GREENWICH

PHOTO-HELIOGRAPHIC

RESULTS.

1904.

RESULTS OF MEASURES

MADE AT THE

ROYAL OBSERVATORY, GREENWICH,

UNDER THE DIRECTION OF

SIR W. H. M. CHRISTIE, K.C.B., M.A., D.Sc., F.R.S.,
ASTRONOMER ROYAL,

OF

PHOTOGRAPHS OF THE SUN

TAKEN AT

GREENWICH, IN INDIA, AND IN MAURITIUS,

IN THE YEAR

1904.

(EXTRACTED FROM THE GREENWICH OBSERVATIONS, 1904.)

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1906.

ERRATA.

GREENWICH PHOTO-HELIOGRAPHIC RESULTS, 1904.

Measures of Positions and Areas of Sun Spots and Faculæ, 1904.

Page.	Column.	Line.	
6	2	43	No. of Group, *for* 5164, *read* 5166.
9	2	6	Greenwich Civil Time, *for* 59·495, *read* 59·498.
12	2	15	Greenwich Civil Time, *for* 84·137, *read* 84·157.
14	1	29	Area of Faculæ, *for* 238, *read* 283.
		39	Total Area of Faculæ, *for* 953, *read* 998.
17	2	8	Greenwich Civil Time, *for* 118·531, *read* 118·538.
20	1	44	Area of Umbra, *dele* 0.
			Area of Whole Spot, *dele* 11.
			Area of Faculæ, *dele c.*
		46	Total Area of Whole Spots, *for* 205, *read* 194.
23	1	31	Greenwich Civil Time, *for* 155·078, *read* 155·478.
28	1	15	Distance from Centre, *dele* 0·554.
			Position Angle, *dele* 73·4.
			Longitude, *dele* 213·1.
			Latitude, *dele* +12·2.
			Area of Umbra, *dele* 0.
			Area of Whole Spot, *dele* 5.
		19	Total Area of Whole Spots, *for* 402, *read* 397.
39	Footnote.		Group 5315, *for* September 21–24, *read* September 20–24.
			Group 5318, *for* September 24–27, *read* September 24–October 2.
			Group 5318, *insert* The group is not seen on September 28, 29 or 30.
41	Footnote.		Group 5322, *for* October 6–16, *read* October 6–17.
			Group 5325, *for* October 9–20, *read* October 8–20.
46	Footnote.		Group 5351, *for* November 2–12, *read* November 1–12.
47	1	36	Area of Faculæ, *for* 191, *read* 125.
		37	Total Area of Faculæ, *for* 2760, *read* 2694.
48	Footnote.		Group 5362, *for* November 18–23, *read* November 18–26.
			Group 5362, *insert* The group is not seen on November 25.
			Group 5364, *for* November 20–December 1, *read* November 19–December 1.
49	2	18	No. of Group, *for* 5360, *read* 5362.
		19	No. of Group, *for* 5360, *read* 5362.
	Footnote.		Group 5365, *for* November 21–22, *read* November 21–24.
			Group 5365, *insert* The group is not seen on November 23.
			Group 5368, *for* November 25, *read* November 25–26.
51	Footnote.		Group 5383, *for* is broken up, *read* has broken up.
52	2	20	Area of Umbra, *for* 1, *read* 2.
		44	Total Area of Umbræ, *for* 269, *read* 270.
55	Footnote.		Group 5400, *for* December 18–21, *read* December 17–21.

Ledgers of Sun Spots, 1904.

Page.	Group.	Date.	
61	5147	Jan. 10	Area of Umbra, *for* 2, *read* 0.
			Area of Whole Spot, *for* 8, *read* 0.
			Longitude, *for* 111·5, *read* ...
			Latitude, *for* +11·7, *read* ...
			Longitude from Central Meridian, *for* +22·8, *read* ...
		Means.	Mean Area of Whole Spot, *for* 6, *read* 5.
			Mean Longitude of Group, *for* 110·80, *read* 110·63.
			Mean Latitude of Group, *for* +11·80, *read* 11·83.
71	5235	May 20	Area of Whole Spot, *for* 74, *read* 71.
		Means.	Mean Area of Whole Spots, *for* 39, *read* 38.

GREENWICH PHOTO-HELIOGRAPHIC RESULTS, 1904.

INTRODUCTION.

§ 1. *Measures of Positions and Areas of Sun Spots and Faculæ on Photographs taken at the Royal Observatory, Greenwich, at Dehra Dûn and at Kodaikánal Observatory in India, and at the Royal Alfred Observatory, Mauritius, in the year* 1904; *with the deduced Heliographic Longitudes and Latitudes.*

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

The photographs of the Greenwich series were taken either with the Thompson or with the Dallmeyer Photoheliograph. The Thompson Photoheliograph, which was in regular use for the greater part of the year, is a photographic refractor of 9 inches aperture, presented to the Royal Observatory by Sir Henry Thompson, which has been fitted with an enlarging doublet by Ross, and with a camera and shutter for rapid exposure so as to take photographs of the Sun on a scale of about 7·5 inches to the solar diameter. The Dallmeyer, which was used instead of the Thompson on 1904 February 22, 23 and 24, is an instrument used in the Transit of Venus expedition to New Zealand, which, as now adapted, gives a solar image of 8 inches diameter on the photographic plate.

The photographs have been taken throughout the year on gelatine dry plates, "Lantern" plates supplied by R. W. Thomas and Co. being used, with hydroquinone development.

The Indian photographs, which have been forwarded by the Solar Physics Committee to fill the gaps in the Greenwich series, were taken under the

superintendence of the Deputy Surveyor-General, Trigonometrical Survey of India, with a Dallmeyer Photoheliograph giving an image of the Sun nearly 8 inches in diameter. In the process adopted at Dehra Dûn, bromo-iodized collodion wet plates in connexion with iron development have been used, as well as "Lantern" dry plates.

The Mauritius photographs were taken under the superintendence of Mr. T. F. Claxton, Director of the Royal Alfred Observatory, Mauritius, with a Dallmeyer Photoheliograph, giving an image of the Sun about 8 inches in diameter. At the Mauritius Observatory bromo-iodized gelatine dry plates have been used with alkaline development.

Photographs of the Sun were taken at Greenwich on 211 days; Indian photographs on 139 days and Mauritius photographs on 11 days have been received from the Solar Physics Committee; and Professor C. Michie Smith has supplied two photographs taken at Kodaikánal Observatory with a Dallmeyer Photoheliograph to complete the total of 363 days for which there are either Greenwich, Indian, or Mauritius photographs of the Sun available for measurement in 1904.

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), which latter is placed opposite the total area of Spots and Faculæ for the day. The photographs taken at Dehra Dûn, in India, are distinguished by the letter I., those taken at Kodaikánal Observatory, India, by the letters KK., and those taken in Mauritius by the letter M.

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 following are the signatures of those persons who measured the photographs for the year 1904:—

E. W. Maunder - -	M	A. H. Smith - - -	AS
R. Fowler - - -	RF	C. F. Lait - - -	CL

The *third* column gives the No. of the group, and the letter for the spot. The groups are numbered in order of their appearance.

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 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 a 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.

At the principal focus of the photoheliograph are two cross-spider-lines which serve to determine the zero of position-angles on the photograph.

The zero of position-angles for the Thompson and Dallmeyer Photoheliographs employed at Greenwich has been determined by the measurement of a plate which

has been exposed to the Sun's rays 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 :—

Thompson Photoheliograph, to 1904 July 19.

Date, Greenwich Civil Time.			Correction for Zero.	Date, Greenwich Civil Time.			Correction for Zero.
		d h	° ′			d h	° ′
1903	December	30. 11	+ 0. 10	1904	May	14. 13	+ 0. 27
1904	January	26. 12	+ 0. 19		June	4. 12	+ 0. 37
	February	10. 11	+ 0. 14			17. 11	+ 0. 23
	March	16. 11	+ 0. 23		July	1. 12	+ 0. 34
	April	2. 12	+ 0. 32			8. 11	+ 0. 30
		18. 15	+ 0. 20			19. 11	+ 0. 26

A correction of +0°·4 for zero of position has been applied to all photographs taken with the Thompson Photoheliograph up to 1904 July 19.

New wires were inserted in the Thompson Photoheliograph on 1904 July 20.

Thompson Photoheliograph, from 1904 July 20.

Date, Greenwich Civil Time.			Correction for Zero.	Date, Greenwich Civil Time.			Correction for Zero.
		d h	° ′			d h	° ′
1904	July	20. 11	+ 0. 38	1904	November	3. 12	+ 0. 22
		23. 10	+ 0. 37			21. 12	+ 0. 44
	August	3. 10	+ 0. 44			23. 12	+ 0. 29
		7. 14	+ 0. 45		December	2. 11	+ 0. 32
	September	15. 10	+ 0. 39			5. 13	+ 0. 37
		17. 10	+ 0. 39			12. 12	+ 0. 31
	October	4. 12	+ 0. 22	1905	January	26. 13	+ 0. 30

A correction of +0°·7 for zero of position has been applied to all photographs taken with the Thompson Photoheliograph from 1904 July 20 to October 13, and a correction of +0°·6 from October 14 to December 31.

The Thompson Photoheliograph was mounted on the tube of the 26-inch Thompson Photographic refractor throughout the year. The Thompson Photoheliograph is not fitted with a position-circle, and the position-angle of the wires, which are approximately parallel and perpendicular to the circle of declination, cannot be altered.

The Dallmeyer Photoheliograph was mounted on the equatorial stand belonging to it, which was erected on the terrace roof of the South Wing of the New Physical Observatory.

In the use at Greenwich of the Dallmeyer Photoheliograph the position-circle has usually been set to some convenient reading near that for zero, so that the wires are respectively very nearly parallel and perpendicular to the circle of declination, and a correction for zero of position of the photoheliograph for the mean of the two wires has been applied to the zero of the position-circle of the micrometer. The position-circle was set to the reading 354°·0 throughout 1904.

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 combined correction is applied to all position-circle readings for spots and faculæ, so as to give true position-angles.

In the use of the photoheliographs at Dehra Dûn and in Mauritius the position-circle has always been set to the zero as determined by allowing the diurnal motion to carry a spot or the Sun's limb along the horizontal wire, and the accuracy of the adjustment has been tested at short intervals. No correction for zero of position of the wires has therefore been applied for the reduction of the photographs taken in India or in Mauritius.

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 new micrometer being adjusted to coincide with the centre of the instrument.

Two sets of measures of the Sun's limb and of spots and faculæ on each photograph have been taken, and the mean of the two sets adopted.

No correction has been applied to the photographs on account of distortion.

The correction for the effect of refraction has been thus found, the Sun's image

being assumed to be sensibly an ellipse. The refraction being sensibly $c \tan z$ where $c = \sin 57''{\cdot}5 = \frac{1}{3600}$ nearly, and z is the apparent zenith-distance, we shall have—

$$\frac{\text{Vertical Diameter}}{\text{Horizontal Diameter}} = \frac{1 - c \sec^2 z}{1 - c} = 1 - c \tan^2 z ;$$

and thus the effect of refraction will be to diminish any vertical ordinate y by the quantity $c \tan^2 z$. Resolving this along and perpendicular to the radius vector r, and putting v for the position-angle of the vertex, we have for δr and $\delta \theta$, the corrections to radius vector and position-angle for the effect of refraction—

$$\delta r = + c \,.\, \tan^2 z \times r \,.\, \cos^2 (\theta - v) = + c \,.\, \tan^2 z \times r \times \frac{1 + \cos 2 (\theta - v)}{2},$$

$$\delta \theta = - c \,.\, \tan^2 z \,.\, \sin (\theta - v) \,.\, \cos (\theta - v) = - c \,.\, \tan^2 z \, \frac{\sin 2 (\theta - v)}{2}.$$

The quantity δr thus found is the correction, on the supposition that a horizontal diameter of the Sun is taken as the scale. But, as the mean of two diameters at right angles has been used, the scale itself requires the correction $\delta \mathrm{R} = + c \,.\, \tan^2 z \times \mathrm{R} \times \frac{1}{2} \left\{ \frac{1 + \cos 2 (\theta_0 - v)}{2} + \frac{1 + \cos 2 (\theta_0 + 90^\circ - v)}{2} \right\} = + \frac{1}{2} c \,\mathrm{R} \,.\, \tan^2 z$, where R is the Sun's mean radius and θ_0, $\theta_0 + 90^\circ$ the position-angles of the two diameters measured. Thus the final correction to r becomes—

$$\delta r = + c \,.\, \tan^2 z \times r \times \frac{\cos 2 (\theta - r)}{2}.$$

The quantities $c \tan^2 z$, $- \frac{\sin 2 (\theta - v)}{2}$, and $\frac{\cos 2 (\theta - r)}{2}$ have been tabulated for use as follows, $c \tan^2 z$ being expressed in circular measure and in arc for application to distances and position-angles respectively :—

$c \tan^2 z$.

z.	In Circular Measure.	In Arc.	z.	In Circular Measure.	In Arc.	z.	In Circular Measure.	In Arc.
°		′	°		′	°		′
80	·0089	31	70	·0021	7	60	·0008	3
79	·0073	25	69	·0019	6½	58	·0007	2
78	·0061	21	68	·0017	6	56	·0006	2
77	·0052	18	67	·0015	5½	54	·0005	2
76	·0045	15	66	·0014	5	52	·0005	2
75	·0039	13	65	·0013	4½	50	·0004	1
74	·0034	11½	64	·0012	4	45	·0003	1
73	·0030	10	63	·0011	4	40	·0002	1
72	·0026	9	62	·0010	3	30	·0001	0
71	·0023	8	61	·0009	3			

Factors for Refraction.

$\theta - v$	$\theta - v$	$-\frac{\sin 2(\theta-v)}{2}$	$\frac{\cos 2(\theta-v)}{2}$	$\theta - v$	$\theta - v$	$-\frac{\sin 2(\theta-v)}{2}$	$\frac{\cos 2(\theta-v)}{2}$
°	°			°	°		
0	180	·00	+ ·50	90	270	·00	− ·50
5	185	− ·09	+ ·49	95	275	+ ·09	− ·49
10	190	− ·17	+ ·47	100	280	+ ·17	− ·47
15	195	− ·25	+ ·43	105	285	+ ·25	− ·43
20	200	− ·32	+ ·38	110	290	+ ·32	− ·38
25	205	− ·38	+ ·32	115	295	+ ·38	− ·32
30	210	− ·43	+ ·25	120	300	+ ·43	− ·25
35	215	− ·47	+ ·17	125	305	+ ·47	− ·17
40	220	− ·49	+ ·09	130	310	+ ·49	− ·09
45	225	− ·50	·00	135	315	+ ·50	·00
50	230	− ·49	− ·09	140	320	+ ·49	+ ·09
55	235	− ·47	− ·17	145	325	+ ·47	+ ·17
60	240	− ·43	− ·25	150	330	+ ·43	+ ·25
65	245	− ·38	− ·32	155	335	+ ·38	+ ·32
70	250	− ·32	− ·38	160	340	+ ·32	+ ·38
75	255	− ·25	− ·43	165	345	+ ·25	+ ·43
80	260	− ·17	− ·47	170	350	+ ·17	+ ·47
85	265	− ·09	− ·49	175	355	+ ·09	+ ·49
90	270	·00	− ·50	180	360	·00	+ ·50

The position-angle of the vertex v is readily taken from a globe.

The distance from centre in terms of the Sun's radius given in the *fourth* column is then readily found by dividing the measured distance r_0, 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 derived from the *Auxiliary Tables for determining the Angle of Position of the Sun's Axis, and the Latitude and Longitude of the Earth referred to the Sun's Equator*, by Warren De La Rue, F.R.S.

The *sixth* and *seventh* columns give the heliographic longitude and latitude of the spot, which are thus computed.* Let r be the measured distance of a spot from the centre of the Sun's apparent disk, 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

* "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.

spot from the centre of the apparent disk as viewed from the Sun's centre and from the Earth respectively. Then we have—

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

$$\text{whence } \rho = \sin^{-1}\frac{r}{R} - \rho'.$$

Log. sin ρ and log. cos ρ, as computed from this formula, are given in *Tables for the Reduction of Solar Observations No.* 2, by Warren De La Rue, F.R.S. Then, if D, λ are the heliographic latitudes of the Earth and the spot respectively, referred to the Sun's equator, and L, l the heliographic longitudes reckoned from the ascending node of the Sun's equator on the ecliptic, and χ the position-angle from the Sun's axis, we have by the ordinary equations of spherical trigonometry—

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

The quantities L and D are derived from Warren De La Rue's *Auxiliary Tables* before referred to, in the computation of which the following formulæ have been used—

$$\tan L = \cos I \tan(\odot - N)$$
$$\sin D = \sin I \sin(\odot - N)$$

where I is the inclination of the Sun's equator to the ecliptic, N the longitude of the ascending node, and $\odot$ the longitude of the Sun.

The position-angle χ is given by the formula—

$$\chi = P + G + H$$

where P is the position-angle from the north point of the Sun, and G and H two auxiliary angles given by the formulæ—

$$\tan G = \tan\omega \cos\odot$$
$$\tan H = \tan I \cos(\odot - N)$$

where ω is the obliquity of the ecliptic.

It will be seen that G is the inclination of two planes through the line joining the centres of the Earth and Sun passing through the poles of the Earth and of the ecliptic respectively, and that H is the inclination of two planes through the same line and the poles of the Sun and of the ecliptic. The values assumed for I, N, ω in the computation of the tables are 7°.15′, 74°.25′, and 23°.27′·5 respectively.

The heliographic longitude of the spot is found from l, the heliographic longitude from node, by subtracting the reduction to the prime meridian, which is the longitude of the node at the epoch of the photograph, referred to the assumed prime meridian, the latter being the meridian which passed through the ascending node at mean noon, 1854 Jan. 1. The period of rotation assumed is 25·38 days.

The heliographic longitude and latitude of the centre of the Sun's disk at the time of the exposure of each photograph are also given (in brackets) in the *sixth* and *seventh* columns respectively. The longitude of the centre of the disk is found by subtracting the reduction to the prime meridian from L, the longitude of the centre from the node. The latitude of the centre is of course the same as D, the heliographic latitude of the Earth.

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 factor for converting the areas, as measured in ten-thousandths of a square inch, into millionths of the Sun's visible hemisphere, allowing for the effect of foreshortening, has been inferred by means of a table of double entry, giving the equivalent of one square for different values of the Sun's radius, and for different distances of the spot or facula from the Sun's centre as measured by means of the position-micrometer.

The individual spots in a group have in some cases not been measured separately, but combined into a cluster of two or three small spots close together, the position of the centre of gravity and the aggregate area of the cluster being given. The actual number of individual spots is usually stated in the notes.

§ 2. *Ledgers of Areas and Heliographic Positions of Groups of Sun Spots deduced from the measurement of the Solar photographs for each day in the year* 1904.

In these ledgers the daily results for each group are collected together from the measures of the individual spots and given in a condensed form. The first column gives, for each day on which the group was observed, the Greenwich civil time at which each photograph was taken, expressed by the day of the month (civil reckoning) and the decimals of a day reckoning from Greenwich mean midnight. The second and third columns give the sums, for each day, of the projected areas of all the umbræ and whole spots comprised in the group, the projected area being the area as

it is measured upon the photograph, uncorrected for foreshortening, and expressed in millionths of the Sun's apparent disk. The fourth and fifth columns give the sums for each day of the areas of all the umbræ and whole spots comprised in the group, corrected for foreshortening, and expressed in millionths of the Sun's visible hemisphere. The sixth and seventh columns give the mean longitude and latitude of the group, found by multiplying the longitude and latitude of each separately measured component of the group by its area, and dividing the sum of the products by the sum of the areas. The last column gives the mean longitude of the group from the central meridian, and is found by subtracting the longitude of the centre of the disk from the mean longitude of the group. At the foot of these daily results for each group are given the mean areas of umbræ and whole spots and the mean longitude and latitude for the period of observation.

§ 3. *Total Projected 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* 1904.

This section requires no further explanation.

W. H. M. CHRISTIE.

Royal Observatory, Greenwich.
1905 *December* 23.

ROYAL OBSERVATORY, GREENWICH.

MEASURES OF POSITIONS AND AREAS

OF

SUN SPOTS AND FACULÆ

ON

PHOTOGRAPHS

TAKEN WITH THE

PHOTOHELIOGRAPHS

AT GREENWICH, IN INDIA, AND IN MAURITIUS,

WITH THE DEDUCED

HELIOGRAPHIC LONGITUDES AND LATITUDES.

1904.

MEASURES of POSITIONS and AREAS of SUN SPOTS and FACULÆ on PHOTOGRAPHS taken at the ROYAL OBSERVATORY, GREENWICH, at DEHRA DÛN in INDIA, and at the ROYAL ALFRED OBSERVATORY, MAURITIUS, in the Year 1904.

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 I. signifies that the photograph was taken in India; the letter M. that the photograph was taken in Mauritius; 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. 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 longitude and latitude of the centre of the disk are given in brackets.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots: Area of WHOLE for each Spot (and for Day).	Faculæ: Area for each Group (and for Day).
1904.				°	°	°			
0·138	AS, M		0·942	253·1	2-8·8	−16·9			125
			0·908	231·3	26·7	−36·1			126
			0·880	241·5	268·1	−26·4			200
			0·885	293·8	267·5	+19·3			148
		5140	0·461	138·7	189·4	−23·1	11	41	
		5140	0·462	133·3	187·5	−21·3	1	6	
		5140	0·463	131·6	187·0	−20·8	4	17	
		5143	0·405	81·2	185·1	+ 0·8	0	5	
I		5142*a*	0·614	110·0	172·1	−14·6	34	212	
		5142	0·659	108·2	168·5	−14·3	4	45	
		5142	0·680	109·9	167·2	−15·7	0	8	
		5142	0·685	105·7	166·2	−13·0	6	21	
		5142	0·700	106·8	165·1	−13·9	0	4	
		5144	0·928	108·6	140·9	−18·4	5	35	} 823*sp*
		5144	0·946	110·0	137·4	−20·0	8	28	
		5144	0·962	110·4	134·7	−20·4	0	11	}
Jan. 1		Centre			(208·6)	(− 3·1)	(73)	(433)	(1422)
1·510	AS, RF	5145	0·400	202·9	200·3	−24·7	0	7	
		5140	0·331	175·6	188·9	−22·4	4	21	
		5140	0·303	167·0	186·4	−20·3	4	17	
		5140	0·336	164·0	184·8	−22·0	0	4	
		5140	0·335	160·1	183·5	−21·5	0	6	
		5142*a*	0·362	123·0	172·3	−14·4	33	166	
		5142	0·399	121·3	169·9	−14·9	14	66	
		5144	0·781	112·2	140·7	−19·2	5	84	523*c*
Jan. 2		Centre			(190·5)	(− 3·2)	(60)	(371)	(523)
2·139	AS, M		0·848	294·4	236·7	+18·6			350
		5140	0·346	199·0	189·3	−22·3	2	11	
		5140	0·320	198·5	188·5	−20·9	0	2	
I.		5140	0·301	193·5	186·6	−20·3	7	16	
		5140	0·314	184·7	183·9	−21·5	1	4	
		5142*a*	0·260	139·3	172·3	−14·6	30	135	
		5142	0·295	135·6	170·0	−15·4	4	26	
		5142	0·335	128·5	166·6	−15·1	0	12	
2·139	AS, M	5144	0·680	115·2	141·8	−19·3	9	16	
I.		5144	0·699	114·7	140·2	−19·4	4	13	
		5144	0·752	113·1	135·3	−19·4	0	2	
Jan. 3		Centre			(182·3)	(− 3·3)	(57)	(237)	(350)
3·413	AS, RF		0·929	289·7	231·2	+16·8			347
		5142*a*	0·225	211·6	172·4	−14·5	19	125	
		5142	0·199	207·2	170·7	−13·7	4	41	
		5142	0·228	199·9	170·0	−15·8	0	6	
		5144	0·458	125·6	142·4	−18·6	1	19	
		5144	0·462	123·6	141·6	−18·0	5	15	
		5144	0·462	120·3	140·9	−16·6	0	7	
		5144	0·470	188·5	140·0	−16·1	0	2	
		5144	0·544	121·4	136·0	−19·5	0	3	
		5144	0·554	122·3	135·6	−20·2	0	13	
		5146*a*	0·989	70·9	85·8	+18·3	40	174	489*p*
Jan. 4		Centre			(165·4)	(− 3·5)	(69)	(405)	(836)
4·478	AS, RF		0·806	242·9	202·8	−23·7			646
		5142*a*	0·396	240·9	172·2	−14·4	15	103	
		5142	0·373	241·8	171·1	−13·5	3	26	
		5144	0·295	147·9	142·0	−18·0	5	18	
		5144	0·305	145·0	140·8	−18·0	1	7	
		5146*a*	0·936	68·9	84·7	+18·3	32	171	245*c*
			0·804	66·3	101·4	+16·5			219
			0·970	63·3	78·9	+24·8			210
Jan. 5		Centre			(151·4)	(− 3·6)	(56)	(325)	(1320)
5·138	AS, RF		0·887	299·2	200·4	+23·7			160
			0·859	241·3	199·9	−26·4			546
I.		5142*a*	0·516	248·0	172·3	−14·3	15	114	
		5142	0·491	244·2	170·0	−15·6	0	8	
		5144	0·252	177·4	142·1	−18·2	3	7	
		5144	0·254	173·7	141·1	−18·3	0	1	
		5144	0·249	169·0	140·0	−17·8	0	2	

Group 5140, 1903 December 28–1904 January 3. A pair of regular spots, *a* and *b*. *b* has a small companion on December 29. The group is an irregular stream after December 31.
Group 5142, 1903 December 29–1904 January 9. A stream of spots. The leader, *a*, is the largest spot of the group, and is a large regular spot. The last spot, *b*, is the next in size. *b* has broken up by January 1.
Group 5143, 1904 January 1. A few very faint spots.
Group 5144, January 1–9. A few unstable spots, none of them large, in a short irregular stream.
Group 5145, January 2. A very small spot.
Group 5146, January 4–16. A large regular spot, *a*, with occasionally a few small companions.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
5·138	AS, RF	5146	0·870	70·3	85·0	+15·1	2	7	269*c*
		5146*a*	0·880	67·0	84·6	+18·1	27	153	
		5146	0·891	69·4	82·6	+16·4	5	12	
I.			0·941	62·6	76·7	+24·2			177
			0·926	101·7	74·9	−12·3			98
Jan. 6		Centre			(142·8)	(−3·7)	(52)	(304)	(1250)
			0·879	242·4	189·4	−25·9			928
6·134	RF, M	5142	0·706	253·8	173·8	−14·1	0	1	
		5142*a*	0·693	252·8	172·6	−14·6	17	129	
		5144	0·327	219·3	142·1	−18·3	3	8	
		5144	0·298	200·2	135·9	−20·0	0	5	
		5144	0·263	196·0	134·0	−18·4	0	3	
I.		5147	0·415	50·0	110·7	+11·9	0	5	
		5147	0·429	50·4	109·9	+12·3	0	3	
		5146	0·743	65·4	85·3	+15·3	0	4	271*f*
		5146*a*	0·767	62·5	84·1	+18·0	38	179	
		5146	0·784	65·4	81·7	+16·5	3	8	
			0·968	119·0	54·3	−29·0			150
Jan. 7		Centre			(129·6)	(−3·8)	(61)	(345)	(1349)
			0·929	241·8	183·3	−27·5			684
7·157	AS, RF	5142*a*	0·841	254·9	173·0	−14·8	9	90	273*c*
		5144	0·416	228·9	135·4	−19·5	0	5	
		5144	0·371	227·0	132·6	−18·3	0	3	
		5147	0·284	13·5	112·2	+12·1	5	9	
I.		5147	0·295	27·4	108·2	+11·3	0	3	
		5146	0·593	56·8	85·2	+15·6	0	2	
		5146*a*	0·627	53·9	84·0	+18·3	23	179	
		5146	0·629	58·2	82·4	+16·1	1	5	
			0·934	116·0	47·7	−25·7			250
Jan. 8		Centre			(116·1)	(−3·9)	(38)	(296)	(1207)
			0·974	243·7	180·3	−26·5			300
8·132	AS, M		0·828	234·9	155·2	−30·9			150
		5142*a*	0·941	255·6	173·5	−14·9	8	79	461*bf*
		5144	0·636	245·4	140·6	−18·5	2	10	
		5144	0·619	244·8	139·2	−18·5	0	3	
I.		5144	0·603	245·0	138·1	−18·0	3	12	
		5147	0·316	329·4	112·6	+11·8	3	7	
		5146*a*	0·490	40·1	83·9	+18·1	26	146	
			0·858	121·4	46·7	−28·8			231
			0·951	69·7	33·8	+17·9			136
Jan. 9		Centre			(103·2)	(−4·0)	(42)	(257)	(1278)
Jan. 10		No Photograph							
1904.				°	°	°			
10·141	RF, M		0·894	247·6	139·5	−21·9			1246
		5146*c*	0·398	342·7	83·9	+18·1	28	126	
		5148	0·586	127·2	46·1	−24·3	0	3	
		5148	0·600	126·0	44·8	−24·2	1	3	
I.		5149	0·801	63·0	28·1	+18·6	0	5	315*c*
		5150	0·870	64·4	20·5	+19·8	0	3	
		5150	0·869	65·5	20·3	+18·9	0	4	
			0·847	115·1	20·4	−23·3			139
Jan. 11		Centre			(76·8)	(−4·2)	(29)	(144)	(1700)
			0·905	120·3	359·0	−29·1			244
11·248	CL, RF		0·975	65·8	348·2	+22·4			67
		5146	0·546	316·3	85·6	+19·2	1	3	
		5146*a*	0·514	318·6	83·1	+18·6	19	104	
M.			0·960	248·7	136·1	−21·6			886
			0·883	234·0	120·9	−33·5			333
			0·829	292·7	114·7	+16·0			178
Jan. 12		Centre			(62·2)	(−4·3)	(20)	(107)	(1708)
			0·852	294·4	100·0	+18·1			151
12·507	AS, RF		0·904	284·9	108·3	+11·4	0	9	89*c*
		5147	0·695	301·5	83·8	+17·8	12	95	140*c*
		5146*a*	0·980	68·5	329·7	+20·0	47	289	261*f*
		5151*a*	0·900	59·6	346·9	+24·8			168
Jan. 13		Centre			(45·5)	(−4·4)	(59)	(393)	(809)
			0·939	287·6	101·0	+14·8			390
13·429	AS, RF		0·759	311·2	72·9	+26·4			270
		5146*a*	0·813	295·7	83·5	+17·7	15	101	218*c*
		5151*a*	0·927	66·6	329·0	+19·7	43	276	
		5151*b*	0·931	64·3	328·9	+21·9	0	74	781*f*
Jan. 14		Centre			(33·4)	(−4·6)	(58)	(451)	(1659)
			0·875	301·8	74·5	+24·7			226
14·480	AS, RF		0·924	291·8	83·9	+18·0	12	61	405*c*
		5146*a*	0·824	61·2	329·5	+20·4	38	403	713*f*
		5151*ab*	Centre		(19·7)	(−4·7)	(50)	(464)	(1344)
Jan. 15		Centre							
			0·935	295·6	71·9	+21·9			101
15·464	AS, RF		0·983	289·4	83·8	+18·0	20	72	186*c*
		5146*a*	0·700	54·9	329·4	+19·9	43	269	
		5151*a*	0·719	51·6	329·3	+22·7	0	10	632*f*
		5151	0·733	53·0	327·7	+22·4	6	70	
		5151*b*	0·837	59·6	315·8	+22·0	4	21	89*c*
Jan. 16		5152*a* Centre			(6·8)	(−4·8)	(73)	(442)	(1008)

Group 5147, January 7–13. A few very small spots, preceding Group 5146. The group is not seen on January 11 or 12, but a small spot is seen in its place on January 13.
Group 5148, January 11. A pair of very small faint spots.
Group 5149, January 11. A very small faint spot.
Group 5150, January 11. A pair of very small faint spots.
Group 5151, January 13–24. A large composite spot, *a*, followed by a smaller spot, *b*, and one or two very small companions. *a* has broken up into two parts by January 19, of which *c* is a regular spot, and *d* fainter and less regular.
Group 5152, January 16–25. A stream of spots close behind Group 5151, and forming with it a fine procession of spots. It is a single small spot, *a*, on January 16; but a second spot, *b*, has formed behind *a* by January 17, and rapidly increases in size, becoming a triple spot by January 19. *b* has broken up by the next day, but has revived as an irregular stream by January 21, of which *c* and *d*, a regular and a composite spot, are the principal members. *d* soon divides into *c* and *f*, and by January 25 little remains of the group beside *c* and *f*.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
16·182	AS, RF		0·983	293·9	73·6	+22·4			106
			0·971	301·4	68·5	+29·0			74
			0·840	239·3	52·1	−28·2			284
		5153	0·500	15·5	348·9	+23·9	0	2	
		5153	0·519	18·2	347·1	+24·7	0	3	
I.		5151*a*	0·605	47·0	329·3	+20·1	29	288	
		5151	0·625	44·2	329·3	+22·4	1	8	224*f*
		5151*b*	0·653	45·7	326·9	+22·9	3	42	
		5152*a*	0·744	55·2	316·4	+21·5	8	28	
		5152*b*	0·782	56·5	312·7	+22·2	8	31	107*c*
			0·922	76·2	291·9	+10·7			109
Jan. 17		Centre			(357·3)	(−4·8)	(49)	(402)	(904)
17·064	AS, RF	5151*a*	0·490	31·0	330·1	+20·0	52	293	
		5151	0·523	31·0	328·8	+21·9	0	7	
		5151	0·535	31·4	328·1	+22·4	0	5	
		5151	0·545	32·5	327·2	+22·6	0	4	
		5151	0·566	34·9	325·1	+23·0	0	29	
		5151	0 607	34·9	323·1	+25·4	0	3	
M.		5151	0·589	38·2	322·4	+23·0	0	12	
		5152*a*	0·618	46·0	317·3	+21·1	12	90	
		5152*b*	0·653	49·8	313·5	+20·8	11	95	
		5152	0·678	48·9	312·2	+22·4	0	3	
			0·959	305·3	52·5	+31·8			128
			0·918	243·8	51·7	−25·9			328
			0·825	302·3	34·6	+22·9			213
Jan. 18		Centre			(345·6)	(−4·9)	(75)	(541)	(669)
18·153	AS, RF		0·873	293·7	28·2	+17·8			497
		5151*c*	0·430	3·5	329·7	+20·3	24	117	
		5151*d*	0·430	7·9	327·7	+20·1	7	133	
		5151*b*	0·478	10·5	325·9	+22·9	0	11	
I.		5151	0·489	13·7	324·1	+23·3	0	29	
		5152*a*	0·496	25·7	318·0	+21·5	0	37	
		5152	0·505	29·2	316·0	+21·2	0	7	
		5152*b*	0·540	34·7	312·1	+21·5	23	151	
Jan. 19					(331·3)	(−5·0)	(54)	(485)	(497)
19·157	AS, RF		0·951	289·5	27·4	+16·8			238
		5151*c*	0·469	336·3	329·8	+20·3	20	120	
		5151	0·481	339·3	328·7	+21·6	0	1	
		5151*d*	0·453	339·1	328·1	+20·0	13	62	
I.		5151	0·428	340·6	326·8	+18·7	0	3	
		5151*b*	0·485	344·9	326·0	+22·8	1	3	
		5152	0·478	354·3	321·1	+23·2	0	3	
		5152*a*	0·447	359·4	318·5	+21·3	7	20	
		5152	0·449	3·8	316·4	+21·4	0	3	
1904.				°	°	°			
19·157	AS, RF	5152*b*	0·467	12·9	311·8	+21·9	13	57	
		5154	0·436	114·8	294·1	−15·1	0	1	
I.			0·856	121·5	261·5	−29·4			226
Jan. 20		Centre			(318·2)	(−5·1)	(54)	(273)	(464)
20·188	AS, RF	5151	0·620	319·9	330·3	+23·6	1	7	
		5151*c*	0·580	317·1	329·4	+20·4	18	102	
		5151	0·588	321·3	328·0	+22·5	3	6	
		5151*d*	0·564	319·4	327·6	+20·5	13	71	
		5151*b*	0·569	323·8	325·8	+22·4	0	2	
		5151	0·527	319·8	325·6	+18·8	0	5	
		5152*a*	0·496	332·6	318·7	+21·0	9	20	
		5152*c*	0·482	342·3	313·7	+22·0	27	104	
I.		5152	0·463	345·3	311·8	+21·4	0	7	
		5152	0·505	348·1	311·1	+24·3	6	15	
		5152	0·480	348·0	310·8	+22·7	1	6	
		5152*d*	0·484	350·7	309·5	+23·3	15	104	
		5154	0·240	130·9	293·9	−14·1	1	5	
		5154	0·229	126·8	293·8	−13·0	1	4	
			0·960	68·1	234·1	+19·3			299
Jan. 21		Centre			(304·6)	(−5·2)	(95)	(458)	(299)
21·542	AS, RF	5151*c*	0·763	302·7	329·8	+20·5	17	64	
		5151*d*	0·744	303·2	328·1	+20·1	5	28	
		5151	0·745	304·4	327·7	+20·9	0	8	
		5151	0·721	302·6	326·5	+18·9	0	12	58*c*
		5152*a*	0·665	310·5	319·4	+21·1	0	15	
		5152*c*	0·625	316·1	314·5	+22·1	21	161	
		5152*e*	0·602	324·2	309·3	+24·3	13	73	
		5152*f*	0·564	323·7	307·7	+22·1	6	78	53*c*
		5154	0·216	225·0	295·7	−13·9	11	46	
		5154	0·180	216·9	293·1	−13·4	10	38	
		5155	0·288	115·8	271·4	−12·2	0	8	54*c*
		5156*a*	0·793	69·6	237·2	+12·7	0	6	
		5156*b*	0·811	70·5	235·4	+12·5	0	10	86*c*
			0·869	61·8	231·6	+21·3			365
			0·913	110·5	220·8	−20·8			196
Jan. 22		Centre			(286·7)	(−5·2)	(83)	(547)	(812)
22·206	AS, RF	5151*c*	0·835	299·1	329·1	+20·6	23	73	
		5151*d*	0·818	299·3	327·4	+20·1	6	21	315*c*
		5152*a*	0·744	305·2	318·7	+21·4	3	12	
		5152*c*	0·710	309·4	314·4	+22·5	31	183	
		5152	0·677	310·9	311·4	+21·9	6	20	
I.		5152	0·684	315·5	309·8	+24·6	0	2	482*f*
		5152*e*	0·677	316·4	308·9	+24·7	3	18	
		5152	0·668	317·2	308·0	+24·7	3	11	
		5152*f*	0·649	315·8	307·5	+23·1	20	122	

Group 5153, January 17. A pair of very small faint spots.
Group 5154, January 20–28. A very small spot on January 20. The group rapidly increases in size on the succeeding days, a number of spots breaking out to form a compact but irregular cluster. The spots at the two extremities of the cluster combine to form two large well-defined spots, *a* and *b*, and the group lengthens out to form a fine stream of the usual type.
Group 5155, January 22. A small faint spot.
Group 5156, January 22–24. Two small spots, *a* and *b*, of which the preceding one, *a*, has disappeared by January 23.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
22·206	AS, RF	5154	0·307	238·6	293·7	−14·3	37	205	
		5157	0·529	36·4	258·6	+20·1	0	6	
		5156*b*	0·736	67·6	234·1	+12·4	3	8	65*c*
I.			0·849	60·5	225·7	+21·5			271
			0·918	112·0	211·4	−22·3			146
			0·988	115·4	195·4	−26·0			127
Jan. 23		Centre			(278·1)	(−5·3)	(135)	(681)	(1406)
23·173	AS, RF		0·888	304·3	320·6	+27·0			426
		5151*c*	0·931	295·0	329·8	+20·9	10	35	}
		5151	0·919	293·4	328·3	+19·0	0	4	} 403*c*
		5151*d*	0·919	295·0	327·9	+20·4	0	9	}
		5152*c*	0·832	301·9	315·1	+22·6	19	117	}
		5152	0·811	301·8	313·1	+21·7	4	9	} 345*c*
		5152*f*	0·776	305·9	308·4	+23·1	14	85	}
		5152	0·783	308·0	308·1	+24·9	0	5	} 284*np*
		5154*a*	0·541	233·2	297·5	−13·6	43	218	
I.		5154	0·531	250·2	296·4	−15·0	5	10	
		5154*b*	0·483	250·3	293·2	−14·1	49	189	
		5158	0·435	9·4	261·1	+20·0	2	12	
		5158	0·433	13·1	259·4	+19·5	2	8	
		5156*b*	0·586	58·9	234·5	+13·0	2	5	}
		5159	0·677	53·9	230·2	+19·1	0	7	} 203*f*
		5159	0·719	49·9	228·8	+23·2	0	4	}
			0·816	112·6	211·6	−21·5			136
			0·896	52·7	210·3	+29·9			107
			0·937	115·4	195·9	−25·6			181
Jan. 24		Centre			(265·4)	(−5·4)	(150)	(717)	(2085)
24·190	AS, RF		0·972	289·4	325·8	+17·4			156
		5152*c*	0·923	297·4	314·6	+22·7	9	83	}
		5152	0·909	297·5	312·4	+22·2	0	8	} 872*c*
		5152*f*	0·876	300·2	307·3	+23·0	0	32	}
		5154	0·710	254·0	296·9	−15·2	0	7	}
		5154*a*	0·704	256·2	296·6	−13·6	50	416	}
I.		5154*b*	0·660	251·7	292·7	−16·2	3	30	} 95*c*
		5154	0·636	253·8	291·1	−14·5	35	248	}
		5160*a*	0·316	158·9	245·1	−22·5	12	36	
		5160	0·343	153·1	242·4	−23·3	0	2	
		5160*b*	0·347	149·0	241·0	−22·7	7	38	
			0·876	120·7	192·5	−29·4			286
			0·954	108·2	179·0	−19·0			123
Jan. 25		Centre			(252·1)	(−5·5)	(116)	(900)	(1532)
1904.				°	°	°			
25·429	RF, M		0·972	297·1	307·8	+24·7			356
		5154*a*	0·882	257·7	297·9	−13·5	57	504	}
		5154	0·850	256·6	294·1	−14·4	0	8	}
		5154	0·849	255·4	293·9	−15·3	0	10	} 538*c*
		5154	0·835	255·1	292·3	−15·5	0	10	}
		5154*b*	0·815	256·1	290·3	−14·6	57	345	}
		5160*a*	0·347	211·8	247·1	−22·6	5	21	
		5160*b*	0·303	195·3	240·6	−22·5	6	17	
			0·779	123·2	187·7	−29·0			145
			0·874	107·6	174·7	−18·1			327
Jan. 26		Centre			(235·7)	(−5·6)	(125)	(915)	(1366)
26·141	AS, RF	5154	0·950	256·2	298·4	−14·9	3	28	}
		5154*a*	0·947	257·9	297·7	−13·3	36	387	}
		5154	0·935	255·8	295·7	−15·3	6	34	} 584*c*
		5154	0·908	256·5	291·5	−14·6	6	23	}
I.		5154*b*	0·895	256·6	289·7	−14·5	60	271	}
		5160*a*	0·458	228·6	247·7	−22·8	11	23	45*c*
		5160*b*	0·379	217·2	240·2	−22·9	4	14	
		5161	0·569	127·5	196·2	−25·0	0	4	
			0·848	107·6	168·0	−17·9			251
Jan. 27		Centre			(225·9)	(−5·6)	(126)	(784)	(880)
27·137	AS, RF		0·857	299·9	265·7	+21·9			107
		5154*a*	0·993	257·0	297·0	−13·6	30	335	}
		5154	0·989	255·9	295·4	−14·9	0	14	} 484*c*
I.		5154*b*	0·971	256·3	289·7	−14·7	22	149	}
		5160*a*	0·624	240·1	248·5	−22·7	9	37	
			0·938	112·6	142·5	−23·2			258
Jan. 28		Centre			(212·7)	(−5·7)	(61)	(535)	(849)
28·423	AS, M		0·918	296·0	257·6	+21·1			170
			0·860	240·3	253·5	−28·4			77
			0·746	306·7	235·6	+22·0			298
		5160*a*	0·810	246·6	248·9	−22·3	8	36	}
		5160	0·798	248·0	247·8	−21·0	0	11	} 283*c*
		5160	0·775	247·2	245·4	−21·2	0	9	}
			0·880	112·6	134·2	−22·6			462
Jan. 29		Centre			(195·6)	(−5·8)	(8)	(56)	(1290)
29·173	AS, RF		0·930	241·2	253·8	−28·9			235
			0·820	304·4	233·0	+23·7			167
		5160*a*	0·896	248·3	249·1	−22·0	4	14	}
I.		5160	0·874	246·4	246·1	−23·4	3	7	} 132*p*
			0·855	110·3	126·9	−20·4			256

Group 5157, January 23. A cluster of small faint spots.
Group 5158, January 24. A few very small spots in a short stream.
Group 5159, January 24. Two very small faint spots.
Group 5160, January 25–31. A few spots in a short stream appearing suddenly near the central meridian. *a* and *b*, the first and last spots are the largest. *b* has disappeared by January 28.
Group 5161, January 27. A very small faint spot.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
29·173	AS, RF		0·952	78·3	114·9	+ 9·2			83
I.			0·946	123·3	114·5	−33·4			81
			0·951	118·7	113·0	−29·1			58
Jan. 30		Centre			(185·5)	(− 5·9)	(7)	(21)	(1012)
30·216	AS, RF		0·892	298·7	230·0	+22·2			380
		5160*a*	0·973	248·5	250·3	−22·3	0	14	
I.		5160	0·973	250·7	250·2	−20·1	0	18	
		5160	0·959	247·5	246·8	−23·2	0	24	497*c*
		5160	0·936	246·8	242·4	−23·8	0	5	
Jan 31		Centre			(172·5)	(−6·0)	(0)	(61)	(877)
31·415	AS, RF		0·938	298·2	221·1	+23·8			171
		5162*a*	0·480	23·4	145·0	+20·1	0	9	
			0·919	67·4	93·8	+18·0			211
Feb. 1		Centre			(156·7)	(−6·0)	(0)	(9)	(382)
32·143	AS, RF		0·956	293·9	216·0	+20·7			84
			0·887	246·7	209·5	−23·4			195
			0·907	303·4	205·0	+26·8			111
I.		5162	0·449	358·8	147·7	+20·4	2	9	
		5162*a*	0·454	5·2	144·6	+20·7	4	8	
			0·896	70·5	86·6	+14·4			203
Feb. 2		Centre			(147·1)	(−6·1)	(6)	(17)	(593)
33·348	AS, M		0·854	238·5	188·2	−30·0			275
		5162	0·490	333·5	144·6	+19·9	0	2	
I.		5162*a*	0·499	334·6	144·4	+20·6	6	32	
			0·847	60·2	79·4	+21·1			440
Feb. 3		Centre			(131·2)	(−6·2)	(6)	(34)	(715)
34·505	AS, RF		0·902	236·3	179·2	−33·0			287
			0·850	254·0	174·4	−16·9			268
		5162*a*	0·626	314·7	144·2	+20·5	3	15	
		5162	0·616	314·9	143·6	+20·1	0	1	47*c*
		5163	0·947	65·3	49·1	+20·9	0	7	
		5163	0·955	65·3	47·6	+21·3	0	28	104*sf*
		5164*a*	0·984	75·6	38·3	+12·9	22	199	279*f*
			0·844	53·0	67·4	+26·4			231
			0·801	65·6	67·1	+15·2			110
			0·927	116·7	47·8	−27·1			224
Feb. 4		Centre			(116·0)	(− 6·3)	(25)	(250)	(1550)
1904.				°	°	°			
35·478	RF, M		0·959	257·8	177·6	−13·5			115
			0·903	250·3	168·2	−20·5			94
		5162*a*	0·748	305·3	143·9	+20·8	3	20	166*f*
		5165	0·765	123·1	56·0	−29·1	0	4	164*sf*
		5163	0·884	61·6	46·9	+21·4	1	5	180*f*
		5164*a*	0·929	73·8	37·5	+12·4	33	367	
		5164	0·957	70·6	33·3	+16·4	0	5	
		5164	0·957	72·1	33·0	+15·0	0	31	691*c*
		5164	0·962	73·8	31·6	+13·6	8	90	
			0·893	115·5	40·2	−25·6			36
			0·946	65·0	36·7	+21·1			147
Feb. 5		Centre			(103·3)	(−6·4)	(45)	(522)	(1593)
36·216	AS, RF		0·945	249·1	165·3	−21·9			253
		5162*a*	0·837	299·7	144·2	+20·5	0	21	
		5162	0·834	300·6	143·6	+21·1	0	6	95*c*
		5163	0·814	56·6	46·4	+22·3	0	4	
		5163	0·814	57·8	46·0	+21·4	4	6	102*f*
		5163	0·848	59·1	42·0	+21·9	0	3	
I.		5164*a*	0·860	71·8	37·0	+12·1	52	341	
		5164	0·890	71·2	33·6	+13·5	1	9	
		5164	0·891	72·3	33·3	+12·6	0	2	655*c*
		5164	0·902	68·6	32·8	+16·1	0	5	
		5164	0·910	71·7	30·9	+13·7	18	120	
			0·904	112·6	158·5	−23·2			78
Feb. 6		Centre			(93·5)	(−6·4)	(75)	(517)	(1183)
37·513	AS, RF		0·961	292·9	146·4	+19·8			166
			0·824	241·2	130·6	−27·3			114
		5164	0·672	58·9	40·0	+15·1	0	5	
		5164	0·651	64·0	39·9	+11·4	0	23	
		5164*a*	0·683	64·0	37·6	+12·3	39	312	
		5164	0·681	66·5	37·1	+10·7	0	22	391*c*
		5164	0·711	64·4	35·4	+13·0	0	16	
		5164	0·743	64·3	32·9	+14·1	0	14	
		5164	0·759	62·1	32·3	+16·2	0	10	
		5164	0·763	65·4	30·9	+14·0	7	53	
			0·728	50·5	39·1	+22·4			112
Feb 7		Centre			(76·4)	(−6·5)	(46)	(455)	(783)
38·594	AS, M		0·917	247·4	129·1	−23·3			241
		5163*a*	0·483	28·1	48·3	+18·9	10	42	
		5163	0·513	32·8	45·1	+19·3	7	34	
		5164*a*	0·507	52·9	37·9	+11·9	42	407	
		5164	0·642	37·8	36·7	+24·5	0	3	

Group 5162, February 1–6. A small spot, *a*, with occasionally a small companion.
Group 5163, February 4–14. One or two small spots. The group is not seen on February 7, but has revived again by February 8 as a scattered stream. *a*, the leader, and largest member of the group, is a regular spot, and remains alone by February 13.
Group 5164, February 4–16. A fine stream of spots. *a*, the leader, is the largest, and is composite in form. *a* increases in length, coalescing with the spots that follow it, and by February 9 has become an unusually long narrow spot. It has broken up by February 11, the principal portion, *b*, being in the following portion of the group.
Group 5165, February 5. A very small faint spot.
Group 5166, February 8. A very small spot.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
38·594	AS, M	5164	0·593	55·1	32·2	+14·2	6	94	
			0·913	64·0	1·2	+20·5			111
			0·921	111·6	354·6	−22·4			202
			0·925	95·2	354·2	− 7·3			124
Feb. 8		Centre			(62·2)	(− 6·5)	(65)	(580)	(678)
39·618	AS, M		0·805	299·5	96·4	+18·9			149
		5163*a*	0·430	358·3	49·6	+18·7	8	62	
		5163	0·443	369·1	44·6	+19·3	10	37	
		5164*a*	0·369	28·7	38·4	+12·3	54	476	
		5164	0·356	33·2	37·4	+10·8	4	62	
		5164	0·437	37·7	32·9	+13·8	4	46	
			0·980	69·2	333·6	+18·8			117
Feb. 9		Centre			(48·8)	(− 6·6)	(80)	(683)	(266)
40·435	AS, RF		0·880	295·9	94·6	+19·0			167
		5163*a*	0·474	332·9	51·1	+18·4	14	69	65*n*
		5163	0·449	347·3	44·0	+19·3	4	57	
		5163	0·482	348·5	43·9	+21·5	0	5	
		5164*a*	0·322	351·9	40·6	+11·9	31	185	
		5164	0·258	355·2	39·2	+ 8·2	0	5	
		5164	0·290	359·3	38·2	+10·2	0	17	
		5164*a*	0·331	1·0	37·7	+12·6	33	264	
		5164	0·305	1·3	37·6	+11·1	2	11	
		5164	0·310	7·1	35·8	+11·3	13	50	
		5164	0·381	10·9	33·7	+15·3	0	14	
		5164	0·358	19·9	30·8	+13·1	0	50	
			0·944	66·4	331·4	+19·7			392
Feb. 10		Centre			(38·0)	(− 6·6)	(97)	(727)	(624)
41·183	AS, RF		0·916	295·8	89·4	+20·4			207
			0·794	311·0	69·8	+26·4			101
		5163*a*	0·580	317·8	52·3	+19·3	7	75	
		5163	0·505	329·7	43·6	+19·3	2	14	
		5164	0·387	325·2	41·0	+11·9	18	151	
		5164	0·386	329·3	39·6	+12·7	12	44	
		5164	0·356	330·1	38·4	+11·3	6	30	
		5164*b*	0·368	336·0	36·8	+12·9	33	221	
I.		5164	0·338	337·4	35·6	+11·5	4	67	
		5164	0·355	344·5	33·6	+13·3	0	6	
		5164	0·391	347·5	33·0	+15·7	0	5	
		5164	0·339	353·3	30·3	+12·9	0	3	
		5164	0·391	357·4	29·1	+16·2	0	3	
		5167	0·989	104·1	305·3	−14·9	0	10	582*f*
			0·895	47·7	336·0	+33·0			43
			0·925	64·2	325·2	+20·8			406
Feb. 11		Centre			(28·0)	(− 6·7)	(82)	(629)	(1339)

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
42·149	AS, RF		0·940	294·3	81·0	+20·1			105
			0·870	306·1	67·2	+26·8			276
		5163*a*	0·711	305·6	53·0	+19·2	14	93	186*c*
		5163	0·595	310·7	43·4	+16·9	1	5	
		5164	0·550	305·3	42·7	+12·5	9	42	
		5164	0·532	307·1	41·1	+12·6	0	5	
I.		5164	0·524	308·8	40·1	+13·0	6	21	
		5164	0·507	307·3	39·6	+11·7	12	45	
		5164*b*	0·487	313·3	36·7	+13·2	29	224	
		5164	0·457	313·2	35·2	+11·9	7	80	
			0·899	58·7	318·1	+24·3			641
			0·953	104·4	302·2	−15·7			1138
Feb. 12		Centre			(15·4)	(− 6·7)	(78)	(515)	(2346)
43·483	AS, RF	5163*a*	0·866	295·8	52·7	+18·3	14	62	356*n*
		5164	0·754	292·7	42·9	+12·4	2	34	
		5164	0·724	292·8	40·4	+11·3	0	8	
		5164	0·722	294·7	39·8	+12·6	5	18	451*c*
		5164	0·705	294·2	38·6	+11·7	0	4	
		5164	0·712	298·0	38·0	+14·4	0	6	
		5164*b*	0·676	297·4	35·5	+12·7	22	225	
		5168	0·470	5·7	354·8	+20·9	1	4	
		5168	0·464	10·6	352·5	+20·3	0	5	
		5167	0·810	104·1	303·3	−15·4	0	13	
			0·821	51·1	312·4	+26·3			856
			0·839	106·2	300·4	−17·3			1373
Feb. 13		Centre			(357·7)	(− 6·8)	(44)	(379)	(3036)
44·159	AS, RF		0·877	297·8	44·5	+20·3			298
		5163*a*	0·934	292·8	53·9	+18·4	9	58	55*c*
		5164	0·849	289·1	43·9	+12·2	6	14	
		5164	0·822	290·8	40·7	+12·7	3	6	568*c*
I.		5164	0·800	292·3	38·2	+13·3	4	21	
		5164	0·778	293·0	36·0	+13·0	18	118	
			0·772	50·8	308·1	+24·0			277
			0·819	106·7	293·7	−17·6			195
Feb. 14		Centre			(348·9)	(− 6·9)	(40)	(217)	(1393)
45·233	CL, M	5164	0·933	286·5	41·1	+12·7	0	5	959*c*
		5164	0·904	288·7	36·4	+13·6	17	90	
I.			0·943	66·1	268·6	+19·8			140
Feb. 15		Centre			(334·8)	(− 6·9)	(17)	(95)	(1099)
46·281	CL, M	5164	0·979	285·7	36·9	+13·8	10	83	733*mf*
		5169	0·715	102·0	275·2	−13·4	0	3	
I.			0·951	111·1	247·9	−22·2			290
Feb. 16		Centre			(321·0)	(− 6·9)	(10)	(86)	(1023)

Group 5167, February 11–13. A small spot in a great mass of bright faculæ. The spot is not seen on February 12.
Group 5168, February 13. A pair of very small spots.
Group 5169, February 16. A very small spot.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
47·158	CL, M		0·970	287·6	22·5	+15·1			95
			0·900	251·1	14·2	−20·1			58
I.		5170*a*	0·988	69·2	231 6	+19·2	0	20	
			0·944	64·1	243 6	+21·6			105
			0·928	111·6	240·4	−22·7			246
Feb. 17		Centre			(309·4)	(−7·0)	(0)	(20)	(504)
48·241	AS, M		0·907	298·1	354·4	+21·8			61
		5172	0·187	202·4	299·4	−16·9	0	8	
		5172	0·179	192·0	297·3	−17·1	0	10	
I.		5170	0·914	66·6	233·4	+18·1	7	26	144*f*
			0·822	111·6	240·0	−21·7			146
			0·897	55·9	239·2	+26·4			217
Feb. 18		Centre			(295·1)	(−7·0)	(7)	(44)	(568)
49·132	AS, M		0·833	299·6	333·7	+19·8			189
		5170	0·816	62·5	234·3	+17·5	7	16	209*f*
I.		5171*a*	0·973	102·8	205·7	−14·1	18	197	200*c*
		5171	0·989	101·5	200·9	−12·4	13	42	
			0·949	112·8	210·8	−23·8			81
Feb. 19		Centre			(283·5)	(−7·1)	(38)	(255)	(679)
50·324	AS, RF		0·914	295·3	329·1	+19·7			263
			0·765	320·3	302·2	+30·2			175
		5172*a*	0·563	249·3	301·2	−17·4	1	4	
		5172*b*	0·518	250·4	298·3	−16·2	4	16	
		5170	0·649	52·6	235·4	+17·2	1	15	
		5170	0·681	52·3	233·4	+18·7	0	1	
		5170	0·721	52·1	230·6	+20·6	8	31	
		5171*a*	0·865	101·3	207·5	−13·3	30	204	
I.		5171	0·891	102·5	204·2	−14·4	0	8	
		5171	0·908	101·3	202·0	−13·2	0	7	
		5171	0·915	99·6	201·1	−11·6	3	8	232*c*
		5171	0·920	100·7	200·3	−12·6	10	41	
		5171	0·935	99·2	198·0	−11·1	0	11	
		5171	0·939	100·7	197·2	−12·5	3	12	
			0·917	58·2	208·4	+25·4			225
			0·954	68·1	199·2	+18·4			96
			0·944	117·2	196·2	+28·0			81
Feb. 20		Centre			(267·9)	(−7·1)	(60)	(358)	(1072)
51·147	CL, RF		0·964	293·1	327·3	+20·0			140
			0·894	300·8	313·5	+23·4			129
			0·825	314·7	299·5	+30·3			174
I.		5172*a*	0·719	253·0	302·7	−17·1	0	5	196*p*
		5172*b*	0·673	254·0	299·0	−16·0	0	11	
1904.									
51·147	CL, RF	5170	0·603	42·4	231·4	+20·0	0	2	
		5170	0·621	42·9	230·1	+20·7	6	28	
		5170	0·646	44·8	227·8	+21·0	0	2	
		5171*a*	0·750	101·6	208·1	−13·4	39	222	
		5171	0·784	101·7	204·9	−13·6	7	17	
		5171	0·793	103·3	204·1	−14·9	0	12	
		5171	0·815	101·6	201·9	−13·6	0	15	
	I.	5171	0·823	98·8	201·1	−11·3	0	6	212*c*
		5171	0·831	100·5	200·2	−12·7	12	42	
		5171	0·844	101·0	198·8	−13·1	0	3	
		5171	0·852	98·8	198·0	−11·2	0	9	
		5171	0·856	100·1	197·5	−12·3	1	9	
			0·904	62·4	197·9	+21·2			114
			0·935	117·6	187·1	−28·2			167
Feb. 21		Centre			(256·9)	(−7·1)	(65)	(383)	(1132)
52·425	AS, RF		0·912	304·8	297·7	+27·7			372
		5172*b*	0·856	254·8	299·4	−16·6	0	9	795*c*
		5170	0·430	6·1	237·4	+18·1	0	3	
		5170	0·431	11·5	234·9	+17·8	7	47	
		5170	0·438	15·4	233·1	+17·8	6	29	
		5170	0·465	16·0	232·3	+19·4	0	7	
		5170	0·489	16·6	231·5	+20·8	3	15	
		5170	0·481	18·2	230·9	+20·1	0	2	
		5170	0·495	19·9	229·8	+20·6	6	10	
		5171*a*	0·534	103·7	208·0	−13·3	43	278	
		5171	0·576	102·3	205·0	−12·8	0	5	
		5171	0·590	106·1	204·3	−15·2	0	6	
		5171	0·605	104·5	203·1	−14·4	0	16	
		5171	0·620	103·2	201·9	−13·7	4	30	
		5171	0·640	101·5	200·3	−12·8	5	21	
		5171	0·652	104·3	199·5	−14·7	0	2	
		5171	0·660	101·9	198·7	−13·2	3	36	
		5171	0·664	100·2	198·3	−12·1	0	3	
		5171	0·664	99·2	198·3	−11·4	7	16	
			0·889	122·7	178·2	−32·2			454
Feb. 22		Centre			(240·1)	(−7·1)	(84)	(535)	(1621)
53·415	AS, RF		0·970	305·0	295·4	+31·4			140
			0·917	351·4	242·0	+58·0			667
		5170	0·441	340·1	236·0	+17·4	7	23	
		5170	0·432	343·7	234·3	+17·4	1	13	
		5170	0·458	349·5	232·1	+19·6	1	11	
		5170	0·472	353·1	230·5	+20·8	0	11	
		5170	0·458	353·7	230·1	+19·9	0	3	
		5171*a*	0·323	109·0	208·8	−12·8	38	276	
		5171	0·351	109·2	207·2	−13·3	2	8	
		5171	0·375	107·7	205·6	−13·2	0	3	

