GREENWICH PHOTO-HELIOGRAPHIC RESULTS.

1917.

Pg. D19 Line 4, Col 5, Fm 281-1 to 181-1

RESULTS OF MEASURES

MADE AT THE

ROYAL OBSERVATORY, GREENWICH

UNDER THE DIRECTION OF

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

OF

PHOTOGRAPHS OF THE SUN

TAKEN

AT GREENWICH, AT THE CAPE, AND IN INDIA

IN THE YEAR

1917.

PUBLISHED BY ORDER OF THE BOARD OF ADMIRALTY, IN OBEDIENCE TO HIS MAJESTY'S COMMAND.

LONDON:
PRINTED AND PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE.

1922.

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GREENWICH PHOTO-HELIOGRAPHIC RESULTS, 1917.

INTRODUCTION.

§ 1. *Positions and Areas of Sun Spots and Faculæ for each Day in the Year* 1917.

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, giving a solar image of about 10-centimetre radius.

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.

Photographs of the Sun were available for measurement upon each day in 1917, those finally selected for measurement being supplied by the different observatories as under:—

Greenwich	112
Cape	243
Kodaikánal	3
Dehra Dún	7
Total	365

The names of those persons who measured the photographs for the year 1917 are as follows :—

E. W. Maunder	H. W. Newton
Annie S. D. Maunder	E. Martin
F. Jeffries	F. Whitaker

At the principal focus of the Photoheliographs excepting that at Kodaikánal two spider-lines are fixed by which the zero of position-angles on the photographs can be determined. These lines are respectively perpendicular and parallel to the equator in the Photoheliographs at the Cape and at Dehra Dûn, but are inclined to it at an angle of about 45° in that at Greenwich. In the Kodaikánal Photoheliograph there is one wire fixed parallel to the equator.

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

The zero-corrections used during the year 1917 in the reduction of the photographs taken at Greenwich were as follows :—

Jan. 1 to Feb. 28, + 2°·8 ; Mar. 1 to Sept. 30, + 2°·7 ; Oct. 1 to Dec. 31, + 2°·8.

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

Jan. 1 — Jan. 13, + 0°·1	Aug. 1 — Aug. 31, + 0°·3
Jan. 14 — Feb. 22, 0°·0	Sept. 1 — Oct. 31, + 0°·25
Feb. 23 — Mar. 5, + 0°·1	Nov. 1 — Dec. 31, + 0°·2
Mar. 6 — July 31, + 0°·25	

DALLMEYER PHOTOHELIOGRAPH, GREENWICH.

Date. Greenwich Civil Time.		Correction for Zero.	Date. Greenwich Civil Time.		Correction for Zero.
	d h	° ′		d h	° ′
1916 December	30. 11	+ 3 03	1917 April	24. 10	+ 2 36
,,	30. 11	+ 2 47	May	26. 10	+ 2 42
1917 February	8. 12	+ 2 49	July	11. 10	+ 2 42
March	1. 13	+ 2 38	,,	11. 11	+ 2 41
,,	1. 13	+ 2 46	September	3. 9	+ 2 41
April	2. 15	+ 2 41	,,	3. 9	+ 2 43
,,	2. 15	+ 2 41	October	20. 10	+ 2 51
,,	13. 9	+ 2 55	,,	20. 10	+ 2 51
,,	13. 9	+ 2 47	1918 January	11. 0	+ 2 49
,,	24. 10	+ 2 54	,,	11. 0	+ 2 51

The wire frame was removed for cleaning on February 9.

DALLMEYER PHOTOHELIOGRAPH, CAPE OF GOOD HOPE.

Date. Greenwich Civil Time.		Correction for Zero.	Date. Greenwich Civil Time.		Correction for Zero.
	d h	° ′		d h	° ′
1916 December	30. 8	+ 0 15	1917 July	7. 9	− 0 6
1917 January	16. 8	− 0 8	,,	26. 12	+ 0 15
February	1. 9	− 0 5	August	7. 9	+ 0 24
,,	15. 8	+ 0 2	,,	21. 8	+ 0 22
March	4. 10	+ 0 13	September	7. 11	+ 0 13
,,	10. 8	+ 0 15	,,	20. 8	+ 0 14
,,	23. 8	+ 0 18	October	11. 9	+ 0 11
April	10. 9	+ 0 16	,,	25. 8	+ 0 19
,,	25. 8	+ 0 15	November	10. 8	+ 0 19
May	8. 9	+ 0 23	,,	27. 9	+ 0 3
,,	26. 12	+ 0 18	December	10. 10	+ 0 21
June	9. 10	+ 0 18	,,	24. 8	+ 0 7
,,	25. 12	+ 0 14	1918 January	7. 8	+ 0 5

A new camera box was fitted to the Cape Photoheliograph on March 5 and 6.

The zero-corrections adopted during 1917 for the Kodaikánal photographs were as follows :—

+0°·2 from Jan. 1 to May 27 and +0°·1 for the remainder of the year.

A new wire was inserted on May 27.

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

The zero-correction adopted during 1917 for the Dehra Dûn photographs was—0°·8.

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

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

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

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

The calculations of heliographic longitude and latitude are made by use of the formulæ given in "Researches on Solar Physics: Heliographical Positions and Areas of Sun Spots observed with the Kew Photoheliograph during the years 1862 and 1863" by W. De La Rue, B. Stewart, and B. Loewy. *Phil. Trans.*, 1869. If r be the measured distance of a spot from the centre of the Sun's apparent disc, R the measured radius of the Sun on the photograph, (R) the tabular semi-diameter of the Sun in arc, and ρ, ρ' the angular distances of a spot from the centre of the apparent disc as viewed from the Sun's centre and from the Earth respectively, ρ is obtained from the equations :—

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

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

$$\sin\lambda = \cos\rho\sin D + \sin\rho\cos D\cos\chi$$

$$\sin l = -\sin\chi\sin\rho\sec\lambda.$$

The position-angle χ is found from the position-angle from the North Point by subtracting P, the position-angle of the N end of the Sun's axis, measured eastward from the North Point of the disc. The heliographic longitude of the spot is $l+$L, where L is the heliographic longitude of the centre of the disc. The three quantities P, D, and L for the time of the exposure of each photograph are derived from the Ephemeris for Physical Observations of the Sun given on p. 522 of the *Nautical Almanac* for 1917.

The inclination of the Sun's axis to the ecliptic is assumed to be 82° 45′, the longitude of the ascending node for 1917·0 to be 74° 36′·2, 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. *General Catalogue of Groups of Sun Spots for* 1917.

The Catalogue contains every group of spots which lasted for two or more days, and the group numbers are in continuation of those given in 1916 and previous years. Groups seen only once are not included, but appear in the Daily Results with a distinctive numeration.

During the year 1917, a number of groups of spots have been noted in the Catalogue as "Revivals." These have been tabulated in series in the following table. The respective groups of each series are in the same heliographic position, and are seen in consecutive rotations but with definite breaks in their history between each rotation. The latter feature excludes them from being classed as "Recurrent" groups; they differ from "Intermittent" groups in their being of long period intermittency. When a "Recurrent" series forms part of a "Revival" series, a reference is made in the last column of the table. Other groups which are given in detail in Ledger II are also indicated.

[TABLE

REVIVAL GROUPS OF SUN SPOTS, 1917.

Reference No. of Series.	Group No.	Duration.	First Seen.		Last Seen.		Mean Area.	Mean Position.			Reference to Ledger.
			Date.	Longitude from C.M.	Date.	Longitude from C.M.		Longitude System I.	Longitude System II.	Latitude.	
		d	1916–17	°	1916–17	°		°	°	°	
1	7913	6	Dec. 16	+ 4	Dec. 21	+72	71	19	18	−23	
	7945	2	Jan. 9	−43	Jan. 10	−28	5	17	18	−25	
2	7899	6	Dec. 5	+19	Dec. 10	+82	240	180	186	+ 7	I.782
	7920	13	,, 24	−81	Jan. 5	+78	153	188	188	+ 8	
	7961	4	Jan. 25	−15	,, 28	+25	23	194	188	+ 8	
3	7922	6/8	Dec. 25	−38	Jan. 1	+53	7	218	218	−17	II.
	7959	5/7	Jan. 21	−42	,, 27	+43	9	223	222	−19	II.
	7995	7	Feb. 19	−14	Feb. 25	+67	18	226	221	−17	II.
4	7926	13	Dec. 28	−78	Jan. 9	+78	1396	136	136	+14	I.784
	7962	10	Jan. 25	−73	Feb. 3	+58	76	142	138	+13	
	8005	3	Mar. 1	+35	Mar. 3	+66	17	143	135	+13	
5	7930	4	Dec. 31	+19	Jan. 3	+61	21	200	200	+10	
	7960	9	Jan. 21	−58	,, 29	+50	71	205	201	+11	II.
6	7938	3	Jan. 8	+16	Jan. 10	+44	11	89	88	+14	
	7974	2	Feb. 2	−16	Feb. 3	− 1	3	88	84	+14	
7	7939	6/7	Jan. 8	+ 1	Jan. 14	+79	130	73	73	+23	I.786
	7969	9	,, 30	−71	Feb. 7	+33	141	69	72	+23	
	8002	12	Feb. 27	−70	Mar. 10	+79	190	66	73	+25	I.789
	8038	8	Mar. 26	−69	Apr. 2	+23	78	67	74	+24	
8	7941	11	Jan. 8	−59	Jan. 18	+78	107	15	14	+15	II.
	7978	9	Feb. 4	−61	Feb. 12	+48	97	17	11	+12	II.
9	7952	6/7	Jan. 16	−67	Jan. 22	+14	11	262	263	−23	I.
	7986	11	Feb. 11	−84	Feb. 21	+40	110	255	259	−23	I.
10	7955	12	Jan. 18	−70	Jan. 29	+78	103	233	229	−11	II.
	7993	10	Feb. 16	−47	Feb. 25	+79	83	233	225	−12	II.
	8021	8	Mar. 13	−76	Mar. 20	+20	12	233	225	−15	II.
11	7968	4	Jan. 28	−67	Jan. 31	−33	9	99	100	+22	
	7999	10	Feb. 24	−71	Mar. 5	+44	100	101	102	+21	II.
12	7973	2	Feb. 2	+23	Feb. 3	+37	3	127	119	+ 7	
	8007	4	Mar. 2	+37	Mar. 5	+73	73	130	118	+10	
13	7976	6	Feb. 3	+ 3	Feb. 8	+70	151	92	97	+25	II.
	8009	6	Mar. 3	+12	Mar. 8	+78	359	92	97	+24	I.790
	8037	5	,, 24	−74	,, 28	−24	27	90	96	+23	
14	8001	3	Feb. 26	+49	Feb. 28	+75	4	197	209	−27	
	8026	9	Mar. 16	−71	Mar. 24	+30	48	194	214	−29	II.
15	8014	3	Mar. 8	+15	Mar. 10	+36	8	27	13	− 9	
	8044	2	Apr. 5	+25	Apr. 6	+43	3	32	15	−10	

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Reference No. of Series.	Group No.	Duration.	First Seen.		Last Seen.		Mean Area.	Mean Position.			Reference to Ledger.
			Date.	Longitude from C M.	Date.	Longitude from C.M.		Longitude System I.	Longitude System II.	Latitude.	
		d	1917	°	1917	°		°	°	°	
16	8020	3	Mar. 12	+46	Mar. 14	+78	23	13	2	+13	
	8045	3/5	Apr. 6	+21	Apr. 10	+71	17	11	359	+15	
	8071	6	May 3	+11	May 8	+76	60	8	359	+17	I.800
	8093	13	,, 23	−76	June 4	+79	138	13	359	+16	I.800
17	8025	4	Mar. 16	+48	Mar. 19	+82	186	314	298	+ 8	II.
	8042	6/7	Apr. 2	−80	Apr. 8	− 2	18	323	301	+ 5	II.
18	8034	12	Mar. 23	−78	Apr. 3	+73	85	102	90	+13	I.792
	8058	12	Apr. 19	−72	,, 30	+76	202	108	89	+12	I.792
	8087	11	May 17	−54	,, 27	+78	204	117	89	+10	II.
19	8041	5/6	Apr. 2	−27	Apr. 7	+42	4	18	19	−21	II.
	8062	12	,, 26	−69	May 7	+77	371	21	22	−21	I.798
	8065	9	,, 29	−23	,, 7	+76	94	24	32	−23	I.798
	8089	13	May 22	−81	June 3	+76	484	22	37	−24	I.798
	8125	13	June 19	−77	July 1	+80	229	16	35	−25	I.798
	8163	12	July 17	−72	,, 28	+70	74	10	22	−23	I.798
	8207	13	Aug. 13	−72	Aug. 25	+83	671	13	30	−23	I.816
	8247	4	Sept. 10	−70	Sept. 13	−31	32	6	33	−24	I.816
19*	8050	11	Apr. 12	−59	Apr. 22	+77	49	214	206	−17	II.
	8078	12	May 9	−65	May 20	+86	176	214	201	−16	II.
	8079	8/11	,, 10	−51	,, 20	+83	88	213	209	−19	II.
20	8054	13	Apr. 14	−73	Apr. 26	+79	56	172	197	−28	I.795
	8080	9	May 11	−79	May 19	+26	46	170	196	−28	I.795
	8107	11/12	June 7	−80	June 18	+62	32	171	193	−25	II.
21	8056	9	Apr. 18	−38	Apr. 26	+66	59	159	158	+20	I.797
	8082	7	May 13	−66	May 19	+14	22	158	150	+18	I.797
	8108	13	June 8	−79	June 20	+78	415	160	155	+19	II.
22	8060	3	Apr. 24	−34	Apr. 26	− 8	8	81	55	+ 7	
	8098	4	May 26	+35	May 29	+77	11	89	58	+ 8	
23	8075	9	May 7	−42	May 15	+69	107	265	244	−12	II.
	8105	8	June 4	−20	June 11	+81	143	276	243	− 9	II.
24	8085	10	May 15	−58	May 24	+65	145	142	110	+ 6	II.
	8112	12	June 9	−77	June 20	+78	99	153	116	+ 7	I.802
	8148	11	July 7	−66	July 17	+75	127	155	112	+ 8	I.802
25	8099	12	May 26	−72	June 6	+80	133	343	307	− 6	II.
	8131	4/7	June 24	−37	,, 30	+45	6	353	315	− 9	II.
26	8120	11	June 15	−58	June 25	+78	370	91	65	+13	I.803
	8153	6	July 10	−84	July 15	−15	36	94	57	+10	I.803
	8166	2	,, 21	+66	,, 22	+81	49	98	61	+11	I.807
	8193	11	Aug. 6	−77	Aug. 16	+59	94	102	54	+ 8	I.807

REVIVAL GROUPS OF SUN SPOTS, 1917.

Reference No. of Series.	Group No.	Duration.	First Seen.		Last Seen.		Mean Area.	Mean Position.			Reference to Ledger.
			Date.	Longitude from C.M.	Date.	Longitude from C.M.		Longitude System I.	Longitude System II.	Latitude.	
		d	1917	°	1917	°		°	°	°	
27	8123	9	June 16	−41	June 24	+63	84	93	83	+18	II.
	8152	7	July 10	−74	July 16	+ 2	13	101	81	+16	II.
	8201	9	Aug. 10	−22	Aug. 18	+82	383	103	78	+15	II.
	8238	11	Sept. 3	−68	Sept. 13	+67	65	104	83	+17	II.
28	8141	12	June 30	−82	July 11	+66	366	228	207	−15	II.
	8182	6	Aug. 4	+21	Aug. 9	+82	51	223	200	−16	I.810
	8220	2	,, 25	−66	,, 26	−50	5	222	191	−14	
29	8144	9/10	July 5	−74	July 14	+44	13	169	126	+ 7	II.
	8190	4	Aug. 6	− 5	Aug. 9	+31	5	170	117	+ 5	
30	8146	8	July 6	−27	July 13	+70	91	204	202	−20	II.
	8198	3	Aug. 8	+48	Aug. 10	+77	42	201	191	−19	
31	8151	13	July 8	−78	July 20	+80	338	123	128	+21	II.
	8191	7	Aug. 6	−54	Aug. 12	+16	41	119	114	+20	II.
32	8169	13	July 23	−77	Aug. 4	+84	329	285	260	+15	I.808
	8214	3	Aug. 19	−80	,, 21	−54	14	287	254	+13	
	8262	10	Sept. 18	−48	Sept. 27	+73	62	285	257	+16	II.
33	8170	12	July 25	−83	Aug. 5	+59	39	253	226	+14	II.
	8216	12	Aug. 21	−84	Sept. 1	+63	34	256	232	+16	II.
34	8172	7/8	July 27	−38	Aug. 3	+57	28	274	254	+16	II.
	8222	7	Aug. 26	0	Sept. 1	+76	169	273	257	+17	I.817
	8257	14	Sept. 16	−86	,, 29	+84	1406	267	235	+15	
	8290	13	Oct. 14	−79	Oct. 26	+87	481	272	224	+12	
	8316	14	Nov. 9	−86	Nov. 22	+83	275	277	229	+15	
	8349	11	Dec. 7	−77	Dec. 17	+58	103	279	208	+ 9	II.
35	8186	4	Aug. 5	+48	Aug. 8	+85	81	239	211	+14	
	8224	9	,, 26	−31	Sept. 3	+74	30	241	211	+15	II.
36	8196	4/6	Aug. 7	−45	Aug. 12	+19	4	119	142	+24	II.
	8240	2	Sept. 6	−11	Sept. 7	+ 1	3	116	142	+24	
37	8209	3	Aug. 14	+57	Aug. 16	+83	96	131	89	+11	
	8237	5/6	Sept. 3	− 2	Sept. 8	+36	7	139	89	+10	
38	8243	12	Sept. 7	−81	Sept. 18	+69	104	37	347	+10	II.
	8286	4	Oct. 12	+27	Oct. 15	+72	38	45	348	+10	II.
	8307	9/11	Nov. 1	−59	Nov. 11	+79	229	55	347	+ 8	I.825
	8334	11	,, 26	−74	Dec. 6	+57	77	66	347	+ 6	
39	8264	5	Sept. 20	+ 7	Sept. 24	+59	17	312	300	−18	II.
	8284	6	Oct. 11	−78	Oct. 16	−13	32	309	299	−19	II.
40	8268	9	Sept. 23	−32	Oct. 1	+81	67	236	178	+ 8	II.
	8295	9	Oct. 19	−53	,, 27	+55	113	230	164	+ 7	II.

REVIVAL GROUPS OF SUN SPOTS, 1917.

Reference No. of Series.	Group No.	Duration.	First Seen.		Last Seen.		Mean Area.	Mean Position.			Reference to Ledger.
			Date.	Longitude from C.M.	Date.	Longitude from C.M.		Longitude System I.	Longitude System II.	Latitude.	
		d	1917–18	°	1917–18	°		°	°	°	
41	8274	3	Oct. 1	−18	Oct. 3	+ 8	3	141	161	−23	
	8304	4/5	,, 29	− 6	Nov. 2	+48	7	144	171	−24	
42	8278	9	Oct. 5	−31	Oct. 13	+84	163	79	79	+20	II.
	8306	8	,, 30	−58	Nov. 6	+33	41	77	106	+24	II.
43	8279	4/5	Oct. 6	+ 6	Oct. 10	+56	16	97	96	−20	
	8301	4	,, 27	−75	,, 30	−40	40	99	79	−18	
44	8283	8/11	Oct. 11	−75	Oct. 21	+60	42	314	266	+12	II.
	8293	2	,, 17	+10	,, 18	+25	9	320	294	+16	
	8312	10	Nov. 6	−83	Nov. 15	+35	84	320	280	+14	II.
45	8303	6	Oct. 29	+ 7	Nov. 3	+76	156	159	86	+ 5	II.
	8329	2/3	Nov. 24	− 6	,, 26	+21	7	160	77	+ 3	
46	8311	2	Nov. 5	+54	Nov. 6	+66	6	111	73	−15	
	8328	13	,, 23	−73	Dec. 5	+80	684	107	72	−16	I.827
	8370	13	Dec. 19	−83	,, 31	+76	330	116	59	−12	
47	8313	6	Nov. 7	+ 7	Nov. 12	+79	99	41	336	+ 9	II.
	8340	12	,, 28	−71	Dec. 9	+79	145	45	327	+ 7	I.830
	8378	13	Dec. 24	−82	Jan. 5	+77	204	51	329	+ 7	
48	8319	10	Nov. 13	−65	Nov. 22	+53	83	248	209	+15	II.
	8361	5	Dec. 15	+ 9	Dec. 19	+58	18	257	212	+14	
49	8320	11	Nov. 15	−83	Nov. 25	+45	102	202	132	+ 8	II.
	8355	13	Dec. 12	−81	Dec. 24	+78	238	211	136	+ 9	II.
50	8324	10	Nov. 19	−56	Nov. 28	+62	49	178	135	−14	II.
	8365	9	Dec. 18	−27	Dec. 26	+81	44	186	141	−14	II.
51	8333	10	Nov. 26	−46	Dec. 5	+71	66	93	80	−19	II.
	8372	12	Dec. 20	−83	,, 31	+59	90	100	63	−16	II.
	8412	8	Jan. 22	− 6	Jan. 29	+81	581	102	68	−16	
52	8336	3	Nov. 28	+37	Nov. 30	+67	12	154	184	+24	
	8368	10	Dec. 19	−39	Dec. 28	+79	122	159	192	+24	II.
53	8352	13	Dec. 10	−83	Dec. 22	+80	408	236	185	−13	II.
	8395	3/4	Jan. 11	−15	Jan. 14	+24	4	239	182	−13	
54	8371	10	Dec. 20	−53	Dec. 29	+69	103	133	158	−23	II.
	8408	3/4	Jan. 20	0	Jan. 23	+37	7	135	151	−22	
55	8373	3	Dec. 21	+35	Dec. 23	+65	43	209	120	+ 4	
	8397	6	Jan. 13	−17	Jan. 18	+51	37	212	117	+ 4	

§ 3. *Ledgers of the Areas and Heliographic Positions of Groups of Sun Spots for 1917.*

Ledger I.—Recurrent Groups.—This Ledger supersedes the Catalogue of Recurrent Groups of Sun Spots given in years previous to 1916 of the *Greenwich Photo-Heliographic Results*, and the reference numbers of the series are in continuation of those given therein. The groups forming this Ledger have been abstracted from a general Ledger of all spot groups seen throughout the year, and were selected upon the following plan, reference being made to the General Catalogue :—If any spot group when first seen was 60° or more to the east of the Central Meridian, then the Catalogue, and, if necessary, the Daily Results also, were searched some fifteen or sixteen days earlier, to ascertain whether a spot group of similar heliographic longitude and latitude was then near the west limb of the Sun. Similarly, if any spot group when last seen was 60° or more to the west of the Central Meridian, then the Catalogue was searched some fifteen or sixteen days later, to ascertain whether a spot group of similar heliographic longitude and latitude was then near the east limb of the Sun. Both the search forward and the search backward have been made in the case of every spot group that was observed close to both the east and west limbs, in order that no possible case of identity might be overlooked. When there appeared to be a case of probable identity between spot groups observed in two consecutive rotations of the Sun, the character of the second group has been carefully compared with that of the first in each of the three elements—area, longitude, and latitude. In cases where the evidence appeared to render probable the continued existence of the spot, it has been numbered in the Ledger, and where there has been some uncertainty a note has been added. If, on the other hand, the evidence appeared to go in the other direction, but was not quite decisive, the series has been printed in the Ledger but a separate number has not been given it. It has been distinguished by the number of the preceding series, placed in brackets and marked with an asterisk. In cases where a well-defined series has been recorded, there have sometimes been included in brackets spot groups undoubtedly belonging to the same general disturbance, but for which the evidence of continuity was not sufficient.

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

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

§ 4. *Total Areas of Sun Spots and Faculæ for each day, and Mean Areas and Mean Heliographic Latitude of Sun Spots and Faculæ for each Rotation of the Sun, and for the year* 1917.

Particulars relating to this section are given in the headings on pages D 162-3.

F. W. DYSON.

Royal Observatory, Greenwich,
1922 *February* 8.

ROYAL OBSERVATORY, GREENWICH.

POSITIONS AND AREAS

OF

SUN SPOTS AND FACULÆ.

FOR EACH DAY IN THE YEAR

1917.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

Col. 1. (1) Time when photograph was taken expressed in days and decimals of a day reckoning from midnight at commencement of year. (2) Place of observatory—Greenwich (G), Cape of Good Hope (C), Kodaikánal (K), Dehra Dûn (D). (3) Date of photograph (Civil reckoning).
Col. 2. Number of Spot Group in order of appearance and in continuation of the Group-numbers given in previous years. Groups seen on one day only are distinguished by the number of the Rotation during which they were observed and by a letter given in the order of their appearance. When there is no number in the second column, it is to be understood that there is a Facula unaccompanied by a Spot.
Col. 3. Distance of Spot Group or Faculæ from Sun's centre in terms of the Sun's radius.
Col. 4. Position Angle of Spot Group or Faculæ measured from the North pole of the Sun's axis in the direction N., E., S., W., N.
Col. 5. Heliographic Longitude of the Spot Group or Faculæ derived from the measures.
Col. 6. Heliographic Latitude of the Spot Group or Faculæ similarly derived.
Col. 7. Area of Umbræ corrected for foreshortening in millionths of the Sun's visible hemisphere.
Col. 8. Area of Whole Spots composing the Group similarly expressed.
Col. 9. Area of each group of Faculæ similarly expressed. The positions of Faculæ relative to the Spots with which they are associated are indicated by the letters *n, s, p, f, c*, denoting respectively north, south, preceding, following, concentric.
In line with the date of each day is given in brackets the position angle of the Sun's axis from the North point; the heliographic longitude and latitude of the centre of the disc; the total areas of Spots and Faculæ for the day.

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.			G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
0·364		·966	290·3	237·3	+18·6			169	1·342	7931	·574	234·0	181·8	−22·5	6	24	
		·948	257·3	236·0	−13·0			65		7924	·479	352·8	155·5	+25·0	0	2	
		·938	305·9	228·0	+31·9			330		7933	·335	187·8	154·5	−22·6	1	3	
	7922	·812	250·8	217·9	−17·4	2	14	402*c*		7925	·164	179·1	151·5	−12·7	2	4	
	7918	·782	243·6	213·7	−22·4	38	217	182*s*		7926	·405	42·8	135·3	+14·0	337	1416	
	7930	·610	291·9	199·6	+10·6	8	38		C	7929	·677	67·0	112·2	+12·7	95	581	797*c*
	7920	·435	297·3	187·5	+ 8·6	30	139			7932	·777	103·8	101·2	−12·7	2	12	208*c*
	7923	·332	240·1	181·7	−12·5	5	9				·814	42·2	110·3	+34·5			488
C	7931	·428	219·3	181·6	−22·2	7	20				·750	58·2	108·9	+20·8			173
	7925	·277	127·1	151·6	−12·6	2	5				·915	74·6	87·2	+12·7			103
	7924	·543	28·5	148·0	+25·5	1	5				·953	61·8	83·4	+25·5			582
	7926	·565	58·3	135·0	+14·5	322	1740	503*c*	Jan. 2			(+1·6)	(151·7)	(−3·3)	(504)	(2422)	(3705)
	7928	·725	119·2	121·4	−22·9	0	2	107*f*									
	7929	·814	71·8	112·4	+12·8	111	599	654*c*									
	7932	·876	102·9	103·8	−12·7	2	12	175*c*									
		·878	48·3	112·7	+33·8			361	2·364		·983	253·7	217·9	−16·6			420
		·865	62·4	109·1	+21·8			385			·903	238·5	200·5	−29·8			362
		·910	113·3	100·1	−22·4			100			·886	301·5	195·0	+25·7			337
Jan. 1			(+2·1)	(164·6)	(−3·1)	(528)	(2800)	(3433)		7918	·967	248·1	213·4	−22·0	21	147	269*sf*
										846d	·910	281·1	202·5	+ 8·6	2	14	} 582*c*
										7930	·890	283·1	199·6	+10·0	0	6	}
1·342		·918	253·8	218·1	−16·2			381		7920	·778	284·0	187·8	+ 8·6	38	144	307*c*
		·905	277·4	215·8	+ 5·2			140		7931	·743	242·3	183·5	−22·6	1	7	136*c*
		·908	289·8	214·5	+16·5			99	C	7923	·699	257·1	182·0	−11·4	4	10	78*p*
		·837	237·2	205·0	−29·0			206		7933	·413	219·7	154·6	−21·7	0	3	
		·834	306·1	200·8	+27·2			80		7925	·276	233·1	151·2	−12·8	1	4	
		·978	186·8	188·3	−78·8			19		7926	·305	7·5	135·9	+14·1	234	1237	
C	7918	·889	246·6	213·4	−22·3	26	186	240*s*		7929	·507	57·3	112·4	+12·7	97	642	
	7930	·765	285·8	199·8	+ 9·8	4	24	189*c*			·866	51·7	86·5	+30·2			245
	7920	·614	288·5	187·6	+ 8·5	26	155				·907	62·3	77·5	+23·3			818
	7923	·525	251·8	182·2	−12·2	5	15		Jan. 3			(+1·1)	(138·2)	(−3·4)	(398)	(2214)	(3554)

Group 7918, 1916 Dec. 22–1917 Jan. 3. Return of Group 7895. A large regular spot, slightly elongated and developing a double umbra by Dec. 30. It has divided into two spots by Jan. 3. One or two small distant followers are occasionally seen.
Group 7920, 1916 Dec. 24–1917 Jan. 5. Return of Group 7899. A large regular spot with occasionally one or two small faint followers.
Group 7922, 1916 Dec. 25–1917 Jan. 1. A very small spot *n* Group 7918 on Dec. 25. Two are seen on Dec. 26, and several in a long straight stream on Dec. 27, of which only the first and last spots remain by Dec. 28. The group is not seen on Dec. 30 and 31, but two very small spots are seen in the neighbourhood on Jan. 1.
Group 7923, 1916 Dec. 26–1917 Jan. 3. Three small spots on Dec. 26, which have developed by Dec. 28 into a short compact stream, of which the central portion is the most stable. The group diminishes after Dec. 29 and only one small spot remains by Jan. 1.
Group 7924, 1916 Dec. 27–1917 Jan. 2. A small regular spot on Dec. 27, near the place of Group 7896, but more probably a new formation. A distant train of spots has come into view by Dec. 28, of which only one remains on Dec. 31. This is also seen on Jan. 1, when the original leader has disappeared, but on Jan. 2 a very small marking is visible near the original leader's position.
Group 7925, 1916 Dec. 27–1917 Jan. 3. Return of Group 7905. A wide pair of small spots of which the rear has disappeared by Dec. 31.
Group 7926, 1916 Dec. 28–1917 Jan. 9. A fine stream of spots, of which the leader is a very large regular spot, which becomes elongated in a direction parallel to the equator, and finally divides into two. Probably a new outburst near Group 7903; not a return.
Group 7928, 1916 Dec. 30–1917 Jan. 1. A small spot in bright faculæ, not seen on December 31.
Group 7929, 1916 Dec. 30–1917 Jan. 11. A large stream of normal type *f* Group 7926. Both the leader and rear spots are large and regular and crossed by several bright bridges after Jan. 3. Group 7930, 1916 Dec. 31–1917 Jan. 3. A pair of small spots on Dec. 31, of which the leader has nearly disappeared by Jan. 1: a loose cluster of very small markings on Jan. 2 and 3.
Group 7931, Jan. 1–3. A small stream *s* Group 7923. Group 7932, Jan. 1–2. Two or three very small spots. Group 7933, Jan. 2–3. One or two minute spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
3·478		·982	280·5	201·7	+ 9·6			192
		·975	239·7	200·6	−30·3			88
		·864	251·3	182·7	−17·9			294
	7920	·910	281·1	187·9	+ 8·5	29	151	243*c*
G	*846e*	·476	312·2	145·0	+15·3	1	3	
	7926	·368	325·1	136·1	+14·1	240	1271	
	7929	·346	34·9	111·9	+13·4	111	586	
		·856	57·1	71·0	+25·5			209
		·930	112·7	55·7	−22·4			134
Jan. 4			(+0·5)	(123·6)	(− 3·5)	(381)	(2011)	(1160)
4·483		·948	253·5	181·7	−16·8			684
		·970	303·8	181·1	+31·5			107
		·867	233·8	166·4	−32·8			137
		·842	287·8	165·4	+12·8			145
		·795	247·8	161·5	−19·7			285
		·818	309·0	156·4	+28·4			678
	7920	·982	279·4	188·4	+ 8·5	18	118	399*f*
C	7926	·520	305·6	136·1	+14·3	178	1268	
	7929	·297	356·0	111·5	+13·6	101	594	
	846f	·458	46·3	90·3	+15·0	1	4	
	7934	·740	50·6	71·3	+25·1	0	5	199*f*
		·861	114·1	52·2	−22·4			252
		·923	62·2	47·3	+23·9			81
		·984	72·0	32·4	+17·0			167
Jan. 5			(0·0)	(110·3)	(− 3·6)	(298)	(1989)	(3134)
5·630		·911	249·9	160·4	−19·8			504
		·897	303·7	152·6	+27·9			906
		·777	312·3	135·9	+28·6			141
	7926	·709	295·0	136·6	+14·6	165	1161	
	7929	·402	316·8	111·6	+13·4	85	510	
	7935	·231	348·5	97·9	+ 9·3	0	7	
C	7934	·638	39·7	68·3	+26·0	1	12	
	7936	·555	125·9	66·3	−22·2	3	10	
	7937	·909	69·4	32·6	+17·0	10	31	320*c*
		·774	123·2	48·4	−27·6			42
		·879	52·5	41·7	+30·1			49
		·965	113·0	20·8	−23·1			258
Jan. 6			(−0·5)	(95·2)	(− 3·7)	(264)	(1731)	(2220)
6·521		·941	249·0	153·5	−21·1			145
		·945	298·0	150·1	+24·8			231
	7926	·832	290·4	137·0	+14·6	241	1164	360*c*
G	7929	·539	302·2	111·3	+13·3	97	550	
	7935	·324	317·8	96·2	+10·1	4	21	
	7934	·556	26·8	67·4	+26·0	4	16	

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
6·521	7936	·420	140·0	66·6	−22·4	5	25	
G	7937	·822	66·7	31·7	+16·6	19	70	152*c*
		·908	114·6	19·3	−23·8			491
Jan. 7			(−1·0)	(83·5)	(−3·8)	(370)	(1846)	(1379)
7·364		·979	279·3	149·8	+ 8·3			82
		·974	299·4	145·2	+27·5			251
		·944	248·7	143·0	−21·4			228
		·840	313·7	118·5	+32·7			145
		·751	241·7	118·4	−23·5			79
	7926	·925	288·0	137·8	+15·0	177	1421	1212*f*
	7929	·679	294·9	111·5	+13·5	85	489	93*c*
	846g	·651	323·3	98·4	+27·9	1	5	
	7935	·466	301·6	96·1	+10·5	14	43	
	7938	·421	321·9	88·0	+15·5	2	14	
C	7939	·465	358·6	73·1	+23·7	0	4	
	7940	·299	13·0	68·5	+13·0	4	22	
	7936	·327	166·1	67·5	−22·3	2	16	
	7934	·552	12·1	64·9	+28·6	1	11	
	7937	·714	60·9	31·8	+17·3	9	45	89*c*
	846h	·792	115·9	22·1	−22·7	0	4	336*f*
	7941	·883	70·6	13·0	+15·0	15	37	}
	7942	·937	73·1	4·9	+14·3	0	17	} 278*c*
	7943	·957	71·7	1·5	+16·2	0	10	}
Jan. 8			(−1·3)	(72·4)	(− 3·9)	(310)	(2138)	(2793)
8·367		·872	243·6	118·4	−24·8			127
		·901	312·6	113·3	+35·2			300
	7926	·983	286·0	136·8	+14·9	86	1242	1527*c*
	7929	·817	289·4	111·4	+13·3	91	512	612*c*
	7944	·803	294·1	108·9	+16·5	2	8	
	7935	·645	291·6	96·6	+10·5	8	39	
	7938	·578	301·6	89·6	+14·1	9	16	
	7940	·336	330·0	69·1	+12·9	30	123	
C	7934	·534	349·9	65·2	+27·6	0	2	
	846i	·247	178·6	58·8	−18·3	0	2	
	7937	·568	51·8	31·5	+16·9	5	22	
	7945	·730	121·2	15·8	−25·1	0	2	272*f*
	7941	·755	66·1	13·9	+14·5	11	48	}
	7942	·827	70·5	6·1	+13·6	10	32	} 277*c*
	7943	·869	68·5	2·0	+16·4	2	12	}
		·975	71·7	344·1	+16·8			62
Jan. 9			(−1·8)	(59·2)	(− 4·0)	(254)	(2060)	(3177)
9·332		·938	244·2	115·7	−25·6			210
C		·852	255·9	104·8	−14·2			70

Group 7934, Jan. 5–11. An unstable group of small spots. Group 7935, Jan. 6–11. A stream of small spots *sf* Group 7929.
Group 7936, Jan. 6– 8. A pair of spots on Jan. 6 and 7, becoming a short stream on Jan. 8. On the same meridian as Group 7934.
Group 7937, Jan. 6–13. A diminishing cluster of unstable spots. Group 7938, Jan. 8–10. A few small spots.
Group 7939, Jan. 8–14. A very small spot on Jan. 8, not seen on Jan. 9, developing into a stream of which the leader is the largest member.
Group 7940, Jan. 8–13. A stream of irregular spots, of which the leading and following spots alone remain on Jan. 12 connected by a ridge of faculæ.
Group 7941, Jan. 8–18. An irregular stream which is led by an unstable composite spot which has nearly disappeared by Jan. 18.
Group 7942, Jan. 8–18. An unstable spot with occasional small companions, *f* Group 7941, and in the same area of faculæ as Group 7943.
Group 7943, Jan. 8–15. A small spot becoming temporarily larger and of regular type with some very small companions.
Group 7944 Jan. 9–11. Three very small spots *n* of Group 7929 on Jan. 9; a small regular spot by Jan. 11.
Group 7945, Jan. 9–10. A minute spot on Jan. 9 with a small cluster on Jan. 10.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
1917.			°	°	°			
9·332		·907	308·8	103·2	+32·4			248
	7929	·918	286·1	111·1	+13·0	68	498	} 995c
	7944	·901	290·9	107·8	+16·8	5	31	
	7935	·801	287·0	97·6	+11·0	11	35	103c
	7938	·738	293·2	90·7	+13·9	2	4	
	7939	·603	316·3	73·1	+22·1	11	30	
	7940	·478	306·8	69·5	+12·7	36	140	
	7934	·592	330·5	65·5	+27·0	2	7	
	846j	·417	186·9	49·8	−28·4	0	2	
C	7937	·441	34·8	31·3	+17·2	5	13	
	7946	·356	109·7	26·6	−10·7	1	2	
	7945	·554	130·3	18·9	−24·6	1	8	
	7941	·611	59·0	13·8	+14·8	30	170	
	7942	·682	65·3	7·1	+13·3	4	23	51c
	7943	·748	63·9	2·3	+16·2	3	16	68c
		·922	68·4	342·3	+18·0			128
		·940	78·5	337·8	+ 9·3			168
		·969	115·9	330·7	−26·1			167
Jan. 10			(−2·3)	(46·5)	(− 4·1)	(179)	(979)	(2208)
10·341		·933	256·6	102·3	−14·0			173
		·949	305·8	98·2	+31·9			264
		·851	310·6	81·8	+30·7			150
	7929	·984	284·6	111·3	+13·5	54	456	} 711c
	7944	·982	288·3	110·2	+17·1	13	49	
	7935	·914	284·4	97·5	+11·3	0	17	281*nf*
	7939	·736	306·4	72·9	+22·5	10	44	100c
	7940	·643	296·4	69·3	+13·0	20	105	
	7947	·598	241·6	67·1	−20·1	0	5	
	7934	·690	320·2	63·2	+28·2	0	1	
C	7937	·364	7·8	30·3	+16·8	8	52	
	7946	·142	130·5	26·9	− 9·6	2	6	
	7948	·359	124·1	15·3	−15·6	5	24	
	7941	·446	42·8	15·0	+15·0	39	141	
	7942	·521	56·0	7·0	+13·0	5	20	
	7943	·597	55·6	2·5	+15·9	1	13	
	7949	·838	63·8	340·7	+19·1	0	5	170c
		·904	117·8	329·7	−26·9			176
		·911	78·0	328·9	+ 9·1			19
		·978	110·8	314·8	−21·2			160
Jan. 11			(−2·8)	(33·2)	(− 4·3)	(157)	(938)	(2204)
11·370		·957	285·6	90·8	+13·5			340
		·929	306·6	80·4	+31·5			141
		·805	312·4	62·6	+29·6			141
C	7939	·853	300·7	72·3	+23·1	22	144	339c
	7947	·773	244·2	68·3	−22·5	10	44	82c
	7940	·778	291·5	67·6	+13·6	10	81	194c

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ:	AREA. Whole Spots.	AREA. Faculæ.
1917.			°	°	°			
11·370	7937	·406	332·2	31·0	+16·7	4	21	
	7946	·180	237·1	28·4	− 9·9	0	3	
	7941	·353	13·6	14·7	+15·6	23	196	
	7948	·223	158·1	14·7	−16·2	6	28	
	7942	·371	35·7	6·8	+13·2	12	43	
C	7943	·445	39·3	2·6	+15·9	7	35	
	7949	·668	55·9	344·1	+18·3	10	29	
		·806	120·4	318·6	−26·9			97
		·915	95·7	313·3	− 6·9			26
		·919	109·9	313·0	−20·0			252
		·953	79·9	308·4	+ 8·2			47
Jan. 12			(−3·3)	(19·6)	(− 4·4)	(104)	(624)	(1659)
12·318		·966	288·7	79·7	+16·7			87
		·892	308·1	61·7	+30·8			439
		·805	317·5	47·3	+32·9			71
	7939	·941	296·1	73·2	+22·7	34	201	548c
	7947	·889	246·8	69·2	−22·6	10	50	306c
	7940	·896	287·5	68·4	+13·5	3	16	322c
	7937	·534	311·5	31·7	+16·5	1	1	
	7948	·247	212·1	14·9	−16·5	11	29	
	7941	·358	339·7	14·5	+15·0	17	143	
C	7942	·291	357·1	8·0	+12·4	11	50	
	7943	·362	13·2	2·2	+16·1	3	11	
	7949	·531	43·1	344·7	+18·6	22	133	
	7950	·978	109·6	288·5	−20·1	14	87	149c
		·838	60·9	315·5	+21·2			53
		·798	95·1	314·1	− 6·9			22
		·816	111·6	313·4	−20·2			136
		·858	76·9	309·6	+ 8·8			51
		·948	58·8	301·0	+27·6			78
Jan. 13			(−3·7)	(7·1)	(− 4·5)	(126)	(721)	(2262)
13·329		·971	284·6	68·1	+13·0			195
		·935	264·0	63·1	− 7·2			56
		·950	303·2	59·6	+29·6			307
		·915	315·8	48·1	+38·3			28
		·821	304·0	41·9	+24·2			41
		·929	333·2	37·4	+52·7			28
		·884	326·5	36·4	+44·0			30
C	7947	·980	248·2	72·8	−22·2	0	10	396c
	7939	·990	293·3	72·8	+22·2	46	489	838c
	7948	·414	240·4	15·7	−16·0	4	23	
	7941	·472	314·0	14·3	+14·8	30	180	
	7942	·379	317·8	8·8	+11·8	9	39	
	7943	·383	339·7	1·7	+16·5	1	5	
	7949	·433	23·4	343·4	+18·8	44	172	
	7951	·860	53·7	302·4	+27·7	3	18	223c

Group 7946, Jan. 10–12. One very small distinct spot on Jan. 10; a pair of spots on Jan. 11–12.
Group 7947, Jan. 11–14. A small group of the "stream" type.
Group 7948, Jan. 11–14. Two small clusters which have condensed to two spots by Jan. 14.
Group 7949, Jan. 11–20. A stream of small spots led by a regular spot sometimes with composite umbræ. Only the leader remains by Jan. 19.
Group 7950, Jan. 13–24. A double spot, passing to the regular type by Jan. 15 and then breaking up on Jan. 18, followed by a train of small spots which have all disappeared by Jan. 23.
Group 7951, Jan. 14–15. Two or three spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
13·329	7950	·914	109·9	287·9	−20·0	18	109	356*c*
C		·837	20·6	328·1	+47·3			48
		·934	63·4	289·1	+22·8			36
Jan. 14			(−4·2)	(353·8)	(−4·6)	(155)	(1045)	(2582)
14·307		·959	306·4	47·5	+32·8			193
		·840	293·2	34·4	+16·5			223
	7941	·633	300·9	15·1	+15·0	26	144	
	7942	·543	299·4	9·7	+11·3	11	44	
C	7943	·493	316·9	1·5	+16·6	0	3	
	7949	·408	350·1	345·2	+18·9	33	194	
	7951	·756	47·0	302·7	+27·2	0	16	82*c*
	7950	·805	111·6	288·4	−20·1	30	230	580*c*
		·934	60·5	277·1	+25·4			108
		·966	113·1	265·6	−23·5			84
Jan. 15			(−4·7)	(341·0)	(−4·7)	(100)	(631)	(1270)
15·348		·932	289·7	33·1	+16·4			257
		·948	307·4	31·0	+33·1			65
		·779	240·4	15·8	−25·8			216
		·745	252·2	14·7	−16·4			103
	7941	·803	293·2	16·9	+15·3	16	78	218*c*
	7942	·725	290·7	10·8	+11·4	11	35	
C	7949	·510	322·0	346·5	+19·1	29	189	
	7950	·651	115·8	288·7	−20·2	23	189	163*c*
	7952	·924	112·3	259·8	−22·4	1	9	113*sp*
		·879	59·0	271·7	+24·2			79
		·885	76·6	266·6	+ 9·5			25
		·933	118·9	259·0	−28·6			96
		·971	107·2	250·6	−17·8			59
Jan. 16			(−5·2)	(327·2)	(−4·8)	(80)	(500)	(1394)
16·320		·872	253·4	14·9	−16·8			160
		·878	244·4	14·8	−24·6			202
		·836	294·9	7·0	+17·7			377
	7941	·906	289·9	16·5	+15·7	9	34	275*f*
	7942	·858	286·8	11·2	+11·7	13	62	81*c*
C	7953	·738	251·4	1·2	−16·9	4	22	
	7949	·643	308·0	346·7	+19·2	24	196	
	7950	·485	123·5	289·0	−19·8	21	180	
	7952	·811	115·2	261·7	−23·1	1	7	113*c*
		·889	107·2	251·7	−17·4			73
Jan. 17			(−5·6)	(314·4)	(−4·8)	(72)	(501)	(1281)
1917.			°	°	°			
17·360		·959	244·5	14·6	−25·8			264
		·957	253·6	14·3	−17·1			122
		·906	292·1	2·3	+17·6			215
	7941	·985	286·3	18·8	+15·0	0	8	367*f*
	7942	·956	284·1	11·9	+12·0	7	42	155*c*
	7953	·872	253·1	1·2	−17·1	3	10	103*c*
	7949	·779	299·4	346·4	+19·0	20	163	
C	7954	·577	308·9	328·6	+16·8	6	23	
	7950	·327	143·5	288·8	−20·0	19	105	
	7952	·662	120·5	262·4	−23·4	3	11	
	7955	·939	100·9	230·5	−12·0	17	87	239*f*
		·964	60·0	231·1	+27·2			165
		·974	106·8	223·2	−17·4			227
		·980	115·9	221·5	−26·3			219
Jan. 18			(−6·1)	(300·7)	(− 4·9)	(75)	(449)	(2076)
18·347		·978	289·5	3·1	+17·8			204
		·956	253·9	1·2	−16·8			144
	7949	·895	294·5	347·2	+19·2	33	149	429*f*
	7954	·724	299·0	329·0	+16·8	4	13	27*c*
	7950	·256	184·5	289·0	−19·7	14	88	
C	7952	·526	128·6	261·3	−23·6	4	27	
	7955	·837	100·8	230·9	−11·8	14	105	361*f*
	7956	·933	58·1	225·0	+27·2	3	11	332*c*
	7957	·918	115·9	221·8	−25·7	2	7	355*c*
		·879	54·2	234·1	+28·0			56
		·919	107·1	220·8	−17·7			517
		·960	77·7	215·7	+10·2			176
		·969	82·3	213·0	+ 6·2			147
Jan. 19			(−6·5)	(287·8)	(− 5·0)	(74)	(400)	(2748)
19·351	7949	·968	291·6	346·9	+19·4	0	96	344*f*
	7954	·830	294·6	326·4	+17·0	0	5	46*c*
	7950	·349	221·8	289·0	−19·9	6	85	
	7952	·374	153·8	264·1	−24·5	0	19	
	7958	·402	122·0	253·7	−17·0	7	23	
C	7955	·684	101·4	231·3	−11·5	13	102	
	7956	·856	53·4	224·0	−27·4	1	18	156*c*
	7957	·846	116·8	218·1	−25·3	7	54	353*c*
		·831	108·4	218·7	−18·1			374
		·913	76·6	210·3	−10·0			426
		·981	117·5	194·5	−28·0			48
Jan. 20			(−7·0)	(274·5)	(− 5·1)	(34)	(402)	(1747)
20·448		·949	290·4	328·7	+17·5			303
	7950	·535	240·1	289·5	−20·0	10	37	
C	7958	·229	160·7	255·6	−17·6	0	1	

Group 7952, Jan. 16–22. A small spot developing into a small unstable stream on Jan. 19. Nothing is seen on Jan. 21.
Group 7953, Jan. 17–18. A pair of small spots.
Group 7954, Jan. 18–20. A small stream *f* Group 7949.
Group 7955, Jan. 18–29. A stable regular spot, followed at some distance by one or two very small spots.
Group 7956, Jan. 19–30. A stream of normal type, of which the leader is alone seen as a small spot before the train appears on Jan. 21, and as a regular spot after Jan. 27 when the train has died out.
Group 7957, Jan. 19–30. A few small scattered unstable spots until Jan. 27, when a regular spot forms, which however soon diminishes.
Group 7958, Jan. 20–21. A pair of spots on Jan. 20; one only on the next day.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
20·448	7955	·482	105·0	231·8	−11·7	14	121	
	7956	·753	47·0	222·1	+26·8	35	145	242*c*
	7957	·704	121·3	218·5	−25·4	4	11	85*c*
	7959	·679	110·3	218·4	−17·5	0	4	
	7960	·865	72·9	202·6	+12·0	18	119	279*c*
C		·776	73·4	211·4	+ 9·4			286
		·894	120·7	198·2	−29·6			96
		·952	79·1	189·3	+ 8·7			211
		·953	102·5	187·2	−13·5			128
Jan. 21			(−7·5)	(260·1)	(−5·2)	(81)	(438)	(1630)
21·340		·971	241·3	325·1	−29·1			66
		·962	290·7	319·4	+18·2			133
		·899	250·1	312·3	−20·2			157
	7950	·676	246·0	289·2	−19·9	6	16	
	7952	·396	214·5	262·5	−24·1	1	3	
	847a	·319	171·1	251·4	−23·6	0	2	
	7955	·303	111·8	231·7	−11·5	16	120	
C	7956	·656	37·2	222·1	+26·6	18	149	
	7957	·525	127·9	221·6	−23·5	1	6	
	7959	·491	119·6	221·6	−18·7	0	4	
	7960	·733	69·3	204·1	+11·2	20	75	
		·843	123·9	193·7	−31·1			145
		·852	75·8	191·7	+ 9·0			164
		·910	111·7	182·9	−21·9			578
		·930	72·2	182·4	+14·4			82
Jan. 22			(−7·9)	(248·3)	(−5·3)	(62)	(375)	(1325)
22·402		·965	249·1	309·8	−21·5			188
	7950	·827	249·9	289·7	−19·6	4	18	221*c*
	847b	·556	245·8	266·4	−17·7	4	10	
	847c	·360	205·0	244·0	−24·3	0	2	
	7955	·112	164·3	232·6	−11·6	15	94	
	7956	·561	19·7	222·2	+26·5	20	177	
C	7957	·442	145·5	218·2	−26·3	0	4	
	7960	·567	60·8	204·2	+11·3	25	224	
		·852	110·7	176·4	−20·4			448
		·939	66·9	168·2	+19·4			333
		·974	80·3	158·8	+ 8·1			114
		·977	110·6	155·9	−21·2			108
Jan. 23			(−8·4)	(234·4)	(−5·4)	(68)	(529)	(1412)
23·338	7950	·921	250·4	289·4	−20·2	0	14	572*f*
	7955	·214	240·8	232·9	−11·4	11	110	
	7956	·532	359·0	222·6	+26·5	22	164	
C	7957	·398	172·6	218·7	−28·3	4	38	
	7960	·410	45·9	204·6	+11·3	10	88	

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
23·338		·852	67·0	167·4	+16·2			204
		·916	78·2	157·2	+ 8·4			220
C		·962	61·4	152·8	+25·5			378
		·943	110·6	151·1	−21·2			210
		·974	72·6	147·4	+15·6			613
Jan. 24			(−8·8)	(222·0)	(−5·5)	(47)	(414)	(2197)
24·339		·961	247·8	283·5	−22·8			428
		·843	248·0	265·8	−21·5			193
	7955	·425	255·3	233·1	−11·2	16	101	
	7959	·344	222·5	223·3	−20·0	5	35	
	7956	·570	338·8	222·2	+26·6	34	218	
	7957	·408	201·9	218·7	−27·6	0	5	
	7960	·299	14·0	204·8	+11·3	5	22	
C	7961	·353	46·3	194·6	+ 8·7	10	45	
	7962	·969	73·5	135·5	+14·4	4	26	372*c*
		·793	74·7	158·5	+ 8·5			86
		·919	56·8	149·0	+27·4			430
		·901	70·5	147·7	+14·8			587
		·888	109·6	146·3	−20·0			136
Jan. 25			(−9·3)	(208·9)	(− 5·6)	(74)	(452)	(2232)
25·344		·957	299·7	263·3	+26·2			82
		·894	247·3	258·8	−22·8			182
	7955	·619	259·3	233·7	−11·0	18	110	
	7959	·518	240·3	224·0	−19·8	2	17	
	7956	·658	323·5	221·5	+26·8	33	187	
	7957	·510	226·9	219·9	−25·4	7	26	
	7960	·335	329·7	205·5	+11·2	6	24	
C	7961	·235	5·5	194·3	+ 7·9	7	27	
	7963	·416	118·7	173·3	−16·7	0	5	
	7962	·887	70·5	136·1	+14·4	7	63	719*f*
	7964	·980	76·0	119·0	+12·5	2	30	250*c*
		·814	51·5	150·4	+26·5			443
		·802	63·9	146·9	+16·9			523
		·927	51·1	136·7	+32·8			153
Jan. 26			(−9·7)	(195·6)	(−5·6)	(82)	(489)	(2352)
26·339		·893	301·3	239·4	+24·6			176
		·948	350·1	204·0	+63·6			220
	7955	·782	260·9	234·1	−10·7	18	119	
	7959	·699	247·0	225·5	−20·0	1	4	
C	7956	·766	312·2	221·7	+26·5	16	148	
	7957	·647	234·7	218·6	−26·6	28	137	
	847d	·569	228·7	211·0	−27·0	0	1	
	7960	·485	306·2	205·9	+11·4	6	33	

Group 7959, Jan. 21–27. Intermittent, no spots being seen on Jan. 23–24. A few small unstable spots *np* Group 7957 and *sf* Group 7955.
Group 7960, Jan. 21–29. An irregular train of short-lived spots with one prominent member on Jan. 23–24 in the middle of the group.
Group 7961, Jan. 25–28. A few spots *f* Group 7960.
Group 7962, Jan. 25–Feb. 3. A stream of abnormal development. A regular spot, preceding which spots develop after Jan. 26 to form a stream with another regular spot as leader; the latter alone survives on Feb. 2. Return of Group 7926.
Group 7963, Jan. 26–31. A few scattered indefinite unstable spots; none are seen on Jan. 29. Group 7972 develops just southwards on Feb. 1.
Group 7964, Jan. 26–Feb. 2. Two spots with one or two small companions in a large mass of faculæ gradually diminishing. A mere dot represents the preceding component on Feb. 2.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.			G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
26·339	7961	·324	317·5	195·2	+ 8·2	0	7		29·351	7963	·524	248·2	173·3	−16·4	7	25	
	7963	·305	140·2	170·6	−19·1	3	13			7962	·328	1·8	142·3	+13·0	14	108	
	847e	·467	56·2	159·4	+ 9·8	0	3			7964	·572	58·6	113·1	+12·0	9	29	
	7962	·722	64·4	140·5	+13·9	19	82	452*f*		7967	·556	69·9	111·4	+ 5·8	1	5	
C	7964	·929	74·7	116·4	+12·0	26	87	847*c*		7968	·796	54·2	98·3	+23·4	3	11	198*c*
	7965	·974	113·9	104·6	−24·5	0	6	236*c*	C	7969	·969	64·2	71·5	+23·2	38	324	329*c*
		·818	46·4	139·4	+30·2			217		7970	·985	87·2	63·3	+ 1·6	25	141	171*f*
		·938	58·6	119·0	+26·8			173			·880	44·0	94·5	+35·3			131
Jan. 27			(−10·1)	(182·5)	(− 5·7)	(117)	(640)	(2321)			·899	70·4	82·0	+14·6			214
											·957	114·9	69·1	−25·5			68
27·542		·807	250·8	220·1	−18·8			221	Jan. 30			(−11·4)	(142·9)	(− 6·0)	(133)	(804)	(2943)
		·789	239·8	216·5	−27·1			100									
	7955	·924	260·8	234·6	−10·7	12	111	149*c*	30·323		·967	242·8	206·3	−27·8			102
	7966	·835	284·8	221·3	+ 9·0	1	14	118*f*			·970	283·8	204·1	+11·8			234
	7956	·881	304·1	220·9	+26·2	18	170	346*c*			·877	237·4	189·7	−31·3			43
	7957	·797	239·8	217·3	−27·3	13	103				·873	283·7	189·0	+ 8·8			161
	7960	·701	291·9	208·0	+10·8	3	13				·816	253·8	184·8	−16·7			100
C	7961	·476	296·6	192·0	+ 7·0	2	11			7963	·690	250·7	173·0	−17·6	2	14	
	7963	·243	193·0	170·0	−19·4	1	9			7971	·539	317·4	152·5	+17·8	1	8	
	7962	·514	52·2	142·2	+13·0	22	101			7962	·411	323·2	144·7	+13·4	10	101	
	7964	·815	70·6	115·0	+12·1	11	59	566*c*		*847f*	·342	2·9	129·1	+13·9	0	5	
	7967	·827	78·9	112·3	+ 5·8	0	8	34*c*	C	7964	·426	43·0	112·9	+12·3	1	17	
	7965	·891	114·8	104·1	−24·6	2	13	185*c*		7967	·382	56·8	111·4	+ 6·3	0	6	
	7968	·948	66·0	99·3	+20·5	0	9	123*c*		7968	·692	45·7	97·5	+23·8	0	10	
		·892	57·8	110·4	+25·2			147		7969	·909	60·3	70·7	+23·8	31	328	543*c*
Jan. 28			(−10·6)	(166·7)	(− 5·8)	(85)	(621)	(1989)		7970	·919	86·0	63·9	+ 1·2	21	137	365*c*
											·882	71·0	71·2	+13·6			195
28·323		·898	251·8	220·6	−18·9			184			·891	112·4	67·1	−22·6			69
	7955	·976	260·6	234·4	−10·4	14	56	102*f*			·978	55·6	58·6	+31·8			371
	7956	·939	300·6	220·3	+26·0	23	203	363*n*	Jan. 31			(−11·8)	(130·1)	(− 6·0)	(66)	(626)	(2183)
	7966	·908	282·6	219·9	+ 8·8	2	20	}									
	7960	·795	288·2	206·4	+10·6	0	42	} 351*c*	31·390		·962	281·4	188·5	+ 9·2			142
	7957	·872	242·0	216·1	−27·2	12	49	215*c*			·947	257·3	187·9	−14·0			105
C	7962	·418	39·2	140·7	+13·2	30	186				·935	237·9	185·0	−32·1			103
	7964	·729	67·0	113·2	+12·2	9	36				·916	246·0	182·5	−24·4			143
	7967	·715	75·8	112·4	+ 5·9	4	28				·853	253·5	174·7	−17·2			339
	7965	·814	116·2	103·2	−24·6	1	6	54*c*			·893	295·9	174·4	+19·8			103
	7968	·887	62·8	99·0	+20·8	0	5	248*c*		7972	·840	247·1	172·6	−22·4	3	16	67*c*
		·789	50·8	113·9	+25·6			134	C	7971	·693	302·9	153·4	+17·2	0	4	
		·878	76·2	96·9	+ 9·1			99		7962	·586	301·7	146·6	+12·6	11	59	
		·937	52·0	95·5	+32·5			188		7964	·323	5·3	114·3	+12·6	3	21	
Jan. 29			(−11·0)	(156·4)	(− 5·9)	(95)	(631)	(1938)		*847g*	·432	16·3	108·7	+18·4	1	9	
										7969	·807	54·6	70·3	+23·6	36	229	356*c*
										847h	·861	48·7	67·4	+30·6	1	6	82*f*
29·351		·962	250·8	217·9	−20·0			454		7970	·795	84·1	63·9	+ 0·9	24	141	350*f*
		·916	284·9	207·1	+11·0			672			·769	31·9	86·2	+35·4			41
C	7956	·989	297·6	220·0	+26·0	26	109	322*nf*			·905	54·1	59·4	+28·8			262
	7957	·953	243·2	215·9	−27·3	10	52	384*c*			·862	109·7	56·5	−20·0			31

Group 7965, Jan. 27–29. A single spot.
Group 7966, Jan. 28–29. A pair of small spots *p* Group 7960.
Group 7967, Jan. 28–31. A few small spots *sf* Group 7964.
Group 7968, Jan. 28–31. Two or three small spots.
Group 7969, Jan. 30–Feb. 7. A large regular spot of which a small portion has detached itself from the *p* side by Feb. 2. By Feb. 5, the main spot has disintegrated, and the group is a stream of small spots of which one or two small components alone remain on Feb. 6–7. Return of Group 7939.
Group 7970, Jan. 30–Feb. 9. An equatorial group. A regular spot which diminishes rapidly after Feb. 6. One or two small spots appear 7° behind the leader.
Group 7971, Jan. 31–Feb. 1. A small cluster of spots on Jan. 31; a single spot on Feb. 1; *np* Group 7962.
Group 7972, Feb. 1–3. A small group forming *s* the place of Group 7963.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
31·390		·941	52·4	54·3	+32·3			467
Feb. 1			(−12·3)	(116·0)	(− 6·1)	(79)	(485)	(2591)
32·342		·985	277·8	182·5	+ 6·6			90
		·974	234·0	181·7	−36·4			113
		·940	253·2	174·3	−17·9			274
		·921	242·8	170·6	−27·4			173
		·962	304·6	170·5	+30·8			58
		·944	292·4	170·4	+18·7			141
		·842	251·3	160·8	−19·1			77
		·877	294·0	160·5	+17·6			195
		·886	307·4	156·9	+29·0			145
		·800	314·5	144·3	+29·4			209
C		·764	329·3	132·0	+35·5			81
	7972	·937	248·2	173·6	−22·5	16	44	141*c*
	7962	·738	293·4	147·3	+12·6	8	24	359*c*
	7973	·452	299·3	126·8	+ 7·0	0	2	
	7964	·388	320·8	117·9	+11·4	0	2	
	7974	·438	37·8	87·5	+14·2	0	5	
	7969	·702	46·6	69·8	+23·6	26	153	186*c*
	7970	·643	81·7	64·2	+ 0·5	22	111	
		·716	37·2	73·8	+29·3			53
		·809	48·2	60·5	+28·1			201
		·883	48·1	52·6	+32·3			401
		·931	69·0	38·4	+16·9			192
		·936	80·0	35·5	+ 7·0			73
		·964	57·4	35·3	+29·2			87
Feb. 2			(−12·6)	(103·5)	(− 6·2)	(72)	(341)	(3249)
33·365		·990	249·1	173·3	−21·5			305
		·955	284·0	160·7	+11·4			53
		·960	292·8	159·9	+19·8			130
		·895	249·8	153·8	−20·8			163
		·940	301·6	153·7	+26·9			122
		·900	233·8	152·4	−35·1			59
		·855	316·6	135·0	+34·0			65
		·730	291·4	133·6	+11·0			77
		·830	325·4	126·7	+38·1			46
C	7972	·989	247·2	173·2	−23·4	0	20	37*c*
	7962	·871	288·7	147·6	+13·0	4	10	1093*n*
	7975	·866	308·4	140·5	+28·7	6	12	360*c*
	7973	·633	289·6	126·8	+ 7·2	0	3	
	7976	·512	355·6	92·5	+24·3	14	39	
	7974	·344	1·9	89·3	+13·8	0	1	
	7969	·588	33·3	69·5	+23·5	18	102	
	7970	·442	76·2	64·7	+ 0·4	13	107	
	7977	·988	106·1	7·7	−16·8	0	13	216*c*

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
33·365		·700	41·4	59·0	+26·3			66
		·801	40·8	51·8	+32·4			357
		·873	65·0	33·8	+18·2			81
		·936	72·1	23·4	+14·4			59
C		·950	114·8	17·5	−25·4			74
		·974	74·6	15·4	+13·4			228
Feb. 3			(−13·0)	(90·0)	(−6·2)	(55)	(307)	(3591)
34·345		·942	248·4	148·2	−22·4			154
		·959	290·2	147·4	+17·3			430
		·910	290·0	139·3	+15·2			225
		·880	310·0	128·4	+30·5			77
		·770	291·8	123·9	+11·9			123
	7975	·947	303·6	141·3	+29·0	3	29	229*c*
	7976	·574	336·0	92·0	+25·4	21	118	
	7969	·510	16·0	68·4	+23·0	10	62	
C	7970	·243	61·3	64·9	+ 0·5	7	68	
	7978	·899	72·4	15·8	+12·8	0	9	
	7977	·927	104·7	8·6	−16·0	34	176	177*c*
	7979	·972	82·2	1·8	+ 6·0	13	131	103*c*
		·852	66·9	22·7	+15·9			115
		·912	72·4	14·1	+13·2			178
		·938	114·4	6·9	−25·0			83
		·963	66·8	6·6	+20·3			183
Feb. 4			(−13·4)	(77·1)	(−6·3)	(88)	(593)	(2077)
35·323		·979	288·8	139·6	+16·8			305
		·975	303·1	135·0	+30·2			139
		·920	287·4	128·4	+13·2			426
		·953	310·4	127·0	+35·4			137
		·893	297·5	122·0	+21·0			41
		·818	290·2	115·8	+12·5			399
		·866	307·8	114·9	+28·0			126
C		·751	302·7	105·9	+19·2			301
	7976	·667	320·3	92·2	+25·2	31	171	
	7969	·501	353·3	67·8	+23·2	16	57	
	7970	·124	1·0	64·1	+ 0·7	18	94	
	7978	·798	68·6	14·8	+12·8	38	156	298*c*
	7977	·830	105·2	7·9	−16·2	66	465	126*c*
	7979	·905	80·0	0·7	+ 6·2	32	110	195*c*
	7980	·993	69·4	344·0	+19·4	8	57	183*c*
		·825	116·4	9·6	−25·3			102
		·901	65·1	4·6	+19·1			186
		·939	101·8	353·6	+13·3			98
Feb. 5			(−13·8)	(64·2)	(− 6·4)	(209)	(1110)	(3062)

Group 7973, Feb. 2–3. A very small spot. Group 7974, Feb. 2–3. A pair of very small spots on Feb. 2; a single spot on Feb. 3.
Group 7975, Feb. 3–4. A small spot forming near the west limb. Group 7976, Feb. 3–8. An irregular stream of ill-formed spots forming on the central meridian. After Feb. 6, two spots marking the front and rear of the stream alone remain.
Group 7977, Feb. 3–16. A magnificent group of the stream type of which both the early formation and maximum development appear within the visible hemisphere. The group is naturally divided into three portions—the leader and rear spots and a much smaller intermediate portion. The leader, which develops from a small spot on Feb. 3, soon appears as a gigantic one of regular type. The rear spot is elongated and more complex, and before Feb. 11 is the largest member. Its major axis, which in the early stage is at right angles to the solar equator, becomes parallel to it by Feb. 8 by the formation spreading towards the centre of the stream. The intermediate portion consists of an irregular cluster of spots which condenses after Feb. 9 and practically connects the leader and rear spot together. Only the last portion of the group remains in view on the west limb on Feb. 16. Groups 7981, 7982, and 7984 are small subordinate groups.
Group 7978, Feb. 4–12. An irregular stream of ill-formed spots. The leading spot, a double, alone remains on Feb. 11. Group 7979, Feb. 4–15. A small regular spot gradually diminishing. A very small follower appears 5° away on Feb. 9. Group 7980, Feb. 5–14. A small but stable spot.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.			G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
36·534		·972	284·2	122·6	+12·1			125	38·470	7978	·338	17·3	16·9	+12·2	29	162	
		·928	278·9	115·2	+ 5·8			141		7977	·276	127·2	9·7	−15·9	393	2510	
		·897	291·9	108·3	+16·4			330		7979	·410	58·6	2·3	+6·2	11	42	
		·919	303·1	107·9	+27·0			67		7981	·358	100·9	2·0	−9·9	1	5	
		·847	247·0	105·8	−22·8			78	G	7982	·527	105·6	351·4	−13·6	4	7	
		·824	281·9	102·3	+ 6·0			93		7980	·726	54·2	344·1	+20·0	4	12	287*f*
		·834	320·9	88·4	+35·4			71			·950	62·2	316·3	+23·8			393
	7976	·797	309·3	91·3	+25·6	45	309	134*c*			·922	116·2	315·4	−26·6			140
C	7969	·591	327·4	68·6	+23·8	0	8		Feb. 8			(−15·0)	(22·8)	(− 6·5)	(478)	(2858)	(2560)
	7970	·308	292·9	64·7	+ 0·8	7	53										
	847i	·372	341·3	55·3	+14·2	0	16										
	7978	·616	60·1	15·3	+12·5	46	153		39·374		·992	297·6	89·1	+26·2			340
	7977	·632	106·5	9·5	−15·4	134	1134				·975	308·4	79·8	+35·2			181
	7979	·750	76·1	1·4	+ 6·0	12	59	118*f*			·947	286·6	79·6	+13·4			137
	7981	·730	96·1	1·2	− 8·8	0	5				·868	253·2	71·5	−17·8			47
	7980	·928	65·7	344·5	+19·7	3	12	604*c*			·955	318·9	69·6	+42·8			88
Feb. 6			(−14·3)	(48·3)	(− 6·4)	(247)	(1749)	(1761)			·838	242·2	66·8	−26·8			43
											·880	300·8	66·0	+23·1			472
											·846	309·2	58·6	+27·9			166
37·537		·993	276·7	117·2	+ 5·8			102			·819	320·2	49·9	+33·8			505
		·981	283·9	111·9	+12·2			249		7970	·825	275·0	65·9	+ 0·4	1	3	209*f*
		·966	292·0	106·5	+19·2			245		7983	·493	316·4	31·4	+14·6	7	27	
		·969	299·7	105·2	+26·6			109	C	7978	·344	341·2	17·4	+12·4	30	135	
		·922	246·9	102·7	−23·8			133		7977	·163	170·2	9·3	−15·8	423	2497	
		·928	279·9	101·8	+ 6·6			80		7981	·134	113·2	3·8	− 9·6	0	8	
		·926	309·3	93·2	+32·6			101		7979	·269	33·8	2·3	+ 6·3	10	65	
		·870	290·6	92·1	+14·3			51		7982	·325	113·8	353·1	−13·8	1	2	
		·890	317·9	83·4	+37·1			93		7984	·413	134·7	352·4	−23·1	8	13	
G	7976	·898	302·3	91·9	+25·2	29	157	487*c*		7980	·611	44·0	344·1	+20·1	4	9	
	7969	·692	313·7	67·9	+23·0	0	5				·897	57·0	314·5	+25·6			485
	7970	·492	281·8	63·8	0·0	2	20				·898	121·7	307·8	−31·2			39
	7978	·450	44·5	16·3	+12·6	50	166				·974	108·8	292·7	−19·8			102
	7977	·447	113·5	10·0	−16·1	369	1998		Feb. 9			(−15·4)	(10·9)	(− 6·6)	(484)	(2759)	(2814)
	7979	·580	70·2	2·0	+ 5·8	15	75										
	7981	·547	97·6	1·9	− 9·6	3	14										
	7980	·834	61·1	344·5	+19·6	9	17	755*c*	40·584		·961	297·1	63·9	+23·6			289
		·989	65·0	317·6	+23·4			131			·913	274·8	60·3	+ 1·6			319
Feb. 7			(−14·7)	(35·1)	(− 6·5)	(477)	(2452)	(2536)			·891	246·2	58·1	−24·2			51
											·935	303·4	56·9	+27·9			147
											·901	310·8	48·5	+32·2			211
38·470		·976	276·2	99·4	+ 4·6			56			·885	318·7	42·0	+37·2			102
		·954	247·4	96·3	−23·4			74	C	7983	·690	300·9	32·7	+15·4	20	179	
		·968	287·0	95·7	+14·6			78		7978	·507	305·8	19·7	+11·0	13	52	
		·936	310·6	82·0	+34·3			174		7977	·295	236·4	9·7	−15·8	332	3020	
		·879	289·4	81·1	+13·6			129		7981	·155	244·2	3·1	−10·5	0	2	
		·801	304·8	68·1	+22·6			380		7979	·259	328·8	2·7	+ 6·1	9	46	
G		·756	314·8	59·7	+27·0			98		7984	·287	178·6	354·6	−23·3	0	4	
		·749	327·8	51·3	+33·6			269		7982	·134	162·1	352·6	−14·0	2	9	
	7976	·966	298·3	92·6	+25·2	35	112	465*c*		7980	·487	21·4	344·1	+20·3	7	10	
	7970	·678	277·1	64·9	0·0	1	8	17*c*		*848a*	·436	40·4	338·2	+12·9	0	1	

Group 7981, Feb. 6–10. A few very small spots *nf* Group 7977.
Group 7982, Feb. 8–11. Two or three very small spots *nf* Group 7977.
Group 7983, Feb. 9–13. A regular spot with a small cluster of followers on Feb. 9–11.
Group 7984, Feb. 9–10. One or two small spots *sf* Group 7977.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
40·584	7985	·709	50·0	319·4	+21·6	5	16	190*f*
C		·887	107·8	292·0	−18·8			67
		·946	115·9	283·2	−26·6			96
Feb. 10			(−15·8)	(355·0)	(−6·7)	(388)	(3339)	(1472)
41·360		·979	243·6	64·6	−27·1			91
		·989	295·3	62·2	+23·7			164
		·974	272·9	61·2	+ 1·2			252
		·984	300·9	58·9	+28·7			145
		·953	307·5	48·5	+32·6			271
		·927	315·6	39·8	+37·8			67
	7983	·794	295·9	32·5	+15·8	24	137	165*c*
	7978	·640	296·7	20·3	+11·2	11	29	
C	7977	·435	248·4	9·5	−15·2	552	3399	
	7979	·382	306·0	2·8	+ 6·6	9	60	
	7982	·186	218·0	351·6	−15·0	0	7	
	7980	·456	1·5	344·1	+20·3	5	11	
	7985	·613	40·9	319·4	+21·4	10	40	
	7986	·991	114·5	260·4	−25·1	4	119	254*c*
		·758	44·2	308·4	+27·5			72
		·891	115·1	281·8	−25·4			121
		·959	107·2	270·2	−18·4			238
Feb. 11			(−16·1)	(344·8)	(−6·7)	(615)	(3802)	(1840)
42·325		·989	303·2	47·4	+31·2			121
		·966	311·6	37·0	+37·2			101
	7983	·906	291·3	33·2	+16·0	8	77	190*c*
	7978	·780	290·2	20·1	+11·2	5	10	122*c*
	7977	·608	252·5	8·9	−15·9	444	3187	
	7979	·550	293·0	2·5	+ 6·6	10	32	
	7987	·566	329·8	349·6	+23·0	7	29	
C	7980	·488	336·8	343·8	+20·0	3	8	
	7985	·519	23·8	319·0	+21·7	12	58	
	848b	·851	106·8	273·4	−17·8	0	7	188*f*
	7986	·948	113·6	259·6	−24·4	34	172	703*c*
		·782	115·8	281·7	−24·2			118
		·989	101·0	249·6	−11·8			69
Feb. 12			(−16·4)	(332·0)	(−6·7)	(523)	(3580)	(1612)
43·510		·881	287·4	15·4	+11·8			439
		·829	300·4	5·8	+20·6			177
	7983	·983	287·8	33·1	+16·0	0	96	304*f*
	7977	·793	256·0	9·0	−15·2	535	3467	773*c*
G	7979	·748	285·1	2·8	+ 6·6	11	33	30*c*
	7987	·714	311·8	351·5	+22·8	5	20	
	7980	·612	315·0	343·6	+19·5	4	6	
1917.								
43·510	7985	·468	354·0	319·4	+20·8	15	71	
	7988	·089	166·2	315·2	−11·7	3	17	
	7989	·358	164·7	310·3	−26·9	2	6	
G	7990	·766	111·1	266·9	−20·4	0	2	27*c*
	7986	·857	115·0	257·7	−24·8	11	126	956*c*
		·928	100·3	247·7	−12·0			198
Feb. 13			(−16·9)	(316·4)	(−6·8)	(586)	(3844)	(2904)
44·397		·958	284·6	15·9	+11·9			428
		·900	293·0	4·8	+17·2			97
		·856	241·2	2·8	−28·0			77
		·874	300·8	359·1	+22·6			71
		·960	191·6	353·0	−75·0			18
	7977	·897	255·6	9·1	−15·9	457	3590	624*c*
	7979	·862	282·0	2·7	+ 6·8	10	17	71*nf*
	7980	·724	305·4	343·4	+19·5	2	6	59*n*
G	7991	·296	272·9	322·0	− 5·3	1	4	
	7985	·524	331·2	320·4	+20·7	5	21	
	7988	·198	246·3	315·4	−11·2	4	18	
	7990	·591	111·2	269·6	−17·9	12	32	
	7992	·646	105·2	264·8	−15·0	3	6	
	7986	·757	116·6	257·0	−24·4	27	82	249*f*
		·790	98·6	252·3	−11·0			65
		·891	100·1	241·3	−12·0			130
		·969	106·3	228·0	−17·4			149
		·980	78·6	228·0	+ 9·7			106
		·984	114·3	223·1	−25·1			66
Feb. 14			(−17·2)	(304·8)	(−6·8)	(521)	(3776)	(2210)
45·592		·975	290·4	2·8	+18·0			133
		·948	243·0	1·5	−27·8			155
		·871	256·9	350·1	−14·8			91
		·877	300·0	343·9	+22·1			541
	7977	·979	253·9	8·4	−17·1	381	2830	1133*c*
	7979	·967	279·3	2·8	+ 7·1	6	17	136*f*
	7991	·554	270·6	322·7	− 5·4	19	59	
	7988	·450	264·4	315·8	− 8·6	1	3	
	7989	·505	226·0	312·9	−26·8	1	2	
G	7990	·376	121·9	269·5	−17·9	55	283	
	7992	·453	110·6	263·0	−15·4	0	12	
	7986	·591	121·1	255·6	−23·5	30	114	
		·840	99·6	231·4	−11·8			87
		·883	75·0	229·3	+ 9·8			254
		·892	110·5	225·5	−21·4			247
		·965	79·0	215·9	+ 8·7			150
		·957	117·2	214·7	−28·0			111
		·970	106·8	211·8	−18·0			121
Feb. 15			(−17·6)	(289·0)	(−6·9)	(493)	(3320)	(3159)

Group 7985, Feb. 10–14. A small feeble stream of spots.
Group 7986, Feb. 11–21. At first a regular spot with a few small followers. By Feb. 15 fresh spots have formed to the *n*, and the group appears as a broad irregular stream of ill-defined spots which die out as the west limb is approached.
Group 7987, Feb. 12–13. A short-lived stream in the same area of faculæ as Group 7980 but *np*.
Group 7988, Feb. 13–15. A few scattered spots. Group 7989, Feb. 13–15. A small spot not seen on Feb. 14.
Group 7990, Feb. 13–22. A very small spot on Feb. 13, developing into a stream led by a regular spot. The train, which is never prominent, has disappeared by Feb. 20.
Group 7991, Feb. 14–18. A small stream *np* Group 7988.
Group 7992, Feb. 14–20. A small spot with followers Feb. 15–18; *nf* Group 7990 and *np* Group 7986.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
46·363		·952	256·6	352·0	−14·8			137
		·943	297·2	344·1	+22·8			440
	7977	·991	252·0	2·9	−18·7	72	621	375*a*
	7991	·695	268·9	323·0	− 5·8	20	89	
	848c	·327	178·4	278·3	−25·9	0	2	
	7990	·237	141·3	270·0	−17·4	64	270	
	7992	·295	119·8	263·6	−15·0	8	37	
C	7986	·479	126·0	254·2	−22·6	31	137	
	7993	·731	99·2	231·7	−11·4	25	45	
		·803	71·8	228·3	+10·2			105
		·825	114·3	223·9	−23·8			107
		·918	75·6	214·5	+10·2			119
		·952	55·3	214·4	+30·0			196
		·900	104·8	214·1	−16·3			84
		·933	115·8	209·3	−26·5			108
Feb. 16			(−17·8)	(278·9)	(−6·9)	(220)	(1201)	(1671)
47·349		·975	295·5	338·5	+22·9			128
		·851	299·7	318·0	+20·8			136
		·753	260·1	315·0	−12·0			49
		·809	312·7	308·2	+28·2			72
	7991	·849	267·7	324·1	− 5·6	27	131	86*c*
	848d	·573	301·5	295·7	+11·4	1	4	
C	7990	·209	205·2	271·2	−17·8	57	262	
	7992	·147	164·6	263·6	−15·0	12	33	
	7986	·341	141·5	252·7	−22·2	45	191	
	7993	·562	99·7	231·7	−11·2	36	150	
	848e	·668	·8 4	228·8	−30·0	1	4	
		·878	·0·5	220·4	+37·1			27
		·872	53·1	214·3	+27·4			59
		·940	53·3	204·5	+31·0			54
		·935	71·2	199·8	+14·8			74
		·966	103·7	189·8	−15·0			80
Feb. 17			(−18·1)	(265·9)	(−6·9)	(179)	(775)	(765)
48·419		·959	296·1	320·4	+22·5			184
		·889	260·3	315·1	−11·8			80
		·876	244·1	312·8	−26·0			88
		·906	305·5	308·3	+28·0			137
	7991	·969	266·7	327·8	− 5·0	0	28	394*c*
	7990	·382	240·8	272·2	−17·3	37	255	
C	7992	·260	239·2	265·1	−14·5	7	22	
	7986	·268	183·3	252·8	−22·4	19	133	
	7993	·360	103·7	231·0	−11·4	35	166	
	7994	·948	110·9	179·4	−22·0	0	8	232*c*
		·805	45·0	211·1	+29·4			112
		·892	45·7	201·5	+34·1			105
		·876	71·1	193·8	+12·8			58

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
48·419		·941	118·1	180·9	−28·7			98
		·942	102·9	180·6	−14·4			85
Feb. 18			(−18·5)	(251·8)	(− 7·0)	(98)	(612)	(1573)
49·366		·991	265·1	321·9	− 5·8			289
		·974	259·8	317·1	−11·5			126
		·939	243·4	309·9	−27·3			130
		·964	302·4	307·1	+28·6			176
		·850	286·2	295·0	+ 9·8			39
	7990	·559	249·8	272·4	−17·0	32	212	
	7992	·459	252·8	266·0	−14·0	6	13	
	7986	·343	216·6	252·1	−22·7	19	85	
	7993	·163	123·1	231·3	−12·0	32	159	
	7995	·296	126·8	225·0	−16·9	4	13	
C	7994	·864	111·0	179·3	−21·7	0	4	281*c*
		·866	15·4	218·4	+50·0			14
		·752	34·4	209·3	+32·2			56
		·836	38·0	200·0	+35·8			53
		·922	53·1	181·1	+30·1			54
		·853	102·9	180·3	−14·7			86
		·877	120·4	178·7	−29·9			66
		·933	129·7	171·2	−39·4			66
		·958	67·0	170·1	+19·6			146
		·953	117·1	165·9	−27·9			52
Feb. 19			(−18·8)	(239·3)	(− 7·0)	(93)	(486)	(1634)
50·319		·936	284·5	293·9	+10·9			81
		·888	252·9	290·0	−18·4			86
		·813	243·7	280·3	−25·4			72
	7990	·724	253·3	273·0	−16·8	31	189	108*c*
	7992	·643	256·3	266·8	−14·2	7	12	24*f*
	7996	·455	250·4	253·0	−15·0	0	3	
	7986	·483	235·3	252·1	−22·3	6	48	
	7993	·134	226·1	232·4	−12·3	30	101	
	7995	·169	169·9	225·0	−16·5	12	45	
C	7997	·943	67·2	160·4	+18·7	3	15	520*c*
		·744	114·5	179·8	−22·7			95
		·735	105·7	179·5	−16·2			31
		·925	78·2	178·9	+ 8·1			83
		·892	45·7	176·5	+34·1			32
		·826	103·7	170·7	−15·3			51
		·886	61·5	170·4	+21·2			51
		·868	117·5	167·0	−27·2			74
		·932	106·8	157·1	−18·2			79
Feb. 20			(−19·1)	(226·8)	(− 7·0)	(89)	(413)	(1387)
51·427		·978	252·4	291·5	−18·6			75

Group 7993, Feb. 16–25. A group of the 'stream' type but with a pair of spots leading after Feb. 19. The original leader only is left on Feb. 25 as a mere dot.
Group 7994, Feb. 18–24. Intermittent. A very small spot not seen on Feb. 20–23. The accompanying faculæ is seen later on the west limb.
Group 7995, Feb. 19–25. A small stream developing *sf* Group 7993. The leader remains until Feb. 23, but very small spots revive to mark the position of the train which had previously disappeared.
Group 7996, Feb. 20–21. One or two small faint spots *n* Group 7986.
Group 7997, Feb. 20–27. A few small unstable spots in a wide area of disturbance.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
1917.			°	°	°			
51·427		·949	285·8	281·3	+12·5			75
		·928	246·2	281·1	−24·7			89
		·793	250·9	264·6	−19·5			148
	7990	·870	254·6	273·2	−16·8	32	170	293*c*
	7996	·683	259·8	255·5	−12·2	0	4	
	7986	·670	243·0	252·5	−23·1	1	4	
	7993	·381	254·0	234·1	−12·6	20	105	
	7995	·291	232·2	226·1	−17·1	14	36	
	848f	·432	357·5	213·3	+18·3	0	2	
C	7998	·595	65·7	179·1	+ 8·2	0	6	
	7997	·849	62·6	159·7	+18·7	8	24	534*c*
		·784	34·8	179·6	+34·0			42
		·811	44·8	171·1	+29·8			36
		·859	73·0	155·7	+10·6			62
		·841	103·8	154·5	−15·4			63
		·912	111·8	145·8	−22·7			58
		·954	75·1	142·1	+11·9			269
		·976	56·4	141·6	+30·6			250
Feb. 21			(−19·4)	(212·2)	(− 7·1)	(75)	(351)	(1994)
52·351		·984	283·7	277·6	+12·0			52
		·963	246·5	275·8	−24·5			77
		·899	250·3	264·7	−20·8			203
		·887	257·3	263·1	−14·5			74
		·854	246·6	258·6	−23·7			181
		·804	259·6	253·9	−12·6			45
		·751	240·6	246·8	−26·5			294
	7990	·951	254·9	273·0	−16·5	22	147	306*c*
C	7993	·577	258·9	235·2	−12·2	16	40	
	7995	·468	246·3	226·5	−17·1	2	14	
	7998	·457	53·1	178·4	+ 9·3	2	6	
	7997	·746	56·3	159·1	+19·1	3	12	146*c*
		·801	115·0	147·5	−24·1			79
		·883	75·3	140·3	+ 9·4			129
		·945	53·1	137·8	+31·4			344
		·924	66·2	137·0	+18·7			83
		·913	106·3	133·3	−17·7			83
		·977	68·0	126·0	+19·6			62
		·972	78·5	125·4	+ 9·3			111
Feb. 22			(−19·7)	(200·0)	(− 7·1)	(45)	(219)	(2269)
53·393		·975	249·4	265·0	−21·6			199
		·975	255·3	264·6	−15·9			111
		·940	246·8	257·3	−24·2			364
G		·913	258·2	252·9	−13·6			109
		·924	295·0	249·0	+19·8			35
		·877	244·2	247·5	−26·0			466

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
1917.			°	°	°			
53·393		·853	303·0	237·3	+23·3			43
	7993	·756	259·8	235·7	−12·3	10	22	
	7995	·701	252·1	230·5	−17·5	1	5	
	7997	·618	46·1	158·3	+19·1	1	25	
		·818	60·9	137·4	+18·9			43
		·808	72·2	135·1	+ 9·9			38
G		·892	47·4	135·1	+32·8			199
		·918	61·9	125·5	+22·2			50
		·898	74·3	124·9	+10·7			107
		·975	66·2	113·4	+21·2			111
		·972	75·6	112·2	+12·1			222
Feb. 23			(−20·0)	(186·3)	(− 7·1)	(12)	(52)	(2097)
54·347		·987	246·3	256·2	−24·4			161
		·970	293·2	245·5	+20·4			63
		·942	245·7	245·0	−25·2			576
		·913	279·3	238·3	+ 5·5			77
		·924	303·5	233·6	+27·2			68
		·846	288·3	228·5	+11·3			84
		·806	252·7	227·5	−18·1			98
	7993	·872	259·8	234·9	−12·4	10	36	185*f*
	7995	·742	255·1	221·7	−15·8	0	2	27*c*
	848g	·169	223·9	180·6	−14·0	1	2	
C	7994	·274	196·9	178·6	−22·2	1	2	
	7997	·495	25·9	160·5	+19·4	0	3	
	7999	·969	65·1	102·6	+21·9	30	165	343*f*
		·818	41·2	134·1	+32·6			146
		·774	70·1	126·1	+10·5			51
		·898	73·3	112·5	+11·6			120
		·917	64·6	112·1	+19·9			203
		·971	59·5	103·6	+27·3			57
		·982	74·5	97·1	+13·6			137
Feb. 24			(−20·3)	(173·7)	(− 7·1)	(42)	(210)	(2396)
55·634		·986	242·1	239·1	−28·6			88
		·931	285·3	222·9	+11·3			115
		·896	243·3	220·6	−27·1			78
		·904	295·3	216·5	+19·2			52
		·904	309·9	210·9	+31·3			46
	7993	·977	260·7	235·4	−10·6	0	7	376*f*
	7995	·918	254·5	224·2	−17·1	3	8	198*c*
G	*848h*	·353	317·3	170·7	+ 8·0	1	2	
	7997	·401	357·1	158·0	+16·3	7	14	
	7999	·872	60·8	102·3	+21·1	21	145	197*f*
	8000	·988	110·9	74·0	−21·7	0	35	
		·727	67·0	113·9	+11·3			81
		·785	59·2	111·6	+18·6			149
		·909	54·9	99·8	+27·7			42

Group 7998, Feb. 21–22. A single faint spot the first day; a pair of small spots on the next.
Group 7999, Feb. 24–Mar. 5. A regular spot, imperfectly formed and gradually diminishing. A very small spot follows by 6° on Feb. 27. Group 8009 appears immediately behind on March 3.
Group 8000, Feb. 25–Mar. 3. A small diminishing regular spot.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
55·634		·919	73·5	92·8	+12·0			107
		·957	62·2	89·2	+23·9			162
Feb. 25			(−20·7)	(156·8)	(− 7·2)	(32)	(211)	(1691)
56·335		·991	258·2	230·9	−12·6			271
		·971	254·4	224·9	−16·8			273
		·933	244·2	217·2	−26·6			147
		·947	283·1	216·7	+ 9·9			140
		·951	292·7	215·4	+18·9			110
		·906	259·7	213·1	−12·4			94
		·893	252·0	211·4	−19·2			70
		·943	302·2	211·0	+27·1			102
		·900	313·4	199·3	+33·9			109
	8001	·777	240·8	196·9	−27·0	0	2	40*p*
C	7997	·436	337·0	157·7	+16·5	1	4	
	7999	·804	56·4	101·7	+21·4	25	150	393*f*
	8000	·959	110·2	72·7	−21·4	12	92	106*f*
		·682	57·4	111·0	+15·7			80
		·842	47·1	102·3	+29·9			127
		·843	67·8	94·0	+14·3			142
		·928	58·0	86·5	+26·1			227
		·947	50·1	86·3	+34·1			74
		·967	85·8	73·0	+ 1·6			102
Feb. 26			(−20·8)	(147·5)	(− 7·2)	(38)	(248)	(2607)
57·313		·950	311·4	195·8	+35·6			93
		·730	257·8	181·8	−13·8			31
		·718	245·0	179·5	−22·8			66
	8001	·901	243·0	199·2	−27·4	0	3	115*c*
	7997	·571	315·1	159·6	+17·3	0	3	
C	7999	·690	48·7	101·1	+21·1	21	135	93*f*
	8000	·878	110·3	72·9	−21·2	11	79	129*f*
	8002	·968	60·3	65·2	+26·3	0	8	96*c*
	8003	·979	76·3	58·5	+11·8	0	24	288*c*
		·690	66·6	94·8	+10·4			33
		·854	53·8	85·0	+25·7			187
		·921	84·3	68·4	+ 2·4			88
		·979	75·6	58·7	+12·4			89
Feb. 27			(−21·1)	(134·7)	(− 7·2)	(32)	(252)	(1308)
58·325		·870	257·3	182·3	−14·5			70
		·842	247·0	178·5	−23·2			196
		·898	307·3	175·8	+28·9			49
C		·823	235·0	174·3	−32·6			20
		·810	300·4	168·9	+19·4			41
	8001	·959	242·9	196·3	−28·0	0	7	132*c*
	7999	·567	34·6	101·2	+21·0	24	131	
58·325	8000	·758	112·0	72·5	−21·3	11	51	242*c*
	8004	·852	109·7	62·6	−20·5	0	10	
	8002	·902	57·2	64·4	+25·4	15	68	674*c*
	848i	·870	92·2	60·7	− 5·5	0	5	58*c*
C	8003	·911	73·6	58·3	+11·7	5	13	192*nf*
		·763	43·5	85·0	+27·9			254
		·868	38·2	78·7	+37·7			69
		·793	79·1	70·2	+ 4·1			88
		·948	43·0	63·4	+40·3			82
		·969	58·6	52·1	+27·9			96
Feb. 28			(−21·4)	(121·3)	(− 7·2)	(55)	(285)	(2263)
59·324		·940	250·8	179·2	−20·4			170
		·921	299·3	169·1	+23·4			95
		·895	289·3	168·4	+13·7			53
		·834	242·2	163·9	−27·1			48
		·842	300·9	158·8	+21·1			407
	8005	·650	300·8	143·1	+13·6	7	23	
C	7999	·487	14·8	100·6	+20·8	17	108	
	8000	·614	116·0	72·0	−21·4	9	27	
	8002	·800	50·9	65·1	+25·0	11	49	375*c*
	8004	·737	111·4	61·3	−20·5	0	4	33*f*
	8003	·801	69·4	58·4	+11·8	0	14	240*nf*
	8006	·991	103·9	24·6	−14·7	11	61	659*n*
		·943	53·8	46·1	+30·6			237
		·981	68·0	33·1	+19·8			202
Mar. 1			(−21·6)	(108·2)	(− 7·2)	(55)	(286)	(2519)
60·410		·965	246·5	170·0	−24·4			90
		·940	293·7	159·4	+19·3			541
		·877	297·3	149·5	+19·7			104
		·839	309·9	140·3	+27·6			87
		·799	326·1	126·9	+35·4			97
	8005	·803	292·9	143·2	+13·6	5	20	53*c*
	848j	·822	318·9	133·6	+32·7	1	3	91*c*
	8007	·648	294·7	130·3	+ 9·9	3	14	
	7999	·479	347·3	100·2	+20·6	12	85	
C	8000	·437	125·9	71·5	−21·5	7	29	
	8002	·671	40·0	65·6	+24·5	33	113	
	8003	·643	62·3	58·4	+11·6	0	3	44*nf*
	8004	·604	114·1	58·0	−20·1	0	3	
	8006	·941	102·7	22·8	−14·4	22	143	927*c*
	8008	·974	103·9	15·7	−15·1	41	208	
		·821	48·9	49·7	+27·5			79
		·937	49·1	34·9	+34·3			240
		·907	63·3	34·1	+20·5			126
		·947	74·9	25·0	+11·7			254
Mar. 2			(−21·9)	(93·8)	(− 7·2)	(124)	(621)	(2733)

Group 8001, Feb. 26–28. One or two small spots in an isolated mass of faculæ.
Group 8002, Feb. 27–Mar. 10. A stream of spots in continual change. The leader, at first composite, assumes the regular form by Mar. 7. The rear portion has died out by Mar. 9 but is represented by conspicuous faculæ. Group 8003, Feb. 27–Mar. 2. A small but stable spot.
Group 8004, Feb. 28–Mar. 2. One or two small spots *f* Group 8000 and probably connected with it.
Group 8005, Mar. 1–3. A stream of small spots of which only one remains on Mar. 3.
Group 8006, Mar. 1–10. A group immediately preceding Group 8008 and in the same large area of faculæ. A small diminishing regular spot followed by an ill-defined cluster. Group 8007, Mar. 2–5. A short stream of which the rear spot is the largest component.
Group 8008, Mar. 2–14. Return of Group 7977. A large stream consisting of a regular spot as leader, a composite spot in the rear, and some unstable spots between them. The group shows signs of dying out as the west limb is approached.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
61·441		·990	291·8	158·6	+20·3			223
		·913	305·8	137·5	+28·5			61
		·881	313·8	129·4	+33·0			148
	848k	·952	290·4	149·3	+17·4	0	8	131*c*
	8005	·934	286·4	146·7	+12·5	1	8	143*n*
	8007	·804	287·8	131·1	+ 9·7	19	69	50*c*
	7999	·559	325·4	100·0	+20·5	7	44	
	8009	·545	339·7	92·2	+23·6	22	114	
	8000	·288	150·2	71·5	−21·5	4	10	
	8002	·580	23·2	65·7	+25·1	45	229	
G	8010	·609	57·0	48·8	+13·2	0	34	
	8006	·837	102·3	23·0	−14·2	21	103	2121*c*
	8008	·935	105·6	10·1	−17·0	112	772	
		·856	41·2	37·0	+34·9			126
		·815	59·1	32·4	+19·9			69
		·935	43·6	24·7	+38·8			83
		·860	72·8	23·7	+10·8			103
		·940	78·2	12·1	+ 8·5			65
		·981	69·4	4·9	+18·5			101
Mar. 3			(−22·2)	(80·3)	(− 7·2)	(231)	(1391)	(3424)
62·349		·976	287·1	143·0	+14·8			241
		·959	300·4	135·5	+26·4			103
		·937	309·8	127·6	+33·3			430
		·785	299·2	114·1	+17·4			266
	8007	·896	284·9	129·6	+ 9·9	23	151	355*c*
	8011	·803	318·8	106·5	+31·5	3	13	66*c*
	7999	·666	312·8	99·7	+20·6	9	32	
	8009	·618	324·4	91·3	+23·4	56	373	
C	8002	·538	4·6	65·6	+25·0	34	232	
	8010	·468	43·0	49·2	+13·0	50	284	
	848l	·712	55·0	30·5	+18·3	1	3	
	8006	·714	103·2	22·6	−14·5	14	101	2137*c*
	8008	·851	105·8	9·6	−17·2	129	823	
		·803	36·1	33·4	+34·5			178
		·891	36·1	24·4	+40·9			146
		·750	67·2	23·6	+11·7			96
		·907	69·9	6·7	+14·8			94
		·945	59·5	3·9	+25·7			106
		·986	67·4	351·7	+20·8			140
Mar. 4			(−22·4)	(68·3)	(− 7·3)	(319)	(2012)	(4358)
63·325		·977	306·4	125·3	+33·1			173
		·896	288·6	116·0	+13·0			96
		·883	301·2	110·6	+23·1			68
	8007	·964	282·6	128·0	+10·0	11	56	174*p*
C	8011	·885	313·0	105·5	+32·5	18	51	57*c*
	7999	·788	303·9	99·8	+20·8	0	3	

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
63·325	8009	·735	312·4	91·7	+23·8	66	381	
	8002	·557	343·8	65·3	+25·0	51	273	
	8010	·356	14·2	50·4	+12·8	65	395	
	8006	·542	105·1	23·0	−14·3	11	96	
	8008	·717	106·3	9·7	−16·8	87	760	368*f*
C	8012	·983	68·0	339·8	+19·9	51	300	252*c*
		·854	57·8	4·2	+22·5			91
		·849	119·6	358·2	−28·9			81
		·928	63·2	352·8	+21·4			157
		·892	106·6	351·7	−18·0			141
Mar. 5			(−22·6)	(55·5)	(− 7·3)	(360)	(2315)	(1658)
64·568		·966	291·5	110·4	+18·6			163
		·960	307·7	104·0	+33·1			188
		·880	294·1	96·1	+17·1			116
	8009	·869	302·6	91·9	+23·6	94	540	446*c*
	8002	·659	322·0	65·5	+24·7	58	344	
	8010	·383	330·6	50·1	+12·3	60	338	
C	8006	·324	116·4	21·7	−15·2	3	72	
	8008	·499	110·7	10·1	−16·6	154	681	
	8012	·927	65·0	336·0	+19·9	56	760	389*c*
		·815	57·0	352·0	+21·4			69
		·945	96·8	327·7	− 8·8			299
		·973	76·7	324·6	+11·0			136
Mar. 6			(−22·9)	(39·1)	(− 7·3)	(425)	(2735)	(1806)
65·322		·991	305·0	104·7	+33·1			105
		·930	288·2	94·4	+13·9			116
		·878	255·0	91·1	−16·6			145
		·893	312·2	80·5	+32·4			106
	8009	·935	298·6	92·4	+23·4	94	395	731*c*
	8002	·739	313·0	65·3	+24·3	40	259	281*c*
	8010	·483	314·6	49·7	+13·0	65	383	
C	8006	·162	144·0	23·5	−14·7	9	35	
	8008	·366	117·3	9·3	−16·6	94	598	
	8012	·859	60·8	336·1	+20·4	65	642	675*c*
	8013	·870	96·2	328·2	− 9·0	0	4	200*f*
		·839	91·6	331·9	− 5·3			93
		·921	74·0	324·6	+11·6			177
		·925	106·0	320·6	−17·5			48
		·953	117·0	315·4	−27·9			70
Mar. 7			(−23·0)	(29·1)	(− 7·3)	(367)	(2316)	(2747)
66·460		·970	254·7	91·3	−16·5			204
		·953	305·3	78·6	+30·5			57
		·819	248·5	69·0	−21·7			88
G	8009	·991	295·0	92·4	+23·5	52	352	375*c*

