GREENWICH

PHOTO-HELIOGRAPHIC

RESULTS.

1914.

HIGH ALTITUDE OBSERVATORY
LABORATORY AND ADMINISTRATIVE
OFFICE
BOULDER, COLORADO

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RESULTS OF MEASURES

MADE AT THE

ROYAL OBSERVATORY, GREENWICH

UNDER THE DIRECTION OF

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

OF

PHOTOGRAPHS OF THE SUN

TAKEN

AT GREENWICH, AT THE CAPE, AND IN INDIA

IN THE YEAR

1914.

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GREENWICH PHOTO-HELIOGRAPHIC RESULTS, 1914.

INTRODUCTION.

§ I. *Measures of Positions and Areas of Sun Spots and Faculæ on Photographs taken at the Royal Observatories of Greenwich, and of the Cape, and in India, at Kodaikánal and at Dehra Dûn, in the year* 1914; *with the deduced Heliographic Longitudes and Latitudes.*

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

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

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

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

scale. The plates and development used have been much the same at each of the four collaborating observatories.

Photographs of the Sun were available for measurement upon each day in 1914, those finally selected for measurement being supplied by the different observatories as under :—

Greenwich	236
Cape	116
Kodaikánal	2
Dehra Dûn	11
Total	365

The measures were made in the manner described in the *Introduction to the Greenwich Photo-Heliographic Results* for 1909, and the results of the measures are printed upon the same general plan, the following being the signatures of those persons who measured the photographs for the year 1914 :—

D. J. R. Edney	DE	A. W. Berry	AB
H. W. Newton	N	J. S. Smith	JS
J. Van Dingenen	VD		

At the principal focus of the photoheliographs one or two spider-lines are fixed by which the zero of position-angles on the photographs can be determined. There is only one such spider-line in the Kodaikánal photoheliograph, and this is placed horizontally. In the other photoheliographs two spider-lines are used, crossing each other at right angles at the centre of the field. These lines are respectively perpendicular and parallel to the equator in the photoheliographs at the Cape and at Dehra Dûn, but are inclined to it at an angle of about 45° in that at Greenwich.

The method of determining the zero of position-angles for the Dallmeyer Photoheliograph at the Royal Observatory, Greenwich, was the same as that used for the Thompson Photograph, as described in 1909, except that, as in 1913, and as just noted, the two spider-lines were arranged nearly at an angle of 45° to the equator.

The determinations obtained were the following :—

DALLMEYER PHOTOHELIOGRAPH, GREENWICH.

Date, Greenwich Civil Time.			Correction for Zero.
		d h	° ′
1913	December	16. 12	+2 42
		16. 12	+2 24
1914	January	14. 12	+2 20
		29. 12	+2 25
		29. 13	+2 25
	February	17. 12	+2 23
		17. 13	+2 23
	March	17. 11	+1 53
		17. 13	+2 32
		25. 11	+2 23
		25. 13	+2 41
	April	15. 12	+2 40
		16. 10	+2 22
		16. 14	+2 40
		28. 12	+3 38
	May	16. 12	+3 16
		18. 16	+3 19
		19. 7	+3 28
	June	2. 10	+3 19
		4. 7	+3 24
		4. 8	+3 19
		4. 10	+3 20
		4. 11	+3 28
		17. 10	+2 56
		18. 12	+3 4
		30. 10	+2 52
		30. 12	+2 55

Date. Greenwich Civil Time.			Correction for Zero.
		d h	° ′
1914	July	14. 9	+2 46
		14. 13	+2 51
		25. 11	+2 57
	August	11. 12	+1 54
		12. 10	+2 1
		12. 12	+1 56
		20. 10	+2 47
		22. 10	+2 26
		28. 11	+2 39
		28. 12	+2 33
	September	15. 12	+2 38
		15. 13	+2 36
		24. 12	+2 35
	October	8. 12	+2 37
		26. 13	+2 46
		29. 10	+2 33
	November	7. 10	+2 36
		7. 12	+2 42
		24. 11	+2 37
		24. 12	+2 43
	December	1. 12	+2 34
		14. 11	+2 38
		14. 13	+2 42
1915	January	2. 12	+2 45
		18. 11	+2 38
		18. 13	+2 49
	February	5. 10	+2 39

Some small alterations in the adjustments of the Photoheliograph were made in the period 1914, June 7 to August 18.

The zero-corrections used in the reduction of the photographs taken at Greenwich with the Dallmeyer Photoheliograph were as follows :—

Date.	Correction for Zero.	Date.	Correction for Zero.
	°		°
From 1914 January 1 to January 30	+2·5	From 1914 April 27 to June 6	+3·4
,, ,, January 31 ,, March 27	+2·4	,, ,, June 7 ,, June 30	+3·0
,, ,, March 28 ,, April 22	+2·5	,, ,, July 1 ,, July 15	+2·8
,, ,, April 23 ,, April 27	Photoheliograph dismounted.	,, ,, July 16 ,, August 9	+2·9
		,, ,, August 10 ,, August 18	+2·0
		,, ,, August 19 ,, December 31	+2·6

The method of taking transits of the Sun over the two wires, employed in 1913, as an alternative to that of photographs with double images of the Sun, was not used in 1914.

The double-image method, as described in 1909, was employed with the Dallmeyer Photoheliograph, at the Royal Observatory, Cape of Good Hope, and the following determinations were obtained :—

DALLMEYER PHOTOHELIOGRAPH, CAPE OF GOOD HOPE.

Date. Greenwich Civil Time.				Correction for Zero.	Date. Greenwich Civil Time.				Correction for Zero.
		d	h	° ′			d	h	° ′
1913	December	27.	8	+0 3	1914	August	1.	0	R.A. wire broken.
1914	January	9.	8	+0 7			2.	0	New wire inserted.
		27.	9	+0 3			3.	10	+0 26
	February	23.	10	+0 8			8.	0	New wires inserted.
	March	17.	10	−0 1			8	10	+0 4
		31.	9	+0 7			25.	8	+0 10
	April	17.	0	R.A. wire broken.		September	14	8	−0 2
		20.	0	New wire inserted.		October	2.	9	+0 4
		20.	10	+0 14·5			19.	12	+0 10
	May	4.	12	+0. 25		November	4.	10	−0 6
		16.	9	+0 24			18.	9	+0 2
	June	2.	10	+0 23		December	3.	8	+0 7
		16.	11	+0 20			17.	9	+0 4
		29.	12	+0 16	1915	January	4.	8	−0 4
	July	15.	11	+0 22			18.	9	+0 6

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

Date.	Correction for Zero.	Date.	Correction for Zero.
	°		°
From 1914 January 1 to April 20	+0·1	From 1914 August 2 to August 7	+0·4
,, ,, April 21 ,, April 30	+0·2	,, ,, August 8 ,, October 31	+0·1
,, ,, May 1 ,, June 30	+0·4	,, ,, November 1 ,, November 30	+0·0
,, ,, July 1 ,, July 31	+0·3	,, ,, December 1 ,, December 31	+0·1

The zero-corrections for the photographs taken at the two Indian Observatories were determined in the same general manner, a correction of +0°·4 for those taken at Kodaikánal, and of −0°·5 for those from Dehra Dûn, being applied throughout the year 1914.

The method of reduction of the measures of the photographs is the same as that described in the *Introduction to the Greenwich Photo-Heliographic Results* for 1909. The inclination of the Sun's axis to the ecliptic is assumed to be 82° 45′, the longitude of the ascending node for 1914·0 to be 74° 33′·6, and the period of the Sun's sidereal rotation to be 25·38 days; the meridian which passed through the ascending node 1854 January 1, Greenwich Mean Noon, being taken as the zero meridian.

§ 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* 1914.

§ 3. *Catalogue of Recurrent Groups of Sun Spots compiled from the Ledgers of Groups of Sun Spots for the year* 1914.

§ 4. *Total Areas of Sun Spots and Faculæ for each day, and Mean Areas and Mean Heliographic Latitude of Sun Spots and Faculæ for each Rotation of the Sun, and for the year* 1914.

These three sections are similar to the corresponding sections for 1911.

F. W. DYSON.

Royal Observatory, Greenwich,
1917 *November.*

ROYAL OBSERVATORY, GREENWICH.

MEASURES OF POSITIONS AND AREAS

OF

SUN SPOTS AND FACULÆ

ON

PHOTOGRAPHS

TAKEN WITH THE

PHOTOHELIOGRAPHS

AT GREENWICH, AT THE CAPE, AND IN INDIA,

WITH THE DEDUCED

HELIOGRAPHIC LONGITUDES AND LATITUDES.

1914.

MEASURES of POSITIONS and AREAS of SUN SPOTS and FACULÆ on PHOTOGRAPHS taken at the ROYAL OBSERVATORIES of GREENWICH and of the CAPE, and in INDIA, at KODAIKÁNAL and at DEHRA DÛN, in the Year 1914.

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

The letter G. signifies that the photograph was taken at Greenwich; the letter C. that it was taken at the Cape; the letter K. that it was taken at Kodaikánal; the letter D. that it was taken at Dehra Dûn; 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 Areas of Spots and Faculæ are expressed in millionths of the Sun's visible Hemisphere.

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

Greenwich Civil Time.	Measurers.	No. of Group, 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).
1914.				°	°	°			
0·446	JS, AB	7022	0·456	340·6	238·8	+22·4	12	32	
		7022	0·446	342·3	237·8	+22·0	0	10	
C.		7022	0·449	355·0	231·8	+23·4	2	12	
		7023	0·912	113·4	164·7	−22·5	6	58	} 436c
		7023	0·938	113·0	160·4	−22·6	24	84	
Jan. 1				(+2·2)	(229·4)	(−3·1)	(44)	(196)	(436)
1·509	JS, AB	7022	0·573	318·4	239·6	+22·3	22	64	
		7022	0·545	325·2	235·1	+23·4	5	15	
C.		7023	0·807	115·4	163·6	−22·3	7	25	} 304c
		7023	0·844	115·4	159·6	−23·1	0	14	
Jan. 2				(+1·6)	(215·4)	(−3·3)	(34)	(118)	(304)
2·517	JS, AB	7022	0·704	306·4	239·6	+22·0	11	39	70c
G.		7023*	0·450	81·1	175·8	+ 0·9	1	2	
Jan. 3				(+1·1)	(202·1)	(−3·4)	(12)	(41)	(70)
3·429	JS, AB	7022	0·823	300·1	240·1	+22·1	0	8	121*nf*
C.			0·573	125·5	159·9	−22·4			64
Jan. 4				(+0·7)	(190·1)	(−3·5)	(0)	(8)	(185)
4·309	JS, AB		0·925	271·3	245·9	− 0·2			110
C.			0·892	298·7	236·9	−23·5			299
		7024	0·531	331·1	194·8	+24·2	2	20	
Jan. 5				(+0·3)	(178·5)	(−3·6)	(2)	(20)	(409)
5·513	N, JS		0·973	294·7	236·2	+23·0			390
C.		7024*	0·835	115·8	107·7	−23·5	0	6	} 37c
		7024*	0·850	115·9	106·1	−23·8	1	4	
Jan. 6				(−0·3)	(162·6)	(−3·7)	(1)	(10)	(427)
1914.				°	°	°			
Jan. 7			No	Spots	or Fac	ulæ			
7·342	JS, AB		0·915	240·7	203·3	−28·3			129
C.			0·914	113·6	73·1	−23·1			128
Jan. 8				(−1·2)	(138·5)	(−3·9)	(0)	(0)	(257)
8·347	JS, AB		0·866	297·5	180·6	+21·3			156
C.		7024†	0·607	92·9	88·0	− 5·0	5	11	
Jan. 9				(−1·7)	(125·3)	(−4·0)	(5)	(11)	(156)
9·341	JS, AB		0·920	294·2	175·6	+20·4			106
C.			0·790	242·2	155·1	−24·2			238
Jan. 10				(−2·2)	(112·2)	(−4·1)	(0)	(0)	(344)
10·464	JS, AB		0·860	243·7	155·3	−24·7			357
C.			0·817	132·3	49·2	−36·1			118
Jan. 11				(−2·7)	(97·4)	(−4·2)	(0)	(0)	(475)
11·345	JS, AB		0·927	245·0	153·2	−24·7			388
C.									
Jan. 12				(−3·1)	(85·8)	(−4·3)	(0)	(0)	(388)
12·365	JS, AB		0·910	61·0	12·0	+24·0			126
C.									
Jan. 13				(−3·6)	(72·4)	(−4·4)	(0)	(0)	(126)

Group 7022, 1913 December 30–1914 January 4. A pair of double spots varying their distance from each other, with occasional different companions.
Group 7023, 1914 January 1–2. A small unstable group.
Group 7023*, January 3. A very small equatorial spot.
Group 7024, January 5. A small double spot.
Group 7024*, January 6. Two very small spots.
Group 7024†, January 9. Two or three very small spots.

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

Greenwich Civil Time.	Measurers.	No. of Group, 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).
1914.				°	°	°			
Jan. 14 to Jan. 16			No	Spots	or Fac	ulæ			
16·452	JS, AB		0·900	62·7	315·4	−26·6			120
C.			0·916	108·6	312·2	−19·0			65
Jan. 17				(−5·6)	(18·6)	(−4·8)	(0)	(0)	(185)
17·592	JS, AB		0·916	246·4	69·6	−23·6			123
G.									
Jan. 18				(−6·1)	(3·5)	(−4·9)	(0)	(0)	(123)
Jan. 19			No	Spots	or Fac	ulæ			
19·322	JS, AB		0·930	241·9	48·8	−28·0			184
C.									
Jan. 20				(−6·9)	(340·8)	(−5·1)	(0)	(0)	(184)
Jan. 21			No	Spots	or Fac	ulæ			
21·540	JS, AB		0·965	64·6	240·8	+22·8			112
G.									
Jan. 22				(−7·9)	(311·6)	(−5·3)	(0)	(0)	(112)
22·505	JS, AB		0·913	61·1	238·5	+23·5			241
G.									
Jan. 23				(−8·3)	(298·9)	(−5·4)	(0)	(0)	(241)
23·509	JS, AB		0·886	54·9	231·1	+27·5			128
G.			0·868	113·2	226·0	−22·8			149
Jan. 24				(−8·8)	(285·7)	(−5·5)	(0)	(0)	(277)
Jan. 25 to Jan. 27			No	Spots	or Fac	ulæ			
27·543	JS, AB		0·929	117·6	164·3	−27·8			212
G.									
Jan. 28				(10·5)	(232·6)	(−5·8)	(0)	(0)	(212)
1914.				°	°	°			
28·406	JS, AB		0·912	93·5	155·3	−5·6			108
G.			0·920	115·8	154·2	−26·1			200
Jan. 29				(−10·9)	(221·2)	(−5·9)	(c)	(0)	(308)
Jan. 30			No	Spots	or Fac	ulæ			
30·465	JS, AB		0·871	273·4	254·3	− 0·1			120
G.			0·798	306·6	237·8	+24·2			179
Jan. 31				(−11·8)	(194·1)	(−6·0)	(0)	(0)	(299)
31·524	JS, AB		0·874	260·2	241·4	−11·6			111
G.			0·851	291·2	234·9	+14·4			75
			0·880	305·0	233·7	+26·8			248
Feb. 1				(−12·2)	(180·1)	(−6·1)	(0)	(0)	(434)
32·486	JS, AB		0·918	301·0	227·7	−25·2			148
		7025	0·245	243·8	180·4	−12·3	8	25	
G.		7025	0·213	233·6	177·6	−13·4	3	10	
		7025	0·188	227·2	175·6	−13·4	0	9	
Feb. 2				(−12·6)	(167·5)	(−6·2)	(11)	(44)	(148)
33·531	JS, AB	7025	0·464	255·4	180·9	−12·3	4	24	
G.		7025	0·410	252·4	177·2	−12·8	0	20	
		7025	0·386	250·2	175·5	−13·3	0	13	
Feb. 3				(−13·0)	(153·7)	(−6·2)	(4)	(57)	(0)
34·486	JS, AB	7026	0·785	309·0	183·3	+25·0	0	13	65c
		7025	0·642	259·2	181·0	−11·7	10	32	
G.		7025	0·614	258·1	178·9	−12·3	0	15	63c
		7025	0·599	256·8	177·7	−12·9	0	7	
		7025	0·577	256·9	176·1	−12·7	10	24	
Feb. 4				(−13·4)	(141·1)	(−6·3)	(20)	(91)	(128)
35·396	JS, AB		0·862	301·6	181·8	+23·0			146
G.		7025	0·775	259·4	180·1	−12·3	9	46	104c
		7025	0·729	258·4	176·0	−12·8	0	15	
Feb. 5				(−13·8)	(129·1)	(−6·4)	(9)	(61)	(250)
36·408	JS, AB		0·901	271·0	179·9	− 1·9			159
			0·900	284·1	177·9	+ 9·7			158
G.			0·903	301·6	173·6	+24·9			138
		7025	0·895	259·1	179·8	−12·6	6	33	189f
Feb. 6				(−14·1)	(115·8)	(−6·4)	(6)	(33)	(644)

Group 7025, February 2–6. A short stream of small spots.
Group 7026, February 4. A pair of very small evanescent 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).
1914.				°	°	°			
37·396	JS, AB		0·962	258·9	177·7	−12·4			360
G.			0·859	287·2	159·4	+11·2			116
			0·809	305·8	148·4	+23·7			101
Feb. 7				(−14·5)	(102·8)	(−6·5)	(0)	(0)	(577)
Feb. 8 to Feb. 11			No	Spots	or Fac	ulæ			
42·413	JS, AB		0·868	101·8	336·1	−13·6			139
G.									
Feb. 12				(−16·4)	(36·8)	(−6·7)	(0)	(0)	(139)
43·433	JS, AB		0·894	123·1	320·9	−32·5			133
G.									
Feb. 13				(−16·7)	(23·3)	(−6·8)	(0)	(0)	(133)
Feb. 14 to Feb. 16			No	Spots	or Fac	ulæ			
47·418	JS, AB		0·882	315·6	19·2	+34·6			168
G.									
Feb. 17				(−18·1)	(330·8)	(−6·9)	(0)	(0)	(168)
48·621	JS, AB	7027	0·478	1·5	314·2	+21·4	2	3	
G.			0·893	60·9	257·9	+22·0			111
Feb. 18				(−18·5)	(315·0)	(−7·0)	(2)	(3)	(111)
Feb. 19 to Feb. 20			No	Spots	or Fac	ulæ			
51·360	N, JS	7027*	0·260	236·7	291·8	−15·1	1	4	
C.									
Feb. 21				(−19·3)	(278·9)	(−7·1)	(1)	(4)	(0)
Feb. 22			No	Spots	or Fac	ulæ			

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).
1914.				°	°	°			
53·401	JS, AB		0·906	108·9	186·5	−20·1			176
G.									
Feb. 23				(−19·9)	(252·1)	(−7·1)	(0)	(0)	(176)
Feb. 24 to Feb. 26			No	Spots	or Fac	ulæ			
57·385	JS, AB		0·874	278·4	259·4	+ 3·7			113
G.		7027†	0·337	166·2	194·5	−26·2	2	6	
Feb. 27				(−21·0)	(199·6)	(−7·2)	(2)	(6)	(113)
Feb. 28			No	Spots	or Fac	ulæ			
59·442	JS, AB		0·905	271·4	237·1	− 1·9			94
G.									
Mar. 1				(−21·6)	(172·5)	(−7·2)	(0)	(0)	(94)
Mar. 2			No	Spots	or Fac	ulæ			
61·294	N, JS		0·911	171·2	123·2	−70·7			56
D.									
Mar. 3				(−22·1)	(148·1)	(−7·2)	(0)	(0)	(56)
62·385	JS, AB		0·909	173·9	116·1	−71·4			102
C.			0·977	112·3	54·2	−23·3			147
Mar. 4				(−22·3)	(133·7)	(−7·2)	(0)	(0)	(249)
63·383	AB, JS		0·944	243·5	192·3	−27·3			128
			0·886	260·5	183·6	−11·8			137
C.			0·890	175·9	110·1	−69·6			116
			0·911	112·5	54·3	−23·4			128
Mar. 5				(−22·5)	(120·6)	(−7·2)	(0)	(0)	(509)
64·459	JS, AB		0·904	255·4	171·8	−16·3			140
			0·889	303·0	161·5	+24·9			87
G.			0·803	115·2	53·6	−24·5			244
Mar. 6				(−22·8)	(106·4)	(−7·3)	(0)	(0)	(471)

Group 7027, February 18. A very small spot.
Group 7027*, February 21. A very small faint spot.
Group 7027†, February 27. A very small double 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).
1914.				°	°	°			
65·350	JS, AB		0·928	186·6	117·3	−73·9			142
C.									
Mar. 7				(−23·0)	(94·7)	(−7·3)	(0)	(0)	(142)
66·447	JS, AB		0·902	73·2	18·5	+11·7			123
C.									
Mar. 8				(−23·2)	(80·2)	(−7·2)	(0)	(0)	(123)
Mar. 9 and Mar. 10			No	Spots	or Fac	ulæ			
69·447	AB, N		0·938	190·0	75·5	−73·5			101
G.									
Mar. 11				(−23·8)	(40·6)	(−7·2)	(0)	(0)	(101)
70·533	JS, AB	7028*	0·511	248·6	56·0	−17·0	0	5	
		7028	0·865	69·3	330·0	+13·9	0	18	162*f*
G.		7028	0·882	68·2	328·4	+15·3	0	2	
Mar. 12				(−24·0)	(26·3)	(−7·2)	(0)	(25)	(162)
71·393	N, JS	7028	0·759	64·4	330·3	+14·0	2	12	148*f*
C.		7028	0·777	64·2	328·8	+14·9	0	3	
Mar. 13				(−24·2)	(15·0)	(−7·2)	(2)	(15)	(148)
72·408	JS, AB		0·797	344·9	18·1	+43·2			100
G.		7028	0·652	59·3	326·5	+13·6	0	8	45*c*
Mar. 14				(−24·3)	(1·6)	(−7·2)	(0)	(8)	(145)
73·436	JS, AB		0·907	285·2	50·8	+10·6			155
		7029	0·865	332·1	22·3	+44·0	0	18	178*c*
G.		7029	0·855	335·0	18·5	+44·6	4	29	
Mar. 15				(−24·5)	(348·1)	(−7·1)	(4)	(47)	(333)
74·386	AB, N		0·960	247·5	50·6	−23·5			151
		7029	0·913	325·3	21·5	+43·8	3	13	
C.		7029	0·912	326·6	20·4	+44·7	0	34	329*c*
		7029*a*	0·895	329·8	15·2	+45·2	20	91	
Mar. 16				(−24·7)	(335·6)	(−7·1)	(23)	(138)	(480)
1914.				°	°	°			
75·391	JS, AB	7029*a*	0·933	324·0	12·7	+44·7	31	133	382*c*
G.									
Mar. 17				(−24·8)	(322·3)	(−7·1)	(31)	(133)	(382)
76·534	JS, AB	7029*a*	0·975	319·5	10·8	+45·0	13	72	350*c*
G.									
Mar. 18				(−25·0)	(307·3)	(−7·1)	(13)	(72)	(350)
Mar. 19			No	Spots	or Fac	ulæ			
78·398	JS, N		0·786	292·4	330·7	+12·7			69
C.									
Mar. 20				(−25·2)	(282·7)	(−7·0)	(0)	(0)	(69)
79·416	JS, N		0·897	288·6	329·9	+13·3			145
C.			0·993	112·9	183·8	−23·5			329
Mar. 21				(−25·4)	(269·2)	(−7·0)	(0)	(0)	(474)
80·479	JS, AB		0·941	112·3	184·1	−23·3			238
G.									
Mar. 22				(−25·5)	(255·2)	(−7·0)	(0)	(0)	(238)
81·394	JS, N		0·854	113·6	184·7	−23·7			139
C.									
Mar. 23				(−25·6)	(243·2)	(−6·9)	(0)	(0)	(139)
82·380	JS, AB		0·879	288·9	288·6	+13·0			106
			0·750	115·5	182·8	−23·6			168
G.									
Mar. 24				(−25·7)	(230·2)	(−6·9)	(0)	(0)	(274)
Mar. 25 and Mar. 26			No	Spots	or Fac	ulæ			
85·412	AB, JS		0·962	64·8	120·7	+21·9			292
C.									
Mar. 27				(−26·0)	(190·2)	(−6·8)	(0)	(0)	(292)

Group 7028*, March 12. A very small spot.
Group 7028, March 12–14. One or two small unstable spots.
Group 7029, March 15–18. A small stream in high latitude, the rear spot, *a*, alone remaining after March 16.

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).
1914.				°	°	°			
86·385	JS, AB		0·892	61·1	120·2	+22·0			314
G.									
Mar. 28				(−26·1)	(177·4)	(−6·7)	(0)	(0)	(314)
87·474	JS, N		0·789	54·1	119·3	+22·8			127
C.									
Mar. 29				(−26·1)	(163·0)	(−6·6)	(0)	(0)	(127)
88·372	JS, N	7030*a*	0·991	59·4	74·0	+29·0	70	297	98*c*
C.			0·687	46·2	118·7	+22·8			93
Mar. 30				(−26·2)	(151·1)	(−6·6)	(70)	(297)	(191)
89·390	JS, AB	7030*a*	0·945	56·1	74·1	+29·0	170	464	278*f*
G.									
Mar. 31				(−26·2)	(137·7)	(−6·5)	(170)	(464)	(278)
90·345	JS, AB	7030*a*	0·872	51·9	73·9	+28·5	145	503	
		7030	0·888	54·5	70·8	+27·3	4	24	
G.		7030	0·918	56·3	65·9	+27·4	5	22	418*c*
		7030	0·920	58·3	65·0	+25·7	0	54	
Apr. 1				(−26·3)	(125·1)	(−6·5)	(154)	(603)	(418)
91·387	JS, AB		0·941	246·1	182·3	−24·6			179
		7030*a*	0·772	44·3	73·7	+28·4	85	443	
G.		7030	0·786	46·4	71·4	+27·9	4	17	299*c*
		7030	0·830	50·1	65·6	+27·7	8	24	
		7030	0·830	52·7	64·3	+25·9	6	16	
Apr. 2				(−26·3)	(111·4)	(−6·4)	(103)	(500)	(478)
92·354	JS, AB		0·897	245·0	162·3	−25·2			115
		7030*b*	0·660	32·3	75·1	+28·0	39	152	
		7030	0·670	34·1	73·5	+27·9	10	29	
G.		7030*c*	0·695	35·7	71·2	+28·6	50	145	133*c*
		7030	0·680	37·3	71·2	+27·0	0	25	
		7030	0·715	39·5	67·7	+28·0	6	31	
Apr. 3				(−26·3)	(98·6)	(−6·4)	(105)	(382)	(248)
93·553	JS, AB	7030	0·555	10·0	76·6	+26·8	0	9	
		7030*b*	0·584	9·8	76·3	+28·8	47	173	
		7030	0·596	13·2	73·9	+29·2	1	32	
G.		7030	0·604	14·8	72·6	+29·4	5	15	
		7030	0·576	17·2	71·8	+27·1	4	15	
		7030*c*	0·610	18·1	70·3	+29·2	35	129	
		7030	0·593	20·6	69·2	+27·5	0	11	
Apr. 4				(−26·4)	(82·8)	(−6·3)	(92)	(384)	(0)
1914.				°	°	°			
94·604	JS, AB	7030*b*	0·580	347·6	77·0	+28·2	37	159	
		7030	0·551	350·6	74·7	+26·6	2	7	
		7030	0·570	351·4	74·4	+28·0	28	66	
G.		7030	0·573	352·7	73·6	+28·3	4	16	
		7030	0·580	355·1	72·2	+29·9	6	28	
		7030*c*	0·561	358·6	69·8	+27·8	66	291	
Apr. 5				(−26·4)	(68·9)	(−6·2)	(143)	(567)	(0)
95·362	JS, AB		0·875	300·5	113·6	+22·8			210
		7030*b*	0·624	333·4	77·3	+27·9	37	159	
		7030	0·606	334·6	75·8	+27·1	6	21	
		7030	0·583	333·5	75·6	+25·4	0	13	
		7030	0·609	336·8	74·6	+28·0	23	81	
G.		7030	0·627	338·6	74·1	+29·6	0	11	
		7030	0·609	339·9	72·7	+28·8	9	22	
		7030*c*	0·585	344·7	68·9	+28·1	60	251	
		7030	0·581	347·6	67·0	+28·3	1	8	
		7030	0·548	350·4	64·7	+26·4	0	14	
Apr. 6				(−26·4)	(58·9)	(−6·2)	(136)	(580)	(210)
96·392	JS, AB		0·916	255·8	112·1	−15·4			152
			0·917	296·0	107·1	+20·9			140
		7030*b*	0·713	319·1	76·9	+27·3	29	123	
		7030	0·693	317·6	76·4	+25·5	0	14	
G.		7030	0·694	321·6	74·3	+27·5	14	68	
		7030	0·689	323·5	72·9	+28·2	6	24	
		7030	0·672	326·9	69·9	+28·6	0	10	
		7030*c*	0·651	329·0	67·6	+28·2	39	153	
Apr. 7				(−26·4)	(45·3)	(−6·1)	(88)	(392)	(292)
97·355	JS, AB	7030*b*	0·817	310·0	77·2	+27·3	42	143	
		7030	0·802	311·6	75·1	+27·7	24	86	
G.		7030	0·777	313·4	72·0	+27·5	3	18	446*c*
		7030	0·747	316·2	68·2	+27·6	15	52	
		7030*c*	0·738	318·6	66·2	+28·5	40	131	
			0·911	30·6	349·7	+47·2			198
Apr. 8				(−26·4)	(32·6)	(−6·1)	(124)	(430)	(644)
98·355	JS, AB	7030*b*	0·905	303·8	76·9	+27·1	43	129	
		7030	0·890	305·2	74·3	+27·5	36	109	
G.		7030	0·835	308·8	66·4	+27·5	6	30	745*c*
		7030*c*	0·831	310·3	65·3	+28·4	46	160	
			0·850	21[illegible]·1	352·8	+47·1			155
Apr. 9				(−26·4)	(19·4)	(−6·0)	(131)	(428)	(900)

Group 7030, March 30–April 11. A large continuously active spot-group. The main spot, *a*, soon breaks up into an increasing number of components—the most important being *b* and *c*—which form a stream covering 12° in longitude on April 6. After this date they diminish in number, only the rear spot, *c*, remaining visible on April 11 close to the limb.