Group 5170, February 17–27. An unstable group, consisting of a number of spots, mostly small, in an irregular stream.
Group 5171, February 19–March 2. A number of spots in a fine stream. The leader, *a*, is a large regular spot. Some of the following spots gradually coalesce with *a*.
Group 5172, February 18–22. Two small spots on February 18. The group is not seen on February 19, but has reappeared by February 20, as two small spots, *a* and *b*. *a* has disappeared by February 22.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
53·415	AS, RF	5171	0·383	109·6	205·3	−14·0	0	4	
		5171	0·412	107·5	203·3	−13·6	0	7	
		5171	0·421	109·7	202·9	−14·6	0	3	
		5171	0·436	106·5	201·6	−13·5	0	8	
		5171	0·452	103·5	200·4	−12·4	4	11	
		5171	0·470	100·7	199·0	−11·3	0	3	
		5171	0·475	103·5	198·9	−12·7	0	9	
		5171	0·482	101·3	198·3	−11·6	2	8	
			0·939	114·3	156·2	−25·2			140
Feb. 23		Centre			(227·0)	(−7·1)	(55)	(401)	(947)
54·474	AS, RF		0·985	255·2	294·2	−15·7			674
		5170	0·553	316·5	236·3	+16·9	0	16	
		5170	0·517	315·8	234·8	+15·0	0	2	
		5170	0·549	327·6	231·3	+20·7	0	10	
		5171*a*	0·120	145·8	209 1	−12·8	56	313	
		5171	0·096	129·7	208·7	−10·7	0	2	
		5171	0·122	126·7	207·3	−11·3	1	6	
		5171	0·115	114·9	206·9	−10·0	0	2	
		5171	0·163	131·0	205·8	−13·3	4	41	
		5171	0·198	124·3	203·4	−13·5	9	56	
		5171	0·221	127·7	202·6	−14·8	0	3	
		5171	0·178	105·9	203·0	− 9·9	0	2	
		5171	0·235	108·2	199·9	−11·3	0	3	
		5171	0·262	108·7	198·4	−11 8	0	3	
			0·940	67·2	147·1	+18·6			156
Feb. 24		Centre			(213·0)	(−7·2)	(70)	(459)	(830)
Feb. 25		No	Photograph						
56·442	CL, RF		0·791	301·3	233·0	+19·3			346
		5170	0·778	305·4	230·2	+21·5	3	14	
		5173	0·687	293·3	227·1	+10·3	0	2	
M		5173	0·623	290·7	223·2	+ 6·9	0	7	
		5171*a*	0·376	254·9	209·1	−12·3	56	348	
		5171	0·309	251·0	204·7	−12·6	0	6	
Feb. 26		Centre			(187·4)	(−7·2)	(59)	(377)	(346)
57·467	AS, RF	5170	0·912	291·6	235·5	+16·3	6	55	
		5170	0·886	296·4	230·6	+19·3	0	23	
		5170	0·897	296·4	232·1	+19·8	0	18	539*c*
		5173	0·761	291·1	219·7	+10·9	0	6	
		5173	0·738	291·5	217·7	+10·6	0	5	39*c*
		5171*a*	0·574	257·6	208·6	−13·0	48	364	174*c*
Feb. 27		Centre			(173·6)	(−7·2)	(54)	(471)	(752)
58·431	AS, RF		0·969	290·7	232·9	+17·9			844
		5173	0·887	286·5	220·7	+11·0	6	32	91*c*
		5171*a*	0·734	258·5	208·4	−13·3	28	368	246*c*
Feb. 28		Centre			(160·9)	(−7·2)	(34)	(400)	(1181)
59·495	AS, RF		0·979	282·8	223·1	+10·9			399
		5171*a*	0·874	259·1	208·3	−13·0	27	254	319*c*
Feb. 29		Centre			(146·8)	(−7·2)	(27)	(254)	(718)
60·507	RF, M	5171*a*	9·955	258·6	207·2	−13·0	50	263	596*f*
Mar. 1		Centre			(133·6)	(−7·2)	(50)	(263)	(596)
61·387	AS, RF		0·963	291·3	192·7	+18·3			117
			0·915	247·3	189·0	−23·7			85
		5171*a*	0·994	259·4	206·8	−11·3	33	215	570*c*
M.		5174*a*	0·126	214·0	126·1	−13·1	5	28	
		5174	0·111	199·6	124·2	−13·2	0	1	
		5174*b*	0·127	190·5	123·4	−14·3	6	25	
			0·966	70·6	50·2	+16·6			435
Mar. 2		Centre			(122·0)	(−7·2)	(44)	(269)	(1207)
62·200	CL, RF		0·880	235·7	171·6	−33·5			107
		5174*a*	0·287	248·0	127·0	−13·1	35	137	
		5174	0·256	242·5	124·7	−13·8	4	19	
I.		5174*b*	0·223	236·2	122·2	−14·2	35	143	
		5175	0·914	64·8	50·1	+19·5	2	8	} 618*c*
		5175	0·935	64·8	46·9	+20·4	2	5	
			0 922	51·5	53·8	+31·3			123
Mar. 3		Centre			(111·2)	(−7·2)	(78)	(312)	(848)
63·225	AS, RF	5174*a*	0·498	256·4	127·4	−13·0	26	172	
		5174	0·469	252·4	125 1	−14·6	0	5	
		5174*b*	0·428	253·3	122·5	−13·6	20	140	
		5176*a*	0·958	108·3	23·1	−19·5	0	18	} 624*c*
M.		5177	0·985	110·6	15·7	−21·5	0	11	
			0·791	58·8	52·1	+19·2			156
			0·857	67·1	42·9	+15·4			299
			0·931	73·1	31·9	+12·8			332
			0·942	238·2	169·0	−32·4			94
Mar. 4		Centre			(97·7)	(−7·2)	(46)	(346)	(1505)

Group 5173, February 26–28. One or two small spots *sf*, Group 5170.
Group 5174, March 2–6. A pair of small spots, *a* and *b*, with one or two very small spots between them. *b* has broken up by March 6.
Group 5175, March 3. Two very small spots.
Group 5176, March 4–12. A small spot, *a*, usually followed by one or two very small companions.
Group 5177. March 4–9. A few small unstable spots, following Group 5176.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
64·132	AS, M	5174*a*	0·670	256·9	127·9	−14·1	29	169	
		5174	0·647	255·3	126·0	−15·0	0	5	
		5174*b*	0·598	256·3	122·4	−14·0	12	86	
		5176*a*	0·885	106·9	22·9	−18·3	10	36	} 764*c*
		5176	0·898	107·1	21·2	−18·5	0	6	
I.		5177	0·945	108·9	13·8	−20·2	0	20	
			0·805	57·8	39·3	+20·4			182
			0·854	68·7	30·9	+14·0			336
			0·974	70·0	12·3	+17·5			33
			0·970	99·8	9·0	−11·3			44
Mar. 5		Centre			(85·8)	(−7·2)	(51)	(322)	(1359)
65·141	CL, M		0·887	248·0	135·5	−22·8			153
		5174*a*	0·829	258·3	129·0	−13·7	29	170	}
		5174	0·760	258·2	122·4	−13·7	0	17	} 270*c*
		5174	0·766	256·9	122·9	−14·7	0	5	}
		5176	0·759	108·0	23·3	−18·4	10	15	}
I.		5176	0·782	108·4	21·1	−18·9	0	4	}
		5177	0·854	108·6	13·5	−19·7	0	3	} 630*c*
		5177	0·857	109·6	13·3	−20·5	3	5	}
		5177	0·870	112·3	11·9	−23·0	0	4	}
			0·883	99·4	10·0	−11·7			115
Mar. 6		Centre			(72·6)	(−7·3)	(42)	(223)	(1168)
Mar. 7		No Photograph							
67·448	AS, RF	5178	0·799	290 5	91·8	+11·6	0	4	} 71*c*
		5178	0·775	291·9	89·3	+11·9	2	10	}
		5179*a*	0·582	309·4	69·9	+15·1	3	15	
		5179*b*	0·565	314·1	67·1	+16·5	9	28	
		5180*a*	0·343	344·3	47·6	+12·0	3	10	
		5180*b*	0·343	350·1	45·6	+12·4	5	10	
		5176	0·360	123·6	23·9	−18·4	4	7	
		5176	0·395	122·0	21·6	−18·9	0	4	
		5176	0·416	122·6	20·4	−19·7	0	4	
		5177	0·474	119·1	16·2	−19·9	0	7	
		5177	0·503	116·5	13·8	−19·4	0	23	
		5177	0·524	120·6	13·2	−21·9	3	50	
		5181	0·862	104·9	342·1	−16·5	1	9	96*c*
Mar. 8		Centre			(42·2)	(−7·3)	(30)	(181)	(167)
68·469	AS, M		0·901	286·8	90·2	+11·7			71
		5179*a*	0·731	299·2	70·0	+15·4	0	30	
		5179*b*	0·704	302·6	66·8	+16·5	13	55	
		5180*b*	0·439	319·0	45·8	+12·3	4	12	
		5176	0·217	155·2	23·2	−18·6	3	8	
1904.				°	°	°			
68·469	AS, M	5176	0·241	148 9	21·2	−19·1	0	11	
		5176	0·272	150·6	20·5	−20·9	0	10	
		5177	0·311	137·5	15·8	−20·3	0	11	
		5177	0·361	134·9	12·8	−21·8	0	14	
		5181	0·724	105·8	342·3	−16·5	2	13	
		5182	0·965	105·5	311·7	−16·8	32	165	352*p*
			0·890	62 1	331·6	+20·8			276
Mar. 9		Centre			(28·7)	(−7·3)	(54)	(329)	(699)
69·435	AS, RF		0·976	284·1	91·2	+12·0			156
		5179*a*	0·872	292·3	72·6	+15·4	1	49	} 244*c*
		5179*b*	0·827	295·9	66·7	+16·5	26	161	}
		5176	0·267	208·9	23·9	−20·8	0	14	
		5176	0·238	212·8	23·8	−18·7	0	4	
		5176	0·283	204·5	23·2	−22·1	0	5	
		5182*a*	0·890	105·0	312·5	−16·6	28	188	800*c*
			0·793	55·6	331·5	+21·4			338
Mar. 10		Centre			(16·0)	(−7·3)	(55)	(421)	(1538)
70·494	AS, RF		0·783	297·9	48·2	+16·6			248
		5179*a*	0·968	287·9	74·7	+15·3	14	70	
		5179*b*	0·931	290·9	67·0	+16·5	20	136	170*c*
		5176	0·420	234·8	23·5	−20·7	0	22	
		5176	0·383	232·9	21·0	−20·1	0	6	
		5176	0·333	227·1	17·1	−20·0	0	7	
		5182*a*	0·756	105·9	312·9	−16·7	23	179	750*f*
Mar. 11		Centre			(2·1)	(−7·2)	(57)	(420)	(1168)
71·191	AS, RF		0·874	295·9	48·6	+18·5			466
			0·732	304·3	32·3	+18·8			167
		5179*b*	0·975	289·0	66·9	+16·7	19	120	118*c*
		5176	0·543	243·3	23·8	−20·3	1	3	
I		5176	0·531	246·0	23·5	−18·6	0	3	
		5176	0·530	242·4	22·7	−20·4	0	1	
		5182*a*	0·661	107·5	311·8	−16·9	30	193	
			0·699	107·9	308·7	−17·6			350
			0·853	101·8	293·7	−13·8			62
			0·936	56·1	291·1	+28·2			146
Mar. 12		Centre			(352·8)	(−7·2)	(50)	(320)	(1309)
72·118	CL, RF		0·884	293·6	38·3	+16·9			492
I		5182*a*	0·487	112·3	312·6	−17·1	27	178	
		5182	0·492	107·8	311·7	−15·0	3	8	
			0·872	50·3	290·5	+29·3			336
Mar. 13		Centre			(340·6)	(−7·2)	(30)	(186)	(828)

Group 5178, March 8. Two small spots.
Group 5179, March 8–12. Two small double spots, *a* and *b*, on March 8. Both have become more condensed by March 9. *b*, the following spot, is the larger and better defined. *a* has passed out of sight by March 12.
Group 5180, March 8–9. Two small spots, *a* and *b*, following Group 5179. Only *b* remains on March 9.
Group 5181, March 8–9. A small faint spot.
Group 5182, March 9–21. A large regular spot, *a*, with occasionally a few small companions.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
73·150	AS, RF		0·938	219·0	33·0	+16·8			357
			0·786	284·9	18·6	−21·0			889
I		5182*a*	0·286	126·5	313·2	−16·8	25	148	
		5182	0·346	129·1	310·5	−19·5	0	3	
			0·941	128·6	256·8	−38·7			143
			0·946	110·8	254·8	−22·0			139
Mar. 14		Centre			(327·0)	(−7·2)	(25)	(151)	(1528)
74·500	AS, RF		0·926	250·6	17·9	−20·7			970
		5182*a*	0·177	200·5	312·9	−16·7	22	126	
		5182	0·141	200·3	312·1	−14·8	0	1	
		5182	0·143	193·3	311·1	−15·1	0	11	
		5182	0·139	185·3	310·0	−15·1	0	4	
		5183	0·959	77·3	237·7	+10·0	0	4	} 247*e*
		5183*a*	0·968	79·2	235·4	+ 8·5	18	140	
			0·970	67·9	237·2	+19·3			514
Mar. 15		Centre			(309·2)	(−7·2)	(40)	(286)	(1731)
75·461	AS, RF		0·973	249 8	14·6	−21·2			314
		5182*a*	0·319	238·3	313·0	−16·5	22	132	
		5182	0·301	227·2	310·0	−18·7	0	5	
		5183*a*	0·887	76·9	236·0	+ 8·1	26	157	} 684*n*
		5183	0·932	78·6	229·5	+ 8·0	0	12	
			0·906	65·1	236·4	+19·0			358
Mar. 16		Centre			(296·6)	(−7·1)	(48)	(306)	(1356)
76·485	AS, RF		0·803	309·6	326·3	+25·7			212
		5182*a*	0·514	249·4	313·1	−16·6	22	159	
		5182	0·483	244·0	310·2	−18·5	0	7	
		5182	0·476	241·3	309·3	−19·6	0	5	
		5183*a*	0·763	72·7	235·9	+ 8·4	27	182	} 1150*f*
		5183	0·824	73·2	230·2	+ 9·6	0	22	
			0·945	101·2	211·4	−12·9			541
Mar. 17		Centre			(283·1)	(−7·1)	(49)	(375)	(1903)
77·504	RF, M	5182*a*	0·693	253·4	313·3	−16·6	20	134	181*c*
		5183*a*	0·599	65·6	236·3	+ 8·4	30	167	} 609*f*
		5183	0·676	69·0	230·1	+ 8·6	0	7	
		5183	0·708	70·3	227·4	+ 8·5	0	9	
			0·847	101·8	211·3	−13·7			443
Mar. 18		Centre			(269·6)	(−7·1)	(50)	(317)	(1233)
78·129	CL, RF		0·937	298·0	325·3	+23·1			208
		5182*a*	0·788	254·7	313·6	−16·4	19	112	} 412*c*
I.		5182	0·764	254·6	311·3	−16·3	0	5	
1904.				°	°	°			
78·129	CL, RF	5184	0·534	43·7	238·9	+16·1	4	17	
		5183*a*	0·499	58·7	236·0	+ 8·6	35	150	
		5183	0·546	55·9	234·0	+11·5	0	2	
I.		5183	0·572	58·7	231·7	+11·1	1	11	
		5183	0·603	65·7	227·8	+ 8·4	9	24	
		5185	0·925	96·2	193·3	− 8·4	3	8	112*c*
		5186*a*	0·987	77·4	182·5	+11·2	0	260	271*c*
			0·760	100·8	211·7	−12·8			212
			0·896	109·1	197·2	−20·2			94
			0·952	116·2	188·0	−27·1			90
Mar. 19		Centre			(261·4)	(−7·1)	(71)	(589)	(1399)
79·152	CL, RF		0·912	294·9	308·9	+19·2			84
			0·872	306·5	299·6	+27·0			109
			0·735	257·4	295·4	− 4·1			69
			0·717	234·7	290·1	−29·8			90
		5182*a*	0·905	255 4	313·4	−16·2	10	116	593*s*
		5184	0·429	20·1	239·1	+16·6	3	23	
		5184	0·463	22 9	237·0	+18·2	0	2	
		5184	0·440	26·8	236·0	+16·1	0	3	
		5184*a*	0·463	25·4	235·9	+17·7	23	90	
I.		5183*a*	0·341	36·0	236·2	+ 9·1	28	164	
		5183	0·416	42·1	231·5	+11·1	0	9	
		5183	0·417	52·0	228·6	+ 8·2	2	31	
		5186*a*	0·908	75·1	185·0	+10·3	63	287	
		5186	0·939	73·3	180·7	+13·0	2	17	
		5186	0·938	75·7	180·4	+10·8	4	44	
		5186	0·952	74·5	178·2	+12·4	21	129	
		5186*b*	0·960	72·0	177·2	+15·0	0	4	629*c*
			0·798	95·0	194·7	− 8·3			79
Mar. 20		Centre			(247·9)	(−7·1)	(156)	(919)	(1653)
80·278	AS, RF		0·971	246·2	310·9	−24·8			103
			0·899	307·1	287·9	+28·9			136
			0·900	316·8	283·1	+36·6			93
		5182*a*	0·983	254·8	313·8	−16·2	17	87	392*f*
		5184	0·432	340·2	241·9	+17·0	1	6	
		5184*a*	0·426	352·5	236·4	+18·0	16	92	
		5183*a*	0·291	345·4	237·3	+ 9·3	27	161	
I.		5183	0·307	357·6	233 8	+10·8	0	2	
		5183	0·281	1·4	232·7	+ 9·3	0	1	
		5183	0·281	15·1	228·9	+ 8·7	0	11	
		5186*a*	0·765	70·6	186·2	+ 9 9	44	196	
		5186	0·823	68·3	181·5	+13·4	2	14	202*c*
		5186	0·823	71·3	180·7	+11·0	1	7	
		5186*b*	0·844	70·2	178·8	+12·6	7	59	
			0·972	109·9	155·3	−20·9			50
Mar. 21		Centre			(233·1)	(−7·0)	(115)	(636)	(976)

Group 5183, March 15–26. A large regular spot, *a*; generally with some small companions.
Group 5184, March 19–25. A number of spots in an irregular stream, forming north of Group 5183. *a*, the last spot of the stream is the largest, most definite and most stable.
Group 5185, March 19. A small spot.
Group 5186, March 19–26. A number of spots in an irregular stream. *a*, the leader, is a composite spot, which has broken up into a close cluster of small spots by March 23; *b* is a close cluster of small spots in the rear part of the stream.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
81·468	AS, RF		0·965	253·8	293·3	−17·4			294
			0·944	305·6	280·0	+30·3			187
			0·862	294·5	272·4	+17·1			88
		5184	0·510	320·8	237·0	+16·7	0	5	
		5184*a*	0·511	323·3	236·0	+17·6	12	71	
		5183*a*	0·441	309·3	237·6	+ 9·7	23	150	
		5186	0·540	66·0	187·7	+ 6·7	0	5	
		5186	0·562	64·5	186·7	+ 8·0	1	5	
		5186*a*	0·577	62·3	186·3	+ 9·6	23	160	
		5186	0·606	61·2	184·8	+11·1	0	1	
		5186	0·614	60·4	184·5	+11·9	1	4	
		5186	0·625	61·6	183·4	+11·6	4	18	
		5186	0·654	61·6	181·4	+12·6	7	72	
		5186	0·683	61·8	179·3	+13·4	0	7	
		5186*b*	0·684	62·7	179·0	+12·8	4	29	
		5187*a*	0·946	66·8	150·5	+19·3	5	29	179*f*
		5188	0·986	104·9	135·8	−15·8	0	19	359*c*
			0·896	111·8	153·3	−22·6			78
Mar. 22		Centre			(217·4)	(−6·9)	(80)	(575)	(1185)
82·160	CL, RF		0·939	252·2	279·2	−19·1			32
			0·933	291·7	273·4	+17·4			84
		5189	0·797	303·7	253·5	+21·4	7	9	
		5189	0·775	306·0	250·7	+22·0	0	2	
		5183*a*	0·567	298·9	238·4	+ 9·9	22	144	
		5184*a*	0·605	312·9	236·0	+18·1	7	43	
I.		5186*a*	0·476	53·2	185·6	+10·2	11	87	
		5186*b*	0·557	53·9	180·9	+13·0	8	59	
		5187*a*	0·886	64·0	151·0	+19·2	21	80	266*c*
		5187	0·911	65·9	147·2	+18·6	8	26	
		5187	0·924	67·6	144·8	+17·7	0	16	
		5188	0·953	103·5	134·9	−15·0	0	17	445*sf*
			0·984	111·3	127·0	−22·1			204
Mar. 23		Centre			(208·3)	(−6·9)	(84)	(483)	(1031)
83·451	AS, RF		0·913	296·9	251·8	+21·1			113
			0·744	310·8	229·0	+23·7			61
		5190*a*	0·808	249·7	244·9	−20·4	0	14	77*c*
		5190*b*	0·784	249·3	242·5	−20·4	5	15	
		5183*a*	0·771	289·4	238·7	+10·3	18	141	623*n*
		5184*a*	0·767	301·3	234·8	+18·6	0	10	140*p*
		5191	0·649	301·2	226·0	+14·1	1	5	
		5191	0·616	299·9	224·2	+12·1	0	6	165*c*
		5191	0·570	300·4	221·1	+10·9	1	5	
		5186	0·277	14·8	187·1	+ 8·7	1	5	
		5186	0·309	16·7	186·0	+10·4	8	57	
		5186	0·301	20·9	185·0	+ 9·5	1	13	
		5186	0·332	19·0	184·9	+11·4	4	13	
1904.				°	°	°			
83·451	AS, RF	5186	0·353	24·8	182·5	+11·9	0	21	
		5186	0·372	25·8	181·7	+12·8	0	7	
		5186	0·389	24·7	181·6	+13·9	0	4	
		5186	0·391	26·7	180·8	+13·7	3	13	
		5187*a*	0·724	55·1	152·4	+19·2	14	74	
		5187	0·741	56·8	150·4	+18·8	3	22	
		5187	0·770	57·1	147·9	+19·8	0	4	150*c*
		5187	0·791	58·7	145·6	+19·5	5	12	
		5188	0·814	105·6	136·5	−16·6	0	3	
		5188	0·823	104·7	135·5	−16·0	0	10	189*c*
		5189	0·828	103·2	135·0	−14·7	1	25	
		5192	0·920	108·7	123·6	−19·8	0	10	621*c*
Mar. 24		Centre			(191·2)	(−6·8)	(65)	(489)	(2139)
84·137	AS, RF		0·959	301·8	249·0	−27·9			110
			0·837	305·8	186·2	+24·9			229
		5190*a*	0·902	250·5	246·8	−20·5	5	30	71*c*
		5190*b*	0·871	250·2	242·8	−20·6	10	52	
		5183*a*	0·864	286·6	239·1	+10·7	23	148	
		5184*a*	0·853	294·1	236·0	+16·5	0	6	861*p*
		5193	0·728	295·8	225·4	+18·3	0	7	374*f*
		5186	0·312	346·4	186·2	+10·8	7	29	
		5186	0·334	351·0	185·0	+12·4	2	9	
		5186	0·285	349·4	184·9	+ 9·4	1	5	
I.		5186	0·332	359·8	182·0	+12·5	0	20	
		5194	0·616	36·5	158·5	+23·3	0	5	
		5187*a*	0·626	47·7	152·7	+18·9	14	82	
		5187	0·642	50·2	150·7	+18·4	0	5	
		5187	0·669	50·9	148·7	+19·2	0	8	
		5187	0·690	52·8	146·5	+19·1	6	17	
		5187	0·715	53·1	144·6	+20·0	0	12	
		5188	0·725	105·2	135·5	−15·7	0	9	475*f*
		5195*a*	0·983	72·8	105·2	+15·4	16	102	138*f*
Mar. 25		Centre			(181·9)	(−6·8)	(84)	(546)	(2258)
85·533	AS, RF		0·938	298·4	227·8	+23·6			165
			0·814	257·2	218·6	−14·4			179
		5190*b*	0·970	250·1	241·1	−20·9	0	33	123*c*
		5183*a*	0·972	282·4	238·4	+10·3	22	121	870*f*
		5186	0·476	308·4	186·0	+10·9	1	12	
		5186	0·454	307·7	185·1	+ 9·8	0	2	
		5186	0·441	313·1	182·9	+11·1	0	6	
		5186	0·438	321·8	179·9	+13·5	0	5	
		5194	0·512	8·6	159·0	+23·5	1	13	
		5194	0·543	11·3	157·1	+25·3	0	13	
		5194	0·511	13·5	156·4	+22·9	0	5	
		5187*a*	0·458	22·5	153·2	+18·3	8	62	
		5187	0·465	27·3	150·9	+17·7	7	39	

Group 5187, March 22–30. A few spots in an irregular stream. The leader, *a*, is the largest and best defined spot.
Group 5188, March 22–30. A few small unstable spots. The group is not seen on March 26 or 27.
Group 5189, March 23. Two small spots.
Group 5190, March 24–26. Two small spots, *a* and *b*. *b*, the following spot, is the best defined, and alone remains on March 26.
Group 5191, March 24. A few very small faint spots.
Group 5192, March 24. A few very small faint spots.
Group 5193, March 25. A very small spot.
Group 5194, March 25–30. A very small spot, on March 25, preceding Group 5187. The group developes into a short stream of small spots on the succeeding days.
Group 5195, March 25–April 5. A regular spot, *a*.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
85·533	AS, RF	5187	0·524	34·4	145·6	+19·1	5	55	
		5195*a*	0·877	68·7	106·2	+15·0	19	108	324*p*
			0·689	113·6	121·4	−21·1			324*f*
Mar. 26		Centre			(163·8)	(−6·8)	(63)	(474)	(1985)
86·583	AS, RF		0·969	283·1	223·6	+10·9			416
			0·879	254·3	211·9	−17·0			278
		5194	0·520	346·0	157·8	+23·5	22	107	
		5187*a*	0·429	353·0	153·0	+18·4	6	34	
		5187	0·453	355·5	152·1	+20·1	0	3	
		5187	0·403	355·2	151·9	+16·9	0	17	
		5187	0·448	8·9	145·7	+19·5	5	56	
		5195*a*	0·756	63·5	105·6	+14·9	18	112	394*f*
			0·852	110·8	91·5	−21·2			99
Mar. 27		Centre			(149·9)	(−6·7)	(51)	(329)	(1187)
87·492	RF, M		0·914	256·3	204·7	−15·3			483
			0·915	313·8	192·0	+35·5			86
			0·773	291·7	185·0	+12·1			437
		5194	0·596	326·9	158·6	+23·6	9	71	
		5194	0·563	330·5	155·3	+22·8	1	6	
		5187*a*	0·488	329·4	153·0	+18·3	4	20	
		5187	0·458	343·6	145·7	+19·3	0	34	
		5188	0·161	167·9	135·9	−15·7	0	21	
		5196*a*	0·320	141·2	125·6	−21·0	7	36	
		5196	0·341	138·2	123·9	−21·2	0	7	
		5196	0·372	138·3	122·4	−22·5	0	16	
		5196*b*	0·371	134·8	121·5	−21·5	0	30	
		5195*a*	0·627	56·5	105·5	+14·6	19	124	241*f*
		5197	0·893	71·0	77·8	+13·6	0	15	349*f*
Mar. 28		Centre			(137·9)	(−6·7)	(40)	(380)	(1596)
88·430	AS, M		0·876	286·9	184·0	+11·3			418
		5194	0·701	314·0	158·8	+23·6	7	23	
		5194	0·691	315·7	157·3	+24·0	0	4	
		5194	0·670	315·8	155·9	+23·0	0	6	169*c*
		5194	0·657	315·8	155·1	+22·3	0	2	
		5187*a*	0·600	313·3	152·8	+18·4	5	15	
		5188	0·240	229·2	136·3	−15·5	3	26	
		5196*a*	0·252	181·5	125·9	−21·1	8	30	
		5196*b*	0·270	163·7	120·8	−21·5	8	27	
		5195*a*	0·490	43·9	105·0	+14·4	17	130	
		5197	0·787	66·6	77·6	+13·8	5	24	322*f*
		5198*a*	0·938	67·4	59·7	+18·6	3	18	206*n*
		5199*a*	0·964	74·9	53·2	+12·6	0	95	391*f*
Mar. 29		Centre			(125·5)	(−6·6)	(56)	(400)	(1506)
1904.									
89·137	AS, M		0·942	285·9	184·2	+12·6			694
			0·924	242·6	184·0	−27·8			184
		5194	0·790	307·7	159·3	+24·1	3	15	
		5194	0·760	309·1	156·1	+23·6	0	3	
		5187*a*	0·701	305·7	153·1	+18·9	2	6	
I.		5188	0·371	245·4	136·6	−15·1	0	7	
		5188	0·314	232·2	131·2	−17·4	0	3	
		5196*a*	0·306	212·1	126·2	−21·5	4	19	
		5196*b*	0·265	196·1	120·7	−21·3	3	16	
		5195*a*	0·414	28·1	104·6	+14·9	16	109	
		5197	0·694	62·3	77·1	+13·7	3	11	111*c*
		5198*a*	0·881	65·4	59·0	+18·0	0	7	408*c*
		5199*a*	0·920	72·9	52·0	+12·8	6	55	662*f*
		5199	0·949	71·6	47·6	+15·1	0	11	
			0·920	119·7	49·3	−29·9			125
Mar. 30		Centre			(116·2)	(−6·6)	(37)	(262)	(2184)
90·449	CL, M		0·842	298·8	150·5	+19·9			371
		5196*a*	0·502	237·8	126·0	−21·4	0	9	
		5195*a*	0·389	345·0	105·0	+15·4	20	108	
		5197	0·491	46·3	77·7	+13·7	1	12	
		5198*a*	0·713	57·5	60·1	+17·4	0	7	
		5199*a*	0·776	67·2	51·9	+13·0	0	27	
		5199	0·787	66·7	51·1	+13·7	0	3	
			0·830	60·5	48·9	+20·0			136
			0·905	70·9	37·3	+14·2			759
Mar. 31		Centre			(99·0)	(−6·6)	(21)	(166)	(1266)
91·476	AS, RF		0·941	294·0	145·7	+ 8·7			784
			0·764	255·0	135·2	−15·6			260
		5195*a*	0·489	318·7	104·9	+15·4	16	108	
		5197	0·377	21·7	77·2	+14·0	3	9	
		5198*a*	0·558	45·5	60·9	+17·1	5	17	
		5199*a*	0·628	60·0	51·6	+12·9	4	20	
			0·815	65·3	35·3	+15·7			980
			0·886	113·0	23·0	+23·3			425
			0·966	70·1	13·6	+17·2			100
Apr. 1		Centre			(85·4)	(−6·5)	(28)	(154)	(2549)
92·473	AS, RF		0·974	293·6	145·1	+21·2			146
			0·884	256·4	134·7	−15·0			322
			0·767	245·9	121·2	−22·5			324
		5195*a*	0·635	303·9	105·1	+15·4	15	138	
		5198*a*	0·435	24·8	61·2	+16·9	3	8	

Group 5196, March 28–31. A few spots in a short stream, following Group 5188. The first and last spots, *a* and *b*, are the most stable and best defined.
Group 5197, March 28–April 1. A small spot following Group 5195.
Group 5198, March 29–April 5. A small spot, *a*, with a small companion on April 3 and 4.
Group 5199, March 29–April 5. A spot, *a*, following Group 5197 and south following Group 5198. Small companions follow *a* on March 30 and 31.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
92·473	AS, RF	5199*a*	0·476	47·3	51·2	+12·8	0	5	
		5200*a*	0·881	67·1	14·4	+16·7	2	24	} 236*c*
		5200	0·893	66·0	13·2	+18·0	0	22	
			0·724	61·3	31·0	+15·5			580
			0·844	116·7	15·4	−25·9			994
Apr. 2		Centre			(72·1)	(−6·4)	(20)	(197)	(2602)
93·500	AS, RF		0·894	251·1	122·4	−19·7			942
		5195*a*	0·779	295·4	105·3	+15·2	18	71	161*c*
		5198*a*	0·389	353·6	61·3	+16·4	2	12	
		5198	0·427	355·7	60·6	+18·9	0	10	
		5199*a*	0·349	21·1	51·3	+12·7	3	25	
		5200*a*	0·746	58·7	16·7	+18·1	13	90	} 204*c*
		5200	0·790	60·6	12·4	+18·4	5	47	
Apr. 3		Centre			(58·7)	(−6·3)	(41)	(255)	(1307)
94·492	CL, RF		0·962	249·5	120·8	−21·4			304
		5195*a*	0·895	290·7	105·7	+15·4	3	22	268*f*
		5198*a*	0·462	325·3	61·4	+16·2	4	7	
		5198	0·459	327·7	60·4	+16·6	0	5	
		5199*a*	0·337	343·9	51·1	+12·6	3	10	
		5200*a*	0·593	47·7	18·3	+17·8	10	49	
		5200	0·619	46·6	17·2	+19·6	0	1	
		5200	0·607	49·2	16·9	+17·8	0	8	
		5200	0·631	51·1	14·7	+17·9	2	6	
		5200	0·652	51·8	13·0	+18·4	2	6	
		5200	0·662	53·3	11·8	+18·1	7	21	
			0·969	110·0	328·8	−20·9			156
Apr. 4		Centre			(45·6)	(−6·3)	(31)	(135)	(728)
95·289	CL, RF	5195*a*	0·964	288·5	106·9	+16·0	0	11	238*e*
I.		5198*a*	0·569	311·0	61·6	+16·3	1	4	
		5199*a*	0·414	320·1	50·8	+12·6	0	3	
		5200*a*	0·492	33·7	18·5	+18·1	8	119	
		5200	0·518	38·0	15·6	+18·1	0	1	
		5200	0·534	40·1	14·0	+18·3	0	1	
		5200	0·542	43·5	12·2	+17·4	0	11	
		5200	0·559	44·0	11·1	+18·0	4	19	
			0·908	63·9	334·8	+20·4			211
			0·947	122·2	323·1	−23·0			504
Apr. 5		Centre			(35·1)	(−6·2)	(13)	(169)	(953)
96·424	AS, RF		0·880	250·6	81·9	−20·0			74
			0·765	296·2	65·3	+15·4			443
		5201	0·446	329·5	33·7	+16·6	0	19	
		5200*a*	0·403	357·1	21·3	+17·5	19	89	

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
96·424	AS, RF	5200	0·407	0·7	19·8	+17·8	3	22	
		5200	0·407	3·1	18·8	+17·8	0	6	
		5200	0·437	19·9	11·1	+18·1	3	16	
			0·881	53·9	326·8	+27·7			381
			0·841	114·1	323·5	−23·5			551
			0·915	102·5	313·4	−13·9			531
Apr. 6		Centre			(20·1)	(−6·1)	(25)	(152)	(1980)
97·615	CL, M		0·895	293·1	63·9	+17·5			177
			0·780	295·4	51·2	+15·4			127
			0·761	308·3	44·9	+23·5			168
		5200*a*	0·481	326·5	20·5	+17·7	23	121	
		5200	0·469	330·7	18·3	+18·1	0	8	
			0·745	106·6	316·5	−16·4			135
			0·773	96·1	313·6	− 8·6			120
			0·904	109·8	299·4	−20·5			223
Apr. 7		Centre			(4·4)	(−6·1)	(23)	(129)	(950)
98·625	AS, M		0·868	301·3	44·8	+23·3			129
			0·795	295·2	39·3	+15·8			820
		5200*a*	0·610	309·7	20·5	+17·7	22	121	
		5200	0·579	309·9	18·6	+16·5	0	5	
		5202*a*	0·950	102·7	278·7	−13·9	48	311	} 417*c*
		5202	0·964	105·9	275·6	−16·9	0	13	
		5202*b*	0·973	105·7	273·4	−16·7	25	240	
			0·759	111·1	302·5	−19·8			99
			0·862	110·1	291·7	−20·3			55
			0·891	117·1	288·6	−26·8			72
			0·960	72·2	280·1	+15·1			293
Apr. 8		Centre			(351·1)	(−6·0)	(95)	(690)	(1885)
99·524	AS, RF	5200*a*	0·733	301·3	20·2	+18·0	15	113	336*p*
		5202	0·896	104·6	275·2	−15·7	80	791	426*c*
			0·916	69·0	276·3	+16·5			506
			0·988	108·7	257·1	−19·3			310
Apr. 9		Centre			(339·2)	(−5·9)	(95)	(904)	(1578)
100·545	CL, M		0·938	290·9	32·0	+17·2			367
			0·837	247·6	22·0	−21·9			245
			0·770	302·5	9·3	+20·1			113
		5200*a*	0·856	295·8	19·9	+18·5	13	117	} 164*c*
		5200	0·843	297·3	18·0	+19·2	0	4	
		5202*a*	0·735	104·6	278·6	−14·7	78	408	} 671*c*
		5202	0·762	107·4	276·4	−17·1	0	6	
		5202	0·776	105·9	275·0	−16·0	0	9	
		5202*b*	0·801	107·7	272·7	−17·7	64	392	

Group 5200, April 2–12. A number of spots, mostly small, in a sparse stream. The leader, *a*, is a regular spot, and the largest in the group.
Group 5201, April 6. A pair of faint small spots, preceding Group 5200.
Group 5202, April 8–21. A fine irregular stream, consisting chiefly of a large double spot, *a*, and a large cluster, *b*, following it. The group is measured as a whole on April 9.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
100·545	CL, M	5203	0·929	109·7	257·0	−20·4	0	6	} 319*c*
		5203	0·938	108·2	255·4	−19·1	0	6	
		5204*a*	0·990	82·4	244·9	+ 6·6	0	52	82*c*
			0·767	64·1	280·2	+15·4			180
			0·856	64·1	271·6	+18·6			313
Apr. 10		Centre			(325·7)	(−5·9)	(155)	(1000)	(2454)
101·458	AS, RF		0·901	249·7	18·2	−20·8			242
			0·879	295·9	10·5	+19·4			123
		5200*a*	0·939	291·5	20·1	+17·8	13	118	200*c*
		5202*a*	0·581	106·3	278·7	−14·3	68	413	
		5202*b*	0·670	110·2	272·5	−17·8	58	421	
		5203	0·842	110·4	256·6	−20·3	0	3	354*c*
		5204*a*	0·943	80·8	244·4	+ 6·6	19	73	156*c*
			0·736	59·0	272·4	+17·8			216
			0·946	71·5	245·5	+15·3			313
			0·976	106·6	235·2	−17·5			116
Apr. 11		Centre			(313·7)	(−5·9)	(158)	(1028)	(1720)
102·444	RF, M	5200*a*	0·988	288·9	19·1	+17·6	15	81	197*f*
		5202	0·360	116·3	281·2	−14·6	0	3	
		5202*a*	0·393	113·3	278·8	−14·3	87	404	
		5202	0·482	118·6	274·2	−18·6	7	66	
		5202	0·488	116·2	273·4	−17·6	2	23	
		5202*b*	0·513	115·8	271·7	−18·0	49	279	
		5204*a*	0·848	78·5	244·1	+ 6·5	13	86	658*n*
			0·768	112·6	251·4	−21·0			137
			0·941	75·3	232·5	+11·7			429
Apr. 12		Centre			(300·6)	(−5·8)	(173)	(942)	(1421)
103·502	AS, RF	5202*a*	0·202	138·7	278·8	−14·3	76	413	
		5202	0·275	134·4	274·9	−16·7	15	63	
		5202	0·332	138·7	273·3	−20·0	0	6	
		5202*b*	0·315	132·0	272·5	−17·7	45	381	
		5204*a*	0·697	74·2	244·4	+ 6·7	11	80	421*c*
			0·760	58·5	243·5	+19·2			531
			0·870	71·1	229·1	+13·4			794
			0·925	58·5	225·3	+26·2			110
			0·895	107·4	223·0	−18·1			275
			0·947	93·4	215·3	− 5·1			148
Apr. 13		Centre			(286·7)	(−5·7)	(147)	(943)	(2279)
1904.									
104·463	AS, RF		0·800	246·8	326·2	−21·9			406
		5205	0·421	3·5	258·3	+19·1	0	6	
		5202*a*	0·177	207·0	278·7	−14·6	74	411	
		5202	0·245	179·4	273·8	−19·8	0	5	
		5202*b*	0·205	174·8	272·9	−17·4	61	472	
		5204*a*	0·528	68·1	244·6	+ 6·5	11	66	93*f*
		5206*a*	0·980	70·5	198·2	+17·8	20	191	252*f*
			0·719	65·7	231·9	+13·1			659
			0·779	107·4	223·2	−17·0			318
			0·862	58·9	220·8	+23·1			370
			0·858	91·4	214·9	− 4·1			308
			0·919	101·3	206·8	−12·6			102
Apr. 14		Centre			(274·0)	(−5·6)	(166)	(1151)	(2508)
105·380	CL, RF		0·870	249·7	322·2	−20·4			264
			0·904	308·5	317·5	+31·2			202
			0·946	82·2	191·8	+ 5·6			50
		5202*a*	0·331	243·2	279·5	−13·8	64	421	
	M.	5202	0·329	233·0	277·7	−16·7	1	4	
		5202*b*	0·277	222·4	273·1	−17·2	60	511	
		5204*a*	0·365	57·0	244·0	+ 6·2	9	60	
		5206*a*	0·928	69·9	196·9	+16·3	23	177	530*c*
Apr. 15		Centre			(261·9)	(−5·5)	(157)	(1173)	(1046)
106·500	AS, RF		0·902	250·6	311·6	−19·8			513
		5202*a*	0·551	250·7	279·6	−15·1	72	477	
		5202*b*	0·477	243·5	273·5	−17·1	42	331	
		5204*a*	0·212	9·0	245·2	+ 6·7	9	64	
		5206*a*	0·810	63·3	197·8	+17·8	21	165	769*f*
Apr. 16		Centre			(247·1)	(−5·4)	(144)	(1037)	(1282)
107·370	CL, M		0·879	248·6	296·8	−21·3			181
			0·778	292·4	283·2	+13·7			134
			0·702	305·7	272·8	+20·0			127
		5202	0·734	251·1	282·1	−17·4	0	5	
		5202*a*	0·702	254·3	279·7	−14·7	86	514	
		5202	0·666	255·2	277·0	−13·5	0	4	
		5202*b*	0·608	248·3	271·7	−17·2	52	276	
		5202	0·600	251·1	271·5	−15·5	0	2	
		5204*a*	0·265	320·9	245·2	+ 6·6	10	58	
		5206*a*	0·699	57·4	197·5	+18·0	31	155	
		5206	0·719	59·3	195·4	+17·5	0	6	} 336*f*
			0·876	119·2	175·7	−28·1			214
			0·954	66·5	166·8	+20·5			146
Apr. 17		Centre			(235·6)	(−5·3)	(179)	(1020)	(1138)

Group 5203, April 10–11. A pair of very small faint spots, following Group 5202. One of the spots has disappeared by April 11.
Group 5204, April 10–19. A large regular spot, *a*
Group 5205, April 14. A very small faint spot.
Group 5206, April 14–26. A large regular spot, *a*, with a small companion on April 17.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
108·476	AS, RF		0·939	247·0	291·1	−23·4			146
			0·860	293·9	276·3	+17·4			361
		5202*a*	0·856	255·9	279·9	−14·7	46	571	} 1227*c*
		5202*b*	0·787	251·9	272·4	−17·4	24	321	
		5204*a*	0·458	295·2	245·5	+ 6·5	9	27	
		5206*a*	0·545	44·4	197·4	+18·1	22	140	
			0·905	63·6	160·8	+21·2			426
			0·974	104·8	143·4	−15·6			153
Apr. 18		Centre			(221·0)	(− 5·2)	(101)	(1059)	(2313)
109·522	AS, RF		0·925	295·2	270·7	+21·0			246
		5202*a*	0·951	255·6	279·7	−15·3	41	602	} 1174*c*
		5202*b*	0·912	253·0	273·2	−17·6	34	321	
		5204*a*	0·652	286·5	246·0	+ 6·7	2	8	
		5207	0·506	338·4	218·8	+23·0	3	12	
		5206*a*	0·426	22·2	197·5	+18·1	25	158	
			0·842	71·2	152·6	+12·8			68
			0·922	105·0	139·7	−15·8			168
Apr. 19		Centre			(207·2)	(− 5·1)	(105)	(1101)	(1656)
110·421	CL, RF		0·974	293·8	268·8	+21·8			196
			0·844	247·6	252·1	−21·5			226
			0·850	306·7	245·2	+27·3			80
			0·760	292·3	241·4	+13·3			644
		5202*a*	0·993	256·2	279·4	−14·3	0	283	} 485*c*
		5202*b*	0·973	253·2	272·7	−17·5	25	200	
		5207	0·591	321·9	218·6	+23·1	3	9	
		5206*a*	0·399	355·7	197·1	+18·4	22	163	
		5208	0·098	141·6	191·8	− 9·4	0	9	
		5208	0·108	128·1	190·4	− 8·8	0	8	
			0·800	57·5	148·8	+22·0			55
			0·801	104·5	142·2	−14·6			130
			0·951	105·2	122·8	−16·0			132
Apr. 20		Centre			(195·3)	(− 5·0)	(50)	(672)	(1948)
111·108	AS, RF		0·894	249·5	249·3	−20·5			239
			0·817	284·8	239·1	+ 9·0			463
		5202*a*	0·992	254·2	269·9	−16·3	13	68	429*c*
		5208	0·237	255·2	199·5	− 8·4	2	6	
		5208	0·157	248·9	194·7	− 8·2	7	33	
I.		5206*a*	0·440	336·4	196·9	+18·8	23	153	
		5209*a*	0·988	101·5	104·5	−12·1	108	654	
		5209	0·995	102·9	101·2	−13·3	0	90	265*c*
		5210	0·994	74·7	104·2	+14·6	0	23	188*p*
			0·915	111·8	120·1	−22·0			236
Apr. 21		Centre			(186·2)	(− 5·0)	(153)	(1027)	(1820)
112·128	CL, RF		0·951	247·3	245·1	−23·1			241
			0·896	286·7	234·2	+12·6			657
		5208	0·470	261·5	200·7	− 8·3	11	62	
		5208	0·441	262·1	198·9	− 7·9	0	4	
		5208	0·409	260·2	196·7	− 8·5	5	44	
		5208	0·375	260·1	194·6	− 8·2	2	11	
		5206*a*	0·554	315·7	196·8	+18·8	17	144	
I.		5211	0·488	326·1	189·5	+19·1	0	6	
		5209*a*	0·925	101·2	104·8	−12·3	99	611	} 770*c*
		5209	0·960	100·6	98·6	−11·6	0	133	
		5209	0·967	103·1	97·1	−13·9	0	12	
		5210*a*	0·946	74·0	103·9	+13·4	34	335	464*c*
			0·843	116·6	116·8	−24·9			133
Apr. 22		Centre			(172·8)	(−4·9)	(168)	(1362)	(2265)
113·445	AS, RF		0·934	291·3	221·4	+18·0			441
			0·906	260·6	220·6	−10·6			121
			0·899	249·8	219·3	−20·3			220
		5208	0·718	263·6	201·3	− 8·0	7	15	} 130*c*
		5208	0·706	263·2	200·3	− 8·2	0	3	
		5208	0·666	262·7	197·1	− 8·5	6	72	
		5208	0·618	262·8	193·5	− 8·2	0	7	
		5206*a*	0·728	300·9	196·4	+18·3	20	124	198*c*
		5212	0·281	5·8	153·7	+11·4	1	8	
		5209*a*	0·772	102·2	105·0	−12·4	89	638	} 867*c*
		5209	0·807	103·0	101·7	−13·3	0	84	
		5209	0·837	101·8	98·6	−12·5	6	144	
		5209	0·877	100·5	93·9	−11·6	0	9	
		5210*a*	0·770	68·6	108·2	+13·0	44	409	} 623*c*
		5210	0·796	70·2	105·5	+12·6	9	39	
		5210	0·809	67·3	104·9	+15·1	3	12	
		5210	0·838	70·2	101·4	+13·7	25	240	
Apr. 23		Centre			(155·4)	(−4·8)	(210)	(1804)	(2600)
114·649	AS, RF		0·819	283·2	193·0	+ 8·0			59
		5208	0·881	263·8	201·5	− 7·7	2	14	} 193*c*
		5208	0·846	263·3	197·5	− 8·2	4	45	
		5206*a*	0·871	294·1	196·3	+18·3	13	127	333*f*
		5209*a*	0·574	105·9	105·2	−12·9	114	703	} 338*f*
		5209	0·577	100·9	104·6	−10·1	0	1	
		5209	0·600	110·5	104·0	−16·0	0	8	
		5209	0·632	110·5	101·6	−16·5	0	6	
		5209	0·634	104·6	100·8	−12·9	10	152	
		5209	0·670	101·4	97·8	−11·1	1	7	
		5209	0·675	106·0	97·7	−14·3	0	3	
		5210*a*	0·560	58·5	110·4	+12·8	43	355	} 125*f*
		5210	0·658	62·5	102·8	+13·9	32	262	
Apr. 24		Centre			(139·6)	(−4·7)	(219)	(1683)	(1048)

Group 5207, April 19–20. A small faint spot.
Group 5208, April 20–26. A pair of small spots on April 20. A number of spots in an irregular stream on the succeeding days. The group undergoes continual change.
Group 5209, April 21–May 3. A very large regular spot, *a*, followed by a train of small spots.
Group 5210, April 21–May 3. A fine irregular stream of spots. The leader, *a*, is a large double spot; the other members of the group are unstable. The leader lengthens out in the direction of motion and the whole group straightens as it diminishes in size.
Group 5211, April 22. A number of very small faint spots close together.
Group 5212, April 23. A small but well-defined spot.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for each Day).	Spots. Area of WHOLE for each Spot (and for each Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
115·430	CL, M	5208	0·931	263·1	197·8	− 8·1	0	38	291*c*
		5206*a*	0·941	291·4	196·3	+18·4	17	117	484*f*
		5209*a*	0·426	111·0	105·1	−13·0	147	642	
		5209	0·460	117·3	104·0	−16·3	0	9	
		5209	0·434	105·7	104·0	−10·9	0	9	
		5209	0·485	110·9	101·4	−14·0	0	20	
		5209	0·503	106·3	99·6	−12·1	8	67	
		5209	0·579	106·5	94·5	−13·3	0	6	
		5210*a*	0·426	46·4	110·7	+12·7	60	381	
		5210	0·412	50·9	110·2	+10·7	0	9	
		5210	0·500	52·8	105·0	+13·3	10	55	
		5210	0·570	56·2	99·9	+14·4	46	225	
		5210	0·632	57·0	95·7	+16·3	5	25	
		5210	0·670	56·4	93·3	+18·0	3	24	
Apr. 25		Centre			(129·1)	(− 4·6)	(296)	(1627)	(775)
116·100	AS, RF		0·917	247·5	186·4	−22·4			66
			0·862	297·3	175·0	+20·7			53
		5208	0·980	263·0	199·0	− 7·8	3	38	124*c*
		5206*a*	0·979	290·1	196·0	+18·6	21	101	207*c*
		5209*a*	0·300	120·6	104·9	−13·1	124	679	
		5209	0·344	127·9	103·8	−16·5	0	5	
		5209	0·365	111·8	100·0	−12·0	4	38	
I.		5210*a*	0·334	28·5	110·8	+12·6	48	322	
		5210	0·328	37·9	108·4	+10·6	0	2	
		5210	0·392	39·4	105·5	+13·3	11	91	
		5210	0·463	46·3	100·1	+14·4	26	174	
		5210	0·519	47·3	96·9	+16·4	6	14	
		5210	0·580	48·5	93·0	+18·6	4	9	
			0·934	72·4	53·4	+14·7			205
Apr. 26		Centre			(120·2)	(− 4·5)	(247)	(1473)	(655)
117·422	AS, RF		0·869	294·0	159·3	+18·3			391
			0·785	307·1	146·3	+25·0			128
		5209*a*	0·158	196·2	105·4	−13·1	105	590	
		5209	0·155	178·9	102·6	−13·3	0	3	
		5210*a*	0·317	333·4	111·1	+12·0	39	294	
		5210	0·303	340·1	108·8	+12·1	0	1	
		5210	0·285	339·6	108·6	+11·0	0	1	
		5210	0·310	344·4	107·7	+12·9	0	2	
		5210	0·319	346·7	107·1	+13·6	5	13	
		5210	0·294	347·9	106·4	+12·3	0	7	
		5210	0·322	350·9	105·8	+14·1	0	4	
		5210	0·298	356·2	104·0	+12·8	22	33	
		5210	0·315	1·2	102·4	+13·9	0	1	
		5210	0·354	4·4	101·2	+16·2	0	5	
1904.				°	°	°			
117·422	AS, RF	5210	0·294	7·5	100·6	+12·5	0	6	
		5210	0·344	8·2	99·9	+15·4	8	25	
		5210	0·316	8·9	99·9	+13·7	1	8	
		5210	0·336	11·4	98·9	+14·8	16	52	
			0·884	68·0	44·0	+17·1			590
Apr. 27		Centre			(102·8)	(− 4·4)	(196)	(1045)	(1109)
118·531	AS, RF		0·909	286·5	151·3	+13·0			89
			0·897	299·1	146·8	+23·7			61
		5209*a*	0·329	241·9	105·4	−13·0	109	639	
		5209	0·317	228·4	102·3	−16·3	0	16	
		5209	0·292	234·3	102·2	−14·0	0	5	
		5210*a*	0·476	306·2	111·2	+12·3	29	198	
		5210	0·461	305·0	110·7	+11·3	0	4	
		5210	0·439	308·5	108·6	+11·8	3	16	
		5210	0·449	313·2	107·7	+13·8	3	13	
		5210	0·431	311·7	107·3	+12·6	0	10	
		5210	0·395	317·9	103·8	+12·8	10	30	
		5210	0·361	323·2	100·8	+12·6	1	7	
		5210	0·363	326·5	99·9	+13·4	0	4	
		5210	0·374	330·4	99·1	+14·7	10	64	
		5213*a*	0·975	110·7	10·5	−21·1	13	73	421*p*
			0·812	65·0	37·9	+17·3			707
Apr. 28		Centre			(88·1)	(− 4·3)	(178)	(1079)	(1278)
119·274	CL, RF		0·963	286·3	150·8	+14·4			189
			0·957	297·8	147·2	+25·0			119
			0·905	255·1	143·2	−15·3			250
		5209*a*	0·476	249·9	105·6	−13·1	93	644	
		5209	0·461	255·0	105·2	−10·6	1	9	
		5209	0·449	241·5	102·6	−16·2	1	16	
		5209	0·337	241·1	96·0	−13·4	0	3	
		5210*a*	0·591	296·2	111·0	+11·6	19	184	
		5210	0·561	292·7	109·9	+ 8·9	0	5	
		5210	0·569	302·6	107·9	+14·2	4	12	
I.		5210	0·539	302·8	106·0	+13·2	0	4	
		5210	0·513	304·4	104·0	+13·0	0	22	
		5210	0·496	315·3	99·7	+16·6	0	3	
		5210	0·474	313·6	99·1	+15·1	10	32	
		5210	0·432	308·5	98·5	+11·6	0	8	
		5214	0·496	38·6	59·4	+18·7	2	13	
		5213	0·936	110·8	9·1	−20·9	10	61	499*a*
			0·817	59·5	29·3	+21·7			685
			0·923	68·0	14·2	+18·4			322
			0·928	122·0	11·7	−31·2			159
Apr. 29		Centre			(78·4)	(− 4·2)	(140)	(1016)	(2223)

Group 5213, April 28–May 4. A single spot, *a*.
Group 5214, April 29–May 4. A few small spots in an irregular cluster.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
120·084	AS, RF		0·965	255·7	142·8	−14·9			117
			0·860	245·8	125·7	−22·8			128
		5209*a*	0·627	254·3	105·7	−13·0	72	605	
		5209	0·619	258·9	105·5	−10·0	5	30	
		5209	0·538	251·9	99·1	−13·1	0	25	
		5210*a*	0·738	288·4	112·9	+10·6	10	116	
		5210	0·720	292·2	110·5	+12·7	10	77	
		5210	0·697	293·1	108·5	+12·8	0	8	
I.		5210	0·697	295·5	107·9	+14·3	2	4	193*c*
		5210	0·647	295·7	104·2	+13·0	1	6	
		5210	0·622	299·0	101·6	+14·1	0	9	
		5210	0·499	302·2	93·0	+11·7	0	15	
		5214	0·409	21·6	58·5	+18·3	18	52	
		5213*a*	0·869	112·4	8·1	−21·5	9	66	199*f*
			0·852	62·2	14·0	+20·9			185
			0·885	124·2	8·1	−32·0			48
Apr. 30		Centre			(67·6)	(−4·1)	(127)	(1013)	(870)
121·527	CL, RF		0·945	251·0	119·5	−19·2			86
			0·895	244·0	110·9	−24·9			144
		5209*a*	0·839	256·9	105·4	−13·1	78	564	458*c*
		5210*a*	0·914	282·8	113·2	+10·0	32	152	
		5210	0·898	286·1	110·5	+12·6	20	68	676*c*
		5210	0·829	290·2	101·8	+14·3	0	20	
		5214	0·409	334·2	59·3	+17·6	17	39	
		5214	0·428	336·4	59·0	+19·1	0	2	
		5214	0·402	341·2	56·4	+18·3	3	19	
		5213*a*	0·673	117·4	8·9	−21·1	11	16	171*f*
May 1		Centre			(48·6)	(−4·0)	(161)	(880)	(1535)
122·266	AS, RF	5209*a*	0·920	257·7	105·7	−12·8	69	660	992*c*
		5210*a*	0·969	282·1	113·2	+10·7	0	41	
		5210	0·958	284·5	110·5	+12·7	0	15	959*c*
		5210	0·913	288·0	102·4	−14·7	0	7	
		5214	0·493	318·6	58·8	+18·0	5	15	
I.		5214	0·474	323·1	56·2	+18·5	1	7	
		5215	0·621	42·2	11·8	+23·8	0	18	
		5213*a*	0·572	123·5	8·0	−21·7	7	16	
			0·952	62·4	330·8	+24·7			32
			0·938	108·0	329·1	−18·3			78
			0·977	69·8	323·5	+18·7			144
May 2		Centre			(38·8)	(−3·9)	(82)	(779)	(2205)
123·680	AS, RF	5209*a*	0·994	257·8	104·5	−12·6	0	196	508*f*
		5210	0·984	283·9	98·5	+13·0	0	93	371*c*
		5216*a*	0·902	289·7	81·9	+15·9	0	10	96*a*
		5214	0·685	301·1	57·9	+17·7	0	3	

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
123·680	AS, RF	5215	0·449	11·4	14·6	+22·2	0	2	
		5215	0·481	10·8	14·4	+24·3	10	47	
		5215	0·481	16·0	11·8	+23·7	1	8	
		5215	0·481	19·1	10·3	+23·2	3	24	
		5213*a*	0·362	146·8	7·9	−21·3	3	17	
		5217	0·843	64·5	326·7	+19·0	3	28	143*c*
		5217	0·873	64·4	323·9	+19·0	0	11	
			0·881	113·1	319·3	−22·1			212
May 3		Centre			(20·1)	(−3·8)	(20)	(439)	(1330)
124·429	CL, RF	5216*a*	0·960	287·5	82·0	+15·7	0	22	
		5216	0·957	290·4	80·8	+18·8	0	11	285*c*
		5214	0·796	295·7	58·9	+17·7	0	8	222*c*
		5215	0·464	352·9	13·8	+23·7	7	74	
		5215	0·454	358·1	11·1	+23·2	4	7	
		5215	0·451	360·7	9·9	+23·0	4	15	
		5213*a*	0·306	172·8	7·9	−21·3	4	10	
		5218	0·341	144·7	358·2	−19·8	8	57	
		5218	0·375	143·5	356·4	−21·1	0	10	
		5217	0·745	60·4	327·1	+18·9	4	12	
		5217	0·796	63·7	321·7	+18·2	2	19	441*c*
		5217	0·810	65·3	319·9	+17·4	0	8	
		5217	0·833	65·2	317·6	+18·2	12	43	
			0·781	114·0	320·6	−20·9			661
			0·903	52·5	313·4	+31·3			314
			0·938	112·4	300·8	−22·3			134
May 4		Centre			(10·2)	(−3·7)	(45)	(296)	(2057)
125·184	AS, RF		0·804	294·7	49·9	+17·2			284
		5215	0·542	333·5	15·7	+25·4	4	21	
		5215	0·486	340·8	10·2	+23·7	3	13	
		5218*a*	0·277	179·1	359·9	−19·6	7	110	
		5218	0·257	172·7	358·2	−18·3	0	1	
		5218	0·296	167·1	356·2	−20·3	0	13	
		5218	0·277	161·5	354·9	−18·7	3	16	
		5217	0·648	54·1	326·5	+19·3	0	6	
I.		5217	0·696	58·2	321·7	+18·7	7	43	
		5217	0·731	58·3	319·0	+19·8	0	12	148*c*
		5217	0·732	59·7	318·4	+18·9	0	2	
		5217	0·750	60·6	316·7	+18·9	9	29	
			0·892	112·0	297·9	−21·2			178
			0·968	69·4	287·1	+18·9			125
			0·975	102·7	282·8	−13·2			687
May 5		Centre			(0·2)	(−3·6)	(33)	(266)	(1422)

Group 5215, May 2–5. A few small unstable spots in a short stream.
Group 5216, May 3–4. A small spot, *a*, first seen near the west limb. A small companion follows *a* on May 4.
Group 5217, May 3–13. A few spots in a long scattered stream. *a* and *b*, the first and last spots on May 6, are the most stable members of the group. *a* has disappeared by May 10.
Group 5218, May 4–11. A pair of spots first seen near the central meridian. The group developes into a long irregular stream, mostly of small unstable spots. The leader, *a*, is the largest and most stable.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
126·476	AS, RF		0·917	290·7	46·9	+17·4			339
			0·779	300·9	28·7	+21·1			425
		5219	0·675	288·3	23·5	+ 9·6	0	12	
		5219	0·667	291·6	22·2	+11·4	1	6	
		5220*a*	0·493	307·3	6·8	+14·1	0	15	
		5220	0·484	307·9	6·2	+14·1	0	3	
		5218*a*	0·413	226·6	1·6	−19·8	12	81	
		5218	0·403	223·8	0·3	−20·2	3	20	
		5218	0·371	211·7	355·2	−21·8	3	6	
		5218	0·325	215·9	354·7	−18·7	1	26	
		5217*a*	0·483	39·9	324·1	+18·3	16	53	
		5217	0·528	47·7	319·0	+17·5	0	3	
		5217	0·559	45·7	318·1	+19·7	0	7	
		5217*b*	0·568	48·1	316·6	+19·1	7	35	
			0·886	67·2	284·0	+18·3			281
			0·894	105·8	280·0	−15·7			947
May 6		Centre			(343·1)	(− 3·5)	(43)	(267)	(1992)
127·105	AS, RF		0·880	294·6	32·8	+19·7			478
		5220*a*	0·599	299·3	7·3	+14·1	0	3	
		5218*a*	0·529	236·4	2·6	−20·0	5	77	
		5218	0·514	234·6	1·2	−20·3	2	4	
		5218	0·493	235·1	0·1	−19·4	0	5	
		5218	0·495	231·6	359·2	−21·0	0	2	
		5218	0·452	233·7	357·3	−18·6	4	15	
		5218	0·470	226·4	356·2	−22·0	0	2	
		5218	0·434	232·5	356·0	−18·4	0	1	
		5218	0·423	230·4	354·9	−18·8	0	9	
I.		5217*a*	0·414	24·4	324·4	+18·7	10	28	
		5217	0·416	32·0	321·5	+17·3	0	4	
		5217	0·483	35·2	317·7	+19·9	1	4	
		5217*b*	0·484	38·0	316·5	+19·1	9	45	
		5221	0·787	104·1	283·4	−13·2	0	3	637*c*
		5221	0·800	107·6	282·5	−16·1	0	7	
			0·874	65·2	277·6	+19·7			342
			0·876	124·2	277·0	−31·3			113
			0·972	109·6	258·3	−19·8			306
May 7		Centre			(334·8)	(− 3·4)	(31)	(209)	(1876)
128·392	CL, RF		0·900	245·3	20·7	−23·6			289
			0·871	301·7	12·7	+25·4			321
		5222	0·833	282·9	18·4	+ 9·8	2	9	386*n*
		5218*a*	0·727	245·0	2·2	−20·1	9	96	507*s*
I.		5218	0·671	245·1	357·7	−18·9	2	4	
		5218	0·672	240·9	356·8	−21·5	0	3	
		5223	0·696	287·8	359·9	+ 9·9	1	2	
1904.				°	°	°			
128·392	CL, RF	5224	0·445	219·3	335·6	−23·1	0	8	
		5217*a*	0·401	342·7	325·0	+19·3	3	9	
		5217	0·384	351·4	321·3	+19·0	1	6	
		5217*b*	0·383	3·2	316·5	+19·2	7	38	
		5221	0·565	109·0	284·6	−13·3	1	2	
I.		5225	0·722	115·4	273·9	−20·3	7	47	181*c*
		5226	0·955	105·4	245·0	−15·7	7	12	342*f*
			0·862	57·8	264·1	+25·5			180
			0·892	112·6	255·8	−21·5			422
			0·938	74·5	249·8	+13·3			486
May 8		Centre			(317·8)	(− 3·2)	(40)	(236)	(3114)
129·472	AS, RF		0·973	280·4	19·1	− 9·3			91
			0·934	296·2	8·9	+23·0			236
			0·899	236·1	4·5	−31·6			92
			0·880	285·0	3·5	+11·6			209
		5218*a*	0·864	246·6	1·9	−21·7	19	139	694*c*
		5217*a*	0·526	316·9	325·9	+19·7	5	17	
		5217	0·485	320·1	322·6	+18·9	0	6	
		5217*b*	0·433	330·5	316·5	+19·0	7	18	
		5221	0·375	122·1	284·4	−14·4	1	15	
		5221	0·425	166·2	280·5	−13·7	0	24	
		5225	0·551	124·2	274·5	−20·7	19	128	
		5226	0·860	105·8	244·7	−15·1	5	16	380*f*
			0·771	113·7	254·9	−20·1			335
			0·826	77·7	249·1	+ 8·3			294
			0·884	64·2	245·2	+21·0			266
			0·932	76·1	236·2	+11·7			241
			0·978	68·4	227·9	+20·3			78
May 9		Centre			(303·5)	(− 3·1)	(56)	(363)	(2916)
130·293	CL, RF		0·979	295·3	8·1	+24·0			196
			0·953	237·4	3·4	−31·9			55
			0·950	283·0	3·1	+11·3			309
			0·933	310·7	353·4	+36·0			129
		5218*a*	0·939	247·9	1·8	−21·7	19	167	991*c*
I.		5224*a*	0·735	240·7	336·6	−23·2	2	7	
		5217*b*	0·537	314·3	316·5	+19·2	4	15	
		5221	0·249	143·6	283·9	−14·5	0	39	
		5225	0·429	136·6	274·3	−20·9	16	170	
		5226	0·757	107·5	244·4	−15·1	5	17	451*f*
			0·865	61·4	237·3	+22·8			413
			0·865	76·5	234·1	+10·1			297
May 10		Centre			(292·6)	(−3·0)	(46)	(415)	(2841)