Group 8009, Mar. 3–8. Two ill-formed spots on Mar. 3, the leader developing to one of regular type, the follower increasing but remaining of indefinite form.
Group 8010, Mar. 3–11. A large stream of normal type developing rapidly from a few faint spots on Mar. 3.
Group 8011, Mar. 4–5. A small stream *np* Groups 7999 and 8009.
Group 8012, Mar. 5–17. At first, a regular spot with an appendage *sf*, followed closely by a composite companion. Later, the appendage and the companion dissolve into a cluster of small spots which have disappeared by Mar. 16.
Group 8013, Mar. 7–17. Intermittent. One or two small spots not seen on Mar. 8 and Mar. 10. On the central meridian a short stream develops, the leader being a regular spot.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
66·460	8002	·854	303·9	64·9	+23·9	45	308	222*c*
	8010	·649	298·5	49·7	+12·1	38	308	
	8014	·250	264·9	28·7	− 8·2	1	4	
	8006	·195	226·8	22·6	−14·8	8	39	
	8008	·172	157·8	10·3	−16·3	79	416	
	848m	·534	34·7	355·5	+19·2	0	7	
	848n	·536	44·3	351·4	+15·9	0	4	
G	8012	·728	53·1	336·0	+20·2	73	515	161*c*
		·808	68·9	323·9	+12·4			42
		·786	98·4	322·0	−11·0			82
		·861	58·3	321·9	+22·6			88
		·886	118·1	312·0	−28·2			64
		·961	62·5	305·6	+23·9			62
Mar. 8			(−23·3)	(14·2)	(− 7·2)	(296)	(1953)	(1445)
67·394		·924	248·1	70·1	−22·9			103
		·819	249·3	56·8	−21·1			61
		·894	305·7	56·5	+27·4			416
		·775	332·9	28·0	+37·0			76
		·767	345·1	16·8	+40·7			87
	8002	·943	298·5	66·5	+23·8	27	177	521*c*
C	8010	·793	291·0	50·8	+11·8	38	256	255*c*
	8014	·407	263·7	25·9	− 9·1	0	2	
	8006	·394	247·9	23·9	−15·1	8	51	
	8008	·220	225·0	10·9	−16·0	80	397	
	8012	·613	43·5	335·2	+19·9	59	567	
	8013	·568	99·4	327·1	−11·2	1	4	
Mar. 9			(−23·5)	(1·8)	(− 7·2)	(213)	(1454)	(1519)
68·353		·974	249·0	67·6	−22·0			117
		·907	249·6	55·0	−21·4			151
		·950	302·5	54·0	+27·8			313
		·847	319·4	31·2	+34·8			144
		·819	334·5	17·1	+41·2			149
	8002	·993	295·3	68·3	+24·0	36	223	236*c*
	8010	·911	285·9	52·3	+11·3	31	198	272*c*
C	8014	·591	263·9	25·6	− 9·4	6	17	
	8006	·549	255·7	22·3	−13·8	7	26	
	8008	·405	247·0	11·8	−15·7	63	377	
	8012	·506	27·1	335·1	+19·7	64	437	
	8015	·949	67·3	281·7	+18·9	1	11	84*f*
		·937	73·4	282·4	+12·7			76
		·939	104·4	278·4	−15·9			131
		·979	108·3	269·4	−19·3			77
Mar. 10			(−23·7)	(349·2)	(−7·2)	(208)	(1289)	(1750)
69·647		·966	303·5	40·1	+29·7			143
1917.								
69·647		·937	314·7	29·1	+37·5			213
		·885	297·3	28·9	+20·1			138
		·844	288·4	26·8	+11·3			90
		·809	264·3	26·5	− 8·8			173
		·809	252·4	26·4	−18·4			265
		·880	325·9	13·2	+41·4			167
	8010	·976	285·5	47·2	+13·3	12	71	334*c*
	8008	·652	254·7	12·7	−15·4	43	300	172*c*
C	8012	·458	355·5	334·4	+19·8	48	284	
	8013	·087	145·8	329·4	−11·3	31	102	
	8016	·242	13·6	328·9	+ 6·3	27	44	
	8017	·563	34·8	312·2	+20·7	4	11	
	8018	·773	78·4	283·0	+ 4·2	7	16	45*c*
	8015	·846	61·5	280·3	+19·5	1	8	90*c*
	8019	·967	81·6	258·2	+ 6·2	10	33	210*f*
		·791	69·1	283·4	+11·6			96
		·870	104·9	271·2	−16·5			239
		·972	115·7	254·1	−26·6			382
Mar. 11			(−23·9)	(332·2)	(− 7·2)	(183)	(869)	(2757)
70·160		·992	285·2	45·8	+14·0			69
		·953	310·9	27·4	+35·4			88
		·908	289·4	27·3	+14·2			140
		·869	262·7	26·2	− 9·9			304
		·852	252·3	24·2	−18·8			241
		·927	319·4	17·8	+40·5			71
		·917	327·0	10·6	+45·4			53
	8008	·733	255·2	12·7	−15·7	45	295	131*c*
	8020	·771	293·4	11·8	+12·9	6	21	49*n*
	8012	·479	341·3	334·8	+19·8	46	293	
D	8016	·242	343·4	329·4	+ 6·2	22	79	
	8013	·106	219·2	329·3	−11·9	30	106	
	8017	·523	27·2	310·6	+20·7	17	46	
	8018	·679	76·4	284·2	+ 3·8	5	18	
	8019	·925	80·5	259·1	+ 5·9	8	19	96*f*
		·739	66·1	279·2	+12·1			44
		·803	58·7	278·8	+19·8			45
		·827	107·2	269·3	−18·3			85
		·938	116·2	254·8	−27·0			177
		·979	115·3	245·3	−26·1			178
		·982	103·2	245·1	−14·2			49
Mar. 12			(−24·0)	(325·4)	(− 7·2)	(179)	(877)	(1820)
71·425		·991	263·0	31·6	− 7·9			347
		·983	285·3	25·7	+13·5			202
		·898	244·1	12·9	−26·4			97
G		·931	300·4	10·8	+24·9			47
		·818	300·7	357·0	+19·9			95

Group 8014, Mar. 8–10. One or two very small spots *np* Group 8006.
Group 8015, Mar. 10–11. A small spot.
Group 8016, Mar. 11–17. A short stream first visible on the central meridian.
Group 8017, Mar. 11–17. A stream of unstable spots. Three ephemeral spots appear on Mar. 14 *n* of the main stream but in the same disturbed area.
Group 8018, Mar. 11–13. A cluster of tiny spots, of which only one is left by Mar. 13.
Group 8019, Mar. 11–15. A small diminishing spot.
Group 8020, Mar. 12–14. A small double spot with two followers distant 5° on Mar. 13.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.			G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
71·425		·973	316·2	354·5	+41·8			43	73·453	8019	·433	60·0	260·0	+ 5·8	1	2	
	8008	·911	256·5	15·2	−15·1	15	207	1136*c*		8021	·754	103·6	232·9	−15·0	7	10	65*f*
	8020	·921	287·4	12·9	+13·0	12	40	240*c*		8024	·817	97·8	226·8	−10·5	7	33	130*c*
	8012	·599	316·6	334·4	+19·2	33	250			8023	·891	71·2	222·2	+13·1	22	95	196*f*
	8013	·374	256·4	330·4	−11·7	26	157		G		·811	67·0	231·9	+13·9			60
	8016	·410	302·3	329·0	+ 5·8	23	107				·866	105·7	221·5	−17·1			240
	8017	·460	352·1	312·5	+19·8	32	144				·897	118·6	218·3	−28·7			124
	8018	·422	65·4	286·2	+ 3·4	0	3				·982	116·2	200·9	−27·0			236
G	*849a*	·521	54·6	283·2	+11·0	1	2		Mar. 15			(−24·6)	(282·0)	(−7·2)	(132)	(691)	(3069)
	8019	·777	76·2	259·5	+ 6·0	4	11	89*f*									
	8021	·966	103·9	232·5	−15·3	0	23	318*c*	74·630	8012	·949	293·3	333·9	+19·5	38	262	515*c*
		·824	118·6	254·3	−27·5			120		8013	·899	261·1	331·1	−11·1	30	116	285*c*
		·930	66·2	244·8	+18·9			61		8016	·906	280·0	330·1	+ 5·9	18	51	328*c*
		·900	117·2	244·4	−27·5			242		8025	·766	286·7	314·1	+ 8·0	18	69	94*c*
		·965	75·0	236·3	+12·4			56		8017	·792	302·5	311·7	+20·2	21	50	122*c*
		·978	95·5	230·2	− 6·9			132		*849b*	·296	37·5	256·1	+ 6·6	0	2	
Mar. 13			(−24·2)	(308·7)	(−7·2)	(146)	(944)	(3225)	C	8021	·559	106·2	232·9	−14·9	3	10	
										8024	·618	97·0	228·2	− 9·9	64	396	
72·332		·887	240·4	359·0	−29·5			75		8023	·754	65·6	221·8	+13·0	8	56	
		·926	303·2	357·0	+27·0			77		8026	·939	118·7	195·8	−29·4	0	6	} 755*c*
		·774	249·0	347·2	−20·8			85		*849c*	·907	116·0	201·0	−26·5	0	7	
		·839	303·5	346·1	+22·9			49			·978	102·2	187·5	−13·3			139
	8008	·977	256·2	15·7	−14·9	25	157	1378*c*	Mar. 16			(−24·8)	(266·5)	(−7·1)	(200)	(1025)	(2238)
	8020	·985	285·2	14·5	+13·6	0	8	261*n*									
	8022	·905	295·0	356·8	+18·9	31	75	167*c*									
	8012	·714	306·6	334·1	+19·5	29	260		75·328		·978	266·1	335·6	− 5·3			89
	8013	·558	260·6	330·8	−11·2	28	152				·977	299·7	329·3	+26·9			110
C	8016	·579	290·7	329·6	+ 5·8	35	131			8012	·985	291·1	333·9	+19·2	14	172	487*c*
	8017	·520	331·6	312·0	+20·2	39	153			8013	·960	260·9	331·8	−10·7	24	95	213*c*
	8019	·637	71·7	259·5	+ 5·8	2	7			8016	·965	278·0	330·9	+ 5·8	3	21	363*c*
	8021	·896	103·4	232·5	−15·2	4	18	125*c*		8025	·857	283·8	314·3	+ 8·0	32	262	94*c*
	8023	·975	74·8	222·0	−13·0	20	117	186*c*	C	8017	·859	299·0	310·4	+20·4	8	45	232*c*
		·811	118·6	243·8	−27·2			119		8021	·420	109·4	233·2	−14·5	7	12	
		·893	122·1	234·2	−31·8			83		8024	·467	98·9	229·5	−10·4	89	428	
		·924	70·1	232·7	+15·3			132		8023	·648	60·1	222·2	+13·0	11	47	
		·929	95·7	228·1	− 8·0			173		8026	·892	119·9	194·6	−29·8	1	19	
		·959	104·8	222·2	−16·2			562		8027	·928	102·9	188·4	−14·6	0	5	
		·976	118·3	217·4	−29·1			86			·886	119·1	195·2	−29·0			392
Mar. 14			(−24·4)	(296·8)	(−7·2)	(213)	(1078)	(3558)			·940	103·0	186·4	−14·7			15
											·982	114·3	176·3	−25·1			98
									Mar. 17			(−24·9)	(257·3)	(−7·1)	(189)	(1106)	(2093)
73·453		·977	250·4	1·3	−20·6			789									
		·916	245·8	349·0	−25·0			167									
		·943	297·6	347·0	+23·0			98	76·354		·991	257·4	327·1	−13·3			253
	8022	·979	291·0	356·8	+18·8	6	34	296*c*			·943	295·5	309·3	+21·1			407
	8012	·848	298·2	334·2	+19·2	30	217	451*c*		8025	·952	280·6	314·3	+ 7·8	27	226	293*c*
G	8013	·757	261·6	331·5	−11·0	20	137	124*p*	C	8028	·564	254·6	277·7	−14·5	3	8	
	8016	·761	283·9	329·8	+ 5·7	26	108	93*c*		8021	·215	129·2	233·8	−14·8	6	10	
	8017	·622	315·8	309·4	+20·1	13	55			8024	·260	104·1	228·9	−10·5	63	384	

Group 8021, Mar. 13–20. A small spot *sp* Group 8024.
Group 8022, Mar. 14–15. A group of small spots forming near the west limb.
Group 8023, Mar. 14–22. A contracting regular spot.
Group 8024, Mar. 15–25. A stream of normal type with rapid development; the leader, a regular spot, alone remains after Mar. 21.
Group 8025, Mar. 16–19. Two spots on the same meridian as Group 8017. The rear spot alone remains in view on the west limb on Mar. 19.
Group 8026, Mar. 16–24. A straggling stream of unstable spots in continual change.
Group 8027, Mar. 17–28. One or two very small spots developing into a small stream, which having nearly disappeared on Mar. 24, shows a slight revival by Mar. 26.
Group 8028, Mar. 18–19. One or two very small spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
76·354	8023	·495	46·5	222·1	+13·3	5	15	
	8026	·791	122·9	193·8	−30·1	23	112	
	8027	·835	103·0	186·7	−14·7	2	5	
C		·816	121·0	190·6	−29·2			279
		·917	114·4	176·6	−25·1			53
		·960	67·9	173·8	+18·9			114
Mar. 18			(−25·0)	(243·7)	(−7·1)	(129)	(760)	(1399)
77·359		·987	294·8	307·1	+23·0			245
		·932	308·6	289·6	+32·1			52
		·848	277·2	287·6	+ 2·3			81
		·823	291·5	282·2	+13·2			62
	8025	·993	280·4	312·2	+ 9·4	24	179	121*c*
	8028	·772	257·4	281·3	−14·2	0	2	
	8021	·149	205·6	234·3	−14·8	2	8	
	8024	·055	175·2	230·2	−10·2	70	383	
C	8023	·376	21·7	222·3	+13·3	4	15	
	8026	·673	127·3	192·6	−29·7	15	81	
	8027	·674	103·6	188·1	−14·4	3	10	
	8029	·990	71·5	151·5	+17·1	0	7	164*c*
	8030	·990	79·4	150·2	+ 9·4	3	27	350*s*
		·910	76·0	167·1	+ 9·6			109
		·950	66·2	163·1	+19·9			562
		·931	115·0	161·1	−25·8			66
		·939	103·6	159·7	−15·2			62
Mar. 19			(−25·2)	(230·5)	(−7·1)	(121)	(712)	(1874)
78·516		·940	276·6	284·3	+ 3·7			74
		·920	246·6	282·7	−24·2			38
		·940	287·5	282·3	−13·8			96
		·885	255·4	278·0	−16·2			120
	8021	·359	245·7	234·9	−15·0	3	5	
	8024	·299	255·8	232·3	−10·9	45	258	
	8023	·367	339·9	222·6	+13·2	7	11	
G	8026	·519	138·0	191·9	−29·0	14	44	
	8027	·463	109·3	188·4	−15·0	7	24	
	8030	·907	78·1	151·9	+ 7·6	39	144	} 741*c*
	8031	·944	79·9	146·0	− 7·1	59	173	}
	8029	·937	68·2	149·5	−17·6	25	83	511*c*
		·856	60·6	162·5	+20·7			103
		·871	103·4	154·1	−15·0			52
		·883	115·3	153·1	−25·6			96
		·962	104·3	140·0	−15·6			83
Mar. 20			(−25·3)	(215·2)	(−7·0)	(199)	(742)	(1914)
79·360		·929	253·6	273·3	−17·8			145
C		·835	283·2	258·9	+ 7·0			87
1917.			°	°	°			
79·360		·765	238·4	251·7	−28·4			71
	8024	·477	261·1	232·6	−10·4	39	275	
	8023	·466	318·0	222·7	+13·6	7	9	
	8026	·385	160·0	195·6	−28·1	2	50	
	8027	·292	120·3	189·0	−15·3	6	15	
	8030	·805	74·2	152·8	+ 8·3	22	178	
C	8029	·868	64·8	148·7	+17·7	23	93	254*c*
	8031	·862	77·3	146·4	+ 7·1	21	121	392*c*
		·796	55·0	159·5	+22·2			168
		·846	121·4	147·8	−30·1			40
		·876	110·8	142·7	−21·5			50
		·934	76·1	137·2	+10·2			447
Mar. 21			(−25·4)	(204·1)	(−7·0)	(120)	(741)	(1654)
80·414		·963	244·4	266·0	−26·5			55
		·927	278·5	257·0	+ 5·2			54
		·889	240·9	252·5	−28·9			71
		·909	294·9	250·8	+19·2			49
		·768	237·0	237·7	−29·4			59
	8024	·678	262·0	233·1	−10·5	41	238	
	8023	·621	301·9	222·9	+13·3	1	3	
	849c[1]	·394	211·0	203·2	−26·4	0	3	
G	8026	·389	190·9	195·0	−29·3	6	65	
	8027	·155	172·5	189·0	−15·7	9	40	
	8032	·570	72·0	157·4	+ 4·3	10	36	
	8030	·633	67·7	154·1	+ 8·3	31	266	
	8029	·738	59·3	148·8	+17·0	35	161	118*c*
	8031	·717	72·9	146·7	+ 7·2	16	62	
		·832	72·6	136·6	+10·3			183
		·928	74·5	124·5	+11·6			107
		·967	54·1	122·7	+32·1			48
Mar. 22			(−25·5)	(190·2)	(−6·9)	(149)	(874)	(744)
81·338		·974	277·8	253·7	+ 5·9			48
		·955	241·6	251·8	−29·1			153
		·958	294·6	246·8	+21·1			74
		·920	256·2	245·7	−15·3			74
		·895	241·0	241·2	−29·0			84
		·863	291·3	234·0	+14·5			64
		·821	236·0	230·9	−31·6			47
C	8024	·816	262·2	233·1	−10·4	33	242	281*c*
	8026	·458	213·4	194·7	−29·0	5	45	
	8027	·252	230·8	189·7	−15·9	3	7	
	8032	·407	62·8	156·8	+ 4·2	5	20	
	8030	·487	56·9	153·7	+ 9·0	50	244	
	8029	·608	49·5	149·2	+17·1	42	227	
	8031	·570	65·4	146·6	+ 7·8	6	31	
	8033	·691	66·2	138·1	+10·9	3	9	

Group 8029, Mar. 19–31. Return of **848** *k* or more probably a revival in that region. An irregular stream, at first of small spots from which emerges a moderate sized composite spot, which undergoes many changes as the rear of the stream disappears.

Group 8030, Mar. 19–31. Two ill-shaped spots of which the larger and more southern becomes a regular spot, whilst the other diminishes and has disappeared by Mar. 27.

Group 8031, Mar. 20–24. Two rapidly diminishing spots with a few very small companions. This group is in the same disturbed area as Group 8030, and the two groups might perhaps be considered as one.

Group 8032, Mar. 22–26. A small group *s* Group 8030. Nothing is seen on Mar. 25.

Group 8033, Mar. 23–28. A single spot on Mar. 23; a short stream on the two following days; afterwards a single spot.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
81·338	8034	·986	75·3	99·9	+13·1	0	38	} 249*c*
	8035	·997	76·5	94·6	+12·7	0	104	}
		·877	70·8	119·9	+13·2			144
C		·933	50·6	119·0	+32·9			126
		·958	67·2	108·7	+19·5			120
		·990	55·1	102·7	+33·0			110
		·973	106·2	100·2	−17·3			173
Mar. 23			(−25·6)	(178·0)	(−6·9)	(147)	(967)	(1747)
82·379		·947	241·3	236·4	−29·4			140
		·886	290·3	223·2	+14·4			152
	8024	·931	261·5	233·5	−10·4	38	209	620*f*
	8026	·592	226·9	194·1	−29·8	5	9	
	8027	·440	246·9	189·1	−16·2	0	1	
	8032	·215	28·9	158·4	+ 3·9	1	3	
	8030	·324	32·4	154·2	+ 9·0	30	178	
	8029	·467	29·1	150·6	+17·3	52	320	
G	8031	·354	50·6	148·4	+ 6·3	0	5	
	8033	·522	55·9	138·3	+10·7	17	49	
	8036	·820	72·0	112·0	+10·5	2	5	26*c*
	8034	·921	71·5	100·3	+14·1	9	37	} 453*c*
	8035	·954	73·5	94·4	+13·4	68	291	}
	8037	·980	64·0	90·3	+23·7	12	52	100*c*
		·873	44·0	117·2	+34·3			88
		·949	51·9	101·8	+32·8			80
		·907	105·5	98·5	−16·9			275
Mar. 24			(−25·7)	(164·3)	(−6·9)	(234)	(1159)	(1934)
83·385		·949	286·2	230·1	−13·0			110
		·773	237·7	199·1	−29·0			84
	8024	·992	260·1	234·7	−10·7	34	199	407*f*
	8027	·626	252·2	189·2	−16·4	2	12	
	8030	·277	348·2	154·3	− 8·8	23	141	
	8029	·415	359·3	150·8	+17·5	29	250	
C	8033	·365	34·6	138·9	+10·8	8	22	
	8036	·669	66·8	112·5	− 9·9	16	38	44*c*
	8034	·810	67·3	100·8	+13·9	14	26	} 246*c*
	8035	·871	70·2	93·8	+13·5	43	279	}
	8037	·919	60·8	90·2	+23·4	8	23	235*f*
		·898	47·6	98·8	−33·1			97
		·822	106·4	95·5	−17·4			141
Mar. 25			(−25·8)	(151·0)	(−6·8)	(177)	(990)	(1364)
84·343		·980	256·1	181·1	−15·0			133
		·885	241·8	200·3	−28·0			354
C		·926	313·8	194·1	−36·2			56
		·765	240·9	186·5	−26·4			109

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
84·345	8027	·760	253·5	187·8	−16·9	7	32	93*c*
	8032	·357	303·1	155·8	+ 4·7	0	2	
	8030	·385	316·1	154·0	+ 9·5	21	125	
	8029	·461	333·8	150·7	+17·7	37	283	
	8033	·302	353·3	140·4	+10·6	2	3	
	8036	·494	56·7	113·8	+ 9·5	27	50	
C	8034	·670	60·5	101·6	+13·8	16	76	
	8035	·755	65·3	93·7	+13·6	26	362	
	8037	·833	55·9	89·8	+23·4	5	32	443*f*
	8038	·962	63·7	69·1	+23·0	24	162	400*c*
	8039	·974	78·1	63·2	+ 9·9	4	43	166*c*
		·836	42·0	96·5	+33·4			118
		·909	113·6	72·6	−24·3			71
		·972	107·2	60·8	−18·3			90
Mar. 26			(−25·9)	(138·4)	(− 6·8)	(169)	(1170)	(2033)
85·339		·957	242·1	199·3	−28·6			350
		·883	242·6	186·9	−27·2			195
	8027	·875	253·4	186·8	−17·7	2	15	242*np*
	8030	·544	298·8	154·1	+ 9·3	10	113	
	8029	·581	313·6	151·4	+17·5	33	194	
	8033	·391	318·4	140·5	+10·5	2	5	
	8036	·341	34·6	114·0	+ 9·7	21	56	
	849d	·861	11·7	109·3	+ 50·8	0	2	21*c*
C	8034	·513	48·4	102·1	+13·7	40	107	
	8035	·613	57·0	93·5	+13·8	39	275	
	849e	·553	109·8	92·6	−16·4	0	2	
	8037	·723	48·2	89·5	+23·3	4	16	158*f*
	8038	·895	59·6	68·2	+23·4	31	121	322*f*
	8039	·891	75·8	64·4	+ 9·4	7	38	110*c*
		·914	47·2	70·9	+34·6			79
		·824	115·2	70·5	−24·4			48
		·912	107·0	58·9	−18·2			92
		·979	56·6	53·5	+30·7			182
		·976	73·9	50·3	+14·1			196
Mar. 27			(−26·0)	(125·3)	(− 6·7)	(189)	(944)	(1995)
86·325		·989	240·9	196·2	−29·7			108
		·950	243·3	185·0	−27·4			360
		·886	293·5	170·3	+17·1			163
		·819	304·6	159·3	+23·2			198
	8027	·955	252·8	186·0	−18·3	0	23	345*np*
C	8030	·700	290·5	153·7	+ 9·1	15	123	46*c*
	8029	·715	303·1	151·1	+17·7	22	168	88*c*
	8033	·548	301·2	140·7	+10·5	1	5	
	849f	·201	217·9	119·6	−15·7	0	4	
	8036	·279	350·4	115·0	+ 9·2	9	28	
	8034	·383	25·5	102·6	+13·6	19	129	

Group 8034, Mar. 23–Apr. 3. A regular spot with one or two companions before Apr. 1, becoming temporarily double on Mar. 27.
Group 8035, Mar. 23–Apr. 4. A large composite spot preceded by a close cluster. This condenses and joins to the main spot after Mar. 28, thus making a long irregular spot, which declines, however, after Apr. 2. This group closely follows Group 8034 in the same general area of faculæ.
Group 8036, Mar. 24–Apr. 1. A stream of small spots *p* Group 8034. The leader spot alone remains after Mar. 29.
Group 8037, Mar. 24–28. Return of Group 8009. A small contracting regular spot.
Group 8038, Mar. 26–Apr. 2. Return of Group 8002. A composite spot diminishing and dividing into two portions on Apr. 1. A companion to the *s* is seen on Mar. 26–27.
Group 8039, Mar. 26–Apr. 3. A small regular spot, preceding which spots form to constitute a stream 7° in length by Mar. 30. On Apr. 1, the group is rapidly disappearing.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.			G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
86·325	8035	·470	43·1	93·1	+13·6	31	230		88·386		·874	62·9	29·5	+19·8			67
	8037	·613	37·1	88·7	+23·1	2	11				·835	100·6	28·1	−12·5			74
	8038	·802	53·7	67·6	+23·6	14	113	346*f*	G		·908	112·7	19·6	−23·3			91
	8039	·759	72·7	65·4	− 8·5	18	71	69*e*			·954	72·0	15·5	+14·9			67
C		·862	2·5	108·8	+52·5			59			·938	102·0	14·7	−13·5			160
		·936	52·7	51·8	−31·3			379			·978	112·4	5·8	−23·2			155
		·902	70·7	51·1	+14·1			200	Mar. 30			(−26·2)	(85·1)	(− 6·6)	(166)	(902)	(1818)
		·961	61·0	43·9	+25·4			106									
		·963	98·2	37·3	− 9·7			179									
		·970	108·9	35·2	−19·9			99	89·346		·955	304·1	137·9	+29·8			55
Mar. 28			(−26·1)	(112·3)	(− 6·7)	(131)	(905)	(2745)			·832	288·1	125·9	+11·1			67
											·856	311·6	120·1	+30·2			84
											·860	324·1	113·0	+39·3			137
87·321		·972	247·2	177·0	−23·7			79		8030	·993	278·9	154·3	+ 8·0	16	114	115*f*
		·942	284·5	167·3	+11·3			79		8029	·994	288·0	153·6	+17·0	24	217	551*f*
		·894	297·7	157·0	−21·1			241		*849j*	·940	286·5	139·9	+13·0	0	7	182*f*
		·878	305·9	151·9	+27·1			56		8036	·741	288·1	117·7	− 8·8	3	12	
	849g	·938	295·9	163·9	+21·4	0	6	247*e*	C	8040	·626	253·5	110·7	−15·3	7	23	
	8030	·839	284·9	154·0	− 8·7	13	108	103*e*		8034	·598	303·3	103·2	+13·6	17	100	
	8029	·841	295·3	151·6	+17·1	36	204	90*f*		8035	·492	314·5	93·5	+14·0	59	355	
	849h	·645	296·2	135·1	+11·2	0	3			8039	·262	12·8	69·1	+ 8·3	16	126	
	8036	·392	313·2	115·9	+ 9·2	7	28			8038	·514	10·9	66·3	+23·7	16	66	
C	8034	·351	348·7	103·1	+13·4	20	113				·794	56·1	27·4	+21·7			40
	8035	·359	14·8	93·7	+13·6	40	283				·869	67·3	16·1	+16·0			76
	8038	·689	44·7	67·3	+23·7	19	71				·838	112·1	15·8	−22·0			148
	8039	·587	65·9	66·4	− 8·3	19	76	64*f*			·931	46·4	15·6	+36·5			147
		·867	47·3	50·8	+31·7			336			·908	103·7	6·6	−15·1			250
		·805	66·1	49·7	+14·7			118			·933	113·6	2·9	−24·3			364
		·918	57·3	39·6	+26·5			85			·972	69·6	359·3	−18·0			113
		·908	75·3	36·1	+10·3			84	Mar. 31			(−26·3)	(72·4)	(− 6·5)	(158)	(1020)	(2329)
		·921	99·2	31·5	−11·0			434									
		·954	66·1	30·8	+20·4			85									
		·946	109·5	27·2	−20·5			429	90·646		·950	286·1	124·2	+13·0			93
Mar. 29			(−26·1)	(99·1)	(− 6·6)	(154)	(892)	(2530)			·910	296·5	115·7	+20·8			46
											·930	312·9	112·4	+35·9			227
88·386		·974	294·4	157·8	+21·8			200			·854	303·5	106·4	+24·1			67
		·919	247·4	152·3	−23·3			64			·823	323·9	92·3	+36·4			94
		·843	286·4	140·1	+10·0			71		8036	·903	283·1	118·0	+ 8·8	0	2	132*nf*
	8030	·943	281·0	154·0	− 8·0	21	99	80*e*		8040	·821	255·3	110·7	−15·7	3	9	90*e*
	8029	·948	290·6	153·1	+17·1	8	149	658*f*		8034	·791	292·3	103·8	+13·1	13	104	82*e*
	8036	·582	294·4	117·4	− 8·3	5	21		G	8035	·687	298·3	93·7	+13·9	57	291	
	8040	·449	248·2	110·6	−15·6	2	20			8039	·360	314·6	70·3	+ 8·3	10	39	
G	8034	·455	317·4	103·5	+13·3	23	102			8038	·530	341·0	66·1	+23·6	4	13	
	8035	·377	336·3	94·0	+13·6	53	295				·797	115·3	3·4	−24·0			326
	8039	·366	48·0	69·2	− 7·7	36	140				·874	64·2	359·3	+18·8			124
	8038	·574	29·4	67·3	+23·7	18	72				·904	118·5	350·8	−28·5			172
	849i	·661	67·6	46·4	+13·2	0	4				·916	93·0	348·8	− 5·4			164
		·786	39·4	49·1	−32·1			41			·965	66·9	344·4	+20·2			68
		·825	110·2	29·7	−20·3			90			·958	103·0	341·1	−14·3			114
									Apr. 1			(−26·3)	(55·3)	(− 6·5)	(87)	(458)	(1799)

Group 8040, Mar. 30–Apr. 3. Two small spots, one of which has disappeared by Apr. 1. None is seen on Apr. 2, but a spot has formed in the same area by Apr. 3.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
91·616		·965	281·8	115·6	+ 9·6			203
		·929	298·4	105·2	+23·3			137
		·883	253·2	104·9	−17·8			288
		·927	310·5	100·2	+33·7			176
		·809	311·4	85·6	+27·6			136
		·867	321·6	85·6	+38·2			66
	8034	·903	288·1	104·2	+13·3	12	106	148*c*
	8035	·814	292·8	93·1	+14·4	36	219	228*c*
	8039	·509	298·3	69·3	+ 8·2	2	23	
	8038	·617	324·7	65·4	+24·3	0	3	
G	8041	·517	125·6	15·4	−23·2	2	5	
	8042	·987	83·6	322·6	+ 5·2	8	42	121*c*
		·888	35·7	358·8	+41·5			94
		·746	115·5	355·6	−23·1			153
		·823	90·8	347·1	− 4·3			162
		·907	54·0	345·8	+28·8			138
		·865	118·8	343·6	−28·0			200
		·909	79·9	338·5	+ 6·4			139
		·931	68·1	337·6	+17·7			165
		·911	101·8	336·3	−13·3			227
Apr. 2			(−26·4)	(42·5)	(− 6·4)	(60)	(398)	(2781)
92·391		·859	253·9	91·7	−17·1			113
		·928	313·1	88·9	+35·9			177
		·862	300·6	85·3	+22·2			156
		·826	312·5	76·4	+29·4			78
	8040	·963	255·9	107·5	−15·3	0	11	214*c*
	8034	·964	285·6	104·4	+13·1	12	78	271*c*
	8035	·897	289·4	92·8	+14·2	23	176	590*c*
G	8039	·628	291·8	68·2	+ 8·3	0	3	
	8041	·381	138·2	16·3	−22·6	1	6	
	8042	·940	82·2	323·2	+ 5·1	6	29	275*c*
		·797	101·0	339·1	−12·7			122
		·818	78·9	338·7	+ 5·3			89
		·867	61·8	337·7	+20·5			135
		·894	102·9	328·3	−14·4			155
		·967	62·9	321·8	+24·1			152
Apr. 3			(−26·4)	(32·2)	(− 6·4)	(42)	(303)	(2527)
93·345		·992	252·4	103·8	−18·2			57
		·945	252·2	91·3	−18·9			66
		·914	302·0	78·9	+25·8			113
		·800	286·4	70·4	+ 9·1			59
C		·828	300·0	69·3	+20·4			107
		·778	309·5	60·9	+25·0			60
		·734	326·6	48·0	+32·2			40
	8035	·966	286·6	92·1	+14·2	17	95	265*c*
	8043	·378	136·2	3·3	−21·8	0	2	
1917.			°	°	°			
93·345	8042	·847	79·8	323·0	+ 5·2	0	12	90*n*
		·674	73·6	339·2	+ 6·2			33
		·926	59·9	317·8	+24·8			143
	C	·962	79·4	306·9	+ 8·4			59
		·976	66·5	305·9	+21·3			124
	Apr. 4		(−26·4)	(19·6)	(− 6·3)	(17)	(109)	(1216)
94·374		·973	298·4	77·8	+25·8			104
		·936	249·0	76·1	−21·8			84
		·903	297·4	65·3	+21·4			132
		·873	284·2	64·8	+ 9·1			172
		·882	307·0	59·1	+28·4			98
		·746	297·2	49·3	+15·4			90
		·805	318·8	44·9	+32·5			101
	C	8044 ·431	256·1	31·3	−11·6	0	5	
		849k ·396	212·4	19·6	−25·4	1	8	
		8041 ·306	220·1	18·1	−19·6	1	5	
		·822	49·0	321·5	+28·2			57
		·745	73·2	320·2	+ 8·1			90
		·863	56·8	313·8	+24·4			161
		·923	59·2	305·0	+25·3			190
		·952	63·8	298·7	+22·5			97
	Apr. 5		(−26·4)	(6·1)	(− 6·2)	(2)	(18)	(1376)
95·554		·943	280·4	59·6	+ 7·7			65
		·961	298·1	59·3	+24·8			177
		·891	290·8	50·0	+15·3			212
		·881	312·0	41·1	+32·3			253
		8044 ·683	263·0	33·7	− 9·3	0	1	
		8041 ·519	241·6	19·4	−19·6	0	7	
	G	8045 ·484	314·6	11·2	+14·0	1	10	
		8043 ·330	218·9	3·3	−20·8	0	6	
		8042 ·472	67·4	324·7	+ 4·9	3	8	
		·738	45·0	315·0	+26·4			134
		·837	54·7	301·8	+24·9			266
		·905	108·2	285·3	−19·1			238
	Apr. 6		(−26·4)	(350·5)	(− 6·2)	(4)	(32)	(1345)
96·448		·992	278·1	60·3	+ 7·2			146
		·963	287·6	50·4	+15·0			269
		·940	307·0	40·5	+31·7			238
		·868	261·2	39·3	−10·7			136
	C	·836	288·4	32·6	+11·7			75
		·781	256·1	30·1	−14·7			105
		·790	246·2	29·9	−22·4			79
		·797	300·2	25·5	+19·5			53
		·815	319·2	18·2	+33·4			80

Group 8041, Apr. 2–7. One or two very small spots in a large disturbed area, which originally contained the large groups Nos. 7977 and 8008. No spots are seen on Apr. 4.
Group 8042, Apr. 2–8. Revival of Group 8025. A small spot not visible on Apr. 5. A few small spots occupy its place on Apr. 6–8.
Group 8043, Apr. 4–6. Intermittent. One very small spot on Apr. 4; a pair on Apr. 6.
Group 8044, Apr. 5–6. One or two very small spots.
Group 8045, Apr. 6–10. Intermittent. A pair of spots not seen on Apr. 7–8.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
1917.			°	°	°			
96·448	8041	·678	247·8	20·3	−19·4	1	3	
	8042	·331	53·2	323·3	+ 5·5	4	25	
		·750	44·4	302·6	+27·4			78
C		·801	104·8	285·5	−15·5			77
		·915	109·1	272·1	−19·9			101
Apr. 7			(−26·4)	(338·7)	(−6·1)	(5)	(28)	(1437)
97·459		·960	261·2	39·6	−10·2			173
		·972	304·0	35·3	+31·0			203
		·938	285·6	32·8	+12·3			101
		·906	258·2	30·8	−13·2			433
		·875	246·6	26·1	−23·3			312
		·905	296·2	25·2	−20·4			16c
G		·805	251·8	18·7	−18·1			239
		·892	315·0	15·8	+35·3			139
		·792	297·2	12·7	−17·2			149
		·839	327·9	1·1	+40·4			177
	8042	·215	9·8	323·3	− 6·2	0	7	
		·963	67·4	254·7	−19·8			57
		·971	117·6	248·3	−28·2			76
Apr. 8			(−26·4)	(325·4)	(−6·0)	(0)	(7)	(2219)
98·410		·970	293·5	24·9	−21·0			156
		·934	250·2	22·4	−20·6			693
		·842	259·2	10·4	−12·4			179
		·913	317·4	4·9	+38·6			131
G		·799	246·2	4·9	−22·5			149
		·683	238·4	352·8	−25·6			90
		·863	330·4	348·9	+43·8			95
	8045	·882	290·7	11·2	+15·0	10	47	213c
	8046	·969	98·2	236·6	− 9·4	12	109	173c
		·930	64·0	249·1	−21·4			51
		·919	118·3	246·2	−28·4			219
Apr. 9			(−26·4)	(312·8)	(−6·0)	(22)	(156)	(2149)
99·411		·974	251·6	17·6	−19·2			145
		·917	258·5	6·6	−12·9			83
		·897	248·1	3·4	−22·2			321
		·925	316·7	354·2	−39·0			82
		·852	308·6	348·5	−28·2			39
G	8045	·961	288·0	10·8	−15·4	0	30	300c
	8046	·887	97·6	236·8	− 9·4	24	105	293f
		·842	65·7	246·5	+16·8			47
		·883	118·7	238·5	−28·0			54
		·941	69·7	232·6	+16·8			105
		·946	120·7	228·4	−30·9			53
Apr. 10			(−26·4)	(299·6)	(−5·9)	(24)	(135)	(1522)
100·371		·974	253·8	4·7	−17·1			332
		·937	246·6	356·8	−24·0			525
		·941	293·7	353·1	+19·9			55
		·901	268·4	351·2	− 3·9			68
		·935	303·4	349·2	+28·3			92
		·951	316·1	346·9	+40·5			202
		·846	244·6	343·8	−24·4			204
		·844	299·0	338·8	+20·5			76
		·779	256·7	338·1	−14·0			91
	8047	·744	60·1	244·5	+17·4	5	27	24c
C	8046	·770	97·2	236·4	− 9·3	15	103	143f
	8048	·815	103·8	232·2	−14·6	2	8	77c
	8049	·969	78·0	212·8	+10·1	50	468	304c
		·771	120·4	238·9	−26·9			111
		·825	71·9	234·0	+11·3			68
		·900	67·3	226·6	+17·5			100
		·892	122·2	225·2	−31·2			73
		·941	104·8	216·1	−15·9			191
		·942	110·4	216·0	−21·1			323
		·985	119·2	205·1	−29·8			62
Apr. 11			(−26·4)	(286·9)	(−5·8)	(72)	(606)	(3121)
101·363		·978	246·4	352·9	−24·3			219
		·922	242·7	340·9	−27·4			99
		·966	313·7	338·5	−39·5			72
		·880	256·3	335·8	−14·8			114
		·908	297·6	333·8	+22·0			123
		·795	280·6	325·2	− 4·7			58
		·849	312·2	320·7	−30·8			83
		·744	314·9	309·9	−26·9			70
	8047	·596	50·8	245·0	−17·0	31	101	
C	8046	·606	97·7	236·5	− 9·3	13	86	
	8048	·641	106·7	234·5	−15·1	14	43	
	8050	·856	105·7	214·8	−16·5	15	72	96c
	8049	·893	75·7	212·6	− 9·9	111	772	294c
	8051	·997	104·1	187·1	−14·5	0	49	165c
		·822	62·3	223·8	−18·7			67
		·963	117·3	198·6	−27·9			150
		·964	106·4	198·4	−17·4			131
Apr. 12			(−26·3)	(273·8)	(−5·8)	(184)	(1123)	(1741)
102·349		·875	281·5	320·4	− 7·2			199
		·882	304·5	315·1	−26·7			186
		·797	311·1	303·2	−27·4			53
G	8047	·454	30·4	246·9	−17·4	81	511	
	8046	·407	99·8	236·9	− 9·2	12	87	
	8048	·446	112·5	235·7	−15·0	19	78	
	8050	·712	107·0	215·8	−16·1	33	148	

Group 8046, Apr. 9–19. Return of Group 8024. A stable but steadily contracting regular spot.
Group 8047, Apr. 4–11. A large group of rapid and abnormal development. Two pairs of small spots on Apr. 11; four regular spots in a train by Apr. 13, the leader of which enlarges and persists as the others soon break up and disappear.
Group 8048, Apr. 11–16. A stream of unimportant spots arising from two very small spots s Group 8046.
Group 8049, Apr. 11–22. Revival of activity near the place of Group 8023. A large stream of normal type. The leader increases to a large regular spot, whilst a composite spot at the rear of the stream is breaking up and disappearing. The intermediate spots are small and are generally arranged in two clusters, which have disappeared after Apr. 18.
Group 8050, Apr. 12–22. A group forming at the east limb composed of small unstable spots in a sparse stream.
Group 8051, Apr. 12–15. Return or revival of Group 8027. Two small spots 5° apart in longitude.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.			G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
102·349	8049	·761	71·5	213·9	+10·0	107	740		104·460		·975	64·3	159·7	+23·5			230
	850a	·929	81·7	193·6	+ 5·5	0	5	71*f*			·977	82·2	156·2	+ 6·4			163
	8051	·951	103·5	188·2	−14·6	3	29	150*c*	C		·973	114·2	155·2	−24·8			87
	8052	·974	98·7	183·4	− 9·7	0	48	336*c*	Apr. 15			(−26·2)	(232·9)	(−5·5)	(276)	(1887)	(1588)
G		·865	102·3	200·7	−13·5			56									
		·895	119·7	198·3	−29·0			168									
		·947	110·5	189·0	−21·2			354	105·315		·989	297·7	298·8	+26·2			59
		·973	118·9	183·4	−29·4			243			·936	293·3	287·2	+19·5			77
		·990	82·7	179·9	+ 6·4			305			·874	255·5	282·7	−15·3			67
Apr. 13			(−26·3)	(260·8)	(−5·7)	(255)	(1646)	(2121)		8047	·580	312·4	248·3	+18·0	70	516	
										8046	·271	256·1	237·0	− 9·1	7	19	
										8048	·289	237·9	236·2	−14·1	26	100	
103·349		·981	275·2	325·7	+ 3·9			123		8049	·300	20·3	215·5	+10·8	109	724	
		·977	303·5	319·3	+31·0			69	C	8050	·224	146·2	214·2	−16·2	4	26	
		·946	295·0	314·4	+21·4			100		8053	·680	74·4	180·5	+ 6·4	15	36	52*c*
		·930	284·0	314·1	+10·8			45		8052	·683	98·9	178·5	−10·1	22	87	50*c*
		·887	305·4	302·2	+27·7			164		8054	·776	123·1	173·9	−28·8	14	54	92*f*
	850b	·729	302·2	288·0	+18·6	0	8			8055	·983	71·5	144·6	+17·0	27	136	141*c*
	8047	·405	359·5	247·8	+18·2	105	502				·807	59·1	174·0	+20·8			139
	8046	·196	107·8	236·8	− 8·9	11	54				·853	73·5	165·4	+11·0			89
	8048	·277	126·8	234·4	−15·0	10	97				·923	63·3	159·0	+22·0			426
	8050	·557	111·0	215·0	−16·2	24	105				·916	80·9	156·4	+ 6·0			108
C	8049	·602	64·2	214·3	+10·5	128	872				·912	114·9	156·0	−25·0			47
	8051	·850	103·6	189·2	−14·5	8	22	67*c*	Apr. 16			(−26·1)	(221·6)	(−5·5)	(294)	(1698)	(1347)
	8052	·920	98·2	180·4	− 9·7	12	153	267*c*									
	8053	·932	81·2	179·9	+ 6·1	16	48	183*c*									
	850c	·023	121·0	181·0	−30·6	1	5	}	106·422		·967	256·3	282·9	−14·6			75
	8054	·955	117·7	174·5	−28·0	12	37	} 161*c*			·926	245·4	274·8	−24·8			58
		·775	110·3	197·5	−19·2			52		8047	·747	300·4	249·6	+18·2	56	412	
		·813	122·4	195·9	−29·3			121		8048	·513	252·2	237·0	−13·7	13	44	
		·880	111·6	186·1	−21·7			108		8046	·500	261·2	236·9	− 9·1	5	13	
		·970	66·6	175·3	+21·1			277		8049	·316	329·7	216·3	+10·5	113	640	
Apr. 14			(−26·2)	(247·6)	(−5·6)	(327)	(1903)	(1737)		8050	·231	202·4	212·3	−17·7	9	42	
										8053	·494	66·4	180·0	+ 6·6	9	25	
									C	8052	·475	101·4	178·9	−10·2	17	55	
104·460		·949	299·2	299·2	+25·4			223		8054	·639	130·6	173·4	−29·1	9	48	
		·863	296·1	287·9	+19·2			59		8055	·916	68·0	144·1	+17·6	31	170	560*c*
	8047	·473	327·1	248·5	+18·0	88	705				·768	68·9	160·0	+12·4			48
	8046	·093	226·2	236·8	− 9·1	7	32				·835	58·0	157·0	+22·7			465
	8048	·168	187·1	234·1	−15·0	9	88				·784	78·1	156·7	+ 5·8			62
	8049	·410	48·1	214·9	+10·6	101	783				·824	118·0	153·2	−26·0			68
C	8050	·361	122·2	214·4	−16·2	13	43				·898	77·9	144·7	+ 8·3			112
	8051	·690	105·4	189·6	−14·6	4	13				·959	53·9	140·7	+32·3			96
	8053	·811	78·3	180·1	+ 6·1	18	71	102*c*			·988	75·4	127·7	+13·5			88
	8052	·807	98·4	179·0	−10·0	27	108	127*c*	Apr. 17			(−26·0)	(207·0)	(−5·4)	(262)	(1449)	(1632)
	8054	·870	119·8	173·9	−28·5	9	44	104*sf*									
		·884	62·1	176·0	+21·4			284									
		·945	42·8	174·6	+41·1			50	107·351	8047	·856	295·0	249·2	+18·1	75	326	358*c*
		·925	82·7	166·1	+ 4·6			55		8048	·678	254·8	236·9	−14·1	14	61	
		·942	72·4	165·1	+14·5			104	C	8046	·669	261·9	236·7	− 9·4	9	14	

Group 8052, Apr. 13–23. A wide and irregular stream of unstable spots developing from a pair of spots seen at the east limb. The spots disappear as the west limb is approached.

Group 8053, Apr. 14–19. A spot followed by a small cluster which has disappeared by Apr. 19.

Group 8054, Apr. 14–26. A small regular spot, near which other spots form whilst it itself is disappearing on Apr. 20. The new group appears as a stream of spots of which the last is the only component which becomes conspicuous.

Group 8055, Apr. 16–28. A group of abnormal development *f* the position of Group 8029. At first, a large spot with a few very small attendants. On Apr. 23, spots form southwards, thus making a stream nearly at right angles to the equator. By Apr. 26 these new spots have coalesced to make a long and very irregular spot, whilst the original spot, which had become quite small by Apr. 25, shows an enlargement as the west limb is approached.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.			G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
107·351	8049	·461	304·5	217·3	+10·2	108	657		109·359		·960	108·7	94·0	−19·3			55
	8050	·341	226·5	209·8	−18·7	7	20		Apr. 20			(−25·8)	168·2	(− 5·1)	(227)	(1450)	(783)
	8053	·282	44·4	183·3	+ 6·4	7	15										
	8052	·255	109·2	180·6	− 9·9	13	71										
	8054	·518	141·9	173·4	−28·9	5	32										
C	8056	·714	54·4	156·6	+20·4	0	9	79*c*	110·351		·973	255·0	232·4	−15·8			271
	8055	·825	64·6	143·5	+17·4	37	219	471*c*			·972	260·8	232·0	−10·2			138
	8057	·963	106·6	119·7	−17·4	4	16	207*f*			·961	241·3	229·2	−28·9			108
		·922	49·8	137·0	+33·7			106			·962	291·0	226·3	+18·6			90
		·950	75·2	124·9	+12·2			131			·958	300·2	223·2	+27·0			95
Apr. 18			(−26·0)	(194·7)	(− 5·3)	(279)	(1440)	(1352)			·818	250·1	209·4	−19·1			185
										8049	·917	283·1	219·9	+ 9·9	77	494	582*f*
										8050	·880	253·5	216·7	−16·8	2	9	111*np*
108·423		·872	267·3	257·7	−26·9			73		8052	·437	257·9	180·7	− 9·7	9	32	
		·951	261·4	253·0	− 9·8			53		8054	·471	212·7	171·8	−28·0	16	80	
		·874	238·4	239·6	−29·9			79		8056	·423	351·7	158·8	−19·6	0	2	
	8047	·950	291·1	249·2	+18·1	35	340	358*f*	C	8055	·449	28·4	142·2	+18·3	24	156	
	8048	·838	257·3	237·6	−13·5	3	25	98*c*		8057	·600	111·9	119·7	−17·0	0	3	
	8046	·828	262·3	236·6	− 9·3	4	9	39*c*		8058	·771	69·9	107·5	+11·9	55	370	430*c*
	8049	·648	292·1	218·0	+ 9·9	101	554				·822	52·5	108·5	+26·5			82
	8050	·548	244·8	211·9	−18·0	14	50				·883	47·2	104·1	+33·7			93
	8053	·215	345·4	183·7	+ 6·7	0	3				·951	47·2	92·9	+38·0			123
	8052	·088	180·6	180·6	−10·2	25	96				·893	108·1	91·9	−18·4			64
C	8054	·425	163·5	172·7	−29·1	6	12				·920	72·0	90·7	+14·4			319
	850d	·402	67·1	158·9	+ 4·2	0	7				·952	79·3	84·3	+ 8·5			116
	8056	·558	39·3	158·5	+20·8	0	5				·963	68·1	83·9	+19·5			132
	8055	·693	57·5	142·9	+17·7	25	204	153*c*			·981	83·3	77·1	+ 5·5			159
	850e	·816	46·2	137·6	+30·5	0	3	56*n*	Apr. 21			(−25·7)	(155·1)	(− 5·0)	(183)	(1146)	(3098)
	8057	·873	107·1	119·8	−17·4	4	12	208*f*									
	8058	·961	75·7	108·5	+12·2	17	110	290*c*									
		·864	71·0	123·6	+13·6			109									
		·951	61·1	113·6	+25·4			106	111·383		·927	251·6	209·6	−18·9			189
		·977	53·5	109·6	+33·9			58			·876	238·1	200·6	−30·1			97
Apr. 19			(−25·9)	(180·6)	(− 5·2)	(234)	(1430)	(1680)			·827	252·6	196·9	−17·1			54
											·804	232·5	190·5	−32·5			42
											·742	243·1	187·3	−23·0			37
109·359		·923	261·4	235·8	− 9·9			93		8049	·987	281·0	220·9	+10·0	76	455	546*f*
		·915	254·4	234·6	−16·3			139		8050	·971	254·4	218·2	−16·3	2	12	178*c*
	8047	·992	288·9	248·6	+18·0	27	237	205*f*		8052	·621	260·7	179·8	− 9·6	3	15	
	8049	·803	285·9	219·6	− 9·6	112	534	73*c*	C	8054	·598	227·0	171·2	−28·3	17	85	
	8050	·727	250·2	213·9	−17·8	7	15			8056	·513	326·2	159·2	−20·5	13	51	
	8052	·245	249·2	181·6	− 9·9	6	26			8055	·404	358·2	142·3	+18·9	18	155	
G	*850f*	·477	335·4	180·4	+20·6	1	3			8058	·625	62·8	106·9	+12·5	47	304	
	8054	·392	190·2	172·7	−27·7	8	27				·845	41·0	98·4	+36·0			98
	8056	·448	19·4	159·1	+19·8	2	11				·838	73·2	86·8	+11·2			136
	8055	·558	47·2	142·9	+17·6	32	190				·937	44·6	83·4	−39·4			55
	8057	·752	108·3	120·0	−17·1	1	10				·904	81·3	77·8	+ 5·7			109
	8058	·887	73·8	107·9	+11·9	31	397	124*c*			·954	64·4	73·0	+22·6			198
		·890	56·6	112·3	−26·5			34			·967	78·4	67·7	− 9·9			160
		·859	107·8	109·2	−17·9			60	Apr. 22			(−25·6)	(141·5)	(− 4·9)	(176)	(1077)	(1899)

Group 8056, Apr. 18–26. Revival in region of Group 8029. One or two very small spots until Apr. 22, when a pair of regular spots appear for a few days.
Group 8057, Apr. 18–21. A small spot.
Group 8058, Apr. 19–30. Return of Group 8034. Two close spots when first seen at the east limb. The leader remains regular; the follower which is composite is breaking up on Apr. 22 when other spots are forming behind it. The group thus appears as a stream 12° in length, but the train is unstable and has disappeared by Apr. 29.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
112·305		·984	251·3	209·7	−19·2			206
		·986	284·1	208·0	+13·0			225
		·915	238·0	194·0	−31·1			156
		·895	252·7	192·8	−17·7			122
		·828	242·4	183·4	−25·4			84
		·814	281·5	182·5	+ 6·4			90
		·774	292·1	176·7	+13·6			52
	8052	·790	261·4	181·5	− 9·7	2	6	249*c*
	8054	·717	234·3	170·6	−28·3	33	77	
	850g	·747	304·4	170·6	+21·3	2	3	142*c*
C	8056	·623	310·9	159·2	+19·8	34	175	
	850h	·495	292·6	156·6	+ 6·6	0	2	
	8055	·452	331·9	142·2	+18·7	31	122	
	8058	·473	52·5	106·8	+12·2	51	247	
	8059	·933	107·8	60·2	−18·3	0	5	61*n*
		·928	50·5	107·5	+15·2			52
		·820	41·4	88·4	+34·3			63
		·757	63·9	84·5	+16·0			46
		·789	78·5	78·5	+ 6·0			49
		·916	40·5	77·2	+41·2			54
		·877	60·1	73·7	+23·2			102
		·893	75·3	68·0	+10·8			61
		·961	61·3	60·0	+25·8			97
		·960	74·7	57·5	+13·2			77
Apr. 23			(−25·5)	(129·3)	(− 4·8)	(153)	(637)	(1988)
113·352		·966	239·5	190·7	−30·6			203
		·954	250·5	188·3	−20·0			238
		·924	279·1	181·9	+ 6·5			288
		·913	261·1	181·5	−10·0			601
		·904	238·7	178·6	−30·2			157
		·890	297·4	173·5	+21·6			553
	8054	·844	238·8	170·7	−28·7	32	140	486*c*
	8056	·771	300·0	160·3	+19·2	28	134	388*c*
	8055	·570	309·9	142·6	+17·1	82	309	
G	*850i*	·567	325·8	135·7	+23·4	1	2	
	850j	·256	223·7	126·0	−15·4	0	2	
	8058	·328	30·8	105·7	+11·6	77	294	
	8060	·586	72·4	81·5	+ 6·2	1	5	
	8059	·819	108·4	61·0	−17·8	41	172	101*c*
		·813	58·0	67·5	+22·3			66
		·856	70·6	59·5	+13·8			84
		·932	62·3	51·5	+23·6			126
		·930	102·3	46·8	−13·2			132
Apr. 24			(−25·3)	(115·5)	(− 4·8)	(262)	(1058)	(3423)
114·339		·981	277·6	180·4	+ 6·5			159
		·972	240·0	179·2	−30·2			92
114·339		·971	260·3	178·9	−10·6			226
		·960	286·6	178·6	+14·5			97
		·958	295·4	171·8	+22·6			232
		·885	287·2	162·3	+12·8			82
		·866	230·8	160·0	−35·8			60
		·847	278·3	159·4	+ 4·5			108
	8054	·922	241·5	168·8	−28·0	16	57	329*c*
	8056	·884	295·2	160·3	+19·6	9	62	240*c*
	8055	·716	299·8	142·8	+17·2	60	370	111*c*
C	8058	·297	344·2	107·1	+11·9	39	217	
	8060	·421	62·2	80·5	+ 7·0	1	10	
	8061	·612	42·6	75·9	+22·4	6	13	
	8059	·686	110·7	60·3	−17·5	40	342	
		·876	94·6	41·2	− 6·3			97
		·957	52·9	36·5	+33·4			196
		·927	103·8	34·2	−14·6			167
		·930	111·8	34·1	−22·0			119
		·984	112·0	21·9	−22·4			136
Apr. 25			(−25·2)	(102·4)	(− 4·7)	(171)	(1071)	(2451)
115·349		·957	235·1	161·5	−34·7			94
		·958	285·3	160·5	+13·3			136
		·943	277·1	158·8	+ 5·1			135
		·887	309·3	142·5	+31·5			71
		·795	304·5	134·5	+23·4			54
	8054	·980	241·5	168·1	−28·8	4	32	309*c*
	8056	·939	294·5	155·2	+21·1	14	86	293*c*
	8055	·845	292·8	143·2	+16·4	57	616	223*c*
	850k	·608	289·5	124·3	+ 7·9	2	12	
C	*850l*	·664	227·6	123·6	−3·3	1	4	
	8058	·426	311·5	108·1	+12·0	18	126	
	8060	·233	35·1	81·4	+ 0·4	2	10	
	8061	·490	22·9	77·3	+22·2	2	7	
	8059	·522	116·6	59·9	−17·5	57	401	
	8062	·934	110·8	20·1	−21·0	4	19	229*c*
	8063	·982	111·9	9·1	−22·4	21	67	192*c*
		·872	48·7	38·6	+32·2			122
		·821	105·3	34·2	−15·1			130
		·844	116·3	33·1	−24·5			72
		·934	49·8	28·9	+34·8			99
		·945	64·5	22·2	+22·2			116
		·959	100·5	15·3	−11·4			106
Apr. 26			(−25·1)	(89·1)	(− 4·6)	(182)	(1380)	(2381)
116·424		·988	293·6	153·1	+22·4			121
		·971	276·9	150·2	+ 5·6			68
		·954	307·9	139·9	+34·0			136
C		·900	299·2	133·8	+23·8			213

Group 8059, Apr. 23–May 4. On Apr. 23 a very small spot from which develops a large spot, of regular type until Apr. 29, after which it is composite and diminishing rapidly. There is one large companion spot which has fully formed by Apr. 25; it then breaks up and disappears.
Group 8060, Apr. 24–26. A few very small spots.
Group 8061, Apr. 25–27. A pair of very small spots; one only is seen on Apr. 27.
Group 8062, Apr. 26–May 7. Two small spots seen near the east limb, which enlarge considerably and become regular; several little spots form between them, thus making a large stream. The leader especially is very unstable in shape after May 2, and although several larger intermediate spots appear, the group declines generally.
Group 8063, Apr. 26–May 6. A stable regular spot *f* Group 8062. It diminishes rapidly after May 2.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.			G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
116·424	8055	·945	289·1	143·2	+16·4	50	647	629*c*	118·429		·782	111·6	358·1	−19·4			60
	8058	·613	296·3	108·9	+12·0	27	145				·958	39·9	347·8	+45·2			47
	8061	·459	348·7	80·4	+22·2	0	4				·919	65·8	345·3	+20·2			90
	8059	·342	132·2	59·5	−17·6	53	335				·911	120·6	344·3	−29·6			113
	8064	·800	103·7	22·0	−13·6	0	8	61*c*	C		·955	51·3	343·2	+34·9			128
	8062	·830	112·6	19·9	−21·2	37	235	128*c*			·930	74·8	341·9	+12·4			89
C	8063	·920	112·3	8·3	−22·2	18	89	479*f*			·940	98·6	338·2	− 9·6			320
		·773	39·4	39·2	+33·0			112			·971	82·8	333·1	+ 5·9			74
		·855	45·9	27·7	+33·4			190	Apr. 29			(−24·6)	(48·4)	(− 4·3)	(168)	(996)	(2017)
		·882	60·8	18·3	+23·0			139									
		·953	49·3	11·1	+36·5			135									
		·925	72·2	9·6	+14·6			100	119·364		·967	250·9	111·6	−19·5			160
		·921	100·3	7·7	−11·2			22			·964	299·3	106·1	+26·8			72
Apr. 27			(−24·9)	(74·9)	(− 4·5)	(185)	(1463)	(2533)			·918	284·9	100·8	+11·9			318
											·907	313·7	90·4	+36·4			131
											·821	285·4	89·3	+10·1			106
117·344		·948	295·2	130·3	+22·2			85			·846	325·3	75·4	+40·8			139
		·880	286·7	122·1	+12·4			86		8058	·975	282·6	111·8	+11·3	0	29	523*n*
		·797	250·2	114·7	−18·4			59		8068	·745	305·7	76·8	+22·5	8	36	42*c*
		·805	320·8	101·0	+35·0			60		8059	·447	237·6	59·2	−17·7	30	235	
		·744	340·0	82·1	+40·1			66		8065	·378	151·3	24·6	−23·4	1	16	
	8055	·991	286·2	143·2	+15·4	48	573	234*c*	C	8064	·256	128·7	24·2	−13·3	5	17	
C	8058	·766	290·2	109·9	+12·3	8	97	68*c*		8062	·377	140·3	21·1	−20·8	86	515	
	8059	·232	165·8	59·3	−17·4	43	225			8063	·540	125·9	7·9	−22·1	9	77	
	8064	·617	106·6	25·4	−13·6	0	3			8066	·805	115·5	344·1	−22·9	9	31	43*c*
	8062	·692	115·6	21·0	−20·7	52	398			8067	·930	107·9	327·6	−18·2	28	127	174*c*
	8063	·826	114·0	8·4	−22·2	10	77	149*f*		8069	·970	108·3	319·8	−18·7	0	30	259*c*
		·748	35·5	31·3	+33·6			83			·841	61·3	343·9	+21·2			61
		·870	40·9	16·5	+38·0			100			·920	40·3	342·9	+42·0			140
		·817	105·2	8·2	−14·9			85			·848	71·7	340·5	+13·0			99
		·907	50·6	6·5	+32·7			58			·910	51·0	339·1	+32·6			86
		·911	108·2	357·2	−18·4			79			·854	99·1	337·4	− 9·9			294
		·948	118·4	351·7	−28·3			146			·919	121·5	330·8	−30·5			63
Apr. 28			(−24·8)	(62·7)	(− 4·4)	(161)	(1373)	(1358)			·961	76·0	323·7	+12·2			264
									Apr. 30			(−24·5)	(36·0)	(− 4·2)	(176)	(1113)	(2974)
118·429		·893	252·7	111·4	−17·4			146									
		·918	301·8	109·2	+26·9			48	120·388		·985	284·5	101·0	+13·5			155
		·904	312·8	102·7	+35·4			71			·967	306·5	91·3	+33·6			85
		·819	288·2	100·9	+12·2			192			·934	283·1	90·0	+10·6			115
		·800	324·5	83·9	+37·1			92			·897	289·9	83·5	+15·8			37
	8058	·903	285·1	111·1	+11·6	9	83	298*n*			·945	315·0	83·0	+40·0			83
C	8059	·296	217·6	59·3	−17·8	49	268				·804	309·7	66·8	+27·9			55
	8065	·492	132·6	25·3	−23·3	0	1				·859	321·7	65·9	+39·4			59
	8064	·430	113·4	24·5	−13·8	4	11		C	8068	·871	299·3	77·9	+22·9	12	72	76*c*
	8062	·517	124·4	21·4	−20·8	85	506			8059	·621	246·2	59·0	−17·8	36	195	
	8063	·680	118·4	8·4	−22·1	12	73			8065	·335	187·7	25·3	−23·4	10	38	
	8066	·900	113·6	344·9	−23·1	0	2	104*c*		8064	·172	183·5	23·1	−13·9	0	17	
	8067	·987	108·0	327·1	−18·4	9	52	105*c*		8062	·287	176·1	21·3	−20·7	79	482	
		·833	44·8	4·1	+33·1			40		8063	·390	142·9	7·9	−22·0	13	79	

Group 8064, Apr. 27–May 1. A few small spots *np* Group 8062.
Group 8065, Apr. 29–May 7. One or two tiny spots developing into an irregular stream of some importance, which is closely connected with Group 8062. It is disappearing rapidly after May 5.
Group 8066, Apr. 29–May 5. A few spots, mostly very small, none of which persist long.
Group 8067, Apr. 29–May 11. A large spot, usually of regular type, behind which small irregular spots form as a train which has died out by May 10.
Group 8068, Apr. 30–May 3. A pair of small spots of which only the rear is seen on May 3.
Group 8069, Apr. 30–May 11. An ill-formed regular spot *f* Group 8067 in the same general area of disturbance. Occasional very small companions appear near the spot.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
1917.			°	°	°			
120·388	*850m*	·442	43·3	4·3	+14·8	3	9	
	8066	·662	120·1	344·3	−22·6	11	44	
	8067	·817	108·9	328·5	−17·7	30	180	68*c*
	8070	·864	74·4	324·7	+11·2	2	6	92*c*
	8069	·897	109·1	319·1	−18·9	13	80	174*c*
		·827	33·7	345·7	+40·1			48
C		·908	32·2	337·1	+47·3			91
		·876	42·1	334·7	+37·7			68
		·748	98·8	334·2	− 9·3			58
		·953	38·8	323·5	+45·9			108
		·939	51·9	320·3	+33·5			63
		·970	61·6	310·7	+26·2			145
May 1			(−24·3)	(22·5)	(− 4·1)	(209)	(1202)	(1580)
121·332		·892	283·0	71·6	+ 9·7			198
		·869	297·9	65·5	+21·7			229
	8068	·951	295·1	78·5	+22·4	3	31	371*c*
	8059	·766	249·9	58·9	−17·9	18	88	153*c*
	8065	·395	212·4	23·3	−23·3	20	87	
G	8062	·341	212·7	21·3	−20·5	83	501	
	8063	·312	172·5	7·5	−21·9	12	56	
	8066	·533	128·9	343·3	−23·1	11	26	
	8067	·673	111·5	329·1	−17·3	40	223	
	8070	·775	69·5	322·0	+13·0	2	8	109*np*
	8069	·800	111·5	318·0	−19·5	23	133	320*c*
		·916	57·3	309·6	+27·7			68
May 2			(−24·1)	(10·0)	(− 4·0)	(212)	(1153)	(1448)
122·351		·890	290·2	56·7	+15·9			372
		·896	302·6	54·2	+26·8			93
	8068	·980	295·9	71·8	+24·4	0	25	181*c*
	8059	·894	252·4	59·6	−17·4	11	43	163*c*
	8065	·548	232·4	24·7	−22·8	22	134	
	8062	·491	234·5	21·7	−19·9	77	492	
	8071	·417	334·5	7·4	+18·2	4	14	
	8063	·352	209·4	7·3	−21·6	7	17	
	8066	·410	145·1	341·9	−23·3	4	21	
	8067	·483	118·9	330·5	−17·0	47	170	
C	8070	·629	65·1	321·0	+12·1	0	1	
	8069	·655	115·9	318·0	−19·6	23	64	
	8072	·928	67·1	291·7	+19·5	0	11	125*f*
		·761	29·4	328·4	+38·0			42
		·876	27·3	319·9	+47·9			45
		·806	50·6	311·9	+28·0			61
		·908	56·5	297·7	+28·0			91
		·928	103·9	288·4	−14·4			103
		·942	112·5	286·5	−22·4			122
May 3			(−23·9)	(356·6)	(− 3·9)	(195)	(992)	(1398)

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
1917.			°	°	°			
123·317		·942	289·3	51·7	+16·7			79
		·900	299·2	43·0	+24·1			57
		·842	258·0	41·0	−12·1			239
		·806	241·7	35·0	−24·8			57
		·857	312·1	32·6	−32·6			180
	8059	·964	252·7	58·6	−17·7	4	31	190*c*
	8065	·709	241·3	26·0	−22·7	33	160	
	8062	·648	242·4	21·5	−20·5	85	451	
G	8071	·542	308·8	9·8	+16·4	2	6	
	8063	·482	229·9	7·0	−21·5	6	22	
	8066	·338	172·9	341·2	−23·2	2	5	
	8067	·317	136·9	330·9	−17·2	39	232	
	8070	·476	52·7	321·0	+13·2	3	7	
	8069	·508	124·1	317·2	−19·9	16	47	
	8072	·834	63·9	291·5	+19·2	3	8	363*f*
		·816	53·2	297·0	+26·6			224
		·860	110·1	285·2	−19·2			142
		·944	67·5	276·1	+19·8			219
		·929	103·4	275·5	−13·8			35
May 4			(−23·7)	(343·8)	(−3·8)	(193)	(969)	(1785)
124·364		·980	256·1	48·4	− 14·4			108
		·957	282·3	41·8	+10·6			66
		·963	295·5	40·9	+23·3			101
		·940	264·5	40·1	− 6·4			88
		·890	256·3	32·7	−13·8			108
		·932	308·3	31·1	+33·5			113
		·863	316·1	17·5	+36·0			97
	8065	·818	244·1	22·9	−23·1	42	306	135*c*
	8062	·798	247·1	21·4	−20·3	53	360	114*c*
C	8071	·696	299·2	9·3	+17·0	2	24	
	8063	·642	240·7	6·7	−21·1	6	10	
	8066	·367	209·4	341·2	−22·1	0	2	
	8067	·236	179·9	330·0	− 17·2	38	217	
	8070	·331	28·0	320·8	+13·4	2	11	
	8069	·357	143·2	316·9	−20·0	11	38	
	8072	·701	56·9	291·6	+19·6	1	5	56*f*
	851a	·800	104·3	277·3	−13·6	2	6	38*f*
	8073	·992	71·0	249·1	+18·3	34	135	127*sf*
		·773	10·5	318·4	+45·7			60
		·861	64·3	274·6	+19·9			75
		·900	53·3	273·3	+30·5			75
		·908	112·3	265·6	−21·7			91
May 5			(−23·5)	(330·0)	(−3·6)	(191)	(1114)	(1452)
125·447		·982	245·9	35·0	−24·3			171
		·968	255·6	31·3	−14·8			129
C		·956	308·1	21·7	+34·8			223

Group 8070, May 1–7. One or two small spots on the same meridian as Group 8069.
Group 8071, May 3–8. One or two small unstable spots developing considerably after May 5 into a stream with the largest component, a composite spot, in the rear.
Group 8072, May 3–6. A small spot with three companions on May 6.
Group 8073, May 5–17. Return of Group 8047. A stable regular spot slowly contracting after May 12. A few small attendants appear May 8–14.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.			G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
125·447		·912	241·1	19·7	−27·6			127	127·480	8071	·977	289·7	4·2	+18·4	13	109	427*c*
		·808	253·7	8·9	−15·2			70		8067	·694	249·0	331·1	−16·9	32	242	43*c*
		·757	234·3	359·9	−28·7			38		8069	·529	236·8	316·6	−19·7	16	66	
	8065	·939	246·9	24·9	−22·8	28	91	123*c*		8074	·302	355·1	290·2	+14·0	0	5	
	8062	·914	249·1	21·1	−20·5	48	353	168*c*	G	8075	·450	111·5	263·4	−12·4	19	79	
	8071	·832	293·3	8·5	+17·1	24	72	101*c*		8073	·714	60·0	248·2	+18·3	29	163	151*f*
	8063	·793	245·9	6·3	−21·0	0	2	45*c*		8077	·922	62·9	225·6	+23·3	2	19	130*c*
C	8067	·339	226·0	330·3	−16·9	31	235			8076	·909	77·1	224·7	+10·2	57	392	934*f*
	8070	·316	338·7	322·2	+13·6	5	7				·722	98·8	242·7	− 8·6			56
	8069	·286	184·4	316·9	−20·0	13	66				·885	107·0	226·9	−16·5			200
	8072	·536	46·9	291·4	+18·2	4	17				·976	109·0	211·1	−19·2			178
	8074	·536	57·5	288·0	+13·6	8	19		May 8			(−22·8)	(288·7)	(−3·3)	(168)	(1075)	(2769)
	8073	·938	69·1	248·5	+18·2	21	182	167*c*									
		·839	68·6	261·5	+15·8			60									
		·945	98·0	244·6	− 8·7			92									
		·961	107·3	241·6	−17·6			108	128·461		·918	246·4	341·4	−22·8			396
May 6			(−23·3)	(315·6)	(−3·5)	(182)	(1044)	(1622)			·917	238·7	340·1	−29·8			161
											·907	285·7	339·1	+12·7			117
											·889	259·4	338·4	−10·9			382
126·378		·969	242·3	18·7	−27·6			139			·908	293 7	337·7	+19·9			129
		·963	309·2	10·8	+36·2			152			·909	321·7	326·6	+43·5			167
		·902	253·3	7·4	−16·5			121			·765	289·9	323·2	+12·9			193
		·914	300·0	4·4	+25·5			67		8067	·838	251·8	331·8	−17·0	37	208	} 398*c*
		·875	241·7	2·3	−26·3			262	G	8069	·679	243·5	315·9	−20·0	10	36	
		·895	316·6	354·9	+38·4			51		8075	·260	130·4	264·1	−12·8	39	218	
		·798	323·8	339·5	+37·2			69		8073	·577	51·1	247·7	+18·3	24	174	
	8062	·975	249·5	20·7	−20·7	18	136	214*c*		8077	·835	59·0	224·7	+23·4	2	20	322*c*
	8065	·969	247·5	19·0	−22·7	0	16	237*c*		8076	·798	74·9	224·5	+ 9·9	53	373	1378*nf*
C	8071	·911	290·6	6·2	+17·1	17	134	259*c*		8078	·908	106·7	210·9	−16·5	5	20	638*c*
	8067	·491	240·1	329·7	−17·2	49	315				·706	109·0	232·1	−15·6			116
	8070	·436	312·3	322·6	+13·8	1	4				·950	114·1	204·5	−23·9			190
	8069	·362	217·1	316·7	−20·0	12	69				·968	104·8	200·2	−15·1			143
	8074	·382	40·9	288·5	+13·4	3	8		May 9			(−22·6)	(275·8)	(−3·2)	(170)	(1049)	(4730)
	8075	·675	104·1	261·5	−12·0	1	7										
	8073	·851	66·1	248·5	+18·2	18	142	252*c*	129·369		·971	244·8	339·6	−25·1			228
	8076	·982	78·7	225·3	+10·4	36	337	158*c*			·964	261·7	338·4	− 8·9			124
	8077	·988	65·7	224·6	+23·4	2	52	100*c*			·963	308·8	331·5	+35·9			123
		·840	98·5	246·3	− 9·0			153			·911	237·1	326·8	−31·0			67
		·899	105·9	239·6	−15·7			150			·866	286·4	321·9	+12·5			116
		·960	71·5	231·6	+16·7			77			·909	321·1	315·0	+43·0			80
		·970	108·4	227·3	−18·6			111		8067	·941	252·8	333·8	−17·2	16	152	481*f*
May 7			(−23·1)	(303·3)	(−3·4)	(157)	(1220)	(2572)	C	8069	·817	247·4	317·0	−20·1	6	18	97*c*
										8075	·166	187·5	265·1	−12·5	57	242	
										8073	·449	35·2	248·0	+18·5	23	176	
127·480		·948	243·2	359·3	−26·4			322		8076	·662	71·2	224·5	+ 9·9	60	351	
		·849	239·8	344·0	−27·0			137		8077	·746	54·8	222·4	+23·1	1	2	38*c*
G		·770	259·9	338·8	− 9·9			94		8078	·784	108·8	213·2	−16·6	2	8	32*c*
		·863	321·6	333·1	+40·2			97		8079	·801	113·8	212·4	−20·8	0	3	32*n*
										851b	·924	115·8	197·4	−25·0	1	6	43*sp*

Group 8074, May 6–8. A small group of spots *sf* Group 8072.

Group 8075, May 7–15. Two minute spots on May 7 developing into a stream, of which the leader becomes the prominent member as a regular spot. The group quickly declines after May 11; the leader breaking up after May 12, whilst the remnants of the train are disappearing.

Group 8076, May 7–19. Return of Group 8049. A large stable regular spot followed by an extended mass of faculæ. A few followers, mostly very small, are seen near it from May 10–15.

Group 8077, May 7–10. A few small spots *n* Group 8076.

Group 8078, May 9–20. Revival of Group 8050. Two small spots developing into a stream of normal type. The leader is a regular spot by May 13, whilst the rearmost spot is composite on May 14 and 15 and is represented in its early and final stages by a cluster. The leader alone remains on May 18.

Group 8079, May 12–20. Intermittent. A small spot on May 10. Nothing is then seen until May 14, when spots begin to multiply and form a very extended cluster or broad stream of irregular spots. This group is closely related to Group 8078, with which it practically merges on and after May 16.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
129·369		·830	66·2	211·1	+17·7			45
		·835	75·8	208·7	+10·0			110
C		·919	103·0	197·2	−13·2			118
		·956	122·2	192·2	−31·6			158
May 10			(−22·4)	(263·8)	(−3·1)	(166)	(958)	(1892)
130·377		·953	286·0	321·1	+14·2			181
		·849	306·3	301·2	+28·2			88
	8067	·996	252·9	335·8	−17·3	0	170	425*f*
	8069	·926	249·2	317·6	−20·4	0	8	260*c*
	8075	·306	237·8	265·6	−12·2	42	220	
	8073	·372	8·2	247·2	+18·5	25	191	
	8076	·481	63·6	224·6	+ 9·6	70	426	
G	8078	·630	112·2	213·2	−16·2	35	99	
	8080	·982	117·4	171·4	−27·5	5	28	255*c*
		·824	118·4	197·6	−24·8			110
		·807	104·2	197·1	−13·2			164
		·890	123·8	190·9	−31·1			304
		·871	80·2	190·8	+ 7·0			87
		·920	103·0	183·7	−13·1			228
		·964	69·6	178·1	+18·7			303
May 11			(−22·2)	(250·4)	(−3·0)	(177)	(1142)	(2405)
131·319		·970	248·9	313·8	−21·1			123
		·956	301·8	306·3	+29·1			99
		·822	290·5	290·6	+15·0			97
		·849	308·3	288·0	+29·8			84
	8075	·490	249·7	265·9	−12·3	25	126	
	8073	·397	337·9	247·0	+18·6	25	153	
	8076	·316	47·3	224·4	+ 9·5	58	401	
C	8078	·471	120·1	213·0	−16·2	63	254	
	8080	·921	118·5	172·6	−27·2	1	28	258*c*
		·781	126·7	192·0	−29·8			138
		·851	67·7	182·7	+17·1			53
		·828	103·7	182·6	−13·0			104
		·927	61·7	174·2	+24·8			213
		·938	70·9	170·5	+16·8			222
		·969	121·2	163·2	−30·9			143
May 12			(−21·9)	(238·0)	(−2·9)	(172)	(962)	(1534)
132·499		·942	287·4	291·0	+15·3			90
		·929	252·2	290·3	−17·5			90
		·951	302·6	289·7	+29·8			98
		·860	296·7	277·7	+21·1			65
C	8075	·702	255·0	266·3	−12·5	14	48	
	8073	·539	312·6	247·2	+18·8	24	139	
	8076	·213	348·8	224·9	+ 9·2	42	358	

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
132·499	*851c*	·290	27·2	214·7	+12·1	0	3	
	8078	·276	145·1	213·1	−15·8	46	288	
	8081	·362	53·1	205·5	+ 9·8	8	30	
	8080	·833	122·0	169·7	−27·9	0	17	124*c*
	8082	·931	69·4	156·3	+18·0	1	39	150*p*
	8083	·965	70·8	149·7	+17·7	0	23	199*s*
		·785	65·7	174·3	+17·0			40
		·871	57·8	167·6	+26·0			90
C		·837	76·1	167·1	+ 9·9			71
		·896	123·7	162·1	−31·2			93
		·935	80·0	154·2	+ 8·3			85
		·956	126·5	151·8	−35·6			102
		·978	105·1	144·5	−15·3			221
		·985	70·1	144·3	+19·0			124
		·984	83·0	143·4	+ 6·4			90
May 13			(−21·6)	(222·5)	(−2·8)	(135)	(945)	(1732)
133·396		·972	287·0	285·4	+15·9			69
		·958	252·0	283·6	−18·0			67
		·935	294·7	276·6	+21·9			78
	8075	·833	257·2	266·5	−12·1	7	17	85*c*
	8073	·667	303·0	246·7	+19·1	17	116	
	8076	·318	310·6	224·6	+ 9·3	58	342	
	8079	·282	191·0	213·7	−18·6	2	9	
	8078	·229	189·0	212·6	−15·7	65	415	
C	8081	·229	20·2	205·9	+ 9·7	17	86	
	8080	·721	126·4	169·9	−27·3	11	95	89*c*
	8082	·836	66·6	157·0	+17·7	9	19	29*c*
	8083	·891	70·0	149·9	+16·4	0	11	143*c*
		·921	127·0	165·2	−34·9			91
		·844	129·0	158·7	−33·6			62
		·938	69·6	143·1	+18·0			349
		·927	105·2	142·9	−15·0			138
		·945	80·8	140·5	+ 7·7			159
		·974	71·0	135·5	+17·7			122
May 14			(−21·4)	(210·5)	(−2·7)	(186)	(1110)	(1481)
134·368		·933	244·9	265·5	−24·3			92
	8075	·934	258·5	266·6	−11·6	0	10	221*f*
	8073	·794	296·4	246·3	+18·9	14	86	64*c*
	8076	·496	294·3	224·9	+ 9·4	77	389	
	8078	·339	227·3	212·6	−15·8	38	344	
	8079	·381	219·5	212·5	−19·6	16	65	
C	8081	·271	322·4	207·3	+ 9·8	17	131	
	8080	·598	135·7	169·7	−27·5	17	165	
	8082	·705	62·0	157·2	+17·4	8	21	
	8083	·768	66·5	150·8	+16·0	2	11	114*c*
	8084	·831	70·4	143·9	+14·7	0	6	95*n*

Group 8080, May 11–19. Return of Group 8054. A small double spot which apparently is disappearing on May 13. Other spots form, however, and the group appears on May 15 as a long narrow stream, which is rapidly diminishing on May 17. One very small spot alone remains on May 19 to mark the head of the stream.

Group 8081, May 13–20. A small stream *f* Group 8076. The leader spot which becomes regular is the chief component.

Group 8082, May 13–19. Return of Group 8056. A small spot with a few companions, making up a short stream after May 14.

Group 8083, May 13–22. One or two spots *p* Group 8084. The group has practically died out by May 19, but revives as a few scattered spots somewhat preceding in longitude the original position. Groups 8083 and 8084 represent perhaps a return of Group 8055.

Group 8084, May 15–20. A faint spot on May 15 which has disappeared the next day. A pair of small composite spots appear on May 17 of which only the leader remains on May 20.

POSITIONS and AREAS of Sun Spots and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
134·368	8085	·853	80·6	140·0	+ 6·6	11	59	99*c*
		·830	107·5	142·5	−15·9			128
		·909	69·7	134·7	+17·2			130
C		·942	61·3	131·2	+25·8			98
		·962	108·1	123·8	−18·1			110
		·977	78·7	121·0	+10·4			94
May 15			(−21·1)	(197·7)	(−2·6)	(200)	(1287)	(1245)
135·412		·984	257·2	263·8	−13·0			227
		·892	263·6	246·9	− 6·8			74
		·758	302·8	227·3	+22·4			109
	8073	·901	292·1	245·5	+18·6	15	91	161*c*
	8076	·682	286·6	225·2	+ 9·4	49	368	114*c*
	8078	·545	244·2	214·4	−15·7	44	218	
	8079	·537	236·4	212·1	−19·3	54	244	
C	8081	·457	296·6	208·3	+ 9·6	16	88	
	8080	·458	156·3	172·0	−27·0	10	39	
	8082	·540	50·8	157·9	+17·7	5	19	
	8083	·642	54·8	150·2	+19·6	0	1	
	8085	·686	78·2	141·6	+ 6·3	135	253	
	851d	·938	73·8	115·8	+14·2	0	4	272*c*
		·785	68·0	135·0	+15·5			120
		·857	60·2	129·8	+23·7			101
		·883	76·0	123·3	+11·1			88
		·889	109·7	122·1	−18·6			51
May 16			(−20·8)	(183·9)	(−2·4)	(328)	(1325)	(1317)
136·453		·977	263·3	247·8	− 7·1			90
		·957	251·5	242·8	−18·3			95
		·853	251·5	227·6	−16·9			95
		·874	299·1	226·5	+23·8			170
	8073	·975	289·8	245·5	+18·7	13	130	202*c*
	8076	·835	282·9	225·5	+ 9·4	58	346	227*c*
	8078	·733	250·5	215·8	−15·7	29	173	
	8079	·710	245·7	213·0	−18·6	28	219	
	8081	·649	287·9	208·7	+ 9·7	15	81	
	851e	·476	3·1	168·5	+26·0	0	3	
C	8080	·453	171·0	165·5	−28·7	4	29	
	8082	·393	28·1	158·9	+18·0	5	19	
	8083	·465	45·1	150·0	+17·0	0	13	
	8084	·487	53·2	146·4	+14·8	16	54	
	8085	·503	73·1	141·3	+ 6·4	65	248	
	8086	·584	118·1	137·5	−17·9	2	7	
	8087	·825	76·2	115·9	+ 9·9	22	89	136*c*
		·872	67·0	112·4	+18·6			84
		·902	75·1	107·2	+12·4			211
		·961	77·0	97·2	+11·9			78
May 17			(−20·5)	(170·1)	(− 2·3)	(257)	(1411)	(1388)
137·446		·949	294·3	225·7	+22·2			105
		·820	291·7	209·2	+16·2			58
	8076	·939	280·7	225·9	+ 9·3	65	391	166*c*
	8078	·868	253·3	216·3	−15·6	17	117	108*f*
	8079	·840	248·5	212·5	−19·2	26	189	122*c*
	8081	·807	283·8	209·4	+ 9·7	19	84	78*f*
	8080	·462	194·8	164·5	−28·6	0	11	
	8082	·357	353·8	159·2	+18·5	8	21	
	8083	·337	15·7	151·5	+16·7	0	9	
C	8084	·341	30·1	146·7	+15·0	9	44	
	8088	·407	25·3	146·3	+19·3	9	45	
	8085	·285	61·3	142·4	+ 5·7	63	302	
	8086	·420	130·6	137·4	−17·9	7	14	
	8087	·657	72·9	117·5	+ 9·4	37	261	
		·758	62·5	111·8	+18·9			59
		·807	72·3	105·1	+12·8			80
		·919	76·3	91·4	+11·6			77
		·980	67·2	80·4	+21·8			165
May 18			(−20·3)	(156·9)	(− 2·2)	(260)	(1488)	(1018)
138·372		·934	286·7	212·1	+14·7			86
		·818	259·4	199·2	− 9·9			106
	8076	·988	279·8	225·0	+ 9·3	36	258	353*f*
	8078	·948	254·6	215·8	−15·3	16	98	419*f*
	8079	·932	250·2	212·6	−19·2	16	148	731*c*
	8081	·911	281·6	209·4	+ 9·7	7	34	216*f*
	8080	·578	223·4	171·0	−26·6	1	2	
C	8082	·424	326·2	159·0	+18·6	4	14	
	8083	·346	340·4	151·6	+16·8	0	4	
	8088	·362	354·7	146·7	+18·9	63	393	
	8084	·307	354·1	146·6	+15·6	2	27	
	8085	·139	8·4	143·6	+ 5·8	41	205	
	8086	·293	156·8	137·8	−17·6	10	40	
	8087	·502	66·6	117·0	+ 9·6	72	356	
		·935	64·2	78·6	+23·1			225
		·975	64·4	70·0	+24·4			152
		·983	110·1	65·5	−20·1			51
May 19			(−20·0)	(144·7)	(− 2·1)	(268)	(1579)	(2339)
139·462		·939	260·4	200·0	− 9·7			104
		·916	247·5	195·4	−21·4			96
		·887	234·9	188·6	−31·7			95
		·817	254·6	184·2	−13·6			58
		·795	297·9	178·7	+20·5			101
		·764	307·2	172·7	+25·9			60
C	8078	·998	255·1	216·7	−15·0	0	80	} 509*f*
	8079	·992	252·5	213·2	−17·7	0	30	
	8081	·984	280·2	209·4	+ 9·7	11	47	174*f*

Group 8085, May 15–24. Two spots on May 15 rapidly developing into a long stream some 11° in length. The leader spot is regular until May 21, after which it disappears suddenly; the rear spot tends to the regular type, but it has broken up by May 20. Only one very small spot remains on May 24 to mark the centre of the stream.

Group 8086, May 17–25. A stream of spots in continual change, approximating to the normal type on May 23, but disappearing rapidly afterwards.

Group 8087, May 17–27. Revival of Group 8058. At first a large irregular spot with rapid growth, preceded by a smaller but regular companion and followed by a small cluster. The large spot is quickly disappearing on May 20 with the exception of a portion on its *f* side which lasts until May 25. Meanwhile other spots form in the middle and front of the group, which now appears as an irregular stream of considerable extent, though it diminishes as the west limb is approached.

Group 8088, May 18–25. Revival of Group 8055. Some faint spots on May 18 which, having enlarged greatly by May 19, appear as two large and nearly regular spots with attendants. The group is disappearing after May 21; the leader spot rapidly diminishes, the rear spot less quickly.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
139·462	8083	·516	310·6	154·5	+17·7	0	10	
	8084	·435	307·6	151·0	+13·5	1	10	
	8088	·440	322·5	146·6	+18·4	57	491	
	8085	·277	297·1	144·6	+ 5·3	43	155	
	8086	·294	208·9	138·8	−16·8	33	129	
C	8087	·314	49·0	116·5	+ 9·9	58	235	
		·819	60·0	80·2	+22·8			233
		·917	44·2	74·0	+40·0			124
		·915	61·2	68·1	+25·2			138
		·926	111·2	63·6	−20·3			110
		·964	100·6	55·9	−10·7			93
May 20			(−19·6)	(130·3)	(− 2·0)	(203)	(1187)	(1895)
140·191		·968	259·2	195·9	−10·9			110
		·964	249·2	194·6	−20·5			104
		·934	238·5	187·2	−29·9			168
		·914	291·8	184·2	+18·9			100
		·888	256·0	182·7	−13·3			94
		·838	304·2	171·4	+26·9			232
		·814	237·4	170·8	−27·1			219
		·771	295·0	167·6	+17·7			191
K		·723	225·6	157·9	−31·8			161
	8083	·630	302·4	154·5	+18·0	14	37	
	8088	·538	310·1	146·2	+18·5	91	596	
	8085	·442	287·1	145·6	+ 5·7	21	115	
	8086	·393	229·6	138·7	−16·5	26	132	
	8087	·221	20·2	116·2	+10·0	50	287	
		·746	55·8	78·6	+23·3			126
		·856	58·8	66·8	+25·1			166
		·837	112·4	65·6	−19·6			88
		·937	101·8	51·4	−11·7			137
May 21			(−19·4)	(120·6)	(− 1·9)	(202)	(1167)	(1896)
141·350		·965	254·2	179·7	−15·6			94
		·954	281·9	176·9	+10·8			82
		·953	291·7	175·6	+20·1			173
		·915	240·5	168·9	−27·5			480
		·925	301·6	168·5	+28·2			261
		·887	292·2	165·2	+18·6			346
		·837	281·5	161·1	+ 8·6			51
C		·846	232·3	157·4	−32·2			290
		·782	289·2	154·6	+13·7			54
		·754	250·6	152·7	−15·6			30
	8083	·823	294·8	157·4	+19·1	7	23	105*c*
	8088	·712	298·8	146·4	+18·7	59	415	81*c*
	8085	·633	282·4	143·6	+ 6·4	13	67	

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
141·350	8086	·574	243·0	137·4	−16·5	39	160	
	8087	·281	318·3	116·2	+10·4	72	312	
	851f	·335	157·2	97·4	−19·6	5	8	
	8089	·989	113·1	24·0	−23·1	7	22	260*c*
		·821	37·2	65·5	+39·4			77
C		·808	101·4	51·9	−10·2			84
		·915	40·9	50·8	+42·7			62
		·883	62·8	47·0	+22·9			83
		·896	106·6	42·5	−15·6			138
		·953	117·1	34·5	−26·2			64
		·959	108·0	32·3	−17·7			214
May 22			(−19·0)	(105·3)	(− 1·7)	(202)	(1007)	(3029)
142·394		·963	291·1	164·0	+19·8			538
		·961	303·9	161·1	+31·8			135
		·945	238·4	159·9	−30·2			439
		·931	278·7	159·4	+ 7·5			132
		·897	230·5	149·5	−35·5			189
	8090	·877	248·1	151·2	−19·8	0	4	169*np*
	8088	·863	292·7	148·4	+18·6	60	363	1935*c*
	8085	·781	281·3	141·9	+ 7·8	6	37	445*c*
G	8086	·731	248·4	136·5	−16·7	28	141	199*c*
	8087	·479	295·4	117·5	+10·4	64	290	
	8091	·815	112·1	38·8	−18·8	7	37	64*c*
	8089	·937	115·0	23·5	−23·9	45	233	504*c*
	8092	·966	83·1	17·0	+ 6·3	6	70	114*c*
	8093	·974	72·5	15·9	+16·6	28	139	61*c*
		·877	112·7	32·0	−20·5			178
		·943	56·1	25·7	+31·0			31
May 23			(−18·7)	(91·5)	(− 1·6)	(244)	(1314)	(5133)
143·676		·950	234·1	143·0	−34·3			289
		·876	290·7	133·4	+17·2			379
		·873	305·3	129·2	+29·4			119
	8090	·976	249·6	151·5	−20·2	43	266	357*c*
	8088	·953	291·1	145·0	+19·6	24	132	924*c*
	8085	·910	280·2	139·2	+ 8·6	0	5	966*p*
G	8086	·877	251·3	134·6	−17·1	5	24	911*c*
	8087	·703	286·0	117·6	+10·0	45	194	
	8094	·351	169·5	70·6	−21·6	15	45	
	8091	·652	117·6	37·1	−18·7	2	11	
	8089	·806	119·1	24·3	−24·0	73	415	401*c*
	8092	·858	81·7	16·1	+ 6·3	26	223	245*c*
	8093	·887	70·5	14·1	+16·5	22	183	593*c*
	8095	·963	95·0	0·3	− 5·2	35	229	343*c*
		·764	114·3	27·2	−19·2			178

Group 8089, May 22–June 3. Return or revival of Groups 8062 and 8065. A large stream of normal type developing at the east limb. The leader persists as a large regular spot; the rear spots make up a complex but unstable cluster which has died out by June 2.

Group 8090, May 23–24. A group of the "stream" type forming at the west limb. Group 8091, May 23–25. A short stream of a few spots *np* Group 8089.

Group 8092, May 23–June 1. A cluster of irregular spots, which appear as a short stream after May 25 with a regular spot as leader. The whole group disperses quickly after May 27.

Group 8093, May 23–June 4. Return of Group 8071. A pair of regular spots 8° apart in longitude and slowly contracting. One or two small attendants are seen between them on May 28 and 31. The leader is alone in view on May 23.

Group 8094, May 24–30. A stream of unimportant spots suddenly appearing near the central meridian. The head of the stream is alone represented by spots on May 29 and 30.

