GREENWICH

PHOTO-HELIOGRAPHIC

RESULTS.

1916.

RESULTS OF MEASURES

MADE AT THE

ROYAL OBSERVATORY, GREENWICH

UNDER THE DIRECTION OF

SIR FRANK DYSON, M.A., LL.D., F.R.S.,
ASTRONOMER ROYAL,

OF

PHOTOGRAPHS OF THE SUN

TAKEN

AT GREENWICH, AT THE CAPE, AND IN INDIA

IN THE YEAR

1916.

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ERRATUM.

GREENWICH PHOTO-HELIOGRAPHIC RESULTS, 1915.

LEDGERS—PAGE D 133, COL. 14, LINE 10, *for* 117 *read* 217.

GREENWICH PHOTO-HELIOGRAPHIC RESULTS, 1916.

INTRODUCTION.

§ 1. *Measures of Positions and Areas of Sun Spots and Faculæ in* 1916.

The photographs from which these measures were made were taken at the Royal Observatories of Greenwich or of the Cape ; at the Kodaikánal Observatory, Southern India, or at Dehra Dûn, North-West Provinces, India.

The photographs of the Sun, obtained at Greenwich, were taken with the Dallmeyer Photoheliograph, of 4 inches aperture, usually stopped down to 2·9 inches. The instrument was used in the Transit of Venus expedition to New Zealand in 1874, and, as now adapted, gives a solar image of about 10-centimetre radius on the photographic plate.

The photographs have been taken throughout the year on gelatine dry plates, "Process" or "Lantern," supplied by the Imperial Dry Plate Company, being used with hydroquinone development.

The photographs from the Cape Observatory were taken under the superintendence of Mr S. S. Hough, His Majesty's Astronomer at the Cape, and those from Kodaikánal under the superintendence of Mr John Evershed, Director of that Observatory. The photographs from Dehra Dûn, which have been forwarded by the Solar Physics Committee to fill the gaps in the combined series, were taken under the superintendence of the Deputy Surveyor-General, Trigonometrical Survey of India. At three of the observatories the instrument employed was a Dallmeyer Photoheliograph giving an image of the Sun about 10 centimetres in radius ; at Kodaikánal a Cooke photo-visual object-glass of 6 inches aperture was used, the image of the Sun being on about the same 10-centimetre scale. The plates and development used have been much the same at each of the four collaborating observatories.

Photographs of the Sun were available for measurement upon each day in 1916 except June 19, those finally selected for measurement being supplied by the different observatories as under :—

Greenwich	180
Cape	166
*Kodaikánal	1
Dehra Dûn	18
Total	365

The following are the signatures of those persons who measured the photographs for the year 1916 :—

E. W. Maunder	M	Annie S. D. Maunder	AM
H. W. Newton	N	H. Lyne	HL

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 respectively perpendicular and parallel to the equator in the photoheliographs at the Cape and at Dehra Dûn, but are inclined to it at an angle of about 45° in that at Greenwich.

The zero of position-angles for the Greenwich and Cape Photoheliographs has been determined by the measurement of a plate which has 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 plate, and the exposures having been so given that the line joining the cusps passed approximately through the centre of the plate, 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. The following tables give the correction for zero of position for the mean of the two wires as thus determined.

The zero-correction used throughout the year 1916 in the reduction of the photographs taken at Greenwich was $+2^{\circ}\cdot8$.

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

Jan. 1 to April 30, $+0^{\circ}\cdot1$; May 1 to Nov. 13, $+0^{\circ}\cdot2$; Nov. 13 to Dec. 31, $+0^{\circ}\cdot1$.

The orientation of the photograph taken at Srinagar with the Kodaikánal Photoheliograph was determined by the photographed image of a plumb line.

* This photograph was taken during an expedition to Srinagar in Kashmir.

DALLMEYER PHOTOHELIOGRAPH, GREENWICH.

Date. Greenwich Civil Time.				Correction for Zero.	Date. Greenwich Civil Time.				Correction for Zero.
		d	h	° ′			d	h	° ′
1915	December	28.	11	+2 45	1916	July	26.	11	+3 04
1916	January	10.	12	+2 47		August	1.	11	+2 40
		23.	12½	+2 54			1.	11	+2 46
		29.	10	+2 54			26.	12	+2 51
	February	5.	11	+2 46		September	7.	10	+2 46
	April	1.	8½	+2 53			7.	10	+2 46
		1.	11	+2 52			22.	8½	+2 38
		1.	13	+2 54			23.	9	+2 48
		21.	8	+2 34		October	7.	11	+2 49
	May	10.	9	+2 43			7.	11	+2 48
		19.	12½	+2 51			21.	10	+2 36
		21.	7½	+2 42			21.	10	+2 43
		26.	8	+2 47		November	9.	10	+2 50
	June	6.	10	+2 51			9.	11	+2 49
		8.	8	+2 38			21.	11	+2 49
	July	4.	7½	+2 45			21.	11	+2 53
		5.	10½	+2 46		December	4.	12	+2 49
		5.	11	+2 39			30.	11	+3 03
		10.	14	+2 38			30.	11	+2 47
		20.	8	+2 36	1917	February	8.	12	+2 49

The wire frame was removed for cleaning on October 18.

DALLMEYER PHOTOHELIOGRAPH, CAPE OF GOOD HOPE.

Date. Greenwich Civil Time.				Correction for Zero.	Date. Greenwich Civil Time.				Correction for Zero.
		d	h	° ′			d	h	° ′
1915	December	6.		+0 4	1916	July	5.	8½	+0 10
1916	January	7.	12½	+0 6			21.	9	+0 13
		24.	10½	+0 3		August	4.	9	+0 24
	February	7.	9	−0 3			21.	12	+0 17
		7.	9½	+0 11		September	6.	8	+0 15
		23.	9½	+0 8			20.	10	+0 11
	March	6.	8	+0 7		October	5.	10	+0 21
		24.	9	+0 7			20.	8	+0 9
	April	5.	9	+0 8		November	6.	9	+0 1
		19.	12	+0 6			20.	8	+0 1
	May	9.	12	+0 19		December	5.	8	+0 4
		22.	9	+0 5			19.	8½	+0 5
	June	20.	12	+0 9			30.	8	+0 15
					1917	January	16.	8	−0 8

The wire frame was removed for the insertion of a new wire on December 30.

The adjustment of the wires in the Dehra Dûn Photoheliograph was usually tested by stopping the driving clock immediately after a photograph had been taken and making a second exposure some two minutes after the first, a portion of a second image of the Sun, just intersecting the first, being thus obtained upon the plate.

The zero-correction adopted during 1916 for the Dehra Dûn photographs was —0°·5.

The *first* column on each page contains the Greenwich civil time at which each photograph was taken, expressed by the day of the year and decimals of a day, reckoning from Greenwich mean midnight January 1d. 0h., and also by the day of the month (civil reckoning), the latter being placed opposite the total area of Spots and Faculæ for the day. The photographs taken at Greenwich, at the Cape, and in India at Kodaikánal and Dehra Dûn are distinguished by the letters, G, C, K, and D respectively.

The *second* column contains the initials of the two persons measuring the photograph ; the initial on the left being that of the person who measured the photograph on the left of the centre of the measuring instrument, and that on the right being that of the person who measured on the right of the centre.

The *third* column gives the No. of the group which is numbered in order of its appearance. Groups only seen once are distinguished by the number of the Rotation in which they occur, and a letter which represents the order of their appearance in that Rotation.

The Rotations 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 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 *next two* columns give the distance from the centre of the Sun in terms of the Sun's radius, and the position-angle from the Sun's axis, reckoned from the Sun's north pole in the direction *n, f, s, p,* both results being corrected for the effects of astronomical refraction.

The measures of the photographs were made with a large position-micrometer specially 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 Sun is read off by means of a scale and vernier to 1-250th of an 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.

The following is the process of measurement of a photograph :—By means of the screws attached to the circular plates carrying the pillars which hold the photograph, the image of the Sun is centred as accurately as possible by rotation. The position-circle is then set to the readings 0°, 90°, 180°, and 270° in succession, and the scale readings taken for the two limbs. The scale being so adjusted that its zero coincides with the centre of rotation of the position-circle, the mean of the eight readings for the limb gives the mean radius of the Sun directly.

The zero of the position-circle of the micrometer has been determined from the readings of the position-circle for the four extremities of the two wires. The resulting correction is applied with the zero correction of the photoheliograph to all position-circle readings for spots and faculæ.

The uncorrected distance from the Sun's centre for spots and faculæ is read off directly to 1-250th of an inch by means of a scale and vernier, the zero of the scale of the micrometer being adjusted to coincide with the centre of the instrument.

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 has been made in the practice of previous years, where in this section components of groups are given separately and combined into groups in the Ledgers. It is found that the present method saves much numerical work without any diminution of accuracy.

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 distance from centre in terms of the Sun's radius given in the *fourth* column is found by dividing the measured distance r, as corrected for refraction, by the measured mean radius of the Sun, R; and the position-angle from the Sun's axis given in the *fifth* column is obtained by applying to the position-angle (from the N. point) corrected for refraction the position-angle of the Sun's axis.

The *sixth* and *seventh* columns give the heliographic longitude and latitude of the spot.* 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 semidiameter 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:—

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

If D and λ 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,

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

* "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.

The position-angle χ is found from the position-angle from the North Point by subtracting P, the position-angle of the N 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. 551 of the *Nautical Almanac* for 1916, and are printed (in brackets) in the *fifth*, *sixth*, and *seventh* columns respectively. D, the heliographic latitude of the Earth, is of course the same as the latitude of the centre of the Sun's disc.

The inclination of the Sun's axis to the ecliptic is assumed to be 82° 45′, the longitude of the ascending node for 1916·0 to be 74° 35′·3, and the period of the Sun's sidereal rotation to be 25·38 days; the meridian which passed through the ascending node 1854 January 1, Greenwich Mean Noon, being taken as the zero meridian.

The measures of areas given in the *last three* columns were made with a glass diaphragm ruled into squares, with sides of one-hundredth of an inch, and placed as nearly as possible in contact with the photographic film. The integral number of squares and parts of a square contained in the area of a spot or facula was estimated by the observer, two independent sets of measures being made by two observers. The mean of the two sets of measures has been taken for each photograph. The area of the spot or facula in millionths of the Sun's visible hemisphere is derived from the measured area by correcting for foreshortening.

§ 2. *General Catalogue of Groups of Sun Spots for* 1916.

This Catalogue is compiled from a general ledger in which the daily results for each group are collected together. 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 1915 and previous years. Groups seen only once are not included, but appear in the Daily Results with a distinctive numeration. The areas and positions of each group, given in the *seventh* to *eleventh* columns, are the mean areas of umbræ and whole spots, and the mean longitude and latitude for the period of observation of the groups. References are given in the *twelfth* column to such groups as are given in detail in the Ledgers.

§ 3. *Ledgers of the Areas and Heliographic Positions of the Principal Groups of Sun Spots for* 1916.

Ledger 1.—Recurrent Groups.—This Ledger supersedes the Catalogue of Recurrent Groups of Sun Spots given in previous years 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—the detail given in the *fourth* column—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—the detail given in the *sixth* column—then the Catalogue and, if necessary, the Daily Results also, were 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 both the east and 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. In cases where the evidence appeared to render probable the continued existence of the spot, it has been numbered in the Ledger, and where there has been some uncertainty a note has been added. If, on the other hand, the evidence appeared to go in the other direction, but was not quite decisive, the series has been printed in the Ledger but a separate number has not been given it. It has been distinguished by the number of the preceding series, placed in brackets and marked with an asterisk. In cases where a well-defined series has been recorded, there have sometimes been included in brackets spot groups undoubtedly belonging to the same general disturbance, but for which the evidence of continuity was not sufficient.

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.

Ledger II.—Groups seen only in one Apparition.—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.

Note.—The general plan of results contained in Ledgers I. and II. is the same as that of the Ledger printed in previous volumes of the *Greenwich Photo-Heliographic Results*; the respective columns correspond in all respects.

§ 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* 1916.

This section requires no further explanation.

In the course of examination of a number of photographs taken in March 1916, several small faint markings were detected in high southern latitude which for distinction were called "flecks." They are much less definite than spots, but their existence was verified in each case on two photographs. They are discussed in detail in a paper by Mrs Walter Maunder in *M.N.R.A.S.*, June 1917. They have not been included in the general body of the observations of sun spots, but are given in the following table :—

SUN "FLECKS" IN HIGH SOUTHERN LATITUDES, 1916 MARCH.

Date.	Where taken.	G.M.T. of 1st Photograph.	Heliographic		G.M.T. of 2nd Photograph.	Heliographic	
			Long.	Lat.		Long.	Lat.
		h m s	°	°	h m s	°	°
March 8	G	11 59 20	143·2	−72·2	12 2 14	143·7	−72·2
9	C	7 50 42	136·4	−72·2	7 51 32	136·7	−72·4
10	C	8 10 28	120·2	−73·3	8 11 28	120·8	−73·3
11	C	8 19 47	..	..	8 20 47	..	..
12	G	12 18 5	134·4	−71·1	12 28 10	134·4	−71·3
13	C	7 20 42	135·3	−71·1	7 21 43	135·6	−69·9
14	C	7 56 7	118·3	−74·6	7 57 7	119·3	−74·6
March 9	C	7 50 42	137·3	−62·5	7 51 32	136·9	−62·6
10	C	8 10 28	125·6	−63·1	8 11 28	125·6	−63·0
11	C	8 19 47	126·8	−62·3	8 20 47	126·5	−62·5
12	C	10 55 1	130·5	−63·8	10 57 53	131·2	−63·6
12	G	12 18 5	130·5	−63·4	12 28 10	130·3	−63·0
13	C	7 20 42	123·0	−63·5	7 21 43	122·3	−63·1
14	C	7 56 7	119·9	−63·5	7 57 7	120·0	−63·3
March 13	C	7 20 42	138·6	−65·4	7 21 43	137·7	−65·1
14	C	7 56 7	133·3	−65·9	7 57 7	133·0	−66·6
March 13	C	7 20 42	124·3	−64·8	7 21 43	124·6	−64·7
14	C	7 56 7	108·3	−64·4	7 57 7	107·9	−64·0

F. W. DYSON.

Royal Observatory, Greenwich,
1921 *April* 25.

ROYAL OBSERVATORY, GREENWICH.

MEASURES OF POSITIONS AND AREAS

OF

SUN SPOTS AND FACULÆ

ON

PHOTOGRAPHS

TAKEN WITH THE

PHOTOHELIOGRAPHS

AT GREENWICH, AT THE CAPE, AND IN INDIA,

WITH THE DEDUCED

HELIOGRAPHIC LONGITUDES AND LATITUDES.

1916.

MEASURES of POSITIONS and AREAS of SUN SPOTS and FACULÆ on PHOTOGRAPHS taken at the ROYAL OBSERVATORIES of GREENWICH and of the CAPE, and in INDIA, at KODAIKÁNAL, at DEHRA DÚN, and at SRINAGAR, in the Year 1916.

NOTE.—The Greenwich Civil Time at which the Photograph was taken is expressed by the Day of the Year and decimals of a day, reckoning from Midnight, January $1^d\ 0^h$. For convenience of reference, the Month and Day of the Month (Civil Reckoning) are added.

The letter G. signifies that the photograph was taken at Greenwich; the letters C., K., D., or S., that it was taken at the Cape, Kodaikánal, Dehra Dûn, or Srinagar respectively; the time given is Greenwich Civil Time.

The position-angles are reckoned from the North Pole of the Sun's Axis in the direction N., E., S., W., N.

The Groups of Spots are numbered in the order of their appearance, and in continuation of the Group-numbers given in previous years, except in the case of Groups seen only on one day, which 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 third column, it is to be understood that there is a Facula unaccompanied by a Spot. 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.

The Areas of Spots and Faculæ are corrected for Foreshortening, and are expressed in millionths of the Sun's visible Hemisphere.

In the line immediately below the results for each day are given in brackets :—1. The Position Angle of the Sun's Axis (from the North point); 2. The Heliographic Longitude and Latitude of the Centre of the Disc; 3. The total areas for each day of Spots and Faculæ.

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
0·444	N, AM		0·932	259·4	22·9	−11·0			79
			0·919	240·0	19·1	−28·7			126
			0·908	311·1	10·6	+34·9			63
			0·838	246·8	9·6	−21·1			67
			0·824	229·6	3·4	−34·3			180
		7575	0·984	249·8	34·0	−20·4	0	55	298*f*
		833c	0·486	224·4	335·8	−23·1	0	6	
		7591	0·423	5·1	311·9	+21·7	7	13	
C.		7581	0·274	153·0	306·8	−17·1	35	242	
		833f	0·185	126·8	305·6	− 9·4	0	5	
		7584	0·534	56·6	286·9	+14·2	72	449	
		7586	0·522	70·0	284·7	+ 7·6	19	58	
		7588	0·771	124·9	268·5	−28·3	2	6	213*c*
			0·867	59·2	259·5	+24·5			95
			0·840	111·6	258·3	−19·8			97
			0·932	108·0	245·8	−17·9			215
			0·969	60·0	242·5	+28·0			199
Jan. 1				(+2·4)	(314·2)	(−3·1)	(135)	(834)	(1632)
1·423	N, AM		0·966	248·3	13·2	−19·4			141
			0·910	237·0	4·1	−31·1			350
			0·926	311·3	0·4	+36·0			131
			0·877	226·2	355·9	−39·2			81
		7591	0·460	337·2	312·3	+21·8	0	8	
C.		7581	0·261	201·1	306·9	−17·2	43	228	
		833g	0·166	185·9	302·3	−12·7	0	3	
		7586	0·317	51·6	286·8	+ 8·2	11	48	
		7584	0·398	39·3	286·3	+14·8	51	325	
		7592	0·874	108·4	241·1	−17·6	23	86	262*c*
			0·769	55·7	257·7	+23·3			78

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
1·423	N, AM		0·924	57·1	239·4	+28·6			129
C.			0·979	52·3	228·7	+35·8			139
Jan. 2				(+1·9)	(301·3)	(−3·2)	(128)	(698)	(1311)
2·367	N, AM		0·945	235·8	357·9	−33·3			261
			0·957	307·3	355·5	+34·1			151
			0·930	226·2	352·3	−41·4			100
			0·871	297·5	345·1	+21·9			154
		7591	0·577	315·3	314·6	+21·1	20	92	
		7581	0·385	230·8	307·0	−17·1	31	179	
		7586	0·197	11·0	286·7	+ 7·8	7	33	
C.		7584	0·314	6·7	286·7	+14·8	38	237	
		7592	0·737	110·2	242·8	−17·0	35	155	168*c*
			0·848	52·1	239·0	+29·2			267
			0·939	49·3	227·2	+36·2			174
			0·895	117·6	227·1	−26·1			145
			0·971	62·1	216·4	+26·1			109
Jan. 3				(+1·5)	(288·9)	(−3·3)	(131)	(696)	(1529)
3·451	N, AM		0·971	235·4	349·7	−34·3			66
			0·912	246·7	339·5	−22·6			64
		7593	0·893	288·4	335·5	+14·7	4	28	85*c*
		7591	0·719	302·8	314·6	+20·3	29	179	146*c*
		7581	0·572	244·2	307·1	−17·3	45	192	
C.		7586	0·312	311·0	288·3	+ 8·5	8	36	
		7584	0·380	328·4	286·5	+15·5	36	234	
		7592	0·565	118·4	243·1	−18·4	33	182	
		7594	0·982	103·7	195·3	−14·1	18	215	353*c*
			0·936	168·9	243·8	−69·4			69
			0·781	43·4	235·5	+31·9			46

Group 7575, 1915 December 25–1916 January 1. A sparse unstable stream forming in the rear of Group 7573, and generally arranged in two loose clusters, of which the following has greatly diminished by December 31. Group 7581, 1915 December 26–1916 January 8. A large regular spot followed by an irregular train of small spots. Group 7584, 1915 December 29–1916 January 8. A few very small spots on December 29, rapidly developing into a fine straight stream of which the first and last members are large regular spots. The group declines rapidly after January 1. Group 7586, 1915 December 30–1916 January 7. A few small unstable spots in an irregular stream, *s* Group 7584, the leader being a small regular spot. Group 7588, 1915 December 30–1916 January 1. A small faint spot *f* Group 7587. Group 7591, 1916 January 1–7. A very irregular stream in continual change. A large composite spot has formed at the head of the group by January 5, but has passed out of sight at the West limb by January 7. Group 7592, January 2–12. Four small spots appearing suddenly on January 2 and developing during the succeeding days into a long, broad, and irregular stream of spots, mostly small and unstable, and grouped into three clusters. The leader of the group is the only fully developed and stable spot, and remains alone after January 9. Group 7593, January 4–5. A few small spots in a short irregular stream forming suddenly *sp* Group 7591. Group 7594, January 4–16. A large regular spot, usually with double nucleus, and surrounded at a considerable distance by a few attendants, none of which persist long.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
3·451	N, AM		0·869	43·9	226·2	+36·4			126
			0·896	115·5	212·3	−24·3			112
C.			0·959	50·9	208·0	+35·9			82
			0·948	59·7	207·8	+27·2			285
			0·970	108·9	198·5	−19·2			79
Jan. 4				(+0·9)	(274·6)	(−3·4)	(173)	(1066)	(1513)
4·379	N, AM		0·933	306·7	324·5	+32·3			86
		7593	0·960	287·4	334·2	+15·6	2	7	139*c*
		7591	0·867	296·6	318·2	+20·8	29	196	250*c*
		7581	0·715	248·4	306·5	−17·7	33	170	157*c*
		7586	0·513	292·4	290·9	+ 8·2	8	10	
		7584	0·509	308·4	286·7	+15·1	21	106	
		7592	0·411	129·8	243·0	−18·6	69	369	
		833h	0·661	57·0	226·8	+18·2	0	5	
C.		7594	0·924	103·8	194·9	−14·1	30	200	428*c*
			0·693	34·7	234·9	+31·5			32
			0·818	37·1	223·8	+37·9			77
			0·877	56·3	207·6	+27·1			351
			0·911	47·1	206·5	+36·4			145
			0·905	111·0	198·3	−20·4			122
			0·986	112·7	181·6	−23·0			123
Jan. 5				(+0·5)	(262·4)	(−3·5)	(192)	(1063)	(1910)
5·472	N, AM	7591	0·953	293·3	317·4	+20·9	26	200	373*c*
		7581	0·862	251·4	306·9	−17·8	25	177	453*c*
		7586	0·709	285·2	291·5	+ 8·1	6	10	33*c*
		7584	0·680	296·5	286·9	+14·8	10	54	46*c*
		7592	0·268	164·2	243·6	−18·5	89	465	
		7594	0·799	105·1	195·4	−14·1	34	227	319*c*
		7595	0·959	77·6	175·8	+10·8	38	258	500*f*
C.			0·804	31·8	214·6	+40·0			49
			0·841	40·8	204·7	+36·9			155
			0·794	51·0	204·2	+27·3			121
			0·815	111·7	194·7	−19·7			149
			0·929	114·5	180·5	−24·0			184
			0·973	107·5	171·1	−17·9			85
			0·981	119·1	169·1	−29·2			134
Jan. 6				(−0·1)	(248·0)	(−3·6)	(228)	(1391)	(2601)
6·508	M, AM		0·906	292·9	296·1	+18·9			33
		7591	0·984	292·4	311·5	+21·2	3	71	181*c*
C.		7581	0·958	252·6	307·8	−17·7	33	184	394*f*
		7586	0·853	281·8	291·6	+ 8·0	6	13	314*c*
1916.				°	°	°			
6·508	M, AM	7584	0·824	291·3	286·9	+15·0	5	42	105*c*
		7592	0·313	213·8	244·9	−18·7	57	321	
		7594	0·649	107·8	194·9	−14·4	34	204	
		7595	0·872	75·2	175·5	+10·9	51	257	703*f*
			0·845	38·0	192·6	+38·8			34
C.			0·834	117·0	179·9	−24·4			113
			0·942	41·9	176·0	+42·5			43
			0·909	106·5	169·2	−16·5			113
			0·930	120·7	167·4	−29·9			149
			0·952	70·1	164·7	+17·6			203
			0·969	60·6	163·0	+27·2			92
Jan. 7				(−0·6)	(234·4)	(−3·8)	(189)	(1092)	(2477)
7·431	N, AM		0·840	297·3	274·7	+20·2			87
		7581	0·995	252·1	307·3	−18·2	24	115	244*f*
		7584	0·935	286·2	289·5	+13·6	6	39	339*n*
		833i	0·895	280·6	284·5	+ 7·7	0	4	311*n*
		7592	0·472	233·9	246·0	−19·6	21	214	
		7594	0·486	113·4	194·9	−14·6	25	189	
		7595	0·751	71·5	175·8	+11·0	38	257	344*f*
C.		*833j*	0·770	111·5	173·2	−18·9	0	6	86*nf*
			0·707	21·2	203·5	+37·4			48
			0·809	27·6	191·8	+42·3			27
			0·884	37·8	176·0	+41·5			84
			0·840	122·6	168·3	−29·1			126
			0·887	63·2	164·1	+21·4			169
			0·935	118·3	153·9	−27·8			65
Jan. 8				(−1·0)	(222·2)	(−3·9)	(114)	(824)	(1930)
8·426	N, M		0·978	283·1	285·6	+11·9			717
			0·915	293·2	271·9	+19·3			97
			0·894	238·8	270·4	−29·5			105
			0·832	303·5	258·7	+24·7			42
			0·766	241·7	256·5	−24·0			105
			0·697	322·7	238·2	+30·1			96
			0·676	344·3	222·2	+36·5			136
		7592	0·656	245·1	248·0	−19·2	24	112	
C.		7596	0·638	9·3	201·9	+34·9	0	11	
		7594	0·306	126·8	194·5	−14·4	21	188	
		7595	0·595	65·3	175·8	+11·0	47	256	176*f*
			0·749	18·5	190·7	+41·3			28
			0·869	33·4	168·0	+43·4			79
			0·760	127·3	164·8	−30·2			89
			0·836	55·7	159·4	+25·5			115
			0·911	125·1	146·0	−33·5			139
			0·934	56·8	146·0	+29·0			58
Jan. 9				(−1·5)	(209·1)	(−4·0)	(92)	(567)	(1982)

Group 7595, January 6–18. Return of Group 7564. A large regular spot, generally with two or three companions which are mostly very small and short-lived.
Group 7596, January 9–11. A small faint spot on January 9, smaller but darker on January 10, and accompanied by two very small acolytes on January 11.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
9·460	AM, M		0·964	243·2	270·0	−26·9			44
			0·888	246·6	257·3	−22·6			96
			0·738	332·8	220·5	+37·2			66
		7592	0·811	249·8	248·7	−18·7	17	89	200*c*
		7596	0·637	352·8	201·1	+35·0	3	7	
G.		7594	0·180	175·2	194·6	−14·4	25	190	
		7595	0·420	52·1	175·9	+11·0	48	245	
			0·866	49·7	145·0	+31·4			68
			0·934	58·8	131·9	+27·1			102
			0·968	67·8	122·9	+20·2			69
Jan. 10				(−2·0)	(195·5)	(−4·1)	(93)	(531)	(645)
10·440	M, AM		0·952	244·9	254·6	−25·1			135
			0·880	304·5	237·2	+27·4			60
			0·811	322·7	220·3	+36·7			125
		7592	0·912	251·6	248·2	−18·5	11	58	764*f*
		7596	0·685	336·4	202·0	+34·8	0	12	66*c*
C.		7594	0·271	227·5	194·5	−14·7	29	157	
		7597	0·163	206·3	186·8	−12·5	1	6	
		7595	0·292	24·3	175·6	+11·2	50	251	
			0·841	55·9	132·3	+25·4			189
			0·881	66·4	124·5	+18·4			66
Jan. 11				(−2·5)	(182·6)	(−4·2)	(91)	(484)	(1405)
11·383	N, AM		0·948	260·6	241·8	−10·2			26
			0·939	301·6	234·6	+27·6			68
			0·881	316·3	219·4	+36·7			49
			0·757	321·4	204·2	+32·6			195
		7592	0·974	252·1	247·5	−18·3	4	32	479*f*
		7594	0·440	244·1	194·3	−15·0	31	126	
C.		7597	0·318	240·6	186·6	−13·0	0	5	
		7595	0·281	341·5	175·4	+11·1	33	216	
		833k	0·435	173·2	166·8	−29·8	0	3	
			0·759	48·0	131·0	+27·1			88
			0·801	61·1	122·2	+19·9			96
			0·989	77·4	90·0	+11·8			154
Jan. 12				(−2·9)	(170·2)	(−4·3)	(68)	(382)	(1158)
12·480	AM, M		0·997	252·2	242·1	−18·0			244
			0·941	311·6	216·8	+36·6			64
G.			0·868	301·0	210·1	+24·0			54
			0·848	308·0	205·1	+28·6			84
			0·840	315·6	201·2	+34·0			161
		7594	0·630	251·6	193·8	−14·9	17	119	
1916.				°	°	°			
12·480	AM, M	7595	0·416	308·4	175·0	+10·8	40	206	
			0·879	64·0	97·5	+20·2			56
G.			0·932	75·4	88·8	+11·9			666
			0·975	62·1	82·6	+25·9			60
Jan. 13				(−3·4)	(155·7)	(−4·4)	(57)	(325)	(1389)
13·537	N, AM		0·919	302·7	202·4	+27·6			81
			0·923	312·8	198·9	+36·4			179
		7594	0·788	254·3	193·4	−15·1	17	110	205*p*
G.		7595	0·590	294·8	174·7	+10·5	36	212	
		833l	0·866	71·8	84·3	+13·3	2	12	401*c*
			0·911	59·5	81·7	+25·3			155
Jan. 14				(−3·9)	(141·8)	(−4·5)	(55)	(334)	(1021)
14·377	M, AM		0·967	300·2	202·2	+27·6			75
			0·972	307·3	201·5	+34·6			88
			0·887	243·9	193·2	−25·1			67
			0·762	238·9	178·3	−26·3			89
			0·827	332·9	162·9	+43·4			65
C.		7594	0·888	255·4	193·3	−15·0	16	82	501*c*
		7595	0·722	289·3	174·4	+10·4	40	240	250*c*
		833m	0·530	249·1	161·4	−14·8	0	2	
		7600	0·434	233·5	152·3	−19·2	1	2	
			0·759	68·7	85·5	+12·8			176
			0·855	54·5	80·7	+26·9			181
Jan. 15				(−4·3)	(130·7)	(−4·6)	(57)	(326)	(1492)
15·468	M, AM		0·948	248·9	188·0	−21·4			42
			0·808	299·5	164·8	+20·2			97
			0·775	232·7	162·4	−31·3			108
			0·872	326·5	157·5	+43·1			37
		7594	0·971	255·9	193·1	−14·8	0	105	355*c*
C.		*833n*	0·873	246·3	176·4	−22·9	0	15	173*s*
		7595	0·868	285·0	174·7	+10·5	36	207	698*c*
		7598	0·514	301·3	142·9	+11·3	0	5	
		7599	0·492	57·0	91·6	+11·3	0	11	
			0·709	46·7	81·8	+25·1			53
			0·980	110·6	37·2	−21·1			69
Jan. 16				(−4·9)	(116·4)	(−4·7)	(36)	(343)	(1632)
16·445	N, AM		0·987	255·2	184·9	−15·3			106
C.			0·951	246·9	175·7	−23·4			168
			0·913	296·1	165·0	+21·4			223

Group 7597, January 11–12. A few very small spots *nf* Group 7594. The group is clustered on January 11, scattered on January 12.
Group 7600, January 15–19. Intermittent. A very small spot on January 15; a pair of small spots on and after January 17.
Group 7598, January 16–17. A close pair of very small markings.
Group 7599, January 16–17. A faint diffused marking.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
16·445	N, AM		0·861	254·3	162·8	−15·9			77
			0·857	236·5	159·6	−30·9			227
			0·937	321·3	158·2	+44·2			45
			0·868	307·2	155·4	+28·7			189
		7595	0·956	282·9	174·9	+10·8	29	232	605*c*
		7600	0·739	246·9	149·7	−20·2	8	26	
C.		7598	0·657	294·6	141·0	+12·1	0	5	
		7601	0·699	321·6	133·1	+29·0	0	2	
		7606	0·467	4·5	101·2	+22·8	1	23	
		7599	0·330	36·0	92·2	+10·7	0	7	
			0·914	55·5	44·5	+28·7			102
			0·931	110·9	34·9	−21·1			369
Jan. 17				(−5·3)	(103·5)	(−4·8)	(38)	(295)	(2111)
17·304	HL, AM		0·943	255·9	163·1	−15·0			28
			0·946	241·2	162·9	−28·7			56
		7595	0·997	281·5	174·5	+ 9·8	0	98	
		7600	0·857	249·4	150·6	−20·1	11	26	157*c*
D.		7601	0·784	313·3	132·7	+28·7	8	58	78*c*
		7602	0·388	327·3	104·7	+14·2	7	25	
		7603	0·968	81·0	17·8	+ 7·4	2	27	144*f*
			0·875	53·7	39·2	+28·2			258
			0·849	112·1	34·9	−21·2			846
Jan. 18				(−5·7)	(92·2)	(−4·9)	(28)	(234)	(1567)
18·422	M, AM		0·942	237·8	147·3	−31·9			123
			0·920	285·2	142·4	+11·9			79
			0·904	226·6	137·8	−41·0			55
		7600	0·953	250·9	150·3	−19·7	2	18	178*f*
		7601	0·892	305·0	133·2	+28·0	4	42	113*c*
		833o	0·745	301·8	119·5	+19·4	0	7	
		7602	0·558	302·6	106·2	+13·0	0	3	
		833p	0·389	322·0	91·7	+13·0	0	6	
C.		*833q*	0·298	25·8	70·0	+10·5	2	5	
		7603	0·859	78·4	19·7	+ 7·3	1	11	} 244*c*
		7604	0·924	79·8	11·2	+ 7·4	0	8	
			0·755	116·2	30·4	−22·8			80
			0·912	45·7	23·2	+36·7			57
			0·895	119·4	13·3	−28·4			82
			0·943	57·8	12·9	+28·1			62
			0·974	122·6	0·3	−32·8			80
Jan. 19				(−6·2)	(77·5)	(−5·0)	(9)	(100)	(1153)
19·517	M, AM		0·987	283·7	142·2	+12·6			103
G.		7601	0·965	300·7	132·6	+27·8	0	45	233*c*
1916.				°	°	°			
19·517	M, AM	7605	0·878	290·9	121·2	+15·6	8	40	268*c*
		7606	0·705	307·8	99·7	+21·5	1	2	
		7603	0·698	73·7	20·8	+ 7·5	2	13	
		7607	0·717	114·9	19·1	−21·2	0	3	
G.		7608	0·747	116·7	16·8	−23·1	2	8	22*c*
		7604	0·794	76·3	12·2	+ 7·7	0	2	107*c*
			0·884	124·3	3·3	−32·5			205
			0·984	76·1	345·1	+12·7			244
Jan. 20				(−6·7)	(63·1)	(−5·1)	(13)	(113)	(1182)
20·559	N, AM		0·868	290·2	106·2	+14·5			47
			0·686	294·6	89·0	+12·5			51
		7605	0·962	288·8	120·9	+16·5	9	68	293*c*
		7606	0·822	301·6	98·3	+22·1	46	198	131*c*
		7607	0·531	121·5	20·6	−20·6	4	15	
		7603	0·534	68·0	19·6	+ 7·0	1	12	
C.		7608	0·599	123·2	16·4	−23·4	0	9	
		7604	0·612	70·6	14·0	+ 7·4	0	2	
		7609	0·921	74·7	344·4	+11·9	0	4	375*c*
			0·866	127·8	353·0	−34·9			192
			0·949	47·5	347·7	+37·4			116
			0·922	110·0	342·1	−20·4			108
Jan. 21				(−7·2)	(49·4)	(−5·2)	(60)	(308)	(1313)
21·376	N, AM		0·815	290·2	90·2	+13·1			285
		7606	0·902	298·0	97·9	+22·4	18	137	239*c*
		7607	0·381	133·1	21·5	−20·0	1	8	
		7603	0·386	55·1	20·1	+ 7·7	0	10	
		7604	0·465	63·2	14·0	+ 7·4	0	21	
C.		*833r*	0·538	85·6	6·3	− 2·0	0	5	
		7610	0·974	67·6	325·0	+20·4	19	188	143*f*
			0·869	131·8	343·2	−38·3			110
			0·859	70·4	342·4	+13·8			382
			0·885	59·8	342·3	+23·5			42
Jan. 22				(−7·6)	(38·6)	(−5·2)	(38)	(369)	(1201)
22·477	N, AM		0·921	287·2	88·8	+13·6			334
			0·867	236·3	81·8	−31·6			100
			0·859	305·7	75·3	+26·8			122
		7606	0·971	295·7	96·3	+23·4	31	363	297*c*
C.		7609	0·704	66·7	342·9	+12·1	0	8	
		7611	0·779	65·0	337·1	+15·6	24	102	151*c*
		7610	0·895	64·0	325·2	+20·4	19	145	541*f*
			0·958	111·7	310·2	−22·3			272
Jan. 23				(−8·1)	(24·1)	(−5·3)	(74)	(618)	(1817)

Group 7601, January 17–20. A very small spot on January 17; a close pair afterwards. Group 7606, January 17–23. Intermittent. A cluster of three very small markings on January 17; a very small marking on January 20, which has developed into a large cluster by January 21, the members of which tend to coalesce and to form a large composite spot. Group 7602, January 18–19. A cluster of very small spots. Group 7603, January 18–22. A small spot, often ill-defined and faint. Group 7604, January 19–22. A cluster of very small, faint, unstable markings *f* Group 7603. Group 7605, January 20–21. Some small spots in a short undulating stream; first seen close to the West limb. Group 7607, January 20–22. A small spot. Group 7608, January 20–21. A very small spot *sf* Group 7607. Group 7609, January 21–23. A very small marking in bright faculæ on January 21. It cannot be made out with certainty on January 22, but is seen as a small but definite spot on January 23. Group 7610, January 22–February 2. Return of Group 7591. A large regular spot. Group 7611, January 23–February 1. A fine group arising suddenly *nf* the place of Group 7609, and evidently a fuller development of the same disturbance. A ring of small spots on January 23, the group lengthens out and becomes a straight stream. The leader is the largest member of the group and becomes elliptical in shape. The following spots soon diminish and disappear, the leader alone remaining by January 31.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
23·428	N, AM		0·995	294·2	92·6	+23·3			177
			0·967	285·4	84·7	+13·3			143
			0·923	238·1	78·1	−31·5			102
			0·928	301·3	73·7	+26·4			146
			0·860	285·1	68·9	+10·1			66
C.		7611	0·623	57·7	338·7	+14·8	19	139	54*c*
		7610	0·788	59·1	325·7	+20·1	27	181	587*f*
		7612	0·989	54·4	295·8	+34·0	7	30	144*s*
			0·899	111·5	307·7	−21·7			457
			0·976	78·7	295·6	+ 9·7			437
Jan. 24				(−8·5)	(11·6)	(−5·4)	(53)	(350)	(2313)
24·438	AM, N		0·989	296·7	75·9	+25·3			121
			0·968	188·1	38·1	−77·7			14
			0·952	189·5	34·0	−74·4			14
		834a	0·570	232·9	28·2	−24·8	1	2	
		7611	0·453	41·0	340·5	+14·7	34	159	
		7610	0·661	50·5	325·5	+20·2	28	143	
G.		7613	0·861	66·5	302·8	+17·0	1	8	33*c*
		7612	0·935	52·2	297·4	+32·4	13	39	143*c*
			0·800	54·9	312·9	+23·5			232
			0·830	110·4	302·7	−19·9			336
			0·902	77·1	295·6	+ 9·1			377
			0·938	69·7	291·7	+16·8			413
Jan. 25				(−8·9)	(358·3)	(−5·5)	(77)	(351)	(1683)
25·404	M, AM		0·893	302·2	42·2	+25·4			105
			0·765	245·6	34·2	−22·1			275
			0·838	313·8	30·6	+31·5			125
		7611	0·351	12·0	341·3	+14·4	36	188	
		7610	0·539	37·2	325·4	+20·1	25	134	
		7613	0·708	59·4	306·2	+16·8	2	11	
C.		7612	0·861	46·8	297·8	+32·3	9	22	144*c*
		7614	0·985	102·2	264·8	−13·0	0	8	116*f*
			0·735	47·2	309·1	+25·4			123
			0·816	75·3	292·9	+ 8·5			433
			0·853	65·8	291·2	+17·2			509
			0·958	114·6	271·7	−25·1			131
			0·979	65·7	271·0	+22·4			106
Jan. 26				(−9·4)	(345·6)	(−5·6)	(72)	(363)	(2067)
26·427	M, AM		0·886	248·4	34·3	−21·7			517
C.			0·897	313·1	24·4	+34·3			188
			0·746	286·2	18·3	+ 8·0			130
1916.				°	°	°			
26·427	M, AM		0·797	334·1	359·3	+40·6			78
		7611	0·376	334·8	341·6	+14·2	34	203	
		7610	0·449	14·5	325·3	+20·0	22	123	
		7615	0·448	129·6	310·4	−21·8	5	11	
		834b	0·620	32·6	310·3	+26·1	0	2	
		7613	0·579	50·4	304·5	+16·5	3	12	
		7612	0·778	38·8	296·9	+32·6	3	22	210*c*
		7616	0·898	62·0	273·5	+22·0	3	16	164*f*
C.		7614	0·923	101·4	264·3	−12·7	3	12	180*c*
			0·963	171·2	292·3	−76·7			24
			0·772	60·2	287·3	+18·6			344
			0·763	68·8	285·6	+12·1			129
			0·975	168·2	274·2	−76·4			11
			0·918	117·0	265·7	−27·0			138
			0·980	106·0	252·8	−16·8			234
			0·991	79·3	251·1	+ 9·7			144
Jan. 27				(−9·8)	(332·1)	(−5·7)	(73)	(401)	(2491)
27·442	AM, M		0·882	247·8	20·4	−22·2			419
			0·857	283·9	15·8	+ 8·8			186
			0·866	325·8	359·0	+41·4			130
		7611	0·510	311·0	342·0	+14·2	30	204	
		7610	0·449	345·9	325·4	+20·0	15	122	
		7615	0·305	157·0	311·4	−21·9	3	8	
C.		7613	0·446	35·3	303·2	+15·8	2	4	
		7612	0·720	29·0	294·0	+33·7	0	3	151*c*
		7616	0·781	56·2	274·6	+21·7	5	12	155*f*
		7614	0·808	101·7	264·7	−12·8	0	6	119*f*
			0·779	118·5	269·5	−25·6			72
			0·915	106·9	252·2	−17·7			556
			0·941	76·8	240·3	+10·3			261
Jan. 28				(−10·2)	(318·7)	(−5·7)	(55)	(359)	(2049)
28·374	AM, M		0·940	248·3	17·1	−22·4			138
			0·940	282·4	14·8	+ 9·6			251
			0·933	316·9	2·4	+39·8			122
			0·831	241·5	1·2	−26·8			70
			0·757	229·0	349·9	−34·0			52
		7611	0·653	299·9	342·1	+14·2	34	213	
C.		7610	0·527	325·1	325·1	+20·0	22	106	
		7613	0·377	0·8	306·2	+16·2	2	9	
		7616	0·661	48·3	274·7	+21·1	2	7	
			0·869	74·3	248·4	+10·5			231
			0·905	59·3	247·8	+24·6			55
			0·871	108·0	245·9	−18·5			403
Jan. 29				(−10·7)	(306·5)	(−5·8)	(60)	(335)	(1322)

Group 7612, January 24–28. A small spot on January 24 and 25; a wide pair of spots on the two succeeding days. Only one remains on January 28.
Group 7613, January 25–30. A very small spot on January 25. A cluster of three small spots on the two succeeding days; one very small spot on January 28, 29, and 30.
Group 7614, January 26–28. A small spot with a distant follower on January 27.
Group 7615, January 27–28. A small regular spot.
Group 7616, January 27–29. A small definite spot.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
29·482	M, AM		0·924	235·8	358·5	−33·8			204
			0·833	230·0	343·8	−36·0			265
			0·878	325·0	334·1	+41·6			71
		7611	0·809	292·0	342·3	+13·9	19	173	680*c*
		7610	0·670	309·1	325·4	+20·0	23	121	
C.		7613	0·445	327·2	306·4	+16·2	1	2	
		834c	0·291	339·5	297·8	+ 9·9	0	1	
		7617	0·711	107·6	247·1	−16·6	3	10	298*c*
			0·789	111·9	240·5	−20·8			442
			0·966	105·6	216·0	−16·5			659
Jan. 30				(−11·1)	(291·9)	(−5·9)	(46)	(307)	(2619)
30·185	M, AM	7611	0·894	289·2	343·0	+14·2	27	153	440*c*
		7610	0·765	303·3	325·5	+20·5	26	137	197*c*
		834d	0·417	236·5	303·8	−18·7	2	13	
S.		7617	0·601	110·0	246·6	−16·6	0	12	
		7618	0·766	103·1	232·6	−13·8	5	23	
			0·916	105·1	215·8	−16·2			90
			0·981	106·1	202·8	−16·8			136
Jan. 31				(−11·4)	(282·6)	(−5·9)	(60)	(338)	(863)
31·442	M, AM		0·804	309·2	309·9	+26·2			216
		7611	0·980	285·8	342·3	+14·1	30	148	545*nf*
		7610	0·899	296·7	325·1	+20·8	12	95	198*f*
		7619	0·734	247·3	312·2	−20·6	28	120	
		7620	0·663	346·3	277·0	+34·0	3	16	
C.		7621	0·081	230·2	269·7	− 8·9	6	30	
		7617	0·340	115·8	247·8	−14·2	7	28	
		7618	0·540	106·5	234·0	−13·9	73	416	
		834e	0·882	107·5	204·0	−18·3	0	8	315*f*
			0·934	54·5	204·8	+30·1			73
			0·960	108·6	191·5	−19·5			49
Feb. 1				(−12·0)	(266·1)	(−6·0)	(159)	(861)	(1396)
32·364	AM, M		0·935	226·5	320·8	−42·6			110
			0·871	304·9	306·5	+26·1			212
			0·770	291·5	300·9	+12·2			271
			0·826	315·1	296·8	+31·3			111
C.			0·787	213·0	291·9	−46·1			43
			0·808	323·7	290·8	+35·7			88
			0·904	185·3	267·9	−69·9			24
			0·882	185·4	266·2	−67·1			17
			0·936	183·0	264·8	−75·0			11
		7610	0·968	293·5	325·5	+20·8	10	129	256*f*
1916.				°	°	°			
32·364	AM, M	7619	0·855	249·7	312·5	−20·4	36	253	293*c*
		7620	0·715	333·9	276·1	+34·1	9	31	
		7621	0·309	260·5	271·8	− 8·7	3	13	
		834f	0·185	227·5	261·9	−13·2	0	2	
		834g	0·322	338·4	260·8	+11·3	0	3	
		7617	0·163	147·5	248·7	−13·9	4	19	
		834h	0·329	58·7	237·6	+ 4·0	0	7	
C.		7618	0·353	115·1	234·7	−14·3	95	470	
		7622	0·985	77·5	175·6	+11·1	23	124	190*p*
			0·891	5·9	244·5	+56·1			28
			0·777	117·1	204·5	−24·7			46
			0·781	106·7	202·7	−16·8			306
			0·918	46·4	199·0	+35·8			164
			0·901	107·5	189·3	−18·3			84
			0·948	115·1	181·9	−25·7			65
Feb. 2				(−12·3)	(253·9)	(−6·1)	(180)	(1051)	(2319)
33·360	M, AM		0·954	298·1	308·1	+24·4			156
			0·858	287·1	297·3	+11·2			418
			0·908	307·7	296·9	+30·3			90
			0·877	316·9	288·2	+35·7			63
			0·941	184·3	267·4	−75·7			13
			0·973	183·7	265·9	−81·5			6
			0·941	182·3	249·7	−75·9			10
		7619	0·945	250·5	312·4	−20·4	51	302	492*c*
		7623	0·732	299·3	282·3	+16·3	14	63	203*np*
C.		7620	0·794	319·8	278·0	+32·3	2	16	177*c*
		834i	0·787	326·7	272·9	+35·8	2	6	
		7617	0·218	225·9	250·1	−14·8	0	2	
		7618	0·180	143·5	234·6	−14·5	85	443	
		7622	0·926	75·5	175·1	+10·9	22	135	416*c*
			0·935	21·5	203·5	+55·6			12
			0·804	48·4	198·2	+27·6			80
			0·891	39·9	193·6	+39·0			172
			0·912	112·6	174·7	−23·1			152
Feb. 3				(−12·7)	(240·8)	(−6·2)	(176)	(967)	(2460)
34·457	N, AM		0·954	284·2	296·8	+11·5			400
			0·952	308·5	289·8	+33·6			145
		7619	0·998	250·3	314·2	−19·9	29	191	157*f*
G.		7623	0·869	292·6	282·8	+16·0	6	74	288*n*
		7620	0·892	310·6	279·0	+31·7	2	10	160*n*
		7617	0·394	246·0	248·2	−15·0	0	5	
		7618	0·210	222·2	234·8	−15·1	58	426	
		7622	0·811	71·6	175·0	+10·9	20	116	283*f*

Group 7617, January 30–February 5. An area of feeble disturbance in which a few very small unstable markings are seen to form and disappear.

Group 7618, January 31–February 9. Two very small clusters on January 31, which become by February 1 a fine irregular stream, consisting chiefly of two large spots with a great number of small spots irregularly scattered between them. The stream develops into one of normal type, but the following portion rapidly diminishes after February 6; the leader, a large regular spot, alone remains on February 9.

Group 7619, February 1–4. A large regular spot forming suddenly. A number of small companions follow it closely.

Group 7620, February 1–4. A pair of small spots, or small clusters of spots. The leader only remains on February 3 and 4.

Group 7621, February 1–2. A few small unstable spots in a short stream.

Group 7622, February 2–14. Return of Group 7505; third apparition. A large regular spot diminishing from day to day.

Group 7623, February 3–5. An irregular cluster of small spots. Only one remains on February 5.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
34·457	N, AM		0·787	115·0	175·6	−23·4			145
			0·888	101·5	163·3	−13·1			49
G.			0·936	63·0	162·1	+22·5			105
			0·935	121·2	157·2	−31·3			158
			0·960	108·0	151·7	−19·0			141
Feb. 4				(−13·2)	(226·4)	(−6·3)	(115)	(822)	(2031)
35·435	M, AM		0·941	310·4	273·8	+34·5			188
		7623	0·948	289·0	281·9	+15·7	3	31	357*n*
		834j	0·900	299·5	271·7	+23·1	7	24	147*c*
		7617	0·578	251·0	248·0	−16·0	1	5	
		7618	0·382	247·2	234·7	−14·3	82	423	
		7624	0·311	135·4	200·2	−18·9	39	98	
G.		7622	0·668	66·0	175·2	+10·8	19	102	
			0·779	23·7	189·6	+39·6			36
			0·856	59·0	161·2	+22·4			133
			0·882	108·2	151·4	−18·9			89
			0·962	56·2	146·2	+30·1			63
			0·987	73·6	135·0	+15·0			182
Feb. 5				(−13·6)	(213·5)	(−6·3)	(151)	(683)	(1195)
36·354	N, AM		0·993	287·7	282·0	+16·6			256
			0·981	306·7	273·0	+34·0			227
			0·952	296·2	268·8	+22·4			171
			0·918	256·9	268·6	−14·5			99
			0·837	287·8	255·5	+11·1			177
			0·808	252·3	255·2	−18·0			461
			0·748	289·7	246·9	+10·2			83
		7618	0·577	254·5	236·2	−14·1	74	357	
		7624	0·221	175·3	200·3	−19·1	78	420	
C.		7622	0·522	56·9	175·1	+10·8	18	104	
		7625	0·757	57·9	158·9	+19·0	2	10	106*n*
		834k	0·703	109·2	157·3	−18·0	3	5	123*f*
		7626	0·934	72·0	135·2	+14·2	1	8	290*c*
			0·718	14·0	188·8	+37·7			95
			0·881	50·5	149·7	+30·2			122
			0·847	125·3	147·2	−33·0			84
			0·981	69·1	125·9	+18·9			81
			0·986	61·9	125·8	+26·2			461
Feb. 6				(−13·9)	(201·4)	(−6·4)	(176)	(904)	(2836)
37·439	AM. M		0·903	285·0	249·4	+10·6			366
G.			0·865	254·1	247·3	−16·9			641
			0·874	238·9	246·8	−30·2			162
1916.				°	°	°			
37·439	AM, M	7618	0·779	258·0	238·5	−13·3	42	203	129*p*
		7627	0·419	219·4	204·1	−24·9	0	8	
		7624	0·312	225·6	200·7	−18·8	115	612	
		7622	0·361	35·3	174·9	+10·8	18	86	
		7625	0·624	47·8	157·9	+19·2	9	24	
G.		7626	0·812	67·7	136·6	+13·9	17	43	} 210*c*
		7628	0·850	67·1	132·9	+15·6	7	38	
			0·929	59·5	125·1	+25·2			47
			0·896	120·4	124·2	−30·0			47
			0·925	66·5	123·6	+18·9			117
			0·985	110·5	105·4	−21·3			73
Feb. 7				(−14·3)	(187·1)	(−6·4)	(208)	(1014)	(1792)
38·400	N, AM		0·944	251·7	246·1	−19·4			351
			0·957	282·5	245·8	+ 9·9			194
			0·886	242·3	236·4	−27·5			37
		7618	0·904	258·4	239·7	−13·3	37	212	414*c*
		7627	0·573	235·2	205·5	−24·7	1	2	
		7624	0·476	241·7	200·7	−18·9	146	760	
		7622	0·299	359·1	174·8	+10·8	16	99	
G.		7625	0·508	30·5	158·7	+19·6	13	46	
		7626	0·664	61·6	137·8	+13·2	35	163	
		7628	0·734	61·1	132·7	+15·9	48	269	
			0·860	54·5	123·5	+25·9			106
			0·843	68·2	120·8	+24·4			105
			0·927	109·5	105·9	−20·5			112
			0·979	64·2	100·7	+23·5			192
Feb. 8				(−14·7)	(174·5)	(−6·5)	(296)	(1551)	(1511)
39·424	N, AM		0·945	245·3	232·7	−25·4			113
		7618	0·978	257·5	239·9	−13·6	31	237	573*c*
		7624	0·651	248·1	200·6	−19·1	130	928	
		834l	0·501	306·9	185·0	+11·4	1	3	
		7622	0·375	322·0	174·5	+10·7	16	78	
		7625	0·440	3·8	159·2	+19·3	16	40	
		7626	0·478	48·7	139·5	+12·2	36	177	
G.		7628	0·597	50·7	132·3	+16·4	50	279	
		7629	0·740	46·1	124·9	+25·4	4	13	75*c*
		7630	0·732	61·7	119·2	+15·3	1	4	
		7631	0·990	104·9	78·0	−15·6	27	147	85*p*
			0·827	111·7	105·5	−21·6			100
			0·916	59·8	101·0	+24·2			300
			0·910	71·9	98·4	+13·4			42
			0·972	61·1	90·0	+26·0			167
Feb. 9				(−15·1)	(161·0)	(−6·6)	(312)	(1906)	(1455)

Group 7624, February 5–12. An irregular stream forming suddenly, and quickly developing into a very fine stream of normal type. The leader and rear spot are both composite and very large. Only the rear spot remains fully visible on February 12. Group 7625, February 6–14. A sparse irregular stream composed of small unstable spots.

Group 7626, February 6–16. A small spot rapidly developing into a large regular spot usually followed by a few very small companions. Considerable motion is shown both in longitude and latitude. See note to Group 7628.

Group 7627, February 7–10. A few very small markings on February 7 and 8. The group is not seen on February 9, but some fresh markings have appeared by February 10, a little *s* of those seen at first.

Group 7628, February 7–17. A small spot *nf* Group 7626, rapidly developing into a large composite spot. It is usually preceded by one or two small companions. Groups 7626 and 7628 might be considered as a single stream of normal type, in which the two chief spots become unusually far apart and the small intermediate spots are unusually small. Group 7629, February 9–12. A few very small spots in two small clusters. Group 7630, February 9–12. A small regular spot.

Group 7631, February 9–10. A large regular spot diminishing day by day, and with proper motion polewards.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.			'	°	°	°			
40·337	N, AM		0·986	254·4	230·7	−16·5			447
			0·937	242·6	219·2	−28·0			82
			0·917	256·2	216·1	−15·3			144
			0·872	310·5	199·0	+30·2			107
			0·837	324·3	187·0	+37·7			120
		7627	0·845	243·4	205·9	−25·9	2	4	} 474*c*
		7624	0·797	251·2	201·6	−18·9	123	875	
		7622	0·511	304·4	174·3	+10·8	12	70	
		7625	0·485	336·2	161·0	+19·8	10	52	
		7626	0·347	24·6	140·6	+11·8	27	149	
C.		7628	0·481	35·8	132·0	+16·5	38	251	
		7629	0·656	36·6	123·4	+25·7	4	5	
		7630	0·584	52·2	120·6	+15·0	12	22	
		7631	0·941	104·4	78·1	−15·7	20	115	464*s*
		7632	0·982	75·4	72·0	+13·0	0	8	128*s*
			0·921	57·9	88·9	+26·1			194
			0·846	57·6	88·4	+22·7			403
			0·901	73·0	87·4	+12·2			66
			0·918	117·6	82·3	−27·9			93
			0·965	58·3	80·6	+28·2			118
Feb. 10				(−15·4)	(149·0)	(−6·6)	(248)	(1551)	(2840)
41·334	N, AM		0·928	306·8	195·2	+30·5			56
			0·902	317·1	186·0	+37·2			139
			0·789	290·8	184·5	+11·9			154
		7624	0·912	252·6	202·1	−18·5	52	789	838*c*
		7622	0·672	294·5	174·2	+10·9	13	64	
		7625	0·593	317·1	161·1	+19·6	8	32	
		834m	0·259	325·2	144·3	+ 5·5	0	10	
		7626	0·334	342·3	141·7	+11·9	31	164	
		7628	0·403	9·4	131·9	+16·1	42	236	
		7630	0·441	34·0	121·1	+14·9	4	10	
C.		7633	0·387	40·2	121·1	+10·6	1	3	
		7631	0·845	104·6	77·8	−15·9	19	104	343*s*
		7632	0·918	73·0	71·9	+12·7	4	8	} 308*c*
		7634	0·943	75·6	67·4	+11·2	1	22	
			0·729	50·4	98·5	+22·4			50
			0·830	52·2	89·1	+26·1			122
			0·836	119·8	80·5	−28·4			72
			0·920	55·8	76·6	+27·9			67
			0·955	107·0	62·0	−18·2			139
			0·996	106·3	49·2	−16·8			90
Feb. 11				(−15·8)	(135·8)	(−6·7)	(175)	(1442)	(2378)
42·376	N, AM		0·903	283·0	184·7	+ 8·6			189
C.			0·933	313·2	179·4	+36·2			152
42·376	N, AM		0·831	301·2	171·6	+21·2			122
			0·948	182·8	134·6	−77·6			37
		7624	0·960	251·6	196·9	−19·5	42	396	561*c*
		7622	0·815	288·8	173·7	+11·0	11	47	172*c*
		7625	0·728	305·3	161·1	+19·6	1	6	127*c*
		7626	0·463	311·9	142·6	+11·6	35	165	
		7628	0·422	337·2	131·9	+16·2	42	226	
		7630	0·366	1·1	121·7	+14·7	6	11	
		7633	0·299	4·4	120·8	+10·6	2	7	
C.		7631	0·697	106·0	78·1	−15·9	12	69	169*sf*
		7632	0·807	69·0	71·8	+12·5	7	8	} 317*c*
		7634	0·831	72·9	68·5	+10·2	21	88	
		7635	0·926	105·3	53·6	−16·7	8	28	44*c*
			0·948	176·1	104·9	−77·4			20
			0·738	44·5	87·0	+26·2			70
			0·862	52·0	71·6	+28·5			114
			0·869	106·5	61·4	−17·7			106
Feb. 12				(−16·2)	(122·1)	(−6·7)	(187)	(1051)	(2200)
43·460	N, HL		0·964	310·9	172·6	+36·4			120
			0·931	293·5	172·1	+18·9			122
			0·893	243·8	171·0	−26·4			136
		7622	0·930	284·8	173·9	+11·0	11	68	224*c*
		7625	0·861	298·0	161·5	+19·8	12	25	218*c*
		7626	0·647	297·3	143·6	+11·7	23	127	
		7628	0·546	313·2	132·1	+15·7	37	219	
		7636	0·606	339·4	121·7	+27·9	4	9	
G.		*834n*	0·609	29·0	88·7	+25·7	1	2	
		7631	0·515	110·2	77·7	−16·2	9	58	
		7632	0·646	61·2	72·5	+12·5	3	7	
		7634	0·656	65·6	70·6	+10·2	23	114	
		7635	0·801	105·8	54·4	−16·7	7	10	46*c*
			0·919	179·8	107·2	−73·3			33
			0·965	60·0	38·9	+26·5			141
			0·948	110·1	35·4	−21·1			150
Feb. 13				(−16·6)	(107·8)	(−6·8)	(130)	(639)	(1190)
44·431	AM, HL		0·962	243·5	170·4	−27·3			72
			0·882	249·5	157·2	−21·2			79
			0·916	305·3	153·1	+28·5			140
			0·854	234·3	151·4	−33·8			104
G.		7622	0·987	282·7	173·9	+11·3	3	30	56*f*
		7625	0·951	293·6	162·8	+19·9	8	32	420*c*
		7626	0·793	290·5	144·1	+11·7	30	121	
		7628	0·683	301·7	131·9	+15·6	34	215	

Group 7632, February 10–13. A small regular spot *np* Group 7634.
Group 7633, February 11–12. One very small spot *s* Group 7630 on February 11; a pair of such spots on February 12.
Group 7634, February 11–22. A few small spots in an irregular stream *sf* Group 7632. The group develops into a straight stream, which consists chiefly of a large composite spot followed at a considerable distance by a small cluster. The cluster has disappeared by February 19, but shows a revival on February 22.
Group 7635, February 12–13. A wide pair of small spots.
Group 7636, February 13–14. Two or three very small spots.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
44·431	AM, HL	7636	0·686	326·4	120·5	+28·6	1	10	
		7631	0·340	120·0	77·2	−16·2	6	35	
		7634	0·486	52·9	71·9	+10·7	35	185	
			0·912	56·4	36·8	+26·8			109
G.			0·869	107·3	34·3	−18·3			75
			0·969	51·8	28·0	+34·3			80
			0·952	79·5	24·4	+ 7·7			72
			0·968	67·5	23·4	+19·7			176
			0·953	109·1	21·6	−20·2			163
Feb. 14				(−16·9)	(95·0)	(−6·8)	(117)	(628)	(1546)
45·521	HL, AM		0·982	293·3	155·9	+21·2			104
			0·932	252·9	150·3	−18·4			48
			0·913	240·3	146·5	−29·8			103
			0·912	269·6	146·5	− 3·2			28
			0·795	312·4	121·9	+27·2			70
		7626	0·919	285·9	144·9	+11·6	20	110	} 202c
G.		7628	0·830	294·4	132·3	+15·8	35	182	
		7631	0·182	160·7	77·1	−16·8	3	8	
		7639	0·288	154·5	73·1	−21·8	1	2	
		7634	0·347	26·9	71·5	+11·1	18	147	
			0·838	49·6	34·5	+28·2			141
			0·890	63·3	23·1	+19·9			98
			0·870	110·9	20·1	−21·5			192
Feb. 15				(−17·3)	(80·7)	(−6·9)	(77)	(449)	(986)
46·333	N, AM		0·975	252·9	148·4	−18·1			60
			0·950	239·9	142·6	−30·6			134
			0·859	232·3	126·5	−35·6			62
			0·864	306·2	120·9	+26·4			210
		7626	0·973	283·8	144·5	+11·6	11	96	} 494c
		7628	0·913	290·5	132·4	+15·6	22	185	
C.		7637	0·818	296·5	119·8	+17·0	20	58	76c
		7631	0·213	213·6	77·0	−17·0	3	6	
		7634	0·316	355·4	71·5	+11·3	23	112	
		7638	0·618	110·7	32·7	−18·1	5	25	
			0·828	58·4	21·0	+21·1			217
			0·795	113·9	18·0	−23·1			66
			0·919	45·8	15·7	+35·9			67
Feb. 16				(−17·6)	(70·0)	(−6·9)	(84)	(482)	(1386)
47·344	M, AM		0·908	233·7	120·7	−35·7			68
C.			0·942	301·8	120·3	+26·8			140
			0·792	310·5	98·5	+25·8			113
1916.				°	°	°			
47·344	M, AM	7628	0·980	286·7	132·7	+14·8	12	116	149c
		7637	0·911	292·5	118·2	+17·1	12	59	189c
		7631	0·378	240·7	76·8	−17·1	1	3	
		7639	0·423	224·7	75·6	−24·0	1	2	
		7634	0·409	319·6	72·3	+11·3	16	96	
		7638	0·443	117·3	32·4	−18·0	2	12	
C.		*834o*	0·586	116·7	22·7	−21·0	0	6	
			0·728	49·9	19·8	+22·4			58
			0·917	38·8	6·9	+41·3			46
			0·894	122·4	354·2	−31·9			71
			0·947	65·8	349·9	+20·2			99
			0·962	72·9	345·3	+14·3			200
Feb. 17				(−17·9)	(56·7)	(−6·9)	(44)	(294)	(1133)
48·345	HL, AM		0·982	283·6	120·5	+11·9			150
			0·976	194·6	111·2	−74·6			18
			0·904	253·8	108·9	−17·7			80
			0·877	291·6	101·0	+15·1			88
			0·888	303·0	98·6	+25·0			264
			0·810	311·8	86·3	+27·5			162
			0·954	182·0	53·6	−79·1			20
			0·943	180·4	45·2	−77·4			24
		7637	0·977	289·3	118·0	+17·1	5	136	223c
C.		7631	0·561	249·2	76·7	−17·4	1	2	
		7634	0·575	301·8	73·3	+11·6	7	70	
		834p	0·199	355·4	44·4	+ 4·4	0	2	
		7638	0·257	141·8	33·9	−18·5	9	56	
			0·808	75·8	351·6	+ 7·1			80
			0·868	61·9	349·1	+20·1			74
			0·889	68·6	344·6	+15·3			315
			0·961	72·6	332·3	+14·5			51
			0·994	65·4	323·6	+23·4			66
Feb. 18				(−18·2)	(43·5)	(−7·0)	(22)	(266)	(1615)
49·336	HL AM,		0·943	253·0	101·9	−18·3			126
			0·957	299·9	97·5	+25·9			306
			0·921	291·9	93·5	+17·0			182
			0·902	304·8	86·6	+27·2			317
			0·957	192·5	79·8	−74·2			7
C.			0·934	187·2	55·8	−74·2			3
		834q	0·876	286·7	88·9	+11·0	2	8	102f
		7631	0·728	252·7	76·9	−17·4	1	3	80c
		7634	0·730	293·5	73·4	+11·8	6	30	61n
		834r	0·637	246·3	68·7	−20·3	1	2	
		7638	0·224	202·6	35·6	−18·9	28	122	

Group 7639, February 15–21. A disturbed area *s* of Group 7631, wherein one or two small unstable spots are occasionally seen. Intermittent Group.
Group 7637, February 16–18. A short stream of spots forming *f* Group 7628.
Group 7638, February 16–25. Two clusters of small spots on February 16. The spots increase in number and the group develops into a long irregular stream.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
49·336	HL, AM	7640	0·985	109·1	308·6	−20·0	6	133	452*c*
			0·959	177·1	14·6	−79·7			44
			0·774	49·2	349·2	+25·1			29
			0·792	62·8	343·3	+16·5			330
C.			0·938	44·2	333·7	+38·6			60
			0·914	128·1	325·6	−37·5			71
			0·948	62·7	324·3	+23·1			172
			0·930	103·3	321·2	−14·9			65
Feb. 19				(−18·5)	(30·4)	(−7·0)	(44)	(298)	(2407)
50·457	HL, AM		0·963	283·3	88·1	+10·8			146
			0·973	300·3	86·4	+27·2			158
			0·870	310·7	65·2	+30·1			81
		7639	0·879	247·7	77·4	−22·9	1	8	524*n*
		7634	0·856	288·3	71·6	+11·7	2	29	453*c*
C.		7638	0·378	234·5	34·6	−19·2	44	232	
		7641	0·261	213·7	24·5	−19·5	0	6	
		7640	0·915	108·8	308·8	−20·0	0	37	707*c*
			0·851	57·3	324·8	+23·0			116
			0·942	59·5	311·7	+25·7			140
			0·962	76·2	303·8	+11·1			221
Feb. 20				(−18·9)	(15·7)	(−7·0)	(47)	(312)	(2546)
51·337	HL, AM		0·994	281·4	86·0	+10·4			61
			0·936	238·1	73·9	−32·3			104
			0·943	307·0	65·7	+31·3			141
			0·842	254·2	61·8	−17·1			63
			0·949	181·8	12·5	−78·2			11
		7639	0·959	249·4	78·9	−21·7	2	37	529*n*
		7634	0·947	284·5	73·1	+11·3	1	20	396*nf*
		7638	0·527	245·2	34·4	−18·9	58	258	
C.		7641	0·396	235·0	24·2	−19·8	0	2	
		7640	0·821	109·6	308·9	−20·1	4	19	} 359*c*
		834s	0·858	106·2	304·6	−17·5	0	10	
			0·945	176·2	347·7	−77·2			24
			0·752	51·6	324·7	+22·4			81
			0·913	57·8	305·4	+25·5			212
			0·890	71·2	304·4	+13·1			219
			0·916	111·6	297·0	−22·6			130
			0·959	66·5	294·9	+20·1			19
Feb. 21				(−19·2)	(4·1)	(−7·1)	(65)	(346)	(2349)
1916.				°	°	°			
52·410	N, HL		0·982	249·7	70·7	−21·2			137
			0·913	277·1	55·9	+ 3·5			46
			0·892	249·5	53·6	−21·4			58
			0·807	310·5	33·1	+26·5			89
		7634	0·993	281·9	71·4	+10·8	0	16	285*nf*
C.		7638	0·702	249·6	34·0	−19·2	71	448	264*p*
			0·815	50·3	305·7	+26·3			105
			0·772	65·6	303·8	+13·7			95
			0·823	111·1	294·7	−21·4			84
			0·940	69·0	283·7	+16·9			161
Feb. 22				(−19·5)	(350·0)	(−7·1)	(71)	(464)	(1324)
53·446	N, AM		0·960	251·0	51·3	−20·2			39
			0·900	304·5	32·3	+26·8			131
			0·830	301·6	25·4	+21·1			62
			0·870	312·6	24·8	+31·5			56
			0·791	311·5	17·5	+26·3			65
G.		7638	0·849	252·4	34·7	−18·6	81	521	354*c*
			0·950	14·2	307·7	+60·9			17
			0·849	62·4	283·8	+18·9			118
			0·973	108·7	258·3	−19·8			117
			0·990	78·8	256·3	+ 9·9			58
Feb. 23				(−19·8)	(336·3)	(−7·1)	(81)	(521)	(1017)
54·521	HL, AM		0·964	301·3	30·4	+27·6			157
			0·928	295·4	25·3	+20·3			166
			0·895	303·8	17·8	+25·9			144
		7638	0·943	252·8	33·7	−18·6	46	258	787*c*
		7642	0·339	17·3	316·3	+11·8	1	3	
		835a	0·280	103·4	306·2	−10·5	1	3	
G.		7643	0·379	128·0	303·7	−20·2	1	7	
		7644	0·716	53·5	284·7	+19·5	1	11	
		7645	0·903	74·7	260·1	+10·5	2	8	367*f*
		7646	0·982	102·3	242·1	−13·3	39	192	279*f*
			0·897	109·1	257·8	−20·2			269
			0·940	118·9	251·4	−29·5			152
			0·958	109·3	247·6	−20·5			163
Feb. 24				(−20·1)	(322·2)	(−7·1)	(91)	(482)	(2484)
55·450	HL, AM		0·985	293·4	25·9	+21·4			45
G.			0·959	298·8	17·7	+25·0			104
			0·898	248·8	14·3	−22·1			73

Group 7640, February 19–21. Return of Group 7619. A regular spot in rapid decline.
Group 7641, February 20–21. A very small cluster *f* Group 7638.
Group 7642, February 24–25. A very small spot.
Group 7643, February 24–26. An area of very small scattered markings *f* position of Group 7640.
Group 7644, February 24–26. A small faint spot.
Group 7645, February 24–29. A very small spot on February 24 and 25, which is not seen on February 26, but has revived by February 27, and is followed by a distant companion.
Group 7646, February 24–March 5. Return of Group 7618. A large regular spot, usually followed closely by one or two small companions, and diminishing day by day.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
55·450	HL, AM		0·920	186·2	329·4	−72·7			30
		7638	0·988	251·6	32·6	−19·2	13	68	581*f*
		7642	0·348	342·4	316·1	+12·3	0	3	
		7643	0·255	155·7	303·5	−20·5	2	14	
		7644	0·605	43·1	283·9	+19·8	1	9	
G.		7645	0·794	71·8	260·1	+ 9·8	1	3	264*f*
		7646	0·925	101·6	241·5	−13·3	34	199	296*f*
			0·769	110·5	260·0	−20·2			70
			0·863	121·7	251·4	−30·8			74
			0·870	108·8	249·0	−19·8			102
			0·949	112·3	237·3	−23·3			245
Feb. 25				(−20·4)	(309·9)	(−7·1)	(51)	(296)	(1884)
56·343	N, AM		0·944	247·2	9·9	−23·8			161
			0·914	259·2	4·9	−12·7			45
			0·831	289·4	351·2	+11·7			123
			0·811	300·6	345·8	+19·6			245
		7647	0·360	226·2	314·3	−21·3	4	20	
		7643	0·245	202·6	303·9	−20·2	0	3	
		7644	0·513	27·0	283·9	+20·1	1	3	
		7646	0·830	101·4	241·7	−13·4	12	162	298*f*
C.		7648	0·989	100·6	215·8	−11·5	0	20	400*c*
		7649	0·989	105·4	215·4	−16·2	23	131	
			0·865	37·2	256·6	+38·3			52
			0·747	69·3	253·1	+10·2			148
			0·852	48·0	251·4	+29·9			46
			0·745	105·3	250·0	−16·2			40
			0·811	114·6	244·5	−24·1			91
			0·895	116·8	234·6	−27·1			101
			0·912	108·7	231·6	−20·0			155
Feb. 26				(−20·6)	(298·2)	(−7·2)	(40)	(339)	(1905)
57·612	N, AM		0·930	283·8	347·7	+ 9·9			108
			0·932	295·2	345·4	+20·3			158
			0·905	235·8	345·3	−33·6			58
			0·769	309·2	321·9	+23·7			59
		7647	0·570	240·4	313·8	−22·4	2	6	
		7645	0·484	51·8	258·8	+10·7	0	6	
G.		7646	0·637	102·2	241·9	−13·3	36	164	
		7648	0·905	99·4	216·0	−11·6	6	31	663*f*
		7649	0·910	104·3	215·3	−15·9	24	173	
			0·828	117·0	226·3	−26·3			71
			0·981	67·2	206·6	+20·6			50
			0·991	110·1	197·3	−20·8			217
Feb. 27				(−21·0)	(281·5)	(−7·2)	(68)	(380)	(1384)
1916.				°	°	°			
58·388	N, HL		0·935	237·0	340·7	−33·3			56
			0·949	291·0	339·1	+17·3			149
			0·864	231·5	328·4	−36·6			69
			0·866	301·5	324·2	+22·7			89
		7645	0·367	35·6	258·7	+10·2	3	9	
		835b	0·484	121·8	245·1	−21·2	2	3	
		7646	0·499	103·9	241·2	−13·1	30	176	
G.		*835c*	0·735	62·2	229·1	+14·7	8	10	
		7648	0·818	99·0	215·5	−11·5	6	20	
		7649	0·829	104·4	214·8	−15·9	30	148	416*f*
		835d	0·870	109·1	210·4	−20·1	1	4	
			0·884	116·6	209·1	−26·8			42
			0·940	64·6	206·1	+20·8			106
			0·957	110·8	196·8	−22·0			641
Feb. 28				(−21·2)	(271·2)	(−7·2)	(80)	(370)	(1568)
59·405	HL, AM		0·919	232·6	323·8	−37·1			44
			0·946	297·7	323·3	+23·3			137
			0·888	289·5	317·0	+13·6			49
			0·836	247·8	314·5	−22·4			137
			0·786	294·8	305·1	+14·4			49
		835e	0·476	339·9	267·7	+19·4	2	6	
		7645	0·307	357·0	258·7	+10·6	0	4	
G.		7646	0·293	110·8	241·6	−12·9	37	152	
		7648	0·662	99·4	216·2	−11·6	1	3	
		7649	0·680	105·6	215·1	−15·9	28	131	56*f*
			0·778	118·4	208·2	−26·4			32
			0·855	58·6	206·0	+22·1			43
			0·863	74·0	200·7	+ 9·9			69
			0·872	111·2	196·8	−22·0			462
			0·953	71·7	188·5	+14·9			106
Feb. 29				(−21·4)	(257·8)	(−7·2)	(68)	(296)	(1184)
60·620	HL, AM		0·939	250·0	312·7	−21·2			181
			0·891	261·0	305·4	−11·3			24
			0·916	289·4	304·8	+14·5			149
			0·875	248·4	303·2	−22·4			222
			0·921	301·3	302·0	+25·1			76
G.		7646	0·099	179·0	241·7	−12·9	30	132	
		7649	0·460	110·8	215·4	−15·9	18	105	
		7650	0·981	106·1	161·6	−17·2	128	531	258*c*
			0·765	116·1	193·0	−24·4			69
			0·803	69·6	191·8	+11·6			33
			0·899	69·0	181·5	+15·3			107
			0·897	114·8	177·7	−25·4			50

Group 7647, February 26–27. A wide area of feeble disturbance in which a number of very small unstable spots are seen on February 26. Only two remain by February 27.
Group 7648, February 26–29. A small spot that divides into two on February 28, and speedily disappears.
Group 7649, February 26–March 9. A regular spot, with some distant followers on February 28, which shows signs of breaking up on February 29. Instead of disappearing, however, the disturbance spreads over an immense area, and several large complex spots, with many small companions, have formed by March 4. The group then lengthens out and becomes a straggling stream, of which the leader and last spots are the largest and most stable members. The group diminishes rapidly after March 5.
Group 7650, March 1–14. A very large composite spot, bisected by a bright bridge and preceded by a stream of companions of moderate size, making up a very fine and striking group.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
60·620	HL, AM		0·923	80·8	175·8	+ 5·5			58
G.			0·965	68·5	170·8	+18·5			141
Mar. 1				(−21·8)	(241·8)	(−7·2)	(176)	(768)	(1368)
61·342	N, AM		0·955	253·1	306·2	−18·3			672
			0·962	286·7	303·7	+13·8			193
			0·933	227·5	300·0	−42·1			77
			0·942	302·1	295·6	+26·9			94
			0·875	279·3	292·1	+ 4·5			77
			0·842	242·5	289·0	−27·0			84
			0·853	302·3	283·5	+22·7			106
		7646	0·186	238·1	241·6	−12·7	24	124	
C.		7649	0·317	119·7	215·7	−15·9	24	146	
		7650	0·943	105·5	160·7	−17·0	141	588	462*c*
		7651	0·986	68·8	155·3	+19·5	6	47	157*c*
		7652	0·984	106·7	151·0	−17·7	11	71	374*c*
			0·921	14·3	207·9	+56·6			34
			0·842	68·1	178·8	+14·1			122
			0·855	77·7	175·3	+ 6·6			61
			0·888	116·2	169·6	−26·5			104
			0·939	66·3	166·9	+19·2			438
Mar. 2				(−21·9)	(232·3)	(−7·2)	(206)	(976)	(3055)
62·339	N, AM		0·968	246·9	296·2	−24·1			73
			0·925	296·4	281·6	+21·1			70
		7646	0·392	254·6	241·9	−12·6	14	72	
		7649	0·197	157·8	214·7	−17·7	58	271	
		7650	0·851	105·8	160·4	−17·1	126	523	642*c*
C.		7651	0·927	66·3	155·8	+18·7	25	183	311*c*
		7652	0·918	107·6	151·8	−18·9	15	56	738*c*
			0·715	63·0	178·4	+13·5			68
			0·852	61·4	166·7	+19·8			325
			0·951	73·0	150·0	+13·7			138
Mar. 3				(−22·2)	(219·2)	(−7·2)	(238)	(1105)	(2365)
63·428	HL, AM		0·843	285·6	259·9	+ 9·0			148
			0·796	247·4	257·2	−22·3			57
		7646	0·609	258·3	242·3	−12·8	18	34	
		7649	0·245	219·0	214·1	−18·0	95	528	
G.		7653	0·281	158·8	198·5	−22·3	0	4	
		7650	0·710	106·7	159·8	−16·9	159	599	
		7651	0·822	61·0	155·6	+18·8	73	334	406*c*
		7652	0·806	109·0	151·0	−19·6	7	38	648*f*
			0·760	53·9	163·8	+21·1			78
1916.				°	°	°			
63·428	HL, AM		0·871	68·8	148·0	+14·5			91
			0·940	52·2	144·0	+31·9			58
			0·945	63·8	139·0	+21·8			45
G.			0·929	126·8	137·0	−36·7			114
			0·948	71·2	136·5	+15·3			188
			0·988	75·8	125·9	+12·7			161
			0·994	109·8	119·3	−20·4			140
Mar. 4				(−22·4)	(204·8)	(−7·2)	(352)	(1537)	(2134)
64·517	N, AM		0·930	284·9	256·5	+11·0			352
			0·899	247·3	255·0	−23·5			131
			0·824	233·6	243·2	−33·8			57
			0·733	248·9	237·1	−20·4			44
		7654	0·827	246·3	246·1	−23·7	30	118	101*c*
		7646	0·784	259·5	242·5	−12·7	2	11	72*c*
		7649	0·432	241·7	214·0	−18·5	100	510	
		7653	0·310	207·5	199·4	−23·1	1	5	
		7655	0·492	36·3	172·9	+16·3	2	2	
		7650	0·535	110·3	159·0	−16·9	168	647	
G.		7651	0·688	51·8	155·7	+19·2	130	516	82*c*
		7652	0·622	110·9	152·8	−18·6	8	61	
		7656	0·698	102·7	146·1	−14·0	1	6	
		7657	0·939	71·7	123·7	+14·4	1	6	543*c*
		835f	0·924	110·1	122·1	−21·3	3	8	138*f*
			0·781	65·0	143·8	+14·2			64
			0·897	47·7	138·6	+32·7			41
			0·869	65·9	134·8	+16·8			241
			0·900	57·7	133·7	+24·8			57
			0·897	129·5	128·6	−38·4			101
			0·972	68·9	117·7	+18·5			130
Mar. 5				(−22·7	(190·5)	(−7·3)	(446)	(1890)	(2154)
65·460	N, AM		0·976	248·5	257·2	−22·5			68
			0·971	282·8	252·2	+10·5			137
			0·955	255·6	251·9	−15·9			91
			0·887	259·7	241·2	−12·5			231
			0·851	248·0	236·5	−22·5			105
			0·780	247·7	228·9	−21·9			64
G.		7654	0·919	246·8	245·6	−24·1	54	286	259*c*
		7649	0·598	248·9	214·0	−18·2	71	369	
		7658	0·487	5·5	175·2	+21·6	6	26	
		7655	0·422	9·1	174·4	+17·3	1	4	
		7650	0·359	120·1	159·2	−17·3	154	671	
		7651	0·545	37·0	157·9	+18·9	144	578	

Group 7651, March 2–14. Return or revival of Group 7625. A few spots at first, mostly small. These multiply rapidly, and form a fine irregular stream of great extent. The leading spots are the largest and most stable, and have coalesced to form a large composite spot by March 8. The following spots have died out by March 12, leaving the leader, now a regular spot, alone. Group 7652, March 2–6. A disturbed area *f* Group 7650, in which some small unstable spots and faint markings are seen.