Group 5219, May 6. Two small spots.
Group 5220, May 6–7. A small spot, *a*, with a very small companion on May 6.
Group 5221, May 7–11. Two very small spots on May 7. The group has become an unstable cluster by May 9.
Group 5222, May 8. A small spot in a bright mass of faculæ.
Group 5223, May 8. A very small spot following Group 5222.
Group 5224, May 8–12. A very small faint spot, not seen on May 9. A small spot, *a*, is seen on May 10, and increases in size on the succeeding days. It is followed by a small companion on May 11 and 12.
Group 5225, May 8–16. A number of small unstable spots in an irregular stream.
Group 5226, May 8–11. A small spot.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
131·098	AS, M		0·933	289·8	1·6	+17·3			55
		5218	0·989	249·2	4·0	−21·1	24	106	529*c*
		5218	0·973	248·3	358·6	−21·8	14	109	
		5223	0·988	279·9	2·2	+ 9·3	0	14	139*n*
		5224*a*	0·853	244·4	338·6	−23·2	17	36	112*e*
		5224	0·823	243·9	335·2	−23·0	0	4	
		5217*b*	0·657	303·5	317·2	+18·9	2	22	196*e*
		5221	0·207	202·8	286·7	−13·9	0	10	
I.		5221	0·209	191·8	284·5	−14·6	0	1	
		5221	0·211	179·8	281·9	−15·0	0	3	
		5225	0·308	164·2	276·9	−20·1	18	66	
		5225	0·374	155·6	272·4	−22·7	7	41	
		5226	0·628	111·6	244·8	−15·6	3	7	
		5227	0·925	63·6	218·0	+23·0	10	46	166*c*
			0·705	104·8	237·9	−12·4			64
			0·870	111·3	222·7	−19·9			192
			0·981	99·9	203·0	−10·3			96
May 11		Centre			(282·0)	(− 2·9)	(95)	(465)	(1549)
132·533	AS, RF		0·855	260·1	321·6	− 9·9			56
			0·830	245·3	317·2	−21·9			224
		5224*a*	0·976	246·7	340·3	−23·3	0	89	393*c*
		5224	0·943	246·8	332·8	−22·7	0	21	
		5217	0·832	294·3	315·9	+18·3	0	4	682*p*
		5225	0·366	211·5	274·9	−20·9	9	87	
		5227	0·755	54·4	221·0	+24·0	4	44	219*c*
		5227	0·805	57·7	215·4	+23·5	5	42	
		5228	0·878	105·1	202·2	−14·6	6	85	111*c*
			0·879	57·7	207·2	+26·4			47
			0·955	63·9	193·7	+23·8			155
			0·895	99·6	199·7	− 9·9			154
May 12		Centre			(263·1)	(− 2·8)	(24)	(372)	(2041)
133·216	AS, RF		0·956	291·5	324·7	+19·7			181
			0·923	246·8	320·4	−22·4			300
		5217	0·910	293·3	316·5	+19·8	0	10	150*c*
		5225	0·494	232·5	278·5	−19·9	0	3	
		5225	0·478	229·9	276·8	−20·3	9	67	
		5225	0·445	222·8	272·9	−21·5	1	9	
I.		5225	0·450	218·0	271·5	−23·3	3	13	
		5227	0·678	49·6	219·8	−23·7	5	30	103*c*
		5227	0·730	53·3	214·4	+23·7	3	16	
		5228*a*	0·780	107·8	203·8	−15·5	6	31	140*c*
		5228	0·828	106·9	198·9	−15·5	0	15	
			0·899	64·6	193·6	+21·3	0	11	234*c*
			0·820	99·5	199·2	− 9·3			137
May 13		Centre			(254·0)	(− 2·7)	(27)	(205)	(1245)
1904.				°	°	°			
134·476	AS, RF		0·988	290·3	316·7	+19·6			233
			0·756	255·5	285·7	−12·7			428
		5225	0·676	241·5	276·6	−20·8	8	57	
		5225	0·651	236·9	273·5	−22·9	2	32	
		5225	0·627	234·8	271·1	−23·3	3	9	
		5229	0·313	30·6	227·9	+13·0	1	12	
		5227	0·527	30·9	220·1	+24·3	1	24	
		5227	0·571	37·5	214·9	+24·5	3	13	
		5228*a*	0·565	113·4	204·9	−15·1	4	27	
		5228	0·643	111·3	119·0	−15·6	3	35	
			0·784	58·3	191·2	+22·5			259
			0·910	63·6	175·5	+22·6			235
May 14		Centre			(237·3)	(− 2·6)	(25)	(209)	(1155)
135·538	AS, M		0·879	255·2	284·3	−14·2			672
			0·894	291·5	284·0	+17·9			212
		5225	0·820	246·5	276·6	−20·6	0	10	499*c*
		5225	0·790	241·4	272·4	−23·8	12	57	
		5225	0·767	241·8	270·3	− 22·9	0	6	
		5229	0·294	337·3	230·0	+13·2	0	5	
		5229	0·258	341·9	228·0	+11·7	0	6	
		5228*a*	0·372	125·0	205·0	−14·7	4	30	
		5228	0·398	123·2	203·2	−14·9	0	10	
		5228	0·463	119·9	198·8	−15·6	5	42	
			0·863	63·0	167·7	+21·6			247
			0·955	69·5	152·7	+18·7			179
May 15		Centre			(223·3)	(− 2·5)	(21)	(166)	(1809)
136·419	CL, RF		0·953	289·9	282·0	+18·2			196
			0·844	255·9	268·6	−13·1			301
			0·853	297·3	266·1	+21·7			110
			0·730	245·0	256·0	−19·5			427
		5230	0·972	292·8	285·8	+21·5	0	85	
		5225	0·912	248·2	276·3	−20·8	0	8	750*c*
		5225	0·888	243·9	272·3	−24·2	0	14	
		5231	0·604	308·5	241·7	+20·0	3	18	
		5231	0·574	309·6	239·4	+19·3	0	2	
		5229	0·371	315·0	227·2	+13·0	0	3	
		5229	0·335	318·5	224·7	+12·3	0	13	
		5227	0·442	342·6	219·8	+22·6	0	8	
		5228*a*	0·241	151·6	204·8	−14·5	5	11	
		5228	0·285	148·8	202·8	−16·3	0	10	
		5228	0·301	135·4	199·0	−14·6	0	11	
		5228	0·309	127·6	197·1	−13·1	0	6	
		5232*a*	0·509	47·6	188·4	+17·9	0	6	72*e*
		5233	0·696	58·6	172·7	+19·4	0	11	164*c*
		5233	0·734	59·0	169·6	+20·4	8	28	
			0·826	59·9	160·9	+23·0			145

Group 5227, May 11–18. A few small spots in an irregular stream. The group is not seen on May 15, or 17.
Group 5228, May 12–19. A few spots mostly very small, in a short stream. The leader, *a*, is the most stable spot of the group.
Group 5229, May 14–16. One or two very small spots south, preceding Group 5227.
Group 5230, May 16. A spot forming suddenly on the west limb.
Group 5231, May 16–17. One or two small spots.
Group 5232, May 16–22. A few spots, mostly small, in an irregular stream. The leader, *a*, is a double spot, and the most stable member of the group.
Group 5233, May 16–20. A few small faint spots following Group 5232.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
136·419	CL, RF		0·883	118·3	152·0	−25·9			67
			0·905	67·4	149·5	+19·3			353
			0·921	110·0	145·3	−19·3			157
			0·958	53·8	143·6	+33·6			137
			0·931	97·1	143·1	− 7·5			107
May 16		Centre			(211·6)	(− 2·3)	(16)	(234)	(2986)
137·651	AS, RF		0·976	246·5	272·5	−23·5			567
			0·952	293·2	264·9	+21·2			251
			0·898	249·0	258·1	−19·8			378
			0·787	286·1	245·5	+11·1			660
			0·784	246·3	244·8	−19·8			318
		5231	0·754	297·2	240·2	+18·6	0	5	361*n*
		5228*a*	0·263	216·0	204·4	−14·4	3	9	
		5228	0·265	209·2	203·0	−15·5	0	2	
		5228	0·228	198·8	199·6	−14·6	0	3	
		5232*a*	0·345	12·9	190·7	+17·4	5	32	
		5232	0·374	20·5	187·4	+18·3	7	25	
		5232	0·376	27·4	184·9	+17·2	3	20	
		5234	0·342	45·7	180·9	+11·7	1	12	
		5233	0·537	46·2	171·1	+19·8	1	21	
			0·958	112·6	122·8	−22·2			140
			0·974	75·4	119·6	+13·7			234
			0·989	105·8	113·6	−16·0			141
May 17		Centre			(195·3)	(− 2·2)	(20)	(129)	(3050)
138·408	CL, RF		0·959	255·3	258·6	−14·7			175
			0·915	283·9	250·2	+11·8			397
			0·878	249·6	245·5	−18·9			345
			0·810	288·1	237·4	+13·3			277
		5227	0·675	308·7	220·1	+23·2	0	2	224*f*
		5228*a*	0·384	236·0	204·4	−14·4	0	7	
		5228	0·316	228·0	199·3	−14·2	0	11	
		5232*a*	0·356	341·0	192·3	+17·5	13	65	
		5232	0·345	354·6	187·2	+18·0	8	41	
		5233	0·449	31·0	171·1	+20·5	0	4	
		5233	0·474	34·5	168·7	+20·9	0	4	
			0·905	114·7	122·1	−23·2			300
			0·932	72·6	118·2	+15·4			613
			0·957	53·2	117·8	+34·1			273
			0·950	104·5	113·8	−14·4			443
May 18		Centre			(185·3)	(− 2·1)	(21)	(134)	(3047)
139·463	AS, M		0·956	253·5	243·8	−16·3			222
			0·923	278·2	238·0	+ 6·7			326
			0·903	290·3	233·6	+17·3			299
			0·797	302·8	218·4	+24·2			307
		5228*a*	0·560	245·7	203·1	−15·0	1	20	

Greenwich Civil Time.	Measurers.	No. of Group and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
139·463	AS, M	5232*a*	0·505	311·1	194·7	+17·5	13	77	
		5232	0·469	318·1	190·5	+18·4	0	8	
		5232	0·436	321·5	187·8	+18·0	3	17	
		5233	0·368	346·9	176·3	+19·0	1	4	
		5233	0·382	355·2	173·2	+20·3	0	8	
			0·813	120·4	120·5	−25·5			412
			0·859	72·5	113·9	+13·9			742
			0·868	106·6	111·9	−15·3			980
May 19		Centre			(171·3)	(− 2·0)	(18)	(134)	(3288)
140·478	CL, M		0·928	287·0	224·4	+15·0			170
			0·883	298·8	215·7	+24·1			261
			0·733	253·0	203·9	−13·7			179
		5232*a*	0·644	300·4	193·4	+17·5	19	96	
		5232	0·618	301·9	191·1	+17·4	0	18	
		5232	0·552	307·4	185·2	+17·8	0	11	
		5233	0·454	321·1	175·4	+18·8	0	5	
		5235	0·834	73·4	103·1	+12·7	0	6	769*np*
		5235	0·868	73·2	99·4	−13·5	0	65	
			0·695	122·8	118·5	−23·5			276
			0·821	106·4	103·7	−14·5			609
			0·894	121·7	97·7	−29·0			179
May 20		Centre			(157·9)	(− 1·9)	(19)	(201)	(2443)
141·138	CL, RF		0·916	286·3	214·1	+14·2			151
			0·909	298·6	210·7	+25·0			221
			0·891	309·1	204·7	+33·1			42
			0·793	253·8	200·6	−13·8			377
		5232*a*	0·731	296·6	192·4	+17·8	13	72	
		5232	0·698	299·5	188·9	+18·7	0	2	
I.		5232	0·676	300·5	187·0	+18·7	6	8	
		5232	0·640	301·8	184·0	+18·3	1	11	
		5236	0·649	109·6	110·3	−13·9	0	3	433*e*
		5235	0·782	72·6	99·6	+12·4	0	4	
		5235	0·801	72·0	97·9	+13·3	6	22	
		5237	0·932	106·3	81·1	−15·8	0	13	125*f*
May 21		Centre			(149·2)	(− 1·7)	(26)	(135)	(1349)
142·068	AS, RF		0·913	257·1	202·3	−12·4			371
			0·862	300·5	191·7	+25·0			100
		5232*a*	0·857	292·3	193·2	+18·1	12	61	198*e*
		5232	0·815	294·7	188·2	+18·9	2	13	
I.		5235	0·618	67·7	101·2	+12·3	13	31	
		5235	0·647	67·9	99·1	+12·8	5	23	
		5235	0·675	68·6	96·9	+13·0	0	2	
			0·800	116·8	86·6	−22·2			351
			0·970	105·1	61·3	−15·0			125
May 22		Centre			(136·9)	(− 1·6)	(32)	(130)	(1145)

Group 5234, May 17. A small faint spot, south of Group 5232.
Group 5235, May 20–24. Two or three small unstable spots.
Group 5236, May 21–24. A very small spot on May 21. The group is not seen on May 22, but one or two small spots are seen on May 23 and 24.
Group 5237, May 21. A small spot.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
143·440	AS, RF		0·874	297·2	175·9	+22·7			677
		5236	0·245	142·3	109·9	−12·6	0	7	
		5236	0·286	145·1	109·0	−15·0	1	10	
		5235	0·374	47·6	102·3	+13·1	3	8	
		5235	0·412	51·4	99·5	+13·4	0	10	
			0·910	69·3	55·3	+18·1			205
May 23		Centre			(118·7)	(−1·5)	(4)	(35)	(882)
144·304	CL, RF		0·933	292·0	174·0	+19·9			271
		5236	0·195	189·7	109·2	−12·4	1	10	
I.		5235	0·286	28·5	99·3	+13·1	2	20	
			0·944	66·4	38·9	+21·7			101
			0·954	76·7	35·7	+12·3			141
May 24		Centre			(107·3)	(−1·4)	(3)	(30)	(513)
145·661	CL, RF	5238	0·607	67·9	54·4	+12·1	2	11	
		5238	0·645	71·1	51·1	+11·0	0	7	
		5239	0·963	80·9	15·6	+ 8·4	13	64	33*c*
			0·770	60·3	43·7	+21·4			72
			0·851	68·6	33·5	+17·4			482
			0·910	111·4	25·3	−19·9			237
			0·963	71·0	16·5	+17·9			224
			0·983	111·8	10·4	−21·7			447
May 25		Centre			(89·4)	(−1·3)	(15)	(82)	(1495)
146·239	AS, M		0·959	250·1	154·3	−19·4			86
			0·929	289·0	148·3	+17·2			109
		5239	0·925	80·8	14·5	+ 8·1	10	71	564
I.		5240	0·966	111·0	7·3	−20·6	0	13	} 515*c*
		5240	0·977	110·1	4·6	−19·8	0	73	
			0·887	106·7	20·1	−15·3			92
			0·905	63·0	20·1	+23·7			77
May 26		Centre			(81·6)	(−1·1)	(10)	(157)	(1443)
147·602	AS, RF		0·970	291·1	138·2	+20·2			63
			0·824	288·8	117·3	+14·8			306
		5241	0·805	245·6	114·8	−20·0	3	20	504*c*
		5242	0·465	308·1	85·9	+15·7	0	9	
		5242	0·470	312·7	84·9	+17·6	0	8	
		5242	0·461	315·5	83·5	+18·2	0	13	
		5239	0·752	78·1	15·9	+ 8·2	5	19	371*f*
		5240*a*	0·846	113·9	8·2	−20·6	20	115	} 1074*c*
		5240	0·884	112·5	3·4	−20·2	0	20	
			0·910	127·3	3·2	−33·9			158
			0·904	63·1	2·3	+23·6			134
			0·957	118·2	352·6	−27·1			90
			0·989	112·3	342·8	−22·2			788
May 27		Centre			(63·7)	(−1·0)	(28)	(204)	(3488)
1904.				°	°	°			
148·058	CL, M		0·856	288·7	114·6	+15·4			374
			0·720	292·2	101·1	+15·1			89
		5241	0·879	247·3	117·2	−20·3	6	18	315*f*
		5239	0·682	77·2	15·6	+ 8·0	4	22	278*f*
I.		5240*a*	0·797	115·7	7·6	−20·8	30	183	} 568*c*
		5240	0·845	113·9	2·3	−20·4	3	14	
		5243	0·983	113·2	338·8	−23·0	12	93	510*p*
			0·901	130·5	359·7	−36·2			78
			0·935	119·7	351·0	−27·9			79
			0·974	73·8	341·7	+15·5			86
May 28		Centre			(57·6)	(−0·9)	(55)	(330)	(2377)
149·482	CL, M		0·915	253·0	103·9	−15·9			477
			0·829	289·5	92·7	+15·6			541
		5244	0·332	224·7	52·6	−14·4	0	12	
		5239	0·430	70·7	14·7	+ 7·4	0	10	
		5240*a*	0·596	125·8	7·6	−21·0	26	204	
		5245	0·841	72·0	343·2	+14·6	2	7	
		5243	0·869	114·5	340·7	−21·5	2	16	} 744*c*
		5243	0·886	117·0	339·0	−24·1	4	41	
			0·812	124·5	349·6	−27·9			94
			0·862	73·8	340·6	+13·5			116
			0·961	67·9	326·5	+20·9			485
May 29		Centre			(38·7)	(−0·8(	(34)	(290)	(2457)
150·522	AS, M		0·933	249·5	92·6	−19·3			248
			0·924	287·6	91·1	+15·9			437
		5244*a*	0·528	245·5	54·4	−13·2	3	13	
		5244*b*	0·491	244·2	51·9	−13·0	7	21	
		5239	0·228	51·4	14·7	+ 7·5	1	11	
		5240	0·447	141·6	7·8	−21·1	16	200	
		5240	0·476	138·0	5·1	−21·3	0	19	
		5240	0·512	132·5	1·3	−20·8	0	7	
		5243	0·702	119·9	344·5	−21·0	0	6	} 795*c*
		5243	0·749	119·1	340·4	−21·8	0	8	
			0·897	65·3	323·9	+21·7			675
			0·903	111·7	322·1	−19·8			212
May 30		Centre			(25·0)	(−0·7)	(27)	(285)	(2367)
151·066	AS, M		0·938	287·7	86·1	+16·3			148
		5244*a*	0·631	249·4	55·0	−13·3	3	12	
		5244*b*	0·580	248·4	51·2	−12·8	6	17	
		5240	0·390	154·2	7·4	−21·1	28	179	
		5240	0·452	156·4	6·3	−24·9	0	8	
I.		5240	0·406	146·6	4·1	−20·4	0	10	
		5243	0·622	124·4	344·6	−21·0	3	15	
			0·838	62·5	324·5	+22·4			270
			0·905	66·7	315·3	+20·7			248
May 31		Centre			(17·8)	(−0·6)	(40)	(241)	(666)

Group 5238, May 25. A pair of small faint spots.
Group 5239, May 25–30. A small regular spot.
Group 5240, May 26–June 6. A large composite spot, *a*, generally with a small companion. *a* has broken up by June 2 into a number of small spots, forming a stream much inclined to the Equator. The last spot of this stream, *b*, is the most stable, and remains alone on June 5.
Group 5241, May 27–28. A close pair of small spots on May 27, measured together. A single spot on May 28.
Group 5242, May 27. A few small spots in a short stream.
Group 5243, May 28–31. Two or three unstable spots, in a scattered unstable group.
Group 5244, May 29–31. Three very small spots, measured together on May 29. Two small clusters, *a* and *b*, on May 30 and 31.
Group 5245, May 29. A very small spot.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
152·646	CL, RF		0·840	253·8	52·9	−13·8			124
		5240	0·391	200·1	5·3	−21·9	12	126	
			0·906	145·8	307·4	−48·7			54
			0·909	69·6	293·4	+18·3			337
			0·930	103·8	289·3	−13·0			588
June 1		Centre			(357·0)	(−0·4)	(12)	(126)	(1103)
153·404	CL, M		0·932	287·6	54·4	+16·2			108
			0·918	255·3	52·7	−13·6			119
		5240	0·498	226·3	9·4	−20·4	0	4	
I.		5240	0·475	220·9	6·3	−21·3	11	45	
		5240	0·456	220·1	5·1	−20·6	0	3	
		5240	0·472	217·0	4·7	−22·4	0	2	
		5240	0·448	218·8	4·3	−20·7	0	8	
		5240	0·441	213·4	2·0	−21·9	0	7	
			0·818	70·1	293·9	+16·0			109
			0·904	110·5	283·8	−18·6			380
			0·966	69·4	273·1	+19·8			120
June 2		Centre			(346·9)	(−0·3)	(11)	(69)	(836)
154·062	AS, M		0·957	255·9	50·7	−13·6			177
		5240	0·610	227·2	7·6	−24·6	3	10	
		5240	0·607	225·6	6·7	−25·2	0	16	
		5240	0·577	230·5	6·7	−21·7	3	9	
		5240	0·585	228·4	6·5	−23·0	6	24	
I.		5240	0·565	231·2	6·2	−20·9	9	39	
		5240	0·547	230·2	4·8	−20·6	0	13	
		5246	0·940	67·0	270·0	+21·5	0	14	232*c*
			0·809	112·6	286·5	−18·2			179
			0·926	114·0	272·4	−22·2			314
June 3		Centre			(338·2)	(−0·2)	(21)	(125)	(902)
155·078	AS, M		0·887	298·1	18·6	+24·6			285
			0·806	281·3	12·3	+ 9·0			374
		5240	0·771	241·0	5·9	−22·0	0	8	834*c*
		5240*b*	0·765	242·0	5·6	−21·1	7	30	
		5247	0·435	209·7	332·8	−22·2	3	20	
		5247	0·423	207·8	331·6	−22·0	3	13	
		5246	0·741	62·7	275·1	+19·8	2	27	556*c*
		5246	0·788	63·0	270·8	+20·9	10	56	
			0·791	121·6	271·8	−24·5			536
			0·896	110·4	257·4	−18·3			484
			0·930	74·1	252·0	+14·7			518
June 4		Centre			(319·4)	(−0·1)	(25)	(154)	(3587)
156·084	AS, RF		0·867	284·3	10·5	+12·4			454
		5240*b*	0·840	244·6	5·6	−21·1	5	24	630*c*
		5248	0·601	232·0	341·9	−21·7	0	7	
		5247	0·534	225·1	335·4	−22·0	0	3	
		5247	0·503	221·9	332·5	−21·9	0	6	
		5247	0·471	214·5	328·1	−22·8	0	2	
I.		5246	0·697	60·4	271·4	+20·1	14	80	139*c*
		5249	0·866	77·6	252·2	+10·7	0	2	460*c*
		5249	0·885	76·2	250·1	+12·2	0	3	
			0·766	127·9	268·4	−28·0			114
			0·903	107·4	248·2	−15·6			79
			0·945	65·5	242·5	+23·0			145
June 5		Centre			(311·4)	(0·0)	(19)	(127)	(2021)
157·416	CL, M		0·959	280·2	6·9	+ 9·9			184
		5240*b*	0·957	247·8	5·3	−21·1	10	21	412*p*
		5247	0·684	236·8	331·7	−21·7	0	4	
		5247	0·671	234·1	329·8	−22·9	7	34	
		5247	0·634	229·7	325·6	−24·0	0	21	
		5246	0·444	41·5	275·7	+19·5	12	57	
		5246	0·491	48·8	270·9	+19·0	3	11	
			0·705	73·0	250·4	+12·0			355
			0·865	67·7	236·0	+19·3			645
June 6		Centre			(293·8)	(+0·2)	(32)	(148)	(1596)
158·419	AS, RF		0·716	305·5	320·3	+24·8			709
		5248	0·903	244·5	342·4	−22·7	0	31	589*c*
		5247	0·811	241·2	330·7	−22·8	6	64	
		5247	0·759	238·0	324·9	−23·5	3	38	
		5246	0·335	10·4	276·8	+19·5	13	81	70*c*
		5249	0·544	64·7	250·2	+13·7	7	60	215*c*
			0·805	60·7	230·8	+23·3			944
			0·945	103·7	210·4	−12·8			192
June 7		Centre			(280·5)	(+0·3)	(29)	(274)	(2719)
159·540	CL, M		0·870	294·0	323·8	+20·9			632
			0·902	320·1	319·1	+44·0			83
		5247	0·928	244·3	331·3	−23·5	0	6	576*p*
		5247	0·884	242·7	324·6	−23·7	0	8	
		5246	0·371	329·7	277·1	+19·0	11	52	
		5246	0·355	336·6	274·3	+19·3	0	10	
		5246	0·353	345·2	271·2	+20·3	2	7	
		5249	0·297	42·5	253·9	+13·0	4	16	
		5249	0·349	45·8	250·8	+14·4	9	35	
		5249	0·396	52·8	246·8	+14·1	2	5	
			0·880	60·3	207·7	+26·0			169
			0·882	105·6	205·0	−13·6			236
June 8		Centre			(265·7)	(+0·4)	(28)	(139)	(1696)

Group 5246, June 3–11. A few small unstable spots in an irregular stream.
Group 5247, June 4–9. A few small unstable spots in an irregular stream.
Group 5248, June 5–7. A small spot on June 5 and 7. No spot is seen on June 6.
Group 5249, June 5–14. A pair of very small spots on June 5. The group is not seen on June 6, but has revived by June 7, as a number of small unstable spots in an irregular and very scattered stream.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
160·125	AS, M		0·952	245·3	325·1	−23·2			370
			0·937	304·6	320·7	+22·3			58
			0·888	293·9	315·5	+21·3			505
			0·799	240·2	303·8	−23·0			122
		5247	0·975	247·1	330·8	−22·2	0	10	
		5246	0·446	315·4	274·3	+18·9	23	58	
		5246	0·427	318·3	272·5	+19·0	2	19	
		5246	0·405	321·1	270·6	+18·8	0	5	
		5246	0·402	329·2	267·8	+20·6	2	11	
I.		5249	0·206	13·6	252·3	+12·0	0	1	
		5249	0·232	13·7	251·9	+13·4	2	6	
		5249	0·229	20·6	250·4	+12·8	1	4	
		5249	0·260	29·5	247·6	+13·5	0	4	
		5249	0·303	35·4	244·7	+14·7	2	6	
		5249	0·288	39·4	244·3	+13·3	0	2	
			0·823	57·9	204·3	+26·2			72
			0·851	105·1	198·0	−12·5			86
			0·890	75·5	193·1	+13·1			173
			0·949	63·8	185·5	+24·9			142
June 9		Centre			(255·1)	(+0·5)	(32)	(126)	(1528)
161·623	AS, M		0·965	292·4	311·6	+21·7			294
			0·851	290·0	294·7	+17·2			137
			0·830	248·3	291·8	−17·4			409
		5246	0·673	297·3	277·0	+18·5	8	91	
		5246	0·626	300·2	272·8	+18·9	4	12	
		5249	0·373	317·3	253·3	+16·5	3	17	
		5249	0·324	309·8	252·8	+12·6	0	5	
		5249	0·356	323·7	250·8	+17·3	2	12	
		5249	0·300	314·0	250·8	+12·7	0	6	
		5249	0·303	321·8	249·2	+14·4	0	19	
		5249	0·253	317·7	248·1	+11·4	0	8	
		5249	0·229	324·2	245·9	+11·4	0	6	
		5250	0·355	25·0	229·0	+19·3	8	48	
		5251*a*	0·813	75·6	184·7	+12·1	6	37	191*c*
		5251	0·835	77·0	182·3	+11·2	0	8	
			0·829	55·9	187·2	+28·1			172
			0·880	66·5	178·6	+20·9			328
June 10		Centre			(238·1)	(+0·7)	(31)	(269)	(1531)
162·288	CL, RF		0·943	237·7	295·9	−29·9			98
			0·912	289·9	293·8	+18·4			158
			0·903	250·2	292·0	−17·4			434
I.		5246	0·775	294·1	277·5	+19·0	6	23	309*nf*
		5246	0·726	297·7	272·4	+20·3	2	12	
		5249	0·417	303·9	250·1	+14·2	6	24	
		5250	0·332	359·7	229·4	+20·1	5	17	

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
162·288	CL, RF	5251*a*	0·722	73·3	184·4	+12·6	6	27	105*c*
		5251	0·756	75·7	181·2	+11·3	0	3	
			0·805	63·4	178·8	+21·5			314
			0·897	88·6	165·7	+ 1·6			48
I.			0·974	109·8	153·6	−19·1			118
			0·975	71·4	152·8	+18·3			85
June 11		Centre			(229·3)	(+0·8)	(25)	(106)	(1669)
163·457	CL, RF		0·977	252·6	290·6	−16·8			222
			0·848	294·6	269·4	+21·1			375
			0·851	237·7	267·2	−26·5			355
		5249	0·625	294·4	250·0	+15·6	0	18	
		5249	0·572	289·8	247·1	+11·9	4	37	
		5250	0·408	321·6	229·4	+19·4	15	215	
		5251*a*	0·511	66·0	185·4	+12·8	2	22	99*c*
June 12		Centre			(213·9)	(+0·9)	(21)	(292)	(1051)
164·630	AS, RF		0·947	292·3	268·3	+21·4			521
			0·925	237·5	261·5	−29·3			393
			0·873	247·4	256·6	−19·0			221
		5249	0·861	281·4	257·2	+10·3	0	14	165*c*
		5249	0·842	281·7	255·0	+10·3	0	10	
		5249	0·815	287·8	251·6	+15·0	3	19	227*c*
		5249	0·789	284·5	249·4	+12·0	0	1	
		5249	0·789	290·7	248·5	+16·8	3	25	
		5250	0·610	302·0	231·5	+19·7	15	230	
		5250	0·562	303·8	227·8	+19·0	23	156	
		5251*a*	0·296	47·1	185·5	+12·6	1	7	
		5252	0·977	108·3	121·8	−17·6	0	15	285*f*
		5253*a*	0·974	77·7	121·7	+12·2	26	241	520*c*
June 13		Centre			(198·3)	(+1·0)	(71)	(718)	(2332)
165·232	AS, M		0·959	294·8	262·7	+24·1			257
			0·961	238·3	261·0	−30·0			242
			0·919	249·9	255·3	−17·9			86
		5249	0·930	281·0	258·4	+10·6	0	6	723*c*
		5249	0·907	281·1	255·0	+10·5	0	5	
		5249	0·890	286·1	252·4	+14·8	4	12	
		5249	0·859	290·0	248·1	+17·7	2	9	
I.		5250	0·708	297·8	232·1	+20·1	32	140	
		5250	0·680	300·3	229·2	+20·9	0	2	
		5250	0·677	302·1	228·4	+21·9	0	11	
		5250	0·656	297·6	228·1	+18·6	17	92	
		5250	0·649	302·0	226·4	+21·0	5	22	
		5250	0·621	308·3	222·4	+23·5	4	14	
		5250	0·605	313·1	219·5	+25·3	3	16	

Group 5250, June 10–16. A few small spots on June 10 and 11. The group has greatly developed by June 12, and become a large compact cluster. The group continues to change rapidly, and is a long irregular stream of spots on June 14.
Group 5251, June 10–15. A small but dark spot, *a*, usually with a very small companion. *a* has broken up by June 15.
Group 5252, June 13–25. A number of small unstable spots in an irregular and quickly changing stream. *a*, the leader, is a double spot which has broken up by June 20.
Group 5253, June 13–25. A large composite spot, *a*, usually with a few companions in a short train following it.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
165·232	AS, M	5251*a*	0·217	21·6	185·7	+12·7	2	7	
		5252	0·951	109·5	120·1	−18·1	11	58	979*c*
I.		5253*a*	0·941	77·3	120·7	+12·3	40	248	678*c*
		5253	0·979	75·8	112·5	+14·1	16	98	
		5254*a*	0·989	112·5	110·4	−22·0	15	104	
June 14		Centre			(190·4)	(+1·1)	(151)	(844)	(2965)
166·641	CL, RF	5250	0·889	291·7	233·0	+19·8	14	145	
		5250	0·840	290·8	227·3	+18·1	4	32	
		5250	0·817	297·7	223·5	+23·1	6	19	572*c*
		5251	0·319	306·5	186·9	+12·1	1	5	
		5251	0·297	313·1	184·6	+13·0	1	3	
		5251	0·276	315·5	183·2	+12·6	0	2	
		5253*a*	0·787	7·4	120·9	+13·0	30	290	927*c*
		5253	0·860	7·4·0	113·4	+14·4	9	75	
		5252*a*	0·789	183·4	122·6	−17·4	12	80	
		5252	0·858	112·3	115·3	−18·3	3	15	833*c*
		5254*a*	0·904	114·4	109·9	−21·3	8	44	
			0·949	71·1	101·1	+18·3			216
June 15		Centre			(171·8)	(+1·3)	(88)	(710)	(2548)
167·418	AS, RF		0·874	304·9	217·7	+30·7			121
			0·830	267·5	217·2	− 1·3			105
		5250	0·953	290·2	233·0	+19·7	12	61	638*c*
		5250	0·920	291·2	227·1	+20·0	0	67	
		5253*a*	0·671	72·3	120·6	+12·8	27	298	718*c*
		5253	0·761	72·3	113·2	+14·3	6	65	
		5252*a*	0·679	117·2	122·4	−16·9	16	84	
		5252	0·704	115·1	120·0	−16·3	0	25	816*c*
		5252	0·737	116·8	117·7	−18·3	0	20	
		5254*a*	0·825	117·5	109·7	−21·5	12	46	
			0·906	69·8	97·7	+18·8			324
June 16		Centre			(161·4)	(+1·4)	(73)	(666)	(2722)
168·460	CL, RF		0·965	292·3	221·6	+21·9			342
			0·861	304·1	202·6	+29·7			131
			0·830	252·3	201·8	−13·7			192
			0·618	289·2	184·2	+12·9			179
		5253*a*	0·485	65·7	120·8	+12·8	37	328	
		5253	0·596	68·7	112·9	+13·7	4	26	
		5252*a*	0·522	126·0	121·6	−16·5	15	56	
		5254	0·670	123·3	111·1	−20·4	0	4	210*c*
		5254*a*	0·694	124·1	109·5	−21·7	6	20	
			0·771	114·4	100·4	−17·5			252
			0·796	69·6	96·5	+17·1			174
			0·898	123·0	88·9	−28·4			163
June 17		Centre			(147·6)	(+1·5)	(62)	(434)	(1643)
169·248	CL, RF	5253	0·326	45·4	123·3	+14·7	1	3	
		5253*a*	0·347	55·2	120·2	+12·9	30	284	
I.		5252*a*	0·413	139·6	120·9	−16·8	12	81	
		5254*a*	0·597	132·4	108·8	−22·3	3	10	
June 18		Centre			(137·1)	(+1·6)	(46)	(378)	(0)
170·603	AS, RF		0·921	283·2	185·8	+12·8			353
		5253	0·222	347·3	122·1	+14·1	0	5	
		5253*a*	0·178	356·9	119·8	+11·9	25	296	
		5253	0·216	357·4	119·8	+14·1	0	3	
		5253	0·251	28·3	112·2	+14·4	0	9	
		5252*a*	0·311	189·8	122·3	−16·1	7	54	
		5252	0·323	179·1	118·9	−17·1	1	24	
		5254*a*	0·430	157·3	109·0	−21·6	0	5	
		5255	0·721	120·4	77·9	−20·1	0	10	100*c*
		5255	0·740	119·8	76·2	−20·3	0	7	
		5256	0·933	70·2	51·3	+19·0	0	15	267*c*
		5256	0·958	70·1	46·4	+19·6	0	23	
			0·916	59·0	55·6	+28·9			63
			0·911	105·2	54·9	−13·1			138
June 19		Centre			(119·2)	(+1·7)	(33)	(451)	(921)
171·471	CL, RF		0·937	290·7	176·5	+20·1			231
		5253	0·295	317·2	119·7	+14·3	0	2	
		5253*a*	0·268	311·7	119·6	+12·1	31	230	
		5253	0·233	341·3	112·2	+14·6	0	6	
		5252	0·391	219·5	122·7	−15·7	3	22	
		5252	0·359	216·7	120·6	−14·8	0	26	
		5252	0·372	208·7	118·5	−17·1	3	12	
		5252	0·319	213·4	118·2	−13·6	2	8	
		5255	0·615	125·5	75·9	−19·3	1	4	
		5256	0·856	68·2	50·5	+19·5	4	13	568*c*
		5256	0·881	68·8	47·4	+19·5	7	25	
		5256	0·908	70·3	43·6	+18·6	5	17	
June 20		Centre			(107·8)	(+1·9)	(56)	(365)	(799)
172·210	CL, M		0·961	281·0	171·7	+11·1			103
		5252	0·475	234·5	121·3	−14·1	0	43	
		5252	0·465	225·9	118·2	−16·9	0	14	
M.		5253*a*	0·406	297·7	119·4	+12·7	22	212	
		5256	0·749	67·6	51·4	+17·7	12	79	473*c*
		5256	0·791	69·6	47·2	+17·2	0	46	
June 21		Centre			(97·9)	(+2·0)	(34)	(394)	(576)
173·512	AS, RF	5253*a*	0·640	286·2	119·4	+11·9	29	198	403*c*
		5252	0·691	246·1	121·3	−14·6	5	27	
		5252	0·659	246·0	118·9	−13·8	0	22	

Group 5254, June 14–19. A small regular spot, *a*, following Group 5252. A very small companion precedes *a* on June 17.
Group 5255, June 19–20. One or two very small spots.
Group 5256, June 19–29. A few small spots irregularly scattered on June 19 and 20. The group increases in size, and on June 22 and the succeeding days consists chiefly of two compact clusters, *a* and *b*, which quickly coalesce into two composite spots.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
173·512	AS, RF	5252	0·661	244·2	118·6	−15·0	0	3	
		5252	0·635	244·4	116·8	−14·2	0	6	390*sp*
		5252	0·623	242·0	115·3	−15·2	13	70	
		5256*a*	0·550	55·9	51·9	+19·8	21	170	
		5256	0·594	58·9	48·2	+19·6	0	3	
		5256*b*	0·607	60·6	46·8	+19·0	5	51	302*c*
		5256	0·667	62·7	41·9	+19·4	0	4	
		5256	0·681	61·2	41·2	+20·8	0	16	
			0·885	79·9	18·7	+ 9·9			302
			0·930	62·8	14·0	+26·0			49
			0·970	114·9	7·3	−23·5			266
June 22		Centre			(80·7)	(+2·1)	(73)	(570)	(1712)
174·420	CL, RF	5253*a*	0·780	283·6	199·3	+12·0	15	198	453*c*
		5252	0·791	249·4	118·5	−14·7	23	161	654*s*
		5256*a*	0·411	42·2	51·7	+19·8	25	234	
		5256*b*	0·457	50·5	46·9	+18·9	26	92	282*c*
		5256	0·533	53·9	41·5	+20·2	1	9	
			0·903	64·5	5·9	+23·9			202
			0·935	116·1	2·8	−23·3			401
June 23		Centre			(68·7)	(+2·2)	(90)	(694)	(1992)
175·485	CL, RF		0·813	239·3	103·8	−33·0			205
		5253*a*	0·903	282·1	118·8	+11·9	6	151	568*c*
		5252	0·938	253·3	122·7	−14·8	0	36	
		5252	0·889	250·8	115·2	−15·9	3	23	512*c*
		5256*a*	0·307	9·5	51·5	+19·8	14	187	
		5256	0·292	18·4	49·1	+18·3	0	4	
		5256*b*	0·322	27·1	45·7	+18·9	7	130	
		5256	0·392	33·8	41·1	+21·2	0	13	
			0·851	119·3	0·9	−23·2			452
			0·904	62·6	351·9	+25·6			189
			0·907	75·8	349·9	+13·8			98
June 24		Centre			(54·6)	(+2·3)	(30)	(544)	(2024)
176·470	AS, RF		0·884	244·8	100·2	−20·8			333
		5253*a*	0·976	282·1	119·1	+12·4	0	73	731*c*
		5252	0·989	254·7	121·9	−14·7	0	20	
		5252	0·963	252·3	114·3	−16·3	0	9	546*c*
		5256*a*	0·339	332·1	51·3	+19·8	19	152	
		5256*b*	0·292	347·8	45·3	+19·0	7	71	
		5257	0·308	204·3	49·1	−13·7	2	6	
		5258	0·751	118·8	357·6	−19·3	1	9	
		5258	0·772	118·6	355·7	−19·9	2	11	446*c*
			0·726	62·0	358·2	+21·7			271
			0·842	76·4	344·8	+12·8			67
			0·955	62·2	330·1	+27·2			149
June 25		Centre			(41·6)	(+2·5)	(31)	(351)	(2543)
1904.				°	°	°			
177·530	CL, RF		0·899	288·5	91·9	+17·7			167
		5256*a*	0·480	308·8	51·9	+19·8	8	139	
		5256*b*	0·398	315·8	45·6	+19·0	6	54	
		5258	0·629	126·9	356·4	−20·0	4	11	
		5259	0·971	109·9	314·4	−18·6	0	30	
			0·910	63·7	324·7	+24·9			336
			0·975	110·5	313·4	−19·3			288
June 26		Centre			(28·6)	(+2·6)	(18)	(234)	(791)
178·416	CL, RF		0·893	243·1	76·1	−22·5			67
		5256*a*	0·618	299·2	51·6	+19·7	5	94	
		5256*b*	0·541	302·6	45·6	+19·3	0	17	
		5260	0·426	144·5	1·8	−17·6	1	4	
		5259	0·925	112·3	311·9	−19·4	0	17	286*c*
			0·835	55·7	324·4	+29·7			251
			0·885	67·1	315·9	+21·4			227
June 27		Centre			(16·8)	(+2·7)	(6)	(132)	(831)
179·503	AS, RF	5256*a*	0·773	293·2	51·2	+19·5	4	33	
		5256*b*	0·713	296·6	45·3	+20·6	3	17	258*c*
		5259	0·816	113·6	311·1	−17·3	1	8	241*c*
			0·687	54·7	324·2	+25·5			106
			0·884	70·5	301·3	+18·5			123
			0·925	103·6	296·2	−11·4			204
June 28		Centre			(2·5)	(+2·8)	(8)	(58)	(932)
180·390	CL, RF		0·891	251·5	50·2	−15·0			67
		5256*b*	0·833	292·4	44·3	+20·1	2	21	800*c*
		5256	0·810	294·0	41·6	+21·0	0	3	
		5261	0·546	142·6	328·4	−22·9	1	6	
		5261	0·568	139·7	326·0	−22·9	1	14	
		5259*a*	0·696	119·8	310·1	−18·0	10	39	
			0·820	73·1	295·1	+15·4			187
			0·866	114·7	292·9	−19·7			310
			0·962	68·2	275 6	+21·7			153
June 29		Centre			(349·4)	(+2·9)	(14)	(83)	(1517)
181·411	AS, RF		0·931	290·4	44·3	+20·1			312
		5261	0·439	171·8	332·3	−22·7	0	7	
		5261	0·451	166·6	329·7	−22·9	4	51	75*c*
		5261	0·4[illegible]	159·3	325·6	−23·7	2	35	
		5259*b*	0·515	136·0	314·1	−18·9	10	89	
		5259	0·561	133·8	310·8	−20·1	0	1	143*c*
		5259	0·571	131·8	309·4	−19·7	0	7	
		5259*a*	0·579	129·1	308·0	−18·7	14	94	
		5262*a*	0·965	74·8	261·4	+15·4	9	48	174*c*
			0·772	122·1	291·5	−22·0			143

Group 5257, June 25. A very small spot.
Group 5258, June 25–26. One or two small faint spots.
Group 5259, June 26–July 8. A small spot, *a*, until June 29, when several small spots are seen near *a*, forming with it a compact cluster. The group has expanded by June 30 into a stream, of which *b* and *a*, the first and last spots, are the largest members. *a* has disappeared by July 3, and *b* by July 6, but a fresh outburst, *s.f.*, *b* has taken place by the latter date and increases rapidly.
Group 5260, June 27. A very small spot.
Group 5261, June 29–July 3. A few spots, mostly small in an irregular stream, preceding Group 5259.
Group 5262, June 30–July 11. A number of spots in an irregular and quickly changing stream. *a*, which is generally the leader, is the only stable member of the group.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
181·411	AS, RF		0·923	63·6	270·2	+25·4			311
			0·930	107·1	269·6	−14·7			114
			0·955	80·8	263·4	+ 9·7			241
June 30		Centre			(336·2)	(+3·0)	(39)	(332)	(1513)
182·413	CL, RF		0·961	290·4	36·7	+20·4			366
			0·779	279·5	13·9	+ 9·3			129
			0·698	230·2	358·8	−24·0			228
		5261	0·462	199·7	332·7	−22·7	0	17	
		5261	0·461	195·8	330·8	−23·2	2	6	
		5261	0·442	192·3	328·8	−22·4	3	13	
		5261	0·455	184·1	325·0	−23·8	2	14	
		5259*b*	0·394	162·3	315·8	−18·9	7	86	
		5259	0·427	153·9	311·6	−19·4	0	10	
		5259	0·424	145·2	308·4	−17·3	0	5	
		5259*a*	0·448	147·5	308·3	−19·2	7	101	
		5262*a*	0·890	74·3	260·5	+15·4	7	97	
		5262	0·933	73·6	254·2	+16·5	0	16	614*c*
		5262	0·949	69·9	251·7	+20·0	0	16	
			0·754	60·8	277·2	+23·7			114
			0·872	61·5	264·6	+26·2			177
			0·896	114·4	262·8	−20·2			319
July 1		Centre			(323·0)	(+3·1)	(28)	(381)	(1947)
183·602	AS, RF		0·830	235·5	356·5	−25·9			400
		5261	0·592	222·4	332·8	−23·0	3	18	
		5261	0·556	218·8	329·3	−22·7	4	26	133*c*
		5261	0·550	214·8	327·2	−23·7	0	5	
		5259*b*	0·415	201·3	316·4	−19·5	6	48	
		5259*a*	0·367	179·4	307·0	−18·3	5	16	
		5262*a*	0·732	72·0	261·2	+15·3	14	107	
		5262	0·797	72·8	255·2	+15·6	4	31	526*c*
		5262	0·834	68·4	252·0	+19·7	4	22	
			0·868	130·2	255·9	−32·0			290
			0·931	71·9	238·9	+18·0			623
			0·953	110·2	237·2	−18·1			140
July 2		Centre			(307·2)	(+3·2)	(40)	(273)	(2112)
184·479	CL, RF		0·911	240·7	356·6	−24·9			457
		5261	0·715	232·5	333·6	−23·2	0	7	
		5261	0·668	230·0	329·1	−22·6	2	14	
		5259*b*	0·517	221·5	316·9	−19·7	4	29	
		5259	0·454	210·9	309·9	−19·7	1	9	
		5259	0·426	205·7	306·8	−19·3	2	16	
		5262*a*	0·582	67·9	261·7	+15·4	9	107	
		5262	0·623	67·5	258·9	+16·4	0	5	
		5262	0·620	70·1	258·7	+14·8	1	9	
1904.				°	°	°			
184·479	CL, RF	5262	0·673	70·4	254·6	+15·6	4	71	
		5262	0·717	65·5	251·9	+19·7	2	12	
		5263	0·859	112·4	239·6	−17·2	0	10	153*c*
			0·776	134·8	256·0	−30·5			239
			0·868	71·5	236·0	+17·7			647
			0·935	129·8	234·1	+35·3			106
July 3		Centre			(295·6)	(+3·3)	(25)	(289)	(1602)
185·468	AS, RF		0·956	243·9	352·0	−23·7			345
			0·809	237·3	330·3	−23·6			251
			0·689	307·3	320·4	+27·3			217
		5259*b*	0·651	234·2	316·4	−19·5	2	9	80*c*
		5259	0·610	231·3	312·7	−19·4	0	7	
		5262	0·357	57·9	264 4	+14·1	0	4	
		5262*a*	0·396	56·9	262·4	+15·7	11	81	
		5262	0·432	60·2	259·7	+15·5	5	32	130*c*
		5262	0·511	65·0	253·9	+15·4	6	18	
		5262	0·539	64·9	252·1	+16·1	2	12	
		5262	0·562	59·2	251·8	+19·6	0	4	
			0·732	142·7	250·8	−32·6			212
			0·760	118·8	237·9	−19·0			227
			0·743	68·0	236·1	+18·5			603
			0·947	106·0	213·0	−14·0			84
			0·937	66·1	213·7	+23·5			92
July 4		Centre			(282·5)	(+3·4)	(26)	(167)	(2241)
186·204	CL, RF		0·884	241·7	330·1	−22·8			476
			0·800	307·8	320·5	+31·7			502
		5259*b*	0·760	240·4	317·1	−19·5	0	10	467*f*
M.		5262*a*	0·276	38·5	262·5	+15·9	26	97	
		5262	0·297	44·9	260·2	+15·5	1	35	
		5262	0·375	56·8	253·8	+15·1	3	18	
		5263*a*	0·642	125·0	239·1	−18·6	7	57	
		5263*b*	0·669	124·8	237·2	−19·5	15	32	225*c*
			0·914	62·9	208·0	+26·1			123
July 5		Centre			(272·7)	(+3·5)	(52)	(249)	(1793)
187·538	CL, RF		0·970	244·7	327·8	−23·4			122
			0·914	300·6	319·3	+29·3			316
			0·854	283·8	213·5	+13·7			173
		5259	0·871	245·1	311·8	−19·5	5	53	
		5259	0·857	241·9	309·3	−21·7	7	30	511*c*
		5259	0·828	242·5	306·5	−20·3	3	22	
		5262	0·276	328·3	263·8	+17·1	0	4	
		5262*a*	0·253	330·0	262·6	+16·2	10	63	
		5262	0·267	333·5	262·2	+17·4	0	7	
		5262	0·263	336·2	261·5	+17·5	0	4	
		5263*a*	0·457	144·5	238·9	−18·3	3	37	

Group 5263, July 3–7. A small faint spot on July 3. The group is not seen on July 4, but has reappeared by July 5 as a pair of well-defined spots, *a* and *b*. *a* has a small companion on July 6.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
187·538	CL, RF	5263	0·474	141·4	237·4	−18·3	0	3	
		5263*b*	0·485	142·6	237·0	−19·2	4	13	
			0·788	108·8	205·5	−12·4			160
			0·844	79·1	197·7	+11·1			88
			0·888	56·5	195·4	+31·1			136
			0·942	69·3	184·9	+20·7			276
July 6		Centre			(255·1)	(+3·6)	(32)	(236)	(1782)
188·227	CL, RF		0·938	292·9	315·2	+22·8			558
		5259	0·938	247·4	312·6	−19·7	8	80	} 674*c*
		5259	0·928	245·6	310·6	−21·0	0	22	
		5259	0·918	244·7	308·7	−21·4	14	210	
		5262*a*	0·357	309·0	262·6	+16·5	14	67	
M.		5263	0·414	162·4	238·3	−19·5	2	18	
			0·554	73·4	213·1	+12·2	0	5	
			0·880	72·4	184·7	+17·2			193
			0·771	107·1	197·5	−10·7			105
			0·922	59·9	180·2	+29·1			63
July 7		Centre			(245·9)	(+3·7)	(38)	(402)	(1593)
189·658	CL, RF	5259	0·990	250·0	306·9	−19·2	0	52	} 453*c*
		5259	0·987	247·1	305·3	−21·9	18	124	
		5262	0·673	296·7	266·8	+20·5	0	5	} 153*c*
		5262*a*	0·599	292·6	262·0	+16·4	5	42	
		5264*a*	0·977	76·3	148·9	+14·2	17	124	322*c*
			0·966	64·8	152·0	+25·3			87
			0·953	123·3	160·2	−30·1			134
July 8		Centre			(227·0)	(+3·8)	(40)	(347)	(1149)
190·423	CL, RF		0·958	254·5	288·5	−13·6			75
			0·942	243·3	283·3	−23·5			142
			0·776	225·5	256·4	−29·9			227
		5262*a*	0·722	289·1	262·0	+16·4	5	35	497*c*
		5264*a*	0·927	77·1	148·9	+13·4	18	140	} 363*c*
		5264*b*	0·974	77·3	139·7	+13·3	13	94	
			0·927	66·4	149·5	+23·3			113
July 9		Centre			(216·9)	(+3·9)	(36)	(269)	(1417)
191·502	AS, M	5262*a*	0·863	287·0	261·9	+16·6	6	45	} 445*n*
		5262	0·845	284·5	260·1	+14·4	0	12	
		5264*a*	0·806	76·4	149·3	+13·3	26	158	} 506*c*
		5264	0·862	77·6	143·3	+12·7	0	12	
		5264*b*	0·898	76·6	138·8	+13·8	33	218	
July 10		Centre			(202·7)	(+4·0)	(65)	(445)	(951)

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
192·469	CL, M		0·915	231·3	247·8	−32·8			232
			0·777	287·1	240·1	+15·8			210
			0·808	241·3	238·6	−20·1			126
		5262*a*	0·948	285·8	261·4	+16·3	0	21	} 598*f*
		5262	0·942	283·3	260·4	+13·9	0	11	
		5264*a*	0·657	74·5	149·4	+13·2	22	136	
		5264	0·719	75·1	144·4	+13·6	0	6	
		5264	0·764	75·3	140·5	+13·8	0	7	} 630*c*
		5264*b*	0·777	76·8	139·1	+12·8	23	199	
		5264	0·780	73·3	139·1	+15·6	2	17	
			0·922	107·2	124·8	−14·1			763
			0·937	73·8	120·2	+16·6			376
July 11		Centre			(189·8)	(+4·1)	(47)	(397)	(2935)
193·431	CL, RF		0·869	289·5	236·9	+19·0			463
		5264*a*	0·466	69·4	150·6	+13·2	15	163	
		5264	0·499	68·7	148·6	+14·1	0	7	
		5264	0·558	71·8	144·2	+13·6	10	57	} 305*c*
		5264	0·608	69·4	141·0	+15·7	3	12	
		5264*b*	0·611	74·6	140·1	+12·7	20	211	
			0·875	114·1	119·8	−18·7			429
			0·865	73·6	117·5	+16·3			464
July 12		Centre			(177·1)	(+4·2)	(48)	(450)	(1661)
194·434	AS, RF		0·903	291·5	228·0	+21·2			670
		5264*a*	0·284	57·2	149·8	+13·0	18	185	
		5264*b*	0·404	66·6	141·6	+13·2	34	295	
		5264	0·442	61·2	140·2	+16·2	3	12	
		5265	0·906	73·7	99·0	+16·6	5	17	485*p*
			0·687	117·5	124·9	−15·1			531
			0·909	116·6	102·9	−21·9			517
			0·914	66·4	98·4	+23·3			133
July 13		Centre			(163·9)	(+4·3)	(60)	(509)	(2336)
195·442	AS, RF		0·952	287·8	222·9	+18·3			171
		5264*a*	0·146	5·1	149·7	+12·7	31	198	
		5264*b*	0·218	42·4	141·8	+13·6	24	198	
		5266	0·679	73·9	108·4	+14·1	1	12	
		5266	0·687	74·8	107·7	+13·6	0	2	
		5266	0·694	76·6	106·9	+12·4	0	10	
		5265	0·796	72·3	98·3	+16·8	2	10	361*c*
			0·837	120·8	99·5	−22·6			537
July 14		Centre			(150·5)	(+4·4)	(58)	(430)	(1069)

Group 5264, July 8–20. A fine stream of spots. The leader, *a*, is a regular spot, and the rear spot, *b*, is composite. These two are the principal spots of the groups. *b* has broken up by July 17.
Group 5265, July 13–14. A small spot.
Group 5266, July 14–20. A few small spots in a short stream preceding Group 5265.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
196·446	CL, RF	5267	0·730	288·0	183·2	+16·2	8	25	
		5267	0·698	289·2	180·5	+16·5	2	21	
		5264*a*	0·264	303·0	150·3	+12·7	21	186	
		5264	0·226	315·0	146·6	+13·6	6	43	
		5264	0·205	328·8	143·5	+14·6	0	6	
		5264*b*	0·147	346·7	139·2	+12·7	18	173	
		5268	0·400	133·1	119·9	−11·5	2	20	
		5268*a*	0·432	131·4	117·9	−12·3	5	31	
		5266	0·505	71·3	107·9	+13·3	6	55	163*c*
		5269	0·985	109·8	59·5	−18·6	34	143	131*f*
			0·868	106·8	79·2	−12·2			123
July 15		Centre			(137·2)	(+4·5)	(102)	(703)	(417)
197·517	CL, RF		0·718	318·3	159·2	+36·1			57
		5267	0·877	286·0	184·2	+16·2	1	7	174*c*
		5264*a*	0·479	288·1	150·8	+12·6	28	184	
		5264	0·438	291·9	147·7	+13·6	1	9	
		5264	0·346	294·3	141·9	+12·5	0	3	
		5264*b*	0·319	296·3	140·1	+12·5	13	83	
		5270	0·454	225·7	142·6	−14·1	4	6	
		5270	0·455	223·7	142·0	−14·8	0	1	
		5270	0·422	222·9	140·2	−13·6	0	1	
		5268	0·288	171·9	120·7	−11·9	4	34	
		5268*a*	0·306	164·1	118·2	−12·5	13	100	
		5266	0·318	48·3	108·8	+16·6	0	2	
		5266	0·295	58·2	108·2	+13·4	9	57	
		5269	0·942	112·7	56·0	−19·6	67	529	470*c*
			0·912	70·4	57·5	+19·7			477
			0·970	80·5	46·6	+10·3			185
			0·961	51·2	50·2	+38·5			84
July 16		Centre			(123·1)	(+4·6)	(140)	(1016)	(1447)
198·489	AS, RF		0·939	286·7	180·4	+17·3			243
		5264*a*	0·660	283·4	151·1	+12·4	18	144	
		5264	0·572	286·6	144·3	+13·3	0	15	132*c*
		5264	0·533	285·8	141·7	+12·3	0	43	
		5264	0·494	287·5	138·9	+12·6	12	92	
		5270	0·619	240·0	143·6	−14·0	3	18	
		5268*a*	0·323	206·5	118·6	−12·1	8	82	
		5266	0·150	6·1	109·3	+13·3	0	1	
		5266	0·153	17·9	107·4	+13·0	6	65	
		5269	0·868	116·5	54·6	−20·1	49	641	410*c*
			0·899	68·8	46·5	+21·1			232
			0·908	80·5	44·8	+10·6			185
			0·979	98·4	33·0	− 7·2			41
July 17		Centre			(110·2)	(+4·7)	(96)	(1101)	(1243)
199·448	AS, RF		0·989	287·6	179·8	+18·1			135
		5264*a*	0·811	281·9	151·6	+12·4	23	130	
		5264	0·703	286·8	141·5	+15·2	0	6	
		5264	0·687	283·5	140·5	+12·7	15	115	534*c*
		5264	0·679	286·4	139·6	+14·6	1	12	
		5270	0·779	246·9	145·1	−14·6	2	23	190*sf*
		5268	0·462	231·0	119·0	−12·4	0	4	
		5268*a*	0·436	231·6	117·8	−11·2	7	94	
		5266	0·263	304·9	110·2	+13·3	1	10	
		5266	0·257	312·3	108·8	+14·7	0	3	
		5266	0·219	308·1	107·6	+12·5	8	43	
		5269*a*	0·697	123·9	59·9	−19·0	45	311	
		5269	0·756	122·5	54·8	−20·4	5	27	472*c*
		5269	0·814	121·4	49·2	−21·9	21	238	
			0·831	66·2	42·4	+22·4			356
			0·850	81·0	39·2	+10·2			251
			0·921	113·8	34·2	−19·7			92
			0·926	96·6	30·5	− 4·3			261
July 18		Centre			(97·5)	(+4·8)	(128)	(1016)	(2291)
200·494	CL, RF	5264*a*	0·930	281·3	152·4	+12·3	0	83	
		5264	0·857	282·2	142·8	+13·0	9	51	802*c*
		5264	0·827	282·4	139·5	+13·0	0	40	
		5270	0·899	251·9	145·2	−13·9	18	76	206*c*
		5268*a*	0·608	243·8	117·4	−11·4	6	46	398*p*
		5266	0·485	288·6	111·8	+13·3	5	15	
		5266	0·420	288·8	107·6	+12·3	4	22	
		5269*a*	0·544	137·1	60·7	−18·9	51	410	
		5269	0·541	132·1	59·0	−16·8	1	11	
		5269	0·664	130·3	50·9	−21·3	14	140	
		5271	0·780	102·6	33·9	− 6·6	0	6	335*f*
			0·710	62·8	40·8	+22·5			361
			0·884	77·0	21·4	+13·8			342
July 19		Centre			(83·7)	(+4·9)	(108)	(900)	(2444)
201·449	AS, RF		0·791	286·3	122·9	+15·9			196
			0·689	225·8	103·8	−24·5			259
		5270	0·981	253·6	147·8	−15·0	9	61	170*c*
		5270	0·964	253·3	143·5	−14·7	0	13	
		5264	0·969	282·7	147·2	+13·5	0	14	550*c*
		5264	0·949	281·8	143·0	+12·7	19	119	
		5268*a*	0·752	249·8	116·9	−11·6	4	17	437*p*
		5266	0·673	283·6	112·9	+12·7	0	6	
		5266	0·597	283·2	107·3	+11·8	3	8	91*c*
		5269	0·405	156·1	61·2	−16·8	0	3	
		5269*a*	0·440	157·6	60·8	−19·1	62	383	
		5269	0·417	151·6	59·1	−16·6	1	4	
		5269	0·468	154·3	58·6	−20·1	0	3	