Group 8095, May 24–June 5. An active group with remarkable changes after May 27. At first a regular spot with a few small companions as a train. By May 28 the spot has suddenly changed to a large double composite spot, which is breaking up and separating into three chief components. By May 31 one of these has become a regular spot, following which the other two components have coalesced to form a large double spot. A few other spots form, chiefly at the head of the stream, as the older components are diminishing rapidly.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
143·676		·920	53·3	13·5	+32·6			121
		·915	125·2	12·2	−32·5			114
G		·900	108·0	11·4	−16·8			277
		·944	116·3	5·3	−25·3			263
May 24			(−18·3)	(74·5)	(− 1·5)	(290)	(1727)	(6480)
144·340		·994	249·7	149·4	−20·4			162
		·968	278·5	140·6	+ 7·9			517
		·916	298·2	128·4	+25·0			122
		·825	247·9	119·4	−18·9			65
		·766	296·0	112·1	+18·6			91
	8088	·987	289·7	145·2	+19·2	21	118	512*f*
	8086	·937	252·1	134·4	−17·2	1	7	627*p*
	8087	·810	282·8	118·7	+ 9·5	31	157	462*c*
	8096	·634	287·5	103·4	+ 9·9	5	14	
G	*851g*	·488	227·5	88·2	−20·4	1	2	
	8094	·363	196·0	71·9	−21·7	8	44	
	8091	·570	123·0	35·4	−19·2	1	12	
	8089	·727	122·6	23·8	−24·0	104	538	204*f*
	8092	·761	80·8	16·8	+ 6·0	60	282	
	8093	·815	68·9	13·5	+16·2	26	166	324*nf*
	8095	·906	94·9	0·9	− 5·0	39	248	358*c*
	8097	·990	104·1	343·9	−14·2	65	436	165*c*
		·857	109·8	8·1	−17·7			142
		·909	51·7	7·1	+33·5			159
		·933	119·1	359·1	−27·5			223
May 25			(−18·1)	(65·7)	(− 1·4)	(362)	(2024)	(4133)
145·327		·991	252·4	134·7	−17·6			199
		·981	298·1	129·2	+27·2			55
		·946	248·4	122·7	−20·8			62
		·930	225·4	114·3	−41·3			9
		·892	291·1	113·6	+18·0			89
		·808	291·0	104·2	+16·0			109
	8087	·928	280·4	120·0	+ 9·1	3	39	962*c*
	8096	·782	283·9	102·9	+ 9·9	0	5	139*c*
	8098	·592	286·3	87·6	+ 8·5	1	3	
G	8094	·475	222·3	72·7	−21·7	15	50	
	8089	·599	130·3	22·9	−23·8	128	677	
	8092	·586	78·3	17·6	+ 5·8	43	219	
	8093	·678	63·9	13·5	+16·2	33	152	160*f*
	8095	·774	94·9	2·2	− 4·6	42	204	265*f*
	8097	·945	105·5	342·4	−15·0	63	458	893*c*
	8099	·952	96·7	340·7	− 6·8	10	71	139*f*
		·782	40·0	14·6	+35·7			38
		·847	40·8	7·5	+38·9			16
		·817	46·9	7·5	+33·0			42
		·899	45·5	358·1	+38·3			60
145·327		·867	122·3	356·6	−28·2			163
		·934	119·6	346·0	−28·0			62
G		·943	76·7	343·2	+12·0			136
May 26			(−17·7)	(52·7)	(−1·3)	(338)	(1878)	(3598)
146·381		·968	289·2	112·7	+18·3			90
		·926	282·8	105·6	+11·4			330
		·894	291·3	99·8	+18·3			93
	8087	·981	279·2	116·9	+ 8·8	5	20	744*c*
	8098	·789	281·8	89·8	+ 8·5	5	14	30*nf*
	851h	·706	307·0	76·7	+24·2	0	3	41*c*
	8094	·638	236·5	73·4	−21·4	12	124	
	8089	·477	144·4	21·1	−23·7	168	923	
	8092	·364	70·4	18·6	+ 6·0	38	182	
G	8093	·504	54·6	13·5	+15·9	44	177	
	8095	·594	96·6	2·6	− 4·7	41	231	
	8100	·818	77·8	344·8	+ 9·3	12	34	35*c*
	8097	·844	107·2	342·3	−15·0	101	664	665*c*
	8099	·855	96·9	340·3	− 6·4	33	180	198*c*
	8101	·977	108·4	321·5	−18·2	90	621	557*c*
		·780	129·1	354·5	−30·1			69
		·892	128·4	343·2	−32·2			58
		·860	73·3	340·9	+13·7			122
		·893	119·1	338·5	−26·2			130
		·956	77·3	326·6	+11·8			71
May 27			(−17·4)	(38·7)	(−1·1)	(549)	(3173)	(3233)
147·373		·979	283·2	103·1	+12·7			108
		·946	250·0	95·6	−19·2			52
		·839	297·5	78·8	+22·1			71
		·762	309·0	67·5	+27·9			43
	8098	·918	279·0	91·6	+ 7·8	4	13	114*nf*
	8094	·784	243·4	74·1	−21·1	7	70	53*c*
	851i	·420	192·7	31·4	−25·1	0	7	
	8089	·399	168·6	20·6	−23·9	84	777	
	8092	·158	40·2	19·7	+ 5·9	14	51	
	8093	·361	35·0	13·2	+16·2	29	151	
C	8095	·403	100·7	2·3	− 5·2	46	348	
	8100	·661	74·2	345·6	+ 9·6	5	21	
	8097	·707	110·2	342·4	−14·8	63	533	
	8099	·705	97·6	341·1	− 6·0	18	117	
	8101	·908	109·4	321·7	−18·0	66	454	659*c*
		·835	123·0	333·5	−27·6			70
		·909	75·0	321·4	+13·2			67
		·950	48·6	320·4	+38·4			98
		·953	122·4	316·0	−31·0			82
		·959	79·1	312·8	+10·2			78
May 28			(−17·0)	(25·6)	(−1·0)	(336)	(2542)	(1495)

Group 8096, May 25–26. A small but definite spot on May 25 with two small companions; two minute spots on May 26.
Group 8097, May 25–June 6. Return of Group 8097. A pair of large regular spots. Before June 2, the following member tends to become composite by the addition of an irregular component just north of it. The other component however remains very stable.
Group 8098, May 26–29. A small spot *f* Groups 8087 and 8096.
Group 8099, May 26–June 6. A regular spot followed by a few small spots until June 2. On the same meridian as Group 8097.
Group 8100, May 27–June 1. A few small short-lived spots.
Group 8101, May 27–June 7. Return or revival of Group 8069. A large regular spot with a composite companion 7° *f* in longitude. The latter breaks up after May 28, and some very small spots form near to make a faint unstable train. The regular spot is disappearing as the west limb is approached. The axis of the group is considerably inclined to the equator.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.			G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.				°	°			
148·455		·938	292·2	79·0	+20·4			96	151·334		·970	256·2	48·7	−13·6			131
		·858	301·4	65·7	+26·0			163			·924	252·8	39·7	−16·1			261
	8098	·978	278·6	88·7	+ 8·2	0	14	70*nf*			·871	287·6	32·2	+15·0			62
	8094	·918	247·8	76·3	−20·6	0	6	122*c*			·870	244·6	31·0	−22·1			362
	8089	·427	200·8	20·8	−24·3	76	666			8089	·805	239·3	22·6	−24·6	56	404	292*c*
	8092	·160	316·6	17·6	+ 5·8	8	28			8092	·736	277·0	20·2	+ 4·7	0	8	81*c*
	8093	·293	356·6	12·3	+16·0	31	164			8093	·676	294·9	12·7	+16·0	19	87	74*c*
C	8095	·170	119·4	2·8	− 5·6	78	406			8095	·506	260·2	3·1	− 5·5	77	499	
	8100	·502	66·2	343·5	+10·8	0	5			8100	·285	314·0	345·2	+10·8	0	9	
	8097	·528	118·0	342·6	−15·0	62	491		C	8102	·312	327·1	343·3	+14·6	6	30	
	8099	·505	100·0	341·4	− 5·8	28	145			8097	·306	213·2	343·2	−15·3	77	392	
	8101	·774	111·7	322·7	−17·1	67	396	102*c*		8099	·187	243·0	342·8	− 5·5	24	203	
		·834	76·8	315·9	+10·4			60		8101	·316	152·5	324·5	−16·8	47	301	
		·953	46·1	306·1	+40·9			109		8103	·932	113·8	266·2	−22·4	23	103	
May 29			(−16·6)	(11·3)	(−0·9)	(350)	(2321)	(722)			·819	65·5	281·2	+19·5			117
											·876	103·0	272·8	−11·6			122
											·937	113·9	265·4	−22·5			221
149·170		·929	297·3	67·1	+24·8			189			·935	79·8	264·6	+ 9·3			86
		·777	253·7	51·6	−13·0			54			·950	72·2	262·6	+16·7			88
	8094	·961	247·6	74·6	−21·7	0	25	130*sf*	June 1			(−15·6)	(333·2)	(−0·6)	(329)	(2036)	(1897)
	8089	·504	216·8	21·1	−24·4	91	508										
	8092	·324	288·4	19·7	+ 5·1	7	37										
D	8093	·342	327·1	12·9	+15·8	30	158		152·425		·876	276·3	19·6	+ 5·3			98
	8095	·083	192·2	2·8	− 5·4	69	394			*852b*	·964	285·8	32·4	+15·0	7	26	162*c*
	8100	·358	54·0	344·7	+11·4	0	6			8089	·918	242·9	22·9	−24·8	64	359	403*f*
	8097	·408	127·2	342·2	−15·0	67	476			8093	·835	290·0	13·4	+16·3	19	99	50*c*
	8099	·349	103·0	341·9	− 5·2	23	127			8095	·707	262·6	3·4	− 5·3	112	581	56*c*
	8101	·668	114·0	322·5	−16·7	70	430	145*c*		8102	·509	301·4	345·4	+15	1	5	
May 30			(−16·4)	(1·8)	(−0·8)	(357)	(2161)	(518)	G	8097	·485	237·0	343·7	−15·0	64	332	
										8099	·426	257·6	343·4	− 5·5	32	151	
										8101	·296	197·8	324·2	−16·8	32	214	
150·354		·933	259·9	54·6	− 9·6			69		8103	·832	116·8	265·7	−22·2	30	164	273*c*
		·872	254·9	45·9	−13·5			191			·961	246·4	41·3	−22·7			205
		·820	247·1	39·0	−18·9			238			·877	313·6	11·2	+36·9			70
		·762	238·3	31·2	−24·0			307			·965	70·0	245·3	+19·2			60
	8089	·669	232·5	21·7	−24·5	88	452		June 2			(−15·2)	(318·8)	(−0·4)	(361)	(1931)	(1377)
	8092	·532	282·9	17·5	+ 6·2	1	5										
	8093	·511	304·4	12·1	+16·2	32	156										
	8095	·299	253·5	2·9	− 5·5	121	567		153·374		·960	276·2	19·6	+ 5·9			167
G	8100	·196	353·8	347·4	+11·2	0	4				·958	307·2	15·1	+35·3			86
	8102	·268	12·5	342·8	+14·4	10	43				·871	294·6	4·1	+21·0			176
	8097	·257	166·3	342·6	−15·1	77	445				·886	311·4	0·9	+35·6			72
	8099	·113	141·7	342·2	− 5·8	27	162				·825	232·0	355·1	−30·6			133
	8101	·469	128·0	323·5	−17·4	63	366			8089	·977	244·7	22·5	−24·7	60	324	1243*f*
	852a	·557	71·1	314·0	+ 9·8	0	1		C	8093	·928	288·0	13·0	+16·5	15	67	116*c*
	8103	·985	112·3	266·9	−22·1	24	96	76*n*		8095	·850	263·7	4·1	− 5·5	62	420	370*c*
		·884	108·4	285·4	−16·5			186		8097	·649	245·6	343·9	−15·7	41	275	
		·933	67·9	279·3	+20·2			266		8099	·615	261·4	343·7	− 5·5	20	105	
		·962	103·0	272·6	−12·7			212		8101	·413	229·3	325·1	−15·9	35	230	
May 31			(−15·9)	(346·2)	(−0·7)	(443)	(2297)	(1545)		8103	·716	121·6	265·2	−22·2	18	134	93*f*

Group 8102, May 31–June 2. A small short-lived stream of spots *n* Group 8100.
Group 8103, May 31–June 12. A stable regular spot with occasional very small companions.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
153·374	8104	·976	79·9	229·2	+ 9·8	20	124	149*p*
		·892	67·8	245·2	+19·5			133
		·899	110·6	243·8	−18·6			83
C		·904	96·2	241·8	− 5·7			45
		·953	72·8	234·9	−16·2			82
		·991	106·6	224·3	−16·5			162
June 3			(−14·8)	(306·2)	(−0·3)	(271)	(1679)	(3110)
154·335		·985	245·5	12·4	−24·1			790
		·976	308·0	7·1	+36·8			92
		·955	293·8	4·4	−22·6			126
		·889	235·6	352·6	−30·5			234
		·843	280·8	350·2	+ 9·0			62
		·839	259·6	349·9	− 8·8			71
		·892	314·0	347·8	+38·0			80
		·804	290·6	344·9	+16·2			80
	8093	·985	287·0	12·8	+16·7	19	97	144*c*
C	8095	·958	264·1	6·6	− 5·7	87	545	1069*c*
	8099	·776	263·4	344·0	− 5·2	17	104	70*c*
	8097	·789	250·6	343·8	−15·3	28	258	106*c*
	8101	·571	242·2	325·0	−15·6	33	224	
	8105	·374	115·9	273·6	− 9·6	4	13	
	8103	·583	130·2	264·9	−22·2	25	156	
	8104	·906	79·4	229·2	+ 9·5	23	164	128*c*
	8106	·994	99·3	210·0	− 9·3	13	88	90*n*
		·773	63·0	246·4	+20·4			48
		·865	111·0	235·5	−18·1			66
		·887	70·4	232·7	+17·1			78
		·957	108·2	221·4	−17·4			495
June 4			(−14·4)	(293·5)	(−0·2)	(249)	(1649)	(3829)
155·358		·921	285·0	345·9	+13·7			74
	8095	·993	264·2	2·8	− 5·8	0	122	88*f*
	8099	·905	263·9	344·3	− 5·5	16	113	55*f*
	8097	·909	253·4	344·1	−15·0	33	255	87*c*
G	8101	·733	248·4	324·8	−15·6	29	201	
	8105	·205	139·4	272·2	− 9·1	6	12	
	8103	·453	146·6	264·3	−22·3	17	131	
	8104	·788	77·9	228·7	− 9·4	19	147	30*c*
	8106	·938	100·0	210·7	− 9·4	24	143	129*f*
		·845	109·2	223·9	−16·2			59
		·929	77·4	212·4	+11·6			63
		·941	109·8	211·1	−18·6			123
June 5			(−14·0)	(279·9)	(−0·1)	(144)	(1124)	(708)
156·493		·979	284·0	342·6	+13·7			134
		·942	241·8	332·5	−26·3			123
1917.			°	°	°			
156·493		·819	237·2	314·8	−26·2			224
	8099	·987	263·9	345·3	− 6·0	9	114	267*f*
	8097	·985	255·0	344·4	−14·8	40	210	365*c*
	8101	·881	252·0	325·0	−15·7	28	188	81*f*
	8105	·233	228·6	275·0	− 8·7	17	85	
	8103	·380	178·1	264·1	−22·1	23	139	
	852c	·510	57·4	238·5	+16·0	0	4	
C	8104	·609	74·0	228·6	+ 9·7	21	161	
	8106	·812	102·5	211·5	−10·0	16	129	543*f*
		·735	114·6	220·5	−17·7			155
		·843	71·0	209·2	+16·0			93
		·857	112·8	208·2	−19·2			473
		·904	120·5	204·0	−27·2			90
		·943	110·7	195·9	−19·4			83
		·979	120·7	188·8	−29·9			67
June 6			(−13·6)	(264·9)	(+0·1)	(154)	(1030)	(2698)
157·446		·915	243·2	315·7	−24·3			176
		·846	294·2	307·5	+20·4			20
	8101	·962	253·2	325·6	−16·1	14	104	243*sf*
	852d	·832	274·0	308·3	+ 3·4	5	8	32*c*
	8105	·418	249·2	275·5	− 8·3	18	149	
	8103	·423	205·8	263·7	−22·1	19	149	
	8104	·434	67·2	228·4	+ 9·9	24	146	
C	8106	·675	105·6	211·1	−10·2	12	102	
	852e	·794	110·0	201·7	−15·6	2	3	
	8107	·989	115·7	172·2	−25·3	0	39	
		·947	123·6	184·8	−31·5			77
		·943	105·8	182·7	−14·8			41
		·960	80·2	179·0	+ 9·4			69
		·971	66·1	177·5	+23·2			137
		·979	115·8	175·7	−25·1			82
June 7			(−13·2)	(252·3)	(+0·2)	(94)	(700)	(877)
158·363		·973	249·8	315·7	−19·6			298
		·968	243·1	313·7	−25·9			186
		·929	292·4	306·7	+20·8			127
		·916	273·0	306·3	+ 2·8			62
	8105	·607	256·2	276·6	− 8·0	41	328	
	8103	·527	223·6	263·2	−22·1	22	171	
C	8104	·263	50·4	228·4	+ 9·9	26	171	
	8106	·496	112·8	212·6	−10·7	10	107	
	8107	·940	116·9	172·8	−25·0	13	97	296*c*
	8108	·983	70·7	161·6	+19·0	43	406	823*c*
		·872	62·2	182·7	+24·1			79
		·865	106·8	181·7	−14·2			122
		·926	126·9	177·6	−33·6			124
		·956	60·3	169·8	+28·3			170
June 8			(−12·8)	(240·2)	(+0·3)	(155)	(1280)	(2287)

Group 8104, June 3–15. Return of Group 8076; third apparition. A stable regular spot.
Group 8105, June 4–11. Revival of Group 8075. An irregular stream of small spots until June 7, after which a composite spot forms at the head, whilst a few unstable spots remain at the rear of the stream.
Group 8106, June 4–15. A spot, approximately regular, with small unstable companions forming a train after June 6. On June 11, a larger companion appears closely following the leader which gradually diminishes.
Group 8107, June 7–18. Revival of Group 8080. A small regular spot followed by a near and a distant companion. The group is not seen on June 15, after which a few small spots are seen.
Group 8108, June 8–20. Revival in region of Groups 8082 and 8083. A remarkable group consisting at first of both regular and ill-formed spots in a broad stream some 10° in length in a dense area of faculæ. The group appears to be quickly dying out by June 15, but a large indefinite spot has formed the next day in the middle of the stream. One or two smaller members appear in the *f* portion of the stream, but the group declines rapidly.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
159·393		·947	253·6	296·7	−15·3			69
		·869	252·6	285·4	−14·8			112
	852f	·985	291·4	305·7	+21·1	9	34	172*p*
	8105	·778	258·4	276·7	− 8·8	33	270	115*c*
	8103	·674	235·3	263·1	−22·1	33	148	
	8109	·289	340·6	232·2	+16·2	1	2	
	8104	·170	352·2	227·8	+10·1	15	124	
C	8110	·293	173·4	224·5	−16·5	0	8	
	8106	·310	128·4	212·3	−10·7	8	58	
	8107	·866	119·6	170·5	−25·0	17	42	170*c*
	852g	·8·8	124·5	170·4	−29·5	2	4	149*c*
	8108	·920	69·1	161·1	+19·3	71	534	1018*c*
	8111	·971	105·2	151·2	−14·6	60	364	269*c*
	8112	·976	84·7	149·3	+ 5·3	20	56	400*n*
		·894	60·6	166·5	+26·1			180
		·921	52·4	164·6	+34·3			128
		·975	122·6	152·2	−31·5			119
June 9			(−12·4)	(226·5)	(+0·4)	(269)	(1644)	(2901)
160·284		·895	249·8	276·3	−17·7			165
		·814	280·5	268·6	+ 8·8			48
	8105	·892	259·4	277·1	− 9·2	32	214	426*c*
	8113	·827	295·0	267·8	+20·8	0	2	
	8103	·788	241·0	262·6	−22·1	27	131	247*c*
	8109	·416	307·4	234·6	+15·0	14	39	
	8104	·273	307·2	227·4	+ 9·9	23	129	
	8110	·360	211·6	226·0	−17·3	0	4	
	8106	·200	174·3	213·3	−10·9	11	68	
	8107	·752	125·0	172·0	−25·1	16	52	402*f*
	8108	·835	66·7	160·4	+19·6	94	654	968*c*
	8111	·903	106·7	151·5	−14·8	68	415	740*c*
G	8112	·910	84·8	149·5	+ 5·0	24	105	416*np*
		·736	61·2	171·2	+21·1			62
		·801	54·9	167·2	+27·6			183
		·861	52·8	161·3	+31·5			138
		·886	46·0	160·7	+38·2			50
		·840	114·2	160·4	−19·8			49
		·907	99·6	150·2	− 8·5			59
		·926	116·1	149·6	−23·8			76
		·941	126·0	149·3	−33·3			330
		·950	54·2	146·7	+33·9			120
		·943	68·2	145·5	+20·7			466
		·970	118·1	141·1	−27·0			105
		·967	79·9	139·8	+ 9·9			226
June 10			(−12·0)	(214·7)	(+0·5)	(309)	(1813)	(5276)
161·562		·937	279·1	267·0	+ 8·8			79
	8105	·988	260·9	278·4	− 8·8	11	77	448*f*
1917.			°	°	°			
161·562	8113	·946	292·4	267·4	+21·4	6	51	157*c*
	8103	·920	245·7	262·2	−21·9	30	141	364*s*
	8109	·659	292·9	236·7	+15·3	34	160	
	8104	·519	289·3	227·5	+10·4	24	127	
	8106	·352	234·4	214·7	−11·1	21	118	
	852h	·207	196·7	201·3	−10·6	0	3	
	8107	·586	138·0	172·2	−25·1	11	66	
	8108	·659	60·1	160·6	+19·6	101	576	
G	8111	·743	110·9	152·1	−14·8	75	409	688*f*
	8112	·749	82·9	149·7	+ 5·7	28	170	112*c*
	8114	·988	109·5	117·8	−19·2	33	200	274*c*
		·796	128·7	152·5	−29·3			104
		·810	65·8	146·3	+19·8			430
		·900	131·3	141·3	−36·0			211
		·905	122·3	131·7	−28·6			116
		·905	68·3	136·7	+19·8			245
		·892	79·9	135·2	+ 9·3			209
		·972	80·5	121·7	+ 9·4			188
June 11			(−11·5)	(197·8)	(+ 0·7)	(374)	(2098)	(3625)
162·399		·987	291·8	266·7	+21·6			132
	8103	·973	247·0	261·7	−22·1	32	113	285*sf*
	8109	·796	288·2	238·0	+14·8	25	201	297*c*
	8104	·665	285·2	227·3	+10·6	28	123	
	8106	·524	246·3	215·9	−11·4	17	95	
	8107	·496	151·5	171·6	−25·0	11	37	
	8108	·539	52·4	159·8	+19·9	77	442	
	8111	·627	115·7	151·0	−15·0	87	402	
G	8112	·614	80·8	149·3	+ 6·3	25	149	
	8114	·951	110·0	116·3	−18·7	54	286	331*c*
		·783	136·4	146·3	−33·8			143
		·773	114·1	139·1	−17·8			230
		·833	65·2	132·9	+20·9			128
		·869	124·6	132·0	−29·0			121
		·825	78·8	131·7	+ 9·7			107
		·921	70·2	120·9	+18·5			94
		·923	80·3	119·8	+ 9·2			326
June 12			(−11·2)	(186·7)	(+0·8)	(356)	(1848)	(2194)
163·383		·796	246·6	223·6	−17·7			312
	8109	·914	285·8	238·9	+14·7	37	187	409*c*
	8104	·815	282·6	227·5	+10·7	23	134	114*f*
	8106	·703	252·7	216·7	−11·3	14	83	
G	*852i*	·677	236·0	210·6	−21·4	0	10	
	8107	·437	175·2	171·4	−24·8	11	15	
	8115	·327	14·0	168·9	+19·3	1	48	
	8116	·290	24·8	166·5	+16·1	1	4	
	8108	·393	34·9	160·0	+19·6	103	389	

Group 8109, June 9–14. A regular spot with a distant companion. The group develops from a very small spot seen on June 9.
Group 8110, June 9–10. One or two very small spots.
Group 8111, June 9–21. A large regular spot followed by an unstable train. By June 16 the spot has divided into two portions, of which the larger regains a regular form, whilst the other is disappearing.
Group 8112, June 9–20. Revival in region of Group 8085. A regular spot, near which small ill-formed companions appear in a sparse stream. The group has nearly died out by June 16, but the fore portion persists to the west limb where two larger spots appear.
Group 8113, June 10–11. A pair of spots forming at the west limb.
Group 8114, June 11–22. A pair of regular spots, widely separated in longitude but apparently forming a single disturbance. A few companion spots are seen until June 18.
Group 8115, June 13–15. A cluster of very small faint spots *p* Group 8108. Group 8116, June 13–14. Some very small faint spots *sp* Group 8108.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
163·383	8111	·474	125·6	150·3	−15·1	86	543	
	8112	·419	76·8	149·6	− 6·3	33	129	
	8114	·865	112·4	116·3	−18·7	52	302	601*c*
	852j	·875	78·2	113·3	+10·7	0	4	250*p*
		·763	142·0	138·3	−36·1			102
G		·808	128·2	127·1	−29·3			129
		·801	79·4	121·1	+ 9·0			206
		·901	136·2	119·4	−40·0			108
		·882	66·2	114·0	+21·2			177
		·966	112·0	100·4	−20·9			61
		·975	81·4	96·7	+ 8·6			159
June 13			(−10·8)	(173·7)	(+ 0·9)	(361)	(1848)	(2628)
164·460		·934	297·1	226·4	+25·5			65
		·898	248·5	221·2	−18·6			501
		·876	303·1	216·3	+29·0			125
		·817	287·9	212·9	+15·0			186
		·811	242·0	209·7	−21·7			224
		·778	253·5	209·0	−12·1			111
	8109	·985	284·9	239·3	+14·8	39	149	251*f*
	8104	·930	281·2	227·4	+10·7	34	138	224*sf*
	8106	·859	256·1	217·6	−11·3	8	41	258*c*
	8107	·473	203·4	171·4	−24·7	4	9	
	8115	·352	331·9	169·6	+18·9	0	11	
G	8116	·250	340·1	164·6	+14·5	0	8	
	8108	·326	359·3	159·7	+20·0	55	246	
	8117	·161	121·3	151·6	− 3·8	10	37	
	8111	·313	152·1	150·8	−15·0	89	447	
	8112	·184	55·9	150·7	+ 6·9	19	67	
	8114	·730	117·3	116·4	−18·7	37	193	217*c*
	8118	·738	62·1	115·4	+20·8	0	10	
	8119	·986	80·3	79·5	+ 9·7	35	222	440*s*
		·893	114·7	99·1	−21·4			101
		·923	71·5	93·2	+17·4			58
		·935	81·9	90·6	+ 8·0			645
June 14			(−10·3)	(159·5)	(+ 1·0)	(330)	(1578)	(3406)
165·396		·968	250·3	219·7	−18·6			342
		·945	276·3	217·8	+ 6·3			98
		·955	300·7	217·6	+29·5			105
		·900	285·2	210·5	+14·1			222
		·890	245·9	207·2	−20·8			432
		·849	256·9	204·1	−10·5			179
G		·874	234·0	201·8	−30·2			65
	8104	·986	280·9	227·6	+10·9	20	121	76*f*
	8106	·950	256·8	218·0	−12·2	6	22	269*f*
	8115	·492	309·7	170·6	+19·2	0	16	
	8108	·374	328·4	159·1	+19·6	38	197	

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
165·396	8117	·129	231·7	152·9	− 3·5	9	25	
	8112	·123	323·4	151·3	+ 6·7	9	42	
	8111	·285	193·0	150·9	−15·0	76	457	
	852k	·327	22·9	139·4	+18·6	1	4	
	8114	·586	125·1	116·6	−18·7	28	158	
	8118	·601	55·5	115·2	+20·8	0	5	
G	8120	·855	75·3	89·2	+13·0	31	123	115*c*
	8119	·925	80·1	79·8	+ 9·6	35	237	400*sp*
	8121	·986	79·3	67·0	+10·7	0	12	278*c*
		·766	80·7	97·6	+ 7·7			62
		·838	83·2	90·5	+ 6·3			249
		·944	59·3	79·0	+29·1			153
		·964	114·3	74·7	−23·0			94
June 15			(−9·9)	(147·1)	(+ 1·1)	(253)	(1419)	(3139)
166·411		·988	257·6	213·9	−12·0			142
		·959	248·2	205·3	−20·5			245
		·949	284·5	204·7	+14·1			80
		·923	296·5	198·9	+24·8			58
		·922	238·2	196·4	−28·4			151
		·894	256·9	195·9	−11·0			150
	8122	·821	233·9	182·1	−28·0	2	9	35*c*
	8107	·689	227·9	168·3	−26·4	1	11	
	8108	·492	306·4	158·1	+18·1	45	499	
	8112	·354	286·6	153·5	+ 7·0	4	14	
C	8117	·341	256·9	153·0	− 3·2	15	51	
	8111	·399	227·7	151·2	−14·2	52	333	
	852l	·154	7·9	132·4	+10·0	0	5	
	8114	·454	138·3	115·1	−18·6	34	166	
	8123	·699	63·7	92·3	+18·9	5	17	
	8120	·683	73·1	91·8	+12·4	68	347	
	8119	·815	78·7	79·6	+ 9·9	25	203	249*s*
	8121	·913	79·1	68·1	+10·4	8	33	422*c*
		·882	57·5	75·6	+29·0			95
		·891	116·9	74·0	−23·1			74
		·935	99·0	65·0	− 8·0			54
		·945	64·5	64·3	+24·4			103
June 16			(− 9·5)	(133·6)	(+ 1·3)	(259)	(1688)	(1858)
167·467		·953	245·9	189·7	−22·4			103
		·942	258·6	189·2	−10·2			116
		·909	285·8	184·3	+14·9			151
G		·871	252·0	178·5	−14·9			80
		·867	300·6	176·3	+26·9			369
		·786	287·2	170·3	+14·3			103
		·821	226·4	165·0	−33·5			133

Group 8117, June 14–20. A small stream of which only the leading spots remain on June 19 and 20.
Group 8118, June 14–15. Two very small spots.
Group 8119, June 14–25. A stable regular spot diminishing rapidly after June 22. Occasional small companions form near the spot, in particular on June 20, 21, and 24.
Group 8120, June 15–25. A large stream of spots developing at the east limb *np* Group 8119. The leader, regular until June 18, becomes composite after coalescing with a large component which has formed immediately following it. The rear spot is generally composite, and though the largest member of the stream on June 18, it has broken up by June 24. The intermediate spots are mostly small but numerous at times.
Group 8121, June 15–18. A small spot with two followers on June 17: *j* Group 8119.
Group 8122, June 16–18. A very small group.
Group 8123, June 16–24. A pair of tiny spots, *n* Group 8120, on June 16 developing into a regular spot followed by a small cluster which soon disappears.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
167·467		·768	306·6	163·9	+28·2			288
		·752	314·6	159·1	+32·8			72
	8122	·928	238·8	183·7	−28·1	2	23	183*c*
	8107	·828	235·8	169·6	−26·8	3	11	347*c*
	852m	·794	297·1	169·2	+22·1	0	3	559*c*
	8108	·667	296·9	158·4	+18·6	111	504	251*p*
	8112	·614	283·0	156·8	+ 9·1	10	38	
	8117	·574	262·4	154·3	− 3·2	7	28	
	852n	·658	310·6	153·5	+26·4	0	3	
G	8111	·578	243·0	151·6	−13·9	60	261	
	8114	·354	164·4	114·0	−18·4	28	177	
	8123	·518	55·2	93·2	+18·3	34	123	
	8120	·513	66·8	90·9	+12·8	110	563	
	8119	·650	76·5	80·0	+ 9·8	43	251	149*c*
	8121	·809	78·0	66·3	+10·5	4	24	485*c*
	8124	·980	76·8	41·4	+13·3	89	480	286*c*
		·843	105·5	63·7	−12·2			305
		·879	62·0	60·9	+25·1			241
		·937	48·4	55·4	+39·0			209
		·948	107·6	49·7	−16·2			450
June 17			(−9·0)	(119·7)	(+ 1·4)	(501)	(2489)	(4880)
168·453		·923	281·2	173·6	+10·9			95
		·916	291·5	171·7	+20·2			370
		·884	299·5	165·7	+26·5			465
		·894	229·8	162·2	−34·3			103
		·829	312·6	154·7	+35·1			158
		·753	233·4	148·5	−25·5			81
		·692	304·0	145·3	+23·9			123
		·770	220·7	143·9	−34·4			178
	8122	·976	240·2	181·0	−28·6	0	13	149*c*
	8107	·916	239·8	168·8	−26·7	0	10	344*c*
	8108	·802	292·7	157·9	+18·9	90	426	1120*c*
G	8112	·774	280·5	156·9	+ 9·1	9	30	101*c*
	8117	·761	264·5	155·8	− 3·2	11	30	77*c*
	8111	·734	248·8	151·3	−14·3	34	213	
	8114	·369	199·4	114·0	−18·8	28	132	
	8123	·368	38·0	92·9	+18·3	21	137	
	8120	·339	54·1	90·3	+12·9	106	624	
	852o	·386	84·4	81·9	+23·5	0	1	
	8119	·466	71·7	80·0	+ 9·7	30	166	
	8121	·626	75·8	68·7	+ 9·9	1	4	
	8124	·916	76·4	40·8	+13·0	80	427	218*c*
		·888	111·5	46·3	−18·3			198
		·918	49·4	45·6	+37·3			93
		·942	104·2	37·4	−12·8			59
		·975	113·7	31·4	−22·7			303
		·970	72·4	31·1	+17·4			273

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
168·453		·986	88·0	26·5	+ 2·2			73
June 18			(− 8·6)	(106·6)	(+ 1·5)	(410)	(2213)	(4581)
169·352		·970	269·9	170·4	+ 0·3			91
		·968	290·5	169·6	+20·2			398
		·965	242·5	166·7	−26·0			233
		·944	299·2	163·4	+28·0			347
		·908	230·5	152·5	−34·3			139
		·819	275·2	149·5	+ 5·2			69
		·849	240·7	148·4	−23·5			74
		·776	296·9	142·6	+21·6			169
		·792	222·8	135·2	−34·2			162
	8117	·902	266·3	158·7	− 2·6	3	21	222*f*
	8108	·903	290·8	158·0	+19·4	63	338	1791*c*
C	8112	·896	280·8	157·9	+10·3	40	150	352*c*
	8111	·852	252·4	151·3	−14·0	32	229	233*c*
	8114	·477	224·2	115·2	−18·5	27	93	
	8123	·283	6·0	92·9	+17·9	12	128	
	8120	·211	14·6	91·6	+13·3	86	615	
	8119	·289	59·0	80·2	+10·1	29	204	
	8124	·818	75·1	40·7	+13·0	84	411	109*c*
	8125	·982	116·2	17·7	−25·4	54	249	164*c*
	8126	·986	98·6	14·9	− ·2	35	102	181*n*
		·785	117·8	47·1	−20·4			50
		·819	105·5	41·2	−11·6			54
		·922	115·3	30·5	−22·4			453
		·915	71·3	29·5	+17·7			456
		·926	86·3	27·1	+ 4·1			81
June 19			(− 8·2)	(94·7)	(+ 1·6)	(465)	(2540)	(5828)
170·401		·958	303·3	151·9	+32·3			192
		·935	284·4	149·5	+14·0			149
		·930	232·7	143·0	−33·4			114
		·871	299·9	138·2	+26·6			125
		·826	301·5	132·5	+26·6			84
		·840	225·7	127·6	−34·7			36
	8117	·980	266·9	159·0	− 2·7	0	20	203*f*
	8112	·979	280·4	158·9	+10·6	50	234	260*c*
C	8108	·979	289·0	158·7	+18·9	23	185	1763*c*
	8111	·950	254·4	151·3	−14·2	19	172	775*f*
	8114	·649	238·6	116·3	−18·3	13	75	
	8123	·345	323·1	93·3	+17·6	22	117	
	8120	·270	319·5	91·1	+13·5	68	535	
	852p	·185	288·1	90·9	+ 5·0	0	5	
	8119	·143	0·1	80·8	+ 9·8	28	186	
	8124	·660	72·1	40·8	+13·0	84	445	

Group 8124, June 17–29. A large stable regular spot.
Group 8125, June 19–July 1. Return of Group 8089. A stable regular spot with a very small follower on June 24.
Group 8126, June 19–July 1. A regular spot with a few very small companions from June 23–26.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
170·401	8125	·920	118·2	17·6	−25·0	40	286	537*f*
	8126	·916	99·7	15·2	− 8·2	21	164	551*f*
	852q	·927	84·5	13·0	+ 5·7	0	5	38*c*
		·836	120·6	29·0	−24·1			133
		·803	69·7	29·0	+17·2			215
C		·846	81·9	23·3	+ 7·8			36
		·940	126·7	16·4	−33·4			128
		·918	71·5	15·0	+17·6			135
		·947	90·1	9·8	+ 0·4			66
		·975	62·2	4·7	+27·4			44
June 20			(− 7·7)	(80·8)	(+1·7)	(368)	(2429)	(5584)
171·400		·987	276·1	148·2	+ 6·3			103
		·978	292·5	145·1	+22·4			383
		·975	233·5	140·3	−34·9			174
		·936	279·9	136·8	+ 9·9			110
		·938	242·0	133·8	−25·4			113
		·899	289·9	130·5	+18·6			89
		·914	230·5	126·3	−34·6			129
		·809	282·7	121·0	+11·3			134
	8111	·996	255·4	151·6	−14·4	0	80	810*sf*
	8114	·798	245·2	117·2	−18·3	15	42	171*c*
	8123	·492	304·4	92·7	+17·7	18	108	
	8120	·437	297·8	90·9	+13·4	51	425	
C	8119	·273	300·0	81·4	+ 9·6	31	211	
	852r	·191	335·6	72·2	−11·8	0	8	
	8124	·482	65·9	40·9	+13·0	92	417	
	8125	·828	122·4	17·3	−25·1	44	262	350*nf*
	8126	·804	101·9	15·1	− 8·4	30	166	169*f*
	8127	·931	80·1	359·3	+ 9·9	5	28	129*c*
	8128	·960	72·7	354·4	+17·1	0	7	243*f*
		·743	127·8	27·1	−25·6			33
		·801	70·5	15·8	+16·6			75
		·876	132·1	15·4	−34·8			64
		·850	88·3	9·6	+ 2·4			74
		·899	98·1	4·5	− 6·4			121
		·926	51·9	4·2	+35·6			51
		·925	62·2	2·0	+26·2			88
		·974	101·9	351·5	−11·2			148
June 21			(−7·3)	(67·6)	(+1·8)	(286)	(1754)	(3761)
172·162		·974	251·7	132·9	−17·3			61
		·967	239·6	129·3	−28·7			87
		·918	291·7	122·9	+20·6			106
		·930	229·5	118·5	−36·2			69
D		·856	279·9	116·0	+ 9·4			163
	8114	·900	248·9	119·3	−18·0	8	27	289*c*
	8120	·582	290·1	91·5	−13·0	71	437	

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ
1917.			°	°	°			
172·162	8123	·615	297·3	92·4	+17·9	19	95	
	8119	·424	289·9	81·3	+10·0	34	191	
	852s	·182	323·5	63·8	+10·3	0	6	
	8124	·344	54·9	40·8	+13·2	91	440	
	8125	·744	126·9	16·6	−25·0	77	251	153*nf*
	8126	·692	103·9	14·9	− 8·2	33	151	207*f*
	8127	·845	79·8	0·2	+ 9·6	6	42	189*f*
D	8128	·900	71·4	354·3	+17·5	6	22	209*f*
		·791	135·5	16·4	−32·8			96
		·751	65·4	11·3	+19·5			102
		·754	89·6	8·7	+ 1·5			90
		·871	59·3	0·2	+27·3			103
		·899	123·0	358·9	−28·2			127
		·885	98·0	355·9	− 6·1			79
		·938	50·5	352·0	+37·4			106
		·954	106·3	346·4	−14·9			233
June 22			(−6·9)	(57·5)	(+1·9)	(345)	(1662)	(2469)
173·376		·981	250·8	118·7	−18·4			156
		·970	289·2	117·1	+19·1			113
		·960	280·2	115·1	+10·4			198
		·975	230·0	113·2	−38·2			53
		·945	249·6	110·3	−18·5			171
		·865	278·6	101·1	+ 8·4			61
		·768	273·4	91·5	+ 4·0			61
	8123	·789	291·3	91·9	+18·0	7	19	94*c*
	8120	·772	285·6	91·2	+13·3	31	279	130*c*
	8119	·647	283·2	81·1	+10·1	16	117	
C	*852t*	·426	259·9	66·2	− 2·4	1	4	
	8124	·189	1·2	41·3	+13·0	76	482	
	8125	·591	139·3	16·5	−24·6	42	246	
	8126	·476	111·6	15·1	− 8·2	28	151	
	852u	·455	97·6	14·8	− 1·5	0	3	
	8127	·701	78·0	357·6	+ 9·8	21	104	
	852v	·839	85·1	344·6	+ 5·2	0	5	26*c*
	8129	·981	72·3	322·9	+17·7	50	587	391*f*
		·743	137·2	5·5	−31·2			125
		·819	69·1	348·1	+18·2			78
		·856	112·0	345·4	−17·5			124
		·901	127·8	344·3	−32·4			90
		·849	100·4	344·3	− 7·7			58
		·934	107·0	334·1	−15·0			139
		·964	53·2	329·4	+35·9			83
		·985	114·5	323·5	−23·7			192
June 23			(−6·4)	(41·5)	(+2·1)	(272)	(1997)	(2343)
174·362		·996	251·3	111·9	−18·4			90
		·966	246·3	101·0	−22·2			48

Group 8127, June 21–July 2. A long stream of spots developing from two spots at the east limb. The leader, which becomes regular, breaks up after June 28; the last spot, composite at first but regular by June 29, remains alone on July 2.
Group 8128, June 21–25. Intermittent. A small spot seen only on June 21, 22, and 25.
Group 8129, June 23–July 5. A large composite spot with triple umbra which has divided into three close regular spots by June 26. An indefinite cluster follows the three spots until they commence to break up on July 2. The axis of the triple group, which at first is inclined some 80° to the solar equator, turns gradually until its inclination is about 20°.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
174·362		·911	274·2	93·9	+ 4·8			114
		·724	287·6	73·6	+14·2			38
	8120	·902	282·9	92·5	+12·6	20	95	709*c*
	8123	·899	289·0	91·5	+18·0	0	8	
	8130	·897	248·2	89·5	−18·4	0	2	54*np*
	8119	·813	279·9	82·4	+ 9·2	25	120	125*c*
	8124	·289	310·5	41·4	+13·0	86	441	
	8125	·485	157·3	16·6	−24·2	43	225	
G	8126	·286	129·0	15·5	− 8·2	26	139	
	852w	·443	106·9	3·3	− 5·4	0	1	
	8127	·514	74·6	358·3	+ 9·8	37	160	
	8131	·628	106·7	351·1	− 8·6	0	6	
	8129	·922	71·6	321·9	+17·8	81	725	640*f*
		·842	134·3	341·6	−34·4			34
		·866	110·7	330·9	−16·6			110
		·845	83·8	330·9	+ 6·4			30
		·904	53·0	328·0	+34·0			86
		·948	113·5	319·6	−21·4			481
June 24			(−5·9)	(28·4)	(+ 2·2)	(318)	(1922)	(2559)
175·494		·847	295·2	69·2	+22·4			21
		·822	282·7	68·1	+11·7			39
		·847	305·8	66·5	+31·0			36
	8120	·977	282·7	91·2	+12·9	0	28	218*c*
	8130	·977	250·6	89·4	−18·4	0	28	84*np*
	8119	·929	279·7	81·5	+ 9·8	7	36	148*c*
	8124	·497	293·0	41·3	+13·2	70	448	
	8125	·447	186·2	16·4	−24·0	42	222	
	8126	·186	190·9	15·4	− 8·2	24	133	
	8127	·282	60·4	359·0	+10·2	42	210	
C	8128	·410	52·8	353·6	+16·5	0	3	
	8131	·414	116·4	351·5	− 8·4	4	26	
	8129	·803	69·2	321·5	+18·0	71	512	68*f*
	8132	·851	116·0	318·8	−20·6	2	6	77*c*
		·803	47·4	327·8	+34·5			28
		·773	114·0	326·1	−16·7			44
		·929	120·6	309·6	−27·2			83
		·938	66·4	304·8	+22·8			31
		·955	105·0	302·0	−13·6			85
June 25			(−5·4)	(13·4)	(+ 2·3)	(262)	(1652)	(962)
176·625		·921	280·5	65·3	+10·6			194
		·905	303·5	60·0	+31·0			92
		·886	290·7	59·6	+19·4			108
G		·799	244·9	47·8	−18·2			123
		·617	301·0	32·6	+20·4			37
	8124	·700	286·9	41·8	+13·5	77	380	63*c*
	853a	·625	223·9	26·7	−24·5	0	4	

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
176·625	8125	·529	212·3	16·4	−24·2	49	233	
	8126	·340	237·7	15·2	− 8·2	29	174	
	8133	·437	191·3	3·7	−22·8	0	4	
	8127	·144	350·4	359·8	+10·5	83	404	
	8131	·211	158·9	354·0	− 8·9	0	2	
	8134	·145	71·5	350·5	+ 5·0	3	13	
	8129	·638	65·1	321·2	+17·4	95	443	
	8132	·694	125·2	321·0	−21·6	9	44	232*f*
G	8135	·721	78·3	312·8	+10·1	19	50	
		·818	64·8	305·7	+21·8			68
		·871	127·7	305·3	−30·6			107
		·838	108·7	303·7	−14·2			116
		·917	72·5	292·5	+17·0			86
		·941	108·3	290·1	−16·3			186
		·970	100·1	283·3	− 9·2			103
		·994	78·6	274·5	+11·6			61
June 26			(−4·9)	(358·4)	(+ 2·4)	(364)	(1751)	(1576)
177·132		·961	280·9	65·6	+11·1			90
	8124	·773	285·6	41·5	+13·6	71	388	
	8125	·583	219·9	15·8	−24·1	41	209	
	8126	·440	244·9	15·4	− 8·5	24	129	
	8127	·190	311·7	359·9	+ 9·7	104	379	
K	8134	·051	16·6	350·9	+ 5·3	3	12	
	8129	·557	60·1	321·3	+18·2	76	319	
	8132	·642	130·9	320·1	−22·7	0	10	
	8135	·635	76·5	313·0	+10·5	6	38	
	8136	·959	78·6	278·3	+11·6	0	26	145*f*
June 27			(−4·7)	(351·7)	(+ 2·5)	(325)	(1510)	(235)
178·410		·959	251·9	46·5	−16·4			97
		·864	250·5	32·2	−15·2			45
		·869	239·4	30·0	−24·7			129
		·807	290·5	27·3	+18·0			76
	853b	·980	282·9	53·4	+13·2	0	15	44*c*
	8124	·923	284·0	41·9	+14·0	50	343	150*c*
	8125	·746	233·4	15·7	−24·3	35	223	
	8126	·674	254·4	15·6	− 8·4	23	119	
C	8133	·621	227·3	4·3	−22·4	15	49	
	8127	·429	287·6	359·2	+ 9·9	73	361	
	8132	·484	153·1	321·1	−22·8	2	10	
	8129	·353	40·5	320·9	+18·1	54	302	
	8137	·416	141·2	319·1	−16·2	0	10	
	8135	·370	70·5	314·2	+ 9·6	4	16	
	8138	·715	107·1	291·0	−10·2	7	13	32*c*
	8139	·809	117·1	285·0	−19·8	8	27	75*c*
	8136	·847	78·6	277·2	+11·0	11	92	209*c*
		·822	104·5	281·0	−10·2			73

Group 8130, June 24–25. A small spot.
Group 8131, June 24–30. Intermittent. A few very small spots. Nothing is seen from June 27 until June 30, when a small spot appears. Revival of Group 8099.
Group 8132, June 25–July 1. A few small unstable spots in a large area of faculæ, in which Group 8137 appears later in the *n* portion.
Group 8133, June 26–July 1. A minute spot on June 26 not seen on 27th. On June 28 a small regular spot has appeared with a small cluster *sf*. The regular spot has broken up by June 30 but has reformed the next day. Group 8134, June 26–27. A small spot *sf* Group 8127.
Group 8135, June 26–July 6. A small spot with an ephemeral companion on June 26 appearing *sf* Group 8129. Other spots form on July 4, and the group has enlarged considerably when last seen at the west limb.
Group 8136, June 27–July 4. A sparse stream of small spots. Group 8137, June 28–30. A short stream forming *n* Group 8132.
Group 8138, June 28–29. Some very small spots of which one alone remains on June 29.
Group 8139, June 28–July 7. A long sparse stream of unimportant spots which gradually die out.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
178·410		·930	66·1	267·4	+23·2			76
		·989	115·7	255·7	−24·9			72
June 28			(−4·1)	(334·8)	(+ 2·7)	(282)	(1580)	(1078)
179·500		·949	243·6	28·6	−23·9			212
		·911	287·3	25·5	+16·8			189
		·843	219·6	3·6	−38·4			41
		·747	223·2	356·7	−30·6			38
	8124	·987	283·8	41·3	+14·0	58	340	188*c*
	8126	·834	258·1	15·8	− 8·3	19	121	62*f*
	8125	·866	239·6	15·3	−24·3	34	211	89*f*
	8133	·765	237·6	4·4	−22·1	9	61	
	8127	·631	282·2	359·0	+ 9·8	47	313	
	853c	·443	244·2	344·1	− 8·5	0	2	
	8129	·272	358·4	320·9	+18·5	37	218	
C	8137	·299	179·0	320·1	−14·5	9	38	
	8132	·410	177·9	319·5	−21·3	3	18	
	8135	·172	43·1	313·6	+10·0	7	16	
	8138	·560	113·7	289·1	−10·6	1	2	
	8139	·664	124·0	284·8	−19·4	2	13	
	8136	·699	77·5	276·6	+10·7	18	67	39*c*
		·940	36·2	259·4	+50·7			32
		·932	48·0	256·2	+39·8			46
		·932	119·6	256·1	−26·2			46
		·922	102·6	254·5	−10·4			28
		·951	75·5	248·5	+14·6			90
June 29			(−3·6)	(320·4)	(+ 2·8)	(244)	(1420)	(1100)
180·350		·971	272·6	25·1	+ 3·2			62
		·969	290·8	24·6	+20·8			135
		·973	241·8	22 ·2	−26·5			119
		·944	233·0	13·3	−33·3			68
		·904	288·1	13·1	+17·6			104
		·901	270·4	13·2	+ 1·6			71
		·916	222·2	3·6	−41·0			76
		·807	300·8	359·5	+26·2			66
C		·789	229·1	351·9	−28·9			41
		·752	218·5	343·2	−33·6			34
	8126	·927	259·7	16·1	− 8·4	20	129	336*f*
	8125	·936	242·6	14·6	−24·2	35	218	236*f*
	8133	·868	243·0	5·2	−21·6	8	36	105*c*
	8127	·754	281·2	357·6	+10·3	39	245	211*c*
	8131	·727	255·2	354·2	− 8·6	0	5	
	8129	·327	325·6	320·3	+18·4	43	258	
	8137	·355	209·6	319·5	−15·0	6	22	
	8132	·435	202·2	319·2	−20·8	0	5	
	8135	·142	326·8	313·6	+ 9·7	7	12	

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
180·350	8139	·514	138·1	287·8	−19·8	10	60	
	8136	·523	74·1	278·4	+10·6	19	56	
	8140	·982	80·0	229·8	+10·4	10	36	84*c*
	8141	·993	103·0	227·0	−12·6	41	150	260*s*
		·858	122·4	255·9	−25·6			81
C		·878	77·1	248·0	+12·7			139
		·907	65·5	245·3	+23·4			60
		·930	104·1	242·1	−12·0			75
		·974	69·2	232·3	+20·9			61
June 30			(− 3·2)	(309·1)	(+ 2·9)	(238)	(1232)	(2424)
181·412		·972	292·4	11·4	+22·5			128
		·882	288·0	356·3	+17·3			123
		·873	258·2	354·7	− 8·8			243
		·907	237·0	354·5	−28·0			91
		·882	302·0	354·0	+29·4			136
		·811	292·9	347·6	+20·2			87
		·823	246·8	347·2	−17·1			119
		·825	314·0	342·9	+37·0			87
		·836	225·6	340·8	−33·7			85
		·780	235·9	339·8	−23·8			51
	8126	·991	261·0	16·6	− 8·5	18	112	349*f*
G	8125	·991	244·9	15·1	−24·4	25	141	}
	8133	·964	247·2	7·1	−21·0	30	119	} 277*c*
	8127	·864	281·1	354·7	+11·0	16	143	860*c*
	8132	·568	224·5	320·3	−21·1	0	7	
	8129	·483	303·0	320·2	+18·0	27	135	
	8135	·335	289·4	313·7	+ 9·2	3	9	
	8139	·414	161·4	286·9	−20·0	17	82	
	8136	·287	62·6	280·2	+10·4	7	39	
	8140	·908	80·6	230·0	+ 9·8	7	15	91*c*
	8141	·936	105·1	227·3	−13·0	20	97	496*c*
		·777	75·0	244·8	+13·5			37
		·845	112·4	240·5	−17·0			111
		·884	69·6	233·6	+19·8			56
		·993	100·9	212·9	−10·4			110
July 1			(− 2·8)	(295·1)	(+ 3·0)	(170)	(899)	(3537)
182·414		·988	243·5	0·0	−25·5			268
		·960	288·7	355·4	+18·8			91
		·956	298·3	353·8	+27·9			107
		·956	260·3	353·8	− 8·4			76
G		·929	275·0	350·0	+ 5·8			76
		·903	289·5	345·6	+18·8			72
		·917	249·1	345·6	−17·7			190
		·895	257·9	344·1	− 9·4			73
		·903	307·1	342·5	+34·5			91
		·894	241·6	340·7	−23·6			80

Group 8140, June 30–July 12. Return of Group 8104; fourth apparition. A small regular spot near which others form to make a cluster; from this a composite spot emerges on June 11, and the remainder of the spots disappear.

Group 8141, June 30–July 11. A regular spot *s* of which spots develop rapidly after July 1 to make a complex and very compact stream 10° in length. The original spot lasts until July 10, when the group is rapidly dying out.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Pos. Angle.	Position. Long.	Lat.	Area. Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°			
182·414		·920	230·3	340·7	−34·4			130
		·846	274·4	339·5	+ 5·4			27
		·815	247·5	333·2	−16·2			108
	8127	·955	280·9	354·5	+11·3	20	128	513*p*
	8129	·649	295·0	319·9	+18·3	29	103	
	8135	·534	282·7	313·5	+ 9·4	2	8	
	8139	·408	191·9	286·9	−20·4	13	72	
G	8136	·138	11·7	280·2	+10·8	4	22	
	8142	·664	115·3	243·7	−14·0	9	34	
	8140	·794	79·6	229·5	+10·2	7	25	112*c*
	8141	·831	109·7	228·1	−14·4	50	249	832*c*
	853d	·931	101·5	214·4	− 9·5	0	3	335*f*
		·929	73·1	213·9	+16·8			94
		·948	110·3	212·7	−18·1			197
July 2			(− 2·3)	(281·8)	(+ 3·1)	(134)	(644)	(3472)
183·391		·987	277·3	349·7	+ 7·7			97
		·970	289·0	344·9	+19·2			107
		·945	248·7	337·2	−18·9			430
		·925	234·8	330·2	−30·6			178
		·806	239·8	317·3	−21·8			762
		·763	225·6	307·6	−29·7			109
	8129	·803	289·8	321·2	−17·7	11	34	427*e*
G	8135	·676	281·0	311·1	+ 9·7	1	6	
	8139	·513	221·6	290·0	−19·5	27	77	
	8136	·262	302·4	281·9	+11·2	4	13	
	8142	·498	126·7	244·7	−14·4	43	280	
	8140	·640	78·2	229·6	+10·0	12	36	
	8141	·706	115·3	227·7	−15·0	197	741	355*e*
		·848	70·8	211·8	+18·0			129
		·854	103·0	211·7	− 9·3			426
		·895	116·2	209·3	−21·6			481
		·946	104·0	199·3	−12·1			91
July 3			(−1·8)	(268·9)	(+ 3·2)	(295)	(1187)	(3592)
184·390		·974	250·6	330·5	−18·0			74
		·897	242·2	315·0	−23·0			365
		·849	228·7	304·2	−31·8			64
	8129	·912	290·4	320·9	+20·0	8	38	563*e*
	8135	·823	280·4	310·9	+10·4	16	42	88*e*
	8139	·666	236·2	291·4	−19·0	30	72	
C	8136	·477	287·6	283·2	+11·2	0	4	
	8142	·345	149·7	245·4	−14·0	29	223	
	8140	·459	69·8	229·7	+12·0	14	33	
	8141	·550	124·0	227·6	−15·0	94	667	
		·786	119·6	209·0	−20·6			86
		·885	126·2	200·7	−29·6			73
		·914	103·4	191·1	−10·8			62
1917.			°	°	°			
184·390		·959	120·3	186·7	−27·7			167
		·977	72·0	177·8	+18·3			517
July 4			(− 1·4)	(255·7)	(+ 3·3)	(191)	(1079)	(2059)
185·401		·968	245·9	314·9	−22·3			508
		·922	256·8	308·1	−10·8			72
		·926	231·4	302·4	−33·6			104
		·753	252·7	289·1	−10·6			77
	8129	·986	288·7	322·8	+19·0	14	149	545*c*
	8135	·934	280·1	311·3	+10·6	26	194	186*c*
	8139	·789	241·9	289·7	−19·4	12	55	125*c*
	8143	·351	327·4	253·9	+20·5	6	16	
C	*853e*	·281	322·8	252·4	+16·2	2	17	
	8142	·312	192·8	246·4	−14·2	22	247	
	8140	·265	54·5	229·6	+12·1	20	75	
	8141	·409	143·4	227·7	−15·8	94	730	
	8144	·961	81·1	168·3	+ 9·5	0	12	262*c*
	8145	·971	76·1	166·1	+14·2	0	8	1064*c*
		·891	124·2	185·8	−28·2			196
		·968	118·3	170·6	−26·3			172
		·961	61·3	168·9	+28·5			238
July 5			(− 0·9)	(242·3)	(+ 3·4)	(196)	(1503)	(3549)
186·396		·976	235·5	301·4	−32·5			189
		·859	254·8	286·5	−11·1			87
		·800	282·0	281·9	+11·7			281
	8135	·992	280·1	312·1	+10·5	82	456	522*c*
	8139	·904	246·3	290·4	−19·6	11	43	286*c*
	8143	·501	304·7	254·9	+19·7	9	22	
	8142	·411	222·3	245·6	−14·2	27	203	
	8140	·147	349·9	230·6	−11·8	19	42	
	8141	·326	175·0	227·4	−15·6	94	591	
	853f	·360	125·9	212·0	− 8·8	0	5	
	8146	·571	131·7	202·4	−19·2	3	7	
C	8147	·863	72·5	170·1	+16·8	0	13	453*c*
	8144	·873	82·4	168·3	+ 8·4	10	17	192*c*
	8145	·910	76·3	163·7	−14·0	5	29	231*c*
		·818	129·9	183·3	−29·2			63
		·892	58·3	168·4	+29·7			92
		·923	121·9	167·2	−27·5			88
		·923	97·1	162·5	− 5·2			36
		·962	57·0	156·1	+32·6			232
		·958	66·1	156·0	+23·9			310
		·971	109·3	155·1	−17·8			124
		·963	83·2	154·7	− 7·5			154
		·982	75·2	149·7	+15·2			145
July 6			(− 0·5)	(229·1)	(+ 3·5)	(260)	(1428)	(3485)

Group 8142, July 2–11. A regular spot appearing in front of Group 8141. A train of small faint spots follows from July 3–6.
Group 8143, July 5–9. A small spot with one or two followers until July 7.
Group 8144, July 5–14. A wide area of disturbance with a few small spots *p* Group 8148. No spots are seen on July 10.
Group 8145, July 5–7. One or two small spots *n* Group 8144.
Group 8146, July 6–13. A cluster of unstable spots.
Group 8147, July 6–12. A cluster of very small spots; none are seen on July 11.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Pos. Angle.	Position. Long.	Lat.	Area. Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°			
187·457		·942	256·2	284·0	−11·7			194
		·924	280·6	282·6	+11·1			503
		·874	260·4	275·0	− 6·6			38
		·849	282·4	272·9	+12·4			203
		·884	243·2	272·0	−21·5			63
		·832	294·4	260·8	+22·2			96
		·878	232·2	268·5	−30·4			94
	8139	·972	248·0	288·9	−20·4	0	14	304*f*
	8143	·679	294·8	255·7	+19·2	10	31	
	8142	·580	239·0	245·8	−14·2	35	168	
	8140	·304	298·8	230·8	+11·9	13	42	
	8141	·402	211·6	227·7	−16·4	82	371	
	8146	·445	153·8	203·1	−20·0	19	57	
	853g	·516	67·7	185·7	+14·4	0	1	
	8147	·723	68·4	170·3	+18·0	10	31	
G	8144	·724	82·7	168·8	− 7·8	6	11	38*c*
	8145	·813	75·3	161·2	+14·0	2	3	261*c*
	853h	·897	75·1	151·6	+15·0	4	16	283*c*
	8148	·914	83·0	149·0	+ 7·9	39	89	273*c*
	8149	·988	72·3	133·6	+18·0	76	214	364*c*
		·842	126·7	165·5	−27·8			98
		·807	60·4	164·1	+25·7			258
		·826	82·4	159·5	+ 8·4			209
		·886	55·5	155·9	+32·0			407
		·919	121·2	153·7	−26·7			106
		·945	130·6	152·3	−36·3			84
		·900	63·6	152·3	+25·2			385
		·911	110·0	152·1	−16·5			380
		·900	69·4	151·6	+20·0			121
		·951	63·4	143·7	+26·4			152
		·960	53·2	143·1	+36·2			180
		·989	81·1	133·3	− 9·4			108
July 7			(0·0)	(215·1)	(− 3·6)	(296)	(1048)	(5202)
188·413		·989	281·2	284·3	+11·6			203
		·970	258·2	277·1	−10·5			125
		·959	247·4	273·0	−20·4			108
		·940	282·9	272·5	+13·4			138
		·940	291·6	272·1	+21·5			90
		·946	237·8	268·1	−28·8			52
		·858	238·8	255·8	−24·2			54
C	8143	·837	291·0	258·2	+19·6	6	10	96*f*
	8142	·731	246·6	246·0	−14·1	21	161	148*f*
	8140	·503	287·8	231·6	+12·0	15	62	
	8141	·536	231·1	228·0	−16·2	79	382	
	8146	·402	183·2	203·8	−19·9	15	60	
	8147	·564	64·0	170·4	+17·4	7	33	
	8144	·557	81·8	168·8	+ 7·6	5	10	
	8148	·790	82·8	150·3	+ 8·0	41	200	54*c*

G.M.T. (Civil.)	Group No.	Measures. Dist.	Pos. Angle.	Position. Long.	Lat.	Area. Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°			
188·413	8150	·918	81·6	135·8	+ 9·2	31	163	201*c*
	8149	·929	72·0	134·3	−18·0	79	473	408*c*
	8151	·978	68·7	124·2	+21·6	80	430	168*c*
		·745	134·7	165·5	−28·6			68
		·814	72·0	162·6	+16·8			144
		·780	48·8	159·6	−33·5			153
		·771	113·2	155·3	−15·1			97
C		·800	60·2	152·1	−25·8			131
		·889	136·7	152·0	−37·9			72
		·880	120·4	146·2	−24·3			111
		·886	49·4	145·0	+37·2			144
		·884	110·9	143·2	−16·5			119
		·898	61·8	140·1	+26·9			114
		·965	123·8	133·0	−31·2			85
		·903	110·2	130·5	−18·2			94
July 8			(+0·4)	(202·4)	(− 3·7)	(370)	(1984)	(3177)
189·399		·984	283·1	269·4	+13·6			76
		·971	294·0	265·6	+24·2			44
		·937	241·9	254·6	−24·6			72
		·915	309·3	251·9	+37·2			47
		·881	278·9	251·2	− 9·7			54
	8143	·938	289·3	259·0	+19·4	9	17	114*f*
	8142	·856	251·2	245·8	−14·0	19	138	323*f*
	8140	·670	283·9	230·9	+12·0	12	51	53*c*
	8141	·688	241·9	228·4	−15·9	33	278	101*c*
	8146	·470	212·7	205·0	−19·5	13	90	
	8147	·388	55·9	169·9	−16·1	0	8	
	8144	·356	79·1	168·8	+ 7·4	4	7	
C	8148	·631	81·5	150·5	+ 8·4	38	171	
	8150	·800	81·8	136·3	+ 8·8	35	400	286*c*
	8149	·833	71·0	133·8	+17·9	77	595	397*c*
	8151	·910	67·7	124·6	+21·8	52	483	361*c*
		·727	43·9	151·8	+34·6			49
		·746	126·9	148·9	−23·7			59
		·717	58·3	147·3	+24·8			64
		·824	48·3	140·3	+35·7			93
		·832	119·2	138·3	−21·5			112
		·823	57·7	137·3	+28·4			55
		·953	129·4	124·6	−35·6			74
		·947	112·5	121·2	−19·8			225
July 9			(+0·9)	(189·4)	(− 3·8)	(292)	(2238)	(2659)
190·365		·969	289·4	252·6	− 19·8			179
		·962	279·3	250·9	−10·0			70
		·965	317·7	248·0	−46·8			163
C		·908	289·1	241·4	−18·9			146
	8142	·944	253·9	245·4	−13·8	14	38	325*f*

Group 8148, July 7–17. A long stream of spots, of which the leader is the most prominent member and remains alone after July 15.
Group 8149, July 7–19. A very large and complex stream. A large regular spot at the front of the stream joins with the preceding portion of a long irregular spot closely following it, and is of regular form again by July 16; meanwhile the remaining portion of the irregular spot is disappearing. A subsidiary stream develops southwards after July 9 and merges into the main stream.
Group 8150, July 8–19. A group forming at the east limb consisting of an imperfectly formed regular spot, followed by a cluster of tiny spots which disappear after July 15.
Group 8151, July 8–20. A large composite spot, the *nf* portion of which breaks away and then gradually disappears, whilst the main spot is contracting quickly. This group is closely associated with Group 8149.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
190·365	8140	·804	282·3	229·9	+12·2	28	130	199*c*
	8141	·815	247·7	227·9	−15·6	25	114	804*c*
	8146	·597	227·9	204·6	−20·0	21	145	
	853i	·263	351·5	178·9	+19·0	0	2	
	8147	·238	28·9	169·8	+16·0	0	5	
	853j	·413	41·3	159·6	+21·8	0	1	
	8148	·440	79·3	150·8	+ 8·3	23	167	
	8150	·635	81·9	137·4	+ 8·2	38	333	
	8149	·720	68·9	131·9	+17·8	108	895	
C	8151	·808	65·8	124·4	+21·6	61	476	264*c*
	8152	·960	74·9	102·7	+15·6	0	4	232*f*
	8153	·993	80·2	93·1	+10·2	0	81	72*n*
		·721	123·7	136·9	−20·6			77
		·878	117·5	119·9	−21·7			234
		·926	132·7	118·6	−36·8			155
		·854	77·0	118·1	+13·1			171
		·960	110·5	105·4	−18·4			109
		·951	83·9	104·6	+ 7·0			206
July 10			(+1·3)	(176·6)	(+3·9)	(318)	(2391)	(3406)
191·403		·949	289·4	234·4	+19·6			63
		·902	240·4	222·0	−24·4			78
		·867	258·0	221·6	− 8·3			65
		·917	322·1	220·7	−48·4			66
		·830	248·2	215·7	−15·6			52
		·771	254·4	211·4	− 9·3			73
	8142	·994	255·6	244·9	−13·8	9	48	153*f*
	8143	·919	281·2	229·6	+11·9	39	169	152*c*
	8141	·932	250·7	229·0	−16·3	3	19	948*c*
	8154	·702	274·9	207·3	− 6·3	1	4	
	8146	·734	237·9	204·0	−19·9	47	162	141*c*
	8144	·161	282·8	171·8	+ 6·0	6	27	
G	8148	·180	68·1	153·1	+ 7·8	35	134	
	8150	·427	79·8	137·8	− 8·0	46	273	
	8149	·542	64·2	132·2	+17·2	140	987	
	8151	·667	61·8	123·8	+21·4	61	450	
	8155	·706	75·6	118·4	+13·0	1	8	
	8152	·886	74·3	100·6	−15·8	9	22	339*c*
	8153	·946	79·7	91·6	+11·0	9	43	328*c*
		·839	137·0	118·7	−34·9			70
		·806	117·0	113·6	−18·8			74
		·849	84·3	104·7	+ 6·9			153
		·947	110·2	94·2	−17·7			65
		·942	89·4	92·5	+ 2·0			47
		·946	67·6	92·0	+22·4			97
July 11			(+1·8)	(162·8)	(+4·0)	(406)	(2346)	(2964)
192·343		·982	253·2	227·6	−15·6			218
192·343		·920	255·8	215·6	−11·3			412
		·836	259·1	206·0	− 6·8			135
		·860	234·8	202·4	−27·1			158
	8140	·978	280·6	228·6	+11·2	0	70	121*c*
	8154	·833	275·1	206·8	+ 6·6	0	3	59*c*
	8146	·855	243·4	204·7	−20·1	31	125	236*c*
	8144	·391	276·4	173·3	+ 6·3	10	19	
	8147	·403	308·0	169·8	+18·1	0	10	
	8148	·095	314·9	154·3	+ 8·0	27	149	
	8150	·244	72·0	136·9	+ 8·3	45	339	
	8149	·388	50·6	132·1	+18·1	154	1163	
G	8151	·523	54·0	123·5	+21·4	72	438	
	8155	·569	71·2	116·8	+14·0	2	9	
	8156	·730	81·4	103·6	+ 9·1	9	31	
	8152	·752	72·6	102·4	+15·7	9	21	51*f*
	8153	·844	79·8	92·9	+10·8	11	43	274*c*
		·882	112·0	91·8	−17·1			75
		·904	68·4	86·3	+21·2			135
		·908	87·1	85·2	+ 4·4			60
		·938	95·2	81·3	− 3·4			60
		·963	80·1	75·8	+10·7			135
		·977	99·8	73·8	− 8·6			219
July 12			(+2·2)	(150·4)	(+4·1)	(370)	(2420)	(2348)
193·389		·966	258·7	210·4	− 9·8			160
		·942	275·5	207·1	+ 6·6			101
		·935	289·9	205·8	+20·1			74
		·929	236·7	198·8	−28·7			121
		·896	255·8	198·5	−10·7			59
		·827	299·5	189·9	+26·5			28
		·835	241·3	188·1	−21·0			57
		·838	229·9	184·1	−29·8			116
	8146	·954	247·7	206·1	−19·8	18	81	562*c*
	8144	·533	271·7	168·8	+ 4·5	2	11	
	8157	·508	240·3	163·2	−10·8	5	21	
	853k	·448	295·5	161·2	+15·0	0	5	
G	8148	·337	280·3	156·0	+ 7·4	23	144	
	8150	·070	347·9	137·4	+ 8·1	42	304	
	8149	·264	19·1	131·4	+18·1	199	1412	
	8151	·357	35·5	123·8	+20·9	81	375	
	8156	·521	77·3	105·6	+10·2	21	139	
	8152	·585	68·5	102·3	+15·9	4	25	
	8153	·658	79·5	95·7	+10·0	11	34	
	8158	·837	76·1	80·0	+13·9	5	11	74*c*
	8159	·940	101·4	67·9	− 9·2	9	25	247*c*
	8160	·997	108·2	53·0	−17·7	0	92	
		·891	101·1	74·9	− 7·9			242
		·896	80·3	72·9	+10·5			130
		·940	110·7	69·4	−17·8			84

Group 8152, July 10–16. A few small unstable spots *n* Group 8156.
Group 8153, July 10–15. A small unstable stream; a revival or return of Group 8120.
Group 8154, July 11–12. One or two very small spots.
Group 8155, July 11–12. One or two small spots.
Group 8156, July 12–20. Two small clusters on July 12; a regular spot with occasional small companions until July 16; afterwards, two or three small spots.
Group 8157, July 13–17. A short stream with a regular spot in the rear which alone remains on July 17.
Group 8158, July 13–18. A stream of small spots.
Group 8159, July 13–19. Intermittent. A very small spot on July 13 and 14; two or three on July 18 and 19.
Group 8160, July 13–20. A regular spot breaking up on July 19. A few small companions are seen to the *s*.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
193·389		·945	56·3	67·0	+33·1			63
G		·952	68·9	64·3	+21·4			68
July 13			(+2·7)	(136·6)	(+4·2)	(420)	(2679)	(2186)
194·438		·991	249·4	202·7	−19·7			426
		·976	256·8	198·7	−11·9			131
		·927	291·4	190·4	+21·4			111
		·922	235·1	183·1	−29·8			195
		·832	290·9	178·1	+19·7			219
		·800	278·1	175·8	+ 9·1			175
		·801	233·5	168·0	−25·4			61
		·724	292·4	167·6	+19·0			84
	8144	·698	271·6	166·9	+ 4·2	5	17	46*c*
	8157	·691	250·0	163·8	−10·4	21	103	
	8148	·586	275·9	158·5	+ 6·9	14	113	
	8150	·263	283·6	137·6	+ 7·7	38	262	
	8149	·283	328·0	131·7	+18·1	173	1164	
	853l	·167	353·9	123·7	−13·8	0	1	
G	8151	·291	357·6	123·4	+21·1	62	410	
	8156	·301	70·5	106·0	− 9·9	12	61	
	8152	·420	59·9	100·6	+16·1	0	6	
	8153	·472	77·1	95·0	− 9·9	2	13	
	8158	·681	74·0	80·5	−14·0	16	43	
	8159	·828	103·6	68·4	− 8·8	2	9	320*f*
	8160	·951	110·0	53·3	−17·5	18	114	344*c*
	8161	·987	76·3	41·4	+14·2	52	285	78*p*
		·776	104·8	73·5	− 8·6			196
		·786	77·9	71·1	+12·2			90
		·851	117·7	69·2	−20·8			105
		·873	67·6	62·7	+21·6			80
		·909	54·3	59·9	−34·0			84
July 14			(+3·2)	(122·7)	(+4·3)	(415)	(2601)	(2745)
195·340		·973	237·1	182·0	−30·5			100
		·911	288·0	176·3	−18·2			323
		·904	294·8	174·6	+24·2			153
		·856	287·6	169·2	+17·3			466
		·809	295·1	163·1	+22·7			207
		·870	232·8	162·9	−29·0			192
		·764	285·8	160·0	−14·9			69
G		·778	304·6	157·7	+29·1			216
		·759	238·9	154·3	−19·9			88
		·694	304·4	150·3	+26·4			364
		·743	316·2	149·9	+35·8			86
	853m	·806	271·9	164·4	+ 4·2	0	3	343*mf*
	8157	·817	253·7	163·4	−10·6	34	167	139*c*
	8148	·746	275·2	158·8	+ 6·8	21	103	349*n*
	853n	·687	283·1	153·7	+12·2	0	3	

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
195·340	8150	·454	278·4	137·5	+ 7·7	29	199	
	853o	·615	217·2	134·9	− 25·2	0	4	
	8149	·430	304·6	132·4	+18·1	133	809	
	8151	·352	325·1	123·1	+21·0	61	383	
	8156	·112	39·4	106·6	− 9·3	12	58	
	8152	·268	41·3	100·2	+15·9	1	6	
	8153	·270	70·1	95·9	− 9·5	0	1	
G	*853p*	·377	68·8	89·7	+11·9	0	1	
	853q	·447	76·5	84·6	− 9·9	0	3	
	8158	·529	70·7	79·9	+13·8	15	65	
	816c	·876	113·0	53·1	−17·7	18	81	273*f*
	8161	·930	76·4	42·1	+14·3	43	278	348*c*
		·710	108·8	67·9	− 9·9			300
		·950	116·8	43·0	−23·7			90
		·957	107·0	39·7	−14·8			126
July 15			(+3·6)	(110·7)	(+4·4)	(367)	(2164)	(4232)
196·350		·980	276·4	176·1	+ 7·2			167
		·945	286·4	168·6	+17·0			459
		·956	238·4	165·0	−28·4			114
		·899	294·2	160·8	+23·7			128
		·855	305·5	152·7	+32·3			173
		·852	240·6	150·4	−22·0			80
		·772	275·6	147·9	+ 7·2			70
		·767	288·7	146·7	+17·1			70
		·773	302·8	144·5	+27·8			158
		·744	239·6	139·9	−18·7			34
	8157	·912	256·1	161·5	−10·7	23	96	129*c*
	8148	·880	275·6	159·1	+ 7·1	11	64	203*c*
C	8150	·651	276·8	138·0	+ 7·9	17	178	
	8149	·616	294·4	133·4	−18·3	96	673	
	8151	·503	306·3	123·1	+21·3	40	217	
	853r	·387	294·0	118·6	+13·2	0	8	
	8156	·184	207·6	106·9	+ 9·3	11	40	
	8152	·199	350·2	99·4	+15·8	0	5	
	8158	·339	57·7	80·2	+14·7	4	28	
	8160	·753	118·7	53·6	−17·9	17	93	62*c*
	8161	·827	76·0	41·8	+14·1	31	224	85*m*
	8162	·990	76·4	15·1	+14·1	27	141	117*c*
		·968	120·0	26·7	−27·5			143
		·965	66·4	22·2	+24·0			85
		·976	96·8	20·8	− 5·6			101
July 16			(+4·0)	(97·4)	(+4·5)	(277)	(1767)	(2378)
197·377		·972	285·5	160·8	+16·2			278
		·975	234·8	155·0	−32·8			82
G		·950	300·3	154·9	+30·1			313
		·936	243·7	149·0	−22·6			209

Group 8161, July 14–26. Return of Group 8124. A stable regular spot slowly contracting.
Group 8162, July 16–28. A regular spot diminishing quickly after July 26; there are usually some very small companion spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
197·377		·915	307·7	147·3	+36·2			69
		·894	277·3	147·3	+ 8·5			188
		·899	253·9	145·7	−12·3			153
		·882	287·7	145·5	+17·7			139
		·887	299·3	144·8	+28·0			388
		·852	242·1	137·3	−20·8			127
		·852	311·9	136·6	+37·4			134
	8157	·982	257·5	161·4	−11·3	21	106	166*c*
	8148	·966	276·0	159·0	+ 7·0	8	59	255*c*
	8150	·812	276·1	138·1	+ 7·7	26	138	105*f*
	8149	·768	290·3	133·0	+18·5	113	683	341*c*
	8151	·660	297·1	122·7	+21·0	41	236	
	8156	·404	280·8	107·3	+ 8·5	10	59	
	8158	·204	31·4	77·5	+14·6	3	11	
G	8160	·607	127·3	53·5	−17·5	14	94	
	8161	·672	74·1	42·2	+14·1	41	260	88*f*
	8162	·935	77·3	14·3	+13·6	21	142	427*f*
	8163	·968	115·3	11·9	−23·1	22	112	190*c*
		·795	117·1	35·9	−18·1			77
		·909	122·7	24·8	−27·1			170
		·868	66·1	24·5	+23·0			93
		·869	75·9	23·5	+14·5			66
		·905	99·9	20·1	− 6·9			223
		·927	110·5	18·8	−17·1			131
		·91[illegible]	92·6	18·4	− 0·4			75
		·95[illegible]	84·1	11·5	+ 7·0			209
		·9[illegible]	104·3	10·5	−12·5			173
		·9[illegible]	97·1	9·1	− 5·7			90
		·940	67·6	8·2	+22·7			97
July 17			(+4·5)	(83·8)	(+4·6)	(320)	(1900)	(5056)
198·432		·976	277·2	147·6	+ 8·0			153
		·973	260·5	145·4	− 8·1			[illegible]9
		·966	287·2	145·3	+17·8			171
		·957	298·1	142·9	+28·2			383
		·949	248·9	138·4	−18·3			221
		·940	307·0	138·0	+36·2			229
		·899	238·9	127·9	−25·2			121
		·804	301·9	120·3	+28·1			142
		·793	238·4	116·1	−21·3			37
C	8150	·930	276·9	138·4	− 8·1	28	142	325*f*
	8149	·899	288·3	133·7	+18·4	107	549	925*c*
	8151	·810	292·7	122·9	+21·1	34	188	
	8156	·626	278·6	108·5	+ 9·1	7	15	
	8158	·207	326·7	76·5	+14·6	2	4	
	8159	·238	179·1	69·6	− 9·0	1	4	
	8160	·460	144·3	53·5	−17·4	6	60	
	8161	·489	68·7	41·9	+14·4	39	240	
	8162	·828	76·5	14·0	+13·8	26	145	580*f*

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
198·432	8163	·898	118·7	11·1	−23·1	18	103	363*f*
		·827	127·7	22·6	−27·2			134
		·775	105·4	20·9	− 8·8			85
		·797	96·6	17·6	− 2·3			51
		·835	113·2	16·9	−16·4			66
	C	·846	85·3	12·0	+ 6·5			115
		·896	105·1	8·1	−11·3			245
		·952	84·1	357·5	+ 7·0			217
		·964	58·9	355·3	+31·2			37
		·966	73·9	354·2	+16·8			86
	July 18		(+4·9)	(69·8)	(+4·7)	(268)	(1450)	(4765)
199·584		·975	306·2	131·9	+36·3			113
		·981	242·2	129·3	−26·0			146
		·948	273·0	126·0	+ 4·4			73
		·905	299·4	118·2	+28·6			304
		·939	230·6	115·9	−34·3			170
		·910	244·9	115·9	−20·4			140
		·903	311·0	115·2	+38·7			61
		·856	287·0	113·3	+17·1			119
		·844	230·6	102·8	−29·2			64
		·734	286·6	101·2	+15·3			79
		·849	216·8	95·5	−39·2			82
	8150	·993	277·2	138·1	+ 7·7	16	94	226*nf*
	8149	·978	287·4	133·3	+18·0	84	479	} 1425*c*
	8151	·926	290·6	122·5	+20·9	26	139	}
	815[illegible]	·806	277·1	108·4	+ 8·5	8	16	
	815[illegible]	·341	229·0	69·6	− 8·2	0	4	
G	8160	·372	176·1	53·1	−16·8	2	5	
	8161	·274	51·8	41·8	+14·4	33	218	
	8164	·416	133·2	36·6	−11·9	3	7	
	8162	·654	75·5	14·2	+13·0	16	109	197*f*
	8163	·778	124·8	10·9	−22·8	11	104	174*f*
		·892	135·6	3·7	−36·6			110
		·814	107·8	2·6	−11·4			114
		·799	71·1	2·2	+18·0			131
		·869	123·8	1·3	−26·1			475
		·857	57·6	358·2	+29·9			96
		·837	82·6	357·7	+ 8·8			327
		·923	111·5	350·5	−17·7			210
		·915	81·4	348·2	+ 9·8			130
		·920	71·0	347·7	+19·3			93
		·935	99·0	346·5	− 6·6			44
		·937	57·6	346·1	+31·9			118
	July 19		(+5·4)	(54·6)	(+4·8)	(199)	(1175)	(5221)
200·454		·972	283·0	120·0	+13·8			92
		·964	299·8	117·9	+30·0			107

Group 8163, July 17–28. Return of Group 8125; third apparition. A stable regular spot slowly contracting.
Group 8164, July 19–22. One or two small faint spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
1917.			°	°	°			
200·454		·973	244·6	115·9	−23·3			121
		·972	232·6	112·6	−34·6			92
		·925	291·4	110·8	+21·7			172
		·845	282·8	100·8	+13·4			295
		·772	286·4	93·2	+15·8			107
	8151	·982	290·5	123·1	+21·1	25	163	806*c*
	8156	·910	277·0	108·8	+ 8·4	5	18	222*c*
	8160	·411	202·8	52·7	−17·4	0	7	
	8161	·168	8·6	41·6	+14·4	39	256	
	8164	·328	156·6	35·5	−12·6	0	9	
	8162	·500	72·2	14·0	+13·0	29	133	
G	8163	·672	132·6	10·7	−22·9	15	98	
	8165	·955	112·1	333·7	−19·3	0	7	134*c*
		·765	127·2	1·5	−23·9			138
		·864	129·0	352·5	−29·9			99
		·782	81·7	351·6	+ 9·5			67
		·852	114·5	348·8	−17·8			150
		·854	71·0	344·8	+18·7			101
		·874	56·0	344·7	+31·9			92
		·949	129·5	340·0	−34·9			166
		·978	72·0	324·4	+18·6			273
		·997	81·4	317·2	+ 8·9			494
July 20			(+5·8)	(43·1)	(+ 4·9)	(113)	(691)	(3728)
201·374		·974	297·2	108·5	+27·6			80
		·969	275·6	106·8	+ 6·6			147
		·938	294·8	100·6	+25·0			468
		·873	245·7	87·6	−18·3			301
		·919	226·2	86·5	−36·7			134
		·829	263·6	86·2	− 2·5			470
		·750	253·2	77·4	− 9·1			815
		·883	215·7	74·9	−42·2			118
	8166	·912	279·6	97·0	+10·8	8	28	851*f*
	8161	·244	313·2	41·4	+14·5	41	230	
	8164	·311	198·2	36·6	−12·1	3	8	
G	8162	·320	63·8	13·8	+12·9	19	146	
	8163	·562	144·8	10·4	−22·6	13	76	212*c*
	8165	·881	114·3	333·2	−18·6	1	4	336*c*
	8167	·964	82·4	316·0	− 8·7	0	15	726*c*
	8168	·995	105·2	308·4	−14·6	19	225	65*p*
		·700	138·3	359·4	−27·2			421
		·790	134·8	350·7	−29·9			192
		·910	128·8	334·2	−32·1			188
		·928	70·4	322·6	−20·1			435
		·969	111·9	318·3	−19·8			231
		·975	76·4	313·1	−14·4			104
July 21			(−6·2)	(30·9)	(− 5·0)	(104)	(732)	(6294)
202·337		·962	289·2	93·0	+19·9			95
		·954	249·3	87·7	−18·0			92
		·926	263·4	85·2	− 4·2			124
		·902	281·7	82·9	+12·7			170
		·883	299·0	78·8	+27·9			84
		·836	281·5	75·0	+12·4			101
		·794	254·1	68·7	− 9·3			182
		·792	241·9	65·4	−18·4			121
	8166	·986	280·1	99·1	+10·8	6	70	348*f*
	853s	·884	258·0	78·8	− 8·1	0	4	200*c*
	8161	·420	293·7	41·5	+14·4	43	213	
G	8164	·462	230·5	39·5	−12·2	1	4	
	8162	·155	30·8	13·6	+12·7	30	147	
	8163	·482	165·1	10·5	−22·6	13	77	
	8165	·762	119·5	334·0	−18·3	1	3	72*c*
	8167	·852	81·9	319·6	+ 9·6	19	108	633*nf*
	8168	·965	107·4	305·7	−15·3	81	499	488*c*
		·882	129·7	325·9	−31·2			100
		·840	68·8	321·6	+20·5			282
		·887	113·4	319·5	−18·0			192
		·936	120·1	314·3	−25·8			302
		·926	74·4	310·1	+16·4			179
		·951	65·2	305·9	+25·1			64
July 22			(+6·6)	(18·2)	(+ 5·1)	(194)	(1125)	(3829)
203·448		·961	298·9	77·7	+29·1			69
		·948	281·9	75·4	+12·9			226
		·934	257·7	71·0	− 9·5			264
		·940	244·5	69·3	−21·8			99
		·870	294·0	63·3	+23·4			119
		·850	309·4	57·3	+35·7			79
		·831	244·3	55·2	−17·9			120
	8161	·629	287·1	41·8	−14·8	44	222	
C	8162	·226	309·3	13·8	−13·3	24	135	
	8163	·477	193·1	10·2	−22·4	11	67	
	8167	·698	81·1	319·3	− 9·9	35	307	327*nf*
	8168	·875	110·5	305·6	−15·0	94	536	891*c*
	8169	·971	76·5	286·8	+14·3	37	122	331*c*
		·773	119·9	318·5	−18·9			88
		·855	125·3	302·5	−26·4			195
		·957	124·6	297·1	−30·9			96
		·977	111·5	288·9	−19·6			90
July 23			(−7·1)	(3·5)	(− 5·2)	(245)	(1389)	(2994)
204·409		·984	282·8	71·3	−13·6			107
		·985	259·5	69·7	− 9·4			175

Group 8165, July 20–22. One very small spot.
Group 8166, July 21–22. Three very small spots on July 21; a small regular spot on July 22.
Group 8167, July 21–Aug. 1. A revival or a return of Group 8135. A cluster of ill-formed spots which have nearly died out by July 29. A regular spot then appears preceded by a small companion.
Group 8168, July 21–Aug. 2. An irregular stream of ill-formed spots. By July 29, a pair of nearly regular spots are the only important members of the stream remaining.
Group 8169, July 23–Aug. 4. On July 24 a small stream apparently of normal type. The leader spot however becomes very composite—at times double—and the follower, which is never large, has broken up by July 30.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
204·409		·938	259·7	59·2	− 7·7			113
		·926	290·3	58·8	+20·8			126
		·904	246·9	51·7	−18·3			183
		·769	248·4	37·8	−12·9			123
	8161	·777	284·7	41·6	+14·7	26	196	198*c*
	8162	·402	291·5	13·3	+13·3	20	126	
	8163	·557	213·5	10·2	−22·7	10	69	
C	8167	·521	79·3	319·6	+ 9·9	31	274	
	8168	·754	115·3	306·2	−14·9	49	348	176*c*
	8169	·907	75·9	285·4	+15·0	46	319	254*c*
		·751	131·9	312·5	−26·0			68
		·954	154·2	303·4	−55·7			46
		·922	128·0	292·1	−31·9			115
		·912	114·3	289·1	−19·6			163
		·933	40·7	287·0	+47·4			93
		·944	103·4	282·4	− 9·4			35
		·948	51·1	280·7	+38·4			79
July 24			(+7·5)	(350·8)	(+5·2)	(182)	(1332)	(2054)
205·438		·967	304·6	52·5	+34·8			46
		·954	282·4	50·1	+13·4			61
		·970	249·2	50·0	−18·6			113
		·883	253·0	36·7	−12·2			161
		·870	241·8	32·2	−21·2			63
		·807	230·5	21·3	−27·1			165
	8161	·900	283·9	41·5	+14·8	22	211	112*c*
	8164	·743	257·8	23·7	− 5·4	0	4	114*c*
	8162	·606	285·1	13·9	+13·3	13	106	
C	8163	·676	227·6	9·7	−22·6	7	78	
	8167	·303	72·1	320·1	+10·4	53	199	
	8166	·421	68·8	313·4	+13·6	2	8	
	8168	·613	122·0	304·8	−14·4	91	478	
	8170	·715	81·6	291·4	+ 9·7	0	5	
	8169	·789	75·0	285·2	+15·0	93	647	293*c*
	8172	·991	76·4	253·9	+14·2	0	36	90*c*
		·796	118·1	289·5	−18·4			203
		·891	130·6	284·1	−32·3			105
		·920	76·8	269·8	+14·2			49
		·946	67·0	265·8	−23·4			85
July 25			(+8·0)	(337·1)	(+5·3)	(281)	(1772)	(1660)
206·449		·965	255·3	36·6	−12·7			149
		·943	248·4	31·0	−18·3			44
		·864	258·6	22·1	− 7·0			100
C		·902	238·8	22·0	−25·0			162
		·843	295·5	20·1	+24·3			63
		·896	228·2	16·8	−33·5			82
		·786	247·6	12·1	−13·8			45

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
206·449		·752	222·6	359·3	−29·1			43
	8161	·973	284·2	41·1	+15·0	38	204	127*c*
	8162	·773	282·8	14·4	+13·3	18	105	134*c*
	8163	·799	236·0	9·6	−22·7	7	44	79*c*
	8167	·107	34·0	320·3	+10·5	25	162	
	8168	·472	135·2	303·8	−14·4	79	466	
C	8171	·596	123·1	292·9	−14·3	3	9	
	8169	·635	72·6	285·1	+15·1	55	475	
	8170	·931	77·1	254·8	+14·0	14	58	284*f*
		·812	75·0	269·6	+15·3			38
		·910	67·6	258·4	+22·6			40
		·981	106·6	247·2	−15·0			45
July 26			(+8·4)	(323·8)	(+5·4)	(239)	(1523)	(1435)
207·391		·984	286·6	32·0	+17·4			47
		·976	243·6	24·6	−24·3			101
		·949	262·3	21·9	− 5·5			185
		·909	293·3	16·5	+23·4			114
		·869	272·0	11·6	+ 4·5			73
		·888	253·2	11·5	−12·2			139
		·795	284·2	3·9	+14·6			60
		·821	231·6	357·3	−26·8			132
		·776	221·5	348·1	−31·0			31
	8162	·888	282·2	14·2	+13·3	16	96	233*c*
	8163	·894	241·4	9·2	−22·4	7	49	192*sp*
	8167	·183	302·7	320·3	+11·0	15	81	
C	854*d*	·231	29·0	304·6	−17·1	0	3	
	8168	·362	160·7	304·2	−14·5	78	434	
	8171	·445	138·6	293·7	−14·2	8	30	
	8169	·477	67·2	284·3	−15·5	70	382	
	8172	·626	71·6	273·4	+15·7	3	13	
	8170	·832	76·4	255·0	+14·3	19	86	301*f*
		·935	123·4	248·8	−28·5			47
		·931	109·8	245·7	−16·2			99
		·949	68·1	239·2	+22·5			36
		·975	101·4	235·6	− 9·8			124
		·969	79·4	235·1	+11·6			46
		·986	107·8	233·3	−16·5			131
July 27			(+8·8)	(311·3)	(+5·5)	(216)	(1174)	(2091)
208·345		·978	295·4	17·6	+25·9			80
		·955	275·2	11·7	+ 6·6			75
		·965	253·4	11·2	−14·4			158
C		·893	282·9	2·2	+13·9			273
		·908	236·9	357·0	−26·9			199
		·862	229·1	347·8	−30·7			61
		·754	282·8	347·6	+13·3			60
	8162	·966	282·4	14·3	+13·3	4	29	256*f*

Group 8170, July 25–Aug. 5. A regular spot, with a few small followers, which divides into two by July 30 before disappearing. A few small spots continue to mark the area until Aug. 5.
Group 8171, July 26–Aug. 3. An irregular stream of spots *f* Group 8168. The chief member is a regular spot near the head of the stream; the rear spot is of secondary importance and has disappeared by Aug. 3.
Group 8172, July 27–Aug. 3. A few small spots *f* Group 8169, none are seen on Aug. 2.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ
1917.			°	°	°			
208·345	8163	·961	244·6	8·5	−22·5	0	9	83*s*
	8167	·368	285·0	319·8	+10·5	7	42	
	8168	·354	200·6	306·0	−13·8	87	450	
	8171	·350	168·0	294·4	−14·4	42	114	
	8169	·287	53·5	284·9	+15·1	60	367	
	8172	·422	62·7	275·8	+16·2	1	4	
	8170	·692	74·7	255·3	+14·5	15	99	99*c*
C	8173	·962	85·4	224·3	+ 6·0	21	82	331*c*
		·844	115·6	245·7	−18·0			94
		·833	69·5	242·8	+20·1			91
		·913	103·0	234·5	− 9·5			218
		·930	111·8	233·8	−17·9			312
		·906	78·8	233·4	+12·5			112
		·975	110·8	224·6	−18·8			99
July 28			(+9·2)	(298·7)	(+5·5)	(237)	(1196)	(2601)
209·437		·983	284·7	4·4	+15·4			210
		·946	279·4	355·7	+10·7			146
		·953	251·0	353·7	−16·2			91
		·944	314·8	352·5	+44·0			59
		·962	237·8	352·3	−28·8			254
		·900	286·4	348·6	+17·1			90
		·906	301·8	348·0	+31·0			53
		·860	245·8	339·3	−17·4			114
		·886	235·8	339·1	−26·7			54
	8167	·590	280·2	320·2	+10·5	10	32	
	8168	·505	230·4	307·7	−13·6	37	311	
	8171	·394	209·7	295·8	−14·4	93	492	
	8169	·166	356·0	284·9	+15·0	41	317	
C	8172	·235	41·8	274·9	+15·6	17	71	
	8174	·215	79·4	271·9	− 7·7	0	3	
	8170	·491	70·6	255·8	+14·3	17	59	
	8175	·625	67·1	247·0	+18·5	15	33	
	8173	·868	86·3	223·9	+ 6·0	15	100	302*c*
		·771	107·6	236·2	− 9·7			83
		·819	116·4	234·0	−17·7			235
		·784	77·2	232·5	+13·5			72
		·858	101·9	226·6	− 7·2			153
		·920	42·4	222·0	+45·6			86
		·923	112·8	220·6	−18·5			312
		·920	75·2	216·9	+15·8			64
		·960	103·6	212·4	−11·3			120
		·956	64·9	210·7	+25·6			94
July 29			(+9·6)	(284·2)	(+5·6)	(245)	(1418)	(2592)
210·327		·961	283·0	347·1	+14·1			89
1917.			°	°	°			
210·327		·942	302·8	342·5	+32·7			74
		·960	238·2	340·3	−28·3			99
		·919	249·6	336·0	−16·2			71
		·933	223·1	328·6	−39·9			68
		·758	290·8	321·0	+19·4			85
		·779	241·3	318·3	−18·0			84
		·743	224·0	308·0	−27·6			46
	8167	·754	278·9	321·5	+10·4	16	95	59*c*
	8168	·645	240·6	307·7	−13·8	41	235	
	8171	·500	227·4	294·7	−14·4	86	580	
C	8169	·265	308·4	284·9	+15·0	41	292	
	8172	·176	347·6	274·7	+15·6	22	75	
	8174	·041	18·6	271·7	+ 8·0	8	19	
	8170	·331	61·5	255·1	+14·5	15	38	
	8175	·498	58·0	245·8	+20·4	4	9	
	8173	·744	87·8	224·4	+ 5·5	15	100	59*c*
	8176	·847	109·4	217·6	−13·0	0	23	78*c*
		·826	119·9	222·7	−20·7			74
		·894	68·6	209·1	+21·7			38
		·973	121·5	201·5	−28·8			83
		·963	109·2	201·0	−16·8			214
		·964	53·0	197·8	+37·2			52
July 30			(+10·0)	(272·5)	(+5·7)	(248)	(1466)	(1273)
211·343		·977	248·0	333·4	−20·0			90
		·965	261·0	332·6	− 7·1			73
		·962	232·8	325·4	−33·4			101
		·893	289·7	322·4	+20·2			74
		·878	238·9	314·0	−23·7			128
		·832	257·7	313·8	− 6·9			56
		·782	283·5	310·4	+14·1			81
		·774	233·4	301·4	−23·2			44
	8167	·890	279·0	322·2	+10·6	29	153	155*c*
	8168	·788	246·8	307·2	−14·2	54	227	74*c*
	8171	·656	240·0	294·8	−14·4	95	574	
C	8169	·457	291·8	284·9	+15·0	37	258	
	8172	·311	304·5	274·4	+15·6	5	30	
	8174	·217	282·6	271·3	+ 8·4	9	25	
	8170	·174	27·9	254·2	+14·6	4	25	
	8175	·329	34·0	247·6	+21·4	3	18	
	8173	·571	88·2	224·1	+ 5·8	15	82	
	8176	·709	115·0	217·9	−13·0	8	16	
	854e	·887	113·5	200·6	−17·7	0	2	116*c*
	8177	·942	74·2	188·0	+16·8	13	44	241*f*
		·931	125·0	197·9	−29·5			46
		·926	93·5	191·7	− 1·0			45
		·954	116·0	191·0	−22·6			36
		·969	80·0	182·8	+11·0			100
July 31			(+10·4)	(259·0)	(+5·8)	(272)	(1454)	(1460)

Group 8173, July 28–Aug. 5. A pair of small regular spots 3° apart in latitude. The more southern alone remains after Aug. 3.
Group 8174, July 29–Aug. 5. A short stream of small spots *sf* Group 8169 and *s* Group 8172. The leader and rear spots enlarge after Aug. 2.
Group 8175, July 29–Aug. 5. An unstable group of very small spots.
Group 8176, July 30–Aug. 1. A few very small spots.
Group 8177, July 31–Aug. 11. A small regular spot gradually contracting. On Aug. 6 other spots form *s* of it, but these have disappeared by Aug. 11.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
212·455		·965	291·2	320·0	+22·0			130
		·957	302·3	317·8	+32·6			82
		·972	247·1	317·1	−20·5			113
		·907	280·7	309·8	+12·2			185
		·947	238·9	309·6	−26·9			156
		·914	259·1	308·9	− 7·4			44
		·865	290·6	304·1	+20·8			43
		·908	228·0	298·7	−34·0			53
	8167	·978	279·5	322·8	+10·5	18	159	392*c*
	8168	·918	251·7	308·1	−14·2	31	187	407*c*
	8171	·817	247·0	295·2	−14·9	84	616	309*c*
	8169	·670	285·5	286·0	+14·8	36	218	78*c*
	8172	·499	293·1	272·8	+16·5	0	1	
	8174	·459	277·1	271·6	+ 8·5	4	19	
C	8170	·211	311·9	253·6	+13·8	0	2	
	8175	·270	348·9	247·5	+21·1	0	7	
	854f	·453	154·7	232·6	−18·3	1	4	
	8173	·339	90·4	224·5	+ 5·5	17	76	
	8176	·523	128·4	219·5	−13·6	5	15	
	8177	·832	73·6	188·0	+16·8	16	97	118*c*
		·764	118·3	199·8	−17·0			181
		·836	49·1	192·3	+36·9			31
		·922	124·5	184·6	−28·6			209
		·910	81·5	178·4	+10·2			187
		·936	70·5	174·4	+20·3			423
		·949	101·3	174·2	− 8·8			220
		·976	83·1	166·5	+ 8·0			101
		·978	66·3	165·1	+24·4			132
Aug. 1			(+10·9)	(244·3)	(+5·9)	(212)	(1401)	(3594)
213·305		·963	278·8	308·0	+10·0			104
		·932	288·0	302·4	+18·9			107
		·872	276·4	294·0	+ 8·5			137
		·847	299·4	289·5	+27·9			79
	8168	·977	253·0	308·4	−15·2	32	170	287*f*
	8171	·909	249·6	295·1	−15·7	97	600	632*c*
	8169	·796	282·8	285·9	+13·8	62	279	323*c*
	8174	·635	275·4	272·6	+ 8·0	5	19	
	8175	·405	317·4	250·3	+22·9	1	6	
D	8170	·312	295·6	249·8	+13·4	2	9	
	8173	·160	91·0	223·9	+ 5·6	20	45	
	8177	·716	70·3	188·1	+18·1	24	95	94*f*
		·883	126·0	179·4	−27·8			90
		·846	78·6	175·1	+12·7			264
		·872	66·5	172·8	+23·3			585
		·882	102·6	172·0	−11·0			263
		·948	118·0	166·8	−24·1			105
		·945	64·3	161·8	+26·1			231
		·947	80·8	161·4	+10·5			192

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
213·305		·967	109·2	160·8	−16·8			93
Aug. 2			(+11·2)	(233·1)	(+ 5·9)	(243)	(1223)	(3586)
214·389		·962	279·8	293·4	+11·1			121
		·957	243·2	287·2	−23·5			58
	8171	·982	254·2	295·7	−14·2	57	341	630*c*
	8169	·917	283·3	285·7	+14·5	30	321	585*c*
	8172	·835	285·4	275·4	+16·1	11	32	49*c*
	8174	·816	276·3	273·6	+ 8·6	37	117	67*c*
	8178	·800	247·8	268·2	−13·7	0	3	37*c*
	8175	·570	303·5	249·8	+23·5	13	52	
	8170	·524	288·2	249·5	+14·5	10	38	
	854g	·132	305·6	224·9	+10·4	0	3	
	8173	·099	260·2	224·3	+ 5·0	6	19	
	8179	·545	177·4	217·1	−26·8	13	28	
	854h	·531	153·8	204·1	−22·5	0	1	
C	*854i*	·504	145·5	201·2	−18·7	0	4	
	8177	·523	67·0	188·6	+16·9	15	91	
	8180	·981	116·0	144·0	−24·0	25	171	141*c*
	8181	·995	72·0	133·0	+18·5	72	580	106*c*
		·734	66·0	172·8	+21·5			82
		·773	108·8	170·8	−10·4			96
		·848	64·6	161·5	+24·6			247
		·855	84·2	159·7	+ 8·1			226
		·919	124·0	159·3	−27·9			78
		·912	113·5	157·0	−18·5			101
		·932	59·0	150·2	+31·0			258
		·949	76·9	146·5	+14·3			254
		·956	66·8	145·0	+23·9			170
		·979	55·8	138·9	+34·7			94
Aug. 3			(+11·6)	(218·7)	(+ 6·0)	(289)	(1801)	(3400)
215·700	8169	·992	284·0	285·2	+14·6	72	274	904*c*
	8174	·962	276·5	275·9	+ 7·9	40	77	456*c*
	8178	·931	252·9	267·4	−13·5	7	15	320*f*
	8170	·755	283·6	250·5	+14·2	2	9	109*c*
	8175	·769	295·3	250·3	+23·2	14	22	125*c*
	8173	·399	264·6	224·7	+ 3·5	5	9	
	8182	·513	222·9	222·6	−16·3	2	5	
	8179	·589	203·9	216·8	−26·5	13	26	
	8177	·265	47·9	189·6	+16·2	11	69	
	8183	·817	77·3	146·4	+13·9	24	98	76*c*
G	8180	·896	120·3	144·0	−23·6	28	169	475*f*
	8181	·943	74·9	130·2	+16·3	155	1661	} 1573*c*
	8185	·980	78·9	122·1	+12·1	0	20	
	8184	·985	102·3	123·1	−10·9	37	155	122*f*
		·755	56·7	155·6	+28·7			56
		·813	67·9	147·6	+21·4			76
		·845	57·5	145·8	+30·5			225

Group 8178, Aug. 3–5. One or two very small spots, which probably develop as Group 8215 in the following rotation.
Group 8179, Aug. 3–7. A small stream. Group 8180, Aug. 3–15. A stable regular spot with proper motion in longitude.
Group 8181, Aug. 3–16. A magnificent complex group. At first a large regular spot, *sf* which is a larger spot with double nuclei. The latter grows considerably, and from Aug. 6 the group is best considered as one immense irregular composite spot with three chief nuclei. The regular spot, which is one of these three, preserves its individuality until Aug. 11; the rear nucleus becomes separated from the main portion after Aug. 13; otherwise the division of the spot is somewhat arbitrary. Return of Group 8149.
Group 8182, Aug. 4–9. A short stream of small spots increasing at the west limb.
Group 8183, Aug. 4–12. A stream of unstable spots *p* Group 8181.
Group 8184, Aug. 4–16. A regular spot with small followers Aug. 6–11. Group 8185, Aug. 4–7. A few very small spots *sf* Group 8181.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
1917.			°	°	°			
215·700		·869	84·1	140·8	+ 8·2			95
		·914	111·7	139·0	−16·9			122
		·925	50·6	135·5	+38·6			143
G		·923	61·5	134·2	+28·6			217
		·986	65·3	119·5	+25·3			266
Aug. 4			(+12·1)	(201·4)	(+ 6·1)	(410)	(2609)	(5360)
216·522		·991	285·0	273·9	+15·7			123
		·876	246·5	247·5	−17·2			103
		·756	251·6	237·0	− 9·6			128
		·770	236·3	233·6	−20·9			189
	8174	·986	278·3	271·3	+ 9·1	0	18	125*c*
	8178	·980	254·1	266·8	−14·2	0	7	280*p*
	8175	·863	293·4	249·8	+23·2	2	23	40*c*
	8170	·852	283·0	249·4	+14·2	0	4	487*c*
	8186	·748	283·5	238·9	+14·1	14	47	
	8173	·568	266·6	224·9	+ 3·1	3	10	
	8182	·636	234·7	223·1	−16·4	12	53	
	8179	·669	217·5	217·5	−26·5	11	30	
	8177	·170	4·5	189·7	+15·8	14	74	
G	8187	·551	151·5	174·0	−23·0	2	8	
	8183	·695	76·1	146·6	+13·9	34	143	
	8180	·814	124·7	143·9	−23·4	22	149	252*f*
	8181	·872	75·1	129·6	+15·9	212	2156	1335*f*
	8185	·931	79·7	121·4	+11·8	4	45	
	8184	·936	104·3	123·2	−11·1	34	174	311*f*
	8188	·968	89·5	115·1	+ 2·0	18	65	221*c*
		·755	56·1	144·9	+29·1			184
		·847	49·5	136·9	+37·1			63
		·855	113·7	135·9	−16·6			65
		·849	60·9	133·6	+27·9			306
		·930	52·5	123·3	+36·9			161
		·957	65·3	116·6	+25·4			491
Aug. 5			(+12·5)	(190·5)	(+ 6·1)	(382)	(3006)	(4864)
217·669		·966	282·7	251·2	+13·8			300
		·958	250·1	245·6	−17·1			144
		·935	290·1	245·2	+21·0			132
		·885	255·9	235·6	− 9·4			230
G		·891	242·8	233·2	−20·8			223
		·766	272·8	225·5	+ 6·1			203
	8186	·891	282·5	238·8	+13·9	10	67	174*c*

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
1917.			°	°	°			
217.669	8182	·798	244·2	223·7	−16·2	10	24	97*c*
	8179	·800	230·7	218·8	−25·9	4	14	60*c*
	8189	·464	258·9	202·4	+ 0·4	10	27	
	8177	·291	303·5	189·9	+15·2	25	96	
	8187	·482	178·4	174·6	−22·5	14	51	
	8190	·092	104·5	170·3	+ 4·9	0	4	
	8183	·469	71·6	148·3	+14·0	19	100	
	8180	·677	134·0	143·7	−22·7	33	175	153*f*.
	8181	·712	74·1	130·3	+15·6	251	2457	
G	8184	·817	108·3	123·4	−11·0	40	192	649*c*
	8185	·792	79·3	122·8	+12·2	6	20	448*f*
	8191	·811	70·1	121·5	+19·8	7	25	240*c*
	8188	·872	90·7	114·8	+ 2·4	32	218	798*c*
	8192	·935	106·6	108·7	−13·1	7	36	386*c*
	8193	·971	82·1	98·7	+ 9·1	14	59	141*c*
	8194	·991	78·4	92·2	+12·3	0	137	128*p*
		·900	53·5	113·2	+35·3			84
		·858	64·7	111·0	+30·9			534
		·958	74·5	101·3	+16·5			117
Aug. 6			(+12·9)	(175·4)	(+ 6·2)	(482)	(3702)	(5241)
218·487		·987	289·8	246·7	+20·5			145
		·944	258·4	233·7	− 8·7			237
		·954	246·8	233·2	−19·9			249
		·873	275·8	225·7	+ 8·2			375
	8186	·962	282·8	239·6	+14·0	9	110	211*c*
	8182	·896	248·6	224·6	−15·9	8	13	255*f*
	8179	·878	235·9	218·3	−25·8	0	2	144*s*
	8189	·625	262·7	202·8	+ 0·4	29	156	
	8177	·434	291·4	189·2	+14·8	40	216	
	8187	·506	200·3	175·5	−22·0	28	216	
	8190	·095	257·2	169·9	+ 5·0	0	9	
	8183	·305	61·9	148·6	+14·3	19	98	
G	8180	·581	144·6	143·4	−22·3	27	146	
	8195	·573	129·6	137·4	−15·8	2	14	
	8181	·579	71·9	129·9	+15·6	384	2656	
	8184	·703	112·8	123·4	−11·0	48	244	591*c*
	8185	·683	76·0	121·7	+14·1	3	13	
	8191	·700	68·4	121·1	+19·5	14	61	
	8196	·729	61·6	119·9	+24·8	2	11	60*c*
	8188	·761	92·2	115·2	+ 2·4	34	207	229*f*
	854j	·792	82·0	112·0	+10·2	0	1	27*f*
	8192	·853	109·4	109·2	−12·9	4	28	193*f*
	854k	·871	75·2	103·7	+15·9	1	4	75*f*
	8193	·908	82·7	99·0	+ 9·3	22	129	303*c*

Group 8186, Aug. 5–8. A small group forming near the west limb. Group 8187, Aug. 5–11. A short lived regular spot with a few small followers.
Group 8188, Aug. 5–14. A composite spot, with a few small followers, becoming very small by Aug. 12.
Group 8189, Aug. 6–10. A small equatorial stream of normal type. Group 8190, Aug. 6–9. A small spot.
Group 8191, Aug. 6–12. A short stream *nf* Group 8181. The spots are very small after Aug. 9. Group 8192, Aug. 6–8. A regular spot just disappearing.
Group 8193, Aug. 6–16. Return or revival of Group 8166. A small regular spot followed by a short train after Aug. 7. The group has considerably diminished by Aug. 12.
Group 8194, Aug. 6–17. A regular spot preceded by a small cluster which condenses into a large irregular spot by Aug. 12, whilst other spots form in front. The irregular spot is breaking up on Aug. 16, and the companion spots have nearly disappeared. Until Aug. 11, Groups 8193 and 8194 might be considered as one long stream of spots, and in this respect the proper motion in longitude of Group 8193 should be noted.
Group 8195, Aug. 7–14. On Aug. 7 a small stream of spots *nf* Group 8180. The leader, a composite spot, develops considerably in a few days, but the train is never prominent. Group 8196, Aug. 7–12. One or two very small spots, not seen on Aug. 9 and 10; *nf* Group 8181.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
218·487	8197	·940	74·8	93·8	+16·5	6	22	130*c*
	8194	·952	79·5	91·8	+11·9	37	164	256*c*
		·799	52·8	115·4	+33·0			109
		·817	63·9	110·9	+24·8			217
G		·816	75·3	109·8	+15·6			154
		·890	56·7	103·1	+32·3			218
		·950	113·4	96·8	−19·9			224
		·984	100·6	86·4	− 9·2			129
Aug. 7			(+13·2)	(164·6)	(+ 6·3)	(717)	(4520)	(4531)
219·362		·988	247·1	230·6	−21·4			88
		·977	260·4	229·4	− 7·9			78
		·951	275·1	225·3	+ 6·8			259
		·934	238·3	215·5	−26·5			142
		·856	251·5	209·0	−12·2			108
		·797	228·4	194·9	−27·2			28
	8186	·995	284·3	238·4	+14·8	0	101	71*c*
	8182	·953	251·9	222·6	−15·1	16	111	292*c*
	8189	·782	265·6	204·0	+ 0·6	37	200	47*c*
	8198	·799	241·5	200·5	−18·2	1	3	118*c*
	8177	·601	286·6	189·4	+15·0	35	144	
	8187	·592	216·8	175·5	−22·4	23	107	
	8190	·288	266·3	169·7	+ 5·0	0	4	
	854l	·378	355·5	154·9	+28·3	0	3	
	8183	·161	30·6	148·2	+14·2	22	97	
C	8180	·507	161·3	142·9	−22·3	27	155	
	8195	·456	145·8	137·6	−15·9	13	43	
	8181	·417	66·4	129·7	+15·5	485	3109	
	8184	·572	120·5	122·9	−11·4	56	285	
	8191	·567	63·9	120·4	+19·8	21	85	
	8196	·607	55·9	119·4	+25·1	1	3	
	8188	·621	93·9	114·8	+ 2·5	26	156	
	8192	·745	114·9	109·1	−13·8	2	9	46*c*
	8197	·832	74·7	96·5	+16·2	10	32	136*c*
	8193	·816	82·9	97·9	+ 9·4	21	136	250*c*
	8194	·886	79·6	90·2	+12·1	24	122	
	8199	·990	107·7	73·7	−16·5	21	206	64*c*
		·785	52·7	105·3	+32·7			58
		·826	110·3	100·6	−12·8			69
		·915	131·5	97·5	−33·9			42
		·900	116·9	94·0	−20·8			122
		·945	101·9	83·7	− 9·0			94
Aug. 8			(+13·5)	(153·0)	(+ 6·3)	(841)	(5111)	(2112)
220·353		·980	279·0	219·1	+10·1			54
		·983	241·5	214·4	−26·4			90
C		·961	312·7	213·6	+42·7			50
		·958	256·7	211·3	−10·8			67
220·353		·871	240·3	194·3	−21·9			28
	8182	·995	255·3	221·9	−13·8	0	101	189*sf*
	8189	·914	267·1	205·5	0·0	15	174	168*c*
	8198	·897	245·7	199·2	−18·4	0	19	249*np*
	8177	·770	284·5	190·3	+15·2	15	97	75*c*
	8187	·708	229·4	175·2	−22·1	12	88	
	8190	·521	269·3	171·3	+ 5·1	0	3	
	8183	·195	319·1	147·5	+14·8	16	82	
	8180	·486	184·6	142·4	−22·4	22	147	
	8195	·362	180·3	140·0	−14·7	54	207	
	8181	·237	47·3	129·4	+15·5	432	3178	
C	8184	·418	135·7	122·7	−11·3	47	303	
	8191	·406	54·8	119·4	+19·5	14	86	
	8188	·434	97·3	114·5	+ 2·6	18	96	
	8200	·671	127·1	105·7	−18·6	1	8	
	8193	·653	83·7	99·0	+ 8·9	37	204	
	8197	·715	73·1	94·6	+16·5	3	19	
	8194	·766	79·8	89·7	+11·9	26	127	
	8199	·954	110·2	70·7	−17·1	56	328	315*c*
		·814	122·1	92·3	−21·4			72
		·876	104·9	80·9	− 9·7			115
		·878	79·7	78·1	+12·1			94
Aug. 9			(+13·9)	(139·9)	(+ 6·4)	(768)	(5267)	(1566)
221·402		·956	241·5	193·6	−24·8			57
		·877	289·5	187·4	+20·1			65
		·794	279·1	178·8	+11·1			73
		·803	255·6	177·5	− 7·5			122
		·743	291·5	173·3	+20·2			148
	8189	·987	268·5	206·4	− 0·4	21	127	213*f*
	8198	·986	249·5	203·3	−18·9	20	105	273*c*
	8177	·904	283·9	191·2	+15·3	7	28	124*c*
	8187	·838	236·9	175·6	−23·1	7	39	146*c*
	8183	·402	290·7	148·7	+14·1	6	25	
	8180	·544	207·3	141·6	−22·7	24	161	
	8195	·437	214·7	140·9	−14·8	48	260	
G	*854m*	·267	33·7	135·0	+19·1	3	20	
	8181	·174	343·0	129·2	+15·8	534	2960	
	854n	·318	5·6	124·0	+24·8	1	6	
	8184	·307	172·5	123·7	−11·3	46	244	
	8191	·268	34·3	116·9	+19·0	1	18	
	8188	·194	111·2	115·6	+ 2·3	13	60	
	8201	·406	65·0	103·6	+15·8	28	130	
	8193	·437	84·0	100·1	+ 8·3	48	232	
	8197	·528	68·6	95·3	+16·6	2	8	
	8194	·598	78·5	89·3	+12·0	27	169	
	8199	·865	113·7	70·4	−16·8	56	359	392*c*
	8202	·965	105·3	53·5	−12·9	9	47	299*c*