Group 7653, March 4–5. A very small cluster of faint markings *sf* Group 7649.

Group 7654, March 5–7. A stream, apparently of normal type, forming suddenly *s* of Group 7646 and near the West limb.

Group 7655, March 5–6. A close pair of very small markings on March 5; a wide pair on March 6.

Group 7656, March 5–11. A disturbed area *nf* Group 7650 and 7652, in which some small unstable markings are seen. Nothing is visible on March 8 and 9.

Group 7657, March 5–12. A number of small unstable spots loosely scattered. The group has diminished by March 8, when only a wide pair remains, of which the following member has disappeared by March 11. Probably the group has freshly formed on March 5, and is therefore a revival, not a true return of Group 7628.

Group 7658, March 6–7. Two clusters of small spots, of which the following has disappeared by March 7.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
65·460	N, AM	7652	0·508	115·5	149·2	−19·0	4	49	
		7656	0·534	104·6	146·1	−13·9	2	5	
		7659	0·760	60·8	134·5	+16·5	3	5	
		7657	0·855	69·9	122·8	+13·0	19	61	341*c*
		7660	0·936	67·5	112·9	+18·0	0	6	184*c*
			0·818	54·1	131·9	+23·7			100
G.			0·811	131·7	128·5	−37·5			26
			0·837	110·8	121·2	−21·4			183
			0·914	57·3	119·5	+25·9			92
			0·949	109·3	105·3	−20·6			79
			0·993	78·4	96·8	+10·5			57
Mar. 6				(−22·9)	(178·1)	(−7·3)	(458)	(2060)	(2017)
66·163	HL, AM		0·935	257·0	238·9	−14·7			136
			0·882	247·0	231·0	−23·7			97
		7654	0·966	246·3	245·3	−24·7	57	224	152*c*
		7649	0·722	250·5	214·6	−18·9	66	258	
		7658	0·504	344·1	177·3	+21·8	1	6	
		7650	0·248	137·0	158·6	−17·4	126	577	
		7651	0·480	22·1	157·8	+19·2	137	656	
D.		7656	0·391	108·1	146·4	−13·6	1	12	
		7659	0·669	54·5	134·2	+16·9	1	6	
		7657	0·778	65·5	122·1	+13·9	19	51	141*c*
		7660	0·889	63·6	111·4	+19·4	0	6	88*c*
		7661	0·906	100·5	103·1	−12·6	0	5	56*c*
		7662	0·964	76·8	96·3	+10·6	0	4	138*c*
			0·762	111·5	119·6	−20·9			62
M[illegible]				(−23·1)	(168·8)	(−7·2)	(408)	(1805)	(870)
[illegible]·500	HL, AM		0·976	248·9	230·2	−22·1			101
			0·921	242·9	218·8	−27·7			57
			0·888	265·1	214·2	− 7·7			60
			0·745	244·5	198·3	−23·7			57
		7649	0·894	252·4	215·2	−18·9	26	148	645*c*
		7650	0·219	214·9	158·7	−17·4	98	464	
		7651	0·450	345·3	158·1	+18·6	90	468	
		7657	0·590	54·1	121·8	+13·9	7	43	
G.		7660	0·719	56·0	112·5	+18·1	1	19	
		7661	0·708	100·5	105·9	−12·5	0	1	
		7662	0·841	72·6	96·7	+10·4	0	4	306*f*
			0·914	56·9	92·7	+26·3			81
			0·922	100·3	83·3	−12·2			51
			0·924	109·9	82·8	−21·1			397
			0·964	73·4	79·4	+13·8			104
			0·994	50·0	75·2	+38·3			31
Mar. 8				(−23·3)	(151·2)	(−7·2)	(222)	(1147)	(1890)
1916.				°	°	°			
68·327	HL, AM		0·969	244·1	217·8	−26·9			64
			0·957	262·9	214·0	− 8·8			92
			0·831	245·3	196·1	−24·4			334
			0·821	255·5	195·8	−15·9			89
			0·835	290·5	193·4	+12·7			111
			0·692	311·2	174·1	+21·1			55
		7649	0·957	252·7	214·6	−18·6	12	95	1491*c*
		7650	0·350	238·7	158·5	−17·3	99	488	
		7651	0·517	326·3	157·8	+18·6	70	477	
		7657	0·501	43·5	119·5	+14·5	3	9	
C.		7660	0·614	46·7	112·3	+18·5	11	23	
			0·809	51·8	96·0	+24·9			46
			0·782	69·3	92·3	+11·3			198
			0·842	109·2	82·7	−20·0			281
			0·913	56·4	82·2	+26·6			39
			0·911	72·6	77·5	+12·6			199
			0·971	48·2	74·5	+37·6			121
			0·923	111·7	72·2	−22·7			132
			0·963	82·5	67·1	+ 5·2			68
			0·954	125·5	67·0	−35·9			71
Mar. 9				(−23·5)	(140·3)	(−7·2)	(195)	(1092)	(3391)
69·341	N, AM		0·982	251·7	207·5	−19·2			199
			0·931	248·3	196·3	− 22·7			483
			0·923	288·3	191·1	+ 3·8			194
			0·915	309·7	182·8	+31·9			92
			0·804	288·9	177·4	+10·5			103
			0·796	300·3	173·3	+18·7			228
			0·747	320·9	159·5	+29·3			56
		7650	0·533	248·3	158·0	−17·5	107	438	
		7651	0·643	310·7	157·7	+18·6	80	426	
		835g	0·643	325·8	150·4	+25·4	0	13	
		7656	0·362	251·9	147·5	−13·2	3	8	
C.		*835h*	0·624	334·4	144·5	+27·2	0	10	
		7656*	0·339	236·4	144·1	−17·7	0	2	
		835i	0·473	350·9	131·5	+20·5	0	4	
		7657	0·365	15·3	121·2	+13·3	6	31	
		7660	0·504	30·6	111·2	+18·7	8	29	
		7663	0·783	64·5	80·1	+14·8	1	2	31*f*
		7664	0·909	44·3	75·2	+36·2	4	14	231*f*
			0·869	67·7	70·6	+15·3			128
			0·836	110·1	70·1	−20·7			102
			0·890	79·8	65·5	+ 5·6			94
			0·978	107·8	47·5	−18·9			127
Mar. 10				(−23·7)	(126·9)	(−7·2)	(209)	(977)	(2068)

Group 7659, March 6–7. A close pair of very small spots.
Group 7660, March 6–13. Two or three small spots, some of which are fairly stable. One small spot alone remains after March 10. Perhaps a return or revival of Group 7637.
Group 7661, March 7–8. A cluster of very small spots, of which only one remains on March 8.
Group 7662, March 7–8. A very small spot, possibly a revival of Group *834r*.
Group 7656*, March 10–13. Intermittent. One or two very small markings *s* Group 7656.
Group 7663, March 10–15. A very small spot on March 10, not seen on March 11. A very small spot, but probably a fresh formation, is seen near the place on March 12, 13, and 15.
Group 7664, March 10–20. A number of small, very unstable spots distributed sparsely in a very long line inclined to the equator. The group is not seen on March 14.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
70·347	N, HL		0·978	247·5	193·4	−23·4			289
			0·936	285·7	180·5	+11·9			143
			0·908	295·2	174·0	+19·2			183
			0·822	255·0	169·4	−16·5			270
			0·859	309·5	162·4	+28·4			99
		7651	0·775	301·5	157·8	+18·7	97	463	269*c*
		7650	0·696	251·9	157·5	−17·7	109	504	189*c*
C.		7656	0·549	257·5	146·9	−12·8	1	13	
		7657	0·399	338·3	122·4	+14·5	4	28	
		7660	0·421	359·6	113·9	+17·6	4	13	
		835j	0·622	116·7	77·0	−22·0	0	7	
		7664	0·859	37·9	72·3	+37·3	6	32	185*c*
		835k	0·763	109·1	64·1	−19·2	0	12	
			0·894	108·0	49·7	−19·3			179
			0·962	109·0	38·2	−20·2			385
Mar. 11				(−23·9)	(113·7)	(−7·2)	(221)	(1072)	(2191)
71·520	HL, AM		0·981	290·7	173·5	+18·6			192
			0·944	256·7	169·9	−14·9			189
			0·937	246·0	168·6	−24·9			35
			0·772	251·3	148·6	−18·9			146
		7651	0·902	294·9	157·8	+18·7	91	483	494*f*
		7650	0·853	253·5	157·2	−17·8	96	483	759*c*
G.		7657	0·552	310·1	123·9	+14·3	0	16	
		7660	0·486	328·3	113·7	+17·4	1	4	
		835l	0·346	28·7	88·5	+10·5	0	3	
		7663	0·454	35·3	82·5	+14·7	1	4	
		7664	0·767	26·6	72·9	+36·7	2	59	82*c*
			0·838	107·9	41·0	−18·9			170
			0·907	109·2	32·4	−20·4			286
Mar. 12				(−24·1)	(98·2)	(−7·2)	(191)	(1052)	(2353)
72·307	N, AM		0·842	244·1	144·7	−25·6			123
			0·822	295·5	138·2	+16·2			154
			0·675	300·9	124·4	+14·5			127
		7651	0·958	292·1	157·2	+18·7	93	509	513*f*
		7650	0·927	253·8	156·7	−17·7	77	397	1178*c*
		7656*	0·838	255·9	145·2	−15·7	0	13	157*c*
C.		7660	0·581	314·9	113·3	+17·7	0	4	
		7663	0·385	14·5	82·1	+14·6	1	7	
		7664	0·725	16·2	73·2	+37·0	2	22	193*c*
		835m	0·350	132·7	71·9	−20·5	0	11	
			0·723	108·4	41·7	−18·3			185
			0·830	108·9	31·6	−19·6			338
			0·925	57·2	27·5	+26·6			56
Mar. 13				(−24·3)	(87·8)	(−7·2)	(173)	(963)	(3024)
1916.				°	°	°			
73·331	N, HL		0·936	256·3	144·6	−15·3			225
			0·921	245·9	142·1	−25·0			278
			0·916	291·6	136·7	+16·5			165
			0·838	285·3	128·9	+ 8·6			39
			0·803	293·4	123·5	+13·9			289
C.			0·918	206·7	122·3	−64·2			25
			0·724	304·8	113·1	+18·8			62
		7650	0·987	253·0	156·6	−17·9	124	424	581*c*
		7651	0·996	280·6	156·1	+18·6	64	229	475*f*
Mar. 14				(−24·4)	(74·3)	(−7·2)	(188)	(653)	(2139)
74·321	HL, AM		0·990	253·4	144·6	−17·4			223
			0·967	245·3	138·0	−25·7			135
			0·976	288·4	135·7	+16·2			194
			0·904	233·5	124·9	−35·9			68
			0·908	288·8	123·4	+13·8			494
			0·866	247·7	121·4	−22·8			85
C.			0·837	299·7	111·8	+20·1			152
		7663	0·511	315·8	82·8	+14·8	0	4	
		7664	0·702	345·2	74·0	+35·7	7	41	
		7665	0·500	128·2	35·9	−24·4	0	6	
		835n	0·498	96·6	31·3	− 9·4	0	7	
		835o	0·814	110·1	6·9	−20·4	0	8	
			0·957	68·8	351·9	+17·9			111
Mar. 15				(−24·6)	(61·3)	(−7·1)	(7)	(66)	(1462)
75·355	N, AM		0·942	248·4	119·1	−22·7			79
			0·920	296·3	109·4	+20·8			98
			0·845	259·8	105·9	−12·4			95
			0·848	304·6	97·5	+24·3			172
			0·779	292·4	95·1	+12·5			179
		835p	0·963	289·0	118·9	+16·1	2	18	336*c*
C.		7664	0·751	333·9	71·7	+35·8	8	74	184*c*
		835q	0·412	353·4	50·5	+16·9	0	7	
		7665	0·331	149·6	37·2	−23·5	7	28	
		835r	0·298	55·0	33·6	+ 2·9	0	5	
		7666	0·993	122·2	321·4	−32·7	0	16	130*p*
			0·884	66·6	350·0	+16·8			171
Mar. 16				(−24·8)	(47·7)	(−7·1)	(17)	(148)	(1444)
76·519	N, AM		0·940	258·9	103·1	−12·8			132
C.			0·963	293·8	102·3	+20·5			128
			0·926	301·9	93·1	+26·0			113
			0·889	286·6	92·4	+11·3			320

Group 7665, March 15–20. A very small marking on March 15. A cluster of small spots on March 16, of which two remain on the succeeding days. The two spots move apart, and only the leader remains on March 19.
Group 7666, March 16–21. A small spot not seen on March 19.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
				°	°	°			
1916.									
76·519	N, AM		0·791	252·1	84·6	−18·5			257
			0·818	294·2	82·7	+15·1			97
		7664	0·847	319·9	74·0	+35·1	7	70	401*c*
		835s	0·372	262·7	54·2	− 9·3	1	8	
		7665	0·303	199·0	38·5	−23·7	11	25	
		7667	0·339	26·6	23·5	+10·5	12	23	
C.		7668	0·941	108·7	321·2	−19·9	10	37	283*c*
		7666	0·948	122·5	320·1	−33·0	3	12	256*p*
			0·824	54·7	345·2	+23·7			62
			0·888	77·1	331·6	+ 8·0			29
			0·952	64·1	325·1	+22·0			147
Mar. 17				(−24·9)	(32·3)	(−7·1)	(44)	(175)	(2225)
77·340	N, HL		0·991	258·0	104·8	−12·7			137
			0·953	284·1	91·6	+11·0			236
			0·959	300·6	88·7	+26·6			131
			0·878	252·4	83·5	−18·9			358
			0·889	290·6	80·6	+14·7			191
		7664	0·898	314·6	72·4	+34·7	19	92	461*c*
		7665	0·397	223·2	38·7	−23·6	12	16	
		7669	0·187	226·8	29·6	−14·3	0	2	
C.		7667	0·302	354·6	23·1	+10·3	3	16	
		835t	0·448	26·8	9·4	+16·5	2	8	
		7668	0·857	108·5	322·2	−19·5	27	141	159*c*
		7666	0·891	123·3	319·3	−32·8	5	12	178*p*
			0·882	61·8	325·5	+20·8			79
			0·941	115·6	310·5	−26·4			60
			0·943	106·2	309·9	−17·7			75
			0·975	72·4	307·2	+15·3			106
Mar. 18				(−25·0)	(21·5)	(−7·1)	(68)	(287)	(2171)
78·451	HL, AM		0·966	251·0	83·1	−20·1			245
			0·929	286·1	72·5	+12·1			87
			0·882	248·8	69·0	−22·0			119
		7664	0·967	308·8	73·1	+34·7	2	75	619*f*
		7665	0·596	241·2	41·1	−22·4	6	10	
		7669	0·398	249·6	29·4	−14·4	1	4	
		7667	0·397	319·4	22·0	+10·7	2	13	
C.		7672	0·174	231·8	14·8	−13·0	0	6	
		7668	0·712	111·1	322·0	−19·9	16	99	101*c*
			0·778	54·0	324·2	+22·1			68
			0·769	128·6	320·8	−33·6			210
			0·858	117·6	308·3	−27·2			73
			0·902	68·8	306·2	+15·6			124
			0·872	107·0	305·7	−18·2			141
Mar. 19				(−25·2)	(6·8)	(−7·0)	(27)	(207)	(1787)
				°	°	°			
1916.									
79·341	HL, AM		0·959	249·5	69·9	−21·6			94
		7664	0·992	306·1	71·0	+34·3	0	42	433*f*
		7665	0·732	245·4	41·1	−22·7	1	4	153*c*
		7670	0·480	243·5	21·9	−18·6	9	32	
		836a	0·442	13·9	348·7	+18·3	0	6	
		7668	0·543	115·3	323·9	−19·5	13	86	
C.		7666	0·666	133·1	319·9	−32·7	0	2	
		7671	0·980	75·5	278·9	+12·6	15	187	785*f*
			0·800	65·6	306·4	+14·7			28
			0·826	120·1	300·9	−28·6			62
			0·823	109·9	299·7	−20·3			42
			0·953	67·1	286·9	+19·3			24
			0·924	111·9	286·8	−22·9			84
Mar. 20				(−25·3)	(355·1)	(−7·0)	(38)	(359)	(1705)
80·351	HL, AM		0·874	249·1	43·0	−21·7			406
			0·770	247·6	31·6	−21·6			134
		7670	0·637	248·8	20·5	−18·8	0	19	
		7672	0·565	257·1	16·1	−13·0	5	25	
		7673	0·484	33·4	325·7	+17·0	0	2	
C.		7668	0·366	127·0	323·8	−19·3	16	114	
		7666	0·553	143·5	318·9	−32·8	0	8	
		7671	0·924	71·8	277·2	+13·8	45	400	664*c*
		7674	0·983	110·0	260·6	−20·9	0	13	69*f*
			0·892	60·3	285·0	+22·4			83
Mar. 21				(−25·4)	(341·8)	(−7·0)	(66)	(581)	(1356)
81·538	N, M		0·943	248·8	37·6	−22·2			496
			0·891	253·7	29·8	−17·7			85
			0·886	284·8	26·3	+ 9·7			116
			0·831	252·0	22·5	−18·7			88
		7672	0·768	258·8	16·6	−13·0	12	59	97*c*
		7673	0·399	353·4	328·9	+16·4	1	2	
		7668	0·218	172·7	324·5	−19·3	30	101	
C.		7671	0·803	67·1	276·8	+13·7	103	760	399*c*
		7674	0·928	110·6	257·3	−21·7	3	13	293*c*
			0·813	54·4	280·3	+23·4			70
			0·902	36·9	280·1	+41·4			28
			0·928	76·2	260·2	+10·0			68
			0·974	104·8	248·2	−15·9			222
Mar. 22				(−25·6)	(326·2)	(−6·9)	(149)	(935)	(1962)
82·494	HL, AM		0·976	257·9	31·9	−13·3			61
C.			0·973	248·9	31·5	−22·0			81
			0·950	283·1	23·3	+10·1			120

Group 7667, March 17–19. Two or three very small spots.
Group 7668, March 17–27. A pair of small spots on March 17, gradually developing on the succeeding days into a composite spot, followed by several small spots in a straight train. The leader breaks up and remains alone on March 26 as a close pair.
Group 7669, March 18–19. A very small spot.
Group 7672, March 19–24. A small but distinct spot on March 19; on March 21, a cluster of small unstable spots showing a tendency to move apart. Intermittent group.
Group 7670, March 20–21. A cluster of very small spots on March 20; a single diffused marking on March 21.
Group 7671, March 20–April 1. A very large and complex group led by a large well-defined spot. The group appears like a fine stream of normal type with the addition of two or three minor streams diverging from the main one in the *sp* direction.
Group 7673, March 21–25. One or two very small faint spots, not seen on March 23. The group has revived by March 24 as a few very small spots in a straight stream.
Group 7674, March 21–24. A pair of small spots on March 22. The leading spot is seen alone on March 21; the following on March 23 and 24.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
82·494	HL, AM		0·928	252·8	22·4	−18·5			158
			0·931	303·9	14·5	+28·1			103
		7672	0·881	259·4	15·8	−12·6	3	26	292*c*
		836b	0·498	311·8	335·8	+13·0	1	17	
		7668	0·290	221·1	325·1	−19·3	16	55	
C.		7671	0·677	60·7	276·2	+13·8	143	1086	
		7674	0·851	110·9	255·1	−21·4	1	11	178*c*
			0·823	72·7	260·8	+ 9·9			76
			0·904	111·7	248·3	−22·5			144
			0·913	103·9	246·9	−15·4			190
			0·967	112·3	236·9	−23·3			199
Mar. 23				(−25·7)	(313·5)	(−6·9)	(164)	(1195)	(1602)
83·434	HL, N	7672	0·957	258·2	15·0	−13·3	0	15	289*p*
		7673	0·583	312·2	327·8	+16·8	5	24	
		7668	0·448	240·2	325·3	−19·2	11	35	
		7671	0·537	49·4	276·3	+14·2	146	814	
		7674	0·729	113·5	255·2	−21·8	1	12	58*c*
G.		7675	0·973	118·0	223·1	−28·7	0	19	143*c*
			0·803	105·2	247·5	−16·2			71
			0·889	75·0	240·7	+ 9·9			29
			0·892	112·2	237·6	−22·9			218
			0·958	102·4	227·0	−13·8			157
			0·987	107·4	218·8	−18·3			200
Mar. 24				(−25·8)	(301·1)	(−6·9)	(163)	(919)	(1165)
84·441	HL, AM		0·926	289·5	352·4	+15·1			100
			0·906	300·9	346·2	+24·2			83
		7673	0·735	299·7	329·4	+16·2	5	17	
		7668	0·622	247·6	325·2	−19·1	12	27	
		7671	0·406	28·3	276·5	+14·2	119	658	
G.		7675	0·916	118·3	221·4	−28·6	4	39	156*c*
			0·796	112·6	235·7	−22·0			34
			0·883	101·9	225·4	−13·6			108
			0·928	106·5	219·0	−17·8			384
			0·989	69·3	209·7	+19·2			26
			0·982	111·3	207·3	−22·1			158
Mar. 25				(−25·9)	(287·9)	(−6·8)	(140)	(741)	(1049)
85·340	N, AM		0·839	296·0	328·0	+17·4			125
			0·825	305·9	323·0	+24·3			67
G.		7668	0·760	251·1	325·2	−18·7	7	28	
		7671	0·358	358·0	276·7	+14·1	132	725	
		7675	0·835	119·8	220·7	−28·5	15	64	89*c*
1916.				°	°	°			
85·340	N, AM	7676	0·941	66·8	210·0	+19·0	28	98	110*c*
			0·838	54·3	227·6	+24·8			37
			0·780	98·9	224·5	−11·1			45
G.			0·849	107·0	217·6	−18·0			363
			0·924	111·3	207·7	−22·3			111
			0·971	110·5	198·6	−21·4			197
Mar. 26				(−25·9)	(276·0)	(−6·8)	(182)	(915)	(1144)
86·305	HL, AM		0·919	235·8	329·3	−33·9			62
			0·932	291·4	328·3	+17·1			214
			0·919	298·8	324·3	+23·2			96
		7668	0·880	252·0	325·3	−18·9	4	17	316*f*
		7671	0·421	328·0	276·6	+14·3	66	584	
C.		7675	0·728	123·4	219·7	−28·5	12	37	
		7676	0·855	62·8	210·0	+19·0	37	202	160*c*
			0·735	109·2	216·4	−18·6			228
			0·833	112·8	207·2	−22·7			243
			0·917	111·6	196·2	−22·4			301
			0·946	70·5	195·5	+15·9			106
Mar. 27				(−26·0)	(263·3)	(−6·7)	(119)	(840)	(1726)
87·336	HL, AM		0·975	292·1	323·3	+19·8			130
			0·938	251·3	320·2	−19·8			440
			0·876	237·8	309·7	−31·3			100
			0·879	293·4	306·9	+16·8			96
		7671	0·567	308·2	277·0	+14·5	65	479	
		7675	0·586	130·9	219·6	−28·3	9	57	
C.		7676	0·746	56·1	208·9	+19·5	34	340	110*c*
		7677	0·956	71·5	179·8	+15·4	5	29	239*f*
		7678	0·979	100·1	170·7	−11·2	5	43	811*s*
			0·804	113·4	196·8	−22·7			240
			0·859	66·5	194·8	+16·2			126
			0·901	114·9	185·3	−25·3			172
Mar. 28				(−26·1)	(249·7)	(−6·7)	(118)	(948)	(2464)
88·405	HL, AM		0·951	235·2	307·8	−35·0			147
			0·937	245·9	305·8	−24·8			172
			0·947	292·3	303·0	+18·6			71
		7671	0·748	297·1	279·0	+15·0	45	338	232*p*
G.		*836c*	0·691	317·7	266·4	+25·0	0	3	
		7675	0·448	146·9	219·5	−28·3	7	41	
		7676	0·600	45·0	209·0	+19·2	42	283	
		7677	0·872	68·1	178·8	+15·3	6	31	100*c*
		7678	0·901	99·2	170·8	−11·1	9	43	892*s*

Group 7675, March 24–April 5. A regular spot with some very small companions. The group, after several changes, has nearly disappeared by April 1, but has revived as a sparse stream by April 2. The leader spot increases greatly before it reaches the West limb on April 5.

Group 7676, March 26–April 6. A straight stream of spots, of which the last is the largest and best defined. This rear spot breaks up by March 30, but reforms again immediately as a very large composite spot, and on April 3 it includes almost the whole of the group. After this it diminishes, and some small spots form following it.

Group 7677, March 28–30. A small composite spot, with some very small faint and distant followers, seen only on March 29.

Group 7678, March 28–April 3. A small regular spot followed by some very faint markings on March 30 and April 1.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
88·405	HL, AM	7679	0·970	70·2	162·8	+17·4	32	240	684*c*
			0·923	56·6	175·6	+27·3			72
G.			0·973	109·4	157·7	−20·4			803
Mar. 29				(−26·2)	(235·6)	(−6·6)	(141)	(979)	(3173)
89·457	HL, AM		0·955	245·4	295·4	−25·4			51
		7671	0·875	291·3	279·1	+15·0	32	302	724*c*
		7675	0·379	173·8	219·0	−28·6	5	11	
		7676	0·471	24·2	209·9	+18·8	55	312	
C.		7677	0·725	60·9	180·7	+15·6	2	7	84*f*
		7678	0·762	99·0	171·8	−11·1	5	65	408*s*
		7679	0·893	66·3	162·8	+17·7	41	294	896*c*
		7680	0·902	110·8	156·9	−21·6	0	24	544*c*
			0·955	109·0	148·0	−20·1			541
Mar. 30				(−26·2)	(221·7)	(−6·6)	(140)	(1015)	(3248)
90·360	HL, AM		0·938	302·6	272·6	+27·5			116
			0·756	246·6	258·0	−21·8			140
		7671	0·953	288·3	279·3	+15·2	31	360	1410*c*
		7675	0·402	200·2	218·8	−28·5	4	19	
		7676	0·441	0·3	209·7	+19·5	66	484	
		7678	0·605	100·1	172·6	−11·3	13	51	
C.		7679	0·797	61·9	162·4	+17·7	30	248	341*c*
		7680	0·785	110·9	158·6	−20·3	22	92	255*c*
		7681	0·975	78·0	134·4	+10·1	90	818	708*c*
			0·717	103·4	164·0	−14·1			38
			0·927	59·7	148·1	+24·9			243
			0·894	110·1	146·1	−20·8			518
Mar. 31				(−26·3)	(209·8)	(−6·5)	(256)	(2072)	(3769)
91,350	HL, AM		0·863	248·3	256·3	−22·0			220
			0·781	252·1	247·9	−18·0			90
		7671	0·995	286·5	278·6	+15·6	19	192	907*f*
		7675	0·502	220·2	218·3	−28·6	1	5	
		7676	0·483	337·3	208·1	+20·0	50	454	
		836d	0·314	168·9	192·9	−24·4	1	3	
		7678	0·419	103·4	172·2	−11·5	7	26	
G.		7679	0·661	53·9	162·8	+17·5	43	298	
		7680	0·645	113·8	157·9	−20·2	20	66	
		7681	0·910	75·4	133·4	+10·4	117	1060	1513*c*
			0·915	23·7	160·4	+51·7			57
			0·810	53·9	151·1	+24·0			260
			0·757	110·9	148·1	−20·0			225
			0·872	52·7	145·1	+27·9			113
			0·866	116·9	137·4	−26·4			334
Apr. 1				(−26·3)	(196·7)	(−6·5)	(258)	(2104)	(3719)
1916.				°	°	°			
92·466	HL, AM		0·927	251·0	250·5	−19·9			286
			0·803	244·2	234·3	−24·4			239
		7683	0·805	300·4	229·6	+19·8	0	12	68*c*
		7675	0·673	234·0	220·0	−28·3	9	43	
		7676	0·606	316·6	208·3	+20·3	98	454	
		836e	0·384	236·7	201·7	−18·2	1	12	
		7678	0·163	122·4	174·0	−11·3	4	16	
C.		7679	0·511	38·0	162·8	+17·7	44	306	
		7680	0·425	124·1	160·1	−19·7	6	18	
		7682	0·434	113·6	157·7	−15·8	8	12	
		7681	0·788	71·0	132·9	+10·7	160	1102	1370*c*
			0·693	45·1	149·7	+23·8			120
			0·793	46·1	141·6	+28·5			89
			0·974	72·1	106·9	+15·7			82
Apr. 2				(−26·4)	(182·0)	(−6·4)	(330)	(1975)	(2254)
93·366	HL, AM		0·974	249·6	248·3	−21·3			65
			0·891	247·1	233·1	−23·3			145
			0·888	234·2	230·8	−34·5			83
			0·791	254·1	222·4	−16·5			166
		7683	0·902	295·7	229·7	+19·8	25	67	146*c*
		7675	0·824	239·9	224·0	−28·3	11	35	81*c*
		7676	0·716	306·6	207·7	+20·2	74	351	
		7678	0·119	222·2	174·8	−11·4	1	10	
G.		*836f*	0·122	180·6	170·1	−13·4	1	4	
		7684	0·170	150·5	165·2	−14·8	1	17	
		7679	0·425	17·4	162·5	+17·5	43	264	
		7680	0·274	138·7	159·2	−18·1	6	33	
		7681	0·641	65·4	133·9	+10·2	146	800	462*sf*
			0·949	63·2	103·4	+22·9			121
			0·934	75·3	103·2	+11·3			297
			0·994	76·3	88·3	+12·7			654
Apr. 3				(−26·4)	(170·1)	(−6·4)	(308)	(1581)	(2220)
94·521	HL, AM		0·898	252·0	219·2	−18·9			376
			0·802	242·8	206·9	−25·4			42
		7683	0·977	291·9	229·0	+19·7	9	133	248*c*
		7675	0·945	242·9	226·3	−27·6	17	80	247*c*
		7676	0·850	299·1	207·2	+20·6	33	266	416*c*
G.		7684	0·225	218·5	163·3	−16·3	4	11	
		7679	0·425	344·0	161·9	+17·7	25	120	
		7682	0·167	202·7	158·7	−15·0	4	23	
		7685	0·291	353·7	156·7	+10·4	23	51	
		7681	0·435	49·8	135·2	+10·3	120	719	
		7686	0·951	71·1	85·9	+15·8	3	122	580*c*

Group 7679, March 29–April 8. Probably a return of Group 7651. A large composite spot, usually with a few very small unstable followers widely scattered. The chief spot breaks up after April 3. Group 7680, March 30–April 3. Probably a return of Group 7650; evidently connected with it. A large area of disturbance in which small unstable spots form and disappear irregularly.

Group 7681, March 31–April 11. A very large well-developed spot, followed by a very long train composed of a great number of small unstable spots in constant change. The train has disappeared by April 10, leaving the chief spot alone.

Group 7682, April 2–8. A disturbed area, *n* of Group 7680, in which small unstable spots form and disappear irregularly. The group is not seen on April 3 and 7.

Group 7683, April 2–4. Some very small spots forming near the West limb on April 2, and developing on the two succeeding days into a stream.

Group 7684, April 3–6. A few very small markings on April 3, *sp* Group 7681. All but one have disappeared by April 4, and this develops into a small composite spot.

Group 7685, April 4–8. A stream of small spots forming suddenly *sf* Group 7679. Only one very small spot remains on April 7.

Group 7686, April 4–12. An irregular cluster of small faint unstable spots. Only one spot remains on April 10, but some faint companions have formed near it by April 11.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
94·521	HL, AM		0·840	68·8	101·3	+13·9			80
G.			0·928	58·2	93·4	+26·3			89
			0·941	113·0	84·0	−23·7			82
Apr. 4				(−26·4)	(154·9)	(−6·3)	(238)	(1525)	(2160)
95·380	HL, AM		0·958	251·6	217·7	−19·3			378
			0·883	244·6	205·3	−25·4			120
			0·790	245·7	194·8	−22·9			145
		7675	0·982	243·1	224·2	−27·5	36	285	554*c*
		7676	0·923	295·4	206·3	+20·5	30	259	627*c*
		836g	0·587	315·4	169·3	+19·0	1	4	
		7684	0·379	241·0	163·7	−16·4	3	8	
G.		7679	0·497	324·8	161·1	+18·0	17	76	
		7682	0·301	231·3	157·7	−16·8	3	36	
		7685	0·364	323·5	156·3	+10·9	17	63	
		7681	0·322	25·3	135·6	+10·7	100	642	
		7686	0·874	69·5	86·0	+14·5	12	169	971*c*
			0·888	54·2	89·3	+27·7			83
			0·844	112·2	86·4	−22·0			124
			0·924	113·0	75·7	−23·6			99
Apr. 5				(−26·4)	(143·6)	(−6·2)	(219)	(1542)	(3101)
96·349	N, AM		0·959	246·6	205·2	−24·1			143
			0·875	244·6	191·4	−25·1			309
			0·711	256·0	176·0	−14·2			433
		7676	0·983	292·3	206·9	+20·6	21	157	663*c*
		7684	0·561	249·8	163·9	−16·4	1	3	
		7679	0·617	310·3	160·3	+18·0	16	71	
		7682	0·469	247·1	157·4	−16·1	3	26	
C.		7685	0·497	305·0	155·2	+10·8	6	49	
		7681	0·306	345·1	135·4	+11·0	117	852	
		7686	0·758	65·3	85·7	+14·1	17	122	331*c*
		7687	0·969	105·0	54·3	−16·0	0	20	58*f*
			0·718	111·4	85·8	−19·6			102
			0·841	114·8	74·2	−24·1			75
			0·930	49·0	72·7	+34·4			126
Apr. 6				(−26·4)	(130·8)	(−6·2)	(181)	(1300)	(2240)
97·611	HL, AM		0·941	241·4	184·5	−28·9			232
			0·931	297·0	177·7	+22·4			42
G.			0·919	289·9	177·7	+15·6			100
			0·867	296·8	169·1	+19·6			144
			0·712	248·2	158·5	−19·7			135
			0·738	313·8	150·2	+25·7			220
1916.				°	°	°			
97·611	HL, AM	7688	0·915	251·7	180·8	−19·2	18	117	596*n*
		7679	0·782	299·2	159·8	+18·1	6	29	197*c*
		7685	0·702	292·0	155·4	+10·7	5	8	
		7681	0·468	307·1	136·3	+10·7	76	430	
		7686	0·544	52·4	87·8	+13·9	8	63	
G.		7687	0·879	105·0	52·2	−16·1	9	34	256*c*
			0·858	41·6	69·8	+35·5			60
			0·952	77·2	43·7	+10·2			63
			0·943	112·2	42·9	−23·0			228
			0·995	101·4	29·2	−11·9			72
Apr. 7				(−26·4)	(114·1)	(−6·1)	(122)	(681)	(2345)
98·352	N, AM		0·968	287·6	177·2	+15·3			55
			0·970	297·4	175·5	+24·7			42
			0·927	293·6	168·2	+19·2			136
			0·817	244·9	158·1	−23·9			97
			0·825	305·4	151·8	+24·5			284
		7688	0·969	252·4	180·9	−18·5	28	133	506*nf*
		7679	0·863	295·4	159·3	+18·3	3	6	525*c*
		7682	0·808	254·2	158·1	−16·2	1	18	280*c*
		7685	0·807	288·0	155·5	+10·7	4	6	107*p*
G.		7681	0·585	297·7	136·0	+10·7	69	360	
		7686	0·425	37·4	88·9	+13·8	9	66	
		7687	0·781	106·7	53·1	−16·8	12	42	90*c*
			0·790	36·6	69·6	+34·4			45
			0·935	44·4	47·5	+38·7			150
			0·886	74·4	44·2	+10·8			72
			0·876	113·5	43·4	−23·4			153
			0·953	118·2	31·5	−28·6			44
			0·962	100·8	29·5	−12·0			248
Apr. 8				(−26·4)	(104·3)	(−6·0)	(126)	(631)	(2834)
99·436	N, AM		0·983	252·8	170·6	−18·0			231
			0·944	284·2	158·7	+11·3			207
			0·949	291·7	158·0	+18·3			595
			0·924	254·2	158·0	−16·8			430
			0·906	243·0	154·7	−26·9			168
			0·921	300·4	151·0	+25·0			254
G.		7689	0·804	248·2	142·9	−21·0	4	17	519*c*
		7681	0·768	288·0	137·6	+ 9·7	47	277	416*c*
		7686	0·339	1·7	89·4	+13·8	5	40	
		7690	0·413	24·0	80·0	+16·2	2	12	
		7687	0·586	109·8	55·1	−16·4	3	9	
		7691	0·708	70·6	47·6	+ 9·1	7	35	38*c*
		7692	0·882	108·2	27·9	−18·9	1	20	108*c*

Group 7687, April 6–10. An irregular cluster of small faint unstable spots. Only one remains on April 10.
Group 7688, April 7–8. A stream of spots suddenly appearing near the West limb.
Group 7689, April 9–10. A small stream of spots suddenly appearing near the West limb.
Group 7690, April 9–10. One or two very small unstable spots *nf* Group 7686.
Group 7691, April 9–11. A small regular spot with a distant follower.
Group 7692, April 9–19. Two very small clusters on April 9. The group rapidly develops into a long straight stream of numerous unstable spots, most of which diminish and disappear after April 15.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
99·436	N, AM		0·710	23·8	69·7	+34·8			146
			0·874	38·6	45·7	+38·8			131
			0·819	114·5	35·9	−23·4			103
G.			0·882	56·6	35·4	+25·6			81
			0·884	101·2	27·5	−12·7			457
			0·984	109·2	9·0	−19·9			63
Apr. 9				(−26·4)	(90·0)	(−6·0)	(69)	(408)	(3947)
100·350	N, AM		0·981	253·8	157·8	−17·0			194
			0·983	283·1	155·6	+11·6			149
			0·969	244·9	154·6	−25·7			137
			0·979	290·5	153·3	+18·6			134
			0·972	297·1	149·8	+24·5			171
			0·826	239·1	131·6	−28·6			113
		7689	0·904	249·7	142·9	−20·8	15	46	461*c*
		7681	0·882	284·4	137·9	+ 9·7	43	273	1172*nf*
		7693	0·670	258·0	120·0	−12·4	1	7	
G.		7686	0·390	327·8	90·3	+13·4	4	7	
		7690	0·413	354·2	80·5	+18·3	0	1	
		7687	0·389	118·7	57·3	−16·2	0	5	
		7691	0·547	63·4	48·4	+ 9·2	6	24	
		836h	0·795	49·8	35·4	+26·5	2	3	
		7692	0·751	109·2	29·9	−18·4	8	56	
		7694	0·950	110·2	5·4	−21·1	0	3	89*p*
			0·820	31·9	44·1	+39·2			63
			0·831	103·9	21·6	−14·8			150
Apr. 10				(−26·4)	(78·0)	(−5·9)	(79)	(425)	(2833)
101·445	HL, AM		0·971	248·0	140·6	−22·7			189
			[illegible]	240·9	129·9	−29·0			116
		7681	0·970	281·9	137·8	+10·0	46	305	2118*nf*
		7693	0·824	258·2	119·2	−13·0	36	80	40*c*
		7686	0·559	307·0	90·8	+14·4	1	6	
G.		7695	0·235	54·7	52·5	+ 2·0	8	39	
		7691	0·372	46·7	47·7	+ 9·2	1	6	
		7692	0·582	113·7	29·5	−18·3	68	264	
		7694	0·859	111·0	4·5	−21·0	4	5	75*p*
			0·709	105·2	18·6	−14·9			98
Apr. 11				(−26·4)	(63·5)	(−5·8)	(164)	(705)	(2636)
102·320	HL, M		0·962	239·5	126·5	−30·8			117
C.			0·958	287·1	122·8	+14·6			1266
			0·884	302·1	107·2	+24·7			69
			0·847	288·4	107·0	+12·2			172
1916.				°	°	°			
102·320	HL, M		0·627	312·2	81·4	+19·8			77
		7693	0·929	258·3	120·7	−13·0	13	66	182*c*
		7686	0·690	296·0	91·3	+13·1	0	5	198*c*
		836i	0·386	341·1	59·3	+15·6	0	3	
		7695	0·143	356·1	52·5	+ 2·4	29	79	
C.		*836j*	0·425	138·4	34·0	−24·0	2	9	
		836k	0·381	108·7	30·3	−12·4	1	4	
		7692	0·437	120·6	28·7	−18·1	66	283	
		7694	0·726	112·5	6·5	−20·2	3	12	
			0·987	72·1	333·6	+16·5			297
Apr. 12				(−26·3)	(51·9)	(−5·8)	(114)	(461)	(2378)
103·356	HL, AM		0·936	283·9	105·8	+10·8			87
			0·895	302·8	94·8	+25·8			160
			0·828	291·1	90·8	+13·9			1008
			0·753	300·1	81·4	+18·0			493
		7693	0·996	259·0	123·8	−11·4	0	43	2348*f*
		836l	0·576	302·9	68·0	+13·3	6	13	
G.		7695	0·312	296·5	54·5	+ 2·5	23	94	
		836m	0·309	332·5	46·6	+10·2	0	3	
		7692	0·267	144·7	29·0	−18·2	62	246	
		7694	0·521	119·4	9·6	−19·8	1	13	
		7696	0·933	70·4	332·5	+15·9	4	19	325*f*
			0·949	113·1	326·1	−23·7			121
Apr. 13				(−26·3)	(38·3)	(−5·7)	(96)	431)	(2428)
104·424	N, AM		0·956	299·0	92·0	+25·6			72
			0·928	287·0	89·9	+13·5			452
			0·906	255·5	89·5	−15·5			67
			0·871	247·0	84·3	−22·7			94
			0·884	293·4	82·3	+17·6			305
			0·851	317·8	68·3	+35·0			64
		7695	0·521	283·7	54·5	+ 2·3	14	35	
G.		7692	0·231	202·3	29·5	−17·9	67	257	
		7694	0·358	135·3	8·7	−20·1	27	130	
		7696	0·819	66·6	333·1	+15·5	4	10	597*f*
			0·868	114·7	324·7	−24·2			118
			0·903	88·2	320·0	− 0·8			60
			0·955	70·8	314·4	+16·4			43
			0·956	107·5	310·6	−18·4			66
Apr. 14				(−26·2)	(24·2)	(−5·6)	(112)	(432)	(1938)
105·408	HL, AM		0·962	289·1	82·5	+16·6			427
G.			0·928	260·2	79·7	−11·1			55
			0·927	246·0	79·2	−24·2			164

Group 7693, April 10–13. A few very small spots on April 10, developing into a serpentine stream by April 11 and into two small clusters by April 12, of which only the following remains in view on April 13.

Group 7694, April 10–21. A very small spot at first preceded by a distant companion on April 12. The group has greatly increased in size by April 14 and becomes an irregular stream mostly composed of small and very unstable spots.

Group 7695, April 11–17. A few small spots in a straight stream on April 11. The group extends and breaks up on the succeeding days, and on April 14 only two very widely separated spots remain, of which the following has disappeared by April 15.

Group 7696, April 13–22. A disturbed area in which a very few small unstable spots appear irregularly: none are seen on April 10.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
105·408	HL, AM		0·858	246·2	69·6	−23·2			134
			0·902	220·8	69·1	−46·1			71
			0·898	314·3	63·1	+35·4			59
			0·786	333·4	38·3	+39·6			27
		7695	0·754	278·4	59·3	+ 2·6	5	11	23*c*
		7692	0·373	233·7	29·6	−18·0	44	258	
		7694	0·266	166·2	7·3	−20·4	47	182	
G.		*836n*	0·615	110·2	334·3	−16·7	1	5	
		7696	0·696	60·7	332·3	+15·6	2	7	67*f*
			0·775	118·1	322·4	−25·0			122
			0·840	56·6	321·2	+24·0			57
			0·886	67·2	312·6	+17·2			56
			0·887	108·5	308·6	−19·0			100
Apr. 15				(−26·2)	(11·2)	(− 5·5)	(99)	(463)	(1362)
106·398	N, AM		0·992	259·5	81·6	−11·1			57
			0·943	245·8	68·9	−24·6			147
			0·954	310·3	61·5	+35·7			90
			0·847	253·6	55·9	−16·8			102
			0·813	288·1	49·9	+11·3			60
			0·740	245·5	44·3	−21·7			41
			0·857	324·5	38·6	+40·1			63
C.		7695	0·889	275·4	60·2	+ 2·4	6	22	177*f*
		7692	0·546	243·8	29·1	−18·6	14	97	
		7694	0·290	208·7	6·6	−20·0	34	114	
		7696	0·564	47·3	332·5	+17·5	0	7	
			0·946	76·5	288·8	+10·9			350
			0·983	76·6	280·4	+12·0			285
Apr. 16				(−26·1)	(358·1)	(−5·4)	(54)	(240)	(1372)
107·386	HL, AM		0·926	253·8	53·3	−17·0			162
			0·899	286·2	46·8	+12·0			59
			0·865	247·1	44·4	−22·4			148
			0·815	241·0	37·7	−26·6			53
			0·902	318·1	35·5	+38·8			77
		7695	0·969	273·2	60·3	+ 1·7	10	46	316*f*
G.		7692	0·705	249·6	29·0	−18·1	7	27	370*p*
		7694	0·430	232·2	6·2	−20·2	32	181	
		837a	0·345	19·0	338·5	+13·6	2	4	
		7696	0·421	33·5	331·2	+15·3	1	10	
			0·847	73·4	289·5	+11·0			388
			0·919	74·1	280·5	+12·3			610
Apr. 17				(−26·0)	(345·1)	(−5·4)	(52)	(268)	(2183)
1916.				°	°	°			
108·591	N, HL		0·941	245·1	39·4	−25·2			150
		7692	0·885	252·3	31·3	−18·0	24	50	908*c*
		7694	0·618	243·3	5·0	−20·4	33	73	
		7696	0·387	358·9	329·5	+17·4	1	11	
		7697	0·953	61·9	261·6	+24·7	2	23	338*f*
G.			0·684	67·2	289·3	+11·2			175
			0·801	69·1	279·1	+13·2			376
			0·872	112·1	275·1	− 4·5			78
			0·908	68·9	267·2	+16·6			116
			0·964	114·8	253·9	−25·3			67
Apr. 18				(−25·9)	(329·1)	(−5·3)	(60)	(157)	(2208)
109·536	AM, HL	7692	0·959	251·9	30·8	−18·8	3	42	1031*c*
		7698	0·817	290·6	8·4	+13·5	2	12	36*c*
		7694	0·764	247·7	5·5	−20·3	15	37	207*c*
		7699	0·520	60·2	289·5	+10·2	0	5	
G.		7700	0·667	59·3	280·3	+15·6	0	3	
		7697	0·879	58·4	261·6	+24·4	4	29	802*f*
			0·835	114·9	261·3	−23·5			65
			0·942	115·7	246·3	−25·9			159
Apr. 19				(−25·9)	(316·7)	(−5·2)	(24)	(128)	(2300)
110·551	N, HL		0·978	252·6	22·0	−18·0			315
			0·913	231·0	6·4	−37·4			28
		7698	0·934	286·2	10·1	+13·1	1	4	103*nf*
		7694	0·885	249·7	5·3	−20·3	15	35	415*c*
		7696	0·578	309·4	331·0	+16·9	0	13	
		7699	0·360	40·8	289·5	+10·8	0	5	
G.		7700	0·485	51·9	280·4	+12·7	18	31	
		7697	0·776	52·0	261·1	+24·7	4	9	339*f*
		7701	0·982	67·0	227·4	+21·4	76	301	563*c*
		7702	0·982	117·6	223·2	−28·0	16	171	340*c*
			0·888	115·8	241·5	−25·2			72
			0·952	105·9	230·7	−16·7			240
Apr. 20				(−25·8)	(303·3)	(−5·1)	(130)	(569)	(2415)
111·324	HL, AM		0·975	285·5	8·1	+13·8			155
			0·956	232·9	5·2	−36·9			30
			0·698	303·9	330·6	+18·9			126
		7694	0·948	250·1	4·8	−20·4	8	22	439*c*
G.		7700	0·366	35·4	280·5	+12·4	8	30	
		7697	0·691	45·2	260·4	+24·9	3	13	} 112*c*
		837b	0·785	47·5	252·1	+28·2	1	3	
		7701	0·939	65·0	227·1	+21·4	47	296	392*c*

Group 7697, April 18–21. A small spot sometimes followed by a faint companion.
Group 7698, April 19–20. Two very small spots of which the following has disappeared by April 20.
Group 7699, April 19–20. A pair of very small faint spots on April 19, of which only one remains by April 20.
Group 7700, April 19–22. A very small marking on April 19; a wide pair of small well-defined spots on April 20, of which one has disappeared by April 22.
Group 7701, April 20–May 1. Probably a return of Group 7683. Two spots widely separated on April 20. The leader, and smaller of the two, soon breaks up and has nearly disappeared by April 23. The following spot has also divided by April 27, after which it soon diminishes.
Group 7702, April 20–May 2. Return of Group 7675. A very large composite spot diminishing steadily after April 24; proper motion equatorwards.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
111·324	HL, AM	7702	0·941	117·6	223·0	−27·6	22	295	547*f*
			0·779	119·7	244·4	−26·0			57
G.			0·862	119·3	235·2	−27·6			66
			0·915	107·8	226·7	−18·3			362
			0·983	70·1	216·1	+18·5			117
Apr. 21				(−25·7)	(293·0)	(−5·0)	(89)	(659)	(2403)
112·433	M, AM		0·834	295·2	330·6	+17·8			297
			0·736	237·2	322·2	−27·0			110
		7700	0·324	352·4	280·9	+13·8	0	6	
		7701	0·849	60·6	225·9	+21·6	40	242	591*c*
		7702	0·845	119·7	222·8	−27·5	45	318	604*f*
C.		7703	0·963	108·8	203·5	−19·4	0	5	96*f*
			0·811	109·2	224·8	−18·4			224
			0·918	67·2	215·4	+18·6			550
			0·972	64·7	205·8	+23·1			161
			0·958	104·0	204·6	−14·8			167
			0·966	117·0	203·0	−27·3			112
Apr. 22				(−25·6)	(278·4)	(−4·9)	(85)	(571)	(2912)
113·441	M, AM		0·926	292·3	329·5	+18·6			386
			0·861	241·7	322·0	−26·7			86
		7701	0·740	54·6	224·8	+21·7	40	224	
		77[illegible]2	0·724	123·9	222·7	−27·3	43	522	421*f*
		77[illegible]	0·873	109·4	204·6	−19·2	2	11	125*f*
G.			0·812	61·3	216·1	+19·8			317
			0·861	103·5	205·7	−14·0			213
			0·907	60·8	205·4	+23·8			159
			0·892	120·2	203·5	−29·0			136
			0·962	115·5	190·7	−25·8			158
			0·979	105·7	186·3	−16·3			74
Apr. 23				(−25·4)	(265·1)	(−4·8)	(85)	(757)	(2075)
114·401	HL, AM		0·928	272·5	337·8	+21·8			59
			0·973	289·9	326·5	+18·1			164
			0·940	243·7	322·0	−26·2			144
			0·894	293·3	312·1	+18·4			122
			0·677	297·8	290·5	+14·7			41
C.			0·862	336·9	282·8	+48·2			124
		7701	0·622	45·0	224·2	+21·9	30	177	
		7702	0·591	131·9	222·9	−27·2	86	538	261*f*
		7703	0·749	111·5	205·1	−19·1	3	9	111*f*
			0·702	54·0	215·2	+20·6			69
			0·730	104·3	205·9	−13·6			69

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
114·401	HL, AM		0·806	56·5	205·6	+23·2			190
			0·794	120·3	202·5	−26·6			176
			0·891	64·5	193·7	+20·1			138
			0·891	119·3	190·8	−28·2			132
C.			0·945	106·7	181·2	−17·3			507
			0·966	71·8	179·8	+16·2			105
			0·962	123·9	178·6	−33·8			119
			0·977	65·1	178·2	+23·1			101
Apr. 24				(−25·3)	(252·4)	(−4·7)	(119)	(724)	(2632)
115·322	M, AM		0·973	242·8	317·2	−27·5			107
			0·907	242·6	304·3	−26·7			91
			0·814	290·2	291·7	+13·4			312
			0·694	291·8	281·1	+11·4			129
		837c	0·546	336·6	254·0	+25·5	1	4	
		837d	0·180	159·0	236·4	−14·2	1	3	
		837e	0·105	98·4	234·2	− 5·5	0	2	
		837f	0·282	68·0	225·1	+ 1·6	0	10	
		7701	0·516	30·4	223·9	+21·9	23	159	
		7702	0·462	145·9	223·4	−26·8	85	433	
		7704	0·577	46·6	213·9	+19·2	0	2	
		7703	0·604	115·3	205·2	−18·6	3	8	
C.		7705	0·834	105·6	183·9	−15·6	20	49	600*c*
			0·753	49·4	201·0	+25·7			75
			0·939	24·4	197·0	+55·5			22
			0·785	124·6	192·4	−29·6			106
			0·820	62·4	190·0	+19·4			38
			0·951	28·7	190·0	+53·6			22
			0·967	31·4	183·0	+53·2			12
			0·899	69·8	179·1	+15·9			99
			0·912	124·0	176·4	−32·7			51
			0·934	61·7	176·0	+24·3			167
			0·950	107·8	168·2	−18·3			191
			0·972	72·2	166·0	+16·1			253
Apr. 25				(−25·2)	(240·2)	(−4·6)	(133)	(670)	(2275)
116·346	HL, AM		0·945	238·4	296·7	−31·2			66
			0·932	250·9	295·5	−19·4			90
			0·918	286·2	291·2	+13·0			440
			0·839	287·3	281·4	+11·8			256
C.			0·774	297·1	272·8	+17·4			148
		837g	0·401	338·3	235·6	+17·4	3	9	
		837h	0·289	171·5	224·1	−21·1	0	5	
		7701	0·447	6·5	223·6	+21·8	23	142	
		7702	0·385	172·3	223·4	−26·8	78	374	

Group 7703, April 22–26. A small spot.
Group 7704, April 25–29. A small disturbed area *sf* Group 7701, in which several very small unstable spots form and disappear irregularly.
Group 7705, April 25–May 4. Return or revival of Group 7688. A stream of normal type of which the leader is the largest and most stable member. The spots in the middle of the group have almost disappeared by April 28, and after a slight revival on April 29, they soon fade away. Some very small spots on May 2 represent the leader spot, and the group is not seen on May 3, though a very small marking is visible on May 4.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
116·346	HL, AM	7704	0·430	27·6	214·7	+17·9	2	7	
		7703	0·437	124·5	204·5	−18·5	1	11	
		7705	0·684	107·7	184·4	−15·3	37	143	
			0·792	66·3	178·1	+15·6			59
			0·848	57·3	175·3	+24·4			145
C.			0·865	109·4	167·3	−19·0			120
			0·922	67·3	162·9	+18·8			493
			0·960	116·1	153·1	−26·2			97
			0·969	106·9	150·7	−17·4			165
			0·977	79·5	150·2	+ 9·2			44
Apr. 26				(−25·1)	(226·7)	(−4·5)	(144)	(691)	(2123)
117·391	HL, M		0·983	285·1	290·6	+14·0			197
			0·919	283·1	278·1	+10·2			215
			0·870	291·7	270·1	+16·4			99
			0·787	309·6	255·5	+26·8			285
		7701	0·483	338·1	224·0	+22·2	32	124	
		7702	0·415	203·7	223·6	−26·5	51	329	
		7704	0·397	354·3	215·3	+18·8	8	24	
		7705	0·490	114·8	185·5	−15·7	41	147	
		7706	0·940	77·9	144·3	+ 9·8	3	11	288*c*
G.			0·747	50·7	173·5	+24·8			78
			0·826	64·6	161·4	+18·0			218
			0·939	37·8	158·1	+45·4			42
			0·883	149·7	155·8	−52·6			20
			0·890	119·9	151·8	−28·4			113
			0·891	107·8	150·1	−17·8			169
			0·928	62·1	149·5	+23·8			152
			0·959	113·7	139·3	−24·0			198
			0·972	71·1	138·8	+17·2			130
			0·991	79·3	131·8	+ 9·9			105
Apr. 27				(−24·9)	(212·9)	(−4·4)	(135)	(635)	(2304)
118·426	HL, AM		0·953	286·4	269·6	+14·2			245
			0·876	243·2	258·9	−25·4			69
			0·872	304·4	252·8	+27·0			1111
		7702	0·540	224·3	224·0	−26·5	49	297	
		7701	0·585	319·5	223·4	+22·4	33	174	
G.		7704	0·457	330·2	213·1	+19·1	11	41	
		7705	0·286	135·9	187·3	−16·0	27	114	
		7706	0·820	75·0	145·9	+ 9·7	3	11	437*c*
			0·729	59·0	158·1	+18·7			83
			0·842	55·4	149·0	+25·8			76
			0·817	122·8	147·7	−28·9			80
			0·798	111·2	147·3	−19·4			129
1916.				°	°	°			
118·426	HL, AM		0·909	68·3	137·0	+17·6			360
			0·912	117·6	134·4	−26·9			188
G.			0·924	78·6	133·0	+ 8·8			381
			0·970	71·6	125·6	+16·6			450
			0·966	101·6	123·8	−12·3			149
Apr. 28				(−24·8)	(199·2)	(−4·3)	(123)	(637)	(3758)
119·351	HL, AM		0·960	244·6	260·6	−25·5			63
			0·928	303·8	248·8	+29·1			415
			0·874	241·5	246·2	−26·8			85
		7702	0·667	234·2	224·0	−26·3	42	217	
		7701	0·698	307·4	223·5	+21·6	27	156	332*p*
		7704	0·577	313·2	213·4	+19·4	3	18	
		7705	0·202	176·4	186·2	−15·8	29	92	
		7707	0·625	65·0	151·8	+11·9	6	22	
		7706	0·692	70·9	145·6	+ 9·9	1	11	
G.		7708	0·993	79·8	104·9	+ 9·6	40	370	151*c*
		7709	0·995	104·6	101·9	−15·0	57	344	96*p*
			0·754	116·7	140·3	−22·6			103
			0·832	64·1	135·0	+18·6			365
			0·863	75·5	129·1	+10·2			347
			0·886	121·8	126·8	−30·0			73
			0·925	66·3	122·9	+20·0			338
			0·902	102·0	122·5	−12·6			179
			0·913	112·4	121·6	−22·1			69
Apr. 29				(−24·6)	(187·0)	(−4·2)	(205)	(1230)	(2616)
120·331	HL, AM		0·970	301·0	245·2	+28·7			242
			0·946	240·1	244·3	−29·6			55
			0·833	252·0	229·8	−17·2			220
		7702	0·793	239·8	223·6	−26·1	27	170	682*f*
		7701	0·808	300·7	222·2	+21·6	16	53	1295*c*
		7705	0·302	226·4	187·1	−15·9	7	56	
		7710	0·314	131·6	159·9	−15·9	4	14	
		7707	0·449	52·4	152·8	+12·0	20	95	
		837i	0·652	152·6	151·4	−39·0	0	2	
G.		7706	0·537	65·8	144·4	+ 9·1	0	6	
		7708	0·937	78·2	105·8	+ 9·6	63	301	216*c*
		7709	0·948	104·4	102·4	−15·0	41	292	299*f*
		7711	0·979	77·9	97·0	+11·0	134	602	477*c*
			0·792	121·8	124·9	−27·3			77
			0·831	64·0	122·1	+18·8			361
			0·805	104·0	120·7	−13·7			92
			0·911	127·5	111·4	−35·6			82
Apr. 30				(−24·4)	(174·0)	(−4·1)	(312)	(1591)	(4098)

Group 7706, April 27–30. Return of Group 7681. One or two small spots.
Group 7707, April 29–May 6. An irregular stream mostly composed of small unstable spots in continual change. The group diminishes after May 2.
Group 7708, April 29–May 11. A large regular spot, sometimes with one or two small followers. On May 7, however, the followers form quite a large cluster.
Group 7709, April 29–May 11. A large regular spot with occasionally some small followers.
Group 7710, April 30–May 4. A few very small unstable spots.
Group 7711, April 30–May 12. A very long irregular stream mostly composed of numerous small unstable spots in continual change. The spots in the following part of the group tend to die out: those in the preceding part to coalesce, forming a large composite spot by May 5, which becomes regular by May 12.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
121·363	HL, AM		0·883	252·4	222·0	−17·4			529
		7702	0·903	243·0	223·7	−26·0	27	125	1037*f*
		7701	0·910	296·5	221·6	+22·0	0	13	1359*c*
		7705	0·503	245·8	188·7	−15·3	6	35	
		7710	0·228	181·4	160·7	−17·1	0	11	
G.		7707	0·302	24·1	153·2	+11·9	30	117	
		7712	0·688	52·0	124·9	+21·7	0	4	163*c*
		7708	0·821	75·4	106·9	+ 9·6	52	332	161*c*
		7709	0·846	105·4	103·0	−15·1	38	294	456*f*
		7711	0·922	75·4	94·9	+11·8	78	728	876*c*
May 1				(−24·2)	(160·4)	(−4·0)	(231)	(1659)	(4581)
122·458	M, AM		0·954	291·9	215·5	+19·4			569
			0·918	253·1	212·4	−17·0			206
			0·870	302·5	200·1	+25·5			133
		7702	0·973	244·3	222·7	−25·8	12	83	549*f*
		7705	0·684	250·9	187·9	−15·8	1	12	
		7710	0·305	226·9	159·2	−15·8	4	18	
C.		7707	0·308	334·1	153·8	+12·1	20	135	
		837*j*	0·288	34·3	136·5	+ 9·9	0	2	
		7712	0·570	38·0	123·6	+23·0	0	5	
		7708	0·652	70·2	107·6	+ 9·7	41	288	82*c*
		7709	0·695	107·7	102·8	−15·0	47	263	351*f*
		7711	0·802	71·6	95·9	+12·2	68	465	931*c*
			0·985	90·0	66·1	− 0·7			68
May 2				(−24·1)	(145·9)	(−3·9)	(193)	(1271)	(2889)
123·345	HL, AM		0·965	239·9	208·5	−30·0			321
			0·973	290·1	208·4	+18·5			141
			0·913	249·9	199·6	−19·8			227
			0·936	301·7	198·2	+27·8			162
			0·841	237·5	188·3	−29·1			81
			0·808	252·7	187·4	−16·2			279
		7710	0·479	241·7	160·2	−16·5	6	22	
		7707	0·434	310·9	153·8	+12·8	18	90	
C.		7713	0·310	227·9	148·0	−15·6	2	7	
		7712	0·480	20·8	123·6	+22·8	0	3	
		7708	0·499	61·7	107·8	+10·3	41	294	
		7709	0·544	111·7	102·8	−14·8	46	257	
		7711	0·673	67·1	95·0	+12·2	104	609	553*c*
		7714	0·965	106·9	59·1	−17·4	0	15	384*f*
			0·790	112·5	83·4	−20·0			112
			0·891	114·8	72·4	−23·7			114
			0·938	87·3	64·9	+ 1·2			222
May 3				(−23·9)	(134·2)	(−3·8)	(217)	(1297)	(2596)
1916.				°	°	°			
124·333	HL, M		0·922	241·2	186·9	−27·8			241
			0·887	289·6	181·0	+15·4			260
			0·885	302·9	177·2	+26·7			142
			0·724	303·9	161·0	+20·9			104
		7705	0·920	254·9	187·9	−15·3	0	3	428*c*
		7710	0·645	248·6	159·7	−16·5	1	11	
		7707	0·581	297·5	152·8	+12·4	11	77	
C.		7713	0·485	242·7	147·7	−16·2	5	14	
		7715	0·463	6·6	117·8	+23·6	17	67	
		7708	0·340	42·6	107·6	+10·8	55	308	
		7709	0·361	123·0	102·9	−14·8	47	264	
		7711	0·518	57·7	94·5	+12·7	74	425	
		7714	0·890	107·5	58·6	−17·3	7	15	400*f*
			0·850	88·6	63·1	− 0·8			125
			0·989	108·3	39·0	−18·6			315
May 4				(−23·7)	(121·1)	(−3·7)	(217)	(1184)	(2015)
125·394	HL, AM		0·977	242·2	184·8	−27·9			78
			0·972	254·8	183·7	−15·6			232
			0·906	233·3	168·7	−34·5			71
			0·878	290·5	165·7	+16·0			178
			0·858	243·9	164·4	−24·2			113
			0·820	253·2	161·6	−15·8			278
			0·846	298·5	160·0	+21·6			159
			0·761	309·9	147·7	+26·3			102
C.		7707	0·744	290·1	152·5	[illegible]2·2	10	32	61*c*
		7713	0·665	249·9	147·4	[illegible]5·9	5	23	64*c*
		7715	0·489	339·1	118·0	[illegible]3·5	36	79	
		7708	0·250	359·0	107·4	[illegible]0·8	55	302	
		7709	0·204	158·9	102·8	−14·5	39	244	
		7711	0·364	38·7	93·7	+12·9	77	426	
		7714	0·766	110·1	58·3	−17·7	3	15	367*f*
			0·926	46·7	49·1	+37·5			28
			0·929	109·5	39·2	−19·4			829
May 5				(−23·5)	(107·1)	(−3·6)	(225)	(1121)	(2560)
126·174	M, AM		0·910	293·7	158·9	+19·8			138
			0·830	234·5	148·6	−30·9			19
			0·820	305·7	144·5	+26·2			117
		7707	0·867	287·1	154·8	+12·9	1	4	216*f*
D.		7713	0·763	251·5	145·5	−16·3	1	16	276*p*
		7715	0·558	325·1	117·1	+23·8	11	60	
		7708	0·306	324·0	107·3	+10·8	64	328	
		7709	0·218	208·0	102·8	−14·5	43	217	
		7711	0·291	4·5	95·5	+13·3	64	412	

Group 7712, May 1–3. A very small marking on May 1; another similar marking is seen near its place on May 2 and 3.
Group 7713, May 3–6. A small feebly disturbed area containing a few very small unstable spots.
Group 7714, May 3–6. A small but definite spot.
Group 7715, May 4–6. A straight sparse stream forming suddenly *np* Group 7708, and *f* the place of Group 7712.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
126·174	M, AM	7714	0·651	113·7	58·2	−17·8	1	5	62*f*
		7716	0·985	110·3	16·3	−20·6	11	34	202*c*
D.			0·861	109·3	38·2	−18·3			165
			0·936	112·9	28·0	−22·6			172
May 6				(−23·3)	(96·8)	(−3·5)	(196)	(1076)	(1367)
127·686	M, AM		0·939	253·4	146·6	−16·8			98
			0·944	280·1	146·5	+ 8·4			171
			0·883	291·7	135·8	+17·3			188
			0·853	284·5	133·7	+10·5			114
			0·852	244·1	133·4	−23·7			65
			0·788	299·1	123·8	+20·1			126
			0·724	307·3	115·5	+23·2			78
G.		7708	0·545	295·7	106·7	+10·7	62	325	
		7709	0·467	245·1	102·6	−14·4	32	204	
		7711	0·433	312·3	96·0	+13·7	66	394	
		837k	0·428	128·2	56·4	−15·3	0	4	
		7716	0·872	111·5	17·2	−20·3	10	73	629*c*
			0·772	115·3	28·4	−21·4			203
			0·946	49·9	13·5	+36·0			17
May 7				(−22·9)	(76·8)	(−3·4)	(170)	(1000)	(1689)
128·404	HL, AM		0·940	251·2	137·1	−18·8			64
			0·937	282·0	135·6	+10·0			172
			0·923	290·4	132·1	+17·4			356
			0·905	275·9	131·5	+ 3·9			45
			0·902	244·9	130·4	−24·0			95
			0·817	255·4	121·6	−13·8			76
			0·838	299·2	119·2	+22·0			422
C.		7708	0·673	289·9	107·2	+10·7	47	285	
		7709	0·594	250·5	102·4	−14·1	33	218	
		7711	0·551	301·7	96·1	+13·9	87	462	
		837l	0·300	287·6	83·9	+ 2·0	0	3	
		7716	0·788	113·2	17·0	−20·2	13	68	101*c*
		7717	0·867	110·8	8·2	−19·6	0	3	438*c*
			0·899	39·8	17·2	+41·5			35
			0·904	45·3	13·4	+37·5			51
May 8				(−22·8)	(67·3)	(−3·3)	(180)	(1039)	(1855)
129·164	HL, AM		0·974	282·4	133·0	+11·3			84
			0·926	261·8	125·1	− 8·8			73
D.			0·928	241·3	123·9	−27·7			105
			0·920	295·7	120·6	+22·1			510
			0·876	253·6	117·9	−15·9			71
			0·854	233·2	111·4	−32·6			53
1916.				°	°	°			
129·164	HL, AM		0·767	223·1	97·8	−36·4			22
		7708	0·788	286·3	107·4	+10·7	53	283	115*c*
		7709	0·723	253·6	102·7	−14·0	45	209	102*c*
D.		7711	0·675	294·7	96·3	+13·9	52	430	
		7716	0·685	117·4	16·9	−20·8	22	177	150*c*
		7717	0·807	118·1	6·1	−24·3	0	9	299*c*
May 9				(−22·6)	(57·3)	(−3·2)	(172)	(1108)	(1584)
130·311	HL, AM		0·970	296·6	114·8	+24·8			125
			0·740	300·0	84·7	+19·3			93
		7708	0·925	282·5	108·5	+10·3	42	246	403*f*
		7709	0·885	256·0	104·0	−13·8	32	179	220*c*
		7711	0·837	288·5	96·7	+13·6	52	323	298*c*
		837m	0·322	219·6	54·5	−17·4	0	1	
G.		7718	0·194	219·4	49·3	−11·6	2	7	
		7719	0·257	165·6	38·3	−17·4	0	4	
		7716	0·468	128·0	19·2	−19·6	23	91	
		7717	0·601	122·8	9·3	−21·5	1	33	
			0·922	67·8	337·8	+19·0			140
			0·963	115·5	328·1	−25·4			48
May 10				(−22·4)	(42·1)	(−3·1)	(152)	(884)	(1327)
131·163	HL, M		0·831	298·4	83·4	+21·4			240
		7708	0·974	281·6	107·6	+10·5	35	231	419*f*
		7709	0·948	256·8	103·3	−13·6	31	184	235*f*
		7711	0·917	286·6	96·4	+13·9	33	242	493*c*
		7719	0·267	194·8	35·9	−17·9	0	16	
D.		7716	0·362	142·2	18·3	−19·5	18	71	
		7717	0·481	133·2	9·7	−22·0	6	51	
		7720	0·974	110·4	315·0	−20·5	4	60	211*c*
			0·881	66·2	333·4	+19·2			189
			0·938	117·8	323·4	−27·0			92
May 11				(−22·2)	(31·8)	(−3·0)	(127)	(855)	(1879)
132·165	HL, AM		0·934	251·9	86·2	−17·9			132
			0·925	294·5	82·0	+21·3			226
		7711	0·986	284·1	96·6	+13·3	82	353	239*f*
		7718	0·561	254·3	50·8	−11·1	7	33	
		7719	0·412	230·1	36·9	−18·0	1	10	
D.		7716	0·277	180·2	17·6	−18·9	23	116	
		7717	0·355	157·0	9·0	−21·9	2	37	
		7720	0·917	110·8	311·9	−20·2	17	77	248*c*
			0·774	62·1	331·4	+19·2			62
			0·914	106·5	312·0	−16·2			48
May 12				(−21·9)	(17·6)	(−2·9)	(132)	(626)	(955)

Group 7716, May 6–14. A regular spot, usually with small companions around it. The chief spot undergoes a sudden enlargement on May 12, after which the group soon disappears. Near the place of Group 7692, but apparently a fresh formation.

Group 7717, May 8–18. Return or revival of Group 7694. A wide area of feeble disturbance *f* Group 7716, containing a few unstable spots, mostly very small and faint. These are generally grouped in two clusters, of which only the more northern is seen on May 8 and the more southern on May 9 and 13.

Group 7718, May 10–12. A few very small unstable markings *np* Group 7714. The group is not seen on May 11.

Group 7719, May 10–14. A few very small unstable markings *p* Group 7716. The group is not seen on May 13.