Group 5267, July 15–16. One or two small spots.
Group 5268, July 15–20. An irregular cluster appearing suddenly near the centre of the disc. The group changes quickly ; *a*, the rear spot, being the most stable member.
Group 5269, July 15–27. A number of spots in a fine stream. The leader, *a*, is a large composite spot at first, but becomes more regular in shape as the group approaches the west limb. *a* remains alone after July 23.
Group 5270, July 16–20. A few small unstable spots preceding Group 5268.
Group 5271, July 19. A very small faint spot.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
201·449	AS, RF	5269	0·498	148·0	54·7	−20·2	1	10	
		5269	0·570	141·3	48·5	−21·9	11	89	
			0·862	120·4	17·3	−23·0			308
			0·850	99·2	13·8	− 5·2			97
			0·870	80·2	10·4	+10·9			474
July 20		Centre			(71·0)	(+4·9)	(110)	(730)	(2582)
202·478	CL, RF		0·990	283·5	140·0	+14·1			601
			0·911	252·1	120·5	−14·0			464
			0·811	285·2	111·4	+15·2			440
			0·825	236·1	105·8	−24·0			133
		5272	0·178	329·3	62·7	+13·8	1	10	
		5272	0·202	342·9	60·9	+16·0	1	8	
		5269	0·380	190·7	61·6	−16·8	0	7	
		5269*a*	0·412	188·1	60·9	−19·0	59	413	
		5269	0·430	175·7	55·4	−20·3	0	20	
		5269	0·474	162·2	48·5	−21·8	1	39	
		5273	0·977	70·9	338·9	+19·7	8	310	1004*c*
			0·898	121·0	359·5	−24·9			352
			0·911	74·2	351·5	+16·5			148
July 21		Centre			(57·4)	(+5·0)	(70)	(807)	(3142)
203·442	AS, RF		0·976	254·4	120·1	−14·0			394
			0·863	289·7	103·9	+19·5			344
			0·851	238·8	96·7	−23·0			412
			0·818	307·3	95·3	+33·0			41
		5272	0·356	294·9	63·9	+13·4	6	24	
		5272	0·327	302·2	61·2	+14·9	0	3	
		5272	0·327	306·9	60·3	+16·2	0	4	
		5269*a*	0·483	213·2	60·8	−18·9	69	395	
		5269	0·468	203·4	56·0	−20·3	3	18	
		5269	0·454	188·8	48·9	−21·5	0	11	
		5274	0·650	113·3	7·3	−10·8	0	7	
		5274	0·694	114·1	4·3	−12·6	0	18	
		5274	0·748	109·9	359·0	−11·2	0	22	
		5273*a*	0·895	69·5	341·2	+20·6	7	80	
		5273	0·900	70·5	340·4	+19·8	0	5	
		5273	0·918	68·4	337·9	+21·9	0	6	1225*c*
		5273*b*	0·936	69·9	335·0	+20·6	0	95	
		5275	0·980	66·2	325·2	+24·3	0	101	
			0·839	125·8	355·5	−26·1			440
			0·778	73·7	353·9	+15·9			105
			0·937	23·9	350·8	+62·0			150
			0·911	112·3	342·5	−17·9			49
July 22		Centre			(44·6)	(+5·1)	(85)	(789)	(3160)
204·431	CL, RF		0·907	288·2	96·7	+18·7			256
			0·873	245·6	88·2	−18·3			192
			0·862	219·5	75·5	−38·0			46
		5272	0·560	285·4	65·0	+12·9	2	10	
		5272	0·542	288·6	63·4	+14·3	0	3	
		5272	0·511	291·2	60·9	+15·1	1	5	
		5269*a*	0·608	229·5	60·6	−18·7	55	353	
		5269	0 589	225·8	58·0	−19·5	0	2	
		5269	0·567	216·7	52·9	−22·1	0	9	
		5276	0·556	149·9	13·8	−23·7	0	16	
		5277	0·600	132·0	3·5	−19·0	6	24	297*f*
		5277	0·641	131·7	0·8	−20·7	4	14	
		5277	0·637	128·8	0·0	−19·0	0	2	
		5273*a*	0·775	66·9	341·9	+21·1	8	45	969*c*
		5273*b*	0·840	68·5	335·0	+20·8	9	70	
		5275	0·904	65·6	327·2	+24·2	8	35	
		5275	0·936	66·6	322·0	+23·7	10	61	
		5275	0·939	64·9	321·5	+25·4	7	50	
			0·770	18·2	8·8	+51·6			130
			0·866	119·3	337·1	−22 0			176
			0·977	112·8	317·0	−20·9			211
July 23		Centre			(31·5)	(+5·2)	(110)	(699)	(2277)
205·545	AS, RF		0·954	290·9	89·8	+21·5			248
			0·974	238·1	88·3	−29·4			117
		5272	0·765	282·3	66·6	+12·8	0	7	206*c*
		5269*a*	0·754	239·9	60·0	−18·3	62	381	522*f*
		5277	0·469	155·0	4·7	−19·9	3	15	
		5277	0·509	149·7	0·9	−20·9	0	14	
		5273*a*	0·603	62·6	342·1	+20·4	5	14	
		5273	0·636	63·7	339·4	+20·6	0	3	
		5273*b*	0·682	64·6	335·7	+21·0	8	67	
		5275	0·774	65·7	327·5	+22·0	0	6	787*c*
		5275	0·795	63·1	325·9	+24·3	0	4	
		5275	0·838	64 9	321·0	+23·8	1	33	
		5275	0·841	63 4	320·9	+25·1	9	43	
			0·743	122·6	335·3	−19·6			225
			0·926	114·2	313·0	−20·0			679
			0·930	58·4	309·2	+31·2			195
			0·944	74·9	305·6	+16·0			118
July 24		Centre			(16·8)	(+5·3)	(88)	(587)	(3097)
206·538	AS, RF		0 667	296·4	43·4	+21·3			136
		5272	0·898	281·9	67·9	+13·0	1	11	338*c*
		5269*a*	0·867	245·5	59·6	−18·1	47	406	815*f*

Group 5272, July 21–25. A few very small spots in a compact cluster.
Group 5273, July 21–28. A pair of spots, *a* and *b*, with at first a few small spots between them forming a scattered stream. *a* is not seen on July 26.
Group 5274, July 22. A few small spots in an irregular stream.
Group 5275, July 22–August 1. An irregular cluster of spots, north following Group 5273. The group gradually diminishes in size.
Group 5276, July 23. A small faint spot.
Group 5277, July 23–26. A few small unstable spots in an irregular cluster.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
206·538	AS, RF	5277	0·422	183·3	5·2	−19·5	1	5	
		5273*a*	0·427	53·2	342·5	+19·8	0	4	
		5273*b*	0·528	58·5	335·1	+20·7	5	22	577*c*
		5275	0·634	59·6	327·4	+23·0	0	11	
		5275	0·716	60·6	320·6	+24·5	6	31	
		5278*a*	0·868	76·5	303·4	+14·3	8	34	
		5278*b*	0·904	76·1	298·7	+14·9	10	60	400*c*
			0·830	119·7	313·4	−20·9			882
			0·960	111·4	293·1	−18·8			208
July 25		Centre			(3·7)	(+5·3)	(78)	(584)	(3356)
207·454	AS, RF		0·857	286·7	50·5	+17·1			719
		5269*a*	0·947	248·5	59·5	−18·3	35	401	985*sf*
		5277	0·470	207·9	5·0	−19·2	0	2	
		5273*b*	0·392	45·5	334·2	+21·1	1	7	
		5275	0·463	51·5	328·7	+21·7	0	23	
		5275	0·522	49·3	325·9	+24·7	2	17	
		5275	0·586	54·3	320·2	+24·5	0	10	
		5275	0·623	54·0	317·7	+25·9	0	8	
		5278*a*	0·728	75·0	305·2	+14·6	4	34	
		5278	0·746	75·8	303·6	+14·2	0	3	353*c*
		5278*b*	0·806	75·5	298·0	+14·9	26	81	
			0·766	125·0	309·2	−22·0			725
			0·855	49·4	297·4	+37·0			116
			0·893	113·3	292·2	−18·0			279
			0·974	75·6	273·9	+15·3			169
July 26		Centre			(351·6)	(+5·4)	(68)	(586)	(3346)
208·631	CL, M		0·966	244·2	46·9	−23·2			275
			0·899	291·9	39·9	+22·0			254
		5269*a*	0·994	251·0	57·2	−18·1	0	63	
		5279	0·419	288·3	0·0	+12·6	1	3	
		5279	0·381	291·1	357·3	+13·0	0	8	
		5273*a*	0·273	334·8	343·1	+19·7	0	11	
		5273	0·279	343·5	340·8	+20·9	0	3	
		5273	0·278	349·4	339·1	+21·3	0	7	
		5273*b*	0·260	8·0	333·8	+20·4	2	4	
		5275	0·313	23·2	328·4	+22·1	0	24	
		5275	0·345	26·2	326·5	+23·4	0	3	
		5275	0·371	26·4	325·6	+24·7	0	10	
		5278*a*	0·517	70·2	305·9	+14·9	5	24	
		5278*b*	0·626	73·5	297·8	+14·6	8	48	
		5280	0·593	80·2	299·7	+10·2	8	30	
			0·782	118·9	290·0	−18·4			231
			0·926	75·5	267·8	+15·5			498
			0·983	107·6	258·8	−16·2			179
July 27		Centre			(336·0)	(+5·5)	(24)	(238)	(1437)
209·472	AS, RF		0·954	293·4	38·0	+24·0			178
			0·940	261·3	33·8	−6·2			113
		5279	0·590	283·2	0·8	+12·3	0	4	63*c*
		5273*b*	0·300	330·2	334·0	+20·6	0	1	
		5275	0·288	348·5	328·4	+22·0	2	50	
		5275	0·305	354·7	326·6	+23·2	0	7	
		5275	0·334	358·8	325·3	+25·0	0	7	
		5278*a*	0·317	60·1	308·5	+14·5	3	26	
		5278	0·408	64·5	302·6	+15·3	0	7	
		5278*b*	0·467	69·4	298·2	+14·4	7	35	
		5280	0·415	77·0	300·7	+10·5	2	16	
		5280	0·447	79·2	298·6	+9·8	3	32	
		5281	0·640	125·0	291·8	−16·8	0	12	676*p*
			0·841	73·0	267·7	+17·3			955
			0·926	109·4	260·1	−15·6			379
July 28		Centre			(324·9)	(+5·6)	(17)	(197)	(2364)
210·211	AS, M		0·972	292·5	32·5	+23·2			107
			0·918	280·5	22·1	+11·9			126
		5275	0·379	318·6	330·7	+21·9	8	37	
		5275	0·344	321·3	328·4	+21·0	1	9	
	M.	5275	0·362	329·2	326·7	+23·5	5	26	
		5281	0·496	140·7	296·0	−17·2	0	17	
		5281	0·516	138·6	294·2	−17·5	14	78	
		5281	0·551	137·5	292·0	−18·7	11	60	
		5281	0·527	130·5	290·7	−14·9	0	5	
		5281	0·582	135·3	289·5	−19·3	0	5	
		5278*a*	0·185	34·1	309·0	+14·4	9	24	
		5278*b*	0·324	62·1	298·0	+14·0	2	15	
		5280	0·260	71·5	300·7	+10·2	0	4	
		5280	0·293	78·5	298·3	+8·7	0	4	
		5280	0·296	75·6	298·3	+9·6	0	11	
			0·786	79·3	263·2	+11·9			468
			0·833	63·9	259·9	+24·7			332
			0·868	112·9	258·8	−16·6			390
			0·968	72·5	238·9	+18·3			162
July 29		Centre			(315·1)	(+5·6)	(50)	(295)	(1585)
211·442	AS, RF		0·845	234·5	348·5	−25·7			739
		5275	0·563	298·2	330·7	+20·3	0	13	
		5275	0·529	307·0	326·2	+23·6	5	43	
		5278*a*	0·251	308·2	310·6	+14·5	3	10	
		5278	0·192	322·1	305·9	+14·3	0	9	
		5280	0·072	331·8	300·9	+9·3	0	2	
		5280	0·066	359·0	299·0	+9·5	0	2	
		5281	0·396	169·2	294·5	−17·1	28	274	

Group 5278, July 25–31. A few spots in a scattered stream. The leader and rear spots, *a* and *b*, are the chief members of the group.
Group 5279, July 27–28. One or two very small spots.
Group 5280, July 27–30. A few spots in a short stream south of Group 5278.
Group 5281, July 28–August 4. A group appearing suddenly some distance from the east limb. It rapidly increases in size, and has become a large irregular cluster by July 30. The cluster is usually measured as one.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
211·442	AS, RF		0·776	113·4	251·8	−14·1			200
			0·765	66·0	250·2	+21·9			307
			0·889	132·0	247·1	−33·0			170
			0·937	116·6	234·0	−22·5			145
			0·916	77·4	232·2	+13·8			268
			0·944	65·3	227·8	+25·2			117
July 30		Centre			(298·9)	(+5·7)	(36)	(353)	(1946)
212·419	AS, RF		0·923	241·4	347·9	−23·6			140
		5278*a*	0·447	291·5	311·3	+14·7	1	10	153*c*
		5275	0·674	298·6	325·8	+23·3	3	56	789*c*
		5281	0·420	200·4	294·7	−17·4	27	344	
			0·650	135·6	256·5	−22·5			111
			0·865	138·0	240·4	−36·0			191
			0·817	79·0	230·9	+12·4			179
			0·839	64·0	229·9	+24·9			253
			0·943	69·2	214·8	+21·5			107
			0·745	226·4	322·7	−26·2			234
July 31		Centre			(285·9)	(+5·8	(31)	(410)	(2157)
213·430	AS, RF	5275	0·815	293·5	326·3	+22·5	0	11	1198*c*
		5281	0·530	222·5	294·5	−17·5	28	303	459*p*
		5282	0·263	65·3	258·4	+12·0	0	6	
			0·856	45·1	219·5	+40·8			248
			0·872	67·7	212·0	+22·3			141
Aug. 1		Centre			(272·5)	(+5·9)	(28)	(320)	(2046)
214·422	AS, RF		0·895	296·4	322·5	+26·2			1032
			0·704	285·7	303·9	+15·3			110
		5281	0·675	235·5	295·0	−17·6	24	251	644*p*
		5282	0·110	4·0	258·9	+12·3	0	6	
		5282	0·111	25·6	256·6	+11·7	1	6	
		5283*a*	0·970	64·0	182·4	+26·6	9	102	192*c*
			0·777	64·0	209·8	+23·8			195
			0·935	83·3	189·8	+ 8·4			66
Aug. 2		Centre			(259·4)	(+6·0)	(34)	(365)	(2239)
215·419	AS, RF		0·948	296·7	318·2	+27·2			929
			0·844	283·5	304·0	+14·6			401
		5281	0·842	245·1	299·0	−17·1	18	218	974*c*
		5281	0·779	240·5	291·6	−18·3	0	73	
		5282	0·224	296·1	258·0	+11·7	2	31	
		5283*a*	0·896	63·5	182·9	+26·4	11	110	396*c*
			0·786	88·1	194·3	+ 5·3			106
Aug. 3		Centre			(246·2)	(+6·1)	(31)	(432)	(2806)
1904.				°	°	°			
216·418	AS, RF		0·984	298·1	314·0	+28·6			204
			0·935	283·5	302·9	+14·8			276
		5281	0·932	249·0	298·4	−17·1	18	175	1050*c*
		5282	0·473	282·3	261·0	+11·2	8	34	
		5282	0·400	282·7	256·3	+10·6	0	10	
		5284	0·443	167·1	227·0	−19·5	5	24	
		5283*a*	0·791	61·6	182·5	+26·0	15	114	495*f*
		5285*a*	0·972	78·7	155·8	+12·4	18	201	637*c*
Aug. 4		Centre			(233·0)	(+6·1)	(64)	(558)	(2662)
217·665	AS, M		0·980	249·9	292·1	−18·3			507
			0·932	234·7	277·5	−29·7			189
		5282	0·685	279·2	259·8	+10·9	20	188	473*c*
		5284	0·486	207·2	230·1	−19·5	0	12	
		5284	0·487	196·3	224·9	−21·7	1	14	
		5283*a*	0·620	54·6	182·4	+26·2	21	119	396*f*
		5285*a*	0·865	79·0	156·2	+12·7	50	302	1540*c*
Aug. 5		Centre			(216·5)	(+6·2)	(92)	(635)	(3105)
218·211	CL, RF		0·921	290·2	276·8	+21·1			255
			0·890	248·0	268·3	−16·3			315
		5282	0·767	279·1	259·5	+11·0	37	256	620*c*
		5284	0·560	219·0	231·1	−20·0	0	6	
	M.	5284	0·529	216·2	228·5	−19·3	1	4	
		5284	0·539	207·8	224·9	−22·4	3	7	
		5283*a*	0·545	49·9	181·7	+26·1	33	120	
		5285*a*	0·794	78·7	156·4	+12·7	55	300	1912*c*
		5285	0·826	77·4	153·3	+13·9	0	14	
Aug. 6		Centre			(209·2)	(+6·2)	(129)	(707)	(3102)
219·565	RF, M		0·908	249·2	253·0	−15·9			281
		5282	0·907	278·9	256·8	+10·7	14	102	742*p*
		5283*a*	0·374	24·0	181·6	+26·1	12	96	
		5285	0·562	73·6	157·6	+14·4	0	4	
		5285*a*	0·579	76·7	156·2	+12·8	43	252	
		5285	0·601	73·1	154·9	+15·1	0	6	
		5285	0·643	77·8	151·4	+12·7	0	19	
		5286*a*	0·994	104·4	109·5	−13·5	0	158	362*c*
			0·910	71·6	125·4	+19·3			155
Aug. 7		Centre			(191·3)	(+6·3)	(69)	(637)	(1540)
220·443	AS, RF		0·922	303·3	246·5	+33·1			119
			0·800	289·2	232·7	+19·2			256
			0·801	237·5	226·0	−21·1			180
		5282	0·968	279·8	256·0	+11·1	0	10	477*c*
		5287	0·395	221·5	195·2	−11·0	0	6	

Group 5282, August 1–8. A very small spot appearing first near the centre of the disc. The group increases in size, and forms a close cluster on April 5 and the succeeding days.
Group 5283, August 2–13. A large regular spot, *a*, with occasionally a small companion.
Group 5284, August 4–6. A few small spots in an irregular cluster.
Group 5285, August 4–15. A large composite spot, *a*, followed by a train of small spots. *a* has broken up by August 12.
Group 5286, August 7–16. A regular spot, *a*, followed by a short train of small spots. The train diminishes quickly in size. *a* is measured together with the train on August 8.
Group 5287, August 8. A cluster of very small spots.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
220·443	AS, RF	5283	0·318	354·1	181·9	+24·8	0	1	
		5283*a*	0·340	355·7	181·4	+26·2	12	67	
		5283	0·333	0·1	179·7	+25·7	0	3	
		5285*a*	0·411	72·3	156·2	+13·1	25	205	
		5285*a*	0·434	77·2	154·3	+11·3	0	7	
		5285	0·451	72·3	153·7	+13·7	3	47	
		5285	0·482	74·8	151·4	+12·9	1	14	
		5286	0·960	106·3	108·5	−13·6	15	308	500*c*
			0·858	118·3	126·4	−20·2			406
			0·878	71·1	118·1	+19·7			273
Aug. 8		Centre			(179·8)	(+6·4)	(56)	(668)	(2211)
221·455	AS, RF		0·891	282·1	229·9	+13·7			131
			0·906	242·0	225·8	−22·0			336
		5283*a*	0·405	326·6	180·7	+25·9	6	32	
		5285*a*	0·217	56·0	155·8	+13·3	31	223	
		5285	0·359	69·9	146·2	+13·1	0	5	
		5288	0·655	124·7	132·4	−16·6	2	15	261*f*
		5286*a*	0·857	109·3	110·5	−12·9	23	148	1066*c*
		5286	0·896	109·4	105·9	−14·2	3	96	
			0·939	66·9	95·8	+23·9			163
Aug. 9		Centre			(166·4)	(+6·4)	(65)	(519)	(1957)
222·422	AS, RF		0·940	291·2	224·4	+22·1			208
			0·958	246·0	222·8	−20·8			257
			0·804	294·0	206·4	+23·1			155
		5283*a*	0·519	311·9	179·0	+26·1	10	38	
		5283	0·462	317·8	173·7	+26·1	0	1	
		5285*a*	0·128	341·7	156·0	+13·4	30	200	
		5285	0·197	25·1	148·6	+16·7	0	7	
		5285	0·163	54·2	145·9	+11·9	0	6	
		5289	0·476	69·2	126·2	+15·5	2	9	
		5286	0·735	114·2	110·3	−12·8	18	147	1023*c*
		5286	0·761	114·3	108·2	−13·7	0	5	
		5286	0·788	113·8	105·7	−14·2	10	73	
			0·908	68·3	88·0	+22·4			142
			0·953	102·9	83·1	−10·2			165
			0·973	76·6	75·9	+14·6			99
			0·978	81·9	75·1	+ 9·3			126
Aug. 10		Centre			(153·6)	(+6·5)	(70)	(486)	(2175)
223·674	AS, RF		0·908	294·6	202·5	+25·0			156
		5283*a*	0·707	300·8	179·5	+26·1	3	16	95*f*
		5290	0·428	284·0	162·1	+11·9	2	13	
		5285*a*	0·331	292·3	155·4	+13·4	26	152	
		5285	0·230	298 8	149·0	+12·7	0	25	
		5289	0·227	46·1	127·4	+15·4	2	10	
233·674	AS, RF	5289	0·272	48·8	124·8	+16·6	6	13	
		5286*a*	0·575	124·4	108·0	−13·3	15	148	
		5291*a*	0·987	109·4	59·3	−17·9	18	148	147*c*
			0·806	127·0	92·2	−24·5			342
			0·835	110·6	83·9	−13·2			140
			0·901	79·2	72·3	+12·6			295
Aug. 11		Centre			(137·1)	(+6·5)	(72)	(525)	(1175)
224·431	CL, RF	5283*a*	0·808	297·8	179·7	+26·2	5	24	215*f*
		5290	0·586	280·9	162·9	+11·7	9	32	
		5285*a*	0·488	286·4	155·8	+13·7	11	115	
		5289	0·156	355·6	127·8	+15·6	1	7	
		5289	0·183	12·8	124·7	+16·8	2	8	
		5286*a*	0·437	138·3	109·8	−12·7	15	105	
		5286	0·501	135·0	105·7	−14·6	0	2	
		5286	0·526	138·9	106·0	−17·1	0	5	
		5291*a*	0·950	111·3	58·9	−17·8	17	136	233*c*
			0·743	112·8	82·8	−12·0			110
			0·793	80·8	74·3	+11·3			168
			0·907	100·5	63·4	− 6·6			90
			0·968	65·3	50·4	+25·5			129
Aug 12		Centre			(127·1)	(+6·6)	(60)	(434)	(945)
225·501	AS, RF		0·946	250·9	180·8	−15·6			146
		5283*a*	0·914	296·1	179·2	+26·5	0	6	395*f*
		5290	0·788	278·9	165·2	+11·1	5	31	153*c*
		5290	0·754	281·3	162·0	+12·8	0	9	
		5285*a*	0·691	282·3	156·6	+13·3	9	81	
		5289	0·261	311·3	124·6	+16·3	0	5	
		5286*a*	0·339	171·4	109·9	−13·0	14	129	
		5286	0·311	167·5	109·0	−11·0	0	6	
		5291*a*	0·858	115·9	58·8	−18·2	25	169	431*f*
			0·896	70·2	48·9	+20·6			174
Aug. 13		Centre			(112·9)	(+6·6)	(53)	(436)	(1299)
226·453	CL, RF		0·844	236·5	150·5	−23·5			120
		5290	0·905	279·0	165·9	+11·0	3	22	676*f*
		5285	0·845	280·5	158·6	+12·5	25	221	
		5285	0·823	283·3	156·2	+14·8	0	2	
		5286	0·348	214·3	111·9	−10·1	0	2	
		5286*a*	0·367	205·0	109·6	−12·7	11	84	
		5291*a*	0·750	121·8	58·5	−18·3	22	135	418*f*
			0·941	298·0	171·4	+28·6			332
			0·872	65·5	40·0	+24·6			242
			0·913	80·6	34·1	+11·3			70
Aug. 14		Centre			(100·5)	(+6·7)	(61)	(466)	(1858)

Group 5288, August 9. A small spot.
Group 5289, August 10–13. A few small spots in a short stream.
Group 5290, August 11–15. A few small spots preceding Group 5285.
Group 5291, August 11–19. A regular spot, *a*.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
227·493	AS, M		0·960	298·3	161·5	+29·0			193
			0·744	242·5	129·6	−15·2			125
		5290	0·980	280·0	165·9	+11·1	0	35	1211*c*
		5285*a*	0·935	282·4	156·6	+14·0	7	43	
		5286*a*	0·501	229·9	109·6	−12·6	14	84	
		5286	0·513	219·7	106·5	−16·9	0	14	
		5291*a*	0·606	132·8	58·8	−18·3	19	109	153*c*
		5292*a*	0·750	78·9	37·8	+12·7	4	20	120*c*
		5292*b*	0·775	78·9	35·6	+12·8	2	14	
			0·777	131·2	46·3	−25·7			198
			0·835	62·4	31·0	+26·6			302
			0·909	37·8	27·5	+49·6			94
			0·903	75·8	21·4	+15·7			193
			0·960	109·2	16·0	−16·3			294
			0·602	71·3	50·3	+16·5			63
Aug. 15		Centre			(86·6)	(+6·7)	(46)	(319)	(2946)
228·480	CL, RF		0·944	285·5	145·3	+16·9			591
			0·811	284·0	128·1	+15·3			75
			0·833	238·9	123·3	−21·1			187
		5286*a*	0·657	241·7	109·8	−12·6	3	23	
		5291*a*	0·491	149·7	58·5	−18·4	13	110	
		5292*a*	0·569	77·8	39·0	+12·6	5	30	
		5292*b*	0·621	77·0	35·3	+13·4	0	12	
			0·908	113·6	12·7	−18·1			240
			0·962	74·4	358·3	+16·9			82
Aug. 16		Centre			(73·6)	(+6·8)	(21)	(175)	(1175)
229·646	AS, RF		0·937	247·0	123·6	−18·7			338
			0·883	289·3	120·6	+20·2			391
			0·901	235·6	114·5	−26·9			89
			0·768	238·8	101·9	−18·6			893
		5291*a*	0·428	180·3	58·3	−18·4	15	100	
		5292*a*	0·326	71·3	39·9	+12·4	3	14	
		5293*a*	0·957	83·2	344·6	+ 8·5	0	20	234*f*
			0·788	118·9	12·0	−17·7			267
			0·941	119·7	354·1	−24·9			171
			0·956	71·0	344·2	+20·1			331
Aug. 17		Centre			(58·2)	(+6·8)	(18)	(134)	(2714)
230·497	CL, M		0·923	285·2	115·0	+16·7			71
			0·898	251·3	107·7	−13·4			605
		5291*a*	0·467	203·1	58·0	−18·6	15	50	
		5292*a*	0·156	48·9	40·0	+12·7	0	3	
		5292	0·200	56·2	37·1	+13·2	0	4	
		5293*a*	0·884	83·9	344·4	+ 8·6	5	37	

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
230·497	CL, M	5293*b*	0·924	81·0	338·8	+10·9	0	21	324*c*
			0·939	122·8	344·2	−27·5			110
			0·918	70·8	339·6	+20·3			477
Aug. 18		Centre			(46·9)	(+6·9)	(20)	(115)	(1587)
231·462	AS, RF		0·946	250·9	102·0	−15·6			710
			0·883	286·9	96·6	+18·1			96
		5294	0·875	236·7	87·5	−24·7	6	19	383*c*
		5294	0·876	235·0	87·0	−26·1	2	16	
		5294	0·849	234·3	83·6	−25·3	10	24	
		5291*a*	0·570	222·3	57·9	−18·6	4	15	
		5293*a*	0·758	84·4	344·6	+ 8·8	7	21	277*c*
		5293	0·795	83·3	341·1	+ 9·5	0	2	
		5293*b*	0·821	81·3	338·5	+11·1	1	23	
		5295*a*	0·964	78·2	318·7	+13·1	27	62	207*c*
			0·844	67·6	336·6	+22·6			696
			0·823	128·2	348·3	−25·8			231
			0·968	115·9	323·5	−22·8			135
Aug. 19		Centre			(34·1)	(+6·9)	(57)	(182)	(2735)
232·529	CL, RF		0·809	281·0	74·4	+13·0			37
		5294	0·963	241·2	88·8	−25·3	0	25	168*c*
		5294	0·941	239·5	83·9	−25·6	0	30	
		5293*a*	0·582	84·4	344·3	+ 8·9	3	15	
I.		5295*a*	0·876	78·6	318·3	+13·3	9	51	270*c*
		5295	0·924	77·9	311·8	+13·8	0	9	
			0·931	118·7	317·2	−23·5			149
			0·915	60·9	313·6	+29·4			316
Aug. 20		Centre			(20·0)	(+6·9)	(12)	(130)	(940)
233·198	CL, AS		0·966	240·6	80·5	−26·0			374
			0·905	282·1	76·7	+13·9			191
			0·930	228·1	68·5	−34·8			135
			0·779	229·6	52·0	−25·1			421
		5293*a*	0·457	83·7	343·9	+ 9·1	0	12	
		5295*a*	0·800	78·4	317·7	+13·4	11	54	340*f*
			0·897	121·1	314·2	−23·9			364
			0·880	58·9	310·4	+30·5			421
			0·961	107·4	300·0	−14·6			410
Aug. 21		Centre			(11·2)	(+6·9)	(11)	(66)	(2656)
234·169	CL, M		0·958	283·0	72·7	+14·4			204
			0·905	243·1	57·9	−20·8			445
			0·850	232·5	47·2	−26·6			241
		5295*a*	0·649	77·6	317·9	+13·4	10	59	

Group 5292, August 15–18. A pair of small spots, *a* and *b*. *b* has disappeared by August 17. *a* has a very small companion on August 18.
Group 5293, August 17–21. A pair of small spots, *a* and *b*, with a very small spot between them on August 19.
Group 5294, August 19–20. A few small spots appearing suddenly near the west limb.
Group 5295, August 19–25. A regular spot, *a*, with a small distant companion on August 20, following Group 5293.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
234·169	CL, M	5296	0·952	109·2	289·5	−15·8	0	11	718*p*
I.		5296	0·991	108·1	278·9	−16·8	0	166	
			0·966	76·6	282·3	+14·7			47
			0·987	72·0	275·9	+18·9			122
Aug. 22		Centre			(358·4)	(+7·0)	(10)	(236)	(1777)
235·407	AS, M		0·942	240·2	46·2	−25·0			494
		5295*a*	0·415	73·1	318·0	+13·3	8	46	
		5296	0·839	114·8	289·6	−16·4	0	8	
		5296	0·841	113·3	289·0	−15·3	0	3	176*c*
		5296	0·884	114·2	284·4	−17·6	0	5	
		5296	0·898	115·0	282·9	−18·8	0	3	
		5296	0·901	113·8	282·0	−17·9	0	9	989*c*
I.		5296	0·934	113·4	277·2	−18·9	31	350	
			0·724	137·1	308·8	−26·2			100
			0·827	127·6	295·6	−25·5			99
			0·863	76·8	281·8	+14·9			70
			0·927	62·1	273·6	+28·4			133
			0·948	77·1	269·7	+14·4			711
Aug. 23		Centre			(342·0)	(+7·0)	(39)	(424)	(2772)
236·500	AS, RF		0·937	281·4	37·9	+13·1			186
			0·894	285·8	31·6	+17·3			158
			0·780	240·8	13·0	−17·4			302
		5297	0·395	304·6	347·7	+19·7	0	11	
		5295*a*	0·196	54·8	318·2	+13·5	7	19	
		5296	0·682	120·8	290·5	−14·7	0	6	
		5296	0·687	120·5	290·0	−14·8	0	7	914*c*
		5296	0·809	119·3	279·7	−18·6	20	348	
		5296	0·863	115·7	272·9	−18·0	0	44	
		5298*a*	0·968	107·3	254·9	−14·7	0	43	144*f*
			0·846	75·2	269·4	+16·3			821
Aug. 24		Centre			(327·6)	(+7·1)	(27)	(478)	(2525)
237·454	CL, RF		0·882	245·3	12·1	−17·8			131
		5297	0·576	294·4	348·7	+19·7	0	4	
		5295*a*	0·124	334·7	318·1	+13·6	1	5	
		5296	0·571	131·8	288·8	−15·9	2	7	
		5296	0·694	126·0	278·9	−18·3	33	487	
		5299	0·604	68·1	278·9	+18·8	3	13	299*f*
		5298*a*	0·886	110·1	256·1	−14·1	13	59	196*c*
Aug. 25		Centre			(315·0)	(+7·1)	(52)	(575)	(626)
238·473	AS, R		0·958	250·7	11·6	−16·2			237
		5296	0·445	150·8	288·5	−15·9	0	17	
		5296	0·477	145·9	285·4	−16·3	0	3	
1904.									
238·473	AS, M	5296	0·493	146·7	285·1	−17·4	5	63	
		5296	0·520	143·3	282·3	−17·8	10	82	
		5296	0·566	144·9	281·2	−20·9	2	7	
		5296	0·534	139·7	280·4	−17·4	17	105	
		5296	0·574	142·4	279·6	−20·4	4	32	
		5296	0·593	137·4	276·4	−19·4	22	190	
		5296	0·565	136·0	277·3	−17·5	0	17	
		5296	0·601	132·9	274·1	−17·8	0	16	
		5299	0·410	57·4	280·1	+19·3	9	45	
		5299	0·470	62·9	275·4	+18·7	0	36	
		5298*a*	0·762	115·8	256·6	−14·4	11	81	228*c*
		5300	0·948	111·7	233·9	−17·9	0	137	838*c*
		5300	0·967	112·1	230·1	−19·2	55	524	
			0·925	74·7	233·0	+16·8			311
Aug. 26		Centre			(301·5)	(+7·1)	(135)	(1355)	(1614)
239·448	CL, RF		0·792	285·1	341·2	+16·3			396
		5296	0·383	178·9	288·2	−15·3	5	40	
		5296	0·382	172·7	285·7	−15·1	3	9	
		5296	0·418	170·6	284·5	−17·2	26	220	
		5296	0·449	165·8	282·0	−18·6	1	6	
		5296	0·483	164·6	280·8	−20·6	0	20	
		5296	0·449	161·2	279·9	−18·0	17	206	
		5296	0·490	154·4	275·7	−19·2	15	152	
		5296	0·518	156·7	275·9	−21·4	0	11	
		5296	0·462	148·1	273·9	−16·2	0	27	
		5299*a*	0·250	30·9	280·8	+19·4	8	31	
		5299	0·289	46·8	275·8	+18·3	1	7	
		5299*b*	0·337	51·0	272·6	+19·0	3	29	
		5298*a*	0·625	123·7	256·3	−14·3	10	93	100*f*
		5300	0·858	115·4	234·4	−17·5	3	25	
		5300	0·909	114·3	227·9	−18·6	45	625	649*c*
			0·862	77·4	228·5	+14·4			232
Aug. 27		Centre			(288·6)	(+7·1)	(137)	(1501)	(1377)
240·243	CL, M		0·918	278·9	345·3	+11·0			206
			0·909	289·3	344·3	+20·6			254
			0·776	290·6	328·7	+20·4			104
		5296	0·427	205·3	289·0	−15·6	2	47	
		5296	0·436	195·9	285·3	−17·5	41	331	
		5296	0·406	186·1	280·7	−16·5	7	65	
		5296	0·475	184·3	280·3	−21·0	0	3	
I.		5296	0·440	181·1	278·6	−18·8	14	101	
		5296	0·453	175·6	276·0	−19·5	21	116	
		5299*a*	0·219	346·5	281·2	+19·4	9	38	
		5299	0·200	3·7	277·3	+18·7	0	10	
		5299*b*	0·219	20·9	273·4	+18·9	0	13	
		5298*a*	0·514	134·2	255·8	−14·3	16	101	

Group 5296, August 22–September 2. A very fine and complex stream of spots. The components of the group undergo constant change.
Group 5297, August 24–25. A small faint spot.
Group 5298, August 24–September 3. A regular spot, *a*, with occasionally a small companion.
Group 5299, August 25–September 2. A number of spots, mostly small and unstable, in a straight stream. *a* and *b*, the first and last spots on August 27, are the most stable, but *a* has disappeared by August 31.
Group 5300, August 26–September 3. A fine irregular stream. *a*, the largest and darkest member of the group, is nearly in the centre.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
240·243	CL, M	5300	0·771	120·1	233·8	−17·7	0	8	
		5300	0·803	120·2	231·0	−19·0	0	37	
		5300*a*	0·830	119·3	228·2	−19·4	42	225	
		5300	0·844	117·5	226·1	−18·5	0	56	
		5300	0·864	116·1	223·5	−18·2	13	77	
			0·841	118·3	226·7	−19·1			697
Aug. 28		Centre			(278·1)	(+7·2)	(165)	(1228)	(1261)
241·407	AS, M		0·949	282·6	335·2	+14·2			131
			0·923	292·2	330·8	+23·2			480
			0·877	239·4	317·3	−22·4			319
			0·808	283·2	317·0	+14·9			346
			0·751	305·1	308·1	+30·7			340
			0·695	242·6	301·9	−13·1			224
		5296	0·571	231·4	290·0	−14·4	12	171	
		5296	0·543	223·9	285·7	−16·4	34	252	
		5296	0·533	219·7	283·5	−17·4	1	13	
		5296	0·496	217·6	281·0	−16·2	4	42	
		5296	0·506	212·9	279·4	−18·2	11	59	
		5296	0·516	209·2	278·1	−19·7	0	22	
		5296	0·477	209·4	276·9	−17·5	0	14	
		5296	0·489	205·7	275·6	−19·0	12	90	
		5296	0·474	200·5	272·8	−19·2	0	8	
		5299*a*	0·367	304·8	281·2	+18·9	0	13	
		5299	0·318	308·7	277·8	+18·4	3	53	
		5299*b*	0·268	320·0	273·1	+18·9	25	167	
		5298*a*	0·378	162·3	255·9	−13·9	14	108	
		5298	0·394	158·2	254·1	−14·3	0	3	
		5300	0·602	132·1	234·9	−17·4	0	5	
		5300	0·631	128·3	231·7	−16·9	0	3	
		5300	0·651	131·1	231·5	−19·2	1	27	535*c*
		5300*a*	0·680	128·3	228·5	−19·0	24	282	
		5300	0·686	125·7	227·0	−17·8	3	42	
		5300	0·724	124·0	223·6	−18·3	8	32	
		5301	0·965	114·2	192·2	−21·1	0	22	70*c*
			0·809	107·4	211·4	− 9·5			103
Aug. 29		Centre			(262·7)	(+7·2)	(152)	(1428)	(2548)
242·440	AS, M		0·970	289·8	326·5	+20·9			62
			0·908	283·8	315·1	+15·5			267
			0·945	243·6	314·8	−22·0			287
			0·891	296·1	312·2	+26·4			247
			0·837	307·7	303·0	+35·2			216
			0·828	246·9	300·8	−14·6			116
			0·865	233·8	300·1	−26·3			325
		5296	0·727	241·2	290·2	−15·1	28	187	578*c*
		5296	0·696	236·6	286·3	−16·8	43	294	
		5296	0·615	226·7	277·2	−18·6	15	161	

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
242·440	AS, M	5299*a*	0·541	294·2	280·4	+19·0	0	2	
		5299	0·508	293·7	278·3	+18·1	11	52	
		5299	0·441	303·1	272·2	+20·6	0	3	
		5299*b*	0·435	298·8	272·7	+18·7	21	160	
		5298*a*	0·374	197·1	255·6	−13·7	18	132	
		5298	0·374	192·2	253·8	−14·2	0	14	
		5300	0·509	145·4	231·5	−17·8	5	43	
		5300	0·549	142·1	228·3	−18·9	24	215	
		5300	0·527	139·5	228·2	−16·8	0	27	
		5300	0·559	137·9	226·0	−17·8	2	29	
		5300	0·590	136·0	223·6	−18·6	4	22	
		5301	0·891	117·5	191·7	−20·5	0	7	252*a*
			0·947	63·6	176·7	+27·3			95
			0·962	81·7	174·2	+10·0			322
Aug. 30		Centre			(249·1)	(+7·2)	(171)	(1348)	(2767)
243·149	AS, CL		0·945	296·5	311·7	+27·4			428
			0·944	285·2	311·4	+16·7			218
			0·942	312·7	309·3	+42·5			161
			0·926	249·8	303·9	−15·6			336
			0·926	239·1	300·8	−25·0			234
			0·878	308·1	298·9	+36·6			337
			0·927	228·4	296·5	−34·2			165
		5296	0·841	243·5	291·7	−17·7	0	6	
		5296	0·823	245·6	290·5	−15·3	18	98	
		5296	0·811	240·6	287·8	−18·7	2	8	
		5296	0·792	242·2	286·6	−16·8	34	212	
		5296	0·781	239·8	284·8	−18·1	0	4	965*c*
		5296	0·754	239·9	282·5	−16·9	0	5	
		5296	0·737	233·5	278·8	−20·4	0	10	
		5296	0·723	236·0	278·7	−18·3	6	79	
		5296	0·693	231·6	274·8	−19·6	10	56	
I.		5299	0·634	289·8	278·4	+18·0	6	29	153*c*
		5299	0·583	292·0	274·3	+18·6	1	5	
		5299*b*	0·559	292·6	272·5	+18·4	18	104	
		5299	0·568	297·0	272·4	+21·0	0	2	
		5298	0·419	221·0	255·9	−11·4	0	1	
		5298*a*	0·444	216·6	255·5	−13·9	19	116	
		5298	0·429	211·5	253·0	−14·4	0	8	
		5300	0·445	163·2	232·0	−18·0	3	13	
		5300	0·454	159·1	230·1	−17·9	1	11	
		5300	0·491	159·6	229·2	−20·3	0	5	
		5300	0·449	154·3	228·0	−16·8	3	25	
		5300	0·479	155·9	227·8	−18·8	24	146	
		5300	0·439	151·4	227·1	−15·6	0	3	
		5300	0·481	151·1	225·6	−17·8	4	19	
		5300	0·505	148·2	223·5	−18·4	1	6	139*c*

Group 5301, August 29–31. Two or three small faint spots.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
243·149	AS, CL	5301	0·817	121·0	191·6	−20·1	2	6	
		5301	0·868	123·5	187·3	−24·3	0	2	242*c*
			0·934	62·2	170·1	+28·4			352
			0·939	80·8	169·1	+11·1			530
Aug. 31		Centre			(239·7)	(+7·2)	(152)	(979)	(4260)
244·187	AS, RF		0·943	304·9	296·9	+35·2			241
			0·933	284·5	295·8	+16·1			84
		5296	0·912	248·2	287·8	−16·5	24	265	}
		5296	0·839	241·6	277·1	−19·0	8	88	} 963*c*
		5296	0·808	239·2	273·3	−19·6	0	5	}
		5296	0·740	239·4	267·6	−16·8	0	2	
		5299	0·798	287·2	279·1	+18·1	2	11	} 841*c*
I.		5299*b*	0·721	289·0	271·8	+18·6	16	54	}
		5298*a*	0·585	234·1	255·1	−13·7	21	94	
		5298	0·566	231·4	253·0	−14·2	0	1	
		5300	0·428	185·4	228·4	−18·0	24	187	
			0·835	84·8	169·0	+ 8·3			212
			0·909	59·0	160·7	+31·1			93
			0·931	73·9	156·5	+17·6			364
Sept. 1		Centre			(226·0)	(+7·2)	(95)	(707)	(2798)
245·594	CL, M		0·944	246·8	273·9	−19·0			1513
			0·902	285·5	272·7	+17·1			786
		5296	0·998	252·9	291·2	−16·4	0	297	
		5296	0·990	250·5	286·3	−18·1	0	171	
		5299*b*	0·894	287·7	271 5	+19·0	0	7	
		5298*a*	0·790	246·5	255·5	−13·6	6	66	309*sf*
		5300	0·563	221·9	230·7	−18·1	0	35	
		5300	0·542	217·9	228·0	−18·5	8	72	
		5300	0·532	213·6	225·6	−19·4	0	1	
		5300	0·498	215 8	225·2	−16·9	0	8	
		5302	0·523	178·8	206·8	−24·2	0	6	
			0·831	55·1	153·5	+32·8			178
			0·880	56·5	146·9	+32·8			615
			0·949	107·4	138·8	−14·0			410
Sept. 2		Centre			(207·5)	(+7·2)	(14)	(663)	(3811)
246·667	CL, RF		0·966	288·8	269·8	+20·0			192
			0·980	247·5	268·0	−20·3			47
			0·943	281·6	264·7	+13·3			90
		5298*a*	0·908	251·0	255·3	−13·9	3	11	145*s*
		5300	0·703	235·1	230·5	−18·0	0	14	
		5300	0·683	232·5	228·0	−18·6	2	17	
		5303	0·858	121·1	141·1	−22·0	5	31	67*c*
			0·852	109·6	138·2	−12·6			225
			0·830	77·3	136·7	+14·6			175
			0·985	106·7	115·8	−15·0			94
Sept. 3		Centre			(193·3)	(+7·2)	(10)	(73)	(1035)
1904.				°	°	°			
247·539	CL, RF		0·965	252·0	253·6	−15·3			98
			0·804	239·8	228·8	−19·0			289
		5304	0·604	250·1	216·4	− 5·9	0	2	
		5303	0·755	128·3	142·0	−22·4	4	11	} 81*c*
		5303	0·783	126·7	139·0	−22·7	0	7	}
			0·769	73·4	131·4	+17·3			92
			0·953	109·3	112·6	−15·9			161
Sept. 4		Centre			(181·7)	(+7·2)	(4)	(20)	(721)
248·415	CL, RF		0·928	278·5	238·9	+10·6			46
			0·912	296·8	236·2	+27·3			146
			0·921	229·8	226·7	−32·7			47
			0·874	241·9	225·2	−20·3			583
		5305	0·271	259·3	185·5	+ 4·1	0	3	
		5303	0·653	137·6	141·7	−22·5	7	52	
		5303	0·677	134·4	138·8	−22·0	2	13	
			0·891	122·9	114·6	−25·0			117
			0·889	111·0	111·1	−14·9			296
Sept. 5		Centre			(170·1)	(+7·2)	(9)	(68)	(1235)
249·312	CL, RF		0·949	245·5	225·3	−20·5			858
		5303	0·563	152·7	142·1	−23·0	9	45	
			0·592	112·3	125·0	− 7·0			40
I.			0·807	117·8	110·1	−17·4			865
			0·977	78·2	79·6	+13·0			246
Sept. 6		Centre			(158·3)	(+7·2)	(9)	(45)	(2009)
250·414	CL, RF		0·819	236·3	190·9	−22·2			54
		5303	0·498	179·1	143·2	−22·5	1	12	
		5303	0·504	176·8	142·0	−22·8	0	5	
		5306	0·227	42·1	134·6	+16·9	0	4	
			0·740	120·5	102·1	−16·6			48
			0·936	120·1	82·6	−29·2			153
			0·894	80·0	79·7	+12·2			100
			0·938	100·7	75·6	− 7·3			85
Sept. 7		Centre			(143·7)	(+7·3)	(1)	(21)	(440)
251·312	AS, RF		0·894	239·8	188·7	−22·8			91
		5307	0·423	163·6	124·8	−16·6	11	50	
		5308*a*	0·969	70·5	54·7	+20·7	0	6	} 163*c*
I.		5308*b*	0·980	67·9	51·6	+23·0	0	3	}
			0·896	127·4	77·8	−28·8			361
			0·849	103·5	75·8	− 7·4			125
			0·970	132·6	66·5	−38·3			126
Sept. 8		Centre			(131·9)	(+7·3)	(11)	(59)	(866)

Group 5302, September 2. A very small spot.
Group 5303, September 3–7. A few small unstable spots in a short stream.
Group 5304, September 4. A very small spot.
Group 5305, September 5. A very small spot.
Group 5306, September 7. A very small spot.
Group 5307, September 8–14. A number of small spots in an irregular stream.
Group 5308, September 8–10. Two very small spots, *a* and *b*. A third is seen on September 10.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
252·460	CL, RF		0·973	240·9	187·7	−26·1			55
			0·859	275·6	176·3	+ 8·6			167
		5307	0·425	198·2	124·6	−16·5	9	67	
		5308*a*	0·867	70·6	56·2	+20·4	5	19	} 374*c*
		5308*b*	0·895	67·2	52·7	+23·6	7	38	
			0·827	135·9	74·6	−31·1			248
			0·911	119·1	57·2	−22·7			271
Sept. 9		Centre			(116·7)	(+7·3)	(21)	(124)	(1115)
253·484	CL, RF		0·949	247·0	170·6	−19·1			41
			0·870	301·3	162·7	+30·6			148
			0·815	283·2	158·2	+14·9			541
			0·716	233·0	140·5	−19·8			414
		5307	0·522	220·8	124·0	−16·5	10	141	
		5308*a*	0·735	68·5	56·5	+20·6	0	2	} 304*s*
		5308	0·763	68·6	53·9	+20·9	0	2	
		5308*b*	0·791	64·3	51·8	+24·6	1	23	
			0·780	141·8	68·7	−31·8			170
			0·884	125·4	47·7	−26·6			449
			0·895	77·5	39·0	+14·4			67
			0·946	65·4	31·1	+25·5			81
Sept. 10		Centre			(103·2)	(+7·2)	(11)	(168)	(2215)
254·465	CL, RF		0·801	285·2	143·8	+16·5			311
			0·844	246·9	143·6	−15·1			263
			0·833	236·3	138·9	−22·8			202
		5307	0·673	238·4	126·5	−14·9	0	8	190*c*
		5307	0·665	235·8	125·1	−16·0	4	28	
		5307	0·646	234·0	123·1	−16·2	0	10	
		5307	0·638	228·8	120·6	−18·6	6	46	
			0·726	132·0	54·5	−23·2			179
			0·878	130·3	39·7	−30·1			116
Sept. 11		Centre			(90·3)	(+7·2)	(10)	(92)	(1261)
255·175	CL, RF		0·933	302·1	150·2	+32·5			145
			0·899	285·2	145·6	+16·8			477
			0·893	251·7	141·1	−12·8			275
			0·895	238·1	137·2	−24·3			200
		5307	0·792	244·1	128·4	−15·4	5	22	}
I.		5307	0·768	241·9	125·6	−16·1	3	8	
		5307	0·737	235·7	120·8	−19·0	6	17	} 473*c*
		5307	0·740	233·0	120·0	−20·9	1	8	
			0·893	130·8	28·7	−31·4			305
			0·913	114·5	19·7	−18·9			81
			0·973	73·3	3·0	+17·8			227
Sept. 12		Centre			(80·9)	(+7·2)	(15)	(55)	(2183)
256·501	CL, RF		0·981	244·9	137·7	−22·8			125
			0·968	258·6	137·1	− 9·1			92
			0·943	287·9	135·0	+19·2			216
			0·784	238·9	108·4	−18·9			264
			0·843	219·5	104·3	−35·2			73
		5307	0·931	250·8	128·7	−14·9	14	62	} 481*c*
		5307	0·904	248·9	124·3	−15·6	8	27	
		5307	0·877	244·0	119·5	−18·7	6	16	
		5309*a*	0·935	73·0	353·2	+18·4	3	26	755*c*
Sept. 13		Centre			(63·4)	(+7·2)	(31)	(131)	(2006)
257·354	AS, RF		0·887	240·6	108·3	−21·9			274
		5307	0·986	253·1	129·9	−15·3	19	81	} 603*c*
		5307	0·968	251·3	124·4	−16·0	7	57	
		5307	0·954	247·1	120·5	−19·3	0	27	
I.		5309*a*	0·858	72·8	352·6	+18·4	3	17	} 437*c*
		5310	0·919	72·2	344·4	+19·2	3	17	
		5310	0·938	70·8	341·3	+20·5	2	5	
			0·941	50·0	342·1	+40·0			45
			0·977	67·2	332·7	+23·7			115
Sept. 14		(Centre)			(52·1)	(+7·2)	(34)	(204)	(1474)
258·426	CL, RF		0·934	248·7	103·2	−16·9			95
			0·843	229·1	84·4	−28·6			164
		5309*a*	0·710	71·7	353·0	+18·0	0	5	285*f*
			0·908	67·2	332·2	+23·7			188
Sept. 15		Centre			(38·0)	(+7·2)	(0)	(5)	(732)
259·444	CL, RF		0·944	240·1	89·0	−25·1			131
			0·861	227·1	71·8	−31·1			252
		5309*a*	0·544	67·9	352·7	+17·9	4	16	} 547*c*
		5310	0·676	69·0	342·6	+19·5	13	110	
			0·806	122·4	338·0	−20·6			69
			0·846	72·9	326·3	+18·3			420
			0·936	119·0	321·1	−23·9			332
			0·935	63·7	314·5	+27·1			314
			0·961	102·6	312·5	−10·0			88
Sept. 16		Centre			(24·5)	(+7·2)	(17)	(126)	(2153)
260·420	CL, RF		0·880	232·4	63·8	−28·2			231
		5309*a*	0·361	57·8	353·1	+17·8	2	10	
		5310	0·476	62·5	345·3	+19·0	3	73	
		5310	0·522	64·2	342·0	+19·3	0	46	
		5310	0·539	61·8	341·3	+20·9	0	9	
		5311	0·874	130·2	321·4	−30·0	0	14	
			0·822	73·3	316·1	+17·8			91

Group 5309, September 13–18. A small regular spot, *a*.
Group 5310, September 14–18. A short irregular stream following Group 5309. The Group is not seen on September 15.
Group 5311, September 17. A small faint spot.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
260·420	CL, RF		0·898	119·5	314·1	−22·5			136
			0·916	68·6	304·6	+22·4			131
			0·932	58·3	302·7	+32·0			196
			0·962	107·8	300·5	−14·9			372
Sept. 17		Centre			(11·7)	(+7·1)	(5)	(152)	(1157)
261·472	CL, RF		0·966	285·5	74·0	+16·8			112
			0·916	243·0	58·7	−21·2			163
			0·914	233·0	54·7	−29·6			165
			0·811	223·1	37·9	−30·9			241
		5312*a*	0·755	292·2	46·2	+21·3	0	6	302*p*
		5309*a*	0·206	26·3	352·3	+17·7	2	7	
		5310	0·273	48·9	345·4	+17·2	0	2	
		5310	0·297	45·1	345·0	+19·0	2	34	
		5310	0·348	52·0	341·0	+19·2	0	6	
		5313	0·539	149·1	340·7	−20·7	4	21	189*c*
		5313	0·579	145·0	337·0	−21·6	3	17	
			0·829	126·0	310·6	−24·3			131
			0·830	78·2	301·3	+13·7			90
			0·919	113·4	295·3	−18·3			858
			0·918	104·3	293·4	−10·1			140
			0·895	66·1	294·0	+24·5			113
			0·917	54·3	291·9	+35·5			290
			0·958	76·5	283·4	+15·0			377
Sept. 18		Centre			(357·8)	(+7·1)	(11)	(93)	(3171)
262·469	CL, RF	5312*a*	0·886	290·4	47·5	+21·4	0	16	256*p*
		5312	0·850	291·8	42·9	+22·3	0	16	
		5313*a*	0·465	174·0	341·6	−20·3	4	44	
		5313	0·465	167·8	338·6	−19·8	3	27	
		5313	0·495	164·0	336·2	−21·2	8	67	
			0·869	117·1	289·7	−19·3			856
			0·873	74·1	283·2	+17·4			258
			0·966	69·8	268·2	+21·3			195
Sept. 19		Centre			(344·6)	(+7·1)	(15)	(170)	(1565)
263·482	AS, RF		0·942	233·1	41·8	−37·1			100
		5312*a*	0·964	289·9	47·1	+21·0	0	30	352*c*
		5312	0·948	289·7	43·8	+20·9	1	24	
		5313*a*	0·490	201·7	342·3	−20·0	16	177	
		5313	0·486	197·2	340·0	−20·6	0	3	
		5313	0·493	193·7	338·4	−21·4	3	18	
		5313	0·463	192·7	337·4	−19·7	5	45	
		5313	0·482	188·6	335·6	−21·3	6	53	
		5314	0·702	73·8	286·7	+16·4	0	3	231*f*
		5315	0·907	73·0	265·4	+18·4	4	42	155*e*
			0·784	121·2	286·2	−19·0			936
Sept. 20		Centre			(331·2)	(+7·1)	(35)	(395)	(1774)
264·483	CL, M		0·980	290·7	38·7	+21·6			197
		5313*a*	0·598	220·9	343·3	−20·4	25	188	
		5313	0·552	212·4	337·1	−21·0	10	43	
		5315	0·791	71·8	266·4	+18·7	9	25	131*c*
		5315	0·803	69·5	265·4	+20·6	2	6	
		5316	0·973	59·6	240·4	+31·1	0	30	237*f*
			0·919	110·1	255·4	−15·3			325
			0·933	85·3	249·4	+ 7·0			255
Sept. 21		Centre			(318·7)	(+7·1)	(46)	(292)	(1145)
265·178	AS, RF	5313*a*	0·700	230·1	343·8	−20·9	29	162	409*c*
		5313	0·646	224·7	337·9	−21·2	5	53	
		5317	0·570	204·6	323·8	−24·4	5	39	
		5315	0·695	68·6	265·5	+19·8	4	27	89*c*
	I.	5316	0·931	59·5	239·9	+30·9	6	29	254*c*
			0·916	112·7	246·6	−17·5			464
			0·884	84·7	246·3	+ 8·0			316
			0·968	66·1	231·7	+24·9			130
Sept. 22		Centre			(308·8)	(+7·0)	(49)	(310)	(1662)
266·517	AS, M		0·959	286·7	5·9	+18·0			286
			0·828	287·9	347·3	+18·7			334
		5313*a*	0·863	240·3	344·5	−21·2	30	243	796*c*
		5313	0·798	236·2	336·5	−21·4	0	21	
		5317*a*	0·719	227·1	326·1	−23·5	32	237	242*c*
		5317*b*	0·699	222·2	322·3	−25·2	18	141	
		5315	0·452	62·4	266·3	+18·4	0	3	
		5315	0·442	59·9	267·4	+19·2	1	8	
		5316*a*	0·795	55·9	241·2	+31·0	0	37	603*c*
		5316	0·834	56·3	236·7	+31·8	0	23	
			0·896	66·0	227·3	+24·6			132
			0·820	116·5	241·3	−17·0			449
			0·936	113·8	226·2	−19·3			347
Sept. 23		Centre			(291·2)	(+7·0)	(81)	(713)	(3189)
267·461	CL, RF		0·921	288·2	346·5	+19·4			313
		5313*a*	0·946	244·4	345·0	−21·5	29	221	395*f*
		5313	0·890	241·2	335·6	−21·7	0	6	
		5317*a*	0·828	235·7	326·6	−23·2	23	239	
		5317	0·833	233·8	326·4	−24·9	0	4	448*c*
		5317	0·812	231·9	323·5	−25·2	0	2	
		5317*b*	0·797	229·6	321·0	−26·0	15	124	
		5315	0·270	38·8	268·4	+18·9	0	8	
		5315	0·320	42·3	265·5	+20·4	0	3	
		5318	0·653	121·4	243·7	−14·3	0	2	329*f*
		5318	0·674	119·4	241·6	−13·8	0	2	
		5318	0·704	120·2	239·7	−15·3	0	2	

Group 5312, September 18–20. A small spot, *a*, appearing first near the west limb. It is followed by a small companion on September 19 and 20.
Group 5313, September 18–25. A few small spots on September 18, developing later into a straight stream, of which *a*, the leader, is the principal member.
Group 5314, September 20. A very small spot.
Group 5315, September 21–24. One or two small unstable spots.
Group 5316, September 21–October 3. A few small spots on September 21, developing later into a straight stream, of which *a*, the leader, is the principal member.
Group 5317, September 22–26. A fine stream appearing suddenly, following Group 5313. The leader, *a*, and the rear spot, *b*, are the chief members of the group.
Group 5318, September 24–27. A small cluster composed of very small spots.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
267·461	CL, RF	5316*a*	0·669	49·7	242·2	+31·2	4	29	
		5316	0·708	50·8	238·6	+31·9	1	7	
		5316	0·737	52·9	235·3	+31·5	2	36	159*c*
			0·885	118·9	222·5	−21·6			388
Sept. 24		Centre			(278·7)	(+6·9)	(74)	(685)	(2032)
268·165	CL, RF		0·964	288·2	345·1	+19·3			237
			0·823	291·1	324·6	+21·2			122
		5313*a*	0·986	246·5	345·9	−21·7	26	200	447*ef*
		5317*a*	0·898	239·2	326·7	−23·8	42	263	
		5317*a*	0·868	233·6	320·8	−26·8	21	113	589*c*
		5318	0·553	126·9	242·5	−13·2	2	4	
I.		5318	0·574	127·5	241·5	−14·3	1	5	
		5318	0·607	132·3	241·3	−18·0	0	3	
		5318	0·606	126·9	239·4	−15·3	4	16	
		5316	0·618	43·6	239·1	+32·6	0	1	
		5316*a*	0·587	42·5	241·7	+31·7	6	37	
		5316	0·625	45·6	237·8	+31·8	3	10	
		5316	0·659	48·2	234·2	+31·8	5	28	
			0·858	124·7	218·5	−25·0			554
Sept. 25		Centre			(269·4)	(+6·9)	(110)	(680)	(1949)
269·618	AS, RF		0·950	295·4	326·2	+26·2			296
			0·926	284·8	322·0	+16·3			169
			0·791	303·3	303·2	+30·3			248
			0·738	240·8	295·3	−16·0			1061
		5317*a*	0·981	245·1	328·1	−22·8	44	284	} 393*ef*
		5317*b*	0·965	240·0	322·2	−26·5	0	48	
		5317	0·944	238·0	317·3	−27·1	0	12	
		5318	0·362	164·3	247·6	−13·4	6	34	
		5318	0·353	159·9	246·3	−12·4	1	17	
		5316*a*	0·433	14·4	246·2	+31·6	14	60	
		5316	0·447	23·2	241·6	+30·9	4	32	
		5316	0·480	31·0	236·7	+30·9	2	17	
			0·941	77·6	182·4	+14·0			222
Sept. 26		Centre			(253·4)	(+6·9)	(71)	(504)	(2389)
270·445	CL, M		0·855	303·1	296·4	+31·7			169
			0·819	239·9	288·0	−19·8			643
		5318	0·368	196·0	245·3	−13·9	2	10	
		5316*a*	0·421	350·3	244·0	+31·2	8	100	
		5316	0·419	3·1	237·8	+31·5	1	4	
		5316	0·405	7·5	235·8	+30·3	0	3	
		5316	0·414	12·3	233·4	+30·5	0	9	
		5319*a*	0·989	112·9	161·4	−21·4	19	108	
			0·884	80·0	176·6	+12·0			473
Sept. 27		Centre			(239·3)	(+6·8)	(30)	(234)	(1285)
1904.									
271·516	AS, M		0·947	300·8	297·1	+31·3			162
			0·896	245·5	284·2	−18·4			1179
			0·836	288·0	282·1	+18·7			351
			0·852	309·1	280·3	+36·5			167
			0·780	315·2	269·7	+38·5			130
			0·751	235·2	266·1	−20·2			194
		5316*a*	0·503	325·8	244·4	+30·9	20	169	
		5316	0·459	328·0	241·3	+29·4	0	7	
		5316	0·462	334·9	238·4	+31·3	0	10	
		5319*a*	0·934	116·3	161·3	−21·5	29	110	342*f*
			0·870	75·9	164·3	+15·6			448
			0·958	29·6	157·4	+59·3			52
			0·975	74·4	146·8	+16·7			145
Sept. 28		Centre			(225·2)	(+6·8)	(49)	(296)	(3170)
272·483	CL, M		0·922	288·9	280·3	+20·0			311
			0·926	246·9	276·0	−18·4			503
			0·900	309·7	274·3	+38·4			418
		5316*a*	0·626	313·0	244·5	+30·9	23	179	
		5316	0·613	316·9	242·0	+32·4	0	6	
		5316	0·578	314·2	240·7	+29·6	0	2	
		5316	0·585	316·7	240·2	+30·9	1	8	
		5316	0·564	322·9	236·2	+32·8	0	5	
		5316	0·527	322·6	234·2	+30·9	0	14	
		5319*a*	0·848	120·7	161·0	−21·5	13	90	218*f*
			0·920	108·8	148·5	−14·4			148
			0·918	74·2	145·0	+17·2			266
Sept. 29		Centre			(212·4)	(+6·7)	(37)	(304)	(1864)
273·161	AS, RF		0·953	247·6	271·9	−18·9			446
			0·916	288·4	270·5	+19·5			420
			0·924	310·0	269·6	+39·4			241
			0·745	239·1	245·4	−17·5			413
		5316	0·701	308·7	243·1	+31·1	20	171	} 318*e*
I.		5316	0·644	314·3	236·5	+32·4	0	7	
		5319*a*	0·778	125·2	160·5	−21·7	12	71	548*f*
			0·856	73·8	144·3	+17·4			292
			0·904	108·0	141·7	−13·1			293
			0·957	73·6	129·4	+17·6			131
Sept. 30		Centre			(203·5)	(+6·7)	(32)	(249)	(3102)
274·255	CL, RF		0·960	290·2	263·8	+21·2			58
			0·870	277·1	249·9	+ 9·5			107
		5316	0·838	303·0	243·9	+31·0	24	155	} 430*c*
I.		5316	0·772	306·2	235·9	+31·7	0	7	
		5318	0·840	248·9	242·6	−13·7	12	89	673*s*
		5319*a*	0·636	135·8	160·7	−21·2	9	27	
			0·904	112·9	128·4	−17·4			499
Oct. 1		Centre			(189·0)	(+6·6)	(45)	(278)	(1767)