Group 8197, Aug. 7–10. A few spots *n* Group 8194.
Group 8198, Aug. 8–10. A small spot on Aug. 8 and 9; a pair of small regular spots on Aug. 10.
Group 8199, Aug. 8–20. The group consists at the east limb of two regular spots. The preceding spot is large and stable; the following one has broken up by Aug. 13, when one or two other small unstable spots have appeared following it. Only the leading regular spot remains on Aug. 18.
Group 8200, Aug. 9–14. One or two very small spots. The group is not seen on Aug. 10.
Group 8201, Aug. 10–18. A stream of normal type, excepting that the leader spot becomes composite and divides into two on Aug. 16, and the rear spot—at first composite—becomes regular. See Group 854 *k* for first signs of activity.
Group 8202, Aug. 10–21. A small diminishing spot with a few very small followers. The group dies out by Aug. 18, but the next day a small stream of normal type is forming near its place.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
221·402	8203	·995	73·8	40·7	+16·7	18	126	94*c*
		·905	67·3	61·0	+23·2			52
G		·949	112·9	58·4	−19·3			380
		·931	80·1	56·9	+11·5			80
Aug. 10			(+14·3)	(126·0)	(+ 6·4)	(919)	(5124)	(2518)
222·386		·957	289·5	187·1	+20·5			90
		·918	258·3	178·0	− 8·0			89
		·879	281·4	175·0	+13·0			126
		·865	271·5	172·9	+ 4·6			141
		·863	290·5	172·7	+21·0			201
		·846	298·1	169·7	+27·1			39
		·835	255·5	167·6	− 8·3			76
		·881	230·2	164·5	−30·3			93
		·906	223·1	164·1	−37·4			23
		·756	274·3	162·3	+ 7·5			176
	8177	·969	284·5	189·6	+15·6	0	22	108*s*
	8187	·925	241·7	175·1	−23·1	0	3	381*c*
	8540	·688	296·3	154·7	+22·6	0	1	
	8183	·595	285·1	149·2	+14·1	8	10	
	8542	·548	295·1	144·5	+19·0	0	1	
	8195	·604	234·7	143·5	−14·8	77	360	
	8180	·645	222·8	141·2	−22·4	29	145	
G	8181	·312	303·0	128·8	+16·0	474	2505	
	8184	·362	214·2	124·9	−11·0	43	203	
	8204	·550	197·9	123·7	−25·0	0	5	
	8196	·322	339·9	119·9	+24·0	1	6	
	8191	·233	343·5	117·0	+19·3	0	6	
	8188	·065	199·1	114·2	+ 3·0	10	62	
	8200	·415	166·4	107·2	−17·2	2	12	
	8201	·220	46·5	103·5	+15·1	20	138	
	8193	·199	82·3	101·6	+ 7·9	24	149	
	8194	·399	76·2	89·8	+11·4	36	226	
	8199	·750	119·7	70·2	−17·1	65	341	208*c*
	8202	·891	108·5	53·0	−13·2	19	48	236*c*
	8203	·955	74·6	39·4	+16·6	22	144	153*c*
		·874	118·3	60·1	−15·7			225
		·823	82·5	57·3	+ 9·9			74
		·984	112·7	37·0	−20·8			71
Aug. 11			(+14·7)	(113·0)	(+ 6·5)	(830)	(4387)	(2510)
223·413		·966	282·6	175·3	+13·8			101
		·956	272·8	172·5	+ 4·6			89
		·972	244·2	171·3	−23·1			319
G		·959	258·4	171·2	− 9·1			110
		·943	290·4	170·8	+21·4			559
		·950	319·6	168·7	+48·9			84
		·917	297·2	166·0	+27·5			248
223·413		·885	277·2	162·0	+ 9·4			140
		·838	289·4	156·3	+19·8			72
		·881	241·5	155·4	−21·3			122
		·827	300·6	153·5	+28·7			347
		·708	294·9	143·0	+22·0			71
		·742	312·1	141·3	+34·7			124
		·777	222·0	136·2	−30·0			37
	8183	·778	283·2	150·6	+14·3	2	6	58*c*
	8195	·750	244·2	143·4	−14·4	129	544	86*c*
	8180	·769	232·8	140·9	−22·8	28	137	100*p*
	8181	·508	291·3	128·9	+16·4	372	2338	
	8204	·647	217·8	125·2	−24·8	5	11	
	8184	·517	236·0	125·2	−10·9	32	190	
	8196	·419	315·6	118·0	+23·5	0	3	
G	8188	·293	256·9	115·9	+ 2·4	2	9	
	8191	·347	312·6	115·1	+19·8	1	6	
	8200	·437	200·4	108·6	−17·7	1	6	
	8193	·072	291·4	103·3	+ 8·0	17	39	
	8201	·162	341·0	102·6	+15·2	62	410	
	8194	·190	59·2	89·8	+11·9	41	275	
	8199	·609	129·8	70·2	−17·2	76	324	
	8202	·746	113·9	55·2	−12·9	11	26	164*f*
	8203	·860	74·2	39·8	+16·8	16	98	150*c*
	8205	·993	83·2	15·8	+ 7·5	159	578	252*p*
		·771	125·3	56·9	−21·7			156
		·936	117·0	35·1	−22·4			66
		·924	108·3	34·8	−14·1			48
		·955	96·0	27·5	− 3·7			201
		·965	76·2	23·7	+15·0			100
Aug. 12			(+15·0)	(99·4)	(+6·5)	(954)	(5000)	(3804)
224·462		·978	293·2	164·9	+24·0			284
		·937	280·2	155·8	+11·9			210
		·954	247·8	154·4	−18·9			133
		·912	299·9	151·2	+29·9			318
		·857	286·4	144·9	+17·4			313
		·819	301·0	138·8	+29·0			219
		·881	229·8	136·9	−30·6			93
		·792	315·1	131·3	+38·8			121
G	8195	·881	250·3	144·0	−13·8	109	794	449*c*
	8180	·879	239·8	140·7	−22·5	23	124	372*p*
	8181	·681	287·7	128·1	+16·8	311	2004	357*p*
	8184	·689	246·9	125·6	−10·6	32	203	
	8204	·764	229·6	125·5	−25·2	5	9	
	8188	·493	263·5	114·8	− 2·6	1	11	
	8200	·542	220·8	107·4	−18·0	1	2	
	8193	·316	276·6	104·0	+ 8·3	15	30	
	8201	·326	299·2	102·7	+15·4	96	454	
	8194	·126	317·0	90·6	+11·9	65	334	

Group 8203, Aug. 10–23. Return of Group 8161; third apparition. A regular spot with a small companion on Aug. 18.
Group 8204, Aug. 11–13. Two or three very small spots.
Group 8205, Aug. 12–24. A very large spot approximately regular around which small scattered spots appear. The largest of these is a small regular spot with remarkable proper motion in longitude.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
224·462	8199	·471	148·1	70·6	−17·1	72	336	
	8206	·604	131·2	57·2	−17·6	10	29	
	8202	·595	122·2	54·6	−12·8	5	33	
	8203	·726	73·0	39·3	+16·8	17	102	52*f*
	8205	·939	84·4	15·4	+ 7·5	112	707	1048*c*
G	8207	·973	116·2	13·6	−23·5	17	58	291*c*
	8208	·982	102·4	8·3	−10·8	13	67	122*p*
		·890	118·4	28·5	−21·5			229
		·864	98·8	26·9	− 4·2			166
		·929	76·1	16·6	+15·3			422
Aug. 13			(+15·4)	(85·6)	(+ 6·6)	(904)	(5297)	(5199)
225·348		·975	299·5	152·4	+30·1			137
		·945	287·3	145·7	+18·5			287
		·924	303·0	141·0	+32·9			144
		·887	311·9	133·1	+39·9			83
		·822	304·5	126·6	+31·8			44
		·849	234·8	123·7	−25·1			53
	8195	·961	253·2	145·3	−14·1	65	713	429*c*
	8180	·950	243·3	140·7	−22·8	18	167	320*f*
	8209	·834	278·7	130·8	+10·9	4	35	223*c*
	8181	·817	286·4	128·8	+17·2	236	2004	722*c*
	8184	·817	251·9	125·9	−10·7	37	205	46*nf*
	8188	·686	265·1	116·8	+ 1·5	7	23	
	8200	·643	233·4	106·4	−17·0	0	4	
	8193	·489	274·6	103·3	+ 8·0	12	38	
	8201	·488	289·7	102·2	+15·3	63	525	
C	8194	·308	288·0	91·2	+11·7	68	350	
	8199	·408	172·3	70·6	−17·1	52	259	
	8206	·493	147·7	57·9	−18·2	5	33	
	8202	·458	135·7	54·8	−12·8	6	23	
	8203	·590	70·3	38·6	+16·8	15	108	
	8205	·848	85·3	15·7	+ 7·4	95	629	622*c*
	8207	·913	119·5	14·0	−23·5	38	236	347*c*
	8208	·927	104·4	8·1	−10·7	15	94	196*c*
		·826	128·5	27·9	−26·4			64
		·743	81·6	25·7	+10·7			41
		·836	61·7	18·4	+27·1			56
		·871	110·3	16·8	−14·0			12
		·857	74·9	14·6	+16·3			156
		·939	130·5	14·1	−34·4			40
		·958	79·9	359·9	+11·5			86
Aug. 14			(+15·7)	(73·9)	(+ 6·6)	(736)	(5446)	(4108)
226·585		·987	241·0	133·2	−27·1			143
		·949	302·1	129·6	+32·5			91
		·951	309·3	129·4	+39·4			59
G		·952	240·7	123·9	−25·2			169

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
226·585		·881	295·9	119·0	+25·9			607
		·803	279·7	111·2	+11·8			96
		·821	243·9	107·7	−16·9			128
		·778	306·3	105·0	+32·0			141
	8180	·998	246·3	140·3	−23·0	29	125	855*nf*
	854*q*	·874	268·2	138·2	+ 1·7	0	6	39*oc*
	8209	·958	278·9	131·5	+10·4	10	108	} 2561*c*
	8181	·942	285·3	128·6	+16·7	205	2064	
	8184	·945	256·2	126·3	−10·7	35	214	557*sf*
	8193	·743	274·1	105·7	+ 7·5	5	9	78*c*
	8201	·705	284·9	102·2	+15·3	74	475	172*p*
	8194	·561	281·5	91·5	+12·0	37	167	
G	854*r*	·317	298·1	74·3	+15·0	2	3	
	8199	·457	209·0	70·8	−16·9	54	269	
	8206	·421	183·7	59·1	−18·1	1	11	
	8202	·338	171·9	54·7	−12·7	6	11	
	8203	·369	59·7	38·1	+17·1	25	106	
	8210	·643	141·7	31·7	−24·1	9	12	69*c*
	8205	·661	85·7	16·0	+ 7·9	99	647	517*f*
	8207	·781	126·7	14·8	−22·9	106	602	374*c*
	8208	·790	109·2	8·3	−10·7	17	102	312*f*
		·914	135·7	4·7	−36·9			83
		·849	78·9	359·0	+13·0			197
		·923	114·3	354·6	−19·4			95
		·951	124·1	352·8	−29·5			202
Aug. 15			(+16·1)	(57·5)	(+ 6·7)	(714)	(4931)	(7896)
227·354		·992	242·6	125·6	−26·0			141
		·953	311·2	119·4	+41·2			86
		·924	294·8	115·3	+25·4			602
		·927	270·4	115·2	+ 2·8			492
		·915	249·4	109·9	−15·7			478
		·878	303·2	107·3	+32·2			278
		·914	234·0	104·9	−29·0			128
		·791	312·0	94·2	+36·6			162
		·823	345·7	70·5	+59·0			74
	8209	·991	279·9	130·3	+10·7	0	144	} 2018*c*
	8181	·984	286·1	128·3	+17·0	191	1964	
G	8184	·987	258·0	126·3	−10·7	48	121	539*f*
	8193	·853	275·2	106·1	+ 7·9	3	6	435*c*
	8201	·816	284·0	102·2	+15·3	78	536	905*c*
	8194	·686	281·2	90·7	+12·5	31	136	242*c*
	8199	·552	225·3	71·4	−16·7	54	252	
	8202	·344	198·8	53·8	−12·2	3	11	
	8203	·247	41·6	37·5	+17·2	20	86	
	8210	·554	155·1	32·6	−23·6	14	47	
	8205	·524	85·8	15·6	+ 8·0	114	666	86*f*
	8207	·690	133·8	14·7	−22·8	99	707	288*c*
	8208	·679	113·7	8·2	−10·6	18	99	197*f*

Group 8206, Aug. 13–15. A small group *f* Group 8199.
Group 8207, Aug. 13–25. Revival of Group 8163. A very large composite spot followed by a broad train of spots, of which one only is large and of any permanence. The composite spot increases considerably between Aug. 14 and 15. On the same meridian as Group 8205.
Group 8208, Aug. 13–23. A regular spot which has broken up by Aug. 21. One or two very small spots occasionally appear near it.
Group 8209, Aug. 14–16. An indefinite spot *sp* Group 8181 in the same area of faculæ.
Group 8210, Aug. 15–23. A pair of small unstable spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.			G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.		°	°		°			
227·354		·853	116·8	354·0	−18·6			85	229·417	*854v*	·864	270·3	79·8	+ 3·6	2	17	95*c*
		·909	126·6	350·8	−29·2			431		8199	·832	244·6	71·6	−16·7	39	220	240*c*
		·952	115·1	339·7	−21·4			169		8203	·338	304·8	37·0	+17·6	17	89	
G		·952	55·5	334·7	+34·8			109		8211	·415	334·9	31·6	+28·7	1	5	
		·964	62·4	331·5	+28·3			146		8210	·543	199·0	31·2	−24·1	5	10	
		·969	81·0	331·0	+10·3			147		8205	·084	76·3	15·4	+ 8·0	101	639	
Aug. 16			(+16·4)	(47·3)	(+ 6·7)	(673)	(4775)	(8238)		8207	·511	168·5	13·8	−23·1	133	986	
									C	8208	·353	146·9	8·8	−10·4	13	77	
228·447		·976	293·0	111·7	+23·8			376		8213	·928	78·1	311·2	+13·6	94	563	602*c*
		·967	276·7	108·7	+ 8·2			367			·759	141·5	346·9	−30·7			51
		·968	251·5	105·5	−16·0			165			·791	58·5	330·0	+28·8			63
		·948	302·3	104·9	+32·7			155			·815	82·0	325·2	+10·4			115
		·912	277·3	99·2	+ 9·4			283			·887	115·7	322·6	−19·0			83
		·886	263·3	94·4	− 2·7			42			·845	68·8	322·5	+21·5			73
		·895	308·8	94·2	+37·5			62			·944	107·3	312·2	−13·8			227
		·891	243·4	90·6	−19·9			85			·963	114·5	310·1	−21·4			194
		·858	255·1	89·8	− 9·1			54	Aug. 18			(+17·1)	(20·1)	(+ 6·8)	(444)	(2876)	(2749)
	8201	·931	283·9	102·3	+15·4	61	512	414*c*									
	8194	·839	281·1	90·4	+13·0	9	32	309*c*	230·414		·976	280·2	85·1	+11·4			200
	8199	·709	238·7	71·9	−16·3	42	263				·953	271·7	79·3	+ 3·7			187
	854s	·574	217·3	54·7	−20·8	0	2				·950	257·4	76·8	− 9·6			100
	8202	·479	227·2	53·9	−12·6	1	2				·873	238·8	60·9	−22·9			218
	8203	·202	340·3	37·0	+17·7	20	83			8199	·928	248·4	71·2	−17·1	37	225	283*f*
	8210	·506	179·7	32·7	−23·4	5	19			8202	·807	244·6	56·0	−15·8	3	8	134*c*
C	8211	·377	1·8	32·1	+28·9	5	24			8203	·509	293·2	36·2	+17·6	16	79	
	8205	·303	84·3	15·2	+ 8·2	112	662			*854w*	·659	327·6	34·2	+39·9	1	3	
	8207	·575	149·0	14·2	−23·0	129	882			8210	·631	214·6	30·1	−24·9	17	51	
	8212	·398	65·7	10·9	+15·7	0	2			8211	·515	318·4	29·8	+29·0	0	1	
	8208	·502	125·3	8·4	−10·6	11	103			8205	·155	276·8	15·8	+ 7·9	106	538	
	854t	·874	61·3	332·6	+28·3	0	2	83*c*	G	8207	·513	192·0	13·4	−23·2	143	987	
	854u	·916	84·9	326·2	+ 7·4	0	5	69*c*		8212	·166	336·1	10·9	+15·6	0	1	
	8213	·985	76·7	311·8	+14·2	51	448	207*c*		8208	·301	185·2	8·5	−10·4	16	74	
		·824	134·8	350·3	−30·5			54		*854x*	·143	106·3	359·0	+ 4·5	0	2	
		·917	139·4	341·9	−40·0			180		*854y*	·319	144·8	356·2	− 8·3	0	2	
		·863	119·2	339·3	−20·9			87		8213	·815	78·3	311·9	+13·6	106	542	1208*c*
		·915	79·3	326·1	+12·5			82		8214	·982	77·6	286·9	+13·4	8	26	124*n*
		·926	53·5	325·9	+36·2			43			·863	114·8	311·9	−17·4			389
		·939	68·8	322·2	+22·2			56			·928	124·4	306·6	−28·3			84
		·964	111·9	322·1	−18·9			41			·891	68·8	303·5	+22·0			74
		·981	102·7	316·0	−11·0			71			·949	115·0	299·9	−21·1			96
Aug. 17			(+16·7)	(32·9)	(+ 6·8)	(446)	(3041)	(3285)			·953	107·4	297·3	−14·2			227
									Aug. 19			(+17·4)	(6·9)	(+ 6·9)	(453)	(2539)	(3324)
229·417		·979	278·3	99·0	+ 9·5			182									
		·958	305·5	94·2	+35·9			105	231·408		·911	280·4	60·1	+12·3			119
		·928	279·7	88·8	+11·6			267			·930	242·2	56·7	−22·7			466
C		·960	243·2	88·8	−23·3			79			·928	208·0	36·5	−50·1			63
		·939	256·1	87·9	−10·5			72	G	8199	·985	251·3	70·9	−17·0	25	178	393*f*
	8201	·987	284·1	102·1	+15·0	39	270	301*c*		8202	·923	250·1	57·7	−15·3	25	125	373*c*

Group 8211, Aug. 17–19. A very small group.
Group 8212, Aug. 17–20. A minute spot *n* Group 8205; not seen on Aug. 18.
Group 8213, Aug. 17–29. A large regular spot which becomes elongated and then double as it is diminishing rapidly. At first it is followed by a long train of very small spots, but these have disappeared by Aug. 24, when for three days it is preceded by a small cluster.
Group 8214, Aug. 19–21. Return of Group 8169. A very small spot.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.			G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
231·408	8203	·676	288·7	35·8	+17·7	12	74		233·439	8215	·922	112·4	263·8	−17·4	56	495	556*c*
	8210	·740	227·5	30·5	−24·4	18	67	155*c*		8216	·950	75·2	254·1	+16·2	3	21	202*c*
	8205	·369	275·0	15·5	+ 8·2	70	537				·849	112·0	272·7	−14·5			137
	8207	·585	212·6	13·7	−22·9	109	802		G		·912	81·2	260·6	+10·8			133
	8212	·320	300·1	10·4	+15·9	0	2				·941	70·0	255·7	+21·1			168
	8208	·393	221·3	9·0	−10·4	14	65				·976	100·4	251·1	− 8·5			59
	8213	·649	78·2	313·3	+12·9	69	449	294*c*	Aug. 22			(+18·4)	(326·9)	(+ 7·0)	(350)	(2433)	(2455)
	8214	·916	78·3	286·7	+13·5	1	12	508*c*									
G		·770	122·5	310·5	−19·4			139									
		·828	129·6	308·2	−27·1			130	234·566		·968	263·0	26·4	− 5·0			73
		·764	111·9	307·6	−11·8			96			·929	254·3	17·7	−11·7			70
		·893	135·3	303·9	−35·0			103			·892	298·1	14·9	+28·2			34
		·883	114·9	296·6	−18·1			161			·858	287·1	11·5	+18·3			66
		·965	128·7	287·9	−34·5			158		8203	·990	286·3	35·4	+17·1	7	45	86c*n*
		·954	86·0	281·0	+ 5·9			103		8210	·990	244·3	29·6	−24·1	0	48	129*c*
		·980	105·3	277·7	−13·4			258		8205	·890	275·4	15·2	+ 8·0	104	420	779*c*
Aug. 20			(+17·7)	(353·8)	(+ 6·9)	(343)	(2311)	(3519)		8207	·912	240·3	11·5	−23·4	96	540	825*c*
										8208	·858	252·7	8·3	−11·0	0	10	81*c*
										8217	·540	234·5	338·6	−11·9	2	6	
232·362		·976	244·3	54·1	−23·1			101	G	8213	·106	349·1	313·2	+13·0	72	446	
		·791	302·9	31·1	+29·9			45		8215	·810	116·6	263·1	−16·7	87	525	512*c*
	8202	·982	252·4	57·4	−15·7	16	179	259*c*		8218	·764	81·9	261·9	+10·7	2	2	61*f*
	8203	·812	286·7	35·6	+17·5	12	83	58*c*		8216	·868	75·3	251·3	+16·2	4	20	133*c*
	8210	·850	236·0	31·5	−24·0	19	102	171*c*			·863	67·7	252·3	+22·7			72
	8205	·559	274·3	15·3	+ 8·1	81	454	33*p*			·933	101·4	244·8	− 8·0			100
	8207	·687	224·3	12·6	−23·4	88	919				·971	115·5	240·5	−22·7			107
	8208	·536	237·5	8·5	−10·5	7	25				·967	84·1	230·3	+ 7·5			110
C	8213	·469	76·0	313·5	+12·6	94	504				·983	103·9	234·7	−12·2			223
	8214	·809	78·4	286·9	+13·4	2	3	37*c*	Aug. 23			(+18·7)	(312·0)	(+ 7·0)	(374)	(2062)	(4235)
	8215	·984	109·6	264·7	−17·7	33	414	142*c*									
	8216	·992	75·0	257·1	+15·7	0	15	90*c*									
		·868	87·8	280·8	+ 5·4			39	235·232		·910	255·1	6·3	−10·4			175
		·902	76·2	276·2	+15·3			219		8205	·949	275·7	15·2	+ 7·6	102	414	782*c*
		·928	106·2	275·6	−12·2			253		8207	·962	242·7	12·0	−23·7	151	585	740*sf*
		·980	80·0	261·9	+11·1			111		8213	·207	300·8	313·7	+13·0	63	388	
		·983	70·2	260·4	+20·6			88	K	8215	·727	120·7	262·7	−16·5	124	700	480*f*
Aug. 21			(+18·0)	(341·2)	(+ 6·9)	(352)	(2698)	(1646)		8216	·767	74·3	253·0	+16·5	0	6	
											·894	107·7	242·7	−12·4			107
											·918	72·9	235·8	+18·4			114
233·439		·900	296·9	31·1	+27·2			59			·961	106·5	231·9	−13·7			225
		·883	261·9	27·8	− 3·7			105	Aug. 24			(+18·9)	(303·2)	(+7·0)	(440)	(2093)	(2623)
		·823	284·4	22·6	+15·9			101									
		·696	286·8	10·8	+16·7			50									
	8203	·924	286·0	35·2	+17·4	15	67	152*c*	236·436		·976	275·6	5·1	+ 6·9			277
	8210	·924	239·5	27·9	−24·7	8	25	305*c*			·983	257·5	4·8	−10·8			162
G	8205	·750	274·4	15·7	+ 8·0	100	557	257*c*			·971	284·7	4·5	+15·9			98
	8207	·808	234·4	12·2	−23·2	94	750	171*c*			·942	249·9	354·2	−16·2			90
	8208	·730	248·3	10·4	−10·6	0	4		C		·907	281·9	352·1	+13·8			68
	8217	·372	213·6	338·9	−11·1	1	4				·908	230·9	342·4	−31·0			217
	8213	·258	65·4	313·0	+13·0	73	510			8207	·999	243·7	10·7	−25·7	0	171	225*f*

Group 8215, Aug. 21–Sept. 2. A stream led by a large composite spot, approximately regular by Aug. 26 but beginning to contract. The train has nearly disappeared by Aug. 31.
Group 8216, Aug. 21–Sept. 1. Revival in region of Group 8170. At first a wide pair of small spots; later, an indefinite spot with occasional very small companions.
Group 8217, Aug. 22–23. A small spot on Aug. 22; a pair on the next day.
Group 8218, Aug. 23–26. A very small spot seen only on Aug. 23 and 26.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
236·436	8213	·445	285·3	313·4	+13·1	59	373	
	8215	·551	136·5	264·0	−17·0	91	568	
	8216	·563	71·1	253·7	+16·4	5	20	
	8219	·851	109·7	232·3	−12·7	7	35	381*c*
	8220	·935	108·1	221·1	−14·1	0	6	252*c*
	8221	·977	91·1	209·9	+ 0·5	16	110	106*c*
C		·745	121·3	245·6	−17·4			109
		·787	82·6	235·1	+10·2			54
		·796	75·0	234·3	+16·2			156
		·886	119·9	231·4	−22·3			173
		·855	88·9	228·5	+ 4·7			129
		·935	73·6	217·2	+17·8			31
		·975	112·8	214·1	−20·3			135
Aug. 25			(+19·3)	(287·3)	(+ 7·1)	(178)	(1283)	(2663)
237·505		·967	282·8	349·4	+14·1			50
		·966	235·0	340·6	−31·1			80
		·930	255·0	339·2	−11·0			50
		·941	245·5	338·8	−20·2			45
		·919	226·4	327·8	−35·4			53
		·748	289·4	321·3	+19·2			39
		·736	239·4	314·5	−16·7			31
	8223	·793	273·8	325·9	+ 7·4	13	30	64*n*
	8213	·641	281·8	313·1	+13·0	44	303	
	8222	·182	0·0	273·2	+17·6	30	177	
G	8215	·436	159·0	263·8	−16·9	80	531	
	8218	·177	67·4	263·7	+10·9	0	3	
	8216	·338	61·8	255·2	+15·9	10	27	
	8224	·525	72·9	242·0	+15·0	10	18	
	8219	·682	115·2	234·4	−11·3	1	5	
	8220	·814	113·0	222·8	−14·1	3	5	43*c*
	8221	·889	93·0	210·8	+ 0·7	11	105	74*f*
		·900	112·8	213·3	−16·9			72
		·964	112·4	202·6	−19·3			155
		·958	73·4	198·8	+17·9			98
Aug. 26			(+19·6)	(273·2)	(+ 7·1)	(202)	(1204)	(854)
238·340		·973	232·0	330·3	−34·4			53
		·935	246·1	326·9	−19·3			70
		·881	285·0	324·5	+16·5			146
		·875	303·3	322·0	+32·4			98
		·907	236·7	319·6	−26·1			66
C		·823	295·3	317·0	+24·8			93
		·834	244·6	313·8	−16·5			321
		·847	227·6	308·3	−29·9			54
		·674	283·2	304·6	+14·1			46
	8223	·893	275·7	325·8	+ 8·3	2	14	138*c*
	8213	·778	281·2	313·6	+13·1	33	303	203*c*

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
238·340	8222	·260	314·6	273·3	+17·4	52	168	
	8215	·406	185·8	264·6	−16·6	79	496	
	855a	·470	182·4	263·4	−20·8	1	5	
	8216	·180	32·4	256·5	+15·8	15	39	
	8224	·379	67·7	241·0	+14·8	11	32	
	8219	·558	123·0	233·8	−11·3	1	4	
C	8221	·780	95·2	211·5	+ 0·4	11	98	129*f*
	8225	·900	120·0	204·5	−23·1	0	10	113*s*
	8226	·964	85·9	187·4	+ 5·8	2	26	407*f*
		·702	122·7	224·3	−16·7			32
		·818	116·7	212·5	−17·1			91
		·910	112·5	200·9	−17·1			173
		·889	73·8	198·8	+17·7			168
		·961	72·5	187·0	+18·7			149
Aug. 27			(+19·8)	(262·2)	(+ 7·1)	(207)	(1195)	(2550)
239·360		·982	276·3	328·3	+ 7·5			73
		·947	257·1	318·0	− 9·8			75
		·921	294·3	316·5	+25·1			39
		·920	245·6	311·0	−19·2			301
		·795	283·6	301·6	+15·0			162
		·790	245·1	296·3	−14·7			84
	8213	·900	280·8	313·5	+12·7	22	270	308*c*
	8222	·438	295·7	273·0	+17·4	36	158	
	8215	·480	213·3	264·6	−16·8	78	448	
	8216	·202	316·0	257·0	+15·3	10	20	
G	*855b*	·430	186·9	251·8	−18·0	0	6	
	8224	·196	45·7	240·4	+14·8	19	44	
	8219	·418	141·1	233·2	−12·1	1	5	
	8221	·606	98·5	212·0	+ 0·6	18	98	
	8225	·794	127·3	205·3	−23·7	11	29	64*c*
	8226	·878	87·1	187·1	+ 6·0	11	26	405*f*
		·801	118·2	201·1	−17·5			65
		·889	123·3	193·7	−25·2			79
		·866	71·1	188·3	+19·9			154
		·889	78·3	185·3	+13·6			107
		·948	60·3	176·4	+30·3			48
		·950	70·0	175·8	+21·1			303
Aug. 28			(+20·1)	(248·7)	(+ 7·1)	(206)	(1104)	(2267)
240·421		·965	249·6	306·0	−17·4			73
		·917	284·8	302·0	+16·4			470
		·933	238·0	296·5	−26·4			69
		·931	229·5	292·7	−33·6			38
C		·881	248·2	292·5	−15·3			53
		·752	244·2	278·8	−13·9			21
		·836	222·2	276·6	−33·0			25
	8213	·981	281·6	314·6	−12·7	18	287	234*c*

Group 8219, Aug. 25–30. A wide area of disturbance shown by faculæ and a few small scattered spots.
Group 8220, Aug. 25–26. Probable return of Group 8182. A very small spot in faculæ *f* Group 8219.
Group 8221, Aug. 25–Sept. 5. Return of Group 8189. A diminishing regular spot on the solar equator.
Group 8222, Aug. 26–Sept. 1. Revival in area of Group 8172. A short stream of spots appearing suddenly when on the central meridian, and beginning to disappear almost as quickly. A revival has taken place, however, on Aug. 31. The axis of the stream is considerably inclined to the equator.
Group 8223, Aug. 26–27. A pair of small spots.
Group 8224, Aug. 26–Sept. 3. Revival of Group 8186. Generally a pair of small spots. Small companions appear on Aug. 30 and Sept. 2.
Group 8225, Aug. 27–Sept. 6. A group consisting of a few small unstable spots. It appears as a short stream after Sept. 1.
Group 8226, Aug. 27–Sept. 3. Two or three very small spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.			G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
240·421	8222	·632	289·6	273·3	+17·9	12	75		242·377	8225	·522	170·5	203·4	−23·7	1	6	
	8215	·610	230·7	264·1	−16·4	55	503			8226	·361	93·5	187·7	+ 5·5	5	9	
	8216	·405	292·1	257·5	+15·4	6	27			8228	·907	110·2	147·3	−14·9	61	467	488*c*
	8224	·178	327·0	240·5	+15·6	6	28			8230	·985	101·9	130·6	−10·3	28	113	114*f*
	8219	·369	166·4	229·6	−13·7	0	4			8231	·987	74·0	126·9	+16·7	18	130	948*c*
	8221	·398	105·6	212·3	+ 0·5	9	61				·763	116·2	163·9	−14·6			47
C	8225	·675	134·8	203·7	−22·1	1	10		C		·765	61·8	160·4	+26·1			52
	8226	·732	89·2	187·6	+ 5·5	8	18	91*f*			·899	60·1	144·9	+29·9			88
	8227	·961	65·3	159·3	+25·7	0	7	110*c*			·907	69·9	143·1	+21·2			46
		·904	121·8	177·1	−24·7			52			·957	117·0	141·0	−23·1			493
		·874	69·4	173·5	+21·4			102			·935	79·9	138·9	+11·9			542
		·904	84·0	169·6	+ 8·5			32			·976	52·1	129·5	+38·4			101
		·962	106·4	163·2	−13·6			119	Aug. 31			(+20·9)	(208·8)	(+ 7·2)	(243)	(1499)	(3816)
Aug. 29			(+20·4)	(234·7)	(+ 7·2)	(115)	(1020)	(1489)									
									243·361		·984	254·9	273·1	−13·3			77
											·854	240·9	248·3	−20·2			116
241·357		·984	286·8	303·5	+17·7			551			·786	287·7	247·6	+18·3			90
		·968	252·8	294·9	−14·6			110			·706	242·3	235·7	−13·6			179
		·965	239·6	291·0	−26·8			85		8222	·964	284·9	271·5	+16·2	37	422	495*c*
		·866	272·4	282·5	+ 5·7			94		8215	·952	249·8	264·4	−16·7	37	377	573*f*
		·869	250·8	279·4	−12·7			84		8216	·889	283·3	259·2	+15·1	11	63	332*c*
	8222	·799	288·4	275·4	+19·0	6	27	322*c*		8232	·803	254·2	246·9	− 8·1	8	27	60*c*
	8215	·735	239·7	263·6	−16·4	77	529	165*c*		8224	·697	283·2	240·1	+14·3	6	20	
	8216	·586	286·5	257·8	+15·5	5	42			8229	·551	222·6	218·7	−17·2	13	72	
	8224	·323	297·6	239·5	+15·5	10	74			8221	·314	248·2	212·7	+ 0·2	5	12	
C	8219	·355	210·6	232·8	−10·7	0	5		C	8225	·518	191·7	202·3	−23·2	3	24	
	8221	·210	122·9	212·2	+ 0·6	6	69			8226	·167	91·3	186·1	+ 6·9	2	9	
	8225	·567	148·8	203·9	−22·1	0	4			8228	·789	115·1	148·4	−14·7	58	489	542*c*
	8226	·588	88·9	186·2	+ 6·5	4	13			*8556*	·920	121·7	135·9	−25·4	3	14	335*c*
	8227	·890	65·0	159·2	+25·4	0	7	299*c*		8230	·923	104·4	130·7	−10·2	16	106	242*c*
	8228	·976	107·0	147·6	−14·8	59	599	347*c*		8231	·920	74·4	128·0	+17·1	16	91	89*c*
		·870	128·4	171·8	−28·2			57			·840	123·9	146·6	−23·3			112
		·886	111·0	163·7	−14·8			125			·800	57·6	144·7	+30·0			143
		·951	63·0	149·1	+27·9			259			·909	131·0	141·5	−32·6			60
		·981	114·0	147·7	−21·8			113			·834	80·3	138·8	+12·1			1059
		·984	77·2	141·5	+13·8			595			·869	67·9	135·3	+22·7			94
Aug. 30			(+20·6)	(222·3)	(+ 7·2)	(167)	(1369)	(3206)			·937	51·4	126·7	+38·5			94
											·945	91·0	125·1	+ 1·5			125
											·953	63·8	122·2	+27·1			461
									Sept. 1			(+21·2)	(195·8)	(+ 7·2)	(215)	(1726)	(5278)
242·377		·956	273·3	282·0	+ 5·3			84									
		·950	253·9	277·9	−12·8			141									
		·815	276·9	263·8	+ 9·8			48	244·475		·979	284·5	260·5	+15·6			175
		·780	233·1	251·1	−22·6			107			·900	265·3	244·7	− 1·0			48
C	8222	·895	285·3	273·0	+16·8	29	158	362*c*			·856	248·4	236·1	−14·3			120
	8215	·869	245·9	264·1	−16·7	51	407	122*c*			·853	234·8	231·1	−24·9			68
	8216	·753	285·1	257·8	+16·1	14	89	33*c*	G	8215	·998	252·5	264·6	−16·7	37	415	247*sf*
	8224	·514	287·4	239·2	+15·0	9	30			8232	·922	257·5	246·4	− 8·5	3	8	70*p*
	8229	·440	201·5	218·5	−16·9	18	47			8224	·878	280·8	243·1	+12·9	4	19	245*n*
	8221	·137	209·4	212·6	+ 0·3	9	43			8229	·711	237·2	219·6	−17·1	21	107	43*c*

Group 8227, Aug. 29–30. A very small spot.
Group 8228, Aug. 30–Sept. 10. A stream of normal type. The following spot has completely broken up by Sept. 6.
Group 8229, Aug. 31–Sept. 5. A pair of small spots developing into a long sinuous stream. After Sept. 2, two of the components grow considerably.
Group 8230, Aug. 31–Sept. 12. Return of Group 8184. A stable regular spot slowly diminishing.
Group 8231, Aug. 31–Sept. 9. Return of Group 8181. An ill-formed spot followed by some very small companions which have multiplied by Sept. 5. The group, however, is unstable and is disappearing by the following day. Extensive areas of faculæ accompany the group.
Group 8232, Sept. 1–2. Two or three very small spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
244·475	8221	·539	258·4	212·8	− 0·1	4	13	
	8225	·611	216·4	204·2	−22·7	6	28	
	8226	·125	256·0	188·0	+ 5·4	0	2	
	8228	·632	124·2	148·5	−14·7	66	419	
	8233	·633	74·9	142·0	+15·0	1	10	
	8230	·797	108·8	131·2	−10·2	12	107	
	8231	·797	73·8	128·1	+17 2	15	100	218*f*
	8234	·892	104·8	120·3	− 9·7	0	4	34*n*
G	8235	·968	104·8	108·0	−12·3	0	22	244*n*
		·821	126·0	134·6	−24·0			163
		·850	94·4	123·4	+ 0·1			58
		·904	112·0	120·5	−16·3			85
		·872	64·9	120·4	+25·4			441
		·921	76·9	113·2	+14·8			244
		·935	62·0	111·1	+28·7			195
		·944	50·3	110·6	+39·7			71
Sept. 2			(+21·4)	(181·1)	(+ 7·2)	(169)	(1254)	(2769)
245·377		·980	259·1	246·0	− 9·1			187
		·928	264·3	236·5	− 2·5			82
		·924	252·5	233·8	−13·1			510
		·928	239·3	230·7	−25·0			214
		·858	274·9	228·6	+ 8·0			151
		·853	287·4	228·1	+18·6			35
	8224	·957	282·3	243·2	+13·8	0	3	797*nf*
	8229	·825	243·4	219·6	−17·1	67	203	247*c*
	8221	·694	262·5	212·5	− 0·1	0	1	
	8236	·654	269·9	210·1	+ 5·4	1	5	
	8225	·720	225·9	203·6	−24·1	24	60	
	8226	·313	269·5	187·5	+ 6·6	0	2	
	8228	·507	136·5	148·1	−14·8	60	381	
G	8237	·525	85·1	137·4	+ 8·7	0	2	
	8230	·670	113·9	130·9	−10·1	15	110	
	8231	·651	71·1	129·1	+17·7	11	103	
	*8*55*d*	·748	64·8	121·8	+23·5	0	2	71*c*
	8234	·779	108·5	120·9	− 9·6	3	9	
	8235	·898	108·0	108·3	−12·7	2	9	376*c*
	8238	·919	75·5	101·6	+16·2	0	3	330*c*
		·825	114·9	118·3	−15·9			60
		·825	62·3	114·5	+26·8			320
		·834	77·3	112·2	+14·5			646
		·905	59·7	104·5	+30·4			211
		·955	115·5	101·4	−21·7			103
		·964	77·3	93·6	+14·1			231
Sept. 3			(+21·7)	(169·2)	(+ 7·2)	(183)	(893)	(4571)
246·409		·981	256·1	232·3	−12·1			209
		·958	285·1	230·0	+16·5			215

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
246·409		·949	273·4	227·4	+ 5·5			57
		·969	235·3	223·7	−31·0			155
		·833	244·4	207·0	−16·6			79
	8229	·936	249·0	221·2	−16·7	88	458	865*c*
	8221	·847	265·7	213·0	+ 0·2	0	5	75*c*
	8236	·819	271·9	210·7	+ 5·7	7	29	109*c*
	8225	·833	234·3	203·3	−24·3	21	66	385*c*
	8228	·394	161·3	148·1	−14·7	55	315	
	*8*55*e*	·546	156·9	142·2	−23·0	1	2	
	8233	·266	62·4	141·6	+14·1	1	8	
G	8230	·502	125·0	131·0	−10·2	14	106	
	8231	·472	64·9	129·0	+18·0	17	115	
	8235	·799	112·7	106·6	−13·3	5	12	272*c*
	8238	·800	75·4	102·2	+16·0	37	115	253*c*
		·858	119·9	103·0	−21·0			85
		·814	65·2	101·7	+24·3			71
		·864	55·3	97·5	+33·5			164
		·907	104·0	92·7	− 9·4			209
		·892	80·4	91·9	+11·8			915
		·962	119·0	87·3	−25·3			252
		·936	71·4	85·2	+19·9			95
Sept. 4			(+21·9)	(155·6)	(+ 7·2)	(246)	(1231)	(4465)
247·361		·902	248·5	203·5	−15·8			174
		·793	289·7	195·4	+19·9			171
	8229	·987	251·7	220·4	−16·6	71	258	322*c*
	8221	·942	267·1	212·9	− 0·2	0	3	91*f*
	8236	·938	272·4	212·8	+ 4·7	0	3	190*f*
	8225	·923	239·5	203·7	−24·5	13	43	371*c*
	8228	·385	197·1	149·7	−14·4	48	257	
	*8*55*f*	·352	353·5	145·6	+27·5	0	1	
	8233	·116	18·2	140·8	+13·6	0	7	
	8237	·099	61·5	138·0	+ 9·9	0	9	
G	8230	·357	145·2	131·1	− 9·9	16	104	
	8231	·284	46·9	130·4	+18·2	19	153	
	8235	·649	121·4	108·4	−13·8	10	41	
	8238	·639	73·7	103·6	+15·9	34	148	
	8239	·970	109·2	70·4	−16·5	16	125	263*s*
		·756	81·6	93·6	+11·0			158
		·798	70·1	90·1	+20·2			104
		·882	123·1	88·8	−24·7			142
		·879	83·1	81·0	+ 9·5			162
		·899	71·4	78·3	+19·8			224
Sept. 5			(+22·1)	(143·0)	(+ 7·2)	(227)	(1152)	(2372)
248·560		·986	274·2	207·8	+ 5·3			178
		·970	250·6	199·8	−16·8			73
C		·925	289·4	195·7	+20·6			116

Group 8233, Sept. 2–6. A few scattered unstable spots *p* Group 8231. None are seen on Sept. 3.
Group 8234, Sept. 2–3. A pair of small spots between Groups 8230 and 8235.
Group 8235, Sept. 2–8. Revival in region of Group 8192. An unstable group of small spots, first as a cluster and then as a stream. The front part is alone represented on Sept. 8.
Group 8236, Sept. 3–5. A pair of spots *n* Group 8221.
Group 8237, Sept. 3–8. One or two very small spots *sp* Group 8231. None are seen on Sept. 4.
Group 8238, Sept. 3–13. A long irregular stream of small spots in continual change. A revival rather than a return of Group 8201.
Group 8239, Sept. 5–14. Return of Group 8199. A regular spot, stable in position but disappearing rapidly after Sept. 12.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
			°	°	°			
1917.								
248·560		·892	274·4	190·6	+ 7·2			196
		·833	290·0	183·7	+20·6			90
		·818	269·7	182·1	+ 3·9			114
	8225	·993	245·1	206·4	−23·6	0	24	217*f*
	8228	·529	227·4	150·8	−14·3	40	188	
	8233	·333	291·6	145·7	+13·8	0	9	
	8237	·228	285·0	140·1	+10·4	0	11	
	855g	·450	339·9	137·7	+32·0	2	2	
	8230	·305	192·0	130·9	−10·2	16	88	
	8231	·199	356·7	127·9	+18·4	5	69	
C	8240	·357	30·0	115·9	+25·0	0	2	
	8241	·220	90·2	114·5	+ 6·9	2	6	
	8235	·478	139·2	108·5	−14·4	4	14	
	8238	·429	65·8	103·2	+16·7	27	133	
	8239	·880	113·8	70·1	−17·0	14	123	373*f*
	8242	·926	80·6	58·7	+11·4	3	5	134*f*
		·790	131·3	86·0	−26·1			63
		·965	117·4	57·7	−24·0			126
		·962	69·4	51·8	+21·7			50
Sept. 6			(+22·4)	(127·2)	(+ 7·2)	(113)	(674)	(1730)
249·391		·953	289·5	189·8	+20·8			99
		·970	245·0	187·5	−22·0			54
		·937	274·4	186·1	+ 6·6			375
		·872	291·3	177·2	+22·1			264
		·778	296·2	166·3	+24·8			316
	8228	·659	239·2	151·7	−13·8	39	202	
	8237	·376	277·9	138·3	+ 9·7	1	7	
	8230	·384	220·5	130·8	− 9·9	16	92	
C	8231	·287	314·2	128·7	+18·6	5	43	
	8240	·284	357·6	116·9	+23·7	0	5	
	8241	·010	61·2	115·7	+ 7·6	6	14	
	8235	·341	160·0	109·4	−11·3	1	11	
	8238	·267	49·3	104·0	+17·1	19	104	
	855h	·655	93·0	75·4	+ 3·6	1	3	
	8239	·793	118·0	69·4	−16·8	14	122	311*f*
	8242	·838	81·4	58·8	+11·2	0	8	133*f*
	8243	·985	81·4	35·3	+ 9·7	34	183	158*c*
		·922	118·6	55·0	−22·7			284
		·935	73·2	45·9	+18·3			154
Sept. 7			(+22·6)	(116·2)	(+ 7·3)	(136)	(794)	(2148)
250·418		·970	273·0	178·8	+ 4·7			115
		·965	287·1	178·7	+18·3			147
G		·901	273·9	167·2	+ 6·7			54
		·892	283·7	166·4	+15·5			91

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
			°	°	°			
1917.								
250·418		·892	294·0	166·0	+24·7			618
		·933	236·6	163·9	−27·6			85
		·902	249·2	163·3	−15·2			41
		·871	235·6	154·9	−25·1			42
		·802	298·0	154·8	+26·7			285
		·702	281·7	147·4	+13·4			73
		·805	233·2	147·2	−23·7			175
		·704	303·1	144·4	+28·1			43
		·719	234·1	140·5	−19·2			19
	8228	·811	246·7	152·5	−14·0	26	170	216*c*
	8237	·589	275·8	138·9	+ 9·3	1	11	
	8230	·550	238·3	130·9	−10·4	14	80	
	8231	·445	298·2	127·0	+18·8	1	13	
	8235	·347	211·0	113·0	−10·1	0	1	
G	8238	·182	343·8	105·6	+17·4	24	49	
	855i	·217	52·8	92·4	+14·7	0	6	
	8239	·659	126·6	69·1	−17·0	17	108	58*f*
	855j	·675	108·4	62·6	− 6·7	0	3	
	855k	·831	70·6	46·2	+20·1	0	2	140*s*
	8243	·899	82·4	38·0	+10·0	18	58	284*c*
	8244	·997	82·7	16·4	+ 7·8	12	55	43*c*
		·842	123·2	53·0	−22·7			182
		·958	118·6	35·0	−24·7			277
		·925	72·0	34·0	+19·4			203
		·946	97·5	32·6	− 4·6			158
		·957	85·3	29·1	+ 6·6			213
		·966	63·5	26·0	+27·4			89
		·974	78·6	24·7	+12·7			204
Sept. 8			(+22·8)	(102·6)	(+ 7·3)	(113)	(556)	(3855)
251·231		·956	285·1	165·9	+16·5			49
		·953	295·8	165·5	+26·7			218
		·915	239·0	151·3	−24·6			73
		·848	300·2	148·9	+29·3			148
		·822	284·4	147·5	+15·9			156
		·812	246·0	141·8	−14·7			247
		·830	231·0	137·9	−26·5			64
		·753	312·8	134·9	+36·1			71
	8228	·906	250·7	153·5	−14·0	25	150	146*c*
	8230	·678	246·2	130·8	−10·3	17	67	
D	8231	·619	294·4	128·8	+20·6	0	5	
	8238	·299	308·5	106·1	+17·7	14	38	
	8245	·318	220·4	103·8	− 6·9	10	27	
	8239	·553	136·8	68·7	−17·1	17	106	
	8242	·608	80·8	54·3	+11·3	9	25	
	8243	·811	82·8	37·3	+10·1	15	32	100*c*
	8244	·972	83·4	14·9	+ 8·1	27	144	179*c*
		·857	68·6	32·8	+22·0			54

Group 8240, Sept. 6–7. A small faint spot on Sept. 6; two on Sept. 7.
Group 8241, Sept. 6–7. A small spot on Sept. 6; a pair on the following day.
Group 8242, Sept. 6–15. A very small spot not seen on Sept. 8. The group then reappears as two small clusters until Sept. 14, when a small double spot marks the leading cluster, whilst the following cluster is represented by a tiny spot on Sept. 15.
Group 8243, Sept. 7–18. A stream of spots in continual change.
Group 8244, Sept. 8–18. Return of Group 8205. A regular spot rapidly disappearing after Sept. 16. A few small distant companions appear from Sept. 10–14.
Group 8245, Sept. 9–10. A small spot followed by a cluster which has disappeared the next day.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
251·231		·922	120·0	31·1	−24·1			157
		·922	76·4	23·9	+15·3			109
D		·924	62·7	23·9	+27·9			52
Sept. 9			(+23·0)	(91·9)	(+ 7·2)	(134)	(594)	(1823)
252·367		·964	296·6	152·9	+27·5			194
		·907	281·6	142·7	+13·6			1239
		·947	240·3	142·0	−25·1			136
		·921	250·6	140·6	−14·7			197
		·886	302·3	138·6	+31·9			154
		·777	291·5	127·5	+21·1			235
		·758	279·0	126·5	+11·5			46
		·873	227·2	125·6	−31·7			34
		·709	307·7	117·7	+31·2			59
	8228	·984	254·3	154·1	−13·9	16	107	67*s*
	8230	·833	252·8	130·6	−10·0	12	74	48*s*
	8246	·842	238·8	127·4	−21·4	7	13	71*c*
	8245	·547	246·4	107·1	− 6·4	4	8	
	8238	·481	292·9	104·4	+17·1	6	13	
C	8239	·434	162·1	68·9	−17·1	11	95	
	8242	·375	76·4	55·1	+11·7	17	40	
	8243	·638	83·8	37·0	+ 9·5	10	33	
	8244	·869	84·6	16·2	+ 8·2	23	151	207*f*
	8247	·969	118·0	6·6	−24·8	8	34	170*n*
		·775	127·2	35·1	−22·6			70
		·738	102·8	30·9	− 4·4			49
		·768	81·2	26·4	+11·3			87
		·833	59·0	21·8	+29·7			49
		·883	120·6	21·6	−22·7			82
		·917	76·4	9·6	+15·3			138
		·950	98·5	6·3	− 5·7			87
		·982	122·7	4·3	−30·1			142
Sept. 10			(+23·2)	(76·9)	(+ 7·2)	(114)	(568)	(3561)
253·381		·984	296·4	145·5	+27·2			99
		·984	251·6	140·2	−16·5			496
		·964	280·5	139·0	+12·0			862
		·897	288·2	127·9	+19·5			951
		·888	266·8	125·7	+ 0·5			128
		·930	238·1	124·9	−26·1			161
		·821	279·6	119·1	+12·0			207
G		·821	296·2	118·0	+25·5			739
		·794	245·4	111·5	−14·5			331
		·909	307·8	110·5	+37·2			99
	8230	·936	255·9	130·7	−10·4	15	74	126*s*
	8246	·935	243·4	127·4	−21·7	0	3	67*n*
	8248	·820	275·1	118·9	+ 8·3	0	3	66*f*
	8551	·779	286·2	114·8	+17·1	1	3	145*c*

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
253·381	8238	·680	287·2	106·1	+16·9	16	78	183*c*
	8551m	·309	335·6	71·5	+23·4	1	4	
	8239	·423	191·6	68·6	−17·1	17	74	
	8242	·158	65·0	55·1	+11·0	22	69	
	8243	·424	82·2	38·4	+ 9·9	33	111	
	8244	·733	86·0	16·1	+ 7·9	28	140	233*c*
G	8247	·902	121·8	6·2	−24·6	11	46	463*c*
		·764	129·8	23·8	−23·7			119
		·863	100·8	5·3	− 5·5			71
		·863	79·2	3·3	+13·0			228
		·939	127·9	2·9	−31·9			321
		·903	71·3	358·3	+19·9			77
		·953	90·2	351·3	+ 2·0			55
Sept. 11			(+23·4)	(63·5)	(+ 7·2)	(144)	(605)	(6227)
254·359		·986	306·2	133·1	+36·7			105
		·978	280·6	129·5	+11·9			61
		·984	245·9	126·1	−22·0			99
		·936	288·6	121·0	+19·9			899
		·898	298·4	114·5	+28·6			258
		·878	250·4	108·6	−13·4			420
	8230	·992	258·2	131·6	−10·7	0	23	166*s*
	8248	·921	276·5	118·2	+ 8·8	0	5	197*f*
	8238	·830	284·9	107·0	+16·3	4	24	607*c*
G	8249	·707	223·9	83·1	−24·5	40	122	
	8239	·504	215·4	68·3	−17·4	8	55	
	8242	·124	305·3	56·5	+11·3	12	38	
	8243	·243	77·0	36·7	+10·2	38	162	
	8244	·564	86·8	16·1	+ 7·7	15	112	
	8247	·814	127·6	5·5	−24·7	3	27	378*c*
	8250	·982	66·5	329·8	+24·3	52	603	163*c*
		·890	131·0	358·9	−31·3			208
		·977	122·4	339·3	−29·5			60
		·957	83·4	337·0	+ 8·4			114
Sept. 12			(+23·6)	(50·6)	(+ 7·2)	(172)	(1171)	(3735)
255·356		·979	290·8	117·4	+21·8			211
		·969	277·6	113·7	+ 9·1			121
		·944	299·6	109·0	+30·2			224
		·942	286·0	108·8	+17·4			284
		·947	255·2	106·3	−11·5			222
		·852	307·1	93·4	+35·1			52
C		·818	274·8	92·6	+ 8·1			162
		·805	283·2	91·4	+14·9			83
		·832	252·9	91·0	− 9·9			55
	8238	·915	284·0	104·4	+15·6	0	5	233*f*
	8249	·824	233·2	83·8	−24·7	89	448	148*c*
	8239	·633	230·8	68·2	−17·4	5	19	

Group 8246, Sept. 10–11. A very small spot.
Group 8247, Sept. 10–13. Return of Group 8207. A small spot preceded by another on Sept. 13.
Group 8248, Sept. 11–12. A small spot showing a revival in region of Group 8241.
Group 8249, Sept. 12–15. A stream of spots quickly dispersing on Sept. 15, with the exception of the leading and rear spots.
Group 8250, Sept. 12–24. A large composite spot which divides after Sept. 16; the fore portion disappears, leaving the back portion as a spot approximately of regular outline. A cluster of small companions appears *s* from Sept. 15–18.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
255·356	8242	·332	283·8	56·5	+11·3	7	30	
	8243	·063	30·1	35·6	+10·3	49	250	
	8244	·361	86·8	16·2	+ 7·9	17	132	
	8247	·686	136·2	6·3	−23·5	o	19	70*c*
C	8250	·918	66·0	330·1	+24·8	69	728	175*c*
		·817	140·0	358·7	−33·1			143
		·931	127·3	338·0	−30·9			59
		·880	85·2	335·4	+ 7·7			109
		·970	77·0	320·4	+14·3			358
Sept. 13			(+23·8)	(37·4)	(− 7·2)	(236)	(1631)	(2709)
256·420		·975	285·9	101·9	+17·1			228
		·947	274·6	95·0	+ 6·6			176
		·951	255·2	93·0	−11·6			125
		·929	281·4	92·4	+13·3			208
		·930	302·2	92·2	+32·6			168
	8249	·933	239·8	85·9	−24·7	45	346	388*c*
	8239	·774	240·3	68·0	−17·4	3	13	280*c*
	8242	·600	279·6	60·4	+11·5	4	12	
	8243	·228	285·0	36·3	+10·4	34	200	
G	*8550*	·276	320·2	34·1	+19·2	o	1	
	8251	·343	354·4	25·5	+27·1	10	41	
	8244	·123	84·4	16·3	+ 7·8	11	78	
	8550	·729	92·8	336·8	+ 2·9	o	1	
	8250	·815	64·3	329·5	+25·0	58	679	223*c*
	8252	·968	105·8	310·5	−13·3	26	184	223*c*
		·781	149·3	354·0	−35·8			116
		·897	132·1	331·3	−32·7			93
		·889	79·1	320·0	+13·0			458
		·929	115·4	319·1	−20·4			235
		·935	72·2	313·2	+19·2			317
		·939	59·6	312·8	+31·0			75
Sept. 14			(+24·0)	(23·4)	(+ 7·2)	(191)	(1555)	(3313)
257·378		·979	279·3	89·8	+10·5			173
		·970	289·0	88·1	+20·1			115
		·964	304·4	86·5	+35·0			172
		·915	282·4	77·7	+14·2			102
		·900	242·3	69·1	−21·1			425
		·817	250·8	62·3	−11·1			71
G		·813	241·4	59·2	−18·2			88
		·807	231·4	54·7	−25·1			82
	8249	·985	242·9	86·0	−25·0	44	253	370*c*
	8242	·681	279·2	53·9	−11·6	o	1	
	8243	·440	278·2	36·8	+10·1	30	128	
	8251	·427	325·1	26·6	+27·3	7	23	
257·378	8253	·190	279·6	21·6	+ 8·8	3	7	
	8244	·098	276·6	16·3	+ 7·8	14	62	
	8250	·693	61·7	328·7	+24·6	51	565	
	8254	·706	78·0	325·6	+13·6	1	3	83*f*
	8252	·890	109·0	311·1	−13·3	37	214	364*c*
G	8255	·931	105·6	304·6	−11·6	10	33	343*c*
		·863	117·1	316·6	−18·9			91
		·820	77·7	315·2	+14·2			130
		·901	83·2	306·0	+ 9·3			89
		·970	123·8	301·9	−30·2			141
		·927	73·1	301·9	+18·3			164
Sept. 15			(+24·2)	(10·7)	(+ 7·2)	(197)	(1289)	(3003)
258·561		·971	245·2	66·7	−21·9			234
		·950	254·2	64·3	−12·5			57
		·905	279·6	60·5	+11·7			143
		·856	279·4	54·4	+11·7			119
		·899	240·4	52·8	−22·7			134
		·769	288·0	45·3	+18·3			41
		·766	229·8	34·8	−24·1			44
	8243	·671	276·6	37·5	+ 9·7	13	50	
	8251	·590	308·6	26·4	+27·7	2	11	
G	8253	·475	276·0	23·5	+ 9·1	2	15	
	8244	·361	272·6	16·3	+ 7·7	15	76	
	8250	·524	52·6	327·9	+24·9	58	502	
	8252	·747	115·1	311·3	−13·3	57	346	454*c*
	8255	·854	112·2	300·5	−14·7	2	13	88*c*
	8256	·988	104·6	276·3	−13·1	6	19	350*c*
	8257	·996	76·7	269·0	+13·8	85	862	522*c*
		·722	124·6	316·4	−18·6			56
		·775	71·9	304·3	+18·6			66
		·920	75·3	287·4	+16·3			144
Sept. 16			(+24·4)	(355·1)	(+ 7·2)	(240)	(1894)	(2452)
259·361		·939	279·7	55·2	+11·6			229
		·954	244·2	52·2	−21·9			171
		·884	286·6	47·3	+18·0			64
		·770	291·7	34·5	+21·2			51
		·847	235·3	34·2	−24·2			72
	8243	·812	277·1	39·3	+ 9·9	14	35	369*c*
C	8253	·634	276·0	24·1	+ 9·3	5	17	
	8244	·521	273·4	16·1	+ 7·9	6	57	
	856a	·104	85·5	338·6	+ 7·7	o	3	
	8250	·409	40·7	327·6	+24·8	74	360	
	8254	·351	71·1	324·7	+13·3	2	7	
	8252	·636	121·3	310·8	−13·3	32	285	

Group 8251, Sept. 14–16. A cluster of small spots.
Group 8252, Sept. 14–21. A large cluster of spots, the centre of which condenses into a large composite spot on Sept. 17. After this, however, the group quickly declines as Group 8264 is forming just southwards.
Group 8253, Sept. 15–17. A few very small spots *p* Group 8244.
Group 8254, Sept. 15–21. One or two very small spots *s* Group 8250; not seen on Sept. 16.
Group 8255, Sept. 15–18. A few small spots *f* Group 8252 in the same general area of disturbance as Group 8252.
Group 8256, Sept. 16–28. At first a long irregular stream led by a large composite spot. Later, the leader becomes regular, and a cluster of spots at the rear of the stream changes into a composite spot; the stream thus becomes one of normal type.
Group 8257, Sept. 16–29. Return or revival of Group 8222. A very large stream of normal type, but in which the leader is exceptionally large if not quite of regular formation. The train has disappeared when the group has reached the west limb.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
259·361	8258	·643	73·4	304·9	+16·2	0	3	
	8255	·742	116·7	301·6	−14·2	3	24	
	8259	·722	80·3	298·1	+11·9	2	13	
	8256	·942	106·4	276·9	−12·7	31	243	261*c*
C	8257	·974	77·0	266·3	+14·0	158	1480	859*c*
	8260	·993	108·3	264·2	−17·1	45	260	54*s*
		·885	130·3	293·2	−30·5			80
		·891	74·5	280·9	+17·1			281
Sept. 17			(+24·5)	(344·6)	(+ 7·2)	(372)	(2787)	(2491)
260·311		·985	281·0	53·0	+12·0			79
		·979	329·5	50·4	+59·5			53
		·887	289·3	35·0	+20·4			71
		·878	255·9	31·3	− 8·8			69
		·901	237·0	28·7	−25·6			288
		·789	276·9	24·4	+ 9·8			151
		·799	299·6	23·5	+27·7			78
		·715	232·1	8·9	−20·4			55
		·687	217·3	359·7	−26·8			46
		·707	206·7	354·1	−32·5			35
	8243	·928	276·6	40·7	+ 8·9	0	5	877*f*
	8244	·693	274·0	16·1	+ 7·9	7	14	
C	8261	·517	205·7	345·8	−20·8	0	2	
	8250	·318	14·8	326·9	+24·9	43	269	
	8254	·160	50·0	324·8	+13·0	0	11	
	8252	·493	132·1	310·1	−12·7	30	295	
	8255	·590	126·1	302·7	−14·1	4	20	
	8259	·556	78·7	298·2	+12·2	10	31	
	8262	·744	75·3	283·8	+15·7	5	19	49*f*
	8256	·837	109·7	278·5	−12·2	54	246	184*c*
	8257	·910	77·2	265·8	+14·6	172	1687	535*c*
	8260	·952	110·5	263·4	−17·0	50	354	251*f*
		·825	135·9	290·1	−31·0			94
		·912	130·4	276·9	−32·3			47
		·991	97·7	250·8	− 6·6			141
Sept. 18			(+24·7)	(332·0)	(+ 7·1)	(375)	(2953)	(3103)
261·356		·983	277·4	38·2	+ 8·5			250
		·966	290·0	34·5	+21·1			68
		·909	278·4	24·1	+10·6			308
		·908	297·4	23·6	+27·8			98
		·931	240·9	20·7	−23·7			74
C		·814	271·2	12·8	+ 5·1			170
		·837	239·1	8·3	−20·9			160
		·880	224·8	6·5	−34·0			63
		·739	281·2	6·1	+13·0			73

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
261·356		·799	229·2	0·4	−26·2			133
		·808	218·4	355·2	−33·6			157
	8261	·679	223·7	348·8	−23·2	0	8	
	8250	·334	337·7	326·2	−25·0	27	226	
	8254	·162	309·6	325·5	−13·0	0	6	
	8252	·366	158·9	310·5	−12·8	30	184	
	8259	·394	74·2	295·4	+12·7	4	17	
	8262	·571	72·9	283·8	−15·6	7	33	
C	8256	·690	116·0	279·0	−12·1	84	427	107*f*
	8257	·789	77·0	265·8	+14·6	240	1622	751*c*
	8260	·865	114·4	262·9	−17·0	41	317	183*c*
	8263	·949	100·4	248·2	− 7·5	11	111	268*c*
		·885	134·4	268·9	−33·7			42
		·912	124·1	260·3	−27·1			67
		·968	113·6	247·0	−20·6			227
		·963	70·2	242·6	+20·9			174
Sept. 19			(+24·8)	(318·2)	(+ 7·1)	(444)	(2951)	(3373)
262·339		·974	297·7	24·0	+28·6			72
		·973	280·4	22·6	−11·7			141
		·912	273·0	11·3	+ 5·6			226
		·909	294·8	11·1	+25·4			46
		·928	243·7	8·2	−21·1			198
		·896	260·7	7·7	− 5·0			56
		·853	284·3	4·3	+15·9			94
		·901	235·9	1·6	−26·5			201
		·891	224·7	354·9	−34·8			162
	8261	·747	230·6	343·9	−22·7	14	43	172*c*
	8250	·458	313·5	326·7	−25·0	23	250	
	8254	·353	289·3	325·2	−13·3	0	5	
	8264	·443	194·5	312·0	−18·3	3	13	
	8252	·352	194·3	310·4	−12·7	21	130	
	8258	·187	356·8	305·9	−17·7	0	2	
C	8259	·141	53·5	298·7	+11·9	2	20	
	8262	·393	65·9	283·5	+15·9	11	36	
	8256	·522	127·8	280·5	−12·1	105	624	
	8257	·632	76·0	266·2	+14·4	195	1600	
	8260	·749	120·5	263·0	−17·1	43	299	116*p*
	8263	·847	103·5	249·4	− 7·4	43	238	143*c*
		·828	129·1	259·5	−26·5			45
		·900	116·8	246·5	−20·4			201
		·871	79·6	244·2	+12·5			39
		·967	138·1	243·4	−43·0			39
		·893	69·1	241·6	+21·8			85
		·944	105·0	237·0	−11·6			130
		·982	114·5	230·4	−22·4			86
		·981	85·4	226·1	− 5·9			111
Sept. 20			(+24·9)	(305·3)	(+ 7·1)	(460)	(3260)	(2363)

Group 8258, Sept. 17–20. Intermittent. A minute spot seen only on Sept. 17 and 20.
Group 8259, Sept. 17–26. An insignificant stream until Sept. 25, when the component spots are growing considerably.
Group 8260, Sept. 17–29. Return of Group 8215. A regular spot crossed by three narrow bright markings on Sept. 25, after which the spot divides.
Group 8261, Sept. 18–22. A cluster of small unstable spots.
Group 8262, Sept. 18–27. A few unstable spots until Sept. 21, when a pair of spots appear, of which the preceding one alone remains on Sept. 26.
Group 8263, Sept. 19–30. Revival of Group 8232. A stream of spots apparently developing at the east limb; perhaps a return of Group 8232. The leader and rear spots are both very composite. The latter soon breaks up, but is represented by a small spot on Sept. 30. The companion spots are few and very small.
Group 8264, Sept. 20–24. A small stream; only one spot remains on Sept. 23 and 24.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
263·403		·976	274·7	9·0	+ 6·1			117
		·986	246·5	7·6	−21·7			166
		·939	282·1	1·9	+13·8			111
		·972	240·1	1·7	−26·8			140
		·958	230·1	354·8	−34·9			177
		·855	292·9	349·9	−23·2			60
	8261	·874	238·5	345·1	−23·1	8	44	109*c*
	8250	·612	302·3	325·8	−24·9	37	193	
	8254	·552	281·9	324·7	−13·0	1	4	
	8252	·484	226·9	312·3	−12·7	3	32	
G	8264	·539	218·5	311·8	−18·3	11	34	
	8259	·189	297·3	301·0	+11·9	4	32	
	8262	·204	38·5	283·6	+16·2	16	87	
	8256	·372	152·6	281·1	−12·2	90	626	
	8257	·431	70·9	266·4	−14·5	206	1605	
	8260	·603	131·0	262·9	−17·0	49	295	
	8263	·683	108·3	250·6	− 7·0	68	471	
		·862	110·0	235·1	−13·3			80
		·910	124·0	233·6	−26·9			62
		·944	113·1	224·7	−19·0			216
		·922	86·1	223·7	+ 6·3			92
		·967	92·9	216·4	− 0·9			41
Sept. 21			(+25·1)	(291·2)	(+ 7·1)	(493)	(3423)	(1371)
264·339		·986	232·4	351·7	−35·2			128
		·912	291·2	345·3	+22·1			61
		·889	302·8	340·7	+32·2			48
		·858	278·4	338·4	+10·8			59
		·888	229·6	330·7	−30·9			76
	8261	·949	243·4	345·3	−22·4	10	27	191*c*
	8250	·746	297·6	325·5	−25·0	24	191	117*c*
	8264	·659	231·8	311·8	−18·1	6	20	
	856b	·595	219·7	302·8	−20·8	0	2	
	8259	·381	284·9	300·9	−12·1	8	34	
	8262	·185	327·1	284·9	+15·9	27	166	
	8256	·332	184·6	280·5	−12·2	77	745	
C	8257	·253	51·6	267·0	+14·7	219	1638	
	8260	·486	146·4	262·6	−17·1	36	286	
	8265	·378	48·6	261·3	+21·1	0	12	
	8263	·520	115·6	250·8	− 6·8	36	400	
	856c	·804	85·8	225·2	+ 7·5	0	2	93*f*
	8266	·957	99·9	207·3	− 7·3	7	14	145*f*
		·852	132·5	232·3	−30·4			37
		·891	116·6	221·2	−19·8			504
		·894	94·6	216·1	− 0·9			43
		·977	112·2	205·0	−19·8			127
		·971	83·6	202·3	+ 7·9			80
		·971	70·8	201·4	−20·3			45
Sept. 22			(+25·2)	(278·9)	(+ 7·0)	(450)	(3537)	(1754)
1917.			°	°	°			
265·444		·989	245·6	341·7	−22·7			164
		·955	279·4	337·8	+11·0			91
		·884	281·4	327·0	+13·3			70
		·928	228·0	321·2	−34·7			59
		·783	283·4	316·1	+14·8			62
	856d	·992	303·0	350·1	+33·5	8	34	178*s*
	8250	·876	294·8	325·4	+25·0	22	142	166*c*
	8264	·839	241·7	315·6	−19·1	2	6	141*c*
	8259	·611	281·1	302·0	+12·3	27	126	42*p*
	8262	·381	295·2	285·2	+15·9	20	117	
	8267	·329	275·2	283·6	+ 8·3	7	15	
	8256	·429	221·6	281·2	−11·9	78	941	
C	8257	·144	340·0	267·2	+14·8	193	1574	
	8260	·407	175·5	262·4	−16·8	40	258	
	8265	·254	7·5	262·3	+21·5	0	17	
	8263	·323	137·6	251·7	− 6·9	40	371	
	8268	·530	82·8	232·2	+ 9·7	0	5	
	8266	·882	102·8	204·3	− 7·8	8	44	109*c*
		·723	125·6	225·9	−19·4			71
		·814	121·0	216·5	−20·1			74
		·917	116·0	202·9	−20·4			191
		·934	84·2	194·8	− 8·0			84
		·946	71·5	192·2	+19·8			117
		·970	103·0	190·4	−10·7			89
Sept. 23			(+25·4)	(264·3)	(+ 7·0)	(445)	(3650)	(1702)
266·402		·902	283·9	316·7	+15·6			319
		·913	252·4	314·6	−12·9			434
		·943	223·3	308·6	−39·7			27
		·802	287·1	305·0	+17·8			90
		·815	244·5	301·5	−16·1			97
		·829	239·1	300·9	−20·7			45
		·728	290·7	297·8	+19·8			30
	8250	·950	294·1	324·4	+25·0	16	106	214*c*
	8264	·899	246·1	311·0	−17·8	5	11	406*c*
	8259	·775	279·9	302·7	+12·1	31	130	120*c*
	8262	·569	286·9	285·8	+15·3	17	86	
	8267	·547	274·1	284·9	+ 8·1	1	5	
	8256	·578	236·6	281·0	−12·5	156	883	
G	8257	·292	298·1	267·0	+14·7	259	1622	
	8260	·440	202·7	261·8	−16·9	39	232	
	8263	·245	181·9	252·1	− 7·1	34	194	
	8268	·275	85·2	235·6	+ 8·0	6	24	
	8266	·772	107·1	203·5	− 8·5	37	102	116*c*
		·831	116·7	200·6	−17·6			101
		·908	124·3	194·4	−27·1			85
		·855	74·1	192·5	+17·1			113
		·858	87·7	192·4	+ 5·5			135
		·886	67·9	189·0	+22·7			148

Group 8265, Sept. 22–23. Some very faint spots *n* Group 8257.
Group 8266, Sept. 22–30. A small spot behind which a stream of normal type forms in the same area of faculae, whilst it itself disappears after Sept. 24. The changes in the new group are rapid, and by Sept. 29 the leader spot of the stream alone remains.
Group 8267, Sept. 23–25. One or two small spots on the same meridian as Groups 8256 and 8262.
Group 8268, Sept. 23–Oct. 1. A long sparse stream of small unstable spots until Sept. 29, when more definite spots appear. A large regular spot has developed at the head of the stream on October 1.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
1917.			°	°	°			
266·402		·907	105·4	188·9	−10·8			91
		·963	114·9	181·8	−21·7			75
G		·969	69·1	174·5	+22·0			245
Sept. 24			(+25·5)	(251·6)	(+ 7·0)	(601)	(3395)	(2891)
267·430		·919	286·9	305·6	+18·3			97
		·941	251·8	305·3	−14·5			493
		·812	291·0	292·2	+21·0			53
	8259	·887	279·8	301·1	+11·9	35	166	395*c*
	8267	·732	273·8	285·3	+ 7·4	0	4	
	8262	·733	284·5	285·3	+15·3	9	31	
	8256	·748	246·2	282·5	−12·7	141	819	406*c*
	8257	·494	287·0	267·2	+14·4	239	1552	
	8260	·553	224·2	261·8	−17·0	34	229	
G	8263	·360	229·2	254·0	− 6·9	31	203	
	8269	·413	190·6	242·6	−16·9	26	86	
	8268	·056	69·9	235·1	+ 8·0	11	42	
	8266	·619	114·4	203·4	− 9·1	22	187	
	8270	·977	108·6	163·4	−16·4	28	166	237*c*
		·885	120·4	182·4	−22·8			55
		·899	71·4	173·5	+19·7			180
		·938	65·9	167·5	+25·0			147
		·984	59·3	156·5	+31·3			121
Sept. 25			(+25·6)	(238·1)	(+ 6·9)	(576)	(3485)	(2184)
268·356		·977	252·9	300·9	−15·1			186
		·953	288·9	299·2	+20·1			82
		·955	307·5	298·8	+37·7			28
		·945	237·3	289·7	−27·8			50
	8259	·969	281·0	302·3	+12·4	24	270	310*c*
	8262	·862	283·5	285·8	+15·0	8	35	143*c*
	8256	·874	251·1	283·5	−12·7	123	748	179*c*
	8257	·679	284·1	268·5	+14·6	170	1125	
	8260	·683	235·5	261·7	−17·1	22	191	
	8263	·546	244·9	255·6	− 7·4	30	153	
C	8269	·493	216·7	243·6	−16·6	16	125	
	8268	·166	277·5	235·3	+ 8·0	7	23	
	856e	·439	166·3	219·5	−18·3	0	4	
	8266	·467	125·9	203·3	− 9·5	23	154	
	856f	·779	63·2	175·8	+25·1	0	3	34*f*
	8270	·920	111·6	162·7	−16·8	28	250	403*c*
	856g	·956	65·7	151·7	+25·2	0	7	150*n*
		·799	123·2	180·2	−21·1			46
		·817	69·9	171·1	+20·4			71
		·940	58·2	155·4	+32·2			112
		·980	77·7	146·3	+13·3			433
Sept. 26			(+25·7)	(225·8)	(+ 6·9)	(451)	(3088)	(2227)

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
1917.			°	°	°			
269·341		·988	285·9	295·2	+16·7			126
		·913	275·3	279·1	+ 7·7			120
		·889	223·0	261·3	−36·1			59
	8262	·953	284·0	286·1	+15·4	3	13	148*c*
	8256	·963	254·3	284·7	−13·0	137	774	676*c*
	8257	·825	283·2	268·8	+14·8	150	1089	253*c*
	8260	·813	242·6	261·8	−17·4	25	175	85*c*
	8263	·720	252·6	256·5	− 7·4	37	183	
	856h	·765	222·2	248·6	−28·9	2	5	
C	8269	·632	232·7	244·3	−16·6	27	96	
	8268	·401	273·2	236·5	+ 7·6	11	26	
	8266	·324	150·2	203·4	− 9·4	11	87	
	8270	·821	116·4	162·7	−17·0	23	267	228*c*
		·869	52·2	155·0	+35·9			66
		·871	62·2	152·7	+27·4			256
		·959	121·6	145·8	−27·6			115
		·917	75·7	145·6	+15·8			491
		·924	83·8	144·9	+ 8·3			170
		·962	112·9	142·7	−19·8			229
		·981	74·8	132·8	+16·2			91
		·981	65·9	132·4	+24·8			141
Sept. 27			(+25·8)	(212·8)	(+ 6·9)	(426)	(2715)	(3254)
270·367		·988	284·8	281·5	+15·6			85
		·965	273·7	274·3	+ 5·3			41
		·965	228·7	264·2	−36·9			51
		·852	231·7	248·0	−27·5			47
	8256	·986	256·8	277·7	−11·7	25	143	368*c*
	8257	·937	283·7	269·7	+15·2	129	878	960*c*
	8260	·915	247·6	261·5	−17·4	18	150	196*c*
	8263	·851	257·1	255·8	− 7·1	33	128	184*c*
	8269	·767	241·3	243·8	−16·8	11	51	55*c*
	8268	·600	275·1	236·3	+ 8·5	8	62	
	856i	·381	268·5	221·7	+ 5·8	1	5	
	8266	·291	198·9	204·7	− 9·1	7	22	
C	8270	·683	124·2	163·2	−17·1	36	244	
		·772	53·5	152·4	+32·1			77
		·785	62·0	149·1	+26·0			88
		·894	128·1	145·5	−29·6			61
		·812	74·7	144·8	+16·3			158
		·817	83·7	144·2	− 9·1			141
		·876	118·8	144·1	−21·1			248
		·929	109·3	134·3	−15·0			88
		·922	91·2	132·3	+ 1·5			48
		·931	71·2	129·9	+19·9			446
		·969	119·3	129·3	−26·1			44
		·962	55·6	124·1	+34·9			49
		·986	69·5	117·3	+21·3			304
Sept. 28			(+25·9)	(199·3)	(+ 6·8)	(268)	(1683)	(3739)

Group 8269, Sept. 25–30. A short stream of spots of which the leader is the largest and most stable member.
Group 8270, Sept. 25–Oct. 7. A large spot of regular type but with composite umbra. A few very small spots usually follow; two of these on Oct. 5 grow very considerably on the two succeeding days, at the same time that Group 8272 is also showing increased activity.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
271·394		·899	236·7	242·3	−25·9			87
		·720	234·2	224·0	−19·6			70
	8257	·992	284·3	269·9	+15·0	141	802	1172*f*
	8260	·982	250·6	261·8	−17·5	10	83	129*c*
	8263	·959	259·5	257·8	− 8·0	0	12	379*f*
	8269	·896	247·3	245·3	−16·8	5	32	481*c*
	8268	·763	275·2	235·8	+ 8·3	24	80	
	8266	·426	231·2	205·4	− 9·1	4	10	
G	8270	·536	137·3	163·6	−16·8	29	226	
	8271	·732	102·3	140·2	− 4·2	4	9	
	856j	·771	111·6	138·9	−11·9	2	6	43*s*
		·816	126·3	139·9	−24·1			295
		·860	67·1	126·6	+23·1			407
		·914	74·6	119·1	+16·8			388
		·945	60·0	114·3	+30·5			248
		·974	107·3	111·7	−15·0			122
Sept. 29			(+26·0)	(185·8)	(+ 6·8)	(219)	(1260)	(3821)
272·423		·990	288·4	255·6	+19·1			130
		·973	236·9	242·3	−30·0			81
		·908	289·6	238·0	+20·5			117
		·893	238·9	228·7	−23·8			85
		·842	253·0	226·9	−10·4			71
		·881	228·1	222·5	−31·8			92
		·762	236·8	214·7	−19·7			89
	8263	·983	261·7	250·4	− 6·8	0	24	128*c*
	8269	·977	252·1	247·2	−15·9	0	18	528*f*
	8268	·923	275·1	239·9	+ 7·2	31	180	400*c*
	8266	·601	245·5	205·7	− 8·8	2	6	
	8270	·428	161·0	163·8	−17·1	28	234	
	8272	·538	137·8	150·0	−17·1	2	7	
C	8271	·582	107·0	138·4	− 4·2	1	2	
	856k	·589	73·2	136·6	+15·3	0	5	
		·704	73·7	127·7	+16·2			62
		·750	58·0	126·3	+28·0			83
		·884	128·2	119·7	−29·1			40
		·821	79·8	116·7	+12·2			96
		·833	69·7	115·9	+20·5			177
		·897	44·2	112·6	+43·6			87
		·913	109·2	109·5	−14·5			113
		·899	58·4	108·8	+31·3			180
		·936	85·4	102·5	+ 6·6			132
		·943	75·4	100·9	+15·9			259
		·971	59·7	94·8	+30·9			123
Sept. 30			(+26·0)	(172·2)	(+ 6·7)	(64)	(476)	(3073)
273·430		·993	251·1	239·2	−17·7			147
		·956	291·1	232·9	+22·1			86
1917.			°	°	°			
273·430		·949	242·9	225·4	−23·1			201
		·906	274·7	224·1	+ 7·1			132
		·906	244·1	218·9	−20·0			264
		·768	271·5	209·2	+ 5·5			56
	8268	·986	276·2	239·8	+ 7·2	35	164	849*c*
	8270	·409	191·2	163·6	−16·8	53	299	
	8272	·426	159·3	149·9	−16·8	1	10	
G	8273	·270	100·5	143·5	+ 3·6	0	2	
	8274	·573	150·5	141·1	−23·4	0	4	
	8275	·591	130·7	131·1	−16·7	3	19	
	8276	·987	116·1	82·5	−24·3	0	39	312*f*
		·858	81·1	99·4	+11·0			129
		·922	74·7	91·0	+16·7			105
		·947	83·4	87·2	+ 8·4			159
Oct. 1			(+26·1)	(158·9)	(+ 6·7)	(92)	(537)	(2440)
274·498		·960	246·6	214·3	−20·2			181
		·880	254·6	204·0	+10·2			235
		·862	241·6	198·4	−20·3			135
	8270	·509	216·8	163·3	−17·7	58	343	
	8272	·407	191·2	149·4	−16·8	7	23	
	8274	·501	173·4	141·1	−23·1	1	2	
G	8273	·077	117·2	140·8	+ 4·6	1	2	
	8275	·440	151·7	132·2	−16·2	0	2	
	8276	·935	118·6	81·1	−23·7	17	61	513*c*
		·866	84·6	84·4	+ 8·0			81
		·913	75·7	78·2	+15·7			50
		·950	66·9	71·9	+24·0			73
Oct. 2			(+26·2)	(144·7)	(+ 6·6)	(84)	(433)	(1268)
275·360		·949	257·3	203·1	− 9·8			206
		·895	285·0	197·4	+16·4			79
		·929	243·6	196·6	−21·5			154
		·867	273·0	193·7	+ 5·9			60
		·878	232·9	185·7	−28·0			57
	8270	·618	230·2	163·1	−17·4	46	365	
	8272	·471	213·4	149·0	−16·8	8	17	
C	8274	·511	194·8	141·5	−23·0	1	3	
	8275	·446	175·0	131·0	−19·6	0	4	
	8276	·869	122·5	80·3	−24·0	15	86	503*c*
	8277	·977	108·4	58·6	−16·3	0	5	84*f*
		·754	83·1	84·2	+ 9·6			46
		·857	53·0	77·2	+34·8			84
		·916	79·2	66·5	+12·5			68
		·977	76·6	54·6	+14·5			62
Oct. 3			(+26·2)	(133·4)	(+ 6·6)	(70)	(480)	(1403)

Group 8271, Sept. 29–30. A pair of small spots on Sept. 29; one only on Sept. 30.
Group 8272, Sept. 30–Oct. 8. A group of small spots *f* Group 8270. Two larger spots appear on Oct. 5, but they appear to be unstable.
Group 8273, Oct. 1–2. A very small spot.
Group 8274, Oct. 1–3. A very small spot.
Group 8275, Oct. 1–3. A small cluster on Oct. 1; one small spot on Oct. 2 and 3.
Group 8276, Oct. 1–7. Return of Group 8249. A small spot with a few companions.
Group 8277, Oct. 3–4. A very small spot on Oct. 3; two on the next day.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
1917.			°	°	°			
276·357		·974	258·1	195·4	− 9·9			35
		·977	246·7	194·1	−21·0			51
		·955	274·5	193·3	+ 6·2			37
		·943	282·5	191·6	+13·9			56
		·960	239·0	187·9	−27·2			39
		·915	291·7	186·9	+22·4			114
		·808	293·1	173·6	+22·4			92
	856l	·830	272·5	176·5	+ 5·8	1	12	29*c*
	856m	·724	301·0	164·1	+26·5	1	3	32*c*
	8270	·754	239·8	163·2	−17·5	21	288	62*c*
	8272	·616	231·1	150·3	−17·1	1	13	
	856n	·262	227·4	131·4	− 3·8	1	5	
C	*856o*	·296	56·0	105·6	+15·8	0	4	
	856p	·398	70·4	97·7	+13·6	0	1	
	856q	·567	86·3	85·7	+ 7·4	0	1	
	8276	·760	128·9	80·3	−23·5	9	125	113*c*
	8277	·902	111·7	59·6	−16·4	0	7	110*c*
		·777	107·3	71·8	− 9·0			21
		·847	124·1	70·2	−24·2			203
		·961	118·5	51·8	−25·0			106
		·964	97·3	46·8	− 5·2			30
		·960	81·5	46·0	− 9·9			201
Oct. 4			(+26·3)	(120·3)	(− 6·5)	(34)	(459)	(1331)
277·362		·975	290·1	185·6	+21·1			122
		·939	273·5	177·1	+ 5·5			32
		·905	291·1	172·2	−21·8			114
		·787	298·9	157·2	+26·5			45
		·756	308·8	151·4	+32·9			42
	8270	·869	245·5	162·8	−17·5	67	364	179*c*
	8272	·775	237·7	151·0	−19·8	21	114	59*c*
C	8276	·649	139·5	79·7	−23·7	7	70	
	8278	·542	61·8	76·5	−20·4	5	31	
		·743	132·9	70·2	−25·1			73
		·806	75·5	53·2	−15·5			46
		·892	101·1	45·4	− 6·8			66
		·878	83·9	45·3	+ 8·5			113
		·964	80·7	31·8	+10·7			152
Oct. 5			(+26·3)	(107·0)	(+ 6·5)	(100)	(579)	(1043)
278·529		·935	293·0	161·4	+23·7			49
		·853	302·5	148·3	+30·9			78
		·821	275·2	147·0	+ 7·9			71
		·802	286·4	144·9	+16·9			97
		·797	246·8	140·4	−14·1			21
G	8270	·950	248·8	159·9	−17·8	80	622	143*c*
	8272	·901	243·5	150·8	−20·5	32	199	129*c*
	856r	·831	235·6	139·9	−23·7	0	2	49*c*
1917.								
278·529	*856s*	·503	328·1	109·6	+31·3	0	3	
	856t	·281	306·7	105·1	+15·9	0	2	
	8279	·437	193·4	97·7	−18·7	1	5	
	8276	·544	158·7	79·1	−24·1	6	31	
	8278	·327	44·6	77·6	+19·6	15	74	
G	8280	·913	89·5	25·8	+ 3·1	2	10	58*f*
		·850	81·7	33·1	+10·4			83
		·921	77·0	23·9	+14·5			39
		·979	81·2	12·7	+ 9·9			36
Oct. 6			(+26·4)	(91·6)	(− 6·4)	(136)	(948)	(853)
279·427		·970	292·1	156·9	+22·9			89
		·925	299·0	147·4	+29·1			127
		·915	286·0	146·5	+17·1			241
		·914	276·0	146·2	+ 8·0			139
		·914	238·8	139·3	−25·1			120
		·859	247·6	135·1	−15·6			74
		·891	226·9	131·1	−33·6			53
		·764	287·1	129·4	+17·1			50
		·773	298·4	128·6	+25·7			85
	8270	·991	251·2	159·4	−17·6	110	1051	199*c*
	8272	·970	246·9	151·9	−20·5	18	219	172*c*
C	*856u*	·697	225·4	112·6	−24·0	1	8	
	8276	·515	178·5	79·0	−24·6	2	13	
	8278	·245	8·9	77·5	−20·2	22	116	
	856v	·285	86·5	63·2	+ 7·0	0	3	
	8280	·828	90·8	24·0	+ 2·9	0	21	77*c*
		·775	78·4	28·8	+13·0			43
		·891	130·3	27·1	−31·5			60
		·918	81·7	12·7	+10·1			48
		·972	113·4	7·3	−20·9			92
		·964	73·4	4·3	+17·7			41
Oct. 7			(+26·4)	(79·8)	(+ 6·3)	(153)	(1431)	(1710)
280·314		·979	299·8	147·9	+30·4			156
		·968	286·0	144·5	+17·1			300
		·970	276·7	144·4	+ 8·0			111
		·962	243·3	137·5	−23·5			68
		·934	268·9	136·9	+ 1·2			46
		·923	257·8	133·7	− 8·7			28
		·934	249·4	133·7	−16·6			46
C		·923	233·8	127·2	−29·9			28
		·861	296·4	126·9	+25·8			171
		·848	285·8	126·3	−16·8			61
		·751	287·6	116·5	+17·4			45
		·753	300·4	114·6	+26·8			21
	8272	·989	249·0	146·5	−19·6	0	46	72*c*
	856w	·725	247·6	111·1	−11·4	1	3	

Group 8278, Oct. 5–13. A stream some 12° in length, of which the largest and most stable component is a regular spot at the head of the stream.
Group 8279, Oct. 6–10. On Oct. 6, a small spot not seen the following day; afterwards, a small unstable stream.
Group 8280, Oct. 6–8. One or two small spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
280·314	8279.	·632	226·5	97·2	−20·2	8	32	
	8278	·306	322·6	79·3	+20·1	61	320	
	8280	·668	92·8	26·4	+ 2·8	1	16	
		·787	137·0	29·8	−30·2			22
C		·855	84·6	9·1	+ 7·9			53
		·912	116·0	7·1	−20·6			79
		·926	71·0	359·7	+19·9			58
		·978	117·7	354·9	−25·4			47
Oct. 8			(+26·4)	(68·1)	(− 6·3)	(71)	(417)	(1412)
281·460		·958	282·0	126·9	+13·3			76
		·953	293·8	126·0	+24·5			435
		·957	269·9	125·9	+ 1·7			68
		·885	278·1	115·5	+10·1			55
		·865	287·2	113·0	+18·0			172
		·859	269·3	112·0	+ 2·6			53
		·905	239·0	111·3	−24·6			82
		·879	248·8	110·9	−15·3			136
		·859	299·4	110·9	+28·3			275
C		·734	277·2	100·3	+ 9·5			80
	8279	·780	236·3	96·8	−21·1	7	25	74*c*
	8278	·485	301·8	78·8	+20·5	53	298	
	856x	·355	71·4	32·8	+12·3	0	2	
	8281	·475	121·8	28·9	− 8·8	8	27	
		·785	122·7	8·1	−20·7			44
		·886	122·8	357·7	−25·2			59
		·831	70·2	356·9	+19·8			53
		·961	130·8	348 3	−36·4			78
		·962	118·6	344·0	−25·3			157
		·954	79·6	339·7	+11·8			153
		·958	54·1	339·3	−36·1			160
Oct. 9			(+26·4)	(52·9)	(+ 6·2)	(68)	(352)	(2210)
282·385		·970	289·5	117·6	+20·4			143
		·951	269·9	112·5	+ 1·8			43
		·938	253·2	107·9	−13·4			54
		·903	285·2	105·7	+16·3			75
		·904	299·3	104·8	+29·0			57
		·867	272·8	100·9	+ 5·5			44
C		·764	227·6	79·5	−26·2			55
		·677	218·7	68·8	−26·4			14
	8279	·879	242·0	96·7	−21·0	2	18	57*c*
	8278	·640	295·6	78·7	+20·7	29	251	
	8281	·323	142·6	29·3	− 8·8	2	30	
		·814	127·1	355·0	−25·1			47
		·929	134·6	344·5	−37·4			74
1917.			°	°	°			
282·385		·890	121·1	344·3	−24·0			65
		·890	52·6	340·3	+35·8			60
C		·876	80·1	339·2	+11·6			62
		·945	70·4	329·1	+20·5			57
		·981	103·9	323·8	−12·3			40
Oct. 10			(+26·4)	(40·7)	(+ 6·1)	(33)	(299)	(947)
283·355		·974	298·6	106·0	+29·2			106
		·949	284·7	100·2	+15·9			171
		·949	273·1	99·6	+ 4·9			86
		·955	244·2	96·1	−22·4			136
		·901	302·6	91·0	+31·9			124
		·856	279·0	87·1	+10·8			84
		·865	235·4	79·9	−25·7			221
		·780	230·4	69·4	−25·2			70
	8278	·782	291·8	78·7	+20·8	30	202	89*c*
	8282	·647	229·4	59·2	−19·6	1	10	
C	8283	·962	80·0	313·1	+11·3	21	112	329*c*
	8284	·988	110·6	309·8	−19·2	6	123	146*c*
	8285	·984	77·4	307·4	+13·4	0	52	169*c*
		·809	127·6	343·0	−25·2			93
		·891	139·2	340·1	−38·3			119
		·833	48·1	336·5	+37·7			54
		·831	76·0	331·5	+15·0			53
		·932	126·7	327·5	−30·9			64
		·936	108·4	321·4	−14·8			221
		·931	63·6	319·1	+26·8			103
		·933	70·4	318·4	+20·5			75
Oct. 11			(+26·4)	(27·9)	(+ 6·1)	(58)	(499)	(2513)
284·350		·953	303·0	87·2	+33·1			
		·934	277·8	84·3	+ 9·4			
		·944	241·1	80·1	−24·7			2,5
		·889	248·4	74·0	−16·1			58
		·871	309·4	72·0	+36·9			49
		·874	235·1	67·8	−26·4			121
	8278	·922	289·8	82·4	+20·5	20	123	123*c*
	8282	·755	236·9	56·9	−19·9	0	4	48*p*
C	8286	·462	280·2	42·2	+10·0	11	44	
	856y	·819	112·0	323·4	−14·1	0	2	149*f*
	8283	·875	80·2	313·4	+11·5	17	102	106*c*
	8284	·933	113·1	309·9	−18·9	3	40	330*f*
	8285	·923	78·1	306·9	+13·3	0	10	273*c*
		·826	148·6	340·8	−39·8			77
		·857	62·4	316·9	+26·6			58
		·962	98·5	301·8	− 6·4			68
		·974	64·8	296·8	+25·8			48
Oct. 12			(+26·4)	(14·8)	(+ 6·0)	(51)	(325)	(1995)

Group 8281, Oct. 9–10. A wide pair of small spots.
Group 8282, Oct. 11–13. One or two scattered spots; revival of Group 8277.
Group 8283, Oct. 11–21. Intermittent. A pair of spots of which the following one is left on Oct. 17. Nothing is then seen until Oct. 21, when three very small spots are seen in an area of faculæ.
Group 8284, Oct. 11–16. A revival rather than a return of Group 8264. A regular spot on Oct. 11 breaking up on the following days.
Group 8285, Oct. 11–14. Probable return of Group 8259. Two small spots closely following Group 8283.
Group 8286, Oct. 12–15. A short lived stream of small spots. Revival of Group 8243.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
1917.			°	°	°			
285·499		·962	240·9	68·6	−25·8			164
	8278	·992	289·5	83·7	+20·0	8	50	395*c*
	8282	·912	246·0	61·3	−18·9	0	6	81*c*
	8286	·713	277·9	45·3	− 9·7	9	37	
	8287	·656	270·8	40·7	+ 5·0	8	28	
	8288	·282	168·8	356·5	−10·1	2	8	
	8283	·716	79·4	314·0	+11·7	16	85	87*c*
G	8284	·823	117·6	309·6	−18·6	4	10	227*c*
	8285	·790	77·3	307·5	+13·6	0	5	86*c*
	8289	·963	105·7	287·6	−13·3	77	464	667*c*
		·862	102·2	301·7	− 7·4			129
		·878	65·8	298·7	+24·0			89
Oct. 13			(+26·4)	(359·7)	(+ 5·9)	(124)	(693)	(1925)
286·181		·982	291·6	71·1	+22·3			175
		·963	308·8	65·1	+38·9			46
		·942	282·0	61·7	+13·3			65
		·951	247·4	58·8	−19·2			147
		·896	236·2	47·0	−26·7			55
	8286	·818	277·8	45·8	+ 9·7	8	58	219*c*
	8287	·778	273·0	41·9	+ 6·0	0	6	44*c*
	8283	·604	77·6	313·7	+12·2	20	96	
D	8284	·745	121·9	309·0	−18·7	2	15	249*f*
	8285	·695	76·4	306·9	+13·6	0	8	91*f*
	8289	·918	107·2	286·7	−13·3	107	479	587*f*
	8290	·979	77·8	271·7	+13·1	158	538	537*c*
		·799	104·4	299·6	− 7·7			59
		·931	131·8	292·6	−35·3			74
Oct. 14			(+26·4)	(350·7)	(+ 5·9)	(295)	(1200)	(2348)
287·461		·887	287·4	36·5	+18·0			44
		·876	254·7	32·8	−10·4			73
	8286	·949	277·7	45·8	+ 9·1	0	11	196*c*
	8283	·349	71·3	314·1	+11·9	8	26	
	8284	·575	135·4	308·7	−18·9	1	4	
	8289	·770	112·3	287·0	−13·0	81	427	280*c*
	8290	·880	78·5	271·9	+12·8	96	477	425*c*
G		·789	125·0	289·5	−22·7			49
		·887	129·2	281·0	−30·6			49
		·846	69·6	276·3	+20·3			75
		·927	113·5	269·8	−19·2			120
		·932	66·1	264·8	+24·3			83
		·947	101·1	264·0	− 8·5			257
		·936	73·9	263·9	+17·1			199
Oct. 15			(+26·3)	(333·8)	(+5·8)	(186)	(945)	(1850)
288·377		·967	278·4	37·4	+ 9·6			125
288·377		·955	292·5	35·1	+23·1			71
		·949	257·9	31·7	− 9·6			68
		·954	236·9	27·8	−29·2			80
		·899	281·8	26·1	+13·1			55
		·878	269·6	22·9	+ 2·4			56
		·790	277·2	14·0	− 9·1			44
		·762	237·7	4·7	−19·8			67
	8288	·604	246·5	355·7	− 9·2	13	33	
	8283	·164	47·7	314·6	+11·9	4	19	
C	8284	·468	152·5	308·6	−18·9	1	2	
	8289	·636	118·7	286·9	−13·0	83	441	
	8290	·762	78·3	272·0	+12·6	91	476	96*c*
	8291	·882	72·8	259·7	+17·8	2	7	223*c*
	8292	·953	83·1	249·0	− 8·3	5	16	274*n*
		·795	65·8	270·1	+22·6			53
		·859	103·7	264·3	− 8·7			158
		·917	115·7	259·7	−20·8			81
		·936	101·7	253·9	− 8·8			160
		·972	109·3	248·2	−17·1			261
		·967	71·1	245·7	+19·7			147
Oct. 16			(+26·3)	(321·7)	(+ 5·7)	(199)	(994)	(2019)
289·332		·918	299·4	15·2	+29·1			75
		·909	273·6	14·6	+ 5·6			130
		·870	243·5	4·7	−19·7			88
		·783	230·6	351·1	−25·6			61
		·772	204·9	333·9	−39·3			68
	8288	·741	251·9	354·5	− 9·3	17	146	
	857a	·375	223·1	324·1	−10·4	0	3	
	8293	·249	320·1	318·6	+16·5	2	12	
	8283	·152	320·0	314·8	+12·2	2	9	
C	8289	·490	129·8	286·5	−13·1	50	424	
	8290	·606	76·8	272·1	+12·4	71	473	
	8291	·812	71·3	255·2	+18·3	2	9	110*c*
	8292	·908	82·7	243·6	+ 9·0	7	78	197*c*
		·760	107·6	262·0	− 9·4			146
		·814	119·1	260·3	−19·6			84
		·855	97·6	251·2	− 3·5			41
		·906	112·1	247·7	−17·3			381
		·934	71·6	239·6	+19·2			83
Oct. 17			(+26·3)	(309·1)	(+ 5·6)	(151)	(1154)	(1464)
290·325		·966	275·2	11·3	+ 6·5			72
		·951	298·2	8·3	+28·6			69
		·959	247·8	6·1	−19·4			85
C		·917	285·8	2·9	+16·7			81
		·879	236·2	350·2	−26·1			79

Group 8287, Oct. 13–14. An evanescent group of very small spots, appearing s of Group 8286 in the same general area of faculæ.

Group 8288, Oct. 13–19. Intermittent. On Oct. 13 a diminutive stream which has disappeared by the next day. On Oct. 16, a pair of small spots have appeared; these are superseded by two clusters on Oct. 17 and a pair of indefinite spots on the two following days.

Group 8289, Oct. 13–25. Return of Group 8256. A very large regular spot which is breaking into two portions on Oct. 21; the *sf* and smaller portion rapidly disappears whilst the other regains a regular outline.

Group 8290, Oct. 14–26. Return of Group 8257. A very large regular spot. There are a few companion spots, but these are insignificant until Oct. 22 when some larger ones form northwards.

Group 8291, Oct. 16–26. A disturbed area, *nf* Group 8290, in which one or two small and unstable spots appear. By Oct. 20, a regular spot has formed preceded by one or two small companions.