Group 7720, May 11–21. A small regular spot, with several unstable attendants rather widely scattered from May 11–14. After May 14, the more distant and unstable attendants have disappeared.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
133·349	HL, AM		0·972	293·4	75·7	+21·9			117
			0·956	283·8	73·5	+12·2			94
			0·905	270·8	66·5	− 0·4			109
			0·763	260·4	51·3	− 9·1			69
		837n	0·847	254·4	59·2	−14·7	0	13	214*s*
C.		7716	0·381	222·2	17·5	−19·0	5	20	
		7717	0·383	192·7	7·2	−24·7	1	11	
		7720	0·781	112·3	312·3	−19·0	24	96	151*c*
		837o	0·886	114·3	301·0	−22·7	0	6	54*c*
		7721	0·979	63·4	286·5	+25·3	2	33	203*c*
			0·916	73·4	297·4	+14·0			260
May 13				(−21·6)	(1·9)	(−2·8)	(32)	(179)	(1271)
134·311	HL, AM		0·919	250·7	55·3	−18·7			231
			0·879	260·5	50·5	− 9·6			337
			0·683	238·5	28·2	−22·8			35
		7719	0·763	248·6	37·3	−17·8	1	12	221*c*
		7716	0·546	239·9	18·9	−18·1	3	11	
G.		7717	0·504	227·4	12·7	−22·2	2	5	
		7720	0·630	116·9	313·0	−18·6	20	68	
		7721	0·914	60·7	287·5	+25·3	13	86	207*c*
			0·828	70·4	295·7	+14·5			158
			0·950	75·6	278·8	+12·8			207
May 14				(−21·3)	(349·2)	(−2·6)	(39)	(182)	(1396)
135·425	HL, AM		0·898	250·4	37·5	−18·6			390
			0·893	297·8	33·5	+23·2			75
		7717	0·659	238·0	11·5	−22·4	8	34	112*p*
		7720	0·444	130·4	313·6	−18·9	8	53	
		7721	0·797	55·5	288·2	+25·1	23	83	86*c*
G.			0·845	75·2	278·4	+11·0			73
			0·891	65·6	274·8	+20·3			23
			0·942	113·6	265·0	−23·0			54
			0·959	60·2	265·0	+27·5			99
			0·966	74·5	260·9	+14·3			53
May 15				(−21·0)	(334·5)	(−2·5)	(39)	(170)	(965)
136·253	HL, M		0·966	296·0	35·6	+24·3			120
		7717	0·791	242·4	12·9	−23·0	16	85	650*c*
		7720	0·335	151·0	313·6	−19·7	7	37	
D.		7721	0·689	49·1	288·6	+24·8	10	66	
		7722	0·875	79·0	263·5	+ 8·4	15	31	72*f*
			0·901	54·8	265·5	+30·0			154
May 16				(−20·8)	(323·5)	(−2·4)	(48)	(219)	(996)
1916.				°	°	°			
137·350	HL, AM		0·917	286·9	13·8	+14·5			82
		7717	0·918	246·4	14·3	−22·4	5	20	894*c*
		7720	0·301	193·1	313·1	−19·2	7	26	
		7721	0·546	33·7	289·6	+24·7	17	53	
		7722	0·715	76·5	264·6	+ 8·0	2	9	
G.		7723	0·856	57·3	255·8	+26·1	17	43	128*c*
			0·951	124·9	239·4	−33·8			18
			0·956	117·7	237·4	−27·0			316
			0·967	67·8	235·9	+20·8			181
May 17				(−20·5)	(309·0)	(−2·3)	(48)	(151)	(1619)
138·314	HL, M		0·964	290·3	8·8	+18·9			85
		7717	0·985	247·6	16·0	−22·4	0	11	743*f*
		7720	0·411	223·1	313·5	−19·5	8	18	
		7721	0·468	13·2	289·5	+24·8	17	43	
		7722	0·529	71·4	265·9	+ 7·7	0	2	
G.		7723	0·750	51·0	255·8	+26·4	14	32	
		7724	0·874	118·9	238·0	−26·1	4	11	249*f*
			0·887	51·6	241·2	+32·1			67
			0·908	65·3	234·2	+21·2			346
May 18				(−20·2)	(296·2)	(−2·2)	(43)	(117)	(1490)
139·453	HL, AM		0·983	245·8	0·2	−24·2			125
			0·833	295·0	334·1	+19·2			76
		7720	0·595	240·1	314·1	−18·9	9	33	
		7721	0·462	346·5	288·0	+24·5	24	91	
		7723	0·624	40·3	254·5	+26·4	7	24	
G.		7724	0·745	124·4	238·1	−26·3	2	9	257*f*
			0·839	60·4	228·9	+23·2			432
			0·844	72·2	225·6	+13·7			59
			0·899	117·7	219·4	−25·6			271
May 19				(−19·9)	(281·2)	(−2·1)	(42)	(157)	(1220)
140·302	M, HL		0·912	291·4	333·3	+18·6			190
		7720	0·724	245·4	313·8	−18·9	6	24	
		7721	0·525	326·5	288·3	+23·9	24	89	
		7723	0·534	27·1	254·2	+26·3	4	19	
		7724	0·634	131·7	238·1	−26·5	0	3	
		7725	0·688	66·3	229·5	+14·5	12	23	
G.			0·818	55·4	221·4	+26·3			117
			0·850	122·6	215·6	−28·3			113
			0·950	65·8	200·7	+22·2			90
			0·956	122·4	199·1	−31·4			133
			0·953	107·9	198·0	−17·6			99
May 20				(−19·6)	(269·9)	(−2·0)	(46)	(158)	(742)

Group 7721, May 13–24. A composite spot on May 13, with some small followers on May 14 and 15. The followers have disappeared by May 16, and the chief spot is surrounded by a cluster of small spots. A small spot follows the cluster at a distance on May 18, and the group has expanded into a long straight stream by May 19, of which only the first and last members remain by May 22.
Group 7722, May 16–18. A small spot.
Group 7723, May 17–20. A wide pair of small spots.
Group 7724, May 18–20. A small spot.
Group 7725, May 20–28. A small spot on May 20, followed by a distant companion on May 21, 22, and 23. The spot has broken up into a cluster of small markings by May 26, but is not seen on May 27. A small spot is near its place on May 28.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
141·295	HL, AM		0·956	293·2	327·4	+21·5			79
			0·938	223·1	319·6	−44·0			67
		7720	0·849	249·4	313·5	−18·4	7	38	244*c*
		7721	0·652	311·7	288·9	+24·0	37	79	
		7725	0·528	58·3	229·3	+14·4	25	122	
		838a	0·615	53·1	225·4	+20·0	3	9	28*f*
G.		7726	0·895	66·5	196·2	+20·0	24	81	74*c*
		7727	0·920	102·0	190·2	−11·8	14	39	319*sf*
		7728	0·987	77·0	177·0	+12·5	28	197	237*c*
			0·702	126·9	218·2	−26·4			62
			0·839	55·9	205·8	+26·8			43
			0·876	125·4	200·1	−31·5			206
May 21				(−19·3)	(256·8)	(−1·9)	(138)	(565)	(1359)
142·445	HL, AM		0·955	250·2	313·6	−19·4			392
			0·946	261·5	311·4	− 8·6			30
			0·858	289·0	298·6	+15·2			163
		7721	0·806	302·1	289·8	+24·1	22	63	505*c*
		7725	0·336	34·9	230·2	+14·2	28	102	
		7726	0·746	61·1	197·8	+19·8	38	110	42*c*
G.		7727	0·798	104·3	189·4	−12·4	83	513	284*sf*
		7728	0·896	75·0	179·3	+12·6	29	155	449*c*
		7729	0·976	105·2	164·3	−15·3	0	83	370*p*
			0·850	131·2	189·8	−35·0			50
			0·856	120·9	186·3	−27·0			91
			0·920	62·3	178·3	+24·5			47
			0·986	83·9	161·7	+ 5·8			102
May 22				(−18·9)	(241·6)	(−1·7)	(200)	(1026)	(2525)
143·333	HL, AM		0·963	247·7	303·3	−21·9			135
			0·917	286·6	294·8	+14·5			182
			0·784	288·8	279·4	+13·6			42
		7721	0·896	298·0	289·7	+24·1	13	67	721*nf*
		7725	0·271	357·4	230·5	+14·0	22	96	
		7726	0·611	53·3	198·5	+20·0	29	101	
G.		7727	0·658	107·2	189·9	−12·4	171	706	
		7728	0·790	72·7	179·4	+12·5	28	121	291*c*
		7730	0·908	82·7	165·2	+ 5·9	5	7	182*nf*
		7729	0·911	105·8	164·9	−15·0	58	221	331*c*
			0·797	118·4	180·3	−23·2			69
			0·942	120·8	161·8	−29·4			85
			0·950	71·3	159·7	+17·2			482
May 23				(−18·6)	(229·8)	(−1·6)	(326)	(1319)	(2520)
144·302	HL, AM		0·958	255·9	290·0	−14·0			36
			0·933	282·8	284·9	+11·3			66
		7721	0·967	295·3	289·9	+24·0	8	54	240*nf*
		7725	0·347	320·3	230·1	+13·9	16	83	
		7726	0·474	39·3	198·4	+20·0	22	109	
G.		7727	0·478	113·5	190·5	−12·3	224	919	
		7728	0·646	68·7	179·1	+12·4	27	143	73*f*
		7729	0·785	108·9	166·8	−15·6	35	173	325*f*
		7732	0·939	78·1	148·0	+10·6	0	7	500*c*
			0·861	130·2	164·2	−34·6			52
			0·884	61·2	158·9	+24·4			94
May 24				(−18·3)	(217·0)	(−1·5)	(332)	(1488)	(1386)
145·603	HL, AM		0·862	305·5	252·8	+28·8			155
		7725	0·555	297·1	230·2	+13·5	10	17	
		7726	0·368	2·3	198·9	+20·2	20	89	
		7727	0·245	142·0	191·0	−12·4	286	1232	
		7728	0·420	55·1	179·2	+12·6	19	100	
		7729	0·561	116·9	168·6	−15·8	34	145	
G.		7731	0·627	122·6	165·5	−20·8	25	43	
		7730	0·623	77·4	162·2	+ 6·7	10	31	
		7732	0·781	74·7	149·9	+11·0	2	6	194*f*
			0·849	52·7	148·7	+30·0			133
			0·875	84·9	139·2	+ 3·9			55
			0·907	116·2	136·9	−24·2			105
			0·934	70·9	132·5	+17·3			283
May 25				(−17·9)	(199·8)	(−1·3)	(406)	(1663)	(925)
146·678	HL, AM		0·819	301·4	235·5	+24·4			347
			0·795	236·6	233·4	−26·7			103
		7725	0·716	290·5	229·1	+13·6	6	28	
		7726	0·423	330·2	198·5	+20·2	9	33	
		7727	0·218	204·0	190·8	−12·6	280	1293	
		7728	0·259	22·7	179·7	+12·6	17	77	
		7729	0·382	132·1	168·5	−15·9	29	136	
G.		7731	0·481	136·6	164·9	−21·4	19	95	
		7730	0·400	70·5	163·4	+ 6·6	19	39	
		7732	0·576	69·7	152·4	+10·5	1	3	
		7733	0·978	79·5	108·3	+10·0	49	216	208*np*
			0·759	68·7	138·7	+15·1			51
			0·865	120·1	129·2	−26·4			136
			0·903	62·5	124·6	+24·0			247
May 26				(−17·5)	(185·6)	(−1·2)	(429)	(1920)	(1092)

Group 7726, May 21–31. A regular spot, followed by a train of small unstable spots. The train is not seen on May 28, nor after May 29, on which day the train suddenly reappears temporarily. Group 7727, May 21–June 1. Three small spots on May 21. The group has developed immensely by May 22, when it consists of two large spots, with a few small companions between them. The two chief spots increase on May 23 and 24, and on May 25 the group consists of a very large regular spot closely followed by two straight parallel streams. The leader increases by absorbing the nearest members of the following streams, and by May 29 the streams have become a compact and complex cluster. The group declines steadily after May 27. Near the place of Group 7705, but evidently a new formation. Group 7728, May 21–June 1. A regular spot, followed by a train of small unstable spots. The train has disappeared by May 26, but revived on May 28 and June 1. Small companions are seen preceding the chief spot from May 26 to 29. Group 7729, May 22–June 2. Two composite spots, of which the leader moves forward in longitude. The follower shows a great enlargement on May 28, but dies down quickly afterwards. The leader is surrounded by several new spots on June 1 and 2, forming a considerable cluster. Group 7730, May 23–28. A disturbed area. One very small but distinct spot on May 23; nothing on May 24; a cluster of small spots on May 25–28, with a distinct companion *nf* on May 26 and 27. Group 7731, May 25–30. A cluster of small unstable spots *s* Group 7730. Group 7732, May 24–27. A disturbed area, with a few small unstable spots. Group 7733, May 26–June 7. Return of Group 7708. A large, well-defined, and stable regular spot.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
147·497	HL, AM		0·944	284·8	244·4	+13·6			56
			0·931	304·8	238·4	+31·6			128
			0·881	238·5	232·8	−27·9			348
			0·859	294·2	231·1	+20·0			448
			0·817	251·3	228·1	−15·8			46
		7726	0·530	313·5	199·1	+20·3	9	40	
		7727	0·334	232·8	190·5	−12·7	386	1748	
		7728	0·256	341·3	179·6	+12·8	23	93	
		7729	0·276	160·9	169·4	−16·1	20	119	
G.		7734	0·302	26·8	166·7	+14·5	5	21	
		7731	0·382	156·2	165·3	−21·4	19	86	
		7730	0·226	55·4	164·1	+ 6·3	7	27	
		7732	0·430	62·9	152·0	+10·2	3	25	
		838b	0·551	64·8	144·2	+12·6	0	4	
		7733	0·921	78·6	108·6	+10·0	27	185	478*c*
			0·818	120·2	123·8	−24·9			72
			0·847	59·2	121·6	+25·0			141
			0·946	105·4	104·4	−14·9			248
May 27				(−17·2)	(174·8)	(−1·1)	(499)	(2348)	(1965)
148·344	HL, AM		0·893	244·5	224·5	−23·1			352
			0·898	309·8	220·2	+34·5			155
		7725	0·916	286·3	228·6	+14·5	0	17	527*n*
		7726	0·652	303·9	198·6	+20·4	12	19	
		7727	0·489	244·7	190·3	−12·9	325	1611	
		7728	0·349	312·0	178·8	+12·5	24	96	
		7734	0·265	343·7	167·9	+13·6	2	31	
G.		7729	0·263	192·8	166·8	−15·8	21	172	
		7730	0·108	334·7	166·1	+ 4·6	4	17	
		7731	0·361	178·0	162·7	−22·0	6	63	
		838c	0·393	126·9	144·6	−14·5	3	11	
		7733	0·836	77·4	107·8	+ 9·9	34	188	584*nf*
			0·866	56·7	108·9	+27·7			57
			0·887	108·1	102·2	−16·4			202
May 28				(−16·9)	(163·5)	(−1·0)	(431)	(2225)	(1877)
149·304	HL, AM		0·922	241·0	215·3	−26·9			430
			0·919	294·2	215·0	+21·7			212
		7726	0·759	299·4	195·7	+21·1	14	23	110*c*
		7727	0·658	251·9	190·5	−12·5	334	1489	
G.		7728	0·524	296·6	179·4	+12·7	12	57	
		7729	0·378	227·6	167·6	−15·6	21	111	
		7734	0·364	313·0	166·6	+13·4	4	26	
		7731	0·408	209·9	163·4	−21·4	8	41	
		7733	0·690	74·6	108·5	+ 9·9	27	181	224*nf*
1916.				°	°	°			
149·304	HL, AM		0·803	101·8	98·1	−10·0			126
G.			0·883	71·0	90·6	+16·2			346
May 29				(−16·6)	(150·8)	(−0·9)	(420)	(1928)	(1448)
150·373	HL, M		0·875	302·2	192·9	+27·2			87
			0·877	233·0	192·5	−32·3			233
		7726	0·902	293·8	198·6	+20·9	12	18	215*f*
		7727	0·823	255·0	191·1	−12·7	260	1366	277*c*
		7728	0·707	289·5	179·7	+13·0	6	19	92*p*
		7729	0·588	243·6	169·7	−15·7	9	31	
		7734	0·541	297·9	166·1	+13·9	4	18	
G.		7731	0·561	231·9	164·8	−20·9	4	17	
		7736	0·409	313·2	154·6	+15·4	1	1	
		7735	0·454	59·8	113·1	+12·5	1	3	
		7733	0·502	68·2	108·6	+10·0	39	171	
			0·736	68·2	91·8	+15·2			132
			0·856	65·8	80·7	+20·0			186
			0·927	112·2	70·2	−20·8			91
			0·948	98·6	65·6	− 8·4			171
May 30				(−16·2)	(136·7)	(−0·8)	(336)	(1644)	(1484)
151·414	HL, AM		0·915	237·8	185·4	−29·4			123
		7726	0·974	291·8	198·5	+21·1	6	26	160*f*
		7727	0·939	256·9	192·1	−12·5	241	1279	427*c*
		7728	0·851	286·2	179·8	+13·3	6	15	158*c*
		7729	0·750	249·6	169·6	−15·6	17	44	52*c*
		7734	0·720	290·6	166·8	+14·2	9	27	31*c*
G.		7735	0·273	33·9	114·0	+12·5	0	2	
		7733	0·306	53·1	108·6	+ 9·9	45	166	
		7733*	0·420	130·0	103·4	−16·2	9	15	
		838d	0·539	61·9	93·7	+14·1	1	3	
		838e	0·649	66·6	85·1	+14·4	0	3	
		838f	0·952	102·2	51·2	−11·8	0	13	459*c*
			0·900	110·5	60·3	−18·6			101
May 31				(−15·8)	(122·9)	(−0·6)	(334)	(1593)	(1511)
152·470	HL, M		0·881	295·4	167·7	+21·9			129
		7727	0·990	257·1	190·5	−12·8	118	648	945*c*
		7728	0·933	284·8	176·8	+13·6	0	22	203*c*
		7729	0·897	252·8	171·5	−15·6	36	147	340*c*
C.		7735	0·248	335·6	114·9	+12·5	3	8	
		7733	0·189	0·0	108·9	+10·3	37	187	
		7733*	0·263	159·5	103·5	−14·7	0	3	
			0·899	107·8	46·1	−16·2			277
June 1				(−15·4)	(108·9)	(−0·5)	(194)	(1015)	(1894)

Group 7734, May 27–31. A disturbed area *f* Group 7729, in which several small unstable spots form and disappear irregularly.
Group 7735, May 30–June 6. A cluster of very small markings *p* Group 7733. The group is not seen on June 3, but has revived by June 4, and increases rapidly afterwards.
Group 7736, May 30–June 4. Intermittent. A minute spot on May 30. A few very small scattered spots on June 3; two small composite spots on June 3; three on June 4.
Group 7733*, May 31–June 1. One or two small spots.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
153·312	HL, AM		0·950	286·0	168·5	+15·0			299
			0·931	277·3	165·9	+ 6·6			163
			0·874	275·3	158·3	+ 4·5			54
			0·874	301·1	154·4	+26·6			81
			0·809	250·9	150·1	−15·6			40
		7729	0·964	254·8	171·8	−14·8	36	246	444*c*
G.		7736	0·819	286·9	151·3	+13·5	9	29	312*c*
		7735	0·352	302·0	115·4	+10·3	0	3	
		7733	0·267	314·8	108·9	+10·4	36	175	
			0·770	108·1	49·0	−14·0			62
			0·910	62·3	35·4	+24·8			75
			0·925	110·7	31·6	−19·2			124
June 2				(−15·1)	(97·8)	(−0·4)	(81)	(453)	(1654)
154·306	HL, AM		0·944	252·0	154·2	−17·0			252
			0·960	228·7	153·4	−39·4			46
			0·931	299·7	149·8	+27·2			50
		7736	0·915	284·4	149·8	+13·0	20	63	497*c*
		7737	0·674	290·9	124·8	+13·6	24	60	
G.		7733	0·448	295·6	108·8	+10·8	43	194	
		7738	0·368	305·5	102·4	+12·0	3	42	
		838g	0·449	329·9	98·6	+22·4	0	2	
			0·791	128·5	39·4	−29·6			26
			0·928	114·0	18·4	−22·3			342
			0·942	69·3	15·8	+19·3			62
June 3				(−14·7)	(84·6)	(−0·3)	(90)	(361)	(1275)
155·309	HL, AM		0·871	240·7	128·4	−25·3			64
			0·838	302·8	123·3	+26·8			119
		7736	0·977	283·2	148·5	+12·8	0	55	181*c*
		7737	0·829	285·7	126·1	+12·8	31	131	77*c*
		7735	0·705	287·5	114·7	+12·1	0	6	
G.		7733	0·632	287·5	109·1	+10·7	31	186	
		7738	0·550	292·0	102·6	+11·6	46	211	
		838h	0·558	125·0	42·6	−18·8	0	4	
			0·882	66·3	12·0	+20·6			77
			0·891	114·9	10·9	−22·1			389
June 4				(−14·3)	(71·4)	(−0·2)	(108)	(593)	(907)
156·434	HL, AM		0·929	241·2	121·8	−26·6			134
			0·919	297·2	120·5	+24·8			179
			0·812	253·9	109·5	−13·0			45
G.		7737	0·954	283·1	128·3	+12·5	77	262	} 626*c*
		7735	0·858	284·3	114·5	+12·2	15	38	
1916.				°	°	°			
156·434	HL, AM	7733	0·806	283·7	109·2	+11·0	28	159	
		7738	0·728	285·1	102·0	+10·9	136	758	
		838i	0·362	154·3	47·0	−18·9	3	4	
G.			0·784	61·5	8·7	+21·9			45
			0·841	118·4	2·9	−23·5			386
			0·930	73·2	349·2	+15·6			63
June 5				(−13·9)	(56·5)	(0·0)	(259)	(1221)	(1478)
157·400	HL, AM		0·889	252·8	105·1	−15·1			164
		7737	0·985	284·5	123·1	+14·2	13	87	} 398*c*
		7735	0·945	283·1	113·9	+12·4	24	97	
G.		7733	0·914	282·1	109·0	+11·0	29	165	91*c*
		7738	0·859	282·4	102·1	+10·7	216	899	301*f*
			0·793	125·8	357·4	−27·5			78
			0·862	72·9	345·5	+14·7			62
June 6				(−13·5)	(43·7)	(+0·1)	(282)	(1248)	(1094)
158·309	HL, AM		0·936	251·4	99·8	−17·3			81
			0·833	292·9	85·1	+18·9			44
		7733	0·979	281·2	109·5	+11·0	19	180	108*c*
G.		7738	0·945	281·0	102·0	+10·4	166	1028	432*f*
		7739	0·769	241·0	77·9	−21·7	5	26	
		838j	0·636	242·8	67·7	−16·7	0	3	
			0·936	112·2	324·1	−20·6			74
June 7				(−13·2)	(31·7)	(+0·2)	(190)	(1237)	(739)
159·321	HL, AM		0·894	293·0	79·6	+20·5			193
			0·784	249·2	67·8	−15·9			50
		7738	0·997	280·8	103·6	+10·8	372	1025	455*f*
		7739	0·886	245·0	78·0	−21·8	13	60	137*c*
G.		*838k*	0·381	169·0	13·8	−21·5	0	2	
		838l	0·511	76·4	348·4	+ 7·2	1	7	
		7740	0·988	83·4	297·5	+ 6·6	66	403	118*c*
			0·919	112·5	313·6	−20·4			113
			0·955	72·5	306·5	+16·8			53
June 8				(−12·8)	(18·3)	(+0·3)	(452)	(1497)	(1119)
160·420	M, AM		0·942	292·1	72·6	+20·9			101
			0·940	249·7	72·2	−18·9			352
			0·885	262·4	65·5	− 6·5			113
G.		7741	0·642	240·5	39·5	−18·0	12	26	21*p*
		7743	0·922	117·3	299·5	−24·8	0	8	138*p*
		7740	0·929	83·0	295·7	+ 6·6	66	395	567*c*

Group 7737, June 3–6. A short stream of normal type appearing suddenly on June 3. The leading spots develop rapidly, but have passed out of sight by June 6.
Group 7738, June 3–8. A small stream of normal type forming just behind Group 7733. The stream increases in size very rapidly, and its members coalesce to form a very large composite spot. Groups 7737, 7735, 7733, and 7738 form an almost continuous procession.
Group 7739, June 7–8. A cluster of small unstable spots spreading but growing fainter on June 8.
Group 7740, June 8–20. A fine stable regular spot. It is followed by an irregular train of small spots after June 8, and the group has developed into a stream of normal type by June 13. The following part of the stream soon breaks up, and the leader remains alone after June 17.
Group 7741, June 9–12. A pair of small spots; a revival of activity in the region of *838h*.
Group 7743, June 9–12. One or two small spots not seen on June 11 and 12.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
160·420	M, AM		0·825	141·3	321·8	−39·6			37
G.			0·901	106·0	300·7	−14·1			132
			0·955	65·7	292·7	+23·3			131
June 9				(−12·3)	(3·7)	(+0·5)	(78)	(429)	(1592)
161·379	HL, AM		0·950	252·7	61·6	−16·2			275
		7741	0·780	245·3	39·2	−18·6	11	34	192*p*
		7742	0·636	239·8	26·2	−18·1	2	10	
		7743	0·821	121·0	300·5	−24·6	1	3	46*p*
G.		7744	0·793	109·3	300·5	−14·8	1	2	
		7740	0·821	81·6	296·3	+ 7·2	78	370	501*c*
			0·760	106·5	303·0	−12·0			28
			0·905	61·9	289·1	+25·4			147
June 10				(−11·9)	(351·0)	(+0·6)	(93)	(419)	(1189)
162·344	HL, AM		0·909	248·7	41·7	−18·9			276
			0·834	290·7	33·0	+17·5			52
		7742	0·792	245·3	27·6	−18·9	2	6	66*c*
		839a	0·450	342·2	347·1	+26·0	4	10	
G.		7740	0·669	80·4	296·8	+ 6·9	65	353	226*f*
			0·680	121·2	300·2	−20·0			57
			0·813	58·0	288·4	+25·9			139
			0·925	78·7	271·1	+10·7			90
June 11				(−11·5)	(338·3)	(+0·7)	(71)	(369)	(906)
163·429	AM, HL		0·927	249·0	30·0	−19·1			185
C.		7740	0·486	75·6	295·7	+ 7·6	61	412	
June 12				(−11·1)	(323·9)	(+0·8)	(61)	(412)	(185)
164·594	M, AM		0·907	292·1	11·9	+20·3			74
			0·899	247·5	10·1	−19·6			202
			0·826	236·8	358·7	−26·1			167
		7743	0·414	166·7	302·6	−22·7	8	19	
G.		7744	0·302	157·1	301·5	−15·0	1	4	
		7740	0·273	62·8	294·4	+ 8·1	92	483	
		7740*	0·969	68·1	233·8	+21·4	0	10	143*c*
			0·926	53·4	245·1	+33·9			62
			0·960	119·0	237·7	−27·4			187
June 13				(−10·6)	(308·5)	(+1·0)	(101)	(516)	(835)
1916.				°	°	°			
165·408	HL, AM		0·938	292·8	6·0	+21·7			64
			0·940	248·1	5·7	−20·1			206
			0·888	237·0	355·3	−28·3			208
		7743	0·418	189·8	302·2	−23·1	6	19	
D.		7744	0·290	194·1	301·9	−15·2	1	5	
		7740	0·135	22·4	294·7	+ 8·2	98	497	
			0·888	52·0	240·7	+33·6			80
			0·900	122·3	238·2	−28·2			227
			0·916	65·8	233·2	+22·5			328
			0·917	109·7	233·1	−17·5			126
June 14				(−10·2)	(297·7)	(+1·1)	(105)	(521)	(1239)
166·553	HL, AM		0·962	243·0	353·9	−25·4			142
			0·884	233·7	338·3	−30·8			39
		7743	0·516	217·1	302·2	−23·1	3	5	
		7744	0·402	227·7	300·3	−14·5	1	3	
		7740	0·267	297·0	296·3	+ 8·1	117	512	
G.		7740*	0·799	66·1	231·9	+19·6	0	2	
			0·818	127·5	234·8	−29·0			72
			0·814	63·1	231·0	+22·3			168
			0·853	117·8	227·8	−22·7			70
			0·848	94·7	224·9	− 3·3			20
			0·926	71·4	215·7	+17·7			69
June 15				(−9·7)	(282·5)	(+1·2)	(121)	(522)	(580)
167·440	HL, AM		0·921	284·7	337·2	+14·0			94
			0·922	297·2	335·8	+25·4			95
		7740	0·444	285·7	296·3	+ 8·0	74	383	
G.		7740*	0·673	62·1	231·9	+19·3	0	2	
		7745	0·969	103·6	196·1	−12·8	153	633	682*c*
			0·850	134·7	225·1	−34·7			99
			0·896	123·1	212·2	−28·6			124
June 16				(−9·3)	(270·8)	(+1·3)	(227)	(1018)	(1094)
168·325	HL, AM		0·894	248·7	320·2	−18·3			134
		7740	0·622	281·2	297·0	+ 8·0	58	337	
		7746	0·287	315·6	270·9	+13·1	3	16	
		839b	0·527	55·6	224·0	+18·6	7	27	
G.		7745	0·901	104·8	196·1	−12·7	117	710	610*c*
			0·885	125·6	202·9	−30·2			107
			0·901	50·6	200·4	+35·6			42
			0·951	73·3	187·7	+16·3			160
June 17				(−9·0)	(259·1)	(+1·4)	(185)	(1090)	(1053)

Group 7742, June 10–11. Two very small spots *f* Group 7741 on June 10, of which only the leader remains by June 11.
Group 7744, June 10–15. A very small spot *n* Group 7743; not seen on June 11 and 12.
Group 7740*, June 13–16. One or two small spots not seen on June 14.
Group 7745, June 16–27. Return of Group 7727. A very large regular spot. It is invaded by bright faculæ from the *f* side, and by June 20 several small spots have become detached from the main body to form a train. The train has wholly disappeared by June 25.
Group 7746, June 17–22. Two small spots on June 17, developing into a straight stream by June 18.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
169·553	HL, AM		0·873	245·4	300·5	−20·5			183
			0·836	297·0	296·7	+23·4			91
		7740	0·829	278·0	298·5	+ 7·4	57	312	462*p*
		7746	0·514	293·1	271·7	+12·9	23	84	
		7747	0·663	66·2	203·7	+16·7	0	8	
G.		7745	0·755	108·4	195·7	−12·7	169	726	377*f*
		7748	0·923	74·3	176·1	+15·0	8	61	} 285*p*
		839c	0·959	71·2	169·9	+18·5	0	7	
			0·860	122·4	189·7	−26·5			103
			0·948	105·8	172·6	−14·5			425
June 18				(−8·4)	(242·8)	(+1·5)	(257)	(1198)	(1926)
June 19				No	photo	graph.			
171·362	HL, AM		0·935	282·7	287·7	+12·5			461
			0·922	298·2	283·9	+26·5			122
		7740	0·982	277·4	297·9	+ 7·6	47	220	199*c*
		7746	0·799	285·0	271·1	+13·0	42	139	76*c*
		7747	0·343	41·8	205·2	+16·5	15	94	
G.		7745	0·455	122·2	195·8	−12·3	113	602	
		7748	0·704	69·2	176·0	+15·7	17	69	42*c*
		7749	0·908	78·1	154·1	+11·6	14	129	522*c*
			0·844	110·7	163·8	−16·3			363
			0·943	64·9	149·7	+24·2			281
June 20				(−7·6)	(218·9)	(+1·8)	(248)	(1253)	(2066)
172·389	HL, AM		0·944	300·1	274·0	+29·0			152
		7746	0·924	282·9	272·4	+12·7	16	96	163*c*
		7747	0·255	359·1	205·5	+16·6	25	142	
		7745	0·297	147·2	195·9	−12·5	73	492	
C.		7748	0·549	63·4	174·7	+15·9	60	182	
		839d	0·634	128·6	173·2	−21·6	1	4	
		7749	0·779	76·8	154·7	+11·4	13	123	106*c*
		7758	0·847	114·0	150·6	−19·0	0	3	94*c*
		7750	0·883	61·8	145·9	+25·6	3	50	156*c*
		7751	0·978	77·0	127·4	+13·1	69	274	
1916.				°	°	°			
172·389	HL, AM	7753	0·991	80·2	123·1	+10·0	2	72	} 322*c*
C.		7754	0·996	78·1	120·4	+12·0	3	133	
June 21				(−7·2)	(205·3)	(+1·9)	(265)	(1571)	(993)
173·419	HL, AM	7746	0·989	282·1	273·0	+12·2	0	56	161*c*
		7747	0·333	319·6	204·7	+16·5	16	118	
		7745	0·261	195·9	195·9	−12·5	94	490	
		7748	0·355	46·6	176·2	+16·0	83	368	
		7749	0·609	73·6	155·3	+11·5	15	95	
		7758	0·704	120·1	151·7	−19·1	0	5	
		7750	0·779	57·0	145·0	+26·4	41	139	111*c*
C.		7752	0·775	65·6	143·3	+19·9	2	4	
		7751	0·904	76·5	127·5	+13·0	62	253	
		7753	0·930	80·1	123·5	+ 9·9	20	65	} 686*c*
		7754	0·962	78·2	117·8	+11·9	67	598	
		7756*	0·989	80·4	110·6	+ 9·8	7	20	
		7755	0·989	109·5	111·8	−18·9	3	56	118*f*
			0·933	63·5	124·4	+25·4			69
June 22				(−6·7)	(191·7)	(+2·0)	(410)	(2267)	(1145)
174·380	HL, AM		0·955	307·0	248·8	+35·8			91
			0·836	294·3	233·6	+21·3			15
			0·855	238·6	232·4	−25·1			172
		7747	0·476	303·4	203·4	+17·1	9	64	
		7745	0·382	228·5	195·9	−12·6	70	453	
		7748	0·252	9·3	176·5	+16·4	105	536	
		7757	0·405	134·1	161·5	−14·3	48	147	
		7749	0·429	67·3	155·2	+11·4	13	71	
		7752	0·607	58·9	145·4	+20·0	1	13	
C.		7750	0·651	50·1	145·2	+26·4	23	106	
		7751	0·791	75·1	127·4	+13·0	58	309	
		7753	0·827	79·5	123·5	+ 9·9	14	73	
		7754	0·890	76·9	116·5	+12·6	45	389	} 770*c*
		7756*	0·924	80·3	111·6	+ 9·8	3	23	
		7756	0·950	79·0	107·3	+11·1	63	346	
		7755	0·938	111·1	111·4	−18·9	4	50	391*f*
			0·959	4·9	160·7	+74·8			12
			0·894	59·0	118·5	+28·4			81
June 23				(−6·3)	(178·9)	(+2·1)	(456)	(2580)	(1532)

Group 7747, June 18–24. A few very small spots on June 18, which have developed by June 20 into two unstable clusters, of which the preceding has nearly disappeared by June 24. Group 7748, June 18–29. Revival or return of Group 7728. A diffuse spot on June 18, which has developed by June 20 into a close pair of distinct spots, followed by a few very small spots in a sparse train. The disturbance then rapidly increases and spreads over an immense area. A regular spot begins to form at the head of the group on June 22, and has fully developed by June 24. The group diminishes after June 25, the leader being the only important spot remaining after June 27. Group 7749, June 20–29. Probably a return of Group 7736. A regular spot, sometimes with a few very small followers. The leader diminishes steadily in size, and nothing is seen on June 27, but a very small marking is near its place on June 28. Group 7750, June 21–26. Several small unstable spots usually grouped in two small clusters. Group 7758, June 21–28. A small disturbed area *f* Group 7757. No spots are seen on June 23. Group 7751, June 21–July 3. Return of Group 7737. Two large regular spots, of which the one in the rear is the smaller, and a composite spot by June 25. Later it breaks up, and the leader remains alone by July 2. A few small unstable companions are seen occasionally near the two chief spots. Group 7752, June 22–30. A few very small spots *s* Group 7750 on June 22, of which only one remains on June 23. This has broken up into a small cluster by June 24, and has nearly disappeared by the next day. A revival has taken place by June 26, and the group becomes a continuous stream, at first strongly curved and convex to the Equator, but straight later. Group 7753, June 22–July 1. A regular spot in the declining stage, usually with one small companion *sf* Group 7751. Group 7754, June 22–July 2. Return of Group 7735. An irregular stream following very closely Groups 7751 and 7753. The rear spot is much the largest member, but the entire group is unstable, and by June 29 it has separated into three distinct clusters. Group 7755, June 22–29. A spot, ill-defined at first, but becoming regular as it diminishes. A very small faint cluster precedes it on June 28. Group 7756*, June 22–25. Return of Group 7733, third apparition. A small spot *p* Group 7736. Group 7756, June 23–July 3. Return of Group 7738. Two spots nearly on the same meridian. The larger and more northern is a double spot: the other is regular. A few small unstable attendants are occasionally seen near them. Group 7757, June 23–30. A short stream developing into a fine double spot, followed by a considerable train. By June 29 the leader has become regular, and the train is a distant and feeble cluster.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
175·485	HL, AM		0·928	292·9	231·2	+22·0			253
			0·890	239·9	222·5	−25·3			202
		7747	0·658	294·6	203·0	+17·6	0	8	
		7745	0·572	244·2	196·0	−12·5	64	361	
		7748	0·316	321·1	176·2	+16·3	137	641	
		7757	0·281	173·9	162·5	−13·9	71	245	
		839e	0·124	22·8	161·5	+ 8·8	0	1	
		7749	0·219	44·6	155·3	+11·0	8	50	
		7758	0·459	150·4	150·3	−21·3	8	20	
G.		7752	0·407	42·7	147·3	+19·5	2	8	
		7750	0·498	35·8	145·5	+25·8	8	37	
		7751	0·614	71·2	127·8	+13·1	55	238	
		7753	0·659	78·2	123·6	+ 9·4	11	71	
		7754	0·756	75·2	116·0	+12·6	42	355	82*c*
		7755	0·840	115·0	110·6	−19·5	11	57	612*f*
		7756*	0·803	80·0	111·2	+ 9·3	2	22	889*c*
		7756	0·839	78·0	107·6	+11·3	71	326	
			0·827	127·8	116·2	−28·9			61
			0·809	56·0	114·8	+28·3			81
June 24				(−5·8)	(164·3)	(+2·2)	(490)	(2440)	(2180)
176·469	HL, AM		0·977	293·3	228·6	+23·3			88
			0·935	244·0	217·2	−23·2			95
			0·886	310·7	207·9	+36·6			64
			0·818	293·5	204·3	+20·4			368
		7745	0·735	250·1	196·2	−12·7	72	299	108*c*
		839f	0·683	236·5	188·5	−20·1	0	3	
		7759	0·570	236·5	180·8	−16·2	11	27	
		7748	0·470	302·3	175·7	+16·7	141	723	
		7757	0·355	217·9	164·2	−13·9	54	272	
		7749	0·166	335·5	155·3	+11·0	7	14	
		7758	0·392	181·1	151·8	−20·6	1	6	
C.		7752	0·319	13·5	146·8	+20·4	0	3	
		7750	0·436	16·5	143·3	+27·0	3	26	
		7751	0·444	63·9	127·2	+13·3	63	349	
		7753	0·477	73·6	123·7	+ 9·9	11	34	
		7754	0·598	72·4	115·7	+12·4	25	149	
		7755	0·716	120·7	110·7	−19·6	4	41	347*f*
		7756*	0·650	78·3	111·3	+ 9·4	0	11	130*c*
		7756	0·704	76·2	107·3	+11·3	49	316	
			0·853	112·8	95·8	−17·9			43
			0·843	75·5	94·5	+13·5			248
			0·929	65·9	84·2	+23·2			60
			0·958	115·5	80·9	−23·6			117
June 25				(−5·3)	(151·3)	(+2·4)	(441)	(2273)	(1668)

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
177·523	HL, AM		0·929	287·6	205·1	+17·2			272
			0·804	256·0	189·4	− 9·7			47
			0·797	289·8	188·8	+17·1			102
			0·821	242·8	188·3	−20·4			73
			0·942	358·4	142·3	+72·6			18
		7745	0·875	253·5	196·5	−13·1	47	319	287*c*
		7759	0·744	245·6	182·0	−16·1	17	53	39*c*
		7748	0·670	292·9	177·3	+17·0	87	448	51*c*
		7757	0·531	239·3	165·2	−13·5	37	221	
		7749	0·350	295·9	155·9	+11·1	4	16	
		7758	0·441	209·5	150·6	−20·0	0	2	
		7750	0·449	342·3	146·1	+27·6	0	10	
C.		7752	0·338	337·3	145·3	+20·5	9	51	
		7751	0·255	40·7	127·5	+13·6	52	341	
		7753	0·260	59·7	124·2	+ 9·9	8	38	
		7754	0·393	65·3	116·0	+11·7	20	123	
		7760	0·430	76·3	112·5	+ 8·0	0	7	
		7755	0·566	131·5	110·6	−19·7	5	26	
		7756	0·517	72·3	107·3	+11·2	48	266	
			0·755	126·5	95·5	−24·7			39
			0·748	69·0	91·5	+17·2			34
			0·873	120·0	81·4	−24·4			46
			0·904	69·1	73·6	+19·9			111
			0·935	106·1	69·7	−14·1			47
June 26				(−4·9)	(137·3)	(+2·5)	(334)	(1921)	(1166)
178·401	M, AM		0·979	287·7	203·8	+17·8			290
			0·919	238·8	187·6	−27·2			67
			0·780	245·5	173·4	−17·1			190
		7745	0·955	255·5	197·1	−13·0	51	282	986*c*
		7759	0·866	249·2	183·1	−16·5	32	92	
		7748	0·802	289·7	177·8	+17·3	65	316	752*c*
		839g	0·754	257·1	173·4	− 8·0	1	5	28*c*
		7757	0·673	247·0	165·0	−13·2	24	181	50*c*
		7758	0·551	224·7	150·1	−20·6	7	20	
G.		7752	0·459	308·9	147·9	+19·1	23	82	
		7751	0·193	356·1	126·5	+13·7	62	350	
		7753	0·127	12·1	124·2	+ 9·7	9	16	
		7754	0·212	43·9	117·1	+11·3	36	169	
		7760	0·244	63·9	113·0	+ 8·7	3	17	
		7755	0·458	146·5	110·2	−19·9	8	19	
		7756	0·340	63·2	107·7	+11·3	40	212	
		7753*	0·533	136·3	102·7	−20·1	0	3	
		839h	0·591	135·5	99·2	−22·5	0	4	
		839i	0·640	135·5	96·2	−24·8	0	3	

Group 7759, June 25–29. A pair of widely separated clusters on June 25, becoming an irregular stream by June 26.
Group 7760, June 26–July 2. A very small spot on June 26 *s* of Groups 7754 and 7756. The five groups, 7751, 7753, 7754, 7756, and 7760, really form part of a single disturbance of immense extent, and the distinction between the groups is to a certain degree arbitrary, and is made for convenience in measurement and reduction. Group 7760 has become a sparse straight stream by June 28, and three small clusters by June 30. A small regular spot alone remains by July 2.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
178·401	M, AM		0·726	59·0	83·0	+23·7			57
			0·824	124·9	76·9	−26·4			51
G.			0·859	105·7	68·2	−12·1			103
			0·862	85·8	66·3	+ 5·0			77
			0·846	63·7	65·2	+29·6			113
June 27				(−4·5)	(125·7)	(+2·6)	(361)	(1771)	(2764)
179·338	M, AM		0·733	248·5	157·7	−13·6			33
			0·969	356·0	131·3	+77·4			14
			0·940	357·0	122·5	+72·2			10
		7759	0·957	251·1	184·5	−17·2	10	36	369*c*
		7748	0·925	287·1	180·5	+16·8	57	287	919*c*
		7757	0·820	252·0	166·3	−13·0	33	138	171*c*
		7749	0·704	282·0	157·6	+10·4	0	3	40*c*
		7758	0·683	234·2	149·6	−21·3	1	10	
		7752	0·615	297·7	148·2	+18·8	18	70	
C.		7751	0·294	310·8	126·5	+13·6	57	311	
		7753	0·229	303·4	124·4	+ 9·9	11	25	
		7754	0·171	339·0	116·9	+11·9	20	99	
		7760	0·096	357·2	113·6	+ 8·2	16	46	
		7755	0·391	173·8	110·7	−20·1	5	26	
		7756	0·174	33·0	107·8	+11·0	40	225	
		7755*	0·451	154·4	101·3	−21·3	0	11	
		7761	0·991	111·0	33·5	−20·4	14	105	146*p*
			0·762	115·8	67·5	−17·4			30
June 28				(−4·0)	(113·3)	(+2·7)	(282)	(1392)	(1732)
180·401	M, AM		0·905	264·3	163·4	− 3·9			79
			0·877	278·8	160·3	+ 9·1			150
			0·928	228·7	159·1	−36·4			74
			0·799	298·8	149·2	+24·4			131
			0·813	241·1	148·8	−21·2			115
		7748	0·987	286·6	180·0	+16·8	45	215	1091*f*
		7759	0·990	254·5	179·8	−14·9	7	117	280*c*
		7757	0·931	254·7	166·2	−13·1	19	119	574*sf*
C.		7749	0·825	282·0	154·4	+11·5	0	7	
		7752	0·779	292·5	148·7	+19·2	15	64	36*c*
		7751	0·495	292·3	127·1	+13·3	49	202	
		7753	0·439	287·3	124·3	+10·0	11	18	
		7754	0·354	297·8	117·8	+12·1	43	114	
		7760	0·284	289·9	114·8	+ 8·2	17	60	
		7755	0·428	204·8	110·2	−20·0	2	8	
		7756	0·204	314·1	107·7	+10·9	37	192	
		7761	0·931	113·3	33·6	−20·4	14	85	335*c*
June 29				(−3·5)	(99·2)	(+2·8)	(259)	(1201)	(2865)
1916.				°	°	°			
181·419	HL, AM		0·863	275·5	145·3	+ 6·2			62
			0·868	298·8	143·6	+26·2			549
		7757	0·990	256·9	166·5	−12·5	21	96	642*sf*
		7752	0·912	290·2	150·8	+19·6	12	66	734*c*
		7751	0·672	286·2	127·1	+13·0	30	187	
G.		7753	0·631	282·4	124·4	+10·0	1	6	
		7754	0·552	287·7	118·2	+12·1	30	116	
		7760	0·491	281·8	114·7	+ 8·3	9	48	
		7756	0·399	291·2	108·0	+10·9	26	145	
		7762	0·372	39·1	71·4	+19·5	2	12	
		7761	0·835	117·5	33·6	−20·8	20	85	574*c*
June 30				(−3·1)	(85·8)	(+2·9)	(151)	(761)	(2561)
182·363	HL, AM		0·973	280·6	150·0	+11·0			247
			0·952	293·8	144·8	+23·5			773
			0·952	247·1	142·7	−20·7			127
			0·793	291·9	124·2	+19·1			43
		7751	0·818	283·1	127·7	+12·4	23	139	70*c*
		7753	0·782	280·5	124·5	+10·1	2	5	
G.		7754	0·697	284·4	116·8	+12·2	31	107	
		7760	0·672	278·9	115·3	+ 8·2	8	23	
		7756	0·579	284·5	107·9	+10·8	23	91	
		7762	0·275	4·5	72·0	+18·9	4	15	
		7761	0·719	123·0	33·3	−20·7	12	64	212*f*
			0·934	113·4	7·3	−20·5			218
July 1				(−2·7)	(73·3)	(+3·0)	(103)	(444)	(1690)
183·322	HL, AM		0·993	293·8	144·3	+24·0			150
			0·899	234·1	117·7	−30·1			53
			0·827	296·5	114·2	+23·5			102
			0·802	241·9	109·3	−20·1			329
		7751	0·921	282·2	127·6	+12·4	20	98	255*c*
		7754	0·841	283·5	117·4	+13·0	6	31	} 451*c*
		7760	0·830	277·6	116·5	+ 8·0	4	5	
G.		7756	0·739	280·9	107·9	+10·2	14	39	410*c*
		7763	0·673	226·5	93·0	−24·9	14	46	
		7762	0·333	325·4	72·1	+18·9	19	70	
		7764	0·454	83·1	33·8	+ 5·8	3	15	
		7761	0·589	132·0	32·9	−20·4	17	53	
			0·906	118·2	0·0	−23·8			302
			0·930	76·1	352·3	+14·1			143
July 2				(−2·2)	(60·6)	(+3·1)	(97)	(357)	(2195)

Group 7761, June 28–July 9. A regular spot diminishing in size. It has dissolved into a very small cluster by July 3, and having disappeared by July 5, it has revived as two small clusters by July 7.

Group 7762, June 30–July 5. An irregular stream of small unstable spots. The leader has become the largest member by July 2, and the group is irregularly scattered by July 4. On July 5 there remain only three very small spots close together.

Group 7763, July 2–5. A small cluster followed by a small composite spot on July 2; later a small sparse irregular stream.

Group 7764, July 2–3. A few small unstable spots in an irregular stream.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
184·357	M. AM		0·910	301·4	110·1	+29·7			107
			0·846	289·1	103·8	+17·8			261
		7751	0·985	281·9	127·3	+12·3	28	127	636*f*
		7756	0·882	280·9	108·6	+11·1	4	11	301*c*
		839j	0·896	242·8	106·3	−22·5	2	6	} 709*c*
C.		7763	0·798	234·4	92·6	−25·4	11	53	
		7762	0·495	303·2	72·7	+18·6	9	50	
		7765	0·336	196·4	52·5	−15·5	11	34	
		7764	0·218	77·5	34·6	+ 5·8	2	14	
		7761	0·471	148·5	31·7	−20·5	7	34	
			0·836	122·9	356·4	−24·9			133
July 3				(−1·7)	(46·9)	(+3·2)	(74)	(329)	(2147)
185·304	HL. AM		0·893	284·2	97·2	+14·1			1033
		7763	0·891	239·1	92·0	−25·4	13	73	741*p*
		7762	0·641	295·1	71·8	+18·3	12	35	
G.		7765	0·451	224·1	53·2	−15·7	13	26	
		7761	0·410	174·3	31·8	−20·6	4	12	
			0·821	130·9	348·6	−30·1			151
			0·897	124·6	337·1	−28·7			83
July 4				(−1·3)	(34·3)	(+3·3)	(42)	(146)	(2008)
186·428	HL. AM		0·901	225·5	72·9	−37·0			42
		7763	0·962	241·3	89·6	−26·3	11	94	741*c*
		7762	0·824	289·8	74·0	+18·3	5	18	267*c*
		7765	0·644	239·9	54·8	−15·9	4	20	
G.		*839k*	0·399	189·2	23·4	−19·6	0	2	
		7766	0·875	130·5	327·5	−32·5	2	17	200*c*
		839l	0·881	116·6	322·0	−21·4	6	25	115*c*
		7767	0·975	83·9	302·3	+ 6·7	29	113	85*c*
			0·785	141·9	343·2	−35·3			46
July 5				(−0·8)	(19·5)	(+3·5)	(57)	(289)	(1496)
187·169	HL. AM		0·993	242·4	89·9	−26·8			163
			0·890	290·4	71·9	+19·8			361
			0·882	256·4	70·0	−10·2			54
D.		7765	0·755	244·5	54·8	−16·4	2	19	
		7766	0·814	135·6	327·2	−32·8	0	55	94*c*
		7767	0·925	84·3	302·0	+ 6·6	20	137	438*nf*
			0·927	55·3	304·0	+33·4			90
July 6				(−0·5)	(9·7)	(+3·6)	(22)	(211)	(1200)
1916.				°	°	°			
188·543	HL. AM		0·980	290·0	70·1	+20·3			207
		7765	0·923	251·2	56·2	−15·7	3	9	279*f*
		7761	0·718	235·2	30·4	−21·3	15	50	28*p*
		7766	0·662	149·6	328·3	−31·3	17	60	
G.		7767	0·756	84·0	302·3	+ 6·9	11	69	279*f*
		7768	0·800	110·2	300·9	−13·6	5	21	
		7769	0·959	77·0	277·6	+13·6	49	278	510*c*
			0·885	62·7	290·7	+25·7			90
July 7				(+0·2)	(351·3)	(+3·7)	(100)	(487)	(1393)
189·308	M, HL		0·953	250·5	51·3	−17·3			336
			0·812	275·0	35·5	+ 6·3			67
		7761	0·816	239·8	30·5	−21·7	16	63	507*c*
		7766	0·608	162·8	329·2	−31·6	8	26	
		7767	0·632	83·9	302·2	+ 6·8	14	86	150*c*
G.		7768	0·691	114·1	301·0	−13·5	6	17	
		7769	0·896	76·8	277·7	+13·6	46	262	1079*c*
			0·853	123·3	289·3	−25·5			60
			0·897	59·7	279·5	+28·7			130
			0·963	113·8	270·0	−21·7			271
July 8				(+0·5)	(341·3)	(+3·8)	(90)	(454)	(2600)
190·340	HL. AM		0·908	275·4	33·0	+ 6·6			55
		7761	0·925	246·0	31·9	−20·4	4	29	661*c*
		7766	0·581	180·2	327·8	−31·5	4	12	
		7770	0·256	81·6	313·0	+ 5·9	1	6	
G.		7767	0·446	81·5	301·4	+ 7·3	14	45	
		7769	0·772	75·5	277·7	+13·6	46	253	327*c*
			0·844	55·8	273·7	+30·6			64
			0·900	117·2	267·9	−22·4			391
July 9				(+1·0)	(327·7)	(+3·9)	(69)	(345)	(1498)
191·574	M, AM		0·967	247·9	23·8	−20·1			317
			0·805	234·5	357·5	−25·0			62
		7767	0·196	70·9	300·7	+ 7·6	8	35	
G.		7769	0·572	71·7	277·6	+13·6	41	249	
			0·773	124·1	267·6	−22·7			34
			0·926	104·0	245·3	−11·3			69
			0·939	72·6	241·5	+17·7			153
July 10				(+1·5)	(311·4)	(+4·0)	(49)	(284)	(635)

Group 7765, July 3–7. A few very small unstable spots in an irregular cluster; one small spot on July 7.
Group 7766, July 5–9. Some small markings developing into a small unstable stream, of which only one spot remains on July 9.
Group 7767, July 5–12. Return of Group 7740. A double spot, followed on July 9 and 10 by a train of small unstable markings. The double spot remains alone on July 11 and has disappeared by July 12, but some very small markings are seen near its place.
Group 7768, July 7–8. A few very small spots.
Group 7769, July 7–19. Return of Group 7746. A large and very stable regular spot.
Group 7770, July 9–11. A few small markings *n* Group 7767; not seen on July 10.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

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1916.				°	°	°			
192·582	AM, M		0·878	291·1	358·7	+20·4			60
			0·888	241·7	355·7	−22·7			148
			0·834	225·2	342·7	−33·0			33
		7770	0·267	274·8	313·4	+ 5·2	1	8	
G.		7767	0·087	304·3	302·1	+ 6·9	3	11	
		7769	0·383	63·8	277·4	+13·6	47	238	
			0·889	117·0	239·7	−21·7			148
			0·901	67·8	234·4	+21·7			361
July 11				(+2·0)	(298·0)	(+4·1)	(51)	(257)	(750)
193·346	M, AM		0·919	240·5	349·6	−24·9			186
		840a	0·442	274·9	314·1	+ 5·9	1	6	
		7767	0·240	284·5	301·4	+ 7·5	1	6	
		7769	0·244	48·1	277·2	+13·5	45	247	
G.			0·793	65·4	237·1	+21·9			69
			0·920	120·3	226·3	−25·7			179
			0·907	58·2	224·7	+30·5			106
			0·957	76·5	214·5	+14·1			206
July 12				(+2·3)	(287·9)	(+4·2)	(47)	(259)	(746)
194·403	M, AM		0·956	235·4	340·7	−31·3			173
			0·863	226·0	322·2	−34·0			157
		7769	0·171	340·0	277·3	+13·5	46	240	
D.			0·876	126·8	220·7	−29·1			224
			0·887	71·5	211·7	+18·3			305
			0·914	55·7	210·0	+33·0			83
			0·967	109·6	201·1	−17·7			330
July 13				(+2·8)	(273·9)	(+4·3)	(46)	(240)	(1272)
195·409	M, AM		0·925	234·2	321·1	−30·6			247
		7769	0·322	300·3	277·1	+13·6	43	232	
		840b	0·736	195·9	276·0	−40·7	0	1	
		840c	0·467	81·7	232·9	+ 7·7	0	3	
G.		*840d*	0·739	73·1	213·6	+15·4	0	3	90*f*
		7771	0·985	73·6	180·0	+16·8	26	147	297*p*
			0·853	124·7	209·3	−26·3			130
			0·876	56·8	202·1	+30·9			71
			0·913	112·4	198·1	−18·3			727
July 14				(+3·3)	(260·6)	(+4·4)	(69)	(386)	(1562)
1916.				°	°	°			
196·361	M, AM		0·974	242·5	320·9	−25·4			41
			0·977	235·0	319·9	−32·7			67
			0·933	253·3	314·7	−13·8			62
			0·806	275·3	301·7	+ 6·9			146
C.		7769	0·503	289·2	277·1	+13·4	46	234	
		7771	0·920	73·4	181·0	+17·0	23	115	475*c*
			0·978	179·0	244·6	−73·1			172
			0·832	101·3	193·0	− 6·8			23
			0·859	114·1	192·6	−18·0			295
July 15				(+3·7)	(248·0)	(+4·5)	(69)	(349)	(1281)
197·373	HL, AM		0·908	278·1	300·0	+ 9·3			253
			0·903	255·6	297·3	−10·8			64
			0·825	289·7	289·5	+18·9			49
		7769	0·682	284·9	277·1	+13·5	38	228	
		7771	0·813	72·5	180·7	+16·8	21	108	398*c*
C.			0·819	118·9	184·9	−20·3			123
			0·845	88·8	177·0	+ 3·5			58
			0·943	109·8	166·8	−16·9			266
			0·930	65·6	166·5	+24·3			159
			0·961	78·6	160·3	+12·3			129
July 16				(+4·1)	(234·6)	(+4·6)	(59)	(336)	(1499)
198·361	HL, AM		0·957	284·2	295·0	+15·0			201
			0·937	272·6	291·0	+ 4·0			48
			0·842	299·4	276·7	+27·1			63
			0·795	235·3	266·9	−23·7			69
		7769	0·826	283·2	277·1	+13·5	33	224	120*c*
C.		7773	0·192	21·4	217·4	+14·8	0	3	
		7771	0·669	69·6	180·7	+17·0	18	96	
		7772	0·925	80·5	153·6	+10·5	7	18	266*c*
			0·889	112·7	162·3	−17·7			352
			0·896	68·6	158·3	+21·1			214
July 17				(+4·6)	(221·5)	(+4·6)	(58)	(341)	(1333)
199·383	HL, AM		0·916	299·4	273·2	+28·7			71
			0·910	240·4	268·1	−24·4			132
G.		7769	0·932	282·6	277·0	+13·4	31	218	707*c*
		7773	0·245	319·6	217·4	+15·3	2	16	
		7774	0·326	20·7	200·9	+22·4	14	29	
		840e	0·528	150·8	191·6	−24·5	2	8	

Group 7771, July 14–26. Return of Group 7748. Third apparition. A regular spot, occasionally with some very small unstable attendants. These are most numerous and widely scattered on July 20 and 21.

Group 7772, July 17–27. Revival of Group 7749. Two small spots on July 17, of which the leader has disappeared by July 18. Many small spots appear by July 19, and by July 20 the group has become a very long and nearly continuous stream of small spots. After this the leader spot develops and becomes a large regular spot, but the following spots diminish, and the leader remains alone on July 26.

Group 7773, July 17–19. A few very small faint unstable spots.

Group 7774, July 18–23. Two small but very dark spots on July 18; a cluster of small spots on July 19; two clusters on July 20, of which only the following one remains by July 21.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
199·383	HL, AM	7771	0·494	63·4	180·6	+16·9	18	94	
		7772	0·805	80·2	154·4	+10·7	13	18	190*c*
			0·766	119·2	163·3	−18·6			309
G.			0·795	68·2	156·4	+20·1			116
			0·872	63·2	148·6	+25·5			101
			0·913	116·2	146·5	−21·5			64
			0·953	79·3	135·3	+11·6			77
July 18				(+5·0)	(208·0)	(+4·7)	(80)	(383)	(1767)
200·325	HL, AM		0·912	294·7	260·9	+24·4			45
			0·896	241·7	254·2	−22·7			166
		7769	0·988	282·8	277·3	+13·3	28	236	421*c*
		7773	0·404	300·0	216·9	+16·1	0	9	
		7774	0·313	346·0	200·3	+22·4	11	45	
G.		7771	0·332	49·4	180·4	+17·1	18	91	
		7772	0·675	79·1	153·3	+10·9	12	56	
			0·803	119·0	147·5	−19·7			96
			0·760	68·6	147·2	+19·3			53
			0·868	59·3	137·3	+28·9			79
			0·936	77·0	125·9	+13·9			627
July 19				(+5·4)	(195·6)	(+4·8)	(69)	(437)	(1487)
201·354	HL, AM		0·826	293·6	236·5	+22·1			172
		7774	0·423	315·8	200·4	+22·2	7	28	
		840f	0·431	215·6	196·9	−15·8	2	4	
		7771	0·222	8·2	180·0	+17·5	10	84	
		840g	0·478	149·8	167·2	−19·6	0	4	
		7772	0·439	78·3	156·2	+ 9·5	50	129	
G.		7775	0·547	57·1	152·4	+21·5	3	14	
		7776	0·939	76·5	111·7	+14·4	4	28	} 831*c*
		7777	0·992	78·7	98·4	+11·9	84	366	
			0·820	76·8	126·9	+13·6			377
			0·922	61·7	115·4	+27·9			128
			0·943	112·4	114·8	−19·2			250
			0·955	87·0	109·1	+ 4·4			43
July 20				(+5·9)	(181·9)	(+4·9)	(160)	(657)	(1801)
202·426	HL, AM		0·928	251·7	233·3	−14·9			176
G.			0·906	294·7	232·2	+24·4			185
			0·880	233·5	221·3	−28·6			159
		840h	0·763	287·3	217·0	+16·4	0	4	
1916.				°	°	°			
202·426	HL, AM	7774	0·561	303·7	198·0	+22·4	4	18	
		7771	0·292	318·7	179·4	+17·5	17	81	
		840i	0·314	207·4	176·2	−11·2	1	2	
		7772	0·161	66·1	159·3	+ 8·7	163	584	
G.		7775	0·399	38·7	152·2	+22·9	2	4	
		7778	0·626	78·7	129·3	+11·0	26	44	
		7776	0·813	75·7	113·5	+14·5	18	38	546*c*
		7777	0·934	79·1	98·4	+12·0	64	342	} 956*c*
		7779	0·976	77·7	89·8	+13·0	16	91	
			0·910	118·1	107·3	−23·0			276
July 21				(+6·3)	(167·8)	(+5·0)	(311)	(1208)	(2298)
203·497	M, AM		0·989	254·3	233·1	−14·6			121
			0·946	297·9	224·6	+28·0			81
			0·897	284·7	217·5	+15·4			319
			0·824	239·9	203·3	−21·1			279
		7774	0·721	296·5	197·7	+22·4	3	4	245*f*
		7771	0·477	297·8	179·7	+17·4	11	67	
		7772	0·145	292·3	161·4	+ 8·2	107	502	
G.		7778	0·422	74·2	129·2	+11·3	29	101	
		7776	0·646	72·7	114·1	+15·0	28	95	
		7777	0·822	79·2	98·2	+11·8	67	370	280*c*
		7779	0·897	78·2	89·7	+12·8	21	86	758*c*
			0·820	54·1	102·3	+31·9			50
			0·862	120·3	100·0	−22·7			434
			0·842	109·7	99·2	−13·6			58
July 22				(+6·8)	(153·6)	(+5·1)	(266)	(1225)	(2625)
204·500	HL, AM		0·975	285·9	218·3	+16·7			148
			0·899	247·2	200·6	−17·8			373
		7774	0·841	294·1	196·6	+23·0	2	16	160*c*
		7771	0·649	291·3	179·5	+17·7	9	64	
		7772	0·348	279·7	161·8	+ 8·5	78	405	
		7778	0·245	59·6	127·9	+12·2	44	160	
C.		7776	0·455	67·1	114·7	+14·9	35	123	
		7777	0·673	77·8	98·2	+12·0	66	380	
		7779	0·774	77·5	89·7	+13·0	17	74	196*c*
		7780	0·949	85·9	68·6	+ 5·5	9	61	506*f*
			0·874	124·0	86·6	−26·2			143
			0·939	65·6	70·3	+24·7			49
			0·963	113·2	69·5	−20·6			113
July 23				(+7·3)	(140·3)	(+5·2)	(260)	(1283)	(1688)

Group 7775, July 20–21. A few very small faint spots *n* Group 7772.

Group 7776, July 20–30. Two small spots on July 20, widely separated. The group has developed by July 22 into a very sparse straight stream, composed of three clusters which increase in size up to July 25. The group diminishes later, and on July 28 only one large composite spot remains with a few small attendants. Near the place of Group 7751, but apparently a new formation.

Group 7777, July 20–August 1. A large regular spot with several close companions, usually to the south at first and following later. The leader alone remains after July 29.

Group 7778, July 21–29. A compact cluster on July 21, which has divided into two clusters by July 22, and is stretched out into an irregular stream by July 24. On July 26, the group again consists of two widely separated clusters, which are reduced to single spots by July 28. Revival of Group 7751.

Group 7779, July 21–29. A number of small unstable spots in an irregular stream, of which only one remains by July 27. Though very faint, it shows an extension on July 28, but has contracted again by July 29. The Groups 7778, 7776, 7777, and 7779 form one very long, nearly continuous procession.

Group 7780, July 23–August [illegible] [illegible]

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
205·383	HL. M		0·940	293·8	198·8	+24·1			131
			0·953	248·7	197·8	−18·4			421
		7771	0·781	289·0	179·4	+18·0	14	65	186*c*
		7772	0·565	277·6	163·0	+ 8·6	60	300	
		7778	0·129	3·8	128·1	+12·7	33	195	
		840j	0·269	173·6	126·9	−10·2	1	5	
		7776	0·300	54·5	114·0	+15·1	22	168	
		7777	0·517	75·2	98·0	+12·1	63	437	
C.		7779	0·632	76·2	89·8	+12·8	12	47	
		7781	0·888	114·8	70·2	−19·1	3	10	122*f*
		840k	0·880	108·9	69·8	−13·8	3	9	36*c*
		7780	0·868	87·0	68·3	+ 5·2	11	68	433*nf*
			0·825	130·4	83·1	−28·6			163
			0·890	63·8	66·5	+25·6			68
			0·979	106·3	52·5	−14·7			377
July 24				(+7·6)	(128·6)	(+5·3)	(222)	(1304)	(1937)
206·488	HL. AM		0·901	252·2	175·7	−13·6			138
			0·842	239·6	165·3	−21·9			141
		7771	0·907	287·7	179·2	+18·3	7	37	528*c*
		7772	0·777	276·2	165·1	+ 8·1	44	260	143*c*
		840l	0·778	305·8	161·0	+30·6	2	6	
		7778	0·292	297·7	129·3	+12·9	41	217	
		7776	0·166	352·4	115·3	+14·7	75	315	
G.		7777	0·296	64·9	98·1	+12·3	81	410	
		7779	0·436	69·9	89·2	+13·4	4	40	
		7780	0·716	88·1	68·3	+ 5·1	23	78	
		7782	0·793	83·3	61·4	+ 8·5	2	13	281*sf*
			0·719	60·4	70·7	+24·7			57
			0·805	122·9	67·2	−22·3			186
			0·902	109·3	52·5	−14·8			607
July 25				(+8·1)	(114·0)	(+5·3)	(279)	(1376)	(2081)
207·420	HL. M		0·908	246·4	163·0	−18·7			355
			0·834	291·9	157·6	+21·2			171
		7771	0·973	287·9	179·1	+18·6	6	17	318*c*
		7772	0·893	276·3	165·2	+ 8·0	35	235	430*c*
		7783	0·788	281·3	153·7	+12·2	28	113	275*c*
G.		7778	0·475	288·0	129·2	+13·3	25	111	
		7776	0·300	302·5	116·8	+14·5	49	191	
		7777	0·134	24·9	98·4	+12·3	51	300	
		7779	0·262	57·7	88·6	+13·3	1	21	
		7781	0·626	131·3	71·9	−19·6	3	12	
1916.				°	°	°			
207·420	HL, M	7780	0·550	89·3	68·3	+ 5·0	13	85	
		7782	0·633	83·5	62·4	+ 8·3	0	4	
G.			0·817	113·4	50·8	−15·5			331
			0·927	115·1	38·0	−20·8			236
July 26				(+8·5)	(101·7)	(+5·4)	(211)	(1089)	(2116)
208·435	HL, AM		0·921	290·1	163·9	+26·9			248
			0·951	245·3	156·2	−21·4			126
			0·886	238·4	144·2	−24·6			40
		7772	0·974	277·0	165·6	+ 8·0	41	257	315*c*
		7783	0·907	280·5	153·8	+11·9	30	166	365*c*
		7778	0·664	284·3	129·6	+13·6	20	64	
G.		7776	0·505	289·2	117·7	+14·4	45	208	
		7777	0·213	306·0	98·4	+12·6	63	346	
		7779	0·127	3·3	87·9	+12·7	2	29	
		7780	0·340	91·5	68·4	+ 4·6	12	65	
		7782	0·441	80·1	62·3	+ 9·3	0	3	
			0·896	118·5	30·1	−22·4			189
July 27				(+8·9)	(88·3)	(+5·5)	(213)	(1138)	(1283)
209·479	HL, AM		0·945	239·7	139·6	−26·2			121
		7783	0·981	280·4	153·8	+11·3	38	111	479*c*
		7778	0·824	282·4	130·0	+13·4	17	34	576*c*
		7776	0·705	284·7	118·9	+14·2	39	145	166*c*
		7777	0·424	287·8	98·7	+12·5	59	298	
		7779	0·278	300·6	88·6	+13·6	3	69	
G.		7780	0·109	97·6	68·2	+ 4·7	15	63	
		7782	0·222	66·6	62·5	+10·5	0	10	
		7784	0·974	73·9	356·6	+17·0	4	22	582*c*
			0·822	123·3	26·2	−23·1			101
			0·908	109·6	12·2	−15·2			44
July 28				(+9·4)	(74·4)	(+5·6)	(175)	(752)	(2069)
210·327	HL. M		0·893	293·5	126·2	+23·5			92
			0·835	236·4	112·5	−23·8			81
		7778	0·915	282·5	129·8	+13·7	10	38	422*c*
		7776	0·834	283·1	119·8	+14·1	41	239	213*c*
		7777	0·584	283·3	98·6	+12·4	52	245	
G.		7779	0·454	287·5	89·5	+13·0	1	35	
		7780	0·098	261·3	68·8	+ 4·8	14	56	
		7782	0·116	5·3	62·6	+12·3	0	8	
		7784	0·923	75·4	355·4	+15·6	0	10	785*n*
			0·934	117·9	359·3	−23·4			102
July 29				(+9·7)	(63·2)	(+5·7)	(118)	(631)	(1695)

Group 7781, July 24–26. A small spot, not seen on July 25.
Group 7782, July 25–29. A region *nf* Group 7780, in which one or two very small unstable markings form and disappear irregularly.
Group 7783, July 26–28. A compact cluster, suddenly appearing *nf* Group 7772. It has condensed by July 27 into a large composite spot with some small companions.
Group 7784, July 28–August 1. One or two small spots in the midst of a great mass of bright faculæ. No spots are seen on July 30 and 31.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
211·325	HL, M		0·919	241·1	111·3	−23·7			152
		7776	0·941	282·8	120·9	+13·9	55	192	1297*c*
		7777	0·752	281·7	98·9	+12·5	40	245	244*c*
		840m	0·642	283·3	89·8	+12·8	1	3	
G.		7780	0·331	266·3	69·4	+ 4·2	10	34	
			0·890	124·9	355·0	−27·4			92
			0·834	72·9	353·7	+17·4			370
July 30				(+10·1)	(50·1)	(+5·7)	(106)	(474)	(2155)
212·332	HL, AM		0·960	283·9	111·2	+15·0			576
			0·905	309·9	98·7	+38·3			135
			0·917	241·4	97·7	−23·3			170
		840n	0·973	298·5	114·1	+28·9	0	19	409*f*
		7777	0·882	281·3	98·9	+12·7	43	210	416*c*
G.		7780	0·534	269·0	68·9	+ 4·4	5	20	
		7785	0·975	118·3	324·2	−25·9	4	27	314*c*
			0·807	45·1	349·8	+38·7			62
			0·747	69·7	349·1	+18·9			71
			0·942	67·7	325·8	+22·9			38
July 31				(+10·5)	(36·7)	(+5·8)	(52)	(276)	(2191)
213·310	HL, AM		0·971	244·9	95·8	−22·6			37
			0·893	234·5	79·0	−27·9			191
		7777	0·962	281·6	98·6	+12·7	43	196	1084*f*
		7786	0·848	279·8	82·0	+11·4	1	12	
		7780	0·721	270·5	69·9	+ 4·4	9	12	26*c*
		840o	0·566	228·7	50·0	−16·5	4	11	
		840p	0·465	203·3	35·0	−19·4	1	3	
		840q	0·417	50·1	3·8	+21·1	0	3	
G.		7784	0·487	67·7	356·0	+15·9	1	5	
		840r	0·864	131·9	335·1	−31·4	0	6	192*f*
		840s	0·802	64·3	331·7	+24·0	0	5	
		840t	0·862	121·7	330·9	−23·4	0	4	
		7787	0·838	67·3	327·4	+22·1	4	5	70*c*
		7785	0·912	120·7	324·2	−24·8	4	11	524*f*
			0·930	73·5	314·9	+17·4			50
			0·949	85·9	312·0	+ 5·8			91
Aug. 1				(+10·9)	(23·8)	(+5·9)	(67)	(273)	(2265)
214·553	HL, AM		0·938	243·0	72·2	−22·7			295
G.			0·878	296·9	68·1	+26·4			60
			0·787	245·3	55·0	−15·1			158
1916.				°	°	°			
214·553	HL, AM	7786	0·969	280·6	83·6	+11·7	4	66	401*c*
		7780	0·891	271·9	70·5	+ 4·4	0	7	309*nf*
		7788	0·349	51·6	350·7	+18·3	2	5	
G.		7787	0·684	62·2	326·4	+23·1	7	28	
		7785	0·790	127·3	324·0	−24·3	3	6	366*sf*
			0·869	84·6	306·8	+ 7·7			190
			0·897	67·7	303·6	+22·7			119
Aug. 2				(+11·4)	(7·4)	(+6·0)	(16)	(112)	(1898)
215·299	HL, AM		0·943	273·2	68·2	+ 5·0			163
			0·898	280·9	61·8	+12·4			208
			0·879	248·8	55·5	−15·3			284
		7788	0·243	30·9	350·0	+17·9	1	8	
		7787	0·548	57·2	327·7	+22·4	7	20	
G.		7785	0·705	133·2	323·5	−23·8	4	15	92*f*
		7789	0·986	78·1	276·3	+12·7	15	128	67*p*
			0·768	87·4	307·2	+ 5·8			66
			0·848	66·7	300·0	+22·9			64
			0·881	81·0	295·4	+10·8			39
Aug. 3				(+11·7)	(357·5)	(+6·0)	(27)	(171)	(983)
216·326	HL, AM		[illegible]	280·8	57·3	+12·1			201
			[illegible]	252·2	53·8	−15·0			328
			[illegible]	241·5	41·8	−22·1			70
		7788	[illegible]	328·7	350·7	+16·8	0	6	
G.		*841a*	0·147	201·9	347·0	− 1·7	0	5	
		7789	0·923	78·9	276·1	+12·5	10	97	395*c*
			0·957	116·0	275·3	−22·7			107
Aug. 4				(+12·1)	(343·9)	(+6·1)	(10)	(108)	(1101)
217·391	HL, AM		0·938	242·2	34·2	−23·3			232
		7790	0·420	290·1	353·7	+13·9	3	12	
C.		7791	0·227	308·9	340·3	+14·2	6	14	
		7789	0·805	79·0	276·0	+12·5	22	113	56*c*
			0·925	71·2	261·6	+19·7			113
Aug. 5				(+12·5)	(329·8)	(+6·2)	(31)	(139)	(401)
218·352	HL, AM		0·934	243·6	21·3	−21·9			145
G.		7790	0·628	284·7	355·7	+14·0	3	7	
		7791	0·422	290·9	341·0	+14·3	7	30	

Group 7785, July 31–August 3. A small well-defined spot in a mass of bright faculæ. A small companion is seen near it on August 3.
Group 7786, August 1–2. Two small spots *sf* the place of Group 7779.
Group 7787, August 1–3. A very small spot on August 1, followed on August 2 by another at a considerable distance; a very sparse stream of small spots on August 3.
Group 7788, August 2–4. A few very small unstable spots.
Group 7789, August 3–15. Return of Group 7769. Third Apparition. A very stable regular spot with dark well-defined umbra, which is approximately circular throughout the apparition.
Group 7790, August 5–8. Three very small spots on August 5 *sp* the place of Group 7788. Only the leader is seen on August 6, and no spots are visible on August 7. Three very small spots appear on August 8.
Group 7791, August 5–9. A pair of well-defined spots which break up after August 7. The following spot alone remains on August 9.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
218·352	HL. AM	7792	0·448	303·8	340·4	+20·1	3	11	
		841b	0·247	13·7	313·5	+20·1	1	11	
G.		7789	0·663	78·3	275·6	+12·4	16	111	
		7793	0·957	102·9	245·8	−10·4	9	36	356*sp*
			0·832	69·4	261·1	+20·5			52
Aug. 6				(+12·9)	(317·1)	(+6·2)	(39)	(206)	(553)
219·461	HL. AM		0·791	285·9	354·7	+16·4			89
			0·807	242·7	351·1	−17·6			71
			0·832	232·1	349·5	−26·5			67
		7792	0·645	293·7	341·3	+19·9	3	10	
G.		7791	0·624	285·3	340·8	+14·4	25	60	
		7789	0·460	75·3	275·5	+12·3	20	108	
		7793	0·843	106·5	247·5	−10·2	13	20	65*c*
		7794	0·914	115·2	241·1	−19·9	2	20	629*nf*
			0·798	49·4	254·6	+35·5			48
Aug. 7				(+13·3)	(302·5)	(+6·3)	(63)	(218)	(969)
220·380	HL. AM	7794*	0·922	247·6	353·6	−17·8	0	1	119*c*
		7790	0·886	283·8	353·1	+15·1	0	15	256*n*
		7792	0·804	288·8	343·6	+18·9	3	13	51*c*
		7791	0·772	283·0	340·9	+14·0	9	33	40*c*
C.		7789	0·274	66·6	275·5	+12·4	11	95	
		7795	0·700	42·7	254·5	+36·1	0	6	
		7793	0·722	110·8	247·2	−10·2	5	16	
		7794	0·831	120·4	240·4	−20·8	2	10	539*nf*
			0·891	68·7	227·2	+21·8			116
Aug. 8				(+13·6)	(290·3)	(+6·3)	(30)	(189)	(1121)
221·334	HL. AM		0·809	230·3	321·6	−26·5			270
		7794*	0·970	249·2	350·2	−18·3	0	8	230*p*
		7791	0·875	282·5	339·2	+14·0	4	20	744*p*
		7789	0·112	21·1	275·3	+12·4	18	92	
C.		7795	0·606	32·8	253·7	+36·4	4	28	
		7793	0·611	118·0	244·5	−11·3	3	8	
		7794	0·698	128·0	241·9	−20·2	0	6	95*f*
			0·920	124·2	218·4	−28·0			120
			0·935	113·4	212·6	−19·2			217
Aug. 9				(+14·0)	(277·7	(+6·4)	(29)	(162)	(1676)
222·467	HL, AM		0·972	289·9	340·4	+20·8			199
			0·965	283·3	338·4	+14·5			100
			0·972	252·6	336·4	−15·1			132
			0·882	295·7	324·3	+25·7			105
			0·891	233·0	316·7	−28·7			481
		7789	0·237	295·9	275·2	+12·2	16	99	
G.		7795	0·529	16·3	252·1	+36·7	7	37	
		7794	0·521	145·4	244·5	−19·1	6	20	
			0·900	127·6	207·7	−29·7			132
			0·901	114·8	203·0	−18·9			515
			0·913	63·4	196·7	+26·9			140
			0·946	88·9	191·7	+ 3·1			192
			0·960	73·1	188·0	+18·0			509
Aug. 10				(+14·4)	(262·7)	(+6·5)	(29)	(156)	(2505)
223·315	HL, AM		0·950	294·0	324·2	+24·8			133
			0·958	241·2	319·3	−25·1			244
			0·936	234·1	312·8	−30·3			192
			0·847	275·3	309·6	+ 8·0			176
			0·826	290·7	307·0	+20·7			88
			0·904	218·7	299·5	−40·6			55
		7789	0·406	285·7	275·0	+12·3	17	89	
		7795	0·495	354·4	254·9	+35·9	3	13	
G.		7794	0·430	163·4	244·1	−17·8	5	21	
		7796	0·991	81·5	168·6	+ 9·3	40	231	223*c*
			0·861	135·6	205·4	−33·5			175
			0·826	119·7	201·9	−20·0			203
			0·843	60·9	195·3	+27·9			116
			0·862	89·9	192·0	+ 3·4			144
			0·900	82·8	186·9	+ 9·3			120
			0·905	73·3	186·1	+17·9			639
Aug. 11				(+14·7)	(251·5)	(+6·5)	(65)	(354)	(2508)
224·488	HL. AM		0·953	277·4	309·0	+ 9·1			129
			0·893	285·7	299·8	+17·0			35
		7789	0·628	281·5	274·9	+12·4	15	92	
		7797	0·491	221·7	255·7	−15·3	2	14	
G.		*841c*	0·485	198·3	245·3	−20·8	0	10	
		841d	0·480	344·7	244·8	+34·0	1	10	
		7794	0·413	195·7	242·7	−16·8	4	14	
		7796	0·924	83·0	168·0	+ 9·0	41	174	301*c*
			0·806	71·5	182·4	+18·7			274
			0·899	105·9	174·4	−11·2			66

Group 7792, August 6–8. Some very small unstable spots *n* of Group 7791 and *nf* Group 7790.
Group 7793, August 6–9. A wide pair of small spots, the preceding of which has disappeared by August 9.
Group 7794, August 7–13. A small well-defined spot, sometimes accompanied by very small scattered unstable markings.
Group 7794*, August 8–9. One or two small spots in an area of faculæ.
Group 7795, August 8–14. Intermittent. Several very small unstable spots in a straight sparse stream which has disappeared by August 11. A pair of small spots is seen on August 14.
Group 7796, August 11–23. Return of Group 7772. A large regular spot, with occasionally a small companion. An outburst of small spots takes place suddenly behind the group on August 21, but the regular spot remains alone on August 23.
Group 7797, August 12–16. Two very small spots on August 12, both of which develop on the succeeding days: the leader becomes at first a compact cluster and then a composite spot: the follower increases but remains single.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
224·488	HL, AM		0·940	69·3	165·1	+21·7			220
G.			0·971	107·3	162·5	−15·0			139
Aug. 12				(+15·1)	(236·0)	(+6·6)	(63)	(314)	(1164)
225·451	HL, AM		0·932	279·3	292·6	+11·0			79
			0·896	291·2	287·2	+21·8			41
		7789	0·777	280·3	274·5	+12·2	20	81	89*p*
		7797	0·619	234·6	254·7	−15·3	30	88	
		841e	0·583	309·4	253·7	+27·4	1	2	
		7794	0·514	219·4	243·2	−17·1	1	9	
		7798	0·302	12·8	219·1	+23·7	6	27	
G.		7796	0·817	83·7	168·2	+ 9·0	31	162	479*f*
			0·851	75·6	164·6	+15·7			124
			0·859	68·8	164·1	+21·5			525
			0·906	112·7	162·4	−17·4			276
			0·980	112·0	148·3	−19·9			79
			0·974	65·1	143·4	+26·3			45
Aug. 13				(+15·5)	(223·3)	(+6·6)	(89)	(369)	(1737)
226·522	HL, AM		0·8[illegible]	288·5	269·5	+19·4			100
		7789	0·9[illegible]	280·2	274·3	+12·1	15	88	115*c*
		7797	0·7[illegible]	244·0	254·7	−15·0	43	189	112*c*
		7795	0·742	314·7	250·0	+36·6	1	15	75*c*
		7798	0·331	334·0	218·2	+23·8	2	11	
		7799	0·433	86·5	183·4	+ 7·5	1	8	
		7796	0·651	84·0	168·3	+ 9·0	22	150	
			0·861	135·4	163·0	−33·1			46
G.			0·804	118·8	159·9	−18·3			115
			0·776	68·1	158·2	+21·1			62
			0·840	83·4	151·6	+ 9·2			107
			0·870	69·2	148·5	+21·4			32
			0·900	54·6	146·3	+34·6			24
			0·928	115·5	145·8	−20·6			245
			0·913	48·0	145·7	+40·8			25
			0·898	63·4	145·3	+26·8			36
			0·949	80·5	136·9	+11·0			766
Aug. 14				(+15·8)	(209·1)	(+6·7)	(84)	(461)	(1860)
227·354	AM, HL		0·896	288·3	262·2	+19·3			53
G.			0·813	311·2	247·6	+36·7			313
			0·792	239·7	244·2	−18·9			103

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
227·354	AM, HL		0·764	232·3	238·9	−22·7			41
		7789	0·967	280·7	274·1	+12·0	12	64	95*c*
		7797	0·867	248·1	254·4	−15·2	27	157	395*c*
		7798	0·436	313·9	218·1	+23·8	4	27	
		7799	0·272	91·7	182·3	+ 6·0	6	20	
G.		7796	0·494	83·7	168·4	+ 9·0	27	129	
		841f	0·837	120·5	147·8	−20·9	2	13	86*c*
			0·818	155·8	171·6	−41·4			22
			0·881	82·3	135·9	+ 9·9			397
			0·959	72·5	123·5	+18·6			494
Aug. 15				(+16·1)	(198·1)	(+6·7)	(78)	(410)	(1999)
228·386	HL, AM		0·906	307·8	247·9	+36·9			287
			0·906	244·7	244·6	−19·5			183
			0·838	247·4	237·4	−14·7			76
			0·839	239·8	235·2	−20·7			91
		7797	0·946	250·8	252·3	−15·6	6	93	487*c*
		7798	0·585	302·1	217·1	+23·8	1	9	
		7799	0·018	302·2	185·4	+ 7·3	2	4	
C.		7796	0·271	80·0	168·9	+ 9·3	27	152	
		7800	0·776	85·1	133·3	+ 8·1	17	41	122*c*
		7801	0·921	82·1	116·9	+ 9·9	5	34	} 312*c*
		7802	0·967	80·7	108·5	+10·7	8	35	
			0·761	123·9	142·4	−20·1			43
			0·832	104·3	130·2	− 8·0			50
			0·907	74·5	118·8	+16·8			342
Aug. 16				(+16·5)	(184·5)	(+6·8)	(66)	(368)	(1993)
229·354	HL, AM		0·992	254·6	252·1	−14·2			428
			0·961	306·5	246·5	+36·9			296
			0·949	246·1	238·9	−20·1			279
			0·925	264·2	238·6	− 2·8			36
		841g	0·265	322·4	181·5	+18·8	1	5	
		7799	0·148	268·8	180·2	+ 6·6	0	4	
		7796	0·058	48·0	169·2	+ 9·0	21	144	
C.		7800	0·591	86·0	135·3	+ 7·9	5	32	
		7801	0·808	82·6	117·5	+ 9·9	11	36	} 230*c*
		7802	0·883	81·8	109·2	+10·4	2	33	
			0·804	75·2	118·0	+15·9			155
			0·914	120·1	112·0	−23·9			143
			0·926	108·7	107·0	−14·4			147
			0·950	78·6	99·2	+12·9			318
Aug. 17				(+16·8)	(171·7)	(+6·8)	(40)	(254)	(2032)