Group 5319, September 27–October 2. A regular spot, *a*. It has a pair of very small companions on October 2.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
275·504	AS, M		0·835	240 3	223·1	−20·3			295
		5316	0·938	300·9	242·5	+31·2	17	153	854*f*
		5318	0·936	254·0	239·5	−12·4	0	23	348*sp*
		5319	0·505	159·7	161·8	−21·7	0	4	
		5319*a*	0·505	156·8	160·3	−21·1	3	10	
		5319	0·551	159·1	160·2	−24·4	0	3	
			0·902	68·9	107·8	+21·9			188
Oct. 2		Centre			(172·6)	(+6·6)	(20)	(193)	(1685)
276·600	AS, M		0·921	240·4	219·3	−24·0			743
		5316	0·990	300·8	242·2	+31·3	0	225	441*f*
		5320	0·785	64·9	107·5	+23·6	6	18	
		5320	0·794	65·8	106·5	+23·0	0	3	459*c*
		5320	0·826	66·2	103·1	+23·2	0	19	
			0·872	70·3	97·4	+20·3	0	17	
Oct. 3		Centre			(158·2)	(+6·5)	(6)	(282)	(1643)
277·510	CL, AS		0·949	301·7	218·3	+32·1			242
			0·947	234·3	209·5	−30·7			341
		5320	0·648	61·3	108·2	+23·2	5	27	
		5320	0·677	63·0	105·5	+22·8	0	13	213*c*
		5320	0·709	64·7	102·5	+22·4	0	7	
		5320	0·714	63·2	102·3	+23·5	3	27	
Oct. 4		Centre			(146·2)	(+6·5)	(8)	(74)	(796)
278·188	AS, RF		0·895	279·1	201·2	+11·0			98
		5321	0·251	37·0	128·1	+17·8	7	99	
I.		5320	0·578	57·5	105·2	+23·5	13	136	
			0·955	61·6	63·6	+29·0			100
Oct. 5		Centre			(137·2)	(+6·4)	(20)	(235)	(198)
279·451	CL, AS		0·775	230·7	155·7	−31·6			161
		5326*a*	0·271	312·2	132·6	+16·6	24	152	
		5321	0·254	318·9	130·6	+17·2	5	23	
		5321	0·266	323·4	130·2	+18·5	0	1	
		5321	0·233	323·7	128·9	+17·1	0	2	
		5321	0·257	329·4	128·5	+19·0	5	44	
		5321	0·208	330·1	126·8	+16·6	0	1	
		5321	0·249	338·8	126·1	+19·7	11	46	
		5321	0·211	339·5	125·0	+17·7	0	5	
		5320	0·356	33·0	108·4	+23·5	1	4	
		5320	0·377	34·6	107·1	+24·2	3	9	
		5320	0·368	37·3	106·6	+23·1	9	66	
		5320	0·390	37·9	105·5	+24·0	0	2	
		5320	0·372	40·6	105·5	+22·5	0	1	
		5320	0·404	42·7	103·3	+23·2	5	22	
1904.				°	°	°			
279·451	CL, AS	5320*a*	0 432	45·0	101·2	+23·7	25	178	
		5322	0·965	110·6	49·0	−18·0	22	118	195*c*
			0·922	76·6	52·8	+14·8			265
			0·961	67·3	45·6	+23·5			141
Oct. 6		Centre			(120·6)	(+6·3)	(110)	(674)	(762)
280·166	CL, RF		0·916	279·0	177·9	+10·7			240
			0·841	238·2	161·5	−22·3			186
		5321*a*	0·409	297·4	133·3	+16·6	37	228	
		5321	0·358	303·2	129·3	+17·3	3	7	
		5321	0·361	311·0	127·8	+19·7	2	13	
		5321	0·324	315·6	125·0	+19·5	7	22	
		5321	0·296	311·7	124·4	+17·5	0	4	
		5320	0·308	11·2	107·4	+23·8	5	57	
I.		5320*a*	0·345	26·1	101·6	+24·2	15	140	
		5322	0·895	112·6	51·5	−17·0	18	80	513*c*
		5322	0·937	112·0	45·3	−18·0	14	169	
		5323	0·871	79·2	50·1	+12·5	8	.48	329*c*
			0·890	132·5	59·6	−33·2			196
			0·910	120·6	51·9	−24·5			84
			0·879	69·5	49·5	+21·0			238
			0·990	78·4	28·3	+12·4			75
Oct. 7		Centre			(111·1)	(+6·3)	(109)	(768)	(1861)
281·438	CL, AS		0·925	290·5	162·5	+21·3			155
			0·942	243·2	159·8	−22·7			185
			0·833	243·8	145·8	−17·8			231
			0·783	286·8	145·7	+16·9			141
		5321*a*	0·648	288·1	134·1	+16·3	32	248	
		5321	0·577	291·2	128·4	+17·2	0	7	
		5321	0·574	295·0	127·6	+19·2	0	3	
		5321	0·531	294·5	124·7	+18·1	0	4	
		5320	0·365	324·6	107·6	+23·3	3	34	
		5320	0·334	333·1	103·7	+23·4	0	4	
		5320	0·312	333·9	102·8	+22·4	0	4	
		5320	0·318	341·3	100·7	+23·6	4	42	
		5324	0·442	43·9	74·7	+24·3	0	6	
		5324	0·509	48·5	69·5	+25·3	0	4	
		5322	0·719	121·2	54·4	−17·1	16	126	
		5322	0·738	120·8	52·8	−17·6	0	8	522*c*
		5322	0·755	120·7	51·4	−18·1	0	12	
		5322	0·813	118·4	45·4	−18·7	14	117	
		5323*a*	0·662	79·1	52·9	+11·9	9	68	291*c*
		5323*b*	0·716	79·2	48·5	+12·1	3	58	
		5325*a*	0·946	79·2	22·7	+12·2	51	334	557*c*
		5326	0·976	77·5	15·9	+13·6	0	18	
			0·791	70·4	42·4	+19·2			208
Oct. 8		Centre			(94·3)	(+6·2)	(132)	(1097)	(2290)

Group 5320, October 3–9. A number of spots in a fine stream. The last spot, *a*, is the largest and best defined, but has broken up by October 8.
Group 5321, October 5–11. A group appearing in front of Group 5320, and forming with it an almost continuous stream on October 7. The leader, *a*, is a large regular spot.
Group 5322, October 6–16. A fine stream of spots. During its greatest developments it consists mainly of *a*, a large regular spot, followed by *b* and *c*, two clusters, or composite spots. *c* has broken up by October 12, *b* by October 16.
Group 5323, October 7–13. Some small spots in an irregular stream. *a* and *b*, the first and last spots, are the largest and most stable.
Group 5324, October 8. Two pairs of very small spots.
Group 5325, October 9–20. A large regular spot, *a*, with occasionally a few small companions. *a* tends to break up after October 13.
Group 5326, October 8–10. A small spot following Group 5325.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
282·154	AS, RF		0·877	286·5	146·4	+17·4			261
			0·877	245·3	141·7	−18·2			409
		5321*a*	0·765	286·1	134·7	+16·3	30	202	} 213*c*
		5321	0·715	288·2	130·1	+17·3	2	12	
		5320	0·425	315·9	103·7	+23·6	5	88	
		5322	0·636	126·6	52·8	−17·0	43	213	
I		5322	0·725	122·9	45·1	−18·4	10	65	
		5323*a*	0·533	77·5	52·9	+11·9	13	53	
		5323	0·561	76·6	51·0	+12·7	0	3	
		5323*b*	0·606	77·3	47·8	+12·6	2	33	
		5325*a*	0·887	79·2	22·0	+12·4	47	291	} 590*c*
		5326	0·933	77·7	15·4	+13·7	6	14	
			0·899	126·2	29·3	−28·6			249
Oct. 9		Centre			(84·9)	(+6·2)	(158)	(974)	(1722)
283·166	AS, RF		0·924	249·9	135·5	−16·6			269
			0·802	232·8	116·0	−24·7			128
		5321*a*	0·890	284·8	134·8	+16·0	33	188	523*c*
		5322*a*	0·471	145·1	55·2	−16·8	50	265	
		5322	0·511	141·6	52·1	−17·8	0	9	
		5322*b*	0·535	139·1	50·0	−18·1	13	36	
I.		5322	0·551	135·8	47·8	−17·6	1	17	
		5322*c*	0·586	134·0	45·2	−18·5	8	77	
		5323*a*	0·322	72·3	53·3	+11·4	3	15	
		5323*b*	0·420	70·4	47·6	+13·7	2	11	
		5325*a*	0·760	78·5	21·9	+12·7	67	375	} 581*c*
		5326	0·825	77·3	15·7	+13·9	0	7	
			0·946	71·9	359·7	+19·1			159
Oct. 10		Centre			(71·5)	(+6·1)	(177)	(1000)	(1660)
284·170	CL, RF		0·958	250·4	127·9	−16·7			184
			0·926	287·5	126·5	+18·4			541
			0·893	234·3	113·3	−28·1			222
			0·737	297·0	103·9	+23·8			599
		5321*a*	0·969	284·8	134·7	+15·8	33	207	122*c*
		5322*a*	0·392	174·8	56·1	−16·9	45	283	
		5322*b*	0·430	161·4	49·9	−18·1	20	108	
		5322*c*	0·467	152·1	44·9	−18·4	12	89	
		5323*a*	0·121	35·5	54·1	+11·7	2	13	
		5323	0·190	43·9	50·4	+13·8	5	12	
I.		5323	0·194	52·0	49·2	+12·8	0	4	
		5323*b*	0·226	54·6	47·3	+13·4	2	32	
		5325	0·568	74·0	24·1	+14·0	1	13	
		5325*a*	0·592	76·4	22·2	+12·8	59	350	
		5325	0·636	72·1	19·3	+16·0	0	10	
284·170	CL, RF	5327*a*	0·962	110·2	347·2	−17·5	2	15	489*c*
			0·927	71·2	349·7	+19·7			677
			0·895	80·6	354·3	+11·1			62
			0·962	101·7	345·7	− 9·5			104
			0·976	80·9	340·2	+10·2			69
Oct. 11		Centre			(58·2)	(+6·0)	(181)	(1136)	(3069)
285·532	CL, AS		0·960	251·1	111·1	−16·2			65
			0·884	294·2	102·2	+24·2			593
		5328*a*	0·474	280·1	68·5	+10·0	5	13	
		5328*b*	0·395	282·8	63·3	+10·6	10	39	
		5322*a*	0·469	215·4	56·7	−16·7	41	255	
		5322	0·427	210·1	53·1	−15·7	0	5	
		5322	0·439	206·4	52·0	−17·2	0	10	
		5322*b*	0·443	201·3	50·0	−18·4	14	109	
		5322	0·419	190·1	44·7	−18·3	3	12	
		5323*a*	0·269	293·6	54·8	+12·0	0	7	
		5323	0·237	300·6	52·3	+12·8	0	3	
		5323	0·207	310·0	49·6	+13·6	2	18	
		5325*a*	0·319	66·7	22·9	+13·0	55	339	
		5325	0·357	59·9	21·6	+16·0	0	6	
		5325	0·382	62·4	19·8	+15·8	4	23	
		5327*a*	0·850	115·8	346·8	−18·2	2	9	783*8f*
			0·816	71·6	345·8	+18·4			515
			0·942	66·5	329·3	+24·2			342
Oct. 12		Centre			(40·3)	(+6·0)	(136)	(848)	(2298)
286·405	CL, AS		0·950	293·1	101·2	+23·8			710
		5328*a*	0·641	278·7	68·6	+10·1	0	9	
		5328*b*	0·567	279·3	63·2	+10·2	5	39	
		5322*a*	0·583	230·7	56·6	−16·4	31	255	
		5322	0·542	223·0	51·5	−17·8	0	8	
		5322*b*	0·530	220·1	49·7	−18·4	5	70	
		5322	0·539	218·1	49·3	−19·5	0	4	
		5322	0·502	217·9	47·5	−17·7	0	2	
		5323*a*	0·449	285·9	54·8	+12·4	0	4	
		5323	0·416	287·7	52·6	+12·7	0	2	
		5323	0·395	290·1	51·0	+13·3	0	6	
		5323	0·367	291·5	49·2	+13·3	0	31	
		5325*a*	0·160	39·8	22·7	+12·9	55	315	
		5325	0·219	36·6	20·9	+15·9	0	4	
		5327*a*	0·742	121·2	346·9	−18·2	3	13	416*f*
		5329*a*	0·948	115·9	321·8	−22·2	4	25	227*f*
			0·860	69·4	329·5	+20·7			249
Oct. 13		Centre			(28·7)	(+5·9)	(103)	(787)	(1602)

Group 5327, October 11–18. A small spot, *a*. A second is seen following it on October 14. The group is not seen on October 15 or 17.
Group 5328, October 12–16. Two small spots, *a* and *b*, appearing preceding Group 5323. *a* has disappeared by October 14.
Group 5329, October 13–21. A small regular spot, *a*, with occasionally a small companion.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
287·423	CL, RF	5238*b*	0·753	278·3	64·3	+10·1	4	13	150*f*
		5325	0·210	307·7	25·1	+13·1	0	2	
		5322*a*	0·731	240·8	56·9	−16·6	36	233	356*c*
		5322*b*	0·678	233·8	50·0	−18·6	10	81	
		5325*a*	0·185	314·1	23·1	+13·1	40	313	
		5325	0·213	323·5	22·8	+15·6	0	1	
		5325	0·196	334·8	20·3	+16·0	0	4	
		5325	0·159	328·9	20·1	+13·6	0	4	
		5325	0·155	342·3	18·1	+14·3	0	2	
		5327*a*	0·602	130·9	346·8	−18·1	0	3	207*c*
		5327	0·643	130·2	344·0	−19·5	0	10	
		5329*a*	0·867	120·1	321·3	−22·4	5	43	444*sp*
			0·819	62·3	321·8	+25·9			222
			0·940	111·4	308·4	−17·8			270
Oct. 14		Centre			(15·3)	(+5·8)	(95)	(709)	(1649)
288·449	AS, RF		0·639	285·4	41·2	+14·2			438
		5228*b*	0·882	278·6	64·1	+10·3	0	5	168*p*
		5322*a*	0·860	247·0	57·4	−16·5	29	212	588*c*
		5322*b*	0·803	241·5	49·9	−18·7	3	37	
		5325	0·398	287·7	24·6	+12·2	5	31	
		5325*a*	0·384	291·3	23·4	+13·3	42	227	
		5325	0·390	296·7	23·0	+15·4	3	13	145*c*
		5325	0·369	299·0	21·4	+15·6	0	4	
		5325	0·365	303·5	20·4	+17·1	0	24	
		5325	0·336	295·9	19·9	+13·8	0	5	
		5329*a*	0·758	126·6	320·9	−22·5	6	28	686*c*
			0·910	113·4	300·4	−18·5			473
			0·909	63·6	296·9	+26·3			166
			0·939	74·3	291·4	+16·7			167
Oct. 15		Centre			(1·9)	(+5·7)	(88)	(586)	(2831)
289·159	AS, RF		0·871	282·7	53·3	+13·8			519
			0·933	230·6	52·2	−33·5			87
			0·837	297·9	47·9	+26·3			208
	·	5328*b*	0·946	278·8	64·0	+10·2	3	13	184*p*
		5322*a*	0·928	249·7	57·5	−16·5	35	229	556*f*
		5330	0·764	242·7	37·4	−16·6	0	2	57*f*
		5325*a*	0·525	286·6	23·5	+13·4	53	259	
I.		5327	0·436	171·6	348·6	−19·9	1	8	
		5327	0·468	166·4	345·3	−21·4	2	10	
		5329*a*	0·678	133·2	320·5	−22·8	6	15	
		5329	0·635	133·1	322·9	−20·8	0	5	
			0·875	116·6	296·3	−20·0			582
			0·924	71·9	284·6	+18·9			233
			0·965	112·5	281·1	−20·0			246
Oct. 16		Centre			(352·5)	(+5·6)	(100)	(541)	(2672)
290·253	AS, RF		0·951	282·5	50·7	+13·7			366
			0·911	295·7	43·5	+25·7			144
			0·871	223·6	25·3	−35·3			254
		5322*a*	0·992	252·5	58·6	−16·5	50	208	334*sf*
		5325*a*	0·732	281·6	25·1	+12·3	2	17	
		5325	0·716	283·0	23·7	+13·2	34	236	
		5325	0·705	279·6	22·9	+10·7	2	8	435*c*
		5325	0·698	285·8	22·0	+15·0	0	2	
		5325	0·676	287·1	20·1	+15·6	0	31	
	I.	5329*a*	0·560	149·1	319·9	−23·3	8	16	
		5331	0·719	127·0	300·2	−21·2	0	8	576*c*
		5331	0·794	125·6	293·5	−23·5	0	4	
		5332*a*	0·961	76·7	263·5	+14·3	29	111	
		5332	0·989	72·9	255·5	+17·7	0	7	275*c*
			0·835	69·5	281·9	+20·1			374
			0·914	114·9	277·2	−18·8			439
Oct. 17		Centre			(338·1)	(+5·6)	(125)	(648)	(3197)
291·138	CL, M		0·923	229·6	24·1	−33·9			138
			0·936	347·3	3·7	+70·2			67
		5325*a*	0·842	282·1	23·9	+13·1	34	215	864*c*
		5327	0·529	218·0	346·5	−19·4	0	2	
		5331	0·629	136·6	298·7	−22·2	2	4	
		5331	0·685	133·9	293·9	−23·7	3	10	
	I.	5331	0·718	132·9	291·2	−24·7	2	4	
		5332*a*	0·885	77·0	263·9	+14·1	12	70	446*c*
		5332	0·943	73·8	255·3	+17·1	8	24	
		5329*a*	0·497	167·6	319·7	−23·5	3	12	
			0·840	120·6	275·4	−21·9			370
			0·969	107·2	253·1	−15·1			434
Oct. 18		Centre			(326·4)	(+5·5)	(64)	(341)	(2319)
292·175	AS, RF		0·732	234·3	352·1	−21·1			95
		5325*a*	0·948	281·9	24·7	+13·0	32	210	341*n*
		5325	0·947	280·1	24·4	+11·3	0	3	
		5325	0·942	283·8	23·6	+14·8	0	9	
		5329	0·493	202·0	324·1	−21·8	0	7	
		5329*a*	0·498	193·5	320·0	−23·5	3	8	
		5331	0·538	149·8	295·7	−22·5	3	11	
		5331	0·574	146·6	292·6	−23·5	0	3	
	I.	5333	0·475	57·3	287·7	+19·7	1	4	
		5334	0·899	108·2	251·4	−13·7	0	5	580*c*
		5332*a*	0·742	75·9	265·0	+14·0	11	55	
		5332	0·772	73·1	262·5	+16·5	0	3	54*c*
		5332	0·771	74·4	262·5	+15·4	0	2	
		5332	0·799	75·2	259·8	+15·1	0	5	287*c*
		5332	0·838	73·6	255·9	+16·7	7	46	
			0·969	68·4	236·1	+22·3			56
			0·977	58·1	234·0	+32·3			110
Oct. 19		Centre			(312·7)	(+5·4)	(57)	(371)	(1523)

Group 5330, October 16. A very small spot, following Group 5322.
Group 5331, October 17–26. A few small unstable spots.
Group 5332, October 17–24. A regular spot, *α*, followed by a train of very unstable small spots.
Group 5333, October 19–21. One or two very small spots.
Group 5334, October 19–22. A compact cluster of small faint spots.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
293·173	CL, M		0·792	293·9	350·7	+22·1			294
			0·831	239·1	349·5	−21·9			273
		5325*a*	0·995	282·6	24·8	+13·1	37	219	343*nf*
		5329*a*	0·573	213·1	319·4	−23·6	6	11	
		5329	0·602	209·6	318·8	−26·4	0	3	
		5331	0·475	172·5	295·7	−22·7	0	9	
		5331	0·484	168·2	293·4	−22·9	0	2	
		5333	0·270	33·5	290·5	+18·2	2	6	
		5333	0·319	37·5	287·6	+19·8	1	10	
I.		5332*a*	0·579	72·8	264·9	+14·2	7	27	
		5332	0·680	72·4	257·3	+15·8	11	43	
		5332	0·704	69·0	255·8	+18·4	4	10	
		5334	0·740	114·2	255·6	−13·8	0	3	
		5334	0·788	114·2	251·5	−15·3	6	34	1050*c*
		5334	0·811	112·7	248·9	−14·9	3	7	
		5334	0·831	114·6	247·5	−17·0	0	5	
			0·957	115·3	230·3	−22·4			195
			0·945	56·6	229·2	+33·2			395
Oct. 20		Centre			(299·5)	(+5·3)	(77)	(389)	(2550)
294·175	AS, RF		0·903	289·0	350·8	+19·3			378
			0·900	242·6	345·6	−21·9			409
			0·778	289·2	336·7	+18·1			151
			0·759	233·4	327·6	−23·0			175
		5335	0·815	282·2	340·9	+13·0	1	4	50*f*
		5329*a*	0·683	226·4	318·9	−23·7	1	7	111*c*
		5331	0·478	195·8	294·3	−22·1	0	4	
		5331	0·497	192·0	292·8	−23·8	1	6	
		5333	0·232	342·1	290·6	+17·9	2	10	
		5333	0·226	354·1	287·7	+18·1	0	6	
I.		5332*a*	0·395	64·3	264·8	+14·7	2	9	
		5332	0·455	67·4	260·7	+14·7	6	22	
		5332	0·543	63·0	255·7	+18·7	0	2	
		5332	0·533	66·9	255·7	+16·5	2	15	
		5334	0·650	120·5	251·0	−15·0	8	58	
		5334	0·682	122·5	249·4	−17·4	0	3	319*c*
		5334	0·669	118·3	249·0	−14·3	1	19	
			0·956	3·3	271·7	+77·4			47
			0·847	37·5	238·9	+45·7			233
			0·882	53·1	227·4	+34·7			630
			0·910	117·0	225·6	−21·9			299
Oct. 21		Centre			(286·3)	(+5·2)	(24)	(165)	(2802)
295·528	CL, RF		0·969	293·8	344·7	+24·3			127
			0·947	284·6	340·0	+15·4			231
			0·888	243·7	326·3	−20·4			125
		5331	0·633	225·8	297·5	−21·6	13	145	
		5331	0·625	222·0	295·3	−23·0	4	20	
295·528	CL, RF	5331	0·597	217·4	291·6	−23·5	0	72	
		5332	0·198	28·3	262·8	+15·2	3	22	
		5334	0·409	143·7	254·0	−14·1	0	17	
		5334	0·421	135·6	250·9	−12·5	0	10	
			0·833	124·0	219·3	−24·4			177
Oct. 22		Centre			(268·4)	(+5·2)	(20)	(286)	(660)
296·168	AS, RF		0·972	285·9	337·1	+16·6			262
			0·941	244·8	326·1	−21·6			143
			0·861	293·7	318·7	+23·0			138
			0·872	230·0	311·0	−30·9			188
		5331	0·743	232·8	299·8	−22·7	40	155	
I.		5331	0·703	231·5	296·2	−21·8	2	26	
		5331	0·704	227·3	294·5	−24·3	11	42	
		5331	0·671	224·7	291·0	−24·0	6	71	175*c*
		5332	0·168	342·1	263·0	+14·3	3	12	
		5336*a*	0·825	82·2	204·3	+ 9·3	4	21	73*c*
			0·874	128·4	208·0	−29·8			161
Oct. 23		Centre			(260·0)	(+5·1)	(66)	(327)	(1140)
297·537	AS, RF		0·906	253·3	304·6	−12·8			163
		5331	0·901	242·7	301·3	−21·9	12	154	
		5331	0·883	242·3	298·9	−21·5	0	2	
		5331	0·857	242·0	295·7	−20·8	2	21	360*c*
		5337	0·835	240·1	292·8	−21·5	0	15	
		5337	0·835	237·7	291·9	−23·3	4	25	
		5337	0·822	234·9	289·6	−24·9	0	7	
		5332	0·399	295·9	263·6	+14·7	0	6	
		5338	0·224	49·7	231·8	+13·3	2	18	
		5338	0·244	54·1	230·2	+13·1	0	5	
		5339	0·402	74·3	218·8	+10·9	3	9	
		5339	0·430	74·7	217·0	+11·1	3	13	
		5336	0·565	80·8	207·6	+ 9·3	0	7	
		5336*a*	0·608	81·3	204·6	+ 9·2	0	14	
Oct. 24		Centre			(241·9)	(+5·0)	(26)	(296)	(523)
298·466	CL, RF	5331	0·974	245·9	303·1	−22·1	20	190	466*c*
		5337	0·919	244·1	292·0	−21·4	0	16	
		5340	0·516	299·4	257·8	+18·9	0	2	
		5340	0·502	296·5	257·5	+17·2	1	7	
		5340	0·473	297·9	255·4	+17·2	0	2	
		5338	0·147	342·6	232·2	+12·9	2	11	
		5338	0·154	349·4	231·3	+13·6	0	2	
		5338	0·151	6·4	228·6	+13·5	1	8	
		5339	0·227	62·9	217·8	+10·7	17	179	
		5339	0·265	74·1	214·7	+ 8·9	3	34	
		5336	0·359	77·6	208·9	+ 9·1	0	5	

Group 5335, October 21. A very small spot.
Group 5336, October 23–31. A small spot, *a*, on October 23. A second has formed in advance of it by October 24, and the group becomes later a scattered stream.
Group 5337, October 24–25. A few small spots following Group 5331.
Group 5338, October 24–31. A short stream of spots.
Group 5339, October 24–November 1. A stream of spots between Groups 5336 and 5338. The group increases in size and undergoes continual changes, and on October 27 and the succeeding days, forms with Groups 5336 and 5338 one very fine and nearly continuous stream.
Group 5340, October 25. A few small spots in an irregular stream, preceding Group 5338.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
298·466	CL, RF	5336*a*	0·416	76·8	205·4	+ 9·9	0	18	
			0·886	67·8	167·7	+21·9			129
			0·964	117·5	159·3	−24·9			135
			0·965	77·5	154·2	+13·4			251
Oct. 25		Centre			(229·6)	(+4·9)	(44)	(474)	(981)
299·196	CL, RF		0·937	286·1	290·0	+16·8			185
			0·858	292·2	278·5	+21·4			174
			0·882	244·6	277·7	−19·7			206
			0·717	287·1	265·3	+15·6			202
		5331	0·998	247·2	303·9	−22·3	0	200	721*f*
		5338	0·243	309·6	231·2	+13·6	11	40	
		5338	0·213	317·2	228·6	+13·7	8	35	
		5339	0·115	23·3	217·5	+10·9	28	153	
		5339	0·101	47·5	215·8	+ 8·5	1	4	
I.		5339	0·137	53·0	213·8	+ 9·5	6	40	
		5339	0·167	46·8	213·0	+11·3	0	10	
		5336	0·236	69·5	207·2	+ 9·4	3	20	
		5336	0·322	73·2	201·9	+ 9·9	2	10	
		5341	0·872	77·8	159·3	+13·0	4	10	
		5341	0·894	77·8	156·5	+13·1	1	7	77*c*
			0·954	106·9	149·7	−14·6			205
			0·915	119·0	159·1	−24·0			134
			0·965	75·6	144·8	+15·1			672
Oct. 26		Centre			(220·1)	(+4·8)	(64)	(529)	(2576)
300·328	AS, RF		0·946	291·3	276·5	+21·7			429
			0·801	287·4	257·9	+16·7			405
		5338	0·471	289·9	232·2	+13·4	16	111	
	→	5338	0·423	294·1	228·6	+14·2	13	85	
		5339	0·273	302·6	218·7	+13·0	0	3	
		5339	0·215	294·3	216·6	+ 9·7	0	4	
		5339	0·222	301·1	216·3	+11·2	75	454	
		5339	0·243	309·3	216·3	+13·4	6	37	
		5339	0·214	310·8	214·7	+12·7	8	24	
I.		5339	0·177	311·0	213·0	+11·3	8	32	
		5336	0·121	318·3	209·9	+ 9·9	8	30	
		5336	0·090	334·5	207·4	+ 9·4	3	14	
		5336	0·098	15·9	203·6	+10·2	3	34	
		5342	0·901	76·3	140·8	+14·4	9	40	794*c*
		5343	0·982	107·3	128·1	−16·0	0	67	267*f*
		5343	0·990	107·5	125·4	−16·5	0	36	
			0·793	125·8	160·5	−24·3			97
			0·891	108·8	144·8	−14·4			356
Oct. 27		Centre			(205·2)	(+4·7)	(149)	(971)	(2348)
301·413	AS, RF		0·881	248·1	249·2	−16·8			424
			0·904	286·2	255·5	+16·6			415
			0·727	310·7	231·1	+31·8			202
		5344	0·766	292·4	239·5	+20·0	0	4	62*c*
		5338	0·694	286·4	234·1	+14·7	0	8	
		5338	0·696	283·6	234·5	+12·8	0	3	
		5338	0·667	284·8	232·1	+13·3	16	76	
		5338	0·616	287·1	228·0	+14·1	5	43	
		5339	0·486	289·6	218·8	+13·4	0	7	
		5339	0·436	287·7	215·8	+11·8	61	609	
		5336	0·356	286·7	211·0	+10·2	3	11	
		5336	0·305	287·0	207·9	+ 9·5	0	20	
		5336	0·256	284·5	205·2	+ 8·2	1	5	
		5336	0·250	291·0	204·4	+ 9·6	5	20	
		5336	0·224	293·9	202·7	+ 9·7	3	10	
		5345	0·689	115·8	151·2	−13·9	2	6	
		5342	0·759	74·5	141·9	+14·7	5	21	814*f*
		5342	0·795	74·3	138·5	+15·3	0	9	
		5343	0·906	110·6	128·8	−16·5	11	90	
		5343	0·925	109·0	125·8	−15·6	0	6	745*c*
		5343	0·947	109·0	122·1	−16·3	0	18	
		5343	0·958	109·9	120·1	−17·6	10	99	
Oct. 28		Centre			(190·8)	(+4·6)	(122)	(1065)	(2662)
302·430	CL, RF		0·967	276·0	253·1	+16·6			214
			0·951	252·2	247·0	−15·3			232
			0·944	241·6	243·5	−24·9			88
			0·660	309·8	212·5	+28·6			295
		5344	0·867	291·2	236·9	+20·6	0	6	124*c*
		5338	0·818	282·6	232·1	+12·8	22	102	367*c*
		5338	0·784	284·5	228·7	+14·1	0	19	
		5339	0·631	283·0	216·1	+11·7	78	657	
		5336	0·524	281·0	208·7	+ 9·6	9	54	
		5336	0·451	283·0	203·8	+ 9·9	12	86	
		5342	0·592	65·7	143·0	+17·8	0	3	758*c*
		5342	0·586	70·6	142·7	+14·9	0	8	
		5343	0·842	113·0	123·7	−16·5	38	303	1277*c*
			0·939	67·1	107·6	+23·0			612
Oct. 29		Centre			(177·4)	(+4·5)	(159)	(1238)	(3967)
303·189	CL, M		0·924	291·7	234·7	+21·7			132
			0·893	244·8	226·6	−20·1			161
			0·842	306·9	220·6	+33·0			380
		5338	0·903	281·8	232·1	+12·6	28	113	298*c*
		5338	0·881	283·2	229·2	+13·7	0	15	
		5339	0·755	281·6	216·2	+11·7	125	776	
		5336	0·669	279·2	209·2	+ 9·4	0	2	559*c*
		5336	0·599	279·6	204·0	+ 9·3	5	31	

Group 5341, October 26. A pair of small spots.
Group 5342, October 27–30. A few small spots in a short stream.
Group 5343, October 27–November 7. A fine irregular stream of spots. The leader, *a*, on October 31 is a double spot, formed by the coalescence of two regular spots.
Group 5344, October 28–29. One or two small faint unstable spots forming north of Group 5338.
Group 5345, October 28. A small spot preceding Group 5343.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
303·189	CL, M	5346	0·516	163·4	158·1	−25·2	0	5	
		5342	0·434	62·2	144·0	+15·7	0	2	
I.		5347	0·538	63·2	137·2	+17·8	0	5	
		5347	0·587	64·6	133·6	+18·2	1	3	
		5347	0·669	62·5	128·0	+21·4	0	2	
		5343	0·693	120·0	128·7	−16·8	17	101	
		5343	0·700	118·1	127·6	−15·9	10	30	
		5343	0·719	116·7	125·7	−15·6	8	23	865*c*
		5343	0·752	115·4	122·7	−15·7	4	23	
		5343	0·789	116·6	119·8	−17·7	19	140	
		5343	0·833	114·7	115·0	−17·7	0	8	
			0·909	65·6	102·6	+24·0			257
			0·951	113·3	98·7	−20·6			62
Oct. 30		Centre			(167·4)	(+4·4)	(217)	(1279)	(2714)
304·170	AS, M		0·918	304·0	219·2	+32·8			393
			0·908	237·0	217·7	+31·6			257
		5338	0·973	281·9	231·6	+12·6	0	44	302*f*
		5338	0·903	283·0	219·1	+13·6	16	146	
		5339	0·887	281·1	217·1	+11·9	70	496	896*c*
		5339	0·872	279·0	215·2	+10·0	3	22	
		5339	0·853	279·9	213·1	+10·7	21	155	
		5336	0·763	278·1	204·2	+ 9·0	0	15	271*c*
		5336	0·750	279·9	203·0	+10·3	0	5	
I.		5348	0·341	174·5	152·6	+15·4	0	6	
		5348	0·316	172·1	151·9	−13·9	6	22	
		5348	0·331	164·2	147·8	−14·2	3	13	
		5343*a*	0·550	129·8	128·4	−16·7	20	100	
		5343	0·579	124·8	125·1	−15·5	2	7	
		5343	0·619	123·1	122·0	−16·1	0	2	
		5343	0·648	124·7	120·6	−18·1	15	87	
		5343	0·660	121·9	118·8	−16·9	0	2	
			0·820	62·9	101·3	+24·5			397
			0·949	102·6	84·4	−10·5			92
Oct. 31		Centre			(154·5)	(+4·3)	(156)	(1122)	(2608)
305·174	CL, RF		0·948	303·0	211·8	+32·6			194
			0·960	239·0	210·0	−28·1			74
			0·891	277·5	204·4	+ 8·6			219
			0·921	231·9	200·4	−32·5			80
		5339	0·966	281·0	216·6	+11·7	103	939	739*c*
		5349	0·556	288·2	174·1	+13·6	0	7	
		5348	0·366	211·2	152·5	−14·1	3	13	
		5348	0·334	205·5	149·8	−13·3	1	5	
I.		5343*a*	0·412	150·2	129·0	−16·8	29	152	
		5343	0·412	137·6	124·8	−13·6	0	2	
		5343	0·492	140·2	122·0	−18·1	3	5	
1904.				°	°	°			
305·174	CL, RF	5343	0·497	138·4	121·0	−17·8	0	19	
		5343	0·514	136·4	119·5	−17·9	10	33	
		5350	0·588	138·5	116·5	−22·3	0	6	
		5351*a*	0·992	107·0	60·4	−16·2	29	87	120*p*
			0·956	76·2	68·1	+14·4			288
Nov. 1		Centre			(141·3)	(+4·2)	(178)	(1268)	(1714)
306·429	CL, RF		0·975	278·3	202·1	+ 9·0			137
		5343*a*	0·366	192·8	129·5	−16·8	23	126	
		5343	0·355	186·4	127·1	−16·5	0	4	
		5343	0·322	176·3	123·5	−14·6	0	10	
		5343	0·384	173·8	122·2	−18·3	0	5	
		5343	0·377	167·5	119·8	−17·5	5	19	
		5351*a*	0·921	109·8	60·2	−16·5	19	130	298*c*
			0·920	73·0	57·9	+17·2			276
			0·956	84·2	51·6	+ 6·7			83
Nov. 2		Centre			(124·7)	(+4·1)	(47)	(294)	(794)
307·477	AS, RF	5343*a*	0·472	222·1	129·7	−16·9	13	123	
		5343	0·399	202·9	120·2	−17·5	0	5	
		5352	0·225	27·9	104·7	+15·4	0	4	
		5351*a*	0·813	113·4	60·1	−16·3	12	110	321*c*
			0·895	130·0	56·4	−32·8			116
			0·831	73·6	55·2	+15·8			299
			0·918	113·9	47·8	−20·0			215
Nov. 3		Centre			(110·9)	(+4·0)	(25)	(242)	(951)
308·433	CL, RF	5343*a*	0·614	235·8	130·2	−16·8	21	88	
		5351*a*	0·680	119·2	60·2	−16·3	19	154	
			0·812	117·5	48·6	−19·5			196
			0·945	78·4	27·2	+12·3			444
Nov. 4		Centre			(98·3)	(+3·9)	(40)	(242)	(640)
309·448	AS, RF		0·959	244·4	154·9	−23·2			90
			0·933	253·0	151·8	−14·4			181
			0·844	287·1	142·0	+16·5			320
		5343*a*	0·761	243·9	130·3	−16·9	12	131	334*c*
		5353	0·156	40·6	79·0	+10·6	14	39	
		5353	0·186	50·8	76·5	+10·5	0	5	
		5353	0·205	46·1	76·3	+11·9	1	9	
		5354	0·294	88·1	67·8	+ 4·2	1	4	
		5354	0·316	90·2	66·5	+ 3·6	0	5	
		5351*a*	0·521	129·7	60·4	−15·9	14	114	
			0·880	75·2	23·4	+14·9			486
Nov. 5		Centre			(84·9)	(+3·8)	(42)	(307)	(1411)

Group 5346, October 30. A few very small spots in a straight stream.
Group 5347, October 30. A few very small spots in a straight stream following Group 5342.
Group 5348, October 31–November 1. A few very small spots in an irregular stream preceding Group 5343. Apparently a revival of Group 5345.
Group 5349, November 1. A few very small spots in a short stream.
Group 5350, November 1. A small spot south following Group 5343.
Group 5351, November 2–12. A regular spot, *a*, with occasionally one or two small companions.
Group 5352, November 3. A small faint spot.
Group 5353, November 5–8. A few very small spots in an irregular stream.
Group 5354, November 5–7. A few very small 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, and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
310·214	AS, RF		0·974	253·0	149·9	−15·6			93
			0·954	284·4	147·5	+14·9			311
			0·838	290·7	130·7	+19·3			284
			0·736	235·2	115·3	−22·0			176
		5343*a*	0·855	247·4	130·3	−17·1	11	114	} 155*c*
		5343	0·848	250·1	130·1	−14·7	0	2	
		5343	0·844	248·5	129·3	−15·9	0	7	
		5355	0·470	304·8	98·8	+18·9	0	5	
		5355	0·447	307·3	96·8	+19·1	0	4	
I.		5353	0·146	351·0	76·1	+12·0	2	14	
		5353	0·146	326·2	79·5	+10·7	5	29	
		5351*a*	0·415	143·4	60·0	−15·8	15	99	
		5351	0·459	145·7	59·0	−18·7	0	5	
		5351	0·441	140·3	57·8	−16·2	0	10	
		5354	0·109	74·6	68·8	+ 5·4	0	4	
		5354	0·184	81·7	64·3	+ 5·1	0	2	
			0·822	71·6	20·3	+17·2			539
			0·938	130·6	13·6	−35·8			246
			0·985	71·7	354·1	+18·6			122
Nov. 6		Centre			(74·8)	(+3·7)	(33)	(295)	(1926)
311·147	CL, RF		0·932	289·3	130·9	+19·2			428
			0·941	242·1	128·6	−24·7			44
			0·906	282·1	127·4	+12·4			152
			0·899	300·8	124·4	+29·1			142
		5343*a*	0·941	250·4	130·3	−17·1	13	80	755*sf*
		5353	0·278	288·3	77·9	+ 8·5	0	4	
		5353	0·336	292·8	80·8	+10·8	5	21	
I.		5353	0·269	299·6	79·9	+11·0	2	7	
		5354	0·106	299·0	67·8	+ 6·5	1	4	
		5354	0·091	290·2	67·4	+ 5·3	0	1	
		5351*a*	0·333	173·2	60·2	−15·7	19	90	
			0·753	68·1	15·1	+18·7			230
			0·966	116·4	351·0	−24·3			127
			0·955	70·2	349·9	+19·9			691
			0·967	110·4	349·6	−18·7			191
Nov. 7		Centre			(62·5)	(+3·5)	(40)	(207)	(2760)
312·438	CL, RF		0·956	245·2	115·2	−22·5			386
		5353	0·598	284·0	81·5	+11·1	0	22	
		5353	0·542	284·5	77·5	+10·7	0	7	
		5351*a*	0·407	217·3	60·2	−15·6	8	69	
			0·871	118·0	349·5	−22·2			122
			0·885	68·4	344·0	+20·7			355
Nov. 8		Centre			(45·4)	(+3·4)	(8)	(98)	(863)
313·171	AS, M		0·978	246·7	111·3	−22·0			290
			0·903	292·7	99·4	+21·9			245
			0·720	282·0	81·4	+10·9			109
		5351	0·531	230·1	60·9	−16·9	1	3	
		5351*a*	0·511	230·9	60·0	−15·7	18	80	
		5351	0·524	227·2	59·5	−17·8	2	7	
I.		5351	0·503	224·7	57·5	−17·8	0	6	
			0·802	123·5	348·9	−24·0			144
			0·804	60·6	345·2	+25·3			118
			0·814	73·1	342·0	+15·7			298
			0·922	122·6	334·2	−28·2			97
			0·924	59·2	330·1	+29·6			75
			0·944	70·5	325·3	+19·5			103
Nov. 9		Centre			(35·8)	(+3·3)	(21)	(96)	(1479)
314·169	CL, RF		0·976	300·1	99·6	+30·0			92
			0·955	290·2	95·2	+20·3			233
			0·860	281·3	81·7	+11·4			242
I.		5351*a*	0·662	241·4	59·6	−15·9	9	56	
		5356*a*	0·991	112·6	302·4	−21·9	35	210	311*n*
			0·911	65·9	318·0	+23·2			117
Nov. 10		Centre			(22·6)	(+3·2)	(44)	(266)	(995)
315·458	CL, RF		0·933	277·3	74·6	+ 8·0			227
			0·829	291·1	60·4	+19·1			190
		5351*a*	0·831	248·5	59·0	−15·9	7	32	418*c*
		5357	0·438	54·9	343·7	+17·5	0	46	
		5357	0·517	55·6	338·9	+19·7	2	13	
		5356*a*	0·928	115·0	301·0	−21·8	27	216	1283*c*
			0·842	62·3	310·7	+24·8			146
Nov. 11		Centre			(5·7)	(+3·1)	(36)	(307)	(2264)
316·153	CL, RF		0·952	275·6	68·5	+ 6·3			226
			0·949	262·5	67·3	− 6·2			84
			0·904	290·2	60·3	+19·5			213
			0·801	275·3	49·5	+ 6·0			67
		5351*a*	0·903	250·8	58·7	−15·9	4	54	324*c*
I.		5357	0·361	28·0	346·0	+21·5	0	4	
		5357	0·416	43·5	338·7	+20·4	0	8	
		5356*a*	0·875	117·3	299·6	−22·0	44	259	1362*c*
			0·939	74·2	286·7	+15·9			264
Nov. 12		Centre			(356·4)	(+3·0)	(48)	(325)	(2540)

Group 5355, November 6. A pair of very small spots.
Group 5356, November 10–21. A large regular spot, *a*, with occasionally some small companions.
Group 5357, November 11–12. A few small faint 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, and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
317·541	AS, M		0·957	244·6	48·2	−23·3			175
			0·750	285·7	26·0	+13·6			139
		5356	0·702	129·5	301·9	−24·2	0	3	} 764*f*
		5356*a*	0·702	125·9	300·5	−22·0	34	235	
		5358	0·952	114·8	269·1	−22·5	14	57	351*c*
			0·898	71·3	275·0	+18·0			323
			0·964	62·1	264·4	+27·6			159
Nov. 13		Centre			(338·2)	(+2·8)	(48)	(295)	(1911)
318·524	CL, RF	5356	0·580	141·0	301·8	−24·3	0	13	} 272*c*
		5356*a*	0·574	137·0	300·4	−22·3	28	202	
		5358	0·865	116·4	269·4	−21·1	0	16	} 329*c*
		5358	0·870	118·3	269·3	−22·8	14	90	
			0·884	73·5	263·8	+15·8			219
Nov. 14		Centre			(325·3)	(+2·7)	(42)	(321)	(820)
319·491	AS, RF		0·941	284·9	22·5	+14·9			134
			0·840	292·0	8·2	+19·8			152
		5356	0·482	158·9	301·6	−24·1	0	4	
		5356*a*	0·462	155·0	300·4	−22·2	26	178	
		5356	0·451	151·1	299·1	−20·6	0	7	
		5358	0·750	122·0	269·5	−21·5	17	116	580*f*
			0·860	67·1	254·7	+20·9			390
Nov. 15		Centre			(312·5)	(+2·6)	(43)	(305)	(1256)
320·332	AS, RF		0·944	291·0	11·5	+20·6			129
			0·912	226·7	357·8	−37·3			26
			0·799	238·1	348·8	−23·3			152
		5356*a*	0·425	177·8	300·4	−22·5	25	143	
		5356	0·432	174·7	298·9	−22·9	5	19	
		5356	0·398	174·2	298·9	−20·8	0	11	
I.		5356	0·447	164·8	294·1	−23·0	0	9	
		5359	0·264	20·9	295·8	+16·7	0	28	
		5358	0·644	129·1	269·0	−21·8	18	129	779*f*
		5360	0·993	79·3	218·1	+10·9	35	140	430*sp*
			0·878	45·9	247·2	+39·1			100
			0·873	72·1	241·4	+16·8			252
			0·966	108·9	228·2	−17·5			119
Nov. 16		Centre			(301·4)	(+2·5)	(83)	(479)	(1987)
321·176	CL, RF		0·894	241·6	349·5	−24·0			321
			0·848	290·6	347·0	+18·6			838
		5356	0·389	207·6	301·2	−17·8	0	2	
		5356*a*	0·456	200·8	300·4	−22·8	20	128	
		5356	0·429	198·0	298·5	−21·7	0	1	
I.		5358	0·514	141·9	270·4	−21·6	8	23	

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
321·176	CL, RF	5358	0·529	139·7	268·8	−21·5	4	26	
		5360*a*	0·950	79·2	218·6	+11·0	27	141	751*c*
			0·883	117·5	232·3	−22·8			239
			0·970	54·8	216·2	+34·6			131
Nov. 17		Centre			(290·3)	(+2·3)	(59)	(321)	(2280)
322·185	AS, RF		0·924	285·5	344·0	+15·1			341
			0·924	242·3	340·7	−24·4			236
			0·899	298·9	338·7	+26·8			317
		5356*a*	0·562	220·8	330·4	−23·1	18	111	
		5356	0·570	214·3	297·8	−25·9	0	3	
		5358	0·418	164·8	270·3	−21·5	6	11	
		5358	0·403	162·2	269·5	−20·3	2	19	
I.		5361	0·684	78·1	234·4	+ 9·7	3	11	}
		5361	0·698	82·7	233·0	+ 6·7	0	2	
		5361	0·718	77·7	231·7	+10·3	3	18	} 424*c*
		5362	0·789	75·7	225·6	+12·6	0	4	
		5360*a*	0·855	78·7	218·6	+10·8	20	136	552*f*
			0·903	119·3	216·8	−25·1			174
			0·917	54·1	214·2	+33·5			302
Nov. 18		Centre			(277·0)	(+2·2)	(52)	(315)	(2346)
323·168	CL, RF		0·977	281·4	341·7	+11·6			99
			0·941	299·1	332·5	+28·1			63
			0·915	289·1	329·4	+18·3			77
		5363	0·975	288·2	341·0	+18·2	0	52	402*c*
		5356*a*	0·694	232·3	300·6	−23·4	19	107	
		5358	0·394	196·6	270·8	−20·0	0	3	
		5358	0·411	194·4	270·3	−21·3	1	5	
		5361	0·536	74·1	232·5	+10·2	16	68	}
I.		5362	0·666	73·1	223·4	+12·7	2	15	} 277*c*
		5362	0·698	70·6	221·2	+14·9	1	6	
		5360*a*	0·719	77·0	218·7	+10·8	24	133	}
		5364	0·987	69·5	183·3	+20·6	23	78	214*p*
			0·850	124·9	212·1	−27·8			127
			9·878	44·0	210·9	+40·4			56
			0·894	55·0	204·6	+31·9			173
Nov. 19					(264·0)	(+2·1)	(86)	(467)	(1488)
324·205	AS, RF		0·880	297·4	309·7	+24·9			78
		5356*a*	0·817	239·4	300·2	−23·3	19	74	687*c*
		5358	0·524	218·1	270·8	−22·4	0	4	
		5358	0·495	219·0	269·8	−20·7	0	9	
		5361	0·308	61·4	234·5	+10·4	8	23	
		5361	0·340	64·4	232·3	+10·3	1	3	
		5361	0·384	63·5	229·9	+11·7	4	10	
I.		5362	0·485	66·0	223·5	+13·1	10	27	

Group 5358, November 13–20. A number of spots in a compact cluster.
Group 5359, November 16. A faint spot.
Group 5360, November 16–27. A large regular spot, *a*.
Group 5361, November 18–22. A stream of small spots.
Group 5362, November 18–23. A stream of small spots, following Group 5361 and north preceding Group 5360; so that the three groups form on November 20 practically a single stream.
Group 5363, November 19. A spot seen only close to the west limb. Apparently a revival of Group 5357.
Group 5364, November 20–December 1. A few small spots in an irregular stream. The group undergoes continual change as to the numbers and areas of its component spots. It is a compact cluster on November 27, but has developed again into an irregular stream by November 28; its two chief members, *a* and *b*, being regular spots.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
324·205	AS, RF	5362	0·514	68·7	221·2	+12·5	1	3	
		5362	0·529	66·6	220·5	+13·8	3	15	
		5360*a*	0·549	73·5	218·2	+10·6	22	119	
I.		5360	0·584	73·7	215·7	+11·0	0	5	
		5364	0·931	68·9	182·8	+20·3	3	27	353*l*
			0·792	126·4	205·1	−26·6			66
			0·945	129·9	186·3	−36·4			81
Nov. 20		Total			(250·4)	(+2·0)	(71)	(319)	(1265)
325·467	CL, RF	5356*a*	0·937	244·2	300·2	−23·3	3	20	633*sf*
		5361	0·158	343·6	236·3	+10·6	0	5	
		5361	0·217	31·8	227·0	+12·5	0	18	
		5362	0·294	45·1	221·4	+13·8	0	6	
		5365	0·355	37·8	220·5	+18·1	1	10	
		5365	0·385	38·2	219·1	+19·4	0	3	
		5360*a*	0·291	58·8	219·1	+10·5	20	107	
		5364	0·795	65·7	183·3	+20·3	1	8	164*c*
		5364	0·815	69·5	180·6	+17·7	0	17	
		5364	0·838	68·9	178·3	+18·6	1	4	
Nov. 21		Centre			(233·7)	(+1·9)	(26)	(198)	(797)
326·181	CL, RF		0·903	244·9	285·7	−21·7			1071
			0·873	286·4	284·3	+15·1			131
		5366	0·545	325·7	244·6	+28·2	4	6	
		5366	0·558	328·7	243·8	+30·0	1	7	
		5361	0·194	345·6	227·1	+12·5	3	11	
		5362	0·200	357·1	224·9	+13·2	1	12	
		5362	0·203	11·8	221·9	+13·1	0	1	
		5365	0·289	13·1	220·4	+18·0	2	7	
		5360*a*	0·177	32·1	218·8	+10·3	18	110	
I.		5365	0·320	16·9	218·7	+19·5	1	2	
		5364	0·676	62·5	185·0	+19·5	0	2	
		5364	0·719	66·7	180·6	+17·7	9	55	
		5364	0·730	69·2	179·2	+16·2	2	11	90*c*
		5364	0·754	66·6	177·6	+18·6	2	10	
		5364	0·752	69·8	177·2	+16·2	1	12	
		5364	0·783	70·4	174·3	+16·3	0	3	
			0·939	105·0	155·7	−13·5			386
			0·954	75·2	152·2	+14·6			283
Nov. 22		Centre			(224·3)	(+1·7)	(44)	(249)	(1961)
327·493	CL, RF		0·917	244·6	270·4	−22·4			538
			0·860	227·4	257·1	−34·6			139
		5366	0·710	308·2	245·7	+27·2	11	81	
		5366	0·715	311·3	244·9	+29·4	3	23	
327·493	CL, RF	5366	0·712	313·8	243·6	+30·7	0	24	
		5362	0·364	302·3	225·3	+12·7	5	33	
		5360*a*	0·256	306·9	219·0	+10·4	17	116	
		5364	0·494	48·7	183·8	+20·4	0	11	
		5364	0·500	54·3	181·8	+18·3	8	35	
			0·826	73·1	152·4	+14·8			291
			0·838	107·2	151·8	−13·4			354
			0·964	110·4	134·2	−19·1			316
			0·964	67·2	133·2	+22·4			139
Nov. 23		Centre			(207·0)	(+1·6)	(44)	(323)	(1777)
328·184	AS, RF		0·910	289·1	262·4	+18·0			193
			0·905	246·5	260·0	−20·4			364
			0·736	245·8	242·2	−16·5			151
		5366	0·822	304·5	248·2	+28·6	0	17	143*c*
		5366*a*	0·802	304·9	246·1	+28·3	102	545	
		5366	0·795	309·2	243·7	+31·1	0	10	
		5360	0·496	294·2	225·4	+13·0	1	17	
		5360	0·441	298·5	221·3	+13·5	0	8	
		5365	0·459	310·9	219·3	+18·8	1	10	
I.		5360*a*	0·391	293·7	219·1	+10·4	23	92	
		5364	0·415	31·4	184·5	+22·2	4	27	
		5364	0·405	35·7	183·3	+20·6	0	2	
		5364	0·399	43·4	181·2	+18·3	11	24	
		5364	0·402	48·5	179·6	+16·8	0	2	
		5364	0·440	52·7	176·6	+16·8	1	4	
			0·772	108·1	149·3	−12·8			114
			0·873	68·9	138·6	+19·1			371
			0·939	112·1	130·2	−20·1			386
Nov. 24		Centre			(197·9)	(+1·5)	(143)	(758)	(1722)
329·178	CL, RF		0·963	247·6	257·2	−21·1			304
			0·914	289·8	249·7	+18·6			164
		5366*a*	0·904	301·1	246·3	+28·5	131	1066	372*c*
		5367	0·879	276·8	246·1	+ 6·7	0	8	124*c*
		5368*a*	0·902	249·9	247·2	−17·4	7	14	182*c*
		5368*b*	0·876	248·8	243·6	−17·7	0	4	
		5360	0·602	284·6	220·9	+ 9·9	0	2	
		5360*a*	0·583	286·3	219·4	+10·6	11	72	
I.		5364	0·350	356·7	186·0	+21·8	6	22	
		5364	0·347	2·9	183·7	+21·6	7	21	
		5364	0·295	11·6	181·2	+18·1	4	15	
			0·885	63·1	125·1	+24·2			218
			0·897	115·1	124·1	−21·7			458
			0·971	71·5	109·1	+18·3			93
Nov. 25		Centre			(184·8)	(+1·4)	(166)	(1224)	(1915)

Group 5365, November 21–22. One or two very small spots, north of Group 5360.
Group 5366, November 22–27. A pair of very small spots on November 22, which develop with great rapidity on the succeeding days to form a very large composite spot, *a*.
Group 5367, November 25. A very small spot south of Group 5366.
Group 5368, November 25. Two small spots, *a* and *b*.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
330·180	AS, RF		0·971	276·2	247·6	+ 6·4			132
			0·898	281·3	235·0	+10·7			145
			0·863	275·1	231·0	+ 5·1			42
		5368*a*	0·978	251·7	248·3	−17·6	0	11	159*c*
		5368*b*	0·957	251·1	243·1	−17·6	4	18	
		5366*a*	0·971	299·1	246·5	+28·6	128	1532	378*c*
		5369	0·944	291·2	241·2	+20·4	6	19	135*c*
		5370	0·876	251·3	230·9	−15·6	30	99	131*c*
I.		5362	0·835	285·9	227·3	+14·0	0	3	616*c*
		5360*a*	0·753	282·5	219·7	+10·2	15	81	
		5364	0·420	325·0	186·5	+21·4	0	25	
		5364	0·388	330·9	183·2	+21·1	9	53	
		5364	0·335	331·4	181·3	+18·3	3	13	
			0·732	124·1	130·5	−23·2			204
			0·893	116·2	111·7	−22·5			496
			0·931	105·8	104·3	−14·2			80
			0·954	72·2	99·7	+17·4			168
Nov. 26		Centre			(171·6)	(+ 1·3)	(195)	(1854)	(2686)
331·190	CL, RF		0·989	291·8	239·3	+21·7			141
			0·975	279·7	235·3	+ 9·8			102
			0·899	290·4	221·0	+18·8			75
			0·875	246·0	216·5	−20·2			58
			0·805	308·5	205·3	+30·8			171
		5366*a*	0·994	298·2	241·4	+28·1	28	376	
		5370	0·978	254·5	235·3	−14·9	12	88	
		5370	0·960	255·5	231·1	−13·6	0	4	242*c*
		5370	0·958	252·0	230·3	−16·9	11	58	
I.		5370	0·951	253·9	229·1	−14·9	7	17	
		5360*a*	0·883	280·9	219·8	+10·2	9	42	1058*c*
		5371	0·663	297·8	196·5	+18·9	1	8	
		5364	0·523	310·8	183·3	+21·0	45	251	
		5372	0·622	119·3	123·9	−16·7	3	15	
		5372	0·674	118·5	120·0	−17·8	3	6	
			0·758	120·1	113·7	−21·4			226
			0·796	106·3	107·1	−12·1			37
			0·998	68·5	72·1	+21·5			158
			0·991	69·7	76·3	+20·3			524
Nov. 27		Centre			(158·3)	(+ 1·2)	(119)	(865)	(2792)
332·330	AS, RF		0·941	280·6	213·0	+10·3			438
			0·886	302·8	201·6	+29·2			86
			0·902	313·2	200·3	+38·6			135
I.		5370	0·995	255·1	226·7	−14·7	0	57	282*c*
		5370	0·994	253·5	226·1	−16·3	0	9	
		5371	0·800	294·2	193·9	+19·8	28	117	158*c*

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
332·330	AS, RF	5364	0·695	298·2	183·7	+19·9	3	14	
		5364	0·698	300·2	183·4	+21·3	28	151	
		5364	0·670	301·1	181·0	+21·0	0	8	
		5364	0·642	300·5	179·1	+19·8	21	130	
		5364	0·627	298·6	178·5	+18·3	0	2	
		5364	0·621	302·0	177·1	+20·0	0	1	
		5364	0·566	299·6	174·0	+17·0	1	9	
		5373	0·564	289·9	175·9	+11·9	0	10	
		5373	0·545	294·4	173·8	+13·8	1	10	
		5373	0·513	292·4	172·1	+12·1	6	29	
		5372	0·449	132·7	123·1	−16·7	4	15	
I.		5372	0·469	128·3	120·8	−15·9	0	2	
		5372	0·488	130·3	120·3	−17·4	1	5	
		5372	0·510	129·1	118·7	−17·8	2	6	
		5372	0·519	126·2	117·3	−16·9	0	1	
		5374	0·725	27·1	117·4	+40·9	0	21	
		5375	0·939	68·1	74·6	+20·9	0	3	146*c*
			0·663	130·6	109·7	−24·7			107
			0·861	44·5	93·0	+38·4			47
			0·866	52·2	89·1	+32·6			37
			0·931	113·6	76·9	−21·5			73
			0·976	107·8	67·0	−17·1			97
Nov. 28		Centre			(143·2)	(+ 1·0)	(95)	(600)	(1606)
333·184	CL, RF		0·955	305·6	201·4	+34·1			157
			0·901	280·4	195·8	+ 9·8			141
		5371	0·934	291·4	199·8	+20·3	15	45	292*c*
		5371	0·894	291·9	193·7	+19·9	0	43	
		5364	0·834	295·1	185·9	+21·2	19	136	446*c*
		5364	0·786	294·4	181·2	+19·5	12	87	
		5364	0·818	296·8	183·9	+22·2	0	3	240*c*
		5373	0·745	285·7	179·0	+12·3	23	64	
		5373	0·724	287·3	177·0	+13·1	5	15	
		5373	0·695	286·6	174·8	+12·1	10	73	
		5373	0·679	289·1	173·1	+13·5	0	4	
I.		5372	0·370	149·3	120·6	−17·6	4	15	
		5372	0·363	141·0	118·4	−15·4	0	16	
		5372	0·420	138·5	115·1	−17·4	0	6	
		5372	0·481	133·2	110·4	−18·3	0	11	
		5376	0·776	37·9	94·7	+38·3	0	6	52*f*
		5375	0·889	65·3	72·5	+22·2	0	3	126*f*
		5377	0·960	76·8	58·7	+12·9	0	7	38*c*
		5377*a*	0·962	74·5	58·5	+15·1	8	37	77*c*
			0·924	72·9	65·4	+16·1			43
			0·937	108·9	64·1	−17·3			266
			0·952	66·3	61·3	+22·8			104
			0·987	76·4	51·5	+13·6			117
Nov. 29		Centre			(132·0)	(+ 0·9)	(96)	(571)	(2099)