Group 8292, Oct. 19–27. An irregular stream in continual change, developing from a small spot at the east limb.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
			°	°	°			
1917.								60
290·325		·844	213·2	333·3	−40·4			
	8288	·871	256·2	354·7	− 9·1	41	221	134*c*
	8294	·580	290·8	330·3	+16·5	0	14	
	8293	·458	295·3	321·4	+16·3	0	7	
	8289	·355	153·6	286·7	−13·0	61	404	
	8290	·417	72·4	272·1	−12·4	77	452	
	8291	·605	68·4	260·0	−17·4	2	18	
C	*857b*	·708	125·6	258·4	−19·9	0	2	23*c*
	8292	·796	83·4	243·1	+ 8·6	21	140	66*c*
		·790	116·2	248·5	−16·6			44
		·867	116·2	240·7	−19·3			163
		·835	70·1	239·8	+19·6			54
		·925	84·7	228·2	+ 7·0			64
		·958	114·3	226·6	−21·4			122
		·944	67·4	224·8	+23·1			33
Oct. 18			(+26·2)	(296·0)	(+ 5·6)	(202)	(1258)	(1149)
291·432		·945	238·9	346·4	−26·9			54
		·896	223·3	331·7	−37·2			46
		·832	315·3	330·9	+39·8			16
	8288	·966	259·0	355·0	− 9·1	18	116	81*c*
	8294	·754	290·1	329·5	+18·6	5	22	
	8289	·331	195·0	286·4	−13·1	58	383	
	8290	·196	54·6	272·0	+11·9	78	445	
G	8291	·454	61·3	256·8	+17·5	21	71	
	8292	·622	83·0	242·9	+ 8·6	21	138	
	8295	·799	84·3	228·2	− 7·9	50	189	
		·874	113·3	224·4	−17·2			52
		·921	124·7	221·7	−28·9			38
		·952	116·3	213·7	−22·9			58
		·958	103·1	209·9	−10·8			62
Oct. 19			(+26·1)	(281·4)	(+ 5·5)	(251)	(1364)	(407)
292·416		·979	240·7	342·0	−27·2			72
		·960	225·1	331·3	−40·3			35
		·845	247·1	322·3	−16·0			109
	8294	·864	289·2	328·0	+19·2	0	9	92*c*
	8289	·436	224·4	286·6	−13·0	64	396	
	8290	·131	330·7	272·1	+11·9	78	439	
	8291	·308	41·4	256·0	+18·6	26	106	
G	8292	·415	79·9	244·1	+ 9·1	37	159	
	8295	·625	83·9	229·7	− 8·0	36	162	
		·842	128·9	220·5	−28·3			65
		·851	120·1	216·0	−22·0			44
		·828	106·1	214·7	−10·1			41
		·910	104·6	204·9	−10·9			108
		·899	81·4	204·1	−10·2			69
		·949	116·1	201·2	−22·7			88

G.M.T. (Civil.)	Group No.	MEASURES. Dist.	MEASURES. Pos. Angle.	POSITION. Long.	POSITION. Lat.	AREA. Umbræ.	AREA. Whole Spots.	AREA. Faculæ.
			°	°	°			
1917.								157
292·416		·947	69·3	196·7	+21·4			
Oct. 20			(+26·1)	(268·4)	(+ 5·4)	(241)	(1271)	(880)
								27
293·370		·946	310·2	325·2	+39·6			230
		·924	250·7	320·4	−15·6			73
		·896	285·1	319·6	+15·9			55
		·939	233·3	317·9	−31·8			31
		·858	298·0	313·5	+26·6			68
		·808	242·8	304·8	−18·2			40
		·742	285·8	303·3	+15·3			155*e*
	8294	·962	286·9	330·6	+17·7	0	14	260*c*
	8283	·863	280·6	315·6	+11·9	2	14	
C	8289	·587	239·6	286·9	−12·7	47	349	
	857c	·377	314·2	272·5	+20·3	0	3	
	8290	·303	293·9	272·2	+12·1	62	456	
	8291	·241	359·1	256·0	+19·1	27	128	
	8292	·218	71·0	243·8	+ 9·2	30	111	
	8295	·425	83·4	230·7	+ 7·6	24	181	
	8296	·831	120·6	205·7	−21·6	5	21	48*c*
	857d	·945	85·6	184·7	+ 5·9	0	3	93*f*
		·820	108·2	203·3	−11·6			28
		·855	84·3	196·9	+ 7·6			41
		·943	69·6	184·9	+21·0			136
		·967	111·2	183·7	−18·9			62
Oct. 21			(+26·0)	(255·8)	(+ 5·3)	(197)	(1280)	(1347)
294·321		·983	289·9	323·7	+20·5			85
		·982	252·2	320·0	−16·3			111
		·935	281·7	312·9	+12·8			232
		·908	247·5	304·9	−17·9			153
		·844	285·5	300·8	+15·9			105
	8289	·730	246·7	286·6	−13·0	48	319	
	8290	·491	285·8	272·1	+12·3	82	468	
	8291	·322	317·8	256·4	+18·8	22	139	
C	8292	·065	355·5	243·6	+ 8·8	19	150	
	8295	·217	79·5	230·9	+ 7·3	24	180	
	8296	·711	127·7	206·3	−21·5	42	198	
	8297	·990	107·3	163·6	−16·2	41	295	324*c*
		·861	68·5	184·4	+21·1			42
		·873	86·7	182·4	+ 5·5			55
		·910	114·1	181·8	−19·3			70
		·956	66·7	170·0	+23·7			99
Oct. 22			(+25·9)	(243·3)	(+ 5·2)	(278)	(1749)	(1276)
295·424		·953	285·5	301·6	+16·2			65
		·953	247·0	297·6	−20·1			49
G		·911	231·2	285·6	−32·1			24

Group 8293, Oct. 17–18. A few small spots.
Group 8294, Oct. 18–21. One or two small spots *p* Group 8293.
Group 8295, Oct. 19–27. Revival of Group 8268. A group appearing suddenly *f* Group 8292. A small regular spot is the chief member, but it has changed to a cluster by Oct. 25.
Group 8296, Oct. 21–30. A stream of normal type, but in which the intermediate spots between the leader and last members are very few and evanescent. The leader, moreover, shows deviations from the "regular" type.
Group 8297, Oct. 22–31. Return of Group 8270. A composite spot becoming a cluster on Oct. 26, which is soon disappearing.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
295·424		·879	240·0	284·5	−23·2			26
	8289	·872	252·6	287·0	−12·4	55	276	92*c*
	8290	·685	282·4	271·8	+12·2	103	552	
	8291	·509	298·6	256·8	+18·6	23	101	
	8292	·276	282·1	244·5	+ 8·2	33	181	
	8295	·050	329·6	230·3	+ 7·6	18	104	
	8296	·556	141·8	207·3	−21·1	45	304	
G	8298	·756	67·6	180·9	+20·1	4	10	23*c*
	8297	·932	109·4	162·9	−15·9	30	275	259*c*
	8299	·961	113·3	158·3	−20·7	42	526	337*c*
		·817	116·2	178·6	−17·8			52
		·911	65·6	163·5	+24·3			54
		·946	85·0	157·6	+ 6·4			100
		·987	73·0	147·1	+17·6			61
Oct. 23			(+25·8)	(228·8)	(+ 5·1)	(353)	(2329)	(1142)
296·415		·959	244·3	285·2	−22·9			89
		·856	291·7	273·9	+21·1			38
		·815	251·4	267·6	−11·9			95
		·776	301·5	263·6	+27·2			40
	8289	·958	255·3	287·1	−12·5	50	296	239*c*
	8290	·827	281·1	271·5	+11·9	76	504	146*c*
	8291	·675	292·1	256·8	−18·4	16	75	54*p*
	8292	·471	278·6	243·7	+ 8·5	23	194	
	8295	·259	279·3	230·6	+ 7·2	20	76	
G	8296	·463	162·3	207·1	−21·1	33	336	
	8298	·631	61·1	179·3	+21·8	19	40	
	8297	·838	112·7	162·4	−15·9	22	244	264*c*
	8299	·883	116·7	158·4	−20·7	72	425	1415*c*
	*8*57*e*	·907	101·1	151·9	− 7·9	0	5	50*p*
		·850	60·6	159·3	+27·5			48
		·857	86·1	156·7	+ 5·9			54
		·914	62·6	150·4	+27·0			55
		·922	73·4	148·3	+17·2			195
		·949	85·5	144·0	+ 5·8			71
		·955	57·3	143·4	+32·6			93
		·983	107·5	138·5	−16·2			149
Oct. 24			(+25·7)	(215·7)	(+ 5·0)	(331)	(2195)	(3095)
297·321		·957	247·0	273·3	−20·2			73
		·904	256·6	266·7	− 9·8			144
		·892	244·9	262·5	−19·6			101
		·790	245·3	251·8	−15·9			57
		·700	234·4	240·8	−20·1			46
C	8289	·996	257·6	287·1	−11·9	21	176	88*s*
	8290	·928	280·8	272·1	+11·9	67	468	337*c*
	8291	·808	289·2	257·0	+18·4	9	91	119*c*
	8292	·646	277·1	243·9	+ 8·4	12	144	
1917.			°	°	°			
297·321	8295	·450	276·5	230·4	+ 7·4	17	70	
	8296	·443	186·8	206·9	−21·0	48	373	
	8298	·492	52·2	179·0	+22·0	5	51	
	8297	·719	118·3	162·6	−16·1	9	253	58*f*
	8299	·780	122·0	158·8	−20·9	52	348	104*f*
	8300	·943	109·5	135·9	−16·5	0	56	287*c*
C		·721	85·6	157·5	+ 6·6			16
		·831	73·2	147·7	+16·8			106
		·851	87·0	145·3	+ 5·2			41
		·906	119·4	144·2	−23·9			69
		·880	57·6	144·1	+30·7			202
		·954	65·8	131·0	+24·5			177
Oct. 25			(+25·6)	(203·7)	(+ 5·0)	(240)	(2030)	(2025)
298·598		·984	258·4	265·2	−10·5			74
		·924	249·4	251·4	−16·9			130
		·855	241·7	240·5	−21·1			73
	8290	·998	281·3	274·1	+11·6	66	508	54*c*
	8291	·936	287·5	256·5	+18·0	6	36	120*c*
	8292	·855	276·3	245·8	+ 7·9	10	45	206*c*
	8295	·697	275·2	231·1	+ 7·1	8	46	39*c*
	8296	·540	216·7	207·0	−21·1	58	367	
G	8298	·324	23·5	178·9	+22·0	2	20	
	8297	·539	130·9	161·9	−16·2	7	262	
	8299	·610	133·4	158·8	−20·5	44	343	
	8300	·810	114·5	136·8	−16·5	6	47	92*c*
		·754	52·2	143·1	+30·9			50
		·875	65·5	126·7	+23·7			157
		·932	73·7	117·9	+16·9			110
		·947	62·5	115·9	+27·5			132
Oct. 26			(+25·5)	(186·9)	(+ 4·8)	(207)	(1674)	(1237)
299·428		·974	253·4	250·8	−15·0			65
		·960	290·0	250·2	+20·5			99
		·910	283·3	241·7	+14·1			138
		·920	243·2	238·5	−22·4			165
		·883	297·2	236·8	+26·1			32
	8292	·929	276·8	244·4	+ 8·0	1	34	400*c*
	8295	·821	275·4	231·3	+ 7·2	1	12	100*c*
G	8296	·640	227·6	206·5	−21·2	53	356	
	8298	·299	350·2	179·1	+21·8	2	16	
	8297	·425	146·6	162·0	−16·0	13	167	
	8299	·508	146·6	158·7	−20·4	46	297	
	8300	·706	119·2	136·2	−16·5	3	13	
	8301	·978	108·7	100·6	−17·1	8	35	101*c*
		·814	60·5	123·8	+26·5			34
		·858	73·8	117·1	+16·3			34
		·910	61·4	111·5	+27·9			102

Group 8298, Oct. 23–28. A few small spots.
Group 8299, Oct. 23–Nov. 2. A group in the same general area of faculæ as Group 8297. Probable return of Group 8272. A cluster which develops from a large composite spot at the east limb. The characteristic feature of the cluster is the three small regular spots arranged as the apices of an equilateral triangle.
Group 8300, Oct. 25–28. A few very small spots.
Group 8301, Oct. 27–30. More probably a revival than a return of Group 8279. A wide pair of spots of which the leader has disappeared on Oct. 30.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
299·428		·948	74·1	104·2	+16·5			95
		·977	57·6	97·9	+32·6			58
Oct. 27			(+25·4)	(176·0)	(+ 4·8)	(127)	(930)	(1423)
300·450		·978	247·2	237·4	−21·1			134
		·893	247·6	222·2	−17·5			77
	8296	·772	237·3	206·6	−21·2	52	288	85*c*
	8298	·391	317·3	178·9	+21·1	0	8	
	8302	·267	200·3	167·9	− 9·7	9	41	
	8297	·357	179·4	162·3	−16·1	10	86	
	8299	·434	171·7	158·7	−20·6	35	245	
C	8300	·548	133·0	137·7	−17·6	1	9	
	8301	·912	111·6	100·0	−17·4	10	66	140*c*
		·829	59·2	109·0	+27·9			110
		·860	73·6	103·4	+16·5			188
		·945	57·0	92·5	+32·6			171
		·951	79·0	90·2	+11·9			82
		·993	103·0	80·8	−12·2			94
		·990	70·0	79·9	+20·4			240
Oct. 28			(+25·2)	(162·5)	(+ 4·7)	(117)	(743)	(1321)
301·337		·967	278·5	226·3	+ 9·4			73
		·952	251·9	220·6	−15·6			92
		·842	254·2	206·1	−10·6			40
	8296	·877	243·1	207·5	−21·0	39	281	123*c*
	8302	·382	233·0	168·7	− 8·8	11	82	
	8297	·403	209·7	162·7	−15·9	7	34	
	8299	·448	197·1	158·9	−20·7	30	234	
	8303	·125	275·5	157·9	+ 5·3	0	2	
C	8304	·475	168·8	145·1	−23·1	1	3	
	8301	·829	114·7	98·9	−17·4	7	46	75*c*
		·866	55·1	93·9	+32·2			58
		·852	78·3	92·4	+12·4			62
		·938	109·3	83·8	−16·2			123
		·974	120·0	78·5	−27·8			141
		·967	55·1	75·8	+34·9			52
		·970	86·1	74·8	+ 5·0			65
		·954	67·4	62·0	−22·9			564
Oct. 29			(+25·1)	(150·8)	(− 4·6)	(95)	(682)	(1468)
302·543		·951	257·3	205·3	−10·5			94
		·917	292·4	201·1	+22·4			100
		·787	296·3	184·9	−23·3			79
	8296	·973	247·0	208·5	−21·0	43	231	245*c*
C	8302	·612	247·5	169·8	− 9·9	34	95	
	8297	·535	231·4	160·5	−15·3	0	13	
	8299	·566	222·6	158·9	−20·4	27	126	

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
302·543	8303	·406	272·2	158·8	+ 5·0	13	54	
	8305	·414	202·7	144·5	−18·0	0	3	
	8301	·715	121·2	95·0	−18·3	4	14	75*f*
	8306	·857	64·5	77·2	+24·1	4	22	298*c*
		·827	108·0	81·5	−12·1			66
C		·889	123·6	78·9	−26·9			98
		·909	88·7	69·6	+ 3·1			83
		·938	113·5	68·8	−20·1			123
		·949	52·6	64·9	−36·8			75
		·987	80·4	53·8	+10·2			130
		·989	63·8	52·5	+26·5			89
Oct. 30			(+24·9)	(134·9)	(+ 4·5)	(125)	(558)	(1555)
303·472		·986	247·0	200·2	−21·8			64
		·863	274·7	182·3	− 6·3			25
		·869	291·7	182·2	+21·0			131
		·780	299·9	171·1	+25·8			40
	857f	·895	245·4	182·2	−19·6	2	10	67*f*
	8302	·765	253·6	170·5	− 9·5	21	93	84*c*
	8297	·709	241·5	162·9	−16·4	3	9	
	8299	·686	233·8	158·6	−20·3	24	89	
	8303	·587	272·4	158·5	+ 5·0	40	222	
G	*857g*	·630	225·5	151·5	−22·3	1	3	
	8304	·578	216·8	144·7	−23·4	6	19	
	8305	·508	221·2	143·1	−18·3	2	12	
	857h	·482	140·0	103·7	−17·4	1	5	
	8306	·732	61·4	78·2	+23·6	11	63	165*f*
		·794	127·3	78·4	−25·5			45
		·888	132·5	70·5	−34·1			43
		·865	117·4	67·5	−20·9			79
		·895	48·4	63·7	+38·8			33
		·894	64·6	60·1	+24·7			129
		·939	82·6	52·5	+ 8·5			189
Oct. 31			(+24·8)	(122·6)	(+ 4·4)	(111)	(525)	(1094)
304·316		·954	275·5	184·2	+ 6·6			52
		·947	291·1	182·7	+21·3			140
		·943	249·1	179·2	−18·0			123
		·848	297·6	167·6	+25·5			111
		·859	248·5	167·5	−15·9			230
		·748	248·5	156·9	−12·9			113
C	8302	·875	256·8	170·9	− 9·3	6	50	227*c*
	8303	·735	273·1	158·8	+ 5·2	28	205	67*c*
	8299	·796	240·1	158·7	−20·4	14	52	163*c*
	8304	·676	226·3	143·8	−24·1	6	11	
	8305	·614	233·1	142·4	−17·9	30	94	
	8306	·622	55·9	77·4	+23·9	13	90	
	8307	·853	81·9	52·9	+ 9·1	0	2	126*c*

Group 8302, Oct. 28–Nov. 2. A small regular spot with some companions to the south.
Group 8303, Oct. 29–Nov. 3. Two regular spots, 5° apart with a few small companions, developing from a tiny double spot on Oct. 29.
Group 8304, Oct. 29–Nov. 2. A small but distinct spot not seen on Oct. 30.
Group 8305, Oct. 30–Nov. 4. A very small spot on Oct 30; afterwards an irregular stream.
Group 8306, Oct. 30–Nov. 6. Revival of Group 8278. A broad but sparse stream of unstable spots.
Group 8307, Nov. 1–11. Revival of Group 8286. Intermittent. A very small spot seen on Nov. 1 and 3. On Nov. 5 a stream develops rapidly which is approximately of normal type. By Nov. 9, however, it has changed considerably, though it is apparently reverting to the normal type on Nov. 11. The original leader, a small regular spot, is the only component which can be traced throughout.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
304·316		·760	60·7	64·8	+24·8			70
		·832	45·7	62·3	+38·3			49
		·846	116·9	58·3	−19·9			67
C		·871	62·0	52·6	+26·4			119
		·989	102·9	31·4	−12·1			157
		·984	70·4	31·1	+20·1			66
Nov. 1			(+24·7)	(111·5)	(+ 4·3)	(97)	(504)	(1880)
305·498		·973	253·3	170·6	−15·1			160
		·952	296·3	167·8	+26·3			164
		·946	286·5	167·2	+17·0			99
		·910	251·5	158·9	−14·8			129
		·896	257·9	158·1	− 8·8			54
		·851	301·1	151·6	+28·4			62
		·795	288·0	147·9	+16·8			153
		·763	309·2	141·1	+31·8			75
C	8302	·978	259·2	172·6	− 9·6	0	9	147*s*
	8303	·903	274·2	160·5	+ 5·6	26	167	103*c*
	8299	·917	245·3	158·6	−20·6	9	44	263*c*
	8304	·818	236·0	144·9	−24·4	0	3	33*c*
	8305	·780	242·5	142·5	−18·2	45	167	119*c*
	8306	·456	39·8	77·3	+24·4	17	81	
	8308	·634	55·5	01·0	+24·4	1	7	
	8309	·937	106·7	28·5	−14·0	30	381	152*c*
	8310	·977	104·9	19·9	−13·6	5	18	133*c*
		·887	126·4	41·1	−29·4			46
		·913	69·9	30·3	+20·0			98
		·955	86·4	23·1	+ 4·7			90
Nov. 2			(+24·5)	(95·9)	(+ 4·2)	(133)	(877)	(2080)
306·398		·977	246·1	158·6	−22·2			48
		·969	255·7	158·0	−12·7			171
		·944	241·2	150·1	−25·4			48
		·911	286·2	149·6	+16·5			154
		·886	299·1	144·6	+27·5			68
		·854	308·1	138·0	+34·1			67
		·835	235·3	133·4	−25·7			24
	8303	·971	274·8	160·2	+ 5·6	28	286	125*c*
C	8305	·889	247·3	143·3	−18·0	23	170	184*c*
	8306	·390	22·2	74·7	+25·1	8	43	
	8308	·522	47·3	59·2	+24·4	2	12	
	8307	·513	78·9	53·5	+ 9·1	0	2	
	8309	·837	109·1	29·8	−13·5	58	568	126*c*
	8310	·917	107·5	19·7	−14·2	5	26	53*c*
		·799	69·8	31·9	+18·6			44
		·827	58·3	31·2	+28·2			38
		·899	83·9	19·9	+ 7·3			60
		·922	101·3	18·1	− 8·8			37
Nov. 3			(+24·3)	(84·0)	(+ 4·1)	(124)	(1107)	(1247)

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
307·488		·966	288·2	145·0	−18·6			114
		·961	274·3	143·7	− 5·3			71
		·944	301·3	139·0	+30·7			105
		·941	237·8	134·3	−28·3			51
		·874	290·1	130·0	+19·5			51
		·851	300·7	125·5	−28·0			81
	8305	·976	250·3	144·8	−18·2	21	110	193*c*
G	8306	·370	341·3	77·2	−24·4	3	23	
	8308	·364	24·2	60·4	+23·3	0	17	
	8309	·691	114·6	29·5	−13·6	75	578	
	8310	·795	112·3	20·3	−14·9	0	3	41*c*
		·882	102·1	9·2	− 8·7			68
		·911	115·1	7·9	−20·8			36
		·884	75·9	7·7	+14·3			37
		·905	62·2	6·2	+26·8			35
		·980	101·9	352·4	−10·8			49
Nov. 4			(+24·1)	(69·7)	(+ 4·0)	(99)	(731)	(932)
308·537		·974	307·1	132·0	+36·9			104
		·973	250·5	130·1	−18·0			79
		·939	294·1	125·2	+23·9			154
		·832	301·5	109·1	+28·0			82
		·742	292·5	102·1	+19·1			64
C	8311	·839	249·5	110·0	−14·8	0	5	68*f*
	8306	·481	314·5	77·6	+23·1	0	2	
	8308	·350	354·9	57·7	+24·1	0	3	
	8307	·097	30·9	53·0	+ 8·5	28	168	
	8309	·525	124·2	29·3	−13·8	71	679	
		·770	103·7	6·9	− 8·0			34
		·905	103·9	352·6	−10·9			87
		·980	70·9	336·9	+19·5			44
Nov. 5			(+23·9)	(55·8)	(+ 3·8)	(99)	(857)	(716)
309·346		·976	296·3	122·8	+26·5			158
		·908	279·9	110·4	+10·5			89
		·932	242·9	109·8	−23·5			50
		·896	302·2	106·4	+30·3			120
		·839	290·9	101·2	+19·5			44
		·813	241·9	94·8	−20·0			46
C	8311	·929	252·8	111·4	−14·4	0	8	87*sf*
	8306	·609	304·3	78·2	+23·2	0	6	
	8307	·159	299·5	53·2	− 8·2	61	253	
	8309	·402	138·4	29·4	−13·7	121	654	
	8312	·991	76·6	322·6	+13·8	14	54	287*c*
		·827	105·9	351·3	−10·8			52
		·870	80·3	344·8	+10·3			65
		·931	69·9	336·9	+20·1			86
		·973	110·9	331·1	−19·2			160
Nov. 6			(+23·7)	(45·2)	(− 3·8)	(196)	(975)	(1244)

Group 8308, Nov. 2–5. One or two small faint spots.
Group 8309, Nov. 2–12. Two regular spots, the smaller one leading and remaining stable whilst the following spot becomes very composite. Two clusters of small spots appear; one midway in the group; the other following the composite spot. Thus for some days the group appears as an irregular stream 14° in length, which is rapidly disappearing at the west limb.
Group 8310, Nov. 2–4. Two small spots *f* Group 8309 in the same general area of faculæ.
Group 8311, Nov. 5–6. A very small spot.
Group 8312, Nov. 6–15. Revival in region of Group 8283. A group of the "stream" type which gradually dies out. The two chief members, the leader and rear spots, are in continual change.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.			G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
310·332		·976	278·9	109·8	+ 9·5			97	313·325	8307	·908	275·8	57·9	+ 6·7	51	410	258*c*
		·956	300·1	104·4	+29·8			91		8313	·743	279·8	40·4	+ 9·5	18	97	
		·951	251·7	102·1	−16·2			154		8309	·647	243·2	29·1	−14·3	31	322	
		·933	289·9	100·8	+19·8			110	C	8312	·581	68·8	318·8	+14·8	12	155	
		·827	291·5	96·9	+19·8			42		8314	·878	115·7	295·2	−20·6	11	39	63*c*
		·879	274·9	93·7	+ 6·0			56		8315	·908	101·8	288·7	− 9·3	22	181	131*c*
		·858	305·0	87·5	+31·5			93		8316	·968	77·8	277·0	+12·7	41	296	432*c*
C		·769	297·5	79·9	+23·1			46	Nov. 10			(+22·8)	(352·7)	(+ 3·3)	(186)	(1500)	(1269)
		·707	306·3	72·0	+27·5			22									
	8307	·368	283·5	53·3	+ 8·2	56	336										
	8313	·153	308·7	39·1	+ 9·1	9	27										
	8309	·303	171·2	29·5	−13·7	106	539		314·324		·962	296·6	52·9	+26·4			160
	8312	·946	76·3	321·1	+14·1	24	126	116*c*			·941	311·6	45·9	+40·0			58
		·925	112·9	327·7	−19·6			112		8307	·981	276·2	58·4	+ 6·7	49	526	412*c*
Nov. 7			(+23·5)	(32·2)	(+ 3·6)	(195)	(1028)	(939)		8313	·900	277·8	43·6	+ 8·5	27	237	129*c*
										8309	·797	249·2	29·6	−14·4	25	201	138*c*
										858a	·403	148·4	326·8	−16·8	0	1	
									C	8312	·390	59·0	319·4	+14·5	11	86	
311·352		·887	294·0	79·9	+22·7			161		8314	·769	121·6	295·0	−21·4	16	69	42*c*
		·864	231·1	69·9	−30·6			53		8315	·797	104·2	288·2	− 9·3	28	146	45*c*
		·809	301·4	69·4	+27·1			137		8316	·890	77·5	276·8	+12·6	49	318	280*c*
	8307	·595	277·9	55·0	+ 7·4	68	352				·935	104·6	271·8	−12·4			89
	8313	·375	286·5	40·0	+ 9·4	11	41				·931	66·0	271·8	+23·4			65
C	8309	·354	211·5	29·6	−14·1	54	556				·975	112·3	264·8	−20·8			66
	8312	·846	75·9	321·3	+13·8	26	124	178*c*	Nov. 11			(+22·6)	(339·5)	(+ 3·2)	(205)	(1584)	(1484)
		·837	115·7	325·9	−19·1			116									
		·960	111·1	307·4	−19·2			62									
		·954	73·7	306·1	+16·6			93									
Nov. 8			(+23·3)	(18·7)	(+ 3·5)	(159)	(1073)	(800)	315·372		·849	279·5	23·6	− 9·7			40
										8313	·982	277·1	44·8	− 7·5	13	106	167*f*
										8309	·933	253·3	32·4	−14·3	5	41	283*c*
										8312	·234	29·6	318·9	+14·8	7	51	
312·473		·955	292·4	76·4	+22·4			125		8314	·611	130·5	296·1	−20·6	11	83	
		·953	241·2	72·1	−26·1			98		8315	·643	108·1	287·6	− 9·1	22	142	
		·899	298·6	66·1	+27·1			114	C	8316	·768	76·1	276·1	+12·7	39	344	46*c*
	8307	·794	275·8	56·4	+ 6·6	61	471	90*c*			·816	107·5	273·1	−12·3			28
	8313	·594	281·2	39·9	+ 9·4	19	87				·819	65·7	272·6	+21·5			18
	8309	·521	235·0	29·9	−14·2	60	430				·944	77·2	255·0	+13·1			305
G	8312	·718	72·6	318·9	+14·8	27	179				·958	108·8	254·4	−17·0			93
	8314	·957	115·4	294·1	−23·1	0	7	57*c*	Nov. 12			(+22·3)	(325·7)	(+ 3·1)	(97)	(767)	(980)
	8315	·972	100·8	288·5	− 9·7	25	113	70*c*									
	8316	·997	77·4	278·2	+12·8	79	220	120*c*									
		·860	72·8	305·2	+16·5			92									
		·906	80·8	299·0	+ 9·7			64	316·335		·957	251·9	24·2	−16·3			190
Nov. 9			(+23·0)	(3·9)	(+ 3·4)	(271)	(1507)	(830)			·926	277·7	20·8	+ 8·3			98
											·894	258·1	15·2	− 9·2			60
									C	8312	·225	333·1	319·0	+14·5	1	15	
										8314	·449	147·5	298·3	−19·2	13	79	
313·325		·981	297·2	71·4	+27·2			270		8317	·299	67·2	296·8	+ 9·5	1	10	
		·899	296·2	55·2	+24·8			115		8315	·476	115·3	287·3	− 9·0	18	143	

Group 8313, Nov. 7–12. A wide pair of small spots *f* Group 8307 on Nov. 7 and 8. Others form on the following days, but the leader only is conspicuous as a regular spot on Nov. 11 and 12.

Group 8314, Nov. 9–19. A small spot on Nov. 9; a pair on Nov. 10 which separate considerably in a few days. By Nov. 13 the rear spot has broken up, and a few faint spots have formed between the pair. The leader appears alone after Nov. 16.

Group 8315, Nov. 9–21. Return of Group 8289; 3rd apparition. A regular spot which is very stable until Nov. 19 when it begins to disappear rapidly. Three very small companions appear *s* on Nov. 15.

Group 8316, Nov. 9–22. Return of Group 8290. This region has been active since July 27—see Groups 8172, 8222, 8257, and 8290. A stream of normal type. The rear spot has broken up by Nov. 12 into a cluster which lasts until Nov. 17; the leader persists as a regular spot.

Group 8317, Nov. 13–20. A stream of spots developing from two small faint markings on Nov. 13. The only important member is the leader, a regular spot, which has formed by Nov. 16.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.			G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
316·335	8316	·616	73·3	276·0	+12·5	46	280		319·337		·773	284·0	323·5	+12·4			183
	8318	·799	77·5	260·4	+11·8	2	16	31*c*		8314	·581	233·2	302·7	−18·0	7	52	
	8319	·910	74·8	247·8	+15·0	5	25	116*s*		8317	·476	283·0	301·3	+ 8·5	20	148	
C		·890	109·7	252·6	−15·9			59		*858c*	·257	253·2	287·7	− 1·7	0	3	
		·917	67·1	247·5	+22·1			60		8315	·311	230·0	287·4	− 9·0	16	122	
		·967	114·1	240·5	−22·4			62		8316	·190	339·4	277·4	+12·8	40	278	
Nov. 13			(+22·1)	(313·0)	(+ 3·0)	(86)	(568)	(676)	C	8319	·478	62·4	247·6	+15·0	26	158	
										8320	·962	82·5	199·4	+ 7·9	17	290	347*c*
											·911	106·3	209·6	−13·6			104
317·322		·958	259·6	12·4	− 9·1			74			·952	115·6	204·6	−23·3			163
		·948	278·6	11·4	+ 9·1			50			·964	69·0	199·3	+20·9			89
		·933	245·5	5·7	−21·6			44	Nov. 16			(+21·2)	(273·5)	(+ 2·6)	(126)	(1051)	(1269)
		·796	253·6	350·9	−11·1			26									
	8312	·411	299·1	321·6	+14·2	1	9										
	8314	·362	183·8	301·4	−18·2	11	44		320·315		·953	289·2	332·5	+19·0			60
	8317	·108	11·8	298·7	+ 8·9	10	36				·933	247·8	326·9	−19·6			125
C	8315	·299	133·7	287·4	− 9·1	17	133				·904	281·2	325·1	+11·2			167
	8316	·416	65·6	277·3	+12·5	43	270				·845	287·1	317·4	+15·7			89
	8318	·660	75·6	259·4	+11·6	0	1				·751	291·4	307·6	+17·6			28
	858b	·734	112·0	255·7	−13·9	3	7	22*s*		8314	·729	242·0	303·0	−18·1	11	46	
	8319	·794	73·8	248·2	+14·6	46	208	82*c*		8317	·670	278·1	302·4	+ 7·2	27	244	
		·752	66·4	253·2	+19·5			28		8315	·486	246·4	287·3	− 9·0	19	124	
		·884	115·2	241·5	−20·5			85	C	8316	·346	301·8	278·1	+12·8	41	309	
		·880	83·3	238·5	+ 7·2			45		8319	·303	45·4	247·8	+14·7	17	84	
		·907	64·4	236·4	+24·3			89		8320	·868	82·4	200·6	+ 7·8	23	150	204*c*
Nov. 14			(+21·8)	(300·0)	(+ 2·9)	(131)	(708)	(545)		*858d*	·958	64·2	188·1	+25·4	2	26	122*sf*
											·866	116·8	204·6	−21·5			100
											·943	120·9	194·5	−27·9			87
318·395		·913	256·3	350·5	−11·3			58			·976	110·2	185·2	−19·0			155
		·891	243·0	344·9	−22·4			35			·973	100·4	184·8	− 9·5			58
	8312	·593	289·1	320·9	+13·3	0	8		Nov. 17			(+21·0)	(260·6)	(+ 2·5)	(140)	(983)	(1195)
	8314	·436	215·5	301·3	−18·1	8	58										
	8317	·253	296·1	299·1	+ 9·1	10	78										
	8315	·210	186·5	287·3	− 9·3	20	138		321·408		·969	283·1	321·8	+13·3			181
	8316	·235	39·3	277·1	+13·1	35	335				·891	287·7	308·4	+16·8			64
C	8319	·629	70·2	248·4	+14·4	37	199			8317	·841	277·1	303·3	+ 7·3	65	404	49*c*
	8320	·992	82·0	203·0	+ 8·3	0	34	65*c*		8314	·865	247·7	303·2	−17·8	9	37	74*p*
		·813	120·6	236·8	−22·6			50		8315	·685	254·6	287·9	− 8·6	12	116	
		·844	59·3	231·6	+27·0			49		8321	·671	244·1	284·7	−15·1	7	29	
		·969	103·5	211·4	−12·4			36		8316	·557	290·7	278·4	+13·3	35	328	
		·979	111·7	209·9	−20·5			65		8319	·219	354·8	247·4	+15·0	7	49	
		·974	73·4	209·0	+16·8			35	C	8320	·716	80·9	200·8	+ 8·2	22	131	
Nov. 15			(+21·5)	(285·9)	(+ 2·7)	(110)	(850)	(393)		8322	·938	83·1	176·6	+ 7·3	0	14	111*f*
										8323	·960	100·2	173·4	− 9·1	16	135	371*c*
											·843	123·3	194·8	−26·0			84
319·337		·980	257·3	350·9	−11·9			47			·896	113·3	185·6	−19·5			155
		·943	282·9	343·9	+13·0			44			·899	62·9	184·2	+25·2			72
		·876	291·6	333·4	+20·1			71			·924	69·7	179·5	+19·6			27
C		·863	257·3	331·9	− 9·6			63			·959	106·9	174·3	−15·4			212
		·847	243·1	327·3	−21·0			158	Nov. 18			(+20·7)	(246·2)	(− 2·4)	(173)	(1243)	(1400)

Group 8318, Nov. 13–14. One or two very small spots between Groups 8316 and 8319.
Group 8319, Nov. 13–22. A small spot on Nov. 13 which has increased and become regular by the next day. It is unstable, however, and soon breaks up, being represented latterly by a small cluster. South preceding it there is an unstable companion from Nov. 14 to 19.
Group 8320, Nov. 15–25. A short stream with a small but stable regular spot as leader. The following portion of the stream is intermittent in activity, none of the spots persisting long.
Group 8321, Nov. 18–20. A spot appearing *sf* Group 8315 and soon disappearing.
Group 8322, Nov. 18–19. A very small spot.
Group 8323, Nov. 18–25. A revival or a return of Group 8302. A small regular spot followed at some distance by several small companions which die out by Nov. 25.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.			G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
322·338		·956	286·4	306·5	+16·3			188	324·349	8319	·666	289·4	247·6	+14·2	3	13	70*p*
		·883	241·6	291·6	−23·6			63		8325	·535	190·8	214·0	−29·6	11	103	
		·801	281·2	286·7	+10·3			36		8320	·161	41·4	201·2	+ 8·8	13	83	
	8314	·944	250·3	302·6	−17·7	3	17	77*c*		8326	·529	59·2	179·1	+17·4	0	15	
	8317	·932	277·0	302·5	+ 7·4	79	474	234*c*		8323	·544	110·0	176·4	− 9·0	13	88	
	8315	·819	258·0	287·8	− 8·5	10	115	32*c*	C	8324	·596	115·2	173·9	−13·0	9	52	
	8321	·808	249·8	285·3	−14·7	3	10	23*c*			·808	119·0	158·1	−21·7			102
	8316	·711	286·6	278·2	+13·3	24	248	53*c*			·856	61·6	151·4	+25·1			97
	858e	·282	287·0	249·6	+ 6·9	1	3				·856	72·2	149·5	+16·2			103
	8319	·310	313·8	247·2	+14·5	7	52				·938	111·4	140·0	−19·2			275
	8320	·533	78·2	202·2	+ 8·2	22	110				·948	63·3	137·4	+25·8			166
C	8324	·850	109·4	178·0	−15·0	3	8	134*f*	Nov. 21			(+19·8)	(207·4)	(+ 2·0)	(69)	(606)	(1406)
	8322	·838	82·6	177·2	+ 7·4	0	4	148*f*									
	8323	·879	101·2	173·4	− 8·7	13	160	632*c*	325·326		·975	253·5	270·4	−15·6			117
		·791	58·9	185·4	+25·6			104			·889	247·6	254·6	−18·9			207
		·798	115·6	184·7	−18·6			66			·839	277·3	251·3	+ 7·1			39
		·873	66·3	174·8	+21·7			82			·923	222·7	251·2	−41·6			68
		·949	106·2	163·8	−14·5			234			·778	236·9	239·7	−23·7			67
		·942	77·2	163·7	+12·8			71		8316	·992	284·0	277·2	+14·1	23	172	200*f*
		·965	113·6	161·6	−22·0			81		8319	·812	286·4	247·8	+14·4	8	28	125*c*
		·966	65·2	159·6	+24·5			82		*858f*	·598	244·0	227·9	−13·6	2	6	
Nov. 19			(+20·4)	(233·9)	(+ 2·3)	(165)	(1201)	(2340)		8325	·586	207·6	212·6	−29·4	21	64	
										8320	·170	314·8	201·5	+ 8·8	24	93	
323·342		·962	246·3	292·4	−22·1			72		8326	·395	46·4	177·1	+17·5	10	33	
		·848	253·3	276·9	−12·9			75		8324	·431	130·6	174·8	−14·4	10	51	
	8317	·991	277·1	302·9	+ 7·3	54	424	262*c*	C	8323	·395	117·1	173·8	− 8·5	20	78	
	8315	·929	260·1	288·2	− 8·3	7	47	54*f*		*858g*	·811	118·0	144·6	−21·1	5	12	46*f*
	8321	·917	252·3	285·4	−15·3	0	9	48*p*		8327	·964	102·7	121·0	−11·7	21	162	229*c*
	8316	·849	284·5	278·1	+13·3	27	196	415*c*			·754	70·4	147·1	+15·9			45
	8319	·472	299·9	245·7	+15·4	3	12				·845	60·3	140·1	+25·8			85
	8325	·534	166·4	212·5	−29·0	12	66				·850	111·0	138·8	−16·6			50
	8320	·324	69·3	202·9	+ 8·5	12	73				·927	113·7	129·3	−21·1			120
C	8324	·745	109·6	174·8	−13·0	0	7				·947	53·2	126·5	+35·3			99
	8323	·750	103·7	173·4	− 8·8	11	84	76*f*			·949	65·0	124·0	+24·3			130
		·852	108·1	164·2	−14·2			86			·964	79·8	120·1	+10·3			39
		·862	60·1	164·2	+26·6			78			·971	93·6	118·7	− 3·1			66
		·856	82·9	162·1	+ 7·1			66	Nov. 22			(+19·4)	(194·5)	(+ 1·9)	(144)	(699)	(1732)
		·909	117·0	158·9	−23·4			108									
		·945	69·5	150·5	+20·0			193	326·497		·975	248·3	254·5	−20·7			77
		·970	109·5	146·6	−18·3			77			·944	284·9	249·4	+14·6			98
Nov. 20			(+20·1)	(220·7)	(+ 2·1)	(126)	(918)	(1610)			·882	298·4	238·2	+25·6			37
											·885	243·3	237·7	−22·5			46
										8325	·716	223·8	213·7	−29·6	6	18	
324·349		·935	255·2	275·3	−13·0			96	G	8320	·421	286·5	203·1	+ 8·4	8	19	
		·866	293·4	265·6	+21·1			48		8324	·292	174·3	177·4	−15·1	28	84	
		·799	280·6	260·0	+ 9·6			27		8326	·274	9·9	176·3	+17·4	1	27	
		·819	246·6	259·3	−17·8			51		8323	·197	155·3	174·3	− 8·5	13	34	
C	8315	·989	261·0	288·2	− 8·6	0	46	67*f*		8327	·859	104·7	121·3	−11·6	42	160	211*c*
	8316	·944	283·8	277·8	+13·7	20	206	304*c*		8328	·963	107·7	106·2	−16·5	0	9	160*c*

Group 8324, Nov. 19–28. A group in the same general area of disturbance as Group 8323. The spots, excepting the leader, are very small, and are arranged in a sparse stream.

Group 8325, Nov. 20–25. A short-lived stream forming near the central meridian.

Group 8326, Nov. 21–26. A small unstable group of few spots.

Group 8327, Nov. 22–Dec. 2. At first a pair of small regular spots, of which the leading one has disappeared by Nov. 26, whilst a cluster has taken the place of the other.

Group 8328, Nov. 23–Dec. 5. A small irregular stream developing rapidly after Nov. 25, when a large spot appears at the head. By Nov. 29 another large spot has formed which is represented earlier by a cluster of indefinite spots. The stream is now roughly of normal type, though the attendant spots are few and very small. Groups 8327, 8328, and 8333 constitute a procession of activity.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
326·497		·888	50·6	122·2	+35·2			49
G		·873	61·2	121·2	+25·7			82
		·964	59·7	106·2	+29·6			83
Nov. 23			(+19·1)	(179·1)	(+ 1·7)	(98)	(351)	(843)
327·553		·986	284·7	245·5	+14·8			123
		·948	245·3	234·0	−22·7			82
		·927	299·7	230·8	+28·0			112
		·916	286·6	230·8	+15·8			52
		·852	251·9	221·7	−14·4			50
	8325	·820	231·7	212·7	−29·4	3	10	75*c*
	8320	·595	282·1	201·1	+ 8·4	11	40	
	8326	·385	314·0	178·2	+17·0	1	7	
	8324	·341	216·9	177·3	−14·2	9	123	
C	8323	·238	222·2	174·5	− 8·5	3	33	
	8329	·102	74·5	159·6	+ 3·1	1	7	
	8330	·251	134·1	154·7	− 8·5	13	76	
	8327	·719	108·9	121·3	−12·3	15	89	73*f*
	8331	·846	80·8	107·8	+ 8·6	4	31	50*c*
	8328	·902	108·1	102·6	−15·5	9	76	315*c*
		·806	43·5	121·4	+36·9			54
		·880	57·3	107·4	+29·1			55
		·870	71·6	105·9	+16·8			48
		·966	67·5	91·0	+22·1			162
Nov. 24			(+18·7)	(165·2)	(+ 1·6)	(69)	(492)	(1251)
328·139		·950	298·7	227·3	+27·6			58
		·914	254·7	222·1	−13·3			39
		·928	240·7	221·7	−26·3			21
	8325	·877	234·2	212·4	−29·9	2	7	114*c*
	8320	·717	280·3	202·7	+ 8·4	8	35	
	8326	·465	305·5	180·6	+17·0	2	22	
	8323	·435	242·2	180·3	−10·2	3	10	
	8324	·431	232·1	177·8	−13·9	18	105	
D	8330	·186	165·8	154·8	− 8·8	45	214	
	8327	·643	111·3	119·7	−12·3	20	79	
	8331	·763	80·3	108·1	+ 8·3	8	42	73*c*
	8328	·829	109·6	103·6	−15·2	25	136	276*c*
		·849	54·8	104·3	+30·1			161
		·921	108·8	92·1	−16·6			122
		·942	65·5	88·5	+23·5			212
		·969	85·6	81·8	+ 4·7			86
Nov. 25			(+18·5)	(157·4)	(+ 1·5)	(131)	(650)	(1162)
329·466		·954	254·8	211·3	−14·1			61

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
329·466		·951	238·0	207·9	−29·7			77
		·887	289·1	201·3	+17·5			40
		·897	245·3	200·7	−21·4			36
		·866	277·1	199·6	+ 6·9			304
		·832	235·1	190·0	−27·5			48
	8324	·714	248·3	182·9	−14·2	7	33	
	8332	·727	299·6	182·7	+22·0	1	6	
	8326	·698	292·8	181·9	+16·7	1	4	
	858h	·448	250·4	165·0	− 7·4	0	3	
	8329	·360	275·8	160·8	+ 3·4	5	14	
	8330	·324	239·0	156·0	− 8·2	31	269	
C	8327	·415	123·7	119·3	−11·9	12	85	
	8328	·582	120·2	108·5	−15·8	79	453	
	8331	·539	76·6	108·0	+ 8·4	0	5	
	8333	·753	113·0	93·9	−16·1	4	46	
	8334	·964	83·7	65·5	+ 6·5	22	228	184*f*
	8335	·976	68·7	63·2	+21·1	0	9	139*c*
		·912	63·8	76·1	+24·4			58
		·956	49·7	71·2	+38·6			35
		·961	111·7	67·9	−20·4			37
		·978	58·0	63·4	+31·5			113
Nov. 26			(+18·0)	(139·9)	(+ 1·4)	(162)	(1155)	(1132)
330·425		·968	287·9	202·3	+17·7			49
		·953	276·2	199·5	+ 6·3			82
		·954	245·4	197·4	−22·9			57
	8324	·859	251·9	184·7	−14·7	0	13	149*f*
	8332	·832	296·1	180·9	+22·2	3	82	138*c*
	858i	·577	273·7	162·4	− 3·2	2	10	
	8330	·526	252·3	157·6	− 8·0	39	318	
	8327	·267	149·1	119·3	−11·9	21	75	
G	8331	·329	65·5	109·7	+ 9·1	1	8	
	8328	·427	133·3	108·5	−15·7	62	587	
	8333	·671	121·9	90·2	−19·6	5	23	
	8334	·885	83·2	65·3	− 6·6	17	184	237*nf*
	8335	·916	68·1	62·4	+20·5	6	37	203*nf*
		·905	57·4	66·0	−29·8			104
		·957	111·7	56·1	−20·2			119
Nov. 27			(+17·7)	(127·3)	(+ 1·3)	(156)	(1337)	(1138)
331·390		·948	240·9	182·8	−27·0			65
		·932	300·2	180·7	+28·3			79
		·889	277·3	177·1	+ 7·0			57
	8332	·929	293·1	181·3	+21·8	6	57	172*c*
C	8324	·895	253·8	176·7	−13·9	0	12	407*n*
	8330	·714	258·5	159·3	− 7·4	34	304	

Group 8329, Nov. 24–26. A pair of small spots not seen on Nov. 25.
Group 8330, Nov. 24–30. A group of partially formed spots of unstable character.
Group 8331, Nov. 24–29. A pair of small spots until Nov. 26, after which only one is seen.
Group 8332, Nov. 26–29. A few spots appearing in the same area of faculæ as Group 8326 when that group is disappearing. A small regular spot has developed near the west limb on Nov. 29.
Group 8333, Nov. 26–Dec. 5. A stream of spots in continual change until Dec. 1, when a regular spot has appeared which alone remains on the following days.
Group 8334, Nov. 26–Dec. 6. Probable return of Group 8307. A large spot which has divided on Nov. 28 and so gradually dies out.
Group 8335, Nov. 26–Dec. 8. Revival of Group 8328. A small spot following which others form the next day. One of these becomes nearly of regular type and, although slowly disappearing, it persists as the spots preceding it die out.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
331·390	8336	·682	305·7	151·9	+24·3	1	22	
	8337	·167	209·7	119·4	− 7·2	2	14	
	8327	·245	197·1	118·8	−12·4	16	53	
	8328	·312	159·4	108·1	−15·9	105	617	
	8331	·183	44·3	107·2	+ 8·5	0	2	
	8333	·518	132·5	90·8	−19·4	3	28	
C	8334	·756	82·7	65·8	+ 6·3	21	135	216*f*
	8335	·838	65·1	60·1	+21·3	52	252	185*c*
	8338	·858	115·1	58·7	−20·7	0	7	57*f*
	8339	·902	108·7	51·9	−16·3	0	5	25*f*
	8340	·945	83·7	43·9	+ 6·3	0	12	100*f*
		·822	52·3	65·6	+30·8			74
		·954	108·3	43·5	−17·1			226
Nov. 28			(+17·3)	(114·6)	(+ 1·1)	(240)	(1520)	(1663)
332·323		·973	256·8	178·2	−12·6			305
		·951	278·8	174·0	+ 8·6			85
		·863	273·0	161·7	+ 3·1			31
		·800	290·6	153·7	+17·0			66
		·818	243·8	153·7	−20·5			28
	8332	·987	291·0	182·6	+21·8	12	112	317*c*
	8330	·847	260·6	159·5	− 7·4	24	153	122*c*
	8336	·821	299·0	153·9	+24·0	3	9	110*c*
	8337	·328	243·2	119·4	− 7·5	14	46	
	8327	·368	230·8	119·2	−12·5	11	56	
C	8328	·307	198·6	108·1	−15·9	137	978	
	8331	·162	338·1	105·8	+ 9·6	0	6	
	8333	·386	154·1	92·1	−19·2	31	137	
	8334	·603	80·6	65·7	+ 6·4	20	107	
	8335	·734	61·0	58·8	+21·5	26	184	120*nf*
	8338	·754	119·1	57·7	−20·7	0	3	33*f*
	8339	·789	111·8	52·7	−16·3	1	5	33*f*
	8340	·859	83·4	43·4	+ 6·2	15	121	128*c*
		·862	49·2	49·8	+34·8			52
		·911	57·4	40·3	+29·8			44
		·922	110·0	36·9	−18·0			177
		·946	69·2	32·4	+19·9			81
		·974	104·2	26·2	−13·6			184
		·973	82·2	25·9	+ 7·8			79
Nov. 29			(+17·0)	(102·3)	(+ 1·0)	(294)	(1917)	(1995)
333·337		·970	291·4	163·9	−20·9			117
		·948	276·6	160·1	+ 6·6			90
		·961	303·6	160·1	+32·3			57
C		·928	248·0	155·0	−19·9			85
		·889	288·8	150·4	+17·1			63

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
333·337	8330	·955	262·5	161·1	− 6·9	3	104	658*c*
	8336	·930	295·0	155·4	+23·4	0	5	123*nf*
	8341	·779	299·0	136·3	+22·7	3	10	
	8337	·543	254·1	120·6	− 7·7	27	232	
	8327	·547	244·8	119·2	−12·7	7	42	
	8328	·429	227·5	108·1	−15·8	120	1066	
	8333	·343	190·2	92·6	−18·7	16	115	
	8338	·209	69·2	77·6	+ 5·1	0	10	
	8334	·404	76·2	65·8	+ 6·3	17	56	
C	8335	·588	53·0	58·7	+21·4	19	216	
	8338	·643	123·5	54·2	−20·0	0	8	
	8339	·635	117·5	53·1	−16·2	1	3	
	8340	·715	81·7	43·7	+ 6·6	23	202	
	8342	·862	78·4	30·0	+10·4	0	3	26*c*
	8343	·886	81·7	26·9	+ 7·7	4	11	35*c*
		·806	111·6	37·6	−16·7			40
		·865	67·6	31·0	+19·7			32
		·917	106·4	23·7	−14·6			92
Nov. 30			(+16·6)	(88·9)	(+ 0·9)	(240)	(2083)	(1418)
334·406		·988	260·4	155·5	− 9·4			299
		·977	295·4	151·4	+25·0			232
		·973	281·5	151·1	+11·3			89
		·976	249·1	150·8	−20·2			155
		·895	246·8	135·8	−20·2			105
	8341	·905	294·2	137·6	+22·1	14	92	91*c*
	8337	·751	258·8	122·6	− 7·5	84	596	
	8327	·724	251·5	119·3	−12·7	3	53	
C	8328	·597	241·6	107·7	−15·7	146	1177	
	8333	·460	223·0	94·1	−18·9	22	135	
	8334	·184	57·6	65·8	+ 6·4	15	52	
	8335	·461	37·4	57·3	+22·1	26	162	
	8344	·448	103·0	48·9	− 5·0	6	32	
	8345	·546	129·2	48·3	−19·4	1	7	
	8340	·537	79·1	42·9	+ 6·5	41	222	
	8346	·664	100·8	33·9	− 6·6	3	16	
	8343	·764	80·4	25·5	+ 7·8	6	29	
		·923	78·8	8·0	+10·6			41
		·939	89·4	5·2	− 0·9			30
Dec. 1			(+16·2)	(74·8)	(+ 0·8)	(367)	(2573)	(1042)
335·498		·964	247·6	133·3	−21·4			98
		·965	299·0	133·2	+28·0			60
		·884	301·8	118·6	+28·0			73
C	8341	·983	292·4	138·9	+22·1	5	64	78*c*
	8337	·885	261·0	122·0	− 7·5	91	694	137*c*

Group 8336, Nov. 28–30. One or two very small spots.
Group 8337, Nov. 28–Dec. 4. Two large regular spots of rapid growth from several minute spots on Nov. 28; *n* Group 8327.
Group 8338, Nov. 28–30. One or two very small spots. Group 8339, Nov. 28–30. A small spot.
Group 8340, Nov. 28–Dec. 9. A revival rather than a return of Group 8313. A small spot on Nov. 28 which grows and becomes of regular type. Meanwhile a companion spot has developed 7° from it in longitude, but it is unstable and after breaking up, it slowly disappears. Small companions appear on Nov. 30, when the group has become a short stream.
Group 8341, Nov. 30–Dec. 2. Two small but distinct spots, of which the preceding one grows and becomes of regular type.
Group 8342, Nov. 30–Dec. 3. A pair of small ephemeral spots on Nov. 30; a small spot on Dec. 3.
Group 8343, Nov. 30–Dec. 4. A pair of small spots until Dec. 2; one small spot afterwards.
Group 8344, Dec. 1–3. A small stream of faint spots.
Group 8345, Dec. 1–8. A short stream of small spots until Dec. 4, when a regular spot has formed in front and the remaining spots are disappearing.
Group 8346, Dec. 1–8. A short stream. The leader is the only significant member and alone remains on Dec. 6.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.			G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
335·498	8327	·885	255·6	121·5	−12·4	2	16	103*c*	337·441		·921	112·4	329·8	−20·3			63
	8328	·702	249·0	107·8	−15·3	147	1197	49*c*			·934	69·5	327·1	+19·2			90
	8333	·643	238·8	95·8	−18·9	14	58		Dec. 4			(+15·0)	(34·8)	(+ 0·4)	(234)	(1438)	(531)
	858k	·488	300·6	86·1	+14·8	0	3										
	8334	·139	315·5	66·0	+ 6·3	5	37										
	8335	·375	7·7	57·3	+22·4	13	101										
	8344	·237	113·0	47·8	− 4·7	7	24		338·324		·955	291·3	94·5	+20·3			78
C	8345	·405	148·3	47·4	−19·5	10	46				·935	303·4	88·6	+31·0			58
	8340	·311	70·5	43·3	+ 6·5	41	261				·832	276·0	79·1	+ 5·1			119
	8346	·438	106·1	35·4	− 6·4	9	40			8328	·986	254·2	102·9	−15·5	43	658	343*c*
	8343	·585	76·6	25·5	+ 8·2	2	16			8333	·954	250·2	94·4	−18·8	0	13	330*f*
		·837	88·8	3·8	+ 1·3			34		8334	·690	277·5	66·4	+ 5·3	4	9	
		·916	103·9	355·0	−12·5			39		*858m*	·586	293·4	56·7	+13·6	0	2	
Dec. 2			(+15·8)	(60·4)	(+ 0·6)	(346)	(2557)	(671)		8335	·626	306·6	55·9	+22·0	6	20	
										858n	·512	248·2	52·0	−10·7	1	2	
										8345	·561	231·1	50·8	−20·4	16	76	
									C	8340	·402	286·2	46·0	+ 6·6	20	138	
336·325		·950	255·6	120·4	−13·5			109		8346	·271	244·3	37·4	− 6·6	12	37	
		·940	300·5	116·6	+28·6			84		8347	·359	217·8	36·4	−16·2	0	2	
		·875	282·3	109·8	+11·0			49		*858o*	·282	84·8	7·0	+ 1·6	1	6	
		·903	313·1	106·5	+38·3			37		8348	·973	83·0	306·9	+ 6·8	47	292	139*f*
	8337	·963	262·2	123·4	− 7·4	39	604	178*c*			·838	109·8	328·2	−16·3			67
	8328	·861	252·0	107·3	−15·2	134	1037	153*c*			·844	72·7	327·0	+14·6			274
	8333	·760	244·2	95·6	−18·9	15	61				·871	118·4	326·2	−24·3			32
	8334	·298	289·4	65·8	+ 6·1	12	22				·964	74·4	309·4	+15·0			107
C	8335	·392	345·1	55·7	+22·7	13	44		Dec. 5			(+14·6)	(23·2)	(+ 0·2)	(150)	(1255)	(1547)
	8344	·102	174·4	48·9	− 5·3	1	7										
	8345	·344	176·4	48·2	−19·5	20	69										
	8340	·144	42·0	44·0	+ 6·6	31	211										
	8346	·273	116·4	35·3	− 6·5	25	86		339·355		·979	248·4	86·7	−21·1			151
	8342	·342	55·0	32·9	+11·7	2	9				·936	274·0	78·7	+ 3·8			126
	8343	·437	70·8	24·9	+ 8·7	2	11				·849	307·5	61·3	+31·0			74
		·974	70·2	341·6	+19·4			91		8334	·844	276·1	66·8	+ 5·2	3	7	74*nf*
		·979	80·8	331·5	+ 9·1			89		8335	·769	299·0	55·9	+21·9	3	10	90*p*
Dec. 3			(+15·4)	(49·5)	(+ 0·5)	(294)	(2161)	(790)		8345	·730	241·0	52·4	−20·6	10	55	
									C	8340	·598	281·1	45·7	+ 6·6	21	142	
										8346	·492	256·0	38·2	− 6·7	4	24	
										8347	·536	236·6	37·4	−17·1	1	9	
337·441	8337	·993	261·2	117·6	− 8·7	18	140	101*c*		8348	·897	82·0	306·2	+ 7·2	66	327	202*f*
	8328	·958	253·4	107·4	−15·5	121	879	150*c*			·783	67·6	320·5	+17·4			46
	8333	·886	248·3	95·1	−18·9	6	47	57*f*			·911	73·6	305·0	+15·0			114
	8334	·521	279·7	65·7	+ 5·3	6	10		Dec. 6			(+14·2)	(9·6)	(+ 0·1)	(108)	(574)	(877)
	8335	·495	318·2	55·5	+21·9	6	23										
	858l	·342	248·4	53·4	− 6·8	2	8										
	8345	·424	213·4	49·1	−20·2	31	97										
G	8340	·211	301·6	45·2	+ 6·7	25	146		340·387		·947	245·0	65·3	−23·6			171
	8347	·278	190·6	37·8	−15·3	2	6				·925	278·5	63·2	+ 7·8			172
	8346	·128	192·6	36·4	− 6·7	17	80				·926	304·5	59·4	+31·6			215
	8343	·212	48·6	25·6	− 8·5	0	2		C		·839	261·3	52·5	− 7·3			135
		·904	80·2	330·6	+ 9·1			70			·858	314·7	45·6	+37·0			189

Group 8347, Dec. 4–9. A few minute spots *s* Group 8346 until Dec. 7, after which a small regular spot appears followed by a small cluster.
Group 8348, Dec. 5–17. Return of Group 8317. A large stable regular spot with occasional very small followers.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.			G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
340·387	*859a*	·914	282·8	61·3	+11·7	0	6	150*c*	343·347		·991	251·3	38·8	−18·6			191
	8335	·904	293·1	58·6	+20·8	0	15	389*c*			·984	262·8	36·4	− 7·1			173
	8345	·862	245·8	53·0	−20·7	5	30	119*f*			·942	281·4	26·7	+10·6			69
	8340	·772	279·0	46·0	+ 6·9	18	119				·927	252·3	23·8	−16·5			132
	8346	·678	260·0	38·1	− 6·7	5	13			8351	·499	341·3	327·4	+27·7	0	5	
	8347	·695	247·0	37·5	−15·7	5	25			8350	·261	19·7	311·8	+13·8	30	155	
C	8348	·770	80·2	306·3	+ 7·5	51	331	74*f*	C	8348	·230	53·4	306·3	+ 7·5	57	317	
	8349	·977	81·0	278·7	+ 8·8	16	92	184*f*		8349	·638	75·3	278·5	+ 9·0	31	178	
		·848	68·2	300·2	+18·3			79		8352	·994	102·7	233·6	−12·7	0	119	6*cc*
		·912	116·3	292·9	−23·7			64			·864	74·8	258·5	+12·8			126
		·944	103·5	286·0	−12·7			142			·888	111·0	256·1	−18·7			85
		·960	59·8	285·0	+28·8			74			·945	73·0	247·2	+15·9			207
		·950	75·0	285·0	+14·2			92	Dec. 10			(+12·5)	(317·0)	(− 0·4)	(118)	(774)	(1043)
Dec. 7			(+13·8)	(356·0)	(0·0)	(100)	(631)	(2249)									
									344·614		·929	285·0	7·5	+13·6			84
341·330		·980	279·8	61·7	+ 9·6			182		8350	·314	321·4	311·9	+13·5	19	147	
		·931	262·8	51·8	− 6·7			107		8348	·175	324·0	306·2	+ 7·5	52	303	
		·939	302·2	49·9	+29·9			160		8349	·396	65·0	279·1	+ 9·1	27	170	
	8335	·956	293·8	54·7	+22·6	0	25	278*c*	C	8353	·688	81·6	257·4	+ 5·3	4	18	
	8345	·946	247·8	53·1	−21·0	0	15	213*f*		8352	·918	103·1	234·3	−12·2	53	482	783*c*
	8340	·905	277·0	48·0	+ 6·3	9	82	192*f*			·829	69·2	246·5	+16·8			206
C	8346	·817	261·8	37·9	− 6·7	0	3	57*c*	Dec. 11			(+12·0)	(300·3)	(− 0·6)	(155)	(1120)	(1073)
	8347	·829	251·1	37·9	−15·6	28	126	79*c*									
	8350	·582	66·7	310·4	+13·2	4	16										
	8348	·617	77·8	306·3	+ 7·4	50	306		345·344		·981	286·0	8·7	+15·6			98
	8349	·910	80·2	278·7	+ 8·8	32	155	336*c*		8350	·444	303·6	313·6	+13·6	14	74	
		·856	114·8	287·4	−21·1			76		8348	·308	298·4	306·5	+ 7·7	51	329	
		·887	101·4	281·8	−10·2			85		8354	·148	351·4	292·0	+ 7·7	23	114	
Dec. 8			(+13·4)	(343·6)	(− 0·1)	(123)	(728)	(1765)	C	8349	·263	49·7	279·0	+ 9·1	24	154	
										8353	·561	77·7	257·4	+ 6·3	7	50	
										8352	·836	104·7	234·9	−12·7	95	708	312*c*
342·458		·985	264·9	48·5	− 5·0			48		8355	·988	81·0	210·2	+ 8·8	35	265	155*nf*
		·979	248·9	46·1	−20·7			101	Dec. 12			(+11·6)	(290·7)	(− 0·7)	(249)	(1694)	(565)
		·935	261·7	37·5	− 7·9			146									
		·845	249·6	24·6	−17·3			127	346·342		·816	282·5	331·3	+ 9·7			118
	8340	·984	276·5	48·0	+ 6·3	11	82	115*f*			·813	295·0	328·9	+19·6			59
	8347	·948	253·2	39·3	−16·0	12	136	129*c*		8350	·615	291·8	313·3	+12·5	4	33	
	859b	·929	281·1	36·3	+10·2	1	8	94*f*		8348	·503	287·2	306·5	+ 7·8	59	320	
C	8351	·444	359·8	328·8	+25·9	0	5			8354	·306	298·2	293·3	+ 7·5	142	672	
	8350	·385	50·1	311·1	+13·9	14	79			8349	·178	346·4	280·0	+ 9·1	13	109	
	8348	·405	70·8	306·1	+ 7·3	57	324		C	8353	·370	70·0	257·2	+ 6·5	47	235	
	8349	·777	78·3	278·5	+ 8·8	14	147	48*c*		8352	·701	107·8	234·5	−13·0	98	687	
		·880	66·5	269·6	+20·3			38		8356	·812	111·4	225·3	−17·7	1	5	
		·040	76·9	259·5	+12·2			91		8355	·934	80·2	209·2	+ 8·8	49	349	727*f*
		·952	111·7	257·9	−20·7			64		8357	·991	109·4	195·8	−19·3	0	25	116*c*
Dec. 9			(+12·9)	(328·7)	(− 0·3)	(109)	(781)	(1001)			·967	62·8	204·8	+25·9			91

Group 8349, Dec. 7–17. A small regular spot with a train of small followers which are not seen on Dec. 13 and after Dec. 15, when the leader is also disappearing. In the same disturbed area as Group 8316.

Group 8350, Dec. 8–13. Two spots on Dec. 8 which have enlarged by Dec. 9. Other spots form the next day to make an irregular stream which, however, is short lived. *np* Group 8348. Group 8351, Dec. 9–10. One or two very small spots.

Group 8352, Dec. 10–22. A regular spot followed by a broad train of numerous ill-formed spots which die out as the west limb is approached.

Group 8353, Dec. 11–20. A pair of widely separated spots developing from two very small nuclei on Dec. 11. The leading spot is of regular type and outlasts its companion which has dwindled to a mere dot by Dec. 19. A few small attendants are seen between the pair on Dec. 13 and 14.

Group 8354, Dec. 12–18. A large stream of normal type, with rapid development, appearing on the central meridian between Groups 8348 and 8349, thereby making a long procession, with Group 8353 in the rear. Both the leading and following spots are large and are fully formed by Dec. 15.

Group 8355, Dec. 12–24. Revival of Group 8320. A large spot nearly of regular formation which shows signs of breaking up on Dec. 19, although the actual separation does not take place until Dec. 22. The two portions then rapidly disappear. There are occasional small companions, those from Dec. 18–21 being at some distance. Group 8356, Dec. 13–16. A small faint stream *sf* Group 8352.

Group 8357, Dec. 13–24. A small but persistent stream of very small spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
346·342		·966	100·6	202·9	−10·4			89
Dec. 13			(+11·2)	(277·6)	(−0·8)	(413)	(2435)	(1200)
347·365		·914	281·4	329·3	+10·0			170
		·916	291·3	328·4	+19·0			91
		·906	247·1	327·3	−21·1			123
		·796	287·2	315·2	+13·0			147
	8358	·749	250·1	310·8	−15·3	17	73	
	8348	·690	282·7	306·8	+ 8·0	52	322	
	8354	·507	287·5	293·0	+ 7·8	153	976	
	8349	·305	306·0	278·5	+ 9·4	12	71	
	8353	·171	39·0	257·9	+ 6·7	50	456	
C	8352	·523	113·3	234·7	−12·7	96	605	
	8356	·685	115·2	223·7	−17·6	5	55	
	8355	·824	78·9	209·4	+ 8·5	50	314	332*f*
	8359	·876	87·6	203·2	+ 1·7	0	2	213*f*
	8357	·947	111·3	194·1	−20·4	6	34	311*c*
	8360	·993	69·1	182·1	+20·6	8	81	115*p*
		·899	59·7	204·1	+26·5			107
		·887	101·5	202·2	−10·5			112
		·930	120·5	198·6	−28·5			89
		·977	102·7	186·7	−12·6			230
Dec. 14			(+10·7)	(264·1)	(− 0·9)	(449)	(2989)	(2040)
348·488		·971	248·5	324·5	−21·1			92
		·900	286·2	312·1	+14·1			136
	8358	·918	253·6	315·0	−15·4	8	23	101*f*
	8348	·851	280·0	306·9	+ 8·0	63	324	65*c*
	8354	·710	281·6	293·6	+ 7·3	260	1460	
	8349	·522	289·3	279·1	+ 9·1	4	45	
	8353	·204	307·6	258·6	+ 6·1	51	300	
	8361	·298	331·2	257·8	+14·1	2	8	
G	*859c*	·553	7·1	244·7	+32·2	0	5	
	8352	·306	133·3	236·1	−13·1	85	436	
	8356	·504	124·9	223·7	−17·6	4	19	
	8355	·641	76·0	210·5	+ 8·2	64	289	84*f*
	8359	·723	88·3	203·2	+ 0·5	6	20	37*nf*
	8357	·833	113·2	195·1	−19·7	4	7	101*c*
	8360	·944	67·8	180·6	+20·5	8	72	110*c*
		·916	104·9	183·7	−14·0			200
		·916	80·7	183·6	+ 8·1			55
Dec. 15			(+10·2)	(249·3)	(− 1·0)	(559)	(3008)	(981)
349·454		·976	284·8	313·0	+14·1			178
		·960	254·4	309·8	−15·3			139
		·918	287·3	301·7	+15·3			66
C		·887	298·1	295·3	+24·0			40
1917.			°	°	°			
349·454	8348	·943	279·0	306·5	+ 8·0	49	323	76*c*
	8354	·843	280·0	293·4	+ 7·6	197	1557	235*c*
	8349	·714	284·7	280·9	+ 9·6	4	8	
	8353	·418	288·1	260·1	+ 6·3	37	256	
	8361	·441	306·8	257·9	+14·1	2	16	
	8352	·205	177·4	236·1	−13·0	69	372	
	8356	·351	143·8	224·1	−17·6	1	7	
	8355	·464	69·4	210·7	+ 8·2	41	297	
	8359	·528	85·4	205·0	+ 1·4	4	7	
C	8357	·702	117·8	195·4	−19·9	13	26	
	8360	·858	65·2	180·6	+20·4	7	63	128*c*
	8362	·972	111·2	160·9	−20·8	13	65	130*c*
	8363	·979	74·6	159·2	+14·8	0	19	90*f*
	8364	·982	105·8	157·8	−15·8	12	127	160*c*
		·834	105·7	181·1	−13·7			104
		·933	114·0	169·3	−22·7			36
		·932	95·2	168·1	− 5·3			243
		·977	65·1	161·0	+24·0			193
Dec. 16			(+ 9·8)	(236·6)	(− 1·2)	(449)	(3143)	(1818)
350·459		·971	287·7	298·1	+16·8			43
	8348	·993	278·6	306·0	+ 8·3	45	208	
	8354	·951	278·8	294·9	+ 7·9	123	1504	425*c*
	8349	·855	282·3	281·0	+ 9·8	0	9	166*n*
	8353	·612	282·1	260·2	+ 6·3	35	203	
	8361	·591	296·3	256·3	+14·1	7	35	
	8352	·320	228·9	237·6	−13·3	53	354	
	8355	·270	52·4	210·9	+ 8·2	40	265	
	8359	·348	82·1	203·2	+ 1·5	3	15	
	8357	·531	126·3	196·4	−19·4	5	22	
C	8360	·739	60·6	180·1	+20·2	7	70	52*c*
	8362	·903	112·4	160·4	−20·7	7	67	113*c*
	8363	·905	72·9	160·0	+14·8	0	9	77*c*
	8364	·922	106·8	156·9	−15·9	30	281	135*c*
		·845	51·7	173·0	+30·6			39
		·826	116·5	170·4	−22·4			37
		·806	94·5	169·8	− 4·4			76
		·889	99·7	160·9	− 9·1			137
		·930	62·7	158·1	+24·7			300
Dec. 17			(+ 9·3)	(223·3)	(− 1·3)	(355)	(3042)	(1600)
351·323		·949	256·5	283·1	−13·3			99
		·915	283·1	277·0	+11·3			240
	8354	·975	278·8	288·4	+ 8·1	89	706	199*c*
	8353	·780	279·3	262·4	+ 6·4	31	192	47*c*
C	8361	·725	291·5	255·9	+14·4	6	28	45*c*
	8352	·477	242·8	237·9	−13·8	48	367	
	8355	·175	5·1	211·0	+ 8·5	43	300	

Group 8358, Dec. 14–15. A short evanescent stream, the leader spot alone remaining on Dec. 15.
Group 8359, Dec. 14–20. A small group in the same general area of faculæ as Group 8355, and showing feeble but sustained activity.
Group 8360, Dec. 14–22. Return of Group 8332. A small regular spot disappearing after Dec. 19 on which day two small companions appear *f* it.
Group 8361, Dec. 15–19. Revival in region of Group 8319. A few short-lived spots.
Group 8362, Dec. 16–22. A pair of shots which gradually die away.
Group 8363, Dec. 16–19. A very small spot with a companion on December 19.
Group 8364, Dec. 16–27. Two spots seen at the east limb. The leader grows and becomes composite and the other the centre of a small cluster which disappears after Dec. 24. Meanwhile the leader is breaking up, and a few small spots alone represent the group on Dec. 27.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
351·323	8359	·186	72·5	201·7	+ 1·8	2	22	
	8357	·403	141·3	196·5	−19·6	8	32	
	8365	·497	115·5	184·5	−13·6	2	13	
	8360	·619	53·9	179·8	+20·1	10	35	71*f*
	8362	·809	115·6	160·6	−21·3	15	52	99*f*
	8363	·818	70·5	159·1	+15·0	3	12	80*c*
C	8364	·831	108·5	157·0	−16·1	45	340	190*c*
	8366	·990	95·9	130·1	− 6·1	45	250	
		·782	100·3	161·0	− 8·8			89
		·860	59·1	157·3	+25·4			266
		·959	111·6	139·3	−21·1			101
		·975	63·9	137·1	+25·0			71
Dec. 18			(+ 8·9)	(211·9)	(− 1·4)	(347)	(2349)	(1597)
352·411		·980	281·9	275·4	+11·3			221
		·873	247·6	256·7	−20·2			75
		·786	291·2	246·9	+15·5			60
	8353	·920	277·8	263·9	+ 6·6	32	164	139*c*
	8361	·861	288·6	255·1	+15·1	0	4	99*sp*
	8352	·661	250·6	237·5	−13·9	42	281	
	8355	·285	306·1	211·0	+ 8·2	50	311	
	8359	·107	303·8	202·7	+ 1·9	2	21	
	8357	·316	175·8	196·2	−19·8	7	33	
	8365	·304	136·8	185·3	−14·2	24	115	
	8360	·511	43·0	175·9	+20·4	8	32	
C	8367	·602	36·8	173·8	+27·3	42	121	
	8362	·650	121·4	161·3	−20·9	14	36	
	8368	·720	52·8	158·6	+24·6	2	12	42*c*
	8363	·679	65·5	158·0	+15·1	3	10	37*c*
	8364	·686	112·6	156·5	−16·4	55	323	
	8366	·928	96·1	129·7	− 6·2	40	250	117*f*
	8369	·944	75·6	128·1	+13·0	4	22	171*n*
	8370	·992	103·1	115·0	−13·2	76	413	
		·906	114·2	134·4	−22·4			123
		·931	59·3	133·1	+27·6			78
		·946	103·8	126·9	−13·6			184
Dec. 19			(+ 8·4)	(197·6)	(− 1·5)	(401)	(2148)	(1346)
353·426		·960	285·9	256·7	+14·8			130
		·939	246·2	252·7	−22·8			107
		·892	288·9	245·3	+15·9			128
		·847	299·7	237·5	+23·7			49
C	8353	·987	276·9	264·4	+ 6·5	36	179	214*f*
	8352	·806	254·0	236·9	−13·7	29	238	227*c*
	8355	·478	290·9	210·9	+ 8·3	51	259	

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
353·426	8359	·336	280·4	203·4	+ 1·8	2	12	
	8357	·364	209·7	195·2	−20·1	8	18	
	8365	·217	189·1	186·2	−14·0	18	96	
	8360	·396	23·1	174·7	+19·6	3	8	
	859d	·460	22·7	173·1	+23·3	1	8	
	8367	·515	20·2	172·7	+27·1	24	226	
	8362	·502	132·1	160·8	−21·1	3	30	
	8368	·606	42·8	157·3	+24·8	7	35	
	8364	·514	120·1	156·7	−16·4	48	329	
C	8371	·822	116·9	131·7	−22·8	2	17	70*c*
	8366	·820	96·3	129·3	− 6·1	35	218	82*f*
	8369	·860	72·3	126·7	+14·2	7	16	275*c*
	8370	·939	103·3	114·7	−13·0	65	406	628*c*
	8372	·992	105·1	101·5	−15·2	8	191	
		·830	55·3	134·4	+27·0			33
		·855	104·6	126·2	−13·3			172
		·950	61·2	115·8	+26·6			66
		·980	80·7	106·4	+ 8·8			64
Dec. 20			(+ 7·9)	(184·2)	(− 1·7)	(347)	(2286)	(2245)
354·318		·959	289·3	244·2	+17·9			101
	8352	·914	255·5	237·9	−13·9	32	210	368*c*
	8355	·650	285·9	211·6	+ 8·8	46	198	
	8373	·580	277·9	207·5	+ 3·1	7	26	
	8357	·500	232·5	197·2	−19·2	3	42	
	8365	·299	224·5	184·9	−14·0	12	82	
	8360	·374	351·5	175·9	+19·8	4	10	
	8367	·485	1·0	172·0	+27·1	17	107	
	8362	·376	148·1	160·3	−20·3	3	15	
	8368	·510	28·8	156·9	+24·7	36	183	
C	8364	·367	134·1	156·6	−16·5	40	297	
	8371	·691	121·1	132·9	−22·3	17	82	
	8366	·685	96·8	129·5	− 6·0	36	211	
	8369	·747	67·8	126·9	+15·0	21	49	
	8370	·852	104·1	114·7	−13·0	57	376	192*c*
	8372	·949	105·4	101·3	−15·2	14	140	274*c*
	8375	·987	99·3	91·8	− 9·4	0	97	116*f*
	8374	·990	86·1	91·1	+ 3·6	55	422	123*c*
		·898	59·0	113·3	+26·5			60
		·929	78·9	105·2	+ 9·6			92
Dec. 21			(+ 7·5)	(172·5)	(− 1·8)	(400)	(2547)	(1326)
355·330	8352	·984	256·2	238·8	−13·9	19	151	666*f*
	8355	·814	282·4	212·6	+ 8·9	32	120	141*c*
	8373	·782	276·8	210·1	+ 4·1	14	65	56*c*

Group 8365, Dec. 18–26. Revival of Group 8324. A single spot on Dec. 18; a short stream of numerous small spots on Dec. 19, most of which soon disappear. Group 8366, Dec. 18–30. Return of Group 8337. A stable circular spot. Group 8367, Dec. 19–24. A pair of composite spots, quickly developing and soon disappearing. Two very small spots represent the following one on Dec. 24. Group 8368, Dec. 19–28. Two spots with maximum development near the central meridian. They have evolved from two small nuclei on Dec. 19 and 20. The leader is regular for a few days. Group 8369, Dec. 19–31. A few scattered unstable spots in a stream which develops considerably between Dec. 23 and 24. Two very large spots then appear as the leader and terminal spots respectively. A cluster of small spots situated between them dies out by Dec. 28. Group 8370, Dec. 19–31. Return of Group 8328. A very large regular spot gradually diminishing. A small cluster appears *s* of it on Dec. 29. Groups 8372 and 8376 are evidently closely associated with this group. Group 8371, Dec. 20–29. A group of few faint spots until two regular spots appear on Dec. 23 as the leader and rear spots of a stream. These remain as the smaller members die out. Group 8372, Dec. 20–31. Perhaps related to Group 8333; in the same general area of faculæ as Group 8370. A regular spot slowly disappearing. A few tiny companions appear on Dec. 26–27. Group 8373, Dec. 21–23. A few small spots *p* the place of Group 8359. Group 8374, Dec. 21–1918, Jan. 2. A very large regular spot with a small regular companion to the *s*. From Dec. 24–28, a nebulous cluster of very small spots follows the principal spot. Group 8375, Dec. 21–1918, Jan. 2. A close pair of spots at the east limb which coalesce to form a regular spot by Dec. 23. A few very small markings follow it on Dec. 27.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.			G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
355·330	8357	·670	244·8	198·6	−18·0	7	41		357·321	8355	·982	279·1	211·3	+ 8·5	7	26	701*f*
	8365	·501	243·6	186·7	−14·5	10	34			8357	·936	252·2	201·7	−17·4	0	6	250*f*
	8360	·446	324·5	175·1	+19·3	2	4			8365	·791	253·4	184·2	−14·4	2	9	257*c*
	8367	·528	337·4	172·3	+27·2	9	61			8367	·727	313·7	169·4	+28·3	1	12	99*c*
	8362	·325	185·8	161·2	−20·7	0	3			8368	·593	317·3	158·9	+23·7	37	189	
	8368	·438	2·6	158·0	+24·0	46	310			8364	·477	238·3	157·8	−16·5	23	242	
	8364	·252	172·6	157·3	−16·3	31	245			8371	·358	182·3	133·8	−23·1	39	180	
C	8371	·546	132·2	133·2	−23·1	1	13			8366	·092	139·1	129·4	− 6·1	38	200	
	8366	·502	98·8	129·4	− 6·0	32	210			8369	·356	23·0	124·6	+16·8	73	418	
	8369	·621	60·3	125·2	+16·2	42	122		C	8370	·349	121·1	115·2	−12·4	56	324	
	8370	·716	106·3	114·5	−12·9	67	421	88*f*		8376	·461	124·8	109·7	−17·2	11	51	
	8376	·774	111·0	110·2	−17·3	5	24	39*c*		8372	·576	114·1	100·0	−15·3	11	119	
	8372	·860	106·7	100·7	−15·3	19	119	75*c*		8375	·658	102·1	92·4	− 9·6	19	122	58*f*
	8375	·924	99·8	91·9	− 9·8	18	154	357*f*		8374	·669	83·9	91·3	+ 2·4	85	614	
	8374	·932	85·6	90·9	+ 3·4	72	417	707*f*		8377	·976	97·5	55·5	− 7·8	31	236	286*c*
		·845	75·2	103·0	+11·3			108		8378	·991	82·5	51·2	+ 7·1	22	249	64*p*
		·949	113·4	88·7	−22·7			119			·904	74·8	69·8	+12·7			92
		·966	66·7	86·5	+21·8			74			·919	95·0	66·3	− 5·5			266
Dec. 22			(+ 7·0)	(159·2)	(− 1·9)	(426)	(2514)	(2430)			·941	64·1	65·8	+23·4			146
											·966	109·8	58·2	−19·7			131
									Dec. 24			(+ 6·1)	(132·9)	(− 2·2)	(455)	(2997)	(2550)
356·455		·990	252·7	226·1	−17·4			72									
	8355	·935	280·3	212·7	+ 8·9	7	100	301*f*									
	8373	·911	275·3	209·5	+ 3·9	4	37	110*c*	358·405		·975	249·5	195·7	−20·5			221
	8357	·841	250·5	200·2	−17·4	0	34	49*c*			·939	290·2	186·4	+18·0			121
	8365	·722	250·5	189·0	−15·3	3	19				·864	301·3	173·3	+25·3			198
	859e	·558	311·7	170·5	+19·9	0	7			8365	·912	254·1	184·0	−15·4	4	18	266*c*
	8367	·627	321·3	170·4	+27·4	4	37			8368	·733	305·5	159·1	+23·4	27	85	
	8364	·334	222·3	157·8	−16·2	25	210			8364	·661	246·8	157·9	−16·8	26	115	
	8368	·488	334·3	157·7	+24·1	31	221			8371	·429	213·2	133·4	−23·1	39	182	
	8371	·403	151·7	132·4	−22·7	22	105			8366	·204	250·2	129·8	− 6·2	31	196	
C	8366	·263	105·6	129·6	− 6·0	32	239			8369	·351	340·6	125·7	+16·9	96	609	
	8369	·469	45·9	123·8	+17·1	11	108		C	8370	·183	162·7	115·5	−12·3	59	304	
	8370	·515	111·5	115·0	−12·6	58	370			8376	·298	150·0	109·8	−17·1	4	20	
	8376	·605	116·2	109·8	−17·1	3	40			8372	·391	127·0	99·9	−15·7	19	83	
	8372	·715	109·6	100·2	−15·3	8	158			8375	·460	106·6	92·3	− 9·6	17	121	
	8375	·799	100·3	91·7	− 9·4	12	114	84*f*		8374	·475	79·5	90·9	+ 2·9	110	761	
	8374	·806	84·9	91·0	+ 2·8	71	578	260*f*		8378	·930	81·6	51·0	+ 6·9	36	248	255*c*
		·867	114·1	86·1	−21·7			69		8377	·928	98·0	50·6	− 8·2	88	679	565*c*
		·867	73·6	85·9	+13·1			47			·794	94·7	66·3	− 5·1			95
		·973	74·8	68·8	+14·3			89			·842	60·7	66·0	+22·9			117
		·977	94·3	66·7	− 4·7			182			·886	114·2	58·0	−22·4			74
		·985	65·6	66·3	+23·6			59			·969	63·2	46·0	+25·2			157
Dec. 23			(+ 6·5)	(144·3)	(− 2·0)	(291)	(2377)	(1322)	Dec. 25			(+ 5·6)	(118·7)	(− 2·3)	(556)	(3421)	(2069)
357·321		·919	296·1	196·2	+22·8			106	359·359		·951	278·5	177·4	+ 7·3			59
		·813	294·4	183·9	+18·3			94			·940	297·5	172·6	+24·8			390

Group 8376, Dec. 22–25. A short stream of very small spots *s* Group 8370 and in the same general area of disturbance.
Group 8377, Dec. 24–1918, Jan. 5. Revival in region of Group 8344. A large stream of normal type, but in which the leader becomes exceptionally large and the rear spot correspondingly small. The umbra of the leading spot is crossed by "bridges" from Dec. 27–31.
Group 8378, Dec. 24–1918, Jan. 5. Return or revival of Group 8340; on the same meridian as Group 8377. A regular spot slowly contracting. There are a few companions from Dec. 29–Jan. 3.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1917.			°	°	°			
359·359		·877	264·3	167·2	− 6·1			163
	8365	·988	255·3	187·3	−14·9	0	13	345*c*
	8368	·858	298·9	160·6	+23·0	16	72	277*c*
	859f	·854	233·1	159·7	−32·2	2	9	69*p*
	8364	·792	250·4	157·2	−16·9	12	91	122*c*
	8371	·557	228·5	133·1	−23·7	46	191	
	8379	·496	236·9	131·9	−17·8	5	19	
	8366	·411	259·7	130·0	− 6·4	28	180	
	8369	·461	315·9	125·6	+17·0	128	735	
C	8380	·508	205·7	120·7	−29·4	2	13	
	8370	·237	224·3	115·8	−12·1	45	263	
	8372	·255	155·1	99·7	−15·6	13	77	
	8375	·265	118·3	92·5	− 9·5	20	122	
	8374	·264	70·7	91·7	+ 2·7	102	697	
	8381	·569	43·8	81·1	+22·0	3	17	
	8377	·813	98·0	51·9	− 7·9	81	660	113*c*
	8378	·825	80·1	51·4	+ 6·7	31	208	278*f*
		·756	56·5	63·1	+22·9			68
		·869	108·7	46·7	−17·4			90
		·911	59·5	45·1	+26·4			354
Dec. 26			(+ 5·1)	(106·1)	(− 2·4)	(534)	(3367)	(2328)
360·373		·981	300·1	168·1	+28·8			134
		·942	261·4	163·0	− 9·0			248
		·945	237·3	161·4	−31·5			143
		·894	284·7	154·6	+11·9			123
	8368	·945	295·6	160·4	+23·1	11	66	680*c*
	8364	·902	251·5	156·4	−17·7	5	64	485*c*
	8371	·704	237·8	133·2	−23·9	21	154	
	8379	·655	244·6	131·1	−18·3	12	55	
	8366	·611	263·0	130·1	− 6·3	33	194	
	8369	·615	302·4	125·5	+17·1	170	1110	
	8380	·624	222·8	121·7	−29·4	2	9	
	8370	·422	246·2	115·9	−12·1	45	295	
C	*859g*	·348	220·6	106·4	−17·7	1	11	
	8372	·269	204·3	99·3	−16·6	17	75	
	8382	·244	344·0	96·6	+11·0	9	44	
	8375	·127	176·4	92·2	− 9·7	22	131	
	8374	·097	7·7	92·0	+ 3·1	91	585	
	8381	·454	22·2	82·1	+22·3	2	6	
	8377	·659	99·6	51·8	− 8·2	108	696	
	8378	·676	76·8	51·3	+ 7·0	·39	215	223*f*
	8383	·987	80·0	12·7	+ 9·4	18	106	180*f*
		·777	59·3	47·0	+21·5			79
		·830	48·0	46·2	+31·9			89
		·862	77·4	34·4	+ 9·5			109
		·917	50·4	34·0	+34·4			138
1917.			°	°	°			
360·373		·901	111·4	29·5	−20·3			138
		·943	101·6	22·3	−11·8			117
Dec. 27			(+ 4·6)	(92·7)	(− 2·5)	(606)	(3816)	(2886)
361·348		·986	240·6	160·0	−29·4			76
		·979	280·8	157·2	+10·0			77
		·973	266·0	156·5	− 4·5			113
		·972	251·3	156·2	−18·8			387
	8368	·988	295·0	158·7	+24·2	3	51	449*c*
	8371	·825	242·9	133·0	−23·6	22	81	99*c*
	8366	·776	264·1	130·6	− 6·2	24	192	
	8379	·783	247·5	129·6	−19·0	14	91	112*c*
C	8369	·756	296·1	125·1	+17·4	153	963	89*c*
	8370	·606	253·4	116·2	−12·0	44	248	
	8372	·402	234·1	99·6	−16·1	9	42	
	8382	·384	308·6	97·6	+11·3	23	122	
	8375	·257	240·9	93·0	− 9·7	19	125	
	8374	·242	291·9	92·8	+ 2·6	98	549	
	8377	·452	103·1	53·6	− 8·2	116	673	
	8378	·499	71·5	51·6	+ 6·9	28	215	
	8384	·842	102·5	23·0	−11·9	6	32	64*c*
	8383	·927	78·9	13·0	+ 9·3	22	138	200*c*
		·846	113·8	23·9	−21·4			44
Dec. 28			(+ 4·1)	(79·9)	(− 2·6)	(581)	(3522)	(1710)
362·324		·980	250·3	145·6	−19·9			116
		·812	236·0	117·0	−28·7			40
	8371	·938	246·3	135·8	−23·1	3	25	199*c*
	8379	·913	251·5	132·3	−18·0	8	23	140*c*
	8366	·895	264·3	130·4	− 6·4	24	184	67*c*
	8369	·873	291·9	125·0	+17·4	142	971	461*c*
	8370	·765	256·0	116·3	−12·5	59	302	103*c*
	8372	·567	245·6	99·3	−15·9	7	37	
C	8382	·540	296·9	96·3	+11·6	25	168	
	8374	·455	280·5	93·5	+ 2·3	70	471	
	8375	·451	253·5	92·9	− 9·9	17	109	
	8381	·495	330·1	82·4	+22·7	9	41	
	8385	·024	232·9	68·1	− 3·6	0	4	
	8377	·248	111·6	53·6	− 7·8	104	627	
	8378	·316	56·7	51·6	+ 7·3	32	198	
	859h	·366	126·8	49·4	−15·3	0	4	
	8384	·700	103·7	23·2	−11·6	6	40	
	8383	·812	75·8	14·2	+ 9·7	22	195	265*c*
		·921	97·9	0·0	− 8·3			67
		·978	109·5	349·1	−19·6			40
Dec. 29			(+ 3·7)	(67·0)	(− 2·8)	(528)	(3399)	(1498)

Group 8379, Dec. 26–30. A group of a few small spots *n* Group 8371.
Group 8380, Dec. 26–27. One or two very small spots *sf* Group 8371.
Group 8381, Dec. 26–31. Two very small spots on Dec. 27; nothing on Dec. 28; afterwards a small cluster.
Group 8382, Dec. 27–1918, Jan. 2. A stream of small spots, *n* Group 8374, of which the last becomes prominent on Dec. 29 but is soon disappearing.
Group 8383, Dec. 27–1918, Jan. 8. A regular spot with a short train of small followers until Jan. 5.
Group 8384, Dec. 28–1918, Jan. 2. A wide pair of very small spots of which the following is alone visible after Dec 31.
Group 8385, Dec. 29–31. A very small double spot *p* Group 8377.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.			G.M.T. (Civil.)	Group No.	MEASURES.		POSITION.		AREA.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.			Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1917.			°	°	°				1917.			°	°	°			
363·400		·972	247·7	129·2	−22·4			263	364·351		·977	241·7	117·5	−28·2			48
		·922	238·3	117·8	−30·2			60			·927	253·1	107·9	−16·8			277
		·832	251·1	108·2	−17·2			80			·922	301·6	102·4	+27·5			81
	8379	·987	253·1	133·7	−17·1	0	12	170*f*			·896	241·1	101·8	−27·1			65
	8366	·975	264·3	130·0	− 6·2	42	203	108*c*		8369	·988	289·7	119·6	+18·9	41	372	274*c*
	8369	·960	289·5	124·5	+17·5	121	768	661*c*		8370	·971	258·2	116·5	−12·2	29	287	227*f*
	8370	·894	257·9	116·0	−12·1	43	279	142*c*		8372	·861	252·5	99·0	−16·5	4	16	134*s*
	8372	·733	250·6	98·7	−16·1	5	23	433*s*		8374	·810	274·8	94·0	+ 2·1	67	508	194*c*
C	8382	·697	290·7	94·5	+12·1	21	131	68*p*	C	8375	·806	259·4	93·7	−10·3	14	74	168*f*
	8374	·659	276·8	93·6	+ 2·3	74	467			8382	·817	286·9	93·1	+11·9	17	54	276*sp*
	8375	·651	258·3	93·0	− 9·7	20	94			8381	·744	304·3	81·8	+22·4	6	28	92*c*
	8381	·626	313·2	82·4	+22·7	10	49			8385	·447	265·5	66·7	− 4·7	1	7	
	8385	·212	260·4	65·0	− 4·8	0	7			8377	·245	249·0	53·6	− 8·0	97	640	
	8377	·091	188·5	53·8	− 7·9	101	650			8378	·262	312·0	51·6	+ 7·1	40	212	
	8378	·178	7·3	51·6	+ 7·2	25	194			8384	·344	116·9	22·1	−11·8	7	11	
	8384	·498	108·7	24·2	−11·7	10	31			8383	·475	62·7	15·0	+ 9·9	34	252	
	8383	·638	71·2	15·3	+ 9·6	32	195				·943	111·7	330·3	−21·4			93
		·969	79·6	338·3	+ 9·3			94			·971	57·9	328·6	+30·1			96
Dec. 30			(+ 3·1)	(52·9)	(− 2·9)	(504)	(3103)	(2079)			·960	74·8	328·1	+13·6			213
									Dec. 31			(+ 2·7)	(40·3)	(− 3·0)	(357)	(2461)	(2238)

ROYAL OBSERVATORY, GREENWICH.

GENERAL CATALOGUE

OF

GROUPS OF SUN SPOTS.

FOR THE YEAR

1917.

GREENWICH PHOTOHELIOGRAPHIC RESULTS, 1917.

GENERAL CATALOGUE of GROUPS of SUN SPOTS for the YEAR 1917.

NOTE.—Groups of Sun Spots, lasting for two or more days, are numbered in the *first* column in continuation of the Group-numbers given in 1916 and the previous years. Groups seen only once are not included in this Catalogue.

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

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

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

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

$$866'{\cdot}6 - 128' \sin^2 l.$$

In both systems the longitude of the centre of the Sun's disc is adopted as 169°·35 for 1917 Jan. 1^{d}·0, the longitudes given under System I. being thus rendered uniform with those given in preceding volumes of the Greenwich Photoheliographic Results. The longitudes according to System II. for Groups 7918, 7920, 7922–26, 7928–30 are computed here from 1917·0 instead of from 1916·0, as in the volume for 1916.

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

No. of Group.	Duration.	First Seen.		Last Seen.		Mean Area Corrected for Foreshortening.		Mean Longitude of Group.		Mean Latitude of Group.	Reference to Ledger.	NOTES.
		Date.	Long. from C.M.	Date.	Long. from C.M.	Umbræ.	Whole Spots.	System I.	System II.			
	d	1916.	°	1917.	°			°	°	°		
7918	13	Dec. 22	−78·1	Jan. 3	+75·2	40	247	215·1	214·9	−21·8	I. 781 (2)	}
7920	13	24	−80·5	5	+78·1	32	153	187·7	188·0	+ 8·0	I. 782 (2)	
2	6/8	25	−38·2	1	+53·3	1	7	218·1	218·4	−17·0	II.	} *See* Ledgers for 1916.
3	9	26	−57·9	3	+43·8	12	39	182·3	182·5	−13·0	II.	
4	7	27	−74·6	2	+ 3·8	16	58	152·2	151·9	+25·1	I. 781*	
5	8	27	−82·3	3	+13·0	4	14	149·2	149·4	−13·0	I. 783 (2)	}
6	13	28	−77·6	9	+77·6	236	1396	136·3	135·9	+14·5	I. 784 (1)	
8	2/3	30	−68·3	1	−43·2	0	4	121·6	121·6	−22·6		
9	13	30	−76·0	11	+78·1	94	544	111·7	111·0	+13·2	I. 785 (1)	
7930	4	31	+19·3	3	+61·4	5	21	199·6	199·5	+10·4		Revives as Group 796c.
		1917.										
1	3	Jan. 1	+17·0	3	+45·3	5	17	182·3	182·4	−22·4		
2	2	1	−60·8	2	−50·5	2	12	102·5	102·4	−12·7		
3	2	2	+ 2·8	3	+16·4	1	3	154·6	154·6	−22·2		
4	7	5	−39·0	11	+30·0	1	8	66·5	67·9	+26·9	II.	
5	6	6	+ 2·7	11	+64·3	6	27	97·0	95·5	+10·4	II.	
6	3	6	−28·9	8	− 4·9	3	17	66·8	67·1	−22·3		
7	8	6	−62·6	13	+24·6	8	32	31·5	30·8	+16·9	II.	
8	3	8	+15·6	10	+44·2	4	11	89·4	88·4	+14·5		Revives as Group 7974.
9	6/7	8	+ 0·7	14	+79·0	18	130	72·9	73·5	+22·7	I. 786 (1)	
7940	6	8	− 3·9	13	+61·3	17	81	68·7	67·3	+13·1	II.	
1	11	8	−59·4	18	+78·1	20	107	15·1	13·7	+15·1	II.	Revives as Group 7978.
2	11	8	−67·5	18	+71·2	8	37	8·4	6·4	+12·6	II.	
3	8	8	−70·9	15	+20·5	2	13	2·0	1·0	+16·2	II.	
4	3	9	+49·7	11	+77·0	7	29	109·0	108·2	+16·8		

GENERAL CATALOGUE of GROUPS of SUN SPOTS—*continued.*

No. of Group.	Duration.	First Seen.		Last Seen.		Mean Area Corrected for Foreshortening.		Mean Longitude of Group.		Mean Latitude of Group.	Reference to Ledger.	NOTES.
		Date.	Long. from C.M.	Date.	Long. from C.M.	Umbræ.	Whole Spots.	System I.	System II.			
	d	1917.	°	1917.	°			°	°	°		
7945	2	Jan. 9	−43·4	Jan. 10	−27·6	1	5	17·4	18·4	−24·8		Slight revival of Group 7913.
6	3	10	−19·9	12	+ 8·8	1	4	27·3	25·3	−10·1		
7	4	11	+33·9	14	+79·0	5	27	69·4	69·8	−21·8		
8	4	11	−17·9	14	+21·9	7	26	15·2	14·0	−16·1		
9	10	11	−52·5	20	+72·4	22	133	345·2	344·7	+19·0	I. 787 (1)	
7950	12	13	−78·6	24	+67·4	14	97	288·9	288·8	−20·0	II.	
1	2	14	−51·4	15	−38·3	2	17	302·6	305·2	+27·4		
2	6/7	16	−67·4	22	+14·2	1	11	262·0	263·4	−23·5	II.	Revives as Group 7986.
3	2	17	+46·8	18	+60·5	4	16	1·2	359·9	−17·0		
4	3	18	+27·9	20	+51·9	3	14	328·0	326·6	+16·9		
5	12	18	−70·2	29	+78·0	15	103	232·6	228·6	−11·3	II.	Revives as Group 7993.
6	12	19	−62·8	30	+77·1	21	142	222·0	226·1	+26·6	II.	
7	12	19	−66·1	30	+73·0	7	41	218·6	222·4	−26·3	II.	*See* Group 7918.
8	2	20	−20·8	21	− 4·5	4	12	254·6	253·2	−17·3		
9	5/7	21	−41·7	27	+43·0	1	9	222·6	221·9	−19·2	II.	Revival of Group 7922.
7960	9	21	−57·5	29	+50·0	10	71	205·1	200·8	+11·2	II.	Revival of Group 7930.
1	4	25	−14·9	28	+25·3	5	23	194·0	188·4	+ 8·0		Revival of Group 7920.
2	10	25	−73·4	Feb. 3	+57·6	13	76	142·4	138·2	+13·4	I. 784 (2)	*See* Group 8005.
3	5/6	26	−22·3	Jan. 31	+42·9	2	11	172·0	170·4	−17·8		
4	8	26	−76·6	Feb. 2	+14·4	8	35	115·2	110·5	+12·1	I. 785 (2)	
5	3	27	−77·9	Jan. 29	−53·2	1	8	104·0	107·0	−24·6		
6	2	28	+54·6	29	+63·5	2	17	220·6	214·8	+ 8·9		
7	4	28	−54·4	31	−18·7	1	12	111·9	105·0	+ 6·0		
8	4	28	−67·4	31	−32·6	1	9	98·5	99·8	+22·1		Revives as Group 7999.
9	9	30	−71·4	Feb. 7	+32·8	19	141	69·4	72·0	+23·4	I. 786 (2)	*See* Recurrent Series 789.
7970	11	30	−79·6	9	+55·0	13	80	64·4	55·5	+ 0·6	II.	
1	2	31	+22·4	1	+37·4	1	6	153·0	150·9	+17·5		
2	3	Feb. 1	+56·6	3	+83·2	6	27	173·1	175·1	−22·8		
3	2	2	+23·3	3	+36·8	0	3	126·8	119·4	+ 7·1		
4	2	2	−16·0	3	− 0·7	0	3	88·4	84·0	+14·0		Revival of Group of 7938.
5	2	3	+50·5	4	+64·2	5	21	140·9	148·9	+28·8		
6	6	3	+ 2·5	8	+69·8	29	151	92·1	96·6	+25·2	II.	*See* Recurrent Series 790.
7	14	3	−82·3	16	+84·0	317	2176	9·0	5·1	−16·0	I. 788 (1)	
8	9	4	−61·3	12	+48·1	25	97	17·4	11·0	+12·1	II.	Revival of Group 7941.
9	12	4	−75·3	15	+73·8	12	57	2·2	352·9	+ 6·4	II.	
7980	10	5	−80·2	14	+38·6	5	15	344·0	343·5	+19·8	I. 787 (2)	
1	5	6	−47·1	10	+ 8·1	1	7	2·4	354·7	− 9·7		
2	4	8	−31·4	11	+ 6·8	2	6	352·2	346·9	−14·1		
3	5	9	+20·5	13	+76·7	12	103	32·6	28·2	+15·6		
4	2	9	−18·5	10	− 0·4	4	8	353·5	356·3	−23·2		
5	5	10	−35·6	14	+15·6	9	41	319·5	320·4	+21·2		
6	11	11	−84·4	21	+40·3	21	110	255·2	258·8	−23·4	II.	Revival of Group 7952.
7	2	12	+17·6	13	+35·1	6	25	350·6	353·3	+22·9		
8	3	13	− 1·2	15	+26·8	3	13	315·5	307·1	−10·5		
9	2/3	13	− 6·1	15	+23·9	1	3	311·6	319·4	−26·8		
7990	10	13	−49·5	22	+73·0	34	182	271·1	268·0	−17·6	II.	
1	5	14	+17·2	18	+76·0	13	62	323·9	312·8	− 5·4		
2	7	14	−40·0	20	+40·0	6	19	264·7	259·0	−14·7	II.	
3	10	16	−47·2	25	+78·6	21	83	233·3	224·7	−11·8	II.	Revival of Group 7955.
4	3/7	18	−72·4	24	+ 4·9	0	2	179·1	181·1	−22·0	II.	
5	7	19	−14·3	25	+67·4	5	18	225·6	221·4	−16·9	II.	Revival of Group 7959.
6	2	20	+26·2	21	+43·3	0	4	254·2	247·1	−13·6		
7	8	20	−66·4	27	+24·9	3	13	159·2	156·4	+18·1	II.	
8	2	21	−33·1	22	−21·6	1	6	178·8	167·8	+ 8·8		
9	10	24	−71·1	Mar. 5	+44·3	17	100	100·9	101·8	+21·0	II.	Revival of Group 7968.
8000	7	25	−82·8	3	− 8·8	8	46	72·4	74·0	−21·4	II.	