Group 7798, August 13–16. A wide pair of small spots, the leader of which is unstable.
Group 7799, August 14–18. A small feebly disturbed area *sp* Group 7796, in which a few very small unstable spots form and disappear irregularly.
Group 7800, August 16–22. A double spot generally accompanied by small unstable markings.
Group 7801, August 16–23. A small regular spot occasionally accompanied by small unstable markings.
Group 7802, August 16–18. A small spot *f* Group 7801.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
230·377	HL, AM		0·976	292·1	237·1	+23·0			50
			0·973	248·3	231·2	−19·2			83
			0·870	290·5	218·8	+21·1			158
		7799	0·396	272·1	181·6	+ 7·1	1	11	
		7796	0·195	282·9	169·2	+ 9·1	22	137	
		7803	0·232	344·1	162·1	+19·6	5	17	
C.		*841h*	0·631	25·1	137·5	+41·1	0	3	
		7800	0·361	84·7	137·0	+ 8·2	10	45	
		7801	0·623	84·1	119·5	+ 9·0	6	28	
		7802	0·748	81·6	109·5	+10·8	2	19	
			0·826	123·1	110·1	−22·1			78
			0·852	111·1	103·4	−14·0			64
			0·897	79·1	93·8	+12·9			606
Aug. 18				(+17·1)	(158·2)	(+6·8)	(46)	(260)	(1039)
231·336	AM, HL		0·920	291·5	213·1	+22·4			377
			0·886	246·9	203·6	−16·8			118
			0·840	300·0	201·4	+28·8			97
			0·870	236·7	198·3	−24·4			170
			0·878	225·4	194·0	−33·6			126
		7796	0·402	277·3	169·2	+ 9·2	28	133	
		7803	0·338	311·9	160·9	+19·6	135	523	
		7800	0·124	77·4	138·5	+ 8·4	15	68	
		7803*	0·403	56·5	124·7	+19·2	0	1	
		7801	0·420	84·0	120·6	+ 8·8	4	7	
G.		*841i*	0·497	75·3	116·0	+13·3	0	1	
		7803†	0·614	80·1	107·5	+11·5	1	2	
		7804	0·799	83·9	92·2	+ 9·1	1	5	236*c*
			0·750	132·2	107·9	−24·8			28
			0·842	72·2	87·9	+18·6			285
			0·952	118·9	79·1	−24·8			93
			0·924	54·3	78·7	+35·4			81
			0·967	110·7	74·5	−18·0			62
			0·946	84·8	74·1	+ 7·1			176
			0·979	75·7	66·1	+15·3			84
Aug. 19				(+17·5)	(145·5)	(+6·9)	(184)	(740)	(1933)
232·434	HL, AM		0·947	250·4	198·9	−16·0			86
			0·890	285·4	196·1	+16·8			109
			0·946	241·8	192·9	−23·8			195
			0·948	230·0	192·5	−34·4			31
C.			0·821	273·9	186·4	+ 7·1			290
		7805	0·789	289·2	182·9	+19·3	10	27	101*c*
		7796	0·625	276·4	169·9	+ 9·4	19	134	
		7803	0·533	296·5	161·3	+19·7	168	1125	
1916.				°	°	°			
232·434	HL, AM	7800	0·136	284·0	138·6	+ 8·7	14	62	
		7801	0·166	77·6	121·6	+ 8·9	6	18	
		7804	0·617	85·1	92·7	+ 8·5	1	3	
			0·744	75·4	82·9	+15·5			21
			0·812	100·8	78·0	− 4·7			28
C.			0·836	86·5	74·1	+ 6·7			116
			0·924	126·0	72·0	−29·5			79
			0·912	113·6	69·6	−18·2			168
			0·909	51·3	66·1	+38·6			39
			0·909	75·8	64·9	+15·8			112
			0·921	61·4	63·7	+29·0			28
Aug. 20				(+17·8)	(131·0)	(+6·9)	(218)	(1369)	(1403)
233·362	M, AM		0·986	261·8	197·8	− 6·9			61
			0·980	243·7	191·5	−24·0			91
			0·916	273·8	185·3	+ 6·3			180
			0·926	209·7	162·6	−48·7			123
			0·796	233·1	162·5	−23·5			94
		7805	0·893	287·8	182·5	+18·9	22	76	470*c*
G.		7796	0·765	276·6	168·9	+ 9·6	22	126	132*c*
		7803	0·675	291·2	160·4	+19·4	243	1084	
		7800	0·357	276·3	139·6	+ 8·8	7	24	
		7801	0·059	303·1	121·6	+ 8·8	5	14	
			0·891	130·7	66·6	−31·3			85
			0·805	79·0	64·7	+13·0			61
			0·893	115·3	60·3	−18·9			178
Aug. 21				(+18·1)	(118·7)	(+7·0)	(299)	(1324)	(1475)
234·338	M, AM		0·868	248·0	162·1	−15·1			136
			0·856	237·5	157·3	−23·1			110
		7805	0·964	287·4	181·6	+18·6	4	52	245*c*
		7796	0·876	277·7	167·4	+10·1	26	107	182*c*
G.		7803	0·816	289·4	160·5	+19·8	178	760	455*c*
		7800	0·547	275·8	139·1	+ 9·1	2	13	
		7803*	0·381	304·8	125·1	+19·2	0	4	
		7801	0·286	277·4	122·4	+ 8·8	5	10	
Aug. 22				(+18·4)	(105·8)	(+7·0)	(215)	(946)	(1128)
235·499	M, AM		0·958	247·6	189·9	−19·1			98
			0·876	241·3	145·7	−21·0			92
			0·775	279·8	141·6	+12·0			78
G.		7796	0·985	277·4	171·2	+ 8·5	11	65	287*f*
		7803	0·930	288·8	159·8	+20·0	76	713	738*c*
		7801	0·528	276·0	122·5	+ 9·1	4	12	
Aug. 23				(+18·8)	(90·5)	(+7·0)	(91)	(790)	(1293)

Group 7803, August 18–24. A few very small spots widely scattered on August 18; a magnificent composite spot on August 19, roughly in the shape of the letter F; on August 20 it is still further enlarged. After this it breaks up into a cluster of spots, mostly composite, and diminishes steadily.
Group 7803*, August 19–22. Intermittent. A very small spot seen only on August 19 and 22.
Group 7803,† August 19–24. Intermittent. A very small spot seen only on August 19 and 24.
Group 7804, August 19–22. A very small faint spot.
Group 7805, August 22–22. Two spots, the leader of which is the larger.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
236·341	M, AM		0·974	279·6	157·0	+10·9			168
			0·968	248·5	151·1	−18·7			65
			0·865	283·8	139·7	+15·4			138
C.			0·843	277·8	137·2	+10·3			164
		7803	0·979	289·0	159·1	+19·9	91	533	670*c*
		841j	0·925	243·4	141·7	−21·3	1	5	101*c*
		7803†	0·491	280·8	108·6	+11·3	1	5	
		841k	0·171	332·9	83·9	+15·6	1	4	
Aug. 25				(+19·0)	(79·3)	(+7·0)	(94)	(547)	(1306)
237·367	HL, AM		0·983	247·1	141·3	−20·8			133
			0·938	282·6	136·4	+14·2			398
			0·951	239·6	131·5	−26·0			30
C.			0·857	292·0	124·9	+22·4			128
			0·779	282·5	117·3	+14·2			162
			0·923	74·7	357·6	+16·8			86
			0·965	114·4	355·5	−21·2			126
Aug. 25				(+19·3)	(65·8)	(+7·1)	(0)	(0)	(1063)
238·353	HL, AM		0·914	290·3	129·6	+21·4			210
			0·941	266·4	122·5	− 1·0			54
			0·926	282·1	121·0	+13·8			267
			0·852	280·5	111·8	+12·7			129
G.			0·900	239·1	110·2	−23·8			65
		841l	0·773	78·2	1·9	+13·6	0	1	26*c*
			0·922	117·7	351·3	−22·1			220
			0·923	71·4	344·6	+19·9			182
			0·932	80·5	343·4	+11·3			99
Aug. 26				(+19·6)	(52·8)	(+7·1)	(0)	(1)	(1252)
239·396	HL, AM		0·951	284·0	112·0	+15·5			426
			0·957	241·9	106·6	−24·3			143
			0·822	283·7	94·7	+15·3			141
G.			0·786	122·6	354·4	−20·0			80
			0·920	126·0	340·7	−29·1			98
			0·860	71·0	339·4	+19·9			81
			0·959	66·7	324·2	+24·3			38
Aug. 27				(+19·9)	(39·0)	(+7·1)	(0)	(0)	(1007)
1916.				°	°	°			
240·411	M, AM		0·923	286·0	93·7	+17·4			243
			0·852	279·8	84·4	+12·1			491
		7806	0·824	255·2	78·9	− 8·0	5	13	57*c*
		841m	0·787	232·6	68·3	−23·3	1	8	30*c*
G.		7807	0·642	128·9	354·1	−17·7	3	13	
			0·948	121·1	320·8	−26·4			105
			0·925	69·4	317·2	+21·7			125
			0·932	83·8	316·3	+ 8·3			114
Aug. 28				(+20·2)	(25·6)	(+7·1)	(9)	(34)	(1165)
241·378	HL, AM		0·950	281·1	85·4	+12·7			401
			0·919	291·6	80·4	+22·7			140
			0·911	271·3	78·5	+ 4·2			42
			0·884	279·0	75·5	+11·3			23
			0·853	237·6	64·0	−22·7			68
		7806	0·939	258·6	80·9	− 8·0	10	65	183*c*
C.		*841n*	0·934	228·0	70·6	−35·0	0	17	50*c*
		841o	0·485	229·0	34·7	−11·8	2	14	
		7807	0·517	144·9	354·6	−18·1	6	23	
		7808	0·985	84·0	292·[illegible]	+ 7·1	3	34	178*c*
			0·880	125·6	319·9	−26·5			121
			0·933	118·2	309·7	−22·9			53
			0·929	83·8	304·[illegible]	+ 8·4			96
Aug. 29				(+20·4)	(12·8)	(+7·2)	(21)	(153)	(1355)
242·320	HL, AM		0·987	260·9	79·[illegible]	7·7			218
			0·910	277·6	66·[illegible]	− 9·9			60
			0·912	245·5	66·[illegible]	−24·8			161
			0·915	254·7	64·1	−10·8			41
			0·883	285·4	63·0	+16·9			105
			0·947	230·6	61·8	−33·7			85
C.		7807	0·434	168·3	355·1	−17·9	3	45	
			0·781	132·9	320·8	−26·5			133
			0·826	84·5	304·4	+ 8·5			68
			0·919	130·0	304·1	−32·3			105
			0·963	117·8	291·5	−24·3			112
			0·947	84·2	288·7	+ 7·8			323
Aug. 30				(+20·7)	(0·4)	(+7·2)	(3)	(45)	(1411)
243·353	HL, M		0·952	286·7	59·9	+18·0			74
			0·966	246·3	57·4	−20·6			51
G.			0·900	271·1	50·9	+ 4·2			41
			0·795	248·8	33·8	−12·0			33
		7807	0·447	196·2	354·2	−18·2	3	16	

G[illegible]9, August 28–29. A few very small spots in a small group of bright faculæ.
G[illegible]7, August 28–31. A few very small unstable spots; a revival of Group 7794.*
G[illegible]58, August 29–September 4. A small spot, not seen on August 30, and just visible on August 31. It is not seen on September 1 and 2, but has revived as a cluster [illegible] very small markings on September 3.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
243·353	HL, M	7809	0·375	58·6	327·1	+18·0	3	15	
		7808	0·818	86·4	291·6	+ 7·1	0	2	119*f*
			0·857	134·3	300·7	−31·8			45
G.			0·895	122·1	290·5	−24·5			133
			0·945	81·5	275·1	+10·4			60
			0·979	113·6	273·3	−20·7			101
Aug. 31				(+21·0)	(346·7)	(+7·2)	(6)	(33)	(657)
244·581	HL, M		0·936	254·4	37·4	−11·8			84
		7809	0·181	8·3	328·9	+17·4	1	3	
		7810	0·873	119·0	275·9	−20·9	0	6	273*f*
G.			0·836	129·7	284·3	−27·3			86
			0·814	80·9	275·6	+11·6			31
			0·901	67·6	265·7	+23·3			124
			0·951	108·9	261·8	−15·4			283
Sept. 1				(+21·3)	(330·5)	(+7·2)	(1)	(9)	(881)
245·389	HL, AM	7811	0·526	281·5	351·5	+12·2	7	23	
		7810	0·807	124·1	273·8	−21·9	0	11	126*c*
G.			0·860	105·8	262·9	− 9·7			96
			0·924	111·0	256·0	−16·2			413
Sept. 2				(+21·5)	(319·8)	(+7·2)	(7)	(34)	(635)
246·566	HL, AM		0·834	242·2	355·1	−18·3			178
		7811	0·740	279·0	352·3	+11·6	4	17	
		842a	0·440	157·7	294·3	−16·8	1	10	
		7808	0·225	86·4	291·3	+ 7·8	1	9	
		7812	0·495	137·2	284·1	−14·5	4	18	
G.		7810	0·634	138·4	277·4	−21·9	1	4	
		7813	0·504	73·6	274·5	+14·4	1	10	
			0·769	116·2	258·9	−14·8			94
			0·886	112·9	246·2	−16·4			284
			0·900	49·9	242·2	+39·0			11
			0·892	66·5	240·9	+24·1			68
Sept. 3				(+21·8)	(304·3)	(+7·2)	(12)	(68)	(635)
247·462	HL, AM		0·918	246·0	354·5	−18·6			189
			0·858	277·9	352·0	+10·5			136
		7814	0·246	277·0	306·6	+ 8·8	1	3	
G.		7808	0·031	56·4	290·9	+ 8·1	1	4	
		7812	0·377	158·8	284·4	−13·3	34	124	
		7810	0·542	153·2	277·2	−21·9	0	1	
		7813	0·296	67·5	276·1	+13·4	4	17	
1916.				°	°	°			
247·462	HL, AM		0·784	117·6	246·2	−16·3			46
			0·903	119·5	234·2	−22·7			60
G.			0·920	72·3	224·6	+19·1			59
Sept. 4				(+22·0)	(292·4)	(+7·2)	(40)	(149)	(490)
248·611	HL, AM		0·984	249·3	353·5	−18·8			142
			0·962	279·0	352·2	+10·6			112
			0·943	298·1	348·8	+28·9			70
			0·876	290·8	338·8	+21·7			209
G.		7814	0·513	277·7	308·3	+10·2	2	7	
		7812	0·373	200·7	285·0	−13·1	31	156	
		7813	0·100	348·1	278·5	+13·0	1	3	
Sept. 5				(+22·3)	(277·3)	(+7·3)	(34)	(166)	(533)
249·361	M, AM		0·931	291·0	337·1	+22·1			97
			0·863	235·9	318·6	−23·8			127
			0·807	217·7	303·7	−33·9			61
		7814	0·648	277·3	308·0	+10·3	0	16	
G.		7812	0·460	221·4	285·5	−13·2	34	135	
			0·928	119·6	205·6	−24·0			194
			0·933	75·9	197·6	+15·7			185
			0·949	99·0	197·1	− 6·1			74
			0·959	87·3	193·7	+ 4·7			63
Sept. 6				(+22·4)	(267·4)	(+7·3)	(34)	(151)	(801)
250·395	M, HL		0·923	298·9	321·5	+20·4			88
			0·913	290·3	320·4	+21·4			57
			0·951	240·3	319·5	−25·3			96
			0·901	223·6	303·9	−36·2			59
		7814	0·828	276·3	310·0	+ 9·3	16	65	197*c*
		7812	0·624	237·6	286·3	−13·3	16	73	
G.		7815	0·809	77·2	199·3	+14·6	8	26	93*c*
		7816	0·994	72·6	168·2	+18·0	53	351	394*p*
			0·871	122·0	200·4	−23·2			231
			0·864	89·9	194·0	+ 3·7			42
			0·935	68·8	183·4	+22·4			325
			0·952	80·8	180·8	+11·0			327
Sept. 7				(+22·7)	(253·7)	(+7·3)	(93)	(515)	(1909)
251·605	HL, AM		0·901	294·3	302·4	+25·0			83
			0·919	231·7	294·7	−30·9			98
G.			0·773	276·8	288·7	+ 9·9			251
			0·829	224·5	280·2	−30·9			74
		7814	0·958	277·1	311·7	+ 8·9	9	50	383*c*

Group 7809, August 31–September 1. A few very small spots on August 31, of which only one remains on September 1. Group 7810, September 1–10. A very small spot with some faint companions on September 2. The group diminishes and has disappeared by September 5, but has re-appeared as a wide pair by September 8.
Group 7811, September 2–3. A small spot with a distant companion to the south, which has broken up into a small cluster by September 3.
Group 7812, September 3–9. A pair of small spots developing into a short stream, of which only the leader remains by September 8. Group 7813, September 3–5. A small cluster of very small unstable spots *of* Group 7808. Group 7814, September 4–8. A very small spot that has broken up into a compact cluster by September 6, and which ultimately becomes a regular spot with a distant follower. Group 7815, September 7–9. Two small spots on September 7: a third forms in advance of the group on September 8, and alone remains on September 9. Group 7816, September 7–10. Return of Group 7803. Two large regular spots nearly on the same meridian. A few small companions are sometimes seen near them. Only one spot remains after September 12.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
251·605	HL, AM	7812	0·792	247·1	286·0	−13·1	14	38	378*c*
		842b	0·645	275·3	278·1	+ 9·0	2	10	
		7810	0·729	233·2	276·0	−20·2	11	26	80*c*
		842c	0·357	284·5	258·3	+11·9	1	4	
		7815	0·579	74·9	202·6	+14·7	5	24	
		842d	0·836	78·6	180·5	+13·6	1	2	479*f*
G.		7816	0·932	74·1	168·0	+17·4	68	413	}
		7817	0·950	73·7	164·8	+17·7	0	24	} 2187*c*
		7818	0·974	72·7	159·5	+18·4	24	417	}
			0·807	131·3	195·0	−26·9			183
			0·815	67·4	183·3	+22·6			193
			0·899	116·6	179·1	−20·0			77
Sept. 8				(+22·9)	(237·7)	(+7·3)	(135)	(1008)	(4466)
252·170	HL, AM		0·966	278·1	306·1	+ 9·7			169
			0·840	277·1	287·9	+ 9·9			247
			0·894	228·4	282·3	−32·1			74
		7812	0·867	250·5	287·0	−12·8	9	37	197*f*
		7810	0·797	236·7	275·6	−20·8	7	25	151*c*
D.		*842e*	0·514	207·1	244·7	−20·1	1	2	
		7815	0·466	72·0	203·1	+14·8	0	2	
		7816	0·883	74·1	167·7	+17·4	70	398	}
		7818	0·937	73·2	159·7	+18·3	25	124	} 1949*c*
			0·746	62·8	183·5	+24·8			88
			0·777	84·5	179·0	+ 8·8			370
Sept. 9				(+23·1)	(230·3)	(+7·3)	(112)	(588)	(3245)
253·424	HL, AM		0·949	278·0	286·0	+ 9·9			328
			0·957	254·0	284·2	−13·0			150
			0·895	237·0	269·6	−25·3			98
			0·800	243·8	261·8	−15·9			46
		7810	0·918	242·8	274·8	−21·4	5	118	243*c*
		7819	0·715	129·3	177·5	−21·1	3	21	
		7816	0·707	72·7	168·9	+17·3	46	264	155*c*
		7818	0·806	73·3	159·8	+17·7	8	34	509*c*
C.		7820	0·988	64·2	130·5	+26·5	26	271	358*c*
			0·779	61·9	163·9	+26·2			257
			0·837	117·2	162·3	−18·0			35
			0·916	117·8	153·1	−21·8			292
			0·923	82·7	145·8	+ 9·5			128
			0·938	74·9	143·1	+16·6			197
			0·946	62·8	141·6	+28·0			93
			0·978	112·8	139·8	−20·4			195
Sept. 10				(+23·3)	(213·7)	(+7·2)	(88)	(708)	(3084)
1916.				°	°	°			
254·386	HL, AM		0·974	279·4	278·8	+10·8			156
			0·970	272·0	277·0	+ 3·7			57
			0·975	245·2	273·7	−22·1			256
			0·900	247·9	261·1	−16·2			138
			0·858	291·6	260·2	+22·2			43
		7819	0·597	142·5	178·1	−21·5	5	16	
		7816	0·546	69·3	168·8	+17·2	44	237	
		7817	0·615	71·7	163·5	+16·9	0	9	
		7818	0·674	72·6	158·9	+17·0	7	21	
C.		7820	0·941	64·5	129·9	+26·3	28	349	494*c*
			0·825	122·1	152·6	−21·3			378
			0·836	83·7	143·9	+ 9·2			156
			0·842	75·5	143·2	+16·1			309
			0·869	61·9	141·1	+27·9			110
			0·914	117·8	140·9	−21·8			249
			0·948	109·9	133·1	−16·0			43
			0·928	72·4	132·0	+18·9			146
Sept. 11				(+23·5)	(201·0)	(+7·[illegible])	(84)	(632)	(2535)
255·394	HL, AM		0·931	250·6	254·4	−17·4			157
			0·801	233·7	232·2	−23·2			37
		7821	[illegible]	57·6	180·5	+11·6	0	8	
		7819	[illegible]	163·3	178·9	−21·[illegible]	2	6	
		7816	[illegible]	59·7	168·8	+17·2	35	209	
		7818	[illegible]	69·7	159·1	+16·2	4	20	
		7822	[illegible]9	59·1	157·2	+22·6	0	7	
		7823	[illegible]41	65·3	156·5	+19·2	0	5	
		7824	0·715	65·9	143·1	+22·1	9	42	32*c*
C.		7820	0·850	63·3	130·0	+26·4	66	365	475*c*
			0·782	130·5	146·8	−25·1			75
			0·845	134·9	143·2	−31·5			61
			0·765	58·1	140·1	+28·7			89
			0·838	123·7	138·6	−23·0			126
			0·844	71·9	129·8	+19·2			61
			0·914	110·6	125·3	−15·5			40
			0·919	78·2	120·2	+13·6			152
			0·967	70·2	111·1	+20·9			149
Sept. 12				(+23·7)	(187·7)	(+7·2)	(116)	(662)	(1454)
256·397	HL, AM		0·965	253·5	246·6	−13·8			62
			0·886	294·2	237·2	+24·8			30
			0·904	240·1	232·7	−23·1			71
C.		7821	0·130	305·5	180·7	+11·5	0	4	
		7819	0·483	188·9	179·1	−21·2	1	5	
		7816	0·202	26·3	169·1	+17·6	26	177	

Group 7817, September 8–13. Intermittent. One or two very small unstable spots between Groups 7816 and 7818. Group 7818, September 8–15. With Group 7816, a return of Group 7803. An irregular stream rapidly diminishing. Two small regular spots and two or three very small companions are all that remain by September 10.
Group 7819, September 10–13. A small regular spot, followed at first by some very small companions which soon disappear. Group 7820, September 10–22. A long stream of unusual shape, being strongly curved, almost semicircular, and convex to the equator. It gradually straightens out, but diminishes quickly after this has been accomplished, leaving only the leader by September 21. This spot is the largest and best-defined member of the group, and is usually compound.
Group 7821, September 12–13. Some faint markings on September 12 south of the place of *842d*. Of these markings, only one remains on September 13.
Group 7822, September 12–17. A few very small markings. None are seen on September 13 and 14, and only one on September 17. Group 7823, September 12–15. Some very faint diffused markings s of Group 7822. Group 7824, September 12–15. A small composite spot sometimes followed by small unstable companions. The whole region between Groups 7816 and 7820 is feebly and irregularly disturbed. Groups 7817, 7818, 7822, 7823, and 7824 being the chief foci of disturbance.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
256·397	HL, AM	7817	0·258	45·5	163·4	+17·4	0	2	
		7818	0·302	57·1	159·2	+16·4	6	14	
		7823	0·369	57·4	155·5	+18·3	1	23	
		7824	0·554	60·1	143·4	+22·2	5	25	
		7820	0·727	60·2	130·0	+26·3	65	527	124*c*
		7825	0·970	79·9	97·6	+11·6	4	34	133*f*
C.			0·716	135·5	141·1	−24·7			47
			0·806	81·0	120·4	+11·6			33
			0·883	70·7	112·0	+20·4			222
			0·893	57·0	112·0	+32·6			254
			0·946	116·9	108·8	−22·5			117
			0·918	78·0	107·2	+13·8			55
Sept. 13				(+23·9)	(174·5)	(+7·2)	(108)	(811)	(1148)
257·341	HL, AM		0·938	270·2	231·6	+ 2·7			44
			0·878	288·8	223·9	+19·9			81
			0·908	236·3	219·4	−26·5			61
		7816	0·208	324·2	169·3	+16·8	29	119	
		7818	0·160	22·6	158·4	+15·6	1	4	
		7824	0·382	47·2	144·5	+21·8	6	23	
		842f	0·479	60·4	135·8	+20·1	2	4	
G.		7820	0·579	54·1	130·7	+26·0	114	543	
		7825	0·893	80·9	98·2	+11·3	6	14	267*f*
		7826	0·956	106·2	91·7	−13·1	8	77	} 350*c*
		7827	0·984	109·8	85·6	−17·9	16	159	
		7828	0·985	104·6	84·2	−13·0	0	51	
			0·783	69·5	110·7	+20·4			128
			0·881	121·7	107·4	−23·4			125
			0·926	68·6	93·3	+22·5			88
Sept. 14				(+24·0)	(162·0)	(+7·2)	(182)	(994)	(1144)
258·357	M, AM		0·942	248·1	215·0	−17·7			90
			0·885	235·1	202·4	−26·2			106
		7829	0·778	244·2	194·9	−14·8	6	19	102*c*
		7816	0·386	296·6	169·6	+16·7	18	90	
		7818	0·223	311·8	158·5	+15·6	1	4	
		7822	0·289	328·6	157·9	+21·4	1	14	
C.		7823	0·216	324·2	156·2	+17·1	1	17	
		7824	0·254	14·8	144·6	+21·3	4	22	
		7820	0·424	41·2	130·7	+25·4	97	591	
		7825	0·748	83·0	99·9	+10·0	4	20	139*sf*
		7826	0·868	109·6	91·7	−13·0	18	72	283*c*
		7827	0·927	113·1	85·0	−18·2	13	73	551*f*
		7828	0·920	107·5	84·6	−13·0	15	69	124*c*
1916.				°	°	°			
258·357	M, AM		0·759	128·4	108·6	−22·6			167
C.			0·867	85·1	88·2	+ 7·8			72
			0·879	72·0	86·5	+19·2			86
Sept. 15				(+24·2)	(148·6)	(+7·2)	(178)	(991)	(1720)
259·442	HL, AM		0·852	284·8	193·2	+16·3			265
			0·830	234·2	181·7	−24·2			83
			0·731	277·6	181·6	+10·5			72
		7829	0·891	248·5	193·4	−15·4	1	4	172*p*
		7816	0·586	288·4	169·6	+16·5	18	78	
		842g	0·347	297·0	153·0	+15·9	0	1	
		842h	0·222	22·2	143·5	+18·9	0	2	
G.		*842i*	0·312	61·6	132·1	+15·4	0	2	
		7820	0·322	10·2	130·7	+25·6	93	447	
		7826	0·710	116·2	93·7	−12·7	23	85	91*c*
		842j	0·655	80·2	93·2	+11·9	1	11	
		7828	0·800	112·4	85·1	−13·0	13	84	86*c*
		7827	0·820	118·2	85·0	−18·1	11	52	576*f*
		842k	0·826	114·8	83·3	−15·8	4	10	55*c*
			0·872	70·6	87·5	+20·4			79
Sept. 16				(+24·4)	(134·3)	(+7·2)	(164)	(776)	(1479)
260·437	HL, AM		0·979	252·8	196·6	−15·1			137
			0·954	278·3	194·2	+10·0			59
			0·905	291·1	186·6	+22·1			132
			0·934	241·0	184·1	−23·8			29
			0·868	277·1	181·8	+ 9·7			316
			0·926	231·0	173·8	−25·4			41
		7816	0·753	285·2	170·1	+16·2	17	77	187*f*
G.		*842l*	0·740	293·7	168·0	+22·3	1	4	
		7822	0·635	297·0	158·7	+22·4	0	5	
		7820	0·362	332·2	131·8	+25·7	98	459	
		7826	0·557	127·4	94·2	−13·3	21	100	
		7828	0·656	119·8	85·5	−13·1	5	21	13*c*
		7827	0·697	126·3	84·9	−18·6	13	42	55*c*
		7830	0·996	70·9	34·1	+19·6	21	160	69*c*
			0·900	120·0	63·4	−23·0			76
Sept. 17				(+24·6)	(121·1)	(+7·2)	(176)	(868)	(1114)
261·488	HL, AM		0·952	278·5	180·0	+10·2			221
			0·960	244·7	176·3	−21·8			43
C.			0·886	294·6	169·7	+25·0			287
			0·788	238·8	152·6	−19·2			93
			0·783	228·4	147·7	−25·9			35

Group 7825, September 13–15. A small spot.
Group 7826, September 14–22. A double spot, becoming regular by September 16, and followed by a train of small unstable spots. The leader diminishes greatly after September 21.
Group 7827, September 14–21. A regular spot with a small follower on September 16.
Group 7828, September 14–20. A small spot *f* Group 7826. Other spots form near it, especially on the *p* side, and on September 18 the group is a feeble stream overlapping Group 7826 in longitude but slightly to the south of it.
Group 7829, September 15–16. A close pair of small spots followed by a small regular spot, which alone survives on September 16.
Group 7830. September 17–25. A large regular spot steadily diminishing.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
261·488	HL, AM	7816	0·879	284·6	169·3	+16·2	10	34	492*s*
		7831	0·687	288·2	150·2	+17·6	18	39	428*p*
		7820	0·498	310·2	131·9	+25·1	44	309	
		7826	0·417	146·8	93·7	−13·5	20	106	
C.		7828	0·482	136·3	87·2	−13·7	5	35	
		7827	0·564	139·1	84·4	−18·6	7	28	
		7832	0·715	123·6	68·6	−17·7	10	15	
		7830	0·947	71·7	34·8	+19·6	20	149	191*c*
Sept. 18				(+24·7)	(107·2)	(+7·1)	(134)	(715)	(1790)
262·447	HL, AM		0·917	254·4	158·6	−11·2			45
			0·867	302·5	153·5	+31·5			149
			0·896	243·6	153·0	−19·9			139
			0·808	236·1	140·7	−21·9			169
		7816	0·960	284·7	169·4	+16·0	9	67	688*nf*
		7831	0·822	286·3	150·1	+17·4	50	289	1145*c*
		7820	0·648	301·0	132·3	+25·1	31	200	
G.		7833	0·415	325·1	109·9	+26·7	10	24	
		7826	0·355	177·0	93·7	−13·6	25	114	
		7828	0·377	163·5	88·3	−14·0	1	14	
		7827	0·466	158·1	84·1	−18·6	3	12	
		842m	0·564	149·2	76·5	−22·1	1	2	
		7832	0·569	135·1	69·8	−17·2	7	12	
		7832*	0·608	83·3	57·0	+ 9·7	2	8	
		7830	0·860	71·3	35·0	+19·6	23	163	277*f*
Sept. 19				(+24·9)	(94·6)	(+7·1)	(162)	(905)	(2612)
263·377	HL, AM		0·957	299·6	156·5	+30·3			75
			0·963	247·7	152·7	−19·2			81
			0·898	297·5	146·3	+27·8			43
			0·897	240·7	139·9	−22·4			129
			0·861	230·2	131·2	−28·9			32
		7831	0·914	286·8	149·2	+18·3	66	356	1026*c*
		7820	0·790	296·2	133·5	+24·9	27	204	84*c*
C.		7833	0·549	309·9	110·3	+26·8	28	101	
		7834	0·484	234·6	105·8	− 9·7	1	22	
		7826	0·406	209·7	94·2	−13·6	14	87	
		7828	0·375	195·0	88·0	−14·1	1	5	
		7827	0·435	183·6	83·9	−18·6	5	8	
		7832	0·458	147·8	67·7	−15·9	1	3	
		7832*	0·407	82·4	58·3	+ 9·5	1	7	
		7830	0·741	69·8	34·9	+19·6	10	123	94*c*
			0·937	79·5	12·0	+12·3			85
Sept. 20				(+25·0)	(82·3)	(+7·1)	(154)	(916)	(1649)
1916.				°	°	°			
264·375	HL, AM		0·963	245·8	139·0	−20·9			179
			0·853	275·1	127·8	+ 7·4			34
			0·834	245·8	121·1	−15·6			51
		7831	0·976	287·4	147·8	+18·4	117	524	716*c*
		7820	0·896	293·7	133·0	+24·3	18	157	1058*f*
		7833	0·703	301·1	111·2	+26·5	27	169	84*c*
G.		7834	0·654	246·2	106·3	− 9·6	1	7	
		7826	0·537	230·2	94·1	−13·6	15	64	
		7827	0·493	208·5	83·4	−18·6	1	5	
		7832	0·411	180·5	69·3	−17·1	0	1	
		7830	0·578	66·6	35·1	+19·2	16	86	
			0·887	78·6	6·0	+13·4			49
Sept. 21				(+25·1)	(69·1)	(+7·1)	(195)	(1013)	(2171)
265·365	HL, AM		0·868	284·1	116·8	+15·6			118
			0·863	236·7	108·1	−24·0			101
		7820	0·966	293·3	132·6	+24·3	17	173	671*f*
		7833	0·829	296·9	111·3	+26·1	30	208	144*c*
G.		7826	0·655	239·6	91·5	−13·6	4	23	
		7830	0·402	57·5	35·2	+19·0	17	70	
		7835	0·956	71·1	342·3	+20·1	3	20	165*c*
			0·918	109·5	352·2	−14·8			39
Sept. 22				(+25·3)	(56·1)	(+7·0)	(71)	(494)	(1238)
266·352	HL, AM		0·939	284·3	113·7	+15·8			134
			0·902	295·7	107·6	+26·1			562
			0·915	256·3	107·1	− 9·5			108
			0·926	241·5	105·0	−23·1			94
			0·783	278·6	94·9	+11·0			74
			0·795	247·2	91·7	−13·3			236
			0·749	231·3	82·1	−22·4			151
		7833	0·922	295·8	110·7	+26·4	56	299	564*c*
G.		7830	0·246	31·4	35·3	+18·9	8	63	
		7835	0·875	70·9	341·6	+20·1	3	6	164*c*
			0·791	114·8	355·2	−14·7			62
			0·901	119·2	344·9	−22·4			71
			0·919	105·8	338·8	−11·5			45
			0·938	65·0	332·4	+25·8			103
			0·969	115·1	331·9	−22·1			318
			0·964	80·2	327·6	+11·3			105
Sept. 23				(+25·4)	(43·0)	(+7·0)	(67)	(368)	(2791)

Group 7831, September 18–21. A pair of small spots forming in the disturbed 7816–7820 region, and quickly developing into a fine stream.
Group 7832, September 18–21. A wide pair of small spots on September 18; a cluster on September 19; a very small spot on September 20, and another, distinct from it, on September 21.
Group 7832,* September 19–20. A cluster of very small spots.
Group 7833, September 19–24. A pair of composite spots appearing suddenly, and quickly developing into a stream which declines, or is partly hidden by faculæ, on reaching the West limb.
Group 7834, September 20–21. A few very small spots and markings in an irregular cluster.
Group 7835, September 22–23. A small spot.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
267·485	M, AM		0·076	243·4	100·6	−24·0			72
			0·913	251·4	90·8	−13·8			661
			0·880	281·5	90·3	+13·4			294
			0·857	238·4	80·1	−22·4			347
G.		7833	0·994	294·2	114·6	+24·7	21	165	441*sf*
		7830	0·239	329·6	35·4	+18·8	12	37	
			0·906	117·6	329·2	−21·4			446
			0·904	82·2	322·9	+10·1			251
Sept. 24				(+25·5)	(28·1)	(+7·0)	(33)	(202)	(2512)
268·451	HL, AM		0·966	297·8	91·8	+28·6			32
			0·962	280·5	90·3	+11·9			185
			0·974	253·9	89·7	−13·9			410
			0·934	288·6	85·2	+19·8			163
			0·924	242·4	77·3	−22·2			212
G.		7830	0·388	303·0	35·3	+18·6	6	17	
		7836	0·793	126·3	331·5	−23·0	1	2	280*f*
		842n	0·792	80·8	322·6	+11·5	1	2	50*f*
			0·860	68·9	315·8	+21·7			40
			0·950	120·5	309·8	−26·1			98
Sept. 25				(+25·6)	(15·3)	(+6·9)	(8)	(21)	(1470)
269·573	HL, AM		0·944	250·9	78·0	−15·4			54
			0·975	243·7	72·9	−23·7			137
			0·889	286·1	63·8	+17·4			33
			0·900	241·1	58·6	−22·2			64
		842o	0·563	294·7	33·2	+19·4	1	7	
		7836	0·640	138·3	333·2	−22·4	3	15	
		7837	0·705	130·5	325·4	−21·6	5	19	
G.		7838	0·748	128·3	321·3	−22·3	0	8	
		7839	0·707	65·6	316·7	+22·0	1	6	
		842p	0·849	121·0	309·1	−21·7	2	4	54*f*
			0·788	78·4	308·2	+13·3			29
			0·850	86·2	301·0	+ 6·9			39
			0·918	61·2	293·7	+29·1			39
			0·950	107·2	291·5	−13·9			88
			0·951	82·4	287·9	+ 9·4			74
Sept. 26				(−25·7)	(0·5)	(+6·9)	(12)	(59)	(611)
270·437	M, AM		0·957	244·3	57·7	−22·1			61
		843a	0·129	267·1	356·5	+ 6·4	0	2	
G.		7836	0·541	152·7	333·6	−22·0	8	22	
		7837	0·597	141·4	325·6	−21·5	1	16	
270·437	M, AM	7839	0·596	60·7	315·0	+22·5	4	12	
G.			0·905	111·2	288·0	−15·9			143
			0·878	81·2	287·2	+11·0			96
Sept. 27				(+25·8)	(349·1)	(+6·8)	(13)	(52)	(300)
271·589	M, AM		0·842	290·1	20·7	+20·5			184
		843b	0·210	341·1	338·0	+18·2	3	14	
		7836	0·477	182·6	335·2	−21·5	6	13	
		7840	0·376	171·7	330·7	−15·0	4	14	
		7838	0·524	156·7	321·0	−22·0	1	9	
G.		7839	0·403	46·6	315·5	+22·4	3	9	
			0·740	113·2	289·4	−12·1			30
			0·903	115·9	273·8	−19·9			194
			0·938	66·4	262·8	+24·4			66
Sept. 28				(+25·9)	(333·9)	(+6·8)	(17)	(59)	(474)
272·389	M, AM		0·969	290·8	41·3	+22·3			129
			0·865	323·1	5·0	+38·7			14
		7836	0·506	202·4	335·3	−21·1	5	12	
		7840	0·396	199·6	331·3	−15·0	3	12	
		7837	0·467	182·8	324·8	−20·8	0	1	
C.		7838	0·491	173·2	319·8	−22·3	0	2	
		7839	0·295	24·4	315·9	+22·3	2	7	
			0·911	117·4	263·2	−21·5			112
			0·874	65·9	252·6	+24·3			39
			0·968	110·9	251·4	−18·3			53
Sept. 29				(+26·0)	(323·4)	(+6·8)	(10)	(34)	(347)
273·356	M, AM		0·840	280·3	6·4	+ 4·9			33
		7838	0·509	196·5	319·6	−22·4	0	3	
C.		7839	0·293	347·3	314·6	+23·3	1	14	
			0·807	120·1	263·0	−19·4			64
Sept. 30				(+26·1)	(310·6)	(+6·7)	(1)	(17)	(97)
274·629	M, AM		0·727	303·1	324·6	+18·3			23
G.		*843c*	0·976	281·9	12·2	+13·0	0	9	84*f*
			0·942	57·6	214·2	+32·7			40
Oct. 1				(+26·1)	(293·8)	(+6·6)	(0)	(9)	(147)
275·303	M, AM		0·797	240·8	331·9	−18·3			72
D.			0·949	56·1	212·9	+34·2			61
Oct. 2				(+26·2)	(284·9)	(+6·6)	(0)	(0)	(133)

Group 7836, September 25–29. A few very small unstable spots. Only one remains on September 28 and 29.
Group 7837, September 26–29. Some very small spots *f* Group 7836; not seen on September 28.
Group 7838, September 20–October 3. Some very small unstable spots *f* Group 7837. The group is not seen on September 27, and only one very small marking is visible on September 29 and 30; the group re-appears temporarily on October 3.
Group 7839, September 26–32. A few very small unstable spots.
Group 7840, September 28–29. A small stream appearing suddenly, *n* of Group 7836.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
276·574	M, AM		0·911	288·8	334·3	+19·8			78
			0·913	296·4	334·2	+26·8			36
			0·925	244·4	331·0	−20·7			113
		7838	0·862	240·0	321·4	−21·7	5	33	160*c*
		7841	0·480	146·3	252·0	−17·2	5	22	
		7842	0·946	128·3	206·0	−33·0	18	40	161*f*
C.		7843	0·990	72·0	184·8	+18·7	27	223	174*p*
			0·825	120·1	218·8	−20·2			12
			0·859	62·1	209·8	+27·1			26
			0·940	119·9	204·1	−25·2			62
			0·924	109·4	203·8	−15·0			49
			0·920	83·8	200·8	+ 8·3			62
			0·935	65·6	198·2	+25·1			22
Oct. 3				(+26·3)	(268·1)	(+6·5)	(55)	(318)	(955)
277·378	M, AM		0·976	254·8	332·7	−13·3			77
			0·936	242·5	321·7	−22·9			273
		7841	0·406	166·1	251·7	−16·6	0	3	
		7842	0·897	132·1	205·1	−33·1	13	59	339*f*
C.		7843	0·956	73·0	183·5	+18·2	29	248	591*c*
			0·854	113·0	202·9	−15·8			47
			0·926	122·1	196·6	−26·4			121
			0·916	84·5	190·8	+ 7·7			187
			0·963	108·1	186·0	−15·4			44
Oct. 4				(+26·3)	(257·5)	(+6·5)	(42)	(310)	(1679)
278·380	HL, AM		0·971	245·7	316·3	−21·7			105
			0·933	292·9	313·8	+23·7			70
			0·914	281·6	310·9	+13·2			38
		7844	0·562	212·3	263·2	−22·2	24	85	
		7842	0·813	138·8	204·9	−32·7	3	15	265*f*
		7843	0·874	72·5	183·1	+18·4	34	283	668*c*
G.			0·833	129·4	197·9	−27·5			64
			0·794	86·2	191·6	+ 6·9			21
			0·887	111·7	185·6	−15·9			82
			0·870	63·9	184·4	+25·7			98
			0·913	80·9	177·9	+10·9			123
			0·983	111·6	168·3	−19·8			162
Oct. 5				(+26·3)	(244·3)	(+6·4)	(61)	(383)	(1696)
279·357	M, AM	7844	0·675	226·9	263·4	−22·0	20	71	
C.		7842	0·733	148·3	204·2	−32·8	7	16	120*f*
		7843	0·757	71·0	182·6	+18·5	36	255	369*c*
1916.				°	°	°			
279·357	M, AM	7845	0·994	72·0	145·8	+18·6	18	246	1134*p*
			0·756	118·6	187·7	−16·6			54
C.			0·920	115·8	169·3	−20·7			144
			0·887	83·2	168·5	+ 9·0			46
			0·941	61·6	160·8	+28·8			222
			0·979	101·2	154·8	− 9·6			79
Oct. 6				(+26·4)	(231·4)	(+6·4)	(81)	(588)	(2168)
280·400	HL, AM	7844	0·799	236·2	263·3	−22·0	21	90	68*c*
		7842	0·662	162·2	203·8	−32·8	3	8	
		7846	0·599	125·1	187·4	−14·7	12	41	
		7843	0·595	67·1	182·5	+18·5	47	259	
		7847	0·692	85·2	173·8	+ 7·8	15	44	
		7848	0·764	85·1	167·7	+ 7·8	37	92	
G.		7849	0·873	115·2	161·6	−18·3	9	24	124*c*
		7845	0·944	72·6	146·2	+18·5	61	292	1402*c*
			0·811	120·7	169·9	−20·2			183
			0·846	61·7	161·0	+27·2			95
			0·907	103·9	154·6	− 9·7			283
			0·895	83·9	153·9	+ 8·2			113
Oct. 7				(+26·4)	(217·7)	(+6·3)	(205)	(850)	(2268)
281·635	HL, AM	7844	0·923	243·2	263·7	−21·7	22	71	379*c*
		7842	0·631	181·8	202·8	−32·7	2	3	
		7846	0·421	150·8	189·2	−15·3	12	23	
		7843	0·378	55·1	182·4	+18·4	51	267	
		7847	0·438	85·6	175·4	+ 7·6	6	18	
		7848	0·583	85·2	165·6	+ 7·9	91	429	
		7849	0·717	124·1	162·7	−18·7	23	50	40*c*
G.		7850	0·704	70·1	157·4	+18·3	1	4	33*f*
		7851	0·684	76·8	157·3	+13·6	1	3	
		7845	0·822	72·0	146·2	+18·3	33	207	636*c*
		7852	0·936	66·8	131·4	+23·9	3	14	274*c*
		7853	0·990	64·6	117·7	+26·0	34	151	99*c*
			0·917	118·1	140·4	−22·7			177
			0·888	77·9	138·3	+13·6			154
			0·973	60·5	123·5	+30·1			43
Oct. 8				(+26·4)	(201·4)	(+6·3)	(279)	(1240)	(1835)
282·382	AM, M	7844	0·975	244·5	264·7	−22·2	4	42	432*c*
G.		7842	0·648	192·5	201·1	−33·0	1	5	
		843d	0·111	340·9	193·6	+12·2	1	2	

Group 7841, October 3–4. A ring of very small spots on October 3, of which only one remains by October 4. Group 7842, October 3–9. A regular spot steadily diminishing. Group 7843, October 3–16. A large regular spot followed by a small train. A small spot precedes the chief spot from October 7 to 11. Group 7844, October 5–9. Two small clusters that coalesce by October 7 to form one short irregular stream. Group 7845, October 6–19. Return of Group 7831. A large regular spot. A short train is seen to the *n* on October 13, of which one member remains until October 16. A new train has formed *nf* by October 17, and, having greatly increased, becomes the largest part of the group by October 19. Group 7846, October 7–10. A few very small unstable spots. Group 7847, October 7–10. A composite spot breaking up to form a close pair. Only a very small marking remains by October 10. Group 7848, October 7–17. An irregular stream forming immediately behind Group 7847. Three small spots arranged along a meridian lead the group on October 7. The group has developed the next day into a fine stream, quite of the normal type. The leader and terminal spots are both large and composite and continue to increase until October 10, after which the terminal begins to break up, and the leader diminishes and becomes regular. The middle of the group is active on October 14 and 15. Group 7849, October 7–15. A pair of small spots on October 7, gradually developing into a small straight stream by October 11. A fresh outbreak has occurred by October 12, but soon dies down, and only a pair of small spots remain by October 14, of which one has disappeared by the next day. Group 7850, October 8–9. A very small spot *p* Group 7845. Group 7851, October 8–12. A very small marking *s* Group 7850. It has developed into a small cluster by October 9, but is not seen on October 10. Group 7852, October 8–19. Return of Group 7820. A small spot *nf* Group 7845, with a very small faint companion on October 11, 16, and 17. Group 7853, October 8–22. Return of Group 7833. A large regular spot becoming double on October 10 and followed by a train, which develops from October 10 to 12, but declines later and has disappeared by October 20, leaving the leader, now a regular spot, alone.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
282·382	AM, M	7846	0·363	176·2	189·7	−15·0	5	16	
		7843	0·266	36·1	182·0	+18·5	54	259	
		7847	0·270	83·0	175·9	+ 7·9	3	7	
		7848	0·416	84·9	166·9	+ 7·7	101	553	
		7849	0·612	132·4	163·1	−18·9	13	43	
		7851	0·558	74·2	157·1	+13·9	0	10	
G.		7850	0·578	66·8	156·7	+18·3	1	2	
		7845	0·722	70·3	145·9	+18·4	40	188	
		7852	0·871	65·6	131·3	+24·2	7	20	} 281*c*
		7854	0·898	66·1	127·6	+24·2	8	15	
		7853	0·965	64·6	115·7	+26·1	49	338	594*c*
			0·863	122·8	139·0	−24·1			195
			0·927	109·0	126·6	−15·0			41
Oct. 9				(−26·4)	(191·5)	(+6·2)	(287)	(1500)	(1543)
283·417	HL. AM	7846	0·416	212·2	191·1	−14·6	1	2	
		7843	0·222	341·8	182·1	+18·3	54	337	
		7847	0·037	43·5	176·4	+ 7·7	1	2	
		7848	0·181	82·9	167·5	+ 7·3	156	868	
		843e	0·215	64·3	166·6	+11·3	1	13	
		7849	0·493	150·4	163·0	−19·4	27	93	
G.		7845	0·552	66·2	146·0	+18·0	32	197	
		843f	0·579	61·5	145·0	+21·1	0	2	
		7852	0·745	62·8	131·5	+24·1	5	12	26*c*
		7854	0·801	62·4	126·2	+25·6	2	15	116*c*
		7853	0·891	64·0	115·2	+25·9	51	391	1111*c*
			0·833	113·9	125·7	−16·0			87
Oct. 10				(+26·4)	(177·9)	(+6·1)	(330)	(1932)	(1340)
284·343	HL. AM	7843	0·348	308·4	182·3	+18·3	42	320	
		7848	0·042	302·9	167·7	+ 7·4	155	832	
		7849	0·438	176·4	164·0	−19·7	17	79	
		7851	0·191	44·8	157·8	+13·8	1	14	
		7855	0·356	38·4	152·0	+22·0	1	8	
C.		7845	0·388	56·4	145·9	+18·1	38	201	
		7852	0·611	56·8	131·7	+24·5	7	19	
		7853	0·797	61·7	114·5	+26·1	54	386	838*f*
			0·774	213·1	134·7	−35·1			119
			0·936	106·8	98·8	−13·3			272
			0·940	78·2	95·1	+13·2			133
Oct. 11				(+26·4)	(165·7)	(−6·1)	(315)	(1859)	(1362)
1916.				°	°	°			
285·363	M, AM		0·964	256·0	224·8	−11·8			120
			0·940	249·2	218·8	−17·1			55
			0·857	222·6	197·1	−34·9			145
		7843	0·527	296·0	182·1	+18·6	55	304	
		7848	0·274	276·8	168·1	+ 7·7	166	772	
		7849	0·458	201·9	162·6	−19·2	27	106	
		7851	0·159	320·0	158·2	+13·0	0	11	
		7855	0·275	5·6	150·5	+21·8	2	10	
C.		7845	0·238	28·1	145·5	+18·0	41	215	
		7852	0·453	44·9	131·8	+24·3	3	10	
		7854	0·506	48·9	127·5	+24·8	1	13	
		7853	0·663	56·7	114·3	+26·1	45	325	136*c*
		7856	0·911	76·7	86·1	+14·6	1	7	268*c*
			0·797	58·2	101·9	+28·7			452
			0·849	110·9	97·5	−14·1			163
Oct. 12				(+26·4)	(152·2)	(+6·0)	(341)	(1773)	(1339)
286·595	HL. AM		0·966	285·6	211·8	+16·5			51
			0·900	284·6	200·5	+15·6			62
			0·884	293·5	197·0	+23·4			57
			0·899	247·5	196·2	−17·3			165
			0·939	227·7	194·5	−35·6			265
			0·843	274·4	193·6	+ 6·9			114
		7843	0·723	290·2	181·5	+18·6	48	298	
		7848	0·559	275·8	170·0	+ 8·1	136	786	
C.		7849	0·619	226·1	164·2	−20·1	16	78	
		7845	0·262	323·6	145·4	+18·0	35	254	
		7852	0·329	12·9	131·4	+24·5	2	4	
		7854	0·359	23·4	127·0	+25·0	3	14	
		7853	0·490	43·4	114·0	+26·3	54	315	
		7856	0·767	75·6	86·0	+14·8	3	10	79*f*
			0·958	120·0	68·2	−26·5			120
Oct. 13				(+26·4)	(136·0)	(+5·9)	(297)	(1759)	(913)
287·398	HL, AM		0·936	275·6	195·1	+ 7·4			218
			0·920	294·4	192·4	+24·7			30
			0·963	231·9	191·6	−34·2			265
			0·927	251·7	190·6	−14·5			92
		7843	0·832	288·0	181·6	+18·2	40	284	116*c*
C.		7848	0·709	275·4	170·7	+ 8·0	128	716	
		7849	0·721	234·6	164·0	−20·1	4	23	
		7845	0·393	304·4	145·3	+18·3	31	214	
		7857	0·278	282·8	141·3	+ 9·2	3	10	
		7852	0·332	343·4	131·3	+24·3	1	6	
		7854	0·329	355·3	127·1	+25·0	3	12	

Group 7854, October 9–14. A small spot closely following Group 7852 on October 9. It has disappeared by October 11, but some faint markings are seen in its place on October 12, 13, and 14.

Group 7855, October 11–12. A very small faint cluster *up* Group 7845.

Group 7856, October 12–13. A small spot.

Group 7857, October 14–19. A few very small unstable spots *s* of Group 7845. The terminal spot develops on October 17 and becomes a large regular spot before reaching the West limb.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
287·398	HL, AM	7853	0·403	27·8	113·3	+26·5	46	327	
		7856	0·639	74·0	86·2	+14·7	4	10	
C.			0·911	125·2	67·6	−28·6			90
			0·926	116·1	62·3	−21·4			42
			0·911	68·0	59·6	+22·4			38
Oct. 14				(+26·4)	(125·4)	(+5·9)	(260)	(1602)	(891)
288·392	M, AM		0·925	245·7	175·7	−19·8			53
			0·915	233·9	170·4	−29·6			50
		7843	0·929	287·0	181·1	+18·0	55	322	742*c*
		7848	0·849	275·7	170·6	+ 7·9	125	689	934*c*
		7849	0·848	242·4	165·0	−19·6	1	2	411*sf*
		7845	0·558	293·5	144·7	+17·8	38	216	
G.		7857	0·495	276·1	142·0	+ 8·0	1	13	
		7852	0·442	317·4	131·4	+24·4	3	12	
		7853	0·355	359·3	112·6	+26·5	58	304	
		843g	0·354	153·3	103·0	−12·6	3	8	
		7856	0·455	69·0	86·4	+14·6	2	6	
			0·821	127·1	65·9	−25·7			141
Oct. 15				(+26·4)	(112·3)	(+5·8)	(286)	(1572)	(2331)
289·379	M, AM		0·922	245·1	162·0	−20·2			241
			0·862	283·0	159·0	+14·2			211
		7843	0·984	287·1	179·9	+17·8	52	323	101*c*
		7848	0·946	276·9	170·6	+ 8·4	84	375	609*c*
		7845	0·722	289·6	144·7	+18·0	32	208	250*np*
C.		7857	0·695	274·9	143·3	+ 7·5	4	14	
		7852	0·591	305·0	131·2	+24·6	2	8	
		7853	0·410	331·5	111·8	+26·6	32	290	
		7858	0·966	102·3	25·8	−10·3	17	125	323*c*
			0·921	87·4	32·0	+ 4·7			85
Oct. 16				(+26·3)	(99·2)	(+5·7)	(223)	(1343)	(1820)
290·343	M, AM		0·967	250·3	158·8	−17·4			301
			0·938	283·5	156·7	+14·6			285
		7848	0·978	277·5	164·9	+ 8·5	7	56	370*c*
		7845	0·847	288·3	144·2	+18·4	49	243	484*np*
		7857	0·832	276·5	143·0	+ 8·5	11	41	34*c*
C.		7852	0·724	297·9	130·7	+23·8	1	7	
		843h	0·659	288·5	123·2	+15·6	0	3	
		7853	0·524	314·5	111·1	+26·5	28	268	
		843i	0·421	340·9	95·5	+28·9	0	1	
1916.				°	°	°			
290·343	M, AM	*843j*	0·566	79·9	52·2	+10·3	0	2	
C.		7858	0·890	104·9	25·7	−10·5	33	159	412*c*
			0·800	87·7	33·3	+ 5·2			40
Oct. 17				(+26·3)	(86·5)	(+5·6)	(129)	(780)	(1926)
291·453	M, AM		0·923	246·4	135·3	−19·2			76
			0·931	234·5	132·9	−30·1			123
		7845	0·947	288·6	143·6	+19·3	45	367	794*np*
C.		7857	0·930	277·6	140·6	+ 9·1	15	73	177*c*
		7852	0·860	293·4	130·6	+22·8	4	15	276*nf*
		7853	0·666	304·4	109·6	+26·4	26	247	201*c*
		7858	0·755	109·6	25·7	−10·8	24	128	211*c*
Oct. 18				(+26·2)	(71·9)	(+5·5)	(114)	(830)	(1858)
292·355	M, AM	7845	0·987	289·6	141·8	+20·2	64	377	863*c*
		7857	0·982	278·5	139·6	+ 9·4	8	106	380*c*
		7852	0·943	293·1	130·9	+23·6	0	3	284*c*
C.		7853	0·787	300·1	109·5	+26·8	19	172	678*p*
		7858	0·611	115·5	26·0	−10·7	15	110	
			0·949	72·3	347·8	+18·6			185
Oct. 19				(+26·1)	(60·0)	(+5·5)	(106)	(768)	(2390)
293·333	M, AM		0·989	292·7	129·8	+23·2			102
			0·850	249·5	102·1	−14·2			91
		7853	0·892	297·0	109·6	+26·5	29	172	1193*c*
C.		7858	0·442	128·3	26·5	−10·8	17	110	
			0·873	71·5	346·4	+18·7			198
			0·953	106·8	337·1	−14·2			35
Oct. 20				(+26·1)	(47·1)	(+5·4)	(46)	(282)	(1619)
294·436	M, AM		0·929	252·6	98·3	−13·9			197
			0·882	282·0	94·6	+13·0			192
			0·859	308·0	88·0	+34·9			256
			0·875	237·2	86·7	−25·2			68
		7853	0·967	295·4	108·4	+25·9	27	174	1186*f*
G.		7858	0·302	161·6	26·9	−11·3	7	30	
		7859	0·989	113·7	314·3	−22·4	10	49	210*p*
			0·777	69·0	342·4	+19·5			85
			0·908	118·2	332·5	−22·7			112
			0·898	81·8	328·3	+ 9·7			138
Oct. 21				(+26·0)	(32·5)	(+5·3)	(44)	(253)	(2444)

Group 7858, October 16–22. A composite spot surrounded and invaded by bright faculæ when near the East limb. The spot diminishes quickly after October 20.
Group 7859, October 21–24. A diffused spot diminishing in size but becoming more definite after October 22. In the same area of disturbance as Group 7858.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
295·170	M, AM		0·958	254·7	94·2	−13·0			103
			0·917	311·7	86·6	+40·0			141
			0·917	238·5	83·2	−26·1			81
			0·864	284·1	82·8	+14·8			232
		7853	0·995	295·9	108·4	+26·2	10	81	961*f*
D.		7858	0·297	193·7	27·0	−11·5	1	9	
		7859	0·953	115·7	314·7	−22·5	16	96	354*c*
			0·849	121·5	331·1	−23·1			164
			0·834	80·6	326·3	+10·7			74
			0·954	74·2	309·8	+16·6			36
Oct. 22				(+25·9)	(22·9)	(+5·2)	(27)	(186)	(2146)
296·409	M, HL		0·938	294·5	76·2	+24·7			66
			0·905	284·1	71·5	+14·9			111
			0·891	237·2	62·8	−26·1			64
G.		7859	0·838	121·0	315·7	−22·4	4	43	255*c*
		7860	0·953	81·8	293·9	+ 9·3	10	49	148*c*
			0·953	110·2	297·1	−17·4			104
Oct. 23				(+25·8)	(6·5)	(+5·1)	(14)	(92)	(748)
297·160	M, AM		0·963	297·3	71·3	+27·6			70
			0·943	287·5	67·5	+18·2			105
			0·944	238·7	61·6	−27·2			171
D.		7859	0·751	126·1	315·7	−22·4	4	23	205*f*
		7860	0·885	82·1	294·1	+ 9·4	7	30	383*f*
		7861	0·919	108·3	292·4	−14·6	1	6	117*f*
			0·927	116·1	293·0	−21·8			121
Oct. 24				(+25·7)	(356·6)	(+5·1)	(12)	(59)	(1172)
298·625	M, AM		0·780	248·7	25·4	−13·1			445
		844a	0·394	341·4	345·4	+26·7	1	2	
G.		7860	0·679	82·1	294·6	+ 9·0	3	9	
		7861	0·740	117·5	294·3	−16·3	10	52	
			0·966	114·6	265·9	−22·2			163
Oct. 25				(+25·6)	(337·3)	(+4·9)	(14)	(63)	(608)
299·442	M, AM		0·862	253·9	23·9	−11·3			693
		7861	0·615	124·9	294·9	−16·5	25	91	
G.		7860	0·539	81·9	294·0	+ 8·4	1	8	
		7862	0·608	79·8	289·3	+10·0	1	6	
			0·909	115·8	265·5	−21·0			217
Oct. 26				(+25·5)	(326·5)	(+4·8)	(27)	(105)	(910)
1916.				°	°	°			
300·355	HL, M		0·949	257·1	24·5	−10·6			311
		7861	0·473	139·7	296·0	−16·5	31	205	
C.			0·864	122·6	261·3	−24·9			90
			0·904	52·3	252·7	+35·9			37
Oct. 27				(+25·3)	(314·5)	(+4·8)	(31)	(205)	(438)
301·393	M, AM	7863	0·299	346·4	305·1	+21·4	1	6	
		7861	0·366	167·6	296·1	−16·2	69	309	
		7860	0·144	61·4	293·5	+ 8·5	0	4	
G.		7862	0·213	61·2	289·9	+10·5	0	9	
			0·949	104·4	231·0	−12·1			99
			0·988	74·8	219·1	+15·7			58
Oct. 28				(+25·2)	(300·8)	(+4·7)	(70)	(328)	(157)
302·416	HL, AM		0·797	239·5	334·4	−20·8			75
		7863	0·423	315·4	305·9	+21·7	6	24	
		7861	0·386	203·7	296·6	−16·2	62	340	
C.		7860	0·151	300·6	294·8	+ 8·8	0	8	
		7864	0·908	74·9	222·1	+15·6	19	60	149*c*
			0·897	110·3	226·5	−15·9			132
			0·977	64·9	209·0	+25·4			198
Oct. 29				(+25·1)	(287·3)	(+4·5)	(87)	(432)	(554)
303·417	HL, AM		0·926	287·2	341·9	+17·5			86
			0·842	279·3	331·5	+10·2			79
			0·880	239·9	330·2	−23·7			105
			0·783	230·7	316·5	−26·4			69
G.		7863	0·572	302·7	305·2	+21·7	0	8	
		7861	0·507	226·6	296·6	−16·2	45	242	
		7864	0·800	74·1	221·4	+15·3	23	100	106*c*
			0·919	64·4	208·0	+25·2			198
			0·926	81·3	206·1	+ 9·7			206
Oct. 30				(+24·9)	(274·1)	(+4·4)	(68)	(350)	(849)
304·348	HL, AM		0·938	280·6	331·7	+11·5			77
			0·901	238·8	320·2	−25·4			238
		7863	0·727	297·2	306·0	+22·5	3	18	
C.		7861	0·636	237·6	295·7	−16·2	40	289	
		7865	0·438	182·6	263·0	−21·4	1	2	
		844b	0·626	50·2	229·2	+27·3	1	3	
		7864	0·657	71·7	221·7	+15·3	51	244	

Group 7860, October 23–29. A regular spot diminishing rapidly. Some very small unstable companions are seen near it on October 25 and 26. The group is not seen on October 27, but a very small spot has appeared by October 28, and a cluster of very faint markings by October 29.

Group 7861, October 24–November 3. One very small spot on October 24; a long straight stream composed of many small spots soon develops, the leader of which has become a large triple spot by October 29, but has broken up by November 1.

Group 7862, October 26–28. Some very faint markings *f* Group 7860; not seen on October 27.

Group 7863, October 28–November 2. A very small spot with a faint companion on October 28. Other faint markings are seen near on October 29 and 31, and the group has developed into a cluster of five small but distinct spots by November 1.

Group 7864, October 29–November 7. A small cluster increasing in size up to October 31, and gradually lengthening out into a straight stream; it diminishes rapidly after November 4. Group 7865, October 31–November 5. A very small but definite spot on October 31. Some others have formed behind it by November 1, making with it a short straight stream, of which the rear spot becomes the chief. Activity in this area during previous rotation (see Group 7844).

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
304·348	HL, AM	7866	0·825	65·0	207·7	+23·0	0	4	106*n*
C.		7867	0·964	79·6	186·9	+11·2	4	50	650*c*
			0·967	62·4	186·4	+27·8			62
Oct. 31				(+24·8)	(261·8)	(+4·4)	(100)	(610)	(1133)
305·384	HL, AM		0·927	241·0	311·3	−24·8			327
		7863	0·867	292·5	307·4	+21·6	6	49	393*c*
		7861	0·780	244·9	295·4	−16·4	46	207	430*c*
		7865	0·488	207·8	262·3	−21·3	6	19	
		7864	0·484	65·2	221·2	+15·4	46	153	
		7866	0·687	59·8	208·0	+23·5	1	8	
G.		7867	0·895	80·6	184·6	+10·4	19	61	979*c*
			0·827	115·4	196·6	−18·1			35
			0·899	128·4	192·6	−31·5			120
			0·915	74·6	182·0	+15·9			402
			0·922	71·2	181·1	+18·9			225
			0·963	111·0	176·6	−18·9			101
Nov. 1				(+24·6)	(248·2)	(+4·3)	(124)	(497)	(3012)
306·490	HL, M		0·979	242·2	308·0	−26·1			96
			0·856	280·4	292·4	+11·0			222
		7863	0·951	291·4	305·5	+21·6	15	41	306*c*
		7861	0·901	249·3	295·0	−16·6	20	120	413*c*
		7865	0·612	226·4	261·9	−21·3	13	52	
		7864	0·279	46·8	221·5	+15·0	26	140	
		7866	0·510	49·3	208·9	+23·1	0	5	
		7867	0·760	79·1	184·3	+11·0	17	81	200*f*
G.		7868	0·891	113·0	174·1	−18·3	0	2	137*c*
		7869	0·947	108·2	164·7	−15·8	0	28	292*c*
		7870	0·986	71·5	152·6	+18·9	20	158	327*c*
			0·835	135·5	189·2	−33·5			118
			0·829	65·2	179·1	+22·7			237
			0·884	125·1	178·7	−28·2			64
			0·880	82·5	171·9	+ 8·5			439
			0·968	81·2	157·9	+ 9·6			167
Nov. 2				(+24·4)	(233·6)	(+4·1)	(111)	(627)	(3018)
307·163	HL, AM		0·981	291·5	304·0	+21·8			272
			0·917	281·5	291·3	+12·2			154
		7861	0·951	251·3	294·4	−16·4	1	22	519*c*
D.		7865	0·698	233·9	261·7	−21·0	25	129	
		844c	0·592	241·9	256·9	−12·7	3	17	
		7864	0·210	20·5	220·3	+15·3	18	125	
		7867	0·648	77·5	184·7	+11·2	12	47	102*c*
1916.				°	°	°			
307·163	HL, AM	7868	0·808	116·3	175·2	−18·3	1	3	261*f*
		7869	0·897	109·8	163·7	−15·7	11	63	444*c*
		7871	0·963	82·1	150·1	+ 8·8	2	22	872*c*
D.		7870	0·968	72·6	148·9	+17·9	63	397	} 995*c*
		7872	0·981	67·9	145·4	+22·4	8	35	
			0·779	60·7	174·7	+25·1			132
			0·800	82·9	171·6	+ 8·1			224
Nov. 3				(+24·3)	(224·7)	(+4·1)	(144)	(860)	(3975)
308·390	M, AM		0·989	248·4	287·8	−20·7			148
		7865	0·838	241·3	260·4	−21·3	23	107	229*c*
		7864	0·296	312·1	221·6	+15·2	24	141	
		7867	0·403	70·9	185·8	+11·1	8	36	
		844d	0·529	69·2	178·0	+14·2	0	3	
G.		7868	0·628	124·5	175·8	−17·5	6	18	
		7869	0·746	114·9	164·1	−15·5	42	189	166*c*
		7870	0·858	71·4	150·0	+17·9	43	301	497*c*
		7871	0·862	81·6	149·0	+ 9·2	67	304	598*c*
		7872	0·906	66·2	144·4	+23·2	13	85	1177*c*
Nov. 4				(+24·1)	(208·5)	(+3·9)	(226)	(1184)	(2815)
309·320	M, AM		0·912	254·2	260·2	−12·7			91
		7865	0·923	245·5	260·0	−20·8	8	68	293*c*
		7864	0·466	295·5	222·0	+15·0	30	97	
		7867	0·233	57·5	184·8	+10·8	8	36	
		7868	0·479	138·1	176·8	−17·2	5	15	
C.		7873	0·382	75·7	174·4	+ 8·9	1	12	
		7869	0·618	121·5	163·3	−15·6	53	233	
		7870	0·730	68·9	150·8	+17·8	34	235	288*c*
		7871	0·730	80·8	149·6	+ 9·3	76	534	171*c*
		7872	0·816	62·9	143·8	+24·1	13	71	581*c*
		7874	0·951	79·1	124·1	+11·6	18	77	92*c*
Nov. 5				(+23·9)	(196·3)	(+3·8)	(246)	(1378)	(1516)
310·401	HL, AM		0·985	247·8	259·6	−21·1			169
			0·973	256·5	257·2	−12·2			85
		7864	0·646	289·2	221·0	+15·1	12	41	
		7867	0·131	323·6	186·5	+ 9·8	11	30	
		7868	0·372	165·9	176·6	−17·4	5	25	
G.		7873	0·139	58·1	175·2	+ 7·9	1	5	
		7869	0·454	136·1	163·0	−15·5	84	296	
		7870	0·554	63·2	150·9	+17·6	40	206	
		7871	0·536	78·0	150·0	+ 9·6	87	439	
		7872	0·678	57·3	143·4	+24·3	27	116	

Group 7866, October 31–November 2. A very small spot with two faint companions on November 2. Group 7867, October 31–November 8. An irregular stream composed of small unstable spots, of which only the leader remains by November 8. Group 7868, November 2–10. A very small spot on November 2 and 3, developing into a close pair by November 4. The group consists of a small regular spot with one or two very small unstable companions after November 7. Near the place of Group 7849. Group 7869, November 2–11. A few very small faint spots *np* Group 7868 on November 2. The group rapidly increases in size and develops into a long irregular stream composed mostly of small unstable spots. The group diminishes after November 6, and only one very small spot, in the *np* part of the stream, remains by November 11. Apparently a new outburst near the place of Group 7849. Group 7870, November 2–14. Two widely separated regular spots, occasionally with one or two very small companions between them. The rear spot, which is probably a return of a portion of Group 7845, does not come into view until November 3, and it remains alone after November 12. Group 7871, November 3–14. Some faint markings forming *s* of Group 7870 and quickly developing into a fine stream. The leader has become a large regular spot by November 5, and remains stable; the following spots are mostly unstable and have all disappeared by November 13. Near the place of Group 7857, but a new formation. Group 7872, November 3–11. A few faint unstable spots irregularly scattered over a great distance in longitude; *p* the place of Group 7852, but a new formation. Group 7873, November 5–6. A small cluster of faint markings. Group 7874, November 5–6. A close pair of spots of which the smaller and more southern has disappeared by November [illegible]

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
310·401	HL, AM	7874	0·852	78·5	123·7	+11·7	14	68	154*c*
		7876	0·965	66·1	107·2	+24·0	75	263	717*c*
G.			0·985	78·9	101·6	+11·6			169
Nov. 6				(+23·7)	(182·0)	(+3·7)	(356)	(1489)	(1294)
311·355	HL, AM	7864	0·791	286·6	221·0	+15·3	3	19	194*c*
		7867	0·310	293·0	186·2	+10·4	5	17	
		7868	0·380	201·5	177·7	−17·1	5	21	
		7869	0·340	162·0	163·2	−15·2	32	224	
		7870	0·380	48·4	152·1	+18·0	14	132	
		7877	0·414	43·7	151·7	+20·8	0	4	
		844e	0·450	39·7	151·2	+23·6	0	2	
C.		7871	0·346	71·2	150·1	+ 9·8	46	332	
		7875	0·477	51·2	146·1	+20·6	0	2	
		7872	0·533	48·3	143·7	+24·0	5	39	
		7874	0·722	76·9	123·7	+11·9	9	52	45*c*
		7876	0·891	65·5	107·5	+23·4	19	156	884*f*
		844f	0·920	79·8	102·4	+10·8	0	8	378*c*
		7878	0·988	86·1	88·3	+ 4·4	6	55	138*c*
Nov. 7				(+23·5)	(169·4)	(+3·6)	(144)	(1063)	(1639)
312·361	HL, AM		0·916	286·5	222·3	+16·5			510
			0·802	297·2	207·2	+23·7			49
		7867	0·527	282·3	187·5	+ 9·4	4	10	
		7868	0·491	226·1	177·8	−16·6	6	17	
		7869	0·356	202·4	164·3	−15·7	11	108	
		7870	0·258	12·5	152·8	+18·0	20	127	
		7877	0·296	17·5	150·8	+19·8	1	6	
C.		7871	0·152	41·0	150·4	+10·0	34	270	
		7875	0·364	36·4	142·9	+20·4	1	2	
		7872	0·422	31·8	142·1	+24·3	7	39	
		844g	0·552	39·8	132·7	+28·2	0	8	
		7874	0·555	72·8	123·5	+12·4	7	22	
		7876	0·779	62·3	107·6	+23·4	19	169	965*f*
		7878	0·902	86·9	91·9	+ 4·4	25	144	262*c*
			0·851	80·2	98·0	+10·2			409
Nov. 8				(+23·2)	(156·2)	(+3·5)	(135)	(922)	(2195)
313·417	HL, AM		0·974	285·4	219·4	+15·8			369
			0·891	296·1	203·8	+24·7			208
G.		7868	0·649	239·4	177·8	−16·5	5	13	
		7869	0·484	228·6	164·3	−15·4	20	95	
		7870	0·303	323·6	153·1	+17·4	21	116	
1916.				°	°	°			
313·417	HL, AM	7877	0·315	334·7	150·5	+19·8	0	5	
		7871	0·176	307·4	150·4	+ 9·4	52	308	
		7872	0·366	2·6	141·3	+24·7	1	14	
		7883	0·450	11·6	136·4	+29·4	0	14	
G.		7874	0·368	63·0	122·7	+12·7	2	9	
		7876	0·632	55·6	107·7	+23·7	22	216	
		7878	0·767	87·4	92·3	+ 4·2	27	78	94*c*
			0·858	54·8	87·2	+31·5			522
			0·927	117·1	78·4	−23·5			112
Nov. 9				(+23·0)	(142·3)	(+3·4)	(150)	(868)	(1305)
314·519	HL, AM		0·961	295·9	201·2	+25·8			113
			0·850	281·7	185·7	+11·7			548
			0·806	299·5	178·5	+25·4			285
			0·745	242·9	171·6	−17·4			60
		7868	0·802	246·6	177·6	−16·4	1	2	
		7869	0·640	241·2	163·1	−15·3	3	23	
		7871	0·423	286·6	152·0	+ 9·5	40	228	
		7870	0·463	302·7	151·7	+17·4	13	66	
		7872	0·427	325·9	142·8	+23·8	1	16	
C.		7879	0·270	286·5	142·8	+ 7·5	1	8	
		7880	0·379	331·7	138·9	+22·7	0	16	
		7876	0·476	42·0	107·4	+23·7	28	192	
		7878	0·555	87·6	94·1	+ 4·1	17	62	
		7881	0·678	131·0	93·9	−23·7	1	20	
		7882	0·966	73·7	52·6	+16·5	0	10	423*c*
			0·784	48·7	82·9	+33·5			85
			0·842	120·5	75·7	−23·3			59
			0·956	116·8	58·3	−24·4			54
Nov. 10				(+22·7)	(127·7)	(+3·3)	(105)	(643)	(1627)
315·363	HL, AM		0·918	281·1	183·1	+11·4			1293
			0·934	236·8	180·1	−29·4			219
			0·889	296·5	177·7	+24·9			1030
			0·935	225·3	175·9	−39·5			81
		7869	0·789	250·0	166·1	−13·6	1	5	1152*p*
		7871	0·596	281·5	152·7	+ 9·4	33	162	
		7870	0·599	294·7	151·2	+17·1	19	47	
C.		7879	0·450	280·6	143·0	+ 7·6	2	8	
		7872	0·522	313·1	141·1	+23·7	2	8	
		7883	0·555	326·5	137·3	+30·4	2	24	
		7876	0·383	22·6	107·4	+23·8	48	241	
		7881	0·566	142·1	94·4	−23·4	10	27	
		7878	0·379	86·6	94·4	+ 4·2	12	56	

Group 7876, November 6–17. Return of Group 7853; third apparition. A composite spot with a close companion *nf* on November 6–8. Numerous small unstable spots form *f* the original leader, which diminishes but becomes more definite. The group is an irregular stream November 9–15, after which the leader alone remains.
Group 7875, November 7–8. One or two very small spots *nf* Group 7870. Group 7877, November 7–9. A very small marking *n* Group 7870.
Group 7878, November 7–15. A double spot followed by a sparse irregular train composed of small unstable spots.
Group 7879, November 10–12. Some very small unstable markings *sf* Group 7871. Group 7880, November 10–12. Two faint markings on November 10. Nothing is seen the next day, but a very small marking appears on November 12. Group 7881, November 10–18. Two compact clusters of small spots developing by November 12 into a straight stream. This has formed again into two clusters by November 14, and these become single spots by November 16, of which only the leader remains by November 17. Group 7882, November 10–21. One or two very small spots, developing by November 14 into a sparse irregular stream of small unstable spots. The leader has become large and dark by November 17, and alone remains as a small spot by November 21.
Group 7883, November 6–15. Some very small markings of which only one remains by November 12; none is seen on November 15.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
315·363	HL, AM	7882	0·898	73·3	53·1	+16·4	1	8	667*c*
C.			0·921	119·1	54·1	−25·1			141
			0·960	84·0	42·9	+ 6·6			141
Nov. 11				(+22·5)	(116·6)	(+3·2)	(130)	(586)	(4724)
31[illegible] 1	HL, AM		0·965	280·9	178·1	+11·3			568
			0·960	294·6	176·4	+24·4			560
			0·908	250·8	166·1	−16·0			1514
		7871	0·769	279·5	153·2	+ 9·2	25	192	258*p*
		7870	0·756	290·0	151·0	+16·9	10	44	373*p*
		7879	0·648	277·3	143·4	+ 7·0	1	10	
		7880	0·636	302·1	138·6	+22·1	0	3	
		7883	0·657	313·8	136·1	+29·5	1	3	
		7876	0·366	351·5	106·6	+24·1	23	163	
C.		7884	0·477	2·8	101·6	+31·3	0	13	
		7878	0·117	79·1	96·6	+ 4·2	17	68	
		7881	0·471	162·3	94·2	−23·6	21	60	
		7882	0·769	71·8	54·0	+15·8	0	16	309*c*
			0·904	6·3	88·6	+66·8			67
			0·835	124·1	53·1	−25·9			43
			0·876	50·8	47·2	+35·3			76
			0·841	83·3	46·1	+ 7·2			53
			0·962	105·5	30·7	−13·9			382
			0·985	74·[illegible]	23·0	+15·3			313
Nov. 12				(+22·3)	(103·2)	(+3·0)	(98)	(572)	(4516)
317·535	HL, AM		0·819	277·8	142·8	+ 8·1			110
			0·783	305·8	134·5	+29·2			522
		844h	0·933	248·3	154·3	−19·0	11	27	923*p*
		7871	0·909	278·7	153·3	+ 9·1	30	123	875*c*
		7870	0·869	286·9	147·7	+16·1	6	15	875*np*
		7885	0·568	238·2	117·8	−14·8	7	24	
		844i	0·596	220·0	112·8	−24·4	5	19	
G.		7876	0·456	321·3	106·0	+23·5	32	142	
		7884	0·515	332·0	104·1	+29·7	1	9	
		7878	0·159	276·1	97·1	+ 3·9	4	11	
		7881	0·453	190·8	93·3	−23·4	41	164	
		7882	0·633	66·8	50·8	+16·7	9	35	
		7886	0·926	73·8	20·9	+16·0	20	107	388*c*
			0·846	109·0	32·6	−14·3			286
Nov. 13				(+22·0)	(88·0)	(+2·9)	(166)	(676)	(3979)
1916.				°	°	°			
318·426	M, AM		0·935	272·5	149·2	+ 3·4			44
			0·914	278·7	142·2	+ 9·1			78
			0·881	298·7	135·6	+26·4			935
		7871	0·973	279·2	152·8	+ 9·5	4	85	498*c*
		7870	0·951	286·3	148·0	+16·3	2	18	668*np*
		7885	0·692	245·5	116·6	−14·5	2	21	
C.		7876	0·601	307·1	107·6	+23·5	25	63	
		7878	0·356	274·9	96·9	+ 4·4	2	11	
		7881	0·528	212·9	94·3	−23·5	32	179	
		7882	0·426	59·2	54·0	+15·1	8	43	
		7886	0·829	72·5	21·1	+16·0	11	60	54*c*
			0·808	118·8	27·0	−21·1			71
Nov. 14				(+21·7)	(76·2)	(+2·8)	(86)	(480)	(2348)
319·425	M, AM		0·981	280·1	141·9	+10·4			101
			0·978	256·9	139·8	−12·2			94
			0·955	297·1	134·7	+26·6			935
			0·861	281·9	122·1	+11·6			128
			0·823	239·6	113·2	−22·8			115
			0·812	303·7	113·0	+28·5			154
		7885	0·847	251·3	118·6	−14·2	2	18	185*c*
G.		7876	0·741	299·1	107·5	+23·0	5	27	208*c*
		7878	0·561	272·9	97·0	+ 3·9	1	5	
		7881	0·643	226·6	93·6	−23·8	44	175	
		7882	0·265	37·6	53·4	+14·7	10	35	
		844j	0·342	80·5	43·3	+ 5·8	1	2	
		7886	0·686	69·9	21·2	+15·[illegible]	7	17	
			0·940	118·5	357·0	−25·5			123
			0·938	73·1	353·6	+16·8			86
Nov. 15				(+21·5)	(63·0)	(+2·7)	(70)	(279)	(2129)
320·336	M, AM		0·986	299·4	131·1	+29·4			248
			0·926	253·4	117·1	−14·3			187
			0·897	240·0	110·0	−25·3			101
			0·837	308·2	102·3	+32·7			145
			0·783	280·2	102·2	+ 9·6			94
C.		7876	0·855	295·8	107·7	+23·3	7	30	705*c*
		7881	0·778	234·8	95·3	−24·7	27	201	326*c*
		7887	0·430	207·2	63·0	−19·8	1	10	
		7882	0·205	342·4	54·6	+13·8	12	70	
		7886	0·523	64·2	21·9	+15·4	4	26	
			0·878	121·8	355·0	−26·1			50
Nov. 16				(+21·2)	(51·0)	(+2·6)	(51)	(337)	(1856)

Group 7884, November 12–13. Three very small and widely separated markings of which only the leader remains the second day.
Group 7885, November 13–15. A few very small spots in a short stream. Only two remain by November 14, and only one the following day.
Group 7886, November 13–17. A compact cluster on November 13 and 14; a few unstable and scattered markings later.
Group 7887, November 16–19. A pair of small faint spots on November 16; an irregular cluster on November 17; later a single small spot.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
321·485	M, AM		0·977	243·0	110·8	−25·7			104
			0·963	253·1	108·7	−15·5			82
			0·880	276·9	97·4	+ 7·2			229
			0·903	305·3	96·7	+32·6			207
			0·816	252·7	88·7	−12·5			39
			0·824	300·3	88·1	+26·1			194
		7876	0·951	293·7	107·1	+23·3	8	38	450c
G.		7881	0·920	241·1	98·6	−25·2	29	149	533f
		7887	0·568	227·5	62·3	−20·2	13	87	
		7882	0·392	300·5	56·2	+13·8	40	147	
		7886	0·330	42·7	22·5	+16·4	3	45	
		844k	0·928	66·1	328·9	+23·0	3	7	223c
			0·942	120·5	329·9	−27·5			51
			0·967	73·3	320·8	+16·8			106
Nov. 17				(+20·9)	(35·9)	(+2·5)	(96)	(473)	(2218)
322·414	M, AM		0·987	296·5	104·3	+26·5			142
			0·955	304·2	94·1	+33·2			184
			0·919	279·2	90·2	+ 9·4			120
			0·921	255·3	89·2	−12·5			67
			0·917	299·4	87·9	+27·7			301
			0·792	242·0	71·6	−20·2			15
C.		7881	0·975	244·0	98·2	−24·7	18	126	355f
		7888	0·712	241·1	64·5	−18·3	6	38	
		7887	0·697	235·6	61·6	−21·3	4	6	
		7882	0·582	290·8	57·5	+13·8	23	105	
		844l	0·264	191·2	26·6	−12·6	0	6	
			0·905	66·6	320·7	+21·4			44
Nov. 18				(+20·6)	(23·6)	(+2·3)	(51)	(281)	(1228)
323·404	M, AM		0·979	245·7	86·5	−23·2			65
			0·948	297·7	80·6	+26·9			344
			0·922	259·3	76·9	− 9·0			68
			0·915	286·7	76·2	+16·2			103
			0·918	310·6	72·1	+37·7			145
C.		7888	0·838	246·7	64·4	−18·0	0	5	93c
		7887	0·816	241·6	60·8	−21·4	1	5	84c
		7882	0·752	286·8	58·3	+14·0	20	176	
			0·869	65·9	312·1	+21·9			200
			0·932	111·3	304·2	−18·9			201
Nov. 19				(+20·3)	(10·6)	(+2·2)	(21)	(186)	(1303)
324·330	M, AM		0·957	297·6	70·3	+27·0			143
			0·925	245·6	63·1	−21·6			255
		7882	0·872	284·9	58·4	+14·0	23	144	547c
C.		7889	0·935	98·4	289·9	− 7·1	4	17	82c
			0·826	122·2	308·3	−24·7			28
			0·820	64·2	305·7	+22·1			161
			0·884	110·0	298·5	−16·5			179
Nov. 20				(+20·0)	(358·4)	(+2·1)	(27)	(161)	(1395)
325·446	M, AM		0·991	249·8	64·5	−19·7			235
			0·881	272·8	45·3	+ 3·4			84
		7882	0·969	283·8	59·3	+13·9	0	6	515nf
		845a	0·495	38·8	323·9	+24·4	3	13	
G.		7890	0·472	55·7	319·7	+17·2	2	4	
		7889	0·809	100·2	290·6	− 7·0	5	12	86c
		7891	0·994	111·4	261·5	−21·0	31	263	213c
			0·822	116·2	292·2	−20·0			135
			0·962	100·0	270·3	− 9·1			72
Nov. 21				(+19·6)	(343·7)	(+2·0)	(41)	(298)	(1340)
326·536	M, AM		0·974	290·3	45·0	+20·1			86
			0·907	258·4	33·4	− 9·7			81
			0·890	247·3	29·5	−19·2			218
			0·817	283·6	23·4	+12·1			100
		7890	0·300	28·9	320·6	+16·9	14	40	
C.		*845b*	0·557	128·5	302·0	−18·6	2	15	
		7889	0·638	105·8	291·1	− 8·5	29	117	
		7892	0·940	70·5	260·1	+18·9	4	10	127nf
		7891	0·954	113·1	259·1	−21·4	44	379	585c
			0·711	119·7	288·6	−19·2			53
			0·833	123·2	278·6	−26·0			33
Nov. 22				(+19·3)	(329·3)	(+1·8)	(93)	(561)	(1283)
327·440	M, AM		0·972	259·4	33·1	− 9·9			52
			0·927	249·8	23·3	−18·0			125
			0·907	287·0	21·7	+16·2			156
C.		7890	0·270	348·8	320·5	+17·1	15	53	
		7889	0·461	112·4	292·0	− 8·5	41	161	
		7892	0·857	68·6	260·0	+19·1	2	8	147f
		7891	0·885	115·4	258·5	−21·4	54	382	267c
Nov. 23				(+19·0)	(317·4)	(+1·7)	(112)	(604)	(747)

Group 7888, November 18–19. Some very small spots in two clusters *up* Group 7887 on November 18; a very small marking the next day.