Group 5369, November 26. A small spot south of Group 5366, but north of the place of Group 5367
Group 5370, November 26–28. A stream of spots following Group 5368.
Group 5371, November 27–30. A stream of unstable spots forming preceding Group 5364.
Group 5372, November 27–December 4. A few small spots in a compact cluster.
Group 5373, November 28–December 1. A fine irregular stream of spots forming south following Group 5364.
Group 5374, November 28. A small spot.
Group 5375, November 28–29. A very small spot.
Group 5376, November 29. A very small spot.
Group 5377, November 29–30. A small spot, *a*, with a very small companion on November 29.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
334·189	AS, RF		0·962	302·9	190·4	+31·8			97
			0·942	255·4	188·1	−13·4			91
			0·911	274·9	184·2	+ 4·8			129
			0·900	300·4	179·7	+27·5			79
			0·894	307·7	176·6	+33·5			71
		5371	0·987	290·4	199·1	+20·3	0	46	676*c*
		5371	0·967	290·6	193·1	+20·1	0	32	
		5364	0·930	292·1	185·8	+20·8	33	143	
		5364	0·897	290·7	181·0	+18·8	5	31	
		5373	0·862	284·9	177·4	+13·2	2	13	
I.		5373	0·860	286·5	177·0	+14·6	0	3	229*c*
		5373	0·853	283·5	176·5	+11·9	61	310	
		5373	0·843	286·0	175·2	+13·9	0	5	
		5378	0·674	253·2	159·7	−10·6	9	23	
		5378	0·656	251·8	158·1	−11·1	0	16	
		5378	0·624	250·6	155·5	−11·3	8	29	
		5378	0·600	252·0	154·1	−10·0	0	6	
		5372	0·321	185·8	120·7	−17·8	6	40	
		5377*a*	0·870	72·9	59·5	+15·1	2	6	224*f*
			0·882	114·0	59·6	−20·6			237
			0·884	65·6	58·9	+21·8			125
			0·906	121·6	58·2	−27·9			50
Nov. 30		Centre			(118·8)	(+0·8)	(126)	(703)	(2008)
335·176	CL, RF	5364	0·985	290·9	185·2	+20·7	24	133	
		5364	0·973	290·4	181·6	+20·0	0	10	411*gf*
		5373	0·946	282·9	176·3	+12·4	33	421	420*e*
		5378	0·823	257·0	160·2	−10·3	4	29	160*e*
		5379	0·694	255·5	148·6	− 9·5	0	8	
		5372	0·418	215·9	120·8	−19·1	1	5	
I.		5372	0·394	219·2	120·8	−17·1	7	28	70*e*
		5372	0·382	215·8	119·3	−17·4	0	4	
			0·729	65·5	61·8	+18·0			187
			0·816	114·3	54·0	−19·2			97
			0·820	73·4	52·0	+13·9			112
			0·925	81·1	38·5	+ 8·5			46
			0·931	75·0	38·0	+14·2			73
Dec. 1		Centre			(105·8)	(+0·6)	(69)	(638)	(1576)
336·443	CL, RF		0·912	285·9	153·8	+14·6			221
			0·756	237·5	132·9	−23·6			112
		5378	0·946	259·3	159·5	−10·0	7	43	230*g*
		5372	0·598	239·3	121·5	−17·4	10	60	
Dec. 2		Centre			(89·0)	(+0·4)	(17)	(103)	(563)
337·170	AS, RF		0·968	285·2	154·3	+14·8			210
			0·964	258·9	153·4	−10·6			195
			0·951	251·4	150·1	−17·5			180
			0·887	290·4	140·2	+18·1			207
			0·862	260·4	138·3	− 8·1			57
			0·845	244·7	134·1	−20·9			577
			0·759	290·5	126·8	+15·6			90
			0·774	301·2	125·6	+23·8			319
I.		5372	0·730	246·5	123·5	−16·6	2	20	252*c*
		5372	0·696	244·0	120·2	−17·5	11	41	
		5380	0·583	243·7	112·0	−14·7	1	4	
		5380	0·547	242·7	109·4	−14·3	4	15	
		5380	0·518	239·7	106·9	−14·9	4	10	
			0·915	67·9	14·9	+20·3			92
			0·940	79·7	9·9	+ 9·8			171
Dec. 3		Centre			(79·4)	(+0·3)	(22)	(90)	(2350)
338·157	AS, RF		0·931	247·3	133·1	−21·0			349
			0·908	293·5	129·4	+21·2			368
			0·789	238·3	113·7	−24·3			294
		5372	0·841	249·2	121·6	−17·2	2	8	263*c*
		5372	0·819	248·6	119·2	−17·2	0	71	
I.		5372	0·777	246·1	114·6	−18·2	0	15	
		5380	0·721	249·3	110·4	−14·6	6	30	131*c*
		5380	0·705	248·8	109·0	−14·6	2	9	
		5381*a*	0·967	68·6	352·4	+20·7	35	230	1028*sf*
Dec. 4		Centre			(66·4)	(+0·2)	(45)	(363)	(2433)
339·513	RS, M		0·958	292·4	120·5	+21·5			235
			0·931	302·9	113·4	+30·4			100
			0·919	246·2	113·2	−21·7			660
			0·815	294·7	100·4	+20·0			157
		5380	0·905	254·1	112·3	−14·3	3	13	427*f*
		5382*a*	0·774	280·8	98·6	+ 8·4	0	48	258*c*
		5382*b*	0·725	282·7	94·2	+ 9·2	11	107	
		5381*a*	0·850	65·6	353·0	+20·6	32	228	193*c*
		5383*a*	0·961	72·5	335·6	+16·8	18	272	312*c*
		5383	0·973	73·2	332·8	+16·3	0	22	
		5384*a*	0·976	82·4	331·5	+ 7·4	0	51	151*c*
			0·895	113·8	347·5	−21·1			296
			0·905	71·0	345·2	+17·2			1535
Dec. 5		Centre			(48·6)	(+0·1)	(64)	(741)	(4324)
340·169	CL, RF		0·962	244·1	112·3	−24·9			386
I.			0·949	253·8	110·6	−15·3			252

Group 5378, November 30–December 2. A few spots in a short stream, first seen near the west limb.
Group 5379, December 1. A very small spot, following Group 5378.
Group 5380, December 3–5. A few spots in a short stream, following Group 5372, and first seen near the west limb.
Group 5381, December 4–15. A large regular spot, *a*, with occasionally some small companions.
Group 5382, December 5–8. Two spots, *a* and *b*, on December 5. *a* has broken up by December 6. *b* is a regular spot.
Group 5383, December 5–16. A fine stream following Group 5381. The leader, *a*, is a large regular spot at first, but lengthens out, and is divided by bridges as it approaches the central meridian, and is broken up by December 11.
Group 5384, December 5–9. A small spot, *a*, south of Group 5383. It has a very small companion on December 9.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
340·169	CL, RF	5382	0·873	279·5	100·3	+ 8·3	2	26	} 141*c*
		5382	0·839	279·6	96·5	+ 8·1	0	18	
		5382*b*	0·823	281·5	94·6	+ 9·5	15	87	
		5381*a*	0·775	62·4	352·8	+21·0	37	189	837*sf*
I.		5383*a*	0·912	71·1	335·6	+17·2	34	348	} 287*c*
		5383	0·934	72·8	332·1	+16·0	7	52	
		5383	0·962	71·0	326·9	+18·3	10	97	
		5384*a*	0·937	81·7	330·9	+ 7·8	10	27	264*c*
Dec. 6		Centre			(40·0)	(0·0)	(115)	(844)	(2167)
341·173	AS, RF		0·990	255·1	108·1	−14·8			114
			0·944	245·0	95·4	−23·5			177
			0·900	290·5	89·1	+18·3			134
		5382	0·957	278·4	99·4	+ 8·0	7	36	} 163*c*
		5382*b*	0·928	280·0	94·3	+ 9·2	16	76	
		5385	0·575	311·4	54·3	+22·1	0	3	
		5385	0·564	314·2	52·6	+22·9	0	4	
		5381*a*	0·633	55·9	352·8	+20·6	32	166	} 483*f*
		5386	0·592	67·1	352·8	+13·1	0	3	
		5387	0·594	74·5	351·4	+ 8·9	19	60	
I.		5387	0·617	74·0	349·9	+ 9·6	1	12	
		5387	0·634	77·6	348·2	+ 7·7	5	35	
		5387	0·646	75·3	347·6	+ 9·2	13	51	
		5383*a*	0·799	67·9	336·0	+17·4	69	300	} 450*c*
		5383	0·811	69·5	334·6	+16·3	2	9	
		5383	0·856	69·7	329·8	+17·1	26	159	
		5384*a*	0·831	80·7	331·1	+ 7·6	11	38	291*c*
			0·939	106·0	317·8	−15·0			323
			0·985	117·9	308·0	−27·5			61
			0·991	75·7	304·8	+14·2			178
Dec. 7		Centre			(26·7)	(−0·2)	(201)	(952)	(2374)
342·173	AS, RF		0·959	287·2	86·0	+16·3			177
			0·809	250·6	65·8	−15·7			136
		5382*b*	0·987	279·6	94·0	+ 9·4	12	71	240*p*
		5387*a*	0·383	63·8	353·3	+ 9·4	38	186	
		5387	0·412	69·9	350·7	+ 7·8	6	42	
		5387	0·427	67·2	350·2	+ 9·2	1	6	
		5387	0·449	65·3	349·2	+10·5	0	13	
		5387	0·450	71·0	348·3	+ 8·1	0	3	
I.		5387*b*	0·481	69·2	346·6	+ 9·5	38	195	
		5381*a*	0·492	42·9	352·7	+20·8	24	144	}
		5381	0·516	47·9	349·7	+20·0	0	19	
		5381	0·528	54·9	346·8	+17·4	0	13	
		5383*a*	0·656	62·5	336·2	+17·4	58	321	} 362*c*
		5383	0·711	66·3	331·1	+16·3	14	113	
		5383	0·762	65·4	326·9	+18·3	0	10	
1904.				°	°	°			
342·173	AS, RF	5384*a*	0·678	78·4	331·7	+ 7·6	12	22	
		5388*a*	0·925	74·5	307·0	+14·2	8	61	} 309*c*
		5388*b*	0·959	75·5	300·9	+13·8	29	171	
		5389*a*	0·997	78·3	288·3	+11·7	52	365	
			0·817	108·0	320·3	−14·8			69
I.			0·899	104·1	310·4	−12·8			121
			0·935	61·0	307·4	+26·8			104
			0·940	114·4	305·4	−23·0			603
Dec. 8		Centre			(13·6)	(−0·3)	(292)	(1755)	(2121)
343·228	CL, RF		0·927	253·3	66·8	−15·6			100
			0·870	293·5	57·8	+20·1			355
		5386	0·272	24·0	353·3	+13·9	2	29	
		5386	0·267	31·3	351·7	+12·7	0	9	
		5387*a*	0·193	27·1	354·7	+ 9·5	23	148	
		5387	0·203	36·4	352·8	+ 9·0	7	27	
		5387	0·195	43·1	352·1	+ 7·8	0	2	
		5387	0·218	41·4	351·4	+ 9·0	1	2	
		5387	0·205	47·4	351·1	+ 7·5	0	2	
		5387	0·264	44·0	349·1	+10·5	1	13	
		5387*b*	0·291	53·0	346·2	+ 9·6	22	129	
		5387	0·278	58·6	346·0	+ 7·9	0	6	
		5381*a*	0·384	18·4	352·4	+20·9	29	152	
		5381	0·380	24·7	350·1	+20·4	4	12	
		5383*a*	0·493	52·0	335·9	+17·2	56	359	
		5383	0·483	56·4	335·3	+15·1	0	4	
		5383	0·504	56·0	334·1	+16·0	1	5	
I.		5383	0·536	56·3	332·1	+16·9	4	20	
		5383	0·558	58·2	330·2	+16·7	11	43	
		5383	0·567	56·5	330·2	+17·8	0	6	
		5383	0·599	57·5	327·8	+18·4	7	13	
		5383	0·614	58·8	326·4	+18·1	0	3	
		5384*a*	0·497	72·5	331·3	+ 8·2	2	17	
		5384	0·488	76·4	331·4	+ 6·2	0	3	
		5388*a*	0·817	71·9	306·7	+14·4	13	83	} 251*c*
		5388	0·854	73·6	302·5	+13·7	5	13	
		5388	0·868	71·6	301·2	+15·7	1	4	
		5388*b*	0·873	73·6	300·3	+14·1	33	152	
		5389*a*	0·950	77·4	288·7	+11·9	47	252	177*c*
		5390	0·990	75·2	278·6	+14·6	0	92	263*c*
			0·839	111·8	304·8	−18·4			263
			0·929	118·7	294·3	−26·6			472
			0·964	104·7	285·8	−14·3			87
Dec. 9		Centre			(359·8)	(−0·4)	(269)	(1600)	(1968)
344·123 K. K.	CL, AS	5837*a*	0·210	322·4	355·4	+ 9·1	17	145	
		5387	0·190	348·7	350·2	+10·2	0	6	

Group 5385, December 7. A pair of very small spots.

Group 5386, December 7–13. A very small spot south of Group 5381; not seen on December 8. The group has reappeared as a short stream of small spots by December 9, but has again disappeared by December 10, and reappears a third time on December 13.

Group 5387, December 7–14. A fine irregular stream, south of Group 5386, and preceding Group 5384. The first and last spots on December 8, *a* and *b*, are large composite spots, but diminish in size rapidly on the succeeding days.

Group 5388, December 8–18. A stream of spots following Group 5383. The first and last spots, *a* and *b*, are the largest, and most stable; but *a* is not seen on December 12, and *b* has disappeared by December 14. The entire group has disappeared by December 16, but a small spot marks its place on December 18.

Group 5389, December 8–19. A large regular spot, *a*, following Group 5388. The spot lengthens out and becomes composite in character, and has broken up to form a stream of spots by December 16, of which *b* and *c* are the largest and most stable members.

Group 5390, December 9–22. A fine irregular stream following Group 5389. The largest spot, *a*, is a fine regular spot, and is near the centre of the group. The other members of the group are very unstable and the group as a whole undergoes rapid change.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
344·123	CL, AS	5387*b*	0·179	7·7	346·6	+ 9·7	8	58	
		5381*a*	0·369	348·7	352·4	+20·6	21	146	
		5381	0·347	354·6	350·0	+19·7	0	5	
		5383*a*	0·356	32·4	336·5	+16·9	46	329	
		5383	0·384	39·6	333·3	+16·7	3	33	
		5383	0·391	44·1	331·6	+15·8	0	3	
		5383	0·419	42·1	330·9	+17·6	4	46	
K. K.		5383	0·460	46·2	327·7	+18·0	8	43	
		5388*a*	0·684	67·7	307·3	+14·7	5	37	} 185*c*
		5388	0·726	69·7	303·6	+14·2	0	7	
		5388*b*	0·759	70·1	300·7	+14·6	11	67	
		5389*a*	0·855	75·0	290·5	+12·5	42	234	246*c*
		5390*a*	0·977	72·6	271·2	+16·9	55	473	296*c*
			0·857	120·3	292·9	−25·9			315
Dec. 10		Centre			(348·0)	(− 0·5)	(220)	(1632)	(1042)
345·197	AS, RF		0·932	249·5	41·1	−19·3			139
			0·817	295·2	25·4	+20·0			287
		5387*a*	0·416	294·5	356·2	+ 9·3	18	75	
		5387	0·377	297·8	353·4	+ 9·5	0	3	
		5387	0·294	292·7	349·5	+ 5·9	0	12	
		5387*b*	0·280	308·2	346·5	+ 9·3	11	65	
		5381*a*	0·469	321·9	351·7	+21·1	31	155	
		5381	0·363	319·7	347·7	+15·4	0	3	
		5381	0·430	324·7	349·0	+19·9	0	8	
		5381	0·427	334·5	345·1	+22·0	0	5	
		5383	0·308	354·2	335·5	+17·2	44	316	
		5383	0·282	359·5	333·9	+15·7	13	124	
		5383	0·308	7·0	331·6	+15·9	9	40	
		5383	0·294	14·0	329·5	+15·9	0	7	
		5383	0·327	13·6	329·1	+17·8	4	15	
I.		5383	0·356	21·0	326·0	+18·7	3	33	
		5388*a*	0·519	58·0	306·7	+15·4	3	21	
		5388	0·525	61·9	305·4	+13·7	0	3	
		5388	0·573	66·9	301·2	+12·4	3	10	
		5388*b*	0·599	64·7	299·9	+14·3	17	48	
		5389*a*	0·712	71·3	290·1	+12·8	62	260	
		5390	0·881	72·9	273·4	+14·7	3	25	
		5390*a*	0·909	70·5	270·1	+17·4	71	329	
		5390	0·923	72·4	267·7	+16·0	6	96	
		5390	0·952	71·9	262·8	+17·0	24	169	
		5390	0·958	68·9	261·9	+20·0	0	22	} 1617*c*
		5390	0·968	72·1	259·4	+17·1	0	38	
		5391	0·947	65·2	264·6	+23·2	11	67	
		5391	0·959	65·6	262·1	+23·2	0	15	
		5392	0·920	104·2	267·5	−13·3	3	16	113*c*
345·197	AS, RF		0·820	71·7	286·3	+14·6			270
			0·866	123·6	278·4	−28·9			456
I.			0·884	112·5	273·5	−20·1			142
			0·965	90·4	259·1	− 0·6			66
			0·976	83·8	256·6	+ 5·9			96
Dec. 11		Centre			(333·7)	(− 0·6)	(336)	(1980)	(3186)
346·516	AS, M	5393*a*	0·837	231·4	6·6	−32·0	2	11	} 91*c*
		5393*b*	0·828	229·4	4·7	−33·0	2	8	
		5387*a*	0·659	284·7	356·3	+ 9·0	11	36	
		5387	0·632	284·1	354·4	+ 8·2	0	11	
		5387*b*	0·527	289·8	346·4	+ 9·6	0	29	
		5381*a*	0·649	305·0	350·9	+21·1	32	170	
		5383	0·459	311·0	337·4	+16·8	0	5	
		5383	0·467	312·8	337·3	+17·7	0	5	
		5383	0·435	310·7	336·2	+15·7	0	7	
		5383	0·430	314·7	334·8	+16·8	5	52	
		5383	0·411	312·6	334·5	+15·3	3	36	
		5383	0·411	317·3	333·2	+16·8	33	205	
		5383	0·382	321·0	330·8	+16·5	0	9	
		5383	0·366	335·1	325·6	+18·6	0	17	
		5394	0·569	195·7	326·9	−33·9	4	15	} 61*c*
		5394	0·533	192·2	323·9	−32·1	0	12	
		5395	0·298	17·5	311·0	+15·7	0	2	
		5388*b*	0·378	48·2	299·5	+13·8	0	11	
		5389*a*	0·486	61·2	290·5	+12·8	48	263	
		5392	0·750	106·6	269·0	−12·9	0	9	70*f*
		5390	0·788	68·7	266·7	+16·0	5	208	} 775*c*
		5390	0·830	68·3	262·6	+17·4	7	43	
		5390*a*	0·763	66·3	269·5	+17·3	60	357	} 853*c*
		5390	0·845	73·9	260·0	+13·1	0	8	
		5391	0·827	61·3	264·6	+22·8	8	46	
		5396*a*	0·977	60·4	241·1	+28·6	31	256	
			0·984	106·0	237·0	−15·9			343
Dec. 12		Centre			(316·3)	(− 0·8)	(251)	(1831)	(2193)
347·168	CL, RF		0·932	281·2	15·8	+10·1			131
		5393*a*	0·891	234·2	5·9	−31·8	5	17	} 108*c*
		5393*b*	0·876	232·2	3·2	−33·0	10	34	
		5386	0·750	290·0	354·3	+14·3	0	2	
		5386	0·645	292·5	345·5	+13·6	1	4	
		5387*a*	0·763	282·3	356·6	+ 8·8	11	50	} 357*c*
		5387	0·732	281·8	353·9	+ 8·0	5	21	
		5387*b*	0·651	285·3	347·1	+ 9·2	2	24	
		5381*a*	0·742	300·3	351·0	+21·2	29	139	} 266*c*
I.		5383	0·533	304·1	335·1	+16·6	41	248	
		5397	0·180	204·2	312·1	−10·3	0	2	
		5388*a*	0·281	0·6	307·6	+15·4	2	17	

Group 5391, December 11–18. A short stream of unstable spots north of Group 5390.
Group 5392, December 11–12. A small spot.
Group 5393, December 12–14. A pair of spots, *a* and *b*, forming near the west limb.
Group 5394, December 12. A pair of small spots.
Group 5395, December 12. A very small spot forming between Groups 5383 and 5388.
Group 5396, December 12–20. A large composite spot, *a*, with occasionally some small companions. *a* has broken up by December 19.
The photographs for December 10 marked K.K. in the column "Greenwich Civil Time" were taken at the Kodai-Kanal Observatory, India.

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

Greenwich Civil Time.	Measurers.	No. of Group and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
347·168	CL, RF	5388*b*	0·303	27·2	299·6	+14·7	2	18	
		5389*a*	0·378	50·9	290·4	+12·8	44	268	
		5390*a*	0·678	62·8	268·8	+17·3	65	402	
		5390	0·676	67·3	267·9	+14·4	0	9	
		5390	0·722	70·3	263·7	+13·4	0	7	343*c*
		5390	0·736	65·6	263·5	+17·0	17	114	
		5391	0·753	57·4	264·3	+23·2	5	41	
	I.	5398	0·840	100·9	251·2	− 9·6	2	3	32*c*
		5399	0·923	105·7	241·2	−14·8	1	15	
		5399*a*	0·942	107·0	238·2	−16·3	24	108	317*c*
		5396*a*	0·946	58·9	240·3	+28·9	65	489	
		5396	0·963	61·7	236·1	+26·9	0	71	973*c*
			0·825	112·7	254·4	−19·0			132
			0·832	79·8	252·2	+ 8·0			124
			0·955	75·5	236·0	+13·6			231
Dec. 13		Centre			(307·8)	(− 0·9)	(331)	(2103)	(3014)
348·128	AS, RF	5393*a*	0·953	235·8	4·4	−32·7	0	61	144*c*
		5393*b*	0·943	234·4	2·0	−33·7	10	44	
		5387*a*	0·875	279·1	355·1	+ 7·4	5	23	666*n*
		5381*a*	0·856	295·4	350·8	+20·9	33	179	394*c*
		5383	0·695	293·4	336·3	+15·2	2	41	
		5383	0·701	300·2	335·0	+19·8	0	18	162*c*
		5383	0·664	296·4	333·2	+16·3	18	144	
		5388*a*	0·352	323·5	307·6	+15·4	0	15	
		5389*a*	0·253	17·0	290·8	+13·0	36	258	
	K.K.	5390*a*	0·512	53·0	269·9	+17·0	56	319	
		5390	0·555	57·2	266·1	+16·5	7	145	
		5390	0·607	57·3	262·7	+18·3	4	25	
		5391	0·599	48·7	266·1	+22·4	0	12	
		5391	0·572	50·6	267·1	+20·4	0	4	
		5391	0·629	49·3	264·0	+23·3	4	35	
		5396*a*	0·871	54·8	240·4	+29·5	14	154	1214*c*
		5399	0·815	106·6	241·7	−14·0	0	5	510*c*
		5399*a*	0·847	108·4	238·6	−16·0	11	108	
			0·878	74·5	235·0	+13·1			328
Dec. 14		Centre			(295·1)	(− 1·0)	(200)	(1590)	(3418)
349·265	AS, RF		0·995	236·4	3·5	−33·5			384
			0·972	277·4	356·1	+ 6·9			282
			0·922	282·3	346·4	+10·9			287
			0·976	285·4	356·5	+14·7			362
	I.		0·904	306·4	338·8	+31·8			149
			0·792	281·0	331·6	+ 8·0			261
			0·799	225·0	323·7	−35·2			212
			0·670	244·5	319·4	−17·7			162
1904.				°	°	°			
349·265	AS, RF	5381	0·977	290·7	356·3	+19·9	0	30	105*c*
		5381	0·968	297·1	353·1	+25·8	0	23	133*f*
		5381*a*	0·955	292·3	350·9	+20·9	39	142	534*f*
		5381	0·933	289·5	347·6	+17·7	0	32	
		5383	0·844	289·1	335·7	+15·3	4	59	856*c*
		5383	0·822	292·3	332·7	+17·4	8	77	
		5388*a*	0·538	301·2	308·5	+15·1	0	20	
		5389*a*	0·295	323·4	290·4	+12·5	43	265	
		5389	0·259	321·5	289·5	+10·5	0	8	
		5390	0·363	25·2	270·8	+17·9	0	14	
		5390	0·278	37·2	270·3	+11·6	0	5	
		5390	0·338	32·0	269·4	+15·4	14	147	
		5390	0·384	31·0	268·1	+18·0	34	259	
	I.	5390	0·390	36·5	266·1	+17·1	0	3	
		5390	0·420	40·8	263·5	+17·4	3	42	
		5390	0·447	47·2	260·2	+16·5	3	13	
		5390	0·468	44·0	260·1	+18·4	0	1	
		5391	0·500	33·3	262·8	+23·5	6	46	
		5396	0·691	48·8	244·9	+26·1	0	10	
		5396*a*	0·758	48·6	239·7	+29·1	22	155	602*c*
		5396	0·789	49·9	236·3	+29·6	0	14	
		5399*a*	0·693	113·3	238·6	−16·8	15	88	
		5399	0·747	112·6	234·0	−17·5	0	40	348*c*
			0·798	73·8	228·7	+12·1			317
			0·833	63·8	227·2	+20·8			73
			0·905	78·7	216·1	+ 9·7			199
			0·980	67·3	203·1	+22·0			210
Dec. 15		Centre			(280·1)	(− 1·2)	(191)	(1493)	(5476)
350·511	CL, AS		0·928	279·8	331·0	+ 8·6			188
			0·907	232·5	323·8	−34·1			155
		5383	0·945	289·2	332·8	+17·6	9	36	649*c*
		5389*b*	0·522	297·1	291·9	+12·6	25	180	
		5389	0·486	294·9	290·1	+10·6	0	25	
		5389*c*	0·490	300·0	289·3	+13·0	7	114	
		5389	0·454	296·5	287·9	+10·5	0	4	
		5390	0·313	340·2	269·9	+15·7	3	71	
		5390	0·338	347·1	268·1	+17·9	35	276	
		5390	0·293	355·1	265·1	+15·6	15	218	
		5390	0·322	5·4	261·8	+17·4	6	53	
		5391	0·428	1·5	262·9	+23·9	0	10	
		5396*a*	0·618	35·0	239·8	+29·1	15	151	
		5396	0·621	40·4	236·9	+27·0	0	11	
		5399*a*	0·475	123·8	239·4	−16·5	3	33	
			0·765	73·7	215·3	+11·5			185
			0·921	65·2	199·3	+22·2			317
			0·977	76·3	186·7	+13·1			131
Dec. 16		Centre			(263·6)	(− 1·3)	(118)	(1182)	(1625)

Group 5397, December 13. A very small spot.
Group 5398, December 13. A very small spot.
Group 5399, December 13–16. A large spot, *a*, with a small companion.
The photographs for December 14 marked K.K. in the column "Greenwich Civil Time" were taken at the Kodai-Kanal Observatory, India.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
Dec. 17		No	photo	graph					
352·163	CL, RF		0·930	287·5	308·7	+15·6			346
			0·920	253·5	308·1	−15·8			405
			0·870	288·4	300·5	+15·1			237
			0·852	242·1	297·5	−24·4			218
		5388	0·874	287·7	301·0	+14·6	0	13	
		5389*b*	0·791	286·9	292·5	+12·3	12	90	
		5389	0·772	287·4	290·6	+12·3	0	6	232*c*
		5389*c*	0·759	288·1	289·4	+12·6	5	37	
		5389	0·767	292·9	289·1	+16·2	0	28	
		5390	0·554	302·3	270·9	+15·8	0	36	
I.		5390	0·533	308·3	267·8	+17·8	37	219	
		5390	0·488	306·3	265·9	+15·3	13	153	
		5391	0·549	320·7	264·1	+23·6	0	8	
		5391	0·520	320·3	262·8	+22·0	0	5	
		5390	0·458	316·2	261·3	+17·7	24	157	
		5396*a*	0·499	6·5	238·2	+28·1	0	32	
		5400*a*	0·546	65·1	211·6	+11·9	0	6	
			0·876	63·4	184·3	+22·2			473
			0·891	75·8	180·1	+11·9			501
Dec. 18		Centre			(241·9)	(−1·6)	(91)	(790)	(2412)
353·294	AS, RF		0·980	287·2	304·3	+16·5			394
			0·966	252·0	301·6	−17·8			243
			0·934	264·0	295·8	− 6·2			97
			0·937	241·0	294·4	−27·6			302
			0·905	255·3	291·2	−14·0			112
			0·823	240·3	278·9	−25·0			393
		5389*b*	0·914	284·4	291·8	+12·4	13	65	512*f*
		5390	0·732	291·7	271·5	+14·5	2	30	
		5390	0·704	297·8	267·7	+17·8	35	198	
		5390	0·682	294·7	266·8	+15·2	11	58	
I.		5390	0·633	301·8	261·3	+18·0	12	69	
		5390	0·610	305·3	258·7	+19·1	0	12	363*c*
		5396	0·535	332·8	242·8	+26·7	0	21	
		5396	0·511	339·8	238·4	+26·8	0	33	
		5400*a*	0·335	46·4	212·7	+11·7	1	6	
		5400*b*	0·398	51·7	208·4	+12·6	6	15	
			0·782	57·0	181·3	+23·9			462
			0·814	72·0	174·4	+13·6			526
			0·894	104·3	164·2	−13·5			165
			0·955	69·7	156·1	+18·8			169
Dec. 19		Centre			(227·0)	(−1·7)	(80)	(507)	(3738)

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
354·451	CL, AS		0·950	285·7	282·4	+14·3			395
			0·917	238·9	275·7	−29·1			212
			0·848	229·2	263·2	−34·8			36
		5390	0·859	288·6	269·1	+14·9	11	57	
		5390	0·849	292·6	267·2	+18·0	36	240	768*c*
		5390	0·833	289·0	266·2	+14·7	0	17	
		5390	0·827	290·8	265·2	+16·0	14	69	
		5396	0·634	320·9	238·7	+27·8	0	10	180*p*
		5400*b*	0·248	12·5	208·8	+12·2	2	22	
		5401	0·621	65·1	176·6	+13·6	0	13	290*f*
			0·986	111·4	131·8	−21·4			239
Dec. 20		Centre			(211·9)	(−1·8)	(63)	(428)	(2120)
355·180	AS, RF		0·948	251·6	273·1	−18·1			166
			0·912	236·7	264·7	−30·9			206
			0·720	316·2	237·1	+29·7			1009
		5390	0·929	286·6	269·0	+14·7	23	131	
		5390	0·920	288·9	267·2	+16·5	1	8	
		5390	0·918	290·6	266·6	+18·0	31	213	2266*c*
		5390	0·903	288·4	264·9	+15·7	22	177	
		5390	0·871	291·4	260·2	+17·5	0	29	
I.		5402	0·683	248·8	243·4	−15·7	15	54	156*c*
		5400*b*	0·277	336·4	208·7	+12·8	0	9	
		5401	0·501	57·3	176·6	+13·9	0	6	
		5403	0·922	67·8	137·4	+19·6	0	8	308*c*
			0·943	112·5	132·7	−21·8			365
			0·759	66·9	155·8	+16·0			221
Dec. 21		Centre			(202·2)	(−1·9)	(92)	(635)	(4697)
356·169	CL, RF		0·927	277·4	256·5	+ 6·0			126
			0·915	254·4	254·9	−15·1			157
			0·818	308·8	236·1	+29·4			1286
			0·671	242·8	228·4	−19·5			187
		5390	0·981	288·9	266·5	+18·1	43	202	
		5390	0·980	286·2	266·4	+15·4	29	415	1342*c*
		5402	0·842	251·7	245·5	−16·5	2	13	
		5402	0·806	252·6	241·9	−15·2	3	7	683*c*
I.		5404	0·571	59·9	158·6	+14·8	1	52	
		5405	0·941	72·3	120·8	+15·8	0	6	
		5405	0·953	75·2	118·1	+13·4	0	14	1031*c*
		5405	0·966	73·0	115·7	+15·8	6	57	
			0·867	116·4	131·4	−23·7			309
			0·925	63·2	125·0	+23·7			320
			0·932	108·3	121·1	−17·8			335
Dec. 22		Centre			(189·2)	(−2·1)	(84)	(766)	(5776)

Group 5400, December 18–21. A very small spot, *a*, on December 18. A second, *b*, has formed near *a* by December 19. *b* alone remains on December 20.
Group 5401, December 20–21. A small spot.
Group 5402, December 21–22. A pair of spots measured together on December 21, but separately on December 22.
Group 5403, December 21. A very small spot.
Group 5404, December 22–25. A few very small spots in an irregular cluster. The group is not seen on December 23.
Group 5405, December 22–24. A few small unstable spots in a short irregular stream.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	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 (and for Day).	Spots. Area of WHOLE for each Spot (and for Day).	Faculæ. Area for each Group (and for Day).
1904.				°	°	°			
357·184	AS, RF		0·968	279·7	250·6	+ 8·8			154
			0·924	291·2	241·1	+18·6			262
			0·905	254·1	240·2	−15·3			595
			0·906	301·7	235·9	+27·3			1170
			0·868	283·3	234·9	+10·4			310
			0·890	315·2	228·2	+37·7			580
			0·782	249·4	225·4	−18·9			368
		5406	0·437	24·3	152·3	+ 8·3	1	15	
I.		5407	0·417	13·9	152·1	+ 3·7	2	14	
		5407	0·503	13·5	146·6	+ 4·8	0	4	
		5407	0·546	11·2	143·6	+ 4·2	0	5	
		5405	0·852	70·0	119·8	+15·7	0	4	} 1231*c*
		5405	0·861	72·8	118·3	+13·6	0	8	
		5405	0·886	70·5	115·7	+16·1	5	35	
		5408	0·882	106·5	114·7	−15·6	0	10	374*c*
			0·776	117·0	127·9	−22·0			600
			0·951	118·1	105·4	−27·3			298
Dec. 23		Centre			(175·9)	(−2·2)	(8)	(95)	(5942)
358·278	CL, RF		0·973	255·2	237·9	−14·9			319
			0·964	285·0	234·6	+13·8			316
			0·972	301·3	234·0	+29·6			825
			0·908	252·2	225·9	−17·1			391
			0·810	282·8	214·3	+ 8·9			434
			0·766	254·3	210·5	−13·4			193
		5409	0·381	314·0	177·7	+13·1	0	6	
		5409	0·316	318·8	173·6	+11·5	0	3	
		5410	0·430	336·8	171·8	+20·9	2	5	
		5410	0·404	336·9	171·0	+19·5	0	6	
I.		5410	0·426	341·9	169·5	+21·5	0	2	
		5410	0·408	342·6	168·9	+20·5	0	8	
		5410	0·424	344·9	168·2	+21·8	2	4	
		5410	0·371	342·5	168·1	+18·4	0	2	
		5404	0·300	15·0	156·8	+14·5	0	4	
		5411	0·569	72·2	128·4	+ 8·1	1	14	
		5411	0·607	71·1	125·9	+ 9·5	0	11	
		5405	0·722	64·4	118·8	+16·5	0	4	} 996*c*
		5405	0·719	68·6	118·1	+13·5	2	7	
			0·866	117·3	103·8	−24·6			318
			0·898	78·1	98·6	+ 9·6			132
Dec. 24		Centre			(161·4)	(−2·3)	(7)	(76)	(3924)
359·157	AS, RF		0·968	252·6	225·2	−17·5			365
			0·896	288·2	211·4	+15·1			655
			0·648	300·1	185·5	+17·0			462
1904.				°	°	°			
359·157	AS, RF	5410	0·504	324·1	168·3	+21·7	1	31	
		5404	0·307	336·1	157·1	+13·8	0	11	
		5411	0·431	67·2	126·3	+ 7·4	0	26	
		5412	0·585	115·6	116·5	−16·6	6	19	
I.		5413	0·951	104·1	78·0	−14·1	7	20	} 250*c*
		5413	0·964	102·5	75·3	−12·7	0	7	
			0·740	64·8	105·6	+16·6			604
			0·762	123·0	104·6	−26·1			660
			0·851	46·1	101·9	+34·5			386
Dec. 25		Centre			(149·8)	(−2·4)	(14)	(114)	(3382)
360·150	CL, RF		0·954	281·5	208·2	+10·2			153
			0·949	256·1	208·1	−14·0			125
			0·952	293·2	206·2	+21·1			267
			0·792	293·9	185·8	+17·1			722
		5412	0·414	126·9	116·6	−16·7	4	28	
I.		5412	0·520	125·7	110·1	−19·8	0	8	
		5413	0·860	105·1	78·0	−14·2	2	9	329*f*
			0·963	65·2	65·1	+23·0			144
			0·958	114·1	64·0	−23·8			84
Dec. 26		Centre			(136·7)	(−2·5)	(6)	(45)	(1824)
361·171	AS, RF		0·928	292·2	188·8	+19·5			453
			0·796	295·0	172·4	+17·9			508
		5412§	0·252	160·7	118·3	−16·3	6	48	
		5414	0·296	2·8	122·4	+14·6	2	12	
I.		5414	0·298	15·7	118·6	+14·0	1	11	
		5413	0·756	106·9	75·2	−14·4	2	7	347*e*
			0·917	65·2	60·0	+21·5			331
			0·964	108·2	49·0	−18·2			198
Dec. 27		Centre			(123·3)	(−2·6)	(11)	(78)	(1837)
362·196	CL, RF		0·915	286·2	174·3	+13·6			314
			0·875	296·5	166·8	+21·4			422
			0·771	287·9	158·2	+11·9			284
		5412	0·246	204·7	115·9	−15·6	0	13	
		5414	0·351	329·3	120·4	+14·7	7	32	
I.		5415	0·424	4·8	107·6	+22·1	2	13	
		5413	0·572	112·4	76·8	−14·9	0	2	
		5413	0·602	114·6	75·1	−16·8	0	2	
			0·846	64·3	55·8	+19·9			430
			0·925	111·3	42·8	−20·8			146
Dec. 28		Centre			(109·8)	(−2·8)	(9)	(62)	(1596)

Group 5406, December 23. A small spot south following Group 5404.
Group 5407, December 23. A few small spots in a straggling stream.
Group 5408, December 23. A small spot.
Group 5409, December 24. Two very small spots.
Group 5410, December 24–25. A few very small spots in a straggling stream.
Group 5411, December 24–25. A few very small spots irregularly scattered.
Group 5412, December 25–28. A few very small spots irregularly scattered.
Group 5413, 1904 December 25–1905 January 6. A few small unstable spots until December 29, on which day the group is not seen. The group has revived in a most remarkable manner by December 30, when it forms a large compact cluster, which lengthens out into a regular stream on the succeeding days. *a* and *b*, the first and last spots, are large regular spots.
Group 5414, December 27–31. A number of very small spots in a straight stream.
Group 5415, December 28. A few very small spots in a straight stream.

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

Greenwich Civil Time.	Measurers.	No. of Group, and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
363·157	AS, RF		0·937	290·6	164·2	+18·1			513
			0·881	251·7	158·2	−17·5			459
		5414	0·523	303·9	123·6	+14·3	14	59	
I.			0·775	109·7	47·6	−17·0			207
			0·906	113·6	33·2	−22·6			411
			0·975	83·0	20·5	+ 6·2			106
Dec. 29		Centre			(97·1)	(−2·9)	(14)	(59)	(1696)
364·412	AS, M		0·754	291·7	126·7	+14·1	0	17	} 319*c*
		5414	0·728	292·3	124·3	+13·8	0	13	
		5414	0·704	295·0	121·8	+15·0	0	43	
		5413	0·225	156·0	75·2	−14·8	20	144	
		5413	0·263	149·6	72·7	−16·1	9	111	
		5413	0·233	144·8	72·7	−13·9	0	7	
1904.				°	°	°			
364·412	AS, M		0·795	239·0	129·8	−26·1			309
			0·881	82·0	19·6	+ 5·6			345
Dec. 30		Centre			(80·6)	(−3·0)	(29)	(335)	(973)
365·470	CL, RF		0·930	288·7	132·9	+16·1			88
			0·901	245·2	129·8	−23·7			208
			0·768	295·2	113·1	+16·9			150
		5414	0·850	289·8	122·4	+15·0	1	4	186*c*
		5413*a*	0·263	218·5	76·4	−14·9	40	300	
		5413*b*	0·227	197·5	70·7	−15·6	35	217	
			0·924	79·6	0·2	+ 8·4			271
			0·933	72·0	359·9	+15·5			242
			0·956	64·9	357·0	+22·8			86
Dec. 31		Centre			(66·7)	(−3·1)	(76)	(521)	(1231)

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

Greenwich Civil Time.	Measurers.	No. of Group and Letter for Spot.	Distance from Centre in terms of Sun's Radius.	Position Angle from Sun's Axis.	Heliographic		Spots.		Faculæ.
					Longitude.	Latitude.	Area of UMBRA for each Spot (and for Day).	Area of WHOLE for each Spot (and for Day).	Area for each Group (and for Day).
1904.				°	°	°			
351·256	CL, RF		0·974	288·7	329·4	+17·8			531
			0·967	278·5	328·5	+ 7·8			114
			0·952	234·4	322·8	−34·1			144
			0·874	250·7	313·6	−17·5			296
			0·804	290·8	305·0	+15·6			470
			0·822	303·3	303·5	+25·8			172
			0·769	232·1	297·8	−29·2			254
		5389	0·654	291·0	292·4	+12·3	19	121	
		5389	0·627	290·7	290·5	+11·6	0	6	141c
	M.	5389	0·621	293·1	289·6	+12·8	9	51	
		5389	0·601	290·1	288·8	+10·7	0	4	
		5390	0·422	314·9	271·9	+15·9	2	14	
		5390	0·390	314·9	270·4	+14·5	0	12	
		5390	0·396	318·6	269·6	+15·8	0	6	
		5390	0·410	324·2	268·4	+17·9	40	204	
		5390	0·378	320·8	268·2	+15·6	3	18	
1904.				°	°	°			
351·256		5390	0·349	322·7	266·5	+14·6	12	59	
		5390	0·363	327·5	265·6	+16·3	5	41	
		5390	0·360	332·0	264·0	+17·0	0	6	
		5390	0·368	337·0	262·6	+18·3	2	19	
		5390	0·333	335·0	262·3	+16·0	0	22	
		5390	0·348	337·4	261·9	+17·2	4	13	
		5390	0·348	343·6	259·8	+17·9	0	17	
		5391	0·432	342·7	261·9	+22·8	0	5	
	M.	5396	0·537	20·8	241·4	+28·6	2	11	
		5396	0·565	23·7	238·8	+29·6	4	46	
		5396	0·547	28·3	237·0	+27·3	2	15	
		5400	0·722	71·7	209·6	+12·0	3	16	156c
			0·838	59·2	201·8	+24·5			189
			0·928	66·5	188·3	+21·1			341
			0·928	76·6	186·8	+11·9			413
Dec. 17		Centre			(253·9)	(−1·5)	(107)	(706)	(3221)

Note.—The photograph for December 17 was not received until after the section "Measures of Positions and Areas," pp. *1* to *57*, had been printed, but it has been included in the "Ledger of Groups of Sun Spots," and in the tables of Mean Areas and Mean Latitudes for the Rotations and for the Year.

ROYAL OBSERVATORY, GREENWICH.

LEDGERS

OF

AREAS AND POSITIONS OF GROUPS OF SUN SPOTS

DEDUCED FROM THE MEASUREMENT

OF THE

SOLAR PHOTOGRAPHS

FOR EACH DAY IN THE YEAR

1904.

AREAS and HELIOGRAPHIC POSITIONS of GROUPS of SUN SPOTS DEDUCED FOR EACH DAY from the MEASUREMENTS of the PHOTOGRAPHS taken at the ROYAL OBSERVATORY, GREENWICH, at DEHRA DÛN and at KODAI-KANAL IN INDIA, and at the ROYAL ALFRED OBSERVATORY, MAURITIUS, in the YEAR 1904.

NOTE.—The Greenwich Civil Time at which the photograph was taken is expressed by the month, day of the month (civil reckoning), and decimal of a day, reckoned from Greenwich Mean Midnight.

The Projected Area of the Umbræ and Whole Spots 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 Column "Longitude from Central Meridian" gives the Mean heliographic longitude of the group, reckoned from the meridian passing through the centre of the Sun's disk at the moment of observation; longitudes west of the centre being reckoned as positive.

Dates for which the decimal of the day is not given indicate days for which no photographic Record is at present available. In these cases the means have been taken of the areas and positions of the spot-groups as measured on the day immediately preceding, and on that immediately following the day for which the photograph is lacking. These interpolated values are enclosed in brackets, but are used in taking the final means for each spot-group.

Group 5140.

A pair of regular spots, *a* and *b*. *b* has a small companion on December 29. The group is an irregular stream after December 31.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
1903. d					°	°	°
Dec. 28·135	16	100	26	169	188·9	−22·5	−72·4
29·416	31	188	29	179	188·2	−21·7	−56·3
30·440	22	136	15	98	188·8	−22·1	−42·2
31·233	17	165	11	104	190·0	−22·7	−30·6
1904.							
Jan. 1·138	28	114	16	64	188·6	−22·3	−20·0
2·510	15	91	8	48	187·0	−21·5	− 3·5
3·139	19	62	10	33	187·3	−21·1	+ 5·0
Means ...	...	...	16	99	188·40	−21·99	...

Group 5142.

A stream of spots. The leader, *a*, is the largest spot of the group, and is a large regular spot. The last spot, *b*, is the next in size. *b* has broken up by January 1.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
1903.							
Dec. 29·416	15	121	26	200	172·1	−14·0	−72·4
30·440	47	334	48	345	170·6	−13·8	−60·4
31·233	49	365	39	291	170·5	−14·1	−50·1
1904.							
Jan. 1·138	67	453	44	290	170·9	−14·5	−37·7
2·510	86	431	47	232	171·6	−14·5	−18·9
3·139	65	333	34	173	171·5	−14·8	−10·8
4·413	45	335	23	172	171·9	−14·4	+ 6·5
5·478	35	239	18	129	172·0	−14·2	+20·6
6·138	26	207	15	122	172·1	−14·4	+29·3

Group 5142—*continued*.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
1904. d					°	°	°
Jan. 7·134	24	190	17	130	172·6	−14·6	+43·0
8·157	10	98	9	90	173·0	−14·8	+56·9
9·132	5	54	8	79	173·5	−14·9	+70·3
Means ...	...	...	27	188	171·86	−14·42	...

Group 5143.

A few very faint spots.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Jan. 1·138	0	9	0	5	185·0	+ 0·8	−23·6
Means ...	...	...	0	5	185·0	+ 0·8	...

Group 5144.

A few unstable spots, none of them large, in a short irregular stream.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Jan. 1·138	9	51	13	74	138·7	−19·3	−69·9
2·510	6	105	5	84	140·7	−19·2	−49·8
3·139	18	45	13	31	140·7	−19·3	−41·6
4·413	11	103	6	59	140·1	−18·5	−25·3
5·478	11	46	6	25	141·7	−18·0	− 9·7
6·138	6	20	3	10	141·6	−18·1	− 1·2
7·134	5	30	3	16	138·6	−18·9	+ 9·0
8·157	0	14	0	8	134·3	−19·0	+18·2
9·132	7	39	5	25	139·2	−18·3	+36·0
Means ...	...	...	6	37	139·51	−18·73	...

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

Group 5145.

A very small spot.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
					°	°	°
1904. d Jan. 2·510	0	14	0	7	200·3	−24·7	+ 9·8
Means ...	...	...	0	7	200·3	−24·7	...

Group 5146.

A large regular spot, *a*, with occasionally a few small companions.

Jan. 4·413	12	53	40	174	85·8	+18·3	−79·6
5·478	23	122	32	171	84·7	+18·3	−66·7
6·138	32	165	34	172	84·5	+17·9	−58·3
7·134	54	247	41	191	84·0	+17·9	−45·6
8·157	37	291	24	186	84·0	+18·2	−32·1
9·132	45	256	26	146	83·9	+18·1	−19·3
10	No photograph.		(27	136	83·9	+18·1	− 6·1)
11·141	51	232	28	126	83·9	+18·1	+ 7·1
12·248	33	184	20	107	83·2	+18·6	+21·0
13·507	17	136	12	95	83·8	+17·8	+38·3
14·429	17	118	15	101	83·5	+17·7	+50·1
15·480	9	48	12	61	83·9	+18·0	+64·2
16·464	7	27	20	72	83·8	+18·0	+77·0
Means ...	...	...	25	134	84·07	+18·08	...

Group 5147.

A few very small spots, preceding Group 5146. The group is not seen on January 11 or 12, but a small spot is seen in its place on January 13.

Jan. 7·134	0	15	0	8	110·4	+12·1	−19·2
8·157	10	24	5	12	111·2	+12·0	− 4·9
9·132	6	13	3	7	112·6	+11·8	+ 9·4
10	No photograph.		(2	8	111·5	+11·7	+22·8)
11·141	0	0	0	0	...	...	...
12·248	0	0	0	0	...	...	...
13·507	0	8	0	9	108·3	+11·4	+62·8
Means ...	...	...	1	6	110·80	+11·80	..

Group 5148.

A pair of very small faint spots.

Jan. 11·141	2	9	1	6	45·5	−24·3	−31·3
Means ...	...	...	1	6	45·5	−24·3	...

Group 5149.

A very small faint spot.

					°	°	°
1904. d Jan. 11·141	0	6	0	5	28·1	+18·6	−48·7
Means ...	...	...	0	5	28·1	+18·6	...

Group 5150.

A pair of very small faint spots.

Jan. 11·141	0	7	0	7	20·4	+19·3	−56·4
Means ...	...	...	0	7	20·4	+19·3	...

Group 5151.

A large composite spot, *a*, followed by a smaller spot, *b*, and one or two very small companions. *a* has broken up into two parts by January 19; of which *c* is a regular spot, and, *d*, fainter and less regular.

Jan. 13·507	19	118	47	289	329·7	+20·0	−75·8
14·429	33	264	43	350	329·0	+20·2	−64·4
15·480	43	460	38	403	329·5	+20·4	−50·2
16·464	70	495	49	349	329·1	+20·5	−37·7
17·182	52	537	33	338	329·0	+20·5	−28·3
18·064	91	612	52	353	329·3	+20·5	−16·3
19·153	55	523	31	290	328·1	+20·6	− 3·2
20·157	60	333	34	189	329·1	+20·2	+10·9
21·188	58	318	35	193	328·6	+20·6	+24·0
22·542	30	148	22	112	328·9	+20·3	+42·2
23·206	32	105	29	94	328·7	+20·5	+50·6
24·173	7	36	10	48	329·3	+20·6	+63·9
Means ...	...	...	35	251	329·03	+20·41	...

Group 5152.

A stream of spots close behind Group 5151, and forming with it a fine procession of spots. It is a single small spot, *a*, on January 16; but a second spot, *b*, has formed behind *a* by January 17, and rapidly increases in size, becoming a triple spot by January 19. *b* has broken up by the next day, but has revived as an irregular stream by January 21, of which *c* and *d*, a regular and a composite spot, are the principal members. *d* soon divides into *e* and *f*, and by January 25 little remains of the group besides *c* and *f*.

Jan. 16·464	5	23	4	21	315·8	+22·0	−51·0
17·182	20	78	16	59	314·5	+21·9	−42·8
18·064	36	291	23	188	315·1	+21·0	−30·5
19·153	38	329	23	195	313·4	+21·5	−17·9
20·157	35	148	20	83	313·9	+21·8	− 4·3
21·188	100	446	58	256	312·1	+22·6	+ 7·5
22·542	64	522	40	327	311·9	+22·5	+25·2

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

Group 5152—*continued.*

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
					°	°	°
1904. d							
Jan. 23·206	95	535	66	368	311·6	+22·8	+33 5
24·173	42	253	37	216	312·2	+22·8	+46·8
25·190	7	101	9	123	312·6	+22·7	+60·5
Means ...	...	...	32	184	313·31	+22·16	...

Group 5153.

A pair of very small faint spots.

Jan. 17·182	0	9	0	5	347·8	+24·4	−10·8
Means ...	...	...	0	5	347·8	+24·4	...

Group 5154.

A very small spot on January 20. The group rapidly increases in size on the succeeding days, a number of spots breaking out to form a compact but irregular cluster. The spots at the two extremities of the cluster combine to form two large well-defined spots, *a* and *b*, and the group lengthens out to form a fine stream of the usual type.

Jan. 20·157	0	2	0	1	294·1	−15·1	−24·1
21·188	4	16	2	9	293·9	−13·6	−10·7
22·542	41	165	21	84	294·5	−13·7	+ 7·8
23·206	72	394	37	205	293·7	−14·3	+15·6
24·173	166	714	97	417	295·5	−13·9	+30·1
25·190	128	1028	88	701	294·5	−14·0	+42·4
26·429	120	910	114	877	294·8	−13·6	+59·1
27·141	89	557	111	743	294·5	−13·9	+68·6
28·137	18	159	52	498	294·8	−14·0	+82·1
Means ...	...	...	58	393	294·48	−14·01	...

Group 5155.

A small faint spot.

Jan. 22·542	0	15	0	8	271·4	−12·2	−15·3
Means ...	...	...	0	8	271·4	−12·2	...

Group 5156.

Two small spots, *a* and *b*, of which the preceding one, *a*, has disappeared by January 23.

Jan. 22·542	0	19	0	16	236·1	+12·6	−50·6
23·206	4	11	3	8	234·1	+12·4	−44·0
24·173	3	9	2	5	234·5	+13·0	−30·9
Means ...	...	...	2	10	234·90	+12·67	...

Group 5157.

A cluster of small faint spots.

					°	°	°
1904. d							
Jan. 23·206	0	10	0	6	258·6	+20·1	−19·5
Means ...	...	...	0	6	258·6	+20·1	..

Group 5158.

A few very small spots in a short stream.

Jan. 24·173	7	35	4	20	260·4	+19·8	− 5·0
Means ...	...	...	4	20	260·4	+19·8	...

Group 5159.

Two very small faint spots.

Jan. 24·173	0	15	0	11	229·7	+20·6	−35·7
Means ...	...	...	0	11	229·7	+20·6	...

Group 5160.

A few spots in a short stream appearing suddenly near the central meridian. *a* and *b*, the first and last spots, are the largest. *b* has disappeared by January 28.

Jan. 25·190	36	145	19	76	243·0	−22·6	− 8·9
26·429	20	70	11	38	244·2	−22·6	+ 8·5
27·141	28	67	15	37	244·9	−22·8	+19·0
28·137	14	58	9	37	248·5	−22·7	+35·8
29·423	9	68	8	56	248·1	−21·9	+52·5
30·173	6	19	7	21	248·0	−22·5	+62·5
31·216	0	33	0	61	248·2	−22·1	+75·7
Means ...	...	...	10	47	246·41	−22·46	...

Group 5161.

A very small faint spot.

Jan. 27·141	1	6	0	4	196·2	−25·0	−29·7
Means ...	...	...	0	4	196·2	−25·0	...

Group 5162.

A small spot, *a*, with occasionally a small companion.

Feb. 1·415	0	15	0	9	145·0	+20·1	−11·7
2·143	10	32	6	17	146·2	+20·5	− 0·9
3·348	11	60	6	34	144·4	+20·6	+13·2

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5162—*continued.*							
1904. d					°	°	°
Feb. 4·505	4	26	3	16	144·2	+20·5	+28·2
5·478	5	27	3	20	143·9	+20·8	+40·6
6·216	0	30	0	27	144·1	+20·6	+50·6
Means ...	...	...	3	21	144·63	+20·52	...
Group 5163. One or two small spots. The group is not seen on February 7, but has revived again by February 8 as a scattered stream. *a*, the leader, and largest member of the group, is a regular spot, and remains alone by February 13.							
Feb. 4·505	0	21	0	35	47·9	+21·2	−68·1
5·478	1	5	1	5	46·9	+21·4	−56·4
6·216	4	16	4	13	45·2	+21·8	−48·3
7·513	0	0	0	0	...	...	...
8·594	31	132	17	76	46·9	+19·1	−15·3
9·618	32	178	18	99	47·7	+18·9	− 1·1
10·435	31	232	18	131	47·7	+18·9	+ 9·7
11·183	15	146	9	89	50·9	+19·3	+22·9
12·149	22	139	15	98	52·5	+19·1	+37·1
13·483	14	63	14	62	52·7	+18·3	+55·0
14·159	6	42	9	58	53·9	+18·4	+65·0
Means ...	...	...	10	61	49·23	+19·64	...
Group 5164. A fine stream of spots. *a*, the leader, is the largest and is composite in form. *a* increases in length, coalescing with the spots that follow it, and by February 9 has become an unusually long narrow spot. It has broken up by February 11; the principal portion, *b*, being in the following portion of the group.							
Feb. 4·505	8	73	22	199	38·3	+12·9	−77·7
5·478	30	346	41	493	36·1	+12·8	−67·2
6·216	70	466	71	477	35·3	+12·6	−58·2
7·513	66	649	46	455	36·6	+12·6	−39·8
8·594	82	855	48	501	36·8	+12·3	−25·4
9·618	115	1088	62	584	37·9	+12·3	−10·9
10·435	149	1124	79	596	37·8	+12·2	− 0·2
11·183	135	986	73	530	38·0	+12·4	+10·0
12·149	109	727	63	417	37·6	+12·7	+22·2
13·483	41	427	29	295	36·9	+12·6	+39·2
14·159	36	197	31	159	37·2	+13·0	+48·3
15·233	15	80	17	95	36·6	+13·6	+61·8
16·281	4	34	10	83	36·9	+13·8	+75·9
Means ...	..	...	46	376	37·08	+12·75	...
Group 5165. A very small faint spot.							
Feb. 5·478	0	5	0	4	56·0	−29·1	−47·3
Means ...	...	...	0	4	56·0	−29·1	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5166. A very small spot.							
1904. d					°	°	°
Feb. 8·594	0	4	0	3	36·7	+24·5	−25·5
Means ...	...	...	0	3	36·7	+24·5	...
Group 5167. A small spot in a great mass of bright faculæ. The spot is not seen on February 12.							
Feb. 11·183	0	3	0	10	305·3	−14·9	−82·7
12·149	0	0	0	0	...	...	...
13·483	0	16	0	13	303·3	−15·4	−54·4
Means ...	...	...	0	8	304·30	−15·15	...
Group 5168. A pair of very small spots.							
Feb. 13·483	2	16	1	9	352·4	+20·6	− 5·3
Means ...	...	...	1	9	352·4	+20·6	...
Group 5169. A very small spot.							
Feb. 16·281	0	4	0	3	275·2	−13·4	−45·8
Means ...	...	...	0	3	275·2	−13·4	...
Group 5170. An unstable group, consisting of a number of spots, mostly small, in an irregular stream.							
Feb. 17·158	0	6	0	20	231·6	+19·2	−77·8
18·241	5	22	7	26	233·4	+18·1	−61·7
19·132	9	18	7	16	234·3	+17·5	−49·2
20·324	13	66	9	47	232·4	+19·5	−35·5
21·147	10	50	6	32	230·0	+20·7	−26·9
22·425	38	201	22	113	233·4	+18·6	− 6·7
23·415	16	109	9	61	233·7	+18·5	+ 6·7
24·474	0	46	0	28	234·4	+18·1	+21·4
25	No photograph.		(2	21	232·3	+19·8	+32·1)
26·442	4	18	3	14	230·2	+21·5	+42·8
27·467	5	83	6	96	233·7	+17·7	+60·1
Means ...	...	...	6	43	232·67	+19·02	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5171. A number of spots in a fine stream. The leader, *a*, is a large regular spot. Some of the following spots gradually coalesce with *a*.							
1904. d					°	°	°
Feb. 19·132	12	105	31	239	204·9	−13·8	−78·6
20·324	42	273	46	291	205·3	−13·1	−62·6
21·147	74	421	59	335	205·8	−13·3	−51·1
22·425	101	676	62	413	205·6	−13·3	−34·5
23·415	88	639	46	340	207·5	−12·8	−19·5
24·474	138	852	70	431	207·8	−12·9	− 5·2
25	No photograph		(63	393	208·4	−12·6	+ 8·2)
26·442	104	657	56	354	209·0	−12·3	+21·6
27·467	78	595	48	364	208·6	−13·0	+35·0
28·431	38	499	28	368	208·4	−13·3	+47·5
29·498	26	246	27	254	208·3	−13·0	+61·5
Mar. 1·507	30	158	50	263	207·2	−13·0	+73·6
2·387	7	49	33	215	206·8	−11·3	+84·8
Means ...	...	...	48	328	207·20	−12·90	...
Group 5172. Two small spots on February 18. The group is not seen on February 19, but has reappeared by February 20 as two small spots, *a* and *b*. *a* has disappeared by February 22.							
Feb. 18·241	0	34	0	18	298·2	−17·0	+ 3·1
19·132	0	0	0	0	...	...	...
20·324	10	35	5	20	298·9	−16·4	+31·0
21·147	0	24	0	16	300·2	−16·3	+43·3
22·425	0	9	0	9	299·4	−16·6	+59·3
Means ...	...	...	1	13	299·18	−16·58	...
Group 5173. One or two small spots, *s.f.* Group 5170.							
Feb. 26·442	0	15	0	9	224·1	+ 7·7	+36·7
27·467	0	14	0	11	218·8	+10·8	+45·2
28·431	6	30	6	32	220·7	+11·0	+59·8
Means ...	...	...	2	17	221·20	+9·83	...
Group 5174. A pair of small spots, *a* and *b*, with one or two very small spots between them. The group has greatly increased in size by March 3. *b* has broken up by March 6.							
Mar. 2·387	22	107	11	54	124·8	−13·7	+ 2·8
3·200	143	578	74	299	124·6	−13·7	+13·4
4·225	81	561	46	317	125·2	−13·3	+27·5
5·132	63	398	41	260	126·0	−14·1	+40·2
6·141	33	219	29	192	128·3	−13·7	+55·7
Means ...	...	...	40	224	125·78	−13·70	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitu from Central Meridian
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5175. Two very small spots.							
1904. d					°	°	°
Mar. 3·200	3	10	4	13	48·9	+19·8	−62·3
Means ...	...	...	4	13	48·9	+19·8	...
Group 5176. A small spot, *a*, usually followed by one or two very small companions.							
Mar. 4·225	0	11	0	18	23·1	−19·5	−74·6
5·132	7	29	10	42	22·7	−18·3	−63·1
6·141	13	25	10	19	22·8	−18·5	−49·8
7	No photograph.		(7	17	22·6	−18·7	−34·8)
8·448	7	26	4	15	22·4	−18·9	−19·8
9·469	6	56	3	29	21·5	−19·6	− 7·2
10·435	0	45	0	23	23·7	−20·7	+ 7·7
11·494	0	63	0	35	21·8	−20·5	+19·7
12·191	2	13	1	7	23·5	−19·6	+30·7
Means ...	...	...	4	23	22·68	−19·37	...
Group 5177. A few small unstable spots, following Group 5176.							
Mar. 4·225	0	4	0	11	15·7	−21·5	−82·0
5·132	0	13	0	20	13·8	−20·2	−72·0
6·141	3	13	3	12	12·9	−19·9	−59·7
7	No photograph.		(3	46	13·2	−20·6	−44·3)
8·448	5	137	3	80	13·4	−21·2	−28·8
9·469	0	47	0	25	14·1	−21·1	−14·6
Means ...	...	...	2	32	13·85	−20·75	...
Group 5178. Two small spots.							
Mar. 8·448	2	17	2	14	90·0	+11·8	+47·8
Means ...	...	...	2	14	90·0	+11·8	...
Group 5179. Two small double spots, *a* and *b*, on March 8. Both have become more condensed by March 9. *b*, the following spot, is the larger and better defined. *a* has passed out of sight by March 12.							
Mar. 8·448	19	69	12	43	68·1	+16·0	+25·9
9·469	18	120	13	85	67·9	+16·1	+39·2
10·435	30	231	27	210	68·1	+16·2	+52·1
11·494	22	136	34	206	69·6	+16·1	+67·5
12·191	9	55	19	120	66·9	+16·7	+74·1
Means ...	...	...	21	133	68·12	+16·22	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5180. Two small spots, *a* and *b*, following Group 5179. Only *b* remains on March 9.							
1904. *a*					°	°	°
Mar. 8·448	15	36	8	20	46·6	+12·2	+ 4·4
9·469	7	21	4	12	45·8	+12·3	+17·1
Means ...	...	...	6	16	46·20	+12·25	...
Group 5181. A small faint spot.							
Mar. 8·448	1	9	1	9	342·1	−16·5	−60·1
9·469	3	18	2	13	342·3	−16·5	−46·4
Means ...	...	...	2	11	342·20	−16·50	...
Group 5182. A large regular spot, *a*, with occasionally a few small companions.							
Mar. 9·469	16	83	32	165	311·7	−16·8	−77·0
10·435	25	173	28	188	312·5	−16·6	−63·5
11·494	30	236	23	179	312·9	−16·7	−49·2
12·191	45	290	30	193	311·8	−16·9	−41·0
13·118	52	323	30	186	312·6	−17·0	−28·0
14·150	47	289	25	151	313·1	−16·9	−13·9
15·500	44	279	22	142	312·7	−16·5	+ 3·5
16·461	42	258	22	137	312·9	−16·6	+16·3
17·485	38	294	22	171	312·9	−16·8	+29·8
18·504	29	194	20	134	313·3	−16·6	+43·7
19·129	24	147	19	117	313·5	−16·4	+52·1
20·152	9	100	10	116	313·4	−16·2	+65·5
21·278	7	33	17	87	313·8	−16·2	+80·7
Means ...	...	...	23	151	312·85	−16·63	...
Group 5183. A large regular spot, *a*, generally with some small companions.							
Mar. 15·500	9	74	18	144	235·5	+ 8·5	−73·7
16·461	24	154	26	169	235·5	+ 8·1	−61·1
17·485	35	261	27	204	235·3	+ 8·5	−47·8
18·504	49	292	30	183	235·6	+ 8·4	−34·0
19·129	99	322	45	187	234·7	+ 8·8	−26·7
20·152	58	382	30	204	234·8	+ 9·1	−13·1
21·278	51	336	27	175	236·7	+ 9·3	+ 3·6
22·468	42	268	23	150	237·6	+ 9·6	+20·2
23·160	36	237	22	144	238·4	+ 9·9	+30·1
24·451	23	181	18	141	238·7	+10·3	+47·5
25·157	23	150	23	148	239·1	+10·7	+57·2
26·533	10	58	22	121	238·4	+10·3	+74·6
Means ...	...	...	26	164	236·69	+ 9·29	...
Group 5184. A number of spots in an irregular stream, forming north of Group 5183. *a*, the last spot of the stream, is the largest, most definite and most stable.							
1904. *a*					°	°	°
Mar. 19·129	7	30	4	17	238·9	+16·1	−22·5
20·152	46	210	26	118	236·5	+17·5	−11·4
21·278	32	178	17	98	236·7	+17·9	+ 3·6
22·468	20	131	12	76	236·1	+17·5	+18·7
23·160	11	69	7	43	236·0	+18·1	+27·7
24·451	0	13	0	10	234·8	+18·6	+43·6
25·157	0	7	0	6	236·0	+16·5	+54·1
Means ...	...	...	9	53	236·43	+17·46	...
Group 5185. A small spot.							
Mar. 19·129	2	6	3	8	193·3	− 8·4	−68·1
Means ...	...	...	3	8	193·3	− 8·4	...
Group 5186. A number of spots in an irregular stream. *a*, the leader, is a composite spot, which has broken up into a close cluster of small spots by March 23; *b* is a close cluster of small spots in the rear part of the stream.							
Mar. 19·129	0	86	0	260	182·5	+11·2	−78·9
20·152	71	368	90	481	182·5	+11·0	−65·4
21·278	67	342	54	276	184·2	+10·7	−48·9
22·468	63	474	40	301	184·1	+10·8	−33·3
23·160	32	251	19	146	183·7	+11·3	−24·6
24·451	31	251	17	133	184·4	+11·1	− 6·8
25·157	19	119	10	63	184·6	+11·5	+ 2·7
26·533	2	45	1	25	184·0	+11·4	+20·2
Means ...	...	...	29	211	183·75	+11·13	...
Group 5187. A few spots in an irregular stream. The leader, *a*, is the largest and best defined spot.							
Mar. 22·468	3	19	5	29	150·5	+19·3	−66·9
23·160	26	108	29	122	149·4	+18·9	−58·9
24·451	30	152	22	112	151·1	+19·2	−40·1
25·157	31	189	20	124	150·7	+19·0	−31·2
26·533	33	270	20	156	149·9	+18·4	−13·9
27·583	20	196	11	110	149·1	+18·8	− 0·8
28·492	7	96	4	54	148·4	+18·9	+10·5
29·430	8	25	5	15	152·8	+18·4	+27·3
30·137	3	9	2	6	153·1	+18·9	+36·9
Means ...	...	...	13	81	150·56	+18·87	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5188. A few small unstable spots. The group is not seen on March 26 or 27.							
1904. d					°	°	°
Mar. 22·468	0	6	0	19	135·8	−15·8	−81·6
23·160	0	11	0	17	134·9	−15·0	−73·4
24·451	1	43	1	38	135·3	−15·2	−55·9
25·157	0	12	0	9	135·5	−15·7	−46·4
26·533	0	0	0	0	...	...	...
27·583	0	0	0	0	...	...	...
28·492	0	42	0	21	135·9	−15·7	− 2·0
29·430	6	51	3	26	136·3	−15·5	+10·8
30·137	0	19	0	10	135·0	−15·8	+18·8
Means ...	...	...	0	16	135·53	−15·53	...
Group 5189. Two small spots.							
Mar. 23·160	8	13	7	11	253·0	+21·5	+44·7
Means ...	...	...	7	11	253·0	+21·5	...
Group 5190. Two small spots, *a* and *b*. *b*, the following spot, is the best defined, and alone remains on March 26.							
Mar. 24·451	6	34	5	29	243·7	−20·4	+52·5
25·157	14	77	15	82	244·3	−20·6	+62·4
26·533	0	16	0	33	241·1	−20·9	+77·3
Means ...	...	...	7	48	243·03	−20·63	...
Group 5191. A few very small faint spots.							
Mar. 24·451	4	25	2	16	223·8	+12·4	+32·6
Means ...	...	...	2	16	223·8	+12·4	...
Group 5192. A few very small faint spots.							
Mar. 24·451	0	8	0	10	123·6	−19·8	−67·6
Means ...	...	...	0	10	123·6	−19·8	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5193. A very small spot.							
1904. d					°	°	°
Mar. 25·157	0	10	0	7	225·4	+18·3	+43·5
Means ...	...	...	0	7	225·4	+18·3	...
Group 5194. A very small spot on March 25, preceding Group 5187. The group developes into a short stream of small spots on the succeeding days.							
Mar. 25·157	0	8	0	5	158·5	+23·3	−23·4
26·533	2	52	1	31	157·8	+24·2	− 6·0
27·583	38	183	22	107	157·8	+23·5	+ 7·9
28·492	17	124	10	77	158·3	+23·5	+20·4
29·430	11	52	7	35	157·7	+23·6	+32·2
30·137	3	23	3	18	158·8	+24·0	+42·6
Means ...	...	...	7	46	158·15	+23·68	...
Group 5195. A regular spot, *a*.							
Mar. 25·157	6	38	16	102	105·2	+15·4	−76·7
26·533	19	104	19	108	106·2	+15·0	−57·6
27·583	23	148	18	112	105·6	+14·9	−44·3
28·492	30	193	19	124	105·3	+14·6	−32·6
29·430	30	228	17	130	105·0	+14·4	−20·5
30·137	28	199	16	109	104·6	+14·9	−11·6
31·449	37	198	20	108	105·0	+15·4	+ 6·0
Apr. 1·476	28	189	16	108	104·9	+15·4	+19·5
2·473	23	213	15	138	105·1	+15·4	+33·0
3·500	22	89	18	71	105·3	+15·2	+46·6
4·492	2	19	3	22	105·7	+15·4	+60·1
5·289	0	6	0	11	106·9	+16·0	+71·8
Means ...	...	...	15	95	105·40	+15·17	...
Group 5196. A few spots in a short stream, following Group 5188. The first and last spots, *a* and *b*, are the most stable and best defined.							
Mar. 28·492	14	168	7	89	123·5	−21·5	−14·4
29·430	31	108	16	57	123·5	−21·3	− 2·0
30·137	13	67	7	35	123·7	−21·4	+ 7·5
31·449	0	16	0	9	126·0	−21·4	+27·0
Means ...	...	...	8	48	124·18	−21·40	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5197. A small spot following Group 5195.							
1904. d					°	°	°
Mar. 28·492	0	14	0	15	77·8	+13·6	−60·1
29·430	6	30	5	24	77·6	+13·8	−47·9
30·137	4	15	3	11	77·1	+13·7	−39·1
31·449	1	21	1	12	77·7	+13·7	−21·3
Apr. 1·476	5	16	3	9	77·2	+14·0	− 8·2
Means ...	...	...	2	14	77·48	+13·76	...
Group 5198. A small spot, *a*, with a small companion on April 3 and 4.							
Mar. 29·430	2	12	3	18	59·7	+18·6	−65·8
30·137	0	7	0	7	59·0	+18·0	−57·2
31·449	0	10	0	7	60·1	+17·4	−38·9
Apr. 1·476	8	28	5	17	60·9	+17·1	−24·5
2·473	5	14	3	8	61·2	+16·9	−10·9
3·500	4	41	2	22	61·0	+17·5	+ 2·3
4·492	7	20	4	12	61·0	+16·4	+15·4
5·289	2	7	1	4	61·6	+16·3	+26·5
Means ...	...	...	2	12	60·56	+17·28	...
Group 5199. A spot, *a*, following Group 5197, and south following Group 5198. Small companions follow *a* on March 30 and 31.							
Mar. 29·430	0	51	0	95	53·2	+12·6	−72·3
30·137	4	51	6	66	51·3	+13·0	−64·9
31·449	0	38	0	30	51·8	+13·1	−47·2
Apr. 1·476	7	31	4	20	51·6	+12·9	−33·8
2·473	0	9	0	5	51·2	+12·8	−20·9
3·500	5	47	3	25	51·3	+12·7	− 7·4
4·492	6	19	3	10	51·1	+12·6	+ 5·5
5·289	1	6	0	3	50·8	+12·6	+15·7
Means ...	...	...	2	32	51·54	+12·79	...
Group 5200. A number of spots, mostly small, in a sparse stream. The leader, *a*, is a regular spot, and the largest in the group.							
Apr. 2·473	2	43	2	46	13·8	+17·3	−58·3
3·500	23	178	18	137	15·2	+18·2	−43·5
4·492	31	142	21	91	16·1	+17·9	−29·5
5·289	21	259	12	151	16·1	+18·0	−19·0
6·424	44	243	25	133	19·7	+17·6	− 0·4
7·615	40	226	23	129	20·4	+17·7	+16·0