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).
				°	°	°			
1914.									
99·351	JS, AB	7030	0·964	301·8	74·9	+28·5	49	239	
		7030*c*	0·916	305·6	64·7	+29·2	25	132	828*c*
G.		7030	0·909	304·4	64·2	+27·9	2	41	
		7030	0·878	303·4	60·4	+25·5	4	19	
Apr. 10				(−26·4)	(6·3)	(−5·9)	(80)	(431)	(828)
100·417	N, JS	7030*c*	0·975	302·0	63·7	+29·4	0	67	637*c*
C.									
Apr. 11				(−26·4)	(352·2)	(−5·9)	(0)	(67)	(637)
101·372	JS, AB		0·986	296·1	56·1	+24·5			120
		7031	0·797	117·5	288·4	−25·2	0	9	60*c*
G.		7031	0·820	117·1	285·9	−25·4	0	8	
Apr. 12				(−26·3)	(339·6)	(−5·8)	(0)	(17)	(180)
102·315	AB, N	7031	0·671	124·3	288·9	−26·7	1	5	
		7031	0·690	124·1	287·3	−27·1	1	12	34*c*
C.		7031	0·707	123·1	285·6	−27·0	9	22	
Apr. 13				(−26·3)	(327·1)	(−5·7)	(11)	(39)	(34)
103·425	JS, AB	7031	0·558	131·4	284·7	−26·6	4	12	
G.		7031	0·571	129·2	283·1	−26·0	0	6	
Apr. 14				(−26·2)	(312·5)	(−5·6)	(4)	(18)	(0)
104·350	N, AB		0·886	329·8	339·9	+45·7			160
G.									
Apr. 15				(−26·2)	(300·3)	(−5·5)	(0)	(0)	(160)
105·353	JS, AB		0·918	327·1	333·5	+46·7			181
		7032*a*	0·732	117·3	242·0	−23·5	5	15	62*c*
G.		7032	0·754	119·0	240·4	−25·2	2	22	
Apr. 16				(−26·1)	(287·0)	(−5·5)	(7)	(37)	(243)
106·374	N, AB		0·923	324·9	322·6	+45·5			100
G.		7032*a*	0·564	124·5	243·2	−23·3	9	23	25*c*
Apr. 17				(−26·1)	(273·5)	(−5·4)	(9)	(23)	(125)
107·351	N, AB	7032*a*	0·412	139·4	243·7	−23·2	7	23	
G.		7032*b*	0·451	135·2	240·4	−23·6	1	8	
Apr. 18				(−26·0)	(260·6)	(−5·3)	(8)	(31)	(0)
1914.									
108·348	JS, AB	7033	0·714	240·9	290·4	−24·2	4	19	51*c*
		7033	0·713	237·8	289·5	−26·2	6	34	
G.		7032*a*	0·324	171·9	244·6	−23·8	0	8	
		7032*b*	0·335	162·7	241·2	−23·7	10	23	
		7032	0·370	158·1	238·7	−25·1	8	26	
		7032*c*	0·363	154·5	237·6	−24·2	1	6	
			0·964	101·8	172·3	−12·7			153
Apr. 19				(−25·9)	(247·4)	(−5·2)	(29)	(116)	(204)
109·349	N, AB	7033*	0·908	240·2	298·5	−29·2	0	7	33*p*
		7033	0·856	244·2	291·9	−24·6	18	56	235*c*
		7033	0·837	241·8	289·3	−26·2	14	35	
G.		7032*b*	0·341	199·6	241·4	−23·8	1	6	
		7032*c*	0·340	189·6	237·8	−24·7	4	13	
			0·912	104·8	168·2	−15·6			288
Apr. 20				(−25·8)	(234·2)	(−5·1)	(37)	(117)	(556)
110·362	N, AB	7033	0·955	245·8	293·9	−24·5	0	41	258*c*
		7033	0·928	243·3	288·7	−26·6	6	47	
G.		7032	0·445	228·1	241·7	−21·9	3	13	
		7032*c*	0·440	217·7	238·1	−25·0	3	13	
			0·817	108·6	166·6	−18·1			152
Apr. 21				(−25·7)	(220·9)	(−5·0)	(12)	(114)	(410)
111·175	N, JS	7033	0·989	245·7	292·6	−24·7	0	33	254*c*
		7033	0·976	243·4	288·2	−27·0	0	25	
		7032	0·595	238·6	243·1	−22·5	2	9	
D.		7032	0·573	234·9	240·7	−23·5	10	21	
		7032	0·571	233·2	240·1	−24·3	1	3	
		7032	0·558	234·2	239·5	−23·3	3	5	
		7032	0·540	230·9	237·2	−23·8	16	34	
			0·947	67·6	142·3	+19·3			111
			0·968	118·0	134·2	−28·3			196
Apr. 22				(−25·6)	(210·1)	(−5·0)	(32)	(130)	(561)
112·352	AB, N	7034	0·799	302·3	241·1	+21·9	4	12	146*c*
		7032	0·745	243·6	240·7	−22·7	7	16	
		7032	0·731	243·6	239·5	−22·4	0	13	103*c*
		7032	0·711	239·1	236·7	−25·0	6	13	
C.		7032	0·704	239·9	236·4	−24·3	2	8	
			0·900	63·5	135·0	+21·2			106
			0·892	120·3	133·0	−29·1			132
Apr. 23				(−25·5)	(194·6)	(−4·8)	(19)	(62)	(487)

Group 7031, April 12–14. Two or three small spots.
Group 7032, April 16–24. A succession of small short-lived spots varying in relative importance.
Group 7033, April 19–22. A pair of small unstable groups.
Group 7033*, April 20. A very small spot, *sp*, Group 7033.
Group 7034, April 23. 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).
1914.				°	°	°			
113·388	AB, JS		0·902	298·6	240·2	+23·2			202
		7032	0·875	247·2	241·3	−22·2	2	16	212c
		7032	0·835	243·2	236·0	−24·9	4	16	
		7035	0·136	147·2	176·6	−11·3	2	9	
C.		7035	0·249	124·4	168·8	−12·8	0	3	
			0·773	123·8	134·0	−28·7			69
			0·827	59·0	131·2	+22·1			97
Apr. 24				(−25·4)	(180·9)	(−4·8)	(8)	(44)	(580)
114·351	N, JS		0·964	295·5	238·9	+23·0			118
			0·940	245·8	238·1	−24·3			461
C.		7035	0·161	202·9	171·9	−13·2	2	8	
		7035	0·144	200·6	171·2	−12·4	2	6	
		7035	0·149	185·0	169·0	−13·2	1	3	
Apr. 25				(−25·2)	(168·2)	(−4·7)	(5)	(17)	(579)
115·462	AB, N		0·991	245·1	237·0	−25·3			297
		7036a	0·455	31·1	139·2	+18·4	6	17	
		7036	0·478	32·9	137·6	+19·1	2	13	
C.		7036	0·499	34·1	136·3	+19·9	4	22	
		7036	0·492	36·6	135·5	+18·8	0	16	
		7036b	0·517	38·7	133·5	+19·4	6	17	
Apr. 26				(−25·1)	(153·5)	(−4·6)	(18)	(85)	(297)
116·529	N, JS		0·929	268·7	207·6	− 2·9			167
		7036a	0·383	355·4	141·2	+17·8	43	193	
		7036	0·408	4·5	137·5	+19·4	15	86	
		7036	0·389	8·2	136·1	+18·1	0	18	
G.		7036	0·404	10·5	135·0	+18·8	18	55	
		7036	0·430	11·3	134·3	+20·4	0	14	
		7036	0·421	14·5	133·0	+19·5	7	27	
		7037	0·966	57·4	69·9	+29·8	0	24	543f
Apr. 27				(−24·9)	(139·4)	(−4·5)	(83)	(417)	(710)
117·384	N, JS	7036a	0·432	330·0	141·1	+17·6	48	209	
		7036	0·429	335·8	138·8	+18·7	23	114	
		7036	0·441	339·4	137·6	+20·0	10	44	
		7036	0·420	340·4	136·6	+18·9	7	42	
		7036	0·419	345·1	134·6	+19·4	55	194	
G.		7036	0·445	348·4	133·6	+21·4	1	12	
		7036	0·423	350·4	132·4	+20·1	6	13	
		7038	0·962	61·7	58·3	+25·7	17	58	
		7038	0·965	60·1	58·0	+27·3	0	54	1146n
		7038	0·968	61·3	57·0	+26·3	16	47	
		7038	0·969	62·8	56·3	+25·0	33	95	
Apr. 28				(−24·8)	(128·1)	(−4·4)	(216)	(882)	(1146)
1914.				°	°	°			
118·444	N, JS	7036a	0·558	310·1	140·5	+17·2	42	189	
		7036a	0·556	313·4	139·2	+18·6	49	212	
		7036	0·540	316·4	137·2	+19·0	25	100	
		7036	0·516	317·4	135·1	+18·3	11	19	
		7036	0·533	320·7	135·1	+20·3	7	40	
		7036	0·510	319·6	134·4	+18·7	0	19	
		7036	0·524	323·3	133·6	+20·7	10	37	
G.		7036	0·504	322·4	133·1	+19·4	28	101	
		7036	0·497	324·8	131·8	+19·8	1	10	
		7038	0·887	58·3	57·6	+25·4	11	21	
		7038	0·897	56·6	56·9	+27·3	7	20	
		7038	0·896	58·0	56·5	+26·1	8	41	1960n
		7038	0·900	57·1	56·3	+27·0	1	11	
		7038	0·902	59·4	55·3	+25·1	29	64	
Apr. 29				(−24·6)	(114·1)	(−4·3)	(229)	(884)	(1960)
119·384	N, AB	7036a	0·689	301·9	139·5	+18·0	76	453	
		7036	0·687	304·6	138·5	+19·6	3	8	
		7036	0·657	304·1	136·5	+18·1	3	12	119c
		7036	0·666	307·5	135·9	+20·4	6	38	
C.		7036	0·644	306·9	134·6	+19·2	10	72	
		7036	0·628	309·5	132·6	+19·9	14	127	
		7038	0·795	53·4	57·0	+25·2	4	27	
		7038	0·811	51·8	56·1	+27·1	4	15	888n
		7038	0·809	54·8	55·1	+24·9	9	56	
Apr. 30				(−24·5)	(101·7)	(−4·2)	(129)	(808)	(1007)
120·318	N, JS	7036a	0·809	295·3	139·2	+17·6	62	451	
		7036	0·781	296·3	136·3	+17·4	2	7	
		7036	0·781	299·6	135·6	+20·4	0	8	
		7036	0·770	300·5	134·1	+20·1	1	5	
		7036	0·761	299·3	133·7	+18·9	20	60	
G.		7036	0·748	299·7	132·5	+18·7	16	39	
		7036	0·749	301·7	131·9	+20·1	16	68	
		7038	0·673	42·6	58·9	+26·1	3	6	
		7038	0·676	45·7	57·3	+24·6	3	9	149n
		7038	0·712	44·6	55·3	+27·0	3	10	
		7038	0·702	47·6	54·6	+24·9	16	40	
May 1				(−24·3)	(89·3)	(−4·1)	(142)	(703)	(149)

Group 7035, April 24–25. Two or three small unstable spots.
Group 7036, April 26–May 3. A fine stream of active spots of rapid development. The leader spot, *a*, continues to be the most important member, as the rear of the stream soon disappears. *a*, the umbra of which is frequently crossed by bright bridges, is measured in two portions on April 29.
Group 7037, April 27. A very small spot in the same area of disturbance as Group 7038.
Group 7038, April 28–May 4. Return of Group 7030. A group of spots appearing on the East limb and showing signs of dying activity.

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).
1914.				°	°	°			
121·540	JS, N	7036*a*	0·930	291·5	138·7	+18·3	90	407	
		7036	0·898	294·6	133·3	+20·0	4	15	
		7036	0·890	293·9	132·5	+19·1	19	52	531*c*
		7036	0·885	295·4	131·4	+20·2	11	56	
G.		7036*	0·788	248·5	124·0	−19·3	0	2	
		7036*	0·787	247·6	123·7	−20·0	1	3	
		7036*	0·768	246·9	121·8	−20·2	0	6	
		7038	0·559	31·1	54·7	+24·7	9	21	
		7038	0·602	30·7	53·0	+27·3	1	12	
May 2				(−24·1)	(73·2)	(−4·0)	(135)	(574)	(531)
122·155	N, JS	7036*a*	0·968	290·4	138·0	+18·6	18	407	
		7036	0·944	293·2	132·5	+20·3	0	15	
		7036	0·937	292·3	131·5	+19·3	11	26	467*c*
		7036	0·933	293·4	130·6	+20·1	8	32	
K.		7036*	0·871	249·6	124·9	−19·7	5	13	
		7036*	0·837	248·4	120·8	−20·1	1	8	83*c*
		7038	0·517	20·0	53·8	+25·2	0	16	
		7038	0·563	20·8	52·0	+27·9	1	9	
May 3				(−24·0)	(65·0)	(−3·9)	(44)	(526)	(550)
123·406	JS, N		0·995	290·7	130·6	+20·1			179
		7036*	0·976	251·0	126·3	−19·4	2	7	169*sf*
G.		7038*	0·558	337·7	62·2	+27·3	3	6	
		7038	0·502	352·1	52·9	+25·9	0	5	
May 4				(−23·7)	(48·5)	(−3·8)	(5)	(18)	(348)
124·579	JS, AB	7039	0·637	330·1	54·4	+30·0	1	5	
		7039	0·663	335·6	52·1	+33·5	1	6	358*c*
G.		7040	0·459	354·4	35·8	+23·4	1	5	
			0·934	127·2	326·5	−35·9			87
May 5				(−23·5)	(33·0)	(−3·7)	(3)	(16)	(445)
125·442	JS, AB		0·764	314·0	60·5	+29·2			646
C.		7041	0·871	129·0	325·8	−35·3	0	13	92*c*
May 6				(−23·4)	(21·6)	(−3·6)	(0)	(13)	(738)
126·408	AB, N		0·847	309·3	57·9	+30·1			1219
G.			0·813	134·7	322·5	−37·2			134
May 7				(−23·1)	(8·8)	(−3·5)	(0)	(0)	(1353)
1914.				°	°	°			
127·312	AB, JS		0·890	306·1	52·5	+29·7			1476
			0·936	179·6	355·5	−72·6			147
G.			0·923	115·5	290·4	−24·8			161
			0·928	102·8	288·7	−13·1			56
May 8				(−23·0)	(356·8)	(−3·4)	(0)	(0)	(1840)
128·416	JS, AB		0·959	302·4	51·0	+29·8			768
C.			0·875	121·5	284·2	−28·8			68
May 9				(−22·7)	(342·3)	(−3·2)	(0)	(0)	(836)
May 10			No	Spots	or Fac	ulæ.			
130·403	N, JS		0·961	114·4	242·4	−24·3			118
C.									
May 11				(−22·2)	(316·0)	(−3·0)	(0)	(0)	(118)
131·508	N, JS		0·873	62·7	244·8	+22·0			64
G.			0·907	116·7	237·9	−25·4			141
May 12				(−21·9)	(301·4)	(−2·9)	(0)	(0)	(205)
132·236	N, JS		0·852	119·4	236·0	−26·3			314
D.									
May 13				(−21·7)	(291·7)	(−2·8)	(0)	(0)	(314)
May 14 and May 15			No	Spots	or Fac	ulæ.			
135·349	JS, N		0·912	179·0	248·2	−68·0			101
G.									
May 16				(−20·9)	(250·6)	(−2·5)	(0)	(0)	(101)
May 17			No	Spots	or Fac	ulæ.			
137·311	N, JS		0·933	247·9	292·6	−21·4			166
			0·941	182·1	231·0	−72·0			61
G.			0·954	45·5	160·6	+40·9			60
May 18				(−20·3)	(224·6)	(−2·2)	(0)	(0)	(287)

Group 7036*, May 2–4. One or two small spots.
Group 7038*, May 4. A very small spot, *p*, the place of Group 7038.
Group 7039, May 5. A pair of very small spots, *n*, of the place of Group 7038.
Group 7040. May 5. A very small spot.
Group 7041, May 6. A small evanescent 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).
1914.				°	°	°			
138·292	JS, N		0·920	181·8	216·1	−68·6			152
			0·888	42·2	160·9	+39·7			124
G.			0·967	69·3	138·3	+19·4			223
			0·986	111·7	131·5	−21·7			122
May 19				(−20·0)	(211·6)	(−2·1)	(0)	(0)	(621)
139·320	JS, N		0·916	65·9	134·5	+21·1			414
G.			0·940	111·5	128·8	−20·9			159
May 20				(−19·7)	(198·0)	(−2·0)	(0)	(0)	(573)
140·315	JS, N	7042	0·487	347·6	191·6	+26·4	0	6	
		7042	0·484	349·2	190·7	+26·4	8	18	
		7042	0·476	349·9	190·2	+25·9	0	5	
G.		7042	0·479	355·0	187·6	+26·5	6	11	
			0·835	61·8	132·6	+22·0			261
			0·856	113·8	128·0	−21·2			162
May 21				(−19·4)	(184·9)	(−1·9)	(14)	(40)	(423)
141·540	JS, N		0·940	242·0	236·9	−26·8			167
		7042	0·587	324·3	191·2	+26·8	12	27	
		7042	0·559	324·5	189·7	+25·4	1	9	
		7042	0·574	326·6	189·4	+27·0	1	5	
G.		7042	0·554	329·0	187·2	+26·6	12	19	
		7043	0·627	51·6	137·0	+21·4	0	5	
		7043	0·632	54·0	135·8	+20·3	1	4	203*f*
		7043	0·648	52·2	135·3	+21·9	0	12	
May 22				(−19·0)	(168·7)	(−1·7)	(27)	(81)	(370)
142·388	JS, AB	7042	0·686	314·2	190·8	+27·1	17	55	
		7042	0·655	316·0	187·9	+26·6	3	12	
		7042	0·637	315·4	187·0	+25·5	0	3	
C.		7042	0·641	317·7	186·2	+26·8	10	24	
		7042	0·633	319·1	185·0	+27·0	0	6	
			0·936	59·4	92·0	+27·8			31
May 23				(−18·8)	(157·4)	(−1·6)	(30)	(100)	(31)
143·399	JS, N	7044	0·879	294·5	202·6	+20·6	4	7	117*s*
		7042	0·805	306·2	190·9	+27·3	11	17	
		7042	0·795	306·3	189·9	+27·0	3	8	
		7042	0·765	306·2	187·2	+25·7	2	10	116*c*
G.		7042	0·765	307·8	186·6	+26·8	2	3	
		7042	0·753	307·6	185·6	+26·2	7	10	
		7042	0·747	308·6	184·7	+26·6	2	12	
			0·806	52·2	97·8	+28·5			66
May 24				(−18·4)	(144·1)	(−1·5)	(31)	(67)	(299)
1914.				°	°	°			
144·325	JS, N		0·944	291·3	200·5	+19·5			63
		7042	0·890	302·0	189·8	+27·4	0	9	276*c*
G.			0·921	62·9	68·0	+24·2			160
May 25				(−18·1)	(131·8)	(−1·4)	(0)	(9)	(499)
145·479	JS, N		0·954	298·0	186·0	+26·1			198
G.			0·924	58·8	53·1	+28·0			490
May 26				(−17·8)	(116·5)	(−1·3)	(0)	(0)	(688)
146·328	JS, AB		0·992	297·1	186·5	+26·7			241
G.			0·867	56·3	50·7	+28·0			567
May 27				(−17·5)	(105·3)	(−1·2)	(0)	(0)	(808)
147·448	JS, AB		0·837	49·3	42·0	+32·3			707
C.									
May 28				(−17·1)	(90·5)	(−1·0)	(0)	(0)	(707)
148·359	JS, AB	7045	0·512	140·5	57·6	−24·0	1	6	
		7045	0·535	137·8	55·3	−24·1	0	3	
C.			0·734	40·5	43·9	+33·0			262
May 29				(−16·7)	(78·4)	(−0·9)	(1)	(9)	(262)
149·116	JS, N		0·919	293·5	132·8	+21·1			239
		7045	0·423	158·0	58·5	−23·8	1	3	
K.		7045	0·435	155·1	56·9	−24·0	2	3	
		7045	0·453	152·6	55·2	−24·4	3	6	
			0·960	65·2	356·8	+23·5			305
May 30				(−16·5)	(68·4)	(−0·8)	(6)	(12)	(544)
150·307	JS, N		0·873	61·7	355·6	+24·0			139
G.									
May 31				(−16·0)	(52·7)	(−0·7)	(0)	(0)	(139)
June 1 and June 2			No	Spots	or Fac	ulæ.			
153·330	JS, N		0·817	301·8	62·6	+25·2			214
			0·782	237·1	59·0	−25·2			32
G.			0·751	317·1	50·1	+33·0			151
			0·957	71·6	300·7	+17·5			269
			0·969	101·5	297·4	−11·2			42
June 3				(−14·9)	(12·7)	(−0·3)	(0)	(0)	(708)

Group 7042, May 21–25. A short and unimportant stream of small unstable spots.
Group 7043, May 22. A group of very small spots.
Group 7044, May 24. A small single spot.
Group 7045, May 29–30. Two or three very small spots.

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

Greenwich Civil Time.	Measurers.	No. of Group, 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).
1914.				°	°	°			
154·336	N, JS		0·853	239·9	53·9	−25·4			191
			0·846	297·5	53·6	+22·8			245
G.			0·812	310·9	45·4	+31·9			527
			0·864	69·3	301·5	+17·7			182
			0·876	106·3	299·3	−14·3			130
June 4				(−14·5)	(359·3)	(−0·2)	(0)	(0)	(1275)
155·379	JS, N		0·951	242·1	55·0	−26·4			89
			0·881	302·2	42·8	+27·9			246
C.			0·771	64·7	298·1	+19·2			87
June 5				(−14·1)	(345·5)	(−0·1)	(0)	(0)	(422)
156·442	JS, N		0·945	301·3	39·3	+29·4			362
C.									
June 6				(−13·7)	(331·5)	(0·0)	(0)	(0)	(362)
157·544	N, JS		0·940	58·0	250·3	+29·9			252
G.									
June 7				(−13·3)	(316·9)	(+0·2)	(0)	(0)	(252)
158·385	N, JS		0·798	297·3	355·3	+21·6			126
		7046*a*	0·851	57·1	252·2	+27·7	21	47	
G.		7046	0·875	55·3	249·8	+30·0	1	9	194*c*
		7046	0·884	57·0	248·2	+28·8	7	34	
June 8				(−12·9)	(305·8)	(+0·3)	(29)	(90)	(320)
159·539	N, JS		0·892	295·5	351·1	+22·7			278
		7046*a*	0·711	49·3	253·1	+27·9	16	78	
G.		7046	0·752	51·3	248·9	+28·3	0	9	153*c*
		7046	0·765	51·1	247·8	+29·0	10	16	
		7046	0·774	51·1	247·0	+29·3	7	20	
June 9				(−12·5)	(290·5)	(+0·4)	(33)	(123)	(431)
160·354	JS, AB		0·964	294·1	352·8	+23·3			156
		7046*a*	0·611	41·1	252·8	+27·8	24	93	
		7046	0·617	43·3	251·5	+27·0	0	3	
		7046	0·678	43·3	247·6	+29·9	0	9	
G.		7046	0·684	44·3	246·5	+29·6	4	10	
		7046	0·682	45·4	246·1	+28·9	3	8	
			0·975	73·3	203·1	+16·4			140
			0·991	111·9	198·5	−21·6			137
June 10				(−12·1)	(279·7)	(+0·5)	(31)	(123)	(433)
1914.				°	°	°			
161·303	JS, AB	7046	0·539	23·5	252·8	+30·1	0	3	
		7046*a*	0·514	25·9	252·4	+28·0	15	49	
		7046	0·518	26·9	251·8	+28·0	2	8	
		7046	0·571	31·6	247·1	+29·6	0	18	
		7046	0·599	30·7	246·2	+31·4	0	8	
G.		7046	0·584	32·5	245·9	+30·0	3	13	
			0·855	67·3	210·5	+19·5			102
			0·911	71·5	202·6	+17·1			140
			0·915	89·7	201·1	+ 0·5			65
			0·941	114·1	199·0	−22·4			216
June 11				(−11·7)	(267·1)	(+0·6)	(20)	(99)	(523)
162·592	AB, N	7046	0·461	355·6	252·4	+28·1	0	5	
		7046*a*	0·461	356·8	251·8	+28·1	8	23	
		7047	0·784	118·6	202·6	−21·4	8	27	
		7047	0·802	119·0	200·9	−22·4	8	17	
		7047	0·814	117·3	199·3	−21·4	8	16	414*c*
G.		7047	0·823	118·4	198·7	−22·5	0	11	
			0·930	178·4	246·2	−67·4			192
			0·781	70·8	200·4	+15·4			130
			0·930	107·9	183·1	−16·3			170
			0·941	63·6	181·9	+25·0			131
June 12				(−11·2)	(250·1)	(+0·8)	(32)	(99)	(1037)
163·527	JS, AB		0·909	287·5	302·0	+16·3			226
		7048	0·784	222·0	277·3	−34·8	3	7	41*c*
		7048*a*	0·758	219·6	273·7	−34·9	3	10	
		7046	0·505	334·7	251·8	+28·0	1	6	
		7046*a*	0·504	336·1	251·0	+28·2	7	13	
		7046	0·495	337·3	250·1	+28·0	0	6	
		7047	0·654	126·0	203·1	−21·8	6	25	
		7047	0·672	125·4	201·6	−22·1	18	37	
G.		7047	0·692	122·1	199·0	−20·8	0	5	
		7047	0·704	124·2	198·8	−22·5	2	7	
		7047	0·714	122·6	197·5	−21·9	9	26	
		7049	0·875	107·0	178·2	−14·3	0	9	
		7049	0·880	108·7	177·9	−15·9	4	11	
		7049	0·881	108·0	177·6	−15·4	0	29	210*c*
		7049*a*	0·902	108·0	174·9	−15·7	12	24	
			0·895	122·2	178·8	−28·0			141
			0·896	61·6	177·0	+25·6			59
June 13				(−10·8)	(237·7)	(+0·9)	(65)	(215)	(677)

Group 7046, June 8–15. A stable spot, *a*, with small evanescent companions.
Group 7047, June 12–22. A fine active stream. A small group on June 12, developing into a stream of normal type. The spot, *a*, at the head of the stream has, by June 19, completely coalesced with spot *b* (represented by a cluster of small spots on June 17) to form *c*, which remains stable as the rear of the stream gradually disappears.
Group 7048, June 13. Two small spots. *a* is double.
Group 7049, June 13–18. A few small spots of which *a* is the 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).
1914.				°	°	°			
164·361	N, AB		0·932	288·2	294·5	+17·3			144
			0·878	227·4	279·4	−35·8			153
		7046*a*	0·587	322·4	250·7	+28·5	9	17	
		7047	0·565	141·0	203·7	−25·0	0	9	
		7047	0·536	136·6	203·4	−21·9	5	18	
		7047	0·548	135·2	202·2	−21·9	18	62	
		7047	0·574	136·4	201·2	−23·6	1	6	
		7047	0·552	132·8	201·1	−21·1	0	13	
		7047	0·563	130·0	199·4	−20·3	1	8	85*c*
G.		7047	0·579	132·3	199·3	−22·0	0	5	
		7047	0·609	134·6	198·4	−24·3	1	5	
		7047	0·588	129·6	197·8	−21·1	3	9	
		7047	0·605	130·4	197·0	−22·2	15	64	
		7049	0·774	111·1	178·3	−15·5	5	10	
		7049	0·775	110·0	178·0	−14·7	0	7	242*c*
		7049*a*	0·813	110·6	174·5	−16·0	14	29	
			0·910	109·4	162·9	−17·2			33
			0·952	73·6	155·2	+15·9			102
June 14				(−10·4)	(226·7)	(+1·0)	(72)	(262)	(759)
165·304	N, AB		0·919	231·8	274·6	−34·0			239
		7046*a*	0·697	312·2	250·2	+28·8	1	10	100*c*
		7046	0·664	317·4	245·4	+30·1	0	4	
		7047*a*	0·438	156·8	203·5	−22·6	24	148	
		7047	0·428	152·8	202·1	−21·2	1	32	
		7047	0·463	154·8	202·1	−23·6	0	13	
		7047	0·484	153·0	200·3	−24·3	0	12	
		7047	0·454	149·0	199·7	−21·8	4	24	
G.		7047	0·480	148·0	198·2	−22·8	0	6	
		7047	0·468	146·3	198·0	−21·8	4	16	
		7047	0·496	147·6	197·4	−23·6	2	10	
		7047	0·481	145·0	197·0	−22·0	0	31	
		7047	0·483	143·4	196·2	−21·7	0	6	
		7049	0·674	114·8	174·9	−15·6	1	4	
		7049	0·679	115·5	174·7	−16·1	13	26	
			0·885	70·8	153·3	+17·4			226
June 15				(−10·0)	(214·2)	(+1·1)	(50)	(342)	(565)
166·452	N, AB		0·799	306·2	246·3	+28·9			341
		7047*a*	0·410	194·4	205·3	−22·1	28	186	
		7047	0·409	186·7	202·0	−22·7	6	34	
G.		7047	0·379	186·9	201·8	−20·9	5	22	
		7047	0·420	181·4	199·6	−23·5	0	12	
		7047	0·395	178·2	198·2	−22·0	8	43	
		7047	0·410	176·0	197·2	−22·8	0	19	