Group 7889, November 20–December 1. Some very small distinct spots quickly developing into a widespread disturbance, consisting chiefly of small spots in a long straight stream, accompanied by one or more clusters to the *n*. The group declines quickly after November 26.

Group 7890, November 21–27. A pair of small spots on November 21, developing into a stream of normal type by the next day. The leader alone remains by November 25, but there is a small companion on November 26.

Group 7891, November 21–30. Return of Group 7865. A large regular spot closely followed by an irregular train of small unstable spots. The group declines rapidly after November 25.

Group 7892, November 22–25. A small declining spot.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
328·315	M, AM		0·968	285·9	21·1	+15·8			82
		7890	0·378	315·8	321·8	+17·2	15	46	
		7889	0·291	126·0	292·2	− 8·2	27	167	
		7892	0·744	65·5	260·4	+19·0	5	7	
C.		7891	0·786	119·2	258·6	−21·4	43	305	399*c*
			0·947	129·4	241·0	−36·2			42
			0·944	62·2	237·1	+26·6			66
			0·965	73·1	231·6	+16·7			70
Nov. 24				(+18·7)	(305·9)	(−1·6)	(90)	(525)	(659)
329·331	M, AM	7890	0·579	298·3	324·6	+17·1	2	12	
		7889	0·166	185·3	293·4	− 8·0	53	292	
		7892	0·592	58·7	260·3	+19·1	0	2	
C.		7891	0·645	126·5	258·8	−21·2	37	323	
		7893	0·803	58·3	243·3	+25·9	2	6	67*f*
			0·893	71·9	230·3	+16·8			105
Nov. 25				(+18·3)	(292·5)	(+1·5)	(94)	(635)	(172)
330·494	M, AM	7890	0·762	289·6	325·1	+15·6	6	14	108*c*
		7889	0·326	238·8	293·4	− 8·5	52	229	
		845c	0·252	341·2	281·9	+15·0	1	2	
G.		7891	0·484	141·7	258·5	−21·0	52	245	
		7893	0·653	50·4	243·3	+25·6	49	148	
			0·920	77·2	210·7	+12·2			126
			0·942	61·1	208·9	+27·5			74
Nov. 26				(+18·0)	(277·1)	(−1·3)	(160)	(638)	(308)
331·533	M, AM		0·927	239·2	327·4	−27·8			53
			0·909	295·2	326·7	+23·3			113
			0·772	304·5	308·6	+26·7			147
		7890	0·893	286·6	325·7	+15·3	4	14	212*f*
		7889	0·527	251·3	293·6	− 8·6	32	132	
G.		7891	0·394	168·4	258·5	−21·4	33	184	
		7893	0·517	37·2	243·2	+25·4	53	240	
			0·908	141·8	211·3	−44·7			100
			0·860	57·8	208·1	+27·9			125
			0·909	79·6	198·5	− 9·9			213
Nov. 27				(+17·6)	(263·4)	(−1·2)	(122)	(570)	(963)
332·43[illegible]	M, AM		0·960	294·4	323·9	−23·7			39[illegible]
G			0·919	289·4	317·1	+18·2			326
			0·865	298·3	308·3	+24·8			187
			0·876	239·8	308·3	−25·5			82
1916.				°	°	°			
332·439	M, AM		0·852	247·6	307·4	−18·3			248
		7889	0·702	256·6	295·0	− 8·5	15	67	59*p*
		7891	0·403	198·4	259·3	−21·3	22	119	
		7893	0·428	14·2	244·8	+25·4	48	233	
			0·844	80·0	194·4	+ 9·0			101
G.			0·900	122·6	192·2	−28·4			43
			0·919	74·0	185·5	+15·1			246
			0·953	63·2	180·8	+25·8			194
			0·953	107·6	180·5	−16·4			341
			0·971	98·6	175·9	− 8·0			49
Nov. 28				(+17·2)	(251·5)	(+1·1)	(85)	(419)	(1915)
333·330	M, AM		0·985	277·3	319·7	+ 7·4			45
			0·940	291·8	308·5	+20·8			260
			0·940	246·9	307·6	−21·2			183
			0·798	245·1	289·5	−18·9			122
		7889	0·846	259·3	296·8	− 8·5	7	63	328*c*
		845d	0·812	245·3	291·0	−19·2	0	3	
		7891	0·496	219·3	259·5	−21·5	14	49	
C.		7893	0·431	348·6	245·2	+25·9	58	287	
		7894	0·970	107·1	165·0	−16·3	44	196	438*sp*
			0·850	76·7	182·3	+11·8			178
			0·904	127·5	181·5	−32·7			73
			0·917	63·4	175·6	+24·7			286
			0·977	75·9	162·4	+14·0			242
Nov. 29				(+16·9)	(239·8)	(+1·0)	(123)	(598)	(2155)
334·322	M, AM		0·909	247·7	289·8	−19·7			213
		7889	0·930	259·5	294·5	− 9·4	8	65	361*c*
		7891	0·621	232·7	258·6	−21·3	3	13	
		7893	0·507	326·7	244·6	+25·8	60	349	
		7895	0·489	146·0	209·5	−23·0	7	16	
C.		7894	0·922	108·7	161·1	−16·8	44	221	284*c*
		7896	0·977	66·5	150·0	+23·1	9	69	323*p*
			0·849	60·3	172·2	+25·4			129
			0·892	82·9	163·9	+ 6·7			105
			0·956	77·1	154·2	+12·6			89
Nov. 30				(+16·5)	(226·7)	(+0·9)	(131)	(733)	(1504)
335·345	M, AM		0·979	250·1	290·2	−19·2			252
		7889	0·993	260·5	296·0	− 9·4	0	16	318*f*
C.		7893	0·637	311·9	244·8	+25·6	49	332	
		7895	0·404	174·4	210·8	−22·9	15	58	
		7894	0·812	111·3	161·2	−16·7	34	228	265*c*

Gr[illegible] 7893, November 25–December 4. A very small spot, rapidly developing into a long straight stream of spots in continual change.

Group 7894, November 29–December 10. A large regular spot on November 29, the train by which it is followed not coming into view until November 30. On and after December 1, the group is a long straight stream of spots, all small except the leader, which has broken up by December 5. Near the place of Group 7869, but a new formation.

Group 7895, November 30–December 7. A wide pair of small spots on November 30. On and after December 1, the group is a long straight stream of small spots. A great development has taken place by December 4, when the group is seen as a stream of normal type.

Group 7896, November 30–December 12. A regular spot, occasionally with a very small distant companion. A fresh outburst takes place on December 9, and a regular spot forms. One small companion follows on December 10 to 12.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
335·345	M, AM	7896	0·917	65·3	148·9	+22·7	14	66	826*c*
			0·725	55·4	172·3	+24·7			34
C.			0·894	75·9	150·6	+12·9			82
			0·986	60·7	134·1	+29·0			199
Dec. 1				(+16·1)	(213·2)	(+0·7)	(112)	(700)	(1976)
336·335	M, AM		0·924	245·9	265·4	−21·9			102
			0·847	241·9	254·3	−23·1			430
		7893	0·763	303·7	244·7	+25·4	49	179	115*c*
		845e	0·699	311·7	236·3	+28·1	0	3	
		7895	0·438	205·7	212·0	−22·6	11	47	
C.		*845f*	0·586	48·9	171·6	+23·1	0	4	
		7894	0·677	116·3	161·0	−16·9	29	189	
		7896	0·822	62·3	148·3	+22·7	10	57	135*c*
		7897	0·962	108·0	127·3	−17·1	4	13	67*f*
		7898	0·966	68·6	126·2	+20·8	13	116	193*c*
			0·946	59·7	131·8	+28·7			336
Dec. 2				(+15·7)	(200·2)	(+0·6)	(116)	(608)	(1378)
337·438	M, AM		0·939	245·1	253·2	−23·1			665
		7893	0·893	298·7	245·7	+25·6	32	208	726*c*
		7895	0·576	227·3	212·7	−22·4	18	84	
		7894	0·500	127·1	161·1	−17·0	35	194	
C.		7896	0·684	55·9	147·8	+22·8	9	67	88*c*
		7897	0·862	109·9	128·0	−16·8	8	13	175*f*
		7898	0·885	66·4	125·6	+20·9	33	249	618*c*
			0·862	53·9	131·7	+30·7			412
			0·959	100·2	112·7	− 9·6			238
Dec. 3				(+15·3)	(185·6)	(+0·5)	(135)	(815)	(2922)
338·491	M, AM		0·986	246·5	251·0	−23·1			274
			0·958	276·0	244·8	+ 5·8			60
		7893	0·973	295·8	246·9	+25·1	32	195	687*nf*
		7895	0·729	237·7	213·5	−22·6	72	342	385*c*
		7894	0·343	148·9	161·2	−16·7	39	199	
		7896	0·531	44·5	148·2	+22·4	9	64	
G.		7897	0·728	113·3	127·8	−16·5	7	14	64*c*
		7898	0·796	62·8	122·6	+21·4	62	422	434*c*
			0·778	49·1	128·8	+30·7			98
			0·887	117·5	112·5	−24·0			43
			0·923	67·5	106·2	+20·8			212
			0·950	59·9	102·7	+28·6			212
			0·966	116·6	98·9	−25·5			143
Dec. 4				(+14·9)	(171·8)	(+0·3)	(221)	(1236)	(2612)
1916.				°	°	°			
339·335	M, AM		0·982	296·3	238·4	+25·8			355
			0·967	288·3	234·9	+17·7			77
		7895	0·831	242·4	213·2	−22·4	76	494	313*c*
		7899	0·343	288·9	179·6	+ 6·6	6	19	
		7894	0·289	183·3	161·6	−16·5	30	193	
C.		7896	0·436	28·1	147·8	+22·7	13	45	
		7897	0·580	120·1	129·1	−16·7	8	13	
		7898	0·678	57·6	122·8	+21·4	58	462	243*c*
			0·920	57·2	97·6	+29·9			120
			0·917	66·0	96·3	+21·9			196
			0·935	119·8	94·5	−27·6			81
Dec. 5				(+14·5)	(160·6)	(+0·2)	(191)	(1226)	(1385)
340·341	M, AM		0·855	301·4	201·8	+26·4			116
			0·813	284·5	200·7	+11·8			85
		7895	0·925	245·8	212·9	−22·2	62	363	635*c*
		7899	0·522	282·7	178·1	+ 6·6	20	85	
		7894	0·368	219·8	161·6	−16·2	28	129	
		7896	0·384	0·5	147·2	+22·6	5	22	
C.		7900	0·452	20·1	137·6	+25·1	0	3	
		7897	0·421	133·6	128·9	−16·7	8	13	
		7898	0·538	47·5	122·3	+21·3	44	342	
			0·826	50·9	98·9	+31·4			203
			0·841	120·6	94·5	−25·2			184
			0·902	62·7	85·9	+24·4			266
			0·982	108·7	69·1	−18·3			272
Dec. 6				(+14·1)	(147·4)	(+0·1)	(167)	(957)	(1761)
341·377	M, AM		0·915	281·9	199·2	+10·8			246
			0·931	300·3	199·1	+28·0			198
			0·800	289·3	185·0	+15·3			131
		7895	0·984	247·3	212·5	−22·3	38	192	356*c*
		7901	0·814	248·6	186·0	−17·2	4	26	125*c*
		7899	0·731	279·5	180·1	+ 6·9	71	359	
		7894	0·536	237·9	161·8	−16·5	17	91	
		7896	0·440	331·7	146·7	+22·7	5	10	
C.		*845g*	0·430	205·1	145·1	−22·8	1	6	
		7900	0·433	354·1	136·5	+25·4	0	5	
		7897	0·302	163·7	128·6	−16·8	1	3	
		7898	0·406	26·3	122·6	+21·2	54	403	
			0·855	46·5	83·9	+36·0			181
			0·880	58·1	76·4	+27·6			317
			0·920	111·1	68·5	−19·3			218
			0·937	97·7	64·6	− 7·2			32
			0·959	71·6	61·3	+17·6			146
Dec. 7				(+13·7)	(133·7)	(0·0)	(191)	(1095)	(1950)

Group 7897, December 2–8. A small regular spot, with a follower on December 4.

Group 7898, December 2–14. A fine stream of normal type not fully seen on the disc until December 3. The following portion of the group breaks up after December 9, and only the leader remains by December 12.

Group 7899, December 5–10. Three small spots on December 5, which have developed by December 7 into a large regular spot, closely followed by a cluster of small unstable companions. The greater part of the group has passed off the disc by December 10.

Group 7900, December 6–11. A very small spot *nf* Group 7896 on December 6 and 7, developing suddenly into a compact short stream by December 8. The *sp* portion of the stream diminishes first, and only one very small spot remains by December 11.

Group 7901, December 7–8. A pair of small spots on December 7, of which the following one has disappeared by December 8.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
342·313	M, AM		0·953	279·4	193·2	+ 8·8			68
			0·910	286·9	185·7	+15·3			269
			0·837	303·5	173·0	+27·3			268
		7901	0·931	251·7	188·8	−17·0	0	5	349*f*
		7899	0·863	277·7	180·6	+ 6·5	69	379	210*c*
		7894	0·684	246·1	161·9	−16·2	20	90	
		7896	0·552	314·6	146·5	+22·5	1	7	
		7902	0·510	320·7	141·9	+23·0	6	24	
C.		7903	0·446	318·3	139·6	+19·2	1	4	
		7900	0·492	329·1	137·5	+24·7	22	62	
		7897	0·311	202·5	128·5	−16·8	0	1	
		7898	0·366	357·1	122·5	+21·1	48	357	
		7904	0·656	53·4	86·7	+22·7	12	35	
		845h	0·850	110·1	65·0	−17·1	0	6	159*s*
			0·859	52·0	68·8	+31·8			127
			0·897	70·5	59·3	+17·4			177
			0·920	81·5	55·0	+ 7·7			73
Dec. 8				(+13·3)	(121·4)	(−0·2)	(179)	(970)	(1700)
343·319	M, AM		0·979	286·6	185·5	+16·2			178
			0·953	253·6	179·6	−15·7			411
			0·943	281·8	178·0	+11·0			86
			0·923	297·4	172·6	+25·0			210
			0·879	306·4	163·7	+31·2			153
			0·836	285·1	163·6	+12·4			144
			0·787	297·3	156·4	+20·9			323
		7899	0·962	276·9	181·8	+ 6·6	34	357	337*c*
		7894	0·820	250·4	161·4	−16·1	10	41	170*c*
		7905	0·637	247·4	145·3	−14·4	0	3	
C.		7896	0·661	306·0	143·4	+22·5	22	97	
		7903	0·605	303·8	140·1	+19·3	8	25	
		7902	0·628	309·0	140·0	+23·0	9	35	
		7900	0·618	316·4	136·3	+26·2	11	49	
		7898	0·440	327·1	122·9	+21·3	34	309	
		7904	0·535	42·2	85·2	+23·0	21	68	
			0·779	68·6	59·2	+16·2			100
			0·879	42·3	57·5	+40·2			121
			0·879	82·0	47·0	+ 6·9			82
			0·908	69·0	44·7	+18·9			80
Dec. 9				(+12·8)	(108·1)	(−0·3)	(149)	(984)	(2395)
344·447	M, AM		0·919	282·9	159·2	+11·6			173
C.			0·933	232·7	157·5	−34·6			116
			0·915	296·6	156·6	+24·0			852
		7899	0·990	276·2	174·8	+ 6·0	0	21	129*c*
1916.				°	°	°			
344·447	M, AM	7894	0·952	252·6	164·5	−16·6	6	26	854*f*
		7905	0·825	252·8	147·5	−14·3	4	13	55*c*
		7896	0·818	298·5	144·3	+22·7	19	133	
		7903	0·778	295·3	141·2	+19·1	7	21	352*c*
		7902	0·776	300·4	139·7	+22·8	9	30	
C.		7900	0·755	306·4	135·8	+26·2	5	23	
		7898	0·592	307·5	123·3	+20·7	30	228	
		7906	0·398	200·2	101·8	−22·2	1	4	
		7904	0·428	22·5	83·1	+22·8	32	149	
			0·917	107·2	27·9	−15·9			170
			0·931	69·8	26·4	+18·6			120
Dec. 10				(+12·4)	(93·3)	(−0·4)	(113)	(648)	(2821)
345·325	M, AM		0·973	294·1	156·7	+23·3			403
			0·966	252·2	156·0	−17·4			998
		7896	0·911	295·2	144·6	+22·5	14	78	
		7903	0·882	293·2	141·1	+20·0	0	5	427*c*
		7902	0·875	296·8	139·5	+22·9	3	14	
		7900	0·851	302·4	135·1	+26·7	1	6	129*c*
C.		7907	0·817	307·1	129·8	+29·1	3	14	147*c*
		7898	0·726	299·6	123·9	+20·5	21	135	239*c*
		7906	0·492	220·6	101·9	−22·4	5	18	
		845i	0·454	328·4	96·4	+21·5	0	2	
		7904	0·394	355·4	83·7	+22·4	24	97	
			0·892	65·8	21·2	+21·1			55
			0·964	119·2	9·2	−28·2			155
Dec. 11				(+12·0)	(81·7)	(−0·6)	(71)	(360)	(2553)
346·326	M, AM		0·957	251·9	140·8	−17·5			143
			0·934	299·0	134·3	+26·6			276
			0·882	251·6	129·1	−16·5			83
			0·792	247·5	118·6	−18·0			34
			0·855	314·3	117·6	+36·2			121
			0·922	357·2	74·9	+66·1			10
		7896	0·976	293·3	144·3	+22·5	11	72	604*f*
		7902	0·961	294·1	140·6	+22·9	0	4	
C.		7907	0·893	304·3	126·5	+29·8	2	10	235*c*
		7898	0·856	294·8	124·4	+20·6	27	109	323*c*
		7908	0·778	295·7	116·3	+19·2	9	31	204*c*
		7906	0·628	233·6	101·5	−22·4	12	43	
		7904	0·470	327·1	84·5	+22·4	23	89	
		7909	0·621	71·3	31·9	+10·8	4	13	
			0·828	61·3	16·6	+22·9			56
			0·894	120·7	8·7	−27·5			186
Dec. 12				(+11·5)	(68·5)	(−0·7)	(88)	(371)	(2275)

Group 7900, December 8–12. A small composite spot on December 8, followed by a small companion on December 9; one small isolated spot on December 10–12. The group lies between Groups 7896 and 7900.

Group 7902, December 8–11. A pair of very small spots on December 8, *sf* Group 7896 and *s* Group 7902. A pair of very small clusters on December 9, of which the follower has disappeared by December 11.

Group 7904, December 8–16. A number of small, well-defined but unstable spots in a compact stream. The leader does not develop until December 13, after which the group quickly declines. Group 7905, December 9–10. A very small spot on December 9; two small clusters on December 10.

Group 7906, December 10–15. A pair of small spots developing into a small stream on December 12. The group is not seen on December 14, but one spot reappears on December 15. Group 7907, December 11–12. Four very small spots on December 11; one small double spot on December 12, *np* Group 7898 and *nf* Group 7900.

Group 7908, December 12–15. A small stream forming behind Group 7898 and increasing in size.

Group 7909, December 12–15. Two very small spots on December 12. Only one is seen on December 15.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
347·390	M, AM		0·972	300·9	128·1	+29·7			945
			0·951	252·5	125·7	−16·8			235
			0·911	302·5	115·7	+28·9			89
			0·924	309·4	115·6	+35·4			237
			0·870	248·3	113·1	−19·2			132
			0·777	310·4	97·2	+29·5			224
		7898	0·951	291·9	124·7	+20·5	19	104	380*c*
C.		7908	0·885	291·7	114·5	+18·6	19	83	659*c*
		7906	0·773	240·9	101·3	−22·6	4	13	74*c*
		7910	0·741	287·5	100·6	+12·3	0	9	39*c*
		7904	0·622	309·7	85·6	+22·7	31	177	
		7909	0·442	61·9	31·2	+11·2	4	11	
		845j	0·570	57·9	24·3	+16·9	1	7	
			0·799	125·7	7·3	−28·2			192
Dec. 13				(+11·1)	(54·5)	(−0·8)	(78)	(404)	(3206)
348·340	M, AM		0·972	305·8	114·5	+34·3			98
			0·862	244·7	99·0	−22·1			247
			0·850	296·0	96·9	+21·4			138
			0·853	306·2	94·3	+29·7			200
		7898	0·994	291·0	124·9	+20·8	4	48	} 722*n*
		7908	0·956	289·8	113·4	+18·6	22	113	
C.		7910	0·865	285·4	100·5	+12·7	2	7	64*c*
		7904	0·755	301·6	86·0	+22·6	16	117	128*c*
		7911	0·166	287·8	51·1	+ 2·0	0	2	
		845k	0·135	334·2	45·4	+ 6·0	0	2	
		7909	0·255	33·7	33·7	+11·3	2	7	
			0·909	67·0	339·1	+20·3			24
Dec. 14				(+10·6)	(42·0)	(−0·9)	(46)	(296)	(1621)
349·362	M, AM		0·923	257·6	95·3	−11·9			30
			0·940	302·5	94·3	+29·8			320
			0·919	237·8	92·0	−29·8			34
			0·882	281·9	89·4	+ 9·9			88
			0·877	315·2	79·7	+37·7			130
			0·763	317·7	66·4	+33·5			57
		7908	0·995	288·0	111·7	+17·7	5	29	436*f*
C.		7906	0·964	247·2	101·9	−22·2	0	6	228*c*
		7904	0·869	297·0	85·3	+22·6	15	45	739*c*
		7911	0·382	278·1	50·6	+ 2·0	1	2	
		7909	0·218	346·6	31·4	+11·0	1	4	
		7912	0·969	107·8	313·4	−17·5	16	107	234*f*
			0·792	63·9	339·7	+19·6			56
1916.				°	°	°			
349·362	M, AM		0·903	72·0	325·6	+15·6			78
			0·896	100·8	325·3	−10·2			65
C.			0·941	63·0	321·3	+24·8			42
Dec. 15				(+10·2)	(28·5)	(−1·1)	(38)	(193)	(2537)
350·339	M, AM		0·980	302·0	91·3	+31·0			374
			0·960	309·7	83·7	+37·3			204
			0·915	235·0	77·9	−32·2			32
			0·871	299·1	72·2	+24·4			101
			0·805	248·1	67·3	−18·1			212
			0·844	307·9	66·1	+30·4			195
			0·764	296·9	61·7	+19·3			81
		7904	0·957	294·1	86·6	+22·6	0	7	608*nj*
C.		7913	0·375	188·8	19·3	−22·8	2	4	
		7912	0·908	109·3	311·6	−18·0	34	191	453*c*
			0·892	127·7	317·9	−33·6			58
			0·894	71·1	314·2	+16·2			82
			0·917	65·3	312·0	+22·0			78
			0·969	58·6	303·2	+29·9			54
			0·962	99·9	301·8	− 9·9			293
			0·996	75·1	291·6	+14·7			43
Dec. 16				(+9·7)	(15·7)	(−1·2)	(36)	(202)	(2868)
351·337	M, AM		0·986	292·7	81·4	+22·1			307
			0·979	284·8	79·8	+14·2			65
			0·910	247·8	66·5	−20·6			169
			0·922	300·9	65·6	+27·6			122
			0·881	311·3	56·0	+34·7			154
		845l	0·840	289·5	57·6	+15·6	3	11	156*c*
C.		7913	0·460	216·2	19·6	−22·9	8	37	
		7912	0·785	111·7	312·7	−17·7	23	131	256*f*
		7914	0·951	74·3	291·7	+14·5	0	13	207*c*
		7915	0·976	106·9	286·0	−16·4	0	25	237*n*
			0·865	63·1	301·2	+28·7			27
			0·893	101·7	299·7	−11·0			254
Dec. 17				(+9·3)	(2·5)	(−1·3)	(34)	(217)	(1954)
352·167	M, AM		0·941	247·9	60·6	−21·2			70
			0·943	289·3	60·4	+17·6			149
			0·935	306·7	55·2	+33·3			74
D.			0·837	297·0	44·7	+21·4			63
		7913	0·567	229·5	19·3	−22·7	25	110	
		7912	0·677	115·3	311·8	−17·8	29	152	311*c*

Group 7910, December 13–14. A very small cluster which has coalesced to form a small spot by December 14.
Group 7911, December 14–15. A very small marking.
Group 7912, December 15–27. A large regular spot with occasionally one or two small and distant followers.
Group 7913, December 16–21. A very small spot on December 16; a long straight stream of small unstable spots on the succeeding days. Only three or four very small faint markings remain on December 21.
Group 7914, December 17–20. A small double spot, with a very small distant follower. The double spot has divided into a pair of spots by December 19, and these have moved apart by December 20. The follower has disappeared by December 20.
Group 7915, December 17–21. A pair of small spots on December 17 and 18; a cluster on December 19, of which only one very small faint spot remains on December 21.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
352·167	M, AM	7914	0·884	73·0	291·1	+14·3	5	28	355*c*
		7915	0·917	107·9	286·0	−16·9	11	29	426*c*
D.			0·814	102·8	297·8	−11·2			243
			0·980	65·7	275·0	+23·4			339
Dec. 18				(+8·9)	(351·6)	(−1·4)	(70)	(319)	(2030)
353·360	M, AM		0·947	293·3	44·8	+21·4			86
			0·856	284·7	33·4	+11·6			81
			0·851	252·2	33·1	−15·9			75
		7913	0·712	239·1	17·2	−22·6	38	163	149*c*
C.		*846a*	0·201	340·7	339·7	+ 9·3	2	9	
		846b	0·417	38·0	320·3	+17·6	0	1	
		7912	0·479	126·3	312·1	−17·9	21	120	
		7914	0·734	68·1	291·3	+14·7	0	10	115*c*
		7915	0·771	110·8	287·2	−16·9	9	51	431*f*
			0·898	62·4	275·8	+23·7			487
Dec. 19				(+8·3)	(335·9)	(−1·6)	(70)	(354)	(1424)
354·341	M, AM		0·946	282·3	33·0	+11·0			103
			0·943	308·3	27·2	+34·9			141
			0·897	251·6	25·7	−17·1			47
		846c	0·852	291·7	18·7	+17·4	5	16	212*c*
		7913	0·835	243·0	16·7	−23·2	21	90	291*c*
		7912	0·328	146·7	312·1	−17·5	21	102	
C.		7914	0·588	62·5	290·5	+14·2	2	11	
		7915	0·618	114·7	287·3	−16·2	6	21	
			0·819	57·3	273·5	+25·1			329
			0·869	115·1	264·7	−22·5			184
			0·950	116·2	252·5	−25·4			191
			0·969	98·9	247·3	− 9·1			135
Dec. 20				(+7·9)	(322·9)	(−1·7)	(55)	(240)	(1633)
355·356	M, AM		0·945	290·4	18·5	+18·6			159
		7913	0·955	247·4	21·3	−22·0	0	20	284*f*
		7912	0·279	188·8	312·2	−17·7	19	106	
C.		7915	0·441	124·8	287·5	−16·2	0	3	
			0·867	118·2	252·2	−25·1			152
			0·949	62·0	241·3	+25·8			725
Dec. 21				(+7·4)	(309·6)	(−1·8)	(19)	(129)	(1320)
356·568	M, AM		0·991	246·0	15·9	−24·1			235
G.			0·948	237·0	2·6	−31·8			42
			0·936	243·0	1·3	−25·8			14

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
356·568	M, AM		0·886	240·0	353·1	−27·2			39
		7912	0·415	228·2	312·5	−17·9	22	106	
		7916	0·298	16·9	288·5	+14·5	1	9	
G.		7917	0·195	45·6	285·6	+ 5·8	5	6	
		7918	0·980	111·5	215·5	−21·4	72	306	320*c*
			0·873	57·0	238·4	+27·2			565
Dec. 22				(+6·8)	(293·6)	(−2·0)	(100)	(427)	(1215)
357·335	M, AM	7912	0·535	239·4	312·3	−17·6	23	103	
		7916	0·312	344·0	288·6	+15·3	2	11	
		7917	0·153	344·1	285·9	+ 6·3	26	94	
C.		7919	0·396	147·2	270·2	−21·4	0	5	
		7918	0·927	112·0	216·6	−21·1	48	271	559*f*
			0·824	53·7	235·1	+27·7			444
			0·955	80·2	211·6	+ 8·7			123
Dec. 23				(+6·4)	(283·5)	(−2·1)	(99)	(484)	(1126)
358·440	M, AM	7912	0·713	247·3	312·3	−17·5	18	89	
		7917	0·318	297·2	285·4	+ 6·3	32	161	
		7919	0·318	188·7	271·8	−20·4	3	5	
		7919*	0·496	131·1	248·1	−23·9	1	4	
		7918	0·818	114·8	216·2	−21·4	40	282	282*c*
C.		7920	0·988	82·5	188·4	+ 7·1	39	161	191*f*
			0·969	179·3	265·7	−77·7			18
			0·908	117·5	205·8	−25·7			297
			0·916	66·5	205·5	+20·4			169
			0·910	75·5	204·8	+12·2			213
Dec. 24				(+5·9)	(268·9)	(−2·2)	(133)	(702)	(1170)
359·377	M, AM		0·933	291·2	323·2	+18·8			151
		7912	0·842	251·1	312·8	−17·1	18	89	298*sf*
		7921	0·810	292·2	307·8	+16·3	9	15	99*c*
		7917	0·516	287·0	286·3	+ 6·6	25	129	
		7919	0·399	217·2	271·4	−20·7	1	10	
		7922	0·648	113·4	218·4	−16·7	0	6	
C.		7918	0·696	119·1	216·0	−21·4	41	294	294*c*
		7920	0·937	81·6	187·8	+ 7·1	56	196	363*c*
			0·787	71·8	206·8	+12·7			140
			0·814	121·2	205·8	−26·3			325
			0·964	106·1	182·2	−16·2			253
Dec. 25				(+5·4)	(256·6)	(−2·3)	(150)	(739)	(1923)

Group 7916, December 22–23. A few very small scattered markings on December 22. A faint triple spot on December 23.
Group 7917, December 22–28. A pair of very small spots quickly developing into a stream of normal type. The preceding portion of the group has greatly declined by December 27. Only one small spot remains by December 28.
Group 7918, 1916 December 22–1917 January 3. Return of Group 7895. A large regular spot, slightly elongated and developing a double umbra by December 30. It has divided into two spots by January 3. One or two very small distant followers are occasionally seen. Group 7919, December 23–25. A close pair of very small markings on December 23. A very small distinct spot on December 24, with a distant follower on December 25. Group 7919*, December 24–27. A disturbed area. Nothing is seen on December 25 and 26. Group 7920, 1916 December 24–1917 January 5. Return of Group 7899. A large regular spot with occasionally one or two very small faint followers. Group 7921, December 25–26. A wide pair of very small spots. Group 7922, 1916 December 25–1917 January 1. A very small spot *n* Group 7918 on December 25. Two are seen on December 26, and several in a long straight stream on December 27, of which only the first and last spots remain by December 28. The group is not seen on December 30 and 31, but two very small spots are seen in the neighbourhood on January 1.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
360·510	M, AM		0·836	257·9	298·0	−11·5			115
			0·872	301·1	297·2	+25·3			59
			0·972	182·7	254·6	−78·2			17
		7912	0·949	252·8	313·0	−17·1	14	79	298*sf*
		7921	0·929	288·1	308·1	+15·8	0	12	209*f*
		7917	0·715	281·8	286·3	+ 6·6	15	81	67*c*
C.		7922	0·480	122·3	216·7	−17·1	2	6	
		7918	0·525	129·0	215·8	−21·4	40	290	99*c*
		7920	0·821	79·5	187·5	+ 7·1	28	159	407*c*
		7923	0·852	104·5	183·8	−13·6	8	35	581*s*
			0·956	62·7	172·1	+25·1			477
			0·963	79·3	168·2	+ 9·6			366
			0·978	108·5	164·7	−18·0			444
Dec. 26				(+4·9)	(241·7)	(−2·5)	(107)	(662)	(3139)
361·498	M, AM		0·977	288·1	304·7	+17·1			145
			0·933	259·0	297·4	−11·3			230
			0·928	247·0	295·8	−22·3			133
			0·896	286·5	290·5	+13·6			200
			0·828	250·5	283·3	−17·5			318
			0·943	199·4	275·0	−64·4			16
			0·787	306·2	273·3	+25·8			374
		7912	0·995	253·2	313·2	−17·0	14	120	197*f*
		7917	0·849	279·6	285·8	+ 6·7	10	40	268*c*
		7919*	0·434	218·8	245·6	−22·2	2	4	
		7922	0·297	147·0	218·9	−16·9	5	19	
C.		7918	0·390	147·4	215·6	−21·7	44	264	
		7920	0·676	76·0	187·4	+ 7·4	28	165	122*c*
		7923	0·736	105·9	182·1	−13·4	22	46	192*f*
		7924	0·976	64·2	154·0	+24·4	9	32	788*sp*
		7925	0·991	103·1	146·3	−13·3	0	29	764*sp*
			0·840	134·6	179·6	−37·8			87
			0·910	57·4	168·5	+28·1			388
			0·892	78·6	166·6	+ 8·9			249
			0·962	111·0	154·8	−20·9			209
			0·973	82·0	152·7	+ 7·1			158
Dec. 27				(+4·4)	(228·6)	(−2·6)	(134)	(719)	(4838)
362·349	M, AM		0·910	251·9	282·3	−17·6			288
			0·883	300·0	274·5	+24·7			346
		7917	0·938	278·8	286·3	+ 7·2	4	34	392*c*
C.		7922	0·253	186·3	219·1	−17·2	1	5	
		7918	0·329	173·3	215·0	−21·7	41	282	
1916.				°	°	°			
362·349	M, AM	7920	0·527	70·6	187·4	+ 7·7	32	151	
		7923	0·593	109·2	182·4	−13·4	16	68	
		7924	0·937	62·2	151·7	+24·8	23	71	1036*c*
		7925	0·944	102·8	146·8	−13·0	1	20	125*p*
		7926	0·981	74·2	139·8	+15·0	227	887	598*c*
C.			0·823	75·4	163·6	+10·4			92
			0·903	48·6	161·7	+35·1			61
			0·874	110·0	157·5	−18·7			626
			0·940	133·8	152·3	−41·7			91
			0·913	81·3	152·2	+ 6·9			133
Dec. 28				(+4·0)	(217·4)	(−2·7)	(345)	(1518)	(3788)
363·305	M, AM		0·983	277·3	283·7	+ 6·6			93
			0·948	298·1	272·5	+25·4			288
			0·886	247·2	266·0	−21·4			194
		7922	0·326	221·2	217·8	−16·8	0	6	
		7927	0·249	233·3	216·6	−11·3	0	2	
		7918	0·371	207·1	215·4	−22·0	33	235	
		7920	0·352	58·1	187·4	+ 8·0	28	149	
		7923	0·410	117·7	183·1	−13·6	30	98	
D.		7924	0·855	58·5	151·7	+24·8	36	160	685*c*
		7925	0·843	104·1	148·0	−13·3	6	14	100*c*
		7926	0·940	73·4	136·6	+14·5	273	1575	793*c*
			0·841	48·1	157·3	+32·2			137
			0·784	71·0	155·6	+13·0			73
			0·892	129·7	146·9	−36·2			164
			0·862	112·1	146·7	−20·4			162
			0·969	96·5	129·2	− 6·9			100
Dec. 29				(+3·5)	(204·9)	(−2·8)	(406)	(2239)	(2789)
364·429	M, AM		0·932	243·8	257·7	−25·4			107
			0·836	245·4	245·0	−22·0			41
			0·827	305·0	239·1	+26·4			157
		7927	0·502	250·2	218·9	−12·3	3	11	
		7918	0·511	229·3	214·7	−22·0	33	212	
		7920	0·196	14·6	187·3	+ 8·0	29	150	
G.		7923	0·231	143·1	181·9	−13·5	12	52	
		7924	0·724	50·7	152·1	+24·9	21	74	123*c*
		7925	0·687	106·6	147·7	−13·4	11	21	
		7926	0·834	70·3	136·1	+14·6	260	1476	1303*c*
		7928	0·934	112·8	121·8	−22·3	1	11	291*c*
		7929	0·975	76·8	114·1	+12·2	0	44	187*f*

Group 7923, 1916 December 26–1917 January 3. Three small spots on December 26, which have developed by December 28 into a short compact stream, of which the central portion is the most stable. The group diminishes after December 29, and only one small spot remains by January 1.

Group 7924, 1916 December 27–1917 January 2. A small regular spot on December 27, near the place of Group 7896, but more probably a new formation. A distant train of spots has come into view by December 28, of which only one remains on December 31. This is also seen on January 1, when the original leader has disappeared, but on January 2 a very small marking is visible near the original leader's position. Group 7925, 1916 December 27–1917 January 3. Return of Group 7905. A wide pair of small spots of which the rear has disappeared by December 31. Group 7926, 1916 December 28–1917 January 9. A fine stream of spots, of which the leader is a very large regular spot, which becomes elongated in a direction parallel to the equator, and finally divides into two. Probably a new outburst near Group 7903; not a return. Group 7927, December 29–30. A very small marking on December 29; a row of three very small spots on December 30.

Group 7928, 1916 December 30–1917 January 1. A small spot in bright faculæ, not seen on December 31. Group 7929, 1916 December 30–1917 January 11. A large stream of normal type *f* Group 7926. Both the leader and rear spots are large and regular and crossed by several bright bridges after January 3.

Measures of Positions and Areas of Sun Spots and Faculæ on Photographs—*continued.*

Greenwich Civil Time.	Measurers.	No. of Group. (No. of Rotation and *Letter* for Groups only seen once.)	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic Longitude.	Heliographic Latitude.	Spots. Area of UMBRA for each Spot or Spot Group (and for Day).	Spots. Area of WHOLE for each Spot or Spot Group (and for Day).	Faculæ. Area for each Group (and for Day).
1916.				°	°	°			
364·429	M, AM		0·886	60·1	132·6	+24·6			101
G.			0·966	53·2	120·8	+34·3			122.
			0·986	66·0	112·2	+23·0			158
Dec. 30				(+3·0)	(190·1)	(−2·9)	(370)	(2051)	(2590)
365·181	M, AM		0·895	298·4	239·2	+23·6			343
			0·870	240·4	238·1	−27·0			54
D.			0·842	257·4	237·2	−12·2			98
			0·853	309·3	230·2	+30·7			157
		7918	0·625	237·0	214·6	−22·4	38	222	101c
		7930	0·404	306·4	199·5	+11·0	7	17	
1916.				°	°	°			
365·181	M, AM	7920	0·237	328·2	187·4	+ 8·5	32	151	
		7923	0·180	187·8	181·6	−13·2	9	19	
		7924	0·638	42·0	152·1	+25·6	13	34	83c
		7925	0·511	110·3	150·9	−12·7	5	13	
		7926	0·738	66·8	135·8	+14·7	320	1775	872c
D.		7929	0·938	75·0	112·0	+13·0	133	515	448c
			0·748	50·6	140·3	+26·0			108
			0·895	53·0	124·0	+30·9			295
			0·869	112·8	121·2	−21·2			362
			0·941	66·0	113·0	+21·4			264
			0·973	102·1	103·5	−12·4			107
Dec. 31				(+2·6)	(180·2)	(−3·0)	(557)	(2746)	(3292)

[1] 7930, 1916 December 31–1917 January 3. A pair of small spots on December 31, of which the leader has nearly disappeared by January 1; a loose cluster of very small markings on January 2 and 3.

ROYAL OBSERVATORY, GREENWICH.

GENERAL CATALOGUE

OF

GROUPS OF SUN SPOTS

MEASURED AT

THE ROYAL OBSERVATORY, GREENWICH

ON THE

SOLAR PHOTOGRAPHS

FOR EACH DAY IN THE YEAR

1916.

GENERAL CATALOGUE of SUN SPOTS MEASURED at the ROYAL OBSERVATORY, GREENWICH, on SOLAR PHOTOGRAPHS taken in the YEAR 1916.

NOTE.—Groups of Sun Spots, lasting for two or more days, are numbered in the *first* column in continuation of the Group-numbers given in 1915 and the previous years. Groups seen only once are not included in this Catalogue.

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

The Mean Areas for Umbra and Whole Spot entered in the *seventh* and *eighth* columns are corrected for the effect of Foreshortening and are expressed in millionths of the Sun's visible hemisphere.

The *ninth* and *tenth* columns give, under the heading "Mean Longitude of Group," the Mean heliographic longitude of the Group as computed upon two different systems. In System I. the daily sidereal motion due to the Sun's rotation is assumed to be 851′·07 for all spots, whatever their latitude; this corresponds to Carrington's assumed rotation period of 25·38 days. In System II. the daily sidereal motion is assumed to vary with the latitude in accordance with the formula

$$866'\cdot6 - 128' \sin^2 l.$$

In both systems the longitude of the centre of the Sun's disc is adopted as 320°·08 for 1916 Jan. 1d·0, the longitudes given under System I. being thus rendered uniform with those given in preceding volumes of the Greenwich Photo-Heliographic Results. The longitudes according to System II. for Groups 7575, 7581, 7584, 7586, and 7588 are computed here from 1916·0 instead of from 1915·0, as in the volume for 1915.

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 its order in the series are also given.

No. of Group.	Duration in Days.	First Seen.		Last Seen.		Mean Area Corrected for Foreshortening.		Mean Longitude of Group.		Mean Latitude of Group.	Reference to Ledger.	NOTES.
		Date.	Longitude from Central Meridian.	Date.	Longitude from Central Meridian.	Umbra.	Whole Spot.	System I.	System II.			
		1915.	°	1916.	°			°	°	°		
7575	8	Dec. 25	−14·9	Jan. 1	+79·8	11	54	31·9	31·9	−19·5	II.	
7581	14	26	−85·1	8	+85·1	33	211	306·9	306·9	−17·5	II.	
7584	11	29	−68·3	8	+67·3	36	217	287·0	286·7	+14·4	II.	
7586	9	30	−57·4	7	+57·2	10	34	287·5	286·9	+ 8·0	II.	
7588	3	30	−72·4	1	−45·7	1	16	268·2	268·1	−28·7		
		1916.										
7591	7	Jan. 1	− 2·3	7	+77·1	19	115	314·8	314·9	+21·1	I. 756 (1)	Irregular stream.
7592	11	2	−60·2	12	+77·3	35	189	245·2	244·9	−18·5	II.	
7593	2	4	+60·9	5	+71·8	3	18	334·8	334·4	+15·2		
7594	13	4	−79·3	16	+76·7	23	163	194·4	193·2	−14·6	II.	
7595	13	6	−72·2	18	+82·3	41	236	175·3	173·3	+10·8	I. 755 (2)	Stable regular spot.
7596	3	9	− 7·2	11	+19·4	1	10	201·7	205·8	+34·9		
7597	[illegible]	11	+ 4·2	12	+16·4	1	6	186·7	185·0	−12·8		
7598	[illegible]	16	+26·5	17	+37·5	0	5	142·0	139·3	+11·7		
7599	[illegible]	16	−24·8	17	−11·3	0	9	91·9	89·0	+11·0		
7600	4	15	+21·6	19	+72·8	4	14	150·7	150·6	−19·8		
7601	[illegible]	17	+29·6	20	+69·5	3	37	132·9	136·9	+28·4		
7602	[illegible]	18	+12·5	19	+28·7	4	14	105·5	103·0	+13·6		
7603	5	18	−74·4	22	−18·5	1	15	19·6	15·2	+ 7·4		
7604	4	19	−66·3	22	−24·6	0	8	12·9	8·4	+ 7·5		
7605	2	20	+58·1	21	+71·5	9	54	121·1	119·1	+16·1		
7606	5/7	17	− 2·3	23	+72·2	14	103	98·7	99·7	+22·4	II.	Typically intermittent.
7607	3	20	−44·0	22	−17·1	2	9	20·4	20·5	−20·6		
7608	2	20	−46·3	21	−33·0	1	9	16·6	18·1	−23·3		

General Catalogue of Groups of Sun Spots—*continued.*

No of Group.	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. Umbra.	Mean Area Corrected for Foreshortening. Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Reference to Ledger.	NOTES.
		1916.	°	1916.	°			°	°	°		
7609	2/3	Jan. 21	−65·0	Jan. 23	−41·2	0	4	343·7	340·1	+12·0		
7610	12	22	−73·6	Feb. 2	+71·6	21	135	325·3	325·2	+20·3	I. 756 (2)	
7611	10	23	−47·0	1	+76·2	29	168	341·1	337·7	+14·4	II.	*See* Group 7593.
7612	5	24	−75·8	Jan. 28	−24·7	6	23	296·4	305·7	+33·0		
7613	6	25	−55·5	30	+14·5	2	8	304·9	302·5	+16·4		
7614	3	26	−80·8	28	−54·0	1	9	264·6	260·5	−12·8		
7615	2	27	−21·7	28	− 7·3	4	10	310·9	311·9	−21·9		Revived as Group 7619.
7616	3	27	−58·6	29	−31·8	3	12	274·3	275·1	+21·6		
7617	7	30	−44·8	Feb. 5	+34·5	2	12	248·1	244·5	−15·3	II.	
7618	10	31	−50·0	9	+78·9	58	321	236·0	231·3	−14·0	I. 757 (1)	
7619	4	Feb. 1	+46·1	4	+87·8	36	216	312·8	312·7	−20·3	I. 758 (1)	
7620	4	1	+10·9	4	+52·6	4	18	277·5	289·9	+33·0		
7621	2	1	+ 3·6	2	+17·9	5	22	270·8	264·1	− 8·8		
7622	13	2	−78·3	14	+78·9	16	86	174·6	167·6	+10·9	I. 755 (3)	
7623	3	3	+41·5	5	+68·4	8	56	282·3	279·0	+16·0		
7624	8	5	−13·3	12	+74·8	98	640	200·9	199·6	−18·9	II.	Development of large group.
7625	9	6	−42·5	14	+67·8	9	30	160·2	159·4	+19·5	I. 759 (1)	
7626	11	6	−66·2	16	+74·5	24	120	141·0	134·3	+12·3	I. 759*	
7627	3/4	7	+17·0	10	+56·9	1	3	205·2	210·1	−25·2		
7628	11	7	−54·2	17	+76·0	33	201	132·3	128·1	+15·9	I. 759*	
7629	2	9	−36·1	10	−25·6	4	9	124·2	129·7	−25·6		
7630	4	9	−41·8	12	− 0·4	6	12	120·7	115·9	+15·0		Revival of Group 7605.
7631	11	9	−83·0	19	+46·5	9	50	77·4	73·6	−16·5	II.	Last stage of regular spot.
7632	4	10	−77·0	13	−35·3	4	8	72·0	65·5	+12·7		
7633	2	11	−14·7	12	− 1·3	2	5	120·9	113·1	+10·6		
7634	12	11	−68·4	22	+81·4	13	77	71·4	63·0	+11·1	II.	
7635	2	12	−68·5	13	−53·4	8	19	54·0	50·4	−16·7		
7636	2	13	+13·9	14	+25·5	2	10	121·1	130·7	+28·2		Revival in region of Group 7629.
7637	3	16	+49·8	18	+74·5	12	84	118·7	115·1	+17·1	I. 760 (1)	
7638	10	16	−37·3	25	+82·7	38	215	34·0	32·0	−18·7	II.	
7639	4/7	15	− 7·6	21	+74·8	1	7	76·3	79·0	−22·6		
7640	3	19	−81·8	21	−55·2	3	63	308·8	308·3	−20·0	I. 758 (2)	
7641	2	20	+ 8·8	21	+20·1	0	4	24·4	23·5	−19·7		
7642	2	24	− 5·9	25	+ 6·2	1	3	316·2	307·1	+12·1		
7643	3	24	−18·5	26	+ 5·7	1	8	303·7	303·6	−20·3		
7644	3	24	−37·5	26	−14·3	1	8	284·2	283·4	+19·8		
7645	5/6	24	−62·1	29	+ 0·9	1	5	259·3	248·4	+10·4		
7646	11	24	−80·1	Mar. 5	+52·0	25	129	241·8	232·8	−13·0	I. 757 (2)	
7647	2	26	+16·1	Feb. 27	+32·3	3	13	314·1	316·1	−21·9		
7648	4	26	−82·4	29	−41·6	3	18	215·9	205·9	−11·6		
7649	13	26	−82·8	Mar. 9	+74·3	44	232	214·8	210·4	−17·3	II.	
7650	14	Mar. 1	−80·2	14	+82·3	122	524	158·7	154·1	−17·4	I. 761 (1)	Large composite spot.
7651	13	2	−77·0	14	+81·8	85	413	157·0	154·5	+18·8	I. 759 (2)	Composite spot with train.
7652	5	2	−81·3	6	−28·9	9	55	151·2	148·7	−18·8		Revival of Group 7600.
7653	2	4	− 6·3	5	+ 8·9	1	5	198·9	202·7	−22·7		
7654	3	5	+55·6	7	+76·5	47	209	245·7	252·1	−24·2	I. 761*	
7655	2	5	−17·6	6	− 4·0	2	3	173·0	168·3	+16·8		
7656	5/7	5	−44·4	11	+33·2	1	6	146·6	137·0	−13·5	II.	Typical intermittent group.
7656*	2/4	10	+17·2	13	+57·4	0	4	144·6	138·7	−16·7		
7657	8	5	−66·8	12	+25·7	7	31	122·2	113·1	+14·0	I. 759*	
7658	2	6	− 2·9	7	+ 8·5	4	16	176·3	178·5	+21·7		
7659	2	6	−43·6	7	−34·6	2	6	134·4	128·9	+16·7		
7660	8	6	−65·2	13	+25·5	3	13	112·6	109·1	+18·2	I. 760 (2)	
7661	2	7	−65·7	8	−45·3	0	3	104·5	93·9	−12·6		
7662	2	7	−72·5	8	−54·5	0	4	96·5	84·0	+10·5		

General Catalogue of Groups of Sun Spots—*continued.*

No of Group.	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. Umbra.	Mean Area Corrected for Foreshortening. Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Reference to Ledger.	NOTES.
		1916.	°	1916.	°			°	°	°		
7663	4/6	Mar. 10	−46·8	Mar. 15	+21·5	1	3	81·9	73·2	+14·7		
7664	10/11	10	−51·7	20	+75·9	5	47	73·0	107·9	+35·8	II.	High latitude group.
7665	6	15	−25·4	20	+46·0	6	15	38·8	44·7	−23·4	II.	
7666	5/6	16	−86·3	21	−22·9	1	8	319·9	348·5	−32·8	II.	High latitude group.
7667	3	17	− 8·8	19	+15·2	6	17	22·9	8·3	+10·5		
7668	11	17	−71·1	27	+62·0	15	67	324·0	321·9	−19·3	II.	
7669	2	18	+ 8·1	19	+22·6	1	3	29·5	19·5	−14·3		
7670	2	20	+26·8	21	+38·7	4	25	21·2	18·0	−18·7		
7671	13	20	−76·2	Apr. 1	+81·9	79	558	277·4	266·6	+14·5	II.	Large complex group.
7672	5/6	19	+ 8·0	Mar. 24	+73·9	3	22	15·7	3·4	−13·0		
7673	4/5	21	−16·1	25	+41·5	2	9	328·0	321·0	+16·6		
7674	4	21	−81·2	24	−45·9	1	12	257·1	259·1	−21·5	I. 761*	
7675	13	24	−78·0	Apr. 5	+80·6	10	57	221·1	240·9	−28·3	I. 762 (1)	
7676	12	26	−66·0	6	+76·1	47	305	208·5	207·1	+19·8	II.	
7677	3	28	−69·9	Mar. 30	−41·0	4	22	179·8	170·2	+15·4		
7678	7	28	−79·0	Apr. 3	+ 4·7	6	36	172·4	156·3	−11·3	II.	
7679	11	29	−72·8	8	+55·0	27	177	161·7	156·1	+17·8	I. 759 (3)	
7680	5	30	−64·8	3	−10·9	11	47	158·5	157·6	−20·0	I. 761 (2)	
7681	12	31	−75·4	11	+74·3	94	637	135·5	117·3	+10·4	I. 763 (1)	Large spot with train.
7682	5/7	Apr. 2	−24·3	8	+53·8	3	16	157·9	148·6	−16·0		
7683	3	2	+47·6	4	+74·1	11	71	229·4	228·0	+15·8	I. 764 (1)	
7684	4	3	− 4·9	6	+33·1	2	10	164·0	154·8	−16·0		
7685	5	4	+ 1·8	8	+51·2	11	35	155·8	138·0	+10·7		
7686	9	4	−69·0	12	+39·4	7	67	88·5	75·5	+14·1	II.	Revival in region of Group 7663.
7687	5	6	−76·5	10	−20·7	5	22	54·4	45·4	−16·3		
7688	2	7	+66·7	8	+76·6	23	125	180·9	177·4	−18·9	I. 764*	
7689	2	9	+52·9	10	+64·9	10	32	142·9	144·2	−20·9		
7690	2	9	−10·0	10	+ 2·5	1	6	80·3	73·1	+17·3		
7691	3	9	−42·4	11	−15·8	5	21	47·9	27·4	+ 9·2		
7692	11	9	−62·1	19	+74·1	33	145	29·5	24·4	−18·3	II.	
7693	4	10	+42·0	13	+85·5	17	51	120·0	104·3	−12·8		
7694	2	10	−72·6	21	+71·8	18	67	6·3	6·2	−20·4	I. 765 (1)	
7695	7	11	−11·0	17	+75·2	14	47	56·3	29·5	+ 2·3	II.	Unstable equatorial stream.
7696	8	13	−65·8	20	+27·7	2	10	331·7	322·0	+16·3	II.	Revival of Group 7673.
7697	4	18	−67·5	21	−32·6	3	19	261·2	273·6	+24·7		
7698	2	19	+51·7	20	+66·8	1	8	9·3	353·2	+13·3		
7699	2	19	−27·2	20	−13·8	0	5	289·5	268·8	+10·5		
7700	4	19	−36·4	22	+ 2·5	7	17	280·5	264·9	+13·6		Feeble revival of Group 7671.
7701	12	20	−75·9	May 1	+61·2	32	172	224·3	228·4	+21·8	I. 764 (2)	
7702	3	20	−80·1	2	+76·8	45	298	223·3	243·7	−26·8	I. 762 (2)	
7703	5	22	−74·9	Apr. 26	−22·2	2	9	204·6	200·7	−19·0		
7704	5	25	−26·3	29	+26·4	5	18	214·1	209·8	+18·9	II.	Revival in region of Group 7676.
7705	10	25	−56·3	May 4	+66·8	17	65	186·5	174·1	−15·6	I. 764*	
7706	4	27	−68·6	Apr. 30	−29·6	2	10	145·1	121·4	+ 9·6	I. 763 (2)	
7707	3	29	−35·2	May 6	+58·0	14	71	153·2	133·3	+12·3	II.	Revival of Group 7685.
7708	3	29	−82·1	11	+75·8	50	299	107·1	83·2	+10·3	I. 766 (1)	
7709	3	29	−85·1	11	+71·5	41	244	102·8	87·1	−14·5	II.	
7710	5	30	−14·1	4	+38·6	3	15	159·9	148·9	−16·4		Revival of Group 7682.
7711	3	30	−77·0	12	+79·0	75	452	95·7	76·5	+13·0	II.	Irregular stream.
7712	3	May 1	−35·5	3	−10·6	0	4	124·0	130·5	+22·5		
7713	4	3	+13·8	6	+48·7	3	15	147·1	135·0	−16·0		
7714	4	3	−75·1	6	−38·6	3	13	58·5	50·4	−17·5		
7715	3	4	− 3·3	6	+20·3	21	69	117·6	128·1	+23·6		
7716	9	6	−80·5	14	+29·7	14	73	17·7	15·4	−19·7	II.	
7717	11	8	−59·1	18	+79·8	4	27	10·6	17·4	−22·4	I. 765 (2)	

General Catalogue of Groups of Sun Spots—*continued.*

No of Group.	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. Umbra.	Mean Area Corrected for Foreshortening. Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Reference to Ledger.	NOTES.
		1916.	°	1916.	°			°	°	°		
7718	2/3	May 10	+ 7·2	May 12	+33·2	3	13	50·1	27·0	−11·3		
7719	4/5	10	− 3·8	14	+48·1	0	8	37·1	29·0	−17·7		Revived as Group 7741.
7720	11	11	−76·8	21	+56·7	11	47	313·2	309·1	−19·1	II.	
7721	12	13	−75·4	24	+72·9	18	67	288·7	303·8	+24·6	II.	
7722	3	16	−60·0	18	−30·3	5	14	264·7	234·9	+ 8·0		
7723	4	17	−53·2	20	−15·7	11	30	255·1	277·3	+26·3		
7724	3	18	−58·2	20	−31·8	2	8	238·1	260·3	−26·3		
7725	8/9	20	−40·4	28	+65·1	13	54	229·7	210·5	+14·1	II.	
7726	11	21	−60·6	31	+75·6	18	59	198·1	197·9	+20·4	II.	
7727	12	21	−66·6	June 1	+81·6	237	1109	190·6	167·1	−12·5	I. 768 (1)	Very large group. *See* Group 7705.
7728	12	21	−79·8	1	+67·9	18	91	179·0	156·2	+12·8	I. 769 (1)	
7729	12	22	−77·3	2	+74·0	26	136	168·3	152·8	−15·6	II.	
7730	5/6	23	−64·6	May 28	+ 2·6	8	20	164·2	129·7	+ 6·0		
7731	6	25	−34·3	30	+28·1	14	58	164·4	167·8	−21·3		
7732	4	24	−69·0	27	−22·8	2	10	150·6	123·3	+10·6		Revival in region of Group 7706.
7733	13	26	−77·3	June 7	+77·8	34	181	108·7	79·8	+10·4	I. 766 (2)	
7733*	2	31	−19·5	1	− 5·4	5	9	103·5	87·0	−15·5		Feeble revival of Group 7709.
7734	5	27	− 8·1	May 31	+43·9	5	25	166·8	146·7	+13·9		
7735	7/8	30	−23·6	June 6	+70·2	5	20	114·4	88·8	+12·1	I. 770 (1)	Intermittent.
7736	4/6	30	+17·9	4	+77·1	5	25	151·1	129·6	+13·7	I. 771 (1)	Intermittent.
7737	4	June 3	+40·2	6	+79·4	44	151	126·4	102·8	+13·0	I. 772 (1)	
7738	6	3	+17·8	8	+85·3	157	661	102·4	74·2	+11·1	I. 767 (1)	Large composite group.
7739	2	7	+46·2	8	+59·7	9	43	77·9	83·3	−21·7		
7740	13	8	−80·8	20	+79·0	73	390	296·4	259·8	+ 7·5	I. 773 (1)	Regular spot with train.
7740*	3/4	13	−74·7	16	−38·9	0	3	232·5	231·4	+20·1		
7741	2	9	+35·8	10	+48·2	11	30	39·4	31·5	−18·3		
7742	2	10	+35·2	11	+49·3	2	8	26·9	19·8	−18·5		
7743	5/7	9	−64·2	15	+19·7	3	8	301·4	315·3	−23·7		
7744	4/6	10	−50·5	15	+17·8	1	2	301·1	281·7	−14·9		
7745	12	16	−74·7	27	+71·4	93	488	196·1	169·1	−12·7	I. 768 (2)	Large spot.
7746	6	17	+11·8	22	+81·3	21	84	271·5	245·6	+12·9	I. 774 (1)	
7747	7	18	−39·1	24	+38·7	11	72	204·2	190·4	+16·8	II.	
7748	12	18	−66·7	29	+80·8	73	350	177·0	161·2	+16·4	I. 769 (2)	
7749	9/10	20	−64·8	29	+55·2	7	51	155·3	124·1	+11·2	I. 771 (2)	Intermittent.
7750	6	21	−59·4	26	+ 8·8	13	61	145·2	174·0	+26·5	II.	
7751	13	21	−77·9	July 3	+80·4	48	244	127·3	97·7	+12·1	I. 772 (2)	
7752	9	22	−48·4	June 30	+65·0	9	40	147·1	144·1	+19·7	II.	
7753	11	21	−82·2	July 1	+51·2	9	38	124·0	89·2	+ 9·9	II.	Last stage of regular spot.
7754	12	21	−84·9	2	+56·8	33	205	116·9	87·6	+12·2	I. 770 (2)	
7755	8	22	−79·9	June 29	+11·0	5	35	110·8	107·2	−19·6	II.	
7755*	2	27	−23·0	28	−12·0	0	7	102·0	103·3	−20·7		
7756	11	23	−71·6	July 3	+61·7	38	197	107·7	75·3	+11·0	I. 767 (2)	
7756*	4	22	−81·1	June 25	−40·0	3	19	111·2	76·2	+ 9·6	I. 766 (3)	
7757	8	23	−17·4	30	+80·7	38	177	164·7	139·1	−12·4	II.	
7758	7/8	21	−54·7	28	+36·3	2	8	150·7	150·2	−20·3	II.	
7759	5	25	+29·5	29	+80·6	15	65	182·0	165·4	−16·2		
7760	7	26	−24·8	July 2	+55·9	8	29	114·3	75·6	+ 8·2	II.	
7761	10/12	28	−79·8	9	+64·2	10	48	32·3	33·8	−20·7	II.	
7762	6	30	−14·4	5	+54·5	8	33	72·3	65·3	+18·8		
7763	4	July 2	+32·4	5	+70·1	12	67	91·8	116·9	−25·5		
7764	2	2	−26·8	3	−12·3	3	15	34·2	350·2	+ 5·8		
7765	5	3	+ 5·6	7	+64·9	7	22	54·3	35·7	−15·8		
7766	5	5	−52·0	9	+ 0·1	6	34	328·0	31·7	−31·9		
7767	8	5	−77·2	12	+13·5	13	63	301·8	258·7	+ 7·0	I. 773 (2)	
7768	2	7	−50·4	8	−40·3	6	19	301·0	274·1	−13·6		

General Catalogue of Groups of Sun Spots—*continued.*

No of Group.	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. Umbra.	Mean Area Corrected for Foreshortening. Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Reference to Ledger.	NOTES.
		1916.	°	1916.	°			°	°	°		
7769	13	July 7	−73·7	July 19	+81·7	41	241	277·3	249·7	+13·5	I. 774 (2)	Typical regular spot.
7770	2/3	9	−14·7	11	+15·8	1	5	313·2	267·4	+ 5·6		
7771	3	14	−80·6	26	+77·4	15	82	180·0	166·3	+17·4	I. 769 (3)	
7772	11	17	−67·9	27	+77·3	55	251	159·9	118·0	+ 9·1	I. 775 (1)	Revival of Group 7749.
7773	3	17	− 4·1	19	+21·3	1	9	217·2	195·5	+15·4		
7774	6	18	− 7·1	23	+56·3	7	23	199·0	209·5	+22·5	II.	
7775	2	20	−29·5	21	−15·6	3	9	152·3	161·6	+22·2		
7776	1	20	−70·2	30	+70·8	37	158	116·1	90·3	+14·5	II.	
7777	3	20	−83·5	Aug. 1	+74·8	60	319	98·4	64·8	+12·3	II.	Large regular spot.
7778	9	21	−38·5	July 29	+66·6	27	107	129·2	97·0	+12·7	II.	Revival of Group 7751.
7779	9	21	−78·0	29	+26·3	9	55	89·2	58·2	+13·1	II.	
7780	11	23	−71·7	Aug. 2	+63·1	11	50	68·9	17·8	+ 4·8	II.	
7781	2/3	24	−58·4	July 26	−29·9	2	7	71·0	65·9	−19·3		
7782	5	25	−52·6	29	− 0·6	0	8	62·2	21·1	+ 9·8		
7783	3	26	+52·0	28	+79·4	32	130	153·8	118·3	+11·8		
7784	3/5	28	−77·8	Aug. 1	−27·8	1	7	356·0	336·1	+16·2		
7785	4	31	−72·5	3	−34·0	4	15	324·0	348·2	−24·7		
7786	2	Aug. 1	+58·2	2	+76·2	3	39	82·8	45·8	+11·6		
7787	3	1	−56·4	3	−29·8	6	18	327·2	338·7	+22·5		
7788	3	2	−16·7	4	+ 6·8	1	6	350·5	337·0	+17·7		
7789	13	3	−81·2	15	+76·0	16	97	275·3	239·5	+12·3	I. 774 (3)	
7790	3/4	5	+23·9	8	+62·8	2	9	354·2	326·2	+14·3		
7791	5	5	+10·5	9	+61·5	10	31	340·4	311·7	+14·2		
7792	3	6	+23·3	8	+53·3	3	11	341·8	337·8	+19·6		*See* Group 7835.
7793	4	6	−71·3	9	−33·2	8	20	246·2	204·9	−10·5		
7794	7	7	−61·4	13	+19·9	3	14	242·6	234·3	−18·8	II.	
7794*	2	8	+63·3	9	+72·5	0	5	351·9	339·9	−18·0		
7795	5/7	8	−35·8	14	+40·9	2	14	253·0	2·2	+36·3	II.	High latitude group.
7796	13	11	−82·9	23	+80·7	26	142	168·9	121·9	+ 9·2	I. 775 (2)	
7797	5	12	+19·7	16	+67·8	22	108	254·4	229·2	−15·3	II.	
7798	4	13	− 4·2	16	+32·6	3	19	218·1	238·1	+23·8		
7799	5	14	−25·7	18	+23·4	2	9	182·6	130·5	+ 6·9		
7800	7	16	−51·2	22	+33·3	10	41	137·3	88·0	+ 8·5	II.	
7801	8	16	−67·6	23	+32·0	6	20	120·3	72·8	+ 9·2	II.	
7802	3	16	−76·0	18	−48·7	4	29	109·1	66·4	+10·6		
7803	7	18	+ 3·9	24	+79·8	128	679	160·6	156·9	+19·7	I. 776 (1)	Very large spot.
7803*	2/4	19	−20·8	22	+19·3	0	1	124·9	118·4	+19·2		
7803†	2/6	19	−38·0	24	+29·3	0	1	108·1	66·9	+11·4		
7804	2	19	−53·3	20	−38·3	1	4	92·5	44·0	+ 8·8		
7805	3	20	+51·9	22	+75·8	12	52	182·3	174·3	+18·9		Related to Group 7843.
7806	2	28	+53·3	29	+68·1	8	39	79·9	27·4	− 8·0		
7807	4	28	−31·5	31	+ 7·5	4	24	354·5	340·9	−18·0		Revival of Group 7794*.
7808	4/7	29	−80·5	Sept. 4	− 1·5	1	7	291·5	237·2	+ 7·5		
7809	2	31	−19·6	1	− 1·6	2	9	328·0	312·8	+17·7		
7810	7/10	Sept. 1	−54·6	10	+61·1	2	19	275·8	281·3	−21·3	II.	
7811	2	2	+31·7	3	+48·0	6	20	351·9	310·6	+11·9		
7812	7	3	−20·2	9	+56·7	20	83	285·5	249·1	−13·3	II.	
7813	3	3	−29·8	5	+ 1·2	2	10	276·4	241·4	+13·6		Feeble revival of Group 7789.
7814	5	4	+14·2	8	+74·0	6	28	308·9	258·8	+ 9·5		
7815	3	7	−54·4	9	−27·2	4	17	201·7	171·3	+14·7		
7816	13	7	−85·5	19	+74·8	34	193	169·0	149·2	+17·0	I. 776 (2)	
7817	3/6	8	−72·9	13	−11·1	0	6	163·9	146·1	+17·3		
7818	8	8	−78·2	15	+ 9·9	9	80	159·1	139·0	+16·9	I. 776 (2)	
7819	4	10	−36·2	13	+ 4·6	3	12	178·4	184·1	−21·3		
7820	13	10	−83·2	22	+76·5	56	353	131·4	166·9	+25·5	I. 777 (1)	Irregular stream.