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5200—*continued.*							
1904. d					°	°	°
Apr. 8·625	35	201	22	126	20·4	+17·7	+29·3
9·524	20	154	15	113	20·2	+18·0	+41·0
10·545	14	127	13	121	19·8	+18·5	+54·1
11·458	9	82	13	118	20·1	+17·8	+66·4
12·444	5	26	15	81	19·1	+17·6	+78·5
Means ...	...	...	16	113	18·26	+17·85	...
Group 5201. A pair of faint small spots, preceding Group 5200.							
Apr. 6·424	0	33	0	19	33·7	+16·6	+13·6
Means ...	...	...	0	19	33·7	+16·6	...
Group 5202. A fine irregular stream, consisting chiefly of a large double spot, *a*, and a large cluster, *b*, following it. The group is measured as a whole on April 9.							
Apr. 8·625	42	317	73	564	276·4	−15·2	−74·7
9·524	72	710	80	791	275·2	−15·7	−64·0
10·545	183	1047	142	815	275·7	−16·2	−50·0
11·458	196	1296	126	834	275·6	−16·1	−38·1
12·444	260	1382	145	775	275·7	−16·1	−24·9
13·502	261	1664	136	863	275·7	−16·0	−11·0
14·463	266	1739	135	888	275·6	−16·0	+ 1·6
15·380	239	1778	125	936	276·0	−15·7	+14·1
16·500	194	1371	114	808	277·1	−15·9	+30·0
17·370	205	1191	138	801	277·0	−15·7	+41·4
18·476	79	995	70	892	277·2	−15·7	+56·2
19·522	54	643	75	923	277·4	−16·0	+70·2
20·421	12	164	25	483	276·6	−15·6	+81·3
21·108	3	18	13	68	269·9	−16·3	+83·7
Means ...	...	...	100	746	275·79	−15·87	...
Group 5203. A pair of very small faint spots, following Group 5202. One of the spots has disappeared by April 11.							
Apr. 10·545	0	9	0	12	256·2	−19·8	−69·5
11·458	0	3	0	3	256·6	−20·3	−57·1
Means ...	...	...	0	8	256·40	−20·05	...

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

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Group 5204. A large regular spot, *a*.							
1904. a					°	°	°
Apr. 10·545	0	15	0	52	244·9	+ 6·6	−80·8
11·458	13	49	19	73	244·4	+ 6·6	−69·3
12·444	14	92	13	86	244·1	+ 6·5	−56·5
13·502	16	115	11	80	244·4	+ 6·7	−42·3
14·463	19	111	11	66	244·6	+ 6·5	−29·4
15·380	17	111	9	60	244·0	+ 6·2	−17·9
16·500	18	125	9	64	245·2	+ 6·7	− 1·9
17·370	20	112	10	58	245·2	+ 6·6	+ 9·6
18·476	15	47	9	27	245·5	+ 6·5	+24·5
19·522	2	12	2	8	246·0	+ 6·7	+38·8
Means ...	...	...	9	57	244·83	+ 6·56	...
Group 5205. A very small faint spot.							
Apr. 14·463	0	11	0	6	258·3	+19·1	−15·7
Means ...	...	...	0	6	258·3	+19·1	...
Group 5206. A large regular spot, *a*, with a small companion on April 17.							
Apr. 14·463	8	78	20	191	198·2	+17·8	−75·8
15·380	17	133	23	177	196·9	+16·3	−65·0
16·500	25	195	21	165	197·8	+17·8	−49·3
17·370	45	231	31	161	197·4	+18·0	−38·2
18·476	37	234	22	140	197·4	+18·1	−23·6
19·522	46	287	25	158	197·5	+18·1	− 9·7
20·421	40	300	22	163	197·1	+18·4	+ 1·8
21·108	41	273	23	153	196·9	+18·8	+10·7
22·128	29	239	17	144	196·8	+18·8	+24·0
23·445	27	170	20	124	196·4	+18·3	+41·0
24·649	13	125	13	127	196·3	+18·3	+56·7
25·430	12	81	17	117	196·3	+18·4	+67·2
26·100	9	42	21	101	196·0	+18·6	+75·8
Means ...	...	...	21	148	197·00	+18·13	...
Group 5207. A small faint spot.							
Apr. 19·522	5	21	3	12	218·8	+23·0	+11·6
20·421	5	14	3	9	218·6	+23·1	+23·3
Means ...	...	...	3	11	218·70	+23·05	...

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Group 5208. A pair of small spots on April 20. A number of spots in an irregular stream on the succeeding days. The group undergoes continual change.							
1904. a					°	°	°
Apr. 20·421	0	35	0	17	191·1	− 9·1	− 4·2
21·108	18	78	9	39	195·4	− 8·2	+ 9·2
22·128	32	216	18	121	198·6	− 8·4	+25·8
23·445	19	144	13	97	197·6	− 8·4	+42·2
24·649	7	61	6	59	198·4	− 8·1	+58·8
25·430	0	28	0	38	197·8	− 8·1	+68·7
26·100	1	16	3	38	199·0	− 7·8	+78·8
Means ...	...	...	7	58	196·84	− 8·30	...
Group 5209. A very large regular spot, *a*, followed by a train of small spots.							
Apr. 21·108	34	226	108	744	104·1	−12·2	−82·1
22·128	77	553	99	756	103·6	−12·4	−69·2
23·445	120	1080	95	875	103·5	−12·5	−51·9
24·649	204	1429	125	880	104·3	−12·9	−35·3
25·430	280	1354	155	753	104·4	−13·0	−24·7
26·100	244	1373	128	722	104·6	−13·1	−15·6
27·422	207	1172	105	593	105·4	−13·1	+ 2·6
28·538	206	1252	109	660	105·3	−13·1	+17·2
29·274	166	1180	95	672	105·5	−13·1	+27·1
30·084	120	1032	77	660	105·4	−12·9	+37·8
May 1·527	85	616	78	564	105·4	−13·1	+56·8
2·266	55	524	69	660	105·7	−12·8	+66·9
3·680	0	45	0	196	104·5	−12·6	+84·4
Means ...	...	...	96	671	104·75	−12·83	...
Group 5210. A fine irregular stream of spots. The leader, *a*, is a large double spot; the other members of the group are unstable. The leader lengthens out in the direction of motion and the whole group straightens as it diminishes in size.							
Apr. 21·108	0	5	0	23	104·2	+14·6	−82·0
22·128	22	220	34	335	103·9	+13·4	−68·9
23·445	99	848	81	700	105·6	+13·3	−49·8
24·649	119	979	75	617	107·2	+13·3	−32·4
25·430	213	1244	124	719	106·0	+13·6	−23·1
26·100	173	1130	95	612	106·4	+13·4	−13·8
27·422	173	857	91	452	107·8	+12·7	+ 5·0
28·538	100	621	56	346	107·6	+12·8	+19·5
29·274	55	446	33	270	108·3	+12·3	+29·9
30·084	32	331	23	235	110·0	+11·7	+42·4
May 1·527	44	208	52	240	111·5	+11·1	+62·9
2·266	0	35	0	63	111·4	+11·6	+72·6
3·680	0	34	0	93	98·5	+13·0	+78·4
Means ...	...	...	51	362	106·80	+12·83	...

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

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Group 5211. A number of very small faint spots close together.							
1904. d					°	°	°
Apr. 22·128	0	10	0	6	189·5	+19·1	+16·7
Means ...	...	...	0	6	189·5	+19·1	...
Group 5212. A small, but well-defined spot.							
Apr. 23·445	2	15	1	8	153·7	+11·4	− 1·7
Means ...	...	...	1	8	153·7	+11·4	...
Group 5213. A single spot, *a*.							
Apr. 28·538	6	33	13	73	10·5	−21·1	−77·6
29·274	7	43	10	61	9·1	−20·9	−69·3
30·084	9	66	9	66	8·1	−21·5	−59·5
May 1·527	17	23	11	16	8·9	−21·1	−39·7
2·266	11	27	7	16	8·0	−21·7	−30·8
3·680	5	32	3	17	7·9	−21·3	−12·2
4·429	8	19	4	10	7·9	−21·3	− 2·3
Means ...	...	...	8	37	8·63	−21·27	...
Group 5214. A few small spots in an irregular cluster.							
Apr. 29·274	3	22	2	13	59·4	+18·7	−19·0
30·084	32	96	18	52	58·5	+18·3	− 9·1
May 1·527	36	109	20	60	58·4	+17·9	+ 9·8
2·266	10	39	6	22	58·0	+18·2	+19·2
3·680	0	5	0	3	57·9	+17·7	+37·8
4·429	0	10	0	8	58·9	+17·7	+48·7
Means ...	...	...	8	26	58·52	+18·08	...
Group 5215. A few small unstable spots in a short stream.							
May 2·266	0	29	0	18	11·8	+23·8	−27·0
3·680	25	143	14	81	13·0	+23·9	− 7·1
4·429	27	170	15	96	13·0	+23·6	+ 2·8
5·184	11	57	7	34	13·6	+24·7	+13·4
Means ...	...	...	9	57	12·85	+24·00	...

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Group 5216. A small spot, *a*, first seen near the west limb. A small companion follows *a* on May 4.							
1904. d					°	°	°
May 3·680	0	9	0	10	81·9	+15·9	+61·8
4·429	0	19	0	33	81·6	+16·6	+71·4
Means ...	...	...	0	22	81·75	+16·25	...
Group 5217. A few spots in a long scattered stream; *a* and *b*, the first and last spots on May 6, are the most stable members of the group. *a* has disappeared by May 10.							
May 3·680	3	41	3	39	326·0	+19·0	−54·1
4·429	20	97	18	82	320·2	+18·2	−50·0
5·184	23	129	16	92	320·0	+19·0	−40·2
6·476	40	166	23	98	320·8	+18·7	−22·3
7·105	35	145	20	81	319·5	+18·9	−15·3
8·392	20	96	11	53	318·5	+19·2	+ 0·7
9·472	22	73	12	41	321·3	+19·3	+17·8
10·293	7	25	4	15	316·5	+19·2	+23·9
11·098	3	34	2	22	317·2	+18·9	+35·2
12·533	0	5	0	4	315·9	+18·3	+52·8
13·216	0	8	0	10	316·5	+19·8	+62·5
Means ...	...	...	10	49	319·31	+18·95	...
Group 5218. A pair of spots first seen near the central meridian. The group developes into a long irregular stream, mostly of small unstable spots. The leader, *a*, is the largest and most stable.							
May 4·429	15	124	8	67	357·9	−20·0	−12·3
5·184	20	270	10	140	359·0	−19·6	− 1·2
6·476	35	243	19	133	359·8	−19·9	+16·7
7·105	19	198	11	115	0·9	−19·7	+26·1
8·392	15	143	11	103	1·9	−20·1	+44·1
9·472	19	140	19	139	1·9	−21·7	+58·4
10·293	13	116	19	167	1·8	−21·7	+69·2
11·098	14	84	38	215	1·3	−21·5	+79·3
Means ...	...	...	17	135	0·56	−20·53	...
Group 5219. Two small spots.							
May 6·476	1	26	1	18	23·1	+10·2	+40·0
Means ...	...	...	1	18	23·1	+10·2	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5220. A small spot, *a*, with a very small companion on May 6.							
1904. d					°	°	°
May 6·476	0	31	0	18	6·7	+14·1	+23·6
7·105	0	4	0	3	7·3	+14·1	+32·5
Means ...	...	...	0	11	7·00	+14·10	...
Group 5221. Two very small spots on May 7. The group has become an unstable cluster by May 9.							
May 7·105	0	12	0	10	282·8	−15·2	−52·0
8·392	2	4	1	2	284·6	−13·0	−33·2
9·472	2	70	1	39	282·0	−14·0	−21·5
10·293	0	76	0	39	283·9	−14·5	− 8·7
11·098	0	29	0	14	285·5	−14·2	+ 3·5
Means ...	...	...	0	21	283·76	−14·18	..
Group 5222. A small spot in a bright mass of faculæ.							
May 8·392	2	9	2	9	18·4	+ 9·8	+60·6
Means ...	...	...	2	9	18·4	+ 9·8	...
Group 5223. A very small spot following Group 5222. It is not seen on May 9 and 10.							
May 8·392	2	2	1	2	359·9	+ 9·9	+42·1
9·472	0	0	0	0	...	...	...
10·293	0	0	0	0	...	...	...
11·098	0	0	0	14	2·2	+ 9·3	+80·2
Means ...	...	...	0	4	1·05	+ 9·60	...
Group 5224. A very small faint spot, not seen on May 9. A small spot, *a*, is seen on May 10, and increases in size on the succeeding days. It is followed by a small companion on May 11 and 12.							
May 8·392	0	13	0	8	335·6	−23·1	+17·8
9·472	0	0	0	0	...	...	...
10·293	3	10	2	7	336·6	−23·2	+44·0
11·098	18	42	17	40	338·3	−23·2	+56·3
12·533	0	53	0	110	338·9	−23·2	+75 8
Means ...	...	...	4	33	337·35	−23·18	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5225. A number of small unstable spots in an irregular stream.							
1904. d					°	°	°
May 8·392	10	66	7	47	273·9	−20·3	−43·9
9·472	32	213	19	128	274·5	−20·7	−29·0
10·293	28	307	16	170	274·3	−20·9	−18·3
11·098	46	202	25	107	275·2	−21·0	− 6·8
12·533	17	163	9	87	274·9	−20·9	+11·8
13·216	21	161	13	92	275·7	−20·8	+21·7
14·476	19	147	13	98	275·1	−21·7	+37·8
15·538	14	90	12	73	272·8	−23·3	+49·5
16·419	0	20	0	22	273·8	−23·0	+62·2
Means ...	..	...	13	92	274·47	−21·40	...
Group 5226. A small spot.							
May 8·392	4	7	7	12	245·0	−15·7	−72·8
9·472	5	17	5	16	244·7	−15·1	−58·8
10·293	7	22	5	17	244·4	−15·1	−48·2
11·098	4	11	3	7	244·8	−15·6	−37 2
Means ...	...	...	5	13	244·73	−15·38	...
Group 5227. A few small spots in an irregular stream. The group is not seen on May 15 or 17.							
May 11·098	8	35	10	46	218·0	+23·0	−64·0
12·533	11	108	9	86	218·3	+23·8	−44·8
13·216	12	67	8	46	217·9	+23·7	−36·1
14·476	7	62	4	37	218·3	+24·4	−19·0
15·538	0	0	0	0	...	...	...
16·419	0	14	0	8	219·8	+22·6	+ 8·2
17 651	0	0	0	0	...	...	...
18·408	0	4	0	2	220·1	+23·2	+34·8
Means ...	...	...	4	28	218·73	+23·45	...
Group 5228. A few spots, mostly very small, in a short stream. The leader, *a*, is the most stable spot of the group.							
May 12·533	6	82	6	85	202·2	−14·6	−60·9
13·216	8	56	6	46	202·2	−15·5	−51·8
14·476	12	98	7	62	201·6	−15·4	−35·7
15·538	16	148	9	82	201·6	−15·2	−21·7
16·419	10	74	5	38	201·4	−14·8	−10·2
17·651	5	27	3	14	203·2	−14·6	+ 7·9
18·408	1	32	0	18	201·3	−14·3	+16·0
19·463	2	34	1	20	203·1	−15·0	+31·8
Means ...	...	...	5	46	202·08	−14·93	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5229. One or two very small spots south preceding Group 5227.							
1904. d					°	°	°
May 14·476	1	22	1	12	227·9	+13·0	− 9·4
15·538	0	22	0	11	228·9	+12·4	+ 5·6
16·419	0	31	0	16	225·2	+12·4	+13·6
Means ...	...	...	0	13	227·33	+12·60	...
Group 5230. A spot forming suddenly on the west limb.							
May 16·419	0	41	0	85	285·8	+21·5	+74·2
Means ...	...	...	0	85	285·8	+21·5	...
Group 5231. One or two small spots.							
May 16·419	5	31	3	20	241·5	+19·9	+29·9
17·651	0	7	0	5	240·2	+18·6	+44·9
Means ...	...	...	2	13	240·85	+19·25	...
Group 5232. A few spots, mostly small, in an irregular stream. The leader, *a*, is a double spot, and the most stable member of the group.							
May 16·419	0	10	0	6	188·4	+17·9	−23·2
17·651	26	143	15	77	188·1	+17·6	− 7·2
18·408	38	198	21	106	190·3	+17·7	+ 5·0
19·463	26	178	16	102	193·2	+17·7	+21·9
20·478	29	193	19	125	192·3	+17·5	+34·4
21·138	28	130	20	93	190·9	+18·0	+41·7
22·068	15	78	14	74	192·3	+18·2	+55·4
Means ...	...	...	15	83	190·79	+17·80	...
Group 5233. A few small faint spots, following Group 5232.							
May 16·419	10	54	8	39	170·5	+20·1	−41·1
17·651	1	35	1	21	171·1	+19·8	−24·2
18·408	0	16	0	8	169·9	+20·7	−15·4
19·463	2	23	1	12	174·2	+19·9	+ 2·9
20·478	0	10	0	5	175·4	+18·8	+17·5
Means ...	...	...	2	17	172·22	+19·86	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5234. A small faint spot, south of Group 5232.							
1904. d					°	°	°
May 17·651	2	23	1	12	180·9	+11·7	−14·4
Means ...	...	...	1	12	180·9	+11·7	...
Group 5235. Two or three small unstable spots.							
May 20·478	0	72	0	74	99·7	+13·4	−58·2
21·138	7	31	6	26	98·1	+13·2	−51·1
22·068	28	87	18	56	100·2	+12·5	−36·7
23·440	5	34	3	18	100·7	+13·3	−18·0
24·304	3	38	2	20	99·3	+13·1	− 8·0
Means ...	...	...	6	39	99·60	+13·10	...
Group 5236. A very small spot on May 21. The group is not seen on May 22, but one or two small spots are seen on May 23 and 24.							
May 21·138	0	5	0	3	110·3	−13·9	−38·9
22·068	0	0	0	0	...	...	...
23·440	1	33	1	17	109·4	−14·0	− 9·3
24·304	2	20	1	10	109·2	−12·4	+ 1·9
Means ...	...	...	1	8	109·63	−13·43	...
Group 5237. A small spot.							
May 21·138	0	10	0	13	81·1	−15·8	−68·1
Means ...	...	...	0	13	81·1	−15·8	...
Group 5238. A pair of small faint spots.							
May 25·661	3	28	2	18	53·1	−11·7	−36·3
Means ...	...	...	2	18	53·1	−11·7	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5239. A small regular spot.							
1904. d					°	°	°
May 25·661	7	35	13	64	15·6	+ 8·4	−73·8
26·239	8	54	10	71	14·5	+ 8·1	−67·1
27·602	6	25	5	19	15·9	+ 8·2	−47·8
28·058	6	33	4	22	15·6	+ 8·0	−42·0
29·482	2	18	0	10	14·7	+ 7·4	−24·0
30·522	2	22	1	11	14·7	+ 7·5	−10·3
Means ...	...	...	6	33	15·17	+ 7·93	...
Group 5240. A large composite spot, *a*, generally with a small companion. *a* has broken up by June 2 into a number of small spots, forming a stream much inclined to the equator. The last spot of this stream, *b*, is the most stable, and remains alone on June 5.							
May 26·239	0	38	0	86	5·0	−19·9	−76·6
27·602	22	142	20	135	7·5	−20·5	−56·2
28·058	40	236	33	197	7·2	−20·8	−50·4
29·482	41	328	26	204	7·6	−21·0	−31·1
30·522	29	402	16	226	7·4	−21·1	−17·6
31·066	52	364	28	197	7·2	−21·2	−10·6
June 1·646	23	231	12	126	5·3	−21·9	+ 8·3
2·404	20	121	11	69	5·7	−21·2	+18·8
3·062	35	182	21	111	6·3	−22·3	+28·1
4·478	10	48	7	38	5·7	−21·3	+46·3
5·084	5	26	5	24	5·6	−21·1	+54·2
6·416	6	12	10	21	5·3	−21·1	+71·5
Means ...	...	...	16	120	6·32	−21·12	...
Group 5241. A close pair of small spots on May 27, measured together. A single spot on May 28.							
May 27·602	4	24	3	20	114·8	−20·0	+51·1
28·058	6	18	6	18	117·2	−20·3	+59·6
Means ...	...	...	5	19	116·00	−20·15	...
Group 5242. A few small spots in a short stream.							
May 27·602	0	52	0	30	84·6	+17·3	+20·9
Means ...	...	...	0	30	84·6	+17·3	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5243. Two or three unstable spots in a scattered unstable group.							
1904. d					°	°	°
May 28·058	5	35	12	93	338·3	−23·0	−79·3
29·482	6	55	6	57	339·5	−23·4	−59·2
30·522	0	19	0	14	342·2	−21·5	−42·8
31·066	5	24	3	15	344·6	−21·0	−33·2
Means ...	...	...	5	45	341·15	−22·23	...
Group 5244. Three very small spots measured together on May 29. Two small clusters, *a* and *b*, on May 30 and 31.							
May 29·482	0	22	0	12	52·6	−14·4	+13·9
30·522	17	59	10	34	52·9	−13·1	+27·9
31·066	13	46	9	29	52·8	−13·0	+35·0
Means ...	...	...	6	25	52·77	−13·50	...
Group 5245. A very small spot.							
May 29·482	2	7	2	7	343·2	+14·6	−55·5
Means ...	...	...	2	7	343·2	+14·6	...
Group 5246. A few small unstable spots in an irregular stream.							
June 3·062	0	10	0	14	270·0	+21·5	−68·2
4·478	14	106	12	83	272·2	+20·5	−47·2
5·084	20	114	14	80	271·4	+20·4	−40·0
6·416	28	121	15	68	274·9	+19·4	−18·9
7·419	25	152	13	81	276·8	+19·5	− 3·7
8·540	25	129	13	69	276·1	+19·2	+10·4
9·125	49	167	27	93	273·0	+19·1	+17·9
10·623	18	153	12	103	276·5	+18·5	+38·4
11·288	10	46	8	35	275·8	+19·4	+46·5
Means ...	...	...	13	70	274·08	+19·72	...
Group 5247. A few small unstable spots in an irregular stream.							
June 4·478	12	59	6	33	332·3	−22·1	+12·9
5·084	0	18	0	11	332·5	−22·1	+21·1
6·416	11	90	7	59	328·4	−23·2	+34·6

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5247—*continued.*							
1904. d					°	°	°
June 7·419	11	124	9	102	328·5	−23·1	+48·0
8·540	0	12	0	14	327·5	−23·6	+61·8
9·125	0	5	0	10	330·8	−22·2	+75·7
Means ...	...	...	4	38	330·00	−22·72	...
Group 5248. A small spot on June 5 and 7. No spot is seen on June 6.							
June 5·084	0	11	0	7	341·9	−21·7	+30·5
6·416	0	0	0	0	...	...	...
7·419	0	27	0	31	342·4	−22·7	+61·9
Means ...	...	...	0	13	342·15	−22·20	...
Group 5249. A pair of very small spots on June 5. The group is not seen on June 6, but has revived by June 7, as a number of small unstable spots, in an irregular and very scattered stream.							
June 5·084	0	5	0	5	250·9	+11·6	−60·5
6·416	0	0	0	0	...	...	...
7·419	12	101	7	60	250·2	+13·7	−30·3
8·540	27	106	15	56	251·3	+14·0	−14·4
9·125	12	44	5	23	248·4	+13·6	− 6·7
10·623	10	137	5	73	250·4	+14·5	+12·3
11·288	11	44	6	24	250·1	+14·2	+20·8
12·457	7	88	4	55	248·0	+13·1	+34·1
13·630	7	80	6	69	252·1	+14·0	+53·8
14·232	6	30	6	32	252·7	+14·2	+62·3
Means ...	...	...	5	40	250·46	+13·66	...
Group 5250. A few small spots on June 10 and 11. The group has greatly developed by June 12, and becomes a large compact cluster. The group continues to change rapidly, and is a long irregular stream of spots on June 14.							
June 10·623	14	89	8	48	229·0	+19·3	− 9·1
11·288	9	32	5	17	229·4	+20·1	+ 0·1
12·457	27	392	15	215	229·4	+19·4	+15·5
13·630	63	622	38	386	230·0	+19·4	+31·7
14·232	87	438	61	297	229·1	+20·2	+38·7
15·641	25	190	24	196	231·1	+19·8	+59·3
16·418	7	90	12	128	229·9	+19·9	+68·5
Means ...	...	...	23	184	229·70	+19·73	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5251. A small, but dark spot, *a*, usually with a very small companion. *a* has broken up by June 15.							
1904. d					°	°	°
June 10·623	7	52	6	45	184·3	+11·9	−53·8
11·288	8	42	6	30	184·1	+12·5	−45·2
12·457	4	39	2	22	185·4	+12·8	−28·5
13·630	2	14	1	7	185·5	+12·6	−12·8
14·232	3	14	2	7	185·7	+12·7	− 4·7
15·641	4	18	2	10	185·5	+12·7	+13·7
Means ...	...	...	3	20	185·08	+12·53	...
Group 5252. A number of small unstable spots in an irregular and quickly changing stream. *a*, the leader, is a double spot, which has broken up by June 20.							
June 13·630	0	7	0	15	121·8	−17·6	−76·5
14·232	7	36	11	58	120·1	−18·1	−70·3
15·641	18	114	15	95	121·4	−17·5	−50·4
16·418	23	184	16	129	121·2	−17·0	−40·2
17·460	25	96	15	56	121·6	−16·5	−26·0
18·248	22	146	12	81	120·9	−16·8	−16·2
19·603	16	149	8	78	121·3	−16·4	+ 2·1
20·471	15	125	8	68	120·6	−15·4	+12·8
21·210	0	101	0	57	120·5	−14·8	+22·6
22·512	28	196	18	128	117·3	−14·8	+36·6
23·420	28	198	23	161	118·5	−14·7	+49·8
24·485	3	47	3	59	119·8	−15·2	+65·2
25·470	0	11	0	29	119·5	−15·2	+77·9
Means ...	...	...	10	78	120·35	−16·15	...
Group 5253. A large composite spot, *a*, usually with a few companions in a short train following it.							
June 13·630	12	111	26	241	121·7	+12·2	−76·6
14·232	34	211	56	346	118·4	+12·8	−72·0
15·641	47	435	39	365	119·4	+13·3	−52·4
16·418	47	528	33	363	119·3	+13·1	−42·1
17·460	70	615	41	354	120·2	+12·9	−27·4
18·248	59	539	31	287	120·2	+12·9	−16·9
19·603	49	615	25	313	119·6	+12·0	+ 0·4
20·471	59	457	31	238	119·4	+12·2	+11·6
21·210	40	390	22	212	119·4	+12·7	+21·5
22·512	45	304	29	198	119·4	+11·9	+38·7
23·420	19	248	15	198	119·3	+12·0	+50·6
24·485	5	130	6	151	118·8	+11·9	+64·2
25·470	0	33	0	73	119·1	+12·4	+77·5
Means ...	...	...	27	257	119·55	+12·48	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5254. A small regular spot, *a*, following Group 5252. A very small companion precedes *a*, on June 17.							
1904. d					°	°	°
June 14·232	5	32	15	104	110·4	−22·0	−80·0
15·641	7	38	8	44	109 9	−21·3	−61·9
16·418	13	52	12	46	109·7	−21·5	−51·7
17·460	8	35	6	24	109·8	−21·5	−37·8
18·248	5	16	3	10	108·8	−22·3	−28·3
19·603	0	10	0	5	109·0	−21·6	−10·2
Means ...	...	...	7	39	109·60	−21·70	...
Group 5255. One or two very small spots.							
June 19·603	0	24	0	17	77·2	−20·2	−42·0
20·471	1	6	1	4	75·9	−19·3	−31·9
Means ...	...	...	1	11	76·55	−19·75	...
Group 5256. A few small spots irregularly scattered on June 19 and 20. The group increases in size, and on June 22 and the succeeding days consists chiefly of two compact clusters, *a* and *b*, which quickly coalesce into two composite spots.							
June 19·603	0	24	0	38	48·3	+19·4	−70·9
20·471	16	53	16	55	47·0	+19·2	−60·8
21·210	16	161	12	125	49·9	(+17·5)*	−48·0
22·512	43	398	26	244	49·9	+19·6	−30·8
23·420	93	605	52	335	50·1	+19·6	−18·6
24·485	40	635	21	334	48·8	+19·5	− 5·8
25·470	48	422	26	223	49·4	+19·5	+ 7·8
26·530	25	343	14	193	50·1	+19·6	+21·5
27·416	8	175	5	111	50·7	+19·6	+33·9
28·503	10	66	7	50	49·2	+19·9	+46·7
29·390	2	27	2	24	44·0	+20·2	+54·6
Means ...	...	...	16	157	48·85	+19·61	...

* The discordance is possibly due to a change of position-angle in the wires of the Mauritius photoheliograph.

Group 5257. A very small spot.

June 25·470	3	12	2	6	49·1	−13·7	+ 7·5
Means ...	...	...	2	6	49·1	−13·7	...

Group 5258. One or two small faint spots.

1904. d					°	°	°
June 25·470	4	27	3	20	356·6	−19·6	−45·0
26·530	6	17	4	11	356·4	−20·0	−32·2
Means ...	...	...	4	16	356·50	−19·80	...

Group 5259. A small spot, *a*, until June 29, when several small spots are seen near, *a*, forming with it a compact cluster. The group has expanded by June 30, into a stream of which *b* and *a*, the first and last spots, are the largest members. *a* has disappeared by July 3, and *b* by July 6, but a fresh outburst, *s.f.*, *b*, has taken place by the latter date, and increases rapidly.

June 26·530	0	14	0	30	314·4	−18·6	−74·2
27·416	0	13	0	17	311·9	−19·4	−64·9
28·503	1	10	1	8	311·1	−17·3	−51·4
29·390	15	56	10	39	310·1	−18·0	−39·3
30·411	39	318	24	191	310·9	−18·8	−25·3
July 1·413	27	365	14	202	311·7	−19·0	−11·3
2·602	20	116	11	64	314·0	−19·2	+ 6·8
3·479	12	95	7	54	312·7	−19·6	+17·1
4·468	2	25	2	16	314·8	−19·5	+32·3
5·204	0	13	0	10	317·1	−19·5	+44·4
6·538	15	107	15	105	310·0	−20·3	+54·9
7·227	17	241	22	312	309·8	−21·0	+63·9
8·658	6	56	18	176	305·8	−21·1	+78·8
Means ...	...	...	10	94	311·87	−19·33	...

Group 5260. A very small spot.

June 27·416	2	7	1	4	1·8	−17·6	−15·0
Means ...	...	...	1	4	1·8	−17·6	...

Group 5261. A few spots, mostly small, in an irregular stream, preceding Group 5259.

June 29·390	2	33	2	20	326·7	−22·9	−22·7
30·411	12	163	6	93	328·4	−23·2	− 7·8
July 1·413	12	88	7	50	329·3	−23·0	+ 6·3
2·602	11	80	7	49	330·4	−22·9	+23·2
3·479	2	32	2	21	330·6	−22·8	+35·0
Means ...	...	...	5	47	329·08	−22·96	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			

Group 5262.

A number of spots in an irregular and quickly changing stream. *a*, which is generally the leader, is the only stable member of the group.

					°	°	°
1904. d							
June 30·411	5	25	9	48	261·4	+15·4	−74·8
July 1·413	6	111	7	129	258·6	+16·1	−64·4
2·602	29	208	22	160	258·8	+16·0	−48·4
3·479	24	319	16	204	258·5	+15·7	−37·1
4·468	43	273	24	151	259·8	+15·7	−22·7
5·204	57	287	30	150	260·9	+15·7	−11·8
6·538	19	149	10	78	262·6	+16·4	+ 7·5
7·227	27	125	14	67	262·6	+16·5	+16·7
8·658	7	73	5	47	262·5	+16·8	+35·5
9·423	7	48	5	35	262·0	+16·4	+45·1
10·502	6	59	6	57	261·5	+16·1	+58·8
11·469	0	20	0	32	261·1	+15·5	+71·3
Means ...	...	...	12	97	260·86	+16·03	...

Group 5263.

A small faint spot on July 3. The group is not seen on July 4, but has reappeared by July 5, as a pair of well-defined spots, *a* and *b*. *a* has a small companion on July 6.

July 3·479	0	10	0	10	239·6	−17·2	−56·0
4·468	0	0	0	0	...	...	...
5·204	34	134	22	89	238·4	−18·9	−34·3
6·538	13	94	7	53	238·3	−18·5	−16·8
7·227	3	34	2	18	238·3	−19·5	− 7·6
Means ...	...	...	6	34	238·65	−18·53	...

Group 5264.

A fine stream of spots. The leader, *a*, is a regular spot, and the rear spot, *b*, is composite. These two are the principal spots of the group. *b* has broken up by July 17.

July 8·658	7	54	17	124	148·9	+14·2	−78·1
9·423	19	149	31	234	145·2	+13·4	−71·7
10·502	60	393	59	388	143·2	+13·6	−59·5
11·469	66	494	47	365	143·1	+13·1	−46·7
12·431	79	750	48	450	144·6	+13·1	−32·5
13·434	101	919	55	492	144·6	+13·2	−19·3
14·442	106	776	55	396	145·8	+13·2	− 4·7
15·446	86	795	45	408	145·1	+12·8	+ 7·9
16·517	76	499	42	279	147·4	+12·6	+24·3
17·489	47	472	30	294	145·6	+12·5	+35·4
18·448	49	345	39	263	146·0	+12·7	+48·5
19·494	10	159	9	174	146·6	+12·7	+62·9
20·449	12	83	19	133	143·4	+12·8	+72·4
Means ...	...	...	38	308	145·35	+13·07	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			

Group 5265.

A small spot.

					°	°	°
1904. d							
July 13·434	4	14	5	17	99·0	+16·6	−64·9
14·442	2	12	2	10	98·3	+16·8	−52·2
Means ...	...	...	4	14	98·65	+16·70	...

Group 5266.

A few small spots in a short stream, preceding Group 5265.

July 14·442	1	34	1	24	107·7	+13·3	−42·8
15·446	11	94	6	55	107·9	+13·3	−29·3
16·517	17	113	9	59	108·2	+13·5	−14·9
17·489	12	130	6	66	107·4	+13·0	− 2·8
18·448	17	107	9	56	108·1	+12·8	+10·6
19·494	15	66	9	37	109·3	+12·7	+25·6
20·449	5	20	3	14	109·7	+12·2	+38·7
Means ...	...	...	6	44	108·33	+12·97	...

Group 5267.

One or two small spots.

July 15·446	13	64	10	46	182·0	+16·3	+44·8
16·517	1	7	1	7	184·2	+16·2	+61·1
Means ...	...	...	6	27	183·10	+16·25	...

Group 5268.

An irregular cluster appearing suddenly near the centre of the disc. The group changes quickly ; *a*, the rear spot, being the most stable member.

July 15·446	12	94	7	51	118·7	−12·0	−18·5
16·517	34	255	17	134	118·8	−12·3	− 4·3
17·489	16	155	8	82	118·6	−12·1	+ 8·4
18·448	13	176	7	98	117·8	−11·2	+20·3
19·494	10	72	6	46	117·4	−11·4	+33·7
20·449	5	23	4	17	116·9	−11·6	+45·9
Means ...	...	...	8	71	118·03	−11·77	...

Group 5269.

A number of spots in a fine stream. The leader, *a*, is a large composite spot at first, but becomes more regular in shape as the group approaches the west limb. *a* remains alone after July 23.

July 15·446	12	51	34	143	59·5	−18·6	−77·7
16·517	46	359	67	529	56·0	−19·6	−67·1
17·489	49	641	49	641	54·6	−20·1	−55·6

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5269—*continued.*							
1904. d					°	°	°
July 18·448	94	758	71	576	55·2	−20·3	−42·3
19·494	107	915	66	561	58·2	−19·5	−25·5
20·449	134	870	75	492	58·4	−19·6	−12·6
21·478	108	871	60	479	59·7	−19·3	+ 2·3
22·442	125	741	72	424	60·3	−19·0	+15·7
23·431	88	576	55	364	60·4	−18·8	+28·9
24·545	82	501	62	381	60·0	−18·3	+43·2
25·538	47	407	47	406	59·6	−18·1	+55·9
26·454	23	260	35	401	59·5	−18·3	+67·9
27·631	0	14	0	63	57·2	−18·1	+81·2
Means ...	...	...	53	420	58·35	−19·05	...
Group 5270. A few small unstable spots, preceding Group 5268.							
July 16·517	7	13	4	8	142·2	−14·1	+19·1
17·489	5	29	3	18	143·6	−14·0	+33·4
18·448	2	28	2	23	145·1	−14·6	+47·6
19·494	16	67	18	76	145·2	−13·9	+61·5
20·449	4	31	9	74	147·0	−14·9	+76·0
Means ...	...	...	7	40	144·62	−14·30	...
Group 5271. A very small faint spot.							
July 19·494	0	7	0	6	33·9	−6·6	−49·8
Means ...	...	...	0	6	33·9	−6·6	...
Group 5272. A few very small spots in a compact cluster.							
July 21·478	4	35	2	18	61·9	+14·8	+ 4·5
22·442	11	60	6	31	63·2	+13·9	+18·6
23·431	5	29	3	18	63·6	+13·7	+32·1
24·545	0	8	0	7	66·6	+12·8	+49·8
25·538	1	10	1	11	67·9	+13·0	+64·2
Means ...	...	...	2	17	64·64	+13·64	...
Group 5273. A pair of spots, *a* and *b*, with at first a few small spots between them, forming a scattered stream. *a* is not seen on July 26.							
July 21·478	4	135	8	310	338·9	+19·7	−78·5
22·442	6	149	7	186	337·9	+20·6	−66·7
23·431	19	133	17	115	337·7	+20·9	−53·8

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5273—*continued.*							
1904. d					°	°	°
July 24·545	20	124	13	84	336·9	+20·9	−39·9
25·538	8	44	5	26	336·2	+20·6	−27·5
26·454	2	12	1	7	334·2	+21·1	−17·4
27·631	3	46	2	25	340·2	+20·4	+ 4·2
28·472	0	2	0	1	334·0	+20·6	+ 9·1
Means ...	...	...	7	94	337·03	+20·60	...
Group 5274. A few small spots in an irregular stream.							
July 22·442	0	66	0	47	2·3	−11·7	−42·3
Means ...	...	...	0	47	2·3	−11·7	...
Group 5275. An irregular cluster of spots, north following Group 5273. The group gradually diminishes in size.							
July 22·442	0	41	0	101	325·2	+24·3	−79·4
23·431	19	108	25	146	323·1	+24·4	−68·4
24·545	11	95	10	86	321·6	+24·3	−55·2
25·538	8	60	6	42	322·3	+24·1	−41·4
26·454	3	98	2	58	324·9	+23·7	−26·7
27·631	0	69	0	37	327·5	+22·9	− 8·5
28·472	4	122	2	64	327·9	+22·5	+ 3·0
29·211	27	135	14	72	329·0	+22·4	+13·9
30·442	9	94	5	56	327·2	+22·8	+28·3
31·419	5	83	3	56	325·8	+23·3	+39·9
Aug. 1·430	0	13	0	11	326·3	+22·5	+53·8
Means ...	...	...	6	66	325·53	+23·38	...
Group 5276. A small faint spot.							
July 23·431	0	27	0	16	13·8	−23·7	−17·7
Means ...	...	...	0	16	13·8	−23·7	...
Group 5277. A few small unstable spots in an irregular cluster.							
July 23·431	16	62	10	40	2·4	−19·6	−29·1
24·545	5	51	3	29	2·9	−20·4	−13·9
25·538	2	10	1	5	5·2	−19·5	+ 1·5
26·454	0	3	0	2	5·0	−19·2	+13·4
Means ...	...	...	4	19	3·88	−19·68	...

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

Group 5278.

A few spots in a scattered stream. The leader and rear spots, *a* and *b*, are the chief members of the group.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
July 25·538	17	86	18	94	300·4	+14·7	−63·3
26·454	36	148	30	118	300·2	+14·8	−51·4
27·631	20	116	13	72	300·5	+14·7	−35·5
28·472	19	123	10	68	302·6	+14·5	−22·3
29·211	21	76	11	39	304·8	+14·2	−10·3
30·442	6	36	3	19	308·4	+14·4	+ 9·5
31·419	2	18	1	10	311·3	+14·7	+25·4
Means ...	...	...	12	60	304·03	+14·57	...

Group 5279.

One or two very small spots.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
1904. d					°	°	°
July 27·631	3	20	1	11	358·0	+12·9	+22·0
28·472	0	7	0	4	0·8	+12·3	+35·9
Means ...	...	...	1	8	359·40	+12·60	...

Group 5280.

A few spots in a short stream, south of Group 5278.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
July 27·631	13	48	8	30	299·7	+10·2	−36·3
28·472	8	86	5	48	299·3	+10·0	−25·6
29·211	0	34	0	19	298·8	+ 9·5	−16·3
30·442	0	9	0	4	300·0	+ 9·4	+ 1·1
Means ...	...	...	3	25	299·45	+ 9·78	...

Group 5281.

A group appearing suddenly some distance from the east limb. It rapidly increases in size, and has become a large irregular cluster by July 30. The cluster is usually measured as one.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
July 28·472	0	19	0	12	291·8	−16·8	−33·1
29·211	42	281	25	165	293·3	−17·9	−21·8
30·442	51	504	28	274	294·5	−17·1	− 4·4
31·419	49	624	27	344	294·7	−17·4	+ 8·8
Aug. 1·430	47	515	28	303	294·5	−17·5	+22·0
2·422	36	371	24	251	295·0	−17·6	+35·6
3·419	19	328	18	291	297·1	−17·4	+50·9
4·418	13	128	18	175	298·4	−17·1	+65·4
Means ...	...	...	21	227	294·91	−17·35	...

Group 5282.

A very small spot appearing first near the centre of the disc. The group increases in size, and forms a close cluster on April 5 and the succeeding days.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
1904. d					°	°	°
Aug. 1·430	0	11	0	6	258·4	+12·0	−14·1
2·422	1	25	1	12	257·8	+12·0	− 1·6
3·419	5	60	2	31	258·0	+11·7	+11·8
4·418	14	78	8	44	259·9	+11·1	+26·9
5·665	29	274	20	188	259·8	+10·9	+43·3
6·211	48	330	37	256	259·5	+11·0	+50·3
7·565	12	86	14	102	256·8	+10·7	+65·5
8·443	0	5	0	10	256·0	+11·1	+76·2
Means ...	...	...	10	81	258·33	+11·31	...

Group 5283.

A large regular spot, *a*, with occasionally a small companion.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Aug. 2·422	4	51	9	102	182·4	+26·6	−77·0
3·419	10	98	11	110	182·9	+26·4	−63·3
4·418	18	140	15	114	182·5	+26·0	−50·5
5·665	34	187	21	119	182·4	+26·2	−34·1
6·211	55	201	33	120	181·7	+26·1	−27·5
7·565	22	178	12	96	181·6	+26·1	− 9·7
8·443	22	132	12	71	181·3	+26·2	+ 1·5
9·455	11	59	6	32	180·7	+25·9	+14·3
10·422	17	67	10	39	178·9	+26·1	+25·3
11·674	5	23	3	16	179·5	+26·0	+42·4
12·431	6	29	5	24	179·7	+26·2	+52·6
13·501	0	5	0	6	179·2	+26·5	+66·3
Means ...	...	...	11	71	181·07	+26·19	...

Group 5284.

A few small spots in an irregular cluster.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Aug. 4·418	8	43	5	24	227·0	−19·5	− 6·0
5·665	1	46	1	26	227·3	−20·7	+10·8
6·211	5	29	4	17	227·9	−20 8	+18·7
Means ...	...	...	3	22	227·40	−20·33	...

Group 5285.

A large composite spot, *a*, followed by a train of small spots. *a* has broken up by August 12.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Aug. 4·418	8	96	18	201	155·8	+12·4	−77·2
5·665	50	305	50	302	156·2	+12·7	−60·3
6·211	67	381	55	314	156·3	+12·8	−52·9
7·565	70	453	43	281	155·9	+12·9	−35·4
8·443	55	492	29	273	155·5	+13·1	−24·3

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

Group 5285—*continued.*

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
1904. a					°	°	°
Aug. 9·455	60	442	31	228	155·6	+13·3	−10·8
10·422	59	419	30	213	155·5	+13·5	+ 1·9
11·674	48	332	26	177	154·5	+13·3	+17·4
12·431	19	201	11	115	155·8	+13·7	+28·7
13·501	13	117	9	81	156·6	+13·3	+43·7
14·453	26	239	25	223	158·6	+12·5	+58·1
15·493	5	31	7	43	156·6	+14·0	+70·0
Means ...	...	...	28	204	156·08	+13·13	...

Group 5286.

A regular spot, *a*, followed by a short train of small spots. The train diminishes quickly in size. *a* is measured together with the train on August 8.

Aug. 7·565	0	36	0	158	109·5	−13·5	−81·8
8·443	8	175	15	308	108·5	−13·6	−71·3
9·455	26	239	26	244	108·7	−13·4	−57·7
10·422	36	298	28	225	108·8	−13·3	−44·8
11·674	24	243	15	148	108·0	−13·3	−29·1
12·431	26	201	15	112	109·6	−12·9	−17·5
13·501	26	252	14	135	109·9	−12·9	− 3·0
14·453	21	160	11	86	109·7	−12·6	+ 9·2
15·493	24	170	14	98	109·2	−13·2	+22·6
16·480	4	35	3	23	109·8	−12·6	+36·2
Means ...	...	...	14	154	109·17	−13·13	...

Group 5287.

A cluster of very small spots.

Aug. 8·443	0	12	0	6	195·2	−11·0	+15·4
Means ...	...	...	0	6	195·2	−11·0	...

Group 5288.

A small spot.

Aug. 9·455	2	23	2	15	132·4	−16·6	−34·0
Means ...	...	...	2	15	132·4	−16·6	...

Group 5289.

A few small spots in a short stream.

Aug. 10·422	4	16	2	9	126·2	+15·5	−27·4
11·674	16	44	8	23	125·9	+16·1	−11·2
12·431	5	29	3	15	126·1	+16·2	− 1·0
13·501	0	10	0	5	124·6	+16·3	+11·7
Means ...	...	...	3	13	125·70	+16·03	...

Group 5290.

A few small spots, preceding Group 5285.

1904. a					°	°	°
Aug. 11·674	4	24	2	13	162·1	+11·9	+25·0
12·431	14	53	9	32	162·9	+11·7	+35·8
13·501	6	50	5	40	164·5	+11·5	+51·6
14·453	2	19	3	22	165·9	+11·0	+65·4
15·493	0	14	0	35	165·9	+11·1	+79·3
Means ...	...	...	4	28	164·26	+11·44	...

Group 5291.

A regular spot, *a*.

Aug. 11·674	6	49	18	148	59·3	−17·9	−77·8
12·431	11	86	17	136	58·9	−17·8	−68·2
13·501	26	174	25	169	58·8	−18·2	−54·1
14·453	29	179	22	135	58·5	−18·3	−42·0
15·493	31	174	19	109	58·8	−18·3	−27·8
16·480	22	191	13	110	58·5	−18·4	−15·1
17·646	26	180	15	100	58·3	−18·4	+ 0·1
18·497	26	88	15	50	58·0	−18·6	+11·1
19·462	7	25	4	15	57·9	−18·6	+23·8
Means ...	...	...	16	108	58·56	−18·28	...

Group 5292.

A pair of small spots, *a* and *b*. *b* has disappeared by August 17. *a* has a very small companion on August 18.

Aug. 15·493	9	44	6	34	36·9	+12·7	−49·7
16·480	8	68	5	42	37·9	+12·8	−35·7
17·646	5	27	3	14	39·9	+12·4	−18·3
18·497	0	12	0	7	38·3	+13·0	− 8·6
Means ...	...	...	4	24	38·25	+12·73	...

Group 5293.

A pair of small spots, *a* and *b*, with a very small spot between them on August 19.

Aug. 17·646	0	11	0	20	344·6	+ 8·5	−73·6
18·497	5	51	5	58	342·4	+ 9·4	−64·5
19·462	11	56	8	46	341·4	+10·0	−52·7
20·529	5	24	3	15	344·3	+ 8·9	−35·7
21·198	0	21	0	12	343·9	+ 9·1	−27·3
Means ...	...	...	3	30	343·32	+ 9·18	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5294. A few small spots appearing suddenly near the west limb.							
1904. a					°	°	°
Aug. 19·462	18	59	18	59	85·8	−25·3	+51·7
20·529	0	34	0	55	86·1	−25·5	+66·1
Means ...	...	...	9	57	85·95	−25·40	...
Group 5295. A regular spot, *a*, with a small distant companion on August 20, following Group 5293.							
Aug. 19·462	14	33	27	62	318·7	+13·1	−75·4
20·529	8	57	9	60	317·3	+13·4	−62·7
21·198	13	65	11	54	317·7	+13·4	−53·5
22·169	16	90	10	59	317·9	+13·4	−40·5
23·407	15	83	8	46	318·0	+13·3	−24·0
24·500	13	37	7	19	318·2	+13·5	− 9·4
25·454	2	10	1	5	318·1	+13·6	+ 3·1
Means ..	...	...	10	44	317·99	+13·39	...
Group 5296. A very fine and complex stream of spots. The components of the group undergo constant change.							
Aug. 22·169	0	53	0	177	279·6	−16·7	−78·8
23·407	22	280	31	378	277·8	−18·8	−64·2
24·500	24	475	20	405	279·3	−18·4	−48·3
25·454	51	714	35	494	279·0	−18·3	−36·0
26·473	99	889	60	532	279·8	−18·4	−21·7
27·448	119	1234	67	691	280·7	−17·9	− 7·9
28·243	155	1194	85	663	282·3	−17·8	+ 4·2
29·407	126	1139	74	671	284·0	−16·6	+21·3
30·440	124	935	86	642	285·2	−16·8	+36·1
31·149	87	602	70	478	284·6	−17·0	+44·9
Sept. 1·187	29	324	32	360	284·9	−17·2	+58·9
2·594	0	90	0	468	289·4	−17·0	+78·8
Means ...	...	...	47	497	282·22	−17·58	...
Group 5297. A small faint spot.							
Aug. 24·500	0	20	0	11	347·7	+19·7	+20·1
25·454	0	6	0	4	348·7	+19·7	+33·7
Means ...	...	...	0	8	348·20	+19·70	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5298. A regular spot, *a*, with occasionally a small companion.							
1904. a					°	°	°
Aug. 24·500	0	22	0	43	254·9	−14·7	−72·7
25·454	12	55	13	59	256·1	−14·1	−58·9
26·473	14	105	11	81	256·6	−14·4	−44·9
27·448	15	145	10	93	256·3	−14·3	−32·3
28·243	27	175	16	101	255·8	−14·3	−22·3
29·407	26	206	14	111	255·9	−13·9	− 6·8
30·440	33	269	18	146	255·4	−13·7	+ 6·3
31·149	34	225	19	125	255·3	−13·9	+15·6
Sept. 1·187	35	155	21	95	255·1	−13·7	+29·1
2·594	7	81	6	66	255·5	−13·6	+48·0
3·667	2	10	3	11	255·3	−13·9	+62·0
Means ...	...	...	12	85	255·65	−14·05	...
Group 5299. A number of spots, mostly small and unstable, in a straight stream. *a* and *b*, the first and last spots on August 27, are the most stable, but *a* has disappeared by August 31.							
Aug. 25·454	5	21	3	13	278·9	+18·8	−36·1
26·473	17	145	9	81	278·0	+19·0	−23·5
27·448	25	129	12	67	276·4	+19·1	−12·2
28·243	18	118	9	61	278·9	+19·2	+ 0·8
29·407	54	445	28	233	274·6	+18·8	+11·9
30·440	57	388	32	217	273·7	+20·0	+24·6
31·149	41	231	25	140	273·8	+18·4	+34·1
Sept. 1·187	25	88	18	65	273·0	+18·5	+47·0
2·594	0	6	0	7	271·5	+19·0	+64·0
Means ...	...	...	15	98	275·42	+18·98	...
Group 5300. A fine irregular stream. *a*, the largest and darkest member of the group, is nearly in the centre.							
Aug. 26·473	29	359	55	661	230·9	−18·9	−70·6
27·448	42	550	48	650	228·2	−18·6	−60·4
28·243	60	447	55	403	227·4	−18·6	−50·7
29·407	53	574	36	391	228·3	−18·8	−34·4
30·440	60	559	35	336	228·2	−18·5	−20·9
31·149	63	396	36	228	227·9	−18·4	−11·8
Sept. 1·187	43	338	24	187	228·4	−18·0	+ 2·4
2·594	14	194	8	116	228·6	−18·3	+21·1
3·667	4	45	2	31	229·1	−18·3	+35·8
Means ...	...	...	33	334	228·56	−18·49	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5301. Two or three small faint spots.							
1904. d					°	°	°
Aug. 29·407	0	38	0	22	192·2	−21·1	−70·5
30·440	0	6	0	7	191·7	−20·5	−57·4
31·149	2	9	2	8	190·5	−21·2	−49·2
Means ...	...	...	1	12	191·47	−20·93	..
Group 5302. A very small spot.							
Sept. 2·594	0	10	0	6	206·8	−24·2	− 0·7
Means ...	...	...	0	6	206·8	−24·2	...
Group 5303. A few small unstable spots in a short stream.							
Sept. 3·667	5	32	5	31	141·1	−22·0	−52·2
4·539	5	23	4	18	140·8	−22·5	−40·9
5·415	14	97	9	65	141·1	−22·4	−29·0
6·312	16	74	9	45	142·1	−23·0	−16·2
7·414	1	30	1	17	142·8	−22·6	− 0·9
Means ...	...	...	6	35	141·58	−22·50	...
Group 5304. A very small spot.							
Sept. 4·539	0	3	0	2	216·4	− 5·9	+34·7
Means ...	...	...	0	2	216·4	− 5·9	...
Group 5305. A very small spot.							
Sept. 5·415	0	7	0	3	185·5	+ 4·1	+15·4
Means ...	...	...	0	3	185·5	+ 4·1	...
Group 5306. A very small spot.							
Sept. 7·414	0	8	0	4	134·6	+16·9	− 9·1
Means ...	...	...	0	4	134·6	+16·9	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5307. A number of small spots in an irregular stream.							
1904. d					°	°	°
Sept. 8·312	21	91	11	50	124·8	−16·6	− 7·1
9·460	17	122	9	67	124·6	−16·5	+ 7·9
10·484	17	241	10	141	124·0	−16·5	+20·8
11·465	15	140	10	92	122·8	−17·2	+32·5
12·175	20	70	15	55	124·4	−17·4	+43·5
13·501	23	85	28	105	126·2	−15·7	+62·8
14·354	10	73	26	165	126·5	−16·2	+74·4
Means ...	...	...	16	96	124·76	−16·59	...
Group 5308. Two very small spots, *a* and *b*. A third is seen on September 10.							
Sept. 8·312	0	4	0	9	53·7	+21·5	−78·2
9·460	12	53	12	57	53·9	+22·5	−62·8
10·484	1	33	1	27	52·3	+24·0	−50·9
Means ...	...	...	4	31	53·30	+22·67	...
Group 5309. A small regular spot, *a*.							
Sept. 13·501	2	19	3	26	353·2	+18·4	−70·2
14·354	3	18	3	17	352·6	+18·4	−59·5
15·426	0	7	0	5	353·0	+18·0	−45·0
16·444	6	26	4	16	352·7	+17·9	−31·8
17·420	3	19	2	10	353·1	+17·8	−18·6
18·472	4	13	2	7	352·3	+17·7	− 5·5
Means ...	...	...	2	14	352·82	+18·03	...
Group 5310. A short irregular stream, following Group 5309. The group is not seen on September 15.							
Sept. 14·354	3	17	5	22	343·7	+19·5	−68·4
15·426	0	0	0	0	...	...	...
16·444	19	163	13	110	342·6	+19·5	−41·9
17·420	6	222	3	128	343·8	+19·2	−27·9
18·472	5	82	2	42	344·4	+18·9	−13·4
Means ...	...	..	5	60	343·63	+19·28	...
Group 5311. A small faint spot.							
Sept. 17·420	0	14	0	14	321·4	−30·0	−50·3
Means ...	...	...	0	14	321·4	−30·0	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5312. A small spot, *a*, appearing first near the west limb. It is followed by a small companion on September 19 and 20.							
1904. d					°	°	°
Sept. 18·472	0	8	0	6	46·2	+21·3	+48·4
19·469	0	32	0	32	45·2	+21·9	+60·6
20·482	1	32	1	54	45·6	+21·0	+74·4
Means ...	..	...	0	31	45·67	+21·40	...
Group 5313. A few small spots on September 18, developing later into a straight stream, of which *a*, the leader, is the principal member.							
Sept. 18·472	11	64	7	38	339·1	−21·1	−18·7
19·469	26	242	15	138	338·4	−20·6	− 6·2
20·482	51	514	30	296	340·1	−20·3	+ 8·9
21·483	56	371	35	231	342·1	−20·5	+23·4
22·178	50	314	34	215	342·3	−21·0	+33·5
23·517	31	273	30	264	343·9	−21·2	+52·7
24·461	19	152	29	227	344·8	−21·5	+66·1
25·165	9	69	26	200	345·9	−21·7	+76·5
Means ...	...	...	26	201	342·08	−20·99	...
Group 5314. A very small spot.							
Sept. 20·482	0	4	0	3	286·7	+16·4	−44·5
Means ...	...	...	0	3	286·7	+16·4	...
Group 5315. One or two small unstable spots.							
Sept. 20·482	4	35	4	42	265·4	+18·4	−65·8
21·483	12	38	11	31	266·2	+19·1	−52·5
22·178	6	39	4	27	265·5	+19·8	−43·3
23·517	2	19	1	11	267·1	+19·0	−24·1
24·461	0	21	0	11	267·6	+19·3	−11·1
Means ...	...	...	4	24	266·36	+19·12	...
Group 5316. A few small spots on September 21, developing later into a straight stream, of which *a*, the leader, is the principal member.							
Sept. 21·483	0	14	0	30	240·4	+31·1	−78·3
22·178	4	22	6	29	239·9	+30·9	−68·9
23·517	0	71	0	60	239·5	+31·3	−51·7

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5316—*continued.*							
1904. d					°	°	°
Sept. 24·461	10	102	7	72	238·4	+31·4	−40·3
25·165	21	117	14	76	238·4	+31·8	−31·0
26·618	37	195	20	109	243·4	+31·3	−10·0
27·445	17	209	9	116	242·8	+31·1	+ 3·5
28·516	35	322	20	186	244·0	+30·9	+18·8
29·483	34	335	24	214	243·4	+31·0	+31·0
30·161	29	255	20	178	242 8	+31·2	+39·3
Oct. 1·255	26	178	24	162	243·6	+31·0	+54·6
2·504	12	108	17	153	242·5	+31·2	+69·9
3·600	0	66	0	225	242·2	+31·3	+84·0
Means ...	...	...	12	124	241·64	+31·19	...
Group 5317. A fine stream appearing suddenly, following Group 5313. The leader, *a*, and the rear spot, *b*, are the chief members of the group.							
Sept. 22·178	9	65	5	39	323·8	−24·4	+15·0
23·517	71	531	50	378	324·7	−24·1	+33·5
24·461	44	427	38	369	324·7	−24·2	+46·0
25·165	59	347	63	376	324·9	−24·7	+55·5
26·618	18	147	44	344	326·9	−23·5	+73·5
Means ...	...	...	40	301	325·00	−24·18	...
Group 5318. A small cluster composed of very small spots. The group is not seen on September 28, 29 or 30.							
Sept. 24·461	0	8	0	6	241·7	−14·5	−37·0
25·165	11	44	7	28	240·4	−15·1	−29·0
26·618	13	95	7	51	247·2	−13·1	− 6·2
27·445	4	19	2	10	245·3	−13·9	+ 6·0
28·516	0	0	0	0	...	...	...
29·483	0	0	0	0	...	...	...
30·161	0	0	0	0	...	...	...
Oct. 1·255	13	97	12	89	242·6	−13·7	+53·6
2·504	0	16	0	23	239·5	−12·4	+66·9
Means ...	...	...	3	23	242·78	−13·78	...
Group 5319. A regular spot, *a*. It has a pair of very small companions on October 2.							
Sept. 27·445	6	33	19	108	161·4	−21·4	−77·9
28·516	21	80	29	110	161·3	−21·5	−63·9
29·483	14	96	13	90	161·0	−21·5	−51·4
30·161	15	89	12	71	160·5	−21·7	−43·0

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

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Group 5319—*continued.*							
1904. d					°	°	°
Oct. 1·255	14	42	9	27	160·7	−21·2	−28·3
2·504	5	28	3	17	160·6	−21·8	−12·0
Means ...	...	...	14	71	160·92	−21·52	...
Group 5320. A number of spots in a fine stream. The last spot, *a*, is the largest and best defined, but has broken up by October 8.							
Oct. 3·600	7	63	6	57	103·0	+22·5	−55·2
4·510	13	109	8	74	105·0	+23·2	−41·2
5·188	21	221	13	136	105·2	+23·5	−32·0
6·451	77	514	43	282	103·0	+23·5	−17·6
7·166	37	371	20	197	105·3	+24·1	− 7·8
8·438	13	160	7	84	103·7	+23·4	+ 9·4
9·154	9	159	5	88	103·7	+23·6	+18·8
Means ...	...	...	15	131	103·84	+23·40	...
Group 5321. A group appearing in front of Group 5320, and forming with it an almost continuous stream on October 7. The leader, *a*, is a large regular spot.							
Oct. 5·188	13	191	7	99	128·1	+17·8	− 9·1
6·451	87	531	45	274	130·5	+17·6	+ 9·9
7·166	91	505	49	274	132·1	+17·0	+21·0
8·438	49	400	32	262	133·7	+16·4	+39·4
9·154	42	277	32	214	134·4	+16·4	+49·5
10·166	31	173	33	188	134·8	+16·0	+63·3
11·170	16	104	33	207	134·7	+15·8	+76·5
Means ...	...	...	33	217	132·61	+16·71	...
Group 5322. A fine stream of spots. During its greatest developments it consists mainly of *a*, a large regular spot followed by *b* and *c*, two clusters, or composite spots. *c* has broken up by October 12, *b* by October 16.							
Oct. 6·451	12	63	22	118	49·0	−18·0	−71·6
7·166	26	192	32	249	47·3	−17·7	−63·8
8·438	38	339	30	263	50·2	−17·9	−44·1
9·154	80	418	53	278	51·0	−17·3	−33·9
10·166	125	698	72	404	52·5	−17·3	−19·0
11·170	140	873	77	480	52·6	−17·4	− 5·6
12·532	104	694	58	391	54·3	−17·2	+14·0
13·405	58	556	36	339	54·9	−16·9	+26·2
14·423	64	439	46	314	55·1	−17·1	+39·8
15·449	34	263	32	249	56·3	−16·8	+54·4
16·159	26	173	35	229	57·5	−16·5	+65·0
17·253	13	55	50	208	58·6	−16·5	+80·5
Means ...	...	...	45	294	53·28	−17·22	...