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).
1914.				°	°	°			
166·452	N, AB	7047	0·385	174·1	196·6	−21·2	0	31	
		7049*a*	0·491	128·2	175·4	−16·5	0	7	
G.			0·890	65·4	138·1	+22·4			207
June 16				(−9·6)	(199·0)	(+1·2)	(47)	(354)	(548)
167·397	AB, JS		0·896	304·0	246·1	+30·7			378
		7047*a*	0·497	217·4	205·5	−22·5	31	163	
		7047	0·468	216·8	203·9	−20·6	0	9	
		7047*b*	0·479	212·8	202·7	−22·4	19	136	
		7047	0·457	212·1	201·5	−21·3	12	43	
		7047	0·485	208·9	201·3	−23·7	5	14	
		7047	0·465	208·1	200·2	−22·7	2	8	
G.		7047	0·469	206·3	199·5	−23·4	4	16	
		7047	0·470	204·1	198·6	−23·9	12	28	
		7047	0·463	202·9	197·8	−23·8	3	12	
		7047	0·438	203·9	197·5	−22·2	41	171	
		7047	0·421	202·7	196·5	−21·4	0	24	
		7049*a*	0·366	150·3	175·6	−17·1	0	8	
			0·864	59·9	130·1	+26·4			167
June 17				(−9·1)	(186·5)	(+1·4)	(129)	(632)	(545)
168·309	N, JS		0·944	302·1	242·6	+30·7			632
		7047*a*	0·618	230·3	205·1	−21·9	23	151	
		7047*b*	0·592	228·7	202·9	−21·6	47	219	
		7047	0·573	226·5	200·9	−21·9	8	43	
		7047	0·584	223·9	200·5	−23·5	1	8	
		7047	0·560	224·3	199·3	−22·2	0	5	
		7047	0·570	221·3	198·6	−23·9	0	3	195*c*
		7047	0·562	219·5	197·4	−24·2	26	141	
G.		7047	0·538	221·3	196·9	−22·4	32	156	
		7047	0·522	222·7	196·6	−21·1	1	4	
		7047	0·519	218·9	194·9	−22·4	0	7	
		7049	0·304	180·7	176·6	−16·2	1	4	
		7049	0·290	185·7	176·1	−15·2	0	3	
			0·677	56·9	136·6	+22·8			172
			0·831	55·2	123·2	+29·2			151
			0·886	122·9	117·3	−27·9			192
June 18				(−8·7)	(174·4)	(+1·5)	(139)	(744)	(1342)
169·355	N, AB		0·954	191·3	190·1	−67·8			174
		7047*c*	0·750	238·8	204·0	−21·6	56	310	
G.		7047	0·738	237·1	202·4	−22·4	5	28	385*c*
		7047	0·723	237·7	201·4	−21·5	11	26	
		7047	0·717	234·9	199·9	−23·0	1	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).
1914.				°	°	°			
169·355	N, AB	7047	0·701	236·0	199·1	−21·8	0	6	
		7047	0·687	234·9	197·7	−22·0	0	7	
		7047	0·693	231·9	197·0	−24·0	10	33	
		7047	0·684	233·5	196·9	−22·7	14	96	
		7047	0·689	230·7	196·2	−24·5	4	15	
G.		7047	0·679	231·8	195·9	−23·4	14	39	
		7047	0·684	230·1	195·7	−24·7	0	6	
		7047	0·655	233·3	194·8	−21·7	0	4	
		7047	0·660	231·5	194·4	−22·8	0	21	
			0·886	128·3	105·2	−32·4			181
			0·964	64·9	87·0	+24·6			31
June 19				(−8·3)	(160·5)	(+1·6)	(115)	(597)	(771)
170·475	JS, AB	7047c	0·884	244·0	204·4	−21·9	56	272	
		7047	0·859	243·4	201·3	−21·7	8	43	
		7047	0·844	244·0	199·7	−20·7	4	33	
		7047	0·837	242·0	198·4	−22·1	13	63	
		7047	0·834	238·8	197·2	−24·5	1	8	
		7047	0·831	239·7	197·1	−23·7	2	9	659c
G.		7047	0·817	241·8	196·3	−21·6	5	46	
		7047	0·819	239·9	195·9	−23·2	7	18	
		7047	0·821	238·9	195·8	−24·0	7	22	
		7047	0·811	240·5	195·3	−22·4	4	13	
		7047	0·804	241·8	195·0	−21·2	0	7	
		7047	0·807	239·5	194·6	−23·0	1	9	
			0·850	59·2	91·0	+26·8			130
June 20				(−7·8)	(145·7)	(+1·7)	(108)	(543)	(789)
171·571	N, AB		0·848	303·9	184·8	+29·3			109
		7047c	0·968	246·7	204·5	−22·0	62	369	
		7047	0·949	247·2	200·5	−20·9	0	31	
		7047	0·936	245·2	197·8	−22·4	4	34	983c
G.		7047	0·929	245·7	196·7	−21·7	1	23	
		7047	0·927	243·5	196·0	−23·7	6	14	
		7047	0·925	244·3	195·7	−22·8	4	36	
			0·861	100·4	72·6	− 8·0			31
			0·934	64·1	63·8	+24·7			131
June 21				(−7·3)	(131·2)	(+1·8)	(77)	(507)	(1254)
172·350	JS, N		0·843	249·8	176·0	−15·9			157
			0·844	300·4	175·1	+26·4			54
G.		7047c	0·998	247·3	206·0	−22·5	0	390	867f
		7047	0·982	246·6	198·1	−22·6	0	55	
			0·889	61·2	60·8	+26·2			137
June 22				(−7·0)	(120·9)	(+1·9)	(0)	(445)	(1215)
1914.				°	°	°			
173·596	JS, N		0·961	251·3	176·7	−17·4			212
			0·919	296·7	169·4	+25·3			213
G.			0·857	53·6	50·4	+31·8			306
			0·842	65·2	49·1	+21·9			278
June 23				(−6·4)	(104·4)	(+2·1)	(0)	(0)	(1009)
174·364	JS, N		0·865	54·9	38·8	+31·0			641
G.									
June 24				(−6·1)	(94·2)	(+2·2)	(0)	(0)	(641)
175·686	JS, N		0·845	53·5	24·1	+31·6			428
G.									
June 25				(−5·5)	(76·8)	(+2·3)	(0)	(0)	(428)
176·318	JS, AB		0·855	41·2	19·8	+41·5			102
G.									
June 26				(−5·2)	(68·4)	(+2·4)	(0)	(0)	(102)
177·309	N, JS		0·925	296·7	121·5	+25·6			97
G.									
June 27				(−4·7)	(55·3)	(+2·5)	(0)	(0)	(97)
178·375	JS, AB		0·922	69·6	334·7	+19·8			81
G.									
June 28				(−4·2)	(41·2)	(+2·6)	(0)	(0)	(81)
179·332	AB, JS		0·915	238·0	89·5	−27·7			117
G.									
June 29				(−3·8)	(28·5)	(+2·7)	(0)	(0)	(117)
180·323	N, JS		0·958	242·0	85·2	−25·8			205
G.									
June 30				(−3·4)	(15·4)	(+2·8)	(0)	(0)	(205)
181·376	N, JS	7050	0·723	238·1	42·1	−20·1	2	9	
		7050	0·706	235·3	39·8	−21·3	2	5	
		7050	0·697	236·9	39·7	−20·0	4	12	
G.		7050	0·677	237·9	38·5	−18·6	0	3	
		7050	0·688	234·9	38·3	−20·9	0	15	
			0·839	27·5	324·1	+50·4			37
July 1				(−2·9)	(1·4)	(+3·0)	(8)	(44)	(37)

Group 7050, July 1–2. A small cluster of short-lived spots.

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

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1914.				°	°	°			
182·437	N, JS	7050	0·840	243·0	40·3	−20·5	2	9	98*c*
C.		7051*a*	0·984	125·6	272·2	−34·2	0	25	163*c*
		7052	0·994	125·0	267·2	−34·3	0	39	
July 2				(−2·4)	(347·4)	(+3·1)	(2)	(73)	(261)
183·449	AB, JS		0·937	245·9	40·3	−21·2			165
			0·904	305·0	35·6	+32·8			61
		7051	0·929	128·7	273·3	−33·9	3	16	
G.		7051*a*	0·942	128·3	270·7	−34·3	19	72	321*c*
		7052	0·959	128·3	267·0	−35·3	0	20	
		7052	0·970	128·5	264·4	−36·0	19	73	
July 3				(−1·9)	(334·0)	(+3·2)	(41)	(181)	(547)
184·472	AB, JS		0·982	247·1	37·1	−21·7			77
			0·927	302·6	26·3	+31·3			167
		7051	0·847	134·2	273·6	−33·9	2	7	
G.		7051*a*	0·857	134·0	272·4	−34·3	18	65	497*c*
		7052	0·923	132·1	262·2	−36·5	25	87	
July 4				(−1·5)	(320·5)	(+3·3)	(45)	(159)	(741)
185·495	N, JS		0·916	315·0	7·4	+42·0			39
		7051*a*	0·758	142·1	272·9	−33·8	19	119	
		7052	0·840	140·0	264·1	−37·5	1	5	
C.		7052	0·836	138·2	263·5	−36·0	1	9	211*c*
		7052	0·860	138·0	260·6	−37·4	12	26	
			0·924	59·9	241·1	+29·0			52
July 5				(−1·0)	(306·9)	(+3·4)	(33)	(159)	(302)
186·701	N, JS		0·949	311·5	359·5	+40·3			215
			0·891	276·1	354·0	+ 7·0			173
		7051*a*	0·655	157·1	273·2	−33·7	19	90	60*c*
G.		7052	0·754	148·5	261·6	−36·9	0	6	
		7052	0·785	148·8	259·5	−39·1	2	3	252*c*
		7052	0·789	147·7	258·3	−38·8	3	7	
			0·836	54·7	238·4	+31·0			158
July 6				(−0·5)	(291·0)	(+3·5)	(24)	(106)	(858)
187·361	N, JS		0·889	271·2	344·8	+2·8			143
		7053	0·758	218·6	316·5	−33·2	2	6	104*f*
		7051*a*	0·621	169·4	274·3	−33·9	7	24	65*c*
G.			0·619	167·8	273·2	−33·6	13	64	
		7052	0·746	155·8	259·0	−39·4	0	8	
		7052	0·747	154·0	257·4	−38·8	2	9	285*c*
			0·961	110·0	210·6	−18·1			320
July 7				(−0·2)	(282·2)	(+3·6)	(24)	(111)	(917)
1914.				°	°	°			
188·661	N, JS	7051*a*	0·626	191·6	273·7	−34·1	18	93	
G.			0·905	117·0	204·5	−22·4			566
July 8				(+0·4)	(265·0)	(+3·7)	(18)	(93)	(566)
189·361	AB, JS	7051*a*	0·665	202·2	273·3	−34·2	10	76	
			0·874	120·0	200·1	−23·8			907
G.			0·902	67·6	192·0	+21·8			85
July 9				(+0·8)	(255·7)	(+3·8)	(10)	(76)	(992)
190·312	N, JS	7051*a*	0·737	213·8	272·9	−34·3	16	70	249*c*
G.			0·815	124·8	195·8	−25·0			719
July 10				(+1·2)	(243·2)	(+3·9)	(16)	(70)	(968)
191·438	N, JS		0·747	206·7	253·5	−38·1			308
		7051*a*	0·835	223·6	272·4	−34·3	15	53	382*c*
		7054	0·516	143·3	209·1	−20·6	3	12	
G.		7054	0·523	141·1	207·9	−20·1	1	6	
		7054	0·542	139·5	206·3	−20·6	3	9	
			0·694	133·3	194·6	−25·0			398
July 11				(+1·7)	(228·3)	(+4·0)	(22)	(80)	(1088)
192·329	N, JS		0·831	216·1	255·4	−38·9			279
G.		7051*a*	0·906	228·4	271·7	−34·6	12	36	260*c*
July 12				(+2·1)	(216·5)	(+4·1)	(12)	(36)	(539)
193·517	N, JS		0·919	288·6	267·3	+18·7			20
			0·905	222·2	252·6	−39·5			197
		7051*a*	0·973	232·9	271·0	−34·6	5	12	229*f*
C.		7054	0·435	198·0	208·9	−20·2	1	4	
		7055	0·796	60·0	150·7	+26·2	2	2	12*f*
			0·908	67·0	136·1	+22·6			67
July 13				(+2·6)	(200·7)	(+4·2)	(8)	(18)	(525)
194·361	JS, AB		0·946	225·2	250·2	−39·7			321
G.			0·920	95·9	123·3	− 3·7			2
July 14				(+3·0)	(189·6)	(+4·3)	(0)	(0)	(350)
195·461	JS, N		0·972	227·0	242·9	−40·0			94
C.									
July 15				(+3·5)	(175·0)	(+4·4)	(0)	(0)	(94)

Group 7051, July 2–13. A revival of Group 7048. A fairly regular spot, *a*, passing through a phase of instability from July 6–8 ; it is measured in two portions on July 7.
Group 7052, July 2–7. A spot soon breaking up into evanescent components. The area of activity connected with this group is closely related to that of Group 7051, and shows a remarkable drift both in latitude and longitude.
Group 7053, July 7. A very small spot.
Group 7054, July 11–13. One or two unstable spots ; none are visible on July 12.
Group 7055, July 13. A minute 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).
1914.				°	°	°			
196·333	N, JS		0·768	237·5	207·3	−21·1			209
		7056	0·596	149·4	143·7	−26·6	1	8	
G.		7056	0·622	147·9	141·7	−27·5	1	3	
		7056	0·647	143·5	138·0	−27·2	1	4	
July 16				(+3·9)	(163·5)	(+4·5)	(3)	(15)	(209)
197·452	N, JS		0·923	246·0	212·4	−20·1			136
			0·824	233·8	196·3	−26·0			205
G.		7056	0·532	171·4	143·6	−27·0	0	41	
		7056	0·519	170·4	143·2	−26·1	5	14	
		7056	0·536	166·4	140·6	−26·7	3	40	
July 17				(+4·4)	(148·7)	(+4·6)	(8)	(95)	(341)
198·360	N, JS		0·958	247·0	206·7	−20·4			210
			0·892	236·0	192·8	−27·3			348
G.		7056	0·536	191·4	143·5	−27·0	3	24	
		7056	0·529	185·8	140·1	−26·9	5	21	
July 18				(+4·8)	(136·7)	(+4·7)	(8)	(45)	(558)
199·367	N, JS		0·942	240·5	188·6	−25·7			202
G.		7056	0·574	204·8	138·9	−26·6	0	5	
July 19				(+5·2)	(123·3)	(+4·8)	(0)	(5)	(202)
200·508	N, JS		0·979	239·9	181·8	−28·1			89
			0·929	115·5	44·1	−21·5			60
C.			0·985	110·9	30·8	−19·6			95
July 20				(+5·7)	(108·2)	(+4·9)	(0)	(0)	(244)
201·703	JS, AB		0·835	231·6	140·0	−27·9			172
G.		7057	0·903	113·9	31·8	−19·0	2	20	163*c*
July 21				(+6·2)	(92·4)	(+5·0)	(2)	(20)	(335)
202·357	JS, AB		0·895	235·5	140·0	−27·7			200
G.		7057	0·837	117·2	31·9	−19·4	4	13	142*c*
July 22				(+6·5)	(83·8)	(+5·0)	(4)	(13)	(342)
203·301	JS, AB		0·968	239·1	141·6	−28·2			166
G.		7057	0·701	124·5	33·7	−19·3	1	4	30*c*
July 23				(+6·9)	(71·3)	(+5·1)	(1)	(4)	(196)

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).
1914.				°	°	°			
July 24			No	Spots	or Fac	ulæ.			
205·307	AB, JS		0·903	229·6	99·5	−32·8			146
G.									
July 25				(+7·8)	(44·8)	(+5·3)	(0)	(0)	(146)
206·327	AB, JS		0·909	45·2	330·3	+42·6			63
G.									
July 26				(+8·2)	(31·3)	(+5·4)	(0)	(0)	(63)
207·396	JS, AB		0·935	239·5	80·6	−26·0			88
G.			0·801	40·9	333·1	+41·2			53
July 27				(+8·7)	(17·1)	(+5·5)	(0)	(0)	(141)
208·366	JS, AB		0·904	241·9	63·8	−22·5			44
G.			0·963	71·9	289·1	+18·9			77
July 28				(+9·1)	(4·3)	(+5·5)	(0)	(0)	(121)
209·351	N, VD	7057*	0·627	220·1	17·4	−23·6	0	5	
D.		7057*	0·608	216·3	14·4	−24·1	4	9	
			0·890	71·1	288·4	+19·3			105
July 29				(+9·5)	(351·3)	(+5·6)	(4)	(14)	(105)
210·319	N, JS	7059	0·318	340·5	345·1	+23·0	0	3	
		7058	0·851	242·1	31·5	−20·1	0	14	} 89*c*
G.		7058	0·847	240·1	30·4	−21·5	0	5	
			0·726	231·2	16·1	−22·5			139
July 30				(+9·9)	(338·5)	(+5·7)	(0)	(22)	(228)
211·516	N, JS		0·887	239·8	19·0	−23·3			66
C.		7058	0·962	246·4	33·0	−20·8	2	8	140*s*
			0·948	130·0	260·4	−34·9			174
July 31				(+10·4)	(322·6)	(+5·8)	(2)	(8)	(380)
212·381	JS, N		0·931	242·3	14·7	−23·2			64
G.			0·868	134·5	263·3	−33·6			179
			0·953	134·1	249·8	−38·9			309
Aug. 1				(+10·7)	(311·2)	(+5·8)	(0)	(0)	(552)

Group 7056, July 16–19. A small unstable group.
Group 7057, July 21–23. Two small spots.
Group 7057*, July 29. Two very small spots.
Group 7058, July 30–31. Revival of Group 7057. One or two small spots.
Group 7059, July 30. 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).
1914.				°	°	°			
213·329	JS, N		0·852	141·7	257·1	−37·5			165
G.			0·940	136·1	241·1	−39·6			206
Aug. 2				(+11·1)	(298·7)	(+5·9)	(0)	(0)	(371)
214·428	N, JS		0·792	146·1	251·1	−36·0			146
			0·894	137·7	234·9	−37·5			198
C.			0·969	111·7	211·8	−19·3			156
Aug. 3				(+11·5)	(284·1)	(+6·0)	(0)	(0)	(500)
215·344	JS, N		0·784	154·2	245·9	−39·4			110
			0·896	145·3	227·7	−43·2			235
G.			0·938	115·7	206·9	−21·5			301
Aug. 4				(+11·9)	(272·0)	(+6·0)	(0)	(0)	(646)
216·455	JS, N		0·812	154·2	229·2	−41·5			135
			0·840	119·7	206·2	−20·8			140
G.			0·966	118·9	187·4	−25·9			221
Aug. 5				(+12·3)	(257·3)	(+6·1)	(0)	(0)	(496)
217·418	JS, AB		0·723	185·7	249·9	−39·7			61
			0·775	161·9	225·9	−41·4			133
G.			0·781	125·9	201·5	−22·7			67
			0·914	122·7	185·5	−26·5			373
Aug. 6				(+12·7)	(244·6)	(+6·2)	(0)	(0)	(634)
218·420	N, JS		0·751	204·3	254·1	−37·3			85
			0·796	127·3	187·4	−24·3			97
C.			0·936	70·3	161·3	+20·6			55
Aug. 7				(+13·1)	(231·3)	(+6·2)	(0)	(0)	(237)
219·424	N, JS		0·818	219·7	257·1	−34·1			58
			0·810	208·2	248·0	−40·0			66
C.			0·836	70·5	161·4	+19·8			66
Aug. 8				(+13·5)	(218·1)	(+6·3)	(0)	(0)	(190)
220·486	N, JS		0·893	229·9	256·9	−31·3			116
C.			0·870	216·3	246·0	−39·8			162
Aug. 9				(+13·9)	(204·0)	(+6·4)	(0)	(0)	(278)
1914.				°	°	°			
221·680	JS, N		0·947	223·7	246·7	−40·0			339
			0·862	219·7	231·7	−37·0			124
			0·838	203·8	216·4	−44·4			230
G.			0·841	74·8	130·7	+16·3			53
			0·921	126·9	129·8	−30·3			235
			0·992	96·3	106·3	− 5·4			201
Aug. 10				(+14·3)	(188·2)	(+6·4)	(0)	(0)	(1182)
222·323	AB, N		0·966	225·9	243·8	−39·6			180
			0·883	219·0	225·1	−38·8			234
			0·858	207·3	212·9	−44·2			224
G.			0·960	98·7	107·2	− 6·4			148
			0·898	127·9	125·1	−29·8			284
Aug. 11				(+14·5)	(179·7)	(+6·5)	(0)	(0)	(1070)
223·321	N, AB		0·937	218·9	220·1	−43·1			298
G.			0·874	101·7	107·2	− 7·0			118
Aug. 12				(+14·9)	(166·5)	(+6·5)	(0)	(0)	(416)
224·368	N, AB		0·956	219·8	210·9	−44·0			159
			0·852	238·5	204·3	−22·4			199
G.			0·834	223·7	195·5	−32·2			113
		7060*a*	0·987	71·5	70·4	+19·3	171	540	127*c*
Aug. 13				(+15·3)	(152·7)	(+6·6)	(171)	(540)	(598)
225·355	N, JS		0·941	242·9	204·6	−22·7			214
G.		7060*a*	0·939	71·7	68·9	+19·4	106	609	824*f*
			0·949	121·6	74·6	−27·1			131
Aug. 14				(+15·6)	(139·6)	(+6·6)	(106)	(609)	(1169)
226·171	JS, N	7060*a*	0·866	71·7	68·6	+19·2	82	568	745*f*
			0·927	117·7	66·4	−22·5			104
D.			0·957	123·6	62·9	−29·4			69
Aug. 15				(+15·9)	(128·9)	(+6·7)	(82)	(568)	(918)
227·346	N, JS		0·948	264·7	184·0	− 2·8			72
			0·928	232·3	172·4	−31·3			363
		7062	0·762	289·5	162·6	+19·2	3	10	74*f*
		7061*a*	0·817	241·8	162·4	−18·3	5	17	112*c*
		7061*b*	0·781	240·3	158·7	−18·1	6	17	
G.		7063	0·789	125·5	69·4	−22·5	3	6	174*s*
		7063	0·822	122·7	65·3	−21·9	5	13	
		7060*a*	0·710	69·5	68·7	+19·2	111	585	
		7060	0·744	64·7	66·5	+23·2	3	11	648*f*
		7060	0·746	67·1	65·9	+21·4	6	24	
Aug. 16				(+16·3)	(113·3)	(+6·7)	(142)	(683)	(1443)

Group 7060, August 13–26. A fine large regular spot, *a*, showing practically no activity, with occasional small companions, generally on the following side.
Group 7061, August 16–18. A pair of small spots, *a* and *b*; *b* alone remains on August 18.
Group 7062, August 16. A small double spot on the same meridian as Group 7061, but in the northern hemisphere.
Group 7063, August 16. A few small faint spots on the same meridian as Group 7060, but South of the equator.

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).
1914.				°	°	°			
228·466	N, JS		0·876	287·6	160·1	+18·7			162
		7061*a*	0·938	248·0	164·3	−17·8	6	39	209*c*
		7061*b*	0·903	246·1	158·7	−18·2	6	56	
		7060*a*	0·526	63·8	68·6	+19·3	94	637	
G.		7060	0·561	72·9	64·9	+15·1	0	13	
		7060	0·587	62·7	64·6	+21·2	1	13	
			0·888	121·9	42·9	−24·2			102
Aug. 17				(+16·7)	(98·5)	(+6·8)	(107)	(758)	(473)
229·310	N, AB		0·951	287·3	160·4	+18·5			184
			0·920	358·7	91·6	+73·5			186
		7061*b*	0·961	248·4	157·7	−18·6	4	7	271*np*
		7060*a*	0·376	54·3	68·6	+19·1	118	557	
G.		7060	0·411	58·5	65·8	+18·7	4	23	
		7060	0·481	60·4	61·1	+19·8	1	13	
		7064	0·752	141·5	54·7	−30·3	2	6	65*s*
			0·882	122·9	32·9	−24·8			177
Aug. 18				(+16·9)	(87·4)	(+6·8)	(129)	(606)	(883)
230·524	N, JS		0·945	189·7	91·1	−62·0			25
		7060*a*	0·219	13·7	68·2	+19·1	124	585	
		7060	0·285	17·5	66·0	+22·6	2	31	
G.		7060	0·229	25·5	65·4	+18·7	0	29	
		7060	0·255	26·1	64·5	+20·0	4	21	
		7064	0·627	158·9	56·4	−29·0	0	4	
Aug. 19				(+17·3)	(71·3)	(+6·9)	(130)	(670)	(25)
231·349	N, AB	7060	0·252	320·3	70·1	+18·0	2	8	
		7060*a*	0·247	329·9	67·9	+19·1	114	671	
G.		7060	0·284	341·0	66·1	+22·4	2	36	
		7060	0·237	343·8	64·4	+20·0	0	90	
		7060	0·200	341·2	64·3	+17·8	0	12	
Aug. 20				(+17·6)	(60·4)	(+6·9)	(118)	(817)	(0)
232·332	N, JS	7060*a*	0·396	303·8	67·7	+19·2	115	625	
		7060	0·394	311·2	65·9	+21·6	2	13	
G.		7060	0·368	307·6	65·3	+19·5	7	12	
		7060	0·350	307·6	64·4	+18·9	0	30	
		7060	0·353	310·6	63·9	+19·9	9	20	
Aug. 21				(+17·9)	(47·4)	(+6·9)	(133)	(700)	(0)
233·322	JS, N	7060*a*	0·568	294·4	67·4	+19·4	119	665	
		7060	0·537	291·6	65·7	+17·4	1	6	
G.		7060	0·517	294·2	64·0	+18·3	0	25	
		7060	0·528	298·4	63·9	+20·6	6	42	
Aug. 22				(+18·2)	(34·3)	(+7·0)	(126)	(738)	(0)
1914.				°	°	°			
234·629	N, JS		0·883	237·0	71·5	−24·7			77
		7065	0·928	236·6	77·7	−27·4	7	18	107*c*
		7065	0·912	236·3	75·2	−26·8	5	16	
G.		7060	0·781	286·2	68·6	+17·0	0	7	
		7060*a*	0·771	289·6	67·3	+19·5	112	647	200*f*
		7060	0·737	288·1	64·4	+18·1	2	22	
			0·924	19·7	328·8	+65·4			33
Aug. 23				(+18·6)	(17·1)	(+7·0)	(126)	(710)	(417)
235·350	N, AB		0·915	241·7	68·0	−22·4			103
			0·825	226·9	51·1	−29·3			138
		7065	0·976	239·3	79·2	−27·9	5	38	149*c*
G.		7065	0·958	239·0	74·6	−27·0	14	32	
		7060*a*	0·862	288·6	67·5	+19·5	125	623	741*f*
			0·938	3·8	352·5	+76·2			238
			0·918	22·9	317·0	+62·5			85
Aug. 24				(+18·9)	(7·6)	(+7·0)	(144)	(693)	(1454)
236·423	N, JS		0·921	235·7	52·6	−27·8			246
G.		7060*a*	0·956	288·3	67·5	+19·5	109	681	856*f*
Aug. 25				(+19·2)	(353·4)	(+7·0)	(109)	(681)	(1102)
237·445	N, JS		0·937	296·9	50·4	+27·7			164
			0·960	237·8	46·9	−28·2			136
C.		7060*a*	0·995	288·5	65·9	+19·0	96	393	755*f*
Aug. 26				(+19·5)	(339·9)	(+7·1)	(96)	(393)	(1055)
238·412	N, AB		0·871	238·5	20·7	−23·0			95
G.									
Aug. 27				(+19·7)	(327·1)	(+7·1)	(0)	(0)	(95)
239·457	AB, N		0·949	353·0	343·4	+76·7			90
G.			0·916	125·8	255·5	−28·8			116
Aug. 28				(+20·0)	(313·3)	(+7·1)	(0)	(0)	(206)
240·318	AB, N		0·906	262·8	5·9	− 3·4			29
G.			0·929	131·8	244·8	−34·6			217
			0·941	71·6	230·6	+19·7			198
Aug. 29				(+20·3)	(301·9)	(+7·1)	(0)	(0)	(444)

Group 7064, August 18–19. A very small unstable spot.
Group 7065, August 23–24. A few 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).
1914.				°	°	°			
241·443	AB, N	7066*a*	0·710	287·0	332·2	+17·1	7	10	
		7066	0·673	287·4	329·1	+17·0	3	5	
G.			0·919	138·8	235·6	−39·4			190
			0·962	107·8	215·9	−14·9			150
Aug. 30				(+20·6)	(287·1)	(+7·2)	(10)	(15)	(340)
242·424	N, JS	7066*a*	0·854	284·8	333·2	+16·4	2	9	
		7066	0·841	286·0	331·7	+17·3	0	5	102*c*
		7066	0·820	286·2	329·5	+17·4	0	4	
C.			0·853	146·4	236·4	−39·6			131
			0·885	112·0	215·9	−15·6			77
			0·965	117·8	204·7	−24·4			114
Aug. 31				(+20·8)	(274·1)	(+7·2)	(2)	(18)	(424)
243·373	N, AB		0·969	296·5	339·0	+27·4			62
			0·939	285·5	332·5	+17·1			194
			0·847	146·9	224·9	−39·4			258
G.			0·946	13·0	216·3	+72·6			111
			0·773	115·6	215·7	−14·5			65
			0·905	122·7	204·2	−25·5			316
			0·951	136·9	203·0	−40·5			133
Sept. 1				(+21·1)	(261·6)	(+7·2)	(0)	(0)	(1139)
244·363	N, AB		0·972	285·5	326·2	+16·7			61
			0·776	158·9	227·3	−39·6			82
G.			0·852	127·5	199·5	−26·6			168
			0·937	143·7	197·2	−44·8			295
Sept. 2				(+21·3)	(248·5)	(+7·2)	(0)	(0)	(606)
245·408	N, AB		0·921	144·6	186·9	−44·0			331
			0·945	122·8	171·1	−27·7			314
			0·955	23·2	171·1	+65·2			121
G.			0·933	68·6	164·8	+22·5			258
			0·944	82·8	163·4	+ 9·2			249
Sept. 3				(+21·6)	(234·7)	(+7·2)	(0)	(0)	(1273)
246·353	N, AB		0·916	291·0	289·3	+22·1			90
			0·932	351·4	251·5	+73·5			150
			0·879	153·6	192·3	−46·1			243
G.			0·936	23·9	164·8	+63·3			205
			0·848	88·4	164·1	+ 5·2			107
			0·916	122·4	163·2	−25·8			398
			0·885	65·0	159·8	+25·4			144
Sept. 4				(+21·8)	(222·2)	(+7·2)	(0)	(0)	(1337)
1914.				°	°	°			
247·545	N, JS		0·832	161·1	184·1	−45·2			88
			0·798	137·8	168·1	−30·6			43
G.			0·832	123·3	157·8	−22·5			70
			0·924	24·7	152·6	+61·5			54
Sept. 5				(+22·1)	(206·5)	(+7·2)	(0)	(0)	(255)
248·473	N, AB		0·918	278·3	261·4	+10·4			52
G.			0·943	346·1	240·0	+71·6			46
			0·830	133·9	150·7	−30·0			74
Sept. 6				(+22·3)	(194·2)	(+7·2)	(0)	(0)	(172)
249·392	N, JS		0·940	342·5	232·8	+68·6			105
G.			0·888	226·8	232·5	−33·0			112
			0·860	213·3	220·3	−40·4			182
Sept. 7				(+22·5)	(182·1)	(+7·2)	(0)	(0)	(399)
250·469	N, JS		0·917	282·8	235·1	+14·6			117
			0·954	339·0	229·1	+67·1			103
G.			0·883	217·4	211·6	−39·4			104
		7067*a*	0·992	110·3	88·3	−18·9	63	293	227*f*
Sept. 8				(+22·8)	(167·8)	(+7·3)	(63)	(293)	(551)
251·408	N, JS		0·939	265·4	224·6	− 1·8			40
			0·960	217·2	212·3	−46·2			82
			0·866	232·8	206·0	−27·1			165
G.			0·858	203·6	184·7	−45·5			211
		7067*a*	0·952	112·3	87·3	−18·6	39	281	374*f*
			0·981	73·1	75·0	+18·0			136
Sept. 9				(+23·0)	(155·4)	(+7·2)	(39)	(281)	(1008)
252·348	N, JS		0·923	239·6	203·9	−24·5			107
			0·885	217·7	187·3	−39·4			215
		7067*a*	0·873	115·8	87·3	−18·3	31	253	370*f*
G.		7068*a*	0·968	73·7	66·3	+17·5	69	536	421*c*
			0·913	13·0	108·3	+68·9			73
			0·961	124·9	76·7	−30·7			102
			0·985	62·8	60·9	+27·9			243
Sept. 10				(+23·2)	(143·0)	(+7·2)	(100)	(789)	(1531)

Group 7066, August 30–31. A few small spots of which *a* is double.
Group 7067, September 8–20. A large regular spot, *a*, occasionally with one or two small followers, and gradually diminishing in size.
Group 7068, September 10–22. Return of Group 7060. A very large regular spot, *a*, with one or two small companions on September 16 and 17, and showing signs of breaking up as the western limb is approached. *a* was visible right on the eastern limb on September 9, but its position and area could not well be determined.