GENERAL CATALOGUE of GROUPS of SUN SPOTS—*continued.*

No. of Group.	Duration.	First Seen.		Last Seen.		Mean Area Corrected for Foreshortening.		Mean Longitude of Group.		Mean Latitude of Group.	Reference to Ledger.	NOTES.
		Date.	Long. from C.M.	Date.	Long. from C.M.	Umbræ.	Whole Spots.	System I.	System II.			
	d	1917.	°	1917.	°			°	°	°		
8001	3	Feb. 26	+49·4	Feb. 28	+75·0	0	4	197·5	208·7	−27·5		Revives as Group 8026.
2	12	27	−69·5	Mar. 10	+79·1	33	190	65·6	72·8	+24·8	I. 789 (1)	*See* Recurrent Series 786.
3	4	27	−76·2	2	−35·4	1	13	58·4	48·4	+11·7		
4	3	28	−58·7	2	−35·8	0	6	60·6	60·6	−20·4		
5	3	Mar. 1	+34·9	3	+66·4	4	17	143·3	135·5	+13·2		Revival of Recurrent Series 784.
6	10	1	−83·6	10	+33·1	11	73	23·0	15·1	−14·6	II.	
7	4	2	+36·5	5	+72·5	14	73	129·8	117·6	+ 9·9		Revival of Group 7973.
8	13	2	−78·1	14	+78·9	77	482	11·5	5·2	−16·1	I. 788 (2)	
9	6	3	+11·9	8	+78·2	64	359	92·0	97·2	+23·6	I. 790 (1)	
8010	9	3	−31·5	11	+75·0	43	274	50·1	39·8	+12·4	II.	
1	2	4	+38·2	5	+50·0	10	32	106·0	127·4	+32·0		
2	13	5	−75·7	17	+76·6	46	388	334·8	333·7	+19·7	II.	*See* Recurrent Series 787.
3	9/11	7	−60·9	17	+74·5	17	79	330·0	317·1	−11·0	II.	
4	3	8	+14·5	10	+36·4	2	8	26·7	12·7	− 8·9		Revives as Group 8044.
5	2	10	−67·5	11	−31·9	1	9	281·0	279·1	+19·2		
6	7	11	− 3·3	17	+73·6	22	77	329·7	312·6	+ 5·9	II.	
7	7	11	−20·0	17	+53·1	19	72	311·3	311·1	+20·3	II.	
8	3	11	−49·2	13	−22·5	4	12	284·5	266·8	+ 3·8		
9	5	11	−74·0	15	−22·0	5	14	259·3	242·4	+ 5·9		
8020	3	12	+46·4	14	+77·7	6	23	13·1	2·5	+13·2		*See* Group 8045.
1	8	13	−76·2	20	+19·7	4	12	233·4	224·6	−14·9	II.	Revival near Groups 7993 and 7995.
2	2	14	+60·0	15	+74·8	18	55	356·8	354·2	+18·8		
3	9	14	−75·9	22	+32·7	9	41	222·3	211·0	+13·2	II.	
4	11	15	−55·2	25	+83·7	48	277	231·2	216·4	−10·4	I. 791 (1)	
5	4	16	+47·6	19	+81·7	26	186	314·2	297·8	+ 7·9	II.	Revives as Group 8042.
6	9	16	−70·7	24	+29·8	8	48	194·2	214·1	−29·4	II.	Revival of Group 8001.
7	12	17	−68·9	28	+73·7	3	16	188·2	180·2	−15·9	I. 791*	
8	2	18	+34·0	19	+50·8	2	5	279·5	269·6	−14·4		
9	13	19	−79·0	31	+81·2	28	181	150·8	145·0	+17·3	II.	*See* Recurrent Series 797.
8030	13	19	−80·3	31	+81·9	24	153	153·8	136·0	+ 8·6	II.	
1	5	20	−69·2	24	−15·9	20	78	146·8	128·7	+ 7·1	II.	
2	5	22	−32·8	26	+17·4	3	12	157·1	136·8	+ 4·3		
3	6	23	−39·9	28	+28·4	5	16	139·5	123·9	+10·7	II.	
4	12	23	−78·1	April 3	+72·7	16	85	102·5	90·0	+13·5	I. 792 (1)	
5	13	23	−83·4	4	+72·5	38	250	93·5	81·4	+13·7		
6	9	24	−52·3	1	+62·7	10	27	115·1	97·6	+ 9·3	II.	
7	5	24	−74·0	Mar. 28	−23·6	6	27	89·7	96·2	+23·4	I. 790 (2)	
8	8	26	−69·3	April 2	+22·9	16	78	67·2	74·5	+23·6	I. 789 (2)	
9	9	26	−75·2	3	+36·0	12	62	67·3	48·5	+ 8·5	II.	
8040	4/5	30	+25·5	3	+75·3	2	13	109·9	100·2	−15·5		
1	5/6	April 2	−27·1	7	+41·6	1	4	17·9	19·0	−20·9	II.	*See* Recurrent Series 788 and 798.
2	6/7	2	−79·9	8	− 2·1	3	18	323·4	300·7	+ 5·4	II.	Revival of Group 8025.
3	2/3	4	−16·3	6	+12·8	0	3	3·3	5·4	−21·3		
4	2	5	+25·2	6	+43·2	0	3	32·5	14·6	−10·4		Revival of Group 8014.
5	3/5	6	+20·7	10	+71·2	2	17	11·1	359·3	+14·8		*See* Group 8020 and Series 800.
6	11	9	−76·2	19	+56·0	11	57	236·7	215·6	− 9·2	I. 791 (2)	
7	10	11	−42·4	20	+80·4	57	368	247·8	241·6	+17·8	I. 793 (1)	
8	9	11	−54·7	19	+57·0	12	60	235·4	222·2	−14·5	II.	*See* Groups 8021 and 8024.
9	12	11	−74·1	22	+79·4	99	641	216·3	195·9	+10·2	I. 794 (1)	
8050	11	12	−59·0	22	+76·7	12	49	214·3	206·0	−17·0	II.	Revives as Group 8078.
1	4	12	−86·7	15	−43·3	4	28	188·5	175·8	−14·6	I. 791*	
2	11	13	−77·4	23	+52·2	12	63	180·4	159·4	− 9·9	II.	
3	6	14	−67·7	19	+ 3·1	11	33	181·2	156·6	+ 6·4	II.	
4	13	14	−73·1	26	+79·0	14	56	172·0	196·7	−28·5	I. 795 (1)	
5	13	16	−77·0	28	+80·5	40	297	143·0	135·4	+17·4	I. 796 (1)	
6	9	18	−38·1	26	+66·1	11	59	158·6	157·8	+20·1	I. 797 (1)	Revival near Group 8029.

GENERAL CATALOGUE of GROUPS of SUN SPOTS—*continued.*

No. of Group.	Duration.	First Seen. Date.	First Seen. Long. from C.M.	Last Seen. Date.	Last Seen. Long. from C.M.	Mean Area Corrected for Foreshortening. Umbræ.	Mean Area Corrected for Foreshortening. Whole Spots.	Mean Longitude of Group. System I.	Mean Longitude of Group. System II.	Mean Latitude of Group.	Reference to Ledger.	NOTES.
	d	1917.	°	1917.	°			°	°	°		
8057	4	Apr. 18	−75·0	Apr. 21	−35·4	2	10	119·8	112·0	−17·2		
8	12	19	−72·1	30	+75·8	32	202	108·4	89·3	+12·0	I. 792 (2)	*See* Group 8087.
9	12	23	−69·1	May 4	+74·8	32	195	59·6	52·2	−17·7	II.	
8060	3	24	−34·0	Apr. 26	− 7·7	1	8	81·1	54·7	+ 6·5		Revives as Group 8098.
1	3	25	−26·5	27	+ 5·5	3	8	77·9	83·3	+22·3		
2	12	26	−69·0	May 7	+77·4	59	371	21·0	21·8	−20·6	I. 798 (1)	
3	11	26	−80·0	6	+50·7	10	52	7·7	12·0	−21·8	II.	
4	5	27	−52·9	1	+ 0·6	2	11	23·8	7·3	−13·6		
5	9	29	−23·1	7	+75·7	17	94	24·0	32·3	−23·1	I. 798 (1)	
6	7	29	−63·5	5	+11·2	5	19	343·0	350·8	−22·9	II.	
7	13	29	−81·3	11	+85·4	30	194	330·5	321·9	−17·4	I. 799 (1)	
8	4	30	+40·8	3	+75·2	8	46	77·7	84·5	+22·6		Revival of Group 8061.
9	12	30	−76·2	11	+67·2	12	55	317·5	315·5	−19·7	I. 799*	
8070	7	May 1	−57·8	7	+19·3	2	6	322·0	303·2	+12·9	II.	
1	6	3	+10·8	8	+75·5	10	60	7·6	359·0	+17·4	I. 800 (1)	*See* Groups 8020 and 8045.
2	4	3	−64·9	6	−24·2	2	10	291·6	287·8	+19·1		
3	13	5	−80·9	17	+75·4	22	144	247·3	241·7	+18·5	I. 793 (2)	
4	3	6	−27·6	8	+ 1·5	4	11	288·9	271·2	+13·7		
5	9	7	−41·8	15	+68·9	23	107	265·0	243·7	−12·3	II.	Revives as Group 8105.
6	13	7	−78·0	19	+80·3	55	364	224·9	198·6	+ 9·6	I. 794 (2)	
7	4	7	−78·7	10	−41·4	2	23	224·3	233·9	+23·3		
8	12	9	−64·9	20	+86·4	30	176	214·0	200·6	−15·8	II.	} Revival of Group 8050.
9	8/11	10	−51·4	20	+82·9	14	88	212·7	209·3	−19·3	II.	
8080	9	11	−79·0	19	+26·3	5	46	169·6	196·3	−27·6	I. 795 (2)	Revives as Group 8107.
1	8	13	−17·0	20	+79·1	14	73	208·0	181·1	+ 9·7	II.	
2	7	13	−66·2	19	+14·3	6	22	157·9	150·4	+18·0	I. 797 (2)	*See* Group 8108.
3	10	13	−72·8	22	+52·1	2	14	152·0	143·0	+17·5	} I 796 (2)	
4	5 6	15	−53·8	20	+20·7	5	23	146·9	130·3	+14·7		
5	10	15	−57·7	24	+64·7	40	145	142·4	110·2	+ 6·5	II.	Revives as Group 8112.
6	9	17	−32·6	25	+68·7	17	73	137·0	126·6	+17·1	II.	
7	11	17	−54·2	27	+78·2	42	204	117·3	89·3	+ 9·7	II.	Revival of Recurrent Series 792.
8	8	18	−10·6	25	+79·5	48	319	146·4	141·4	+18·9	II.	*See* Recurrent Series 796.
9	13	22	−81·3	June 3	+76·3	80	484	22·4	36·8	−24·1	I. 798 (2)	
8090	2	23	+59·7	May 24	+77·0	21	135	151·4	150·0	−20·0		
1	3	23	−52·7	25	−30·3	3	20	37·1	32·1	−18·9		
2	10	23	−74·5	June 1	+47·0	20	110	18·1	343·3	+ 5·8	II.	
3	13	23	−75·6	4	+79·3	27	138	13·1	359·2	+16·2	I. 800 (2)	
4	7	24	− 3·9	May 30	+72·8	8	52	73·4	77·0	−21·4	II.	
5	13	24	−74·2	June 5	+82·9	67	389	2·8	327·0	− 5·3	I. 801 (1)	
6	2	25	+37·7	May 26	+50·2	2	9	103·2	74·8	+ 9·9		
7	13	25	−81·8	June 6	+79·5	60	402	343·2	325·9	−15·1	I. 799 (2)	
8	4	26	+34·9	May 29	+77·4	2	11	89·4	57·8	+ 8·2		Revival of Group 8060.
9	12	26	−72·0	June 6	+80·4	21	133	342·6	306·8	− 5·8	II.	
8100	6	27	−53·9	1	+12·0	3	13	345·2	317·2	+10·5		
1	12	27	−77·2	7	+73·3	48	311	323·9	311·1	−16·7	I. 799*	
2	3	31	− 3·4	2	+26·6	6	26	343·8	325·4	+14·7		
3	13	31	−79·3	12	+75·0	25	137	264·1	271·0	−22·2	II.	
4	13	June 3	−77·0	15	+80·1	23	139	228·1	197·3	+10·1	I. 794 (3)	
5	8	4	−19·9	11	+80·6	20	143	275·6	242·6	− 8·8	II.	Revival of Group 8075.
6	12	4	−83·5	15	+70·9	13	88	213·7	184·1	−10·7	II.	*See* Groups 8078 and 8050.
7	11/12	7	−80·1	18	−62·2	7	32	171·0	193·0	−25·4	II.	Revival of Recurrent Series 795.
8	13	8	−78·6	20	+77·9	70	415	159·5	155·1	+19·3	II.	Revival of Recurrent Series 797.
9	6	9	+ 5·7	14	+79·8	25	123	236·6	218·2	+15·1	II.	
8110	2	9	− 2·0	10	−11·3	0	6	225·2	212·6	−16·9		
1	13	9	−75·3	21	−84·0	57	333	151·2	130·7	−14·6	II.	
2	12	9	−77·2	20	−78·1	23	99	152·8	115·8	+ 7·4	I. 802 (1)	Revival of Group 8085.

GENERAL CATALOGUE of GROUPS of SUN SPOTS—*continued.*

No. of Group.	Duration.	First Seen.		Last Seen.		Mean Area Corrected for Foreshortening.		Mean Longitude of Group.		Mean Latitude of Group.	Reference to Ledger.	NOTES.
		Date.	Long. from C.M.	Date.	Long. from C.M.	Umbræ.	Whole Spots.	System I.	System II.			
	d	1917.	°	1917.	°			°	°	°		
8113	2	June 10	+53·1	June 11	+69·6	3	26	267·6	270·6	+21·1		
4	12	11	−80·0	22	+61·8	30	154	116·2	109·2	−18·6	II.	
5	3	13	− 4·8	15	+23·5	0	25	169·7	164·8	+19·1		
6	2	13	−•7·2	14	+ 5·1	1	6	165·6	147·4	+15·3		
7	7	14	− 7·9	20	+78·2	8	30	155·0	112·9	− 3·2	II.	
8	2	14	−44·1	15	−31·9	0	7	115·3	117·0	+20·8		
9	12	14	−80·0	25	+68·1	28	179	80·6	47·0	+ 9·8	II.	
8120	11	15	−57·9	25	+77·8	58	370	91·1	65·4	+13·0	I. 803 (1)	
1	4	15	−80·1	18	−37·9	3	18	67·5	35·8	+10·4		
2	3	16	+48·5	18	+74·4	1	15	182·3	218·8	−28·2		
3	9	16	−41·3	24	+63·1	15	84	92·6	83·4	+18·1	II.	*See* Group 8152.
4	13	17	−78·3	29	+80·9	78	419	41·2	15·9	+13·3	I. 804 (1)	
5	13	19	−77·0	July 1	+80·0	43	229	16·3	35·2	−24·5	I. 798 (3)	
6	13	19	−79·8	1	+81·5	25	138	15·4	337·7	− 8·3	I. 801 (2)	
7	12	21	−68·3	2	+72·7	41	210	358·3	324·2	+10·2	II.	
8	3/5	21	−73·2	June 25	−19·8	1	6	354·1	341·0	+17·0		
9	13	23	−78·6	July 5	+80·5	46	294	321·2	312·2	+18·2	II.	
8130	2	24	+61·1	June 25	+76·0	0	15	89·4	81·4	−18·4		
1	4/7	24	−37·3	30	+45·1	1	6	352·7	315·4	− 8·6	II.	Revival of Group 8099.
2	7	25	−54·6	July 1	+25·2	2	14	320·0	325·2	−21·6	II.	
3	5/6	26	+ 5·3	1	+72·0	10	45	4·9	12·1	−22·0		
4	2	26	− 7·9	June 27	− 0·8	3	12	350·7	307·9	+ 5·2		
5	11	26	−45·6	July 6	+83·0	16	77	312·7	277·3	+10·0	I. 805 (1)	
6	8	27	−73·4	4	+27·5	8	40	279·5	246·6	+10·9	II.	
7	3	28	−15·7	June 30	+10·4	5	23	319·6	299·5	−15·2		Revival near Group 8101.
8	2	28	−43·8	29	−31·3	4	7	290·0	256·2	−10·4		
9	10	28	−49·8	July 7	+73·8	13	52	288·2	285·2	−19·7	II.	
8140	13	30	−79·3	12	+78·2	15	60	230·0	197·2	+11·4	I. 794 (4)	
1	12	30	−82·1	11	+66·2	68	366	227·8	206·8	−15·2	II.	*See* Recurrent Series 810.
2	10	July 2	−38·1	11	+82·1	23	154	245·4	220·5	−14·1	II.	
3	5	5	+11·6	9	+69·6	8	19	256·3	253·1	+19·7		
4	9/10	5	−74·0	14	+44·2	5	13	169·3	125·8	+ 6·9	II.	Revives as Group 8190.
5	3	5	−76·2	7	−53·9	2	13	163·7	138·9	+14·1		
6	8	6	−26·7	13	+69·5	21	91	204·2	201·6	−19·8	II.	Revives as Group 8198.
7	6/7	6	−59·0	12	+19·4	2	14	170·0	155·9	+17·1		
8	11	7	−66·1	17	+75·2	24	127	154·5	111·8	+ 7·6	I. 802 (2)	
9	13	7	−81·5	19	+78·7	118	777	132·8	122·4	+18·0	I. 806 (1)	
8150	12	8	−66·6	19	+83·5	33	235	137·4	95·6	+ 8·1	II.	
1	13	8	−78·2	20	+80·0	54	338	123·5	127·6	+21·2	II.	Revives as Group 8191.
2	7	10	−73·9	16	+ 2·0	3	13	101·2	81·3	+15·7	II.	*See* Groups 8123 and 8201.
3	6	10	−83·5	15	−14·8	5	36	94·0	57·0	+10·2	I. 803 (2)	Revives as Recurrent Series 807.
4	2	11	+44·5	12	+56·4	1	3	207·0	162·6	+ 6·4		
5	2	11	−44·4	12	−33·6	2	8	117·6	90·2	+13·5		
6	9	12	−46·8	20	+65·7	11	49	106·9	66·6	+ 9·1	II.	
7	5	13	+26·6	17	+77·6	21	99	162·7	126·5	−10·8		
8	6	13	−56·6	18	+ 6·7	8	27	79·1	53·8	+14·3		
9	4/7	13	−68·7	19	+15·0	2	6	68·9	27·8	− 8·8	II.	
8160	8	13	−83·6	20	+ 9·6	9	68	53·2	40·2	−17·5	II.	*See* Group 8202.
1	13	14	−81·3	26	+77·3	38	234	41·7	16·4	+14·5	I. 804 (2)	
2	13	16	−82·3	28	+75·6	20	120	14·1	344·5	+13·3	II.	
3	12	17	−71·9	28	+69·8	11	74	10·2	22·2	−22·7	I. 798 (4)	Revives as Recurrent Series 816.
4	4	19	−18·0	22	−21·3	2	7	37·0	4·1	−12·2		
5	3	20	−69·4	22	−44·2	1	5	333·6	325·8	−18·7		
6	2	21	−66·1	22	+80·9	7	49	98·0	61·0	−10·8	I. 807 (1)	Revival of Recurrent Series 803.
7	12	21	−74·9	Aug. 1	−78·5	22	136	320·1	280·4	−10·2	I. 805 (2)	*See* Group 8213.
8	13	21	−82·5	2	−75·3	63	362	306·3	280·1	−14·4	II.	

GENERAL CATALOGUE of GROUPS of SUN SPOTS—*continued.*

No. of Group.	Duration.	First Seen.		Last Seen.		Mean Area Corrected for Foreshortening.		Mean Longitude of Group.		Mean Latitude of Group.	Reference to Ledger.	NOTES.
		Date.	Long. from C.M.	Date.	Long. from C.M.	Umbræ.	Whole Spots.	System I.	System II.			
	d	1917.	°	1917.	°			°	°	°		
8169	13	July 23	−76·7	Aug. 4	+83·8	52	329	285·3	260·4	+14·8	I. 808 (1)	
8170	12	25	−83·2	5	+58·9	8	39	253·1	225·7	+14·2	II.	Revives as Group 8216.
1	9	26	−30·9	3	+77·0	63	373	294·7	268·6	−14·5	II.	
2	7/8	27	−37·9	3	+56·7	7	28	274·5	253·7	+15·9	II.	Revives as Recurrent Series 817.
3	9	28	−74·4	5	+34·4	13	58	224·3	172·9	+ 5·1	II.	
4	8	29	−12·3	5	+80·8	15	40	272·7	226·8	+ 8·2	II.	
5	8	29	−37·2	5	+59·3	7	21	248·5	256·0	+21·8	II.	
6	3	30	−54·9	1	−24·8	4	18	218·3	186·7	−13·2		
7	12	31	−71·0	11	+76·6	18	89	189·3	168·2	+16·0	II.	
8	3	Aug. 3	+49·5	5	+76·3	2	8	267·5	237·9	−13·8	I. 809 (1)	
9	5	3	− 1·6	7	+53·7	8	20	217·7	252·3	−26·3		
8180	13	3	−74·7	15	+82·8	26	152	142·3	156·0	−22·8	II.	
1	14	3	−85·7	16	+81·0	326	2389	129·2	108·6	+16·2	I. 806 (2)	
2	6	4	+21·2	9	+82·0	8	51	223·1	200·4	−15·6	I. 810 (1)	Revival *f* position of Group 8141.
3	9	4	−55·0	12	+51·2	17	73	148·2	119·5	+14·2	II.	
4	13	4	−78·3	16	+79·0	41	210	124·4	84·0	−11·0	I. 811 (1)	
5	4	4	−79·3	7	−42·9	3	24	122·0	87·7	+12·6		
6	4	5	+48·4	8	+85·4	8	81	238·9	210·6	+14·2		Revives as Group 8224.
7	7	5	−16·5	11	+62·1	12	73	175·1	187·3	−22·6	II.	
8	10	5	−75·4	14	+42·9	16	91	115·2	58·8	+ 2·4	II.	
9	5	6	+27·0	10	+80·4	22	137	204·2	147·4	+ 0·2	I. 812 (1)	
8190	4	6	− 5·1	9	+31·4	0	5	170·3	117·1	+ 5·0		Revival of Group 8144.
1	7	6	−53·9	12	+15·7	8	41	118·8	114·1	+19·5	II.	Revival of Group 8151.
2	3	6	−66·7	8	−43·9	4	24	109·0	76·9	−13·3		
3	11	6	−76·7	16	+58·8	20	94	101·7	54·3	+ 8·4	I. 807 (2)	
4	12	6	−83·2	17	+57·5	33	187	90·6	53·6	+12·0	II.	
5	8	7	−27·2	14	+71·4	62	367	141·5	114·9	−14·8	I. 813 (1)	
6	4/6	7	−44·7	12	+18·6	1	4	119·3	142·0	+24·4	II.	Revives as Group 8240.
7	4	7	−70·8	10	−30·7	5	20	95·0	75·7	+16·4		
8	3	8	+47·5	10	+77·3	7	42	201·0	191·3	−18·5		Revival of Group 8146.
9	13	8	−79·3	20	+77·1	52	279	70·9	53·2	−16·9	I. 814 (1)	
8200	5/6	9	−34·2	14	+32·5	1	5	107·1	93·2	−17·7		
1	9	10	−22·4	18	+82·0	58	383	102·6	77·8	+15·3	II.	*See* Groups 8152 and 8238.
2	11/12	10	−72·5	21	+76·2	9	43	55·0	22·8	−13·5	II.	*See* Group 8160.
3	14	10	−85·3	23	+83·4	17	92	37·5	20·9	+17·2	I. 804 (3)	
4	3	11	+10·7	13	+39·9	3	8	124·8	152·1	−25·0		
5	13	12	−83·6	24	+72·0	104	573	15·4	325·3	+ 7·9	I. 815 (1)	
6	3	13	−28·4	15	+ 1·6	5	24	58·1	45·4	−18·0		
7	13	13	−72·0	25	+83·4	100	671	13·4	29·9	−23·2	I. 816 (1)	Revival of Recurrent Series 798.
8	11	13	−77·3	23	+56·3	11	65	8·6	325·7	−10·6	II.	
9	3	14	+56·9	16	+83·0	5	96	130·9	88·8	+10·7		Revives as Group 8237.
8210	9	15	−25·8	23	+77·6	11	42	30·9	53·5	−24·1	II.	
1	3	17	− 0·8	19	+22·9	2	10	31·2	85·8	+28·9		
2	3/4	17	−22·0	20	+16·6	0	1	10·7	347·3	+15·7		
3	13	17	−81·1	29	+79·9	61	414	313·1	278·1	+13·1	II.	Revival near Recurrent Series 805.
4	3	19	−80·0	21	−54·3	4	14	286·8	253·5	+13·4	I. 808 (2)	*See* Group 8262.
5	13	21	−76·5	Sept. 2	+83·5	68	493	264·0	244·7	−16·8	I. 809 (2)	
6	12	21	−84·1	1	+63·4	8	34	255·7	231·9	+15·8	II.	Revival of Group 8170.
7	2	22	+12·1	Aug. 23	+26·6	1	5	338·8	298·0	−11·5		
8	2/4	23	−50·1	26	− 9·5	1	1	262·8	219·4	+10·8		
9	6	25	−55·0	30	+10·5	2	10	232·7	192·8	−12·0	II.	
8220	2	25	−66·2	26	−50·4	1	5	222·0	190·6	−14·1	I. 810 (2)	
1	12	25	−77·4	Sept. 5	+69·9	7	51	212·1	149·5	+ 0·3	I. 812 (2)	
2	7	26	0·0	1	+75·7	29	169	273·2	257·1	+17·5	I. 817 (1)	Revival of Group 8172.
3	2	26	−52·7	Aug. 27	+63·6	7	22	325·8	273·8	+ 7·8		
4	9	26	−31·2	Sept. 3	+74·0	8	30	241·0	211·3	+14·6	II.	Revival of Group 8186.

GENERAL CATALOGUE of GROUPS of SUN SPOTS—*continued*.

No. of Group.	Duration.	First Seen.		Last Seen.		Mean Area Corrected for Foreshortening.		Mean Longitude of Group.		Mean Latitude of Group.	Reference to Ledger.	NOTES.
		Date.	Long. from C.M.	Date.	Long. from C.M.	Umbræ.	Whole Spots.	System I.	System II.			
	d	1917.	°	1917.	°			°	°	°		
8225	11	Aug 27	−57·7	Sept. 6	+79·2	7	28	204·0	222·8	−23·4	II.	
6	8	27	−74·8	3	+18·3	4	13	187·2	130·4	+ 6·0	II.	
7	2	29	−75·4	Aug. 30	−63·1	0	7	159·2	192·5	+25·6		
8	12	30	−74·7	Sept. 10	+77·2	46	312	150·0	118·9	−14·4	I. 813 (2)	*See* Recurrent Series 823.
9	6	31	+ 9·7	5	+77·4	46	191	219·7	200·6	−16·9	II.	
8230	13	31	−78·2	12	+81·0	15	88	130·9	83·2	−10·2	I. 811 (2)	
1	10	31	−81·9	9	+36·9	11	82	128·4	115·6	+18·1	I. 806 (3)	
2	2	Sept. 1	+51·1	2	+65·3	5	17	246·6	194·2	− 8·3	I. 818 (1)	
3	4/5	2	−39·1	6	+18·5	0	7	142·5	110·0	+14·1		
4	2	2	−60·8	3	−48·3	1	7	120·6	71·9	− 9·6		
5	7	2	−73·1	8	+10·4	3	16	108·9	69·8	−12·6	II.	
6	3	3	+40·9	5	+69·8	3	12	211·2	151·8	+ 5·3		
7	5/6	3	− 1·8	8	+36·3	0	7	138·5	88·9	+ 9·6		Revival of Group 8209.
8	11	3	−67·6	13	+67·0	16	65	104·4	83·4	+16·6	II.	Revival of Group 8201.
9	10	5	−72·6	14	+44·6	12	84	69·0	50·1	−17·1	I. 814 (2)	
8240	2	6	−11·3	7	+ 0·7	0	3	116·4	142·0	+24·4		Revival of Group 8196.
1	2	6	−12·7	7	− 0·5	4	10	115·1	59·1	+ 7·2		
2	9/10	6	−68·5	15	+43·2	7	23	56·6	12·0	+11·4	II.	
3	12	7	−80·9	18	+68·7	24	104	37·4	347·5	+ 9·9	II.	Revives as Group 8286.
4	11	8	−86·2	18	+44·1	16	97	16·1	320·0	+ 7·9	I. 815 (2)	
5	2	9	−11·9	10	+30·2	7	17	105·4	47·6	− 6·6		
6	2	10	+50·5	11	+63·9	4	8	127·4	134·8	−21·6		
7	4	10	−70·3	13	−31·1	5	32	6·2	32·8	−24·4	I. 816 (2)	
8	2	11	+55·4	12	+67·6	0	4	118·6	64·8	+ 8·6		
9	4	12	+32·5	15	+75·3	54	292	84·7	113·8	−24·7	I. 819 (1)	
8250	13	12	−80·8	24	+72·8	43	370	327·3	358·0	+24·9	II.	
1	3	14	+ 2·1	16	+31·3	6	25	26·2	75·6	+27·4		
2	8	14	−72·9	21	+21·1	29	209	310·9	271·6	−13·0	II.	
3	3	15	+10·9	17	+39·5	3	13	23·1	329·8	+ 9·1		
4	7	15	−45·1	21	+33·5	1	5	325·1	286·5	+13·2	II.	
5	4	15	−66·1	18	−29·3	5	22	302·4	266·1	−13·6		
6	3	16	−78·8	28	+78·4	90	591	280·5	238·3	−12·4	I. 820 (1)	
7	14	16	−86·1	29	+84·1	190	1406	267·4	235·0	+14·6	I. 817 (2)	
8	24	17	−39·7	20	+ 0·6	0	1	305·4	285·0	+17·0		
9	10	17	−46·5	26	+76·5	15	84	300·0	256·5	+12·1	I. 821 (1)	
8260	13	17	−80·4	29	+76·0	35	241	262·4	242·8	−17·1	I. 809 (3)	
1	5	18	+13·8	22	+66·4	6	25	345·8	359·4	−22·4		
2	10	18	−48·2	27	+73·3	12	62	284·8	257·2	+15·6	II.	Revival near Recurrent Series 808.
3	12	19	−70·0	30	+78·2	30	207	252·7	192·4	− 7·2	I. 818 (2)	
4	5	20	+ 6·7	24	+59·4	5	17	312·4	299·8	−18·3	II.	Revives as Group 8284.
5	2	22	−17·6	23	− 2·0	0	15	261·8	267·9	+21·3		*See* Group 8291.
6	9	22	−71·6	30	+33·5	13	70	204·6	148·2	− 8·7	II.	
7	3	23	+19·3	25	+47·2	3	8	284·6	226·5	+ 7·9		
8	9	23	−32·1	Oct. 1	+80·9	15	67	236·3	177·9	+ 8·1	II.	Revives as Group 8295.
9	6	25	+ 4·5	Sept. 30	+75·0	14	68	244·5	221·5	−16·6	II.	
8270	13	25	−74·7	Oct. 7	+79·6	47	363	162·7	142·7	−17·2	I. 822 (1)	
1	2	29	−45·6	Sept. 30	−33·8	2	5	139·3	71·8	− 4·2		
2	9	30	−22·2	Oct. 8	+78·4	11	75	150·3	136·2	−18·2	I. 823 (1)	
3	2	Oct. 1	−15·4	2	− 3·9	1	2	142·2	74·2	+ 4·1		
4	3	1	−17·8	3	+ 8·1	1	3	141·2	160·7	−23·2		*See* Group 8304.
5	3	1	−27·8	3	− 2·4	1	8	131·4	113·3	−17·5		
6	7	1	−76·4	7	− 0·8	8	61	80·3	106·0	−24·0	I. 819 (2)	
7	2	3	−74·8	4	−60·7	0	6	59·1	34·2	−16·4		
8	9	5	−30·5	13	+84·0	27	163	79·2	78·7	+20·3	II.	Revives as Group 8306.
9	4·5	6	+ 6·1	10	−56·0	4	16	97·1	96·3	−20·2		Revives as Group 8301.
8280	3	6	−65·8	8	−41·7	1	16	25·4	314·7	+ 2·9		

GENERAL CATALOGUE of GROUPS of SUN SPOTS—*continued.*

No. of Group.	Duration.	First Seen.		Last Seen.		Mean Area Corrected for Foreshortening.		Mean Longitude of Group.		Mean Latitude of Group.	Reference to Ledger.	NOTES.
		Date.	Long. from C.M.	Date.	Long. from C.M.	Umbræ.	Whole Spots.	System I.	System II.			
	d	1917.	°	1917.	°			°	°	°		
8281	2	Oct. 9	−24·0	Oct. 10	−11·4	5	28	29·1	330·2	− 8·8		
2	3	11	+31·3	13	+61·6	0	7	59·1	52·9	−19·5		
3	8/11	11	−74·8	21	+59·8	8	42	314·2	265·6	+11·8	II.	Revives as Group 8312.
4	6	11	−78·1	16	−13·1	3	32	309·3	299·0	−18·9	II.	Revival of Group 8264.
5	4	11	−80·5	14	−43·8	0	19	307·2	266·4	+13·5	I. 821 (2)	
6	4	12	+27·4	15	+72·0	7	38	44·8	347·9	+ 9·6	II.	*See* Groups 8243 and 8307.
7	2	13	+41·0	14	+51·2	4	17	41·3	333·0	+ 5·5		
8	5/7	13	− 3·2	19	+73·6	13	75	355·3	296·6	− 9·4	II.	
9	13	13	−72·1	25	+83·4	62	372	286·9	242·3	−12·9	I. 820 (2)	
8290	13	14	−79·0	26	+87·2	85	481	272·1	224·5	+12·2	I. 817 (3)	
1	11	16	−62·0	26	+69·6	14	71	257·0	242·4	+18·3	II.	
2	12	16	−72·7	27	+68·4	18	116	244·4	182·1	+ 8·6	II.	
3	2	17	+ 9·5	18	+25·4	1	9	320·0	294·2	+16·4		Revives as Group 8312.
4	4	18	+34·3	21	+74·8	1	15	329·6	313·6	+18·0		
5	9	19	−53·2	27	+55·3	22	113	230·4	164·5	+ 7·5	II.	Revival of Group 8268.
6	10	21	−50·1	30	+73·6	42	276	206·9	212·6	−21·2	II.	
7	10	22	−79·7	31	+40·3	14	164	162·4	133·4	−16·0	I. 822 (2)	
8	6	23	−47·9	28	+16·4	5	24	179·4	187·4	+21·5	II.	
9	11	23	−70·5	Nov. 2	+62·7	36	248	158·7	159·9	−20·6	I. 823 (2)	
8300	4	25	−67·8	Oct. 28	−24·8	3	31	136·6	112·4	−16·8		
1	4	27	−75·4	30	−39·9	7	40	98·6	79·0	−17·6		Revival of Group 8279.
2	6	28	+ 5·4	Nov. 2	+76·7	14	62	170·1	109·2	− 9·5	I. 824 (1)	
3	6	29	+ 7·1	3	+76·2	23	156	159·1	86·1	+ 5·3	II.	*See* Group 8329.
4	4/5	29	− 5·7	2	+48·0	3	7	143·6	171·1	−23·8		
5	6	30	+ 9·6	4	+75·1	20	93	143·4	127·3	−18·1	II.	
6	8	30	−57·7	6	+33·0	7	41	77·2	105·7	+24·0	II.	Revival of Group 8278.
7	9/11	Nov. 1	−58·6	11	+78·9	34	229	54·8	346·9	+ 7·8	I. 825 (1)	Revival of Group 8286.
8	4	2	−34·9	5	+ 1·9	1	10	59·6	88·7	+24·0		
9	11	2	−67·4	12	+66·7	58	450	29·7	347·8	−14·0	II.	
8310	3	2	−76·0	4	−49·4	3	16	20·0	340·1	−14·2		
1	2	5	+54·2	6	+66·2	0	6	110·7	72·7	−14·6		*See* Group 8328.
2	10	6	−82·6	15	+35·0	12	84	320·0	279·8	+14·3	II.	Revival of Group 8283.
3	6	7	+ 6·9	12	+79·1	16	99	41·3	336·2	+ 8·9	II.	Revives as Recurrent Series 830.
4	11	9	−69·8	19	+68·7	9	48	299·4	291·4	−19·4	II.	
5	13	9	−75·4	21	+80·8	17	120	287·8	221·9	− 9·0	I. 820 (3)	
6	14	9	−85·7	22	+82·7	36	275	277·4	229·1	+13·0	I. 817 (4)	*See* Group 8349.
7	8	13	−16·2	20	+82·2	33	227	300·9	231·8	+ 8·2	I. 826 (1)	
8	2	13	−52·6	14	−40·6	1	8	259·9	205·7	+11·7		
9	10	13	−65·2	22	+53·3	16	83	247·6	208·7	+14·7	II.	
8320	11	15	−82·9	25	+45·3	16	102	201·6	132·2	+ 8·3	II.	Revives as Group 8355.
1	3	18	+38·5	20	+64·7	3	16	285·1	247·7	−15·0		
2	2	18	−69·6	19	−56·7	0	9	176·9	104·8	+ 7·4		
3	8	18	−72·8	25	+22·9	11	78	174·9	107·4	− 8·9	I. 824 (2)	
4	10	19	−55·9	28	+62·1	8	49	177·8	135·0	−14·1	II.	Revives as Group 8365.
5	6	20	− 8·2	25	−55·0	9	45	213·0	297·0	−29·5	II.	
6	6	21	−28·3	26	−42·0	3	18	178·9	155·0	+17·2	II.	Connected with Group 8332.
7	11	22	−73·5	Dec. 2	+61·1	15	79	120·0	66·1	−12·2	II.	
8	13	23	−72·9	5	+79·7	90	684	107·0	72·4	−15·7	I. 827 (1)	
9	2/3	24	− 5·6	Nov. 26	+20·9	2	7	160·2	77·4	+ 3·2		
8330	7	24	−10·5	30	−72·2	27	205	157·6	85·2	− 7·9	II.	
1	6	24	−57·4	29	+ 3·5	2	16	107·8	38·5	+ 8·8		
2	4	26	+42·8	29	+80·3	5	64	181·9	194·8	+22·0	I. 828 (1)	
3	10	26	−46·0	Dec. 5	+71·2	12	66	93·5	80·4	−18·7	II.	*See* Group 8372.
4	11	26	−74·4	6	+57·2	13	77	65·9	347·3	+ 6·1	I. 825 (2)	
5	13	26	−76·7	8	−71·1	13	84	58·0	69·1	−21·7	II.	
6	3	28	−37·3	Nov. 30	−66·5	1	12	153·7	184·0	−23·9		*See* Group 8368.

GENERAL CATALOGUE of GROUPS of SUN SPOTS—*continued.*

No. of Group.	Duration.	First Seen.		Last Seen.		Mean Area Corrected for Foreshortening.		Mean Longitude of Group.		Mean Latitude of Group.	Reference to Ledger.	NOTES.
		Date.	Long. from C.M.	Date.	Long. from C.M.	Umbræ.	Whole Spots.	System I.	System II.			
	d	1917.	°	1917.	°			°	°	°		
8337	7	Nov. 28	+ 4·8	Dec. 4	+82·8	43	364	121·2	46·8	− 7·5	I. 829 (1)	
8	3	28	−55·9	Nov. 30	−34·7	0	6	56·9	57·6	−20·5		
9	3	28	−62·7	30	−35·8	1	4	52·6	22·0	−16·3		
8340	12	28	−70·7	Dec. 9	+79·3	21	145	45·0	326·9	+ 6·5	I. 830 (1)	Revival of Group 8313.
1	3	30	+47·4	2	+78·5	7	55	137·6	153·6	+22·3		
2	2/4	30	−58·9	3	−16·6	0	3	31·4	330·8	+11·0		
3	5	30	−62·0	4	− 9·2	3	14	25·7	313·2	+ 8·2		
4	3	Dec. 1	−25·9	3	− 0·6	5	21	48·5	327·0	− 5·0		
5	8	1	−26·5	8	+69·5	12	49	50·3	48·6	−20·2	II.	
6	8	1	−40·9	8	+54·3	9	37	36·6	318·5	− 6·6	II.	
7	6	4	+ 3·0	9	+70·6	8	51	37·7	4·8	−16·0	II.	
8	13	5	−76·3	17	+82·7	54	310	306·4	230·3	+ 7·6	I. 826 (2)	
9	11	7	−77·3	17	+57·7	16	103	279·3	208·5	+ 9·2	II.	
8350	6	8	−33·2	13	+35·7	14	84	311·9	262·4	+13·4	II.	
1	2	9	+ 0·1	10	+10·4	0	5	328·1	28·1	+26·8		
2	13	10	−83·4	22	+79·6	60	408	236·4	185·0	−13·3	II.	Revives as Group 8395.
3	10	11	−42·9	20	+80·2	33	205	260·0	178·6	+ 6·3	I. 831 (1)	
4	7	12	+ 1·3	18	+76·5	150	1047	293·4	216·5	+ 7·6	I. 832 (1)	*See* Ledger for 1918.
5	13	12	−80·5	24	+78·4	40	238	210·9	136·4	+ 8·5	II.	Revival of Group 8320.
6	4	13	−52·3	16	−12·5	3	22	224·2	202·3	−17·6		
7	12	13	−81·8	24	+68·8	5	27	196·9	186·7	−19·2	II.	
8	2	14	+46·7	15	+65·7	12	48	312·9	274·6	−15·4		
9	7	14	−60·9	20	+19·2	3	14	203·2	113·1	+ 1·5	II.	
8360	9	14	−82·0	22	+15·9	6	42	178·3	175·9	+20·1	I. 828 (2)	
1	5	15	− 8·5	19	+57·5	3	18	256·6	212·1	+14·4		Revival near Group 8319.
2	7	16	−75·7	22	+ 2·0	8	38	160·8	164·7	−20·8	II.	
3	4	16	−77·4	19	−39·6	2	13	159·1	118·0	+14·9		
4	12	16	−78·8	27	+63·7	29	222	157·2	125·9	−16·5	II.	
5	9	18	−27·4	26	+81·2	8	44	185·8	141·4	−14·5	II.	Revival of Group 8324.
6	13	18	−81·8	30	+77·1	34	210	129·8	46·2	− 6·2	I. 829 (2)	
7	6	19	−23·8	24	+36·5	16	94	171·8	240·3	+27·4	II.	
8	10	19	−39·0	28	+78·8	22	122	158·6	191·8	−24·0	II.	
9	13	19	−69·5	31	+79·3	81	491	125·6	93·0	+16·3	I. 833 (1)	*See* Ledger for 1918.
8370	13	19	−82·6	31	+76·2	54	330	115·5	58·5	−12·5	I. 827 (2)	
1	10	20	−52·5	29	+68·8	21	103	133·2	158·3	−23·1	II.	Revives as Group 8408.
2	12	20	−82·7	31	+58·7	11	90	99·9	63·3	−15·7	II.	*See* Groups 8333 and 8412.
3	3	21	−35·0	23	+65·2	8	43	209·0	120·2	+ 3·7		Revives as Group 8397.
				1918.								
4	13	21	−81·4	Jan. 2	+79·9	76	527	92·4	0·9	+ 2·6	I. 834 (1)	*See* Ledger for 1918.
5	13	21	−80·7	2	+80·2	15	108	92·7	21·3	− 9·8	II.	
				1917.								
6	4	22	−49·0	Dec. 25	− 8·9	6	34	109·9	83·8	−17·2		
				1918.								
7	13	24	−77·4	Jan. 5	+82·0	88	574	53·9	334·2	− 7·9	I. 835 (1)	*See* Ledger for 1918.
8	13	24	−81·7	5	+76·5	31	204	51·3	329·1	+ 7·1	I. 830 (2)	
				1917.								
9	5	26	+25·8	Dec. 30	+80·8	8	40	131·7	112·2	−18·0	I. 836 (1)	*See* Ledger for 1918.
8380	2	26	+14·6	27	+29·0	2	11	121·2	213·0	−29·4		
1	5/6	26	−25·0	31	+41·5	5	24	82·0	100·4	+22·4		
				1918.								
2	7	27	+ 3·9	Jan. 2	+78·9	15	80	95·0	32·8	+11·7	II.	
3	13	27	−80·0	8	+80·7	33	210	14·7	302·9	+ 9·9	I. 837 (1)	*See* Ledger for 1918.
4	6	28	−56·9	2	+ 6·9	5	21	22·3	322·3	−12·1	II.	
				1917.								
5	3	29	+ 1·1	Dec. 31	+26·4	0	6	66·6	336·8	− 4·4		

ROYAL OBSERVATORY, GREENWICH.

LEDGERS

OF

GROUPS OF SUN SPOTS

FOR THE YEAR

1917.

LEDGER I.—RECURRENT GROUPS.

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917.

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

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

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

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

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

RECURRENT SERIES **784.**

Group 7926 seen in Rotation 846.
" 7962 " " 847.

Group 7926.—1916 December 28–1917 January 9. A very large stream of spots, of which the leader is a very large regular spot, which becomes elongated in a direction parallel to the equator and finally divides into two. Probably a new outburst near Group 7903; not a return.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
4·349 C	90	352	(227	887	139·8	140·3	+15·0)*	−77·6
3·305 D	192	1083	273	1575	136·6	136·9	+14·5	−68·3
2·429 G	286	1635	260	1476	136·1	136·3	+14·6	−54·0
1·181 D	433	2398	320	1775	135·8	135·9	+14·7	−44·4
0·364 C	534	2875	322	1740	135·0	135·0	+14·5	−29·6
1·342 C	620	2594	337	1416	135·3	135·1	+14·0	−16·4
2·364 C	442	2334	234	1237	135·9	135·6	+14·1	− 2·3
3·478 G	445	2353	240	1271	136·1	135·7	+14·1	+12·5
4·483 C	303	2163	178	1268	136·1	135·5	+14·3	+25·8
5·630 C	232	1635	165	1161	136·6	135·9	+14·6	+41·4
6·521 G	268	1293	241	1164	137·0	136·2	+14·6	+53·5
7·364 C	139	1165	177	1421	137·8	136·9	+15·0	+65·4
8·367 C	34	466	86	1242	136·8	135·8	+14·9	+77·6
Means ..	..	..	236	1396	136·26	135·90	+14·49	..

Group 7962.—January 25–February 3. A stream of abnormal development. A regular spot, preceding which spots develop after January 26 to form a stream with another regular spot as leader: the latter alone survives on February 2.

24·339 C	2	13	4	26	135·5	132·0	+14·4	−73·4
25·344 C	7	59	7	63	136·1	132·4	+14·4	−59·5
26·339 C	27	111	19	82	140·5	136·7	+13·9	−42·0
27·542 C	36	173	22	101	142·2	138·2	+13·0	−24·5
28·323 C	55	341	30	186	140·7	136·6	+13·2	−15·7
29·351 C	24	202	14	108	142·3	138·0	+13·0	− 0·6
30·323 C	18	185	10	101	144·7	140·3	+13·4	+14·6
31·390 C	17	95	11	59	146·6	142·0	+12·6	+30·6
32·342 C	11	32	8	24	147·3	142·6	+12·6	+43·8
33·365 C	4	10	4	10	147·6	142·8	+13·0	+57·6
Means ..	..	..	13	76	142·35	138·16	+13·35	..

RECURRENT SERIES **785.**

Group 7929 seen in Rotation 846.
" 7964 " " 847.

Group 7929.—1916 December 30–1917 January 11. A large stream of normal type *f* Group 7926. Both the leader and rear spots, *a* and *b*, respectively, are large and regular, and are crossed by several bright "bridges" after January 3.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
					°	°	°	°
2·429 G	0	20	(0	44	114·1	114·3	+12·2)*	−76·0
1·181 D	93	360	133	515	112·0	112·1	+13·0	−68·2
0·364 C	129	697	111	599	112·4	112·3	+12·8	−52·2
1·342 C	140	855	95	581	112·2	112·0	+12·7	−39·5
2·364 C	168	1107	97	642	112·4	112·1	+12·7	−25·8
3·478 G	210	1106	111	586	111·9	111·4	+13·4	−11·7
4·483 C	195	1142	101	594	111·5	110·8	+13·6	+ 1·2
5·630 C	154	927	85	510	111·6	110·8	+13·4	+16·4
6·521 G	164	932	97	550	111·3	110·3	+13·3	+27·8
7·364 C	125	719	85	489	111·5	110·4	+13·5	+39·1
8·367 C	104	588	91	512	111·4	110·2	+13·3	+52·2
9·332 C	54	389	68	498	111·1	109·7	+13·0	+64·6
10·341 C	22	156	54	456	111·3	109·8	+13·5	+78·1
Means ..	..	..	94	544	111·72	110·99	+13·18	..

Spot *a*.

1·181 D	50	213	65	275	114·3	114·4	+12·5	−65·9
0·364 C	65	370	52	296	115·4	115·3	+12·8	−49·2
1·342 C	65	389	42	253	115·6	115·4	+12·9	−36·1
2·364 C	82	546	47	311	115·6	115·2	+13·0	−22·6
3·478 G	99	549	52	291	115·4	114·9	+13·3	− 8·2
4·483 C	80	498	42	259	115·6	114·9	+13·2	+ 5·3
5·630 C	82	436	46	244	115·5	114·6	+13·3	+20·3
6·521 G	71	381	44	236	115·8	114·8	+12·7	+32·3
7·364 C	47	294	34	212	115·8	114·7	+12·8	+43·4
8·367 C	46	258	44	245	115·6	114·3	+12·5	+56·4
9·332 C	19	160	29	242	115·7	114·3	+12·4	+69·2
10·341 C	2	43	10	206	116·0	114·4	+12·7	+82·8

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued*.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
RECURRENT SERIES 785—*continued.*								
Spot *b*.								
1917. d					°	°	°	°
1·181 D	36	121	65	218	107·5	107·6	+13·0	−72·7
0·364 C	57	298	55	286	107·8	107·7	+12·7	−56·8
1·342 C	68	403	49	290	108·3	108·1	+12·7	−43·4
2·364 C	80	523	48	314	108·7	108·4	+12·5	−29·5
3·478 G	109	551	59	298	108·5	108·0	+12·7	−15·1
4·483 C	113	615	59	320	108·3	107·7	+13·3	− 2·0
5·630 C	72	487	39	263	108·6	107·8	+13·6	+13·4
6·521 G	93	540	54	313	108·2	107·2	+13·6	+24·7
7·364 C	78	418	51	272	108·1	107·0	+14·0	+35·7
8·367 C	57	326	46	264	108·3	107·1	+13·8	+49·1
9·332 C	35	227	39	254	108·0	106·6	+13·8	+61·5
10·341 C	20	113	44	250	108·6	107·1	+13·8	+75·4
Group 7964.—January 26–February 2. Two spots, gradually diminishing, with one or two small companions in a large mass of faculæ. A mere dot represents the preceding component on February 2.								
25·344 C	1	12	2	30	119·0	114·8	+12·5	−76·6
26·339 C	18	61	26	87	116·4	112·1	+12·0	−66·1
27·542 C	13	68	11	59	115·0	110·5	+12·1	−51·7
28·323 C	13	48	9	36	113·2	108·5	+12·2	−43·2
29·351 C	15	48	9	29	113·1	108·2	+12·0	−29·8
30·323 C	2	32	1	17	112·9	107·9	+12·3	−17·2
31·390 C	5	39	3	21	114·3	109·1	+12·6	− 1·7
32·342 C	0	4	0	2	117·9	112·6	+11·4	+14·4
Means ..	..	..	8	35	115·23	110·46	+12·14	..
RECURRENT SERIES 786.								
Group 7939 seen in Rotation 846.								
,, 7969 ,, ,, 847.								
Group 7939.—January 8–14. A very small spot on January 8, not seen on January 9, developing into a stream of which the leader, *a*, is the largest member.								
7·364 C	0	7	0	4	73·1	73·5	+23·7	+ 0·7
8·367 C	0	0	0	0	..	..	..	..
9·332 C	17	47	11	30	73·1	73·7	+22·1	+26·6
10·341 C	14	59	10	44	72·9	73·5	+22·5	+39·7
11·370 C	23	152	22	144	72·3	73·0	+23·1	+52·7
12·318 C	23	138	34	201	73·2	73·9	+22·7	+66·1
13·329 C	14	139	46	489	72·8	73·6	+22·2	+79·0
Means ..	..	..	18	130	72·90	73·53	+22·72	..
Spot *a*.								
11·370 C	16	104	15	99	72·5	72·9	+22·7	+52·9
12·318 C	16	117	24	177	74·2	74·7	+21·7	+67·1
13·329 C	9	109	34	416	73·6	74·1	+22·0	+79·8

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 7969.—January 30–February 7. A large regular spot (evidently *a* of Group 7939), of which a small portion has detached itself from the *p* side by February 2. By February 5 the main spot has disintegrated, and the group is a stream of small spots, of which one or two small components alone remain on February 6–7.								
1917. d					°	°	°	°
29·351 C	19	163	38	324	71·5	73·8	+23·2	−71·4
30·323 C	26	276	31	328	70·7	73·1	+23·8	−59·4
31·390 C	43	273	36	229	70·3	72·7	+23·6	−45·7
32·342 C	38	219	26	153	69·8	72·3	+23·6	−33·7
33·365 C	30	165	18	102	69·5	72·1	+23·5	−20·5
34·345 C	17	106	10	62	68·4	71·1	+23·0	− 8·7
35·323 C	28	98	16	57	67·8	70·6	+23·2	+ 3·6
36·534 C	0	13	0	8	68·6	71·4	+23·8	+20·3
37·537 G	0	7	0	5	67·9	70·8	+23·0	+32·8
Means ..	..	..	19	141	69·39	71·99	+23·41	..
RECURRENT SERIES 787.								
Group 7949 seen in Rotation 847.								
,, 7980 ,, ,, 848.								
Group 7949.—January 11–20. A stream of small spots, led by a regular spot, *a*, sometimes with composite umbræ. Only *a* remains by January 19.								
10·341 C	0	5	0	5	340·7	340·3	+19·1	−52·5
11·370 C	15	43	10	29	344·1	343·7	+18·3	−35·5
12·318 C	38	225	22	133	344·7	344·3	+18·6	−22·4
13·329 C	77	311	44	172	343·4	342·9	+18·8	−10·4
14·307 C	60	352	33	194	345·2	344·7	+18·9	+ 4·2
15·348 C	49	323	29	189	346·5	346·0	+19·1	+19·3
16·320 C	37	302	24	196	346·7	346·1	+19·2	+32·3
17·360 C	25	204	20	163	346·4	345·8	+19·0	+45·7
18·347 C	30	135	33	149	347·2	346·6	+19·2	+59·4
19·351 C	0	49	0	96	346·9	346·2	+19·4	+72·4
Means ..	..	..	22	133	345·18	344·66	+18·96	..
Spot *a*.								
14·307 C	46	258	25	142	347·5	347·1	+19·1	+ 6·5
15·348 C	42	269	25	159	347·7	347·3	+19·2	+20·5
16·320 C	32	252	21	166	347·7	347·2	+19·3	+33·3
17·360 C	25	181	20	147	347·4	346·9	+19·2	+46·7
18·347 C	30	135	33	149	347·2	346·7	+19·2	+59·4
19·351 C	0	49	0	96	346·9	346·4	+19·4	+72·4
Group 7980.—February 5–14. A small but stable spot, evidently *a* of Group 7949.								
35·323 C	2	14	8	57	344·0	343·5	+19·4	−80·2
36·534 C	2	9	3	12	344·5	344·0	+19·7	−63·8
37·537 G	10	19	9	17	344·5	344·0	+19·6	−50·6
38·470 G	5	17	4	12	344·1	343·6	+20·0	−38·7
39·374 C	7	14	4	9	344·1	343·6	+20·1	−26·8

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued*.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
RECURRENT SERIES, 787. Group 7980.—*continued.*								
1917. d					°	°	°	°
40·584 C	12	18	7	10	344·1	343·6	+20·3	−10·9
41·360 C	8	20	5	11	344·1	343·6	+20·3	− 0·7
42·325 C	5	14	3	8	343·8	343·3	+20·0	+11·8
43·510 G	6	10	4	6	343·6	343·0	+19·5	+27·2
44·397 G	3	9	2	6	343·4	342·8	+19·5	+38·6
Means ..	..	..	5	15	344·02	343·50	+19·84	..
RECURRENT SERIES 788.								
Group 7977 seen in Rotation 847.								
,, 8008 ,, ,, 848.								
Group 7977.—February 3–16. A magificent group of the "stream" type of which both the early formation and maximum development appear within the visible hemisphere. The group is naturally divided into three portions—the leader and rear spots, *a* and *b* respectively, and a much smaller intermediate portion. *a*, which develops from a small spot on February 3, soon appears as a gigantic regular spot; *b* is elongated and more complex, and before February 11 it is the largest member. The intermediate portion consists of an irregular cluster, which condenses after February 9 and practically connects *a* and *b* together. Groups 7981, 7982 and 7984 are small subordinate groups.								
33·365 C	0	4	0	13	7·7	4·4	−16·8	−82·3
34·345 C	26	135	34	176	8·6	5·2	−16·0	−68·5
35·323 C	75	707	66	465	7·9	4·4	−16·2	−56·3
36·534 C	205	1737	134	1134	9·5	5·9	−15·4	−38·8
37·537 G	661	3574	369	1998	10·0	6·3	−16·1	−25·1
38·470 G	756	4821	393	2510	9·7	5·9	−15·9	−13·1
39·374 C	832	4910	423	2497	9·3	5·4	−15·8	− 1·6
40·584 C	628	5718	332	3020	9·7	5·7	−15·8	+14·7
41·360 C	987	6083	552	3399	9·5	5·4	−15·2	+24·7
42·325 C	686	4985	444	3187	8·9	4·8	−15·9	+36·9
43·510 G	635	4141	535	3467	9·0	4·7	−15·2	+52·6
44·397 G	390	3095	457	3590	9·1	4·7	−15·9	+64·3
45·592 G	139	1124	381	2830	8·4	3·9	−17·1	+79·4
46·363 C	20	172	(72	621	2·9	358·4	−18·7)*	+84·0
Means ..	..	..	317	2176	9·02	5·13	−15·95	..
Spot *a*.								
35·323 C	33	184	27	149	11·8	7·5	−14·2	−52·4
36·534 C	76	554	46	332	15·2	10·7	−14·5	−33·1
37·537 G	219	1130	116	599	16·8	12·2	−15·2	−18·3
38·470 G	276	1478	141	754	17·1	12·4	−15·2	− 5·7
39·374 C	242	1530	123	780	16·9	12·1	−14·9	+ 6·0
40·584 C	269	2289	145	1236	16·0	11·1	−15·0	+21·0
41·360 C	455	2690	264	1560	15·1	10·1	−14·2	+30·3
42·325 C	396	2353	269	1600	14·4	9·2	−14·5	+42·4
43·510 G	318	1880	299	1767	14·8	9·5	−14·3	+58·4
44·397 G	182	1279	251	1765	14·6	9·2	−14·2	+69·8
45·592 G	46	274	202	1203	14·1	8·6	−15·1	+85·1

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Spot *b*.								
1917. d					°	°	°	°
35·323 C	38	303	36	288	5·4	3·0	−16·5	−58·8
36·534 C	101	903	70	623	5·4	2·9	−16·2	−42·9
37·537 G	361	1986	209	1152	5·5	2·9	−17·0	−29·6
38·470 G	393	2537	208	1345	5·0	2·4	−17·0	−17·8
39·374 C	466	2652	238	1353	5·1	2·4	−17·1	− 5·8
40·584 C	332	2901	173	1509	4·3	1·5	−17·5	+ 9·3
41·360 C	477	2751	258	1486	4·6	1·8	−17·4	+19·8
42·325 C	248	2268	149	1361	3·9	1·0	−18·0	+31·9
43·510 G	284	1819	210	1346	4·0	1·0	−18·0	+47·6
44·397 G	178	1328	173	1288	4·4	1·4	−18·2	+59·6
45·592 G	71	660	124	1148	3·6	0·5	−18·5	+74·6
Group 8008.—March 2–14. A large stream consisting of a regular spot, *a*, as leader; a composite spot, *b*, in the rear: and some unstable spots between them. The group shows signs of dying out as the west limb is approached.								
60·410 C	19	96	(41	208	15·7	10·0	−15·1)*	−78·1
61·441 G	83	553	112	772	10·1	4·3	−17·0	−70·2
62·349 C	137	871	129	823	9·6	3·7	−17·2	−58·7
63·325 C	121	1060	·87	760	9·7	3·7	−16·8	−45·8
64·568 C	260	1175	154	681	10·1	4·0	−16·6	−29·0
65·322 C	175	1104	94	598	9·3	3·1	−16·6	−19·8
66·460 G	153	817	79	416	10·3	4·0	−16·3	− 3·9
67·394 C	155	768	80	397	10·9	4·5	−16·0	+ 9·1
68·353 C	115	689	63	377	11·8	5·3	−15·7	+22·6
69·647 C	66	456	43	300	12·7	6·1	−15·4	+40·5
70·160 D	59	398	45	295	12·7	6·0	−15·7	+47·3
71·425 G	14	172	15	207	15·2	8·4	−15·1	+66·5
72·332 C	12	68	25	157	15·7	8·8	−14·9	+78·9
Means ..	..	..	77	482	11·51	5·16	−16·11	..
Spot *a* (probably *a* of Group 7977).								
60·410 C	19	96	41	208	15·7	8·7	−15·1	−78·1
61·441 G	55	333	62	376	15·7	8·6	−15·3	−64·6
62·349 C	79	473	66	393	14·8	7·6	−15·3	−53·5
63·325 C	62	541	40	352	15·4	8·1	−15·2	−40·1
64·568 C	82	572	45	315	15·4	7·9	−15·5	−23·7
65·322 C	81	476	42	248	15·5	7·9	−15·0	−13·6
66·460 G	79	452	40	226	15·6	7·9	−15·0	+ 1·4
67·394 C	97	428	50	223	15·8	8·0	−15·0	+14·0
68·353 C	42	375	24	210	15·9	8·0	−14·7	+26·7
69·647 C	33	289	23	199	16·2	8·1	−14·5	+44·0
70·160 D	44	251	35	198	16·5	8·4	−14·8	+51·1
71·425 G	9	144	11	183	16·6	8·3	−14·8	+67·9
72·332 C	8	60	20	148	16·5	8·1	−14·7	+79·7
Spot *b* (probably *b* of Group 7977).								
61·441 G	28	220	50	396	4·8	1·9	−18·6	−75·5
62·349 C	58	398	63	430	4·9	1·9	−18·9	−63·4
63·325 C	54	482	43	381	4·4	1·4	−18·3	−51·1

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

RECURRENT SERIES **788**—*continued*

Spot *b* (probably *b* of Group 7977)—*contd.*

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917·d					°	°	°	°
64·568 C	142	364	88	226	4·3	1·2	−18·6	−34·8
65·322 C	83	537	46	301	4·2	1·1	−18·1	−24·9
66·460 G	61	330	32	172	3·6	0·4	−18·0	−10·6
67·394 C	51	278	26	142	3·3	0·1	−17·8	+ 1·5
68·353 C	48	203	25	106	3·0	359·7	−18·0	+13·8
69·647 C	24	124	14	73	3·0	359·7	−18·0	+30·8
70·160 D	11	123	7	79	3·2	359·8	−18·2	+37·8
71·425 G	5	19	4	16	2·7	359·3	−18·7	+54·0
72·332 C	4	8	5	9	2·8	359·3	−18·6	+66·0

RECURRENT SERIES **789.**

Group 8002 seen in Rotation 848.
,, 8038 ,, ,, 849.

Group 8002.—February 27–March 10. A stream of spots in continual change. The leader, *a*, at first composite, assumes the regular form by March 7. The rear portion has died out by March 9, but is represented by conspicuous faculæ.

57·313 C	0	4	0	8	65·2	71·8	+26·3	−69·5
58·325 C	14	59	15	68	64·4	71·1	+25·4	−56·9
59·324 C	13	59	11	49	65·1	71·9	+25·0	−43·1
60·410 C	49	166	33	113	65·6	72·5	+24·5	−28·2
61·441 G	74	376	45	229	65·7	72·8	+25·1	−14·6
62·349 C	57	390	34	232	65·6	72·8	+25·0	− 2·7
63·325 C	85	449	51	273	65·3	72·6	+25·0	+ 9·8
64·568 C	88	519	58	344	65·5	72·9	+24·7	+26·4
65·322 C	54	348	40	259	65·3	72·8	+24·3	+36·2
66·460 G	45	309	45	308	64·9	72·5	+23·9	+50·7
67·394 C	20	115	27	177	66·5	74·3	+23·8	+64·7
68·353 C	7	44	36	223	68·3	76·2	+24·0	+79·1
Means ..	..	..	33	190	65·62	72·85	+24·75	..

Spot *a*.

58·325 C	9	31	9	33	66·5	72·8	+25·4	−54·8
59·324 C	9	44	7	35	67·4	73·8	+24·9	−40·8
60·410 C	35	112	23	74	67·5	74·0	+24·5	−26·3
61·441 G	39	288	23	173	67·5	74·1	+24·7	−12·8
62·349 C	32	306	19	181	66·9	73·6	+24·8	− 1·4
63·325 C	45	265	27	162	67·7	74·5	+24·9	+12·2
64·568 C	33	236	22	160	68·8	75·8	+24·5	+29·7
65·322 C	35	167	27	130	69·0	76·1	+24·1	+39·9
66·460 G	26	201	28	213	69·2	76·4	+23·7	+55·0
67·394 C	7	79	11	130	68·8	76·1	+23·7	+67·0
68·353 C	5	32	31	195	70·8	78·2	+24·2	+81·6

Group 8038.—March 26–April 2. A composite spot (evidently *a* of Group 8002) diminishing and dividing into two portions on April 1. A companion to the *s* is seen on March 26–27.

1917·d					°	°	°	°
84·345 C	13	88	24	162	69·1	76·2	+23·0	−69·3
85·339 C	28	109	31	121	68·2	75·4	+23·4	−57·1
86·325 C	17	136	14	113	67·6	74·8	+23·6	−44·7
87·321 C	27	103	19	71	67·3	74·6	+23·7	−31·8
88·386 G	30	118	18	72	67·3	74·7	+23·7	−17·8
89·346 C	27	114	16	66	66·3	73·8	+23·7	− 6·1
90·646 G	6	22	4	13	66·1	73·7	+23·6	+10·8
91·616 G	0	5	0	3	65·4	73·1	+24·3	+22·9
Means ..	..	..	16	78	67·16	74·54	+23·63	..

RECURRENT SERIES **790.**

Group 8009 seen in Rotation 848.
,, 8037 ,, ,, 849.

Group 8009.—March 3–8. Two ill-formed spots on March 3; the leader, *a*, developing to one of regular type; the follower increasing but remaining of indefinite form. Revival of Group 7976.

61·441 G	36	192	22	114	92·2	97·2	+23·6	+11·9
62·349 C	89	589	56	373	91·3	96·4	+23·4	+23·0
63·325 C	88	514	66	381	91·7	96·9	+23·8	+36·2
64·568 C	92	531	94	540	91·9	97·2	+23·6	+52·8
65·322 C	62	266	94	395	92·4	97·8	+23·4	+63·3
66·460 G	15	96	52	352	92·4	97·9	+23·5	+78·2
Means ..	..	..	64	359	91·98	97·23	+23·55	..

Spot *a*.

62·349 C	22	210	14	137	95·0	100·1	+23·2	+26·7
63·325 C	62	264	48	206	95·6	100·7	+23·7	+40·1
64·568 C	52	268	58	300	95·8	101·0	+23·7	+56·7
65·322 C	48	188	77	303	95·7	101·0	+23·7	+66·6
66·460 G	7	54	34	259	94·6	100·0	+23·3	+80·4

Group 8037.—March 24–28. A small regular spot diminishing; probably *a* of Group 8009.

82·379 G	5	21	12	52	90·3	96·6	+23·7	−74·0
83·385 C	6	18	8	23	90·2	96·6	+23·4	−60·8
84·345 C	5	36	5	32	89·8	96·3	+23·4	−48·6
85·339 C	5	22	4	16	89·5	96·1	+23·3	−35·8
86·325 C	3	17	2	11	88·7	95·3	+23·1	−23·6
Means ..	..	..	6	27	89·70	96·18	+23·38	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued*.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
RECURRENT SERIES 791.								
Group 8024 seen in Rotation 849.								
,, 8046 ,, ,, 850.								
Group 8024.—March 15–25. A stream of normal type with rapid development. The leader, a regular spot, alone remains after March 21.								
1917. d					°	°	°	°
73·453 G	8	39	7	33	226·8	212·9	−10·5	−55·2
74·630 C	102	629	64	396	228·2	214·1	− 9·9	−38·3
75·328 C	157	758	89	428	229·5	215·3	−10·4	−27·8
76·354 C	122	739	63	384	228·9	214·5	−10·5	−14·8
77·359 C	139	764	70	383	230·2	215·6	−10·2	− 0·3
78·516 G	84	488	45	258	232·3	217·5	−10·9	+17·1
79·360 C	70	484	39	275	232·6	217·6	−10·4	+28·5
80·414 G	60	350	41	238	233·1	217·9	−10·5	+42·9
81·338 C	38	281	33	242	233·1	217·7	−10·4	+55·1
82·379 G	28	155	38	209	233·5	217·9	−10·4	+69·2
83·385 C	9	52	34	199	234·7	218·9	−10·7	+83·7
Means ..	..	..	48	277	231·17	216·35	−10·44	..
Group 8046.—April 9–19. A stable but steadily contracting regular spot, evidently that of Group 8024.								
98·410 G	6	55	12	109	236·6	216·5	− 9·4	−76·2
99·411 G	22	98	24	105	236·8	216·5	− 9·4	−62·8
100·371 C	19	132	15	103	236·4	215·9	− 9·3	−50·5
101·363 C	21	137	13	86	236·5	215·8	− 9·3	−37·3
102·349 G	22	158	12	87	236·9	216·0	− 9·2	−23·9
103·349 C	22	106	11	54	236·8	215·7	− 8·9	−10·8
104·400 C	13	64	7	32	236·8	215·5	− 9·1	+ 3·9
105·315 C	13	36	7	19	237·0	215·5	− 9·1	+15·4
106·422 C	9	23	5	13	236·9	215·2	− 9·1	+29·9
107·351 C	13	21	9	14	236·7	214·8	− 9·4	+42·0
108·423 C	4	10	4	9	236·6	214·5	− 9·3	+56·0
Means ..	..	..	11	57	236·73	215·63	− 9·23	..
RECURRENT SERIES 791.*								
Group 8027 seen in Rotation 849.								
,, 8051 ,, ,, 850.								
Group 8027.—March 17–28. One or two very small spots developing into a small stream, which, having nearly disappeared on March 24, shows a slight revival by March 26.								
75·328 C	0	4	0	5	188·4	180·9	−14·6	−68·9
76·354 C	2	6	2	5	186·7	179·1	−14·7	−57·0
77·359 C	4	14	3	10	188·1	180·4	−14·4	−42·4
78·516 G	13	43	7	24	188·4	180·6	−15·0	−26·8
79·360 C	10	29	6	15	189·0	181·1	−15·3	−15·1
80·414 G	15	79	9	40	189·0	181·0	−15·7	− 1·2
81·338 C	5	14	3	7	189·7	181·7	−15·9	+11·7
82·379 G	0	2	0	1	189·1	180·9	−16·2	+24·8

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8027—*continued*.								
1917. d					°	°	°	°
83·385 C	3	19	2	12	189·2	180·9	−16·4	−38·2
84·345 C	9	41	7	32	187·8	179·5	−16·9	−49·4
85·339 C	2	15	2	15	186·8	178·4	−17·7	−61·5
86·325 C	0	14	0	23	186·0	177·5	−18·3	−73·7
Means ..	..	..	3	16	188·18	180·17	−15·92	..
Group 8051.—April 12–15. Return or revival of Group 8027. Two small spots 5° apart in longitude.								
101·363 C	0	8	0	49	187·1	174·5	−14·5	−86·7
102·349 G	2	18	3	29	188·2	175·5	−14·6	−72·6
103·349 C	8	23	8	22	189·2	176·4	−14·5	−58·4
104·460 C	6	19	4	13	189·6	176·6	−14·6	−43·3
Means ..	..	..	4	28	188·52	175·75	−14·55	..
RECURRENT SERIES 792.								
Group 8034 and 8035 seen in Rotation 849.								
,, 8058 ,, ,, 850.								
Group 8034.—March 23–April 3. A regular spot, with one or two companions before April 1, becoming temporarily double on March 27.								
81·338 C	0	13	0	38	99·9	88·3	+13·1	−78·1
82·379 G	7	29	9	37	100·3	88·5	+14·1	−64·0
83·385 C	17	30	14	26	100·8	88·9	+13·9	−50·2
84·345 C	23	113	16	76	101·6	89·5	+13·8	−36·8
85·339 C	68	184	40	107	102·1	89·9	+13·7	−23·2
86·325 C	36	239	19	129	102·6	90·3	+13·6	− 9·7
87·321 C	38	214	20	113	103·1	90·6	+13·4	+ 4·0
88·386 G	41	181	23	102	103·5	90·9	+13·3	+18·4
89·346 C	27	162	17	100	103·2	90·4	+13·6	+30·8
90·646 G	16	129	13	104	103·8	90·8	+13·1	+48·5
91·616 G	10	92	12	106	104·2	91·1	+13·3	+61·7
92·391 G	7	42	12	78	104·4	91·2	+13·1	+72·7
Means ..	..	..	16	85	102·46	90·03	+13·50	..
Group 8035.—March 23–April 4. A large composite spot, preceded by a close cluster. This condenses and joins to the main spot after March 28, thus making a long irregular spot, which declines, however, after April 2. This group closely follows Group 8034 in the same general area of faculæ.								
81·338 C	0	17	0	104	94·6	83·3	+12·7	−83·4
82·379 G	41	175	68	291	94·4	82·9	+13·4	−69·9
83·385 C	43	276	43	279	93·8	82·2	+13·5	−57·2
84·345 C	34	473	26	362	93·7	82·0	+13·6	−44·7
85·339 C	61	434	39	275	93·5	81·6	+13·8	−31·8
86·325 C	54	405	31	230	93·1	81·1	+13·6	−19·2
87·321 C	73	529	40	283	93·7	81·6	+13·6	− 5·4

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

Date. G.M.T. (Civil) Place.	Projected Area.		Corrected Area.		Longitude.		Latitude.	Long. from C.M.
	Umbræ.	Whole Spots.	Umbræ.	Whole Spots.	System I.	System II.		
RECURRENT SERIES 792. Group 8035—*continued.*								
1917. d					°	°	°	°
88·386 G	100	545	53	295	94·0	81·7	+13·6	+ 8·9
89·346 C	102	614	59	355	93·5	81·1	+14·0	+21·1
90·646 G	84	426	57	291	93·7	81·1	+13·9	+38·4
91·616 G	42	256	36	219	93·1	80·4	+14·4	+50·6
92·391 G	21	157	23	176	92·8	80·0	+14·2	+60·6
93·345 C	9	50	17	95	92·1	79·1	+14·2	+72·5
Means ..	..	..	38	250	93·54	81·39	+13·73	..

Group 8058.—April 19–30. Two close spots when first seen at the east limb. The leader remains regular; the follower, which is composite, is breaking up on April 22, when other spots are forming behind it. The group thus appears as a stream 12° in length, but the train is unstable, and has disappeared by April 29.

108·423 C	10	61	17	110	108·5	90·4	+12·2	−72·1
109·359 G	30	371	31	397	107·9	89·6	+11·9	−60·3
110·351 C	68	468	55	370	107·5	89·1	+11·9	−47·6
111·383 C	74	474	47	304	106·9	88·3	+12·5	−34·6
112·305 C	89	438	51	247	106·8	88·0	+12·2	−22·5
113·352 G	145	558	77	294	105·7	86·7	+11·6	− 9·8
114·339 C	74	413	39	217	107·1	88·0	+11·9	+ 4·7
115·349 C	33	229	18	126	108·1	88·8	+12·0	+19·0
116·424 C	43	231	27	145	108·9	89·5	+12·0	+34·0
117·344 C	11	126	8	97	109·9	90·3	+12·3	+47·2
118·429 C	8	71	9	83	111·1	91·3	+11·6	+62·6
119·364 C	0	13	0	29	111·8	91·9	+11·3	+75·8
Means ..	..	..	32	202	108·35	89·32	+11·95	..

RECURRENT SERIES 793.

Group 8047 seen in Rotation 850.
„ 8073 „ „ 851.

Group 8047.—April 11–22. A large group of rapid and abnormal development. Two pairs of small spots on April 11; four regular spots in a train by April 13, of which the leader, *a*, enlarges and persists as the others soon break up and disappear.

100·371 C	7	36	5	27	244·5	238·6	+17·4	−42·4
101·363 C	50	161	31	101	245·0	239·0	+17·0	−28·8
102·349 G	145	914	81	511	246·9	240·9	+17·4	−13·9
103·349 C	192	914	105	502	247·8	241·7	+18·2	+ 0·2
104·460 C	156	1254	88	705	248·5	242·3	+18·0	+15·6
105·315 C	113	835	70	516	248·3	242·1	+18·0	+26·7
106·422 C	75	546	56	412	249·6	243·3	+18·2	+42·6
107·351 C	77	340	75	326	249·2	242·9	+18·1	+54·5
108·423 C	22	215	35	340	249·2	242·8	+18·1	+68·6
109·359 G	7	62	27	237	248·6	242·1	+18·0	+80·4
Means ..	..	..	57	368	247·76	241·57	+17·84	..

Date. G.M.T. (Civil) Place.	Projected Area.		Corrected Area.		Longitude.		Latitude.	Long. from C.M.
	Umbræ.	Whole Spots.	Umbræ.	Whole Spots.	System I.	System II.		
Group 8047—*continued.* Spot *a*.								
1917. d					°	°	°	°
102·349 G	57	278	31	153	251·0	245·4	+17·7	− 9·8
103·349 C	83	433	46	238	251·1	245·4	+18·0	+ 3·5
104·460 C	107	641	61	365	250·8	245·1	+18·1	+17·9
105·315 C	72	559	45	352	250·6	244·8	+18·1	+29·0
106·422 C	66	509	50	387	250·3	244·4	+18·2	+43·3
107·351 C	77	319	75	309	249·4	243·5	+18·2	+54·7
108·423 C	22	215	35	340	249·2	243·2	+18·1	+68·6
109·359 G	7	62	27	237	248·6	242·6	+18·0	+80·4

Group 8073.—May 5–17. A stable regular spot, *a* of Group 8047, slowly contracting after May 12. A few small attendants appear, May 8–14.

124·364 C	9	35	34	135	249·1	243·8	+18·3	−80·9
125·447 C	15	127	21	182	248·5	243·1	+18·2	−67·1
126·378 C	19	147	18	142	248·5	243·1	+18·2	−54·8
127·480 G	41	230	29	163	248·2	242·7	+18·3	−40·5
128·461 G	40	286	24	174	247·7	242·2	+18·3	−28·1
129·369 C	40	315	23	176	248·0	242·4	+18·5	−15·8
130·377 G	46	352	25	191	247·2	241·6	+18·5	− 3·2
131·319 C	46	284	25	153	247·0	241·4	+18·6	+ 9·0
132·499 C	41	235	24	139	247·2	241·5	+18·8	+24·7
133·396 C	26	173	17	116	246·7	241·0	+19·1	+36·2
134·368 C	17	105	14	86	246·3	240·5	+18·9	+48·6
135·412 C	13	80	15	91	245·5	239·7	+18·6	+61·6
136·453 C	6	59	13	130	245·5	239·6	+18·7	+75·4
Means ..	..	..	22	144	247·34	241·74	+18·54	..

RECURRENT SERIES 794.

Group 8049 seen in Rotation 850.
„ 8076 „ „ 851.
„ 8104 „ „ 852.
„ 8140 „ „ 853.

Group 8049.—April 11–22. Revival of activity near the place of Group 8023. A large stream of normal type. The leader, *a*, increases to a large regular spot, whilst the composite spot, *b*, at the rear of the stream is breaking up and disappearing. The intermediate spots are small and are generally arranged in two clusters, which have disappeared after April 18.

100·371 C	24	232	50	468	212·8	193·4	+10·1	−74·1
101·363 C	105	701	111	772	212·6	193·0	+ 9·9	−61·2
102·349 G	140	962	107	740	213·9	194·1	+10·0	−46·9
103·349 C	202	1376	128	872	214·3	194·4	+10·5	−33·3
104·460 C	182	1419	101	783	214·9	194·7	+10·6	−18·0
105·315 C	208	1378	109	724	215·5	195·2	+10·8	− 6·1
106·422 C	214	1213	113	640	216·3	195·8	+10·5	+ 9·3
107·351 C	191	1169	108	657	217·3	196·6	+10·2	+22·6
108·423 C	154	842	101	554	218·0	197·1	+ 9·9	+37·4

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
RECURRENT SERIES 794. Group 8049—*continued.*								
1917. d					°	°	°	°
109·359 G	135	639	112	534	219·6	198·5	+ 9·6	+51·4
110·351 C	62	398	77	494	219·9	198·6	+ 9·9	+64·8
111·383 C	25	150	76	455	220·9	199·4	+10·0	+79·4
Means ..	..	..	99	641	216·33	195·90	+10·17	..
Spot *a*.								
100·371 C	19	196	33	345	214·9	195·3	+ 9·9	−72·0
101·363 C	67	389	64	373	217·0	197·2	+ 9·3	−56·8
102·349 G	98	585	70	415	218·2	198·2	+ 9·7	−42·6
103·349 C	126	781	76	469	218·7	198·5	+10·5	−28·9
104·460 C	114	903	62	488	219·0	198·6	+10·7	−13·9
105·315 C	165	957	86	498	219·4	198·9	+10·8	− 2·2
106·422 C	171	864	91	458	219·7	199·0	+10·2	+12·7
107·351 C	162	920	92	524	219·6	198·7	+ 9·9	+24·9
108·423 C	136	735	91	492	219·9	198·8	+ 9·7	+39·3
109·359 G	130	624	109	524	220·1	198·8	+ 9·4	+51·9
110·351 C	59	389	74	486	220·1	198·6	+ 9·7	+65·0
111·383 C	25	150	76	455	220·9	199·1	+10·0	+79·4
Spot *b*.								
100·371 C	5	36	17	123	206·5	187·9	+10·4	−80·4
101·363 C	19	270	25	351	208·1	189·4	+10·5	−65·7
102·349 G	42	359	37	312	208·2	189·3	+10·4	−52·6
103·349 C	64	452	44	312	207·2	188·1	+11·0	−40·4
104·460 C	53	356	31	206	206·8	187·5	+10·8	−26·1
105·315 C	26	275	14	149	207·0	187·5	+11·0	−14·6
106·422 C	33	220	17	114	207·2	187·5	+11·0	− 0·2
107·351 C	28	155	15	82	207·1	187·2	+10·8	+12·4
108·423 C	18	99	10	57	207·4	187·3	+10·8	+26·8
109·359 G	5	15	3	10	207·4	187·1	+10·9	+39·2
110·351 C	3	9	3	8	207·7	187·3	+10·9	+52·6
Group 8076.—May 7–19. A large stable spot, evidently *a* of Group 8049, followed by an extended mass of faculæ. A few followers, mostly very small, are seen near it from May 10–15.								
126·378 C	14	130	36	337	225·3	200·2	+10·4	−78·0
127·480 G	48	329	57	392	224·7	199·3	+10·2	−64·0
128·461 G	64	449	53	373	224·5	198·9	+ 9·9	−51·3
129·369 C	90	531	60	351	224·5	198·8	+ 9·9	−39·3
130·377 G	121	746	70	426	224·6	198·7	+ 9·6	−25·8
131·319 C	108	756	58	401	224·4	198·3	+ 9·5	−13·6

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8076—*continued.*								
1917. d					°	°	°	°
132·499 C	83	702	42	358	224·9	198·5	+ 9·2	+ 2·4
133·396 C	110	646	58	342	224·6	198·1	+ 9·3	+14·1
134·368 C	132	671	77	389	224·9	198·2	+ 9·4	+27·2
135·412 C	72	511	49	368	225·2	198·3	+ 9·4	+41·3
136·453 C	64	384	58	346	225·5	198·3	+ 9·4	+55·4
137·446 C	45	271	65	391	225·9	198·5	+ 9·3	+69·0
138·372 C	12	85	36	258	225·0	197·5	+ 9·3	+80·3
Means ..	..	..	55	364	224·92	198·58	+ 9·60	..
Group 8104.—June 3–15. A stable regular spot, *a* of Group 8049.								
153·374 C	9	55	20	124	229·2	199·6	+ 9·8	−77·0
154·335 C	20	140	23	164	229·2	199·4	+ 9·5	−64·3
155·358 G	23	181	19	147	228·7	198·7	+ 9·4	−51·2
156·493 C	34	256	21	161	228·6	198·4	+ 9·7	−36·3
157·446 C	43	265	24	146	228·4	198·0	+ 9·9	−23·9
158·363 C	50	328	26	171	228·4	197·8	+ 9·9	−11·8
159·393 C	30	244	15	124	227·8	197·0	+10·1	+ 1·3
160·284 G	45	248	23	129	227·4	196·5	+ 9·9	+12·7
161·562 G	41	219	24	127	227·5	196·3	+10·4	+29·7
162·399 G	42	184	28	123	227·3	196·0	+10·6	+40·6
163·383 G	27	156	23	134	227·5	196·0	+10·7	+53·8
164·460 G	25	102	34	138	227·4	195·7	+10·7	+67·9
165·396 G	6	37	20	121	227·6	195·7	+10·9	+80·1
Means ..	..	..	23	139	228·08	197·32	+10·12	..
Group 8140.—June 30–July 12. A small regular spot (probably *a* of Group 8049), near which others form to make a cluster: from this a composite spot emerges on July 11, and the remainder of the spots disappear.								
180·350 C	4	14	10	36	229·8	198·1	+10·4	−79·3
181·412 G	6	13	7	15	230·0	198·1	+ 9·8	−65·1
182·414 G	8	31	7	25	229·5	197·4	+10·2	−52·3
183·391 G	18	55	12	36	229·6	197·3	+10·0	−39·3
184·390 C	25	60	14	33	229·7	197·2	+12·0	−26·0
185·401 C	39	145	20	75	229·6	197·0	+12·1	−12·7
186·396 C	37	83	19	42	230·6	197·8	+11·8	+ 1·5
187·457 G	25	81	13	42	230·8	197·8	+11·9	+15·7
188·413 C	25	107	15	62	231·6	198·4	+12·0	+29·2
189·399 C	18	77	12	51	230·9	197·6	+12·0	+41·5
190·365 C	33	156	28	130	229·9	196·4	+12·2	+53·3
191·403 G	31	134	39	169	229·6	195·9	+11·9	+66·8
192·343 G	0	30	0	70	228·6	194·8	+11·2	+78·2
Means ..	..	..	15	60	230·02	197·22	+11·35	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

Date. G.M.T. (Civil) Place.	Projected Area.		Corrected Area.		Longitude.		Latitude.	Long. from C.M.
	Umbræ.	Whole Spots.	Umbræ.	Whole Spots.	System I.	System II.		
RECURRENT SERIES 795.								
Group 8054 seen in Rotation 850.								
„ 8080 „ „ 851.								
Group 8054.—April 14–26. A small regular spot, near which other spots form, whilst it itself is disappearing on April 20. The new group appears as a stream of spots, of which the last is the only component which becomes conspicuous.								
1917. d					°	°	°	°
103·349 C	7	22	12	37	174·5	197·9	−28·0	−73·1
104·460 C	9	44	9	44	173·9	197·5	−28·5	−59·0
105·315 C	18	68	14	54	173·9	197·7	−28·8	−47·7
106·422 C	14	73	9	48	173·4	197·5	−29·1	−33·6
107·351 C	9	56	5	32	173·4	197·7	−28·9	−21·3
108·423 C	10	21	6	12	172·7	197·2	−29·1	− 7·9
109·359 G	15	49	8	27	172·7	197·4	−27·7	+ 4·5
110·351 C	28	139	16	80	171·8	196·7	−28·0	+16·7
111·383 C	26	136	17	85	171·2	196·4	−28·3	+29·7
112·305 C	45	107	33	77	170·6	196·0	−28·3	+41·3
113·352 G	34	149	32	140	170·7	196·3	−28·7	+55·2
114·339 C	13	42	16	57	168·8	194·6	−28·0	+66·4
115·349 C	2	13	4	32	168·1	194·2	−28·8	+79·0
Means ..	..	..	14	56	171·98	196·70	−28·48	..
Group 8080.—May 11–19. A small double spot, which is apparently disappearing on May 13. Other spots form, however, and the group appears on May 15 as a long narrow stream, which is soon diminishing. One very small spot alone remains on May 19 to mark the head of the stream.								
130·377 G	2	11	5	28	171·4	197·3	−27·5	−79·0
131·319 C	1	22	1	28	172·6	198·7	−27·2	−65·4
132·499 C	0	18	0	17	169·7	196·1	−27·9	−52·8
133·396 C	14	133	11	95	169·9	196·5	−27·3	−40·0
134·368 C	27	266	17	165	169·7	196·4	−27·5	−28·0
135·412 C	17	69	10	39	172·0	198·9	−27·0	−11·0
136·453 C	7	50	4	29	165·5	192·6	−28·7	− 4·6
137·446 C	0	19	0	11	164·5	191·8	−28·6	+ 7·6
138·372 C	1	4	1	2	171·0	198·5	−26·6	+26·3
Means ..	..	..	5	46	169·59	196·31	−27·59	..
RECURRENT SERIES 796.								
Group 8055 seen in Rotation 850.								
„ 8083 and 8084 „ 851.								
Group 8055.—April 16–28. A group of abnormal development *f* the position of Group 8029. At first, a large spot with a few very small attendants. On April 23, spots form southwards, thus making a stream nearly at right angles to the equator. By April 26, these new spots have coalesced to make a long and very irregular spot, whilst the original spot, which has become quite small by April 25, shows an enlargement as the west limb is approached.								
105·315 C	10	51	27	136	144·6	137·3	+17·0	−77·0
106·422 C	25	138	31	170	144·1	136·8	+17·6	−62·9
107·351 C	42	247	37	219	143·5	136·1	+17·4	−51·2
108·423 C	36	294	25	204	142·9	135·4	+17·7	−37·7
109·359 G	53	317	32	190	142·9	135·3	+17·6	−25·3

Date. G.M.T. (Civil) Place.	Projected Area.		Corrected Area.		Longitude.		Latitude.	Long. from C.M.
	Umbræ.	Whole Spots.	Umbræ.	Whole Spots.	System I.	System II.		
Group 8055—*continued.*								
1917. d					°	°	°	°
110·351 C	42	278	24	156	142·2	134·6	+18·3	−12·9
111·383 C	33	282	18	155	142·3	134·6	+18·9	+ 0·8
112·305 C	56	218	31	122	142·2	134·4	+18·7	+12·9
113·352 G	135	509	82	309	142·6	134·8	+17·1	+27·1
114·339 C	83	513	60	370	142·8	134·9	+17·2	+40·4
115·349 C	62	663	57	616	143·2	135·2	+16·4	+54·1
116·424 C	33	424	50	647	143·2	135·2	+16·4	+68·3
117·344 C	14	158	48	573	143·2	135·1	+15·4	+80·5
Means ..	..	..	40	297	143·05	135·36	+17·36	..
Group 8083.—May 13–22. One or two small spots *p* Group 8084. The group has practically died out by May 19, but revives as a few scattered spots, somewhat preceding in longitude the original position.								
132·499 C	0	12	0	23	149·7	141·0	+17·7	−72·8
133·396 C	0	10	0	11	149·9	141·1	+16·4	−60·6
134·368 C	2	14	2	11	150·8	141·9	+16·0	−46·9
135·412 C	0	2	0	1	150·2	141·3	+19·6	−33·7
136·453 C	0	24	0	13	150·0	141·0	+17·0	−20·1
137·446 C	0	17	0	9	151·5	142·4	+16·7	− 5·4
138·372 C	0	7	0	4	151·6	142·5	+16·8	+ 6·9
139·462 C	0	17	0	10	154·5	145·3	+17·7	+24·2
140·191 K	22	58	14	37	154·5	145·2	+18·0	+33·9
141·350 C	8	26	7	23	157·4	148·1	+19·1	+52·1
Means ..	..	..	2	14	152·01	142·98	+17·50	..
Group 8084.—May 15–20. A faint spot on May 15, which has disappeared the next day. A pair of small composite spots appear on May 17, of which only the leader remains on May 20.								
134·368 C	0	7	0	6	143·9	127·6	+14·7	−53·8
135·412 C	0	0	0	0	..	..	..	..
136·453 C	28	94	16	54	146·4	129·9	+14·8	−23·7
137·446 C	17	83	9	44	146·7	130·1	+15·0	−10·2
138·372 C	3	51	2	27	146·6	129·9	+15·6	+ 1·9
139·462 C	2	18	1	10	151·0	134·1	+13·5	+20·7
Means ..	..	..	5	23	146·92	130·32	+14·72	..
RECURRENT SERIES 797.								
Group 8056 seen in Rotation 850.								
„ 8082 „ „ 851.								
Group 8056.—April 18–26. Revival in region of Group 8029. One or two very small spots until April 22, when a pair of regular spots appear for a few days.								
107·351 C	0	13	0	9	156·6	155·8	+20·4	−38·1
108·423 C	0	9	0	5	158·5	157·7	+20·8	−22·1
109·359 G	3	19	2	11	159·1	158·3	+19·8	− 9·1

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

RECURRENT SERIES **797.** Group 8056—*continued.*

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
110·351 C	0	4	0	2	158·8	158·0	+19·6	+ 3·7
111·383 C	22	89	13	51	159·2	158·4	+20·5	+17·7
112·305 C	53	274	34	175	159·2	158·4	+19·8	+29·9
113·352 G	36	170	28	134	160·3	159·5	+19·2	+44·8
114·339 C	9	59	9	62	160·3	159·5	+19·6	+57·9
115·349 C	10	59	14	86	155·2	154·4	+21·1	+66·1
Means ..	..	..	11	59	158·58	157·78	+20·09	..

Group 8082.—May 13–19. A small spot with a few companions making up a short stream after May 14.

132·499 C	1	29	1	39	156·3	148·9	+18·0	−66·2
133·396 C	10	21	9	19	157·0	149·5	+17·7	−53·5
134·368 C	11	30	8	21	157·2	149·7	+17·4	−40·5
135·412 C	9	33	5	19	157·9	150·3	+17·7	−26·0
136·453 C	10	36	5	19	158·9	151·3	+18·0	−11·2
137·446 C	14	39	8	21	159·2	151·5	+18·5	+ 2·3
138·372 C	8	26	4	14	159·0	151·3	+18·6	+14·3
Means ..	..	..	6	22	157·93	150·36	+17·99	..

RECURRENT SERIES **798.**

Group 8062 and 8065 seen in Rotation 850.
,, 8089 ,, ,, 851.
,, 8125 ,, ,, 852.
,, 8163 ,, ,, 853.

Group 8062.—April 26–May 7. Two small spots, seen near the east limb, which grow considerably and become regular; several little spots form between them, thus making a large stream. The leader especially is very unstable in shape after May 2, and although several larger intermediate spots appear, the group declines generally.

115·349 C	3	14	4	19	20·1	20·8	−21·0	−69·0
116·424 C	42	263	37	235	19·9	20·6	−21·2	−55·0
117·344 C	75	573	52	398	21·0	21·7	−20·7	−41·7
118·429 C	145	860	85	506	21·4	22·1	−20·8	−27·0
119·364 C	161	955	86	515	21·1	21·8	−20·8	−14·9
120·388 C	152	918	79	482	21·3	22·0	−20·7	− 1·2
121·332 G	155	937	83	501	21·3	22·0	−20·5	+11·3
122·351 C	134	852	77	492	21·7	22·4	−19·9	+25·1
123·317 G	129	683	85	451	21·5	22·2	−20·5	+37·7
124·364 C	63	430	53	360	21·4	22·1	−20·3	+51·4
125·447 C	39	289	48	353	21·1	21·9	−20·5	+65·5
126·378 C	9	61	18	136	20·7	21·5	−20·7	+77·4
Means ..	..	..	59	371	21·04	21·76	−20·63	..

Group 8065.—April 29–May 7. One or two tiny spots, developing into an irregular stream of some importance which is closely connected with Group 8062. It is disappearing rapidly after May 5.

1917. d					°	°	°	°
118·429 C	0	2	0	1	25·3	33·4	−23·3	−23·1
119·364 C	2	30	1	16	24·6	32·7	−23·4	−11·4
120·388 C	19	72	10	38	25·3	33·5	−23·4	+ 2·8
121·332 G	35	159	20	87	23·3	31·6	−23·3	+13·3
122·351 C	36	224	22	134	24·7	33·0	−22·8	+28·1
123·317 G	46	226	33	160	26·0	34·4	−22·7	+42·2
124·364 C	49	356	42	306	22·9	31·4	−23·1	+52·9
125·447 C	20	62	28	91	24·9	33·4	−22·8	+69·3
126·378 C	0	8	0	16	19·0	27·6	−22·7	+75·7
Means ..	..	..	17	94	24·00	32·33	−23·06	..

Group 8089.—May 22–June 3. Return or revival of Groups 8062 and 8065. A large stream of normal type developing at the east limb. The leader, *a*, persists as a large regular spot; the rear spots make up a complex but unstable cluster which has died out by June 2.

141·350 C	2	7	7	22	24·0	37·7	−23·1	−81·3
142·394 G	32	165	45	233	23·5	37·3	−23·9	−68·0
143·676 G	87	494	73	415	24·3	38·2	−24·0	−50·2
144·340 G	143	737	104	538	23·8	37·8	−24·0	−41·9
145·327 G	206	1092	128	677	22·9	37·0	−23·8	−29·8
146·381 G	295	1620	168	923	21·1	35·3	−23·7	−17·6
147·373 C	152	1413	84	777	20·6	34·9	−23·9	− 5·0
148·455 C	139	1210	76	666	20·8	35·2	−24·3	− 9·5
149·170 D	155	876	91	508	21·1	35·6	−24·4	−19·3
150·354 G	131	674	88	452	21·7	36·3	−24·5	−35·5
151·334 C	65	477	56	404	22·6	37·3	−24·6	−49·4
152·425 G	51	287	64	359	22·9	37·7	−24·8	−64·1
153·374 C	26	141	60	324	22·5	37·4	−24·7	−76·3
Means ..	..	..	80	484	22·45	36·75	−24·13	..

Spot *a*.

142·394 G	23	112	31	149	25·0	40·8	−23·9	−66·5
143·676 G	48	291	39	239	25·9	41·9	−24·2	−48·5
144·340 G	82	446	57	312	26·2	42·2	−24·5	−39·5
145·327 G	128	652	78	398	25·9	42·0	−24·4	−26·8
146·381 G	130	698	73	391	25·4	41·6	−24·2	−13·3
147·373 C	99	633	54	348	24·9	41·3	−24·7	− 0·7
148·455 C	104	638	58	357	24·1	40·6	−24·8	+12·8
149·170 D	123	571	73	337	24·1	40·7	−25·5	+22·3
150·354 G	91	496	63	342	24·1	40·8	−24·9	+37·9
151·334 C	65	430	56	370	23·7	40·5	−24·8	+50·5
152·425 G	47	271	60	344	23·3	40·2	−24·8	+64·5
153·374 C	26	141	60	324	22·5	39·5	−24·7	+76·3

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
RECURRENT SERIES 798—*continued.*								
Group 8125.—June 19–July 1. A stable regular spot, probably *a* of Group 8089, with a very small follower on June 24.								
1917. d					°	°	°	°
169·352 C	21	96	54	249	17·7	36·0	−25·4	−77·0
170·401 C	32	227	40	286	17·6	36·0	−25·0	−63·2
171·400 C	50	297	44	262	17·3	35·8	−25·1	−50·3
172·162 D	102	334	77	251	16·6	35·2	−25·0	−40·9
173·376 C	68	396	42	246	16·5	35·2	−24·6	−25·0
174·362 G	75	396	43	225	16·6	35·4	−24·2	−11·8
175·494 C	75	396	42	222	16·4	35·4	−24·0	+ 3·0
176·625 G	84	396	49	233	16·4	35·5	−24·2	+18·0
177·132 K	67	343	41	209	15·8	34·9	−24·1	+24·1
178·410 C	47	297	35	223	15·7	35·0	−24·3	+40·9
179·500 C	34	213	34	211	15·3	34·7	−24·3	+54·9
180·350 C	25	156	35	218	14·6	34·1	−24·2	+65·5
181·412 G	7	39	25	141	15·1	34·7	−24·4	+80·0
Means ..	..	..	43	229	16·28	35·22	−24·52	..
Group 8163.—July 17–28. A stable regular spot, probably *a* of Group 8089, slowly contracting. Note the considerable proper motion in longitude since the first apparition.								
197·377 G	11	57	22	112	11·9	23·5	−23·1	−71·9
198·432 C	16	91	18	103	11·1	22·8	−23·1	−58·7
199·584 G	14	132	11	104	10·9	22·7	−22·8	−43·7
200·454 G	23	146	15	98	10·7	22·5	−22·9	−32·4
201·374 G	22	127	13	76	10·4	22·3	−22·6	−20·5
202·337 G	23	135	13	77	10·5	22·4	−22·6	− 7·7
203·448 C	20	118	11	67	10·2	22·2	−22·4	+ 6·7
204·409 C	17	115	10	69	10·2	22·3	−22·7	+19·4
205·438 C	11	115	7	78	9·7	21·8	−22·6	+32·6
206·449 C	9	53	7	44	9·6	21·8	−22·7	+45·8
207·391 C	6	44	7	49	9·2	21·4	−22·4	+57·9
208·345 C	0	5	0	9	8·5	20·8	−22·5	+69·8
Means ..	..	..	11	74	10·24	22·21	−22·70	..
RECURRENT SERIES 799.								
Group 8067 seen in Rotation 851. ,, 8097 ,, ,, 852.								
Group 8067.—April 29–May 11. A large spot, usually of regular type, behind which small irregular spots form as a train, which has died out by May 10.								
118·429 C	3	17	9	52	327·1	318·9	−18·4	−81·3
119·364 C	21	94	28	127	327·6	319·4	−18·2	−68·4
120·388 C	36	209	30	180	328·5	320·2	−17·7	−54·0
121·332 G	58	333	40	223	329·1	320·7	−17·3	−40·9
122·351 C	81	299	47	170	330·5	322·1	−17·0	−26·1
123·317 G	76	443	39	232	330·9	322·4	−17·2	−12·9
124·364 C	75	424	38	217	330·0	321·4	−17·2	0·0

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8067—*continued.*								
1917. d					°	°	°	°
125·447 C	59	442	31	235	330·3	321·6	−16·9	+14·7
126·378 C	83	547	49	315	329·7	321·0	−17·2	+26·4
127·480 G	46	350	32	242	331·1	322·3	−16·9	+42·4
128·461 G	40	229	37	208	331·8	322·9	−17·0	+56·0
129·369 C	11	104	16	152	333·8	324·9	−17·2	+70·0
130·377 G	0	32	0	170	335·8	326·8	−17·3	+85·4
Means ..	..	..	30	194	330·48	321·89	−17·35	..
Group 8097.—May 25–June 6. A pair of large regular spots. Before June 2 the following member tends to become composite by the addition of an irregular component just north of it. The other component, however, remains very stable.								
144·340 G	19	127	65	436	343·9	327·3	−14·2	−81·8
145·327 G	42	303	63	458	342·4	325·7	−15·0	−70·3
146·381 G	109	714	101	664	342·3	325·5	−15·0	−56·4
147·373 C	90	762	63	533	342·4	325·5	−14·8	−43·2
148·455 C	105	833	62	491	342·6	325·5	−15·0	−28·7
149·170 D	122	872	67	476	342·2	325·0	−15·0	−19·6
150·354 G	148	855	77	445	342·6	325·3	−15·1	− 3·6
151·334 C	146	742	77	392	343·2	325·8	−15·3	+10·0
152·425 G	111	583	64	332	343·7	326·2	−15·6	+24·9
153·374 C	63	420	41	275	343·9	326·3	−15·7	+37·7
154·335 C	34	318	28	258	343·8	326·1	−15·3	+50·3
155·358 G	28	214	33	255	344·1	326·2	−15·0	+64·2
156·493 C	14	74	40	210	344·4	326·4	−14·8	+79·5
Means ..	..	..	60	402	343·19	325·91	−15·06	..
RECURRENT SERIES 799.*								
Group 8069 seen in Rotation 851. ,, 8101 ,, ,, 852.								
Group 8069.—April 30–May 11. An ill-formed regular spot *f* Group 8067, in the same general area of disturbance. Occasional very small companions appear near the spot.								
119·364 C	0	15	0	30	319·8	317·9	−18·7	−76·2
120·388 C	12	72	13	80	319·1	317·2	−18·9	−63·4
121·332 G	27	161	23	133	318·0	316·1	−19·5	−52·0
122·351 C	34	97	23	64	318·0	316·0	−19·6	−38·6
123·317 G	27	81	16	47	317·2	315·2	−19·9	−26·6
124·364 C	21	72	11	38	316·9	314·9	−20·0	−13·1
125·447 C	26	128	13	66	316·9	314·9	−20·0	+ 1·3
126·378 C	22	127	12	69	316·7	314·7	−20·0	+13·4
127·480 G	26	112	16	66	316·6	314·6	−19·7	+27·9
128·461 G	15	54	10	36	315·9	313·8	−20·0	+40·1
129·369 C	7	21	6	18	317·0	314·9	−20·1	+53·2
130·377 G	0	6	0	8	317·6	315·5	−20·4	+67·2
Means ..	..	..	12	55	317·48	315·47	−19·73	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

RECURRENT SERIES **799***—*continued.*

Group 8101.—May 27–June 7. Return or revival of Group 8069. A large regular spot with a composite companion 7° *f* in longitude. The latter breaks up after May 28, and some very small spots form near to make a faint unstable train. The regular spot is disappearing as the west limb is approached. The axis of the group is considerably inclined to the equator.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917· d					°	°	°	°
146·381 G	39	270	90	621	321·5	309·2	−18·2	−77·2
147·373 C	56	385	66	454	321·7	309·3	−18·0	−63·9
148·455 C	85	501	67	396	322·7	310·2	−17·1	−48·6
149·170 D	104	639	70	430	322·5	310·0	−16·7	−39·3
150·354 G	111	642	63	366	323·5	310·9	−17·4	−22·7
151·334 C	88	575	47	301	324·5	311·8	−16·8	− 8·7
152·425 G	61	411	32	214	324·2	311·4	−16·8	+ 5·4
153·374 C	63	417	35	230	325·1	312·2	−15·9	+18·9
154·335 C	54	368	33	224	325·0	312·0	−15·6	+31·5
155·358 G	40	275	29	201	324·8	311·7	−15·6	+44·9
156·493 C	27	179	28	188	325·2	312·0	−15·7	+60·3
157·446 C	8	58	14	104	325·6	312·4	−16·1	+73·3
Means ..	..	..	48	311	323·86	311·09	−16·66	..