General Catalogue of Groups of Sun Spots—*continued.*

No of Group.	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. Umbra.	Mean Area Corrected for Foreshortening. Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Reference to Ledger.	NOTES.
		1916.	°	1916.	°			°	°	°		
7821	2	Sept. 12	− 7·2	Sept. 13	+ 6·2	0	6	180·6	136·3	+11·6		
7822	3/6	12	−30·5	17	+37·6	0	4	157·9	169·3	+22·1		
7823	3/4	12	−31·2	15	+ 7·6	1	11	156·1	143·0	+18·2		Revived as Group 7850.
7824	4	12	−44·6	15	− 4·0	6	28	143·9	153·3	+21·9		
7825	3	13	−76·9	15	−48·7	5	23	98·6	51·7	+11·0		
7826	9	14	−70·3	22	+35·4	16	81	93·2	55·0	−13·3	II.	
7827	8	14	−76·4	21	+14·3	9	47	84·5	72·4	−18·4	II.	Last stage of regular spot.
7828	7	14	−77·8	20	+ 5·7	6	40	86·1	48·6	−13·4	II.	
7829	2	15	+46·3	16	+59·1	4	12	194·2	164·6	−15·1		
7830	9	17	−87·0	25	+20·0	15	96	35·0	27·6	+19·2	II.	Last stage of regular spot.
7831	4	18	+43·0	21	+78·7	63	302	149·3	134·3	+17·9	I. 778 (1)	
7832	4	18	−38·6	21	+ 0·2	5	8	68·9	48·6	−17·0		
7832*	2	19	−37·6	20	−24·0	2	8	57·7	5·1	+ 9·6		
7833	6	19	+15·3	24	+86·5	30	160	110·7	154·6	+26·5	I. 779 (1)	
7834	2	20	+23·5	21	+37·2	1	15	106·1	53·6	− 9·7		
7835	2	22	−73·8	23	−59·3	3	13	341·9	340·0	+20·1		
7836	5	25	−43·8	29	+11·9	5	13	333·8	344·6	−22·0		
7837	3/4	26	−35·1	29	+ 1·4	2	9	325·3	331·2	−21·3		
7838	5/8	26	−39·2	Oct. 3	+53·3	1	7	320·6	332·6	−22·1	II.	Typical intermittent group.
7839	5	26	−43·8	Sept. 30	+ 4·0	2	10	315·5	329·9	+22·5		
7840	2	28	− 3·2	29	+ 7·9	4	13	331·0	299·4	−15·0		
7841	2	Oct. 3	−16·1	Oct. 4	− 5·8	3	13	251·8	230·0	−16·9		Revival of Group 7797.
7842	7	3	−62·1	9	+ 9·6	7	21	204·0	307·1	−32·9	II.	
7843	14	3	−83·3	16	+80·7	45	284	182·2	168·9	+18·4	II.	Related to Group 7805.
7844	5	5	+18·9	9	+73·2	18	72	263·7	275·2	−22·0		*See* Group 7865.
7845	14	6	−85·6	19	+81·8	40	245	145·1	131·9	+18·4	I. 778 (2)	
7846	4	7	−30·3	10	+13·2	8	21	189·4	156·1	−14·9		
7847	4	7	−43·9	10	− 1·5	6	18	175·4	113·4	+ 7·8		
7848	11	7	−50·0	17	+78·4	118	611	168·5	106·1	+ 7·8	II.	Large active group.
7849	9	7	−56·1	15	+52·7	15	55	163·4	156·2	−19·3	II.	
7850	2	8	−44·0	9	−34·8	1	3	157·0	143·2	+18·3		
7851	4/5	8	−43·1	12	+ 6·0	0	8	157·6	117·6	+13·6		
7852	12	8	−70·0	19	+70·9	3	11	131·3	158·8	+24·1	I. 777 (2)	
7853	15	8	−83·7	22	+85·5	40	285	112·3	158·4	+26·3	I. 779 (2)	
7854	5/6	9	−63·9	14	+ 1·7	3	12	127·1	161·3	+24·9		
7855	2	11	−13·7	12	− 1·7	2	9	151·3	162·1	+21·9		
7856	4	12	−66·1	15	−25·9	3	8	86·2	51·2	+14·7		
7857	6	14	+15·9	19	+79·6	7	43	141·6	80·5	+ 8·6	II.	Revival in region of Group 7800.
7858	7	16	−73·4	22	+ 4·1	16	96	26·2	332·4	−10·8	II.	
7859	4	21	−78·2	24	−40·9	9	53	315·1	330·5	−22·4		Revival of Group 7838.
7860	5/6	23	−72·6	29	+ 7·5	3	15	294·2	231·9	+ 8·9	II.	Revival in region of Group 7808.
7861	11	24	−64·2	Nov. 3	+69·7	32	171	295·2	267·1	−16·2	II.	
7862	2/3	26	−37·2	Oct. 28	−10·9	0	5	289·6	231·9	+10·3		
7863	6	28	+ 4·3	Nov. 2	+71·9	5	24	305·9	316·2	+21·8	II.	
7864	10	29	−65·2	7	+51·6	25	112	221·4	187·0	+15·3	II.	
7865	6	31	+ 1·2	5	+63·7	13	63	261·6	267·7	−21·2	I. 780 (1)	Revival of Group 7844.
7866	3	31	−54·1	2	−24·7	0	6	208·2	230·2	+23·2		
7867	9	31	−74·9	8	+31·3	10	41	185·7	128·1	+10·6	II.	
7868	9	Nov. 2	−59·5	10	+49·9	4	13	176·6	154·6	−17·3	II.	} *See* Group 7849.
7869	10	2	−68·9	11	+49·5	26	126	164·0	129·8	−15·3	II.	
7870	13	2	−81·0	14	+71·8	24	142	150·7	129·1	+17·4	I. 778 (3)	
7871	12	3	−74·6	14	+76·6	41	250	151·1	87·9	+ 9·4	II.	*See* Groups 7848 and 7857.
7872	9	3	−79·3	11	+24·5	9	47	143·1	170·8	+23·8	II.	
7873	2	5	−21·9	6	− 6·8	1	9	174·8	108·5	+ 8·4		Revival in region of Group 7848.
7874	5	5	−72·2	9	−19·6	10	46	123·5	71·9	+12·1		

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		1916.	°	1916/17	°			°	°	°		
7875	2	Nov. 7	−23·3	Nov. 8	−13·9	1	2	144·2	145·1	+20·5		
7876	12	6	−74·8	17	+71·2	26	142	107·3	133·2	+23·6	I. 779 (3)	
7877	3	7	−17·7	9	+ 8·2	0	5	151·0	149·1	+20·1		
7878	9	7	−81·1	15	+34·0	13	54	95·0	16·7	+ 4·2	II.	
7879	3	10	+15·1	12	+40·2	1	9	143·1	72·4	+ 7·4		*See* Groups 7800 and 7857.
7880	2/3	10	+11·2	12	+35·4	0	6	138·7	154·8	+22·4		
7881	9	10	−33·8	18	+74·6	25	122	95·1	125·0	−24·0	II.	
7882	12	10	−75·1	21	+75·6	12	66	55·2	17·4	+14·9	II.	
7883	3/4	9	− 5·9	12	+32·9	1	10	136·6	220·7	+29·8		
7884	2	12	− 1·6	13	+16·1	1	11	102·8	195·1	+30·5		
7885	3	13	+29·8	15	+55·6	4	21	117·7	77·9	−14·5		
7886	5	13	−67·1	17	−13·4	9	51	21·5	349·9	+15·9		
7887	4	16	+12·0	19	+50·2	5	27	61·9	64·2	−20·7		
7888	2	18	+40·9	19	+53·8	3	22	64·5	47·7	−18·2		
7889	12	20	−68·5	Dec. 1	+82·8	23	112	293·2	222·6	− 8·4	II.	
7890	7	21	−24·0	Nov. 27	+62·3	8	26	322·6	295·0	+16·6	II.	
7891	10	21	−82·2	30	+31·9	33	226	259·1	266·4	−21·3	I. 780 (2)	
7892	4	22	−69·2	25	−32·2	3	7	260·2	249·7	+19·0		
7893	10	25	−49·2	Dec. 4	+75·1	43	218	244·6	290·7	+25·6	II.	
7894	12	29	−74·8	10	+71·2	27	146	161·7	132·5	−16·6	II.	Revival of Group 7869.
7895	8	30	−17·2	7	+78·8	37	199	212·1	230·7	−22·6	I. 781 (1)	
7896	13	30	−76·7	12	+75·8	11	61	146·8	166·2	+22·5	I. 781*	Revival in region of Group 7872.
7897	7	Dec. 2	−72·9	8	+ 7·1	5	10	128·3	100·8	−16·8	II.	
7898	13	2	−74·0	14	+82·9	36	264	123·5	128·7	+21·0	II.	
7899	6	5	+19·0	10	+81·5	40	240	180·0	101·4	+ 6·6	I. 782 (1)	
7900	6	6	− 9·8	11	+53·4	7	25	136·5	185·5	+25·7	II.	
7901	2	7	+52·3	8	+67·1	2	16	187·4	161·7	−17·1		
7902	5	8	+20·5	12	+72·1	5	21	140·3	102·7	+22·9		
93	4	8	+18·2	11	+59·4	4	14	140·5	132·3	+19·4		
[illegible]	9	8	−34·7	16	+70·9	19	87	85·2	104·9	+22·6	II.	
[illegible]	2	9	+37·2	10	+54·2	2	8	146·4	102·4	−14·4	I. 783 (1)	
[illegible]	5/6	10	+ 8·5	15	+73·4	4	14	101·7	119·0	−22·4	II.	
7907	2	11	+48·1	12	+58·0	3	12	128·2	217·0	+29·5		
7908	4	12	+47·8	15	+83·2	14	76	114·7	101·9	+18·8		
7909	4	12	−36·6	15	+ 2·9	3	9	32·1	329·5	+11·1		
7910	2	13	+46·1	14	+58·5	1	8	100·5	45·2	+12·5		
7911	2	14	+ 9·1	15	+22·1	1	2	50·9	321·6	+ 2·0		
7912	13	15	−75·1	27	+84·6	21	115	312·5	289·4	−17·6	II.	
7913	6	16	+ 3·6	21	+71·7	16	71	18·9	39·7	−22·7		
7914	4	17	−70·8	20	−32·4	2	16	291·2	246·7	+14·4		
7915	5	17	−76·5	21	−22·1	5	26	286·8	256·1	−16·5		
7916	2	22	− 5·1	23	+ 5·1	2	10	288·6	246·4	+14·9		Revival of Group 7914.
7917	7	22	− 8·0	28	+68·9	17	78	285·9	202·6	+ 6·5	II.	
7918	13	22	−78·1	Jan. 3	+75·2	40	247	215·1	227·8	−21·8	I. 781 (2)	
7919	3	23	−13·3	Dec. 25	+14·8	1	7	271·1	275·1	−20·8		
7919*	2/4	24	−20·8	27	+17·0	1	2	246·8	269·3	−23·0		
7920	13	24	−80·5	Jan. 5	+78·1	32	153	187·7	108·3	+ 8·0	I. 782 (2)	Stable regular spot.
7921	2	25	+51·2	Dec. 26	+66·4	5	14	307·9	273·4	+16·1		
7922	6/8	25	−38·2	Jan. 1	+53·3	1	7	218·1	190·6	−17·0	II.	
7923	9	26	−57·9	3	+43·8	P2	39	182·3	127·3	−13·0	II.	
7924	7	27	−74·6	2	+ 3·8	16	58	151·8	197·5	+25·1	I. 781*	
7925	8	27	−82·3	3	+13·0	4	14	149·3	94·2	−13·0	I. 783 (2)	
7926	13	28	−77·6	9	+77·6	236	1396	136·3	90·1	+14·5	I. 784 (1)	Very large group. *See Ledger for* 1917.
7927	2	29	+11·7	Dec. 30	+28·8	2	7	217·8	155·9	−11·8		
7928	2/3	30	−68·3	Jan. 1	−43·2	0	4	121·6	142·1	−22·6		
7929	13	30	−76·0	11	+78·1	94	544	111·7	56·8	+13·2	I. 785 (1)	Large stream. *See Ledger for* 1917.
7930	4	31	+19·3	3	−61·4	5	21	199·6	129·9	−10·3		

ROYAL OBSERVATORY, GREENWICH.

LEDGERS

OF THE

AREAS AND HELIOGRAPHIC POSITIONS

OF THE

PRINCIPAL GROUPS OF SUN SPOTS

DEDUCED FROM THE MEASUREMENT OF THE

SOLAR PHOTOGRAPHS

FOR EACH DAY IN THE YEAR

1916.

LEDGER I.—RECURRENT GROUPS.

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS DERIVED from PHOTOGRAPHS taken at the OBSERVATORIES of GREENWICH, THE CAPE, KODAIKÁNAL, and DEHRA DÛN, in the YEAR 1916.

NOTE.—The Greenwich Civil Time at which the photograph was taken is expressed in the *first* column by the Day of the Year (civil reckoning) 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, Kodaikánal, Dehra Dûn, by the letters C, K, and D 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 remaining columns correspond to those with similar headings in the preceding Section.

When a group is near the East or the West limb of the Sun on any particular day, and in consequence is only visible in part, the measures for that day are marked with an asterisk and are not included in taking the mean area, longitude, and latitude of the group.

RECURRENT SERIES, 755.

Group 7564 seen in Rotation 832.
" 7595 " " 833.
" 7622 " " 834.

Group 7564.—1915 December 14–22. A pair of small spots on December 14. New spots form on the succeeding days, and by December 17 the group has become a long stream. The leader, *a*, is then a large regular spot, and the rear spot has assumed the same form by December 20.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
$\overline{18}$·334 C	7	38	4	22	165·3	169·0	+ 9·1	−27·5
$\overline{17}$·334 C	48	215	26	113	165·0	168·5	+ 8·4	−14·6
$\overline{16}$·465 C	59	288	30	146	167·7	171·0	+ 8·0	+ 3·0
$\overline{15}$·427 C	91	445	48	238	169·9	173·0	+ 8·4	+17·9
$\overline{14}$·337 C	116	510	65	299	170·3	173·2	+ 8·6	+30·2
$\overline{13}$·460 C	131	581	94	423	170·7	173·3	+ 9·0	+45·4
$\overline{12}$·341 C	111	862	104	787	169·6	172·0	+ 9·2	+55·9
$\overline{11}$·380 C	55	534	83	815	170·2	172·4	+ 9·7	+70·2
$\overline{10}$·336 C	8	57	(18	131	164·4	166·4	+ 9·1)*	+77·0
Means ..	..	..	57	355	168·59	171·55	+ 8·80	..

Spot *a*.

$\overline{15}$·427 C	47	288	25	156	171·8	174·8	+ 8·3	+19·8
$\overline{14}$·337 C	44	269	26	161	173·1	176·0	+ 8·2	+33·0
$\overline{13}$·460 C	42	226	32	174	174·0	176·6	+ 8·5	+48·7
$\overline{12}$·341 C	42	268	43	276	174·0	176·4	+ 9·5	+60·3
$\overline{11}$·380 C	24	234	45	440	174·0	176·2	+ 9·9	+74·0

Group 7595.—1916 January 6–18. A large regular spot, evidently *a* of Group 7564, generally with two or three companions, mostly very small and short-lived.

1916. d					°	°	°	°
5·472 C	22	148	38	258	175·8	174·8	+10·8	−72·2
6·508 C	50	254	51	257	175·5	174·3	+10·9	−58·9
7·431 C	50	342	38	257	175·8	174·4	+11·0	−46·4
8·426 C	76	413	47	256	175·8	174·2	+11·0	−33·3
9·460 G	87	445	48	245	175·9	174·2	+11·0	−19·6
10·440 C	97	483	50	251	175·6	173·7	+11·2	− 7·0
11·383 C	63	416	33	216	175·4	173·3	+11·1	+ 5·2
12·480 G	72	375	40	206	175·0	172·7	+10·8	+19·3
13·537 G	58	342	36	212	174·7	172·2	+10·5	+32·9
14·377 C	55	334	40	240	174·4	171·8	+10·4	+43·7
15·468 C	36	207	36	207	174·7	171·9	+10·5	+58·3
16·445 C	17	138	29	232	174·9	171·9	+10·8	+71·4
17·304 D	0	16	(0	98	174·5	171·3	+ 9·8)*	+82·3
Means ..	..	..	41	236	175·29	173·28	+10·83	..

Group 7622.—February 2–14. A large regular spot, evidently *a* of Group 7564, diminishing from day to day.

32·364 C	8	44	23	124	175·6	169·7	+11·1	−78·3
33·360 C	17	103	22	135	175·1	169·0	+10·9	−65·7
34·457 G	24	136	20	116	175·0	168·7	+10·9	−51·4
35·435 G	28	152	19	102	175·2	168·7	+10·8	−38·3
36·354 C	30	177	18	104	175·1	168·4	+10·8	−26·3
37·439 G	34	160	18	86	174·9	168·1	+10·8	−12·2
38·400 G	31	190	16	99	174·8	167·8	+10·8	+ 0·3
39·424 G	29	144	16	78	174·5	167·3	+10·7	+13·5
40·337 C	20	120	12	70	174·3	166·9	+10·8	+25·3
41·334 C	20	95	13	64	174·2	166·6	+10·9	+38·4

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

RECURRENT SERIES, 755. Group 7622—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
42·376 C	13	55	11	47	173·7	165·9	+11·0	+51·6
43·460 G	8	50	11	68	173·9	166·0	+11·0	+66·1
44·431 G	1	10	3	30	173·9	165·8	+11·3	+78·9
Means ..	..	..	16	86	174·63	167·61	+10·91	..

RECURRENT SERIES, 756.

Group 7591 seen in Rotation 833.
,, 7610 ,, ,, 834.

Group 7591.—1916 January 1–7. A very irregular stream in continual change. A large composite spot, *a*, has formed at the head of the group by January 5, but has passed out of sight at the West limb by January 7.

0·444 C	13	23	7	13	311·9	311·9	+21·7	− 2·3
1·423 C	0	15	0	8	312·3	312·3	+21·8	+11·0
2·367 C	32	151	20	92	314·6	314·6	+21·1	+25·7
3·451 C	40	249	29	179	314·6	314·7	+20·3	+40·0
4·379 C	29	196	29	196	318·2	318·3	+20·8	+55·8
5·472 C	16	123	26	200	317·4	317·5	+20·9	+69·4
6·508 C	1	26	(3	71	311·5	311·6	+21·2)*	+77·1
Means ..	..	..	19	115	314·83	314·88	+21·10	..
Spot *a*.								
3·451 C	24	163	18	127	319·1	319·1	+20·9	+44·5
4·379 C	20	144	21	150	319·8	319·9	+20·8	+57·4
5·472 C	11	69	21	130	319·9	320·0	+21·0	+71·9

Group 7610.—January 22–February 2. A large regular spot, perhaps *a* of Group 7591.

21·376 C	9	87	19	188	325·0	324·9	+20·4	−73·6
22·477 C	17	131	19	145	325·2	325·1	+20·4	−58·9
23·428 C	33	224	27	181	325·7	325·6	+20·1	−45·9
24·438 G	43	216	28	143	325·5	325·4	+20·2	−32·8
25·404 C	42	227	25	134	325·4	325·3	+20·1	−20·2
26·427 C	40	219	22	123	325·3	325·2	+20·0	− 6·8
27·442 C	27	218	15	122	325·4	325·3	+20·0	+ 6·7
28·374 C	38	179	22	106	325·1	325·0	+20·0	+18·6
29·482 C	34	181	23	121	325·4	325·3	+20·0	+33·5
30·185 K	34	178	26	137	325·5	325·4	+20·5	+42·9
31·442 C	11	84	12	95	325·1	325·0	+20·8	+59·0
32·364 C	5	66	10	129	325·5	325·4	+20·8	−71·6
Means ..	..	..	21	135	325·34	325·24	−20·27	..

RECURRENT SERIES, 757.

Group 7618 seen in Rotation 834.
,, 7646 ,, ,, 835.

Group 7618.—January 31–February 9. Two very small clusters on January 31, which have become by February 1 a fine irregular stream consisting chiefly of two large spots with a great number of small spots irregularly scattered between them. The stream develops into one of normal type, but the following portion rapidly diminishes after February 6, and the leader, *a*, a large regular spot, alone remains on February 9.

1916. d					°	°	°	°
30·185 K	7	30	5	23	232·6	228·6	−13·8	−50·0
31·442 C	123	705	73	416	234·0	229·8	−13·9	−32·1
32·364 C	180	886	95	470	234·7	230·4	−14·3	−19·2
33·360 C	167	869	85	443	234·6	230·2	−14·5	− 6·2
34·457 G	114	836	58	426	234·8	230·2	−15·1	+ 8·4
35·435 G	152	783	82	423	234·7	230·0	−14·3	+21·2
36·354 C	121	586	74	357	236·2	231·4	−14·1	+34·8
37·439 G	53	257	42	203	238·5	233·5	−13·3	+51·4
38·400 G	32	183	37	212	239·7	234·6	−13·3	+65·2
39·424 G	13	101	31	237	239·9	234·7	−13·6	+78·9
Means ..	..	..	58	321	235·97	231·34	−14·02	..
Spot *a*.								
31·442 C	53	296	30	169	237·6	233·0	−13·0	−28·5
32·364 C	80	356	42	185	238·7	234·0	−13·2	−15·2
33·360 C	76	357	38	179	239·2	234·3	−13·6	− 1·6
34·457 G	57	347	30	180	239·3	234·3	−13·4	+12·9
35·435 G	53	295	30	165	239·2	234·0	−13·2	+25·7
36·354 C	48	269	30	169	239·1	233·8	−13·2	+37·7
37·439 G	34	181	28	147	239·3	233·8	−13·1	+52·2
38·400 G	21	141	24	141	239·7	234·1	−13·3	+65·2
39·424 G	13	101	31	237	239·9	234·1	−13·6	+78·9

Group 7646.—February 24–March 5. A large regular spot, evidently *a* of Group 7618, usually followed closely by one or two small companions, and diminishing day by day.

54·521 G	15	74	39	192	242·1	233·9	−13·3	−80·1
55·450 G	26	153	34	199	241·5	233·1	−13·3	−68·4
56·343 C	14	182	12	162	241·7	233·2	−13·4	−56·5
57·612 G	56	253	36	164	241·9	233·2	−13·3	−39·6
58·388 G	51	303	30	176	241·2	232·4	−13·1	−30·0
59·405 G	72	293	37	152	241·6	232·6	−12·9	−16·2
60·620 G	59	263	30	132	241·7	232·5	−12·9	− 0·1
61·342 C	47	243	24	124	241·6	232·3	−12·7	− 9·3
62·339 C	25	133	14	72	241·9	232·5	−12·6	−22·7
63·428 G	29	54	18	34	242·3	232·7	−12·8	−37·5
64·517 G	3	14	2	11	242·5	232·8	−12·7	−52·0
Means ..	..	..	25	129	241·82	232·84	−13·00	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

RECURRENT SERIES, 758.

Group 7619 seen in Rotation 834.
,, 7640 ,, ,, 835.

Group 7619.—February 1–4. A large regular spot forming suddenly at the place of Group 7615. A number of small companions follow it closely.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
31·442 C	39	164	28	120	312·2	312·1	−20·6	+46·1
32·364 C	38	264	36	253	312·5	312·4	−20·4	+58·6
33·360 C	34	200	51	302	312·4	312·3	−20·4	+71·6
34·457 G	4	26	29	191	314·2	314·1	−19·9	+87·8
Means ..	..	..	36	216	312·83	312·73	−20·33	..

Group 7640.—February 19–21. A regular spot in rapid decline.

49·336 C	2	47	6	133	308·6	308·1	−20·0	−81·8
50·457 C	0	30	0	37	308·8	308·3	−20·0	−66·9
51·337 C	5	22	4	19	308·9	308·4	−20·1	−55·2
Means ..	..	..	3	63	308·77	308·27	−20·03	..

RECURRENT SERIES, 759.

Group 7625 seen in Rotation 834.
,, 7651 ,, ,, 835.
,, 7679 ,, ,, 836.

[illegible] 7625.—February 6–14. A sparse irregular stream composed of small [illegible]ble spots.

[illegible]	3	13	2	10	158·9	158·1	+19·0	−42·5
[illegible]	14	38	9	24	157·9	157·1	+19·2	−29·2
38·400 G	22	80	13	46	158·7	157·9	+19·6	−15·8
39·424 G	29	72	16	40	159·2	158·3	+19·3	− 1·8
40·337 C	18	92	10	52	161·0	160·1	+19·8	+12·0
41·334 C	13	52	8	32	161·1	160·2	+19·6	+25·3
42·376 C	1	8	1	6	161·1	160·2	+19·6	+39·0
43·460 G	12	26	12	25	161·5	160·5	+19·8	+53·7
44·431 G	5	20	8	32	162·8	161·8	+19·9	+67·8
Means ..	..	..	9	30	160·24	159·36	+19·53	..

Group 7651.—March 2–14. A few spots at first, mostly small. These multiply rapidly and form a fine irregular stream of great extent. The leading spots are the largest and most stable, and have coalesced to form a large composite spot by March 6. The following spots have died out by March 12, leaving the leader, now a regular spot, alone. The rapid development taking place in the group on March 3–7 seems to constitute it a new disturbance rather than a mere return of 7625.

61·342 C	2	16	6	47	155·3	153·0	+19·5	−77·0
62·339 C	19	139	25	183	155·8	153·5	−18·7	−63·4
63·428 G	84	384	73	334	155·6	153·3	+18·8	−49·2

Group 7651—*continued.*

1916. d					°	°	°	°
64·517 G	188	748	130	516	155·7	153·3	+19·2	−34·8
65·460 G	240	963	144	578	157·9	155·5	+18·9	−20·2
66·163 D	241	1151	137	656	157·8	155·4	+19·2	−11·0
67·500 G	161	836	90	468	158·1	155·6	+18·6	+ 6·9
68·327 C	120	823	70	477	157·8	155·3	+18·6	+17·5
69·341 C	123	655	80	426	157·7	155·1	+18·6	+30·8
70·347 C	123	586	97	463	157·8	155·2	+18·7	+44·1
71·520 G	79	420	91	483	157·8	155·2	+18·7	+59·6
72·307 C	54	296	93	509	157·2	154·5	+18·7	+69·4
73·331 C	12	43	64	229	156·1	153·4	+18·6	+81·8
Means ..	..	..	85	413	156·97	154·48	+18·83	..

Group 7679.—March 29–April 8. A large composite spot, usually with a few very small unstable followers widely scattered. The chief spot breaks up after April 3.

88·405 G	16	119	32	240	162·8	157·5	+17·4	−72·8
89·457 C	37	267	41	294	162·8	157·4	+17·7	−58·9
90·360 C	36	303	30	248	162·4	157·0	+17·7	−47·4
91·350 G	65	451	43	298	162·8	157·3	+17·5	−33·9
92·466 C	76	527	44	306	162·8	157·3	+17·7	−19·2
93·366 G	79	480	43	264	162·5	156·9	+17·5	− 7·6
94·521 G	46	218	25	120	161·9	156·2	+17·7	+ 7·0
95·380 G	30	131	17	76	161·1	155·4	+18·0	+17·5
96·[illegible] C	26	113	16	71	160·3	154·5	+18·0	+29·5
97·011 G	7	36	6	29	159·8	153·9	+18·1	+45·7
98·352 G	3	6	3	6	159·3	153·4	+18·3	+55·0
Means ..	..	..	27	177	161·68	156·07	+17·78	..

(RECURRENT SERIES, 759.*)

Groups 7626 and 7628 seen in Rotation 834.
,, 7657 ,, ,, 835.

It seems probable that 7657 is a revival, rather than a return of 7628.

Group 7626.—February 6–16. A small spot rapidly developing into a large regular spot usually followed by a few very small companions. Considerable motion is shown both in longitude and latitude.

36·354 C	1	6	1	8	135·2	129·3	+14·2	−66·2
37·439 G	20	50	17	43	136·6	130·5	+13·9	− 50·5
38·400 G	52	243	35	163	137·8	131·6	+13·2	−36·7
39·424 G	64	310	36	177	139·5	133·1	+12·2	−21·5
40·337 C	50	282	27	149	140·6	134·1	+11·8	− 8·4
41·334 C	59	309	31	164	141·7	135·0	+11·9	+ 5·9
42·376 C	62	295	35	165	142·6	135·7	+11·6	+20·5
43·460 G	36	196	23	127	143·6	136·6	+11·7	+35·8
44·431 G	36	147	39	121	144·1	136·9	+11·7	+49·1
45·521 G	16	87	20	110	144·9	137·5	+11·6	+64·2
46·333 C	5	45	11	96	144·5	137·0	+11·6	+74·5
Means ..	..	..	24	120	141·01	134·30	+12·31	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

(RECURRENT SERIES, **759***)—*continued.*

Group 7628.—February 7–17. A small spot, *nf* Group 7626, rapidly developing into a large composite spot. It is usually preceded by one or two small companions. Groups 7626 and 7628 may be considered as a single stream of normal type, in which the two chief spots become unusually far apart, and the small intermediate spots are unusually small.

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
1916. d					°	°	°	°
37·439 G	7	40	7	38	132·9	129·2	+15·6	−54·2
38·400 G	66	368	48	269	132·7	128·9	+15·9	−41·8
39·424 G	80	450	50	279	132·3	128·4	+16·4	−28·7
40·337 C	66	441	38	251	132·0	128·0	+16·5	−17·0
41·334 C	77	429	42	236	131·9	127·8	+16·6	− 3·9
42·376 C	76	410	42	226	131·6	127·7	+16·2	+ 9·8
43·460 G	62	365	37	219	132·1	127·8	+15·7	+24·3
44·431 G	50	316	34	215	131·9	127·5	+15·6	+36·9
45·521 G	39	204	35	182	132·3	127·8	+15·8	+51·6
46·333 C	18	153	22	185	132·4	127·8	+15·6	+62·4
47·344 C	5	47	12	116	132·7	128·0	+14·8	+76·0
Means ..	..	..	33	201	132·28	128·08	+15·88	..

Group 7657.—March 5–12. A number of small unstable spots loosely scattered. The group has diminished by March 8, when only a wide pair remains, of which the following member has disappeared by March 11. Probably the group has freshly formed on March 5, and is therefore a revival, not a true return, of Groups 7626 and 7628.

64·517 G	1	4	1	6	123·7	115·1	+14·4	−66·8
65·460 G	20	64	19	61	122·8	114·0	+13·0	−55·3
66·163 D	24	65	19	51	122·1	113·2	+13·9	−46·7
67·500 G	11	71	7	43	121·8	112·8	+13·9	−29·4
68·327 C	5	15	3	9	119·5	110·3	+14·5	−20·8
69·341 C	11	58	6	31	121·2	111·9	+13·3	− 5·7
70·347 C	7	52	4	28	122·4	113·0	+14·5	+ 8·7
71·520 G	0	26	0	16	123·9	114·3	+14·3	+25·7
Means ..	..	..	7	31	122·18	113·08	+13·98	..

RECURRENT SERIES, **760.**

Group 7637 seen in Rotation 834.
,, 7660 ,, ,, 835.

Group 7637.—February 16–18. A short stream of spots forming *f* Group 7628.

46·333 C	23	67	20	58	119·8	116·3	+17·0	+49·8
47·344 C	10	49	12	59	118·2	114·6	+17·1	+61·5
48·345 C	2	59	5	136	118·0	114·3	+17·1	+74·5
Means ..	..	..	12	84	118·67	115·07	+17·07	..

Group 7660.—March 6–13. Two or three small spots, some of which are fairly stable. One small spot alone remains after March 10. Apparently a return but perhaps only a revival of Group 7637.

1916. d					°	°	°	°
65·460 G	0	4	0	6	112·9	109·6	+18·0	−65·2
66·163 D	0	6	0	6	111·4	108·0	+19·4	−57·4
67·500 G	2	26	1	19	112·5	109·1	+18·1	−38·7
68·327 C	17	37	11	23	112·3	108·8	+18·5	−28·0
69·341 C	13	50	8	29	111·2	107·7	+18·7	−15·7
70·347 C	7	24	4	13	113·9	110·3	+17·6	+ 0·2
71·520 G	2	7	1	4	113·7	110·1	+17·4	+15·5
72·307 C	0	6	0	4	113·3	109·6	+17·7	+25·5
Means ..	..	..	3	13	112·65	109·15	+18·18	..

RECURRENT SERIES, **761.**

Group 7650 seen in Rotation 835.
,, 7680 ,, ,, 836.

Group 7650.—March 1–14. A very large composite spot, bisected by a bright bridge and preceded by a stream of companions of moderate size, making up a very fine and striking group.

60·620 G	47	202	128	531	161·6	157·4	−17·2	−80·2
61·342 C	93	394	141	588	160·7	156·5	−17·0	−71·6
62·339 C	134	556	126	523	160·4	156·1	−17·1	−58·8
63·428 G	221	832	159	599	159·8	155·4	−16·9	−45·0
64·517 G	284	1096	168	647	159·0	154·5	−16·9	−31·5
65·460 G	286	1243	154	671	159·2	154·7	−17·3	−18·9
66·163 D	243	1110	126	577	158·6	154·0	−17·4	−10·2
67·500 G	192	909	98	464	158·7	154·0	−17·4	− 7·5
68·327 C	187	921	99	488	158·5	153·8	−17·3	−18·2
69·341 C	182	742	107	438	158·0	153·2	−17·5	+31·1
70·347 C	158	730	109	504	157·5	152·6	−17·7	+43·8
71·520 G	101	508	96	483	157·2	152·3	−17·8	+59·0
72·307 C	58	301	77	397	156·7	151·7	−17·7	+68·9
73·331 C	41	140	124	424	156·6	151·5	−17·9	+82·3
Means ..	..	..	122	524	158·75	154·12	−17·36	..

Group 7680.—March 30–April 3. A large area of disturbance in which small unstable spots form and disappear irregularly.

89·457 C	0	21	0	24	156·9	156·0	−21·6	−64·8
90·360 C	27	115	22	92	158·6	157·7	−20·3	−51·2
91·350 G	31	102	20	66	157·9	157·0	−20·2	−38·8
92·466 C	11	33	6	18	160·1	159·2	−19·7	−21·9
93·366 G	12	63	6	33	159·2	158·3	−18·1	−10·9
Means ..	..	..	11	47	158·54	157·64	−19·98	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

(RECURRENT SERIES, 761.*)

Group 7654 seen in Rotation 835.
" 7674 " " 836.

Group 7654.—March 5–7. A stream, apparently of normal type, forming suddenly *s* Group 7646, and near the West limb.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Fore-shortening of Umbra.	Area Corrected for Fore-shortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d						°	°	°
64·517 G	34	134	30	118	246·1	252·5	−23·7	+55·6
65·460 G	43	227	54	286	245·6	252·1	−24·1	+67·5
66·163 D	30	118	57	224	245·3	251·8	−24·7	+76·5
Means ..	..	..	47	209	245·67	252·13	−24·17	..

Group 7674.—March 21–24. A pair of small spots on March 22. The leading spot is seen alone on March 21, the following on March 23 and 24. These spots are possibly the remnants of the stream seen in the previous rotation, but the continuity is not certain.

80·351 C	0	5	0	13	260·6	262·6	−20·9	−81·2
81·538 C	2	10	3	13	257·3	259·3	−21·7	−68·9
82·494 C	1	12	1	11	255·1	257·2	−21·4	−58·4
83·434 G	2	16	1	12	255·2	257·3	−21·8	−45·9
Means ..	..	..	1	12	257·05	259·10	−21·45	..

RECURRENT SERIES, 762.

Group 7675 seen in Rotation 836.
" 7702 " " 837.

Group 7675.—March 24–April 5. A regular spot with some very small companions. The group after several changes has nearly disappeared by April 1, but has revived as a sparse stream by April 2. The leader spot, *a*, increases greatly before it reaches the West limb on April 5.

83·434 G	0	9	0	19	223·1	241·5	−28·7	−78·0
84·441 G	3	32	4	39	221·4	240·1	−28·6	−66·5
85·340 G	17	71	15	64	220·7	239·6	−28·5	−55·3
86·305 G	16	51	12	37	219·7	238·8	−28·5	−43·6
87·336 G	15	92	9	57	219·6	238·9	−28·3	−30·1
88·[illegible] G	12	74	7	41	219·5	239·0	−28·3	−16·1
89·[illegible]	10	20	5	11	219·0	238·8	−28·6	− 2·7
90·[illegible]	8	35	4	19	218·8	238·8	−28·5	+ 9·0
91·[illegible]	1	8	1	5	218·3	238·5	−28·6	+21·6
92·4[illegible]	13	64	9	43	220·0	240·4	−28·3	+38·0
93·3[illegible]	13	40	11	35	224·0	244·6	−28·3	+53·9
94·5[illegible] G	11	53	17	80	226·3	247·2	−27·6	+71·4
95·[illegible] G	14	110	36	285	224·2	245·3	−27·5	+80·6
M[illegible] ..	..	..	10	57	221·12	240·88	−28·33	..

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Fore-shortening of Umbra.	Area Corrected for Fore-shortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
Spot *a*.								
1916. d						°	°	°
93·366 G	11	29	10	26	224·9	243·9	−28·1	+54·8
94·521 G	11	46	17	69	226·3	245·6	−27·6	+71·4
95·380 G	14	63	36	191	226·2	245·7	−27·6	+82·6

Group 7702.—April 20–May 2. A very large composite spot, probably *a* of Group 7675, diminishing steadily after April 24; proper motion equatorwards.

110·551 G	6	66	16	171	223·2	242·5	−28·0	−80·1
111·324 G	15	202	22	295	223·0	242·5	−27·6	−70·0
112·433 C	49	342	45	318	222·8	242·5	−27·5	−55·6
113·441 G	61	725	43	522	222·7	242·5	−27·3	−42·4
114·401 C	139	869	86	538	222·9	242·9	−27·2	−29·5
115·322 C	151	773	85	433	223·4	243·6	−26·8	−16·8
116·346 C	146	694	78	374	223·4	243·8	−26·8	− 3·3
117·391 G	94	599	51	329	223·6	244·1	−26·5	+10·7
118·426 G	84	505	49	297	224·0	244·7	−26·5	+24·8
119·351 G	63	325	42	217	224·0	244·9	−26·3	+37·0
120·331 G	34	208	27	170	223·6	244·7	−26·1	+49·6
121·363 G	24	109	27	125	223·7	244·9	−26·0	+63·3
122·458 C	6	39	12	83	222·7	244·1	−25·8	+76·8
Means ..	..	..	45	298	223·31	243·67	−26·80	..

RECURRENT SERIES, 763.

Group 7681 seen in Rotation 836.
" 7706 " " 837.

Group 7681.—March 31–April 11. A very large well-developed spot, *a*, followed by a very long train composed of a great number of small unstable spots in constant change. The train has disappeared by April 10, leaving *a* alone.

90·360 C	46	370	90	818	134·4	117·2	+10·1	−75·4
91·350 G	98	891	117	1060	133·4	116·0	+10·4	−63·3
92·466 C	197	1360	160	1102	132·9	115·3	+10·7	−49·1
93·366 G	224	1230	146	800	133·9	116·2	+10·2	−36·2
94·521 G	219	1308	120	719	135·2	117·2	+10·3	−19·7
95·380 G	189	1211	100	642	135·6	117·5	+10·7	− 8·0
96·349 C	225	1639	117	852	135·4	117·1	+11·0	+ 4·6
97·611 G	134	755	76	430	136·3	118·0	+10·7	+22·2
98·352 G	112	580	69	360	136·0	117·3	+10·7	+31·7
99·436 G	60	355	47	277	137·6	118·7	+ 9·7	+47·6
100·350 G	41	260	43	273	137·9	118·8	+ 9·7	+59·9
101·445 G	23	151	46	305	137·8	118·5	+10·0	+74·3
Means ..	..	..	94	637	135·53	117·32	+10·35	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		

RECURRENT SERIES, 763. Group 7681—*continued.*

Spot *a*.

1916. d					°	°	°	°
90·300 C	46	273	90	535	135·9	117·8	+ 9·0	−73·9
91·350 G	69	505	75	545	136·1	117·8	+ 9·1	−60·6
92·466 C	129	694	97	521	136·3	117·8	+ 9·3	−45·7
93·366 G	129	782	81	493	136·2	117·5	+ 9·4	−33·9
94·521 G	171	959	94	527	137·0	118·1	+ 9·4	−17·9
95·380 G	145	907	75	472	137·3	118·2	+ 9·7	− 6·3
96·349 C	180	1077	94	560	137·6	118·3	+ 9·8	+ 6·8
97·611 G	115	636	67	363	137·5	118·0	+ 9·9	+23·4
98·352 G	86	488	53	302	137·3	117·6	+ 9·8	+33·0
99·436 G	58	342	45	267	137·6	117·7	+ 9·7	+47·6
100·350 G	41	260	43	273	137·9	117·8	+ 9·7	+59·9
101·445 G	23	151	46	305	137·8	117·5	+10·0	+74·3

Group 7706.—April 27–30. One or two small spots.

117·391 G	2	8	3	11	144·3	120·9	+ 9·8	−68·6
118·426 G	4	13	3	11	145·9	122·3	+ 9·7	−53·3
119·351 G	2	16	1	11	145·6	121·8	+ 9·9	−41·4
120·331 G	0	11	0	6	144·4	120·5	+ 9·1	−29·6
Means ..	..	..	2	10	145·05	121·38	+ 9·63	..

RECURRENT SERIES, 764.

Group 7683 seen in Rotation 836.
,, 7701 ,, ,, 837.

Group 7683.—April 2–4. Some very small spots forming near the West limb on April 2, and developing on the two succeeding days into a stream. *a* and *b* represent the leader and rear spots respectively.

92·466 C	0	14	0	12	229·6	228·2	+19·8	+47·6
93·366 G	22	59	25	67	229·7	228·3	+19·8	+59·6
94·521 G	4	60	9	133	229·0	227·6	+19·7	+74·1
Means ..	..	..	11	71	229·43	228·03	+19·77	..

Spot *a*.

92·466 C	0	10	0	9	230·2	228·5	+19·7	+48·2
93·366 G	9	32	11	39	231·2	229·5	+19·8	+61·1
94·521 G	0	19	0	53	232·1	230·4	+19·4	+77·2

Spot *b*.

1916. d					°	°	°	°
92·466 C	0	4	0	3	227·6	226·7	+20·3	+45·6
93·366 G	12	27	13	28	227·6	226·7	+19·8	+57·5
94·521 G	4	41	8	80	227·0	226·1	+19·9	+72·1

Group 7701.—April 20–May 1. Two spots widely separated on April 20. *a*, the leader, and smaller of the two, soon breaks up and has nearly disappeared by April 23. The following spot, *b*, has also divided by April 27, after which it soon diminishes. Small attendant spots are visible occasionally.

110·551 G	33	119	76	301	227·4	231·3	+21·4	−75·9
111·324 G	34	205	47	296	227·1	231·0	+21·4	−65·9
112·433 C	44	267	40	242	225·9	229·8	+21·6	−52·5
113·441 G	54	304	40	224	224·8	228·8	+21·7	−40·3
114·401 C	48	277	30	177	224·2	228·2	+21·9	−28·2
115·322 C	40	275	23	159	223·9	227·9	+21·9	−16·3
116·346 C	42	252	23	142	223·6	227·7	+21·8	− 3·1
117·391 G	56	218	32	124	224·0	228·1	+22·2	+11·1
118·426 G	54	281	33	174	223·4	227·5	+22·4	+24·2
119·351 G	39	224	27	156	223·5	227·7	+21·6	+36·5
120·331 G	20	64	16	53	222·2	226·4	+21·6	+48·2
121·363 G	0	11	0	13	221·6	225·8	+22·0	+61·2
Means ..	..	..	32	172	224·30	228·35	+21·79	..

Spot *a* (probably *a* of Group 7683).

110·551 G	21	50	36	81	234·1	234·3	+20·0	−69·2
111·324 G	16	67	18	75	233·7	233·9	+20·1	−59·3
112·433 C	10	39	8	31	233·7	233·9	+20·7	−44·7
113·441 G	2	12	1	8	233·0	233·2	+21·0	−32·1

Spot *b* (probably *b* of Group 7683).

110·551 G	12	69	40	220	224·9	228·9	+21·9	−78·4
111·324 G	18	138	29	221	224·9	228·9	+21·8	−68·1
112·433 C	32	211	31	205	224·5	228·5	+21·7	−53·9
113·441 G	46	248	35	186	224·5	228·6	+21·8	−40·6
114·401 C	46	250	29	160	224·2	228·3	+21·9	−28·2
115·322 C	39	257	23	149	223·9	228·1	+21·9	−16·3
116·346 C	41	202	23	113	223·6	227·8	+21·8	− 3·1

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
(RECURRENT SERIES, 764.*)								
Group 7688 seen in Rotation 836.								
,, 7705 ,, ,, 837.								
Group 7688.—April 7–8. A stream of spots suddenly appearing near the West limb.								
1916. d					°	°	°	°
97·611 G	15	95	18	117	180·8	177·3	−19·2	+66·7
98·352 G	14	67	28	133	180·9	177·4	−18·5	−76·6
Means ..	..	..	23	125	180·85	177·35	−18·85	..
Group 7705.—April 25–May 4. A stream of normal type of which the leader, *a*, is the largest and most stable member. The spots in the middle of the group have almost disappeared by April 28, and after a slight revival on April 29, they soon fade away. Some very small spots on May 2 represent *a*, and the group is not seen on May 3, though a very small marking is visible on May 4. It appears that the group formed on April 25, and thus it is a revival, not a true return of Group 7688.								
115·322 C	23	55	20	49	183·9	171·9	−15·6	−56·3
116·346 C	55	211	37	143	184·4	172·3	−15·3	−42·3
117·391 G	73	258	41	147	185·5	173·3	−15·7	−27·4
118·426 G	53	220	27	114	187·3	175·0	−16·0	−11·9
119·351 G	57	182	29	92	186·2	173·8	−15·8	− 0·8
120·331 G	15	109	7	56	187·1	174·6	−15·9	+13·1
121·363 G	12	62	6	35	188·7	176·1	−15·3	+28·3
122·458 C	2	19	1	12	187·9	175·2	−15·8	+42·0
123·345 C	0	0	0	0	..	..	..	..
124·333 C	0	3	0	3	187·9	175·0	−15·3	+66·8
Means ..	..	..	17	65	186·54	174·13	−15·63	..
Spot *a*.								
115·322 C	20	42	18	37	184·5	172·3	−15·3	−55·7
116·346 C	46	153	31	103	185·8	173·5	−15·0	−40·9
117·391 G	49	190	27	106	187·7	175·3	−15·8	−25·2
118·426 G	37	177	19	92	188·3	175·7	−16·2	−10·9
119·351 G	35	127	18	65	188·5	175·8	−15·8	+ 1·5
120·331 G	15	93	8	49	188·5	175·7	−15·4	+14·5
121·363 G	12	62	6	35	188·7	175·8	−15·3	+28·3
RECURRENT SERIES, 765.								
Group 7694 seen in Rotation 836.								
,, 7717 ,, ,, 837.								
Group 7694.—April 10–21. A very small spot at first, preceded by a distant companion on April 12. The group has greatly increased in size by April 14, and becomes an irregular stream mostly composed of small and very unstable spots.								
100·350 G	0	2	0	3	5·4	5·3	−21·1	−72·6
101·445 G	4	5	4	5	4·5	4·4	−21·0	−59·0
102·320 C	4	16	3	12	6·5	6·4	−20·2	−45·4
Group 7694—*continued.*								
1916. d					°	°	°	°
103·356 G	2	22	1	13	9·6	9·5	−19·8	−28·7
104·424 G	50	241	27	130	8·7	8·6	−20·1	−15·5
105·408 G	90	350	47	182	7·3	7·2	−20·4	− 3·9
106·398 C	65	220	34	114	6·6	6·5	−20·0	+ 8·5
107·386 G	59	329	32	181	6·2	6·1	−20·2	−21·1
108·591 G	52	116	33	73	5·0	4·9	−20·4	+35·9
109·536 G	19	48	15	37	5·5	5·4	−20·3	+48·8
110·551 G	14	33	15	35	5·3	5·2	−20·3	−62·0
111·324 G	5	14	8	22	4·8	4·7	−20·4	+71·8
Means ..	..	..	18	67	6·28	6·18	−20·35	..
Group 7717.—May 8–18. A wide area of feeble disturbance, *f* Group 7716, containing a few unstable spots, mostly very small and faint. These are generally grouped in two clusters, of which only the more northern is seen on May 8, and the more southern on May 9 and 13. Return or revival of Group 7694.								
128·404 C	0	3	0	3	8·2	14·7	−19·6	−59·1
129·164 D	0	11	0	9	6·1	12·7	−24·3	−51·2
130·311 G	2	54	1	33	9·3	15·9	−21·5	−32·8
131·163 D	11	90	6	51	9·7	16·4	−22·0	−22·1
132·165 D	4	69	2	37	9·0	15·7	−21·9	− 8·6
133·349 C	2	21	1	11	7·2	14·0	−24·7	+ 5·3
134·311 G	4	8	2	5	12·7	19·5	−22·2	+23·5
135·425 G	12	51	8	34	11·5	18·4	−22·4	+37·0
136·253 D	20	105	16	85	12·9	19·8	−23·0	+49·4
137·350 G	4	16	5	20	14·3	21·3	−22·4	+65·3
138·314 G	0	4	0	11	16·0	23·1	−22·4	+79·8
Means ..	..	..	4	27	10·63	17·41	−22·40	..
RECURRENT SERIES, 766.								
Group 7708 seen in Rotation 837.								
,, 7733 ,, ,, 838.								
,, 7756* ,, ,, 839.								
Group 7708.—April 29–May 11. A large regular spot, sometimes with one or two small followers. On May 7, however, the followers form quite a large cluster.								
119·351 G	10	91	40	370	104·9	82·1	− 9·6	−82·1
120·331 G	45	214	63	301	105·8	82·8	− 9·6	−68·2
121·363 G	60	382	52	332	106·9	83·7	+ 9·6	−53·5
122·458 C	63	437	41	288	107·6	84·2	+ 9·7	−38·3
123·345 C	72	507	41	294	107·8	84·2	+10·3	−26·4
124·333 C	103	581	55	308	107·6	83·9	+10·8	−13·5
125·394 C	105	581	55	302	107·4	83·5	+10·8	+ 0·3
126·174 D	123	631	64	328	107·3	83·2	+10·8	+10·5

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra	Whole Spot.	System I.	System II.		
RECURRENT SERIES, 766. Group 7708—*continued.*								
1916. d					°	°	°	°
127·686 G	104	541	62	325	106·7	82·3	+10·7	+29·0
128·404 C	70	426	47	285	107·2	82·7	+10·7	+39·9
129·164 D	66	349	53	283	107·4	82·7	+10·7	+50·1
130·311 G	32	189	42	246	108·5	83·6	+10·3	+66·4
131·163 D	14	99	35	231	107·6	82·5	+10·5	+75·8
Means ..	..	..	50	299	107·13	83·19	+10·32	..
Group 7733.—May 26–June 7. A large, well-defined, and stable regular spot, evidently identical with that of Group 7708.								
146·678 G	21	92	49	216	108·3	80·4	+10·0	−77·3
147·497 G	21	146	27	185	108·6	80·6	+10·0	−66·2
148·344 G	37	207	34	188	107·8	79·7	+ 9·9	−55·7
149·304 G	39	262	27	181	108·5	80·1	+ 9·9	−42·3
150·373 G	67	294	39	171	108·6	80·0	+10·0	−28·1
151·414 G	86	320	45	166	108·6	79·8	+ 9·9	−14·3
152·470 C	73	367	37	187	108·9	79·9	+10·3	0·0
153·312 G	70	337	36	175	108·9	79·8	+10·4	+11·1
154·306 G	77	347	43	194	108·8	79·5	+10·8	+24·2
155·309 G	49	290	31	186	109·1	79·6	+10·7	+37·7
156·434 G	33	189	28	159	109·2	79·5	+11·0	+52·7
157·400 G	24	135	29	165	109·0	79·1	+11·0	+65·3
158·309 G	8	75	19	180	109·5	79·4	+11·0	+77·8
Means ..	..	..	34	181	108·75	79·80	+10·38	..
Group 7756.*—June 22–25. A small spot *p* Group 7756, probably *a* of Groups 7708 and 7733.								
173·419 C	2	6	7	20	110·6	75·9	+ 9·8	−81·1
174·380 C	2	18	3	23	111·6	76·7	+ 9·8	−67·3
175·485 G	2	27	2	22	111·2	76·1	+ 9·3	−53·1
176·469 C	0	17	0	11	111·3	76·0	+ 9·4	−40·0
Means ..	..	..	3	19	111·18	76·18	+ 9·58	..
RECURRENT SERIES, 767.								
Group 7738 seen in Rotation 838.								
,, 7756 ,, ,, 839.								
Group 7738.—June 3–8. A small stream of normal type forming just behind Group 7733. The stream increases in size very rapidly, and its members coalesce to form a very large composite spot. Groups 7737, 7735, and 7738 form an almost continuous procession.								
154·306 G	6	77	3	42	102·4	74·6	+12·0	+17·8
155·309 G	76	352	46	211	102·6	74·6	+11·6	+31·2
156·434 G	186	1039	136	758	102·0	73·8	+10·9	+45·5
Group 7738—*continued.*								
1916. d					°	°	°	°
157·400 G	223	927	216	899	102·1	73·8	+10·7	−58·4
158·309 G	100	681	166	1028	102·0	73·5	+10·4	+70·3
159·321 G	61	168	372	1025	103·6	74·9	+10·8	+85·3
Means ..	..	..	157	661	102·45	74·20	+11·07	..
Group 7756.—June 23–July 3. Two spots, *a* and *b*, nearly on the same meridian. *a*, the larger and more northern, is a double spot; *b* is regular. A few small unstable attendants are occasionally seen near them. *a* and *b* evidently represent the large composite spot of Group 7738.								
174·380 C	39	212	63	346	107·3	75·7	+11·1	−71·6
175·485 G	77	355	71	326	107·6	75·8	+11·3	−56·7
176·469 C	70	449	49	316	107·3	75·4	+11·3	−44·0
177·523 C	83	458	48	266	107·3	75·2	+11·2	−30·0
178·401 G	75	400	40	212	107·7	75·4	+11·3	−18·0
179·338 C	78	442	40	225	107·8	75·3	+11·0	− 5·5
180·401 C	72	376	37	192	107·7	75·0	+10·9	+ 8·5
181·419 G	49	268	26	145	108·0	75·2	+10·9	+22·2
182·363 G	38	149	23	91	107·9	74·9	+10·8	+34·6
183·322 G	19	53	14	39	107·9	74·7	+10·2	+47·3
184·357 C	4	10	4	11	108·6	75·2	+11·1	+61·7
Means ..	..	..	38	197	107·74	75·25	+11·01	..
Spot *a*.								
174·380 C	26	138	42	225	107·6	77·4	+12·0	−71·3
175·485 G	61	291	56	265	107·9	77·5	+11·7	−56·4
176·469 C	54	345	38	242	107·6	77·1	+11·9	−43·7
177·523 C	63	345	37	200	107·7	77·0	+11·8	−29·6
178·401 G	54	298	29	158	107·9	77·0	+11·6	−17·8
179·338 C	52	304	27	155	108·2	77·2	+11·8	− 5·1
180·401 C	52	286	27	146	108·2	77·0	+11·6	+ 9·0
181·419 G	33	197	18	108	108·3	76·9	+11·4	+22·5
182·363 G	24	94	15	57	108·2	76·7	+11·4	+34·9
183·322 G	11	27	8	21	108·0	76·3	+11·1	+47·4
184·357 C	4	10	4	11	108·6	76·7	+11·1	+61·7
Spot *b*.								
174·380 C	13	74	21	121	106·7	71·3	+ 9·4	−72·2
175·485 G	16	64	15	61	106·1	70·5	+ 9·4	−58·2
176·469 C	16	104	11	74	106·2	70·4	+ 9·5	−45·1
177·523 C	20	102	12	60	106·5	70·5	+ 9·2	−30·8
178·401 G	21	68	11	36	106·6	70·4	+ 9·2	−19·1

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

RECURRENT SERIES, 767. Group 7756. Spot *b*—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
179·338 C	23	119	12	61	106·8	70·4	+ 9·4	− 6·5
180·401 C	20	77	10	39	106·7	70·1	+ 9·3	+ 7·5
181·419 G	16	71	9	38	107·0	70·2	+ 9·4	+21·2
182·363 G	14	55	8	33	107·5	70·5	+ 9·3	+34·2
183·322 G	8	25	6	19	107·7	70·5	+ 9·1	+47·1

RECURRENT SERIES, 768.

Group 7727 seen in Rotation 838.
" 7745 " " 839.

Group 7727.—May 21–June 1. Three small spots on May 21. The group has developed immensely by May 22, when it consists of two large spots, *a* and *b*, with a few small companions between them. *a* and *b* increase on May 23 and 24, and on May 25 the group consists of *a*, now a very large regular spot, closely followed by two straight parallel streams of which *b* is the prominent member. *a* increases by absorbing the nearest members of the following streams, whilst *b* disintegrates, and by May 29 the streams have become a compact and complex cluster, *c*. The group declines steadily after May 27. Near the place of Group 7705, but evidently a new formation.

141·295 G	11	31	14	39	190·2	167·6	−11·8	−66·6
142·445 G	100	618	83	513	189·4	166·6	−12·4	−52·2
143·333 G	259	1069	171	706	189·9	167·0	−12·4	−39·9
144·302 G	393	1612	224	919	190·5	167·4	−12·3	−26·5
145·603 G	550	2369	286	1232	191·0	167·7	−12·4	− 8·8
146·678 G	549	2536	280	1293	190·8	167·3	−12·6	− 5·2
147·497 G	729	3298	386	1748	190·5	166·9	−12·7	+15·7
148·344 G	560	2777	325	1611	190·3	166·6	−12·9	+26·8
149·304 G	499	2223	334	1489	190·5	166·6	−12·5	+39·7
150·373 G	289	1525	260	1366	191·1	167·0	−12·7	+54·4
151·414 G	165	886	241	1279	192·1	167·9	−12·5	+69·2
152·470 C	31	188	(118	648	190·5	166·1	−12·8)*	+81·6
Means ..	..	..	237	1109	190·57	167·15	−12·47	..

Spot *a*.

141·295 G	10	25	12	32	190·6	167·6	−11·5	−66·2
142·445 G	36	204	28	157	192·7	169·5	−12·1	−49·0
143·333 G	98	406	62	256	193·4	170·0	−12·6	−36·4
144·302 G	125	539	69	296	194·5	171·0	−12·6	−22·5
145·603 G	149	730	76	372	195·4	171·7	−12·1	− 4·4
146·678 G	261	1250	134	645	194·7	170·8	−12·1	− 9·1
147·497 G	403	1468	218	792	194·5	170·5	−12·1	+19·7
148·344 G	350	1482	207	874	193·9	169·7	−12·5	+30·4
149·304 G	270	1167	189	817	194·0	169·7	−12·2	+43·2
150·373 G	174	893	169	866	194·9	170·4	−12·4	+58·2
151·414 G	109	551	179	904	194·8	170·1	−12·5	+71·9
152·470 C	16	74	(85	394	193·6	168·7	−12·8)*	+84·7

Spot *b*.

1916. d					°	°	°	°
141·295 G	1	6	1	8	188·0	165·3	−12·8	−68·8
142·445 G	61	383	53	333	187·4	165·5	−12·5	−54·2
143·333 G	162	664	112	458	187·6	164·5	−12·5	−42·2
144·302 G	257	1019	149	591	187·7	164·5	−12·1	−29·3
145·603 G	257	932	134	485	187·0	163·6	−12·1	−12·5

Cluster *c*.

148·344 G	211	1296	117	719	185·9	163·4	−13·3	+22·4
149·304 G	229	1056	143	662	186·3	163·6	−12·8	+35·5
150·373 G	116	633	91	500	186·2	163·3	−13·1	+49·5
151·414 G	55	336	62	375	185·7	162·7	−12·6	+62·8
152·470 C	15	115	33	254	185·6	162·4	−12·8	+76·7

Group 7745.—June 16–27. A very large regular spot. It is invaded by bright faculæ from the *f* side, and by June 20 several small spots have become detached from the main body to form a train, which, however, has wholly disappeared by June 25.

167·440 G	77	318	153	633	196·1	170·0	−12·8	−74·7
168·325 G	103	623	117	710	196·1	169·8	−12·7	−63·0
169·553 G	223	956	169	726	195·7	169·3	−12·7	−47·1
170	No	Photo	graph.					
171·362 G	202	1075	113	602	195·8	169·1	−12·3	−23·1
172·389 C	141	947	73	492	195·9	169·0	−12·5	− 9·4
173·419 C	180	942	94	490	195·9	168·9	−12·5	+ 4·2
174·380 C	129	839	70	453	195·9	168·7	−12·6	+17·0
175·485 G	107	591	64	361	196·0	168·6	−12·5	+31·7
176·469 C	99	410	72	299	196·2	168·7	−12·7	+44·9
177·523 C	46	310	47	319	196·5	168·8	−13·1	+59·2
178·401 G	31	170	51	282	197·1	169·3	−13·0	+71·4
Means ..	..	..	93	488	196·11	169·11	−12·67	..

RECURRENT SERIES, 769.

Group 7728 seen in Rotation 838.
" 7748 " " 839.
" 7771 " " 840.

Group 7728.—May 21–June 1. A regular spot, *a*, followed by a train of small unstable spots. The train has disappeared by May 26, but revived on May 28 and June 1. Small companions are seen preceding the chief spot from May 26 to 29.

141·295 G	12	68	28	197	177·0	155·1	+12·5	−79·8
142·445 G	26	138	29	155	179·3	157·2	+12·6	−62·3
143·333 G	35	149	28	121	179·4	157·2	+12·5	−50·4

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
RECURRENT SERIES, 769. Group 7728—*continued.*								
1916. d					°	°	°	°
144·302 G	42	220	27	143	179·1	156·7	+12·4	−37·9
145·603 G	35	181	19	100	179·2	156·6	+12·6	−20·6
146·678 G	32	148	17	77	179·7	157·0	+12·6	− 5·9
147·497 G	44	178	23	93	179·6	156·7	+12·8	− 4·8
148·344 G	46	182	24	96	178·8	155·8	+12·5	−15·3
149·304 G	21	96	12	57	179·4	156·3	+12·7	+28·6
150·373 G	8	27	6	19	179·7	156·4	+13·0	+43·0
151·414 G	6	16	6	15	179·8	156·3	+13·3	+56·9
152·470 C	0	16	0	22	176·8	153·2	+13·6	+67·9
Means ..	..	..	18	91	178·98	156·21	+12·76	..
Spot *a*.								
141·295 G	12	50	28	118	179·8	157·6	+12·2	−77·0
142·445 G	22	107	24	114	180·5	158·1	+12·3	−61·1
143·333 G	26	122	21	96	180·6	158·1	+12·4	−49·2
144·302 G	25	160	16	102	180·3	157·6	+12·3	−36·7
145·603 G	20	99	11	54	180·4	157·5	+12·4	−19·4
146·678 G	29	116	15	60	179·7	156·7	+12·6	− 5·9
147·497 G	37	147	19	77	179·5	156·3	+12·5	− 4·7
148·344 G	38	135	20	72	178·8	155·5	+12·5	−15·3
149·304 G	14	70	8	41	179·4	155·9	+12·7	+28·6
150·373 G	8	27	6	19	179·7	156·1	+13·0	+43·0
151·414 G	6	16	6	15	179·8	156·0	+13·3	+56·9
152·470 C	0	6	0	9	179·8	155·9	+13·3	+70·9

Group 7748.—June 18–29. A diffuse spot on June 18, which has developed by June 20 into a close pair of distinct spots, followed by a few very small spots in a sparse train. The disturbance then rapidly increases and spreads over an immense area. A regular spot, *a*, begins to form at the head of the group on June 22 and has fully developed by June 24. The group diminishes after June 25, the leader, *a*, being the only important spot remaining after June 27. Revival or return of Group 7728.

169·553 G	6	47	8	61	176·1	160·8	+15·0	−66·7
170	No	Photog	raph.					
171·362 G	24	98	17	69	176·0	160·6	+15·7	−42·9
172·389 C	100	303	60	182	174·7	159·2	+15·9	−30·6
173·419 C	151	685	83	368	176·2	160·6	+16·0	−15·5
174·380 C	202	1030	105	536	176·5	160·8	+16·4	− 2·4
175·485 G	259	1209	137	641	176·2	160·4	+16·3	+11·9
176·469 C	248	1268	141	723	175·7	159·8	+16·7	−24·4
177·523 C	130	669	87	448	177·3	161·3	+17·0	+40·0
178·401 G	78	381	65	316	177·8	161·7	+17·3	−52·9
179·338 C	44	221	57	287	180·5	164·4	+16·8	+67·2
180·401 C	15	71	45	215	180·0	163·8	+16·8	−80·8
Means ..	..	..	73	350	177·00	161·22	+16·35	..

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Spot *a*.								
1916. d					°	°	°	°
173·419 C	64	337	34	179	179·5	164·6	+16·5	−12·2
174·380 C	66	507	34	264	180·3	165·3	+16·6	− 1·4
175·485 G	70	467	38	252	181·0	165·9	+16·1	+16·7
176·469 C	77	434	46	260	181·8	166·6	+16·2	−30·5
177·523 C	66	358	47	254	181·5	166·2	+16·5	+44·2
178·401 G	50	272	45	245	181·1	165·8	+16·8	−55·4
179·338 C	38	200	51	268	181·2	165·8	+16·8	+67·9
180·401 C	15	71	45	215	180·0	164·5	+16·8	+80·8

Group 7771.—July 14–26. A regular spot, *a* of Group 7748, occasionally with some very small unstable attendants. These are most numerous and widely scattered on July 20 and 21.

195·409 G	9	52	26	147	180·0	166·7	+16·8	−80·6
196·361 C	18	90	23	115	181·0	167·6	+17·0	−67·0
197·373 C	25	127	21	108	180·7	167·3	+16·8	−53·9
198·361 C	27	144	18	96	180·7	167·2	+17·0	−40·8
199·383 G	31	165	18	94	180·6	167·0	+16·9	−27·4
200·325 G	34	171	18	91	180·4	166·8	+17·1	−15·2
201·354 G	20	164	10	84	180·0	166·3	+17·5	− 1·9
202·426 G	32	155	17	81	179·4	165·6	+17·5	+11·6
203·497 G	20	117	11	67	179·7	165·9	+17·4	−26·1
204·500 C	13	97	9	64	179·5	165·6	+17·7	−39·2
205·383 C	17	81	14	65	179·4	165·4	+18·0	+50·8
206·488 G	6	31	7	37	179·2	165·2	+18·3	+65·2
207·420 G	3	8	6	17	179·1	165·0	+18·6	+77·4
Means ..	..	..	15	82	179·98	166·28	+17·43	..

RECURRENT SERIES, 770.

Group 7735 seen in Rotation 838.
,, 7754 ,, ,, 839.

Group 7735.—May 30–June 6. A cluster of very small markings *p* Group 7733. The group is not seen on June 3, but has revived by June 4, and increases rapidly afterwards.

150·373 G	2	5	1	3	113·1	88·1	+12·5	−23·6
151·414 G	0	4	0	2	114·0	88·9	+12·5	− 8·9
152·470 C	6	15	3	8	114·9	89·6	+12·5	+ 6·0
153·312 G	0	6	0	3	115·4	90·0	+10·3	−17·6
154·306 G	0	0	0	0	..	..	..	..
155·309 G	0	9	0	6	114·7	88·9	+12·1	+43·3
156·434 G	15	39	15	38	114·5	88·5	+12·2	+58·0
157·400 G	16	64	24	97	113·9	87·8	+12·4	+70·2
Means ..	..	..	5	20	114·36	88·83	+12·07	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

RECURRENT SERIES, 770—*continued.*

Group 7754.—June 21–July 2. An irregular stream following very closely Groups 7751 and 7753. The rear spot is much the largest member, but the entire group is unstable, and by June 29 it has separated into three distinct clusters.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
172·389 C	1	25	(3	133	120·4	92·1	+12·0)*	−84·9
173·419 C	37	332	67	598	117·8	89·4	+11·9	−73·9
174·380 C	41	357	45	389	116·5	87·9	+12·6	−62·4
175·485 G	56	473	42	355	116·0	87·2	+12·6	−48·3
176·469 C	41	241	25	149	115·7	86·8	+12·4	−35·6
177·523 C	37	228	20	123	116·0	86·9	+11·7	−21·3
178·401 G	70	332	36	169	117·1	87·8	+11·3	− 8·6
179·338 C	39	195	20	99	116·9	87·5	+11·9	+ 3·6
180·401 C	82	216	43	114	117·8	88·2	+12·1	+18·6
181·419 G	50	194	30	116	118·2	88·5	+12·1	+32·4
182·363 G	45	155	31	107	116·8	86·9	+12·2	+43·5
183·322 G	6	34	6	31	117·4	86·3	+13·0	+56·8
Means ..	..	..	33	205	116·93	87·58	+12·16	..

RECURRENT SERIES, 771.

Group 7736 seen in Rotation 838.
" 7749 " " 839.

Group 7736.—May 30–June 4. Intermittent. A minute spot on May 30; a few very small scattered spots on June 2; two small composite spots on June 3; three on June 4.

150·373 G	1	2	1	1	154·6	133·5	+15·4	+17·9
151·414 G	0	0	0	0	..	..	..	..
152·470 C	0	0	0	0	..	..	..	..
153·312 G	10	33	9	29	151·3	129·8	+13·5	+53·5
154·306 G	16	51	20	63	149·8	128·2	+13·0	+65·2
155·309 G	0	24	0	55	148·5	126·8	+12·8	−77·1
Means ..	..	..	5	25	151·05	129·58	+13·68	..

Group 7749.—June 20–29. A regular spot, sometimes with a few very small followers. The leader diminishes steadily in size, and nothing is seen on June 27, but a very small marking is near its place on June 28.

170	No	Photograph						
171·362 G	12	109	14	129	154·1	123·6	+11·6	−64·8
172·389 C	17	156	13	123	154·7	124·0	+11·4	−50·6
173·419 C	24	150	15	95	155·3	124·4	+11·5	−36·4
174·380 C	24	129	13	71	155·2	124·2	+11·4	−23·7
175·485 G	16	98	8	50	155·3	124·1	+11·0	− 9·0
176·469 C	13	27	7	14	155·3	123·9	+11·0	+ 4·0
177·523 C	8	30	4	16	155·9	124·3	+11·1	+18·6

Group 7749—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
178·401 G	0	0	0	0	..	..	..	..
179·338 C	0	4	0	3	157·6	125·7	+10·4	+44·3
180·401 C	0	8	0	7	154·4	122·3	+11·5	+55·2
Means ..	..	..	7	51	155·31	124·06	+11·21	..

RECURRENT SERIES, 772.

Group 7737 seen in Rotation 838.
" 7751 " " 839.

Group 7737.—June 3–6. A short stream of normal type appearing suddenly on June 3. The leading spot, *a*, develops rapidly, but has passed out of sight by June 6. *b* represents the rear of the stream.

154·306 G	35	88	24	60	124·8	101·3	+13·6	+40·2
155·309 G	36	151	31	131	126·1	102·5	+12·8	−54·7
156·434 G	47	160	77	262	128·3	104·5	+12·5	−71·8
157·400 G	5	31	(13	87	123·1	99·2	+14·2)*	−79·4
Means ..	..	..	44	151	126·40	102·77	+12·97	..

Spot *a*.

154·306 G	22	61	15	42	126·1	102·2	+13·3	−41·5
155·309 G	15	82	14	77	128·2	104·1	+12·6	−56·8
156·434 G	44	141	75	240	130·9	106·7	+12·3	+74·4

Spots *b*.

154·306 G	14	23	9	15	122·2	101·8	+14·1	+37·6
155·309 G	8	32	6	26	122·1	101·6	+14·3	+50·7
156·434 G	3	11	4	15	124·0	103·4	+13·9	+67·5
157·400 G	5	31	13	87	123·1	102·3	+14·2	+79·4

Group 7751.—June 21–July 3. Two large regular spots, of which *b*, the one in the rear, is the smaller and a composite spot by June 25. Later it breaks up, and the leader, *a*, remains alone by July 2. A few small unstable companions are seen occasionally near *a* and *b*.

172·389 C	31	116	69	274	127·4	98·8	+13·1	−77·9
173·419 C	54	222	62	253	127·5	98·7	+13·0	−64·2
174·380 C	72	382	58	309	127·4	98·5	+13·0	−51·5
175·485 G	88	377	55	238	127·8	98·7	+13·1	−36·5
176·469 C	112	623	63	349	127·2	97·9	+13·3	−24·1
177·523 C	100	656	52	341	127·5	98·0	+13·6	− 9·8
178·401 G	121	687	62	350	126·5	96·9	+13·7	+ 0·8

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
RECURRENT SERIES, 772. Group 7751—*continued.*								
1916. d					°	°	°	°
179·338 C	110	598	57	311	126·5	96·7	+13·6	+13·2
180·401 C	86	354	49	202	127·1	97·2	+13·3	+27·9
181·419 G	45	279	30	187	127·1	97·0	+13·0	+41·3
182·363 G	27	162	23	139	127·7	97·4	+12·4	+54·4
183·322 G	16	77	20	98	127·6	97·2	+12·4	+67·0
184·357 C	10	45	28	127	127·3	96·7	+12·3	+80·4
Means ..	..	..	48	244	127·28	97·67	+12·06	..
Spot *a* (evidently *a* of Group 7737).								
172·389 C	27	88	55	178	129·5	102·8	+12·9	−75·8
173·419 C	24	152	26	164	129·5	102·6	+13·0	−62·2
174·380 C	28	218	22	170	129·7	102·7	+13·0	−49·2
175·485 G	51	253	32	157	129·4	102·2	+12·9	−34·9
176·469 C	46	300	25	165	129·1	101·7	+13·0	−22·2
177·523 C	52	345	27	176	128·9	101·4	+13·0	− 8·4
178·401 G	63	293	32	149	128·6	100·9	+12·9	− 2·9
179·338 C	59	294	31	156	128·5	100·7	+12·7	+15·2
180·401 C	44	233	26	135	128·2	100·2	+12·6	+29·0
181·419 G	28	217	19	148	127·9	99·8	+12·5	+42·1
182·363 G	26	152	22	131	127·7	99·4	+12·4	+54·4
183·322 G	16	77	20	98	127·6	99·2	+12·4	+67·0
184·357 C	10	45	28	127	127·3	98·7	+12·3	+80·4
Spot *b* (representing *b* of Group 7737).								
172·389 C	4	28	14	96	123·4	100·1	+13·6	−81·9
173·419 C	30	69	40	92	123·9	100·5	+13·1	−67·8
174·380 C	44	164	38	143	124·4	100·9	+13·2	−54·5
175·485 G	38	116	25	75	125·2	101·5	+13·3	−39·1
176·469 C	66	322	38	184	125·5	101·7	+13·9	−25·8
177·523 C	39	279	20	145	125·7	101·7	+14·2	−11·6
178·401 G	44	302	22	154	125·2	101·1	+14·3	− 0·5
179·338 C	37	216	19	112	125·1	100·9	+14·5	+11·8
180·401 C	42	122	24	70	124·9	100·5	+14·4	+25·7
181·419 G	17	61	11	40	124·6	100·1	+14·6	+38·8
182·363 G	0	11	0	9	124·7	100·1	+14·3	+51·4
RECURRENT SERIES. 773. Group 7740 seen in Rotation 839. ,, 7767 ,, ,, 840. Group 7740.—June 8–20. A large stable regular spot, *a*. It is followed by an irregular train of small spots after June 8, and the group has developed into a stream of normal type by June 13. The following part of the stream soon breaks up, and the leader, *a*, remains alone after June 17.								
159·321 G	21	128	66	403	297·5	262·1	+ 6·6	−80·8
160·420 G	50	293	66	395	295·7	260·1	+ 6·6	−68·0
161·379 G	90	425	78	370	296·3	260·5	+ 7·2	−54·7
Group 7740—*continued.*								
1916. d					°	°	°	°
162·344 G	99	535	65	353	296·8	260·8	+ 6·9	−41·5
163·429 C	107	722	61	412	295·7	259·4	+ 7·6	−28·2
164·594 G	177	929	92	483	294·4	257·9	+ 8·1	−14·1
165·408 D	196	994	98	497	294·7	258·0	+ 8·2	− 3·0
166·553 G	225	984	117	512	296·3	259·3	+ 8·1	+13·8
167·440 G	132	684	74	383	296·3	259·1	+ 8·0	+25·5
168·325 G	91	526	58	337	297·0	259·6	+ 8·0	+37·9
169·553 G	64	351	57	312	298·5	260·9	+ 7·4	+55·7
170	No	Photograph.						
171·362 G	18	85	47	220	297·9	259·9	+ 7·6	+79·0
Means ..	..	..	73	390	296·43	259·80	+ 7·53	..
Spot *a*.								
159·321 G	21	128	66	403	297·5	261·3	+ 6·6	−80·8
160·420 G	45	262	57	330	297·3	260·9	+ 6·8	−66·4
161·379 G	65	360	55	302	297·5	260·9	+ 6·9	−53·5
162·344 G	87	478	57	315	297·6	260·8	+ 6·7	−40·7
163·429 C	78	528	44	296	297·7	260·6	+ 6·9	−26·2
164·594 G	108	564	55	288	297·8	260·4	+ 6·9	−10·7
165·408 D	143	688	72	344	298·2	260·7	+ 7·1	+ 0·5
166·553 G	164	722	85	375	298·1	260·3	+ 7·4	+15·6
167·440 G	111	535	63	305	298·1	260·1	+ 7·3	+27·3
168·325 G	81	453	53	294	298·3	260·1	+ 7·4	+39·2
169·553 G	64	349	57	311	298·5	260·0	+ 7·4	+55·7
170	No	Photograph.						
171·362 G	18	85	47	220	297·9	259·0	+ 7·6	+79·0
Group 7767.—July 5–12. A double spot, *a*, followed on July 9 and 10 by a train of small unstable markings. *a* remains alone on July 11, and has disappeared by July 12, but some very small markings are seen near its place.								
186·428 G	13	51	29	113	302·3	260·0	+ 6·7	−77·2
187·169 D	15	105	20	137	302·0	259·5	+ 6·6	−67·7
188·543 G	14	91	11	69	302·3	259·5	+ 6·9	−49·0
189·308 G	22	134	14	86	302·2	259·2	+ 6·8	−39·1
190·340 G	25	80	14	45	301·4	258·2	+ 7·3	−26·3
191·574 G	16	69	8	35	300·7	257·2	+ 7·6	−10·7
192·582 G	6	22	3	11	302·1	258·4	+ 6·9	+ 4·1
193·346 G	1	11	1	6	301·4	257·5	+ 7·5	+13·5
Means ..	..	..	13	63	301·80	258·69	+ 7·04	..
Spot *a* (evidently *a* of Group 7740).								
186·428 G	13	51	29	113	302·3	259·4	+ 6·7	−77·2
187·169 D	15	105	20	137	302·0	259·0	+ 6·6	−67·7
188·543 G	14	91	11	69	302·3	258·9	+ 6·9	−49·0

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

RECURRENT SERIES, 773. Group 7767. Spot *a*—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. a					°	°	°	°
189·308 G	22	134	14	86	302·2	258·7	+ 6·8	−39·1
190·340 G	22	57	12	31	302·3	258·5	+ 6·6	−25·4
191·574 G	14	41	7	21	302·2	258·1	+ 6·6	− 9·2
192·582 G	6	22	3	11	302·1	257·8	+ 6·9	+ 4·1

RECURRENT SERIES. 774.

Group 7746 seen in Rotation 839.
" 7769 " " 840.
" 7789 " " 841.

Group 7746.—June 17–22. Two small spots on June 17, developing into a straight stream by June 18. *a* is the leader spot.

168·325 G	5	31	3	16	270·9	245·3	+13·1	+11·8
169·553 G	40	145	23	84	271·7	245·9	+12·9	+28·9
170	No	Photograph.						
171·362 G	50	168	42	139	271·1	245·0	+13·0	+52·2
172·389 C	13	76	16	96	272·4	246·2	+12·7	+67·1
173·419 C	0	17	(0	56	273·0	246·6	+12·2)*	+81·3
Means ..	..	..	21	84	271·53	245·60	+12·93	..

Spot *a*.

168·325 G	5	13	3	7	272·3	..	+13·2	+13·2
169·553 G	31	71	18	42	273·3	..	+13·2	+30·5
170	No	Photograph.						
171·362 G	12	28	11	25	274·6	..	+12·8	+55·7
172·389 C	7	24	10	33	275·4	..	+12·7	+70·1

Group 7769.—July 7–19. A large and very stable regular spot, possibly *a* of Group 7746.

188·543 G	28	160	49	278	277·6	250·8	+13·6	−73·7
189·308 G	41	234	46	262	277·7	250·8	+13·6	−63·6
190·340 G	59	324	46	253	277·7	250·7	+13·6	−50·0
191·574 G	68	408	41	249	277·6	250·4	+13·6	−33·8
192·582 G	87	441	47	238	277·4	250·0	+13·6	−20·6
193·346 G	87	475	45	247	277·2	249·7	+13·5	−10·7
194·403 D	91	470	46	240	277·3	249·7	+13·5	+ 3·4
195·409 G	82	437	43	232	277·1	249·3	+13·6	+16·5
196·361 C	80	403	46	234	277·1	249·2	+13·4	+29·1
197·373 C	56	335	38	228	277·1	249·1	+13·5	+42·5
198·361 C	38	255	33	224	277·1	248·9	+13·5	+55·6
199·383 G	23	160	31	218	277·0	248·7	+13·4	+69·0
200·325 G	9	75	28	236	277·3	248·9	+13·3	+81·7
Means ..	..	..	41	241	277·32	249·71	+13·52	..

Group 7789.—August 3–15. A very stable regular spot with dark well-defined umbra, which is approximately circular throughout the apparition, evidently identical with the spot of Group 7769.

1916. a					°	°	°	°
215·299 G	5	44	15	128	276·3	241·5	+12·7	−81·2
216·326 G	8	75	10	97	276·1	241·2	+12·5	−67·8
217·391 C	26	134	22	113	276·0	240·9	+12·5	−53·8
218·352 G	24	166	16	111	275·6	240·3	+12·4	−41·5
219·461 G	35	192	20	108	275·5	240·1	+12·3	−27·0
220·380 C	22	182	11	95	275·5	239·9	+12·4	−14·8
221·334 C	35	184	18	92	275·3	239·6	+12·4	− 2·4
222·467 G	32	194	16	99	275·2	239·3	+12·2	+12·5
223·315 G	30	161	17	89	275·0	238·9	+12·3	+23·5
224·488 G	23	143	15	92	274·9	238·7	+12·4	+38·9
225·451 G	25	102	20	81	274·5	238·1	+12·2	+51·2
226·522 G	13	76	15	88	274·3	237·7	+12·1	+65·2
227·354 G	6	33	12	64	274·1	237·4	+12·0	+76·0
Means ..	..	..	16	97	275·25	239·51	+12·34	..

RECURRENT SERIES. 775.

Group 7772 seen in Rotation 840.
" 7796 " " 841.

Group 7772.—July 17–27. A revival of Group 7749. Two small spots on July 17, of which the leader has disappeared by July 18. Many small spots appear by July 19, and by July 20 the group has become a very long and nearly continuous stream of small spots. After this the leader spot, *a*, develops and becomes a large regular spot, but the following spots diminish, and *a* remains alone on July 26.

198·361 C	5	14	7	18	153·6	112·7	+10·5	−67·9
199·383 G	15	21	13	18	154·4	113·3	+10·7	−53·6
200·325 G	17	82	12	56	153·3	112·0	+10·9	−42·3
201·354 G	89	230	50	129	156·2	114·7	+ 9·5	−25·7
202·426 G	320	1151	163	584	159·3	117·6	+ 8·7	− 8·5
203·497 G	210	992	107	502	161·4	119·5	+ 8·2	− 7·8
204·500 C	143	753	78	405	161·8	119·7	+ 8·5	−21·5
205·383 C	100	500	60	300	163·0	120·7	+ 8·6	−34·4
206·488 G	56	329	44	260	165·1	122·6	+ 8·1	+51·1
207·420 G	32	214	35	235	165·2	122·5	+ 8·0	−63·5
208·435 G	19	119	41	257	165·6	122·7	+ 8·0	+77·3
Means ..	..	..	55	251	159·90	118·00	+ 9·06	..

Spot *a*.

201·354 G	28	56	15	30	159·9	116·4	+ 8·7	−22·0
202·426 G	166	554	83	277	162·8	119·1	+ 8·1	− 5·0
203·497 G	111	553	57	282	164·7	120·7	+ 8·0	+11·1
204·500 C	85	475	47	261	165·1	120·9	+ 8·3	+24·8
205·383 C	69	390	43	242	165·3	120·9	+ 8·3	−36·7
206·488 G	56	320	44	253	165·1	120·5	+ 8·1	+51·1
207·420 G	32	214	35	235	165·2	120·4	+ 8·0	−63·5
208·435 G	19	119	41	257	165·6	120·6	+ 8·0	+77·3

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

RECURRENT SERIES, 775—*continued.*

Group 7796.—August 11–23. A large regular spot, evidently *a* of Group 7772, with occasionally a small companion. An outburst of small spots takes place suddenly behind the group on August 21, but the regular spot remains alone on August 23.

Date, Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
223·315 G	11	64	40	231	168·6	122·8	+ 9·3	−82·9
224·488 G	32	135	41	174	168·0	122·0	+ 9·0	−68·0
225·451 G	36	188	31	162	168·2	122·0	+ 9·0	−55·1
226·522 G	33	228	22	150	168·3	121·9	+ 9·0	−40·8
227·354 G	47	227	27	129	168·4	121·8	+ 9·0	−29·7
228·386 C	52	292	27	152	168·9	122·1	+ 9·3	−15·6
229·354 C	42	288	21	144	169·2	122·2	+ 9·0	− 2·5
230·377 C	43	269	22	137	169·2	122·0	+ 9·1	+11·0
231·336 G	51	242	28	133	169·2	121·8	+ 9·2	+23·7
232·434 C	30	209	19	134	169·9	122·3	+ 9·4	+38·9
233·362 G	29	164	22	126	168·9	121·1	+ 9·6	+50·2
234·338 G	25	105	26	107	167·4	119·4	+10·1	+61·6
235·499 G	4	23	11	65	171·2	122·9	+ 8·5	+80·7
Means ..	..	..	26	142	168·88	121·87	+ 9·19	..