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).
				°	°	°			
1914.									
253·646	N, JS		0·965	225·4	189·0	−39·7			146
		7067*a*	0·722	124·0	87·0	−18·2	42	266	328*f*
		7068*a*	0·861	73·8	66·0	+17·6	79	470	827*n*
		7069	0·980	120·8	53·4	−28·1	0	13	
G.		7069	0·988	121·8	50·6	−29·8	0	29	534*p*
		7069*a*	0·993	121·2	48·1	−29·7	0	106	
			0·961	177·4	119·6	−66·5			139
			0·890	127·8	72·7	−28·8			225
Sept. 11				(+23·4)	(125·9)	(+7·2)	(121)	(884)	(2199)
254·363	N, JS	7071	0·418	307·2	137·3	+21·4	2	3	
		7071	0·393	308·4	135·6	+20·9	0	4	
		7067*a*	0·625	131·1	86·8	−18·0	35	213	276*f*
		7067	0·650	130·0	84·8	−18·6	2	11	
G.		7068*a*	0·769	73·2	66·1	+17·5	89	444	437*n*
		7070	0·928	123·8	56·0	−27·7	0	8	
		7069	0·955	124·2	51·3	−29·6	0	31	492*c*
		7069*a*	0·969	123·5	47·8	−29·9	31	206	
			0·836	131·9	71·2	−29·0			122
Sept. 12				(+23·6)	(116·4)	(+7·2)	(159)	(920)	(1327)
255·383	N, JS		0·932	232·8	162·6	−30·8			74
		7067*a*	0·499	147·4	86·7	−17·8	45	228	
		7068*a*	0·612	70·4	65·9	+17·6	70	434	256*n*
G.		7070	0·829	130·2	57·6	−27·4	4	13	
		7069	0·889	128·9	50·3	−29·7	11	20	452*c*
		7069*a*	0·909	127·2	47·0	−29·4	21	165	
Sept. 13				(+23·8)	(103·0)	(+7·2)	(151)	(860)	(782)
256·542	N, JS	7067*a*	0·427	176·8	86·2	−18·0	38	204	
		7067	0·417	172·7	84·4	−17·2	1	5	
G.		7068*a*	0·407	61·6	65·6	+17·8	64	460	
		7069*a*	0·813	134·1	45·8	−29·2	23	167	491*p*
Sept. 14				(+24·0)	(87·6)	(+7·2)	(126)	(836)	(491)
257·349	N, JS	7067*a*	0·453	198·9	85·8	−18·1	38	203	
		7067	0·443	196·1	84·4	−18·0	0	9	
		7068*a*	0·267	45·3	65·5	+17·9	80	449	
G.		7069	0·708	144·7	49·2	−28·9	0	7	
		7069	0·729	143·3	47·1	−29·5	3	20	
		7069*a*	0·738	141·3	45·3	−29·0	24	143	
Sept. 15				(+24·1)	(77·0)	(+7·2)	(145)	(831)	(0)
1914.									
258·386	N. JS	7067*a*	0·557	220·1	85·4	−18·5	31	195	
		7068*a*	0·187	350·7	65·1	+17·8	83	446	
		7068	0·186	7·5	61·6	+17·8	2	3	
		7072	0·276	2·7	62·5	+23·2	2	3	
		7072	0·357	8·7	59·8	+27·8	0	9	
G.		7069	0·607	159·3	49·4	−27·5	0	10	
		7069	0·636	156·2	46·4	−28·6	5	14	
		7069	0·638	154·5	45·2	−28·2	11	44	
		7069	0·662	154·8	44·4	−29·9	10	29	
			0·935	6·2	40·4	+75·0			72
			0·856	122·0	11·6	−22·6			90
Sept. 16				(+24·3)	(63·3)	(+7·2)	(144)	(753)	(162)
259·540	N, JS	7067*a*	0·706	234·3	85·2	−18·6	25	185	
		7068*a*	0·337	304·2	65·0	+17·8	85	477	
		7068	0·284	301·6	62·6	+15·5	1	4	
		7068	0·286	309·5	61·4	+17·5	2	4	
		7072	0·396	324·1	63·0	+25·6	0	6	
G.		7072	0·408	332·7	60·3	+28·2	1	5	
		7069	0·585	174·9	44·7	−28·3	8	18	
		7069	0·605	173·6	43·7	−29·6	3	8	
			0·937	15·7	1·5	+69·6			147
			0·925	73·7	339·5	+17·8			65
Sept. 17				(+24·5)	(48·1)	(+7·2)	(125)	(707)	(212)
260·388	N, JS		0·706	210·1	61·2	−31·1			168
		7067*a*	0·811	240·6	85·0	−18·7	40	187	356*sf*
		7068*a*	0·487	293·8	64·7	+17·6	79	478	
G.		7072	0·507	317·8	59·6	+28·6	3	23	
		7069	0·616	191·3	44·9	−30·0	1	13	
		7069	0·591	190·6	44·0	−28·3	3	3	
Sept. 18				(+24·6)	(36·9)	(+7·1)	(126)	(704)	(524)
261·372	N, JS		0·723	215·6	52·8	−29·7			313
		7067*a*	0·910	245·4	84·7	−18·9	34	194	305*sf*
		7068*a*	0·657	288·7	64·5	+17·5	82	427	
G.		7072	0·644	308·0	59·3	+29·2	3	9	
		7069	0·655	206·0	43·0	−29·2	0	8	
Sept. 19				(+24·8)	(23·9)	(+7·1)	(119)	(638)	(618)
262·645	N, DE		0·852	231·2	55·5	−27·7			372
		7067*a*	0·985	249·5	83·9	−18·7	38	143	205*sf*
		7068*a*	0·839	285·9	64·5	+17·2	72	431	561*nf*
G.		7069	0·750	220·4	40·7	−28·9	2	6	130*c*
			0·901	130·0	313·4	−31·3			142
Sept. 20				(+25·0)	(7·1)	(+7·1)	(112)	(580)	(1410)

Group 7069, September 11–21. An unstable spot, *a*, with companions, breaking up after September 15.
Group 7070, September 12–13. A small spot, *p*, Group 7069.
Group 7071, September 12. One or two very small spots.
Group 7072, September 16–19. One or two small unstable spots in a disturbed area *nf*, Group 7068.

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).
1914.				°	°	°			
263·491	JS, N		0·909	234·7	52·8	−27·9			386
		7068*a*	0·925	285·3	64·4	+16·8	73	409	} 574*nf*
		7068	0·914	288·0	62·7	+19·3	3	23	
G.		7069	0·832	228·1	40·7	−28·8	3	14	213*c*
			0·935	12·3	316·9	+71·6			86
			0·853	135·1	310·7	−32·2			69
Sept. 21				(+25·1)	(355·9)	(+7·1)	(79)	(446)	(1328)
264·358	N, JS		0·924	235·6	44·1	−28·1			521
		7068*a*	0·978	285·2	63·7	+16·3	44	213	} 758*nf*
G.		7068	0·973	286·6	62·5	+17·8	0	57	
Sept. 22				(+25·2)	(344·5)	(+7·0)	(44)	(270)	(1279)
265·366	N, DE		0·931	296·3	40·4	+27·0			153
			0·965	236·2	38·9	−30·0			376
G.			0·907	355·8	343·2	+71·4			103
Sept. 23				(+25·3)	(331·2)	(+7·0)	(0)	(0)	(632)
266·416	N, JS		0·931	357·2	327·5	+75·2			70
		7073*a*	0·966	68·1	240·8	+22·9	29	65	219*f*
G.			0·929	67·1	248·3	+23·8			82
Sept. 24				(+25·4)	(317·3)	(+7·0)	(29)	(65)	(371)
267·376	N, JS		0·940	359·7	305·8	+76·7			127
		7073*a*	0·896	67·7	240·6	+23·0	21	79	192*f*
G.			0·919	19·1	258·9	+65·2			84
			0·814	68·5	250·4	+21·4			53
Sept. 25				(+25·5)	(304·6)	(+6·9)	(21)	(79)	(456)
268·380	JS, N		0·910	358·8	294·9	+72·0			86
		7073*a*	0·787	66·2	240·2	+22·8	15	76	166*f*
G.			0·889	74·6	228·1	+16·8			83
Sept. 26				(+25·6)	(291·4)	(+6·9)	(15)	(76)	(335)
269·533	N, JS	7073*a*	0·630	61·8	239·3	+22·8	10	78	
			0·845	125·0	226·8	−24·6			91
G.			0·910	118·0	216·4	−21·9			74
Sept. 27				(+25·8)	(276·2)	(+6·8)	(10)	(78)	(165)
270·435	N, JS	7073*a*	0·478	53·6	239·8	+22·6	16	91	
C.			0·890	126·9	210·5	−28·4			89
Sept. 28				(+25·9)	(264·3)	(+6·8)	(16)	(91)	(89)
1914.				°	°	°			
271·342	N, JS	7073*a*	0·345	36·5	239·5	+22·7	13	71	
			0·797	126·3	208·1	−23·3			55
G.			0·911	119·5	192·8	−23·3			111
Sept. 29				(+25·9)	(252·3)	(+6·8)	(13)	(71)	(166)
272·436	N, JS		0·934	269·0	306·7	+ 1·5			45
		7073*a*	0·278	355·2	239·3	+22·7	12	62	
G.		7073	0·288	1·5	237·4	+23·4	0	2	
		7073	0·266	5·1	236·4	+22·0	1	4	
			0·926	115·1	174·9	−20·1			108
Sept. 30				(+26·0)	(237·9)	(+6·7)	(13)	(68)	(153)
273·386	N, JS	7073*a*	0·354	321·6	239·0	+22·5	7	31	
G.									
Oct. 1				(+26·1)	(225·3)	(+6·7)	(7)	(31)	(0)
274·381	JS, N	7074	0·853	240·8	264·6	−20·6	1	2	} 123*c*
		7074	0·831	240·0	262·2	−20·4	0	5	
		7073*a*	0·512	303·8	239·5	+22·4	4	12	
C.		7073	0·452	311·2	233·9	+23·5	4	6	
		7073	0·418	311·2	232·0	+22·2	1	5	
			0·935	72·9	142·2	+18·3			106
Oct. 2				(+26·2)	(212·2)	(+6·6)	(10)	(30)	(229)
275·415	N, JS		0·965	229·4	263·8	−36·3			92
			0·938	244·6	263·6	−21·1			93
		7075	0·508	111·4	170·4	− 4·8	1	3	
C.			0·914	143·2	150·5	−42·8			86
			0·854	71·5	139·8	+19·2			73
Oct. 3				(+26·2)	(198·6)	(+6·6)	(1)	(3)	(344)
276·517	N, JS		0·812	294·3	237·5	+23·4			61
G.									
Oct. 4				(+26·3)	(184·0)	(+6·5)	(0)	(0)	(61)
277·531	N, DE		0·897	293·5	234·5	+23·9			92
G.									
Oct. 5				(+26·3)	(170·6)	(+6·5)	(0)	(0)	(92)

Group 7073, September 24–October 2. A small regular spot, *a*, commencing to break up rapidly on October 1. Two distant followers appear on October 2.
Group 7074, October 2. One or two very small spots.
Group 7075, October 3. 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).
1914.				°	°	°			
278·430	N, JS		0·959	292·9	233·3	+23·7			189
C.			0·899	4·8	146·3	+69·7			117
			0·967	114·1	87·7	−21·3			293
Oct. 6				(+26·3)	(158·8)	(+6·4)	(0)	(0)	(599)
279·437	N, JS		0·898	358·5	149·4	+70·1			46
			0·831	169·8	132·7	−48·6			68
G.			0·876	116·8	89·5	−19·8			121
			0·946	117·4	79·6	−23·3			163
			0·974	72·3	67·5	+18·6			376
Oct. 7				(+26·4)	(145·5)	(+6·3)	(0)	(0)	(774)
280·445	N, DE		0·785	124·1	88·0	−21·6			111
			0·871	122·4	78·7	−24·2			228
G.			0·902	73·0	67·3	+18·1			649
			0·967	60·8	55·9	+29·8			246
Oct. 8				(+26·4)	(132·2)	(+6·3)	(0)	(0)	(1234)
281·470	N, JS	7076	0·433	303·8	141·1	+19·7	0	6	
		7076	0·407	303·1	139·7	+18·6	0	6	
			0·771	129·2	77·8	−24·5			176
G.			0·804	72·0	65·4	+18·1			451
			0·951	122·4	53·2	−28·2			236
			0·923	61·8	51·3	+28·4			355
Oct. 9				(+26·4)	(118·7)	(+6·2)	(0)	(12)	(1218)
282·483	N, DE		0·882	236·1	159·6	−25·9			118
			0·881	217·8	149·8	−39·8			80
		7076	0·627	294·2	142·6	+19·8	7	16	
		7076	0·595	292·4	140·5	+18·2	4	4	
G.		7076	0·587	294·4	139·6	+19·2	3	3	
		7076	0·556	294·4	137·5	+18·6	2	4	
			0·848	128·8	57·0	−28·0			282
			0·829	59·0	51·2	+29·0			466
			0·938	124·8	43·1	−29·6			386
Oct. 10				(+26·4)	(105·3)	(+6·2)	(16)	(27)	(1332)
283·422	JS, N		0·926	292·2	161·1	+22·8			78
			0·955	239·2	159·7	−27·0			68
C.		7076	0·781	290·0	143·8	+19·4	9	10	} 84c
		7076	0·745	289·0	140·5	+18·1	0	3	
		7076	0·737	290·5	139·7	+19·2	0	3	
1914.				°	°	°			
283·422	JS, N	7077	0·437	66·7	68·4	+15·5	2	7	
		7077	0·507	65·6	64·1	+17·4	0	4	
		7077	0·530	62·1	63·2	+19·7	1	5	
			0·790	136·2	53·9	−30·0			88
C.			0·713	56·1	51·0	+28·0			153
			0·852	130·2	44·7	−29·4			205
			0·827	53·3	40·5	+33·4			81
			0·934	127·0	32·3	−31·3			188
Oct. 11				(+26·4)	(92·9)	(+6·1)	(12)	(32)	(945)
284·611	N, JS		0·895	289·3	141·0	+20·0			107
G.			0·828	134·7	33·8	−31·3			253
Oct. 12				(+26·4)	(77·2)	(+6·0)	(0)	(0)	(360)
285·455	N, JS		0·960	288·9	140·7	+19·8			133
		7077	0·190	12·2	63·7	+16·7	3	10	
C.		7077	0·163	21·6	62·6	+14·7	0	7	
		7077	0·244	18·4	61·4	+19·3	1	5	
			0·758	142·6	33·3	−32·0			215
Oct. 13				(+26·4)	(66·1)	(+6·0)	(4)	(22)	(348)
286·421	N, JS		0·996	290·0	140·0	+20·4			80
C.			0·929	354·6	70·9	+73·1			91
			0·727	150·3	27·8	−33·7			82
Oct. 14				(+26·4)	(53·4)	(+5·9)	(0)	(0)	(253)
287·335	JS, N		0·953	236·6	107·1	−29·4			46
			0·819	239·6	90·2	−20·7			141
C.		7078	0·813	90·0	347·0	+ 3·4	3	7	} 52c
		7078	0·817	89·7	346·6	+ 3·6	0	3	
		7078	0·824	92·3	346·1	+ 1·5	0	4	
Oct. 15				(+26·3)	(41·3)	(+5·8)	(3)	(14)	(239)
288·491	N, JS		0·917	260·3	91·2	− 6·5			63
G.			0·880	239·1	81·5	−23·7			95
			0·802	286·1	79·3	+16·3			51
Oct. 16				(+26·3)	(26·1)	(+5·7)	(0)	(0)	(209)
289·518	N, JS		0·929	240·4	75·2	−24·8			151
			0·858	283·4	71·7	+14·3			130
C.			0·787	294·5	63·2	+22·6			157
			0·770	221·1	48·5	−30·9			130
Oct. 17				(+26·2)	(12·5)	(+5·6)	(0)	(0)	(568)

Group 7076, October 9–11. A short sparse stream of very small spots, being apparently a revival of Group 7071.
Group 7077, October 11–13. A few scattered evanescent spots—none seen on October 12. This group marks the position of the great spot of August and September—Groups 7060 and 7068.
Group 7078, October 15. Three very small spots in low latitude.

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).
1914.				°	°	°			
290·365	JS, N		0·950	242·3	68·2	−24·1			94
			0·897	290·6	65·1	+20·9			454
C.			0·861	231·6	51·5	−28·8			110
			0·760	303·3	47·5	+28·6			157
			0·776	219·0	36·5	−32·4			77
Oct. 18				(+26·2)	(1·3)	(+5·6)	(0)	(0)	(892)
291·446	N, JS		0·965	292·3	62·8	+23·0			333
			0·943	236·1	50·9	−29·4			124
			0·881	301·6	47·2	+30·3			339
			0·835	224·5	31·0	−32·6			160
C.		7079	0·634	154·3	328·7	−29·6	7	19	
		7079	0·632	152·4	327·7	−28·8	4	13	
		7079	0·646	153·3	327·6	−30·0	3	5	
			0·984	113·9	271·0	−22·2			136
Oct. 19				(+26·1)	(347·1)	(+5·5)	(14)	(37)	(1092)
292·345	JS, N		0·926	300·1	42·5	+29·9			303
			0·952	234·7	40·3	−31·2			139
			0·875	228·3	25·6	−32·2			122
C.		7079	0·585	169·3	328·1	−29·6	9	32	
		7079	0·582	167·5	326·9	−29·2	7	47	
			0·948	115·9	268·0	−22·5			225
Oct. 20				(+26·1)	(335·2)	(+5·4)	(16)	(79)	(789)
293·533	N, JS		0·964	302·4	34·4	+32·6			159
			0·941	232·0	21·6	−33·0			156
		7080	0·724	308·3	0·7	+30·6	1	2	
		7080	0·704	310·2	358·4	+31·1	2	6	
G.		7079	0·580	193·2	328·3	−29·0	0	6	
		7079	0·574	190·7	326·6	−29·0	6	6	
		7081*a*	0·706	66·9	276·1	+20·0	1	8	
			0·916	9·8	293·7	+69·1			63
			0·853	120·0	267·0	−22·0			251
Oct. 21				(+26·0)	(319·6)	(+5·3)	(10)	(28)	(629)
294·494	N, JS		0·817	304·7	358·3	+31·0			74
		7081*a*	0·541	59·5	277·2	+20·4	12	30	
C.		7081	0·590	63·9	272·9	+19·3	11	31	
			0·769	126·2	264·6	−23·2			184
Oct. 22				(+25·9)	(306·9)	(+5·2)	(23)	(61)	(258)
1914.				°	°	°			
295·307	N, JS		0·899	302·1	358·7	+31·0			83
		7081*a*	0·402	47·7	277·8	+20·6	16	35	
C.		7081	0·440	53·3	274·2	+20·0	1	2	
		7081	0·456	55·9	272·7	+19·6	4	10	
		7081	0·460	56·7	272·2	+19·4	8	16	
Oct. 23				(+25·9)	(292·6)	(+5·2)	(29)	(63)	(83)
296·559	N, JS		0·927	294·5	347·4	+24·5			87
			0·814	230·5	324·7	−27·6			95
G.		7081*a*	0·272	2·7	278·9	+20·7	8	22	
		7081	0·268	25·1	272·8	+19·0	4	7	
Oct. 24				(+25·7)	(279·7)	(+5·0)	(12)	(29)	(182)
297·167	N, JS		0·938	291·8	341·5	+22·2			93
			0·871	234·6	324·5	−27·3			88
		7081*a*	0·303	337·0	278·9	+21·1	10	29	
D.		7081	0·271	350·4	274·4	+20·4	2	3	
		7081	0·250	356·4	272·5	+19·3	4	9	
		7082	0·212	88·5	259·4	+ 5·2	1	4	
Oct. 25				(+25·6)	(271·6)	(+5·0)	(17)	(45)	(181)
298·373	N, JS	7083	0·524	233·7	281·3	−13·6	2	8	
		7081*a*	0·465	307·7	278·8	+21·0	4	9	
		7081	0·381	314·5	272·4	+20·1	2	9	
		7081	0·355	317·4	270·4	+19·8	0	4	
		7081	0·358	323·5	268·9	+21·5	0	3	
G.		7084	0·519	199·1	266·4	−24·5	1	2	
		7082	0·060	267·3	259·1	+ 4·7	1	4	
		7082	0·025	281·5	257·1	+ 5·2	1	2	
		7085	0·546	56·0	226·6	+22·0	1	4	
		7085	0·569	55·9	225·1	+22·8	2	4	
Oct. 26				(+25·5)	(255·7)	(+4·9)	(14)	(49)	(0)
299·414	N, JS	7081	0·619	298·4	277·5	+21·0	0	5	
		7081	0·610	300·5	276·4	+21·9	0	3	
		7081	0·577	298·7	274·5	+20·1	5	12	
		7081	0·549	299·5	272·4	+19·8	1	8	
		7081*b*	0·527	298·8	271·1	+18·9	4	23	
		7085	0·368	37·6	228·1	+21·5	10	14	
G.		7085	0·384	37·4	227·4	+22·4	2	7	
		7085	0·404	41·2	225·4	+22·3	3	7	
		7085	0·424	40·0	224·8	+23·5	11	17	
		7085	0·430	44·4	223·1	+22·4	1	3	
		7085	0·453	42·0	222·7	+24·2	1	7	
			0·984	72·7	161·6	+17·8			61
Oct. 27				(+25·4)	(242·0)	(+4·8)	(38)	(106)	(61)

Group 7079, October 19–21. A small unstable group.
Group 7080, October 21. Two very small spots.
Group 7081, October 21–30. An active stream of small spots, of which the leader, *a*, remains fairly stable until October 26, after which date a spot, *b*, in the rear of the stream becomes the most prominent feature.
Group 7082, October 25–26. One or two very small spots.
Group 7083, October 26. A small triple spot.
Group 7084, October 26. A minute spot.
Group 7085, October 26–November 3. An active stream of generally unimportant spots; a spot, *a*, in the rear of the stream becoming predominant after October 31 and increasing in area until its disappearance round the western limb.

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).
1914.				°	°	°			
300·529	N, JS	7081	0·767	292·5	276·1	+20·2	5	14	
		7081	0·753	292·9	274·8	+20·2	2	5	
		7081	0·739	291·7	273·7	+19·0	3	6	
		7081*b*	0·711	292·2	271·2	+19·0	11	54	
		7085	0·284	353·6	229·2	+21·1	5	9	
G.		7085	0·321	4·9	225·6	+23·3	0	2	
		7085	0·306	7·8	224·7	+22·3	5	12	
		7085	0·317	8·1	224·5	+22·9	0	2	
		7085	0·331	9·0	224·1	+23·7	5	15	
		7085	0·345	13·9	222·1	+24·2	0	3	
			0·939	70·5	157·2	+20·0			49
Oct. 28				(+25·3)	(227·3)	(+4·7)	(36)	(122)	(49)
301·380	N, DE		0·910	249·6	278·7	−16·4			163
			0·882	300·1	276·2	+28·6			127
			0·840	239·1	267·3	−23·7			161
		7081	0·865	290·9	275·4	+20·4	0	6	
		7081	0·857	291·0	274·4	+20·3	1	7	
		7081	0·843	291·3	272·7	+20·3	0	9	266*c*
		7081	0·838	290·1	272·4	+19·3	4	10	
G.		7081*b*	0·819	290·1	270·3	+19·0	15	38	
		7085	0·360	327·0	228·3	+22·0	0	6	
		7085	0·355	330·7	226·9	+22·5	3	5	
		7085	0·355	334·7	225·6	+23·2	0	3	
		7085	0·338	333·8	225·3	+22·2	2	11	
		7085	0·347	336·9	224·6	+23·1	4	15	
		7085	0·353	340·6	223·4	+23·9	2	9	
Oct. 29				(+25·1)	(216·1)	(+4·6)	(31)	(119)	(717)
302·385	N, JS		0·918	242·2	264·7	−23·3			183
		7081	0·924	288·6	270·3	+18·9	0	4	300*p*
		7081*b*	0·922	289·1	269·9	+19·3	0	23	
		7086	0·476	291·7	229·8	+14·1	0	5	
		7085	0·509	306·6	228·8	+21·7	0	11	
G.		7085	0·478	311·4	225·5	+22·5	1	2	
		7085	0·470	313·2	224·5	+22·8	1	3	
		7085	0·470	315·0	224·0	+23·5	7	28	
			0·902	5·6	189·2	+68·0			81
			0·888	68·2	140·7	+21·4			174
Oct. 30				(+25·0)	(202·8)	(+4·5)	(9)	(76)	(738)
303·424	JS, N		0·992	289·0	272·8	+19·4			139
C.		7085	0·679	297·2	229·4	+21·4	1	7	
		7085	0·667	298·2	228·2	+21·7	0	4	
1914.				°	°	°			
303·424	JS, N	7085	0·643	301·0	225·7	+22·8	0	13	
C.		7085	0·617	303·8	223·0	+23·7	7	18	
			0·926	2·8	180·9	+71·6			56
Oct. 31				(+24·8)	(189·1)	(+4·4)	(8)	(42)	(195)
304·569	N, DE		0·926	294·0	241·3	+23·8			119
		7085	0·847	292·2	230·9	+21·0	14	40	
		7085	0·838	291·6	230·0	+20·4	0	5	
		7085	0·835	293·5	229·4	+21·9	12	24	
		7085	0·823	291·1	228·5	+19·8	0	7	206*c*
G.		7085*a*	0·802	294·6	225·8	+22·2	13	48	
		7085	0·798	293·8	225·5	+21·4	4	6	
		7085	0·781	296·6	223·3	+23·3	2	7	
			0·945	342·2	221·8	+67·1			69
			0·921	93·6	107·4	− 1·6			103
			0·963	113·6	102·9	−21·3			212
Nov. 1				(+24·6)	(174·0)	(+4·3)	(45)	(137)	(709)
305·460	N, JS	7085	0·939	290·7	232·2	+20·9	11	49	
		7085	0·933	290·7	231·1	+20·8	4	18	
		7085	0·930	289·7	230·6	+19·8	4	9	
		7085	0·924	291·3	229·5	+21·2	3	7	
		7085	0·920	290·5	229·0	+20·5	4	7	472*c*
		7085	0·918	292·0	228·5	+21·8	0	3	
C.		7085	0·899	291·5	225·8	+21·1	0	7	
		7085*a*	0·897	292·5	225·4	+22·0	14	85	
		7085	0·889	292·1	224·4	+21·5	0	9	
		7087	0·965	111·5	90·3	−19·4	0	14	
		7087	0·983	110·8	85·3	−19·5	0	17	413*c*
		7087	0·985	110·7	84·6	−19·5	0	12	
			0·912	116·3	100·7	−21·9			335
Nov. 2				(+24·5)	(162·3)	(+4·2)	(40)	(237)	(1220)
306·433	N, JS	7085*a*	0·967	291·8	225·0	+22·2	12	93	
		7085	0·967	290·3	225·0	+20·7	0	15	324*c*
		7087	0·879	112·6	91·5	−17·6	8	13	
G.		7087	0·890	114·1	90·2	−19·2	5	19	336*c*
		7087	0·922	112·1	85·4	−18·5	0	34	
			0·824	120·8	99·7	−22·3			150
			0·960	73·9	75·4	+16·6			107
Nov. 3				(+24·3)	(149·4)	(+4·1)	(25)	(174)	(917)

Group 7086, October 30. A very small spot, *sp*, Group 7085.
Group 7087, November 2–11. An irregular stream of small unstable 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).
1914.				°	°	°			
307·417	N, JS		0·970	291·5	212·7	+21·8			65
			0·917	352·7	155·5	+69·1			53
		7087	0·759	120·1	92·5	−19·5	2	4	
		7087	0·755	117·5	92·1	−17·5	2	8	
		7087	0·776	118·7	90·6	−19·1	2	11	
		7087	0·777	117·9	90·3	−18·6	1	3	
C.		7087	0·780	116·9	89·7	−17·9	0	7	312*c*
		7087	0·792	116·2	88·4	−17·7	3	10	
		7087	0·827	117·3	85·3	−19·8	3	7	
		7087	0·837	116·1	83·9	−19·2	7	16	
			0·917	121·1	75·4	−26·4			67
			0·949	65·3	65·1	+24·7			184
Nov. 4				(+24·1)	(136·5)	(+4·0)	(20)	(66)	(681)
308·443	N, VD	7087	0·599	126·9	92·9	−17·6	2	12	
		7087	0·619	125·7	91·2	−17·7	1	13	
		7087	0·635	124·5	89·7	−17·7	2	9	
		7087	0·648	126·2	89·4	−19·2	0	5	
		7087	0·705	122·6	84·1	−19·2	11	45	
G.			0·827	124·3	74·1	−25·2			76
			0·790	72·1	71·4	+16·5			110
			0·881	63·5	62·7	+25·0			222
			0·951	57·4	51·9	+32·2			89
Nov. 5				(+23·9)	(122·9)	(+3·9)	(16)	(84)	(497)
309·450	N, JS	7087	0·460	139·9	91·7	−16·9	0	9	
		7087	0·475	140·7	91·3	−17·9	5	24	
		7087	0·490	138·3	89·8	−17·8	0	9	
		7087	0·540	134·8	85·9	−18·8	6	13	
		7087	0·566	134·9	84·6	−20·0	5	10	
		7087	0·564	133·1	83·9	−19·2	8	21	
G.		7087	0·573	133·8	83·7	−19·9	7	14	
		7087	0·571	132·5	83·3	−19·2	1	5	
		7087	0·560	130·4	83·2	−17·8	0	2	
		7088	0·710	60·4	67·6	+23·3	0	4	109*nf*
			0·884	73·3	47·9	+16·5			91
			0·942	124·7	45·6	−30·7			156
			0·930	59·6	42·6	+29·6			230
Nov. 6				(+23·7)	(109·7)	(+3·8)	(32)	(111)	(586)
310·415	N, JS	7087	0·377	167·8	92·1	−17·8	0	11	
		7087	0·381	165·5	91·2	−17·9	1	4	
G.		7087	0·413	160·9	88·7	−19·2	4	8	
		7087	0·420	154·3	85·9	−18·5	2	2	
		7087	0·451	151·5	83·7	−19·7	8	16	
1914.				°	°	°			
310·415	N, JS	7087	0·445	150·1	83·4	−19·0	6	8	
		7088*a*	0·526	51·4	70·6	+22·4	14	46	
		7088	0·546	52·5	69·0	+22·6	5	14	
		7088	0·574	50·6	67·8	+24·5	2	5	
		7088	0·588	48·6	67·6	+26·1	6	10	
G.		7088	0·587	51·1	66·8	+24·7	6	19	
		7088*b*	0·602	49·9	66·2	+26·0	25	105	
			0·862	128·5	45·8	−30·1			84
			0·891	57·9	36·4	+30·1			352
			0·928	116·7	32·9	−23·0			67
Nov. 7				(+23·5)	(96·9)	(+3·7)	(79)	(248)	(503)
311·545	N, JS	7087	0·399	198·4	89·6	−18·6	6	12	
		7087	0·419	197·1	89·5	−20·1	1	6	
		7088*a*	0·350	26·8	72·3	+21·6	16	99	
		7088	0·362	29·3	71·1	+21·8	4	11	
G.		7088	0·382	31·4	69·6	+22·4	9	15	
		7088	0·419	34·7	67·0	+23·4	1	4	
		7088	0·434	34·7	66·4	+24·2	5	7	
		7088*b*	0·460	34·3	65·4	+25·6	25	158	
Nov. 8				(+23·3)	(82·0)	(+3·5)	(67)	(312)	(0)
312·580	N, JS	7087	0·521	223·1	90·4	−19·1	0	21	
		7088*a*	0·312	346·0	73·0	+20·9	17	110	
		7088	0·322	351·4	71·4	+21·9	6	26	
C.		7088	0·329	357·5	69·3	+22·5	5	13	
		7088	0·345	4·4	66·8	+23·5	3	32	
		7088	0·369	6·4	65·8	+24·8	2	18	
		7088*b*	0·394	8·6	64·7	+26·2	23	153	
Nov. 9				(+23·0)	(68·4)	(+3·4)	(56)	(373)	(0)
313·384	N, JS	7087	0·666	236·9	93·7	−18·6	1	7	
		7087	0·630	234·1	90·3	−18·9	5	19	
		7087	0·621	231·9	88·9	−19·7	1	4	
		7087	0·595	228·1	85·9	−20·4	2	4	
		7088*a*	0·393	320·1	73·4	+20·7	25	100	
		7088	0·385	324·6	71·6	+21·4	11	38	
G.		7088	0·376	329·2	69·7	+22·0	2	7	
		7088	0·368	334·2	67·7	+22·5	1	3	
		7088	0·374	340·5	65·6	+23·8	9	23	
		7088	0·388	342·7	65·1	+24·9	4	7	
		7088*b*	0·403	346·1	64·0	+26·2	34	150	
			0·897	114·9	357·7	−20·5			62
Nov. 10				(+22·9)	(57·8)	(+3·3)	(95)	(362)	(62)

Group 7088, November 6–15. An active stream of spots of rapid birth. The stream is considerably inclined to the equator, and its length steadily increases as the two principal components, *a* and *b*, move away from each other. The rear spot, *b*, is breaking up on November 12, the leader spot, *a*, alone remaining on November 14.