RECURRENT SERIES **800.**

Group 8071 seen in Rotation 851.
„ 8093 „ „ 852.

Group 8071.—May 3–8. One or two small unstable spots developing considerably after May 5 into a stream, with the largest component, a composite spot, in the rear.

122·351 C	7	26	4	14	7·4	359·0	+18·2	+10·8
123·317 G	3	10	2	6	9·8	1·3	+16·4	+26·0
124·364 C	3	34	2	24	9·3	0·7	+17·0	+39·3
125·447 C	25	81	24	72	8·5	359·8	+17·1	+52·9
126·378 C	13	107	17	134	6·2	357·5	+17·1	+62·9
127·480 G	6	48	13	109	4·2	355·4	+18·4	+75·5
Means ..	..	..	10	60	7·57	358·95	+17·37	..

Group 8093.—May 23–June 4. A pair of regular spots 8° apart in longitude and slowly contracting. One or two small attendants are seen between them on May 28 and 31. The leader is alone in view on May 23.

142·394 G	13	64	(28	139	15·9	2·7	+16·6)*	−75·6
143·676 G	21	171	22	183	14·1	0·7	+16·5	−60·4
144·340 G	30	194	26	166	13·5	0·1	+16·2	−52·2
145·327 G	48	223	33	152	13·5	0·0	+16·2	−39·2
146·381 G	75	306	44	177	13·5	359·9	+15·9	−25·2
147·373 C	53	279	29	151	13·2	359·5	+16·2	−12·4
148·455 C	59	316	31	164	12·3	358·5	+16·0	+ 1·0
149·170 D	56	297	30	158	12·9	359·0	+15·8	+11·1
150·354 G	56	269	32	156	12·1	358·1	+16·2	+25·9
151·334 C	28	128	19	87	12·7	358·6	+16·0	+39·5

Group 8093—*continued.*

1917· d					°	°	°	°
152·425 G	21	107	19	99	13·4	359·2	+16·3	+54·6
153·374 C	10	49	15	67	13·0	358·7	+16·5	+66·8
154·335 C	6	33	19	97	12·8	358·4	+16·7	+79·3
Means ..	..	..	27	138	13·08	359·22	+16·21	..

RECURRENT SERIES **801.**

Group 8095 seen in Rotation 851.
„ 8126 „ „ 852.

Group 8095.—May 24–June 5. An active group with remarkable changes after May 27. At first, a regular spot with a few small companions as a train. By May 28 the spot has suddenly changed to a large double composite spot, which is breaking up and separating into three chief components. One of these by May 31 has become a regular spot, following which the other two components have coalesced to form a large double spot. A few other spots form, chiefly at the head of the stream, as the older components are diminishing rapidly.

143·676 G	19	125	35	229	0·3	325·7	− 5·2	−74·2
144·340 G	33	212	39	248	0·9	326·1	− 5·0	−64·8
145·327 G	53	258	42	204	2·2	327·2	− 4·6	−50·5
146·381 G	66	373	41	231	2·6	327·3	− 4·7	−36·1
147·373 C	83	632	46	348	2·3	326·8	− 5·2	−23·3
148·455 C	153	796	78	406	2·8	327·0	− 5·6	− 8·5
149·170 D	138	788	69	394	2·8	326·8	− 5·4	+ 1·0
150·354 G	233	1090	121	567	2·9	326·7	− 5·5	+16·7
151·334 C	132	855	77	499	3·1	326·6	− 5·5	+29·9
152·425 G	155	805	112	581	3·4	326·7	− 5·5	+44·6
153·374 C	61	424	62	420	4·1	327·1	− 5·5	+57·9
154·335 C	45	289	87	545	6·6	329·4	− 5·7	+73·1
155·358 G	0	30	(0	122	2·8	325·4	− 5·8)*	+82·9
Means ..	..	..	67	389	2·83	326·95	− 5·28	..

Group 8126.—June 19–July 1. A regular spot with a few very small companions from June 23–26.

169·352 C	12	35	35	102	14·9	338·5	− 8·2	−79·8
170·401 C	17	133	21	164	15·2	338·6	− 8·2	−65·6
171·400 C	36	197	30	166	15·1	338·3	− 8·4	−52·5
172·162 D	48	219	33	151	14·9	337·9	− 8·2	−42·6
173·376 C	49	266	28	151	15·1	337·8	− 8·2	−26·4
174·362 G	51	267	26	139	15·5	338·0	− 8·2	−12·9
175·494 C	47	261	24	133	15·4	337·7	− 8·2	+ 2·0
176·625 G	54	328	29	174	15·2	337·2	− 8·2	+16·8
177·132 K	43	231	24	129	15·4	337·3	− 8·5	+23·7
178·410 C	33	176	23	119	15·6	337·2	− 8·4	+40·8
179·500 C	21	135	19	121	15·8	337·2	− 8·3	+55·4
180·350 C	15	98	20	129	16·1	337·3	− 8·4	+67·0
181·412 G	5	31	18	112	16·6	337·6	− 8·5	+81·5
Means ..	..	..	25	138	15·45	337·74	− 8·30	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

Date. G.M.T. (Civil) Place.	Projected Area.		Corrected Area.		Longitude.		Latitude.	Long. from C.M.
	Umbræ.	Whole Spots.	Umbræ.	Whole Spots.	System I.	System II.		
RECURRENT SERIES 802.								
Group 8112 seen in Rotation 852.								
,, 8148 ,, ,, 853.								
Group 8112.—June 9–20. Revival in region of Group 8085. A regular spot near which small ill-formed companions appear in a sparse stream. The group has nearly died out by June 16, but the fore portion persists to the west limb, where two larger spots appear.								
1917. d					°	°	°	°
159·393 C	9	25	20	56	149·3	113·6	+ 5·3	−77·2
160·284 G	20	88	24	105	149·5	113·6	+ 5·0	−65·2
161·562 G	37	225	28	170	149·7	113·5	+ 5·7	−48·1
162·399 G	40	232	25	149	149·3	112·9	+ 6·3	−37·4
163·383 G	60	233	33	129	149·6	113·0	+ 6·3	−24·1
164·460 G	35	132	19	67	150·7	113·9	+ 6·9	− 8·8
165·396 G	16	82	9	42	151·3	114·3	+ 6·7	+ 4·2
166·411 C	7	25	4	14	153·5	116·2	+ 7·0	+19·9
167·467 G	16	60	10	38	156·8	119·3	+ 9·1	+37·1
168·453 G	11	37	9	30	156·9	119·2	+ 9·1	+50·3
169·352 C	36	135	40	150	157·9	120·0	+10·3	+63·2
170·401 C	21	93	50	234	158·9	120·7	+10·6	+78·1
Means ..	..	..	23	99	152·78	115·85	+ 7·36	..
Group 8148.—July 7–17. A long stream of spots, of which the leader is the most prominent member and remains alone after July 15. Perhaps only a revival of Group 8112.								
187·457 G	32	74	39	89	149·0	107·4	+ 7·9	−66·1
188·413 C	50	243	41	200	150·3	108·5	+ 8·0	−52·1
189·399 C	59	263	38	171	150·5	108·5	+ 8·4	−38·9
190·365 C	41	300	23	167	150·8	108·5	+ 8·3	−25·8
191·403 G	68	263	35	134	153·1	110·6	+ 7·8	− 9·7
192·343 G	53	298	27	149	154·3	111·6	+ 8·0	+ 3·9
193·389 G	44	271	23	144	156·0	113·1	+ 7·4	+19·4
194·438 G	23	183	14	113	158·5	115·3	+ 6·9	+35·8
195·340 G	28	136	21	103	158·8	115·4	+ 6·8	+48·2
196·350 C	11	62	11	64	159·1	115·5	+ 7·1	+61·7
197·377 G	4	31	8	59	159·0	115·2	+ 7·0	+75·2
Means ..	..	..	24	127	154·49	111·78	+ 7·60	..
RECURRENT SERIES 803.								
Group 8120 seen in Rotation 852.								
,, 8153 ,, ,, 853.								
Group 8120.—June 15–25. A large stream of spots developing at the east limb *n p* Group 8119. The leader, regular until June 18, becomes composite after coalescing with a large component, which has formed immediately following it. The rear spot is generally composite, and though the largest member of the stream on June 18, it has broken up by June 24. The intermediate spots are mostly small but numerous at times.								
165·396 G	33	125	31	123	89·2	64·2	+13·0	−57·9
166·411 C	99	507	68	347	91·8	66·7	+12·4	−41·8
167·467 G	188	965	110	563	90·9	65·6	+12·8	−28·8

Date. G.M.T. (Civil) Place.	Projected Area.		Corrected Area.		Longitude.		Latitude.	Long. from C.M.
	Umbræ.	Whole Spots.	Umbræ.	Whole Spots.	System I.	System II.		
Group 8120—*continued.*								
1917. d					°	°	°	°
168·453 G	198	1182	106	624	90·3	64·9	+12·9	−16·3
169·352 C	168	1194	86	615	91·6	66·0	+13·3	− 3·1
170·401 C	130	1020	68	535	91·1	65·4	+13·5	+10·3
171·400 C	91	765	51	425	90·9	65·0	+13·4	+23·3
172·162 D	116	717	71	437	91·5	65·5	+13·0	+34·0
173·376 C	39	356	31	279	91·2	65·0	+13·3	+49·7
174·362 G	17	82	20	95	92·5	66·2	+12·6	+64·1
175·494 C	0	12	0	28	91·2	64·7	+12·9	+77·8
Means ..	..	..	58	370	91·11	65·38	+13·01	..
Group 8153.—July 10–15. A small unstable stream.								
190·365 C	0	20	0	81	93·1	56·5	+10·2	−83·5
191·403 G	6	28	9	43	91·6	54·8	+11·0	−71·2
192·343 G	12	46	11	43	92·9	56·0	+10·8	−57·5
193·389 G	17	51	11	34	95·7	58·6	+10·0	−40·9
194·438 G	4	23	2	13	95·0	57·7	+ 9·9	−27·7
195·340 G	0	2	0	1	95·9	58·4	+ 9·5	−14·8
Means ..	..	..	5	36	94·03	57·00	+10·23	..
RECURRENT SERIES 804.								
Group 8124 seen in Rotation 852.								
,, 8161 ,, ,, 853.								
,, 8203 ,, ,, 854.								
Group 8124.—June 17–29. A large stable regular spot.								
167·467 G	36	195	89	480	41·4	17·0	+13·3	−78·3
168·453 G	65	347	80	427	40·8	16·2	+13·0	−65·8
169·352 C	98	478	84	411	40·7	16·0	+13·0	−54·0
170·401 C	127	672	84	445	40·8	15·9	+13·0	−40·0
171·400 C	161	731	92	417	40·9	15·9	+13·0	−26·7
172·162 D	171	831	91	440	40·8	15·7	+13·2	−16·7
173·376 C	149	948	76	482	41·3	16·0	+13·0	− 0·2
174·362 G	165	846	86	441	41·4	15·9	+13·0	+13·0
175·494 C	120	771	70	448	41·3	15·7	+13·2	+27·9
176·625 G	110	543	77	380	41·8	16·0	+13·5	+43·4
177·132 K	91	497	71	388	41·5	15·6	+13·6	+49·8
178·410 C	39	266	50	343	41·9	15·9	+14·0	+67·1
179·500 C	19	112	58	340	41·3	15·1	+14·0	+80·9
Means ..	..	..	78	419	41·22	15·92	+13·29	..
Group 8161.—July 14–26. A stable regular spot slowly contracting; evidently identical with the spot of Group 8124.								
194·438 G	17	94	52	285	41·4	16·9	+14·2	−81·3
195·340 G	32	206	43	278	42·1	17·5	+14·3	−68·6
196·350 C	35	254	31	224	41·8	17·1	+14·1	−55·6

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
RECURRENT SERIES 804. Group 8161—*continued.*								
1917. d					°	°	°	°
197·377 G	61	388	41	260	42·2	17·3	+14·1	−41·6
198·432 C	69	421	39	240	41·9	16·9	+14·4	−27·9
199·584 G	63	420	33	218	41·8	16·6	+14·4	−12·8
200·454 G	76	501	39	256	41·6	16·3	+14·4	− 1·5
201·374 G	79	443	41	230	41·4	16·0	+14·5	+10·5
202·337 G	78	387	43	213	41·5	16·0	+14·4	+23·3
203·448 C	69	347	44	222	41·8	16·3	+14·8	+38·3
204·409 C	33	248	26	196	41·6	15·8	+14·7	+50·8
205·438 C	19	185	22	211	41·5	15·6	+14·8	+64·4
206·449 C	18	96	38	204	41·1	15·1	+15·0	+77·3
Means ..	..	..	38	234	41·67	16·42	+14·47	..

Group 8203.—August 10–23. A regular spot with a small companion on August 18. Note proper motion in longitude, and also that in latitude since its first appearance as Group 8124.

221·402 G	4	27	18	126	40·7	24·5	+16·7	−85·3
222·386 G	13	87	22	144	39·4	23·2	+16·6	−73·6
223·413 G	17	101	16	98	39·8	23·5	+16·8	−59·6
224·462 G	23	141	17	102	39·3	22·9	+16·8	−46·3
225·348 C	24	174	15	108	38·6	22·2	+16·8	−35·3
226·585 G	46	197	25	106	38·1	21·6	+17·1	−19·4
227·354 G	39	165	20	86	37·5	20·9	+17·2	− 9·8
228·447 C	40	163	20	83	37·0	20·3	+17·7	+ 4·1
229·417 C	32	167	17	89	37·0	20·3	+17·6	+16·9
230·414 G	27	136	16	79	36·2	19·4	+17·6	+29·3
231·408 G	17	109	12	74	35·8	18·9	+17·7	+42·0
232·362 C	14	98	12	83	35·6	18·6	+17·5	+54·4
233·439 G	12	52	15	67	35·2	18·2	+17·4	+68·3
234·566 G	2	13	7	45	35·4	18·3	+17·1	+83·4
Means ..	..	..	17	92	37·54	20·91	+17·19	..

RECURRENT SERIES 805.

Group 8135 seen in Rotation 853.
,, 8167 ,, ,, 854.

Group 8135.—June 26–July 6. A small spot, with an ephemeral companion on June 26, appearing *s f* Group 8129. Other spots form on July 4, and the group has enlarged considerably when last seen at the west limb.

176·625 G	27	71	19	50	312·8	278·4	+10·1	−45·6
177·132 K	9	58	6	38	313·0	278·5	+10·5	−38·7
178·410 C	8	30	4	16	314·2	279·4	+ 9·6	−20·6
179·500 C	14	32	7	16	313·6	278·6	+10·0	− 6·8
180·350 C	14	24	7	12	313·6	278·4	+ 9·7	+ 4·5
181·412 G	6	17	3	9	313·7	278·3	+ 9·2	+18·6
182·414 G	4	13	2	8	313·5	277·9	+ 9·4	+31·7
183·391 G	2	9	1	6	311·1	275·3	+ 9·7	−42·2

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8135—*continued.*								
1917. d					°	°	°	°
184·390 C	18	48	16	42	310·9	274·8	+10·4	+55·2
185·401 C	19	141	26	194	311·3	275·0	+10·6	−69·0
186·396 C	20	116	82	456	312·1	275·7	+10·5	−83·0
Means ..	..	..	16	77	312·71	277·30	+ 9·97	..

Group 8167.—July 21–August 1. A cluster of ill-formed spots which have nearly died out by July 29. A regular spot then appears, preceded by a small companion.

201·374 G	0	8	0	15	316·0	277·3	+ 8·7	−74·9
202·337 G	21	113	19	108	319·6	280·7	+ 9·6	−58·6
203·448 C	50	440	35	307	319·3	280·2	+ 9·9	−44·2
204·409 C	52	464	31	274	319·6	280·3	+ 9·9	−31·2
205·438 C	101	383	53	199	320·1	280·7	+10·4	−17·0
206·449 C	50	324	25	162	320·3	280·7	+10·5	− 3·5
207·391 C	29	158	15	81	320·3	280·5	+11·0	+ 9·0
208·345 C	13	78	7	42	319·8	279·8	+10·5	+21·1
209·437 C	16	52	10	32	320·2	280·0	+10·5	+36·0
210·327 C	21	124	16	95	321·5	281·1	+10·4	+49·0
211·343 C	26	139	29	153	322·2	281·6	+10·6	−63·2
212·455 C	8	68	18	159	322·8	282·0	+10·5	−78·5
Means ..	..	..	22	136	320·14	280·41	+10·21	..

RECURRENT SERIES 806.

Group 8149 seen in Rotation 853.
,, 8181 ,, ,, 854.
,, 8231 ,, ,, 855.

Group 8149.—July 7–19. A very large and complex stream. A large regular spot at the front of the stream joins with the preceding portion of a long irregular spot closely following it, and is of regular form again by July 16; meanwhile the remaining portion of the irregular spot is disappearing. A subsidiary stream develops southwards after July 9 and merges into the main stream.

187·457 G	24	68	76	214	133·6	123·5	+18·0	−81·5
188·413 C	58	346	79	473	134·3	124·1	+18·0	−68·1
189·399 C	86	654	77	595	133·8	123·6	+17·9	−55·6
190·365 C	151	1238	108	895	131·9	121·6	+17·8	−44·7
191·403 G	234	1648	140	987	132·2	121·9	+17·2	−30·6
192·343 G	285	2153	154	1163	132·1	121·7	+18·1	−18·3
193·389 G	387	2730	199	1412	131·4	121·0	+18·1	− 5·2
194·438 G	331	2242	173	1164	131·7	121·2	+18·1	+ 9·0
195·340 G	240	1463	133	809	132·4	121·8	+18·1	+21·7
196·350 C	150	1065	96	673	133·4	122·8	+18·3	−36·0
197·377 G	146	881	113	683	133·0	122·3	+18·5	−49·2
198·432 C	94	483	107	549	133·7	123·0	+18·4	−63·9
199·584 G	35	203	84	479	133·3	122·5	+18·0	−78·7
Means ..	..	..	118	777	132·83	122·38	+18·04	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

RECURRENT SERIES **806**—*continued.*

Group 8181.—August 3–16. A magnificent complex group. At first a large regular spot, *a*, *sf* which is a larger spot with double nuclei. The latter grows considerably, and from August 6 the group is best considered as one immense irregular composite spot with three chief nuclei; *a*, which is one of these three, preserves its individuality until August 11; the rear nucleus becomes separated from the main portion after August 13, otherwise the division of the spot is somewhat arbitrary.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917· d					°	°	°	°
214·389 C	15	121	(72	580	133·0	113·1	+18·5)*	−85·7
215·700 G	105	1121	155	1661	130·2	110·2	+16·3	−71·2
216·522 G	210	2135	212	2156	129·6	109·5	+15·9	−60·9
217·669 G	354	3460	251	2457	130·3	110·1	+15·6	−45·1
218·487 G	629	4354	384	2656	129·9	109·6	+15·6	−34·7
219·362 C	881	5652	485	3109	129·7	109·3	+15·5	−23·3
220·353 C	847	6231	432	3178	129·4	108·9	+15·5	−10·5
221·402 G	1047	5803	534	2960	129·2	108·6	+15·8	+ 3·2
222·386 G	895	4727	474	2505	128·8	108·1	+16·0	+15·8
223·413 G	641	4031	372	2338	128·9	108·0	+16·4	+29·5
224·462 G	457	2947	311	2004	128·1	107·2	+16·8	+42·5
225·348 C	274	2330	236	2004	128·8	107·8	+17·2	+54·9
226·585 G	145	1393	205	2064	128·6	107·5	+16·7	+71·1
227·354 G	77	745	191	1964	128·3	107·2	+17·0	+81·0
Means ..	..	..	326	2389	129·22	108·61	+16·18	..
			Spot *a*.					
214·389 C	13	102	62	489	133·0	126·1	+19·2	−85·7
215·700 G	53	454	71	608	132·3	125·4	+19·2	−69·1
216·522 G	64	624	61	593	131·9	125·0	+19·0	−58·6
217·669 G	91	704	63	486	132·7	125·7	+18·9	−42·7
218·487 G	103	836	62	502	132·4	125·4	+19·0	−32·2
219·362 C	120	907	66	532	132·3	125·3	+19·2	−20·7
220·353 C	122	851	63	443	132·3	125·3	+19·1	− 7·6
221·402 G	137	735	71	382	132·1	125·0	+19·0	+ 6·1
222·386 G	95	632	51	341	132·0	124·9	+18·8	+19·0

Group 8231.—August 31–September 9. An ill-formed spot, followed by some very small companions, which have multiplied by September 5. The group, however, is unstable, and is disappearing by the following day. Extensive areas of faculæ accompany the group.

242·377 C	7	38	18	130	126·9	114·3	+16·7	−81·9
243·361 C	13	72	16	91	128·0	115·4	+17·1	−67·8
244·475 G	18	122	15	100	128·1	115·4	+17·2	−53·0
245·377 G	16	156	11	103	129·1	116·3	+17·7	−40·1
246·409 G	29	202	17	115	129·0	116·2	+18·0	−26·6
247·361 G	37	294	19	153	130·4	117·5	+18·2	−12·6
248·560 C	10	135	5	69	127·9	115·0	+18·4	+ 0·7
249·391 C	9	83	5	43	128·7	115·7	+18·6	+12·5
250·418 G	2	24	1	13	127·0	114·0	+18·8	+24·4
251·231 D	0	7	0	5	128·8	115·7	+20·6	+36·9
Means ..	..	..	11	82	128·39	115·55	+18·13	..

RECURRENT SERIES **807.**

Group 8166 seen in Rotation 853.
„ 8193 „ „ 854.

Group 8166.—July 21–22. Three very small spots on July 21; a small regular spot on July 22.

1917· d					°	°	°	°
201·374 G	7	23	8	28	97·0	60·0	+10·8	+66·1
202·337 G	2	24	6	70	99·1	61·9	+10·8	+80·9
Means ..	..	..	7	49	98·05	60·95	+10·80	..

Group 8193.—August 6–16. A small regular spot followed by a short train after August 7. The group has considerably diminished by August 12.

217·669 G	7	29	14	59	98·7	52·3	+ 9·1	−76·7
218·487 G	19	109	22	129	99·0	52·5	+ 9·3	−65·6
219·362 C	35	158	21	136	97·9	51·2	+ 9·4	−55·1
220·353 C	55	309	37	204	99·0	52·1	+ 8·9	−40·9
221·402 G	86	415	48	232	100·1	52·9	+ 8·3	−25·9
222·386 G	48	292	24	149	101·6	54·2	+ 7·9	−11·4
223·413 G	33	78	17	39	103·3	55·7	+ 8·0	+ 3·9
224·462 G	28	56	15	30	104·0	56·2	+ 8·3	+18·4
225·348 C	21	66	12	38	103·3	55·3	+ 8·0	+29·4
226·585 G	7	12	5	9	105·7	57·4	+ 7·5	+48·2
227·354 G	3	6	3	6	106·1	57·7	+ 7·9	+58·8
Means ..	..	..	20	94	101·70	54·32	+ 8·42	..

RECURRENT SERIES **808.**

Group 8169 seen in Rotation 854.
„ 8214 „ „ 855.

Group 8169.—July 23–August 4. On July 24 a small stream, apparently of normal type. The leader spot, *a*, becomes, however, very composite—at times double—and the follower, which is never large, has broken up by July 30.

203·448 C	19	59	37	122	286·8	262·6	+14·3	−76·7
204·409 C	38	269	46	319	285·4	261·1	+15·0	−65·4
205·438 C	116	796	93	647	285·2	260·8	+15·0	−51·9
206·449 C	85	739	55	475	285·1	260·5	+15·1	−38·7
207·391 C	124	671	70	382	284·3	259·6	+15·5	−27·0
208·345 C	113	700	60	367	284·9	260·1	+15·1	−13·8
209·437 C	80	621	41	317	284·9	260·0	+15·0	+ 0·7
210·327 C	80	564	41	292	284·9	259·9	+15·0	+12·4
211·343 C	66	461	37	258	284·9	259·8	+15·0	+25·9
212·455 C	53	326	36	218	286·0	260·7	+14·8	+41·7
213·305 D	75	338	62	279	285·9	260·5	+13·8	+52·8
214·389 C	24	259	30	321	285·7	260·2	+14·5	+67·0
215·700 G	23	70	72	274	285·2	259·5	+14·6	+83·8
Means ..	..	..	52	329	285·32	260·41	+14·82	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued*.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
RECURRENT SERIES 808. Group 8169—*continued.*								
Spot *a*.								
1917. d					°	°	°	°
203·448 C	19	47	37	92	287·5	263·1	+14·4	−76·0
204·409 C	15	140	16	151	287·9	263·4	+15·0	−62·9
205·438 C	95	601	75	475	286·6	261·9	+15·0	−50·5
206·449 C	61	579	38	365	286·5	261·7	+15·1	−37·3
207·391 C	79	460	44	258	286·4	261·5	+15·3	−24·9
208·345 C	71	476	37	248	286·8	261·8	+15·2	−11·9
209·437 C	51	414	26	211	286·2	261·1	+15·0	+ 2·0
210·327 C	49	426	25	222	286·2	261·0	+15·0	+13·7
211·343 C	55	392	31	223	286·0	260·6	+14·8	+27·0
212·455 C	53	318	36	213	286·1	260·6	+14·7	+41·8
213·305 D	75	316	62	262	286·2	260·6	+13·8	+53·1
214·389 C	24	243	30	301	285·8	260·1	+14·5	+67·0
215·700 G	15	44	72	210	286·6	260·7	+14·3	+85·2
Group 8214.—August 19–21. A very small spot, perhaps *a* of Group 8169.								
230·414 G	3	10	8	26	286·9	253·7	+13·4	−80·0
231·408 G	1	10	1	12	286·7	253·4	+13·5	−67·1
232·362 C	2	4	2	3	286·9	253·4	+13·4	−54·3
Means ..	..	..	4	14	286·83	253·50	+13·43	..
RECURRENT SERIES 809.								
Group 8178 seen in Rotation 854.								
,, 8215 ,, ,, 855.								
,, 8260 ,, ,, 856.								
Group 8178.—August 3–5. One or two very small spots, which probably develop as Group 8215 in the following rotation.								
214·389 C	0	4	0	3	268·2	238·8	−13·7	+49·5
215·700 G	5	11	7	15	267·4	237·8	−13·5	+66·0
216·522 G	0	3	0	7	266·8	237·1	−14·2	+76·3
Means ..	..	..	2	8	267·47	237·90	−13·80	..
Group 8215.—August 21–September 2. A stream led by a large composite spot, *a*, approximately regular by August 26, but beginning to contract. The train has nearly disappeared by August 31.								
232·362 C	12	151	33	414	264·7	245·9	−17·7	−76·5
233·439 G	44	387	56	495	263·8	244·9	−17·4	−63·1
234·566 G	103	618	87	525	263·1	244·1	−16·7	−48·9
235·232 K	170	960	124	700	262·7	243·7	−16·5	−40·5
236·436 C	152	947	91	568	264·0	244·8	−17·0	−23·3
237·505 G	143	949	80	531	263·8	244·6	−16·9	− 9·4
238·340 C	143	901	79	496	264·6	245·3	−16·6	+ 2·4
239·360 G	137	786	78	448	264·6	245·2	−16·8	+15·9
240·421 C	88	799	55	503	264·1	244·6	−16·4	+29·4
Group 8215—*continued*								
Spot *a*.								
1917. d					°	°	°	°
241·357 C	105	725	77	529	263·6	244·0	−16·4	+41·3
242·377 C	52	411	51	407	264·1	244·5	−16·7	+55·3
243·361 C	23	234	37	377	264·4	244·7	−16·7	+68·6
244·475 G	5	56	37	415	264·6	244·8	−16·7	+83·5
Means ..	..	..	68	493	264·01	244·70	−16·81	..
Spot *a*.								
232·362 C	12	151	33	414	264·7	246·3	−17·7	−76·5
233·439 G	42	326	52	404	264·6	246·2	−17·5	−62·3
234·566 G	79	486	66	403	264·4	245·9	−17·0	−47·6
235·232 K	142	746	101	530	264·5	245·9	−16·7	−38·7
236·436 C	120	804	71	474	265·0	246·3	−17·1	−22·3
237·505 G	125	732	69	403	265·4	246·6	−17·0	− 7·8
238·340 C	120	711	66	391	265·8	247·0	−16·7	+ 3·6
239·360 G	121	684	69	390	265·3	246·4	−16·8	+16·6
240·421 C	75	566	48	362	265·4	246·4	−16·5	+30·7
241·357 C	81	552	61	414	264·9	245·8	−16·6	+42·6
242·377 C	49	366	49	370	264·7	245·5	−16·7	+55·9
243·361 C	22	222	36	362	264·6	245·4	−16·7	+68·8
244·475 G	5	56	37	415	264·6	245·3	−16·7	+83·5
Group 8260.—September 17–29. A regular spot, *a* of Group 8215, crossed by three narrow bright markings on September 25, after which the spot divides.								
259·361 C	11	64	45	260	264·2	245·0	−17·1	−80·4
260·311 C	31	220	50	354	263·4	244·1	−17·0	−68·6
261·356 C	41	320	41	317	262·9	243·6	−17·0	−55·3
262·339 C	57	399	43	299	263·0	243·6	−17·1	−42·3
263·403 G	77	469	49	295	262·9	243·4	−17·0	−28·3
264·339 C	63	501	36	286	262·6	243·0	−17·1	−16·3
265·444 C	72	468	40	258	262·4	242·8	−16·8	− 1·9
266·402 G	69	413	39	232	261·8	242·1	−16·9	+10·2
267·430 G	57	381	34	229	261·8	242·0	−17·0	+23·7
268·356 C	32	281	22	191	261·7	241·8	−17·1	+35·9
269·341 C	29	206	25	175	261·8	241·9	−17·4	+49·0
270·367 C	15	122	18	150	261·5	241·5	−17·4	+62·2
271·394 G	4	32	10	83	261·8	241·7	−17·5	+76·0
Means ..	..	..	35	241	262·45	242·81	−17·11	..
RECURRENT SERIES 810.								
Group 8182 seen in Rotation 854.								
,, 8220 ,, ,, 855.								
Group 8182.—August 4–9. A short stream of small spots increasing at the west limb.								
215·700 G	4	8	2	5	222·6	200·2	−16·3	+21·2
216·522 G	18	82	12	53	223·1	200·6	−16·4	+32·6
217·669 G	12	29	10	24	223·7	201·1	−16·2	+48·3

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued*.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long from C.M.
RECURRENT SERIES 810. Group 8182—*continued*.								
1917. d					°	°	°	°
218·487 G	7	12	8	13	224·6	201·9	−15·9	+60·0
219·362 C	10	68	16	111	222·6	199·8	−15·1	+69·6
220·353 C	0	21	0	101	221·9	199·0	−13·8	+82·0
Means ..	..	..	8	51	223·08	200·43	−15·62	..
Group 8220.—August 25–26. A very small spot in faculæ *f* Group 8219.								
236·436 C	0	4	0	6	221·1	189·9	−14·1	−66·2
237·505 G	3	6	3	5	222·8	191·4	−14·1	−50·4
Means ..	..	..	1	5	221·95	190·65	−14·10	..
RECURRENT SERIES 811. Group 8184 seen in Rotation 854. „ 8230 „ „ 855.								
Group 8184.—August 4–16. A regular spot with small followers, August 6–11.								
215·700 G	13	55	37	155	123·1	83·8	−10·9	−78·3
216·522 G	24	124	34	174	123·2	83·8	−11·1	−67·3
217·669 G	47	223	40	192	123·4	83·8	−11·0	−52·0
218·487 G	69	348	48	244	123·4	83·6	−11·0	−41·2
219·362 C	91	468	56	285	122·9	83·0	−11·4	−30·1
220·353 C	86	550	47	303	122·7	82·6	−11·3	−17·2
221·402 G	86	460	46	244	123·7	83·4	−11·3	− 2·3
222·386 G	79	375	43	203	124·9	84·4	−11·0	+11·9
223·413 G	56	327	32	190	125·2	84·5	−10·9	+25·8
224·462 G	47	294	32	203	125·6	84·7	−10·6	+40·0
225·348 C	43	238	37	205	125·9	84·9	−10·7	+52·0
226·585 G	23	142	35	214	126·3	85·1	−10·7	+68·8
227·354 G	16	40	48	121	126·3	84·9	−10·7	+79·0
Means ..	..	..	41	210	124·35	84·04	−10·97	..
Group 8230.—August 31–September 12. A stable regular spot slowly diminishing; evidently identical with the spot of the preceding rotation.								
242·377 C	10	40	28	113	130·6	84·1	−10·3	−78·2
243·361 C	13	82	16	106	130·7	84·0	−10·2	−65·1
244·475 G	15	130	12	107	131·2	84·3	−10·2	−49·9
245·377 G	22	164	15	110	130·9	83·8	−10·1	−38·3
246·409 G	24	183	14	106	131·0	83·7	−10·2	−24·6
247·361 G	30	196	16	104	131·1	83·6	− 9·9	−11·9
248·560 C	30	169	16	88	130·9	83·2	−10·2	+ 3·7
249·391 C	30	170	16	92	130·8	82·9	− 9·9	+14·6
250·418 G	23	133	14	80	130·9	82·8	−10·4	+28·3
251·231 D	25	99	17	67	130·8	82·6	−10·3	+38·9

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8230—*continued*.								
1917. d					°	°	°	°
252·367 C	13	82	12	74	130·6	82·1	−10·0	+53·7
253·381 G	11	53	15	74	130·7	82·1	−10·4	+67·2
254·359 G	0	6	0	23	131·6	82·8	−10·7	+81·0
Means ..	..	..	15	88	130·91	83·23	−10·22	..
RECURRENT SERIES 812. Group 8189 seen in Rotation 854. „ 8221 „ „ 855.								
Group 8189.—August 6–10. A small equatorial stream of normal type, *a* being the leading component.								
217·669 G	18	49	10	27	202·4	146·0	+ 0·4	+27·0
218·487 G	46	243	29	150	202·8	146·2	+ 0·4	+38·2
219·362 C	46	250	37	200	204·0	147·2	+ 0·6	+51·0
220·353 C	12	143	15	174	205·5	148·4	0·0	+65·6
221·402 G	7	42	21	127	206·4	149·1	− 0·4	+80·4
Means ..	..	..	22	137	204·22	147·38	+ 0·20	..
Spot *a*.								
217·669 G	13	50	7	29	203·4	147·0	+ 0·5	+28·0
218·487 G	36	160	23	104	204·4	147·8	+ 0·2	+39·8
219·362 C	21	179	17	147	205·2	148·4	+ 0·4	+52·2
220·353 C	16	132	20	164	206·0	148·9	+ 0·1	+66·1
221·402 G	7	42	21	127	206·4	149·1	− 0·4	+80·4
Group 8221.—August 25–September 5. A diminishing regular spot on the solar equator; probably *a* of Group 8189.								
236·436 C	7	48	16	110	209·9	148·7	+ 0·5	−77·4
237·505 G	10	97	11	105	210·8	149·3	+ 0·7	−62·4
238·340 C	14	122	11	98	211·5	149·8	+ 0·4	−50·7
239·360 G	28	155	18	98	212·0	150·0	+ 0·6	−36·7
240·421 C	17	113	9	61	212·3	150·1	+ 0·5	−22·4
241·357 C	12	134	6	69	212·2	149·7	+ 0·6	−10·1
242·377 C	17	86	9	43	212·6	149·8	+ 0·3	+ 3·8
243·361 C	10	23	5	12	212·7	149·7	+ 0·2	+16·9
244·475 G	6	22	4	13	212·8	149·5	− 0·1	+31·7
245·377 G	0	2	0	1	212·5	148·9	+ 0·1	+43·3
246·409 G	0	5	0	5	213·0	149·2	+ 0·2	+57·4
247·361 G	0	2	0	3	212·9	148·8	− 0·2	+69·9
Means ..	..	..	7	51	212·10	149·46	+ 0·32	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

Date. G.M.T. (Civil) Place.	Projected Area.		Corrected Area.		Longitude.		Latitude.	Long. from C.M.
	Umbræ.	Whole Spots.	Umbræ.	Whole Spots.	System I.	System II.		
RECURRENT SERIES 813.								
Group 8195 seen in Rotation 854.								
,, 8228 ,, ,, 855.								
Group 8195.—August 7–14. On August 7, a small stream of spots, *nf* Group 8180. The leader, a composite spot, develops considerably in a few days, but the train is never prominent.								
1917. d					°	°	°	°
218·487 G	4	23	2	14	137·4	111·2	−15·8	−27·2
219·362 C	24	76	13	43	137·6	111·3	−15·9	−15·4
220·353 C	100	383	54	207	140·0	113·6	−14·7	+ 0·1
221·402 G	86	465	48	260	140·9	114·3	−14·8	+14·9
222·386 G	123	571	77	360	143·5	116·8	−14·8	+30·5
223·413 G	172	726	129	544	143·4	116·6	−14·4	+44·0
224·462 G	104	756	109	794	144·0	117·1	−13·8	+58·4
225·348 C	37	403	65	713	145·3	118·3	−14·1	+71·4
Means ..	..	..	62	367	141·51	114·90	−14·79	..
Group 8228.—August 30–September 10. A stream of normal type, with *a* and *b* as the first and last spots respectively; *b* has completely broken up by September 6.								
241·357 C	26	266	59	599	147·6	117·2	−14·8	−74·7
242·377 C	52	396	61	467	147·3	116·8	−14·9	−61·5
243·361 C	72	604	58	489	148·4	117·7	−14·7	−47·4
244·475 G	104	655	66	419	148·5	117·7	−14·7	−32·6
245·377 G	103	657	60	381	148·1	117·2	−14·8	−21·1
246·409 G	101	584	55	315	148·1	117·1	−14·7	− 7·5
247·361 G	88	475	48	257	149·7	118·5	−14·4	+ 6·7
248·560 C	67	319	40	188	150·8	119·5	−14·3	−23·6
249·391 C	59	306	39	202	151·7	120·3	−13·8	−35·5
250·418 G	30	201	26	170	152·5	120·9	−14·0	−49·9
251·231 D	21	128	25	150	153·5	121·9	−14·0	−61·6
252·367 C	6	39	16	107	154·1	122·3	−13·9	+77·2
Means ..	..	..	46	312	150·03	118·93	−14·42	..
Spot *a*.								
241·357 C	19	143	37	276	149·9	119·5	−14·8	−72·4
242·377 C	35	195	37	209	150·3	119·8	−14·7	−58·5
243·361 C	41	329	32	253	150·9	120·2	−15·0	−44·9
244·475 G	49	369	31	232	151·3	120·5	−15·0	−29·8
245·377 G	67	374	38	213	151·2	120·3	−15·0	−18·0
246·409 G	54	354	29	191	151·6	120·5	−14·7	− 4·0
247·361 G	67	350	36	189	151·7	120·5	−14·3	+ 8·7
248·560 C	61	296	36	175	152·1	120·8	−14·2	+24·9
249·391 C	57	291	38	195	152·1	120·7	−13·8	+35·9
250·418 G	30	197	26	167	152·6	121·0	−14·0	−50·0
251·231 D	21	128	25	150	153·5	121·8	−14·0	−61·6
252·367 C	6	39	16	107	154·1	122·3	−13·9	−77·2

Date. G.M.T. (Civil) Place.	Projected Area.		Corrected Area.		Longitude.		Latitude.	Long. from C.M.
	Umbræ.	Whole Spots.	Umbræ.	Whole Spots.	System I.	System II.		
Group 8228—*continued.*								
Spot *b*.								
1917. d					°	°	°	°
241·357 C	6	120	16	329	145·3	115·6	−15·0	−77·0
242·377 C	18	188	24	248	144·2	114·4	−14·7	−64·6
243·361 C	29	252	26	224	144·1	114·2	−14·4	−51·7
244·475 G	40	215	27	146	143·7	113·6	−14·7	−37·4
245·377 G	33	260	20	156	143·6	113·4	−14·3	−25·6
246·409 G	40	193	22	106	143·4	113·1	−14·5	−12·2
247·361 G	18	109	10	59	143·7	113·3	−14·5	+ 0·7
RECURRENT SERIES 814.								
Group 8199 seen in Rotation 854.								
,, 8239 ,, ,, 855.								
Group 8199.—August 8–20. The group consists at the east limb of two regular spots. The preceding spot, *a*, is large and stable; the following one has broken up by August 13, whilst one or two other small unstable spots have appeared following it. Only *a* remains on August 18.								
219·362 C	6	60	(21	206	73·7	56·6	−16·5)*	−79·3
220·353 C	34	200	56	328	70·7	53·5	−17·1	−69·2
221·402 G	57	363	56	359	70·4	53·1	−16·8	−55·6
222·386 G	87	455	65	341	70·2	52·8	−17·1	−42·8
223·413 G	120	515	76	324	70·2	52·8	−17·2	−29·2
224·462 G	126	589	72	336	70·6	53·1	−17·1	−15·0
225·348 C	95	470	52	259	70·6	53·0	−17·1	− 3·3
226·585 G	96	480	54	269	70·8	53·1	−16·9	+13·3
227·354 G	90	420	54	252	71·4	53·7	−16·7	+24·1
228·447 C	59	370	42	263	71·9	54·1	−16·3	+39·0
229·417 C	43	244	39	220	71·6	53·7	−16·7	+51·5
230·414 G	28	169	37	225	71·2	53·2	−17·1	+64·3
231·408 G	9	63	25	178	70·9	52·9	−17·0	+77·1
Means ..	..	..	52	279	70·88	53·25	−16·92	..
Spot *a*.								
219·362 C	6	60	21	206	73·7	55·0	−16·5	−79·3
220·353 C	22	147	32	216	72·9	54·2	−16·8	−67·0
221·402 G	44	258	41	240	72·5	53·7	−16·5	−53·5
222·386 G	58	314	42	226	72·7	53·8	−16·7	−40·3
223·413 G	61	357	37	218	72·4	53·4	−16·5	−27·0
224·462 G	88	427	49	239	72·4	53·3	−16·2	−13·2
225·348 C	71	420	38	227	72·1	52·9	−16·4	− 1·8
226·585 G	77	420	43	235	72·0	52·7	−16·3	+14·5
227·354 G	83	383	49	230	71·7	52·4	−16·6	+24·4
228·447 C	57	357	40	253	71·9	52·5	−16·3	+39·0
229·417 C	43	244	39	220	71·6	52·1	−16·7	+51·5
230·414 G	28	169	37	225	71·2	51·6	−17·1	+64·3
231·408 G	9	63	25	178	70·9	51·2	−17·0	+77·1

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued*.

RECURRENT SERIES **814**—*continued*.

Group 8239.—September 5–14. A regular spot, evidently *a* of Group 8199, stable in position, but disappearing rapidly after September 12.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917· d					°	°	°	°
247·361 G	8	62	16	125	70·4	51·8	−16·5	−72·6
248·560 C	13	118	14	123	70·1	51·5	−17·0	−57·1
249·391 C	17	149	14	122	69·4	50·7	−16·8	−46·8
250·418 G	26	164	17	108	69·1	50·3	−17·0	−33·5
251·231 D	29	177	17	106	68·7	49·9	−17·1	−23·2
252·367 C	20	173	11	95	68·9	50·0	−17·1	− 8·0
253·381 G	30	134	17	74	68·6	49·6	−17·1	+ 5·1
254·359 G	14	94	8	55	68·3	49·2	−17·4	+17·7
255·356 C	8	29	5	19	68·2	49·0	−17·4	+30·8
256·420 G	4	17	3	13	68·0	48·8	−17·4	+44·6
Means ..	..	..	12	84	68·97	50·08	−17·08	..

RECURRENT SERIES **815**.

Group 8205 seen in Rotation 854.
„ 8244 „ „ 855.

Group 8205.—August 12–24. A very large spot, approximately regular, around which small scattered spots appear. The largest of these is a small regular spot, *c*, with considerable proper motion in longitude.

223·413 G	39	142	159	578	15·8	326·9	+ 7·5	−83·6
224·462 G	78	491	112	707	15·4	326·2	+ 7·5	−70·2
225·348 C	101	669	95	629	15·7	326·3	+ 7·4	−58·2
226·585 G	150	980	99	647	16·0	326·4	+ 7·9	−41·5
227·354 G	193	1128	114	666	15·6	325·8	+ 8·0	−31·7
228·447 C	215	1274	112	662	15·2	325·2	+ 8·2	−17·7
229·417 C	201	1278	101	639	15·4	325·2	+ 8·0	− 4·7
230·414 G	207	1055	106	538	15·8	325·3	+ 7·9	+ 8·9
231·408 G	128	991	70	537	15·5	324·8	+ 8·2	+21·7
232·362 C	135	756	81	454	15·3	324·4	+ 8·1	+34·1
233·439 G	133	742	100	557	15·7	324·6	+ 8·0	+48·8
234·566 G	95	385	104	420	15·2	323·8	+ 8·0	+63·2
235·232 K	65	264	102	414	15·2	323·7	+ 7·6	+72·0
Means ..	..	..	104	573	15·45	325·28	+ 7·87	..

Spot *c*.

226·585 G	21	121	13	76	20·1	328·9	+ 7·8	−37·4
227·354 G	27	84	15	47	20·9	329·5	+ 7·7	−26·4
228·447 C	19	99	10	50	22·0	330·4	+ 7·4	−10·9
229·417 C	16	108	8	54	23·0	331·1	+ 7·2	+ 2·9
230·414 G	20	93	10	48	23·6	331·5	+ 7·1	+16·7
231·408 G	11	62	6	36	24·3	332·0	+ 6·9	+30·5
232·362 C	7	23	5	16	25·7	333·2	+ 6·7	−44·5
233·439 G	5	18	5	17	26·2	333·4	+ 6·6	+59·3

Group 8244.—September 8–18. A regular spot rapidly disappearing after September 16. A few small distant companions appear from September 10 to 14.

1917· d					°	°	°	°
250·418 G	2	9	(12	55	16·4	321·6	+ 7·8)*	−86·2
251·231 D	13	69	27	144	14·9	319·9	+ 8·1	−77·0
252·367 C	23	151	23	151	16·2	320·9	+ 8·2	−60·7
253·381 G	38	192	28	140	16·1	320·6	+ 7·9	−47·4
254·359 G	25	186	15	112	16·1	320·4	+ 7·7	−34·5
255·356 C	31	245	17	132	16·2	320·3	+ 7·9	−21·2
256·420 G	21	155	11	78	16·3	320·1	+ 7·8	− 7·1
257·378 G	27	124	14	62	16·3	319·9	+ 7·8	+ 5·6
258·561 G	28	141	15	76	16·3	319·7	+ 7·7	+21·2
259·361 C	11	98	6	57	16·1	319·3	+ 7·9	+31·5
260·311 C	10	21	7	14	16·1	319·1	+ 7·9	+44·1
Means ..	..	..	16	97	16·06	320·02	+ 7·89	..

RECURRENT SERIES **816**.

Group 8207 seen in Rotation 854.
„ 8247 „ „ 855.

Group 8207.—August 13–25. Revival of Group 8163. A very large composite spot followed by a broad train, of which only one member is large and permanent. The composite spot increases considerably between August 14 and 15. On the same meridian as Group 8205.

224·462 G	8	27	17	58	13·6	29·8	−23·5	−72·0
225·348 C	31	195	38	236	14·0	30·2	−23·5	−59·9
226·585 G	132	752	106	602	14·8	31·1	−22·9	−42·7
227·354 G	144	1025	99	707	14·7	31·1	−22·8	−32·6
228·447 C	212	1446	129	882	14·2	30·6	−23·0	−18·7
229·417 C	229	1700	133	986	13·8	30·3	−23·1	− 6·3
230·414 G	246	1701	143	987	13·4	30·0	−23·2	+ 6·5
231·408 G	174	1293	109	802	13·7	30·4	−22·9	+19·9
232·362 C	128	1332	88	919	12·6	29·3	−23·4	+31·4
233·439 G	112	893	94	750	12·2	29·0	−23·2	+45·3
234·566 G	79	446	96	540	11·5	28·4	−23·4	+59·5
235·232 K	84	325	151	585	12·0	28·9	−23·7	+68·8
236·436 C	0	17	(0	171	10·7	27·7	−25·7)*	+83·4
Means ..	..	..	100	671	13·38	29·93	−23·22	..

Group 8247.—September 10–13. A small spot preceded by another on September 13.

252·367 C	4	17	8	34	6·6	33·1	−24·8	−70·3
253·381 G	10	40	11	46	6·2	32·8	−24·6	−57·3
254·359 G	4	31	3	27	5·5	32·2	−24·7	−45·1
255·356 C	0	27	0	19	6·3	33·1	−23·5	−31·1
Means ..	..	..	5	32	6·15	32·80	−24·40	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

RECURRENT SERIES **817.**

Group 8222 seen in Rotation 855.
,, 8257 ,, ,, 856.
,, 8290 ,, ,, 857.
,, 8316 ,, ,, 858.

Group 8222.—August 26–September 1. Revival in area of Group 8172. A short stream of spots appearing suddenly when on the central meridian and beginning to disappear almost as quickly. A revival has taken place, however, on August 31. The axis of the stream is considerably inclined to the equator.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude System I.	Longitude System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
237·505 G	59	348	30	177	273·2	257·3	+17·6	0·0
238·340 C	100	323	52	168	273·3	257·3	+17·4	+11·1
239·360 G	63	282	36	158	273·0	257·0	+17·4	+24·3
240·421 C	19	117	12	75	273·3	257·2	+17·9	+38·6
241·357 C	7	33	6	27	275·4	259·2	+19·0	+53·1
242·377 C	26	142	29	158	273·0	256·8	+16·8	+64·2
243·361 C	20	228	37	422	271·5	255·2	+16·2	+75·7
Means ..	..	..	29	169	273·24	257·14	+17·47	..

Group 8257.—September 16–29. A very large stream of normal type, but in which the leader, *a*, is exceptionally large if not quite of regular formation. The train has disappeared when the group has reached the west limb.

258·561 G	16	162	(85	862	269·0	237·5	+13·8)*	−86·1
259·361 C	86	665	158	1480	266·3	234·7	+14·0	−78·3
260·311 C	154	1407	172	1687	265·8	234·0	+14·6	−66·2
261·356 C	302	1996	240	1622	265·8	233·9	+14·6	−52·4
262·339 C	308	2476	195	1600	266·2	234·2	+14·4	−39·1
263·403 G	373	2873	206	1605	266·4	234·3	+14·5	−24·8
264·339 C	422	3159	219	1638	267·0	234·8	+14·7	−11·9
265·444 C	379	3091	193	1574	267·2	234·8	+14·8	+ 2·9
266·402 G	495	3094	259	1622	267·0	234·5	+14·7	+15·4
267·430 G	411	2697	239	1552	267·2	234·6	+14·4	+29·1
268·356 C	245	1644	170	1125	268·5	235·8	+14·6	+42·7
269·341 C	165	1210	150	1089	268·8	235·9	+14·8	+56·0
270·367 C	88	609	129	878	269·7	236·7	+15·2	+70·4
271·394 G	37	210	141	802	269·9	236·8	+15·0	+84·1
Means ..	..	..	190	1406	267·37	235·00	+14·64	..

Spot *a*.

259·361 C	84	526	148	926	269·9	239·0	+14·1	−74·7
260·311 C	129	979	134	1018	270·0	239·0	+14·4	−62·0
261·356 C	213	1227	158	908	270·2	239·1	+14·6	−48·0
262·339 C	242	1540	148	939	270·3	239·1	+14·6	−35·0
263·403 G	263	1705	142	921	270·7	239·4	+14·8	−20·5
264·339 C	317	2015	162	1028	270·5	239·0	+14·8	− 8·4
265·444 C	253	2024	129	1032	270·6	239·0	+15·0	+ 6·3

Group 8257—*continued.*

1917. d					°	°	°	°
266·402 G	318	1804	169	956	270·4	238·7	+15·0	+18·8
267·430 G	308	1681	182	992	270·1	238·3	+15·0	+32·0
268·356 C	200	1177	140	824	270·2	238·3	+15·3	+44·4
269·341 C	147	902	135	830	270·4	238·4	+15·1	+57·6
270·367 C	85	549	125	807	270·6	238·4	+15·3	+71·3
271·394 G	37	210	141	802	269·9	237·6	+15·0	+84·1

Group 8290.—October 14–26. A very large regular spot (*a* of Group 8257). There are a few companions, but they are insignificant until October 22, when some larger ones form northwards.

286·181 D	66	224	158	538	271·7	225·1	+13·1	−79·0
287·461 G	92	459	96	477	271·9	225·0	+12·8	−61·9
288·377 C	118	618	91	476	272·0	225·0	+12·6	−49·7
289·332 C	113	750	71	473	272·1	224·9	+12·4	−37·0
290·325 C	141	823	77	452	272·1	224·8	+12·4	−23·9
291·432 G	152	873	78	445	272·0	224·5	+11·9	− 9·4
292·416 G	156	878	78	439	272·1	224·4	+11·9	+ 3·7
293·370 C	119	877	62	456	272·2	224·4	+12·1	+16·4
294·321 C	144	820	82	468	272·1	224·1	+12·3	+29·0
295·424 G	150	803	103	552	271·8	223·6	+12·2	+43·0
296·415 G	84	568	76	504	271·5	223·2	+11·9	+55·8
297·321 C	50	354	67	468	272·1	223·6	+11·9	+68·4
298·598 G	9	69	66	508	274·1	225·4	+11·6	+87·2
Means ..	..	..	85	481	272·13	224·46	+12·24	..

Group 8316.—November 9–22. A stream of normal type. The rear spot has broken up by November 12 into a cluster, which lasts until November 17; the leader persists as a regular spot.

312·473 G	13	36	(79	220	278·2	231·0	+12·8)*	−85·7
313·325 C	22	151	41	296	277·0	229·7	+12·7	−75·7
314·324 C	45	292	49	318	276·8	229·3	+12·6	−62·7
315·372 C	51	444	39	344	276·1	228·5	+12·7	−49·6
316·335 C	74	442	46	280	276·0	228·2	+12·5	−37·0
317·322 C	79	493	43	270	277·3	229·4	+12·5	−22·7
318·395 C	68	653	35	335	277·1	229·0	+13·1	− 8·8
319·337 C	78	544	40	278	277·4	229·2	+12·8	+ 3·9
320·315 C	77	584	41	309	278·1	229·7	+12·8	+17·5
321·408 C	58	546	35	328	278·4	229·9	+13·3	+32·2
322·338 C	34	349	24	248	278·2	229·5	+13·3	+44·3
323·342 C	29	209	27	196	278·1	229·3	+13·3	+57·4
324·349 C	13	137	20	206	277·8	228·8	+13·7	+70·4
325·326 C	6	45	23	172	277·2	228·1	+14·1	+82·7
Means ..	..	..	36	275	277·35	229·12	+13·03	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

RECURRENT SERIES **818.**

Group 8232 seen in Rotation 855.
„ 8263 „ „ 856.

Group 8232.—September 1–2. Two or three very small spots.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
243·361 C	10	32	8	27	246·9	194·6	− 8·1	+51·1
244·475 G	2	6	3	8	246·4	193·8	− 8·5	+65·3
Means ..	..	..	5	17	246·65	194·20	− 8·30	..

Group 8263.—September 19–30. A stream of spots, apparently developing at the east limb. The leader and rear spots are both very composite. The latter soon breaks up, but is represented by a small spot on September 30. The companion spots are few and very small. A revival or return of Group 8232.

261·356 C	6	69	11	111	248·2	189·1	− 7·5	−70·0
262·339 C	46	251	43	238	249·4	190·1	− 7·4	−55·9
263·403 G	99	680	68	471	250·6	191·1	− 7·0	−40·6
264·339 C	60	683	36	400	250·8	191·1	− 6·8	−28·1
265·444 C	75	702	40	371	251·7	191·7	− 6·9	−12·6
266·402 G	66	372	34	194	252·1	191·9	− 7·1	+ 0·5
267·430 G	59	378	31	203	254·0	193·6	− 6·9	+15·9
268·356 C	50	259	30	153	255·6	195·0	− 7·4	+29·8
269·341 C	53	254	37	183	256·5	195·6	− 7·4	+43·7
270·367 C	34	136	33	128	255·8	194·7	− 7·1	+56·5
271·394 G	0	7	0	12	257·8	196·5	− 8·0	+72·0
272·423 C	0	9	0	24	250·4	188·8	− 6·8	+78·2
Means ..	..	..	30	207	252·74	192·43	− 7·19	..

RECURRENT SERIES **819.**

Group 8249 seen in Rotation 855.
„ 8276 „ „ 856.

Group 8249.—September 12–15. A stream of spots quickly forming, but apparently dispersing on September 15, with the exception of the leading and rear spots.

254·359 G	57	172	40	122	83·1	112·1	−24·5	+32·5
255·356 C	100	506	89	448	83·8	112·9	−24·7	+46·4
256·420 G	34	251	45	346	85·9	115·1	−24·7	+62·5
257·378 G	16	89	44	253	86·0	115·3	−25·0	+75·3
Means ..	..	..	54	292	84·70	113·85	−24·72	..

Group 8276.—October 1–7. A small spot with a few companions.

273·430 G	0	13	0	39	82·5	107·9	−24·3	−76·4
274·498 G	12	43	17	61	81·1	106·6	−23·7	−63·6
275·360 C	15	85	15	86	80·3	105·9	−24·0	−53·1

Group 8276—*continued.*

1917. d					°	°	°	°
276·357 C	13	164	9	125	80·3	106·0	−23·5	−40·0
277·362 C	11	107	7	70	79·7	105·5	−23·7	−27·3
278·529 G	10	53	6	31	79·1	105·0	−24·1	−12·5
279·427 C	4	22	2	13	79·0	105·0	−24·6	− 0·8
Means ..	..	..	8	61	80·29	105·99	−23·99	..

RECURRENT SERIES **820.**

Group 8256 seen in Rotation 856.
„ 8289 „ „ 857.
„ 8315 „ „ 858.

Group 8256.—September 16–28. At first a long, irregular stream led by a large composite spot, *a*. Later, *a* becomes regular, and a cluster of spots at the rear of the stream changes into a composite spot; the stream thus becomes one of normal type.

258·561 G	2	6	6	19	276·3	234·9	−13·1	−78·8
259·361 C	23	163	31	243	276·9	235·4	−12·7	−67·7
260·311 C	57	267	54	246	278·5	236·9	−12·2	−53·5
261·356 C	123	613	84	427	279·0	237·2	−12·1	−39·2
262·339 C	179	1062	105	624	280·5	238·5	−12·1	−24·8
263·403 G	169	1174	90	626	281·1	239·0	−12·2	−10·1
264·339 C	146	1407	77	745	280·5	238·2	−12·2	+ 1·6
265·444 C	141	1693	78	941	281·2	238·7	−11·9	+16·9
266·402 G	253	1441	156	883	281·0	238·4	−12·5	+29·4
267·430 G	183	1087	141	819	282·5	239·7	−12·7	+44·4
268·356 C	119	724	123	748	283·5	240·6	−12·7	+57·7
269·341 C	76	418	137	774	284·7	241·6	−13·0	+71·9
270·367 C	10	48	(25	143	277·7	234·4	−11·7)*	+78·4
Means ..	..	..	90	591	280·48	238·26	−12·45	..

Spot *a*.

259·361 C	19	83	24	107	280·0	239·5	−13·0	−64·6
260·311 C	24	156	20	133	281·6	241·0	−12·6	−50·4
261·356 C	58	264	38	174	282·6	241·8	−13·0	−35·6
262·339 C	98	561	56	320	283·8	242·9	−12·8	−21·5
263·403 G	93	603	49	320	284·6	243·5	−12·7	− 6·6
264·339 C	107	616	57	326	285·0	243·8	−12·1	+ 6·1
265·444 C	85	820	48	467	285·2	243·8	−12·0	+20·9
266·402 G	146	733	93	469	285·7	244·1	−12·4	+34·1
267·430 G	148	691	118	553	286·0	244·3	−12·7	+47·9
268·356 C	84	512	93	568	286·3	244·4	−13·0	+60·5
269·341 C	55	328	111	663	286·3	244·3	−13·0	+73·5

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

RECURRENT SERIES **820**—*continued.*

Group 8289.—October 13–25. A very large regular spot (*a* of Group 8256), which is breaking into two portions on October 21; the *s f* and smaller portion rapidly disappears, whilst the other regains a regular outline.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
285·499 G	42	253	77	464	287·6	243·9	−13·3	−72·1
286·181 D	85	383	107	479	286·7	242·9	−13·3	−64·0
287·461 G	104	548	81	427	287·0	243·0	−13·0	−46·8
288·377 C	128	678	83	441	286·9	242·8	−13·0	−34·8
289·332 C	87	743	50	424	286·5	242·2	−13·1	−22·6
290·325 C	116	761	61	404	286·7	242·3	−13·0	− 9·3
291·432 G	110	723	58	383	286·4	241·8	−13·1	+ 5·0
292·416 G	115	707	64	396	286·6	241·9	−13·0	+18·2
293·370 C	76	564	47	349	286·9	242·0	−12·7	+31·1
294·321 C	67	440	48	319	286·6	241·6	−13·0	+43·3
295·424 G	54	272	55	276	287·0	241·8	−12·4	+58·2
296·415 G	29	171	50	296	287·1	241·7	−12·5	+71·4
297·321 C	4	33	21	176	287·1	241·6	−11·9	+83·4
Means ..	..	..	62	372	286·85	242·27	−12·87	..

Group 8315.—November 9–21. A regular spot, which is very stable until November 19, when it begins to disappear rapidly. Three very small companions appear *s* on November 15.

312·373 G	12	54	25	113	288·5	223·8	− 9·7	−75·4
313·325 C	19	153	22	181	288·7	223·8	− 9·3	−64·0
314·324 C	34	178	28	146	288·2	223·1	− 9·3	−51·3
315·272 C	34	219	22	142	287·6	222·3	− 9·1	−38·1
316·335 C	32	250	18	143	287·3	221·8	− 9·0	−25·7
317·322 C	32	256	17	133	287·4	221·7	− 9·1	−12·6
318·395 C	38	271	20	138	287·3	221·4	− 9·3	+ 1·4
319·337 C	31	231	16	122	287·4	221·3	− 9·0	+13·9
320·315 C	34	218	19	124	287·3	221·0	− 9·0	+26·7
321·408 C	18	171	12	116	287·9	221·3	− 8·6	+41·7
322·338 C	12	132	10	115	287·8	221·1	− 8·5	+53·9
323·342 C	5	35	7	47	288·2	221·3	− 8·3	+67·5
324·349 C	0	14	0	46	288·2	221·1	− 8·6	+80·8
Means ..	..	..	17	120	287·83	221·92	− 8·98	..

RECURRENT SERIES **821.**

Group 8259 seen in Rotation 856.
,, 8285 ,, ,, 857.

Group 8259.—September 17–26. An insignificant stream until September 25, when the component spots are growing considerably.

259·361 C	3	18	2	13	298·1	255·3	+11·9	−46·5
260·311 C	16	51	10	31	298·2	255·3	+12·2	−33·8
261·356 C	8	31	4	17	295·4	252·3	+12·7	−22·8
262·339 C	4	39	2	20	298·7	255·4	−11·9	− 6·6
263·403 G	8	64	4	32	301·0	257·5	−11·9	+ 9·8

Group 8259—*continued.*

1917·d					°	°	°	°
264·339 C	15	62	8	34	300·9	257·3	+12·1	+22·0
265·444 C	43	199	27	126	302·0	258·2	+12·3	+37·7
266·402 G	40	165	31	130	302·7	258·7	+12·1	+51·1
267·430 G	31	153	35	166	301·1	257·0	+11·9	+63·0
268·356 C	10	136	24	270	302·3	258·0	+12·4	+76·5
Means ..	..	..	15	84	300·04	256·50	+12·14	..

Group 8285.—October 11–14. Two small spots closely following Group 8283.

283·355 C	0	19	0	52	307·4	266·9	+13·4	−80·5
284·350 C	0	8	0	10	306·9	266·2	+13·3	−67·9
285·499 G	0	6	0	5	307·5	266·7	+13·6	−52·2
286·181 D	0	11	0	8	306·9	266·0	+13·6	−43·8
Means ..	..	..	0	19	307·18	266·45	+13·47	..

RECURRENT SERIES **822.**

Group 8270 seen in Rotation 856.
,, 8297 ,, ,, 857.

Group 8270.—September 25–October 7. A large spot of regular type but with composite umbra. A few very small spots usually follow. Two of these on October 5 grow very considerably on the two succeeding days, at the same time that Group 8272 is also showing increased activity.

267·430 G	12	72	28	166	163·4	143·9	−16·4	−74·7
268·356 C	23	199	28	250	162·7	143·1	−16·8	−63·1
269·341 C	26	310	23	267	162·7	143·0	−17·0	−50·1
270·367 C	51	358	36	244	163·2	143·5	−17·1	−36·1
271·394 G	49	383	29	226	163·6	143·8	−16·8	−22·2
272·423 C	51	426	28	234	163·8	143·9	−17·1	− 8·4
273·430 G	96	544	53	299	163·6	143·6	−16·8	+ 4·7
274·498 G	99	589	58	343	163·3	143·3	−17·7	+18·6
275·360 C	72	573	46	365	163·1	143·0	−17·4	+29·7
276·357 C	27	381	21	288	163·2	143·0	−17·5	+42·9
277·362 C	69	362	67	364	162·8	142·6	−17·5	+55·8
278·529 G	52	397	80	622	159·9	139·6	−17·8	+68·3
279·427 C	32	257	110	1051	159·4	139·0	−17·6	+79·6
Means ..	..	..	47	363	162·67	142·72	−17·19	..

Group 8297.—October 22–31. A composite spot becoming a cluster on October 26, which is soon disappearing.

294·321 C	12	86	41	295	163·6	135·0	−16·2	−79·7
295·424 G	22	202	30	275	162·9	134·2	−15·9	−65·9
296·415 G	24	268	22	244	162·4	133·6	−15·9	−53·3

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

RECURRENT SERIES **822.** Group 8297—*continued.*

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917·d					°	°	°	°
297·321 C	13	351	9	253	162·6	133·8	−16·1	−41·1
298·598 G	12	444	7	262	161·9	132·9	−16·2	−25·0
299·428 G	24	303	13	167	162·0	133·0	−16·0	−14·0
300·450 C	19	162	10	86	162·3	133·2	−16·1	− 0·2
301·337 C	13	61	7	34	162·7	133·5	−15·9	+11·9
302·543 C	0	22	0	13	160·5	131·1	−15·3	+25·6
303·472 G	4	13	3	9	162·9	133·5	−16·4	+40·3
Means ..	..	..	14	164	162·38	133·38	−16·00	..

RECURRENT SERIES **823.**

Group 8272 seen in Rotation 856.
,, 8299 ,, ,, 857.

Group 8272.—September 30–October 8. A group of small spots *f* Group 8270. Two larger spots appear on October 5, but they are apparently unstable.

272·423 C	3	12	2	7	150·0	136·1	−17·1	−22·2
273·430 G	2	18	1	10	149·9	136·0	−16·8	− 9·0
274·498 G	13	42	7	23	149·4	135·4	−16·8	+ 4·7
275·360 C	14	30	8	17	149·0	135·0	−16·8	+15·6
276·357 C	2	21	1	13	150·3	136·2	−17·1	+30·0
277·362 C	27	144	21	114	151·0	136·8	−19·8	+44·0
278·529 G	29	175	32	199	150·8	136·6	−20·5	+59·2
279·427 C	9	103	18	219	151·9	137·7	−20·5	+72·1
280·314 C	0	14	(0	46	146·5	132·2	−19·6)*	+78·4
Means ..	..	..	11	75	150·29	136·22	−18·18	..

Group 8299.—October 23–November 2. A group in the same general area of faculæ as Group 8297. A cluster of spots developing from a large composite spot at the east limb. The characteristic feature of the cluster is the three small regular spots arranged as the apices of an equilateral triangle.

295·424 G	25	296	42	526	158·3	159·5	−20·7	−70·5
296·415 C	70	396	72	425	158·4	159·6	−20·7	−57·3
297·321 C	67	437	52	348	158·8	160·0	−20·9	−44·9
298·598 G	69	545	44	343	158·8	160·0	−20·5	−28·1
299·428 G	80	510	46	297	158·7	159·9	−20·4	−17·3
300·450 C	64	439	35	245	158·7	159·9	−20·6	− 3·8
301·337 C	53	419	30	234	158·9	160·1	−20·7	+ 8·1
302·543 C	45	209	27	126	158·9	160·1	−20·4	+24·0
303·472 G	34	130	24	89	158·6	159·8	−20·3	+36·0
304·316 C	17	64	14	52	158·7	159·9	−20·4	+47·2
305·498 C	7	35	9	44	158·6	159·8	−20·6	+62·7
Means ..	..	..	36	248	158·67	159·87	−20·56	..

RECURRENT SERIES **824.**

Group 8302 seen in Rotation 857.
,, 8323 ,, ,, 858.

Group 8302.—October 28–November 2. A small regular spot with companions to the south.

1917. d					°	°	°	°
300·450 C	17	79	9	41	167·9	107·5	− 9·7	+ 5·4
301·337 C	21	151	11	82	168·7	108·1	− 8·8	+17·9
302·543 C	53	149	34	95	169·8	109·0	− 9·9	+34·9
303·472 G	26	120	21	93	170·5	109·5	− 9·5	+47·9
304·316 C	6	49	6	50	170·9	109·7	− 9·3	+59·4
305·498 C	0	4	0	9	172·6	111·2	− 9·6	+76·7
Means ..	..	..	14	62	170·07	109·17	− 9·47	..

Group 8323.—November 18–25. A small regular spot, followed at some distance by several small companions, which die out by November 25. A revival or a return of Group 8302.

321·408 C	11	76	16	135	173·4	106·6	− 9·1	−72·8
322·338 C	13	153	13	160	173·4	106·4	− 8·7	−60·5
323·342 C	15	112	11	84	173·4	106·2	− 8·8	−47·3
324·349 C	21	148	13	88	176·4	108·9	− 9·0	−31·0
325·326 C	36	141	20	78	173·8	106·1	− 8·5	−20·7
326·497 G	26	65	13	34	174·3	106·4	− 8·5	− 4·8
327·553 C	6	63	3	33	174·5	106·4	− 8·5	+ 9·3
328·139 D	6	19	3	10	180·3	112·1	−10·2	+22·9
Means ..	..	..	11	78	174·94	107·39	− 8·91	..

RECURRENT SERIES **825.**

Group 8307 seen in Rotation 857.
,, 8334 ,, ,, 858.

Group 8307.—November 1–11. Revival of Group 8286. Intermittent. A very small spot seen on November 1 and 3. On November 5, a stream, which is approximately of normal type, develops rapidly. By November 9, however, it has changed considerably, though it is apparently reverting to the normal type on November 11. The original leader, *a*, which is a small regular spot is the only component which can be traced throughout.

304·316 C	0	2	0	2	52·9	346·3	+ 9·1	−58·6
305·498 C	0	0	0	0	..	..	..	..
306·398 C	0	4	0	2	53·5	346·4	+ 9·1	−30·5
307·488 G	0	0	0	0	..	..	..	..
308·537 C	55	334	28	168	53·0	345·4	+ 8·5	− 2·8
309·346 C	121	499	61	253	53·2	345·4	+ 8·2	+ 8·0
310·332 C	104	621	56	336	53·3	345·3	+ 8·2	+21·1
311·352 C	108	567	68	352	55·0	346·8	+ 7·4	+36·3
312·473 G	73	567	61	471	56·4	348·0	+ 6·6	+52·5
313·325 C	41	345	51	410	57·9	349·3	+ 6·7	+64·5
314·324 C	21	206	49	526	58·4	349·6	+ 6·7	+78·9
Means ..	..	..	34	229	54·84	346·94	+ 7·83	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

Date. G.M.T. (Civil) Place.	Projected Area.		Corrected Area.		Longitude.		Latitude.	Long. from C.M.
	Umbræ.	Whole Spots.	Umbræ.	Whole Spots.	System I.	System II.		
RECURRENT SERIES 825. Group 8307—*continued.*								
Spot *a*.								
1917. d					°	°	°	°
309·346 C	48	186	24	95	56·8	346·3	+ 7·7	+11·6
310·332 C	31	214	17	120	58·3	347·5	+ 7·1	+26·1
311·352 C	48	212	32	140	59·6	348·6	+ 7·1	+40·9
312·473 G	42	213	37	194	60·6	349·4	+ 6·6	+56·7
313·325 C	20	102	28	143	62·1	350·7	+ 6·6	+69·4
314·324 C	7	80	25	289	61·8	350·1	+ 6·2	+82·3
Group 8334.—November 26–December 6. A large spot (probably *a* of Group 8307), which divides on November 28, and so gradually dies out.								
329·466 C	12	123	22	228	65·5	348·1	+ 6·5	−74·4
330·425 G	16	173	17	184	65·3	347·7	+ 6·6	−62·0
331·390 C	27	177	21	135	65·8	347·9	+ 6·3	−48·8
332·323 C	32	170	20	107	65·7	347·6	+ 6·4	−36·6
333·337 C	30	101	17	56	65·8	347·5	+ 6·3	−23·1
334·406 C	29	102	15	52	65·8	347·2	+ 6·4	− 9·0
335·498 C	11	74	5	37	66·0	347·2	+ 6·3	+ 5·6
336·325 C	24	42	12	22	65·8	346·8	+ 6·1	+16·3
337·441 G	10	18	6	10	65·7	346·4	+ 5·3	+30·9
338·324 C	6	13	4	9	66·4	346·9	+ 5·3	+43·2
339·355 C	3	7	3	7	66·8	347·0	+ 5·2	+57·2
Means ..	..	..	13	77	65·87	347·30	+ 6·06	..
RECURRENT SERIES 826.								
Group 8317 seen in Rotation 858.								
,, 8348 ,, ,, 859.								
Group 8317.—November 13–20. A stream of spots developing from two small faint markings on November 13. The only important member is the leader, *a*, a regular spot which has completely formed by November 16.								
316·335 C	1	19	1	10	296·8	228·5	+ 9·5	−16·2
317·322 C	19	72	10	36	298·7	230·2	+ 8·9	− 1·3
318·395 C	19	151	10	78	299·1	230·3	+ 9·1	+13·2
319·337 C	34	258	20	148	301·3	232·3	+ 8·5	+27·8
320·315 C	40	361	27	244	302·4	233·2	+ 7·2	+41·8
321·408 C	71	440	65	404	303·3	233·9	+ 7·3	+57·1
322·338 C	55	341	79	474	302·5	232·9	+ 7·4	+68·6
323·342 C	14	115	54	424	302·9	233·1	+ 7·3	+82·2
Means ..	..	..	33	227	300·88	231·80	+ 8·15	..

Date. G.M.T. (Civil) Place.	Projected Area.		Corrected Area.		Longitude.		Latitude.	Long. from C.M.
	Umbræ.	Whole Spots.	Umbræ.	Whole Spots.	System I.	System II.		
Group 8317—*continued.*								
Spot *a*.								
1917. d					°	°	°	°
317·322 C	6	38	3	19	300·5	230·4	+ 9·1	+ 0·5
318·395 C	7	63	4	33	302·2	231·8	+ 8·9	+16·3
319·337 C	22	179	13	104	302·8	232·2	+ 8·0	+29·3
320·315 C	35	283	24	195	303·7	232·9	+ 7·1	+43·1
321·408 C	55	314	52	298	304·5	233·5	+ 6·8	+58·3
322·338 C	48	250	71	370	304·4	233·2	+ 6·8	+70·5
323·342 C	12	88	49	358	303·6	232·1	+ 7·1	+82·9
Group 8348, December 5–17. A large stable regular spot (*a* of Group 8317), with occasional very small followers.								
338·324 C	22	137	47	292	306·9	232·1	+ 6·8	−76·3
339·355 C	59	292	66	327	306·2	231·2	+ 7·2	−63·4
340·387 C	65	424	51	331	306·3	231·1	+ 7·5	−49·7
341·330 C	80	485	50	306	306·3	230·9	+ 7·4	−37·3
342·458 C	103	589	57	324	306·1	230·4	+ 7·3	−22·6
343·347 C	111	622	57	317	306·3	230·4	+ 7·5	− 10·7
344·614 C	102	595	52	303	306·2	230·0	+ 7·5	+ 5·9
345·344 C	96	621	51	329	306·5	230·2	+ 7·7	+15·8
346·342 C	101	551	59	320	306·5	230·0	+ 7·8	+28·9
347·365 C	75	466	52	322	306·8	230·0	+ 8·0	+42·7
348·488 G	66	341	63	324	306·9	229·9	+ 8·0	+57·6
349·454 C	33	218	49	323	306·5	229·3	+ 8·0	+69·9
350·459 C	11	51	45	208	306·0	228·5	+ 8·3	+82·7
Means ..	..	..	54	310	306·42	230·31	+ 7·62	..
RECURRENT SERIES 827.								
Group 8328 seen in Rotation 858.								
,, 8370 ,, ,, 859.								
Group 8328.—November 23–December 5. A small irregular stream developing rapidly after November 25, when a large spot, *a*, appears at the head. By November 29 another large spot, *b*, has formed, being represented earlier by a cluster of indefinite spots. The stream is now roughly of normal type, though the attendant spots are few and very small. Groups 8327, 8328, and 8333 constitute a procession of activity.								
326·497 G	0	5	0	9	106·2	72·2	−16·5	−72·9
327·553 C	8	65	9	76	102·6	68·5	−15·5	−62·6
328·139 D	27	152	25	136	103·6	69·5	−15·2	−53·8
329·466 C	127	737	79	453	108·5	74·2	−15·8	−31·4
330·425 G	111	1064	62	587	108·5	74·1	−15·7	−18·8
331·390 C	199	1175	105	617	108·1	73·6	−15·9	− 6·5
332·323 C	260	1861	137	978	108·1	73·5	−15·9	+ 5·8
333·337 C	217	1936	120	1066	108·1	73·4	−15·8	+19·2
334·406 C	231	1881	146	1177	107·7	72·9	−15·7	+32·9
335·498 C	191	1553	147	1197	107·8	72·9	−15·3	+47·4

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued*.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
RECURRENT SERIES 827. Group 8328—*continued*.								
1917. d					°	°	°	°
336·325 C	140	1059	134	1037	107·3	72·3	−15·2	+57·8
337·441 G	68	503	121	879	107·4	72·3	−15·5	+72·6
338·324 C	15	223	(43	658	102·9	67·7	−15·5)*	+79·7
Means ..	..	..	90	684	106·99	72·45	−15·67	..
Spot *a*.								
329·466 C	76	418	46	251	110·6	72·7	−15·4	−29·3
330·425 G	64	448	35	242	111·1	73·1	−15·2	−16·2
331·390 C	80	566	42	294	111·3	73·2	−15·5	− 3·3
332·323 C	120	973	64	516	111·1	72·9	−15·3	+ 8·8
333·337 C	119	1056	67	591	111·1	72·8	−15·2	+22·2
334·406 C	151	906	98	589	111·4	72·9	−15·0	+36·6
335·498 C	101	864	83	708	111·1	72·5	−14·8	+50·7
336·325 C	50	424	55	466	111·4	72·7	−14·5	+61·9
337·441 G	30	206	68	464	111·4	72·6	−14·8	+76·6
Spot *b*.								
330·425 G	36	432	20	242	106·3	76·2	−16·5	−21·0
331·390 C	81	479	43	254	105·5	75·3	−17·0	− 9·1
332·323 C	135	865	70	450	104·9	74·7	−16·4	+ 2·6
333·337 C	98	880	53	475	104·4	74·1	−16·6	+15·5
334·406 C	74	837	44	502	103·5	73·1	−16·5	+28·7
335·498 C	90	689	64	489	103·3	72·8	−16·0	+42·9
336·325 C	90	472	79	415	103·0	72·4	−15·9	+53·5
337·441 G	35	264	48	362	102·4	71·7	−16·4	+67·6
338·324 C	14	200	38	548	102·1	71·3	−15·6	+78·9
Group 8370, December 19–31. A very large regular spot, probably *a* of Group 8328, gradually diminishing. A small cluster appears *s* of it on December 29. Groups 8372 and 8376 are evidently closely associated with this group.								
352·411 C	20	108	76	413	115·0	59·0	−13·2	−82·6
353·426 C	45	282	65	406	114·7	58·5	−13·0	−69·5
354·318 C	60	396	57	376	114·7	58·4	−13·0	−57·8
355·330 C	95	593	67	421	114·5	58·0	−12·9	−44·7
356·455 C	100	638	58	370	115·0	58·3	−12·6	−29·3
357·321 C	105	612	56	324	115·2	58·4	−12·4	−17·7
358·405 C	116	596	59	304	115·5	58·5	−12·3	− 3·2
359·359 C	89	515	45	263	115·8	58·7	−12·1	+ 9·7
360·373 C	81	556	45	295	115·9	58·6	−12·1	+23·2
361·348 C	70	394	44	248	116·2	58·8	−12·0	+36·3
362·324 C	77	396	59	302	116·3	58·7	−12·5	+49·3
363·400 C	39	251	43	279	116·0	58·2	−12·1	+63·1
364·351 C	14	140	29	287	116·5	58·6	−12·2	+76·2
Means ..	..	..	54	330	115·48	58·52	−12·49	..

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
RECURRENT SERIES 828.								
Group 8332 seen in Rotation 858.								
,, 8360 ,, ,, 859.								
Group 8332.—November 26–29. A few spots appearing in the same area of faculæ as Group 8326, when that group is disappearing. A small regular spot has developed near the west limb on November 29.								
1917. d					°	°	°	°
329·466 C	2	8	1	6	182·7	195·5	+22·0	+42·8
330·425 G	3	91	3	82	180·9	193·8	+22·2	+53·6
331·390 C	4	42	6	57	181·3	194·2	+21·8	+66·7
332·323 C	4	37	12	112	182·6	195·6	+21·8	+80·3
Means ..	..	..	5	64	181·88	194·78	+21·95	..
Group 8360.—December 14–22. A small regular spot disappearing after December 19, on which day two small companions appear *f* it.								
347·365 C	2	20	8	81	182·1	179·7	+20·6	−82·0
348·488 G	5	48	8	72	180·6	178·2	+20·5	−68·7
349·454 C	7	65	7	63	180·6	178·2	+20·4	−56·0
350·459 C	9	95	7	70	180·1	177·7	+20·2	−43·2
351·323 C	15	55	10	35	179·8	177·3	+20·1	−32·1
352·411 C	14	55	8	32	175·9	173·4	+20·4	−21·7
353·426 C	6	15	3	8	174·7	172·2	+19·6	− 9·5
354·318 C	8	19	4	10	175·9	173·4	+19·8	+ 3·4
355·330 C	4	7	2	4	175·1	172·6	+19·3	+15·9
Means ..	..	..	6	42	178·31	175·86	+20·10	..
RECURRENT SERIES 829.								
Group 8337 seen in Rotation 858.								
,, 8366 ,, ,, 859.								
,, 8401 ,, ,, 860.								
Group 8337.—November 28–December 4. Two large regular spots, *a* and *b*, of rapid growth from several minute spots on November 28; *n* Group 8327.								
331·390 C	4	28	2	14	119·4	45·5	− 7·2	+ 4·8
332·323 C	27	87	14	46	119·4	45·3	− 7·5	+17·1
333·337 C	45	392	27	232	120·6	46·3	− 7·7	+31·7
334·406 C	112	806	84	596	122·6	48·0	− 7·5	+47·8
335·498 C	82	652	91	694	122·0	47·2	− 7·5	+61·6
336·325 C	23	350	39	604	123·4	48·4	− 7·4	+73·9
337·441 G	5	39	(18	140	117·6	42·4	− 8·7)*	+82·8
Means ..	..	..	43	364	121·23	46·78	− 7·47	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
RECURRENT SERIES 829. Group 8337—*continued.*								
Spot *a*.								
1917. d					°	°	°	°
332·323 C	2	13	1	7	121·3	44·2	− 6·2	+19·0
333·337 C	30	233	18	140	122·0	44·7	− 7·4	+33·1
334·406 C	87	456	67	351	124·0	46·4	− 6·6	+49·2
335·498 C	52	286	62	343	125·6	47·8	− 6·0	+65·2
336·325 C	8	138	18	305	126·3	48·3	− 5·9	+76·8
Spot *b*.								
332·323 C	12	52	6	28	118·5	48·7	− 8·2	+16·2
333·337 C	15	159	9	92	118·5	48·5	− 8·3	+29·6
334·406 C	25	350	17	245	118·2	48·0	− 8·9	+43·4
335·498 C	30	366	29	351	118·4	47·9	− 8·9	+58·0
336·325 C	15	196	21	274	118·3	47·7	− 9·1	+68·8
337·441 G	5	39	18	140	117·6	46·7	− 8·7	+82·8
Group 8366.—December 18–30. A stable circular spot, evidently *a* of Group 8337.								
351·323 C	13	73	45	250	130·1	47·9	− 6·1	−81·8
352·411 C	30	188	40	250	129·7	47·2	− 6·2	−67·9
353·426 C	40	251	35	218	129·3	46·6	− 6·1	−54·9
354·318 C	53	311	36	211	129·5	46·6	− 6·0	−43·0
355·330 C	55	362	32	210	129·4	46·3	− 6·0	−29·8
356·455 C	61	439	32	239	129·6	46·2	− 6·0	−14·7
357·321 C	76	401	38	200	129·4	45·8	− 6·1	− 3·5
358·405 C	60	385	31	196	129·8	45·9	− 6·2	+11·1
359·359 C	51	327	28	180	130·0	45·9	− 6·4	+23·9
360·373 C	53	308	33	194	130·1	45·8	− 6·3	+37·4
361·348 C	30	243	24	192	130·6	46·0	− 6·2	+50·7
362·324 C	22	166	24	184	130·4	45·6	− 6·4	+63·4
363·400 C	19	92	42	203	130·0	45·0	− 6·2	+77·1
Means ..	..	..	34	210	129·84	46·22	− 6·17	..
Group 8401.—1918 January 14–26. A small but stable regular spot, *a* (evidently *a* of Group 8337), followed by a small cluster until January 20, and then by a single small spot until January 23. On the same meridian as Groups 8400, 8402, and 8404.								
378·349 C	3	26	(10	89	134·0	50·0	− 6·4)*	−82·0
379·310 C	12	73	20	117	130·9	46·7	− 8·3	−72·4
380·314 C	33	180	34	178	131·0	46·6	− 8·5	−59·1
381·353 C	39	232	28	162	132·1	47·4	− 7·9	−44·3
382·344 C	38	228	23	136	131·1	46·2	− 8·0	−32·3
383·329 C	63	236	34	125	131·6	46·5	− 7·9	−18·8
384·485 C	31	217	15	109	131·8	46·5	− 8·2	− 3·4

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8401—*continued.*								
1917. d					°	°	°	°
385·456 G	41	172	21	87	133·2	47·6	− 7·5	+10·8
386·351 C	18	129	10	69	133·3	47·5	− 7·0	+22·7
387·373 C	21	120	13	75	133·8	47·8	− 6·9	+36·6
388·479 G	22	76	18	61	134·4	48·2	− 7·4	+51·8
389·319 C	16	70	17	76	134·8	48·4	− 6·8	+63·2
390·344 C	4	26	8	54	134·8	48·1	− 6·4	+76·7
Means ..	..	..	20	104	132·73	47·29	− 7·57	..
Spot *a*.								
378·349 C	3	26	10	89	134·0	47·4	− 6·4	−82·0
379·310 C	8	52	11	72	134·0	47·1	− 6·6	−69·3
380·314 C	14	111	12	99	133·8	46·7	− 6·9	−56·3
381·353 C	24	183	16	124	133·7	46·4	− 7·1	−42·7
382·344 C	25	153	15	89	133·7	46·2	− 6·7	−29·7
383·329 C	36	164	19	85	133·7	45·9	− 6·8	−16·7
384·485 C	17	142	8	71	133·9	45·9	− 6·6	− 1·3
385·456 G	33	153	17	78	133·9	45·6	− 6·9	+11·5
386·351 C	15	117	8	63	133·8	45·3	− 6·7	+23·2
387·373 C	20	114	12	71	134·0	45·3	− 6·6	+36·8
388·479 G	22	76	18	61	134·4	45·4	− 7·4	+51·8
389·319 C	16	70	17	76	134·8	45·6	− 6·8	+63·2
390·344 C	4	26	8	54	134·8	45·4	− 6·4	+76·7
RECURRENT SERIES 830. Group 8340 seen in Rotation 858. ,, 8378 ,, ,, 859.								
Group 8340.—November 28–December 9. A small spot on November 28, which grows and becomes of regular type. Meanwhile a companion spot has developed 7° from it in longitude, but it is unstable, and after breaking up, it slowly disappears. Small companions appear on November 30, when the group is a short stream. A revival rather than a return of Group 8313.								
331·390 C	0	8	0	12	43·9	327·0	+ 6·3	−70·7
332·323 C	16	126	15	121	43·4	326·3	+ 6·2	−58·9
333·337 C	33	282	23	202	43·7	326·4	+ 6·6	−45·2
334·406 C	70	374	41	222	42·9	325·3	+ 6·5	−31·9
335·498 C	79	493	41	261	43·3	325·5	+ 6·5	−17·1
336·325 C	62	418	31	211	44·0	326·0	+ 6·6	− 5·5
337·441 G	50	285	25	146	45·2	326·9	+ 6·7	+10·4
338·324 C	37	253	20	138	46·0	327·5	+ 6·6	+22·8
339·355 C	35	226	21	142	45·7	327·0	+ 6·6	+36·1
340·387 C	23	151	18	119	46·0	327·1	+ 6·9	+50·0
341·330 C	8	71	9	82	48·0	328·8	+ 6·3	+64·4
342·458 C	4	30	11	82	48·0	328·6	+ 6·3	+79·3
Means ..	..	..	21	145	45·01	326·87	+ 6·51	..

LEDGER I.—AREAS and HELIOGRAPHIC POSITIONS of RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

RECURRENT SERIES **830**—*continued.*

Group 8378.—December 24–1918 January 5. A regular spot slowly contracting. There are a few companions from December 29–January 3. On the same meridian as Group 8377.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
357·321 C	6	69	22	249	51·2	330·4	+ 7·1	−81·7
358·405 C	26	181	36	248	51·0	330·0	+ 6·9	−67·7
359·359 C	35	236	31	208	51·4	330·2	+ 6·7	−54·7
360·373 C	58	316	39	215	51·3	329·9	+ 7·0	−41·4
361·348 C	49	371	28	215	51·6	329·9	+ 6·9	−28·3
362·324 C	60	374	32	198	51·6	329·7	+ 7·3	−15·4
363·400 C	50	380	25	194	51·6	329·5	+ 7·2	− 1·3
364·351 C	75	396	40	212	51·6	329·3	+ 7·1	+11·3
365·421 C	68	338	39	189	51·3	328·7	+ 7·7	+25·1
366·350 C	42	293	27	188	51·2	328·4	+ 7·4	+37·2
367·338 C	33	211	26	169	51·0	328·0	+ 7·4	+50·0
368·352 C	19	132	22	150	50·8	327·4	+ 6·9	+63·2
369·361 C	14	95	31	214	50·9	327·4	+ 7·1	+76·5
Means ..	..	..	31	204	51·27	329·14	+ 7·13	..

RECURRENT SERIES **831.**

Group 8353 seen in Rotation 859.
„ 8389 „ „ 860.

Group 8353.—December 11–20. A pair of widely separated spots, *a* and *b*, developing from two very small nuclei on December 11. The leader, *a*, is of regular type, and outlasts *b*, which has dwindled to a dot by December 19. A few small attendants are seen between the pair on December 13 and 14.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
344·614 C	7	26	4	18	257·4	177·1	+ 5·3	−42·9
345·344 C	12	81	7	50	257·4	176·9	+ 6·3	−33·3
346·342 C	88	435	47	235	257·2	176·5	+ 6·5	−20·4
347·365 C	100	894	50	450	257·9	177·0	+ 6·7	− 6·2
348·488 G	98	584	51	300	258·6	177·4	+ 6·1	+ 9·3
349·454 C	68	464	37	256	260·1	178·7	+ 6·3	+23·5
350·459 C	55	318	35	203	260·2	178·6	+ 6·3	+36·9
351·323 C	39	243	31	192	262·4	180·5	+ 6·4	+50·5
352·411 C	25	130	32	164	263·9	181·8	+ 6·6	+66·3
353·426 C	12	59	36	179	264·4	182·0	+ 6·5	+80·2
Means ..	..	..	33	205	259·95	178·65	+ 6·30	..

Group 8353—*continued.*

Spot *a.*

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
344·614 C	5	21	3	14	257·9	178·0	+ 5·3	−42·4
345·344 C	8	51	5	31	258·5	178·4	+ 6·6	−32·2
346·342 C	33	161	17	85	260·6	180·3	+ 7·0	−17·0
347·365 C	42	304	21	155	262·7	182·1	+ 7·0	− 1·4
348·488 G	42	285	22	148	263·7	182·9	+ 6·4	+14·4
349·454 C	41	267	23	152	264·2	183·1	+ 6·5	+27·6
350·459 C	36	183	24	123	264·3	183·0	+ 6·5	+41·0
351·323 C	30	180	25	149	264·6	183·1	+ 6·4	+52·7
352·411 C	25	119	32	154	264·5	182·7	+ 6·6	+66·9
353·426 C	12	59	36	179	264·4	182·4	+ 6·5	+80·2

Spot *b.*

344·614 C	2	5	1	4	255·2	174·2	+ 5·5	−45·1
345·344 C	4	30	2	19	255·5	174·4	+ 5·8	−35·2
346·342 C	46	237	25	130	254·8	173·4	+ 6·2	−22·8
347·365 C	50	368	25	188	254·4	172·8	+ 6·4	− 9·7
348·488 G	56	299	29	152	254·1	172·2	+ 5·8	+ 4·8
349·454 C	27	197	14	104	253·8	171·7	+ 5·8	+17·2
350·459 C	19	135	11	80	254·7	172·3	+ 6·3	+31·4
351·323 C	9	63	6	43	254·9	172·3	+ 6·3	+43·6
352·411 C	0	11	0	10	255·4	172·6	+ 6·6	+57·8

Group 8389.—1918 January 4–13. A small regular spot with two very small followers on January 10. Evidently *a* of Group 8353.

368·352 C	4	42	10	109	268·6	182·0	+ 6·3	−79·0
369·361 C	12	81	16	105	267·6	180·8	+ 6·4	−66·8
370·564 C	21	118	17	96	267·4	180·3	+ 6·3	−51·1
371·349 C	26	158	17	106	267·7	180·4	+ 6·0	−40·5
372·358 C	26	164	15	93	267·6	180·1	+ 6·1	−27·3
373·347 C	22	219	11	114	267·4	179·7	+ 6·2	−14·5
374·499 G	37	188	19	96	267·7	179·7	+ 5·9	+ 1·0
375·550 G	22	147	12	78	267·8	179·6	+ 5·9	+14·9
376·353 C	13	69	7	39	267·7	179·3	+ 6·1	+25·4
377·464 C	5	20	3	13	267·9	179·2	+ 5·8	+40·2
Means ..	..	..	13	85	267·74	180·11	+ 6·10	..

ROYAL OBSERVATORY, GREENWICH.

LEDGERS

OF

GROUPS OF SUN SPOTS

FOR THE YEAR

1917.

LEDGER II.—NON-RECURRENT GROUPS.

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917.

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

Group 7934.

January 5–11. An unstable group of small spots.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917.d					°	°	°	°
4·483 C	0	7	0	5	71·3	72·1	+25·1	−39·0
5·630 C	2	19	1	12	68·3	69·3	+26·0	−26·9
6·521 G	6	27	4	16	67·4	68·6	+26·0	−16·1
7·364 C	2	18	1	11	64·9	66·2	+28·6	− 7·5
8·367 C	0	3	0	2	65·2	66·7	+27·6	+ 6·0
9·332 C	4	12	2	7	65·5	67·2	+27·0	+19·0
10·341 C	0	2	0	1	63·2	65·1	+28·2	+30·0
Means ..	..	..	1	8	66·54	67·89	+26·93	..

Group 7935.

January 6–11. A stream of small spots *sf* Group 7929.

5·630 C	0	14	0	7	97·9	96·8	+ 9·3	+ 2·7
6·521 G	7	39	4	21	96·2	95·0	+10·1	+12·7
7·364 C	25	76	14	43	96·1	94·7	+10·5	+23·7
8·367 C	12	60	8	39	96·6	95·0	+10·5	+37·4
9·332 C	13	42	11	35	97·6	95·8	+11·0	+51·1
10·341 C	0	14	0	17	97·5	95·6	+11·3	+64·3
Means ..	..	..	6	27	96·98	95·48	+10·45	..

Group 7937.

January 6–13. A diminishing cluster of unstable spots.

5·630 C	8	26	10	31	32·6	32·2	+17·0	−62·6
6·521 G	22	81	19	70	31·7	31·2	+16·6	−51·8
7·364 C	12	63	9	45	31·8	31·2	+17·3	−40·6
8·367 C	9	36	5	22	31·5	30·8	+16·9	−27·7
9·332 C	9	24	5	13	31·3	30·6	+17·2	−15·2
10·341 C	14	96	8	52	30·3	29·5	+16·8	− 2·9
11·370 C	8	38	4	21	31·0	30·1	+16·7	+11·4
12·318 C	1	2	1	1	31·7	30·7	+16·5	+24·6
Means ..	..	..	8	32	31·49	30·79	+16·88	..

Group 7940.

January 8–13. A stream of irregular spots, of which the leading and following members alone remain on January 12 connected by a ridge of faculæ.

7·364 C	7	42	4	22	68·5	67·4	+13·0	− 3·9
8·367 C	57	233	30	123	69·1	67·9	+12·9	+ 9·9
9·332 C	63	245	36	140	69·5	68·1	+12·7	+23·0
10·341 C	30	162	20	105	69·3	67·8	+13·0	−36·1
11·370 C	13	102	10	81	67·6	65·9	+13·6	−48·0
12·318 C	3	14	3	16	68·4	66·6	+13·5	+61·3
Means ..	..	..	17	81	68·73	67·28	+13·12	..

Group 7941.

January 8–18. An irregular stream led by an unstable composite spot, which has nearly disappeared by January 18.

1917.d					°	°	°	°
7·364 C	14	35	15	37	13·0	12·2	+15·0	−59·4
8·367 C	14	63	11	48	13·9	12·9	+14·5	−45·3
9·332 C	47	270	30	170	13·8	12·7	+14·8	−32·7
10·341 C	70	251	39	141	15·0	13·8	+15·0	−18·2
11·370 C	43	369	23	196	14·7	13·4	+15·6	− 4·9
12·318 C	32	264	17	143	14·5	13·1	+15·0	+ 7·4
13·329 C	51	313	30	180	14·3	12·8	+14·8	+20·5
14·307 C	41	221	26	144	15·1	13·5	+15·0	+34·1
15·348 C	19	91	16	78	16·9	15·1	+15·3	+49·7
16·320 C	7	29	9	34	16·5	14·6	+15·7	+62·1
17·360 C	0	3	0	8	18·8	16·8	+15·0	+78·1
Means ..	..	..	20	107	15·14	13·72	+15·06	..

Group 7942.

January 8–18. An unstable spot with occasional small companions, *f* Group 7941 and in the same area of faculæ as Group 7943.

7·364 C	0	12	0	17	4·9	3·7	+14·3	−67·5
8·367 C	11	36	10	32	6·1	4·8	+13·6	−53·1
9·332 C	6	34	4	23	7·1	5·6	+13·3	−39·4
10·341 C	8	34	5	20	7·0	5·4	+13·0	−26·2
11·370 C	22	80	12	43	6·8	5·0	+13·2	−12·8
12·318 C	21	97	11	50	8·0	6·1	+12·4	+ 0·9
13·329 C	17	72	9	39	8·8	6·7	+11·8	+15·0
14·307 C	18	74	11	44	9·7	7·4	+11·3	+28·7
15·348 C	15	48	11	35	10·8	8·4	+11·4	+43·6
16·320 C	13	65	13	62	11·2	8·6	+11·7	+56·8
17·360 C	4	25	7	42	11·9	9·2	+12·0	+71·2
Means ..	..	..	8	37	8·39	6·45	+12·55	..

Group 7943.

January 8–15. A small spot, becoming temporarily larger and of regular type, with some very small companions.

7·364 C	0	6	0	10	1·5	0·8	+16·2	−70·9
8·367 C	2	12	2	12	2·0	1·2	+16·4	−57·2
9·332 C	4	21	3	16	2·3	1·4	+16·2	−44·2
10·341 C	2	21	1	13	2·5	1·6	+15·9	−30·7
11·370 C	12	63	7	35	2·6	1·6	+15·9	−17·0
12·318 C	5	21	3	11	2·2	1·1	+16·1	− 4·9
13·329 C	1	9	1	5	1·7	0·5	+16·5	+ 7·9
14·307 C	0	5	0	3	1·5	0·2	+16·6	+20·5
Means ..	..	..	2	13	2·04	1·05	+16·23	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 7950.

January 13–24. A double spot, passing to the regular type by January 15 and then breaking up on January 18, followed by a train of small spots, which have all disappeared by January 23.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
12·318 C	6	37	14	87	288·5	288·4	−20·1	−78·6
13·329 C	15	90	18	109	287·9	287·8	−20·0	−65·9
14·307 C	35	361	30	230	288·4	288·3	−20·1	−52·6
15·348 C	35	289	23	189	288·7	288·5	−20·2	−38·5
16·320 C	36	315	21	180	289·0	288·8	−19·8	−25·4
17·360 C	35	201	19	105	288·8	288·6	−20·0	−11·9
18·347 C	24	167	14	88	289·0	288·8	−19·7	+ 1·2
19·351 C	11	159	6	85	289·0	288·8	−19·9	+14·5
20·448 C	16	61	10	37	289·5	289·3	−20·0	+29·4
21·340 C	9	24	6	16	289·2	289·0	−19·9	+40·9
22·402 C	4	21	4	18	289·7	289·5	−19·6	+55·3
23·338 C	0	11	0	14	289·4	289·2	−20·2	+67·4
Means ..	..	..	14	97	288·93	288·75	−19·96	..

Group 7952.

January 16–22. A small spot, developing into a small unstable stream on January 19. Nothing is seen on January 21.

15·348 C	1	7	1	9	259·8	261·0	−22·4	−67·4
16·320 C	1	8	1	7	261·7	263·0	−23·1	−52·7
17·360 C	5	16	3	11	262·4	263·8	−23·4	−38·3
18·347 C	7	44	4	27	261·3	262·8	−23·6	−26·5
19·351 C	0	30	0	19	264·1	265·7	−24·5	−10·4
20·448 C	0	0	0	0	..	..	..	..
21·340 C	1	6	1	3	262·5	264·2	−24·1	+14·2
Means ..	..	..	1	11	261·97	263·42	−23·52	..

Group 7955.

January 18–29. A stable regular spot, followed at some distance by one or two very small companions.