RECURRENT SERIES, 776.

Group 7803 seen in Rotation 841.
Groups 7816 and 7818 seen in Rotation 842.

Group 7803.—August 18–24. A few very small spots widely scattered on August 18; a magnificent composite spot on August 19, roughly in the shape of the letter F; on August 20 it is still further enlarged. After this it breaks up into a cluster of spots, mostly composite, and diminishes steadily.

230·377 C	9	33	5	17	162·1	158·4	+19·6	+ 3·9
231·336 G	255	987	135	523	160·9	157·2	+19·6	−15·4
232·434 C	285	1907	168	1125	161·3	157·6	+19·7	−30·3
233·362 G	357	1594	243	1084	160·4	156·7	+19·4	−41·7
234·338 G	207	884	178	760	160·5	156·8	+19·8	−54·7
235·499 G	56	528	76	713	159·8	156·0	+20·0	−69·3
236·341 C	38	222	91	533	159·1	155·3	+19·9	−79·8
Means ..	..	..	128	679	160·50	156·86	+19·71	..

Group 7816.—September 7–19. Two large regular spots nearly on the same meridian. A few small companions are sometimes seen near them. Only one spot remains after September 17.

250·395 G	12	80	53	351	168·2	148·9	+18·0	−85·5
251·605 G	50	303	68	413	168·0	148·6	+17·4	−69·7
252·170 D	66	375	70	398	167·7	148·3	+17·4	−62·6
253·424 C	66	377	46	264	168·9	149·4	+17·3	−44·8
254·386 C	73	395	44	237	168·8	149·2	+17·2	−32·2

Group 7816—*continued.*

1916. d					°	°	°	°
255·394 C	64	387	35	209	168·8	149·1	+17·2	−18·9
256·397 C	50	344	26	177	169·1	149·4	+17·6	− 5·4
257·341 G	57	234	29	119	169·3	149·5	+16·8	+ 7·3
258·357 C	34	166	18	90	169·6	149·7	+16·7	+21·0
259·442 G	29	126	18	78	169·6	149·6	+16·5	+35·3
260·437 G	22	101	17	77	170·1	150·0	+16·2	+49·0
261·488 C	10	33	10	34	169·3	149·2	+16·2	+62·1
262·447 G	5	38	9	67	169·4	149·2	+16·0	+74·8
Means ..	..	..	34	193	168·98	149·24	+16·96	..

Group 7818.—September 8–15. An irregular stream rapidly diminishing. Two small regular spots, and two or three very small companions are all that remain by September 10.

251·605 G	11	193	24	417	159·5	139·6	+18·4	−78·2
252·170 D	18	88	25	124	159·7	139·8	+18·3	−70·6
253·424 C	9	41	8	34	159·8	139·8	+17·7	−53·9
254·386 C	11	31	7	21	158·9	138·8	+17·0	−42·1
255·394 C	7	35	4	20	159·1	138·9	+16·2	−28·6
256·397 C	11	26	6	14	159·2	138·9	+16·4	−15·3
257·341 G	2	7	1	4	158·4	138·1	+15·6	− 3·6
258·357 C	1	8	1	4	158·5	138·1	+15·6	+ 9·9
Means ..	..	..	9	80	159·14	139·00	+16·90	..

RECURRENT SERIES, 777.

Group 7820 seen in Rotation 842.
,, 7852 ,, ,, 843.

Group 7820.—September 10–22. A long stream of unusual shape, being strongly curved, almost semi-circular, and convex to the Equator. It gradually straightens out, but diminishes quickly after this has been accomplished, leaving only the leader, *a*, by September 21. *a* is the largest and best-defined member of the group, and is usually compound.

253·424 C	10	87	26	271	130·5	165·2	+26·5	−83·2
254·386 C	19	239	28	349	129·9	164·7	+26·3	−71·1
255·394 C	70	388	66	365	130·0	165·0	+26·4	−57·7
256·397 C	89	722	65	527	130·0	165·1	+26·3	−44·5
257·341 G	184	882	114	543	130·7	166·0	+26·0	−31·3
258·357 C	176	1074	97	591	130·7	166·1	+25·4	−17·9
259·442 G	176	844	93	447	130·7	166·2	+25·6	− 3·6
260·437 G	182	850	98	459	131·8	167·5	+25·7	+10·7
261·488 C	76	533	44	309	131·9	167·7	+25·1	+24·7
262·447 G	47	308	31	200	132·3	168·2	+25·1	+37·7
263·377 C	33	252	27	204	133·5	169·6	+24·9	+51·2
264·375 G	16	140	18	157	133·0	169·2	+24·3	+63·9
265·365 G	9	91	17	173	132·6	169·0	+24·3	+76·5
Means ..	..	..	56	353	131·35	166·88	+25·53	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

RECURRENT SERIES, 777. Group 7820—*continued.*

Spot *a*.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916.d					°	°	°	°
253·424 C	10	66	26	171	132·7	162·9	+25·8	−81·0
254·386 C	10	123	13	156	133·4	163·7	+25·7	−67·6
255·394 C	36	180	31	151	134·9	165·3	+25·5	−52·8
256·397 C	44	293	29	196	135·3	165·8	+25·2	−39·2
257·341 G	106	494	63	291	135·0	165·6	+25·2	−27·0
258·357 C	67	443	36	239	135·0	165·7	+24·8	−13·6
259·442 G	80	418	42	217	134·8	165·7	+24·7	+ 0·5
260·437 G	85	379	46	205	134·9	165·9	+24·6	+13·8
261·488 C	57	380	33	220	134·0	165·1	+24·7	+26·8
262·447 G	37	222	25	149	134·1	165·3	+24·3	+39·5
263·377 C	31	219	25	180	133·8	165·1	+24·3	+51·5
264·375 G	16	140	18	157	133·0	164·5	+24·3	+63·9
265·365 G	9	91	17	173	132·6	164·2	+24·3	+76·5

Group 7852.—October 8–19. A small spot, probably *a* of Group 7820, *nf* Group 7845, with a very small faint companion on October 11, 16, and 17.

281·635 G	2	10	3	14	131·4	158·4	+23·9	−70·0
282·382 G	7	20	7	20	131·3	158·4	+24·2	−60·2
283·417 G	6	16	5	12	131·5	158·7	+24·1	−46·4
284·343 C	11	30	7	19	131·7	159·0	+24·5	−34·0
285·363 C	5	17	3	10	131·8	159·2	+24·3	−20·4
286·595 C	4	7	2	4	131·4	158·9	+24·5	− 4·6
287·398 C	2	12	1	6	131·3	158·9	+24·3	− 5·9
288·392 G	6	22	3	12	131·4	159·1	+24·4	+19·1
289·379 C	4	13	2	8	131·2	159·0	+24·6	+32·0
290·343 C	1	10	1	7	130·7	158·6	+23·8	+44·2
291·453 C	4	15	4	15	130·6	158·6	+22·8	+58·7
292·355 C	0	2	0	3	130·9	159·0	+23·6	+70·9
Means ..	..	..	3	11	131·27	158·82	+24·08	..

RECURRENT SERIES, 778.

Group 7831 seen in Rotation 842.
" 7845 " " 843.
" 7870 " " 844.

Group 7831.—September 18–21. A pair of small spots forming in the disturbed 7816–7820 region, and quickly developing into a fine stream, of which *b* is a large regular spot at the rear.

261·488 C	27	57	18	39	150·2	135·3	+17·6	+43·0
262·447 G	57	332	50	289	150·1	135·1	+17·4	+55·5
263·377 C	54	292	66	356	149·2	134·2	+18·3	+66·9
264·375 G	52	233	117	524	147·8	132·7	+18·4	+78·7
Means ..	..	..	63	302	149·33	134·33	+17·93	..

Spot *b*.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian
1916.d					°	°	°	°
261·488 C	16	32	11	21	148·8	138·3	+18·4	+41·6
262·447 G	31	174	26	148	148·7	138·2	+18·4	+54·1
263·377 C	39	206	46	243	148·2	137·7	+18·9	+65·9
264·375 G	43	190	88	390	146·6	136·0	+19·0	+77·5

Group 7845.—October 6–19. A large regular spot, evidently *b* of Group 7831. A short train is seen to the *n* on October 13, of which one member remains until October 16. A new train has formed, *nf*, by October 17, and having greatly increased, becomes the largest part of the group by October 19.

279·357 C	4	56	18	246	145·8	132·9	+18·6	−85·6
280·400 G	41	195	61	292	146·2	133·3	+18·5	−71·5
281·635 G	38	238	33	207	146·2	133·2	+18·3	−55·2
282·382 G	55	261	40	188	145·9	132·9	+18·4	−45·6
283·417 G	53	328	32	197	146·0	133·0	+18·0	−31·9
284·343 C	71	372	38	201	145·9	132·8	+18·1	−19·8
285·363 C	80	421	41	215	145·5	132·4	+18·0	− 6·7
286·595 C	67	489	35	254	145·4	132·2	+18·0	+ 9·4
287·398 C	58	397	31	214	145·3	132·1	+18·3	+19·9
288·392 G	64	360	38	216	144·7	131·4	+17·8	+32·4
289·379 C	44	289	32	208	144·7	131·4	+18·0	+45·5
290·343 C	53	261	49	243	144·2	130·8	+18·4	+57·7
291·453 C	29	238	45	367	143·6	130·2	+19·3	+71·7
292·355 C	17	118	64	377	141·8	128·4	+20·2	+81·8
Means ..	..	..	40	245	145·09	131·93	+18·42	..

Group 7870.—November 2–14. Two widely separated regular spots, *a* and *b*, occasionally with one or two very small companions between them. *b* does not come into view until November 3, and it remains alone after November 12.

306·490 G	7	54	(20	158	152·6	131·5	+18·9)*	−81·0
307·163 D	31	202	63	397	148·9	127·7	+17·9	−75·8
308·390 G	44	310	43	301	150·0	128·7	+17·9	−58·5
309·320 C	47	322	34	235	150·8	129·5	+17·8	−45·5
310·401 G	67	343	40	206	150·9	129·5	+17·6	−31·1
311·355 C	26	244	14	132	152·1	130·6	+18·0	−17·3
312·361 C	39	245	20	127	152·8	131·2	+18·0	− 3·4
313·417 G	41	224	21	116	153·1	131·5	+17·4	+10·8
314·519 C	24	117	13	66	151·7	130·0	+17·4	+24·0
315·363 C	30	76	19	47	151·2	129·4	+17·1	+34·6
316·381 C	13	58	10	44	151·0	129·2	+16·9	+47·8
317·535 G	6	15	6	15	147·7	125·8	+16·1	+59·7
318·426 C	1	11	2	18	148·0	126·0	+16·3	+71·8
Means ..	..	..	24	142	150·68	129·09	+17·37	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

RECURRENT SERIES, 778. Group 7870—*continued.*

Spot *a*.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
306·490 G	7	54	20	158	152·6	137·6	+18·9	−81·0
307·163 D	21	133	35	223	151·6	136·5	+18·6	−73·1
308·390 G	24	193	22	174	152·7	137·6	+18·6	−55·8
309·320 C	21	199	15	140	153·5	138·3	+18·5	−42·8
310·401 G	44	207	26	120	153·8	138·6	+18·4	−28·2
311·335 C	15	170	8	92	154·4	139·1	+18·6	−15·0
312·361 C	23	178	12	93	154·9	139·6	+18·5	− 1·3
313·417 G	24	153	13	81	155·7	140·3	+18·0	+13·4
314·519 C	5	51	3	30	156·0	140·6	+17·8	+28·3
315·363 C	15	30	10	20	156·4	140·9	+17·7	+39·8
316·381 C	0	7	0	6	157·0	141·5	+17·7	+53·8

Spot *b* (possibly the regular spot of Group 7845).

307·163 D	11	69	28	174	145·4	119·9	+17·0	−79·3
308·390 G	20	119	21	127	146·3	120·7	+17·0	−62·2
309·320 C	26	122	20	95	146·8	121·1	+16·8	−49·5
310·401 G	23	136	14	86	146·8	121·0	+16·6	−35·2
311·355 C	11	64	6	35	147·2	121·4	+16·7	−22·2
312·361 C	16	67	8	35	147·3	121·4	+16·8	− 8·9
313·417 G	17	71	9	37	147·4	121·4	+16·8	+ 5·1
314·519 C	19	57	10	31	147·4	121·3	+17·0	+19·7
315·363 C	15	47	9	28	147·4	121·2	+16·7	+30·8
316·381 C	10	31	7	22	147·5	121·2	+16·5	+44·3
317·535 G	6	15	6	15	147·7	121·3	+16·1	+59·7
318·426 C	1	11	2	18	148·0	121·6	+16·3	+71·8

RECURRENT SERIES. 779.

Group 7833 seen in Rotation 842.
,, 7853 ,, ,, 843.
,, 7876 ,, ,, 844.

Group 7833.—September 19–24. A pair of composite spots appearing suddenly and quickly developing into a stream which declines, or is partly hidden by faculæ, on reaching the West limb. *a* is the leader spot.

262·447 G	18	43	10	24	109·9	153·5	−26·7	−15·3
263·377 C	46	168	28	101	110·3	154·0	−26·8	−28·0
264·375 G	39	242	27	169	111·2	155·1	−26·5	+42·1
265·365 G	34	234	30	208	111·3	155·3	−26·1	+55·2
266·352 G	43	235	56	299	110·7	154·9	−26·4	+67·7
267·485 G	4	31	(21	165	114·6	159·0	−24·7)*	+86·5
Means ..	..	..	30	160	110·68	154·56	−26·50	..

Spot *a*.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
262·447 G	11	23	6	13	111·0	149·8	+26·4	+16·4
263·377 C	35	114	21	68	111·8	150·8	+26·5	+29·5
264·375 G	27	150	19	108	112·9	152·0	+26·3	+43·8
265·365 G	22	162	21	151	113·4	152·7	+25·7	+57·3
266·352 G	32	144	44	200	113·1	152·5	+25·8	+70·1
267·485 G	4	31	21	165	114·6	154·2	−24·7	+86·5

Group 7853.—October 8–22. A large regular spot (probably *a* of Group 7833), becoming double on October 10, and followed by a train which develops from October 10 to 12, but declines later and has disappeared by October 20, leaving the leader, now a regular spot, alone.

281·635 G	10	44	(34	151	117·7	162·8	+26·0)*	−83·7
282·382 G	26	180	49	338	115·7	160·9	+26·1	−75·8
283·417 G	47	359	51	391	115·2	160·5	+25·9	−62·7
284·343 C	66	471	54	386	114·5	160·0	+26·1	−51·2
285·363 C	67	485	45	325	114·3	160·0	+26·1	−37·9
286·595 C	94	553	54	315	114·0	159·9	+26·3	−22·0
287·398 C	83	594	46	327	113·3	159·3	+26·5	−12·1
288·392 G	110	574	58	304	112·6	158·7	+26·5	+ 0·3
289·379 C	58	527	32	290	111·8	158·1	+26·6	+12·6
290·343 C	48	454	28	268	111·1	157·5	+26·5	+24·6
291·453 C	39	369	26	247	109·6	156·2	+26·4	+37·7
292·355 C	23	212	19	172	109·5	156·3	+26·8	+49·5
293·333 C	26	156	29	172	109·6	156·5	+26·5	+62·5
294·436 G	14	90	27	174	108·4	155·5	−25·9	−75·9
295·170 D	2	17	(10	81	108·4	155·6	+26·2)*	+85·5
Means ..	..	..	40	285	112·27	158·42	+26·32	..

Group 7876.—November 6–17. A composite spot, *a*, with a close companion, *nf*, on November 6 to 8. Numerous small unstable spots form behind *a*, which diminishes but becomes more definite. The group is an irregular stream November 9–15, after which *a* alone remains.

310·401 G	40	140	75	263	107·2	132·7	−24·0	−74·8
311·355 C	17	143	19	156	107·5	133·0	−23·4	−61·9
312·361 C	24	214	19	169	107·6	133·2	−23·4	−48·6
313·417 G	35	337	22	216	107·7	133·4	−23·7	−34·6
314·519 C	49	337	28	192	107·4	133·2	−23·7	−20·3
315·363 C	88	447	48	241	107·4	133·3	−23·8	− 9·2
316·381 C	43	302	23	163	106·6	132·5	−24·1	+ 3·4
317·535 G	57	254	32	142	106·0	132·0	−23·5	+18·0
318·426 C	41	101	25	63	107·6	133·7	−23·5	+31·4
319·425 G	7	37	5	27	107·5	133·7	−23·0	+44·5
320·336 C	7	31	7	30	107·7	134·0	−23·3	+56·7
321·485 G	5	19	8	38	107·1	133·5	−23·3	+71·2
Means ..	..	..	26	142	107·28	133·18	−23·56	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

RECURRENT SERIES, **779.** Group 7876—*continued.*

Spot *a* (probably the third apparition of *a* of Group 7833).

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d						°	°	°
310·401 G	32	117	59	216	107·5	130·2	+23·7	−74·5
311·355 C	16	131	17	143	107·6	130·3	+23·4	−61·8
312·361 C	20	198	16	156	107·7	130·5	+23·3	−48·5
313·417 G	28	295	18	189	108·0	130·9	+23·2	−34·3
314·519 C	29	169	16	95	108·4	131·4	+23·1	−19·3
315·363 C	48	214	26	116	108·5	131·5	+23·1	− 8·1
316·381 C	33	127	17	67	108·3	131·4	+23·2	+ 5·1
317·535 G	26	95	15	53	107·9	131·1	+23·0	+19·9
318·426 C	40	85	25	54	108·2	131·4	+23·4	+32·0
319·425 G	7	37	5	27	107·5	130·8	+23·0	+44·5
320·336 C	7	31	7	30	107·7	131·1	+23·3	+56·7
321·485 G	5	19	8	38	107·1	130·6	+23·3	+71·2

RECURRENT SERIES. **780.**

Group 7865 seen in Rotation 844.
,, 7891 ,, ,, 845.

Group 7865.—October 31–November 5. A very small but definite spot on October 31. Some others have formed behind it by November 1, making with it a short straight stream, of which the rear spot, *b*, becomes the chief.

304·348 C	2	4	1	2	263·0	269·1	−21·4	+ 1·2
305·384 G	11	33	6	19	262·3	268·4	−21·3	+14·1
306·490 G	20	82	13	52	261·9	268·0	−21·3	+28·3
307·163 D	35	184	25	129	261·7	267·8	−21·0	+37·0
308·390 G	25	118	23	107	260·4	266·6	−21·3	+51·9
309·320 C	6	53	8	68	260·0	266·2	−20·8	+63·7
Means ..	..	..	13	63	261·55	267·68	−21·18	..

Spot *b*.

306·490 G	14	46	9	29	260·6	267·0	−21·7	+27·0
307·163 D	30	126	21	87	260·8	267·3	−21·2	+36·1
308·390 G	21	106	19	95	260·0	266·5	−21·2	+51·5
309·320 C	5	49	6	62	259·7	266·2	−20·9	+63·4

Group 7891.—November 21–30. A large regular spot, *a*, closely followed by an irregular train of small unstable spots. The group declines rapidly after November 25.

325·446 G	7	60	31	263	261·5	268·7	−21·0	−82·2
326·536 C	27	231	44	379	259·1	266·3	−21·4	−70·2
327·440 C	50	357	54	382	258·5	265·7	−21·4	−58·9
328·315 C	53	377	43	305	258·6	265·8	−21·4	−47·3

Group 7891—*continued.*

1916.					°	°	°	°
329·331 C	56	490	37	323	258·8	266·0	−21·2	−33·7
330·494 G	92	429	52	245	258·5	265·8	−21·0	−18·6
331·533 G	62	340	33	184	258·5	265·8	−21·4	− 4·0
332·439 G	40	217	22	119	259·3	266·6	−21·3	+ 7·8
333·330 C	24	84	14	49	259·5	266·8	−21·5	+19·7
334·322 C	4	20	3	13	258·6	266·0	−21·3	+31·9
Means ..	..	..	33	226	259·09	266·35	−21·29	..

Spot *a* (apparently *b* of Group 7865).

325·446 G	7	60	31	263	261·5	267·7	−21·0	−82·2
326·536 C	24	174	37	268	260·5	266·7	−21·1	−68·8
327·440 C	40	253	40	256	260·2	266·4	−21·0	−57·2
328·315 C	43	295	34	230	259·8	266·0	−21·1	−46·1
329·331 C	44	403	29	262	259·7	266·0	−21·1	−32·8
330·494 G	75	356	43	203	259·4	265·7	−21·1	−17·7
331·533 G	41	277	22	150	259·3	265·6	−21·3	− 4·1
332·439 G	38	194	21	107	259·6	265·9	−21·2	− 8·1
333·330 C	23	78	13	45	259·6	265·9	−21·5	+19·8
334·322 C	4	16	3	10	259·1	265·5	−21·4	+32·9

RECURRENT SERIES. **781.**

Group 7895 seen in Rotation 845.
,, 7918 ,, ,, 846.

Group 7895.—November 30–December 7. A wide pair of small spots on November 30. On and after December 1, the group is a long straight stream of small spots. A great development has taken place by December 4, when the group is seen as a stream of normal type, *a* being the leader.

334·322 C	12	28	7	16	209·5	227·9	−23·0	−17·2
335·345 C	27	105	15	58	210·8	229·2	−22·9	− 2·4
336·335 C	20	84	11	47	212·0	230·5	−22·6	+11·8
337·438 C	30	138	18	84	212·7	231·3	−22·4	+27·1
338·491 G	99	469	72	342	213·5	232·1	−22·6	+41·7
339·335 C	86	551	76	494	213·2	231·9	−22·4	+52·6
340·341 C	48	279	62	363	212·9	231·6	−22·2	+65·5
341·377 C	13	67	38	192	212·5	231·3	−22·3	+78·8
Means ..	..	..	37	199	212·14	230·73	−22·55	..

Spot *a*.

338·491 G	56	322	42	242	215·9	227·7	−22·3	+44·1
339·335 C	50	330	48	314	216·0	227·9	−21·8	+55·4
340·341 C	27	162	40	240	216·0	227·9	−21·6	+68·6
341·377 C	6	27	26	119	216·5	228·4	−21·5	+82·8

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

RECURRENT SERIES, 781—*continued.*

Group 7918.—1916 December 22–1917 January 3. A large regular spot, probably *a* of Group 7895, slightly elongated, and developing a double umbra by December 30. It has divided into two spots by January 3. One or two very small distant followers are occasionally seen.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
356·568 G	28	121	72	306	215·5	228·0	−21·4	−78·1
357·335 C	36	205	48	271	216·6	229·1	−21·1	−66·9
358·440 C	47	328	40	282	216·2	228·7	−21·4	−52·7
359·377 C	59	426	41	294	216·0	228·6	−21·4	−40·6
360·510 C	67	492	40	290	215·8	228·4	−21·4	−25·9
361·498 C	82	488	44	264	215·6	228·3	−21·7	−13·0
362·349 C	78	533	41	282	215·0	227·7	−21·7	− 2·4
363·305 D	62	435	33	235	215·4	228·1	−22·0	+10·5
364·429 G	57	366	33	212	214·7	227·5	−22·0	+24·6
365·181 D	60	347	38	222	214·6	227·4	−22·4	+34·4
366·364 C	47	271	38	217	213·7	226·5	−22·4	+49·1
367·342 C	24	172	26	186	213·4	226·3	−22·3	+61·7
368·364 C	11	76	21	147	213·4	226·3	−22·0	+75·2
Means ..	..	..	40	247	215·07	227·76	−21·78	..

RECURRENT SERIES, 781*.

Group 7896 seen in Rotation 845.
,, 7924 ,, ,, 846.

Group 7896.—November 30–December 12. A regular spot, occasionally with a very small distant companion. A fresh outburst takes place on December 9, and a regular spot forms. One small companion follows on December 10 to 12.

334·322 C	4	30	9	69	150·0	169·1	+23·1	−76·7
335·345 C	11	53	14	66	148·9	168·0	+22·7	−64·3
336·335 C	11	65	10	57	148·3	167·5	+22·7	−51·9
337·438 C	13	99	9	67	147·8	167·0	+22·8	−37·8
338·491 G	16	109	9	64	148·2	167·5	+22·4	−23·6
339·335 C	23	79	13	45	147·8	167·1	+22·7	−12·8
340·341 C	9	40	5	22	147·2	166·6	+22·6	− 0·2
341·377 C	9	18	5	10	146·7	166·2	+22·7	+13·0
342·313 C	1	12	1	7	146·5	166·0	+22·5	+25·1
343·319 C	34	147	22	97	143·4	163·0	+22·5	+35·3
344·447 C	22	155	19	133	144·3	163·9	+22·7	+51·0
345·325 C	12	65	14	78	144·6	164·3	+22·5	+62·9
346·326 C	5	32	11	72	144·3	164·0	+22·5	+75·8
Means ..	..	..	11	61	146·77	166·17	+22·65	..

Group 7924.—1916 December 27–1917 January 2. A small regular spot on December 27, near the place of Group 7890, but more probably a new formation. A distant train of spots has come into view by December 28, of which only one remains on December 31. This is also seen on January 1, when the original leader has disappeared, but on January 2 a very small marking is visible near the original leader's position.

361·498 C	4	14	(9	32	154·0	199·2	+24·4)*	−74·6
362·349 C	16	50	23	71	151·7	197·0	+24·8	−65·7
363·305 D	38	167	36	160	151·7	197·1	+24·8	−53·2

Group 7924—*continued.*

1916. d					°	°	°	°
364·429 G	29	103	21	74	152·1	197·7	+24·9	−38·0
365·181 D	20	53	13	34	152·1	197·8	+25·6	−28·1
366·364 C	2	8	1	5	148·0	193·8	+25·5	−16·6
367·342 C	0	3	0	2	155·5	201·4	+25·0	+ 3·8
Means ..	..	..	16	58	151·85	197·47	+25·10	..

RECURRENT SERIES, 782.

Group 7899 seen in Rotation 845.
,, 7920 ,, ,, 846.

Group 7899.—December 5–10. Three small spots on December 5, which have developed by December 7 into a large regular spot, *a*, closely followed by a cluster of small unstable companions. The greater part of the group has passed off the disc by December 10.

339·335 C	12	36	6	19	179·6	101·4	+ 6·6	+19·0
340·341 C	34	144	20	85	178·1	99·7	+ 6·6	+30·7
341·377 C	99	491	71	359	180·1	101·4	+ 6·9	+46·4
342·313 C	72	384	69	379	180·6	101·7	+ 6·5	+59·2
343·319 C	21	198	34	357	181·8	102·7	+ 6·6	+73·7
344·447 C	0	6	(0	21	174·8	95·4	+ 6·0)*	+81·5
Means ..	..	..	40	240	180·04	101·38	+ 6·64	..

Spot *a*.

340·341 C	14	67	8	40	179·5	101·2	+ 6·8	+32·1
341·377 C	69	332	52	249	181·5	103·0	+ 7·0	+47·8
342·313 C	40	229	42	243	183·1	104·4	+ 6·6	+61·7
343·319 C	13	130	27	267	183·9	104·9	+ 6·6	+75·8

Group 7920.—1916 December 24–1917 January 5. A large regular spot, apparently *a* of Group 7899, with occasionally one or two very small faint followers.

358·440 C	12	50	39	161	188·4	110·3	+ 7·1	−80·5
359·377 C	40	139	56	196	187·8	109·5	+ 7·1	−68·8
360·510 C	32	183	28	159	187·5	108·9	+ 7·1	−54·2
361·498 C	42	246	28	165	187·4	108·6	+ 7·4	−41·2
362·349 C	55	256	32	151	187·4	108·4	+ 7·7	−30·0
363·305 D	53	281	28	149	187·4	108·2	+ 8·0	−17·5
364·429 G	56	295	29	150	187·3	107·9	+ 8·0	− 2·8
365·181 D	62	296	32	151	187·4	107·8	+ 8·5	+ 7·2
366·364 C	54	252	30	139	187·5	107·6	+ 8·6	+22·9
367·342 C	41	246	26	155	187·6	107·5	+ 8·5	+35·9
368·364 C	48	182	38	144	187·8	107·5	+ 8·6	+49·6
369·478 G	24	127	29	151	187·9	107·4	+ 8·5	+64·3
370·483 C	7	47	18	118	188·4	107·6	+ 8·5	+78·1
Means ..	..	..	32	153	187·68	108·25	+ 7·97	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS—*continued.*

RECURRENT SERIES, 783.

Group 7905 seen in Rotation 845.
" 7925 " " 846.

Group 7905.—December 9–10. A very small spot on December 9; two small clusters on December 10.

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
1916. d					°	°	°	
343·319 C	0	4	0	3	145·3	101·4	−14·4	+37·2
344·447 C	4	15	4	13	147·5	103·4	−14·3	+54·2
Means ..	..	..	2	8	146·40	102·40	−14·35	..

Group 7925.—1916 December 27–1917 January 3. A wide pair of small spots, of which the rear has disappeared by December 31.

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
1916. d					°	°	°	°
361·498 C	0	8	0	29	146·3	91·7	−13·3	−82·3
362·349 C	1	13	1	20	146·8	92·1	−13·0	−70·6
363·305 D	7	15	6	14	148·0	93·1	−13·3	−56·9
364·429 G	16	31	11	21	147·7	92·7	−13·4	−42·4
365·181 D	9	22	5	13	150·9	95·8	−12·7	−29·3
366·364 C	3	10	2	5	151·6	96·3	−12·6	−13·0
367·342 C	3	7	2	4	151·5	96·0	−12·7	− 0·2
368·364 C	1	8	1	4	151·2	95·6	−12·8	+13·0
Means ..	..	..	4	14	149·25	94·16	−12·98	..

ROYAL OBSERVATORY, GREENWICH.

LEDGERS

OF THE

AREAS AND HELIOGRAPHIC POSITIONS

OF THE

PRINCIPAL GROUPS OF SUN SPOTS

DEDUCED FROM THE MEASUREMENT OF THE

SOLAR PHOTOGRAPHS

FOR EACH DAY IN THE YEAR

1916.

LEDGER II.—GROUPS SEEN ONLY IN ONE APPARITION.

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS, seen only in ONE APPARITION, DERIVED from PHOTOGRAPHS taken at the OBSERVATORIES of GREENWICH, THE CAPE, KODAIKÁNAL and DEHRA DÛN, in the YEAR 1916.

[The columns in this Ledger correspond in all respects to those in Ledger I.]

Group 7575.

1915 December 25–1916 January 1. A sparse unstable stream forming in the rear of Group 7573, and generally arranged in two loose clusters, of which the following has greatly diminished by December 31.

Date, Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
$\bar{7}$·502 G	11	44	6	24	30·8	30·9	−19·2	−14·9
$\bar{6}$·459 C	29	76	15	40	30·2	30·3	−19·5	− 2·9
$\bar{5}$·480 C	37	147	20	78	30·9	31·0	−19·3	+11·3
$\bar{4}$·441 G	26	85	15	50	30·6	30·7	−20·0	+23·6
$\bar{3}$·337 C	26	149	17	96	31·6	31·7	−19·6	+36·4
$\bar{2}$·458 C	15	70	12	59	32·9	32·9	−19·0	+52·5
$\bar{1}$·363 C	3	24	4	30	34·1	34·1	−18·7	+65·6
0·444 C	0	20	0	55	34·0	34·0	−20·4	+79·8
Means ..	..	..	11	54	31·89	31·95	−19·46	..

Group 7581.

1915 December 26–1916 January 8. A large regular spot followed by an irregular train of small spots.

$\bar{6}$·459 C	2	24	11	128	308·0	308·4	−17·4	−85·1
$\bar{5}$·480 C	8	166	13	272	307·4	307·7	−17·5	−72·2
$\bar{4}$·441 G	47	262	49	277	306·1	306·3	−17·5	−60·9
$\bar{3}$·337 C	51	333	40	260	306·4	306·6	−17·8	−48·8
$\bar{2}$·458 C	60	454	39	284	306·2	306·3	−17·6	−34·2
$\bar{1}$·363 C	75	449	41	248	306·6	306·6	−17·2	−21·9
0·444 C	67	466	35	242	306·8	306·8	−17·1	− 7·4
1·423 C	82	439	43	228	306·9	306·8	−17·2	+ 5·6
2·367 C	57	331	31	179	307·0	306·8	−17·1	+18·1
3·451 C	73	314	45	192	307·1	306·9	−17·3	+32·5
4·379 C	46	239	33	170	306·5	306·2	−17·7	+44·1
5·472 C	26	181	25	177	306·9	306·5	−17·8	+58·9
6·508 C	19	107	33	184	307·8	307·4	−17·7	+73·4
7·431 C	5	24	24	115	307·3	306·8	−18·2	+85·1
Means ..	..	..	33	211	306·93	306·86	−17·51	..

Group 7584.

1915 December 29–1916 January 8. A few very small spots on December 29, rapidly developing into a fine straight stream, of which *a* and *b*, the first and last members, are large regular spots. The group declines rapidly after January 1, and both *a* and *b* have broken up by January 7.

$\bar{3}$·337 C	2	13	2	19	286·9	287·2	+12·3	−68·3
$\bar{2}$·458 C	100	449	89	403	286·6	286·8	+14·1	−53·8
$\bar{1}$·363 C	90	677	64	479	286·8	286·9	+14·0	−41·7

Group 7584—*continued.*

1916. d					°	°	°	°
0·444 C	122	761	72	449	286·9	286·8	+14·2	−27·3
1·423 C	94	602	51	325	286·3	286·1	+14·8	−15·0
2·367 C	72	448	38	237	286·7	286·4	+14·8	− 2·2
3·451 C	67	433	36	234	286·5	286·1	+15·5	+11·9
4·379 C	37	183	21	106	286·7	286·1	+15·1	+24·3
5·472 C	15	80	10	54	286·9	286·2	+14·8	+38·9
6·508 C	6	48	5	42	286·9	286·1	+15·0	+52·5
7·431 C	4	28	6	39	289·5	288·6	+13·6	+67·3
Means ..	..	..	36	217	286·97	286·66	+14·38	..

Spot *a*.

$\bar{2}$·458 C	45	223	38	190	288·6	288·8	+13·6	−51·8
$\bar{1}$·363 C	53	307	36	209	289·0	289·1	+13·8	−39·5
0·444 C	62	313	36	182	289·1	289·2	+13·9	−25·1
1·423 C	34	139	18	75	289·8	290·0	+14·4	−11·5
2·367 C	20	126	10	66	289·9	290·2	+14·1	+ 1·0
3·451 C	22	113	12	61	290·2	290·7	+14·2	+15·6
4·379 C	16	60	10	36	290·6	291·2	+14·1	+28·2
5·472 C	9	34	6	24	291·1	291·8	+13·9	+43·1
6·508 C	4	21	4	20	290·2	291·0	+13·8	+55·8
7·431 C	0	16	0	23	290·3	291·3	+13·9	+68·1

Spot *b*.

$\bar{2}$·458 C	50	210	47	197	284·6	284·8	+14·4	−55·8
$\bar{1}$·363 C	38	338	28	247	284·8	284·9	+14·3	−43·7
0·444 C	57	355	34	213	284·6	284·5	+14·6	−29·6
1·423 C	44	327	24	180	284·6	284·4	+15·0	−16·7
2·367 C	43	266	23	141	284·8	284·5	+15·4	− 4·1
3·451 C	38	222	21	120	285·0	284·6	+15·7	+10·4
4·379 C	20	100	11	57	284·8	284·3	+15·6	+22·4
5·472 C	6	40	4	26	283·9	283·3	+15·1	+35·9
6·508 C	2	23	2	19	284·2	283·5	+15·3	+49·8

Group 7586.

1915 December 30–1916 January 7. A few small unstable spots in an irregular stream, *s* Group 7584. The leader, *a*, is a small regular spot.

$\bar{2}$·458 C	4	24	4	23	283·0	283·3	+ 7·6	−57·4
$\bar{1}$·363 C	26	105	20	76	283·9	284·0	+ 7·7	−44·6
0·444 C	32	99	19	58	284·7	284·6	+ 7·6	−29·5

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Group 7586—*continued.*								
1916. d					°	°	°	°
1·423 C	21	90	11	48	286·8	286·5	+ 8·2	−14·5
2·367 C	13	64	7	33	286·7	286·2	+ 7·8	− 2·2
3·451 C	15	68	8	36	288·3	287·5	+ 8·5	+13·7
4·379 C	13	18	8	10	290·9	289·9	+ 8·2	+28·5
5·472 C	8	14	6	10	291·5	290·3	+ 8·1	+43·5
6·508 C	6	14	6	13	291·6	290·2	+ 8·0	+57·2
Means ..	..	..	10	34	287·49	286·94	+ 7·97	..
Spot *a*.								
1̄·363 C	11	46	8	32	285·9	286·0	+ 7·4	−42·6
0·444 C	15	50	9	29	287·3	287·2	+ 7·1	−26·9
1·423 C	20	55	10	29	287·9	287·6	+ 7·3	−13·4
2·367 C	13	27	7	14	288·8	288·3	+ 7·4	− 0·1
3·451 C	15	53	8	28	289·9	289·1	+ 8·2	+15·3
4·379 C	13	18	8	10	290·9	289·9	+ 8·2	+28·5
5·472 C	8	14	6	10	291·5	290·3	+ 8·1	+43·5
6·508 C	6	14	6	13	291·6	290·2	+ 8·0	+57·2
Group 7592.								
January 2–12. Four small spots appearing suddenly on January 2 and developing during the succeeding days into a long, broad, and irregular stream of spots, mostly small and unstable and grouped into three clusters. The leader of the group, *a*, has become a fully developed and stable spot by January 6, and remains alone by January 10.								
1·423 C	23	84	23	86	241·1	241·0	−17·6	−60·2
2·367 C	47	209	35	155	242·8	242·7	−17·0	−46·1
3·451 C	55	303	33	182	243·1	242·9	−18·4	−31·5
4·379 C	126	671	69	369	243·0	242·8	−18·6	−19·4
5·472 C	171	895	89	465	243·6	243·4	−18·5	− 4·4
6·508 C	107	606	57	321	244·9	244·6	−18·7	+10·5
7·431 C	37	375	21	214	246·0	245·7	−19·6	+23·8
8·426 C	36	169	24	112	248·0	247·6	−19·2	+38·9
9·460 G	20	105	17	89	248·7	248·3	−18·7	+53·2
10·440 C	9	48	11	58	248·2	247·7	−18·5	+65·6
11·383 C	2	15	4	32	247·5	247·0	−18·3	+77·3
Means ..	..	..	35	189	245·17	244·88	−18·46	..
Spot *a*.								
5·472 C	41	301	21	157	247·9	247·7	−18·7	− 0·1
6·508 C	55	330	29	175	248·5	248·2	−18·7	+14·1
7·431 C	27	206	16	119	249·1	248·8	−18·9	+26·9
8·426 C	36	147	24	98	249·1	248·7	−18·9	+40·0
9·460 G	20	96	17	82	248·9	248·5	−18·7	+53·4
10·440 C	9	48	11	58	248·2	247·7	−18·5	+65·6
11·383 C	2	15	4	32	247·5	247·0	−18·3	+77·3
Group 7594.								
January 4–16. A large regular spot, *a*, usually with double nucleus, and surrounded at a considerable distance by a few attendants, none of which persist long.								
1916. d					°	°	°	°
3·451 C	7	83	18	215	195·3	194·9	−14·1	−79·3
4·379 C	23	155	30	200	194·9	194·4	−14·1	−67·5
5·472 C	42	277	34	227	195·4	194·7	−14·1	−52·6
6·508 C	51	309	34	204	194·9	194·1	−14·4	−39·5
7·431 C	43	332	25	189	194·9	194·0	−14·6	−27·3
8·426 C	42	361	21	188	194·5	193·5	−14·4	−14·6
9·460 G	49	372	25	190	194·6	193·4	−14·4	− 0·9
10·440 C	55	302	29	157	194·5	193·2	−14·7	+11·9
11·383 C	55	225	31	126	194·3	192·9	−15·0	+24·1
12·480 G	27	186	17	119	193·8	192·3	−14·9	+38·1
13·537 G	21	136	17	110	193·4	191·7	−15·1	+51·6
14·377 C	15	76	16	82	193·3	191·5	−15·0	+62·6
15·468 C	0	51	0	105	193·1	191·2	−14·8	+76·7
Means ..	..	..	23	163	194·38	193·22	−14·58	..
Group 7606.								
January 17–23. Intermittent. A cluster of three very small markings on January 17; a very small marking on January 20, which has developed into a large cluster by January 21, the members of which tend to coalesce and to form a large composite spot.								
16·445 C	2	41	1	23	101·2	102·1	+22·8	− 2·3
17·304 D	0	0	0	0	..	..	..	..
18·422 C	0	0	0	0	..	..	..	..
19·517 G	1	3	1	2	99·7	100·7	+21·5	+36·6
20·559 C	53	228	46	198	98·3	99·4	+22·1	+48·9
21·376 C	16	119	18	137	97·9	99·0	+22·4	+59·3
22·477 C	15	177	31	363	96·3	97·5	+23·4	+72·2
Means ..	..	..	14	103	98·68	99·74	+22·44	..
Group 7611.								
January 23–February 1. A group arising suddenly *nf* the place of Group 7609, and evidently a fuller development of the same disturbance, represented in the previous rotation by Group 7593. A ring of small spots on January 23; the group gradually lengthens out and becomes a straight stream. The leader is the largest member of the group and becomes elliptical in shape. The following spots soon diminish and disappear, the leader alone remaining by January 31.								
22·477 C	30	129	24	102	337·1	334·3	+15·6	−47·0
23·428 C	30	217	19	139	338·7	335·8	+14·8	−32·9
24·438 G	60	284	34	159	340·5	337·4	+14·7	−17·8
25·404 C	67	355	36	188	341·3	338·1	+14·4	− 4·3
26·427 C	63	376	34	203	341·6	338·3	+14·2	+ 9·5
27·442 C	51	352	30	204	342·0	338·6	+14·2	+23·3

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Group 7611—*continued.*								
1916. d					°	°	°	°
28·374 C	51	323	34	213	342·1	338·6	+14·2	+35·6
29·482 C	22	203	19	173	342·3	338·6	+13·9	+50·4
30·185 K	24	138	27	153	343·0	339·2	+14·2	+60·4
31·442 C	12	60	30	148	342·3	338·4	+14·1	+76·2
Means ..	..	..	29	168	341·09	337·73	+14·43	..
Group 7617. January 30–February 5. An area of feeble disturbance in which a few very small unstable markings are seen to form and disappear.								
29·482 C	4	14	3	10	247·1	243·8	−16·6	−44·8
30·185 K	0	20	0	12	246·6	243·2	−16·6	−36·0
31·442 C	14	53	7	28	247·8	244·3	−14·2	−18·3
32·364 C	7	37	4	19	248·7	245·1	−13·9	− 5·2
33·360 C	0	4	0	2	250·1	246·4	−14·8	+ 9·3
34·457 G	0	10	0	5	248·2	244·4	−15·0	+21·8
35·435 G	2	8	1	5	248·0	244·1	−16·0	+34·5
Means ..	..	..	2	12	248·07	244·47	−15·30	..
Group 7624. February 5–12. An irregular stream forming suddenly and quickly developing into a very fine stream of normal type. The leader, *a*, and rear spot, *b*, are both composite and very large. Only *b* remains fully visible on February 12.								
35·435 G	73	184	39	98	200·2	199·0	−18·9	−13·3
36·354 C	153	823	78	420	200·3	199·0	−19·1	− 1·1
37·439 G	217	1155	115	612	200·7	199·4	−18·8	+13·6
38·400 G	256	1333	146	760	200·7	199·4	−18·9	+26·2
39·424 G	197	1406	130	928	200·6	199·2	−19·1	+39·6
40·337 C	148	1055	123	875	201·6	200·2	−18·9	+52·6
41·334 C	46	645	52	789	202·1	200·7	−18·5	+66·3
42·376 C	24	225	(42	396	196·9	195·4	−19·5)*	+74·8
Means ..	..	..	98	640	200·89	199·56	−18·89	..
Spot *a*.								
36·354 C	72	417	37	213	203·2	201·1	−18·3	+ 1·8
37·439 G	94	470	50	249	204·1	201·9	−17·5	+17·0
38·400 G	129	589	75	342	204·5	202·2	−17·6	+30·0
39·424 G	90	446	63	312	204·9	202·6	−18·1	+43·9
40·337 C	65	484	59	440	205·9	203·5	−18·0	+56·9
41·334 C	13	258	19	390	207·6	205·2	−17·5	+71·8
Spot *b*.								
1916. d					°	°	°	°
36·354 C	60	286	31	146	197·2	196·4	−19·3	− 4·2
37·439 G	112	514	59	270	197·7	196·9	−19·3	+10·6
38·400 G	109	677	61	379	197·3	196·5	−19·5	+22·8
39·424 G	107	751	67	473	197·1	196·3	−19·8	+36·1
40·337 C	74	531	56	398	196·7	195·9	−19·7	+47·7
41·334 C	33	376	33	376	196·3	195·5	−19·4	+60·5
42·376 C	19	164	31	269	195·6	194·7	−19·5	+73·5
Group 7631. February 9–19. A large regular spot, diminishing day by day, with proper motion polewards.								
39·424 G	8	43	27	147	78·0	74·6	−15·6	−83·0
40·337 C	14	79	20	115	78·1	74·6	−15·7	−70·9
41·334 C	20	112	19	104	77·8	74·2	−15·9	−58·0
42·376 C	17	98	12	69	78·1	74·5	−15·9	−44·0
43·460 G	15	100	9	58	77·7	74·0	−16·2	−30·1
44·431 G	12	66	6	35	77·2	73·4	−16·2	−17·8
45·521 G	6	16	3	8	77·1	73·2	−16·8	− 3·6
46·333 C	5	12	3	6	77·0	73·0	−17·0	+ 7·0
47·344 C	1	5	1	3	76·8	72·7	−17·1	+20·1
48·345 C	1	4	1	2	76·7	72·5	−17·4	+33·2
49·336 C	1	4	1	3	76·9	72·7	−17·4	+46·5
Means ..	..	..	9	50	77·40	73·58	−16·47	..
Group 7634. February 11–22. A few small spots in an irregular stream *sf* Group 7632. The group develops into a straight stream, which consists chiefly of a large composite spot followed at a considerable distance by a small cluster. The cluster has disappeared by February 19, but shows a revival on February 20.								
41·334 C	1	15	1	22	67·4	60·0	+11·2	−68·4
42·376 C	24	99	21	88	68·5	60·9	+10·2	−53·6
43·460 G	35	173	23	114	70·6	62·8	+10·2	−37·2
44·431 G	61	324	35	185	71·9	63·9	+10·7	−23·1
45·521 G	34	277	18	147	71·5	63·3	+11·1	− 9·2
46·333 C	43	212	23	112	71·5	63·2	+11·3	+ 1·5
47·344 C	29	178	16	96	72·3	63·8	+11·3	+15·6
48·345 C	11	115	7	70	73·3	64·6	+11·6	+29·8
49·336 C	8	41	6	30	73·4	64·6	+11·8	+43·0
50·457 C	2	30	2	29	71·6	62·6	+11·7	+55·9
51·337 C	1	13	1	20	73·1	63·9	+11·3	+69·0
52·410 C	0	4	0	16	71·4	62·0	+10·8	+81·4
Means ..	..	..	13	77	71·37	62·97	+11·10	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Foreshortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Group 7638.								
February 16–25. Two clusters of small spots on February 16. The spots increase in number, and the group develops into a long irregular stream; the leader spot, *a*, becomes regular by February 23.								
1916. d					°	°	°	°
46·333 C	8	40	5	25	32·7	30·8	−18·1	−37·3
47·344 C	3	22	2	12	32·4	30·5	−18·0	−24·3
48·345 C	18	108	9	56	33·9	32·0	−18·5	− 9·6
49·336 C	55	240	28	122	35·6	33·6	−18·9	+ 5·2
50·457 C	81	430	44	232	34·6	32·6	−19·2	+18·9
51·337 C	98	437	58	258	34·4	32·3	−18·9	+30·3
52·410 C	101	640	71	448	34·0	31·9	−19·2	+44·0
53·446 G	86	554	81	521	34·7	32·6	−18·6	+58·4
54·521 G	31	174	46	258	33·7	31·5	−18·6	+71·5
55·450 G	4	21	(13	68	32·6	30·4	−19·2)*	+82·7
Means ..	..	..	38	215	34·00	31·98	−18·67	..
Spot *a*.								
48·345 C	5	29	3	15	37·0	34·6	−18·3	− 6·5
49·336 C	22	107	11	55	38·1	35·6	−18·3	+ 7·7
50·457 C	17	118	10	66	40·3	37·8	−18·9	+24·6
51·337 C	27	90	17	56	41·0	38·4	−18·1	+36·9
52·410 C	15	153	12	121	40·9	38·3	−18·1	+50·9
53·446 G	24	207	27	232	40·7	38·0	−17·7	+64·4
54·521 G	6	44	(14	103	41·5	38·8	−18·2)*	+79·3
Group 7649.								
February 26–March 9. A regular spot, *a*, with some distant followers on February 28, which shows signs of breaking up on February 29. Instead of disappearing, however, the disturbance spreads over an immense area, and several large complex spots with many small companions have formed by March 4. The group then lengthens out and becomes a straggling stream, of which the leader, *b*, and last spot, *c*, are the largest and most stable members. The group diminishes rapidly after March 5.								
56·343 C	7	40	23	131	215·4	211·4	−16·2	−82·8
57·612 G	20	145	24	173	215·3	211·2	−15·9	−66·2
58·388 G	34	166	30	148	214·8	210·7	−15·9	−56·4
59·405 G	41	193	28	131	215·1	210·9	−15·9	−42·7
60·620 G	33	187	18	105	215·4	211·1	−15·9	−26·4
61·342 C	45	275	24	146	215·7	211·3	−15·9	−16·6
62·339 C	113	532	58	271	214·7	210·3	−17·7	− 4·5
63·428 G	183	1015	95	528	214·1	209·6	−18·0	+ 9·3
64·517 G	181	931	100	510	214·0	209·4	−18·5	+23·5
65·460 G	115	595	71	369	214·0	209·4	−18·2	+35·9
66·163 D	91	359	66	258	214·6	209·9	−18·9	+45·8
67·500 G	23	133	26	148	215·2	210·4	−18·9	+64·0
68·327 C	7	56	12	95	214·6	209·8	−18·6	+74·3
Means ..	..	..	44	232	214·84	210·42	−17·27	..
Spot *a*.								
1916. d					°	°	°	°
56·343 C	7	40	23	131	215·4	209·8	−16·2	−82·8
57·612 G	20	145	24	173	215·3	209·6	−15·9	−66·2
58·388 G	29	150	26	134	214·8	209·0	−15·9	−56·4
59·405 G	38	185	26	126	215·1	209·2	−15·8	−42·7
60·620 G	27	148	15	83	215·4	209·4	−15·8	−26·4
61·342 C	23	108	12	57	215·3	209·2	−15·7	−17·0
62·339 C	18	58	9	30	215·6	209·4	−15·9	− 3·6
Spot *b*.								
61·342 C	1	13	1	7	217·0	213·9	−18·6	−15·3
62·339 C	28	100	14	51	216·8	213·6	−18·5	− 2·4
63·428 G	55	384	29	200	217·5	214·3	−17·4	+12·7
64·517 G	87	358	50	204	218·6	215·3	−17·4	+28·1
65·460 G	49	273	32	180	218·8	215·5	−17·6	+40·7
66·163 D	34	183	27	142	219·1	215·7	−18·9	+50·3
67·500 G	17	86	22	113	219·9	216·5	−18·8	+68·7
68·327 C	6	34	14	82	220·1	216·6	−18·4	+79·8
Spot *c*.								
62·339 C	14	76	7	40	210·9	209·0	−19·7	− 8·3
63·428 G	64	217	32	111	209·9	208·0	−19·2	+ 5·1
64·517 G	46	302	25	163	209·1	207·2	−19·2	+18·6
65·460 G	28	137	17	81	208·7	206·7	−18·9	+30·6
66·163 D	44	137	29	90	208·6	206·6	−19·4	+39·8
67·500 G	6	34	5	31	208·0	206·0	−18·9	+56·8
68·327 C	1	18	1	21	207·6	205·6	−18·6	+67·3
Group 7656.								
March 5–11. A disturbed area *nf* Groups 7650 and 7652, in which some small unstable markings are seen. Nothing is visible on March 8 and 9.								
64·517 G	2	8	1	6	146·1	136·9	−14·0	−44·4
65·460 G	4	8	2	5	146·1	136·7	−13·9	−32·0
66·163 D	2	22	1	12	146·4	136·9	−13·6	−22·4
67·500 G	0	0	0	0	..	..	..	..
68·327 C	0	0	0	0	..	..	..	..
69·341 C	6	15	3	8	147·5	137·6	−13·2	+20·6
70·347 C	1	21	1	13	146·9	136·8	−12·8	+33·2
Means ..	..	..	1	6	146·60	136·98	−13·50	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Group 7664.

March 10–20. A number of small, very unstable spots distributed sparsely in a very long line inclined to the equator. The group is not seen on March 14.

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
1916. d					°	°	°	°
69·341 C	3	12	4	14	75·2	107·7	+36·2	−51·7
70·347 C	6	33	6	32	72·3	105·3	+37·3	−41·4
71·520 G	3	75	2	59	72·9	106·4	+36·7	−25·3
72·307 C	3	31	2	22	73·2	107·1	+37·0	−14·6
73·331 C	0	0	0	0	..	..	..	..
74·321 C	10	59	7	41	74·0	108·9	+35·7	+12·7
75·355 C	10	99	8	74	71·7	107·0	+35·8	+24·0
76·519 C	8	75	7	70	74·0	109·9	+35·1	+41·7
77·340 C	17	81	19	92	72·4	108·7	+34·7	+50·9
78·451 C	1	39	2	75	73·1	109·9	+34·7	+66·3
79·341 C	0	11	0	42	71·0	108·2	+34·3	+75·9
Means ..	..	..	5	47	72·98	107·91	+35·75	..

Group 7665.

March 15–20. A very small marking on March 15. A cluster of small spots on March 16, of which two remain on the succeeding days. The two spots move apart, and only the leader remains on March 19.

74·321 C	0	10	0	6	35·9	41·6	−24·4	−25·4
75·355 C	14	53	7	28	37·2	43·0	−23·5	−10·5
76·519 C	21	48	11	25	38·5	44·4	−23·7	+ 6·2
77·340 C	22	30	12	16	38·7	44·7	−23·6	+17·2
78·451 C	9	16	6	10	41·1	47·1	−22·4	+34·3
79·341 C	2	5	1	4	41·1	47·2	−22·7	+46·0
Means ..	..	..	6	15	38·75	44·67	−23·38	..

Group 7666.

March 16–21. A small spot not seen on March 19.

75·355 C	0	4	0	16	321·4	349·1	−32·7	−86·3
76·519 C	2	8	3	12	320·1	348·2	−33·0	−72·2
77·340 C	5	11	5	12	319·3	347·7	−32·8	−62·2
78·451 C	0	0	0	0	..	..	..	..
79·341 C	0	3	0	2	319·9	349·0	−32·7	−35·2
80·351 C	0	14	0	8	318·9	348·4	−32·8	−22·9
Means ..	..	..	1	8	319·92	348·48	−32·80	..

Group 7668.

March 17–27. A pair of small spots on March 17, gradually developing on the succeeding days into a composite spot followed by several small spots in a straight train. The leader breaks up and remains alone on March 26 as a close pair.

1916. d					°	°	°	°
76·519 C	7	25	10	37	321·2	319·3	−19·9	−71·1
77·340 C	28	147	27	141	322·2	320·3	−19·5	−59·3
78·451 C	23	139	16	99	322·0	320·0	−19·9	−44·8
79·341 C	22	146	13	86	323·9	321·9	−19·5	−31·2
80·351 C	30	211	16	114	323·8	321·8	−19·3	−18·0
81·538 C	58	199	30	101	324·5	322·5	−19·3	− 1·7
82·494 C	30	105	16	55	325·1	323·0	−19·3	+11·6
83·434 G	20	62	11	35	325·3	323·2	−19·2	+24·2
84·441 G	19	45	12	27	325·2	323·1	−19·1	+37·3
85·340 G	9	36	7	28	325·2	323·1	−18·7	+49·2
86·305 C	4	16	4	17	325·3	323·1	−18·9	+62·0
Means ..	..	..	15	67	323·97	321·94	−19·33	..

Group 7671.

March 20–April 1. A very large and complex group led by a large well-defined spot, *a*. The group appears like a fine stream of normal type with the addition of two or three minor streams diverging from the main one in the *sp* direction. At the end of the main stream is a partially formed regular spot, *b*, which has disintegrated by March 28.

79·341 C	6	76	(15	187	278·9	268·9	+12·6)*	−76·2
80·351 C	35	307	45	400	277·2	267·1	+13·8	−64·6
81·538 C	124	916	103	760	276·8	266·5	+13·7	−49·4
82·494 C	211	1597	143	1086	276·2	265·8	+13·8	−37·3
83·434 G	247	1379	146	814	276·3	265·8	+14·2	−24·8
84·441 G	217	1196	119	658	276·5	265·9	+14·2	−11·4
85·340 G	244	1343	132	725	276·7	265·9	+14·1	+ 0·7
86·305 C	120	1062	66	584	276·6	265·7	+14·3	+13·3
87·336 C	106	785	65	479	277·0	266·0	+14·5	+27·3
88·405 G	60	450	45	338	279·0	267·9	+15·0	+43·4
89·457 C	31	293	32	302	279·1	267·8	+15·0	+57·4
90·360 C	19	221	31	360	279·3	267·9	+15·2	+69·5
91·350 G	4	40	19	192	278·6	267·1	+15·6	+81·9
Means ..	..	..	79	558	277·44	266·62	+14·45	..

Spot *a*.

79·341 C	6	76	15	187	278·9	269·5	+12·6	−76·2
80·351 C	28	239	35	296	278·5	268·9	+14·2	−63·3
81·538 C	57	419	46	335	279·3	269·6	+14·9	−46·9
82·494 C	76	572	49	372	279·9	270·1	+15·3	−33·6
83·434 G	105	584	61	339	280·2	270·3	+15·3	−20·9
84·441 G	118	607	63	327	280·2	270·2	+15·1	− 7·7
85·340 G	119	621	64	335	279·9	269·7	+14·9	+ 3·9

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Group 7671. Spot *a*—*continued.*								
1916. d					°	°	°	°
86·305 C	64	563	36	315	279·7	269·4	+14·9	+16·4
87·336 C	87	482	55	304	279·8	269·4	+15·1	+30·1
88·405 G	52	386	39	290	279·0	268·5	+15·0	+43·4
89·457 C	29	260	30	268	279·1	268·5	+15·0	+57·4
90·360 C	18	140	29	228	279·3	268·5	+15·2	+69·5
91·350 G	4	40	19	192	278·6	267·7	+15·6	+81·9
Spot *b*.								
82·494 C	29	199	21	147	270·5	258·9	+13·6	−43·0
83·434 G	29	198	18	123	270·2	258·5	+13·3	−30·9
84·441 G	51	203	29	114	270·1	258·3	+13·5	−17·8
85·340 G	41	199	22	107	269·9	258·0	+13·4	− 6·1
86·305 C	19	132	10	71	269·9	257·8	+13·3	+ 6·6
87·336 C	4	49	2	28	270·0	257·8	+13·8	+20·3
88·405 G	4	46	3	30	270·7	258·3	+14·6	+35·1
Group 7676.								
March 26–April 6. A straight stream of spots of which the last, *a*, is the largest and best defined. This rear spot breaks up by March 30, but reforms again immediately as a very large composite spot, and on April 3 it includes almost the whole of the group. After this it diminishes and some small spots form following it.								
85·340 G	19	67	28	98	210·0	208·7	+19·0	−66·0
86·305 C	39	210	37	202	210·0	208·7	+19·0	−53·3
87·336 C	45	448	34	340	208·9	207·6	+19·5	−40·8
88·405 G	67	456	42	283	209·0	207·7	+19·2	−26·6
89·457 C	99	558	55	312	209·9	208·6	+18·8	−11·8
90·360 C	118	865	66	484	209·7	208·3	+19·5	− 0·1
91·350 G	88	796	50	454	208·1	206·7	+20·0	+11·4
92·466 C	156	720	98	454	208·3	206·9	+20·3	+26·3
93·366 G	104	494	74	351	207·7	206·3	+20·2	+37·6
94·521 G	35	283	33	266	207·2	205·8	+20·6	+52·3
95·380 G	23	201	30	259	206·3	204·9	+20·5	+62·7
96·349 C	8	59	21	157	206·9	205·4	+20·6	+76·1
Means ..	..	..	47	305	208·50	207·13	+19·77	..
Spot *a*.								
85·340 G	9	38	14	60	208·6	208·3	+19·7	−67·4
86·305 C	19	90	20	94	207·5	207·2	+20·3	−55·8
87·336 C	33	282	26	220	207·2	206·9	+20·5	−42·5
88·405 G	44	298	28	191	206·8	206·5	+20·3	−28·8
89·457 C	42	276	24	160	207·3	207·0	+20·3	−14·4
90·360 C	84	662	47	371	208·2	207·9	+20·1	− 1·6

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Group 7676. Spot *a*—*continued.*								
1916. d					°	°	°	°
91·350 G	72	765	41	436	208·1	207·8	+20·0	+11·4
92·466 C	139	684	88	431	208·3	208·0	+20·3	+26·3
93·366 G	100	473	71	336	207·7	207·4	+20·2	+37·6
94·521 G	22	233	21	219	207·2	206·9	+20·6	+52·3
95·380 G	23	194	30	250	206·3	206·0	+20·5	+62·7
96·349 C	8	59	21	157	206·9	206·6	+20·6	+76·1
Group 7678.								
March 28–April 3. A small regular spot followed by some very faint markings on March 30 and April 1.								
87·336 C	2	18	5	43	170·7	155·2	−11·2	−79·0
88·405 G	8	38	9	43	170·8	155·1	−11·1	−64·8
89·457 C	7	85	5	65	171·8	155·9	−11·1	−49·9
90·360 C	20	81	13	51	172·6	156·5	−11·3	−37·2
91·350 G	13	48	7	26	172·2	155·9	−11·5	−24·5
92·466 C	8	31	4	16	174·0	157·6	−11·3	− 8·0
93·366 G	2	19	1	10	174·8	158·2	−11·4	+ 4·7
Means ..	..	..	6	36	172·41	156·34	−11·27	..
Group 7686.								
April 4–12. An irregular cluster of small, faint, unstable spots. Only one spot remains on April 10, but some faint companions have formed near it by April 11.								
94·521 G	2	76	3	122	85·9	73·4	+15·8	−69·0
95·380 G	12	166	12	169	86·0	73·4	+14·5	−57·6
96·349 C	22	158	17	122	85·7	73·0	+14·1	−45·1
97·611 G	13	107	8	63	87·8	74·9	+13·9	−26·3
98·352 G	16	120	9	66	88·9	75·9	+13·8	−15·4
99·436 G	9	75	5	40	89·4	76·3	+13·8	− 0·6
100·350 G	7	13	4	7	90·3	77·1	+13·4	+12·3
101·445 G	1	10	1	6	90·8	77·4	+14·4	+27·3
102·320 C	0	7	0	5	91·3	77·8	+13·1	+39·4
Means ..	..	..	7	67	88·46	75·47	+14·09	..
Group 7692.								
April 9–19. Two very small clusters on April 9. The group rapidly develops into a long straight stream of numerous unstable spots, most of which diminish and disappear after April 15.								
99·436 G	1	19	1	20	27·9	23·0	−18·9	−62·1
100·350 G	11	76	8	56	29·9	25·0	−18·4	−48·1
101·445 G	112	432	68	264	29·5	24·5	−18·3	−34·0
102·320 C	117	505	66	283	28·7	23·7	−18·1	−23·2

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Group 7692—*continued.*								
1916. d					°	°	°	°
103·356 G	120	473	62	246	29·0	23·9	−18·2	− 9·3
104·424 G	131	503	67	257	29·5	24·4	−17·9	+ 5·3
105·408 G	82	478	44	258	29·6	24·4	−18·0	+18·4
106·398 C	24	162	14	97	29·1	23·9	−18·6	+31·0
107·386 G	10	38	7	27	29·0	23·7	−18·1	+43·9
108·591 G	22	47	24	50	31·3	26·0	−18·0	+62·2
109·536 G	2	24	3	42	30·8	25·4	−18·8	+74·1
Means ..	..	..	33	145	29·48	24·35	−18·30	..
Group 7695. April 11–17. A few small spots in a straight stream on April 11. The group extends and breaks up on the succeeding days, and on April 14 only two very widely separated spots, *a* and *b*, remain, of which *b* has disappeared by April 15. *a* shows a considerable motion forwards in longitude.								
101·445 G	15	77	8	39	52·5	26·5	+ 2·0	−11·0
102·320 C	56	155	29	79	52·5	26·3	+ 2·4	+ 0·6
103·356 G	44	177	23	94	54·5	28·0	+ 2·5	+16·2
104·424 G	24	60	14	35	54·5	27·8	+ 2·3	+30·3
105·408 G	6	14	5	11	59·3	32·3	+ 2·6	+48·1
106·398 C	6	20	6	22	60·2	33·0	+ 2·4	+62·1
107·386 G	5	23	10	46	60·3	32·8	+ 1·7	+75·2
Means ..	..	..	14	47	56·26	29·53	+ 2·27	..
Spot *a*.								
101·445 G	6	31	3	16	53·7	27·8	+ 2·2	− 9·8
102·320 C	22	50	11	25	55·2	29·1	+ 2·4	+ 3·3
103·356 G	21	99	11	52	57·0	30·6	+ 2·6	+18·7
104·424 G	12	27	8	18	58·5	31·8	+ 2·4	+34·3
105·408 G	6	14	5	11	59·3	32·4	+ 2·6	+48·1
106·398 C	6	20	6	22	60·2	33·0	+ 2·4	+62·1
107·386 G	5	23	10	46	60·3	32·9	+ 1·7	+75·2
Spot *b*.								
101·445 G	9	46	5	24	51·9	25·9	+ 1·9	−11·6
102·320 C	24	76	12	38	51·1	24·9	+ 2·0	− 0·8
103·356 G	14	62	7	32	51·2	24·7	+ 1·9	+12·9
104·424 G	11	27	6	15	51·4	24·6	+ 2·0	+27·2

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Group 7696. April 13–20. A disturbed area in which a very few small unstable spots appear irregularly; none are seen on April 19.								
1916. d					°	°	°	°
103·356 G	3	14	4	19	332·5	323·1	+15·9	−65·8
104·424 G	5	11	4	10	333·1	323·6	+15·5	−51·1
105·408 G	3	11	2	7	332·3	322·7	+15·6	−38·9
106·398 C	0	11	0	7	332·5	322·8	+17·5	−25·6
107·386 G	1	19	1	10	331·2	321·4	+15·3	−13·9
108·591 G	2	20	1	11	329·5	319·6	+17·4	+ 0·4
109·536 G	0	0	0	0	..	..	..	..
110·551 G	0	22	0	13	331·0	320·9	+16·9	+27·7
Means ..	..	..	2	10	331·73	322·01	+16·30	..
Group 7704. April 25–29. A small disturbed area *sf* Group 7701, in which several very small unstable spots form and disappear irregularly. Revival of Group 7676 in the previous rotation.								
115·322 C	0	3	0	2	213·9	209·7	+19·2	−26·3
116·346 C	4	14	2	7	214·7	210·5	+17·9	−12·0
117·391 G	15	45	8	24	215·3	211·1	+18·8	+ 2·4
118·426 G	20	74	11	41	213·1	208·8	+19·1	+13·9
119·351 G	6	30	3	18	213·4	209·1	+19·4	+26·4
Means ..	..	..	5	18	214·08	209·84	+18·88	..
Group 7707. April 29–May 6. An irregular stream mostly composed of small unstable spots in continual change. The group diminishes after May 2.								
119·351 G	10	34	6	22	151·8	132·5	+11·9	−35·2
120·331 G	36	170	20	95	152·8	133·3	+12·0	−21·2
121·363 G	59	226	30	117	153·2	133·5	+11·9	− 7·2
122·458 C	39	256	20	135	153·8	134·0	+12·1	+ 7·9
123·345 C	34	165	18	90	153·8	133·8	+12·8	+19·6
124·333 C	19	127	11	77	152·8	132·7	+12·4	+31·7
125·394 C	13	43	10	32	152·5	132·2	+12·2	+45·4
126·174 D	1	4	1	4	154·8	134·4	+12·9	+58·0
Means ..	..	..	14	71	153·19	133·30	+12·28	..
Group 7709. April 29–May 11. A large regular spot with occasionally some small followers.								
119·351 G	12	72	57	344	101·9	87·0	−15·0	−85·1
120·331 G	27	189	41	292	102·4	87·4	−15·0	−71·6
121·363 G	41	316	38	294	103·0	87·8	−15·1	−57·4

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Group 7709—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
1916. d					°	°	°	°
122·458 C	69	382	47	263	102·8	87·5	−15·0	−43·1
123·345 C	78	437	46	257	102·8	87·4	−14·8	−31·4
124·333 C	88	489	47	264	102·9	87·4	−14·8	−18·2
125·394 C	76	479	39	244	102·8	87·1	−14·5	− 4·3
126·174 D	85	425	43	217	102·8	87·0	−14·5	+ 6·0
127·686 G	58	364	32	204	102·6	86·6	−14·4	+25·8
128·404 C	54	351	33	218	102·4	86·3	−14·1	+35·1
129·164 D	63	290	45	209	102·7	86·5	−14·0	+45·4
130·311 G	30	167	32	179	104·0	87·7	−13·8	+61·9
131·163 D	18	110	31	184	103·3	86·9	−13·6	+71·5
Means ..	..	..	41	244	102·80	87·12	−14·51	..

Group 7711.

April 30–May 12. A very long irregular stream, mostly composed of numerous small unstable spots in continual change. The spots in the following part of the group tend to die out; those in the preceding part to coalesce, forming a large composite spot by May 5, which becomes regular by May 10.

120·331 G	56	251	134	602	97·0	78·7	+11·0	−77·0
121·363 G	61	569	78	728	94·9	76·5	+11·8	−65·5
122·458 C	83	561	68	465	95·9	77·3	+12·2	−51·0
123·345 C	155	909	104	609	95·0	76·3	+12·2	−39·2
124·333 C	128	732	74	425	94·5	75·6	+12·7	−26·6
125·394 C	143	789	77	426	93·7	74·6	+12·9	−13·4
126·174 D	123	792	64	412	95·5	76·3	+13·3	− 1·3
127·686 G	120	717	66	394	96·0	76·6	+13·7	+19·2
128·404 C	145	770	87	462	96·1	76·6	+13·9	+28·8
129·164 D	76	632	52	430	96·3	76·7	+13·9	+39·0
130·311 G	57	355	52	323	96·7	76·9	+13·6	+54·6
131·163 D	24	180	33	242	96·4	76·5	+13·9	+64·6
132·165 D	28	121	82	353	96·6	76·5	+13·3	+79·0
Means ..	..	..	75	452	95·74	76·55	+12·95	..

Group 7716.

May 6–14. A regular spot usually with small companions around it. The chief spot undergoes a sudden enlargement on May 12, after which the group soon disappears. Near the place of Group 7692, but apparently a fresh formation.

126·174 D	4	12	11	34	16·3	14·2	−20·6	−80·5
127·686 G	10	72	10	73	17·2	15·0	−20·3	−59·6
128·404 C	16	84	13	68	17·0	14·8	−20·2	−50·3
129·164 D	33	261	22	177	16·9	14·7	−20·8	−40·4
130·311 G	41	159	23	91	19·2	17·0	−19·6	−22·9
131·163 D	33	132	18	71	18·3	16·1	−19·5	−13·5

Group 7716—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
1916. d					°	°	°	°
132·165 D	45	223	23	116	17·6	15·4	−18·9	0·0
133·349 C	10	37	5	20	17·5	15·2	−19·0	+15·6
134·311 G	5	18	3	11	18·9	16·6	−18·1	+29·7
Means ..	..	..	14	73	17·66	15·44	−19·67	..

Group 7720.

May 11–21. A small regular spot with several unstable attendants, rather widely scattered from May 11–14. After May 14 the more distant and unstable attendants have disappeared.

131·163 D	2	28	(4	60	315·0	311·1	−20·5)*	−76·8
132·165 D	14	62	17	77	311·9	307·9	−20·2	−65·7
133·349 C	30	130	24	96	312·3	308·3	−19·0	−49·6
134·311 G	31	106	20	68	313·0	309·0	−18·6	−36·2
135·425 G	14	95	8	53	313·6	309·5	−18·9	−20·9
136·253 D	13	69	7	37	313·6	309·5	−19·7	− 9·9
137·350 G	14	50	7	26	313·1	309·0	−19·2	+ 4·1
138·314 G	14	33	8	18	313·5	309·4	−19·5	+17·3
139·453 G	14	54	9	33	314·1	309·9	−18·9	+32·9
140·302 G	9	34	6	24	313·8	309·6	−18·9	+43·9
141·295 G	8	41	7	38	313·5	309·3	−18·4	+56·7
Means ..	..	..	11	47	313·24	309·14	−19·13	..

Group 7721.

May 13–24. A composite spot on May 13, with some small followers on May 14 and 15. The followers have disappeared by May 16, and the chief spot is surrounded by a cluster of small spots. A small spot follows the cluster at a distance on May 18, and the group has expanded into a long straight stream by May 19, of which only the first and last members remain by May 22.

133·349 C	1	14	2	33	286·5	301·0	+25·3	−75·4
134·311 G	11	71	13	86	287·5	302·1	+25·3	−61·7
135·425 G	28	101	23	83	288·2	303·0	+25·1	−46·3
136·253 D	15	96	10	66	288·6	303·5	+24·8	−34·9
137·350 G	28	89	17	53	289·6	304·6	+24·7	−19·4
138·314 G	30	76	17	43	289·5	304·6	+24·8	− 6·7
139·453 G	42	163	24	91	288·0	303·2	+24·5	+ 6·8
140·302 G	41	150	24	89	288·3	303·6	+23·9	+18·4
141·295 G	56	119	37	79	288·9	304·3	+24·0	+32·1
142·445 G	26	75	22	63	289·8	305·3	+24·1	+48·2
143·333 G	12	60	13	67	289·7	305·3	+24·1	+59·9
144·302 G	4	28	8	54	289·9	305·6	+24·0	+72·9
Means ..	..	..	18	67	288·71	303·84	+24·55	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Group 7725.

May 20–28. A small spot on May 20 followed by a distant companion on May 21, 22, and 23. The spot has broken up into a cluster of small markings by May 26, but is not seen on May 27. A small spot is near its place on May 28.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Fore-shortening of Umbra.	Area Corrected for Fore-shortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
140·302 G	18	34	12	23	229·5	210·8	+14·5	−40·4
141·295 G	42	207	25	122	229·3	210·5	+14·4	−27·5
142·445 G	52	192	28	102	230·2	211·3	+14·2	−11·4
143·333 G	42	184	22	96	230·5	211·4	+14·0	+ 0·7
144·302 G	30	157	16	83	230·1	210·9	+13·9	+13·1
145·603 G	16	29	10	17	230·2	210·8	+13·5	+30·4
146·678 G	8	39	6	28	229·1	209·6	+13·6	+43·5
147·497 G	0	0	0	0	..	..	..	..
148·344 G	0	14	0	17	228·6	208·9	+14·5	+65·1
Means ..	..	..	13	54	229·69	210·53	+14·07	..

Group 7726.

May 21–31. A regular spot, *a*, followed by a train of small unstable spots. The train is not seen on May 28, nor after May 29, on which day the train suddenly reappears temporarily.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Fore-shortening of Umbra.	Area Corrected for Fore-shortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
141·295 G	22	73	24	81	196·2	196·1	+20·0	−60·6
142·445 G	50	146	38	110	197·8	197·7	+19·8	−43·8
143·333 G	46	161	29	101	198·5	198·4	+20·0	−31·3
144·302 G	39	189	22	109	198·4	198·3	+20·0	−18·6
145·603 G	37	165	20	89	198·9	198·7	+20·2	− 0·9
146·678 G	17	60	9	33	198·5	198·3	+20·2	+12·9
147·497 G	16	68	9	40	199·1	198·9	+20·3	+24·3
148·344 G	18	29	12	19	198·6	198·4	+20·4	+35·1
149·304 G	18	31	14	23	195·7	195·5	+21·1	+44·9
150·373 G	10	16	12	18	198·6	198·4	+20·9	+61·9
151·414 G	3	12	6	26	198·5	198·3	+21·1	+75·6
Means ..	..	..	18	59	198·07	197·91	+20·36	..

Spot *a*.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Fore-shortening of Umbra.	Area Corrected for Fore-shortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
141·295 G	19	57	20	61	197·2	196·8	+19·6	−59·6
142·445 G	37	95	27	69	199·0	198·6	+19·9	−42·6
143·333 G	22	107	14	66	200·0	199·6	+19·7	−29·8
144·302 G	27	145	15	81	199·9	199·5	+20·0	−17·1
145·603 G	28	111	15	60	200·2	199·8	+20·2	+ 0·4
146·678 G	15	43	8	24	200·0	199·6	+20·2	+14·4
147·497 G	16	61	9	36	199·6	199·2	+20·3	+24·8
148·344 G	18	29	12	19	198·6	198·2	+20·4	+35·1
149·304 G	14	17	11	14	198·6	198·2	+20·6	+47·8
150·373 G	10	16	12	18	198·6	198·1	+20·9	+61·9
151·414 G	3	12	6	26	198·5	198·0	+21·1	+75·6

Group 7729.

May 22–June 2. Two composite spots of which the leader, *a*, moves forward in longitude. The follower shows an enlargement on May 28, but dies down quickly afterwards. On May 31 *a* is represented by a cluster of small spots; on June 1 and 2, by a close pair of newly formed spots.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Fore-shortening of Umbra.	Area Corrected for Fore-shortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
142·445 G	0	37	0	83	164·3	149·3	−15·3	−77·3
143·333 G	48	184	58	221	164·9	149·9	−15·0	−64·9
144·302 G	44	216	35	173	166·8	151·6	−15·6	−50·2
145·603 G	57	241	34	145	168·6	153·3	−15·8	−31·2
146·678 G	54	249	29	136	168·5	153·1	−15·9	−17·1
147·497 G	39	229	20	119	169·4	153·9	−16·1	− 5·4
148·344 G	46	228	21	172	166·8	151·2	−15·8	+ 3·3
149·304 G	39	207	21	111	167·6	151·9	−15·6	+16·8
150·373 G	16	51	9	31	169·7	153·9	−15·7	+33·0
151·414 G	22	58	17	44	169·6	153·7	−15·6	+46·7
152·470 C	32	131	36	147	171·5	155·5	−15·6	+62·6
153·312 G	19	132	36	246	171·8	155·7	−14·8	+74·0
Means ..	..	..	26	136	168·29	152·75	−15·57	..

Spot *a*.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Fore-shortening of Umbra.	Area Corrected for Fore-shortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
143·333 G	19	55	20	59	168·4	153·9	−15·3	−61·4
144·302 G	22	118	17	90	169·5	154·9	−16·2	−47·5
145·603 G	28	137	17	81	170·7	156·0	−16·2	−29·1
146·678 G	29	183	16	99	170·7	155·9	−16·1	−14·9
147·497 G	24	195	12	101	170·5	155·6	−15·9	− 4·3
148·344 G	29	197	15	102	170·0	155·0	−16·0	+ 6·5
149·304 G	27	130	15	72	170·8	155·7	−15·6	+20·0
150·373 G	14	44	9	28	171·3	156·1	−15·6	+34·6
151·414 G	14	42	11	33	171·1	155·8	−15·7	+48·2
152·470 C	25	94	29	109	172·4	157·0	−15·7	+63·5
153·312 G	11	95	22	186	172·6	157·1	−15·3	+74·8

Group 7747.

June 18–24. A few very small spots on June 18 which have developed by June 20 into two unstable clusters, of which the preceding has nearly disappeared by June 24.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Fore-shortening of Umbra.	Area Corrected for Fore-shortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
169·553 G	0	12	0	8	203·7	190·1	+16·7	−39·1
170·	No	Photo	graph.					
171·362 G	29	178	15	94	205·2	191·5	+16·5	−13·7
172·389 C	48	273	25	142	205·5	191·7	+16·6	+ 0·2
173·419 C	31	223	16	118	204·7	190·8	+16·5	+13·0
174·380 C	15	112	9	64	203·4	189·4	+17·1	+24·5
175·485 G	0	12	0	8	203·0	189·0	+17·6	+38·7
Means ..	..	..	11	72	204·25	190·42	+16·83	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Group 7750.

June 21–26. Several small unstable spots usually grouped in two small clusters.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Fore-shortening of Umbra.	Area Corrected for Fore-shortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
172·389 C	3	47	3	50	145·9	174·3	+25·6	−59·4
173·419 C	51	172	41	139	145·0	173·6	+26·4	−46·7
174·380 C	35	161	23	106	145·2	174·0	+26·4	−33·7
175·485 G	14	64	8	37	145·5	174·5	+25·8	−18·8
176·469 C	5	47	3	26	143·3	172·4	+27·0	− 8·0
177·523 C	0	17	0	10	146·1	175·4	+27·6	+ 8·8
Means ..	..	..	13	61	145·17	174·03	+26·47	..