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).
1914.				°	°	°			
314·378	N, JS		0·898	241·4	104·0	−23·8			132
		7087	0·781	241·6	91·3	−19·6	0	2	
		7087	0·758	239·7	88·7	−20·1	2	3	320c
		7087	0·735	236·7	85·8	−21·4	1	2	
		7088*a*	0·558	304·0	74·3	+20·9	14	90	
C.		7088	0·542	306·0	72·7	+21·4	18	42	
		7088	0·534	308·1	71·5	+22·0	0	1	
		7088	0·518	308·9	70·3	+21·8	1	4	
		7088	0·490	318·6	65·5	+24·5	0	4	
		7088	0·492	322·0	64·3	+25·7	2	6	
		7088*b*	0·489	323·9	63·4	+26·2	15	74	
Nov. 11				(+22·6)	(44·7)	(+3·2)	(53)	(228)	(452)
315·412	N, JS		0·864	243·8	86·9	−20·7			495
		7088*a*	0·715	296·5	74·2	+20·9	13	75	
		7088	0·707	297·5	73·2	+21·3	4	19	
G.		7088	0·681	300·2	70·5	+22·4	0	4	
		7088	0·632	308·3	64·3	+25·6	0	5	
		7088*b*	0·614	310·6	62·3	+26·2	17	32	
			0·843	178·4	28·8	−54·1			120
Nov. 12				(+22·4)	(31·1)	(+3·1)	(34)	(135)	(615)
316·403	N, JS		0·936	245·3	84·1	−21·8			224
		7089	0·988	251·2	97·5	−18·1	0	17	
		7089	0·979	250·7	94·4	−18·2	0	10	288c
		7089	0·978	250·1	94·0	−18·7	5	20	
		7090	0·928	284·6	85·9	+14·7	0	7	100c
C.		7088*a*	0·850	293·5	74·7	+21·5	24	117	
		7088	0·840	296·3	73·0	+23·6	1	5	
		7088	0·751	302·5	62·6	+25·9	3	12	235c
		7088	0·749	304·0	62·0	+26·9	2	5	
		7091	0·838	113·7	324·5	−17·9	3	11	
		7091	0·853	111·7	322·4	−16·7	6	12	39c
Nov. 13				(+22·1)	(18·0)	(+3·0)	(44)	(216)	(886)
317·420	N, JS		0·980	283·6	83·2	+13·9			136
			0·851	299·2	60·3	+26·2			171
		7088*a*	0·941	291·8	74·1	+21·4	13	129	100*f*
G.		7091	0·682	120·0	323·2	−17·6	12	16	
		7091	0·719	116·2	322·5	−16·3	1	5	
		7091	0·720	115·2	322·2	−15·7	3	6	
Nov. 14				(+21·8)	(4·6)	(+2·9)	(29)	(156)	(407)
1914.				°	°	°			
318·548	N, JS		0·904	299·9	52·1	+28·0			272
			0·878	231·5	43·2	−31·5			146
		7088*a*	0·997	291·7	76·1	+21·9	0	128	271*f*
G.		7091	0·502	133·4	327·3	−17·6	7	10	
		7091	0·551	125·3	321·9	−16·2	5	10	
			0·940	66·1	280·6	+23·3			262
Nov. 15				(+21·5)	(349·7)	(+2·7)	(12)	(148)	(951)
319·495	N, JS		0·940	234·3	41·3	−32·1			124
			0·892	298·8	38·0	+26·7			99
G.			0·830	307·9	27·7	+32·2			85
			0·886	66·3	276·3	+22·1			403
Nov. 16				(+21·3)	(337·2)	(+2·6)	(0)	(0)	(711)
320·500	N, JS		0·921	303·0	28·2	+31·1			140
G.			0·813	65·2	271·7	+21·5			308
Nov. 17				(+21·0)	(324·0)	(+2·5)	(0)	(0)	(448)
321·443	N, JS	7092	0·403	174·7	309·3	−21·2	1	3	
		7092	0·414	171·1	307·7	−21·7	1	2	
G.		7093	0·323	43·7	298·2	+15·8	1	1	
		7094*a*	0·974	69·7	234·9	+20·3	22	91	235c
		7094*b*	0·983	69·7	232·2	+20·4	21	119	
Nov. 18				(+20·7)	(311·6)	(+2·4)	(46)	(216)	(235)
322·372	N, JS	7092	0·432	204·0	310·1	−20·9	1	2	
		7093	0·224	359·4	299·4	+15·2	0	2	
		7093	0·247	0·3	299·2	+16·6	1	2	
		7093	0·269	5·4	297·8	+17·8	0	2	
C.		7093	0·240	6·8	297·6	+16·0	1	2	
		7093	0·251	10·4	296·6	+16·6	0	1	
		7094*a*	0·911	68·4	234·7	+20·6	10	84	
		7094	0·926	64·4	232·9	+24·5	0	3	349*f*
		7094*b*	0·928	68·8	232·1	+20·5	20	96	
Nov. 19				(+20·4)	(299·3)	(+2·3)	(33)	(194)	(349)
323·462	N, JS		0·858	237·7	338·6	−26·0			78
		7092	0·548	223·9	309·0	−21·2	0	4	
G.		7094*a*	0·796	65·5	234·5	+20·6	11	44	264c
		7094*b*	0·817	66·7	232·1	+20·1	16	96	
		7095	0·906	67·6	221·4	+21·1	0	4	302*np*
Nov. 20				(+20·1)	(285·0)	(+2·1)	(27)	(148)	(644)

Group 7089, November 13. A few small spots, *p*, the place of Group 7087.
Group 7090, November 13. A very small spot forming near the West limb.
Group 7091, November 13–15. Two or three small unstable spots.
Group 7092, November 18–20. One or two very small spots.
Group 7093, November 18–19. Some very small faint spots.
Group 7094, November 18–27. Return of Group 7085. Two stable spots, *a* and *b*, with occasional small attendants.
Group 7095, November 20–24. One or two very small unstable spots, *f*. Group 7094, in the same general area of disturbance. No spots are seen on November 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).
1914.				°	°	°			
324·355	N, JS		0·923	242·0	336·8	−24·7			68
			0·825	245·8	325·5	−18·5			112
		7097	0·365	144·0	260·4	−15·2	1	3	
		7094*a*	0·678	60·9	234·0	+20·8	9	40	
		7094	0·679	64·1	233·2	+18·7	0	5	185*f*
C.		7094*b*	0·700	62·6	231·9	+20·3	19	107	
		7095	0·824	63·7	220·3	+22·6	0	8	
		7096	0·859	66·0	215·9	+21·5	8	20	
		7096	0·873	64·6	214·5	+23·0	4	8	167*c*
		7096	0·876	65·7	213·9	+22·1	0	7	
		7096	0·890	65·2	212·2	+22·8	0	2	
Nov. 21				(+19·8)	(273·2)	(+2·0)	(41)	(200)	(532)
325,452	N, JS		0·889	249·9	319·3	−16·9			64
		7099	0·742	266·1	306·3	− 1·6	0	4	
		7094*a*	0·512	50·7	233·8	+20·6	9	28	
		7094	0·500	54·0	233·5	+18·8	1	4	
		7094	0·536	50·9	232·3	+21·4	0	3	
		7094	0·549	49·5	232·0	+22·5	2	4	
C.		7094*b*	0·533	53·5	231·7	+20·1	23	118	
		7098	0·613	50·3	227·6	+24·6	1	3	
		7100	0·592	59·1	226·3	+19·3	1	3	
		7095	0·676	62·1	219·4	+19·8	0	1	62*c*
		7096	0·721	61·9	215·9	+21·2	9	64	
			0·923	68·3	192·5	+20·7			102
Nov. 22				(+19·5)	(258·7)	(+1·9)	(46)	(232)	(228)
326·381	N, JS		0·888	253·2	307·5	−14·0			74
		7094*a*	0·390	33·0	233·4	+20·8	6	9	
		7094	0·371	36·2	233·1	+19·1	1	2	
C.		7094*b*	0·397	37·8	231·6	+20·0	13	64	
		7096	0·589	54·9	215·5	+21·2	9	16	
		7096	0·617	54·6	213·7	+22·4	1	4	
			0·871	63·8	188·3	+23·5			80
			0·971	112·4	172·4	−21·2			164
Nov. 23				(+19·2)	(246·5)	(+1·8)	(30)	(95)	(318)
327·522	N, JS		0·767	299·4	277·9	+23·2			93
		7100*	0·650	295·4	269·2	+17·4	1	3	
G.		7094	0·344	344·8	236·9	+20·9	2	2	
		7094	0·295	353·7	233·3	+18·6	1	4	
		7094*a*	0·326	355·4	233·0	+20·4	2	4	
		7094*b*	0·306	0·2	231·3	+19·4	12	68	
1914.				°	°	°			
327·522	N, JS	7098	0·411	9·6	227·1	+25·4	1	5	
		7095	0·361	23·2	222·7	+20·9	5	8	
		7095	0·392	26·8	220·5	+22·0	4	7	
		7096	0·460	40·2	212·8	+22·0	0	2	
G.		7096	0·465	42·0	211·9	+21·7	0	4	
		7101*a*	0·948	73·4	160·5	+16·2	19	90	261*c*
		7101*b*	0·984	71·5	151·9	+18·5	0	57	
			0·877	116·5	173·7	−22·1			196
Nov. 24				(+18·8)	(231·4)	(+1·6)	(47)	(254)	(550)
328,528	JS, N		0·854	294·6	274·7	+21·7			248
		7094*a*	0·402	323·7	232·8	+20·3	0	3	
		7094	0·386	326·1	231·4	+20·1	0	2	
		7094*b*	0·371	325·2	231·1	+19·1	8	30	
G.		7101*a*	0·854	71·8	160·7	+16·3	19	73	151*c*
		7101*b*	0·921	70·6	152·1	+18·4	10	39	
			0·773	121·0	172·6	−22·4			98
			0·989	110·0	138·0	−19·5			375
Nov. 25				(+18·4)	(218·2)	(+1·5)	(37)	(147)	(872)
329·305	JS, N		0·922	293·1	273·6	+21·8			346
		7094	0·506	308·2	232·7	+19·5	0	2	
		7094*b*	0·489	309·5	231·4	+19·3	8	14	
C.		7101*a*	0·753	69·3	160·9	+16·3	14	29	165*c*
		7101*b*	0·848	68·9	151·6	+18·5	15	28	
			0·936	110·8	140·5	−18·9			297
Nov. 26				(+18·1)	(207·9)	(+1·4)	(37)	(73)	(808)
330·537	N, JS		0·988	289·5	272·5	+19·5			182
		7094*b*	0·678	296·9	231·3	+18·9	3	4	
		7101*a*	0·558	62·3	160·9	+16·1	1	4	
G.		7101*b*	0·687	64·0	151·2	+18·5	2	5	
		7102*a*	0·985	114·9	113·6	−24·2	17	73	133*f*
			0·813	114·6	140·5	−18·9			184
Nov. 27				(+17·7)	(191·7)	(+1·3)	(23)	(86)	(499)
331·304	JS, N		0·820	294·8	234·2	+20·8			258
			0·730	304·1	223·3	+25·0			132
		7104	0·439	3·5	179·9	+27·1	0	3	
		7104	0·422	8·9	177·5	+25·7	1	4	
		7105	0·772	117·8	135·1	−20·3	3	6	137*p*
C.		7102*a*	0·939	115·4	114·4	−23·3	24	109	
		7102	0·948	116·1	112·9	−24·2	7	31	367*c*
		7102	0·960	115·8	110·3	−24·3	0	11	
		7103*a*	0·972	117·9	107·7	−26·7	22	140	
Nov. 28				(+17·4)	(181·6)	(+1·2)	(57)	(304)	(894)

Group 7096, November 21–24. A few small spots, *f*, Group 7095.
Group 7097, November 21. A very small spot.
Group 7098, November 22–24. One or two very small spots, *nf*, Group 7094; none are seen on November 23.
Group 7099, November 22. A very small faint spot in low latitude.
Group 7100, November 22. A very small spot, *f*, Group 7094.
Group 7101, November 24–27. A pair of spots, *a* and *b*, widely separated in longitude and diminishing rapidly in area.
Group 7100*, November 24. A very small spot.
Group 7102, November 27–December 9. A large almost regular spot, *a*, with occasional small followers. *a* reaches a minimum in latitude on December 1 and a maximum in longitude about December 3.
Group 7103, November 28–December 6. A large composite spot, *a*, dividing into two portions, *b* and *c*, which soon disappear. This group closely follows Group 7102 in the same disturbed area.
Group 7104, November 28. Two very small spots.
Group 7105, November 28. 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).
1914.				°	°	°			
332·174	N, VD		0·894	292·5	231·7	+20·5			219
			0·825	298·9	222·3	+24·2			367
		7102*a*	0·864	118·1	114·2	−23·3	46	269	
		7102	0·888	119·3	111·4	−25·2	5	9	
		7103	0·912	119·1	108·0	−25·8	9	19	
D.		7103*a*	0·926	120·5	106·2	−27·5	70	257	312*c*
		7103	0·944	121·8	103·2	−29·4	0	29	
		7103	0·948	122·9	102·8	−30·5	13	37	
		7103	0·953	120·3	101·2	−28·3	2	9	
		7106*a*	0·985	73·5	90·5	+16·4	39	206	249*c*
			0·962	112·3	97·8	−21·1			104
Nov. 29				(+17·1)	(170·1)	(+1·1)	(184)	(835)	(1251)
333·333	JS, N		0·977	290·5	231·9	+20·2			194
			0·930	294·9	221·5	+23·4			327
			0·833	296·3	208·4	+22·2			109
			0·860	320·1	202·5	+41·8			77
		7102*a*	0·708	123·5	115·4	−22·2	56	268	
		7102	0·733	123·1	113·3	−22·8	2	20	
		7102	0·768	122·4	110·0	−23·6	2	3	
		7103	0·793	122·1	107·7	−24·2	1	7	
		7103	0·799	123·8	107·6	−25·7	21	67	
C.		7103*a*	0·815	125·1	106·5	−27·3	9	176	490*c*
		7103*a*	0·833	124·3	104·3	−27·3	40	157	
		7103	0·866	123·2	100·2	−27·7	4	7	
		7106	0·875	71·5	95·1	+16·6	1	3	
		7106*a*	0·905	71·9	91·1	+16·8	31	169	427*c*
		7106	0·906	73·6	90·9	+15·2	0	11	
			0·851	114·7	99·6	−20·3			90
			0·936	113·6	87·8	−21·6			230
Nov. 30				(+16·7)	(154·9)	(+0·9)	(167)	(888)	(1944)
334·441	N, JS		0·971	293·6	215·2	+23·0			205
		7107	0·329	172·8	137·7	−18·2	2	11	
		7102*a*	0·535	135·4	116·5	−21·5	46	277	
		7102	0·584	133·0	112·7	−22·7	1	6	
		7103*b*	0·664	132·4	107·3	−25·9	28	69	
		7103	0·662	130·8	106·8	−24·9	0	5	
		7103	0·684	133·0	106·1	−27·1	1	7	192*c*
G.		7103	0·707	134·4	105·1	−28·9	0	2	
		7103	0·704	131·6	104·1	−27·1	4	10	
		7103*c*	0·719	131·6	102·9	−27·8	21	99	
		7106	0·753	67·7	93·6	+17·1	0	5	440*c*
		7106*a*	0·778	68·9	91·1	+16·8	27	185	
			0·831	115·0	87·1	−20·0			116
			0·937	63·7	72·6	+24·9			226
Dec. 1				(+16·3)	(140·2)	(+0·8)	(130)	(676)	(1179)
1914.				°	°	°			
335·318	JS, N	7107	0·358	207·1	138·5	−17·8	9	11	
		7107	0·361	205·1	137·9	−18·3	5	11	
		7107	0·345	201·1	136·2	−18·1	1	2	
		7107	0·376	195·3	134·8	−20·5	0	2	
		7107	0·352	195·3	134·3	−19·1	11	26	
		7102*a*	0·428	153·7	117·0	−21·8	50	215	
		7102	0·441	151·6	115·7	−22·0	5	15	
		7103	0·545	144·4	108·2	−25·5	9	25	
		7103*b*	0·563	143·7	107·0	−26·2	15	88	
		7103	0·590	140·6	104·1	−26·4	2	4	
		7103	0·626	143·3	103·4	−29·4	1	6	
C.		7103*c*	0·625	140·5	102·0	−28·1	22	98	
		7103	0·647	141·2	101·0	−29·6	1	3	
		7106	0·620	64·5	93·2	+16·0	1	2	
		7106	0·641	60·7	92·7	+18·8	1	1	277*c*
		7106*a*	0·647	65·0	91·2	+16·3	34	154	
		7106	0·669	71·3	88·3	+12·9	1	4	
		7108	0·669	122·5	91·8	−20·4	2	3	
		7108	0·698	121·9	89·4	−21·1	4	6	
		7109	0·751	72·7	81·4	+13·4	1	4	
			0·939	16·7	90·1	+64·4			76
			0·875	59·9	71·2	+26·4			439
Dec. 2				(+15·9)	(128·7)	(+0·7)	(175)	(680)	(792)
336·401	N, JS	7107	0·560	236·6	143·6	−17·5	0	2	
		7107	0·496	231·0	138·2	−17·7	10	28	
		7107	0·474	227·0	135·7	−18·3	0	4	
		7107	0·470	223·2	134·3	−19·5	7	23	
		7102*a*	0·385	186·9	117·2	−21·9	31	204	
		7103	0·464	167·3	107·9	−26·3	6	18	
G.		7103	0·448	166·3	107·7	−25·2	2	31	
		7103	0·469	163·6	106·0	−26·0	6	12	
		7103*c*	0·512	157·2	101·5	−27·6	7	51	
		7106*a*	0·463	53·9	91·6	+16·3	36	157	
		7109*	0·725	55·7	73·4	+24·4	0	3	
		7110*a*	0·979	72·9	36·8	+16·8	0	64	232*n*
			0·845	58·0	61·1	+26·9			130
Dec. 3				(+15·5)	(114·4)	(+0·5)	(105)	(597)	(362)
337·437	N, JS		0·950	246·1	170·7	−22·5			150
			0·831	291·5	155·0	+18·0			268
		7107	0·702	243·5	141·9	−17·9	1	8	
C.		7107	0·670	242·9	139·3	−17·4	10	23	
		7107	0·626	235·7	134·1	−20·3	2	12	
		7102*a*	0·470	213·6	117·1	−22·6	38	199	

Group 7106, November 29–December 11. Return of Group 7090. A fairly regular spot, *a*, often accompanied by small companions and gradually diminishing in size.
Group 7107, December 1–6. Revival of Group 7105. An irregular stream of small spots.
Group 7108, December 2. Two or three very small spots, being apparently a revival in the area of Groups 7087 and 7089.
Group 7109, December 2. A very small spot, *sf*, Group 7106.
Group 7109*, December 3. A very small spot.
Group 7110, December 3–15. Two ill-formed spots, the first of which, *a*, dies away after December 8, while *b*, the second and larger, breaks up into a small cluster on December 11.

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).
1914.				°	°	°			
337·437	N, JS	7103	0·463	193·9	107·9	−26·2	7	11	
		7103	0·455	192·3	107·0	−25·9	1	3	
		7103	0·468	188·2	105·1	−27·1	0	1	
		7103*c*	0·480	180·2	100·9	−28·2	13	36	
		7103	0·522	177·1	99·0	−30·9	1	2	
C.		7106*a*	0·320	31·3	90·9	+16·2	18	123	
		7110*a*	0·921	72·1	34·9	+16·6	8	108	} 635*c*
		7110*b*	0·956	71·7	28·8	+17·6	51	366	
			0·951	357·9	107·3	+72·0			118
			0·958	54·0	31·2	+34·3			127
Dec. 4				(+15·1)	(100·8)	(+0·4)	(150)	(892)	(1298)
338·420	N, JS		0·934	287·6	155·8	+16·5			158
		7107	0·838	249·5	142·7	−16·9	0	5	
		7107	0·808	247·9	139·3	−17·5	4	13	} 224*c*
		7107	0·775	247·1	136·0	−17·4	0	2	
		7107	0·759	244·5	134·0	−18·9	2	10	
		7102*a*	0·592	228·4	116·4	−22·8	34	198	
		7102	0·577	225·0	114·2	−23·7	1	4	
G.		7103	0·529	214·0	106·9	−25·7	2	5	
		7103	0·545	200·6	100·6	−30·3	0	3	
		7103	0·505	202·2	100·2	−27·5	0	2	
		7106*a*	0·277	350·6	90·5	+16·1	21	129	
		7111	0·565	160·4	75·0	−31·8	0	2	
		7110*a*	0·816	69·6	35·0	+16·7	14	79	} 516*c*
		7110*b*	0·873	69·7	28·7	+17·8	59	347	
			0·909	52·4	27·9	+33·8			154
Dec. 5				(+14·7)	(87·8)	(+0·3)	(137)	(799)	(1052)
339·185	N, JS		0·955	289·5	149·2	+18·6			125
		7107	0·856	249·4	134·6	−17·4	1	6	} 182*p*
		7107	0·855	247·3	134·1	−19·1	4	6	
		7102*a*	0·699	236·4	116·6	−22·5	37	174	
		7102	0·640	230·0	110·0	−24·0	0	1	
		7103	0·616	221·8	105·1	−27·1	1	4	
		7103	0·598	218·0	102·2	−27·8	2	9	
D.		7103	0·613	213·3	100·6	−30·5	2	10	
		7106*a*	0·358	323·8	90·4	+16·9	26	121	
		7110*a*	0·716	66·7	34·6	+16·5	16	61	
		7110	0·741	65·0	32·9	+18·3	2	11	} 275*c*
		7110	0·766	67·2	30·2	+17·4	4	8	
		7110*b*	0·787	67·0	28·3	+18·0	36	237	
			0·929	46·6	16·6	+39·7			129
Dec. 6				(+14·4)	(77·7)	(+0·2)	(131)	(648)	(711)
1914.				°	°	°			
340·561	JS, N		0·971	249·9	134·7	−19·5			260
			0·741	229·8	99·5	−28·3			133
		7102*a*	0·855	242·9	115·1	−22·9	24	165	202*f*
		7106*a*	0·567	300·5	90·1	+16·7	26	104	
		7106	0·543	297·4	89·3	+14·4	1	3	
		7106	0·550	302·2	88·6	+17·0	1	3	
		7110*a*	0·492	54·2	35·1	+16·7	8	15	
		7110	0·520	52·8	33·8	+18·3	1	4	
C.		7110	0·532	51·2	33·6	+19·4	3	8	
		7110	0·543	54·4	32·0	+18·4	1	5	
		7110	0·566	56·5	30·0	+18·1	3	7	
		7110*b*	0·589	57·2	28·2	+18·6	31	141	
		7110	0·578	60·0	28·2	+16·8	5	10	
		7110	0·592	62·8	26·6	+15·7	1	3	
			0·856	44·8	10·4	+37·3			112
			0·890	115·0	359·3	−22·0			92
			0·981	114·2	342·0	−23·7			106
Dec. 7				(+13·8)	(59·6)	(0·0)	(105)	(468)	(905)
341·312	N, JS		0·832	234·3	100·1	−29·0			279
		7102*a*	0·924	245·1	115·0	−22·9	27	150	263*f*
		7106*a*	0·685	295·1	89·9	+16·8	22	99	
		7106	0·675	296·6	88·8	+17·5	2	4	
		7112	0·340	241·7	67·3	− 9·4	0	4	
C.		7110*a*	0·377	39·4	35·3	+16·8	5	10	
		7110	0·422	38·1	33·8	+19·2	2	8	
		7110	0·445	47·0	29·8	+17·5	3	10	
		7110*b*	0·473	47·1	28·3	+18·6	24	140	
		7110	0·460	50·7	28·0	+16·8	2	7	
		7113	0·937	115·1	342·2	−23·5	1	12	123*j*
Dec. 8				(+13·5)	(49·7)	(−0·1)	(88)	(444)	(665)
342·464	JS, N		0·927	238·0	98·9	−29·5			320
			0·870	246·8	92·7	−20·2			69
		7102*a*	0·988	246·8	114·9	−23·0	33	222	198*f*
		7106*a*	0·841	290·0	89·8	+16·5	16	82	} 194*c*
		7106	0·823	287·5	88·3	+14·1	2	8	
		7115	0·624	349·2	42·9	+37·4	1	3	
		7115	0·577	356·5	37·0	+34·8	5	6	
C.		7115	0·604	0·2	34·3	+36·7	3	3	
		7110	0·331	0·8	34·2	+19·0	1	8	
		7110*b*	0·341	18·3	28·0	+18·5	22	111	
		7113	0·860	118·6	338·6	−24·5	0	7	} 144*p*
		7113	0·864	119·2	338·3	−25·1	0	5	
		7114*a*	0·946	64·8	325·7	+23·6	0	10	} 140*f*
		7114	0·952	64·8	324·4	+23·8	0	7	
Dec. 9				(+13·0)	(34·5)	(−0·3)	(83)	(472)	(1065)

Group 7111, December 5. A very small spot, *f*, a disturbed area.
Group 7112, December 8. A very small faint spot.
Group 7113, December 8–19. A few spots developing normally into a stream of which the rear spot, *b*, becomes the larger after December 12, the leader spot, *a*, gradually diminishing in size.
Group 7114, December 9–12. A small spot, *a*, with a companion on December 9.
Group 7115, December 9–10. One or two very small isolated spots in high latitude.