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Group 5323. Some small spots in an irregular stream. *a* and *b*, the first and last spots, are the largest and most stable.							
1904. d					°	°	°
Oct. 7·166	8	48	8	48	50·1	+12·5	−61·0
8·438	17	184	12	126	50·9	+12·0	−43·4
9·154	25	147	15	89	50·9	+12·2	−34·0
10·166	10	48	5	26	50·9	+12·4	−20·6
11·170	19	118	9	61	49·5	+13·1	− 8·7
12·532	5	55	2	28	51·2	+13·1	+10·9
13·405	0	80	0	43	50·1	+13·2	+21·4
Means ...	...	...	7	60	50·51	+12·64	...
Group 5324. Two pairs of very small spots.							
Oct. 8·438	0	17	0	10	72·6	+24·7	−21·7
Means ...	...	...	0	10	72·6	+24·7	...
Group 5325. A large regular spot, *a*, with occasionally a few small companions. *a* tends to break up after October 13.							
Oct. 8·438	34	219	51	334	22·7	+12·2	−71·6
9·154	44	272	47	291	22·0	+12·4	−62·9
10·166	88	488	67	375	21·9	+12·7	−49·6
11·170	98	604	60	373	22·2	+12·9	−36·0
12·532	112	696	59	368	22·9	+13·2	−17·4
13·405	109	626	55	319	22·7	+12·9	− 6·0
14·423	78	636	40	326	23·0	+13·2	+ 7·7
15·449	90	562	50	304	23·2	+13·6	+21·3
16·159	90	439	53	259	23·5	+13·4	+31·0
17·253	51	409	38	294	23·4	+13·3	+45·3
18·138	37	233	34	215	23·9	+13·1	+57·5
19·175	21	143	32	222	24·7	+13·1	+72·0
20·173	8	46	37	219	24·8	+13·1	+85·3
Means ...	...	...	48	300	23·15	+13·01	...
Group 5326. A small spot following Group 5325.							
Oct. 8·438	0	8	0	18	15·9	+13·6	−78·4
9·154	4	11	6	14	15·4	+13·7	−69·5
10·166	0	8	0	7	15·7	+13·9	−55·8
Means ...	...	...	2	13	15·67	+13·73	...

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

Group 5327.

A small spot, *a*. A second is seen following it on October 14. The group is not seen on October 15 or 17.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
1904. d					°	°	°
Oct. 11·170	1	8	2	15	347·2	−17·5	−71·0
12·532	2	9	2	9	346·8	−18·2	−53·5
13·405	5	17	3	13	346·9	−18·2	−41·8
14·423	0	21	0	13	344·6	−19·2	−30·7
15·449	0	0	0	0	...	...	...
16·159	5	32	3	18	346·8	−20·7	− 5·7
17·253	0	0	0	0	...	...	...
18·138	0	4	0	2	346·5	−19·4	+20·1
Means ...	...	...	1	9	346·47	−18·87	...

Group 5328.

Two small spots, *a* and *b*, appearing preceding Group 5323. *a* has disappeared by October 14.

Oct. 12·532	27	95	15	52	64·8	+10·4	+24·5
13·405	8	79	5	48	64·2	+10·2	+35·5
14·423	6	17	4	13	64·3	+10·1	+49·0
15·449	0	5	0	5	64·1	+10·3	+62·2
16·159	2	9	3	13	64·0	+10·2	+71·5
Means ...	...	...	5	26	64·28	+10·24	...

Group 5329.

A small regular spot, *a*, with occasionally a small companion.

Oct. 13·405	2	16	4	25	321·8	−22·2	−66·9
14·423	5	43	5	43	321·3	−22·4	−54·0
15·449	8	37	6	28	320·9	−22·5	−41·0
16·159	8	30	6	20	321·1	−22·3	−31·4
17·253	13	26	8	16	319·9	−23·3	−18·2
18·138	5	20	3	12	319·7	−23·5	− 6·7
19·175	4	26	3	15	321·9	−22·7	+ 9·2
20·173	10	23	6	14	319·3	−24·2	+19·8
21·175	2	11	1	7	318·9	−23·7	+32·6
Means ...	...	...	5	20	320·53	−22·98	...

Group 5330.

A very small spot, following Group 5322.

Oct. 16·159	0	3	0	2	37·4	−16·6	+44·9
Means ...	...	...	0	2	37·4	−16·6	...

Group 5331.

A few small unstable spots.

1904. d					°	°	°
Oct. 17·253	0	15	0	12	298·0	−22·0	−40·1
18·138	9	27	7	18	294·4	−22·5	−32·0
19·175	4	25	3	14	295·0	−22·7	−17·7
20·173	0	18	0	11	295·3	−22·7	− 4·2
21·175	2	19	1	10	293·4	−23·1	+ 7·1
22·528	27	374	17	237	295·5	−22·3	+27·1
23·168	80	412	59	294	296·6	−23·2	+36·6
24·537	12	158	14	177	300·6	−21·8	+58·7
25·466	9	88	20	190	303·1	−22·1	+73·5
26·196	0	27	0	200	303·9	−22·3	+83·8
Means ...	...	...	12	116	297·58	−22·47	...

Group 5332.

A regular spot, *a*, followed by a train of very unstable small spots.

Oct. 17·253	16	64	29	118	263·0	+14·5	−75·1
18·138	16	82	20	94	261·7	+14·9	−64·7
19·175	22	138	18	111	260·9	+15·3	−51·8
20·173	33	121	22	80	259·7	+15·6	−39·8
21·175	17	84	10	48	259·7	+15·4	−26·6
22·528	6	44	3	22	262·8	+15·2	− 5·6
23·168	5	24	3	12	263·0	+14·3	+ 3·0
24·537	0	11	0	6	263·6	+14·7	+21·7
Means ...	...	...	13	61	261·80	+14·99	...

Group 5333.

One or two very small spots.

Oct. 19·175	2	7	1	4	287·7	+19·7	−25·0
20·173	5	31	3	16	288·7	+19·2	−10·8
21·175	4	32	2	16	289·5	+18·0	+ 3·2
Means ...	...	...	2	12	288·63	+18·97	...

Group 5334.

A compact cluster of small faint spots.

Oct. 19·175	0	4	0	5	251·4	−13·7	−61·3
20·173	11	61	9	49	251·0	−15·3	−48·5
21·175	14	121	9	80	250·5	−15·1	−35·8
22·528	0	49	0	27	252·9	−13·5	−15·5
Means ...	...	...	5	40	251·45	−14·40	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5335. A very small spot.							
1904. d					°	°	°
Oct. 21·175	1	4	1	4	340·9	+13·0	+54·6
Means ...	...	...	1	4	340·9	+13·0	...
Group 5336. A small spot *a* on October 23. A second has formed in advance of it by October 24, and the group becomes later a scattered stream.							
Oct. 23·168	4	24	4	21	204·3	+ 9·3	−55·7
24·537	0	33	0	21	205·6	+ 9·2	−36·3
25·466	0	41	0	23	206·2	+ 9·7	−23·4
26·196	9	59	5	30	205·4	+ 9·6	−14·7
27·328	27	156	14	78	206·7	+ 9·9	+ 1·5
28·413	21	127	12	66	206·4	+ 9·6	+15·6
29·430	36	247	21	140	205·7	+ 9·8	+28·3
30·189	9	53	5	33	204·3	+ 9·3	+36·9
31·170	0	26	0	20	203·9	+ 9·3	+49·4
Means ...	...	...	7	48	205·39	+ 9·52	...
Group 5337. A few small spots, following Group 5331.							
Oct. 24·537	5	52	4	47	291·8	−23·0	+49·9
25·466	0	13	0	16	292·0	−21·4	+62·4
Means ...	...	...	2	32	291·90	−22·20	...
Group 5338. A short stream of spots.							
Oct. 24·537	5	44	2	23	231·5	+13·3	−10·4
25·466	5	41	3	21	230·7	+13·2	+ 1·1
26·196	36	145	19	75	230·0	+13·6	+ 9·9
27·328	51	348	29	196	230·6	+13·7	+25·4
28·413	32	197	21	130	230·9	+13·6	+40·1
29·430	25	142	22	121	231·6	+13·0	+54·2
30·189	24	112	28	128	231·8	+12·7	+64·4
31·170	0	21	0	44	231·6	+12·6	+77·1
Means ...	...	...	16	92	231·09	+13·21	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5339. A stream of spots between Groups 5336 and 5338. The group increases in size and undergoes continual changes, and on October 27, and the succeeding days, forms with Groups 5336 and 5338 one very fine and nearly continuous stream.							
1904. d					°	°	°
Oct. 24·537	10	40	6	22	217·7	+11·0	−24·2
25·466	38	412	20	213	217·3	+10·4	−12·3
26·196	69	412	35	207	216·5	+10·6	− 3·6
27·328	187	1075	97	554	216·1	+11·4	+10·9
28·413	111	1111	61	616	215·8	+11·8	+25·0
29·430	122	1026	78	657	216·1	+11·7	+38·7
30·189	165	1020	125	776	216·2	+11·7	+48·8
31·170	104	770	110	819	216·6	+11·9	+62·1
Nov. 1·174	54	492	103	939	216·6	+11·7	+75·3
Means ...	...	...	71	534	216·54	+11·36	...
Group 5340. A few small spots in an irregular stream, preceding Group 5338.							
Oct. 25·466	2	18	1	11	257·2	+17·5	+27·6
Means ...	...	...	1	11	257·2	+17·5	...
Group 5341. A pair of small spots.							
Oct. 26·196	5	16	5	17	158·1	+13·0	−62·0
Means ...	...	...	5	17	158·1	+13·0	...
Group 5342. A few small spots in a short stream.							
Oct. 27·328	8	35	9	40	140·8	+14·4	−64·4
28·413	7	38	5	30	140·9	+14·9	−49·9
29·430	0	18	0	11	142·8	+15·7	−34·6
30·189	0	3	0	2	144·0	+15·7	−23·4
Means ...	...	...	4	21	142·13	+15·18	...
Group 5343. A fine irregular stream of spots. The leader, *a*, on October 31 is a double spot, formed by the coalescence of two regular spots.							
Oct. 27·328	0	36	0	103	127·2	−16·2	−78·0
28·413	15	151	21	213	124·1	−17·0	−66·7
29·430	42	330	38	303	123·7	−16·5	−53·7
30·189	78	435	58	325	123·8	−17·0	−43·6
31·170	59	318	37	198	124·7	−17·3	−29·8

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

Group 5343—*continued.*

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
1904. d					°	°	°
Nov. 1·174	75	383	42	211	126·6	−16·5	−14·7
2·429	53	307	28	164	127·7	−16·8	+ 3·0
3·477	23	227	13	128	129·3	−16·9	+18·4
4·433	33	140	21	88	130·2	−16·8	+31·9
5·448	16	171	12	131	130·3	−16·9	+45·4
6·214	12	128	11	123	130·2	−17·0	+55·4
7·147	9	55	13	80	130·3	−17·1	+67·8
Means ...	...	...	25	172	127 34	−16·83	...

Group 5344.

One or two small faint unstable spots forming north of Group 5338.

Oct. 28·413	0	5	0	4	239·5	+20·0	+48·7
29·430	0	6	0	6	236·9	+20·6	+59·5
Means ...	...	...	0	5	238·20	+20·30	...

Group 5345.

A small spot preceding Group 5343.

Oct. 28·413	2	9	2	6	151·2	−13·9	−39·6
Means ...	...	...	2	6	151·2	−13·9	...

Group 5346.

A few very small spots in a straight stream.

Oct. 30·189	0	9	0	5	158·1	−25·2	− 9·3
Means ...	...	...	0	5	158·1	−25·2	...

Group 5347.

A few very small spots in a straight stream following Group 5342.

Oct. 30·189	3	16	1	10	134·3	+18·6	−33·1
Means ...	...	...	1	10	134·3	+18·6	...

Group 5348.

A few very small spots in an irregular stream preceding Group 5343. Apparently a revival of Group 5345.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
1904. d					°	°	°
Oct. 31·170	16	76	9	41	150·7	−14·2	− 3·8
Nov. 1·174	7	35	4	18	151·7	−13·9	+10·4
Means ...	...	...	7	30	151·20	−14·05	...

Group 5349.

A few very small spots in a short stream.

Nov. 1·174	0	11	0	7	174·1	+13·6	+32·8
Means ...	...	...	0	7	174·1	+13·6	...

Group 5350.

A small spot south following Group 5343.

Nov. 1·174	0	10	0	6	116·5	−22·3	−24·8
Means ...	...	...	0	6	116·5	−22·3	...

Group 5351.

A regular spot, *a*, with occasionally one or two small companions.

Nov. 1·174	8	23	29	87	60·4	−16·2	−80·9
2·429	15	102	19	130	60·2	−16·5	−64·5
3·477	14	129	12	110	60·1	−16·3	−50·8
4·433	28	228	19	154	60·2	−16·3	−38·1
5·448	24	192	14	114	60·4	−15·9	−24·5
6·214	28	208	15	114	59·8	−16·0	−15·0
7·147	36	171	19	90	60·2	−15·7	− 2·3
8·438	15	126	8	69	60·2	−15·6	+14·8
9·171	35	165	21	96	59·8	−16·0	+24·0
10·169	14	84	9	56	59·6	−15·9	+37·0
11·458	8	35	7	32	59·0	−15·9	+53·3
12·153	3	46	4	54	58·7	−15·9	+62·3
Means ...	...	...	15	92	59·88	−16·02	...

Group 5352.

A small faint spot.

Nov. 3·477	0	7	0	4	104·7	+15·4	− 6·2
Means ...	...	...	0	4	104·7	+15·4	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5353. A few very small spots in an irregular stream.							
1904. d					°	°	°
Nov. 5·448	30	104	15	53	78·3	+10·8	− 6·6
6·214	14	85	7	43	78·4	+11·1	+ 3·6
7·147	13	62	7	32	80·2	+10·6	+17·7
8·438	0	46	0	29	80·5	+11·0	+35·1
Means ...	...	...	7	39	79·35	+10 88	...
Group 5354. A few very small spots in an irregular stream.							
Nov. 5·448	1	16	1	9	67·1	+ 3·9	−17·8
6·214	0	12	0	6	67·3	+ 5·3	− 7·5
7·147	2	11	1	5	67·7	+ 6·3	+ 5·2
Means ...	...	...	1	7	67·37	+ 5·17	...
Group 5355. A pair of very small spots.							
Nov. 6·214	0	16	0	9	97·9	+19·0	+23·1
Means ...	...	...	0	9	97·9	+19·0	...
Group 5356. A large regular spot, α, with occasionally some small companions.							
Nov. 10·169	10	58	35	210	302·4	−21·9	−80·2
11·458	21	163	27	216	301·0	−21·8	−64·7
12·153	43	252	44	259	299·6	−22·0	−56·8
13·541	49	341	34	238	300·5	−22·0	−37·7
14·524	46	351	28	215	300·5	−22·4	−24·8
15·491	46	336	26	189	300·4	−22·0	−12·1
16·332	54	329	30	182	299·8	−22·5	− 1·6
17·176	35	234	20	131	300·4	−22·7	+10·1
18·185	30	186	18	114	300·3	−23·2	+23·3
19·168	27	155	19	107	300·6	−23·4	+36·6
20·205	22	86	19	74	300·2	−23·3	+49·8
21·467	2	14	3	20	300·2	−23·3	+66·5
Means ...	...	...	25	163	300·49	−22·54	...
Group 5357. A few small faint spots in an irregular stream.							
Nov. 11·458	3	106	2	59	342·6	+18·0	−23·1
12·153	0	21	0	12	341·1	+20·8	−15·3
Means ...	...	...	1	36	341·85	+19·40	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5358. A number of spots in a compact cluster.							
1904. d					°	°	°
Nov. 13·541	9	35	14	57	269·1	−22·5	−69·1
14·524	14	105	14	106	269·3	−22·5	−56·0
15·491	23	154	17	116	269·5	−21·5	−43·0
16·332	27	198	18	129	269·0	−21·8	−32·4
17·176	19	83	12	49	269·6	−21·5	−20·7
18·185	14	54	8	30	269·8	−20·7	− 7·2
19·168	2	14	1	8	270·5	−20·8	+ 6·5
20·205	0	22	0	13	270·1	−21·2	+19·7
Means ...	...	...	11	64	269·61	−21·56	...
Group 5359. A faint spot.							
Nov. 16·332	0	54	0	28	295·8	+16·7	− 5·6
Means ...	...	...	0	28	295·8	+16·7	...
Group 5360. A large regular spot, α.							
Nov. 16·332	9	34	35	140	218·1	+10·9	−83·3
17·176	17	89	27	141	218·6	+11·0	−71·7
18·185	20	141	20	136	218·6	+10·8	−58·4
19·168	33	185	24	133	218·7	+10·8	−45·3
20·205	37	206	22	124	218·1	+10·6	−32·3
21·467	38	205	20	107	219·1	+10·5	−14·6
22·181	35	215	18	110	218·8	+10·3	− 5·5
23·493	33	223	17	116	219·0	+10·4	+12·0
24·184	42	170	23	92	219·1	+10·4	+21·2
25·178	18	120	11	74	219·4	+10·6	+34·6
26·180	19	106	15	81	219·7	+10·2	+48·1
27·190	8	39	9	42	219·8	+10·2	+61·5
Means ...	...	...	20	108	218·92	+10·56	...
Group 5361. A stream of small spots.							
Nov. 18·185	9	43	6	31	232·7	+ 9·9	−44·3
19·168	27	115	16	68	232·5	+10·2	−31·5
20·205	24	67	13	36	233·0	+10 8	−17·4
21·467	0	46	0	23	229·0	+12·1	− 4·7
22·181	5	22	3	11	227·1	+12·5	+ 2·8
Means ...	...	...	8	34	230·86	+11·10	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5362. A stream of small spots, following Group 5361 and north preceding Group 5360, so that the three groups form on November 20 practically a single stream. The group is not seen on November 25.							
1904. d					°	°	°
Nov. 18·185	0	4	0	4	225·6	+12·6	−51·4
19·168	4	31	3	21	222·8	+13·3	−41·2
20·205	24	76	14	45	222·4	+13·3	−28·0
21·467	0	11	0	6	221·4	+13·8	−12·3
22·181	2	25	1	13	224·7	+13·2	+ 0·4
23·493	10	62	5	33	225·3	+12·7	+18·3
24·184	2	45	1	25	224·1	+13·2	+26·2
25·178	0	0	0	0	...	...	...
26·180	0	3	0	3	227·3	+14·0	+55·7
Means ...	...	...	3	17	224·20	+13·26	...
Group 5363. A spot seen only close to the west limb. Apparently a revival of Group 5357.							
Nov. 19·168	0	24	0	52	341·0	+18·2	+77·0
Means ...	...	...	0	52	341·0	+18·2	...
Group 5364. A few small spots in an irregular stream. The group undergoes continual change as to the numbers and areas of its component spots. It is a compact cluster on November 27, but has developed again into an irregular stream by November 28; its two chief members, *a* and *b*, being regular spots.							
Nov. 19·168	8	26	23	78	183·3	+20·6	−80·7
20·205	2	20	3	27	182·8	+20·3	−67·6
21·467	2	34	2	29	181·0	+18 5	−52·7
22·181	20	127	14	93	179·6	+17·4	−44·7
23·493	14	80	8	46	182·3	+18·8	−24·7
24·184	29	108	16	59	182·4	+20·0	−15·5
25·178	33	107	17	58	183·9	+20 8	− 0·9
26·180	22	166	12	91	183·8	+20·8	+12·2
27·190	76	423	45	251	183·3	+21·0	+25·0
28·330	79	471	53	315	181·3	+20·5	+38·1
29·184	36	261	31	226	184·1	+20·6	+52·1
30·189	29	134	38	174	184·9	+20·4	+66·1
Dec. 1·176	9	52	24	143	184·9	+20·7	+79·1
Means ...	...	...	22	122	182·89	+20·03	...
Group 5365. One or two very small spots, north of Group 5360. The group is not seen on November 23.							
Nov. 21·467	2	25	1	13	220·2	+18·4	−13·5
22·181	6	17	3	9	220·0	+18·3	− 4·3
23·493	0	0	0	0	...	...	...
24·184	2	17	1	10	219·3	+18·8	+21·4
Means ...	...	...	1	8	219·83	+18·50	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5366. A pair of very small spots on November 22, which develop with great rapidity on the succeeding days to form a very large composite spot, *a*.							
1904. d					°	°	°
Nov. 22·181	8	20	5	13	244·2	+29·2	+19·9
23·493	21	180	14	128	245·2	+28·3	+38·2
24·184	123	686	102	572	246·1	+28·4	+48·2
25·178	112	916	131	1066	246·3	+28·5	+61·5
26·180	62	744	128	1532	246·5	+28·6	+74·9
27·190	6	86	28	376	241·4	+28·1	+83·1
Means ...	...	...	68	615	244·95	+28·52	...
Group 5367. A very small spot south of Group 5366.							
Nov. 25·178	0	8	0	8	246·1	+ 6·7	+61·3
Means ...	...	...	0	8	246·1	+ 6·7	...
Group 5368. Two small spots, *a* and *b*.							
Nov. 25·178	6	16	7	18	246·4	−17·5	+61·6
26·180	2	15	4	29	245·1	−17·6	+73·5
Means ...	...	...	6	24	245·75	−17·55	...
Group 5369. A small spot south of Group 5366, but north of the place of Group 5367.							
Nov. 26·180	4	13	6	19	241·2	+20·4	+69·6
Means ...	...	...	6	19	241·2	+20·4	...
Group 5370. A stream of spots following Group 5368.							
Nov. 26·180	29	96	30	99	230·9	−15·6	+59·3
27·190	16	84	30	167	232·8	−15·6	+74·5
28·330	0	14	0	66	226·6	−14·9	+83·4
Means ...	...	...	20	111	230·10	−15·37	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5371. A stream of unstable spots forming, preceding Group 5364.							
1904. [a]					°	°	°
Nov. 27·190	2	12	1	8	196·5	+18·9	+38·2
28·330	34	141	28	117	193·9	+19·8	+50·7
29·184	11	71	15	88	196·8	+20·1	+64·8
30·189	0	32	0	78	196·6	+20·2	+77·8
Means ...	...	...	11	73	195·95	+19·75	...
Group 5372. A few small spots in a compact cluster.							
Nov. 27·190	9	33	6	21	122·8	−17·0	−35·5
28·330	13	52	7	29	121·3	−17·0	−21·9
29·184	7	88	4	48	116·8	−17·0	−15·2
30·189	12	75	6	40	120·7	−17·8	+ 1·9
Dec. 1·176	13	68	8	37	120·6	−17·4	+14·8
2·443	16	97	10	60	121·5	−17·4	+32·5
3·170	19	87	13	61	121·3	−17·2	+41·9
4·157	2	109	2	94	118·7	−17·4	+52·3
Means ...	...	...	7	49	120·46	−17·28	...
Group 5373. A fine irregular stream of spots forming south following Group 5364.							
Nov. 28·330	13	83	7	49	173·2	+12·4	+30·0
29·184	51	216	38	156	176·7	+12·3	+44·7
30·189	66	346	63	331	176·5	+12·0	+57·7
Dec. 1·176	21	276	33	421	176·3	+12·4	+70·5
Means ...	...	...	35	239	175·68	+12·28	...
Group 5374. A small spot.							
Nov. 28·330	0	29	0	21	117·4	+40·9	−25·8
Means ...	...	...	0	21	117·4	+40·9	...
Group 5375. A very small spot.							
Nov. 28·330	0	2	0	3	74·6	+20·9	−68·6
29·184	0	3	0	3	72·5	+22·2	−59·5
Means ...	...	...	0	3	73·55	+21·55	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5376. A very small spot.							
1904. [a]					°	°	°
Nov. 29·184	0	7	0	6	94·7	+38·3	−37·3
Means ...	...	...	0	6	94·7	+38·3	...
Group 5377. A small spot, *a*, with a very small companion on November 29.							
Nov. 29·184	4	24	8	44	58·5	+14·7	−73·5
30·189	2	6	2	6	59·5	+15·1	−59·3
Means ...	...	...	5	25	59·00	+14·90	...
Group 5378. A few spots in a short stream, first seen near the west limb.							
Nov. 30·189	25	113	17	74	157·3	−10·9	+38·5
Dec. 1·176	5	33	4	29	160·2	−10·3	+54·4
2·443	5	28	7	43	159·5	−10·0	+70·5
Means ...	...	...	9	49	159·00	−10·40	...
Group 5379. A very small spot, following Group 5378.							
Dec. 1·176	0	12	0	8	148·6	− 9·5	+42·8
Means ...	...	...	0	8	148·6	− 9·5	...
Group 5380. A few spots in a short stream, following Group 5372, and first seen near the west limb.							
Dec. 3·170	15	50	9	29	108·9	−14·6	+29·5
4·157	12	54	8	39	110·1	−14·6	+43·7
5·513	2	11	3	13	112·3	−14·3	+63·7
Means ...	...	...	7	27	110·43	−14·50	...

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

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5381. A large regular spot, *a*, with occasionally some small companions.							
1904. d					°	°	°
Dec. 4·157	18	119	35	230	352·4	+20·7	−74·0
5·513	34	242	32	228	353·0	+20·6	−55·6
6·169	47	240	37	189	352·8	+21·0	−47·2
7·173	49	259	32	166	352·8	+20·6	−33·9
8·173	42	307	24	176	351·9	+20·5	−21·7
9·228	62	306	33	164	352·2	+20·9	− 7·6
10·123	40	282	21	151	352·3	+20·6	+ 4·3
11·197	56	303	31	171	351·3	+21·0	+17·6
12·516	48	258	32	170	350·9	+21·1	+34·6
13·168	39	187	29	139	351·0	+21·2	+43·2
14·128	35	185	33	179	350·8	+20·9	+55·7
15·265	24	134	39	227	351·4	+20·8	+71·3
Means ...	...	...	32	183	351·90	+20·83	...
Group 5382. Two spots, *a* and *b*, on December 5. *a* has broken up by December 6. *b* is a regular spot.							
Dec. 5·513	15	210	11	155	95·6	+ 9·0	+47·0
6·169	19	144	17	131	96·0	+ 9·1	+56·0
7·173	16	78	23	112	95·9	+ 8·8	+69·2
8·173	4	24	12	71	94·0	+ 9·4	+80·4
Means ...	...	...	16	117	95·38	+ 9·08	...
Group 5383. A fine stream, following Group 5381. The leader, *a*, is a large regular spot at first, but lengthens out, and is divided by bridges as it approaches the central meridian, and has broken up by December 11.							
Dec. 5·513	10	163	18	294	335·4	+16·8	−73·2
6·169	39	379	51	497	333·5	+17·3	−66·5
7·173	112	538	97	468	333·9	+17·3	−52·8
8·173	108	660	72	444	334·7	+17·1	−38·9
9·228	135	785	79	453	334·8	+17·2	−25·0
10·123	114	840	61	454	334·8	+17·1	−13·2
11·197	140	1025	73	535	334·0	+16·8	+ 0·3
12·516	74	611	41	336	333·3	+16·7	+17·0
13·168	70	421	41	248	335·1	+16·6	+27·3
14·128	31	303	20	203	334·0	+16·4	+38·9
15·265	14	152	12	136	334·0	+16·5	+53·9
16·511	6	24	9	36	332·8	+17·6	+69·2
Means ...	...	...	48	342	334·19	+16·95	...

Date. Greenwich Civil Time.	Projected Area of		Area for Group.		Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.			
Group 5384. A small spot, *a*, south of Group 5383. It has a very small companion on December 9.							
1904. d					°	°	°
Dec. 5·513	0	23	0	51	331·5	+ 7·4	−77·1
6·169	7	19	10	27	330·9	+ 7·8	−69·1
7·173	13	43	11	38	331·1	+ 7·6	−55·6
8·173	17	33	12	22	331·7	+ 7·6	−41·9
9·228	3	34	2	20	331·3	+ 8·0	−28·5
Means ...	...	...	7	32	331·30	+ 7·68	...
Group 5385. A pair of very small spots.							
Dec. 7·173	0	11	0	7	53·3	+22·6	+26·6
Means ...	...	...	0	7	53·3	+22·6	...
Group 5386. A very small spot, south of Group 5381; not seen on December 8. The group has reappeared as a short stream of small spots by December 9, but has again disappeared by December 10, and reappears a third time on December 13.							
Dec. 7·173	0	4	0	3	352·8	+13·1	−33·9
8·173	0	0	0	0	..	...	...
9·228	4	75	2	38	352·9	+13·6	− 6·9
10·123	0	0	0	0	...	...	...
11·197	0	0	0	0	...	...	...
12·516	0	0	0	0	...	...	...
13·168	2	9	1	6	348·4	+13·8	+40·6
Means ...	...	...	0	7	351·37	+13·50	...
Group 5387. A fine irregular stream, south of Group 5386, and preceding Group 5384. The first and last spots on December 8, *a* and *b*, are large composite spots, but diminish in size rapidly on the succeeding days.							
Dec. 7·173	59	248	38	158	349·4	+ 8·8	−37·3
8·173	149	806	83	445	349·9	+ 9·3	−23·7
9·228	106	640	55	329	350·8	+ 9·5	− 9·0
10·123	50	410	25	209	352·8	+ 9·3	+ 4·8
11·197	52	292	29	155	351·6	+ 9·0	+17·9
12·516	16	122	11	76	352·2	+ 9·1	+35·9
13·168	25	129	18	95	353·6	+ 8·7	+45·8
14·128	5	23	5	23	355·1	+ 7·4	+60·0
Means ...	...	...	33	186	351·93	+ 8·89	...

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

Group 5388.

A stream of spots, following Group 5383. The first and last spots, *a* and *b*, are the largest and most stable; but *a* is not seen on December 12, and *b* has disappeared by December 14. The entire group has disappeared by December 16, but a small spot marks its place on December 18.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
1904. a					°	°	°
Dec. 8·173	23	146	37	232	302·5	+13·9	−71·1
9·228	54	264	52	252	302 5	+14·2	−57·3
10·123	21	150	16	111	303·1	+14·6	−44·9
11·197	37	134	23	82	302·0	+14·3	−31·7
12·516	0	21	0	11	299·5	+13·8	−16·8
13·168	7	67	4	35	303·5	+15·0	− 4·3
14·128	0	28	0	15	307·6	+15·4	+12·5
15·265	0	34	0	20	308·5	+15·1	+28·4
16·511	0	0	0	0	...	...	...
17·256*	0	0	0	0	...	...	...
18·163	0	13	0	13	301·0	+14·6	+59·1
Means ...	...	...	12	70	303·36	+14·54	...

Group 5389.

A large regular spot, *a*, following Group 5388. The spot lengthens out, and becomes composite in character, and has broken up to form a stream of spots by December 16, of which *b* and *c* are the largest and most stable members.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Dec. 8·173	9	60	52	365	288·3	+11·7	−85·3
9·228	30	159	47	252	288·7	+11·9	−71·1
10·123	44	244	42	234	290·5	+12·5	−57·5
11·197	88	368	62	260	290·1	+12·8	−43·6
12·516	84	461	48	263	290·5	+12·8	−25·8
13·168	81	499	44	268	290·4	+12·8	−17·4
14·128	70	502	36	258	290·8	+13·0	− 4·3
15·265	83	526	43	273	290·4	+12·4	+10·3
16·511	56	557	32	323	290·8	+12·6	+27·2
17·256*	43	280	28	182	291·5	+12·4	+37·6
18·163	21	203	17	161	291·1	+13·0	+49·2
19·294	11	53	13	65	291·8	+12·4	+64·8
Means ...	...	...	39	242	290·41	+12·53	...

Group 5390.

A fine irregular stream, following Group 5389. The largest spot, *a*, is a fine regular spot, and is near the centre of the group. The other members of the group are very unstable, and the group, as a whole, undergoes rapid change.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Dec. 9·228	0	27	0	92	278·6	+14·6	−81·2
10·123	24	206	55	473	271·2	+16·9	−76·8
11·197	82	511	104	679	267·2	+17·1	−66·5
12·516	91	780	72	616	267·9	+16·8	−48·4
13·168	119	770	82	532	267·6	+17·1	−40·2
14·128	114	830	67	489	268·4	+16·9	−26·7
15·265	100	902	54	484	268·0	+17·0	−12·1
16·511	112	1171	59	618	266·7	+16·8	+ 3·1
17·256*	125	796	68	431	266·9	+16·9	+13·0

Group 5390—*continued.*

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
1904. a					°	°	°
Dec. 18·163	128	980	74	565	265·7	+17·0	+23·8
19·294	88	534	60	367	266·4	+17·2	+39·4
20·451	66	411	61	383	267·1	+17·0	+55·2
21·180	62	457	77	558	266·3	+16·4	+64·1
22·169	29	248	72	617	266·4	+16·3	+77·2
Means ...	...	...	65	493	268·17	+16·71	...

Group 5391.

A short stream of unstable spots, north of Group 5390.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Dec. 11·197	7	52	11	82	264·1	+23·2	−69·6
12·516	9	52	8	46	264·6	+22·8	−51·7
13·168	7	55	5	41	264·3	+23·2	−43·5
14·128	7	81	4	51	264·7	+22·9	−30·4
15·265	11	79	6	46	262·8	+23·5	−17·3
16·511	0	18	0	10	262·9	+23·9	− 0·7
17·256*	0	9	0	5	261·9	+22·8	+ 8·0
18·163	0	21	0	13	263·6	+23·0	+21·7
Means ...	...	...	4	37	263·61	+23·16	...

Group 5392.

A small spot.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Dec. 11·197	2	13	3	16	267·5	−13·3	−66·2
12·516	0	13	0	9	269·0	−12·9	−47·3
Means ...	...	...	2	13	268·25	−13·10	...

Group 5393.

A pair of spots, *a* and *b*, forming near the west limb.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Dec. 12·516	5	22	4	19	5·8	−32·4	+49·5
13·168	14	49	15	51	4·1	−32·6	+56·3
14·128	7	67	10	105	3·4	−33·1	+68·3
Means ...	...	...	10	58	4·43	−32·70	...

Group 5394.

A pair of small spots.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Dec. 12·516	7	44	4	27	325·6	−33·1	+ 9·3
Means ...	...	...	4	27	325·6	−33·1	...

* The photograph for December 17 was not received until after the section "Measures of Positions and Areas," pp. *1* to *57*, had been printed, but it has been included in the "Ledger of Groups of Sun Spots," and in the tables of Mean Areas and Mean Latitudes for the Rotations and for the Year.

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

Group 5395.

A very small spot forming between Groups 5383 and 5388.

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
1904. d					°	°	°
Dec. 12·516	0	5	0	2	311·0	+15·7	− 5·3
Means ...	...	...	0	2	311·0	+15·7	...

Group 5396.

A large composite spot, *a*, with occasionally some small companions. *a* has broken up by December 19.

Dec. 12·516	14	112	31	256	241·1	+28·6	−75·2
13·168	43	360	65	560	239·8	+28·6	−68·0
14·128	14	152	14	154	240·4	+29·5	−54·7
15·265	29	234	22	179	239·7	+29·0	−40·4
16·511	23	253	15	162	239·6	+29·0	−24·0
17·256*	14	119	8	72	238·8	+29·0	−15·1
18·163	0	56	0	32	238·2	+28·1	− 3·7
19·294	0	93	0	54	240·1	+26·8	+13·1
20·451	0	16	0	10	238·7	+27·8	+26·8
Means ...	...	...	17	164	239·60	+28·49	...

Group 5397.

A very small spot.

Dec. 13·168	0	3	0	2	312·1	−10·3	+ 4·3
Means ...	...	...	0	2	312·1	−10·3	...

Group 5398.

A very small spot.

Dec. 13·168	2	3	2	3	251·2	− 9·6	−56·6
Means ...	...	...	2	3	251·2	− 9·6	...

Group 5399.

A large spot, *a*, with a small companion.

Dec. 13·168	17	85	25	123	238·6	−16·1	−69·2
14·128	12	122	11	113	238·7	−15·9	−56·4
15·265	21	182	15	128	237·2	−17·0	−42·9
16·511	6	58	3	33	239·4	−16·5	−24·2
Means ...	...	...	14	99	238·48	−16·38	...

Group 5400.

A very small spot, *a*, on December 18. A second, *b*, has formed near *a* by December 19. *b* alone remains on December 20.

1904. d					°	°	°
Dec. 17·256*	5	23	3	16	209·6	+12·0	−44·3
18·163	0	11	0	6	211·6	+11·9	−30·3
19·294	13	38	7	21	209·6	+12·3	−17·4
20·451	3	43	2	22	208·8	+12·2	− 3·1
21·180	0	17	0	9	208·7	+12·8	+ 6·5
Means ...	...	...	2	15	209·66	+12·24	...

Group 5401.

A small spot.

Dec. 20·451	0	20	0	13	176·6	+13·6	−35·3
21·180	0	10	0	6	176·6	+13·9	−25·6
Means ...	...	...	0	10	176·60	+13·75	...

Group 5402.

A pair of spots, measured together on December 21, but separately on December 22.

Dec. 21·180	21	79	15	54	243·4	−15·7	+41·2
22·169	5	23	5	20	244·2	−16·0	+55·0
Means ...	...	...	10	37	243·80	−15·85	..

Group 5403.

A very small spot.

Dec. 21·180	0	6	0	8	137·4	+19·6	−64·8
Means ...	...	...	0	8	137·4	+19·6	...

Group 5404.

A few very small spots in an irregular cluster. The group is not seen on December 23.

Dec. 22·169	2	85	1	52	158·6	+14·8	−30·6
23·184	0	0	0	0	...	...	...
24·278	0	9	0	4	156·8	+14·5	− 4·6
25·157	0	21	0	11	157·1	+13·8	+ 7·3
Means ...	...	...	0	17	157·50	+14·37	...

* The photograph for December 17 was not received until after the section "Measures of Position and Areas," pp. *1* to *57*, had been printed, but it has been included in the "Ledger of Groups of Sun Spots," and in the tables of Mean Areas and Mean Latitudes for the Rotations, and for the Year.

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

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Group 5405. A few small unstable spots in a short irregular stream.							
1904. d					°	°	°
Dec. 22·169	3	43	6	77	116·5	+15·4	−72·7
23·184	4	46	5	47	116·5	+15·6	−59·4
24·278	2	14	2	11	118·4	+14·6	−43·0
Means ...	...	...	4	45	117·13	+15·20	...
Group 5406. A small spot south following Group 5404.							
Dec. 23·184	1	28	1	15	152·3	+ 8·3	−23·6
Means ...	...	...	1	15	152·3	+ 8·3	...
Group 5407. A few small spots in a straggling stream.							
Dec. 23·184	4	41	2	23	149·3	+ 4·0	−26·6
Means ...	...	...	2	23	149·3	+ 4·0	...
Group 5408. A small spot.							
Dec. 23·184	0	10	0	10	114·7	−15·6	−61·2
Means ...	...	...	0	10	114·7	−15·6	...
Group 5409. Two very small spots.							
Dec. 24·278	0	15	0	9	176·3	+12·6	+14·9
Means ...	...	...	0	9	176·3	+12·6	...
Group 5410. A few very small spots in a straggling stream.							
Dec. 24·278	6	49	4	27	169·8	+20·5	+ 8·4
25·157	2	53	1	31	168·3	+21·7	+18·5
Means ...	...	...	3	29	169·05	+21·10	...

Date. Greenwich Civil Time.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area for Group. Umbra.	Area for Group. Whole Spot.	Mean Longitude of Group.	Mean Latitude of Group.	Longitude from Central Meridian.
Group 5411. A few very small spots irregularly scattered.							
1904. d					°	°	°
Dec. 24·278	2	40	1	25	127·3	+8·7	−34·1
25·157	0	47	0	26	126·3	+7·4	−23·5
Means ...	...	...	1	26	126·80	+8·05	...
Group 5412. A few very small spots irregularly scattered.							
Dec. 25·157	10	31	6	19	116·5	−16·6	−33·3
26·150	7	65	4	36	115·2	−17·4	−21·5
27·171	12	94	6	48	118·3	−16·3	− 5·0
28·196	0	26	0	13	115·9	−15·6	+ 6·1
Means ...	...	...	4	29	116·48	−16·48	...
Group 5413. A few small unstable spots until December 29, on which day the group is not seen. The group has revived in a most remarkable manner by December 30, when it forms a large compact cluster, which lengthens out into a regular stream on the succeeding days. *a* and *b*, the first and last spots, are large regular spots.							
Dec. 25·157	4	16	7	27	77·3	−13·7	−72·5
26·150	2	9	2	9	78·0	−14·2	−58·7
27·171	2	9	2	7	75·2	−14·4	−48·1
28·196	0	6	0	4	76·0	−15·9	−33·8
29·157	0	0	0	0	...	...	...
30·412	56	506	29	262	74·1	−15·3	− 6·5
31·470	144	999	75	517	74·0	−15·2	+ 7·3
Jan. 1	No photograph.		(74	479	74·3	−15·3	+18·7)
2·160	121	738	73	440	74·5	−15·4	+30·1
3·304	74	500	54	365	75·0	−15·3	+45·7
4·210	42	305	40	289	75·2	−15·7	+57·8
5·546	8	86	17	174	75·8	−15·5	+76·1
6·158	8	89	36	393	76·2	−15·7	+84·5
Means ...	...	...	31	228	75·47	−15·13	...
Group 5414. A number of very small spots in a straight stream.							
Dec. 27·171	5	44	3	23	120·6	+14·3	− 2·7
28·196	13	60	7	32	120·4	+14·7	+10·6
29·157	23	100	14	59	123·6	+14·3	+26·5
30·412	0	102	0	73	123·4	+14·6	+42·8
31·470	2	5	1	4	122·4	+15·0	+55·7
Means ...	..	...	5	38	122·08	+14·58	...
Group 5415. A few very small spots in a straight stream.							
Dec. 28·196	3	24	2	13	107·6	+22·1	− 2·2
Means ...	...	...	2	13	107·6	+22·1	...

ROYAL OBSERVATORY, GREENWICH.

TOTAL PROJECTED 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

1904.

TOTAL PROJECTED AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1904.

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 Greenwich Civil Time is expressed by the month, day of the month (civil reckoning), and decimal of a day, reckoned from Greenwich Mean Midnight.

Dates for which the decimal of a day is not given, indicate days for which no photographic Record is at present available. The areas given for these days are enclosed in brackets, and are obtained by interpolation from the measures of photographs taken on the days immediately preceding and following.

Greenwich Civil Time.	Projected Area.			Greenwich Civil Time.	Projected Area.			Greenwich Civil Time.	Projected Area.			Greenwich Civil Time.	Projected Area.		
	Umbræ.	Whole Spots.	Faculæ.		Umbræ.	Whole Spots.	Faculæ.		Umbræ.	Whole Spots.	Faculæ.		Umbræ.	Whole Spots.	Faculæ.
1904. d				1904. d				1904. d				1904. d			
Jan. 1·1	104	626	1267	Feb. 14·2	43	239	1612	Mar. 29·4	94	558	1379	May 11·1	94	441	795
2·5	108	640	622	15·2	15	80	975	30·1	57	389	1686	12·5	33	411	1879
3·1	102	441	373	16·3	4	38	582	31·4	38	284	1207	13·2	41	292	1130
4·4	69	491	565	17·2	0	6	353					14·5	39	328	1156
5·5	69	407	1329	18·2	5	56	512					15·5	30	259	1709
6·1	64	392	1174	19·1	21	124	533	Apr. 1·5	48	264	2464	16·4	25	275	3020
7·1	83	482	1238	20·3	65	375	937	2·5	30	279	2863	17·7	35	234	2645
8·2	56	427	1001	21·1	84	496	1102	3·5	55	355	1301	18·4	39	250	2576
9·1	64	362	1037	22·4	139	885	1572	4·5	46	200	508	19·5	31	234	3250
10	(54	271	1339)	23·4	104	748	704	5·3	24	277	484	20·5	29	275	2772
11·1	53	254	1640	24·5	138	898	346	6·4	44	276	2036	21·1	36	176	1966
12·2	33	184	1260	25	(132	814	386)	7·6	40	226	1065	22·1	43	165	1119
13·5	36	262	686	26·4	109	690	426	8·6	78	518	1781	23·4	6	68	832
14·4	50	382	1373	27·5	82	693	807	9·5	92	864	1227	24·3	5	58	351
15·5	52	507	1253	28·4	44	529	854	10·5	197	1198	2538	25·7	10	62	1256
16·5	82	545	1043	29·5	26	246	487	11·5	218	1431	1468	26·2	8	93	875
17·2	72	624	911					12·4	278	1499	1281	27·6	31	243	3007
18·1	127	903	578					13·5	277	1779	2507	28·1	55	322	2255
19·2	94	852	490					14·5	293	1939	2815	29·5	52	430	2222
20·2	95	484	383	Mar. 1·5	30	158	458	15·4	274	2023	821	30·5	48	502	2509
21·2	162	780	170	2·4	30	156	543	16·5	237	1691	1187	31·1	70	434	612
22·5	134	868	896	3·2	146	589	728	17·4	270	1534	1272				
23·2	202	1055	1500	4·2	81	576	1127	18·5	132	1276	2302				
24·2	226	1062	2107	5·1	70	440	1214	19·5	107	963	1279	June 1·6	23	231	901
25·2	171	1274	1310	6·1	49	257	1330	20·4	57	513	1785	2·4	20	121	628
26·4	141	981	1239	7	(15	194	759)	21·1	97	600	1207	3·1	35	191	720
27·1	118	630	792	8·4	49	294	187	22·1	160	1237	1758	4·5	36	213	3880
28·1	32	216	484	9·5	50	345	511	23·4	267	2258	2805	5·1	26	174	2105
29·4	9	68	1419	10·4	55	449	1421	24·6	343	2595	1317	6·4	45	222	1600
30·2	6	19	907	11·5	52	435	1161	25·4	504	2707	729	7·4	48	404	3380
31·2	0	33	637	12·2	56	358	1408	26·1	428	2560	444	8·5	52	247	1542
				13·1	52	323	796	27·4	381	2028	1108	9·1	60	216	1308
				14·2	47	289	1541	28·5	312	1907	1302	10·6	49	431	1482
				15·5	53	353	1091	29·3	231	1692	1897	11·3	38	165	1638
Feb. 1·4	0	15	288	16·5	66	413	949	30·1	194	1525	860	12·5	37	518	1036
2·1	10	32	509	17·5	73	555	1860					13·6	84	833	1667
3·3	11	60	760	18·5	78	485	1552					14·2	141	760	1884
4·5	12	120	1301	19·1	132	591	1250	May 1·5	181	956	1709	15·6	101	795	2594
5·5	35	382	1216	20·2	184	1059	1474	2·3	76	655	1807	16·4	90	854	2959
6·2	74	512	1053	21·3	157	889	835	3·7	32	309	837	17·5	104	746	1799
7·5	66	649	920	22·5	128	899	668	4·4	71	439	2191	18·2	85	701	0
8·6	113	991	540	23·2	113	688	641	5·2	54	455	1073	19·6	65	822	743
9·6	147	1265	226	24·5	95	707	2424	6·5	76	466	1928	20·5	91	641	715
10·4	180	1355	536	25·2	93	610	2180	7·1	54	360	1780	21·2	56	652	663
11·2	150	1135	799	26·5	67	546	1798	8·4	54	340	2896	22·5	116	898	2150
12·1	132	866	1871	27·6	82	527	1060	9·5	80	512	2805	23·4	140	1051	2381
13·5	57	522	3534	28·5	68	637	1619	10·3	58	556	2426	24·5	48	811	1905

TOTAL PROJECTED AREAS of SUN SPOTS and FACULÆ—*concluded.*

Greenwich Civil Time.	Projected Area.			Greenwich Civil Time.	Projected Area.			Greenwich Civil Time.	Projected Area.			Greenwich Civil Time.	Projected Area.		
	Umbræ.	Whole Spots.	Faculæ.		Umbræ.	Whole Spots.	Faculæ.		Umbræ.	Whole Spots.	Faculæ.		Umbræ.	Whole Spots.	Faculæ.
1904. d				1904. d				1904. d				1904. d			
June 25·5	55	504	2192	Aug. 11·7	102	715	1165	Sept. 28·5	56	401	2904	Nov. 14·5	59	456	958
26·5	31	375	558	12·4	82	599	923	29·5	48	431	1540	15·5	68	490	1317
27·4	11	195	772	13·5	72	608	1207	30·2	44	344	3009	16·3	89	614	1992
28·5	11	76	1041	14·5	78	597	1951					17·2	72	406	2096
29·4	19	116	1509	15·5	68	434	2848					18·2	73	428	2172
30·4	56	507	1337	16·5	35	294	939	Oct. 1·3	54	317	1855	19·2	101	548	1114
				17·6	31	219	2600	2·5	16	152	1463	20·2	108	478	1376
				18·5	31	152	1331	3·6	7	129	1350	21·5	44	334	766
July 1·4	45	564	1799	19·5	50	174	2498	4·5	13	109	688	22·2	77	425	1613
2·6	60	404	2185	20·5	13	115	760	5·2	34	413	149	23·5	78	545	1540
3·5	39	456	1555	21·2	13	86	2300	6·5	176	1108	594	24·2	198	1026	1629
4·5	45	298	2687	22·2	16	142	1324	7·2	162	1115	1641	25·2	169	1167	1559
5·2	91	434	2139	23·4	37	363	2166	8·4	151	1327	2356	26·2	139	1144	2440
6·5	47	349	1617	24·5	37	554	2673	9·2	204	1283	1670	27·2	117	676	1605
7·2	47	400	1052	25·5	70	806	664	10·2	253	1415	1736	28·3	139	793	1198
8·7	20	183	640	26·5	159	1498	1102	11·2	274	1708	2532	29·2	110	671	1921
9·4	27	198	1486	27·4	201	2057	1449	12·5	249	1550	2156	30·2	134	706	1688
10·5	66	452	1012	28·2	260	1933	1272	13·4	182	1375	1355				
11·5	66	514	2752	29·4	259	2401	3249	14·4	152	1156	1942				
12·4	79	750	1862	30·4	274	2157	2573	15·4	132	867	3349				
13·4	106	933	2506	31·1	227	1464	4042	16·2	132	686	2445	Dec. 1·2	48	441	1373
14·4	110	822	1203					17·3	94	570	3057	2·4	21	125	488
15·4	134	1098	436					18·1	66	366	2106	3·2	34	137	2277
16·5	180	1247	1145					19·2	53	343	1363	4·2	32	282	1824
17·5	129	1427	1156	Sept. 1·2	131	905	2878	20·2	67	299	2445	5·5	62	649	3667
18·4	176	1414	2577	2·6	21	382	3151	21·2	41	271	2917	6·2	112	781	1814
19·5	157	1287	2737	3·7	11	87	843	22·5	32	466	528	7·2	249	1181	2147
20·4	159	1027	2559	4·5	5	26	719	23·2	89	459	1042	8·2	351	2035	1712
21·5	116	1042	1992	5·4	14	104	1140	24·5	32	338	508	9·2	394	2290	1600
22·4	142	1057	2610	6·3	16	74	1744	25·5	54	613	696	10·1	291	2132	946
23·4	148	935	2280	7·4	1	37	385	26·2	120	660	1741	11·2	465	2699	2598
24·5	118	780	3356	8·3	21	95	675	27·3	272	1651	1980	12·5	348	2499	1744
25·5	84	617	3872	9·5	28	175	1057	28·4	189	1638	2633	13·2	425	2638	2887
26·5	65	521	3404	10·5	18	274	2513	29·4	225	1768	4137	14·1	294	2293	3435
27·6	39	314	1106	11·5	15	140	1533	30·2	278	1648	3010	15·3	282	2244	4986
28·5	31	360	2614	12·2	20	70	2011	31·2	178	1211	2424	16·5	202	2081	1295
29·2	90	526	1572	13·5	25	104	1731					17·3	186	1227	2976
30·4	66	643	2000	14·4	16	108	1058					18·2	149	1284	2263
31·4	57	725	2798	15·4	0	7	771	Nov. 1·2	144	954	1057	19·3	112	718	3638
				16·4	25	189	2202	2·4	68	409	572	20·5	69	490	2038
				17·4	9	255	903	3·5	37	362	1001	21·2	84	568	4691
Aug. 1·4	47	539	2508	18·5	20	167	2876	4·4	61	368	523	22·2	39	399	4910
2·4	42	447	2252	19·5	26	274	1443	5·4	71	483	1426	23·2	10	124	5516
3·4	34	486	2494	20·5	55	586	1884	6·2	54	449	1787	24·3	10	127	3515
4·4	62	486	1916	21·5	70	423	783	7·1	60	298	2211	25·2	16	168	3680
5·7	114	811	3008	22·2	69	439	1658	8·4	15	172	681	26·2	10	74	1648
6·2	175	942	3211	23·5	103	893	3384	9·2	35	165	1348	27·2	19	146	1779
7·6	104	753	1038	24·5	73	708	2151	10·2	24	142	707	28·2	16	116	1598
8·4	85	816	1834	25·2	100	577	1716	11·5	32	304	2070	29·2	23	100	1459
9·5	100	762	1906	26·6	68	436	2479	12·2	46	319	2252	30·4	56	608	1112
10·4	115	799	1959	27·4	27	261	1363	13·5	58	376	1753	31·5	146	1003	1065

MEAN AREAS of SUN SPOTS and FACULÆ, as measured on PHOTOGRAPHS taken at the ROYAL OBSERVATORY, GREENWICH, at DEHRA DÛN, INDIA, and in MAURITIUS, for each ROTATION of the SUN, from 1903 December 20 to 1905 January 5.

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 1873–1903 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 rotations adopted in the volumes of Greenwich Observations, 1877 to 1883, correspond, on the other hand, to the sidereal rotation of the Sun, the commencement of each being defined by the coincidence of the assumed prime meridian with the ascending node. 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							
672	1903 December	20·64	26	57	353	1164	46	287	1338
673	1904 January	16·98	27	93	638	883	65	456	1000
674	February	13·32	26	61	401	899	45	296	1015
675	March	11·65	27	78	483	1413	52	347	1532
676	April	7·94	28	209	1398	1547	143	1018	1658
677	May	5·20	26	42	298	1914	30	217	2059
678	June	1·41	28	61	495	1580	41	339	1628
679	June	28·61	27	91	715	1928	65	525	1966
680	July	25·82	27	67	516	2005	48	385	2100
681	August	22·05	27	71	608	1697	50	454	1805
682	September	18·30	28	101	713	1858	72	520	1933
683	October	15·59	27	93	633	1719	73	506	1888
684	November	11·89	27	103	638	1714	89	592	1969
685	December	9·20	26	149	1054	2600	106	750	2813

MEAN AREAS of SUN SPOTS and FACULÆ, as measured on PHOTOGRAPHS taken at the ROYAL OBSERVATORY, GREENWICH, at DEHRA DÛN, INDIA, and in MAURITIUS, for the YEAR 1904.

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.
1904	363	93	653	1639	67	488	1761

MEAN HELIOGRAPHIC LATITUDE of SUN SPOTS, as measured on PHOTOGRAPHS taken at the ROYAL OBSERVATORY, GREENWICH, at DEHRA DÛN, INDIA, and in MAURITIUS, for each ROTATION of the SUN, from 1903 December 20 to 1905 January 5.

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.		
672	1903 Dec. 20·64	26	163	18·70	124	16·59	+ 3·40	17·78
673	1904 Jan. 16·98	27	312	16·82	144	14·70	+ 6·87	16·20
674	Feb. 13·32	26	68	15·73	229	13·82	− 7·08	14·25
675	Mar. 11·65	27	276	13·63	72	17·39	+ 7·23	14·40
676	Apr. 7·94	28	302	14·58	717	14·49	− 5·88	14·52
677	May 5·20	26	72	17·13	145	20·09	− 7·78	19·11
678	June 1·41	28	267	16·03	72	18·82	+ 8·62	16·63
679	June 28·61	27	254	15·05	272	18·97	− 2·52	17·05
680	July 25·82	27	200	15·45	185	16·49	+ 0·10	15·95
681	Aug. 22·05	27	54	18·77	400	17·62	−13·28	17·76
682	Sept. 18·30	28	271	18·95	249	19·81	+ 0·39	19·36
683	Oct. 15·59	27	300	12·26	206	18·34	− 0·15	14·73
684	Nov. 11·89	27	477	19·06	115	19·98	+11·50	19·24
685	Dec. 9·20	26	629	17·04	121	16·44	+11·65	16·95

MEAN HELIOGRAPHIC LATITUDE of SUN SPOTS, as measured on PHOTOGRAPHS taken at the ROYAL OBSERVATORY, GREENWICH, at DEHRA DÛN, INDIA, and in MAURITIUS, for the YEAR 1904.

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.		
1904	363	268	16·33	220	16·88	+1·37	16·57

NOTE.—In the computations for forming the corresponding Tables given in the volumes for 1884 and 1885, the latitudes of the Spots were only taken to the nearest degree, the next higher whole degree being adopted whenever the fractional part of the latitude amounted to or exceeded ·5. Thus, under 8°, for example, would be included all Spots from 7°·5 to 8°·4, both inclusive; and the corresponding mean latitude should have been taken as 7°·95 instead of 8°. The Mean Heliographic Latitudes, therefore, both for Spots North and South of the Equator, and the Mean Distances from the Equator of all Spots, both for the rotations and for entire years, require a correction of − 0°·05. The Mean Latitude of the entire Spotted Area requires the following correction:—

$$-0°\cdot05 \times \frac{\text{Mean Area N.} - \text{Mean Area S.}}{\text{Mean Area N.} + \text{Mean Area S.}}$$

These corrections have been applied in computing the Mean Heliographic Latitudes and Mean Distance from the Equator given in the above Tables for 1904, and in corresponding Tables for the years 1886 to 1903.