Group 7752.

June 22–30. A few very small spots *s* Group 7750, on June 22, of which only one remains on June 23. This has broken up into a small cluster by June 24, and has nearly disappeared the next day. A revival has taken place by June 26, and the group becomes a continuous stream, at first strongly curved and convex to the Equator, but straight later.

173·419 C	2	5	2	4	143·3	140·4	+19·9	−48·4
174·380 C	2	21	1	13	145·4	142·4	+20·0	−33·5
175·485 G	4	14	2	8	147·3	144·3	+19·5	−17·0
176·469 C	0	6	0	3	146·8	143·8	+20·4	− 4·5
177·523 C	17	96	9	51	145·3	142·3	+20·5	+ 8·0
178·401 G	41	147	23	82	147·9	144·9	+19·1	+22·2
179·338 C	29	111	18	70	148·2	145·2	+18·8	+34·9
180·401 C	19	81	15	64	148·7	145·6	+19·2	+49·5
181·419 G	10	54	12	66	150·8	147·7	+19·6	+65·0
Means ..	..	..	9	40	147·08	144·07	+19·67	..

Group 7753.

June 21–July 1. A regular spot in the declining stage, usually with one small companion; *sf* Group 7751.

172·389 C	1	20	2	72	123·1	89·3	+10·0	−82·2
173·419 C	15	48	20	65	123·5	89·5	+ 9·9	−68·2
174·380 C	16	83	14	73	123·5	89·3	+ 9·9	−55·4
175·485 G	16	107	11	71	123·6	89·2	+ 9·4	−40·7
176·469 C	20	60	11	34	123·7	89·1	+ 9·9	−27·6
177·523 C	15	74	8	38	124·2	89·4	+ 9·9	−13·1
178·401 G	18	31	9	16	124·2	89·2	+ 9·7	+ 1·5
179·338 C	21	49	11	25	124·4	89·2	+ 9·9	+11·1
180·401 C	19	32	11	18	124·3	88·9	+10·0	+25·1
181·419 G	2	9	1	6	124·4	88·8	+10·0	+38·6
182·363 G	2	6	2	5	124·5	88·7	+10·1	+51·2
Means ..	..	..	9	38	123·95	89·15	+ 9·88	..

Group 7755.

June 22–29. A spot, ill-defined at first, but becoming regular as it diminishes. A very small faint cluster precedes it on June 28.

1916. d					°	°	°	°
173·419 C	1	17	3	56	111·8	108·3	−18·9	−79·9
174·380 C	3	35	4	50	111·4	107·9	−18·9	−67·5
175·485 G	12	62	11	57	110·6	107·1	−19·5	−53·7
176·469 C	6	58	4	41	110·7	107·2	−19·6	−40·6
177·523 C	9	42	5	26	110·6	107·0	−19·7	−26·7
178·401 G	15	39	8	19	110·2	106·6	−19·9	−15·5
179·338 C	10	49	5	26	110·7	107·1	−20·1	− 2·6
180·401 C	3	15	2	8	110·2	106·6	−20·0	+11·0
Means ..	..	..	5	35	110·78	107·23	−19·58	..

Group 7757.

June 23–30. A short stream developing into a fine double spot, followed by a considerable train. By June 26 the leader has become regular, and the train is a distant and feeble cluster.

174·380 C	87	268	48	147	161·5	136·4	−14·3	−17·4
175·485 G	136	471	71	245	162·5	137·2	−13·9	− 1·8
176·469 C	101	513	54	272	164·2	138·8	−13·9	+12·9
177·523 C	63	375	37	221	165·2	139·6	−13·5	+27·9
178·401 G	35	270	24	181	165·0	139·3	−13·2	+39·3
179·338 C	38	159	33	138	166·3	140·5	−13·0	+53·0
180·401 C	14	88	19	119	166·2	140·2	−13·1	+67·0
181·419 G	6	28	21	96	166·5	140·4	−12·5	+80·7
Means ..	..	..	38	177	164·68	139·05	−13·42	..

Group 7758.

June 21–28. A small disturbed area *f* Group 7757. No spots are seen on June 23.

172·389 C	0	3	0	3	150·6	150·1	−19·0	−54·7
173·419 C	0	7	0	5	151·7	151·2	−19·1	−40·0
174·380 C	0	0	0	0	..	..	..	..
175·485 G	14	35	8	20	150·3	149·8	−21·3	−14·0
176·469 C	2	11	1	6	151·8	151·3	−20·6	+ 0·5
177·523 C	0	4	0	2	150·6	150·1	−20·0	+13·3
178·401 G	12	33	7	20	150·1	149·6	−20·6	+24·4
179·338 C	1	15	1	10	149·6	149·1	−21·3	+36·3
Means ..	..	..	2	8	150·67	150·17	−20·27	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Group 7760.

June 26–July 2. A very small spot on June 26, *s* Groups 7754 and 7756. The five groups, 7751, 7753, 7754, 7756, and 7760, really form parts of a single disturbance of immense extent, and the distinction between the groups is to a certain degree arbitrary and made for convenience in measurement and reduction. Group 7760 has become a sparse straight stream by June 28, and three small clusters by June 30. A small regular spot alone remains by July 2.

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Foreshortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
1916. d					°	°	°	°
177·523 C	0	12	0	7	112·5	74·3	+ 8·0	−24·8
178·401 G	5	33	3	17	113·0	74·6	+ 8·7	−12·7
179·338 C	33	91	16	46	113·6	75·1	+ 8·2	+ 0·3
180·401 C	32	116	17	60	114·8	76·0	+ 8·2	+15·6
181·419 G	16	83	9	48	114·7	75·7	+ 8·3	+28·9
182·363 G	12	34	8	23	115·3	76·1	+ 8·2	+42·0
183·322 G	4	6	4	5	116·5	77·1	+ 8·0	+55·9
Means ..	..	..	8	29	114·34	75·56	+ 8·23	..

Group 7761.

June 28–July 9. A regular spot diminishing in size. It has dissolved into a very small cluster by July 3, and having disappeared by July 5, it has revived as two small clusters by July 7.

179·338 C	4	29	14	105	33·5	34·9	−20·4	−79·8
180·401 C	10	63	14	85	33·6	35·0	−20·4	−65·6
181·419 G	22	94	20	85	33·6	35·1	−20·8	−52·2
182·363 G	17	89	12	64	33·3	34·8	−20·7	−40·0
183·322 G	27	85	17	53	32·9	34·4	−20·4	−27·7
184·357 C	12	59	7	34	31·7	33·2	−20·5	−15·2
185·304 G	8	21	4	12	31·8	33·3	−20·6	− 2·5
186·428 G	0	0	0	0	..	..	..	..
187·169 D	0	0	0	0	..	..	..	..
188·543 G	21	70	15	50	30·4	31·9	−21·3	+39·1
189·308 G	19	74	16	63	30·5	32·0	−21·7	+49·2
190·340 G	3	22	4	29	31·9	33·4	−20·4	+64·2
Means ..	..	..	10	48	32·32	33·80	−20·72	..

Group 7774.

July 18–23. Two small but very dark spots on July 18; a cluster of small spots on July 19; two clusters on July 20, of which only the following one remains by July 21.

199·383 G	26	55	14	29	200·9	211·3	+22·4	− 7·1
200·325 G	20	84	11	45	200·3	210·7	+22·4	+ 4·7
201·354 G	13	51	7	28	200·4	210·9	+22·2	+18·5
202·426 G	7	30	4	18	198·0	208·5	+22·4	+30·2
203·497 G	4	6	3	4	197·7	208·3	+22·4	+44·1
204·500 C	2	17	2	16	196·6	207·2	+23·0	+56·3
Means ..	..	..	7	23	198·98	209·48	+22·47	..

Group 7776.

July 20–30. Two small spots widely separated on July 20. The group has developed by July 22 into a very sparse straight stream composed of three clusters which increase in size up to July 25. The group diminishes later, and on July 28 only one large composite spot remains with a few small attendants. *c* represents the middle cluster which develops into the composite spot.

1916. d								
201·354 G	3	21	4	28	111·7	86·5	+14·4	−70·2
202·426 G	21	45	18	38	113·5	88·2	+14·5	−54·3
203·497 G	43	146	28	95	114·1	88·7	+15·0	−39·5
204·500 C	62	220	35	123	114·7	89·1	+14·9	−25·6
205·383 C	43	324	22	168	114·0	88·3	+15·1	−14·6
206·488 G	148	618	75	315	115·3	89·5	+14·7	+ 1·3
207·420 G	93	360	49	191	116·8	90·9	+14·5	+15·1
208·435 G	77	358	45	208	117·7	91·6	+14·4	+29·4
209·479 G	55	207	39	145	118·9	92·7	+14·2	+44·5
210·327 G	46	266	41	239	119·8	93·5	+14·1	+56·6
211·325 G	36	125	55	192	120·9	94·5	+13·9	+70·8
Means ..	..	..	37	158	116·13	90·32	+14·52	..

Spot *c*.

203·497 G	16	60	10	38	115·3	89·7	+15·0	−38·3
204·500 C	13	72	7	40	115·6	89·8	+15·0	−24·7
205·383 C	19	149	10	77	116·1	90·2	+14·8	−12·5
206·488 G	57	266	29	136	117·1	91·1	+14·5	+ 3·1
207·420 G	62	213	33	113	117·5	91·4	+14·4	+15·8
208·435 G	53	266	31	154	118·1	91·8	+14·2	+29·8
209·479 G	55	207	39	145	118·9	92·5	+14·2	+44·5
210·327 G	46	266	41	239	119·8	93·3	+14·1	+56·6
211·325 G	36	125	55	192	120·9	94·3	+13·9	+70·8

Group 7777.

July 20–August 1. A large regular spot with several close companions, usually to the south at first and following later. The leader alone remains after July 29.

201·354 G	22	94	84	366	98·4	65·8	+11·9	−83·5
202·426 G	46	248	64	342	98·4	65·6	+12·0	−69·4
203·497 G	77	425	67	370	98·2	65·2	+11·8	−55·4
204·500 C	99	561	66	380	98·2	65·0	+12·0	−42·1
205·383 C	109	753	63	437	98·0	64·7	+12·1	−30·6
206·488 G	155	788	81	410	98·1	64·6	+12·3	−15·9
207·420 G	101	600	51	300	98·4	64·8	+12·3	− 3·3
208·435 G	123	679	63	346	98·4	64·6	+12·6	+10·1
209·479 G	108	541	59	298	98·7	64·8	+12·5	+24·3
210·327 G	85	401	52	245	98·6	64·5	+12·4	+35·4
211·325 G	52	323	40	245	98·9	64·7	+12·5	+48·8
212·332 G	41	200	43	210	98·9	64·5	+12·7	+62·2
213·310 G	24	109	43	196	98·6	64·0	+12·7	+74·8
Means ..	..	..	60	319	98·45	64·83	+12·29	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Group 7778.

July 21–29. Revival of Group 7751. A compact cluster on July 21, which has divided into two clusters by July 22, and is stretched out into an irregular stream by July 24. On July 26 the group again consists of two widely separated clusters, which are reduced to single spots by July 28.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
202·426 G	41	69	26	44	129·3	97·7	+11·0	−38·5
203·497 G	53	184	29	101	129·2	97·5	+11·3	−24·4
204·500 C	87	314	44	160	127·9	96·0	+12·2	−12·4
205·383 C	66	390	33	195	128·1	96·1	+12·7	− 0·5
206·488 G	78	417	41	217	129·3	97·1	+12·9	+15·3
207·420 G	43	194	25	111	129·2	96·8	+13·3	+27·5
208·435 G	30	96	20	64	129·6	97·1	+13·6	+41·3
209·479 G	19	39	17	34	130·0	97·3	+13·4	+55·6
210·327 G	8	31	10	38	129·8	97·0	+13·7	+66·6
Means ..	..	..	27	107	129·16	96·96	+12·68	..

Group 7779.

July 21–29. A number of small unstable spots in an irregular stream, of which only one remains by July 27. Though very faint, it shows an extension on July 28, but has contracted again by July 29. The Groups 7778, 7776, 7777, and 7779 form one very long nearly continuous procession.

202·426 G	8	40	16	91	89·8	59·4	+13·0	−78·0
203·497 G	19	77	21	86	89·7	59·2	+12·8	−63·9
204·500 C	22	94	17	74	89·7	59·0	+13·0	−50·6
205·383 C	18	74	12	47	89·8	59·0	+12·8	−38·8
206·488 G	7	72	4	40	89·2	58·2	+13·4	−24·8
207·420 G	2	40	1	21	88·6	57·5	+13·3	−13·1
208·435 G	4	57	2	29	87·9	56·6	+12·7	− 0·4
209·479 G	5	133	3	69	88·6	57·2	+13·6	+14·2
210·327 G	2	63	1	35	89·5	58·0	+13·0	+26·3
Means ..	..	..	9	55	89·20	58·23	+13·07	..

Group 7780.

July 23–August 2. A regular spot, with occasionally a small companion.

204·500 C	6	39	9	61	68·6	18·7	+ 5·5	−71·7
205·383 C	11	68	11	68	68·3	18·2	+ 5·2	−60·3
206·488 G	33	110	23	78	68·3	17·9	+ 5·1	−45·7
207·420 G	21	141	13	85	68·3	17·7	+ 5·0	−33·4
208·435 G	22	123	12	65	68·4	17·6	+ 4·6	−19·9
209·479 G	29	126	15	63	68·2	17·1	+ 4·7	− 6·2
210·327 G	27	112	14	56	68·8	17·5	+ 4·8	+ 5·6
211·325 G	18	65	10	34	69·4	17·8	+ 4·2	+19·3
212·332 G	9	34	5	20	68·9	17·1	+ 4·4	+32·2
213·310 G	12	16	9	12	69·9	17·9	+ 4·4	+46·1
214·553 G	0	6	0	7	70·5	18·1	+ 4·4	+63·1
Means ..	..	..	11	50	68·87	17·78	+ 4·75	..

Group 7794.

August 7–13. A small well-defined spot, sometimes accompanied by very small scattered unstable markings.

1916. d					°	°	°	°
219·461 G	2	16	2	20	241·1	233·0	−19·9	−61·4
220·380 C	2	11	2	10	240·4	232·2	−20·8	−49·9
221·334 C	0	8	0	6	241·9	233·7	−20·2	−35·8
222·467 G	11	34	6	20	244·5	236·3	−19·1	−18·2
223·315 G	9	38	5	21	244·1	235·8	−17·8	− 7·4
224·488 G	8	26	4	14	242·7	234·3	−16·8	+ 6·7
225·451 G	2	15	1	9	243·2	234·9	−17·1	+19·9
Means ..	..	..	3	14	242·56	234·31	−18·81	..

Group 7795.

August 8–14. Intermittent. Several very small unstable spots in a straight sparse stream which has disappeared by August 11; a pair of small spots is seen on August 14.

220·380 C	0	8	0	6	254·5	2·5	+36·1	−35·8
221·334 C	7	45	4	28	253·7	2·1	+36·4	−24·0
222·467 G	12	62	7	37	252·1	1·1	+36·7	−10·6
223·315 G	5	23	3	13	254·9	4·3	+35·9	+ 3·4
224·488 G	0	0	0	0	..	..	..	..
225·451 G	0	0	0	0	..	..	..	..
226·522 G	2	20	1	15	250·0	1·0	+36·6	+40·9
Means ..	..	..	2	14	253·04	2·20	+36·34	..

Group 7797.

August 12–16. Two very small spots on August 12, both of which develop on the succeeding days, the leader becoming first a compact cluster and then a composite spot, the follower increasing but remaining single.

224·488 G	4	25	2	14	255·7	230·8	−15·3	+19·7
225·451 G	47	137	30	88	254·7	229·7	−15·3	+31·4
226·522 G	55	242	43	189	254·7	229·6	−15·0	+45·6
227·354 G	27	159	27	157	254·4	229·2	−15·2	+56·3
228·386 C	4	61	6	93	252·3	226·9	−15·6	+67·8
Means ..	..	..	22	108	254·36	229·24	−15·28	..

Group 7800.

August 16–22. A double spot, generally accompanied by small unstable markings.

228·386 C	22	52	17	41	133·3	84·6	+ 8·1	−51·2
229·354 C	8	52	5	32	135·3	86·4	+ 7·9	−36·4
230·377 C	18	83	10	45	137·0	87·9	+ 8·2	−21·2
231·336 G	29	137	15	68	138·5	89·2	+ 8·4	− 7·0

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Group 7800—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Fore-shortening of Umbra.	Area Corrected for Fore-shortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
232·434 C	28	124	14	62	138·6	89·1	+ 8·7	+ 7·6
233·362 G	13	45	7	24	139·6	89·9	+ 8·8	+20·9
234·338 G	4	21	2	13	139·1	89·2	+ 9·1	+33·3
Means ..	..	..	10	41	137·34	88·04	+ 8·46	..

Group 7801.

August 16–23. A small regular spot, occasionally accompanied by small unstable markings.

228·386 C	4	27	5	34	116·9	70·1	+ 9·9	−67·6
229·354 C	13	43	11	36	117·5	70·5	+ 9·9	−54·2
230·377 C	9	43	6	28	119·5	72·3	+ 9·0	−38·7
231·336 G	7	12	4	7	120·6	73·2	+ 8·8	−24·9
232·434 C	12	36	6	18	121·6	74·0	+ 8·9	− 9·4
233·362 G	9	27	5	14	121·6	73·8	+ 8·8	+ 2·9
234·338 G	9	20	5	10	122·4	74·4	+ 8·8	+16·6
235·499 G	6	20	4	12	122·5	74·2	+ 9·1	+32·0
Means ..	..	..	6	20	120·33	72·81	+ 9·15	..

Group 7810.

September 1–10. A very small spot, with some faint companions on September 2. The group diminishes and has disappeared by September 5, but has reappeared as a wide pair by September 8.

244·581 G	0	6	0	6	275·9	281·3	−20·9	−54·6
245·389 C	0	13	0	11	273·8	279·2	−21·9	−46·0
246·566 G	2	6	1	4	277·4	282·8	−21·9	−26·9
247·462 G	0	2	0	1	277·2	282·6	−21·9	−15·2
248·611 G	0	0	0	0	..	..	..	..
249·361 G	0	0	0	0	..	..	..	..
250·395 G	0	0	0	0	..	..	..	..
251·605 G	15	35	11	26	276·0	281·5	−20·2	+38·3
252·170 D	9	30	7	25	275·6	281·1	−20·8	+45·3
253·424 C	4	94	5	118	274·8	280·4	−21·4	+61·1
Means ..	..	..	2	19	275·81	281·27	−21·29	..

Group 7812.

September 3–9. A pair of small spots developing into a short stream, of which only the leader remains by September 8.

246·566 G	7	31	4	18	284·1	248·1	−14·5	−20·2
247·462 G	63	229	34	124	284·4	248·3	−13·3	− 8·0
248·611 G	58	289	31	156	285·0	248·7	−13·1	+ 7·7

Group 7812—*continued.*

1916. d					°	°	°	°
249·361 G	60	232	34	135	285·5	249·1	−13·2	+18·1
250·395 G	25	114	16	73	286·3	249·7	−13·3	+32·6
251·605 G	17	46	14	38	286·0	249·3	−13·1	+48·3
252·170 D	9	37	9	37	287·0	250·2	−12·8	+56·7
Means ..	..	..	20	83	285·47	249·06	−13·33	..

Group 7826.

September 14–22. A double spot becoming regular by September 16 and followed by a train of small unstable spots. The leader diminishes greatly after September 21.

257·341 G	5	46	8	77	91·7	54·1	−13·1	−70·3
258·357 C	18	71	18	72	91·7	54·0	−13·0	−56·9
259·442 G	33	120	23	85	93·7	55·8	−12·7	−40·6
260·437 G	35	167	21	100	94·2	56·2	−13·3	−26·9
261·488 C	36	193	20	106	93·7	55·5	−13·5	−13·5
262·447 G	47	215	25	114	93·7	55·4	−13·6	− 0·9
263·377 C	26	158	14	87	94·2	55·7	−13·6	+11·9
264·375 G	25	108	15	64	94·1	55·5	−13·6	+25·0
265·365 G	6	35	4	23	91·5	52·8	−13·6	+35·4
Means ..	..	..	16	81	93·17	55·00	−13·33	..

Group 7827.

September 14–21. A regular spot with a small follower on September 16.

257·341 G	6	58	16	159	85·6	73·7	−17·9	−76·4
258·357 C	10	55	13	73	85·0	73·0	−18·2	−63·6
259·442 G	13	60	11	52	85·0	73·0	−18·1	−49·3
260·437 G	19	60	13	42	84·9	72·8	−18·6	−36·2
261·488 C	12	46	7	28	84·4	72·3	−18·6	−22·8
262·447 G	6	22	3	12	84·1	71·9	−18·6	−10·5
263·377 C	9	15	5	8	83·9	71·7	−18·6	+ 1·6
264·375 G	2	9	1	5	83·4	71·1	−18·6	+14·3
Means ..	..	..	·9	47	84·54	72·44	−18·40	..

Group 7828.

September 14–20. A small spot *f* Group 7826. Other spots form near it, especially on the *p* side, and on September 18 the group is a feeble stream overlapping Group 7826 in longitude but slightly south of it.

257·341 G	0	18	0	51	84·2	47·1	−13·0	−77·8
258·357 C	12	55	15	69	84·6	47·4	−13·0	−64·0
259·442 G	16	101	13	84	85·1	47·7	−13·0	−49·2

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Group 7828—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Fore-shortening of Umbra.	Area Corrected for Fore-shortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1916. d					°	°	°	°
260·437 G	8	32	5	21	85·5	48·0	−13·1	−35·6
261·488 C	8	62	5	35	87·2	49·5	−13·7	−20·0
262·447 G	2	26	1	14	88·3	50·5	−14·0	− 6·3
263·377 C	1	10	1	5	88·0	50·1	−14·1	+ 5·7
Means ..	..	..	6	40	86·13	48·61	−13·41	..

Group 7830.

September 17–25. A large regular spot steadily diminishing.

260·437 G	4	30	21	160	34·1	26·8	+19·6	−87·0
261·488 C	13	97	20	149	34·8	27·5	+19·6	−72·4
262·447 G	24	168	23	163	35·0	27·7	+19·6	−59·6
263·377 C	14	166	10	123	34·9	27·5	+19·6	−47·4
264·375 G	27	141	16	86	35·1	27·7	+19·2	−34·0
265·365 G	30	127	17	70	35·2	27·8	+19·0	−20·9
266·352 G	16	122	8	63	35·3	27·8	+18·9	− 7·7
267·485 G	23	73	12	37	35·4	27·9	+18·8	+ 7·3
268·451 G	11	32	6	17	35·3	27·8	+18·6	+20·0
Means ..	..	..	15	96	35·01	27·61	+19·21	..

Group 7838.

September 26–October 3. Some very small unstable spots *f* Group 7837. The group is not seen on September 27, and only one very small marking is visible on September 29 and 30; the group reappears temporarily on October 3.

269·573 G	0	11	0	8	321·3	333·2	−22·3	−39·2
270·437 G	0	0	0	0	..	..	..	..
271·589 G	2	15	1	9	321·0	332·9	−22·0	−12·9
272·389 C	0	4	0	2	319·8	331·8	−22·3	− 3·6
273·356 C	0	6	0	3	319·6	331·6	−22·4	+ 9·0
274·629 G	0	0	0	0	..	..	..	..
275·303 D	0	0	0	0	..	..	..	..
276·574 C	5	34	5	33	321·4	333·6	−21·7	+53·3
Means ..	..	..	1	7	320·62	332·62	−22·14	..

Group 7842.

October 3–9. A regular spot steadily diminishing.

276·574 C	12	26	18	40	206·0	308·1	−33·0	−62·1
277·378 C	12	53	13	59	205·1	307·5	−33·1	−52·4
278·380 G	4	18	3	15	204·9	307·6	−32·7	−39·4
279·357 C	9	22	7	16	204·2	307·3	−32·8	−27·2

Group 7842—*continued.*

1916. d					°	°	°	°
280·400 G	4	12	3	8	203·8	307·3	−32·8	−13·9
281·635 G	3	5	2	3	202·8	306·7	−32·7	+ 1·4
282·382 G	2	8	1	5	201·1	305·3	−33·0	+ 9·6
Means ..	..	..	7	21	203·99	307·11	−32·87	..

Group 7843.

October 3–16. A large regular spot followed by a small train. A small spot precedes the chief spot from October 7–11.

276·574 C	8	65	27	223	184·8	171·8	+18·7	−83·3
277·378 C	17	144	29	248	183·5	170·5	+18·2	−74·0
278·380 G	33	277	34	283	183·1	170·0	+18·4	−61·2
279·357 C	47	335	36	255	182·6	169·5	+18·5	−48·8
280·400 G	75	418	47	259	182·5	169·3	+18·5	−35·2
281·635 G	95	494	51	267	182·4	169·2	+18·4	−19·0
282·382 G	103	498	54	259	182·0	168·7	+18·5	− 9·5
283·417 G	105	661	54	337	182·1	168·8	+18·3	+ 4·2
284·343 C	80	603	42	320	182·3	168·9	+18·3	+16·6
285·363 C	94	516	55	304	182·1	168·7	+18·6	+29·9
286·595 C	67	414	48	298	181·5	168·0	+18·6	+45·5
287·398 C	44	315	40	284	181·6	168·1	+18·2	+56·2
288·392 G	41	240	55	322	181·1	167·5	+18·0	+68·8
289·379 C	19	118	52	323	179·9	166·3	+17·8	+80·7
Means ..	..	..	45	284	182·25	168·95	+18·36	..

Group 7848.

October 7–17. An irregular stream forming immediately behind Group 7847. Three small spots arranged along a meridian lead the group on October 7. The group has developed the next day into a fine stream quite of the normal type. The leader and terminal spots, *a* and *b* respectively, are both large and composite, and continue to increase until October 10, after which *b* begins to break up and *a* diminishes and becomes regular. The middle of the group is active on October 14 and 15.

280·400 G	49	121	37	92	167·7	106·3	+ 7·8	−50·0
281·635 G	149	704	91	429	165·6	103·9	+ 7·9	−35·8
282·382 G	183	1005	101	553	166·9	105·1	+ 7·7	−24·6
283·417 G	306	1702	156	868	167·5	105·4	+ 7·3	−10·4
284·343 C	309	1663	155	832	167·7	105·4	+ 7·4	+ 2·0
285·363 C	319	1484	166	772	168·1	105·6	+ 7·7	+15·9
286·595 C	227	1310	136	786	170·0	107·2	+ 8·1	+34·0
287·398 C	178	1009	128	716	170·7	107·8	+ 8·0	+45·3
288·392 G	133	733	125	689	170·6	107·4	+ 7·9	+58·3
289·379 C	55	247	84	375	170·6	107·2	+ 8·4	+71·4
290·343 C	3	24	(7	56	164·9	101·3	+ 8·5)*	+78·4
Means ..	..	..	118	611	168·54	106·13	+ 7·82	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Group 7848—*continued.*								
Spot *a*.								
1916. d					°	°	°	°
281·635 G	60	299	35	176	169·4	106·3	+ 7·5	−32·0
282·382 G	79	479	43	259	170·0	106·7	+ 7·5	−21·5
283·417 G	134	787	67	394	170·7	107·2	+ 7·0	− 7·2
284·343 C	153	714	77	357	172·1	108·4	+ 7·3	+ 6·4
285·363 C	145	590	78	319	173·4	109·5	+ 7·1	+21·2
286·595 C	107	656	68	420	175·2	111·0	+ 7·9	+39·2
287·398 C	72	349	57	276	176·6	112·2	+ 7·7	+51·2
288·392 G	63	284	73	329	177·2	112·6	+ 7·3	+64·9
289·379 C	30	110	71	259	177·5	112·7	+ 7·4	+78·3
Spot *b*.								
281·635 G	73	351	46	221	164·0	103·2	+ 8·2	−37·4
282·382 G	88	455	50	259	163·5	102·5	+ 8·1	−28·0
283·417 G	137	719	71	374	164·0	102·8	+ 7·8	−13·9
284·343 C	113	713	57	357	164·3	102·9	+ 8·3	− 1·4
285·363 C	132	583	67	297	164·5	102·9	+ 8·5	+12·3
286·595 C	96	459	55	262	164·9	103·0	+ 8·3	+28·9
287·398 C	68	436	44	283	165·1	103·0	+ 8·2	+39·7
288·392 G	45	305	37	250	165·0	102·7	+ 7·7	+52·7
289·379 C	17	79	20	94	164·8	102·3	+ 7·9	+65·6
290·343 C	3	24	7	56	164·9	102·2	+ 8·5	+78·4

Group 7849.

October 7–15. A pair of small spots on October 7, gradually developing into a small straight stream by October 11. A fresh outbreak has occurred by October 12, but soon dies down, and only a pair of small spots remain by October 14, of which one has disappeared by the next day.

280·400 G	9	24	9	24	161·6	154·6	−18·3	−56·1
281·635 G	33	71	23	50	162·7	155·7	−18·7	−38·7
282·382 G	21	68	13	43	163·1	156·0	−18·9	−28·4
283·417 G	47	163	27	93	163·0	155·9	−19·4	−14·9
284·343 C	30	141	17	79	164·0	156·9	−19·7	− 1·7
285·363 C	48	189	27	106	162·6	155·5	−19·3	+10·4
286·595 C	25	122	16	78	164·2	157·0	−20·1	+28·2
287·398 C	6	32	4	23	164·0	156·8	−20·1	+38·6
288·392 G	1	2	1	2	165·0	157·8	−19·6	+52·7
Means ..	..	..	15	55	163·36	156·24	−19·33	..

Group 7857.

October 14–19. A few very small unstable spots *s* Group 7845. The terminal spot develops on October 17, and becomes a large regular spot before reaching the West limb.

287·398 C	6	19	3	10	141·3	80·7	+ 9·2	+15·9
288·392 G	1	22	1	13	142·0	81·1	+ 8·0	+29·7
289·379 C	6	20	4	14	143·3	82·2	+ 7·5	+44·1

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Group 7857—*continued.*								
1916. d					°	°	°	°
290·343 C	12	46	11	41	143·0	81·7	+ 8·5	+56·5
291·453 C	11	54	15	73	140·6	79·1	+ 9·1	+68·7
292·355 C	3	41	8	106	139·6	77·9	+ 9·4	+79·6
Means ..	..	..	7	43	141·63	80·45	+ 8·62	..

Group 7858.

October 16–22. A large composite spot, surrounded and invaded by bright faculæ when near the East limb. The spot diminishes quickly after October 20.

289·379 C	9	66	17	125	25·8	332·6	−10·3	−73·4
290·343 C	30	146	33	159	25·7	332·3	−10·5	−60·8
291·453 C	31	168	24	128	25·7	332·1	−10·8	−46·2
292·355 C	24	174	15	110	26·0	332·2	−10·7	−34·0
293·333 C	30	197	17	110	26·5	332·5	−10·8	−20·6
294·436 G	13	57	7	30	26·9	332·7	−11·3	− 5·6
295·170 D	1	17	1	9	27·0	332·7	−11·5	+ 4·1
Means ..	..	..	16	96	26·23	332·44	−10·84	..

Group 7860.

October 23–29. A regular spot diminishing rapidly. Some very small unstable companions are seen near on October 25 and 26. The group is not seen on October 27, but a very small spot has appeared by October 28, and a cluster of very faint markings by October 29.

296·409 G	6	30	10	49	293·9	232·2	+ 9·3	−72·6
297·160 D	7	28	7	30	294·1	232·3	+ 9·4	−62·5
298·625 G	5	13	3	9	294·6	232·5	+ 9·0	−42·7
299·442 G	2	13	1	8	294·0	231·7	+ 8·4	−32·5
300·355 C	0	0	0	0	..	..	..	..
301·393 G	0	7	0	4	293·5	230·8	+ 8·5	− 7·3
302·416 C	0	15	0	8	294·8	231·9	+ 8·8	+ 7·5
Means ..	..	..	3	15	294·15	231·90	+ 8·90	..

Group 7861.

October 24–November 3. A very small spot on October 24. A long straight stream composed of many small spots soon develops, of which the leader, *a*, has become a large triple spot by October 29, but has broken up by November 1 into two components.

297·160 D	1	5	1	6	292·4	264·8	−14·6	−64·2
298·625 G	14	70	10	52	294·3	266·5	−16·3	−43·0
299·442 G	39	145	25	91	294·9	267·1	−16·5	−31·6
300·355 C	54	360	31	205	296·0	268·1	−16·5	−18·5

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Group 7861—*continued.*								
1916. d					°	°	°	°
301·393 G	127	572	69	309	296·1	268·1	−16·2	− 4·7
302·416 C	114	630	62	340	296·6	268·5	−16·2	+ 9·3
303·417 G	77	417	45	242	296·6	268·4	−16·2	+22·5
304·348 C	62	444	40	289	295·7	267·4	−16·2	+33·9
305·384 G	57	259	46	207	295·4	267·0	−16·4	+47·2
306·490 G	17	104	20	120	295·0	266·5	−16·6	+61·4
307·163 D	1	14	1	22	294·4	265·8	−16·4	+69·7
Means ..	..	..	32	171	295·22	267·11	−16·19	..
Spot *a*.								
299·442 G	8	23	5	14	298·1	269·4	−16·2	−28·4
300·355 C	30	220	17	123	298·0	269·2	−16·2	−16·5
301·393 G	91	396	49	211	297·7	268·8	−15·8	− 3·1
302·416 C	88	488	48	264	297·8	268·8	−15·9	+10·5
303·417 G	65	369	38	214	297·0	267·9	−15·9	+22·9
304·348 C	50	336	33	218	296·5	267·3	−15·9	+34·7
305·384 G	38	176	30	142	296·1	266·8	−16·0	+47·9
306·490 G	17	71	20	83	295·8	266·4	−16·3	+62·2
Group 7863. October 28–November 2. A very small spot with a faint companion on October 28. Other faint markings are seen near on October 29 and 31, and the group has developed into a cluster of five small but distinct spots by November 1.								
301·393 G	2	12	1	6	305·1	315·3	+21·4	+ 4·3
302·416 C	11	44	6	24	305·9	316·2	+21·7	+18·6
303·417 G	0	13	0	8	305·2	315·5	+21·7	+31·1
304·348 C	4	25	3	18	306·0	316·3	+22·5	+44·2
305·384 G	6	49	6	49	307·4	317·8	+21·6	+59·2
306·490 G	9	25	15	41	305·5	315·9	+21·6	+71·9
Means ..	..	..	5	24	305·85	316·17	+21·75	..
Group 7864. October 29–November 7. A small cluster increasing in size up to October 31 and gradually lengthening out into a straight stream. It diminishes rapidly after November 4.								
302·416 C	16	51	19	60	222·1	188·2	+15·6	−65·2
303·417 G	28	121	23	100	221·4	187·4	+15·3	−52·7
304·348 C	78	369	51	244	221·7	187·6	+15·3	−40·1
Group 7864—*continued.*								
1916. d					°	°	°	°
305·384 G	81	269	46	153	221·2	187·0	+15·4	−27·0
306·490 G	50	269	26	140	221·5	187·2	+15·0	−12·1
307·163 D	35	246	18	125	220·3	185·9	+15·3	− 4·4
308·390 G	47	271	24	141	221·6	187·1	+15·2	+13·1
309·320 C	53	174	30	97	222·0	187·4	+15·0	+25·7
310·401 G	18	63	12	41	221·0	186·2	+15·1	+39·0
311·355 C	4	23	3	19	221·0	186·1	+15·3	+51·6
Means ..	..	..	25	112	221·38	187·01	+15·25	..
Group 7867. October 31–November 8. An irregular stream composed of small unstable spots, of which only the leader remains by November 8.								
304·348 C	2	27	4	50	186·9	130·0	+11·2	−74·9
305·384 G	17	55	19	61	184·6	127·5	+10·4	−63·6
306·490 G	22	105	17	81	184·3	127·0	+11·0	−49·3
307·163 D	18	73	12	47	184·7	127·3	+11·2	−40·0
308·390 G	14	65	8	36	185·8	128·1	+11·1	−22·7
309·320 C	15	70	8	36	184·8	127·0	+10·8	−11·5
310·401 G	20	59	11	30	186·5	128·5	+ 9·8	+ 4·5
311·355 C	8	31	5	17	186·2	128·0	+10·4	+16·8
312·361 C	6	17	4	10	187·5	129·1	+ 9·4	+31·3
Means ..	..	..	10	41	185·70	128·06	+10·59	..
Group 7868. November 2–10. A very small spot on November 2 and 3, developing into a close pair by November 4. The group consists of a small regular spot with one or two very small unstable companions after November 7. Near the place of Group 7849.								
306·490 G	0	2	0	2	174·1	152·3	−18·3	−59·5
307·163 D	1	4	1	3	175·2	153·4	−18·3	−49·5
308·390 G	9	28	6	18	175·8	153·9	−17·5	−32·7
309·320 C	9	27	5	15	176·8	154·8	−17·2	−19·5
310·401 G	10	47	5	25	176·6	154·6	−17·4	− 5·4
311·355 C	10	38	5	21	177·7	155·6	−17·1	+ 8·3
312·361 C	10	29	6	17	177·8	155·6	−16·6	+21·6
313·417 G	8	20	5	13	177·8	155·5	−16·5	+35·5
314·519 C	1	3	1	2	177·6	155·3	−16·4	+49·9
Means ..	..	..	4	13	176·60	154·56	−17·26	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Group 7869.								
November 2–11. A few very small faint spots *nf* Group 7868 on November 2. The group rapidly increases in size, and develops into a long irregular stream composed mostly of small unstable spots. The group diminishes after November 6, and only one very small spot, in the *np* part of the stream, remains by November 11. Apparently a new outburst near the place of Group 7849.								
1916. d					°	°	°	°
306·490 G	0	18	0	28	164·7	131·0	−15·8	−68·9
307·163 D	10	57	11	63	163·7	129·9	−15·7	−61·0
308·390 G	58	255	42	189	164·1	130·2	−15·5	−44·4
309·320 C	83	364	53	233	163·3	129·3	−15·6	−33·0
310·401 G	150	529	84	296	163·0	128·9	−15·5	−19·0
311·355 C	61	423	32	224	163·2	129·0	−15·2	− 6·2
312·361 C	21	200	11	108	164·3	129·9	−15·7	+ 8·1
313·417 G	35	167	20	95	164·3	129·8	−15·4	+22·0
314·519 C	4	35	3	23	163·1	128·5	−15·3	+35·4
315·363 C	1	6	1	5	166·1	131·4	−13·6	+49·5
Means ..	..	..	26	126	163·98	129·79	−15·33	..
Group 7871.								
November 3–14. Some faint markings *s* Group 7870, and quickly developing into a large stream. The leader, *a*, has become a large regular spot by November 5, and remains stable; the following spots are mostly unstable, and have all disappeared by November 13. Near the place of Group 7857, but a new formation.								
307·163 D	1	12	2	22	150·1	88·1	+ 8·8	−74·6
308·390 G	68	310	67	304	149·0	86·7	+ 9·2	−59·5
309·320 C	105	731	76	534	149·6	87·1	+ 9·3	−46·7
310·401 G	148	730	87	439	150·0	87·3	+ 9·6	−32·0
311·355 C	87	626	46	332	150·1	87·2	+ 9·8	−19·3
312·361 C	66	530	34	270	150·4	87·3	+10·0	− 5·8
313·417 G	101	603	52	308	150·4	87·1	+ 9·4	+ 8·1
314·519 C	73	415	40	228	152·0	88·5	+ 9·5	+24·3
315·363 C	53	262	33	162	152·7	89·0	+ 9·4	+36·1
316·381 C	32	246	25	192	153·2	89·3	+ 9·2	+50·0
317·535 G	25	103	30	123	153·3	89·2	+ 9·1	+65·3
318·426 C	2	40	4	85	152·8	88·5	+ 9·5	+76·6
Means ..	..	..	41	250	151·13	87·94	+ 9·40	..
Spot *a*.								
308·390 G	28	126	26	117	150·8	88·2	+ 8·4	−57·7
309·320 C	60	377	42	264	152·0	89·2	+ 9·1	−44·3
310·401 G	80	472	46	274	152·1	89·1	+ 9·5	−29·9
311·355 C	71	459	38	243	151·8	88·6	+ 9·8	−17·6
312·361 C	51	348	26	174	151·9	88·5	+ 9·7	− 4·3
313·417 G	73	402	37	205	152·3	88·7	+ 9·3	+10·0
314·519 C	61	350	34	193	152·7	88·9	+ 9·4	+25·0
Group 7871. Spot *a*—*continued*.								
1916. d					°	°	°	°
315·363 C	49	240	30	149	153·0	89·0	+ 9·3	+36·4
316·381 C	29	224	23	175	153·3	89·1	+ 9·1	+50·1
317·535 G	25	103	30	123	153·3	88·8	+ 9·1	+65·3
318·426 C	2	40	4	85	152·8	88·2	+ 9·5	+76·6
Group 7872.								
November 3–11. A few faint unstable spots irregularly scattered over a great distance in longitude; *p* the place of Group 7852, but a new formation.								
307·163 D	3	14	8	35	145·4	172·7	+22·4	−79·3
308·390 G	11	73	13	85	144·4	171·8	+23·2	−64·1
309·320 C	15	83	13	71	143·8	171·3	+24·1	−52·5
310·401 G	39	170	27	116	143·4	171·0	+24·3	−38·6
311·355 C	9	66	5	39	143·7	171·4	+24·0	−25·7
312·361 C	12	70	7	39	142·1	169·9	+24·3	−14·1
313·417 G	1	26	1	14	141·3	169·2	+24·7	− 1·0
314·519 C	2	29	1	16	142·8	170·8	+23·8	+15·1
315·363 C	3	14	2	8	141·1	169·2	+23·7	+24·5
Means ..	..	..	9	47	143·11	170·81	+23·83	..
Group 7878.								
November 7–15. A double spot, followed by a sparse irregular train composed of small unstable spots.								
311·355 C	2	17	(6	55	88·3	11·1	+ 4·4)*	−81·1
312·361 C	22	125	25	144	91·9	14·4	+ 4·4	−64·3
313·417 G	34	100	27	78	92·3	14·6	+ 4·2	−50·0
314·519 C	29	104	17	62	94·1	16·1	+ 4·1	−33·6
315·363 C	22	103	12	56	94·4	16·2	+ 4·2	−22·2
316·381 C	33	135	17	68	96·6	18·1	+ 4·2	− 6·6
317·535 G	7	22	4	11	97·1	18·4	+ 3·9	+ 9·1
318·426 C	4	20	2	11	96·9	17·9	+ 4·4	+20·7
319·425 G	1	8	1	5	97·0	17·8	+ 3·9	+34·0
Means ..	..	..	13	54	95·04	16·68	+ 4·16	..
Group 7881.								
November 10–18. Two compact clusters of small spots, developing by November 12 into a straight stream. This has formed again into two clusters by November 14, and these have become single spots by November 16, of which only the leader remains by November 17.								
314·519 C	2	29	1	20	93·9	123·5	−23·7	−33·8
315·363 C	16	45	10	27	94·4	124·0	−23·4	−22·2
316·381 C	36	106	21	60	94·2	123·9	−23·6	− 9·0

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Group 7881—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
1916. d					°	°	°	°
317·535 G	73	293	41	164	93·3	123·1	−23·4	+ 5·3
318·426 C	55	304	32	179	94·3	124·2	−23·5	+18·1
319·425 G	68	269	44	175	93·6	123·6	−23·8	+30·6
320·336 C	34	255	27	201	95·3	125·4	−24·7	+44·3
321·485 G	23	118	29	149	98·6	128·8	−25·2	+62·7
322·414 C	8	57	18	126	98·2	128·5	−24·7	+74·6
Means ..	..	..	25	122	95·09	125·00	−24·00	..

Group 7882.

November 10–21. One or two very small spots, developing by November 14 into a sparse irregular stream of small unstable spots. The leader has become large and dark by November 17, and alone remains as a small spot by November 21.

314·519 C	0	5	0	10	52·6	15·5	+16·5	−75·1
315·363 C	1	7	1	8	53·1	15·9	+16·4	−63·5
316·381 C	0	21	0	16	54·0	16·7	+15·8	−49·2
317·535 G	14	54	9	35	50·8	13·3	+16·7	−37·2
318·426 C	14	78	8	43	54·0	16·4	+15·1	−22·2
319·425 G	20	67	10	35	53·4	15·7	+14·7	− 9·6
320·336 C	24	137	12	70	54·6	16·8	+13·8	+ 3·6
321·485 G	74	272	40	147	56·2	18·3	+13·8	+20·3
322·414 C	38	172	23	105	57·5	19·5	+13·8	+33·9
323·404 C	26	232	20	176	58·3	20·1	+14·0	+47·7
324·330 C	23	143	23	144	58·4	20·1	+14·0	+60·0
325·446 G	0	3	0	6	59·3	20·9	+13·9	+75·6
Means ..	..	..	12	66	55·18	17·43	+14·88	..

Group 7889.

November 20–December 1. Some very small distinct spots quickly developing into a wide-spread disturbance, consisting chiefly of small spots in a long straight stream, accompanied by one or more clusters to the *n*. The group declines quickly after November 26.

324·330 C	3	12	4	17	289·9	220·5	− 7·1	−68·5
325·446 G	6	14	5	12	290·6	221·0	− 7·0	−53·1
326·536 C	45	180	29	117	291·1	221·2	− 8·5	−38·2
327·440 C	74	288	41	161	292·0	221·9	− 8·5	−25·4
328·315 C	52	322	27	167	292·2	221·9	− 8·2	−13·7
329·331 C	103	572	53	292	293·4	222·9	− 8·0	+ 0·9
330·494 G	99	433	52	229	293·4	222·7	− 8·5	+16·3
331·533 G	55	223	32	132	293·6	222·6	− 8·6	+30·2
332·439 G	21	97	15	67	295·0	223·9	− 8·5	+43·5
333·330 C	7	68	7	63	296·8	225·5	− 8·5	+57·0
334·322 C	6	49	8	65	294·5	223·0	− 9·4	+67·8
335·345 C	0	4	0	16	296·0	224·2	− 9·4	+82·8
Means ..	..	..	23	112	293·21	222·61	− 8·35	..

Group 7890.

November 21–27. A pair of small spots on November 21, developing into a stream of normal type by the next day. The leader alone remains by November 25, but there is a small companion on November 26.

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
1916. d					°	°	°	°
325·446 G	4	7	2	4	319·7	292·4	+17·2	−24·0
326·536 C	26	76	14	40	320·6	293·2	+16·9	− 8·7
327·440 C	28	101	15	53	320·5	293·0	+17·1	+ 3·1
328·315 C	27	86	15	46	321·8	294·2	+17·2	+15·9
329·331 C	4	19	2	12	324·6	296·9	+17·1	+32·1
330·494 G	8	18	6	14	325·1	297·3	+15·6	+48·0
331·533 G	4	13	4	14	325·7	297·9	+15·3	+62·3
Means ..	..	..	8	26	322·57	294·99	+16·63	..

Group 7893.

November 25–December 4. A very small spot, rapidly developing into a long straight stream of spots in continual change.

329·331 C	2	7	2	6	243·3	288·7	+25·9	−49·2
330·494 G	76	228	49	148	243·3	288·9	+25·6	−33·8
331·533 G	92	413	53	240	243·2	289·0	+25·4	−20·2
332·439 G	88	423	48	233	244·8	290·7	+25·4	− 6·7
333·330 C	106	521	58	287	245·2	291·2	+25·9	+ 5·4
334·322 C	103	602	60	349	244·6	290·7	+25·8	+17·9
335·345 C	76	510	49	332	244·8	291·1	+25·6	+31·6
336·335 C	64	233	49	179	244·7	291·1	+25·4	+44·5
337·438 C	29	189	32	208	245·7	292·3	+25·6	+60·1
338·491 G	16	92	32	195	246·9	293·6	+25·1	+75·1
Means ..	..	..	43	218	244·65	290·73	+25·57	..

Group 7894.

November 29–December 10. A large regular spot on November 29, the train by which it is followed not coming into view until November 30. On and after December 1, the group is a long straight stream of spots, all small, except the leader, which has broken up by December 5. Near the place of Group 7869, but a new formation.

333·330 C	22	97	(44	196	165·0	136·3	−16·3)*	−74·8
334·322 C	34	173	44	221	161·1	132·3	−16·8	−65·6
335·345 C	40	268	34	228	161·2	132·4	−16·7	−52·0
336·335 C	43	282	29	189	161·0	132·1	−16·9	−39·2
337·438 C	60	328	35	194	161·1	132·1	−17·0	−24·5
338·491 G	73	376	39	199	161·2	132·1	−16·7	−10·6
339·335 C	58	372	30	193	161·6	132·4	−16·5	+ 1·0
340·341 C	52	239	28	129	161·6	132·3	−16·2	+14·2

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Group 7894—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
1916. d					°	°	°	°
341·377 C	28	155	17	91	161·8	132·4	−16·5	+28·1
342·313 C	30	132	20	90	161·9	132·5	−16·2	+40·5
343·319 C	12	48	10	41	161·4	131·9	−16·1	+53·3
344·447 C	4	16	6	26	164·5	134·9	−16·6	+71·2
Means ..	..	..	27	146	161·67	132·49	−16·56	..

Group 7897.

December 2–8. A small regular spot with a small follower on December 4.

336·335 C	2	7	4	13	127·3	100·1	−17·1	−72·9
337·438 C	8	14	8	13	128·0	100·7	−16·8	−57·6
338·491 G	9	19	7	14	127·8	100·4	−16·5	−44·0
339·335 C	13	21	8	13	129·1	101·6	−16·7	−31·5
340·341 C	15	23	8	13	128·9	101·3	−16·7	−18·5
341·377 C	2	6	1	3	128·6	100·9	−16·8	− 5·1
342·313 C	0	2	0	1	128·5	100·8	−16·8	+ 7·1
Means ..	..	..	5	10	128·31	100·83	−16·77	..

Group 7898.

December 2–14. A large stream of normal type, not fully seen on the disc until December 3. The following portion of the group breaks up after December 9, and only the leader, *a*, remains by December 12.

336·335 C	7	61	(13	116	126·2	131·2	+20·8)*	−74·0
337·438 C	31	234	33	249	125·6	130·7	+20·9	−60·0
338·491 G	76	515	62	422	122·6	127·7	+21·4	−49·2
339·335 C	85	679	58	462	122·8	127·9	+21·4	−37·8
340·341 C	74	579	44	342	122·3	127·4	+21·3	−25·1
341·377 C	98	733	54	403	122·6	127·7	+21·2	−11·1
342·313 C	88	662	48	357	122·5	127·6	+21·1	+ 1·1
343·319 C	60	551	34	309	122·9	128·0	+21·3	+14·8
344·447 C	49	368	30	228	123·3	128·5	+20·7	+30·0
345·325 C	29	187	21	135	123·9	129·1	+20·5	+42·2
346·326 C	28	114	27	109	124·4	129·6	+20·6	+55·9
347·390 C	12	65	19	104	124·7	129·9	+20·5	+70·2
348·340 C	1	11	4	48	124·9	130·1	+20·8	+82·9
Means ..	..	..	36	264	123·54	128·68	+20·98	..

Spot *a*.

336·335 C	7	59	13	111	126·5	128·2	+20·7	−73·7
337·438 C	15	120	16	125	126·4	128·1	+20·6	−59·2
338·491 G	38	213	29	162	126·1	127·8	+20·6	−45·7

Group 7898. Spot *a*—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
1916. d					°	°	°	°
339·335 C	29	254	19	165	125·8	127·5	+20·6	−34·8
340·341 C	42	308	24	179	124·9	126·6	+20·8	−27·4
341·377 C	50	424	27	229	124·6	126·3	+20·7	− 9·1
342·313 C	58	400	31	216	124·5	126·2	+20·5	+ 3·1
343·319 C	47	383	26	214	124·0	125·7	+20·6	+15·9
344·447 C	44	294	27	182	124·4	126·1	+20·3	+31·1
345·325 C	26	172	19	126	124·6	126·3	+20·5	+42·9
346·326 C	28	114	27	109	124·4	126·1	+20·6	+55·9
347·390 C	12	65	19	104	124·7	126·4	+20·5	+70·2
348·340 C	1	11	4	48	124·9	126·6	+20·8	+82·9

Group 7900.

December 6–11. A very small spot *nf* Group 7896 on December 6 and 7, developing suddenly into a compact short stream by December 8. The *sp* portion of the stream diminishes first, and only one very small spot remains by December 11.

340·341 C	0	6	0	3	137·6	186·3	+25·1	− 9·8
341·377 C	0	9	0	5	136·5	185·3	+25·4	+ 2·8
342·313 C	39	109	22	62	137·5	186·5	+24·7	+16·1
343·319 C	18	78	11	49	136·3	185·4	+26·2	+28·2
344·447 C	6	30	5	23	135·8	185·0	+26·2	+42·5
345·325 C	1	6	1	6	135·1	184·5	+26·7	+53·4
Means ..	..	..	7	25	136·47	185·50	+25·72	..

Group 7904.

December 8–16. A number of small, well-defined but unstable spots in a compact stream. The leader does not develop until December 13, after which the group quickly declines.

342·313 C	18	53	12	35	86·7	106·2	+22·7	−34·7
343·319 C	35	116	21	68	85·2	104·8	+23·0	−22·9
344·447 C	58	271	32	149	83·1	102·7	+22·8	−10·2
345·325 C	44	180	24	97	83·7	103·4	+22·4	+ 2·0
346·326 C	40	156	23	89	84·5	104·2	+22·4	+16·0
347·390 C	48	277	31	177	85·6	105·4	+22·7	+31·1
348·340 C	21	154	16	117	86·0	105·9	+22·6	+44·0
349·362 C	15	45	15	45	85·3	105·2	+22·6	+56·8
350·339 C	0	4	0	7	86·6	106·6	+22·6	+70·9
Means ..	..	..	19	87	85·19	104·93	+22·64	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL GROUPS of SUN SPOTS—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Group 7906.								
December 10–15. A pair of small spots, developing into a small stream on December 12. The group is not seen on December 14, but one spot reappears on December 15.								
1916. d					°	°	°	°
344·447 C	2	7	1	4	101·8	119·0	−22·2	+ 8·5
345·325 C	9	31	5	18	101·9	119·2	−22·4	+20·2
346·326 C	19	67	12	43	101·5	118·8	−22·4	+33·0
347·390 C	5	17	4	13	101·3	118·7	−22·6	+46·8
348·340 C	0	0	0	0	..	..	..	..
349·362 C	0	3	0	6	101·9	119·4	−22·2	+73·4
Means ..	..	..	4	14	101·68	119·02	−22·36	..
Group 7912.								
December 15–27. A large regular spot, with occasionally one or two small and distant followers.								
349·362 C	8	54	16	107	313·4	290·7	−17·5	−75·1
350·339 C	29	162	34	191	311·6	288·8	−18·0	−64·1
351·337 C	29	164	23	131	312·7	289·9	−17·7	−49·8
352·167 D	43	224	29	152	311·8	288·9	−17·8	−39·8
353·360 C	36	210	21	120	312·1	289·1	−17·9	−23·8
354·341 C	40	193	21	102	312·1	289·1	−17·5	−10·8
355·356 C	36	203	19	106	312·2	289·1	−17·7	+ 2·6
356·568 G	40	193	22	106	312·5	289·3	−17·9	+18·9
357·335 C	39	175	23	103	312·3	289·1	−17·6	+28·8
358·440 C	25	126	18	89	312·3	289·0	−17·5	+43·4
359·377 C	20	97	18	89	312·8	289·4	−17·1	+56·2
360·510 C	9	50	14	79	313·0	289·6	−17·1	+71·3
361·498 C	3	25	14	120	313·2	289·7	−17·0	+84·6
Means ..	..	..	21	115	312·46	289·36	−17·56	..
Group 7917.								
December 22–28. A pair of very small spots quickly developing into a stream of normal type. The preceding portion of the group has greatly declined by December 27, and only one small spot remains by December 28.								
356·568 G	9	11	5	6	285·6	202·9	+ 5·8	− 8·0
357·335 C	51	184	26	94	285·9	203·0	+ 6·3	+ 2·4
358·440 C	60	304	32	161	285·4	202·3	+ 6·3	+16·5
Group 7917—*continued.*								
1916. d					°	°	°	°
359·377 C	42	218	25	129	286·3	202·9	+ 6·6	+29·7
360·510 C	21	114	15	81	286·3	202·7	+ 6·6	+44·6
361·498 C	11	43	10	40	285·8	201·9	+ 6·7	+57·2
362·349 C	3	24	4	34	286·3	202·2	+ 7·2	+68·9
Means ..	..	..	17	78	285·94	202·56	+ 6·50	..
Group 7922.								
1916 December 25–1917 January 1. A very small spot *n* Group 7918 on December 25. Two are seen on December 26, and several in a long straight stream on December 27, of which only the first and last spots remain by December 28. The group is not seen on December 30 and 31, but two very small spots are seen in the neighbourhood on January 1.								
359·377 C	0	9	0	6	218·4	191·1	−16·7	−38·2
360·510 C	4	11	2	6	216·7	189·3	−17·1	−25·0
361·498 C	9	37	5	19	218·9	191·4	−16·9	− 9·7
362·349 C	2	9	1	5	219·1	191·6	−17·2	+ 1·7
363·305 D	0	11	0	6	217·8	190·2	−16·8	+12·9
364·429 G	0	0	0	0	..	..	..	..
365·181 D	0	0	0	0	..	..	..	..
366·364 C	2	16	2	14	217·9	190·1	−17·4	+53·3
Means ..	..	..	1	7	218·13	190·62	−17·02	..
Group 7923.								
1916 December 26–1917 January 3. Three small spots on December 26 that have developed by December 28 into a short compact stream, of which the central portion is the most stable. The group diminishes after December 29, and only one small spot remains by January 1.								
360·510 C	8	37	8	35	183·8	129·4	−13·6	−57·9
361·498 C	30	62	22	46	182·1	127·5	−13·4	−46·5
362·349 C	25	109	16	68	182·4	127·7	−13·4	−35·0
363·305 D	55	179	30	98	183·1	128·2	−13·6	−21·8
364·429 G	23	102	12	52	181·9	126·9	−13·5	− 8·2
365·181 D	17	38	9	19	181·6	126·5	−13·2	+ 1·4
366·364 C	9	17	5	9	181·7	126·4	−12·5	+17·1
367·342 C	8	26	5	15	182·2	126·7	−12·2	+30·5
368·364 C	5	14	4	10	182·0	126·4	−11·4	+43·8
Means ..	..	..	12	39	182·31	127·30	−12·98	..

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

1916.

TOTAL AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1916.

NOTE.—The Greenwich Civil Time at which the photograph was taken is expressed by the month, day of month (civil reckoning), 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, Kodaikánal and Dehra Dûn, by the letters C, K and D 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 disk.

The Area Corrected for the effect of Foreshortening is expressed in millionths of the Sun's visible hemisphere.

Greenwich Civil Time.		Where taken.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1916	d							
January	1·444	C	237	1396	1373	135	834	1632
	2·423	C	220	1235	1078	128	698	1311
	3·367	C	221	1203	1298	131	696	1529
	4·451	C	261	1475	1108	173	1066	1513
	5·379	C	275	1473	1696	192	1063	1910
	6·472	C	300	1718	2284	228	1391	2601
	7·508	C	240	1364	2116	189	1092	2477
	8·431	C	139	1113	1792	114	824	1930
	9·426	C	154	960	1779	92	567	1982
	10·460	G	161	932	618	93	531	645
	11·440	C	163	861	1408	91	484	1405
	12·383	C	120	670	954	68	382	1158
	13·480	G	99	561	971	57	325	1389
	14·537	G	81	490	996	55	334	1021
	15·377	C	71	416	1574	57	326	1492
	16·468	C	36	301	1511	36	343	1632
	17·445	C	30	237	1637	38	295	2111
	18·304	D	35	177	1547	28	234	1567
	19·422	C	9	101	923	9	100	1153
	20·517	G	14	102	857	13	113	1182
	21·559	C	65	332	1051	60	308	1313
	22·376	C	27	284	1142	38	369	1201
	23·477	C	62	449	1372	74	618	1817
	24·428	C	65	450	1603	53	350	2313
	25·438	G	114	540	1456	77	351	1683
	26·404	C	120	622	2100	72	363	2067
	27·427	C	126	687	2311	73	401	2491
	28·442	C	93	619	1977	55	359	2049
	29·374	C	96	529	1181	60	335	1322
	30·482	C	62	404	2652	46	307	2619
	31·185	K	69	390	809	60	338	863
February	1·442	C	215	1158	1104	159	861	1396
	2·364	C	256	1389	2297	180	1051	2319
	3·360	C	242	1288	2341	176	967	2460
	4·457	G	150	1091	1619	115	822	2031
	5·435	G	263	1168	851	151	683	1195
	6·354	C	312	1612	2221	176	904	2836
	7·439	G	345	1715	1715	208	1014	1792
	8·400	G	460	2399	1189	296	1551	1511
	9·424	G	428	2556	1038	312	1906	1455

Greenwich Civil Time.		Where taken.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1916	d							
February	10·337	C	344	2120	2208	248	1551	2840
	11·334	C	248	1706	1995	175	1442	2378
	12·376	C	246	1255	2021	187	1051	2200
	13·460	G	188	949	940	130	639	1190
	14·431	G	167	897	1087	117	628	1546
	15·521	G	96	588	903	77	449	986
	16·333	C	102	529	1205	84	482	1386
	17·344	C	49	315	870	44	294	1133
	18·345	C	32	290	1283	22	266	1615
	19·336	C	69	343	1881	44	298	2407
	20·457	C	84	510	2186	47	312	2546
	21·337	C	105	507	1934	65	346	2349
	22·410	C	101	644	1140	71	464	1324
	23·446	G	86	554	900	81	521	1017
	24·521	G	53	295	1705	91	482	2484
	25·450	G	36	223	1320	51	296	1884
	26·343	C	29	276	1667	40	339	1905
	27·612	G	85	445	999	68	380	1384
	28·388	G	114	531	1242	80	370	1568
	29·405	G	118	507	1133	68	296	1184
March	1·620	G	139	652	1061	176	768	1368
	2·342	C	191	954	2040	206	976	3055
	3·339	C	303	1405	2017	238	1105	2365
	4·428	G	525	2338	1911	352	1537	2134
	5·517	G	711	3047	1857	446	1890	2154
	6·460	G	732	3248	1749	458	2060	2017
	7·163	D	635	2857	721	408	1805	870
	8·500	G	389	1981	1628	222	1147	1890
	9·327	C	336	1852	2727	195	1092	3391
	10·341	C	339	1580	1735	209	977	2068
	11·347	C	302	1472	1938	221	1072	2191
	12·520	G	186	1049	2151	191	1052	2353
	13·307	C	116	681	2944	173	963	3024
	14·331	C	53	183	1482	188	653	2139
	15·321	C	10	97	1017	7	66	1462
	16·355	C	25	188	1266	17	148	1444
	17·519	C	61	213	1967	44	175	2225
	18·340	C	80	317	1757	68	287	2171
	19·451	C	38	237	1512	27	207	1787
	20·341	C	45	308	937	38	359	1705

TOTAL AREAS of SUN SPOTS and FACULÆ—*continued.*

Greenwich Civil Time.		Where taken.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1916.	d							
March	21·351	C	74	610	1182	66	581	1356
	22·538	C	200	1204	1705	149	935	1962
	23·494	C	247	1769	1276	164	1195	1602
	24·434	G	277	1515	772	163	919	1165
	25·441	G	246	1293	785	140	741	1049
	26·340	G	289	1517	1056	182	915	1144
	27·305	C	179	1339	1685	119	840	1726
	28·336	C	171	1360	1765	118	948	2464
	29·405	G	169	1173	2193	141	979	3173
	30·457	C	187	1254	2940	140	1015	3248
	31·360	C	274	1990	2999	256	2072	3769
April	1·350	G	301	2341	3009	258	2104	3719
	2·466	C	477	2794	2275	330	1975	2254
	3·366	G	459	2426	1654	308	1581	2220
	4·521	G	378	2164	1712	238	1525	2160
	5·380	G	312	2026	2439	219	1542	3101
	6·349	C	300	2114	2006	181	1300	2240
	7·611	G	185	1038	2246	122	681	2345
	8·352	G	166	853	2610	126	631	2834
	9·436	G	92	552	3508	69	408	3947
	10·350	G	87	457	2428	79	425	2833
	11·445	G	198	778	2172	164	705	2636
	12·320	C	192	761	1699	114	461	2378
	13·356	G	179	720	2390	96	431	2428
	14·424	G	210	815	1751	112	432	1938
	15·408	G	182	861	1174	99	463	1362
	16·398	C	95	413	1005	54	240	1372
	17·386	G	79	416	2030	52	268	2183
	18·591	G	77	197	2112	60	157	2208
	19·536	G	27	127	1895	24	128	2300
	20·551	G	90	319	1599	130	569	2415
	21·324	G	73	500	1826	89	659	2403
	22·433	C	93	624	2728	85	571	2912
	23·441	G	117	1040	2034	85	757	2075
	24·401	C	191	1158	2396	119	724	2632
	25·322	C	223	1157	2118	133	670	2275
	26·346	C	255	1223	1819	144	691	2123
	27·391	G	240	1128	1868	135	635	2304
	28·426	G	215	1093	3224	123	637	3758
	29·351	G	199	974	2376	205	1230	2616
	30·331	G	242	1248	3849	312	1591	4098
May	1·363	G	257	1703	4331	231	1659	4581
	2·458	C	270	1742	2659	193	1271	2889
	3·345	C	354	2085	2193	217	1297	2596
	4·333	C	387	2109	1611	217	1184	2015
	5·394	C	412	2084	2387	225	1121	2560
	6·174	D	358	1993	1296	196	1076	1367
	7·686	G	292	1702	1676	170	1000	1689
	8·404	C	285	1640	1722	180	1039	1855
	9·164	D	238	1543	1592	172	1108	1584
	10·311	G	166	947	1190	152	884	1327
	11·163	D	109	701	1537	127	855	1879
	12·165	D	104	549	731	132	626	955
1916.	d							
May	13·349	C	43	212	1045	32	179	1271
	14·311	G	52	219	1307	39	182	1396
	15·425	G	54	247	864	39	170	965
	16·253	D	63	300	1031	48	219	996
	17·350	G	67	212	1274	48	151	1619
	18·314	G	66	171	1113	43	117	1490
	19·453	G	69	266	1223	42	157	1220
	20·302	G	75	256	610	46	158	742
	21·295	G	153	553	1112	138	565	1359
	22·445	G	254	1206	2212	200	1026	2525
	23·333	G	446	1813	2191	326	1319	2520
	24·302	G	552	2429	1277	332	1488	1386
	25·603	G	752	3109	873	406	1663	925
	26·678	G	751	3366	1081	429	1920	1092
	27·497	G	914	4229	1766	499	2348	1965
	28·344	G	729	3771	1612	431	2225	1877
	29·304	G	637	2942	1413	420	1928	1448
	30·373	G	407	1980	1497	336	1644	1484
	31·414	G	312	1379	1282	334	1593	1511
June	1·470	C	142	717	1171	194	1015	1894
	2·312	G	99	508	1404	81	453	1654
	3·306	G	134	566	966	90	361	1275
	4·309	G	161	832	809	108	503	907
	5·434	G	286	1435	1327	259	1221	1478
	6·400	G	268	1157	904	282	1248	1094
	7·309	G	125	793	517	190	1237	739
	8·321	G	96	368	739	452	1497	1119
	9·420	G	68	339	1194	78	429	1592
	10·379	G	109	490	1103	93	419	1189
	11·344	G	110	560	976	71	369	906
	12·429	C	107	722	140	61	412	185
	13·594	G	194	975	659	101	516	835
	14·408	D	208	1039	1022	105	521	1239
	15·553	G	233	1000	543	121	522	580
	16·440	G	209	1005	660	227	1018	1094
	17·325	G	211	1226	838	185	1090	1053
	18·553	G	333	1515	1925	257	1198	1926
	19·	..	No	Photo	graph			
	20·362	G	335	1713	1704	248	1253	2066
	21·389	C	356	1972	745	265	1571	993
	22·419	C	548	2826	750	410	2267	1145
	23·380	C	667	3637	1283	456	2580	1532
	24·485	G	801	3897	2112	490	2440	2180
	25·469	C	735	3778	1748	441	2273	1668
	26·523	C	530	3042	1153	334	1921	1166
	27·401	G	534	2636	2653	361	1771	2764
	28·338	C	413	2004	1550	282	1392	1732
	29·401	C	354	1454	2043	259	1201	2865
	30·419	G	204	1031	2221	151	761	2561
July	1·363	G	148	623	1223	103	444	1690
	2·322	G	133	483	2237	97	357	2195
	3·357	C	80	362	1958	74	329	2147
	4·304	G	62	188	1815	42	146	2008

TOTAL AREAS of SUN SPOTS and FACULÆ—*continued.*

Greenwich Civil Time.	Where taken.	Projected Area.			Area Corrected for Foreshortening.		
		Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1916. July d 5·428	G	39	198	1139	57	289	1496
6·169	D	18	194	872	22	211	1200
7·543	G	97	443	1118	100	487	1393
8·308	G	102	508	2443	90	454	2600
9·340	G	95	458	1377	69	345	1498
10·574	G	84	477	441	49	284	635
11·582	G	94	478	686	51	257	750
12·346	G	89	497	585	47	259	746
13·403	D	91	470	1004	46	240	1272
14·409	G	91	506	1292	69	386	1562
15·361	C	98	493	1052	69	349	1281
16·373	C	81	462	1333	59	336	1499
17·361	C	70	419	1159	58	341	1333
18·383	G	103	445	1693	80	383	1767
19·325	G	80	429	1076	69	437	1487
20·354	G	156	598	1477	160	657	1801
21·426	G	480	1755	1941	311	1208	2298
22·497	G	426	1947	2559	266	1225	2625
23·500	C	434	2094	1311	260	1283	1688
24·383	C	372	2218	1469	222	1304	1937
25·488	G	487	2389	2042	279	1376	2081
26·420	G	334	1722	1999	211	1089	2116
27·435	G	300	1578	976	213	1138	1283
28·479	G	233	1120	1726	175	752	2069
29·327	G	168	897	1461	118	631	1695
30·325	G	107	518	1977	106	474	2155
31·332	G	52	255	1535	52	276	2191
August 1·310	G	54	207	1891	67	273	2265
2·553	G	20	97	1720	16	112	1898
3·299	G	24	115	914	27	171	983
4·326	G	8	96	746	10	108	1101
5·391	C	42	182	316	31	139	401
6·352	G	53	292	342	39	206	553
7·461	G	95	338	893	63	218	969
8·380	C	46	296	1114	30	189	1121
9·334	C	50	273	1450	29	162	1676
10·467	G	55	290	1851	29	156	2505
11·315	G	55	286	2106	65	354	2508
12·488	G	69	365	936	63	314	1164
13·451	G	123	497	1676	89	369	1737
14·522	G	108	600	1594	84	461	1860
15·354	G	101	521	1849	78	410	1999
16·386	C	91	471	1679	66	368	1993
17·354	C	67	432	1344	40	254	2032
18·377	C	82	477	914	46	260	1039
19·336	G	344	1391	1722	184	740	1933
20·434	C	368	2313	1297	218	1369	1403
21·362	G	428	1899	1343	299	1324	1475
22·338	G	247	1065	1093	215	946	1128
23·499	G	66	571	966	91	790.	1293
24·341	C	42	242	772	94	547	1306
25·367	C	0	0	819	0	0	1063
26·353	G	0	1	1025	0	1	1252
27·396	G	0	0	795	0	0	1007

Greenwich Civil Time.	Where taken.	Projected Area.			Area Corrected for Foreshortening.		
		Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1916. August d 28·411	G	12	45	1053	9	34	1165
29·378	C	21	134	948	21	153	1355
30·320	C	6	81	1039	3	45	1411
31·353	G	12	58	523	6	33	657
September 1·581	G	2	11	720	1	9	881
2·389	C	12	52	557	7	34	635
3·566	G	21	113	655	12	68	635
4·462	G	74	278	447	40	149	490
5·611	G	62	307	364	34	166	533
6·361	G	60	266	639	34	151	801
7·395	G	64	298	1408	93	515	1909
8·605	G	111	690	3916	135	1008	4466
9·170	D	104	538	3100	112	588	3245
10·424	C	93	629	2490	88	708	3084
11·386	C	111	704	2110	84	632	2535
12·394	C	156	914	1410	116	662	1454
13·397	C	164	1212	1003	108	811	1148
14·341	G	273	1307	890	182	994	1144
15·357	C	272	1582	1550	178	991	1720
16·442	G	274	1291	1578	164	776	1479
17·437	G	272	1253	988	176	868	1114
18·488	C	196	1042	1700	134	715	1790
19·447	G	222	1187	2389	162	905	2612
20·377	C	188	1118	1286	154	916	1649
21·375	G	164	886	1781	195	1013	2171
22·365	G	81	499	1025	71	494	1238
23·352	G	62	363	2225	67	368	2791
24·485	G	27	104	2015	33	202	2512
25·451	G	13	36	1038	8	21	1470
26·573	G	18	84	451	12	59	611
27·437	G	22	85	251	13	52	300
28·589	G	31	109	456	17	59	474
29·389	C	16	61	202	10	34	347
30·356	C	2	33	112	1	17	97
October 1·629	G	0	4	104	0	9	147
2·303	D	0	0	127	0	0	133
3·574	C	33	163	728	55	318	955
4·378	C	29	202	1153	42	310	1679
5·380	G	77	437	1403	61	383	1696
6·357	C	90	517	1574	81	588	2168
7·400	G	245	1010	2062	205	850	2268
8·635	G	383	1706	1669	279	1240	1835
9·382	G	423	2138	1041	287	1500	1543
10·417	G	569	3285	1113	330	1932	1340
11·343	C	570	3323	1301	315	1859	1362
12·363	C	619	3182	1388	341	1773	1339
13·595	C	494	2933	751	297	1759	913
14·398	C	389	2416	663	260	1602	891
15·392	G	366	1980	2315	286	1572	2331
16·379	C	195	1280	1422	223	1343	1820
17·343	C	147	951	1409	129	780	1926
18·453	C	114	844	1612	114	830	1858
19·355	C	67	547	1487	106	768	2390

TOTAL AREAS of SUN SPOTS and FACULÆ—*continued.*

Greenwich Civil Time.	Where taken.	Projected Area.			Area Corrected for Foreshortening.		
		Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1916. d							
October 20·333	C	56	353	1537	46	282	1619
21·436	G	30	162	1999	44	253	2444
22·170	D	13	93	1508	27	186	2146
23·409	G	10	77	625	14	92	748
24·160	D	13	63	956	12	59	1172
25·625	G	21	87	642	14	63	608
26·442	G	43	168	889	27	105	910
27·355	C	54	360	321	31	205	438
28·393	G	129	608	81	70	328	157
29·416	C	141	740	413	87	432	554
30·417	G	105	551	779	68	350	849
31·348	C	149	877	707	100	610	1133
November 1·384	G	174	676	2676	124	497	3012
2·490	G	125	668	2473	111	627	3018
3·163	D	140	834	2889	144	860	3975
4·390	G	276	1430	2588	226	1184	2815
5·320	C	345	1895	1580	246	1378	1516
6·401	G	508	2163	708	356	1489	1294
7·355	C	237	1704	1241	144	1063	1639
8·361	C	214	1495	2098	135	922	2195
9·417	G	259	1528	1101	150	868	1305
10·519	C	186	1120	1464	105	643	1627
11·363	C	221	1015	4272	130	586	4724
12·381	C	160	916	3636	98	572	4516
13·535	G	226	931	3378	166	676	3979
14·426	C	132	652	1760	86	480	2348
15·425	G	109	429	1713	70	279	2129
16·336	C	73	486	1787	51	337	1856
17·485	G	130	641	1795	96	473	2218
18·414	C	61	303	827	51	281	1228
19·404	C	27	244	1051	21	186	1303
20·330	C	26	155	1294	27	161	1395
21·446	G	23	106	865	41	298	1340
22·536	C	104	519	1023	93	561	1283
23·440	C	154	754	621	112	604	747
24·315	C	138	794	614	90	525	659
1916. d							
November 25·331	C	165	1091	169	94	635	172
26·494	G	277	1112	289	160	638	308
27·533	G	213	989	936	122	570	963
28·439	G	149	737	1578	85	419	1915
29·330	C	159	774	1739	123	598	2155
30·322	C	163	902	1168	131	733	1504
December 1·345	C	154	940	1408	112	700	1976
2·335	C	147	742	1170	116	608	1378
3·438	C	170	992	2516	135	815	2922
4·491	G	289	1580	2253	221	1236	2612
5·335	C	277	1738	1213	191	1226	1385
6·341	C	232	1310	1513	167	957	1761
7·377	C	256	1519	1589	191	1095	1950
8·313	C	260	1413	1645	179	970	1700
9·319	C	206	1236	2071	149	984	2395
10·447	C	165	933	2375	113	648	2821
11·325	C	102	508	1893	71	369	2553
12·326	C	111	440	1936	88	371	2275
13·390	C	92	479	2486	78	404	3206
14·340	C	40	260	1317	46	296	1621
15·362	C	27	119	1992	38	193	2537
16·339	C	33	173	2137	36	202	2868
17·337	C	47	261	1483	34	217	1954
18·167	D	98	454	1756	70	319	2030
19·360	C	105	537	1543	70	354	1424
20·341	C	81	359	1497	55	240	1633
21·356	C	36	220	929	19	129	1320
22·568	G	72	342	831	100	427	1215
23·335	C	129	594	977	99	484	1126
24·440	C	149	824	960	133	702	1170
25·377	C	173	925	1933	150	739	1923
26·510	C	141	896	2594	107	662	3139
27·498	C	184	930	4137	134	719	4838
28·349	C	270	1346	2868	345	1518	3788
29·305	D	407	2174	2370	406	2239	2789
30·429	G	473	2579	2340	370	2051	2590
31·181	D	706	3544	3352	557	2746	3292

MEAN AREAS of SUN SPOTS and FACULÆ, as measured on PHOTOGRAPHS taken at the ROYAL OBSERVATORIES of GREENWICH and of the CAPE, and in INDIA, for each ROTATION of the SUN, from 1915 December 29 to 1916 December 17.

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 disk, 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 1873–1915 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 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 CIVIL 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.
			d							
833	1915	December	28·97	27	132	785	1418	92	572	1632
834	1916	January	25·31	28	181	1006	1617	123	713	1881
835		February	21·65	27	215	1031	1614	163	783	1958
836		March	19·97	27	225	1335	1940	155	969	2324
837		April	16·25	28	196	1094	2030	143	815	2294
838		May	13·49	27	286	1302	1214	218	997	1417
839		June	9·70	26	295	1484	1349	204	1049	1554
840		July	6·90	27	178	870	1457	123	606	1701
841		August	3·11	28	93	474	1164	69	360	1408
842		August	30·35	27	115	623	1417	89	513	1658
843		September	26·61	27	185	1033	1112	133	755	1362
844		October	23·90	27	158	836	1023	108	576	1945
845		November	20·21	28	149	806	1475	100	608	1798

MEAN AREAS of SUN SPOTS and FACULÆ for the YEAR 1916.

The Mean Projected Areas are expressed in millionths of the Sun's apparent disk.

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.
1916	365	186	978	1512	135	724	1785

MEAN HELIOGRAPHIC LATITUDE of SUN SPOTS, as measured on PHOTOGRAPHS taken at the ROYAL OBSERVATORIES of GREENWICH and of the CAPE, and in INDIA, for each ROTATION of the SUN, from 1915 December 29 to 1916 December 17.

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 for 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.		
	d			°		°	°	°
833	1915 Dec. 28·97	27	313	14·91	259	17·15	+ 0·41	15·92
834	1916 Jan. 25·31	28	330	15·03	383	17·38	− 2·37	16·29
835	Feb. 21·65	27	240	19·69	542	17·52	− 6·11	18·19
836	Mar. 19·97	27	804	14·08	165	19·62	+ 8·37	14·61
837	Apr. 16·25	28	468	13·70	348	20·58	− 0·92	16·63
838	May 13·49	27	424	12·45	574	13·43	− 2·43	13·01
839	June 9·70	26	722	12·61	327	14·34	+ 4·20	13·15
840	July 6·90	27	591	12·30	15	22·93	+11·42	12·57
841	Aug. 3·11	28	325	15·93	35	15·43	+12·90	15·88
842	Aug. 30·35	27	425	21·55	88	15·11	+15·26	20·44
843	Sept. 26·61	27	677	16·40	78	18·12	+12·82	16·58
844	Oct. 23·90	27	389	15·12	187	18·23	+ 4·30	16·13
845	Nov. 20·21	28	333	20·27	276	17·93	+ 2·96	19·21

MEAN HELIOGRAPHIC LATITUDE of SUN SPOTS for the YEAR 1916.

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.		
			°		°	°	°
1916	365	470	15·14	254	17·05	+ 3·83	15·81