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).
1914.				°	°	°			
343·420	N, JS		0·980	240·3	98·6	−29·1			337
			0·912	241·6	84·8	−25·9			165
			0·812	285·9	74·9	+12·6			68
			0·826	300·6	73·1	+24·5			172
		7106*a*	0·936	288·0	90·0	+16·7	12	59	305*c*
		7115	0·612	339·0	37·2	+34·3	0	5	
C.		7110*b*	0·340	342·2	28·2	+18·4	20	65	
		7113	0·712	122·4	341·4	−22·7	0	14	
		7113	0·745	123·3	338·9	−24·4	4	20	140*c*
		7113	0·752	122·0	337·9	−23·7	3	14	
		7114*a*	0·863	62·4	325·7	+23·3	0	9	128*f*
			0·936	105·7	313·4	−14·8			118
Dec. 10				(+12·6)	(21·9)	(−0·4)	(39)	(186)	(1433)
344·361	JS, N		0·957	242·9	80·7	−26·0			77
			0·885	298·5	68·2	+24·7			336
		7106*a*	0·988	286·6	89·8	+16·3	13	23	84*f*
		7110	0·479	321·4	28·1	+21·4	2	8	
		7110	0·443	318·1	27·6	+18·7	11	20	
		7110	0·453	320·6	27·2	+20·0	0	5	
C.		7116	0·500	213·6	27·2	−25·0	7	13	
		7116	0·459	207·4	22·9	−24·5	3	10	
		7113*a*	0·552	131·8	343·3	−22·0	25	79	
		7113	0·566	129·8	341·7	−21·6	4	5	
		7113	0·593	130·8	340·4	−23·2	3	13	
		7113*b*	0·625	130·4	338·1	−24·3	15	65	
		7114*a*	0·749	57·7	326·1	+23·2	2	6	87*f*
Dec. 11				(+12·2)	(9·5)	(−0·5)	(85)	(247)	(584)
345·346	N, JS		0·956	296·4	67·2	+25·0			194
			0·692	301·2	35·5	+20·4			109
		7117	0·806	251·3	48·6	−15·3	7	12	107*f*
		7110	0·612	302·3	29·5	+18·6	1	3	
		7110	0·591	300·9	28·4	+17·1	3	4	
		7110	0·593	304·6	27·5	+19·1	22	33	
		7110	0·603	306·8	27·4	+20·6	3	15	
C.		7116	0·631	229·1	28·1	−24·9	5	14	
		7116	0·601	227·4	25·4	−24·4	0	2	
		7116	0·577	225·0	23·0	−24·5	6	14	
		7113*a*	0·419	150·1	343·5	−21·9	16	136	
		7113	0·439	144·0	340·5	−21·3	2	5	
		7113	0·463	144·8	339·8	−22·7	2	5	
		7113*b*	0·503	143·0	337·2	−24·2	24	136	
		7114*a*	0·619	49·2	326·0	+23·3	1	2	
Dec. 12				(+11·8)	(356·5)	(−0·6)	(92)	(381)	(410)
1914.				°	°	°			
346·449	N, JS	7117	0·938	253·5	50·8	−15·7	0	3	149*f*
		7116	0·787	239·1	29·6	−24·3	0	4	
		7116	0·765	237·1	27·0	−25·0	2	8	
		7116	0·750	237·7	25·8	−24·1	0	4	
		7116	0·728	236·2	23·5	−24·5	2	5	
		7110	0·763	297·3	28·0	+19·9	0	6	298*p*
		7110	0·752	296·5	27·2	+19·0	2	22	
C.		7113*a*	0·367	184·3	343·7	−22·2	17	93	
		7113	0·354	179·4	341·8	−21·4	6	18	
		7113	0·351	173·9	339·7	−21·1	4	7	
		7113	0·381	172·3	338·8	−22·9	6	14	
		7113	0·387	169·4	337·6	−23·1	1	13	
		7113*b*	0·409	168·1	336·7	−24·3	13	126	
			0·926	66·5	276·4	+21·4			110
Dec. 13				(+11·3)	(342·0)	(−0·8)	(53)	(323)	(557)
347·434	N, JS		0·981	252·7	47·3	−17·1			100
			0·855	241·7	24·5	−24·3			162
		7110	0·895	290·8	30·4	+18·1	2	9	
		7110	0·884	292·4	28·7	+19·2	0	4	184*c*
		7110	0·879	294·4	27·7	+20·8	0	3	
		7110	0·871	293·5	26·9	+19·8	0	6	
		7113*a*	0·429	211·7	343·0	−22·2	20	81	
G.		7113	0·403	210·7	341·7	−21·1	4	9	
		7113	0·383	206·5	339·5	−20·9	5	9	
		7113	0·394	204·8	339·2	−21·7	5	16	
		7113	0·420	199·4	337·8	−24·1	0	6	
		7113	0·378	202·0	337·7	−21·4	2	6	
		7113	0·400	200·5	337·7	−22·8	3	10	
		7113*b*	0·408	196·5	336·2	−23·8	30	188	
		7118	0·906	109·4	265·3	−17·9	0	7	214*f*
Dec. 14				(+10·8)	(329·0)	(−0·9)	(71)	(354)	(660)
348·336	JS, VD		0·937	244·2	24·8	−24·4			186
			0·835	318·6	1·6	+38·0			81
		7110	0·968	289·0	31·3	+18·1	8	23	
		7110	0·962	289·6	29·8	+18·5	0	12	546*c*
C.		7110	0·953	289·8	28·0	+18·5	5	19	
		7113*a*	0·547	228·0	343·2	−22·4	19	54	
		7113	0·530	229·3	342·6	−21·1	2	4	
		7113*b*	0·492	218·2	336·5	−23·6	20	151	
			0·986	70·6	238·0	+18·9			141
Dec. 15				(+10·4)	(317·2)	(−1·0)	(54)	(263)	(954)

Group 7116, December 11–13. A short stream of small spots.
Group 7117, December 12–13. A small spot.
Group 7118, December 14. 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).
				°	°	°			
1914.									
349·504	N, JS	7113*a*	0·706	238·7	342·4	−22·4	6	62	
C.		7113*b*	0·645	233·5	336·1	−23·5	17	170	
			0·934	66·9	235·1	+21·0			226
Dec. 16				(+9·9)	(301·8)	(−1·2)	(23)	(232)	(226)
350·475	N, JS	7113*a*	0·829	243·8	342·2	−22·2	9	42	137*c*
		7113*b*	0·780	240·5	336·5	−23·4	29	171	
G.		7119	0·964	66·4	216·5	+22·3	0	15	181*n*
		7119	0·969	66·8	215·4	+22·0	0	22	
			0·801	63·0	239·6	+20·4			116
Dec. 17				(+9·4)	(289·0)	(−1·3)	(38)	(250)	(434)
351·167	N, VD	7113*a*	0·903	246·1	342·7	−22·1	19	38	174*c*
		7113	0·883	248·3	340·4	−19·8	2	6	
		7113*b*	0·863	243·5	336·9	−23·3	24	146	
D.		7119	0·921	66·1	215·5	+21·2	3	5	297*c*
		7119*a*	0·923	65·3	215·3	+22·1	10	41	
			0·767	61·9	234·0	+20·1			104
			0·973	66·7	205·3	+22·2			284
Dec. 18				(+9·1)	(279·9)	(−1·4)	(58)	(236)	(859)
352·416	JS, N		0·885	300·3	321·2	+25·7			146
		7113*a*	0·976	249·8	340·4	−20·1	0	16	207*c*
		7113*b*	0·958	246·1	335·7	−23·3	14	72	
C.		7119*a*	0·788	59·5	216·3	+22·5	9	77	194*c*
		7119	0·823	59·5	212·8	+23·7	0	4	
			0·887	61·9	204·8	+23·9			249
Dec. 19				(+8·5)	(263·4)	(−1·5)	(23)	(169)	(796)
353·459	JS, VD	7120	0·958	253·0	322·6	−16·8	2	9	70*c*
		7120	0·942	253·2	319·5	−16·3	3	8	
		7119*a*	0·650	51·6	216·4	+22·4	8	60	
C.		7119	0·664	52·0	215·3	+22·7	1	3	
		7119	0·685	52·8	213·4	+23·2	1	2	
			0·792	55·4	203·6	+25·5			68
Dec. 20				(+8·0)	(249·7)	(−1·6)	(15)	(82)	(138)
354·512	JS, N	7119*a*	0·512	36·9	216·5	+22·4	13	33	
G.		7119	0·529	37·8	215·3	+22·9	1	6	
Dec. 21				(+7·5)	(235·8)	(−1·8)	(14)	(39)	(0)
1914.				°	°	°			
355·409	JS, N	7119*a*	0·429	16·7	216·4	+22·3	6	31	
C.		7119	0·440	18·8	215·2	+22·7	1	11	
			0·950	110·9	153·0	−20·4			58
Dec. 22				(+7·1)	(224·0)	(−1·9)	(7)	(42)	(58)
356·354	N, JS		0·888	298·7	269·9	+24·2			108
C.		7119*a*	0·422	350·1	216·0	+22·5	10	24	
			0·949	108·7	140·4	−18·4			197
Dec. 23				(+6·7)	(211·5)	(−2·0)	(10)	(24)	(305)
357·336	N, VD		0·951	295·8	267·7	+23·7			117
		7119*a*	0·505	323·8	217·3	+22·0	9	11	
C.		7121	0·718	120·0	156·4	−22·6	3	7	
			0·875	110·6	138·8	−19·0			124
			0·989	117·9	117·4	−27·9			286
Dec. 24				(+6·2)	(198·6)	(−2·1)	(12)	(18)	(527)
358·444	N, JS		0·813	299·7	233·5	+22·2			183
		7119*a*	0·644	310·5	215·9	+22·7	0	5	
		7121	0·527	133·9	159·6	−23·5	1	9	
C.		7121	0·540	129·9	157·5	−22·3	10	19	
		7122*a*	0·957	113·8	111·7	−23·4	14	82	577*s*
			0·759	114·4	136·9	−19·8			100
Dec. 25				(+5·7)	(184·0)	(−2·3)	(25)	(115)	(860)
359·391	N, VD		0·910	295·8	233·5	+22·2			220
			0·776	305·6	215·5	+25·1			141
C.		7123	0·550	23·0	157·5	+28·0	1	11	
		7122*a*	0·889	115·2	110·6	−23·3	15	59	516*s*
			0·973	118·8	95·5	−28·6			268
Dec. 26				(+5·2)	(171·5)	(−2·4)	(16)	(70)	(1145)
360·510	JS, N		0·980	291·8	233·4	+20·8			97
			0·884	296·5	215·1	+21·9			211
			0·793	301·2	203·9	+22·5			158
G.		7122*a*	0·760	118·5	110·5	−22·9	12	74	271*s*
			0·906	70·4	94·1	+16·5			186
			0·911	121·0	93·7	−29·1			304
Dec. 27				(+4·7)	(156·8)	(−2·5)	(12)	(74)	(1227)

Group 7119, December 17–25. A close pair of spots coalescing to form a single spot, *a*, by December 18. The group shows a continuation of activity in the area occupied by Groups 7094, 7095, and 7096.
Group 7120, December 20. A pair of small spots showing a revival of Group 7091.
Group 7121, December 24–25. One or two short-lived spots.
Group 7122, 1914 December 25–1915 January 4. Return of Group 7102. A slowly contracting spot, *a* of Group 7102, with a mass of faculæ to the South. The motion of the spot in longitude, since its maximum about December 3, appears to be consistently maintained.
Group 7123, December 26. A small double spot on the same meridian as Group 7121, but in the northern hemisphere.

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).
				°	°	°			
1914.									
361·359	JS, N		0·947	299·1	212·9	+26·4			233
			0·879	300·2	202·2	+24·8			186
C.		7122*a*	0·645	123·7	110·1	−23·0	10	42	
			0·853	124·3	91·2	−30·2			315
			0·853	68·5	89·8	+16·8			125
Dec. 28				(+4·3)	(145·6)	(−2·6)	(10)	(42)	(859)
362·340	VD, N		0·953	296·6	201·7	+24·3			264
			0·894	272·4	195·8	+ 0·9			46
			0·843	299·2	185·4	+22·7			49
C.		7124	0·500	149·2	115·9	−27·9	0	5	
		7122*a*	0·504	134·2	109·7	−23·0	7	29	
			0·931	60·8	68·3	+25·9			114
Dec. 29				(+3·8)	(132·7)	(−2·7)	(7)	(34)	(473)
1914.									
363·356	JS, N	7125	0·953	294·3	188·6	+22·0	9	48	353*c*
		7125	0·931	296·1	184·3	+22·9	0	6	
		7122*a*	0·386	155·9	109·5	−23·4	10	27	
		7126	0·854	103·9	61·1	−13·3	11	19	
C.		7126	0·863	102·9	60·0	−12·6	1	5	154*c*
		7126	0·883	104·9	57·7	−14·5	6	9	
		7126	0·886	104·4	57·3	−14·1	5	10	
			0·857	53·5	67·6	+28·8			81
Dec. 30				(+3·3)	(119·3)	(−2·9)	(42)	(124)	(588)
364·375	N, JS		0·901	293·2	167·0	+19·3			66
		7125	0·987	294·1	184·3	+23·2	0	44	251*s*
		7122*a*	0·355	188·6	109·2	−23·5	7	16	
		7126	0·701	106·2	62·3	−13·4	6	11	47*c*
C.		7126	0·771	106·1	56·2	−14·3	11	16	
		7127	0·989	74·5	25·6	+14·9	14	62	121*c*
			0·719	48·8	69·1	+25·8			76
			0·952	65·8	36·7	+21·9			423
Dec. 31				(+2·8)	(105·9)	(−3·0)	(38)	(149)	(984)

Group 7124, December 29. A very small spot, *sp*, Group 7122.
Group 7125, December 30–31. A small group forming near the West limb.
Group 7126, 1914 December 30–1915 January 5. Probably a return of Group 7116. A few small spots, in an intermittent group not seen on January 3 and 4.
Group 7127, 1914 December 31–1915 January 12. A fine cluster by January 3, developing into two large and active composite spots, *a* and *b*, with a few faint companions. *a*, the larger, has divided up by January 11, while *b* is quickly disappearing. Perhaps a return of Group 7110, but more probably a new disturbance in its neighbourhood.

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

1914.

AREAS and HELIOGRAPHIC POSITIONS of GROUPS of SUN SPOTS DEDUCED FOR EACH DAY from the MEASUREMENTS of the PHOTOGRAPHS taken at the ROYAL OBSERVATORIES of GREENWICH and of THE CAPE, and IN INDIA, at the OBSERVATORY, KODAIKÁNAL, and at DEHRA DÛN, in the YEAR 1914.

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 place where the photograph was taken is also indicated in the first Column. A photograph taken at Greenwich is indicated by the letter G, one taken at the Cape by the letter C, one taken at Kodaikánal by the letter K, and one taken at Dehra Dûn by the letter D.

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

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

In both systems the longitude of the centre of the Sun's disk is adopted as 235°·23 for 1914 Jan. 1d·0; the longitudes given under System I. being thus rendered uniform with those given in preceding volumes of the Greenwich Photo-Heliographic Results.

The Column "Longitude from the 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.

Group 7022.

1913 December 30–1914 January 4. A pair of double spots varying their distance from each other, with occasional different companions. The longitudes according to System II. for this group are computed from 1914·0, instead of 1913·0 as in the volume for 1913.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1914. d					°	°	°	°
$\bar{2}$·462 G	22	119	13	72	234·1	234·0	+22·7	−21·4
$\bar{1}$·463 G	18	90	10	51	235·2	235·2	+22·2	− 7·1
0·446 C	26	96	14	54	237·1	237·1	+22·5	+ 7·7
1·509 C	44	130	27	79	238·7	238·8	+22·5	+23·3
2·517 G	16	56	11	39	239·6	239·7	+22·0	+37·5
3·429 C	0	9	0	8	240·1	240·3	+22·1	+50·0
Means ..	..	..	13	51	237·47	237·52	+22·33	..

Group 7023.

January 1–2. A small unstable group.

0·446 C	22	107	30	142	162·2	162·2	−22·6	−67·2
1·509 C	8	44	7	39	162·2	162·3	−22·6	−53·2
Means ..	..	..	19	91	162·20	162·25	−22·60	..

Group 7025.

February 2–6. A short stream of small spots.

1914. d					°	°	°	°
32·486 G	21	84	11	44	178·8	173·6	−12·8	+11·3
33·531 G	7	101	4	57	178·4	173·1	−12·7	+24·7
34·486 G	32	124	20	78	178·8	173·3	−12·2	+37·7
35·396 G	11	78	9	61	179·1	173·5	−12·4	+50·0
36·408 G	5	30	6	33	179·8	174·0	−12·6	+64·0
Means ..	..	..	10	55	178·98	173·50	−12·54	..

Group 7028.

March 12–14. One or two small unstable spots.

70·533 G	0	20	0	20	329·8	320·3	+14·0	−56·5
71·393 C	3	20	2	15	330·0	320·4	+14·2	−45·0
72·408 G	0	12	0	8	326·5	316·7	+13·6	−35·1
Means ..	..	..	1	14	328·77	319·13	+13·93	..

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

Group 7029.

March 15–18. A small stream in high latitude, the rear spot, *a*, alone remaining after March 16.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1914. d					°	°	°	°
73·436 G	4	48	4	47	20·0	78·7	+44·4	+31·9
74·386 C	20	120	23	138	17·1	76·6	+44·9	+41·5
75·391 G	22	97	31	133	12·7	73·0	+44·7	+50·4
76·534 G	6	32	13	72	10·8	72·0	+45·0	+63·5
Means ..	..	..	18	98	15·15	75·08	+44·75	..

Group 7030.

March 30–April 11. A large continuously active spot-group. The main spot, *a*, soon breaks up into an increasing number of components—the most important being *b* and *c*—which form a stream covering 12° in longitude on April 6. After this date they diminish in number, only the rearmost spot remaining visible on April 11, close to the limb.

88·372 C	19	82	70	297	74·0	93·6	+29·0	−77·1
89·390 G	112	306	170	464	74·1	93·9	+29·0	−63·6
90·345 G	151	578	154	603	72·7	92·8	+28·2	−52·4
91·387 G	130	626	103	500	72·9	93·2	+28·3	−38·5
92·354 G	153	563	105	382	72·6	93·1	+28·2	−26·0
93·553 G	148	619	92	384	73·6	94·4	+28·8	− 9·2
94·604 G	236	932	143	567	72·6	93·6	+28·0	+ 3·7
95·362 G	218	927	136	580	72·5	93·7	+27·9	+13·6
96·392 G	129	574	88	392	72·4	93·8	+27·7	+27·1
97·355 G	155	537	124	430	72·1	93·7	+27·8	+39·5
98·355 G	127	422	131	428	71·2	93·0	+27·7	+51·8
99·351 G	53	289	80	431	70·1	92·2	+28·5	+63·8
100·417 C	0	31	0	67	63·7	86·0	+29·4	+71·5
Means ..	..	..	107	425	71·88	92·85	+28·35	..

Group 7031.

April 12–14. Two or three small spots.

101·372 G	0	21	0	17	287·2	303·2	−25·3	−52·4
102·315 C	15	56	11	39	286·5	302·7	−27·0	−40·6
103·425 G	6	31	4	18	284·2	300·5	−26·4	−28·3
Means ..	..	..	5	25	285·97	302·13	−26·23	..

Group 7032.

April 16–24. A succession of small short-lived spots varying in relative importance.

105·353 G	9	49	7	37	241·0	250·3	−24·5	−46·0
106·374 G	15	37	9	23	243·2	252·6	−23·3	−30·3
107·351 G	13	55	8	31	242·8	252·2	−23·3	−17·8

Group 7032—*continued.*

1914. d					°	°	°	°
108·348 G	34	115	19	63	240·3	249·8	−24·3	− 7·1
109·349 G	8	35	5	19	238·9	248·5	−24·4	+ 4·7
110·362 G	11	46	6	26	239·9	249·6	−23·5	+19·0
111·175 D	52	119	32	72	239·2	249·0	−23·5	+29·1
112·352 C	22	69	15	50	238·7	248·6	−23·5	+44·1
113·388 C	7	33	6	32	238·6	248·6	−23·6	+57·7
Means ..	..	..	12	39	240·29	249·91	−23·77	..

Group 7033.

April 19–22. A pair of small unstable groups.

108·348 G	13	74	10	53	289·8	304·5	−25·5	+42·4
109·349 G	33	94	32	91	290·9	305·8	−25·2	+56·7
110·362 G	4	60	6	88	291·1	306·1	−25·6	+70·2
111·175 D	0	21	0	58	290·7	305·8	−25·7	+80·6
Means ..	..	..	12	73	290·63	305·55	−25·50	..

Group 7035.

April 24–25. Two or three small unstable spots.

113·388 C	4	24	2	12	174·6	156·2	−11·7	− 6·3
114·351 C	11	34	5	17	171·1	152·6	−12·9	+ 2·9
Means ..	..	..	4	15	172·85	154·40	−12·30	..

Group 7036.

April 26–May 3. A fine stream of active spots of rapid development. The leader spot, *a*, continues to be the most important member, as the rear of the stream soon disappears. *a*, the umbra of which is frequently crossed by bright bridges, is measured in two portions on April 29.

115·462 C	31	145	18	85	136·4	131·7	+19·2	−17·1
116·529 G	153	720	83	393	138·5	133·7	+18·5	− 0·9
117·384 G	272	1132	150	628	137·8	133·0	+18·7	+ 9·7
118·444 G	289	1217	173	727	137·6	132·7	+18·6	+23·5
119·384 C	165	1051	112	710	137·5	132·6	+18·6	+35·8
120·318 G	146	780	117	638	137·4	132·5	+18·1	+48·1
121·540 G	98	415	124	530	137·2	132·2	+18·6	+64·0
122·155 K	23	260	37	480	137·0	132·0	+18·8	+72·0
Means ..	..	..	102	524	137·43	132·55	+18·64	..

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

Group 7038.

April 28–May 4. Return of Group 7030. A group of spots appearing on the East limb and showing signs of dying activity.

Date. Greenwich Civil Time. and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
1914. d					°	°	°	°
117·384 G	34	132	66	254	57·2	73·9	+25·9	−70·9
118·444 G	50	139	56	157	56·2	73·0	+25·8	−57·9
119·384 C	20	117	17	98	55·8	72·8	+25·3	−45·9
120·318 G	35	95	25	65	55·5	72·6	+25·3	−33·8
121·540 G	17	53	10	33	54·1	71·4	+25·6	−19·1
122·155 K	2	42	1	25	53·2	70·5	+26·2	−11·8
123·406 G	0	9	0	5	52·9	70·4	+25·9	+ 4·4
Means ..	..	..	25	91	54·99	72·09	+25·71	..

Group 7036.*

May 2–4. One or two small spots.

121·540 G	1	12	1	11	122·7	120·9	−20·0	+49·5
122·155 K	6	22	6	21	123·3	121·5	−19·9	+58·3
123·406 G	1	3	2	7	126·3	124·4	−19·4	+77·8
Means ..	..	..	3	13	124·10	122·27	−19·77	..

Group 7042.

May 21–25. A short and unimportant stream of small unstable spots.

140·315 G	24	69	14	40	189·9	214·3	+26·4	+ 5·0
141·540 G	42	98	26	60	189·5	214·1	+26·5	+20·8
142·388 C	44	149	30	100	188·9	213·7	+26·9	+31·5
143·399 G	34	75	27	60	187·8	212·8	+26·6	+43·7
144·325 G	0	8	0	9	189·8	214·9	+27·4	+58·0
Means ..	..	..	19	54	189·18	213·96	+26·76	..

Group 7045.

May 29–30. Two or three very small spots.

148·359 C	1	16	1	9	56·8	65·0	−24·0	−21·6
149·116 K	12	21	6	12	56·5	64·7	−21·1	−11·9
Means ..	..	..	4	11	56·65	64·85	−22·55	..

Group 7046.

June 8–15. A stable spot, *a*, with small evanescent companions.

158·385 G	29	89	29	90	250·4	286·0	+28·3	−55·4
159·539 G	44	168	33	123	251·1	287·0	+28·3	−39·4
160·354 G	49	193	31	123	251·4	287·5	+28·2	−28·3

Group 7046—*continued.*

1914. d					°	°	°	°
161·303 G	34	167	20	99	250·0	286·3	+28·9	−17·1
162·592 G	14	49	8	28	251·9	288·5	+28·1	+ 1·8
163·527 G	14	44	8	25	251·0	287·8	+28·1	+13·3
164·361 G	15	27	9	17	250·7	287·7	+28·5	+24·0
165·304 G	1	21	1	14	248·8	286·0	+29·2	+34·6
Means ..	..	..	17	65	250·66	287·10	+28·45	..

Group 7047.

June 12–22. A fine active stream. A small group on June 12, developing into a stream of normal type. The spot, *a*, at the head of the stream has, by June 19, completely coalesced with spot *b* (represented by a cluster of small spots on June 17) to form *c*, which remains stable as the rear of the stream gradually disappears.

162·592 G	29	85	24	71	200·8	208·1	−21·8	−49·3
163·527 G	52	146	35	100	200·6	208·0	−21·9	−37·1
164·361 G	73	324	44	199	200·1	207·5	−22·1	−26·6
165·304 G	61	529	35	298	201·4	208·8	−22·4	−12·8
166·452 G	84	629	47	347	202·5	210·0	−22·1	+ 3·5
167·397 G	228	1097	129	624	201·3	208·8	−22·4	+14·8
168·309 G	222	1197	138	737	200·7	208·3	−22·4	+26·3
169·355 G	159	827	115	597	200·9	208·5	−22·2	+40·4
170·475 G	112	557	108	543	201·1	208·8	−22·0	+55·4
171·571 G	43	287	77	507	202·6	210·3	−22·0	+71·4
172·350 G	0	74	0	445	205·1	212·9	−22·5	+84·2
Means ..	..	..	68	406	201·56	209·09	−22·16	..

Group 7049.

June 13–18. A few small spots of which *a* is the most stable.

163·527 G	15	68	16	73	176·8	161·3	−15·4	−60·9
164·361 G	23	55	19	46	175·9	160·3	−15·7	−50·8
165·304 G	20	44	14	30	174·7	159·0	−16·0	−39·5
166·452 G	0	13	0	7	175·4	159·6	−16·5	−23·6
167·397 G	0	15	0	8	175·6	159·7	−17·1	−10·9
168·309 G	1	13	1	7	176·4	160·4	−15·8	+ 2·0
Means ..	..	..	8	29	175·80	160·05	−16·08	..

Group 7050.

July 1–2. A small cluster of short-lived spots.

181·376 G	11	62	8	44	39·6	40·0	−20·4	+38·2
182·437 C	2	10	2	9	40·3	40·7	−20·5	+52·9
Means ..	..	..	5	27	39·95	40·35	−20·45	..

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

Group 7051.

July 2–13. A revival of Group 7048. A fairly regular spot, *a*, passing through a phase of instability from July 6–8; it is measured in two portions on July 7.

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
1914. d					°	°	°	°
182·437 C	0	9	0	25	272·2	347·7	−34·2	−75·2
183·449 G	15	60	22	88	271·2	347·1	−34·2	−62·8
184·472 G	21	75	20	72	272·5	348·9	−34·3	−48·0
185·495 C	25	155	19	119	272·9	349·7	−33·8	−34·0
186·701 G	30	137	19	90	273·2	350·5	−33·7	−17·8
187·361 G	33	138	20	88	273·5	351·1	−33·7	− 8·7
188·661 G	27	146	18	93	273·7	351·8	−34·1	+ 8·7
189·361 G	15	114	10	76	273·3	351·7	−34·2	+17·6
190·312 G	21	95	16	70	272·9	351·7	−34·3	+29·7
191·438 G	17	59	15	53	272·4	351·7	−34·3	+44·1
192·329 G	11	31	12	36	271·7	351·3	−34·6	+55·2
193·517 C	2	6	5	12	271·0	351·1	−34·6	+70·3
Means ..	..	..	15	69	272·54	350·36	−34·17	..

Group 7052.

July 2–7. A spot soon breaking up into evanescent components. The area of activity connected with this group is closely related to that of Group 7051, and shows a remarkable drift both in latitude and longitude.

182·437 C	0	9	0	39	267·2	359·7	−34·3	−80·2
183·449 G	9	47	19	93	265·0	358·0	−35·8	−69·0
184·472 G	19	68	25	87	262·2	355·7	−36·5	−58·3
185·495 C	15	43	14	40	261·7	355·7	−37·1	−45·2
186·701 G	6	21	5	16	259·8	354·5	−38·1	−31·2
187·361 G	2	23	2	17	258·2	353·2	−39·1	−24·0
Means ..	..	..	11	49	262·35	356·13	−36·82	..

Group 7054.

July 11–13. One or two unstable spots; none are visible on July 12.

191·438 G	13	44	7	27	207·9	207·7	−20·5	−20·4
192·329 G	0	0	0	0	..	..	..	..
193·517 C	2	7	1	4	208·9	208·7	−20·2	+ 8·2
Means ..	..	..	3	10	208·40	208·20	−20·35	..

Group 7056.

July 16–19. A small unstable group.

196·333 G	5	23	3	15	141·8	176·2	−26·9	−21·7
197·452 G	14	160	8	95	142·3	176·9	−26·7	− 6·4
198·360 G	14	76	8	45	141·9	176·6	−27·0	+ 5·2
199·367 G	0	8	0	5	138·9	173·8	−26·6	+15·6
Means ..	..	..	5	40	141·23	175·88	−26·80	..

Group 7057.

July 21–23. Two small spots.

1914. d					°	°	°	°
201·703 G	2	17	2	20	31·8	26·2	−19·0	−60·6
202·357 G	4	15	4	13	31·9	26·27	−19·4	−51·9
203·301 G	2	6	1	4	33·7	28·0	−19·3	−37·6
Means ..	..	..	2	12	32·47	26·80	−19·23	..

Group 7058.

July 30–31. Revival of Group 7057. One or two small spots.

210·319 G	0	20	0	19	31·2	32·5	−20·5	+52·7
211·516 C	1	4	2	8	33·0	34·3	−20·8	+70·4
Means ..	..	..	1	14	32·10	33·40	−20·65	..

Group 7060.

August 13–26. A fine large regular spot, *a*, showing practically no activity, with occasional small companions generally on the following side.

224·368 G	57	179	171	540	70·4	64·6	+19·3	−82·3
225·355 G	74	423	106	609	68·9	63·0	+19·4	−70·7
226·171 D	82	570	82	568	68·6	62·7	+19·2	−60·3
227·346 G	170	876	120	620	68·6	62·7	+19·4	−44·7
228·466 G	162	1120	95	663	68·4	62·5	+19·3	−30·1
229·310 G	227	1095	123	593	68·3	62·3	+19·1	−19·1
230·524 G	255	1297	130	666	67·9	61·9	+19·3	− 3·4
231·349 G	230	1578	118	817	67·4	61·4	+19·3	+ 7·0
232·332 G	245	1284	133	700	67·4	61·4	+19·3	+20·0
233·322 G	207	1208	126	738	67·1	61·0	+19·5	+32·8
234·629 G	146	867	114	676	67·2	61·1	+19·4	+50·1
235·350 G	127	635	125	623	67·5	61·4	+19·5	+59·9
236·423 G	65	405	109	681	67·5	61·4	+19·5	+74·1
237·445 C	20	82	96	393	65·9	59·7	+19·0	+86·0
Means ..	..	..	118	635	67·94	61·94	+19·32	..

Group 7061.

August 16–18. A pair of small spots, *a* and *b*; *b* alone remains on Aug. 18.

227·346 G	14	41	11	34	160·5	149·4	−18·2	+47·2
228·466 G	9	76	12	95	161·0	149·8	−18·0	+62·5
229·310 G	2	4	4	7	157·7	146·5	−18·6	+70·3
Means ..	..	..	9	45	159·73	148·57	−18·27	..

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

Group 7064.

August 18–19. A very small unstable spot.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1914. d					°	°	°	°
229·310 G	1	7	2	6	54·7	115·0	−30·3	−32·7
230·524 G	0	6	0	4	56·4	117·0	−29·0	−14·9
Means ..	..	..	1	5	55·55	116·00	−29·65	..

Group 7065.

August 23–24. A few small spots.

234·629 G	9	27	12	34	76·5	121·1	−27·1	+59·4
235·350 G	10	36	19	70	77·1	121·8	−27·5	+69·5
Means ..	..	..	16	52	76·80	121·45	−27·30	..

Group 7066.

August 30–31. A few small spots, of which *a* is double.

241·443 G	12	21	10	15	331·2	312·6	+17·1	+44·1
242·424 C	2	20	2	18	332·0	313·3	+16·9	+57·9
Means ..	..	..	6	17	331·60	312·95	+17·00	..

Group 7067.

September 8–20. A large regular spot, *a*, occasionally with one or two small followers, and gradually diminishing in size.

250·469 G	17	77	63	293	88·3	76·8	−18·9	−79·5
251·408 G	24	174	39	281	87·3	75·7	−18·6	−68·1
252·348 G	30	248	31	253	87·3	75·7	−18·3	−55·7
253·646 G	58	366	42	266	87·0	75·3	−18·2	−38·9
254·363 G	58	350	37	224	86·7	75·0	−18·0	−29·7
255·383 G	78	392	45	228	86·7	75·0	−17·8	−16·3
256·542 G	70	375	39	209	86·2	74·4	−18·0	− 1·4
257·349 G	68	376	38	212	85·7	73·9	−18·1	+ 8·7
258·386 G	50	320	31	195	85·4	73·5	−18·5	+22·1
259·540 G	35	261	25	185	85·2	73·3	−18·6	+37·1
260·388 G	47	218	40	187	85·0	73·0	−18·7	+48·1
261·372 G	29	163	34	194	84·7	72·7	−18·9	+60·8
262·645 G	13	50	38	143	83·9	71·8	−18·7	+76·8
Means ..	..	..	39	221	86·11	74·32	−18·41	..

Group 7068.

September 10–22. Return of Group 7060. A very large regular spot, *a*, with one or two small companions on September 16 and 17, and showing signs of breaking up as the Western limb is approached. *a* was visible right on the Eastern limb on September 9, but its position and area could not well be determined.

1914. d					°	°	°	°
252·348 G	35	273	69	536	66·3	49·4	+17·5	−76·7
253·646 G	81	479	79	470	66·0	49·0	+17·6	−59·9
254·363 G	114	571	89	444	66·1	49·1	+17·5	−50·3
255·383 G	112	690	70	434	65·9	48·8	+17·6	−37·1
256·542 G	118	842	64	460	65·6	48·4	+17·8	−22·0
257·349 G	155	864	80	449	65·5	48·3	+17·9	−11·5
258·386 G	165	871	85	449	65·1	47·8	+17·8	+ 1·8
259·540 G	168	926	88	485	65·0	47·6	+17·8	+16·9
260·388 G	138	834	79	478	64·7	47·3	+17·6	+27·8
261·372 G	124	647	82	427	64·5	47·0	+17·5	+40·6
262·645 G	79	472	72	431	64·5	46·9	+17·2	+57·4
263·491 G	58	332	76	432	64·3	46·6	+16·9	+68·4
264·358 G	18	117	44	270	63·4	45·7	+16·6	+78·9
Means ..	..	..	75	443	65·15	47·84	+17·48	..

Group 7069.

September 11–21. An unstable spot, *a*, with companions, breaking up after September 15.

253·646 G	0	40	0	148	49·1	112·3	−29·6	−76·8
254·363 G	16	122	31	237	48·3	111·6	−29·9	−68·1
255·383 G	28	157	32	185	47·4	111·0	−29·4	−55·6
256·542 G	27	196	23	167	45·8	109·7	−29·2	−41·8
257·349 G	36	230	27	170	45·7	109·8	−29·1	−31·3
258·386 G	40	149	26	97	45·6	109·9	−28·7	−17·7
259·540 G	16	41	11	26	44·4	109·0	−28·7	− 3·7
260·388 G	5	26	4	16	44·7	109·5	−29·7	+ 7·8
261·372 G	0	12	0	8	43·0	108·1	−29·2	+19·1
262·645 G	3	8	2	6	40·7	106·1	−28·9	+33·6
263·491 G	3	15	3	14	40·7	106·3	−28·8	+44·8
Means ..	..	..	14	98	45·04	109·39	−29·20	..

Group 7070.

September 12–13. A small spot, *p*, Group 7069.

254·363 G	0	6	0	8	56·0	106·1	−27·7	−60·4
255·383 G	4	14	4	13	57·6	107·9	−27·4	−45·4
Means ..	..	..	2	11	56·80	107·00	−27·55	..

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

Group 7072.

September 16–19. One or two small unstable spots in a disturbed area *nf* Group 7068.

Date. Greenwich Civil Time. and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1914. d					°	°	°	°
258·386 G	3	23	2	12	60·5	113·5	+26·6	− 2·8
259·540 G	2	20	1	11	61·8	115·0	+26·8	+13·7
260·388 G	5	39	3	23	59·6	113·0	+28·6	+22·7
261·372 G	4	14	3	9	59·3	112·9	+29·2	+35·4
Means ..	..	..	2	14	60·30	113·60	+27·80	..

Group 7073.

September 24–October 2. A small regular spot, *a*, commencing to break up rapidly on October 1. Two distant followers appear on October 2.

Date. Greenwich Civil Time. and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
266·416 G	15	34	29	65	240·8	256·8	+22·9	−76·5
267·376 G	18	71	21	79	240·6	256·6	+23·0	−64·0
268·380 G	18	93	15	76	240·2	256·3	+22·8	−51·2
269·533 G	15	121	10	78	239·3	255·5	+22·8	−36·9
270·435 C	27	159	16	91	239·8	256·0	+22·6	−24·5
271·342 G	25	134	13	71	239·5	255·8	+22·7	−12·8
272·436 G	25	131	13	68	239·1	255·4	+22·7	+ 1·2
273·386 G	13	57	7	31	239·0	255·4	+22·5	+13·7
274·381 C	16	40	9	23	236·4	252·9	+22·6	+24·2
Means ..	..	..	15	65	239·41	255·63	+22·73	..

Group 7076.

October 9–11. A short sparse stream of very small spots, being apparently a revival of Group 7071.

Date. Greenwich Civil Time. and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
281·470 G	0	21	0	12	140·4	132·5	+19·2	+21·7
282·483 G	25	43	16	27	141·2	133·3	+19·3	+35·9
283·422 C	11	22	9	16	142·4	134·5	+19·1	+49·5
Means ..	..	..	8	18	141·33	133·43	+19·20	..

Group 7077.

October 11–13. A few scattered evanescent spots—none seen on October 12. This group marks the position of the great spot of August and September—Groups 7060 and 7068.

Date. Greenwich Civil Time. and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
283·422 C	5	28	3	16	65·7	43·9	+17·3	−27·2
284·611 G	0	0	0	0	..	..	..	..
285·455 C	6	42	4	22	62·8	40·8	+16·7	− 3·3
Means ..	..	..	2	13	64·25	42·35	+17·00	..

Group 7079.

October 19–21. A small unstable group.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1914. d					°	°	°	°
291·446 C	22	57	14	37	328·2	41·4	−29·4	−18·9
292·345 C	25	127	16	79	327·4	40·8	−29·4	− 7·8
293·533 G	10	19	6	12	327·4	41·1	−29·0	+ 7·8
Means ..	..	..	12	43	327·67	41·10	−29·27	..

Group 7081.

October 21–30. An active stream of small spots, of which the leader, *a*, remains fairly stable until October 26, after which date a spot, *b*, in the rear of the stream becomes the most prominent feature.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
293·533 G	1	11	1	8	276·1	272·6	+20·0	−43·5
294·494 C	37	100	23	61	275·0	271·5	+19·8	−31·9
295·307 C	53	115	29	63	275·5	272·0	+20·1	−20·7
296·559 G	23	56	12	29	277·4	273·8	+20·3	− 2·3
297·167 D	31	80	16	41	277·2	273·6	+20·7	+ 5·6
298·373 G	11	45	6	25	274·0	270·4	+20·6	+18·3
299·414 G	16	86	10	51	273·0	269·4	+19·7	+31·0
300·529 G	28	110	21	79	272·5	268·9	+19·3	+45·2
301·380 G	22	77	20	70	271·8	268·2	+19·5	+55·7
302·385 G	0	21	0	27	270·0	266·4	+19·2	+67·2
Means ..	..	..	14	45	274·25	270·68	+19·92	..

Group 7082.

October 25–26. One or two very small spots.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
297·167 D	2	8	1	4	259·4	187·5	+ 5·2	−12·2
298·373 G	3	12	2	6	258·4	186·2	+ 4·9	+ 2·7
Means ..	..	..	2	5	258·90	186·85	+ 5·05	..

Group 7085.

October 26–November 3. An active stream of generally unimportant spots; a spot, *a*, in the rear of the stream becoming predominant after October 31, and increasing in area until its disappearance round the Western limb.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra.	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
298·373 G	6	13	3	8	225·8	240·7	+22·4	−29·9
299·414 G	49	99	28	55	225·7	240·7	+22·7	−16·3
300·529 G	30	83	15	43	225·3	240·3	+22·7	− 2·0
301·380 G	20	90	11	49	225·3	240·4	+22·8	+ 9·2
302·385 G	14	78	9	44	225·3	240·4	+23·0	+22·5
303·424 C	12	64	8	42	225·4	240·6	+22·8	+36·3
304·569 G	51	156	45	137	228·1	243·3	+21·6	+54·1
305·460 C	32	157	40	194	228·2	243·5	+21·4	+65·9
306·433 G	6	56	12	108	225·0	240·3	+22·0	+75·6
Means ..	..	..	19	76	226·01	241·13	+22·38	..

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

Group 7087.

November 2–11. An irregular stream of small unstable spots.

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Foreshortening of Umbra	Area Corrected for Foreshortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1914. d					°	°	°	°
305·460 C	0	18	0	43	86·7	76·9	−19·5	−75·6
306·433 G	13	55	13	66	88·0	78·2	−18·5	−61·4
307·417 C	24	78	20	66	88·3	78·5	−18·7	−48·2
308·443 G	23	126	16	84	87·4	77·5	−18·6	−35·5
309·450 G	53	181	32	107	87·0	77·1	−18·7	−22·7
310·415 G	37	92	21	49	87·1	77·2	−18·9	− 9·8
311·545 G	13	32	7	18	89·6	79·6	−19·1	+ 7·6
312·580 C	0	36	0	21	90·4	80·4	−19·1	+22·0
313·384 G	15	52	9	34	90·3	80·3	−19·1	+32·5
314·378 C	3	9	3	7	88·6	78·5	−20·3	+43·9
Means ..	..	..	12	50	88·34	78·42	−19·05	..

Group 7088.

November 6–15. An active stream of spots of rapid birth. The stream is considerably inclined to the equator, and its length steadily increases as the two principal components, *a* and *b*, move away from each other. The rear spot, *b*, is breaking up on November 12, the leader spot, *a*, alone remaining on November 14.

309·450 G	0	5	0	4	67·6	88·3	+23·3	−42·1
310·415 G	97	327	58	199	67·6	88·4	+24·8	−29·3
311·545 G	108	537	60	294	68·2	89·1	+23·9	−13·8
312·580 C	104	657	56	352	68·2	89·1	+23·8	− 0·2
313·384 G	157	603	86	328	68·0	89·0	+23·6	+10·2
314·378 C	85	375	50	221	69·8	90·9	+23·0	+25·1
315·412 G	50	196	34	135	70·8	91·9	+22·4	+39·7
316·403 C	33	151	30	139	73·1	94·3	+22·2	+55·1
317·420 G	9	88	13	129	74·1	95·4	+21·4	+69·5
318·548 G	0	21	0	128	76·1	97·4	+21·9	+86·4
Means ..	..	..	39	193	70·35	91·38	+23·03	..

Group 7091.

November 13–15. Two or three small unstable spots.

316·403 C	10	24	9	23	323·4	299·4	−17·3	−54·6
317·420 G	22	39	16	27	322·8	298·7	−16·9	−41·8
318·548 G	20	34	12	20	324·6	300·4	−16·9	−25·1
Means ..	..	..	12	23	323·60	299·50	−17·03	..

Group 7092.

November 18–20. One or two very small spots.

321·443 G	3	8	2	5	308·7	314·8	−21·4	− 2·9
322·372 C	1	4	1	2	310·1	316·2	−20·9	+10·8
323·462 G	0	7	0	4	309·0	315·1	−21·2	+24·0
Means ..	..	..	1	4	309·27	315·37	−21·17	..

Group 7093.

November 18–19. Some very small faint spots.

1914. d					°	°	°	°
321·443 G	2	2	1	1	298·2	267·7	+15·8	−13·4
322·372 C	3	17	2	9	298·3	267·7	+16·4	− 1·0
Means ..	..	..	2	5	298·25	267·70	+16·10	..

Group 7094.

November 18–27. Return of Group 7085. Two stable spots, *a* and *b*, with occasional small attendants.

321·443 G	18	87	43	210	233·4	229·5	+20·4	−78·2
322·372 C	23	144	30	183	233·3	229·4	+20·6	−66·0
323·462 G	32	165	27	140	232·9	229·0	+20·3	−52·1
324·355 C	40	221	28	152	232·5	228·6	+20·4	−40·7
325·452 C	57	267	35	157	232·1	228·2	+20·2	−26·6
326·381 C	37	139	20	75	231·9	228·0	+20·1	−14·6
327·522 G	32	148	17	78	231·6	227·7	+19·4	+ 0·2
328·528 G	14	66	8	35	231·3	227·4	+19·3	+13·1
329·305 C.	14	28	8	16	231·6	227·7	+19·3	+23·7
330·537 G	4	6	3	4	231·3	227·3	+18·9	+39·6
Means ..	..	..	22	105	232·19	228·28	+19·89	..

Group 7095.

November 20–24. One or two very small unstable spots, *f*, Group 7094, in the same general area of disturbance. No spots are seen on November 23.

323·462 G	0	3	0	4	221·4	228·2	+21·1	−63·6
324·355 C	0	10	0	8	220·3	227·1	+22·6	−52·9
325·452 C	0	2	0	1	219·4	226·2	+19·8	−39·3
326·381 C	0	0	0	0	..	..	..	..
327·522 G	17	28	9	15	221·7	228·6	+21·4	− 9·7
Means ...	..	..	2	6	220·70	227·53	+21·23	..

Group 7096.

November 21–24. A few small spots, *f*, Group, 7095.

324·355 C	13	36	12	37	215·0	224·7	+22·0	−58·2
325·452 C	13	89	9	64	215·9	225·7	+21·2	−42·8
326·381 C	17	32	10	20	215·1	224·9	+21·4	−31·4
327·522 G	0	11	0	6	212·2	222·0	+21·8	−19·2
Means ..	..	..	8	32	214·55	224·33	+21·60	..

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

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Group 7098. November 22–24. One or two very small spots, *nf*, Group 7094; none are seen on November 23.								
1914. d					°	°	°	°
325·452 C	1	4	1	3	227·6	267·3	+24·6	−31·1
326·381 C	0	0	0	0	..	..	..	..
327·522 G	1	9	1	5	227·1	267·1	+25·4	− 4·3
Means ..	..	..	1	3	227·35	267·20	+25·00	..
Group 7101. November 24–27. A pair of spots, *a* and *b*, widely separated in longitude and diminishing rapidly in area.								
327·522 G	12	79	19	147	157·2	133·6	+17·1	−74·2
328·528 G	28	106	29	112	157·7	134·0	+17·0	−60·5
329·305 C	35	68	29	57	156·3	132·6	+17·4	−51·6
330·537 G	5	15	3	9	155·5	131·7	+17·4	−36·2
Means ..	..	..	20	81	156·68	132·98	+17·23	..
Group 7102. November 27–December 9. A large, almost regular spot, *a*, with occasional small followers. *a* reaches a minimum in latitude on December 1, and a maximum in longitude about December 3.								
330·537 G	6	26	17	73	113·6	133·1	−24·2	−78·1
331·304 C	21	102	31	151	113·8	133·3	−23·6	−67·8
332·174 D	51	281	51	278	114·1	133·7	−23·4	−56·0
333·333 C	84	410	60	291	115·2	134·9	−22·3	−39·7
334·441 G	79	477	47	283	116·4	136·1	−21·5	−23·8
335·318 C	100	414	55	230	116·9	136·7	−21·8	−11·8
336·401 G	58	375	31	204	117·2	137·0	−21·9	+ 2·8
337·437 C	66	350	38	199	117·1	137·0	−22·6	+16·3
338·420 G	57	326	35	202	116·4	136·4	−22·8	+28·6
339·185 D	52	251	37	175	116·6	136·6	−22·5	+38·9
340·561 C	25	171	24	165	115·1	135·2	−22·9	+55·5
341·312 C	21	116	27	150	115·0	135·1	−22·9	+65·3
342·464 C	11	70	33	222	114·9	135·1	−23·0	+80·4
Means ..	..	..	37	202	115·56	135·40	−22·72	..
Group 7103. November 28–December 6. A large composite spot, *a*, dividing into two portions, *b* and *c*, which soon disappear. This group closely follows Group 7102 in the same disturbed area.								
331·304 C	11	66	22	140	107·7	171·3	−26·7	−73·9
332·174 D	71	260	94	351	105·6	169·4	−27·9	−64·5
333·333 C	85	476	75	414	105·8	169·8	−27·0	−49·1
334·441 G	80	276	54	192	104·8	169·0	−27·0	−35·4
Group 7103—*continued.*								
1914. d					°	°	°	°
335·318 C	81	360	50	224	104·7	169·1	−27·1	−24·0
336·401 G	36	196	21	112	104·7	169·3	−26·6	− 9·7
337·437 C	37	94	22	53	102·7	167·5	−27·7	+ 1·9
338·420 G	4	17	2	10	103·7	168·7	−27·4	+15·9
339·185 D	7	36	5	23	102·0	167·1	−28·9	+24·3
Means ..	..	..	38	169	104·63	169·02	−27·37	..
Group 7106. November 29–December 11. Return of Group 7090. A fairly regular spot, *a*, often accompanied by small companions, and gradually diminishing in size.								
332·174 D	14	73	39	206	90·5	61·6	+16·4	−79·6
333·333 C	27	157	32	183	91·2	62·2	+16·7	−63·7
334·441 G	34	239	27	190	91·2	62·1	+16·8	−49·0
335·318 C	57	249	37	161	91·2	62·0	+16·2	−37·5
336·401 G	64	276	36	157	91·6	62·3	+16·3	−22·8
337·437 C	35	234	18	123	90·9	61·5	+16·2	− 9·9
338·420 G	40	247	21	129	90·5	61·1	+16·1	+ 2·7
339·185 D	48	227	26	121	90·4	60·9	+16·9	+12·7
340·561 C	46	179	28	110	90·0	60·4	+16·6	+30·4
341·312 C	35	151	24	103	89·9	60·2	+16·8	+40·2
342·464 C	19	99	18	90	89·7	59·9	+16·3	+55·2
343·420 C	8	42	12	59	90·0	60·1	+16·7	+68·1
344·361 C	4	7	13	23	89·8	59·8	+16·3	+80·3
Means ..	..	..	25	127	90·53	61·08	+16·48	..
Group 7107. December 1–6. Revival of Group 7105. An irregular stream of small spots.								
334·441 G	4	20	2	11	137·7	121·3	−18·2	− 2·5
335·318 C	47	95	26	52	136·0	119·6	−18·7	+ 7·3
336·401 G	29	100	17	57	136·6	120·1	−18·5	+22·2
337·437 C	20	64	13	43	138·3	121·8	−18·3	+37·5
338·420 G	8	36	6	30	137·9	121·3	−17·8	+50·1
339·185 D	5	13	5	12	134·3	117·7	−18·3	+56·6
Means ..	..	..	12	34	136·80	120·30	−18·30	..
Group 7110. December 3–15. Two ill-formed spots, the first of which, *a*, dies away after December 8, while *b*, the second and larger, breaks up into a small cluster on December 11.								
336·401 G	0	28	0	64	36·8	20·7	+16·8	−77·6
337·437 C	37	303	59	474	30·2	14·0	+17·4	−70·6
338·420 G	74	434	73	426	29·9	13·7	+17·6	−57·9
339·185 D	75	407	58	317	29·7	13·4	+17·7	−48·0

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

Group 7110—*continued.*

Date. Greenwich Civil Time, and Where taken.	Projected Area of Umbra.	Projected Area of Whole Spot.	Area Corrected for Fore-shortening of Umbra.	Area Corrected for Fore-shortening of Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
1915. d					°	°	°	°
340·561 C	86	312	53	193	29·2	12·9	+18·3	−30·4
341·312 C	62	308	36	175	29·0	12·6	+18·4	−20·7
342·464 C	44	223	23	119	28·4	12·0	+18·5	− 6·1
343·420 C	38	122	20	65	28·2	11·7	+18·4	+ 6·3
344·361 C	23	61	13	33	27·7	11·2	+19·6	+18·2
345·346 C	45	88	29	55	27·6	11·0	+19·3	+31·1
346·449 C	2	38	2	28	27·4	10·8	+19·2	+45·4
347·434 G	2	21	2	22	28·8	12·1	+19·1	+59·8
348·336 C	7	29	13	54	29·8	13·1	+18·3	+72·6
Means ..	..	..	29	156	29·44	13·02	+18·35	..

Group 7113.

December 8–19. A few spots developing normally into a stream, of which the rear spot, *b*, becomes the larger after December 12, the leader spot, *a*, gradually diminishing in size.

341·312 C	1	8	1	12	342·2	7·8	−23·5	−67·5
342·464 C	0	13	0	12	338·5	4·2	−24·8	−56·0
343·420 C	9	65	7	48	339·3	5·1	−23·7	−42·6
344·361 C	78	261	47	162	340·9	6·7	−23·0	−28·6
345·346 C	77	498	44	282	340·3	6·2	−23·0	−16·2
346·449 C	88	499	47	271	339·7	5·7	−23·2	− 2·3
347·434 G	127	591	69	325	338·4	4·5	−23·1	+ 9·4
348·336 C	70	358	41	209	338·3	4·4	−23·3	+21·1
349·504 C	35	349	23	232	337·8	4·0	−23·2	+36·0
350·475 G	47	262	38	213	337·6	3·9	−23·2	+48·6
351·167 D	44	186	45	190	338·2	4·5	−22·9	+58·3
352·416 C	8	49	14	88	336·6	3·0	−22·7	+73·2
Means ..	..	..	31	170	338·98	5·00	−23·30	..

Group 7114.

December 9–12. A small spot, *a*, with a companion on December 9.

342·464 C	0	11	0	17	325·2	351·6	+23·7	−69·3
343·420 C	0	9	0	9	325·7	352·1	+23·3	−56·2
344·361 C	2	7	2	6	326·1	352·6	+23·2	−43·4
345·346 C	2	3	1	2	326·0	352·6	+23·3	−30·5
Means ..	..	..	1	9	325·75	352·23	+23·38	..

Group 7115.

December 9–10. One or two very small isolated spots in high latitude.

342·464 C	14	20	9	12	37·8	190·5	+35·9	+ 3·3
343·420 C	0	8	0	5	37·2	190·4	+34·3	+15·3
Means ..	..	..	5	9	37·50	190·45	+35·10	..

Group 7116.

December 11–13. A short stream of small spots.

1915. d					°	°	°	°
344·361 C	18	40	10	23	25·3	64·6	−24·8	+15·8
345·346 C	17	47	11	30	25·5	64·9	−24·7	+29·0
346·449 C	5	27	4	21	26·4	65·9	−24·6	+44·4
Means ..	..	..	8	25	25·73	65·13	−24·70	..

Group 7117.

December 12–13. A small spot.

345·346 C	8	14	7	12	48·6	11·6	−15·3	+52·1
346·449 C	0	2	0	3	50·8	13·7	−15·7	+68·8
Means ..	..	..	4	8	49·70	12·65	−15·50	..

Group 7119.

December 17–25. A close pair of spots coalescing to form a single spot, *a*, by December 18. The group shows a continuation of activity in the area occupied by Groups 7094, 7095, and 7096.

350·475 G	0	19	0	37	215·8	233·3	+22·1	−73·2
351·167 D	10	36	13	46	215·3	232·9	+22·0	−64·6
352·416 C	11	100	9	81	216·1	233·7	+22·6	−47·3
353·459 C	17	100	10	65	216·3	234·0	+22·4	−33·4
354·512 G	23	66	14	39	216·3	234·0	+22·5	−19·5
355·409 C	13	77	7	42	216·1	233·9	+22·4	− 7·9
356·354 C	18	44	10	24	216·0	233·8	+22·5	+ 4·5
357·336 C	15	19	9	11	217·3	235·2	+22·0	+18·7
358·444 C	0	8	0	5	215·9	233·8	+22·7	+31·9
Means ..	..	..	8	39	216·12	233·84	+22·36	..

Group 7121.

December 24–25. One or two short-lived spots.

357·336 C	4	9	3	7	156·4	176·8	−22·6	−42·2
358·444 C	18	46	11	28	158·2	178·6	−22·7	−25·8
Means ..	..	..	7	18	157·30	177·70	−22·65	..

Group 7122.

1914 December 25–1915 January 4. Return of Group 7102. A slowly contracting spot, *a*, of Group 7102, with a mass of faculæ to the south. The motion of the spot in longitude, since its maximum about December 3, appears to be consistently maintained.

358·444 C	8	48	14	82	111·7	137·5	−23·4	−72·3
359·391 C	14	55	15	59	110·6	136·5	−23·3	−60·9
360·510 G	16	96	12	74	110·5	136·5	−22·9	−46·3

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

Date. Greenwich Civil Time, and Where taken.	Projected Area of		Area Corrected for Fore-shortening of		Mean Longitude of Group.		Mean Latitude of Group.	Longitude from Central Meridian.
	Umbra.	Whole Spot.	Umbra.	Whole Spot.	System I.	System II.		
Group 7122—*continued.*								
1914. d					°	°	°	°
361·359 C	16	64	10	42	110·1	136·1	−23·0	−35·5
362·340 C	13	49	7	29	109·7	135·8	−23·0	−23·0
363·356 C	19	49	10	27	109·5	135·7	−23·4	− 9·8
364·375 C	14	29	7	16	109·2	135·4	−23·5	+ 3·3
1915.								
0·103 K	17	38	9	20	109·2	135·5	−23·3	+12·9
1·551 G	21	30	13	19	108·8	135·2	−23·1	+31·6
2·108 K	14	19	9	13	108·7	135·1	−23·1	+38·8
3·321 C	3	13	3	11	108·2	134·7	−23·0	+54·3
Means ..	..	..	10	36	109·65	135·82	−23·18	..
Group 7125. December 30–31. A small group forming near the West limb.								
1914.								
363·356 C	5	34	9	54	188·1	208·8	+22·1	+68·8
364·375 C	0	15	0	44	184·3	205·1	+23·2	+78·4
Means ..	..	..	5	49	186·20	206·95	+22·65	..
Group 7126. 1914 December 30–1915 January 5. Probably a return of Group 7116. A few small spots in an intermittent group not seen on January 3 and 4.								
363·356 C	22	43	23	43	59·4	12·9	−13·7	−59·9
364·375 C	23	37	17	27	58·7	12·1	−13·9	−47·2
1915.								
0·103 K	18	42	12	27	59·0	12·3	−14·0	−37·3
Group 7126—*continued.*								
1915. d					°	°	°	°
1·551 G	9	34	6	18	57·6	10·7	−14·8	−19·6
2·108 K	0	0	0	0	..	..	..	..
3·321 C	0	0	0	0	..	..	..	..
4·351 C	3	9	2	5	56·9	9·6	−15·2	+16·6
Means ..	..	..	9	17	58·32	11·52	−14·32	..
Group 7127. 1914 December 31–1915 January 12. A fine cluster by January 2, developing into two large and active composite spots, *a* and *b*, with a few faint companions. *a*, the larger, has divided up by January 11, whilst *b* is quickly disappearing. Perhaps a return of Group 7110, but more probably a new disturbance in its neighbourhood.								
1914.								
364·375 C	4	19	14	62	25·6	344·4	+14·9	−80·3
1915.								
0·103 K	9	50	17	88	24·5	343·2	+14·9	−71·8
1·551 G	85	297	77	268	23·2	341·8	+15·2	−54·0
2·108 K	81	608	63	473	23·3	341·8	+15·0	−46·6
3·321 C	129	946	80	581	23·7	342·1	+15·0	−30·2
4·351 C	247	1345	136	742	23·5	341·8	+15·0	−16·8
5·367 C	219	1397	116	739	23·9	342·0	+14·9	− 3·1
6·384 C	273	1400	147	754	24·3	342·3	+15·0	+10·7
7·486 G	197	1004	117	593	24·4	342·3	+15·4	+25·3
8·402 C	137	838	90	561	24·5	342·3	+15·1	+37·5
9·451 G	108	610	93	527	24·7	342·4	+15·4	+51·5
10·459 G	71	407	93	530	25·0	342·6	+15·9	+65·1
11·357 C	35	137	89	355	25·3	342·8	+15·7	+77·2
Means ..	..	..	87	483	24·30	342·45	+15·18	..

AREAS and HELIOGRAPHIC POSITIONS of GROUPS of SUN SPOTS in the YEAR 1914.

GROUPS SEEN ONLY ON ONE DAY.

No. of Group.	Date. Greenwich Civil Time, and Where taken.	Projected Area. Umbra.	Projected Area. Whole Spot.	Area Corrected for Foreshortening. Umbra.	Area Corrected for Foreshortening. Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
	1914. d					°	°	°	°
7023*	Jan. 3·517 G	2	3	1	2	175·8	175·2	+ 0·9	−26·3
7024	5·309 C	4	34	2	20	194·8	195·2	+24·2	+16·3
7024*	6·513 C	1	11	1	10	107·1	107·6	−23·6	−55·5
7024†	9·347 C	8	18	5	11	88·0	86·0	− 5·0	−37·3
7026	Feb. 4·486 G	0	16	0	13	183·3	187·5	+25·0	+42·2
7027	18·621 G	4	5	2	3	314·2	315·4	+21·4	− 0·8
7027*	21·360 C	1	8	1	4	291·8	285·9	−15·1	+12·9
7027†	27·385 G	3	11	2	6	194·5	203·5	−26·2	− 5·1
7028*	Mar. 12·533 G	0	8	0	5	56·0	50·6	−17·0	+29·7
7033*	Apr. 20·349 G	0	6	0	7	298·5	325·7	−29·2	+64·3
7034	23·352 C	4	14	4	12	241·1	245·4	+21·9	+46·5
7037	27·529 G	0	12	0	24	69·9	101·1	+29·8	−69·5
7038*	May 4·406 G	4	10	3	6	62·2	85·6	+27·3	+13·7
7039	5·579 G	4	17	2	11	53·1	95·1	+31·9	+20·1
7040	5·579 G	2	8	1	5	35·8	45·4	+23·4	+ 2·8
7041	6·442 C	0	13	0	13	325·8	22·6	−35·3	−55·8
7043	22·540 G	2	34	1	21	135·8	139·8	+21·5	−32·9
7044	24·399 G	2	6	4	7	202·6	203 3	+20·6	+58·5
7048	Jun. 13·527 G	8	21	6	17	275·2	347·0	−34·9	+37·5
7053	July 7·361 G	3	7	2	6	316·5	27·9	−33·2	+34·3
7055	13·517 C	2	2	2	2	150·7	181·1	+26·2	−50·0
7057*	29·351 D	7	23	4	14	15·5	34·6	−23·9	+24·2
7059	30·319 G	0	5	0	3	345·1	359·2	+23·0	+ 6·6
7062	Aug. 16·346 G	4	13	3	10	162·6	156·2	+19·2	+49·3
7063	16·346 G	9	22	8	19	66·6	76·4	−22·1	−46·7

No. of Group.	Date. Greenwich Civil Time, and Where taken.	Projected Area. Umbra.	Projected Area. Whole Spot.	Area Corrected for Foreshortening. Umbra.	Area Corrected for Foreshortening. Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Longitude from Central Meridian.
	1914. d					°	°	°	°
7071	Sept. 12·363 G	3	12	2	7	136·3	140·9	+21·1	+19·9
7074	Oct. 2·381 C	1	8	1	7	262·9	263·2	−20·5	+50·7
7075	3·415 C	2	4	1	3	170·4	103·2	− 4·8	−28·2
7078	15·335 C	3	16	3	14	346·7	273·7	+ 2·9	−54·6
7080	21·533 G	4	11	3	8	359·0	89·1	+31·0	+39·4
7083	26·373 G	4	14	2	8	281·3	239·2	−13·6	+25·6
7084	26·373 G	2	4	1	2	266·4	298·6	−24·5	+10·7
7086	30·385 G	0	8	0	5	229·8	189·9	+14·1	+27·0
7089	Nov. 13·403 C	2	18	5	47	95·4	80·5	−18·4	+77·4
7090	13·403 C	0	5	0	7	85·9	47·6	+14·7	+67·9
7097	21·355 C	2	5	1	3	260·4	223·7	−15·2	−12·8
7099	22·452 C	0	5	0	4	306·3	222·7	− 1·6	+47·6
7100	22·452 C	1	4	1	3	226·3	217·8	+19·3	−32·4
7100*	24·522 G	2	4	1	3	269·2	246·9	+17·4	+37·8
7104	28·304 C	1	12	1	7	178·5	231·5	+26·3	− 3·1
7105	28·304 C	4	7	3	6	135·1	134·4	−20·3	−46·5
7108	Dec. 2·318 C	8	13	6	9	90·2	94·6	−20·9	−38·5
7109	2·318 C	1	5	1	4	81·4	32·8	+13·4	−47·3
7109*	3·401 G	0	4	0	3	73·4	108·7	+24·4	−41·0
7111	5·420 G	0	4	0	2	75·0	187·7	−31·8	−12·8
7112	8·312 C	0	7	0	4	67·3	358·4	− 9·4	+17·6
7118	14·434 G	0	6	0	7	265·3	245·1	−17·9	−63·7
7120	20·459 C	3	11	5	17	321·1	291·1	−16·6	+71·4
7123	26·391 C	2	18	1	11	157·5	233·3	+28·0	−14·0
7124	29·340 C	0	9	0	5	115·9	191·3	−27·9	−16·8

Group 7023*, Jan. 3. A very small equatorial spot.
Group 7024, Jan. 5. A small double spot.
Group 7024*, Jan. 6. Two very small spots.
Group 7024†, Jan. 9. Two or three very small spots.
Group 7026, Feb. 4. A pair of very small evanescent spots.
Group 7027, Feb. 18. A very small spot.
Group 7027*, Feb. 21. A very small faint spot.
Group 7027†, Feb. 27. A very small double spot.
Group 7028*, Mar. 12. A very small spot.
Group 7033*, Apr. 20. A very small spot, *sp*, Group 7033.
Group 7034, Apr. 23. A small spot.
Group 7037. Apr. 27. A very small spot in the same area of disturbance as Group 7038.
Group 7038*, May 4. A very small spot, *p*, the place of Group 7038.
Group 7039, May 5. A pair of very small spots, *n*, of the place of Group 7038.
Group 7040, May 5. A very small spot.
Group 7041, May 6. A small evanescent spot.
Group 7043, May 22. A group of very small spots.
Group 7044, May 24. A small single spot.
Group 7048, June 13. Two small spots of which the follower is double.
Group 7053, July 7. A very small spot.
Group 7055, July 13. A minute spot.
Group 7057*, July 29. Two very small spots.
Group 7059, July 30. A very small faint spot.
Group 7062, Aug. 16. A small double spot.
Group 7063, Aug. 16. A few small faint spots.

Group 7071, Sept. 12. One or two very small spots.
Group 7074, Oct. 2. One or two very small spots.
Group 7075, Oct. 3. A very small spot.
Group 7078, Oct. 15. Three very small spots in low latitude.
Group 7080, Oct. 21. Two very small spots.
Group 7083, Oct. 26. A small triple spot.
Group 7084, Oct. 26. A minute spot.
Group 7086, Oct. 30. A very small spot, *sp*, Group 7085.
Group 7089, Nov. 13. A few small spots, *p*, the place of Group 7087.
Group 7090, Nov. 13. A very small spot forming near the West limb.
Group 7097, Nov. 21. A very small spot.
Group 7099, Nov. 22. A very small faint spot in low latitude.
Group 7100, Nov. 22. A very small spot, *f*, Group 7094.
Group 7100*, Nov. 24. A very small spot.
Group 7104, Nov. 28. Two very small spots.
Group 7105, Nov. 28. A very small spot.
Group 7108, Dec. 2. Two or three very small spots, apparently a revival of Groups 7087 and 7089.
Group 7109, Dec. 2. A very small spot, *sf*, Group 7106.
Group 7109*, Dec. 3. A very small spot.
Group 7111, Dec. 5. A very small spot, *f*, a disturbed area.
Group 7112, Dec. 8. A very small faint spot.
Group 7118, Dec. 14. A very small spot.
Group 7120, Dec. 20. A pair of small spots, a revival of Group 7091.
Group 7123, Dec. 26. A small double spot.
Group 7124, Dec. 29. A very small spot, *sp*, Group 7122.

ROYAL OBSERVATORY, GREENWICH.

CATALOGUE

OF

RECURRENT GROUPS OF SUN SPOTS

COMPILED FROM THE

LEDGERS OF GROUPS OF SUN SPOTS

FOR THE YEAR

1914.

CATALOGUE of RECURRENT GROUPS of SUN SPOTS, COMPILED from the LEDGERS of AREAS and POSITIONS of GROUPS of SUN SPOTS deduced from the MEASUREMENT of the SOLAR PHOTOGRAPHS at the ROYAL OBSERVATORY, GREENWICH, for the YEAR 1914.

NOTE.—Groups of Sun Spots observed uninterruptedly in two or more consecutive Rotations of the Sun, are classified as "Recurrent." Cases where the continuity of the group is doubtful are enclosed in brackets.

The reference Numbers in the following Table are in continuation of those given in previous "Catalogues of Recurrent Groups of Sun Spots."

The numeration of the Spot Groups is the same as in the two preceding Sections.

The numeration of the Rotations is the same as in the following Section.

The Columns "Longitude from Central Meridian" give, for the date on which each group was first seen and last seen respectively, its heliographic longitude from the meridian passing through the centre of the Sun's disc at the moment of observation; longitude west of the centre being reckoned as positive.

The Mean Areas for Umbra and for Whole Spot are corrected for the effect of foreshortening and are expressed in millionths of the Sun's visible hemisphere.

Reference Number.	No. of Group.	Rotation.	First Seen. Date.	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	No. of Days Photographed.	Mean Area for Umbra.	Mean Area for Whole Spot.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	REMARKS.
			1914.	°	1914.	°				°	°	°	
721	7030	809	Mar. 30	−77·1	Apr. 11	+71·5	13	107	425	71·88	92·85	+28·35	A large continuously active spot-group.
	7037	810	Apr. 27	−69·5	27	−69·5	1	0	24	69·9	101·1	+29·8	A very small spot.
	7038	810	28	−70·9	May 4	+ 4·4	7	25	91	54·99	72·09	+25·71	A group of spots appearing on the East limb and showing signs of dying activity.
722	7060	814	Aug. 13	−82·3	Aug. 26	+86·0	14	118	635	67·94	61·94	+19·32	A fine large regular spot.
	7068	815	Sept. 10	−76·7	Sept. 22	+78·9	13	75	443	65·15	47·84	+17·48	A very large regular spot.
723	7085	817	Oct. 26	−29·9	Nov. 3	+75·6	9	19	76	226·01	241·13	+22·38	An active stream of generally unimportant spots.
	7094	818	Nov. 18	−78·2	27	+39·6	10	22	105	232·19	228·28	+19·89	Two stable spots with occasional small attendants.
	7095	818	20	−63·6	24	− 9·7	4	2	6	220·70	227·53	+21·23	One or two very small unstable spots; none seen on Nov. 23.
	7096	818	21	−58·2	24	−19·2	4	8	32	214·55	224·33	+21·60	A few small spots. *Note.*—These three groups are closely associated with the stream forming Group 7085, of which they clearly combine to represent the return, which cannot safely be ascribed to any one of the three individually.
724	7090	817	Nov. 13	+67·9	Nov. 13	+67·9	1	0	7	85·9	47·6	+14·7	A very small spot.
	7106	818	29	−79·6	Dec. 11	+80·3	13	25	127	90·53	61·08	+16·48	A fairly regular spot, frequently with small companions.
725	7102	818	Nov. 27	−78·1	Dec. 9	+80·4	13	37	202	115·56	135·40	−22·72	A large, almost regular spot, with occasional small followers.
	7122	819	Dec. 25	−72·3	1915. Jan. 4	+54·3	11	10	36	109·65	135·82	−23·18	A slowly contracting spot.
(725*)	7110	818	Dec. 3	−77·1	1914. Dec. 15	+72·6	13	29	156	29·44	13·02	+18·35	Two ill-formed spots, one of which disappears, and the other breaks up into a small cluster.
	7127	819	31	−80·3	1915. Jan. 12	+77·2	13	87	483	24·30	342·45	+15·18	A fine cluster developing into two large and active composite spots. *Note.*—7127 appears rather to be a new disturbance in the neighbourhood of 7110 than a return of that group.
726	7117	818	Dec. 12	+52·1	1914. Dec. 13	+68·8	2	4	8	49·70	12·65	−15·50	A small spot.
	7126	819	30	−59·9	1915. Jan. 4	+16·6	5	9	17	58·32	11·52	−14·32	A few small spots. An intermittent group.

ROYAL OBSERVATORY, GREENWICH.

TOTAL AREAS OF SUN SPOTS AND FACULÆ

PROJECTED AND CORRECTED FOR FORESHORTENING

FOR EACH DAY,

AND

MEAN AREAS AND MEAN HELIOGRAPHIC LATITUDE

OF

SUN SPOTS AND FACULÆ

FOR EACH ROTATION OF THE SUN

AND FOR THE YEAR

1914.

TOTAL AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1914.

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

The place where the photograph was taken is indicated in the second Column. A photograph taken at Greenwich is indicated by the letter G, one taken at the Cape by the letter C, one taken at Kodaikánal by the letter K, and one taken at Dehra Dun by the letter D.

The Projected Area is the Area as it is measured on the photograph, uncorrected for the effect of foreshortening and expressed in millionths of the Sun's apparent disk.

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

Greenwich Civil Time.		Where taken.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1914	d							
January	1·446	C	48	203	326	44	196	436
	2·509	C	52	174	357	34	118	304
	3·517	G	18	59	100	12	41	70
	4·429	C	0	9	252	0	8	185
	5·309	C	4	34	357	2	20	409
	6·513	C	1	11	224	1	10	427
	7·532	G	0	0	0	0	0	0
	8·342	C	0	0	210	0	0	257
	9·347	C	8	18	158	5	11	156
	10·341	C	0	0	378	0	0	344
	11·464	C	0	0	504	0	0	475
	12·345	C	0	0	294	0	0	388
	13·365	C	0	0	105	0	0	126
	14·426	G	0	0	0	0	0	0
	15·326	C	0	0	0	0	0	0
	16·529	G	0	0	0	0	0	0
	17·452	C	0	0	158	0	0	185
	18·592	G	0	0	100	0	0	123
	19·395	C	0	0	0	0	0	0
	20·322	C	0	0	137	0	0	184
	21·162	D	0	0	0	0	0	0
	22·540	G	0	0	60	0	0	112
	23·505	G	0	0	199	0	0	241
	24·509	G	0	0	269	0	0	277
	25·441	C	0	0	0	0	0	0
	26·508	C	0	0	0	0	0	0
	27·539	G	0	0	0	0	0	0
	28·543	G	0	0	158	0	0	212
	29·406	G	0	0	248	0	0	308
	30·524	C	0	0	0	0	0	0
	31·465	G	0	0	337	0	0	299
February	1·524	G	0	0	426	0	0	434
	2·486	G	21	84	119	11	44	148
	3·531	G	7	101	0	4	57	0
	4·486	G	32	140	179	20	91	128
	5·396	G	11	78	289	9	61	250
	6·408	G	5	30	577	6	33	644
	7·396	G	0	0	438	0	0	577
	8·188	D	0	0	0	0	0	0
	9·362	C	0	0	0	0	0	0
	10·400	G	0	0	0	0	0	0

Greenwich Civil Time.		Where taken.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1913	d							
February	11·379	C	0	0	0	0	0	0
	12·413	G	0	0	139	0	0	139
	13·433	G	0	0	119	0	0	133
	14·395	G	0	0	0	0	0	0
	15·517	G	0	0	0	0	0	0
	16·388	C	0	0	0	0	0	0
	17·418	G	0	0	159	0	0	168
	18·621	G	4	5	100	2	3	111
	19·392	C	0	0	0	0	0	0
	20·399	G	0	0	0	0	0	0
	21·360	C	1	8	0	1	4	0
	22·516	G	0	0	0	0	0	0
	23·401	G	0	0	150	0	0	176
	24·433	G	0	0	0	0	0	0
	25·437	C	0	0	0	0	0	0
	26·356	C	0	0	0	0	0	0
	27·385	G	3	11	111	2	6	113
	28·391	G	0	0	0	0	0	0
March	1·442	G	0	0	80	0	0	94
	2·411	G	0	0	0	0	0	0
	3·294	D	0	0	46	0	0	56
	4·385	C	0	0	149	0	0	249
	5·383	C	0	0	426	0	0	509
	6·459	G	0	0	492	0	0	471
	7·350	C	0	0	107	0	0	142
	8·447	C	0	0	107	0	0	123
	9·373	C	0	0	0	0	0	0
	10·406	G	0	0	0	0	0	0
	11·447	G	0	0	70	0	0	101
	12·533	G	0	28	161	0	25	162
	13·393	C	3	20	193	2	15	148
	14·408	G	0	12	192	0	8	145
	15·436	G	4	48	313	4	47	333
	16·386	C	20	120	364	23	138	480
	17·391	G	22	97	263	31	133	382
	18·534	G	6	32	152	13	72	350
	19·475	G	0	0	0	0	0	0
	20·398	C	0	0	86	0	0	69
	21·416	C	0	0	210	0	0	474
	22·479	G	0	0	162	0	0	238
	23·394	C	0	0	145	0	0	139

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

Greenwich Civil Time.		Where taken.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1914.	d							
March	24·380	G	0	0	325	0	0	274
	25·405	G	0	0	0	0	0	0
	26·494	G	0	0	0	0	0	0
	27·412	C	0	0	162	0	0	292
	28·385	G	0	0	286	0	0	314
	29·474	C	0	0	157	0	0	127
	30·372	C	19	82	162	70	297	191
	31·390	G	112	306	184	170	464	278
April	1·345	G	151	578	367	154	603	418
	2·387	G	130	626	449	103	500	478
	3·354	G	153	563	287	105	382	248
	4·553	G	148	619	0	92	384	0
	5·604	G	236	932	0	143	567	0
	6·362	G	218	927	205	136	580	210
	7·392	G	129	574	236	88	392	292
	8·355	G	155	537	728	124	430	644
	9·355	G	127	422	964	131	428	900
	10·351	G	53	289	677	80	431	828
	11·417	C	0	31	300	0	67	637
	12·372	G	0	21	113	0	17	180
	13·315	C	15	56	49	11	39	34
	14·425	G	6	31	0	4	18	0
	15·350	G	0	0	149	0	0	160
	16·353	G	9	49	227	7	37	243
	17·374	G	15	37	118	9	23	125
	18·351	G	13	55	0	8	31	0
	19·348	G	47	190	155	29	116	204
	20·349	G	41	135	511	37	117	556
	21·362	G	16	106	367	12	114	410
	22·175	D	52	140	279	32	130	561
	23·352	C	26	84	534	19	62	487
	24·388	C	11	57	594	8	44	580
	25·351	C	11	34	383	5	17	579
	26·462	C	31	145	83	18	85	297
	27·529	G	153	733	383	83	417	710
	28·384	G	306	1265	750	216	882	1146
	29·444	G	338	1356	1811	229	884	1960
	30·384	C	185	1167	1210	129	808	1007
May	1·318	G	181	875	187	142	703	149
	2·540	G	115	480	447	135	574	531
	3·155	K	31	324	384	44	526	550
	4·406	G	5	23	131	5	18	348
	5·579	G	6	25	562	3	16	445
	6·442	C	0	13	924	0	13	738
	7·408	G	0	0	1456	0	0	1353
	8·312	G	0	0	1622	0	0	1840
	9·416	C	0	0	508	0	0	836
	10·465	C	0	0	0	0	0	0
	11·403	C	0	0	66	0	0	118
	12·508	G	0	0	183	0	0	205
	13·236	D	0	0	332	0	0	314
	14·315	G	0	0	0	0	0	0
	15·324	G	0	0	0	0	0	0

Greenwich Civil Time.		Where taken.	Projected Area.			Aera Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1914.	d							
May	16·349	G	0	0	84	0	0	101
	17·283	G	0	0	0	0	0	0
	18·311	G	0	0	199	0	0	287
	19·292	G	0	0	392	0	0	621
	20·320	G	0	0	444	0	0	573
	21·315	G	24	69	457	14	40	423
	22·540	G	44	131	389	27	81	370
	23·388	C	44	149	22	30	100	31
	24·399	G	38	81	336	31	67	299
	25·325	G	0	8	441	0	9	499
	26·479	G	0	0	499	0	0	688
	27·328	G	0	0	630	0	0	808
	28·448	C	0	0	781	0	0	707
	29·359	C	1	16	357	1	9	262
	30·116	K	12	21	362	6	12	544
	31·307	G	0	0	137	0	0	139
June	1·353	G	0	0	0	0	0	0
	2·394	G	0	0	0	0	0	0
	3·330	G	0	0	665	0	0	708
	4·336	G	0	0	1386	0	0	1275
	5·379	C	0	0	401	0	0	422
	6·442	C	0	0	240	0	0	362
	7·544	G	0	0	173	0	0	252
	8·385	G	29	89	341	29	90	320
	9·539	G	44	168	448	33	123	431
	10·354	G	49	193	186	31	123	433
	11·303	G	34	167	422	20	99	523
	12·592	G	42	134	997	32	99	1037
	13·527	G	89	279	612	65	215	677
	14·361	G	111	406	776	72	262	759
	15·304	G	82	594	549	50	342	565
	16·452	G	84	641	601	47	354	548
	17·397	G	228	1112	506	129	632	545
	18·309	G	223	1210	1340	139	744	1342
	19·355	G	159	827	829	115	597	771
	20·475	G	112	557	846	108	543	789
	21·571	G	43	287	934	77	507	1254
	22·350	G	0	74	712	0	445	1215
	23·596	G	0	0	905	0	0	1009
	24·364	G	0	0	644	0	0	641
	25·686	G	0	0	459	0	0	428
	26·318	G	0	0	106	0	0	102
	27·309	G	0	0	74	0	0	97
	28·375	G	0	0	63	0	0	81
	29·332	G	0	0	95	0	0	117
	30·323	G	0	0	119	0	0	205
July	1·376	G	11	62	40	8	44	37
	2·437	C	2	28	150	2	73	261
	3·449	G	24	108	369	41	181	547
	4·472	G	40	142	620	45	159	741
	5·495	C	39	198	308	33	159	302
	6·701	G	36	158	876	24	106	858
	7·361	G	38	169	939	24	111	917

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

Greenwich Civil Time.		Where taken.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1914.	d							
July	8·661	G	27	146	485	18	93	566
	9·361	G	15	114	960	10	76	992
	10·312	G	21	95	1176	16	70	968
	11·438	G	30	103	1430	22	80	1088
	12·329	G	11	31	554	12	36	539
	13·517	C	7	15	383	8	18	525
	14·361	G	0	0	234	0	0	350
	15·461	C	0	0	45	0	0	94
	16·333	G	5	23	269	3	15	209
	17·452	G	14	160	338	8	95	341
	18·360	G	14	76	439	8	45	558
	19·367	G	0	8	137	0	5	202
	20·508	C	0	0	115	0	0	244
	21·703	G	2	17	327	2	20	335
	22·357	G	4	15	327	4	13	342
	23·301	G	2	6	127	1	4	196
	24·341	C	0	0	0	0	0	0
	25·307	G	0	0	127	0	0	146
	26·327	G	0	0	53	0	0	63
	27·396	G	0	0	127	0	0	141
	28·366	G	0	0	80	0	0	121
	29·351	D	7	23	96	4	14	105
	30·319	G	0	25	285	0	22	228
	31·516	C	1	4	258	2	8	380
August	1·381	G	0	0	415	0	0	552
	2·329	G	0	0	315	0	0	371
	3·428	C	0	0	436	0	0	500
	4·344	G	0	0	557	0	0	646
	5·455	G	0	0	425	0	0	496
	6·418	G	0	0	641	0	0	634
	7·420	C	0	0	268	0	0	237
	8·424	C	0	0	217	0	0	190
	9·486	C	0	0	268	0	0	278
	10·680	G	0	0	893	0	0	1182
	11·323	G	0	0	882	0	0	1070
	12·321	G	0	0	326	0	0	416
	13·368	G	57	179	473	171	540	598
	14·355	G	74	423	688	106	609	1169
	15·171	D	82	570	749	82	568	918
	16·346	G	197	951	1595	142	683	1443
	17·466	G	171	1196	420	107	758	473
	18·310	G	231	1107	648	129	606	883
	19·524	G	255	1303	17	130	670	25
	20·349	G	230	1578	0	118	817	0
	21·332	G	245	1284	0	133	700	0
	22·322	G	207	1208	0	126	738	0
	23·629	G	156	895	454	126	710	417
	24·350	G	138	671	1401	144	693	1454
	25·423	G	65	405	841	109	681	1102
	26·445	C	20	82	444	96	393	1055
	27·412	G	0	0	94	0	0	95
	28·457	G	0	0	151	0	0	206
	29·318	G	0	0	321	0	0	444
	30·443	G	12	21	234	10	15	340
	31·424	C	2	20	381	2	18	424

Greenwich Civil Time.		Where taken.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1914.	d							
September	1·373	G	0	0	952	0	0	1139
	2·363	G	0	0	518	0	0	606
	3·408	G	0	0	894	0	0	1273
	4·353	G	0	0	1134	0	0	1337
	5·545	G	0	0	270	0	0	255
	6·473	G	0	0	156	0	0	172
	7·392	G	0	0	364	0	0	399
	8·469	G	17	77	305	63	293	551
	9·408	G	24	174	708	39	281	1008
	10·348	G	65	522	1031	100	789	1531
	11·646	G	139	886	1787	121	884	2199
	12·363	G	190	1062	1387	159	920	1327
	13·383	G	221	1254	882	151	860	782
	14·542	G	215	1413	647	126	836	491
	15·349	G	259	1470	0	145	831	0
	16·386	G	259	1364	144	144	753	162
	17·540	G	221	1247	152	125	707	212
	18·388	G	196	1118	690	126	704	524
	19·372	G	157	836	726	119	638	618
	20·645	G	96	530	1437	112	580	1410
	21·491	G	61	347	1226	79	446	1328
	22·358	G	18	117	892	44	270	1279
	23·366	G	0	0	400	0	0	632
	24·416	G	15	34	213	29	65	371
	25·376	G	18	71	374	21	79	456
	26·380	G	18	93	338	15	76	335
	27·533	G	15	121	159	10	78	165
	28·435	C	27	159	82	16	91	89
	29·342	G	25	134	159	13	71	166
	30·436	G	25	131	115	13	68	153
October	1·386	G	13	57	0	7	31	0
	2·381	C	17	48	213	10	30	229
	3·415	C	2	4	262	1	3	344
	4·517	G	0	0	71	0	0	61
	5·531	G	0	0	82	0	0	92
	6·430	C	0	0	363	0	0	599
	7·437	G	0	0	515	0	0	774
	8·445	G	0	0	1056	0	0	1234
	9·470	G	0	21	1188	0	12	1218
	10·483	G	25	43	1279	16	27	1332
	11·422	C	16	50	975	12	32	945
	12·611	G	0	0	381	0	0	360
	13·455	C	6	42	356	4	22	348
	14·421	C	0	0	197	0	0	253
	15·335	C	3	16	249	3	14	239
	16·491	G	0	0	203	0	0	209
	17·518	C	0	0	607	0	0	568
	18·365	C	0	0	876	0	0	892
	19·446	C	22	57	811	14	37	1092
	20·345	C	25	127	581	16	79	789
	21·533	G	15	42	508	10	28	629
	22·494	C	37	100	323	23	61	258
	23·307	C	53	115	73	29	63	83
	24·559	G	23	56	177	12	29	182

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

Greenwich Civil Time.	Where taken.	Projected Area.			Area Corrected for Foreshortening.		
		Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1914. d							
October 25·167	D	33	87	153	17	45	181
26·373	G	26	89	0	14	49	0
27·414	G	66	185	22	38	106	61
28·529	G	59	193	34	36	122	49
29·380	G	42	168	719	31	119	717
30·385	G	14	108	588	9	76	738
31·424	C	12	64	79	8	42	195
November 1·569	G	51	156	568	45	137	709
2·460	C	32	175	872	40	237	1220
3·433	G	19	112	683	25	174	917
4·417	C	24	78	621	20	66	681
5·443	G	23	126	487	16	84	497
6·450	G	53	186	503	32	111	586
7·415	G	135	419	457	79	248	503
8·545	G	121	569	0	67	312	0
9·580	C	104	693	0	56	373	0
10·384	G	172	655	55	95	362	62
11·378	C	88	383	543	53	228	452
12·412	G	50	196	630	34	135	615
13·403	C	45	199	698	44	216	886
14·420	G	31	127	315	29	156	407
15·548	G	20	55	665	12	148	951
16·495	G	0	0	645	0	0	711
17·500	G	0	0	470	0	0	448
18·443	G	23	97	100	46	216	235
19·372	C	28	165	238	33	194	349
20·462	G	32	175	670	27	148	644
21·355	C	55	272	594	41	200	532
22·452	C	72	372	224	46	232	228
23·381	C	54	171	228	30	95	318
24·522	G	65	279	453	47	254	550
25·528	G	42	172	637	37	147	872
26·305	C	49	96	675	37	73	808
27·537	G	15	47	306	23	86	499
1914. d							
November 28·304	C	37	188	861	57	304	894
29·174	D	136	614	1021	184	835	1251
30·333	C	197	1043	1704	167	888	1944
December 1·441	G	196	1011	1194	130	676	1179
2·318	C	295	1135	886	175	680	792
3·401	G	186	978	234	105	597	362
4·437	C	195	1046	1002	150	892	1298
5·420	G	182	1064	1070	137	799	1052
6·185	D	188	934	690	131	648	711
7·561	C	158	662	772	105	468	905
8·312	C	119	590	625	88	444	665
9·464	C	87	435	851	83	472	1065
10·420	C	56	247	1155	39	186	1433
11·361	C	125	377	497	85	247	584
12·346	C	149	650	410	92	381	410
13·449	C	96	566	567	53	323	557
14·434	G	129	618	706	71	354	660
15·336	C	78	387	590	54	263	954
16·504	C	35	349	163	23	232	226
17·475	G	47	281	401	38	250	434
18·167	D	53	223	666	58	236	859
19·416	C	19	149	704	23	169	796
20·459	C	20	110	128	15	82	138
21·512	G	23	66	0	14	39	0
22·409	C	13	77	37	7	42	58
23·354	C	18	44	226	10	24	305
24·336	C	19	28	281	12	18	527
25·444	C	26	103	719	25	115	860
26·391	C	16	72	992	16	70	1145
27·510	G	16	96	1188	12	74	1227
28·359	C	16	64	793	10	42	859
29·340	C	13	59	341	7	34	473
30·356	C	46	126	483	42	124	588
31·375	C	41	100	602	38	149	984

MEAN AREAS of SUN SPOTS and FACULÆ, as measured on PHOTOGRAPHS taken at the ROYAL OBSERVATORIES of GREENWICH and of the CAPE, and in INDIA, for each ROTATION of the SUN, from 1913 December 23 to 1915 January 7.

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 1873–1913 printed in the Greenwich Observations for 1884 and succeeding years) correspond to the synodic rotation of the Sun, and the commencement of each is defined by the coincidence of the assumed prime meridian with the central meridian, the assumed prime meridian being that meridian which passed through the ascending node at mean noon on January 1, 1854, and the assumed period of the Sun's sidereal rotation being 25·38 days. The numeration of the rotations is in continuation of Carrington's series (*Observations of Solar Spots made at Redhill* by R. C. Carrington, F.R.S.), No. 1 being the rotation commencing 1853 November 9. The dates of commencement of the rotations are given in GREENWICH CIVIL TIME, reckoning from midnight.

No. of Rotation.	Date of Commencement of each Rotation.			No. of Days on which Photographs were taken.	Mean of Daily Areas.					
					Projected.			Corrected for Foreshortening.		
					Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
			d							
806	1913	December	22·53	27	6	27	149	4	20	169
807	1914	January	18·86	27	3	16	137	2	11	151
808		February	15·20	28	0·4	3	91	0·3	2	99
809		March	14·53	27	62	250	255	54	217	295
810		April	10·83	27	60	275	448	44	213	518
811		May	8·07	27	6	18	330	4	12	384
812		June	4·29	28	48	243	529	34	186	580
813		July	1·48	27	12	60	407	10	50	431
814		July	28·69	27	76	423	471	56	301	543
815		August	24·92	27	80	462	617	65	377	728
816		September	21·18	28	11	53	458	10	51	524
817		October	18·47	27	51	202	389	33	137	463
818		November	14·77	27	97	453	684	75	368	788
819		December	12·08	27	76	394	553	51	262	654

MEAN AREAS of SUN SPOTS and FACULÆ, as measured on PHOTOGRAPHS taken at the ROYAL OBSERVATORIES of GREENWICH and of the CAPE, and in INDIA, for the YEAR 1914.

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.
1914	365	40	195	396	31	152	454

MEAN HELIOGRAPHIC LATITUDE of SUN SPOTS, as measured on PHOTOGRAPHS taken at the ROYAL OBSERVATORIES of GREENWICH and of the CAPE, and in INDIA, for each ROTATION of the SUN, from 1913 December 23 to 1915 January 7.

The numbers given in the accompanying table have been formed as follows :—

The Heliographic Latitude of each Spot for each day has been multiplied by its Area (corrected for foreshortening), and the sum of the products, for Spots North of the Equator, has been divided by the sum of the corresponding Areas to form Mean Heliographic Latitude of Spotted Area North of Equator ; similarly for Spots South of the Equator. In forming the Mean Heliographic Latitude of entire Spotted Area, the algebraic sum of the products for Spots North and South of the Equator has been divided by the sum of the Areas ; and for the Mean Distance from the Equator for all Spots, the numerical sum of the products, without regard to the sign of the latitude, has been similarly divided.

The Mean Areas have been formed by dividing the sum of the Daily Areas (corrected for foreshortening) by the number of days of observation for each Rotation of the Sun, and are expressed in millionths of the Sun's visible hemisphere.

No. of Rotation.	Date of Commencement of each Rotation.	No. of Days on which Photographs were taken.	Spots NORTH of the Equator.		Spots SOUTH of the Equator.		Mean Heliographic Latitude of entire Spotted Area.	Mean Distance from Equator of all Spots.
			Mean of Daily Areas.	Mean Heliographic Latitude.	Mean of Daily Areas.	Mean Heliographic Latitude.		
	d			°		°	°	°
806	1913 Dec. 22·53	27	12	22·40	7	21·69	+ 5·50	22·13
807	1914 Jan. 18·86	27	0·5	25·00	10	12·49	−10·79	13·06
808	Feb. 15·20	28	2	14·48	0·5	20·17	+ 5·96	15·88
809	Mar. 14·53	27	217	29·33	0	..	+29·33	29·33
810	Apr. 10·83	27	183	19·70	30	24·27	+13·55	20·34
811	May 8·07	27	11	26·18	0·8	24·06	+22·86	26·04
812	June 4·29	28	19	28·44	168	21·90	−16·90	22·55
813	July 1·48	27	0·1	26·20	50	32·87	−32·78	32·86
814	July 28·69	27	290	19·43	11	22·27	+17·84	19·54
815	Aug. 24·92	27	231	18·02	146	21·37	+ 2·74	19·32
816	Sept. 21·18	28	50	19·26	0·9	23·50	+18·53	19·33
817	Oct. 18·47	27	110	22·49	27	20·46	+14·01	22·09
818	Nov. 14·77	27	195	18·17	173	23·93	− 1·60	20·87
819	Dec. 12·08	27	171	16·53	92	22·53	+ 2·87	18·63

MEAN HELIOGRAPHIC LATITUDE of SUN SPOTS, as measured on PHOTOGRAPHS taken at the ROYAL OBSERVATORIES of GREENWICH and of the CAPE, and in INDIA, for the YEAR 1914.

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.		
			°		°	°	°
1914	365	99	21·11	53	23·06	+5·71	21·79