17·360 C	12	61	17	87	230·5	227·4	−12·0	−70·2
18·347 C	15	116	14	105	230·9	227·7	−11·8	−56·9
19·351 C	19	150	13	102	231·3	227·9	−11·5	−43·2
20·448 C	24	212	14	121	231·8	228·2	−11·7	−28·3
21·340 C	31	230	16	120	231·7	227·9	−11·5	−16·6
22·402 C	29	188	15	94	232·6	228·6	−11·6	− 1·8
23·338 C	21	215	11	110	232·9	228·8	−11·4	−10·9
24·339 C	29	184	16	101	233·1	228·8	−11·2	+24·2
25·344 C	28	173	18	110	233·7	229·2	−11·0	+38·1
26·339 C	23	149	18	119	234·1	229·4	−10·7	+51·6
27·542 C	9	86	12	111	234·6	229·7	−10·7	+67·9
28·323 C	6	25	14	56	234·4	229·4	−10·4	+78·0
Means ..	..	..	15	103	232·63	228·58	−11·29	..

Group 7956.

January 19–30. A stream of normal type, of which the leader, *a*, is alone seen as a small spot before the train appears on January 21, and as a regular spot after January 27, when the train has died out.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
18·347 C	2	8	3	11	225·0	228·1	+27·2	−62·8
19·351 C	1	19	1	18	224·0	227·3	+27·4	−50·5
20·448 C	47	191	35	145	222·1	225·5	+26·8	−38·0
21·340 C	27	224	18	149	222·1	225·7	+26·6	−26·2
22·402 C	34	294	20	177	222·2	226·0	+26·5	−12·2
23·338 C	38	275	22	164	222·6	226·5	+26·5	+ 0·6
24·339 C	56	358	34	218	222·2	226·3	+26·6	+13·3
25·344 C	40	282	33	187	221·5	225·8	+26·8	+25·9
26·339 C	20	353	16	148	221·7	226·1	+26·5	+39·2
27·542 C	17	162	18	170	220·9	225·5	+26·2	+54·2
28·323 C	16	141	23	203	220·3	225·1	+26·0	+63·9
29·351 C	8	33	26	109	220·0	225·0	+26·0	+77·1
Means ..	..	..	21	142	222·05	226·08	+26·59	..
Spot *a*.								
18·347 C	2	8	3	11	225·0	228·1	+27·2	−62·8
19·351 C	1	19	1	18	224·0	227·2	+27·4	−50·5
20·448 C	29	127	21	94	224·1	227·5	+26·8	−36·0
21·340 C	19	145	12	94	224·5	228·1	+26·6	−23·8
22·402 C	28	237	17	142	224·1	227·8	+26·4	−10·3
23·338 C	33	218	19	129	224·1	228·0	+26·3	+ 2·1
24·339 C	35	278	21	170	223·5	227·6	+26·4	+14·6
25·344 C	32	208	22	139	222·6	226·8	+26·5	+27·0
26·339 C	20	173	16	135	221·9	226·3	+26·6	+39·4
27·542 C	17	162	18	170	220·9	225·5	+26·2	+54·2
28·323 C	16	141	23	203	220·3	225·0	+26·0	+63·9
29·351 C	8	33	26	109	220·0	224·9	+26·0	+77·1

Group 7957.

January 19–30. A few small scattered unstable spots until January 27, when a regular spot forms, which, however, soon diminishes.

18·347 C	2	6	2	7	221·8	224·7	−25·7	−66·1
19·351 C	7	57	7	54	218·1	221·2	−25·3	−56·4
20·448 C	7	15	4	11	218·5	221·8	−25·4	−41·6
21·340 C	2	10	1	6	221·6	225·0	−23·5	−26·7
22·402 C	0	7	0	4	218·2	221·8	−26·3	−16·2
23·338 C	8	70	4	38	218·7	222·5	−28·3	− 3·3
24·339 C	0	10	0	5	218·7	222·6	−27·6	+ 9·8
25·344 C	12	44	7	26	219·9	224·0	−25·4	+24·3
26·339 C	42	210	28	137	218·6	222·8	−26·6	+36·1
27·542 C	15	124	13	103	217·3	221·7	−27·3	+50·6
28·323 C	12	48	12	49	216·1	220·7	−27·2	+59·7
29·351 C	6	32	10	52	215·9	220·6	−27·3	+73·0
Means ..	..	..	7	41	218·62	222·45	−26·33	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued*.

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 7959.

January 21–27. Intermittent, no spots being seen on January 23–24. A few small, unstable spots *np* Group 7957 and *sf* Group 7955.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
20·448 C	0	7	0	4	218·4	217·8	−17·5	−41·7
21·340 C	0	7	0	4	221·6	221·0	−18·7	−26·7
22·402 C	0	0	0	0	..	..	..	..
23·338 C	0	0	0	0	..	..	..	..
24·339 C	8	67	5	35	223·3	222·6	−20·0	+14·4
25·344 C	3	27	2	17	224·0	223·3	−19·8	+28·4
26·339 C	1	5	1	4	225·5	224·8	−20·0	+43·0
Means ..	..	..	1	9	222·56	221·90	−19·20	..

Group 7960.

January 21–29. Revival of Group 7930. An irregular train of short-lived spots, with one prominent member on January 23–24 in the middle of the group.

20·448 C	19	120	18	119	202·6	199·0	+12·0	−57·5
21·340 C	26	104	20	75	204·1	200·3	+11·2	−44·2
22·402 C	42	370	25	224	204·2	200·2	+11·3	−30·2
23·338 C	19	162	10	88	204·6	200·5	+11·3	−17·4
24·339 C	8	44	5	22	204·8	200·5	+11·3	− 4·1
25·344 C	12	45	6	24	205·5	201·0	+11·2	+ 9·9
26·339 C	10	56	6	33	205·9	201·2	+11·4	+23·4
27·542 C	4	19	3	13	208·0	203·1	+10·8	+41·3
28·323 C	0	51	0	42	206·4	201·4	+10·6	+50·0
Means ..	..	..	10	71	205·12	200·80	+11·23	..

Group 7970.

January 30–February 9. An equatorial group. A regular spot which diminishes rapidly after February 6. One or two small spots appear 7° behind the leader.

29·351 C	9	50	25	141	63·3	55·7	+ 1·6	−79·6
30·323 C	17	109	21	137	63·9	56·1	+ 1·2	−66·2
31·390 C	29	171	24	141	63·9	55·8	+ 0·9	−52·1
32·342 C	34	165	22	111	64·2	55·9	+ 0·5	−39·3
33·365 C	23	191	13	107	64·7	56·1	+ 0·4	−25·3
34·345 C	13	133	7	68	64·9	56·0	+ 0·5	−12·2
35·323 C	36	187	18	94	64·1	55·0	+ 0·7	− 0·1
36·534 C	14	100	7	53	64·7	55·3	+ 0·8	+16·4
37·537 G	4	36	2	20	63·8	54·1	+ 0·0	+28·7
38·470 G	2	12	1	8	64·9	55·0	+ 0·0	+42·1
39·374 C	1	3	1	3	65·9	55·7	+ 0·4	+55·0
Means ..	..	..	13	80	64·39	55·52	+ 0·64	..

Group 7976.

February 3–8. An irregular stream of ill-formed spots forming on the central meridian. After February 6 two spots, marking the front and rear of the stream, alone remain.

1917. d					°	°	°	°
33·365 C	24	68	14	39	92·5	96·7	+24·3	+ 2·5
34·345 C	34	193	21	118	92·0	96·3	+25·4	+14·9
35·323 C	46	255	31	171	92·2	96·6	+25·2	+28·0
36·534 C	54	373	45	309	91·3	95·9	+25·6	+43·0
37·537 G	25	138	29	157	91·9	96·6	+25·2	+56·8
38·470 G	16	52	35	112	92·6	97·4	+25·2	+69·8
Means ..	..	..	29	151	92·08	96·58	+25·15	..

Group 7978.

February 4–12. An irregular stream of ill-formed spots. The leading spot, a double, alone remains on February 11.

34·345 C	0	8	0	9	15·8	10·1	+12·8	−61·3
35·323 C	46	188	38	156	14·8	8·9	+12·8	−49·4
36·534 C	73	243	46	153	15·3	9·2	+12·5	−33·0
37·537 G	89	296	50	166	16·3	10·1	+12·6	−18·8
38·470 G	55	303	29	162	16·9	10·5	+12·2	− 5·9
39·374 C	57	252	30	135	17·4	10·9	+12·4	+ 6·5
40·584 C	22	90	13	52	19·7	13·0	+11·0	+24·7
41·360 C	17	44	11	29	20·3	13·4	+11·2	+35·5
42·325 C	6	12	5	10	20·1	13·1	+11·2	+48·1
Means ..	..	..	25	97	17·40	11·02	+12·08	..

Group 7979.

February 4–15. A small regular spot gradually diminishing. A very small follower appears 5° away on February 9.

34·345 C	6	63	13	131	1·8	353·8	+ 6·0	−75·3
35·323 C	28	95	32	110	0·7	352·5	+ 6·2	−63·5
36·534 C	16	78	12	59	1·4	352·9	+ 6·0	−46·9
37·537 G	25	123	15	75	2·0	353·3	+ 5·8	−33·1
38·470 G	20	77	11	42	2·3	353·3	+ 6·2	−20·5
39·374 C	19	125	10	65	2·3	353·1	+ 6·3	− 8·6
40·584 C	18	88	9	46	2·7	353·2	+ 6·1	+ 7·7
41·360 C	17	112	9	60	2·8	353·2	+ 6·6	+18·0
42·325 C	17	53	10	32	2·5	352·6	+ 6·6	+30·5
43·510 G	15	44	11	33	2·8	352·7	+ 6·6	+46·4
44·397 G	10	17	10	17	2·7	352·4	+ 6·8	+57·9
45·592 G	3	9	6	17	2·8	352·2	+ 7·1	+73·8
Means ..	..	..	12	57	2·23	352·93	+ 6·36	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 7986.

February 11–21. At first a regular spot with a few small followers. By February 15 fresh spots have formed to the *n*, and the group appears as a broad, irregular stream of ill-defined spots, which die out as the west limb is approached.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
41·360 C	1	33	4	119	260·4	263·6	−25·1	−84·4
42·325 C	22	111	34	172	259·6	262·9	−24·4	−72·4
43·510 G	12	133	11	126	257·7	261·1	−24·8	−58·7
44·397 G	35	107	27	82	257·0	260·5	−24·4	−47·8
45·592 G	48	184	30	114	255·6	259·2	−23·5	−33·4
46·363 C	54	241	31	137	254·2	257·8	−22·6	−24·7
47·349 C	84	359	45	191	252·7	256·4	−22·2	−13·2
48·419 C	37	255	19	133	252·8	256·6	−22·4	+ 1·0
49·366 C	36	161	19	85	252·1	256·0	−22·7	+12·8
50·319 C	11	84	6	48	252·1	256·0	−22·3	+25·3
51·427 C	2	6	1	4	252·5	256·5	−23·1	+40·3
Means ..	..	..	21	110	255·15	258·78	−23·41	..

Group 7990.

February 13–22. A very small spot on February 13, developing into a stream led by a regular spot, *a*. The train, which is never prominent, has disappeared by February 20.

43·510 G	0	2	0	2	266·9	264·1	−20·4	−49·5
44·397 G	18	51	12	32	269·6	266·8	−17·9	−35·2
45·592 G	103	527	55	283	269·5	266·6	−17·9	−19·5
46·363 C	124	528	64	270	270·0	267·0	−17·4	− 8·9
47·349 C	113	514	57	262	271·2	268·2	−17·8	+ 5·3
48·419 C	68	473	37	255	272·2	269·1	−17·3	+20·4
49·366 C	52	349	32	212	272·4	269·2	−17·0	+33·1
50·319 C	43	263	31	189	273·0	269·8	−16·8	+46·2
51·427 C	32	169	32	170	273·2	269·9	−16·8	+61·0
52·351 C	14	93	22	147	273·0	269·6	−16·5	+73·0
Means ..	..	..	34	182	271·10	268·03	−17·58	..

Spot *a*.

44·397 G	11	35	7	21	270·4	267·0	−17·7	−34·4
45·592 G	72	392	38	208	271·2	267·7	−17·4	−17·8
46·363 C	82	414	42	211	271·7	268·2	−17·2	− 7·2
47·349 C	77	390	39	199	272·3	268·7	−17·1	+ 6·4
48·419 C	58	432	31	233	273·1	269·4	−16·8	+21·3
49·366 C	52	321	32	196	273·1	269·4	−16·8	+33·8
50·319 C	43	263	31	189	273·0	269·2	−16·8	+46·2
51·427 C	32	169	32	170	273·2	269·3	−16·8	+61·0
52·351 C	14	93	22	147	273·0	269·0	−16·5	+73·0

Group 7992.

February 14–20. A small spot with followers, February 15–18; *nf* Group 7990 and *np* Group 7986.

1917. d					°	°	°	°
44·397 G	4	10	3	6	264·8	259·4	−15·0	−40·0
45·592 G	0	21	0	12	263·0	257·5	−15·4	−26·0
46·363 C	16	72	8	37	263·6	258·0	−15·0	−15·3
47·349 C	25	64	12	33	263·6	257·9	−15·0	− 2·3
48·419 C	14	42	7	22	265·1	259·2	−14·5	+13·3
49·366 C	10	24	6	13	266·0	260·0	−14·0	+26·7
50·319 C	10	18	7	12	266·8	260·7	−14·2	+40·0
Means ..	..	..	6	19	264·70	258·96	−14·73	..

Group 7993.

February 16–25. A group of the "stream" type, but with a pair of spots leading after February 19. The original leader, *a*, only is left on February 25 as a mere dot. Revival of Group 7955.

46·363 C	34	61	25	45	231·7	223·9	−11·4	−47·2
47·349 C	59	249	36	150	231·7	223·7	−11·2	−34·2
48·419 C	65	312	35	166	231·0	222·8	−11·4	−20·8
49·366 C	60	312	32	159	231·3	223·0	−12·0	− 8·0
50·319 C	59	198	30	101	232·4	223·9	−12·3	+ 5·6
51·427 C	38	192	20	105	234·1	225·4	−12·6	+21·9
52·351 C	25	68	16	40	235·2	226·3	−12·2	+35·2
53·393 G	13	29	10	22	235·7	226·7	−12·3	+49·4
54·347 C	10	36	10	36	234·9	225·7	−12·4	+61·2
55·634 G	0	3	0	7	235·4	226·0	−10·6	+78·6
Means ..	..	..	21	83	233·34	224·74	−11·84	..

Spot *a*.

47·349 C	28	146	17	86	233·1	224·7	−10·8	−32·8
48·419 C	32	122	17	63	234·6	226·0	−10·7	−17·2
49·366 C	17	105	9	53	235·5	226·8	−11·0	− 3·8
50·319 C	20	58	10	30	235·8	226·9	−11·6	+ 9·0
51·427 C	17	92	9	51	235·8	226·7	−11·8	+23·6
52·351 C	19	50	12	30	235·6	226·3	−11·9	+35·6
53·393 G	11	20	8	15	235·4	225·9	−11·9	+49·1
54·347 C	2	13	2	13	234·9	225·3	−11·3	+61·2
55·634 G	0	3	0	7	235·4	225·6	−10·6	+78·6

Group 7994.

February 18–24. Intermittent. A very small spot, not seen on February 20–23. The accompanying faculæ is seen later on the west limb.

48·419 C	0	5	0	8	179·4	181·3	−22·0	−72·4
49·366 C	0	4	0	4	179·3	181·2	−21·7	−60·0

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Date. G.M.T. (Civil) Place.	Projected Area.		Corrected Area.		Longitude.		Latitude.	Long. from C.M.
	Umbræ.	Whole Spots.	Umbræ.	Whole Spots.	System I.	System II.		
Group 7994—*continued.*								
1917. d					°	°	°	°
50·319 C	0	0	0	0	..	..	..	..
51·427 C	0	0	0	0	..	..	..	..
52·351 C	0	0	0	0	..	..	..	..
53·393 G	0	0	0	0	..	..	..	..
54·347 C	1	3	1	2	178·6	180·7	−22·2	+ 4·9
Means ..	..	..	0	2	179·10	181·07	−21·97	..
Group 7995.								
February 19–25. A small stream developing *sf* Group 7993. The leader remains until February 23, but two very small spots revive to mark the position of the train, which had previously disappeared.								
49·366 C	7	25	4	13	225·0	221·1	−16·9	−14·3
50·319 C	24	89	12	45	225·0	221·0	−16·5	− 1·8
51·427 C	27	70	14	36	226·1	222·0	−17·1	+13·9
52·351 C	4	25	2	14	226·5	222·4	−17·1	+26·5
53·393 G	2	7	1	5	230·5	226·3	−17·5	+44·2
54·347 C	0	3	0	2	221·7	217·4	−15·8	−48·0
55·634 G	2	6	3	8	224·2	219·8	−17·1	−67·4
Means ..	..	..	5	18	225·57	221·43	−16·86	..
Group 7997.								
February 20–27. A few small unstable spots in a wide area of disturbance.								
50·319 C	2	10	3	15	160·4	157·8	−18·7	−66·4
51·427 C	8	25	8	24	159·7	157·0	−18·7	−52·5
52·351 C	4	16	3	12	159·1	156·4	−19·1	−40·9
53·393 G	2	39	1	25	158·3	155·5	−19·1	−28·0
54·347 C	0	5	0	3	160·5	157·7	−19·4	−13·2
55·634 G	13	27	7	14	158·0	155·1	−16·3	+ 1·2
56·335 C	2	7	1	4	157·7	154·8	−16·5	−10·2
57·313 C	0	5	0	3	159·6	156·6	−17·3	−24·9
Means ..	..	..	3	13	159·16	156·36	−18·14	..
Group 7999.								
February 24–March 5. A regular spot, imperfectly formed and gradually diminishing. A very small spot follows by 6° on February 27. Group 8009 appears immediately behind on March 3.								
54·347 C	15	83	30	165	102·6	103·4	−21·9	−71·1
55·634 G	21	144	21	145	102·3	103·1	−21·1	−54·5
56·335 C	30	178	25	150	101·7	102·5	−21·4	−45·8
57·313 C	30	196	21	135	101·1	101·9	−21·1	−33·6
58·325 C	40	215	24	131	101·2	102·0	−21·0	−20·1
59·324 C	29	189	17	108	100·6	101·4	−20·8	− 7·6

Date. G.M.T. (Civil) Place.	Projected Area.		Corrected Area.		Longitude.		Latitude.	Long. from C.M.
	Umbræ.	Whole Spots.	Umbræ.	Whole Spots.	System I.	System II.		
Group 7999—*continued.*								
1917. d					°	°	°	°
60·410 C	21	149	12	85	100·2	101·0	+20·6	+ 6·4
61·441 G	12	73	7	44	100·0	100·9	+20·5	+19·7
62·349 C	13	48	9	32	99·7	100·6	+20·6	+31·4
63·325 C	0	4	0	3	99·8	100·7	+20·8	+44·3
Means ..	..	..	17	100	100·92	101·75	+20·98	..
Group 8000.								
February 25–March 3. A small diminishing regular spot.								
55·634 G	0	11	0	35	74·0	75·4	−21·7	−82·8
56·335 C	7	53	12	92	72·7	74·2	−21·4	−74·8
57·313 C	11	76	11	79	72·9	74·4	−21·2	−61·8
58·325 C	14	67	11	51	72·5	74·0	−21·3	−48·8
59·324 C	15	43	9	27	72·0	73·5	−21·4	−36·2
60·410 C	12	52	7	29	71·5	73·1	−21·5	−22·3
61·441 G	7	20	4	10	71·5	73·1	−21·5	− 8·8
Means ..	..	..	8	46	72·44	73·96	−21·43	..
Group 8006.								
March 1–10. A group immediately preceding Group 8008, and in the same large area of faculæ. A small diminishing regular spot, followed by an ill-defined cluster.								
59·324 C	3	17	11	61	24·6	17·2	−14·7	−83·6
60·410 C	15	98	22	143	22·8	15·3	−14·4	−71·0
61·441 G	23	114	21	103	23·0	15·4	−14·2	−57·3
62·349 C	21	142	14	101	22·6	14·9	−14·5	−45·7
63·325 C	19	162	11	96	23·0	15·2	−14·3	−32·5
64·568 C	6	138	3	72	21·7	13·7	−15·2	−17·4
65·322 C	17	70	9	35	23·5	15·4	−14·7	− 5·6
66·460 G	15	76	8	39	22·6	14·4	−14·8	+ 8·4
67·394 C	14	94	8	51	23·9	15·5	−15·1	+22·1
68·353 C	12	43	7	26	22·3	13·8	−13·8	+33·1
Means ..	..	..	11	73	23·00	15·08	−14·57	..
Group 8010.								
March 3–11. A large stream of normal type, developing rapidly from a few faint spots on March 3; *a* and *b* are respectively the leading and following spots.								
61·441 G	0	54	0	34	48·8	39·0	+13·2	−31·5
62·349 C	87	500	50	284	49·2	39·2	+13·0	−19·1
63·325 C	122	734	65	395	50·4	40·3	+12·8	− 5·1
64·568 C	112	627	60	338	50·1	39·8	+12·3	−11·0

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued*.

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8010—*continued*.								
1917. d					°	°	°	°
65·322 C	116	672	65	383	49·7	39·3	+13·0	+20·6
66·460 G	57	465	38	308	49·7	39·1	+12·1	+35·5
67·394 C	44	308	38	256	50·8	40·0	+11·8	+49·0
68·353 C	25	157	31	189	52·3	41·4	+11·3	+63·1
69·647 C	5	26	(12	71	47·2	36·1	+13·3)*	+75·0
Means ..	..	..	43	274	50·12	39·76	+12·44	..
Spot *a*.								
62·349 C	32	265	18	148	51·3	39·8	+12·2	−17·0
63·325 C	77	399	41	211	52·7	41·0	+11·7	− 2·8
64·568 C	67	336	36	181	53·8	41·9	+10·8	+14·7
65·322 C	49	323	28	187	54·2	42·2	+10·4	+25·1
66·460 G	38	243	26	168	54·5	42·3	+10·0	+40·3
67·394 C	35	195	31	172	54·7	42·3	+10·2	+52·9
68·353 C	18	118	24	158	55·2	42·6	+10·5	+66·0
Spot *b*.								
62·349 C	50	200	29	116	46·2	38·3	+14·1	−22·1
63·325 C	39	294	21	162	45·9	37·9	+14·2	− 9·6
64·568 C	45	274	24	148	45·1	37·0	+14·1	+ 6·0
65·322 C	63	330	35	185	44·8	36·6	+14·4	+15·7
66·460 G	17	213	11	134	44·4	36·0	+14·8	+30·2
67·394 C	9	109	7	81	43·9	35·4	+14·9	+42·1
68·353 C	6	27	6	26	43·7	35·1	+14·4	+54·5
69·647 C	3	13	5	24	43·8	35·0	+14·5	+71·6
Group 8012.								
March 5–17. At first a regular spot with an appendage *sf*, followed closely by a composite companion. Later, the appendage and the companion dissolve into a cluster of small spots, which have disappeared by March 16.								
63·325 C	19	112	(51	300	339·8	338·7	+19·9)*	−75·7
64·568 C	42	564	56	760	336·0	334·9	+19·9	−63·1
65·322 C	65	652	65	642	336·1	335·0	+20·4	−53·0
66·460 G	99	706	73	515	336·0	334·9	+20·2	−38·2
67·394 C	94	895	59	567	335·2	334·1	+19·9	−26·6
68·353 C	110	751	64	437	335·1	333·9	+19·7	−14·1
69·647 C	85	507	48	284	334·4	333·2	+19·8	+ 2·2
70·160 D	80	514	46	293	334·8	333·6	+19·8	+ 9·4
71·425 G	54	400	33	250	334·4	333·2	+19·2	+25·7
72·332 C	41	363	29	260	334·1	332·9	+19·5	+37·3
73·453 G	32	231	30	217	334·2	333·0	+19·2	+52·2
73·630 C	24	167	38	262	333·9	332·6	+19·5	+67·4
75·328 C	5	61	14	172	333·9	332·6	+19·2	+76·6
Means ..	..	..	46	388	334·84	333·66	+19·69	..

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8013.								
March 7–17. Intermittent. One or two small spots, not seen on March 8 and 10. On the central meridian a short stream develops, the leader being a regular spot.								
1917. d					°	°	°	°
65·322 C	0	4	0	4	328·2	316·4	− 9·0	−60·9
66·460 G	0	0	0	0	..	..	..	..
67·394 C	1	7	1	4	327·1	314·9	−11·2	−34·7
68·353 C	0	0	0	0	..	..	..	..
69·647 C	61	204	31	102	329·4	316·8	−11·3	− 2·8
70·160 D	61	210	30	106	329·3	316·6	−11·9	+ 3·9
71·425 G	47	293	26	157	330·4	317·5	−11·7	+21·7
72·332 C	46	253	28	152	330·8	317·7	−11·2	+34·0
73·453 G	26	179	20	137	331·5	318·2	−11·0	+49·5
74·630 C	27	100	30	116	331·1	317·6	−11·1	+64·6
75·328 C	13	52	24	95	331·8	318·2	−10·7	+74·5
Means ..	..	..	17	79	329·96	317·10	−11·01	..
Group 8016.								
March 11–17. A short stream, first visible on the central meridian.								
69·647 C	51	85	27	44	328·9	312·5	+ 6·3	− 3·3
70·160 D	42	153	22	79	329·4	312·8	+ 6·2	+ 4·0
71·425 G	42	196	23	107	329·0	312·1	+ 5·8	+20·3
72·332 C	55	214	35	131	329·6	312·5	+ 5·8	+32·8
73·453 G	34	142	26	108	329·8	312·5	+ 5·7	+47·8
74·630 C	15	42	18	51	330·1	312·5	+ 5·9	+63·6
75·328 C	2	11	3	21	330·9	313·1	+ 5·8	+73·6
Means ..	..	..	22	77	329·67	312·57	+ 5·93	..
Group 8017.								
March 11–17. A stream of unstable spots. Three ephemeral spots appear on March 14, *n* of the main stream, but in the same disturbed area.								
69·647 C	6	17	4	11	312·2	312·1	+20·7	−20·0
70·160 D	28	78	17	46	310·6	310·5	+20·7	−14·8
71·425 G	56	256	32	144	312·5	312·4	+19·8	− 3·8
72·332 C	67	260	39	153	312·0	311·9	+20·2	+15·2
73·453 G	21	86	13	55	309·4	309·3	+20·1	+27·4
74·630 C	26	61	21	50	311·7	311·6	+20·2	+45·2
75·328 C	8	46	8	45	310·2	310·2	+20·4	+53·1
Means ..	..	..	19	72	311·26	311·14	+20·30	..
Group 8021.								
March 13–20. A small spot *sp* Group 8024.								
71·425 G	0	12	0	23	232·5	224·1	−15·3	−76·2
72·332 C	4	16	4	18	232·5	224·0	−15·2	−64·3

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8021—*continued.*								
1917. d					°	°	°	°
73·453 G	9	13	7	10	232·9	224·3	−15·0	−49·1
74·630 C	5	17	3	10	232·9	224·2	−14·9	−33·6
75·328 C	13	22	7	12	233·2	224·4	−14·5	−24·0
76·354 C	12	19	6	10	233·8	224·9	−14·8	− 9·9
77·359 C	4	15	2	8	234·3	225·2	−14·8	+ 3·8
78·516 G	5	10	3	5	234·9	225·7	−15·0	+19·7
Means ..	..	..	4	12	233·37	224·60	−14·94	..
Group 8023. March 14–22. A contracting, regular spot.								
72·332 C	9	66	20	117	222·0	211·3	+13·0	−74·8
73·453 G	20	87	22	95	222·2	211·3	+13·1	−59·8
74·630 C	11	74	8	56	221·8	210·8	+13·0	−44·7
75·328 C	17	72	11	47	222·2	211·1	+13·0	−35·1
76·354 C	8	26	5	15	222·1	210·8	+13·3	−21·6
77·359 C	8	27	4	15	222·3	210·8	+13·3	− 8·2
78·516 G	13	21	7	11	222·6	211·0	+13·2	+ 7·4
79·360 C	12	16	7	9	222·7	210·9	+13·6	+18·6
80·414 G	2	5	1	3	222·9	211·0	+13·3	+32·7
Means ..	..	..	9	41	222·31	211·00	+13·20	..
Group 8025. March 16–19. Two spots on the same meridian as Group 8017. The rear spot alone remains in view at the west limb on March 19.								
74·630 C	23	90	18	69	314·1	297·8	+8·0	+47·6
75·328 C	33	271	32	262	314·3	297·9	+8·0	+57·0
76·354 C	17	134	27	226	314·3	297·6	+7·8	+70·6
77·359 C	6	44	(24	179	312·2	295·3	+9·4)*	+81·7
Means ..	..	..	26	186	314·23	297·77	+7·93	..
Group 8026. March 16–24. A straggling stream of unstable spots in continual change. A revival rather than a return of Group 8001.								
74·630 C	0	4	0	6	195·8	214·7	−29·4	−70·7
75·328 C	1	18	1	19	194·6	213·7	−29·8	−62·7
76·354 C	26	138	23	112	193·8	213·2	−30·1	−49·9
77·359 C	21	122	15	81	192·6	212·3	−29·7	−37·9
78·516 G	23	76	14	44	191·9	211·8	−29·0	−23·3

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8026—*continued.*								
1917. d					°	°	°	°
79·360 C	3	89	2	50	195·6	215·8	−28·1	− 8·5
80·414 G	12	120	6	65	195·0	215·4	−29·3	+ 4·8
81·338 C	9	80	5	45	194·7	215·4	−29·0	+16·7
82·379 G	8	15	5	9	194·1	215·0	−29·8	+29·8
Means ..	..	..	8	48	194·23	214·14	−29·36	..
Group 8029. March 19–31. A revival near 848*k*. An irregular stream—at first of small spots, from which emerges a moderate-sized composite spot, which undergoes many changes as the rear of the stream disappears.								
77·359 C	0	2	0	7	151·5	146·1	+17·1	−79·0
78·516 G	17	56	25	83	149·5	144·0	+17·6	−65·7
79·360 C	22	92	23	93	148·7	143·1	+17·7	−55·4
80·414 G	46	219	35	161	148·8	143·2	+17·0	−41·4
81·338 C	68	362	42	227	149·2	143·5	+17·1	−28·8
82·379 G	92	563	52	320	150·6	144·8	+17·3	−13·7
83·385 C	54	454	29	250	150·8	145·0	+17·5	− 0·2
84·345 C	66	498	37	283	150·7	144·8	+17·7	+12·3
85·339 C	53	316	33	194	151·4	145·4	+17·5	+26·1
86·325 C	31	236	22	168	151·1	145·1	+17·7	+38·8
87·321 C	39	224	36	204	151·6	145·5	+17·1	+52·5
88·386 G	5	93	8	149	153·1	146·9	+17·1	+68·0
89·346 C	4	43	24	217	153·6	147·3	+17·0	+81·2
Means ..	..	..	28	181	150·82	144·98	+17·34	..
Group 8030. March 19–31. Two ill-shaped spots, of which the larger and more southern becomes a regular spot, whilst the other diminishes and has disappeared by March 27.								
77·359 C	1	8	(3	27	150·2	133·9	+ 9·4)	−80·3
78·516 G	33	123	39	144	151·9	135·3	+ 7·6	−63·3
79·360 C	25	212	22	178	152·8	136·0	+ 8·3	−51·3
80·414 G	48	416	31	266	154·1	137·1	+ 8·3	−36·1
81·338 C	86	427	50	244	153·7	136·5	+ 9·0	−24·3
82·379 G	56	335	30	178	154·2	136·8	+ 9·0	−10·1
83·385 C	45	271	23	141	154·3	136·7	+ 8·8	+ 3·3
84·345 C	39	232	21	125	154·0	136·2	+ 9·5	+15·6
85·339 C	17	192	10	113	154·1	136·1	+ 9·3	+28·8
86·325 C	21	176	15	123	153·7	135·5	+ 9·1	+41·4
87·321 C	14	119	13	108	154·0	135·6	+ 8·7	+54·9
88·386 G	14	67	21	99	154·0	135·3	+ 8·0	+68·9
89·346 C	4	28	16	114	154·3	135·5	+ 8·0	+81·9
Means ..	..	..	24	153	153·76	136·05	+ 8·63	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 8031.

March 20–24. Two rapidly diminishing spots, with a few very small companions. This group is in the same disturbed area as Group 8030, and the two groups might perhaps be considered as one.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
78·516 G	39	115	59	173	146·0	128·3	+ 7·1	−69·2
79·360 C	21	124	21	121	146·4	128·5	+ 7·1	−57·7
80·414 G	22	86	16	62	146·7	128·5	+ 7·2	−43·5
81·338 C	19	51	6	31	146·6	128·2	+ 7·8	−31·4
82·379 G	0	9	0	5	148·4	129·8	+ 6·3	−15·9
Means ..	..	..	20	78	146·82	128·66	+ 7·10	..

Group 8033.

March 23–28. A single spot on March 23; a short stream on the two following days; afterwards a single spot.

81·338 C	4	13	3	9	138·1	123·0	+10·9	−39·9
82·379 G	29	83	17	49	138·3	123·0	+10·7	−26·0
83·385 C	14	41	8	22	138·9	123·4	+10·8	−12·1
84·345 C	4	7	2	3	140·4	124·7	+10·6	+ 2·0
85·339 C	4	9	2	5	140·5	124·6	+10·5	+15·2
86·325 C	1	8	1	5	140·7	124·6	+10·5	+28·4
Means ..	..	..	5	16	139·48	123·88	+10·67	..

Group 8036.

March 24–April 1. A stream of small spots *p* Group 8034. The leader spot alone remains after March 29.

82·379 G	2	6	2	5	112·0	95·3	+10·5	−52·3
83·385 C	24	57	16	38	112·5	95·6	+ 9·9	−38·5
84·345 C	46	87	27	50	113·8	96·7	+ 9·5	−24·6
85·339 C	39	106	21	56	114·0	96·7	+ 9·7	−11·3
86·325 C	16	53	9	28	115·0	97·5	+ 9·2	+ 2·7
87·321 C	13	52	7	28	115·9	98·2	+ 9·2	+16·8
88·386 G	8	35	5	21	117·4	99·5	+ 8·3	+32·4
89·346 C	4	16	3	12	117·7	99·6	+ 8·8	+45·3
90·646 G	0	2	0	2	118·0	99·6	+ 8·8	+62·7
Means ..	..	..	10	27	115·14	97·63	+ 9·32	..

Group 8039.

March 26–April 3. A small, regular spot, preceding which spots form to constitute a stream 7° in length by March 30. On April 1 the group is rapidly disappearing.

84·345 C	2	20	4	43	63·2	45·3	+ 9·9	−75·2
85·339 C	6	34	7	38	64·4	46·3	+ 9·4	−60·9
86·325 C	24	92	18	71	65·4	47·1	+ 8·5	−46·9
87·321 C	30	122	19	76	66·4	47·9	+ 8·3	−32·7
88·386 G	66	260	36	140	69·2	50·5	+ 7·7	−15·9
89·346 C	30	243	16	126	69·1	50·2	+ 8·3	− 3·3
90·646 G	19	75	10	39	70·3	51·1	+ 8·3	+15·0
91·616 G	4	39	2	23	69·3	49·9	+ 8·2	+26·8
92·391 G	0	4	0	3	68·2	48·6	+ 8·3	+36·0
Means ..	..	..	12	62	67·28	48·54	+ 8·54	..

Group 8041.

April 2–7. One or two very small spots in a large disturbed area, which originally contained the large Groups 7977 and 8008. No spots are seen on April 4.

91·616 G	3	10	2	5	15·4	16·5	−23·2	−27·1
92·391 G	1	11	1	6	16·3	17·4	−22·6	−15·9
93·345 C	0	0	0	0	..	..	..	..
94·374 C	3	9	1	5	18·1	19·2	−19·6	+12·0
95·554 G	0	13	0	7	19·4	20·5	−19·6	+28·9
96·448 C	2	5	1	3	20·3	21·5	−19·4	+41·6
Means ..	..	..	1	4	17·90	19·02	−20·88	..

Group 8042.

April 2–8. Revival of Group 8025. A small spot, not visible on April 5; a few small spots occupy its place on April 6–8.

91·616 G	3	14	8	42	322·6	300·6	+ 5·2	−79·9
92·391 G	4	20	6	29	323·2	301·0	+ 5·1	−69·0
93·345 C	0	13	0	12	323·0	300·6	+ 5·2	−56·6
94·374 C	0	0	0	0	..	..	..	..
95·554 G	5	14	3	8	324·7	301·8	+ 4·9	−25·8
96·448 C	8	48	4	25	323·3	300·2	+ 5·5	−15·4
97·459 G	0	13	0	7	323·3	299·9	+ 6·2	− 2·1
Means ..	..	..	3	18	323·35	300·68	+ 5·35	..

Group 8048.

April 11–19. A stream of unimportant spots, arising from two very small spots *s* Group 8046.

100·371 C	2	9	2	8	232·2	219·6	−14·6	−54·7
101·363 C	22	66	14	43	234·5	221·7	−15·1	−39·3
102·349 G	32	139	19	78	235·7	222·8	−15·0	−25·1
103·349 C	19	186	10	97	234·4	221·4	−15·0	−13·2
104·460 C	17	172	9	88	234·1	220·9	−15·0	− 1·2
105·315 C	48	193	26	100	236·2	222·9	−14·1	+14·6
106·422 C	23	76	13	44	237·0	223·6	−13·7	+30·0
107·351 C	20	90	14	61	236·9	223·4	−14·1	+42·2
108·423 C	3	28	3	25	237·6	223·9	−13·5	+57·0
Means ..	..	..	12	60	235·40	222·24	−14·46	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 8050.

April 12–22. A group forming at the east limb and composed of small unstable spots in a sparse stream.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
101·363 C	16	74	15	72	214·8	206·9	−16·5	−59·0
102·349 G	46	208	33	148	215·8	207·8	−16·1	−45·0
103·349 C	38	175	24	105	215·0	206·9	−16·2	−32·6
104·460 C	23	81	13	43	214·4	206·3	−16·2	−18·5
105·315 C	8	50	4	26	214·2	206·0	−16·2	− 7·4
106·422 C	17	80	9	42	212·3	204·0	−17·7	+ 5·3
107·351 C	13	37	7	20	209·8	201·4	−18·7	+15·1
108·423 C	23	83	14	50	211·9	203·4	−18·0	+31·3
109·359 G	9	20	7	15	213·9	205·4	−17·8	+45·7
110·351 C	2	9	2	9	216·7	208·1	−16·8	+61·6
111·383 C	1	6	2	12	218·2	209·5	−16·3	+76·7
Means ..	..	..	12	49	214·27	205·97	−16·95	..

Group 8052.

April 13–23. A wide and irregular stream of unstable spots, developing from a pair of spots at the east limb. The stream disappears as the west limb is approached.

10[illegible]·349 G	0	22	0	48	183·4	163·3	− 9·7	−77·4
1[illegible]·349 C	9	118	12	153	180·4	160·1	− 9·7	−67·2
1[illegible]·460 C	32	126	27	108	179·0	158·5	−10·0	−53·9
105·315 C	33	128	22	87	178·5	157·9	−10·1	−43·1
106·422 C	30	97	17	55	178·9	158·0	−10·2	−28·1
107·351 C	25	138	13	71	180·6	159·6	− 9·9	−14·1
108·423 C	48	189	25	96	180·6	159·4	−10·2	+ 0·0
109·359 G	10	52	6	26	181·6	160·2	− 9·9	+13·4
110·351 C	17	57	9	32	180·7	159·1	− 9·7	+25·6
111·383 C	4	23	3	15	179·8	158·0	− 9·6	+38·3
112·305 C	2	7	2	6	181·5	159·5	− 9·7	+52·2
Means ..	..	..	12	63	180·45	159·42	− 9·88	..

Group 8053.

April 14–19. A spot, followed by a small cluster, which has disappeared by April 19.

103·349 C	12	35	16	48	179·9	155·8	+ 6·1	−67·7
104·460 C	22	84	18	71	180·1	155·8	+ 6·1	−52·8
105·315 C	23	54	15	36	180·5	156·0	+ 6·4	−41·1
106·422 C	17	44	9	25	180·0	155·2	+ 6·6	−27·0
107·351 C	14	28	7	15	183·3	158·3	+ 6·4	−11·4
108·423 C	0	6	0	3	183·7	158·4	+ 6·7	+ 3·1
Means ..	..	..	11	33	181·25	156·58	+ 6·38	..

Group 8059.

April 23–May 4. On April 23 a very small spot, from which develops a large spot, of regular type until April 29, after which it is composite and diminishing rapidly. There is one large companion, which has fully formed by April 25; it then breaks up and disappears.

1917. d					°	°	°	°
112·305 C	0	4	0	5	60·2	53·2	−18·3	−69·1
113·352 G	47	197	41	172	61·0	54·0	−17·8	−54·5
114·339 C	58	497	40	342	60·3	53·2	−17·5	−42·1
115·349 C	97	684	57	401	59·9	52·7	−17·5	−29·2
116·424 C	100	629	53	335	59·5	52·3	−17·6	−15·4
117·344 C	82	440	43	225	59·3	52·0	−17·4	− 3·4
118·429 C	95	515	49	268	59·3	52·0	−17·8	+10·9
119·364 C	54	419	30	235	59·2	51·8	−17·7	+23·2
120·388 C	56	306	36	195	59·0	51·5	−17·8	+36·5
121·332 G	23	114	18	88	58·9	51·4	−17·9	+48·9
122·351 C	10	39	11	43	59·6	52·0	−17·4	+63·0
123·317 G	2	17	4	31	58·6	50·9	−17·7	+74·8
Means ..	..	..	32	195	59·57	52·25	−17·70	..

Group 8063.

April 26–May 6. A stable regular spot *f* Group 8062. It diminishes rapidly after May 2.

115·349 C	8	26	21	67	9·1	13·3	−22·4	−80·0
116·424 C	14	71	18	89	8·3	12·5	−22·2	−66·6
117·344 C	11	87	10	77	8·4	12·6	−22·2	−54·3
118·429 C	17	107	12	73	8·4	12·7	−22·1	−40·0
119·364 C	15	130	9	77	7·9	12·2	−22·1	−28·1
120·388 C	24	147	13	79	7·9	12·2	−22·0	−14·6
121·332 G	22	106	12	56	7·5	11·9	−21·9	− 2·5
122·351 C	13	33	7	17	7·3	11·7	−21·6	+10·7
123·317 G	11	39	6	22	7·0	11·4	−21·5	+23·2
124·364 C	9	15	6	10	6·7	11·2	−21·1	+36·7
125·447 C	0	3	0	2	6·3	10·8	−21·0	+50·7
Means ..	..	..	10	52	7·71	12·05	−21·83	..

Group 8066.

April 29–May 5. A few spots, mostly very small, none of which persist long.

118·429 C	0	2	0	2	344·9	352·5	−23·1	−63·5
119·364 C	10	37	9	31	344·1	351·7	−22·9	−51·9
120·388 C	16	66	11	44	344·3	352·0	−22·6	−38·2
121·332 G	19	44	11	26	343·3	351·1	−23·1	−26·7
122·351 C	7	38	4	21	341·9	349·7	−23·3	−14·7
123·317 G	3	9	2	5	341·2	349·1	−23·2	− 2·6
124·364 C	0	3	0	2	341·2	349·2	−22·1	+11·2
Means ..	..	..	5	19	342·99	350·76	−22·90	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 8070.

May 1–7. One or two small spots on the same meridian as Group 8069.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
120·388 C	2	6	2	6	324·7	306·3	+11·2	−57·8
121·332 G	2	10	2	8	322·0	303·4	+13·0	−48·0
122·351 C	0	2	0	1	321·0	302·3	+12·1	−35·6
123·317 G	4	12	3	7	321·0	302·1	+13·2	−22·8
124·364 C	4	21	2	11	320·8	301·8	+13·4	− 9·2
125·447 C	9	14	5	7	322·2	303·0	+13·6	+ 6·6
126·378 C	2	7	1	4	322·6	303·3	+13·8	+19·3
Means ..	..	..	2	6	322·04	303·17	+12·90	..

Group 8075.

May 7–15. Two minute spots on May 7, developing into a stream, of which the leader becomes the prominent member as a regular spot. The group quickly declines after May 12, whilst the remnants of the train are disappearing.

126·378 C	2	10	1	7	261·5	240·9	−12·0	−41·8
127·480 G	33	139	19	79	263·4	242·6	−12·4	−25·3
128·461 G	75	418	39	218	264·1	243·2	−12·8	−11·7
129·369 C	112	475	57	242	265·1	244·0	−12·5	+ 1·3
130·377 G	78	416	42	220	265·6	244·3	−12·2	+15·0
131·319 C	44	221	25	126	265·9	244·5	−12·3	+27·9
132·499 C	20	69	14	48	266·3	244·7	−12·5	+43·8
133·396 C	8	19	7	17	266·5	244·8	−12·1	+56·0
134·368 C	0	7	0	10	266·6	244·7	−11·6	+68·9
Means ..	..	..	23	107	265·00	243·74	−12·27	..

Group 8078.

May 9–20. Revival of Group 8050. Two small spots, developing into a stream of normal type. The leader, *a*, is a regular spot by May 13, whilst the rearmost spot, *b*, is composite on May 14 and 15, and is represented in its early and final stages by a cluster; *a* alone remains on May 18.

128·461 G	4	16	5	20	210·9	198·1	−16·5	−64·9
129·369 C	2	10	2	8	213·2	200·3	−16·6	−50·6
130·377 G	54	155	35	99	213·2	200·2	−16·2	−37·2
131·319 C	111	476	63	254	213·0	199·9	−16·2	−25·0
132·499 C	87	551	46	288	213·1	199·9	−15·8	− 9·4
133·396 C	126	813	65	415	212·6	199·3	−15·7	+ 2·1
134·368 C	71	643	38	344	212·6	199·2	−15·8	+14·9
135·412 C	74	366	44	218	214·4	200·9	−15·7	+30·5
136·453 C	40	235	29	173	215·8	202·2	−15·7	+45·7
137·446 C	17	117	17	117	216·3	202·6	−15·6	+59·4
138·372 C	10	63	16	98	215·8	202·0	−15·3	+71·1
139·462 C	0	11	0	80	216·7	202·8	−15·0	+86·4
Means ..	..	..	30	176	213·97	200·62	−15·84	..

Group 8078—*continued.*

Spot *a*.

1917. d					°	°	°	°
130·377 G	43	101	27	64	214·3	200·7	−16·1	−36·1
131·319 C	51	302	29	154	214·9	201·2	−16·2	−23·1
132·499 C	58	411	30	214	215·0	201·2	−15·8	− 7·5
133·396 C	67	446	34	227	215·2	201·3	−15·5	+ 4·7
134·368 C	49	444	26	240	215·5	201·5	−15·6	+17·8
135·412 C	54	316	32	190	215·7	201·6	−15·6	+31·8
136·453 C	38	229	28	169	216·1	201·9	−15·6	+46·0
137·446 C	17	117	17	117	216·3	202·0	−15·6	+59·4
138·372 C	10	63	16	98	215·8	201·4	−15·3	+71·1
139·462 C	0	11	0	80	216·7	202·2	−15·0	+86·4

Spot *b*.

130·377 G	10	38	7	25	211·0	199·4	−16·8	−39·4
131·319 C	50	133	29	77	209·7	198·0	−16·8	−28·3
132·499 C	28	130	15	69	209·4	197·6	−16·2	−13·1
133·396 C	42	306	21	156	209·0	197·1	−16·0	− 1·5
134·368 C	17	188	9	98	208·3	196·3	−16·3	+10·6
135·412 C	17	43	10	24	208·1	196·0	−16·2	+24·2
136·453 C	2	6	1	4	207·6	195·5	−16·5	+37·5

Group 8079.

May 10–20. Intermittent. A small spot on May 10. Nothing is then seen until May 14, when spots begin to multiply and form a very extended cluster or broad stream of irregular spots. This group is closely related to Group 8078, with which it practically merges on and after May 16.

129·369 C	0	3	0	3	212·4	209·2	−20·8	−51·4
130·377 G	0	0	0	0	..	..	..	..
131·319 C	0	0	0	0	..	..	..	..
132·499 C	0	0	0	0	..	..	..	..
133·396 C	3	17	2	9	213·7	210·4	−18·6	+ 3·2
134·368 C	30	121	16	65	212·5	209·1	−19·6	+14·8
135·412 C	91	414	54	244	212·1	208·7	−19·3	+28·2
136·453 C	39	309	28	219	213·0	209·6	−18·6	+42·9
137·446 C	28	205	26	189	212·5	209·1	−19·2	−55·6
138·372 C	13	110	16	148	212·6	209·1	−19·2	+67·9
139·462 C	0	8	(0	30	213·2	209·7	−17·7)*	+82·9
Means ..	..	..	14	88	212·69	209·31	−19·33	..

Group 8081.

May 13–20. A small stream *f* Group 8076. The leader spot, which becomes regular, is the chief component.

132·499 C	16	57	8	30	205·5	179·3	+ 9·8	−17·0
133·396 C	31	166	17	86	205·9	179·5	+ 9·7	− 4·6
134·368 C	32	253	17	131	207·3	180·7	+ 9·8	− 9·6

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(The columns in this Ledger correspond in all respects to those in Ledger I.)

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8081—*continued.*								
1917. d					°	°	°	°
135·412 C	28	155	16	88	208·3	181·5	+ 9·6	+24·4
136·453 C	22	122	15	81	208·7	181·7	+ 9·7	+38·6
137·446 C	23	100	19	84	209·4	182·2	+ 9·7	+52·5
138·372 C	6	28	7	34	209·4	182·0	+ 9·7	+64·7
139·462 C	4	17	11	47	209·4	181·8	+ 9·7	+79·1
Means ..	..	..	14	73	207·99	181·09	+ 9·71	..
Group 8085.								
May 15–24. Two spots on May 15, rapidly developing into a long stream, some 11° in length. The leader spot is regular until May 21, after which it disappears suddenly; the rear spot tends to the regular type, but it has broken up by May 20. Only one very small spot remains on May 24 to mark the centre of the stream.								
135·368 C	12	62	11	59	140·0	108·8	+ 6·6	−57·7
135·412 C	92	366	63	253	141·6	110·2	+ 6·3	−42·3
136·453 C	113	430	65	248	141·3	109·6	+ 6·4	−28·8
137·446 C	121	578	63	302	142·4	110·5	+ 5·7	−14·5
138·372 C	80	406	41	205	143·6	111·5	+ 5·8	− 1·1
139·462 C	83	295	43	155	144·6	112·2	+ 5·3	+14·3
140·191 K	38	205	21	115	145·6	113·1	+ 5·7	+25·0
141·350 C	20	105	13	67	143·6	110·8	+ 6·4	+38·3
142·394 G	8	46	6	37	141·9	108·9	+ 7·8	+50·4
143·676 G	0	4	0	5	139·2	105·9	+ 8·6	+64·7
Means ..	..	..	33	145	142·38	110·15	+ 6·46	..
Group 8086.								
May 17–25. A stream of spots in continual change, approximating to the normal type on May 23, but disappearing rapidly afterwards.								
136·453 C	4	12	2	7	137·5	127·4	−17·9	−32·6
137·446 C	12	26	7	14	137·4	127·2	−17·9	−19·5
138·372 C	20	77	10	40	137·8	127·6	−17·6	− 6·9
139·462 C	64	246	33	129	138·8	128·5	−16·8	+ 8·5
140·191 K	48	245	26	132	138·7	128·3	−16·5	+18·1
141·350 C	64	263	39	160	137·4	126·9	−16·5	+32·1
142·394 G	38	193	28	141	136·5	126·0	−16·7	+45·0
143·676 G	5	23	5	24	134·6	124·0	−17·1	+60·1
144·340 G	1	5	1	7	134·4	123·7	−17·2	+68·7
Means ..	..	..	17	73	137·01	126·62	−17·13	..

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8087.								
May 17–27. Revival of Group 8058. At first a large irregular spot with rapid growth, preceded by a smaller but regular companion and followed by a small cluster. The large spot is quickly disappearing on May 20, with the exception of a portion on its *f* side, which lasts until May 25. Meanwhile, other spots form in the middle and front of the group, which now appears as an irregular stream of considerable extent, though it diminishes as the west limb is approached.								
1917. d					°	°	°	°
136·453 C	26	102	22	89	115·9	88·9	+ 9·9	−54·2
137·446 C	57	392	37	261	117·5	90·3	+ 9·4	−39·4
138·372 C	124	627	72	356	117·0	89·6	+ 9·6	−27·7
139·462 C	111	446	58	235	116·5	88·9	+ 9·9	−13·8
140·191 K	97	559	50	287	116·2	88·4	+10·0	− 4·4
141·350 C	138	600	72	312	116·2	88·2	+10·4	+10·9
142·394 G	113	508	64	290	117·5	89·3	+10·4	+26·0
143·676 G	64	277	45	194	117·6	89·2	+10·0	+43·1
144·340 G	37	185	31	157	118·7	90·1	+ 9·5	+53·0
145·327 G	2	29	3	39	120·0	91·2	+ 9·1	+67·3
146·381 G	2	8	5	20	116·9	87·9	+ 8·8	+78·2
Means ..	..	..	42	204	117·27	89·27	+9·73	..
Group 8088.								
May 18–25. Some faint spots on May 18 which, having greatly enlarged by May 19, appear as two large, nearly regular, spots with attendants. The group is disappearing after May 21; the leader spot rapidly diminishes, the rear spot less quickly. Evidently connected with groups comprising Recurrent Series 796.								
137·446 C	17	82	9	45	146·3	141·5	+19·3	−10·6
138·372 C	118	728	63	393	146·7	141·9	+18·9	+ 2·0
139·462 C	103	886	57	491	146·6	141·7	+18·4	+16·3
140·191 K	155	1012	91	596	146·2	141·3	+18·5	+25·6
141·350 C	83	584	59	415	146·4	141·5	+18·7	+41·1
142·394 G	61	370	60	363	148·4	143·4	+18·6	+56·9
143·676 G	15	81	24	132	145·0	140·0	+19·6	+70·5
144·340 G	7	39	21	118	145·2	140·1	+19·2	+79·5
Means ..	..	..	48	319	146·35	141·43	+18·90	..
Group 8092.								
May 23–June 1. A cluster of irregular spots which appear as a short stream after May 25 with a regular spot as leader. The whole group disperses quickly after May 27.								
142·394 G	3	37	6	70	17·0	343·3	+ 6·3	−74·5
143·676 G	27	230	26	223	16·1	342·0	+ 6·3	−58·4
144·340 G	78	366	60	282	16·8	342·6	+ 6·0	−48·9
145·327 G	69	353	43	219	17·6	343·2	+ 5·8	−35·1
146·381 G	70	337	38	182	18·6	343·9	+ 6·0	−20·1

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(The columns in this Ledger correspond in all respects to those in Ledger I.)

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8092—*continued.*								
1917. d					°	°	°	°
147·373 C	27	100	14	51	19·7	344·8	+ 5·9	− 5·9
148·455 C	15	55	8	28	17·6	342·4	+ 5·8	+ 6·3
149·170 D	14	68	7	37	19·7	344·3	+ 5·1	+17·9
150·354 G	1	9	1	5	17·5	341·9	+ 6·2	+31·3
151·334 C	0	11	0	8	20·2	344·3	+ 4·7	+47·0
Means ..	..	..	20	110	18·08	343·27	+ 5·81	..
Group 8094. May 24–30. A stream of unimportant spots suddenly appearing near the Central Meridian. The head of the stream is alone represented by spots on May 29 and 30.								
143·676 G	29	84	15	45	70·6	74·2	−21·6	− 3·9
144·340 G	14	82	8	44	71·9	75·5	−21·7	+ 6·2
145·327 G	26	88	15	50	72·7	76·3	−21·7	+20·0
146·381 G	18	190	12	124	73·4	77·1	−21·4	+34·7
147·373 C	9	87	7	70	74·1	77·8	−21·1	+48·5
148·455 C	0	5	0	6	76·3	80·0	−20·6	+65·0
149·170 D	0	14	0	25	74·6	78·3	−21·7	+72·8
Means ..	..	..	8	52	73·37	77·03	−21·40	..
Group 8099. May 26–June 6. A regular spot followed by a few small spots until June 2. On the same meridian as Group 8097.								
145·327 G	6	44	10	71	340·7	306·3	− 6·8	−72·0
146·381 G	34	187	33	180	340·3	305·6	− 6·4	−58·4
147·373 C	26	167	18	117	341·1	306·2	− 6·0	−44·5
148·455 C	48	250	28	145	341·4	306·2	− 5·8	−29·9
149·170 D	45	240	23	127	341·9	306·5	− 5·2	−19·9
150·354 G	53	324	27	162	342·2	306·6	− 5·8	− 4·0
151·334 C	48	399	24	203	342·8	306·9	− 5·5	+ 9·6
152·425 G	57	274	32	151	343·4	307·3	− 5·5	+24·6
153,374 C	32	167	20	105	343·7	307·3	− 5·5	+37·5
154·335 C	22	132	17	104	344·0	307·4	− 5·2	+50·5
155·358 G	14	97	16	113	344·3	307·5	− 5·5	+64·4
156·493 C	3	37	9	114	345·3	308·2	− 6·0	+80·4
Means ..	..	..	21	133	342·59	306·83	− 5·77	..
Group 8103. May 31–June 12. A regular spot, with occasional very small companions, showing proper motion in longitude.								
150·354 G	8	34	24	96	266·9	273·5	−22·1	−79·3
151·334 C	17	76	23	103	266·2	272·9	−22·4	−67·0
152·425 G	33	182	30	164	265·7	272·4	−22·2	−53·1

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8103—*continued.*								
1917. d					°	°	°	°
153·374 C	26	189	18	134	265·2	272·0	−22·2	−41·0
154·335 C	41	255	25	156	264·9	271·7	−22·2	−28·6
155·358 G	30	234	17	131	264·3	271·1	−22·3	−15·6
156·493 C	43	258	23	139	264·1	271·0	−22·1	− 0·8
157·446 C	35	270	19	149	263·7	270·6	−22·1	+11·4
158·363 C	37	289	22	171	263·2	270·2	−22·1	+23·0
159·393 C	49	221	33	148	263·1	270·1	−22·1	+36·6
160·284 G	33	161	27	131	262·6	269·7	−22·1	+47·9
161·562 G	24	112	30	141	262·2	269·3	−21·9	+64·4
162·399 G	15	53	32	113	261·7	268·8	−22·1	+75·0
Means ..	..	..	25	137	264·14	271·02	−22·15	..
Group 8105. June 4–11. Revival of Group 8075. An irregular stream of small spots until June 7. A composite spot then forms at the head, whilst a few unstable spots remain at the rear of the stream.								
154·335 C	7	25	4	13	273·6	241·3	− 9·6	−19·9
155·358 G	11	24	6	12	272·2	239·7	− 9·1	− 7·7
156·493 C	34	167	17	85	275·0	242·3	− 8·7	+10·1
157·446 C	33	272	18	149	275·5	242·6	− 8·3	+23·2
158·363 C	64	526	41	328	276·6	243·5	− 8·0	+36·4
159·393 C	44	341	33	270	276·7	243·4	− 8·8	+50·2
160·284 G	29	194	32	214	277·1	243·6	− 9·2	+62·4
161·562 G	3	21	11	77	278·4	244·6	− 8·8	+80·6
Means ..	..	..	20	143	275·64	242·63	− 8·81	..
Group 8106. June 4–15. A spot, approximately regular, with small unstable companions forming a train after June 6. On June 11, a larger companion appears closely following the leader, which gradually diminishes.								
154·335 C	3	20	13	88	210·0	181·4	− 9·3	−83·5
155·358 G	17	100	24	143	210·7	182·0	− 9·4	−69·2
156·493 C	18	151	16	129	211·5	182·6	−10·0	−53·4
157·446 C	18	150	12	102	211·1	182·0	−10·2	−41·2
158·363 C	17	184	10	107	212·6	183·3	−10·7	−27·6
159·393 C	15	112	8	58	212·3	182·8	−10·7	−14·2
160·284 G	21	131	11	68	213·3	183·6	−10·9	− 1·4
161·562 G	40	222	21	118	214·7	184·8	−11·1	+16·9
162·399 G	29	162	17	95	215·9	185·9	−11·4	+29·2
163·383 G	21	119	14	83	216·7	186·5	−11·3	+43·0
164·460 G	8	42	8	41	217·6	187·2	−11·3	+58·1
165·396 G	4	14	6	22	218·0	187·4	−12·2	+70·9
Means ..	..	..	13	88	213·70	184·12	−10·71	..

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Group 8107.

June 7–18. Revival of Group 8080. A small, regular spot, followed by a near and a distant companion. The group is not seen on June 15, after which a few small spots are seen.

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1917· d					°	°	°	°
157·446 C	0	12	0	39	172·2	193·5	−25·3	−80·1
158·363 C	9	67	13	97	172·8	194·2	−25·0	−67·4
159·393 C	18	43	17	42	170·5	192·0	−25·0	−56·0
160·284 G	20	69	16	52	172·0	193·6	−25·1	−42·7
161·562 G	17	107	11	66	172·2	194·0	−25·1	−25·6
162·399 G	20	66	11	37	171·6	193·5	−25·0	−15·1
163·383 G	19	27	11	15	171·4	193·5	−24·8	− 2·3
164·460 G	7	16	4	9	171·4	193·6	−24·7	+11·9
165·396 G	0	0	0	0	..	..	..	..
166·411 C	2	15	1	11	168·3	190·8	−26·4	+34·7
167·467 G	3	12	3	11	169·6	192·2	−26·8	+49·9
168·453 G	0	8	0	10	168·8	191·5	−26·7	+62·2
Means ..	..	..	7	32	170·98	192·95	−25·45	..

Group 8108.

June 8–20. Revival in region of Groups 8082 and 8083. A remarkable group, consisting at first of both regular and ill-formed spots in a broad stream some 10° in length in a dense area of faculæ. The group appears to be quickly dying out by June 15, but a large, indefinite spot has formed by the next day in the middle of the stream. One or two smaller members appear in the *f* portion of the stream; but the group declines rapidly.

158·363 C	17	151	43	406	161·6	157·6	+19·0	−78·6
159·393 C	56	426	71	534	161·1	156·8	+19·3	−65·4
160·284 G	103	719	94	654	160·4	156·1	+19·6	−54·3
161·562 G	148	862	101	576	160·6	156·2	+19·6	−37·2
162·399 G	130	740	77	442	159·8	155·4	+19·9	−26·9
163·383 G	188	711	103	389	160·0	155·6	+19·6	−13·7
164·460 G	105	467	55	246	159·7	155·3	+20·0	+ 0·2
165·396 G	70	364	38	197	159·1	154·6	+19·6	+12·0
166·411 C	78	874	45	499	158·1	153·6	+18·1	+24·5
167·467 G	164	749	111	504	158·4	153·9	+18·6	+38·7
168·453 G	107	507	90	426	157·9	153·3	+18·9	+51·3
169·352 C	54	293	63	338	158·0	153·4	+19·4	+63·3
170·401 C	9	74	23	185	158·7	154·1	+18·9	+77·9
Means ..	..	..	70	415	159·49	155·07	+19·27	..

Group 8109.

June 9–14. A regular spot with a distant companion. The group develops from a very small spot seen on June 9.

159·393 C	2	4	1	2	232·2	214·0	−16·2	− 5·7
160·284 G	20	73	14	39	234·6	216·3	−15·0	−19·9
161·562 G	51	239	34	160	236·7	218·3	−15·3	−38·9

Group 8109—*continued.*

1917· d					°	°	°	°
162·399 G	31	244	25	201	238·0	219·5	+14·8	+51·3
163·383 G	30	153	37	187	238·9	220·3	+14·7	+65·2
164·460 G	14	53	39	149	239·3	220·6	+14·8	+79·8
Means ..	..	..	25	123	236·62	218·17	+15·13	..

Group 8111.

June 9–21. A large regular spot followed by an unstable train. By June 16 the spot has divided into two portions, of which the larger regains a regular form, whilst the other is disappearing.

159·393 C	31	184	60	364	151·2	131·4	−14·6	−75·3
160·284 G	60	360	68	415	151·5	131·6	−14·8	−63·2
161·562 G	100	542	75	409	152·1	132·1	−14·8	−45·7
162·399 G	137	629	87	402	151·0	130·9	−15·0	−35·7
163·383 G	153	953	86	543	150·3	130·0	−15·1	−23·4
164·460 G	171	854	89	447	150·8	130·4	−15·0	− 8·7
165·396 G	145	879	76	457	150·9	130·4	−15·0	+ 3·8
166·411 C	96	610	52	333	151·2	130·6	−14·2	+17·6
167·467 G	98	427	60	261	151·6	130·8	−13·9	+31·9
168·453 G	47	291	34	213	151·3	130·4	−14·3	+44·7
169·352 C	35	242	32	229	151·3	130·3	−14·0	+56·6
170·401 C	12	109	19	172	151·3	130·2	−14·2	+70·5
171·400 C	0	15	0	80	151·6	130·4	−14·4	+84·0
Means ..	..	..	57	333	151·24	130·73	−14·56	..

Group 8114.

June 11–22. A pair of regular spots, *a* and *b*, widely separated in longitude, but apparently forming a single disturbance. A few companions are seen until June 18.

161·562 G	13	65	33	200	117·8	111·0	−19·2	−80·0
162·399 G	34	179	54	286	116·3	109·5	−18·7	−70·4
163·383 G	54	302	52	302	116·3	109·4	−18·7	−57·4
164·460 G	50	264	37	193	116·4	109·5	−18·7	−43·1
165·396 G	45	255	28	158	116·6	109·6	−18·7	−30·5
166·411 C	60	295	34	166	115·1	108·1	−18·6	−18·5
167·467 G	52	331	28	177	114·0	107·0	−18·4	− 5·7
168·453 G	52	241	28	132	114·0	106·9	−18·8	− 7·4
169·352 C	49	163	27	93	115·2	108·1	−18·5	+20·5
170·401 C	20	113	13	75	116·3	109·1	−18·3	+35·5
171·400 C	19	51	15	42	117·2	110·0	−18·3	+49·6
172·162 D	7	24	8	27	119·3	112·1	−18·0	+61·8
Means ..	..	..	30	154	116·21	109·19	−18·58	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 8114—*continued.*

Spot *a*.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
161·562 G	13	52	33	131	120·0	112·1	−19·4	−77·8
162·399 G	17	83	22	107	121·1	113·1	−19·4	−65·6
163·383 G	21	113	18	98	121·4	113·4	−18·7	−52·3
164·460 G	21	94	14	63	121·9	113·8	−18·6	−37·6
165·396 G	20	110	12	65	121·9	113·8	−18·3	−25·2
166·411 C	26	124	14	67	121·7	113·5	−18·0	−11·9
167·467 G	28	130	15	69	121·4	113·2	−17·9	+ 1·7
168·453 G	16	101	9	56	120·9	112·6	−17·9	+14·3
169·352 C	21	79	12	47	120·8	112·5	−17·7	+26·1
170·401 C	10	65	7	46	121·4	113·0	−17·9	+40·6
171·400 C	10	30	9	27	121·7	113·3	−17·8	+54·1
172·162 D	6	19	7	24	121·8	113·4	−17·9	+64·3

Spot *b*.

161·562 G	0	13	0	69	113·6	107·8	−18·5	−84·2
162·399 G	12	74	23	143	112·9	107·0	−18·3	−73·8
163·383 G	17	127	19	142	112·1	106·2	−18·6	−61·6
164·460 G	19	114	15	91	111·6	105·7	−18·9	−47·9
165·396 G	20	98	13	65	110·9	104·9	−19·1	−36·2
166·411 C	34	150	20	87	110·0	104·0	−18·9	−23·6
167·467 G	24	186	13	100	109·7	103·7	−18·9	−10·0
168·453 G	36	140	19	76	109·3	103·2	−19·4	+ 2·7
169·352 C	28	84	15	46	109·2	103·1	−19·3	+14·5
170·401 C	10	48	6	29	109·2	103·1	−18·9	+28·4
171·400 C	9	17	6	12	109·3	103·1	−19·0	+41·7
172·162 D	1	5	1	4	109·4	103·2	−18·7	+51·9

Group 8117.

June 14–20. A small stream of which only the leading spots remain on June 19 and 20.

164·460 G	19	73	10	37	151·6	110·2	− 3·8	− 7·9
165·396 G	18	50	9	25	152·9	111·2	− 3·5	+ 5·8
166·411 C	29	96	15	51	153·0	111·1	− 3·2	+19·4
167·467 G	11	46	7	28	154·3	112·1	− 3·2	+34·6
168·453 G	13	39	11	30	155·8	113·4	− 3·2	+49·2
169·352 C	3	19	3	21	158·7	116·0	− 2·6	+64·0
170·401 C	0	8	0	20	159·0	116·1	− 2·7	+78·2
Means ..	..	..	8	30	155·04	112·87	− 3·17	..

Group 8119.

June 14–25. A stable, regular spot, diminishing rapidly after June 22. Occasional small companions form near it, in particular on June 20, 21 and 24.

1917. d					°	°	°	°
164·460 G	12	76	35	222	79·5	46·9	+ 9·7	−80·0
165·396 G	27	181	35	237	79·8	47·0	+ 9·6	−67·3
166·411 C	29	236	25	203	79·6	46·6	+ 9·9	−54·0
167·467 G	65	379	43	251	80·0	46·8	+ 9·8	−39·7
168·453 G	52	298	30	166	80·0	46·6	+ 9·7	−26·6
169·352 C	56	391	29	204	80·2	46·7	+10·1	−14·5
170·401 C	55	365	28	186	80·8	47·1	+ 9·8	0·0
171·400 C	59	406	31	211	81·4	47·5	+ 9·6	+13·8
172·162 D	62	348	34	191	81·3	47·2	+10·0	+23·8
173·376 C	25	181	16	117	81·1	46·8	+10·1	+39·6
174·362 G	29	140	25	120	82·4	47·9	+ 9·2	+54·0
175·494 C	5	27	7	36	81·5	46·8	+ 9·8	+68·1
Means ..	..	..	28	179	80·63	46·99	+ 9·78	..

Group 8123.

June 16–24. A pair of tiny spots on June 16, *n* Group 8120, becoming a regular spot, followed by a small cluster which soon disappears.

166·411 C	7	24	5	17	92·3	83·3	+18·9	−41·3
167·467 G	59	210	34	123	93·2	84·2	+18·3	−26·5
168·453 G	41	256	21	137	92·9	83·8	+18·3	−13·7
169·352 C	23	246	12	128	92·9	83·8	+17·9	− 1·8
170·401 C	41	219	22	117	93·3	84·1	+17·6	+12·5
171·400 C	32	190	18	108	92·7	83·4	+17·7	+25·1
172·162 D	30	151	19	95	92·4	83·1	+17·9	+34·9
173·376 C	9	24	7	19	91·9	82·5	+18·0	+50·4
174·362 G	0	7	0	8	91·5	82·1	+18·0	+63·1
Means ..	..	..	15	84	92·57	83·37	+18·07	..

Group 8127.

June 21–July 2. A long stream developing from two spots at the east limb. The leader, which becomes regular, breaks up after June 28; the last spot, composite at first, but regular by June 29, remains alone on July 2.

171·400 C	4	21	5	28	359·3	326·2	+ 9·9	−68·3
172·162 D	6	45	6	42	0·2	327·0	+ 9·6	−57·3
173·376 C	30	148	21	104	357·6	324·1	+ 9·8	−43·9
174·362 G	65	273	37	160	358·3	325·2	+ 9·8	−30·1
175·494 C	82	404	42	210	359·0	325·1	+10·2	−14·4
176·625 G	164	800	83	404	359·8	325·7	+10·5	− 1·4
177·132 K	206	744	104	379	359·9	325·7	+ 9·7	+ 8·2
178·410 C	130	647	73	361	359·2	324·8	+ 9·9	+24·4

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued*.

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8127—*continued*.								
1917· d					°	°	°	°
179·500 C	71	482	47	313	359·0	324·4	+ 9·8	+38·6
180·350 C	51	316	39	245	357·6	322·8	+10·3	+48·5
181·412 G	17	145	16	143	354·7	319·7	+11·0	+59·6
182·414 G	12	77	20	128	354·5	319·3	+11·3	+72·7
Means ..	..	..	41	210	358·26	324·17	+10·15	..
Group 8129.								
June 23–July 5. A large composite spot, with triple umbra, which has divided into three close regular spots by June 26. An indefinite cluster follows the three spots until they commence to break up on July 2. The axis of the triple group, which at first is inclined some 80° to the solar equator, turns gradually until its inclination is about 20°.								
173·376 C	20	233	50	587	322·9	314·2	+17·7	−78·6
174·362 G	63	568	81	725	321·9	313·2	+17·8	−66·5
175·494 C	85	612	71	512	321·5	312·7	+18·0	−51·9
176·625 G	145	684	95	443	321·2	312·3	+17·4	−37·2
177·132 K	125	528	76	319	321·3	312·4	+18·2	−30·4
178·410 C	100	567	54	302	320·9	312·0	+18·1	−13·9
179·500 C	72	421	37	218	320·9	311·9	+18·5	+ 0·5
180·350 C	82	485	43	258	320·3	311·3	+18·4	+11·2
181·412 G	46	234	27	135	320·2	311·1	+18·0	+25·1
182·414 G	42	154	29	103	319·9	310·8	+18·3	+38·1
183·391 G	13	41	11	34	321·2	312·0	+17·7	+52·3
184·390 C	7	32	8	38	320·9	311·7	+20·0	+65·2
185·401 C	5	52	14	149	322·8	313·5	+19·0	−80·5
Means ..	..	..	46	294	321·22	312·24	+18·24	..
Group 8131.								
June 24–30. Intermittent. A few very small spots. Nothing is seen from June 27 until June 30, when a small spot appears. Revival of Group 8099.								
174·362 G	0	10	0	6	351·1	314·3	− 8·6	−37·3
175·494 C	7	47	4	26	351·5	314·5	− 8·4	−21·9
176·625 G	0	4	0	2	354·0	316·7	− 8·9	− 4·4
177·132 K	0	0	0	0	..	..	..	..
178·410 C	0	0	0	0	..	..	..	..
179·500 C	0	0	0	0	..	..	..	..
180·350 C	0	7	0	5	354·2	316·2	− 8·6	+45·1
Means ..	..	..	1	6	352·70	315·43	− 8·62	..
Group 8132.								
June 25–July 1. A few small unstable spots in a large area of faculæ, in which Group 8137 appears later in the *n* portion.								
175·494 C	2	6	2	6	318·8	323·9	−20·6	−54·6
176·625 G	13	64	9	44	321·0	326·1	−21·6	−37·4

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8132—*continued*.								
1917· d					°	°	°	°
177·132 K	0	16	0	10	320·1	325·2	−22·7	−31·6
178·410 C	3	17	2	10	321·1	326·3	−22·8	−13·7
179·500 C	6	31	3	18	319·5	324·7	−21·3	− 0·9
180·350 C	0	9	0	5	319·2	324·4	−20·8	+10·1
181·412 G	0	11	0	7	320·3	325·6	−21·1	+25·2
Means ..	..	..	2	14	320·00	325·17	−21·56	..
Group 8136.								
June 27–July 4. A sparse stream of small spots.								
177·132 K	0	15	0	26	278·3	246·1	+11·6	−73·4
178·410 C	12	91	11	92	277·2	244·8	+11·0	−57·6
179·500 C	26	97	18	67	276·6	243·9	+10·7	−43·8
180·350 C	33	94	19	56	278·4	245·6	+10·6	−30·7
181·412 G	12	76	7	39	280·2	247·2	+10·4	−14·9
182·414 G	7	43	4	22	280·2	247·0	+10·8	− 1·6
183·391 G	7	24	4	13	281·9	248·5	+11·2	+13·0
184·390 C	0	8	0	4	283·2	249·6	+11·2	+27·5
Means ..	..	..	8	40	279·50	246·59	+10·94	..
Group 8139.								
June 28–July 7. A long sparse stream of unimportant spots, which gradually die out.								
178·410 C	9	32	8	27	285·0	282·1	−19·8	−49·8
179·500 C	2	19	2	13	284·8	281·9	−19·4	−35·6
180·350 C	17	103	10	60	287·8	284·9	−19·8	−21·3
181·412 G	32	150	17	82	286·9	284·0	−20·0	− 8·2
182·414 G	23	131	13	72	286·9	284·0	−20·4	+ 5·1
183·391 G	45	133	27	77	290·0	287·1	−19·5	+21·1
184·390 C	45	107	30	72	291·4	288·5	−19·0	+35·7
185·401 C	14	67	12	55	289·7	286·7	−19·4	+47·4
186·396 C	10	37	11	43	290·4	287·4	−19·6	+61·3
187·457 G	0	7	0	14	288·9	285·9	−20·4	+73·8
Means ..	..	..	13	52	288·18	285·25	−19·73	..
Group 8141.								
June 30–July 11. A regular spot, *a*, *s* of which spots develop rapidly after July 1 to make a complex and very compact stream 10° in length. The original spot lasts until July 10, when the group is rapidly dying out.								
180·350 C	10	37	41	150	227·0	206·6	−12·6	−82·1
181·412 G	14	69	20	97	227·3	206·8	−13·0	−67·8
182·414 G	57	280	50	249	228·1	207·5	−14·4	−53·7
183·391 G	277	1048	197	741	227·7	207·0	−15·0	−41·2

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Date. G.M.T. (Civil) Place.	Projected Area.		Corrected Area.		Longitude.		Latitude.	Long. from C.M.
	Umbræ.	Whole Spots.	Umbræ.	Whole Spots.	System I.	System II.		
Group 8141—*continued.*								
1917. d					°	°	°	°
184·390 C	157	1109	94	667	227·6	206·8	−15·0	−28·1
185·401 C	173	1333	94	730	227·7	206·8	−15·8	−14·6
186·396 C	178	1117	98	591	227·4	206·3	−15·6	− 1·7
187·457 G	151	679	82	371	227·7	206·5	−16·4	+12·6
188·413 C	133	646	79	382	228·0	206·7	−16·2	+25·6
189·399 C	48	405	33	278	228·4	207·0	−15·9	+39·0
190·365 C	29	133	25	114	227·9	206·4	−15·6	+51·3
191·403 G	2	14	3	19	229·0	207·4	−16·3	+66·2
Means ..	..	..	68	366	227·82	206·82	−15·15	..
Spot *a*.								
180·350 C	10	37	41	150	227·0	201·4	−12·6	−82·1
181·412 G	14	69	20	97	227·3	201·5	−13·0	−67·8
182·414 G	18	111	16	100	227·6	201·7	−12·8	−54·2
183·391 G	30	119	21	82	227·8	201·8	−13·0	−41·1
184·390 C	34	152	20	90	228·3	202·1	−13·2	−27·4
185·401 C	18	160	10	86	228·3	202·0	−13·6	−14·0
186·396 C	27	87	14	45	228·6	202·1	−14·0	− 0·5
187·457 G	10	54	5	29	228·7	202·1	−14·1	+13·6
188·413 C	12	33	7	20	228·9	202·2	−14·3	+26·5
189 C	2	9	1	6	228·7	201·8	−14·2	+39·3
190 C	2	9	2	8	228·8	201·8	−14·0	+52·2

Group 8142.

July 2–11. A regular spot appearing in front of Group 8141. A train of small faint spots follows from July 3–6.

182·414 G	13	51	9	34	243·7	219·4	−14·0	−38·1
183·391 G	76	486	43	280	244·7	220·3	−14·4	−24·2
184·390 C	55	421	29	223	245·4	220·9	−14·0	−10·3
185·401 C	41	466	22	247	246·4	221·7	−14·2	+ 4·1
186·396 C	49	370	27	203	245·6	220·8	−14·2	+16·5
187·457 G	58	276	35	168	245·8	220·9	−14·2	+30·7
188·413 C	28	220	21	161	246·0	220·9	−14·1	+43·6
189·399 C	20	144	19	138	245·8	220·6	−14·0	+56·4
190·365 C	9	76	14	114	245·4	220·1	−13·8	+68·8
191·403 G	2	11	9	48	244·9	219·4	−13·8	+82·1
Means ..	..	..	23	162	245·37	220·50	−14·07	..

Group 8144.

July 5–14. A wide area of disturbance with a few small spots, *p* Group 8148. No spots are seen on July 10.

185·401 C	0	7	0	12	168·3	125·8	+ 9·5	−74·0
186·396 C	10	17	10	17	168·3	125·6	+ 8·4	−60·8

Date. G.M.T. (Civil) Place.	Projected Area.		Corrected Area.		Longitude.		Latitude.	Long. from C.M.
	Umbræ.	Whole Spots.	Umbræ.	Whole Spots.	System I.	System II.		
Group 8144—*continued.*								
1917. d					°	°	°	°
187·457 G	8	16	6	11	168·8	125·9	+ 7·8	−46·3
188·413 C	8	16	5	10	168·8	125·7	+ 7·6	−33·6
189·399 C	7	12	4	7	168·8	125·4	+ 7·4	−20·6
190·365 C	0	0	0	0	..	..	..	..
191·403 G	12	53	6	27	171·8	128·0	+ 6·0	+ 9·0
192·343 G	19	36	10	19	173·3	129·2	+ 6·3	+22·9
193·389 G	4	19	2	11	168·8	124·5	+ 4·5	+32·2
194·438 G	7	24	5	17	166·9	122·4	+ 4·2	+44·2
Means ..	..	..	5	13	169·31	125·83	+ 6·86	..

Group 8146.

July 6–13. A cluster of unstable spots.

186·396 C	5	11	3	7	202·4	199·8	−19·2	−26·7
187·457 G	35	101	19	57	203·1	200·5	−20·0	−12·0
188·413 C	27	109	15	60	203·8	201·2	−19·9	+ 1·4
189·399 C	24	159	13	90	205·0	202·3	−19·5	+15·6
190·365 C	34	234	21	145	204·6	201·9	−20·0	+28·0
191·403 G	64	222	47	162	204·0	201·3	−19·9	+41·2
192·343 G	32	130	31	125	204·[illegible]	202·0	−20·1	+54·3
193·389 G	10	50	18	81	206·[illegible]	203·4	−19·8	+69·5
Means ..	..	..	21	91	204·21	201·55	−19·80	..

Group 8150.

July 8–19. A group forming at the east limb and consisting of an imperfectly formed regular spot, followed by a cluster of tiny spots, which disappear after July 15.

188·413 C	24	130	31	163	135·8	95·2	+ 9·2	−66·6
189·399 C	43	483	35	400	136·3	95·5	+ 8·8	−53·1
190·365 C	58	513	38	333	137·4	96·3	+ 8·2	−39·2
191·403 G	83	496	46	273	137·8	96·5	+ 8·0	−25·0
192·343 G	87	651	45	339	136·9	95·4	+ 8·3	−13·5
193·389 G	84	607	42	304	137·4	95·6	+ 8·1	− 0·8
194·438 G	74	505	38	262	137·6	95·6	+ 7·7	+14·9
195·340 G	52	357	29	199	137·5	95·3	+ 7·7	+26·8
196·350 C	26	270	17	178	138·0	95·6	+ 7·9	+40·6
197·377 G	30	162	26	138	138·1	95·5	+ 7·7	+54·3
198·432 C	21	105	28	142	138·4	95·5	+ 8·1	+68·6
199·584 G	4	23	16	94	138·1	95·0	+ 7·7	+83·5
Means ..	..	..	33	235	137·44	95·58	+ 8·12	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued*.

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 8151.

July 8–20. A large composite spot, the *nf* portion of which breaks away and then gradually disappears whilst the main spot is contracting quickly. This group is closely associated with Group 8149.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
188·413 C	34	183	80	430	124·2	128·2	+21·6	−78·2
189·399 C	44	401	52	483	124·6	128·6	+21·8	−64·8
190·365 C	71	561	61	476	124·4	128·4	+21·6	−52·2
191·403 G	91	671	61	450	123·8	127·8	+21·4	−39·0
192·343 G	122	742	72	438	123·5	127·5	+21·4	−26·9
193·389 G	153	707	81	375	123·8	127·9	+20·9	−12·8
194·438 G	119	784	62	410	123·4	127·5	+21·1	+ 0·7
195·340 G	115	722	61	383	123·1	127·2	+21·0	+12·4
196·350 C	69	377	40	217	123·1	127·2	+21·3	+25·7
197·377 G	61	354	41	236	122·7	126·8	+21·0	+38·9
198·432 C	39	221	34	188	122·9	127·1	+21·1	+53·1
199·584 G	20	106	26	139	122·5	126·7	+20·9	+67·9
200·454 G	10	63	25	163	123·1	127·3	+21·1	+80·0
Means ..	..	..	54	338	123·47	127·55	+21·25	..

Group 8152.

July 10–16. A few small unstable spots *n* Group 8156.

190·365 C	0	2	0	4	102·7	83·1	+15·6	−73·9
191·403 G	8	21	9	22	100·6	80·9	+15·8	−62·2
192·343 G	12	28	9	21	102·4	82·6	+15·7	−48·0
193·389 G	7	41	4	25	102·3	82·4	+15·9	−34·3
194·438 G	0	11	0	6	100·6	80·6	+16·1	−22·1
195·340 G	2	11	1	6	100·2	80·1	+15·9	−10·5
196·350 C	0	9	0	5	99·4	79·2	+15·8	+ 2·0
Means ..	..	..	3	13	101·17	81·27	+15·69	..

Group 8156.

July 12–20. Two small clusters on July 12; a regular spot with occasional small companions until July 16; afterwards two or three small spots.

192·343 G	12	43	9	31	103·6	64·2	+ 9·1	−46·8
193·389 G	37	239	21	139	105·6	66·0	+10·2	−31·0
194·438 G	24	117	12	61	106·0	66·1	+ 9·9	−16·7
195·340 G	24	117	12	58	106·6	66·6	+ 9·3	+ 4·1
196·350 C	21	79	11	40	106·9	66·7	+ 9·3	+ 9·5
197·377 G	18	108	10	59	107·3	66·8	+ 8·5	−23·5
198·432 C	11	23	7	15	108·5	67·8	+ 9·1	−38·7
199·584 G	9	19	8	16	108·4	67·5	+ 8·5	−53·8
200·454 G	4	15	5	18	108·8	67·7	+ 8·4	−65·7
Means ..	..	..	11	49	106·86	66·60	+ 9·14	..

Group 8159.

July 13–19. Intermittent. A very small spot on July 13 and 14; two or three on July 18 and 19.

1917. d					°	°	°	°
193·389 G	6	17	9	25	67·9	27·5	− 9·2	−68·7
194·438 G	2	9	2	9	68·4	27·8	− 8·8	−54·3
195·340 G	0	0	0	0	..	..	..	..
196·350 C	0	0	0	0	..	..	..	..
197·377 G	0	0	0	0	..	..	..	..
198·432 C	2	8	1	4	69·6	28·1	− 9·0	− 0·2
199·584 G	0	8	0	4	69·6	27·9	− 8·2	+15·0
Means ..	..	..	2	6	68·88	27·83	− 8·80	..

Group 8160.

July 13–20. A regular spot, breaking up on July 19. A few small companions are seen to the *s*.

193·389 G	0	15	0	92	53·0	40·2	−17·7	−83·6
194·438 G	11	71	18	114	53·3	40·5	−17·5	−69·4
195·340 G	17	79	18	81	53·1	40·2	−17·7	−57·6
196·350 C	23	122	17	93	53·6	40·6	−17·9	−43·8
197·377 G	22	149	14	94	53·5	40·5	−17·5	−30·3
198·432 C	10	108	6	60	53·5	40·4	−17·4	−16·3
199·584 G	4	9	2	5	53·1	39·9	−16·8	− 1·5
200·454 G	0	13	0	7	52·7	39·5	−17·4	+ 9·6
Means ..	..	..	9	68	53·23	40·22	−17·49	..

Group 8162.

July 16–28. A regular spot, diminishing quickly after July 26. There are usually some very small companions.

196·350 C	8	41	27	141	15·1	346·4	+14·1	−82·3
197·377 G	15	102	21	142	14·3	345·5	+13·6	−69·5
198·432 C	29	163	26	145	14·0	345·0	+13·8	−55·8
199·584 G	24	165	16	109	14·2	345·1	+13·0	−40·4
200·454 G	50	230	29	133	14·0	344·7	+13·0	−29·1
201·374 G	36	275	19	146	13·8	344·4	+12·9	−17·1
202·337 G	58	287	30	147	13·6	344·1	+12·7	− 4·6
203·448 C	47	264	24	135	13·8	344·1	+13·3	+10·3
204·409 C	36	230	20	126	13·3	343·5	+13·3	+22·5
205·438 C	20	169	13	106	13·9	343·9	+13·3	+36·8
206·449 C	23	135	18	105	14·4	344·3	+13·3	+50·6
207·391 C	15	89	16	96	14·2	343·9	+13·3	+62·9
208·345 C	2	15	4	29	14·3	343·9	+13·3	+75·6
Means ..	..	..	20	120	14·07	344·52	+13·30	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 8168.

July 21–August 2. An irregular stream of ill-formed spots. By July 29, a pair of nearly regular spots are the only important members of the stream remaining.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917· d					°	°	°	°
201·374 G	4	47	(19	225	308·4	283·0	−14·6)*	−82·5
202·337 G	39	252	81	499	305·7	280·2	−15·3	−72·5
203·448 C	87	509	94	536	305·6	280·0	−15·0	−57·9
204·409 C	65	460	49	348	306·2	280·4	−14·9	−44·6
205·438 C	141	752	91	478	304·8	278·9	−14·4	−32·3
206·449 C	137	817	79	466	303·8	277·8	−14·4	−20·0
207·391 C	144	811	78	434	304·2	278·1	−14·5	− 7·1
208·345 C	161	838	87	450	306·0	279·8	−13·8	+ 7·3
209·437 C	63	541	37	311	307·7	281·3	−13·6	+23·5
210·327 C	63	362	41	235	307·7	281·2	−13·8	+35·2
211·343 C	66	279	54	227	307·2	280·6	−14·2	+48·2
212·455 C	25	151	31	187	308·1	281·3	−14·2	+63·8
213·305 D	14	73	32	170	308·4	281·5	−15·2	+75·3
Means ..	..	..	63	362	306·28	280·09	−14·44	..

Group 8170.

July 25–August 5. A regular spot—with a few small followers—which divides into two by July 30 before disappearing. A few small spots continue to mark the area until August 5.

205·438 C	0	10	0	36	253·9	227·2	+14·2	−83·2
206·449 C	10	43	14	58	254·8	228·0	+14·0	−69·0
207·391 C	21	95	19	86	255·0	228·0	+14·3	−56·3
208·345 C	22	142	15	99	255·3	228·2	+14·5	−43·4
209·437 C	29	104	17	59	255·8	228·6	+14·3	−28·4
210·327 C	28	71	15	38	255·1	227·8	+14·5	−17·4
211·343 C	7	49	4	25	254·2	226·7	+14·6	− 4·8
212·455 C	0	4	0	2	253·6	226·0	−13·8	+ 9·3
213·305 D	3	16	2	9	249·8	222·1	−13·4	+16·7
214·389 C	17	65	10	38	249·5	221·6	+14·5	+30·8
215·700 G	3	11	2	9	250·5	222·5	+14·2	+49·1
216·522 G	0	4	0	4	249·4	221·2	+14·2	+58·9
Means ..	..	..	8	39	253·08	225·66	+14·21	..

Group 8171.

July 26–August 3. An irregular stream of spots *f* Group 8168. The chief member is a regular spot, *a*, near the head of the stream; the rear spot is of secondary importance, and has almost disappeared by August 3.

206·449 C	5	15	3	9	292·9	267·3	−14·3	−30·9
207·391 C	15	54	8	30	293·7	268·0	−14·2	−17·6
208·345 C	79	214	42	114	294·4	268·6	−14·4	− 4·3
209·437 C	171	901	93	492	295·8	269·8	−14·4	−11·6
210·327 C	147	997	86	580	294·7	268·6	−14·4	−22·2

Group 8171—*continued.*

1917· d					°	°	°	°
211·343 C	144	870	95	574	294·8	268·6	−14·4	+35·8
212·455 C	96	710	84	616	295·2	268·9	−14·9	+50·9
213·305 D	81	504	97	600	295·1	268·7	−15·7	+62·0
214·389 C	22	132	57	341	295·7	269·1	−14·2	+77·0
Means ..	..	..	63	373	294·70	268·62	−14·54	..

Spot *a*.

209·437 C	54	356	30	196	297·0	270·2	−14·1	+12.8
210·327 C	65	482	38	284	297·4	270·5	−13·9	+24·9
211·343 C	71	414	49	286	297·6	270·6	−14·1	+38·6
212·455 C	45	333	41	300	297·1	269·9	−14·4	+52·8
213·305 D	46	266	58	333	296·6	269·3	−15·3	+63·5
214·389 C	22	111	60	304	296·2	268·8	−14·3	+77·5

Group 8172.

July 27–August 3. A few small spots *f* Group 8169; none are seen on August 2.

207·391 C	5	20	3	13	273·4	252·9	+15·7	−37·9
208·345 C	2	8	1	4	275·8	255·2	+16·2	−22·9
209·437 C	33	140	17	71	274·9	254·2	+15·6	− 9·3
210·327 C	43	146	22	75	274·7	253·9	+15·6	+ 2·2
211·343 C	10	57	5	30	274·4	253·5	+15·6	+15·4
212·455 C	0	2	0	1	272·8	251·8	+16·5	+28·5
213·305 D	0	0	0	0	..	..	..	..
214·389 C	12	36	11	32	275·4	254·2	+16·1	+56·7
Means ..	..	..	7	28	274·49	253·67	+15·90	..

Group 8173.

July 28–August 5. A pair of small regular spots 3° apart in latitude. The more southern alone remains after August 3.

208·345 C	11	45	21	82	224·3	173·9	+ 6·0	−74·4
209·437 C	15	100	15	100	223·9	173·2	+ 6·0	−60·3
210·327 C	20	133	15	100	224·4	173·5	+ 5·5	−48·1
211·343 C	24	135	15	82	224·1	173·0	+ 5·8	−34·9
212·455 C	32	143	17	76	224·5	173·1	+ 5·5	−19·8
213·305 D	40	89	20	45	223·9	172·3	+ 5·6	− 9·2
214·389 C	12	35	6	19	224·3	172·4	+ 5·0	− 5·6
215·700 G	9	17	5	9	224·7	172·5	+ 3·5	+23·3
216·522 G	5	16	3	10	224·9	172·5	+ 3·1	+34·4
Means ..	..	..	13	58	224·33	172·93	+ 5·11	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 8174.

July 29–August 5. A short stream of small spots *sf* Group 8169 and *s* Group 8172. The leader and rear spots enlarge after August 2.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
209·437 C	0	6	0	3	271·9	226·7	+ 7·7	−12·3
210·327 C	15	37	8	19	271·7	226·3	+ 8·0	− 0·8
211·343 C	18	49	9	25	271·3	225·7	+ 8·4	+12·3
212·455 C	7	34	4	19	271·6	225·7	+ 8·5	+27·3
213·305 D	7	28	5	19	272·6	226·5	+ 8·0	+39·5
214·389 C	43	136	37	117	273·6	227·3	+ 8·6	+54·9
215·700 G	22	43	40	77	275·9	229·3	+ 7·9	+74·5
216·522 G	0	6	(0	18	271·3	224·5	+ 9·1)*	+80·8
Means ..	..	..	15	40	272·66	226·79	+ 8·16	..

Group 8175.

July 29–August 5. An unstable group of very small spots.

209·437 C	24	50	15	33	247·0	254·3	+18·5	−37·2
210·327 C	7	15	4	9	245·8	253·1	+20·4	−26·7
211·343 C	5	34	3	18	247·6	255·0	+21·4	−11·4
212·455 C	0	14	0	7	247·5	254·9	+21·1	+ 3·2
213·305 D	2	11	1	6	250·3	257·8	+22·9	+17·2
214·389 C	21	86	13	52	249·8	257·3	+23·5	+31·1
215·700 G	18	28	14	22	250·3	257·9	+23·2	+48·9
216·522 G	2	23	2	23	249·8	257·4	+23·2	+59·3
Means ..	..	..	7	21	248·51	255·96	+21·78	..

Group 8177.

July 31–August 11. A small regular spot gradually contracting. On August 6 other spots form *s* of it, but these have disappeared by August 11.

211·343 C	9	30	13	44	188·0	167·5	+16·8	−71·0
212·455 C	18	108	16	97	188·0	167·4	+16·8	−56·3
213·305 D	34	134	24	95	188·1	167·4	+18·1	−45·0
214·389 C	26	155	15	91	188·6	167·8	+16·9	−30·1
215·700 G	22	133	11	69	189·6	168·7	+16·2	−11·8
216·522 G	28	145	14	74	189·7	168·7	+15·8	− 0·8
217·669 G	49	185	25	96	189·9	168·8	+15·2	+14·5
218·487 G	72	393	40	216	189·2	168·0	+14·8	+24·6
219·362 C	57	232	35	144	189·4	168·1	+15·0	+36·4
220·353 C	19	124	15	97	190·3	168·9	+15·2	+50·4
221·402 G	6	24	7	28	191·2	169·7	+15·3	+65·2
222·386 G	0	11	0	22	189·6	168·0	+15·6	+76·6
Means ..	..	..	18	89	189·30	168·25	+15·98	..

Group 8180.

August 3–15. A stable regular spot, with proper motion in longitude.

1917. d					°	°	°	°
214·389 C	10	68	25	171	144·0	157·3	−24·0	−74·7
215·700 G	25	151	28	169	144·0	157·4	−23·6	−57·4
216·522 G	26	173	22	149	143·9	157·3	−23·4	−46·6
217·669 G	49	257	33	175	143·7	157·2	−22·7	−31·7
218·487 G	45	240	27	146	143·4	157·0	−22·3	−21·2
219·362 C	46	267	27	155	142·9	156·5	−22·3	−10·1
220·353 C	38	258	22	147	142·4	156·1	−22·4	+ 2·5
221·402 G	40	273	24	161	141·6	155·3	−22·7	+15·6
222·386 G	44	223	29	145	141·2	155·0	−22·4	+28·2
223·413 G	36	175	28	137	140·9	154·7	−22·8	+41·5
224·462 G	22	119	23	124	140·7	154·6	−22·5	+55·1
225·348 C	12	106	18	167	140·7	154·7	−22·8	+66·8
226·585 G	4	17	29	125	140·3	154·3	−23·0	+82·8
Means ..	..	..	26	152	142·28	155·95	−22·84	..

Group 8183.

August 4–12. A stream of unstable spots *p* Group 8181.

215·700 G	28	114	24	98	146·4	118·1	+13·9	−55·0
216·522 G	49	205	34	143	146·6	118·2	+13·9	−43·9
217·669 G	33	179	19	100	148·3	119·8	+14·0	−27·1
218·487 G	36	187	19	98	148·6	119·9	+14·3	−16·0
219·362 C	44	190	22	97	148·2	119·5	+14·2	− 4·8
220·353 C	31	160	16	82	147·5	118·6	+14·8	+ 7·6
221·402 G	11	46	6	25	148·7	119·7	+14·1	+22·7
222·386 G	13	16	8	10	149·2	120·1	+14·1	+36·2
223·413 G	2	8	2	6	150·6	121·3	+14·3	+51·2
Means ..	..	..	17	73	148·23	119·47	+14·18	..

Group 8187

August 5–11. A short-lived regular spot, with a few small followers.

216·522 G	3	13	2	8	174·0	186·1	−23·0	−16·5
217·669 G	25	89	14	51	174·6	186·8	−22·5	− 0·8
218·487 G	49	372	28	216	175·5	187·7	−22·0	+10·9
219·362 C	37	172	23	107	175·5	187·8	−22·4	+22·5
220·353 C	17	124	12	88	175·2	187·5	−22·1	+35·3
221·402 G	8	43	7	39	175·6	188·0	−23·1	+49·6
222·386 G	0	2	0	3	175·1	187·5	−23·1	+62·1
Means ..	..	..	12	73	175·07	187·34	−22·60	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 8188.

August 5–14. A composite spot, with a few small followers, becoming very small by August 12.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
216·522 G	9	33	18	65	115·1	59·9	+ 2·0	−75·4
217·669 G	32	216	32	218	114·8	59·3	+ 2·4	−60·6
218·487 G	44	269	34	207	115·2	59·5	+ 2·4	−49·4
219·362 C	41	244	26	156	114·8	58·8	+ 2·5	−38·2
220·353 C	32	175	18	96	114·5	58·3	+ 2·6	−25·4
221·402 G	26	118	13	60	115·6	59·1	+ 2·3	−10·4
222·386 G	20	123	10	62	114·2	57·5	+ 3·0	+ 1·2
223·413 G	4	18	2	9	115·9	58·9	+ 2·4	+16·5
224·462 G	2	19	1	11	114·8	57·6	+ 2·6	+29·2
225·348 C	10	34	7	23	116·8	59·3	+ 1·5	+42·9
Means ..	..	..	16	91	115·17	58·82	+ 2·37	..

Group 8191.

August 6–12. A short stream *nf* Group 8181. The spots are very small after August 9.

217·669 G	8	29	7	25	121·5	116·9	+19·8	−53·9
218·487 G	20	87	14	61	121·1	116·5	+19·5	−43·5
219·362 C	34	139	21	85	120·4	115·8	+19·8	−32·6
220·353 C	26	156	14	86	119·4	114·8	+19·5	−20·5
221·402 G	2	34	1	18	116·9	112·3	+19·0	− 9·1
222·386 G	0	12	0	6	117·0	112·3	+19·3	+ 4·0
223·413 G	2	12	1	6	115·1	110·4	+19·8	+15·7
Means ..	..	..	8	41	118·77	114·14	+19·53	..

Group 8194.

August 6–17. A regular spot, preceded by a small cluster which condenses into a large irregular spot by August 12, whilst other spots form in front. The irregular spot is breaking up on August 16, and the companion spots have nearly disappeared. Until August 11, Groups 8193 and 8194 might be considered as one long stream of spots, and in this respect the proper motion in longitude of Group 8193 should be noted.

217·669 G	0	38	0	137	92·2	56·1	+12·3	−83·2
218·487 G	23	102	37	164	91·8	55·5	+11·9	−72·8
219·362 C	23	116	24	122	90·2	53·8	+12·1	−62·8
220·353 C	34	165	26	127	89·7	53·1	+11·9	−50·2
221·402 G	44	272	27	169	89·3	52·5	+12·0	−36·7
222·386 G	66	419	36	226	89·8	52·9	+11·4	−23·2
223·413 G	81	540	41	275	89·8	52·7	+11·9	− 9·6
224·462 G	129	668	65	334	90·6	53·3	+11·9	+ 5·0
225·348 C	128	661	68	350	91·2	53·8	+11·7	+17·3
226·585 G	61	279	37	167	91·5	53·9	+12·0	+34·0
227·354 G	45	197	31	136	90·7	53·0	+12·5	+43·4
228·447 C	10	35	9	32	90·4	52·5	+13·0	+57·5
Means ..	..	..	33	187	90·60	53·59	+12·05	..

Group 8196.

August 7–12. One or two very small spots not seen on August 9 and 10; *nf* Group 8181.

1917. d					°	°	°	°
218·487 G	3	15	2	11	119·9	142·4	+24·8	−44·7
219·362 C	1	5	1	3	119·4	142·0	+25·1	−33·6
220·353 C	0	0	0	0	..	..	..	..
221·402 G	0	0	0	0	..	..	..	..
222·386 G	1	12	1	6	119·9	142·8	+24·0	+ 6·9
223·413 G	0	6	0	3	118·0	141·0	+23·5	+18·6
Means ..	..	..	1	4	119·30	142·05	+24·35	..

Group 8201.

August 10–18. A stream of normal type, excepting that the leader spot becomes composite and divides into two on August 16, and the rear spot—at first composite—becomes regular. *See* Group 8541 for first signs of activity.

221·402 G	51	236	28	130	103·6	79·2	+15·8	−22·4
222·386 G	40	271	20	138	103·5	79·0	+15·1	− 9·5
223·413 G	122	803	62	410	102·6	78·0	+15·2	+ 3·2
224·462 G	182	857	96	454	102·7	78·0	+15·4	+17·1
225·348 C	111	921	63	525	102·2	77·4	+15·3	+28·3
226·585 G	105	679	74	475	102·2	77·3	+15·3	+44·7
227·354 G	92	630	78	536	102·2	77·2	+15·3	+54·9
228·447 C	45	379	61	512	102·3	77·2	+15·4	+69·4
229·417 C	13	89	39	270	102·1	76·9	+15·0	+82·0
Means ..	..	..	58	383	102·60	77·80	+15·31	..

Group 8202.

August 10–21. A small diminishing spot with a few small followers. The group dies out by August 18, but the next day a small stream of normal type is forming near its place.

221·402 G	5	25	9	47	53·5	22·1	−12·9	−72·5
222·386 G	17	44	19	48	53·0	21·4	−13·2	−60·0
223·413 G	14	34	11	26	55·2	23·5	−12·9	−44·2
224·462 G	8	53	5	33	54·6	22·7	−12·8	−31·0
225·348 C	11	41	6	23	54·8	22·8	−12·8	−19·1
226·585 G	11	21	6	11	54·7	22·5	−12·7	− 2·8
227·354 G	6	20	3	11	53·8	21·5	−12·2	+ 6·5
228·447 C	1	4	1	2	53·9	21·5	−12·6	+21·0
229·417 C	0	0	0	0	..	..	..	..
230·414 G	4	10	3	8	56·0	23·3	−15·8	+49·1
231·408 G	19	97	25	125	57·7	24·8	−15·3	+63·9
232·362 C	6	69	16	179	57·4	24·4	−15·7	−76·2
Means ..	..	..	9	43	54·96	22·77	−13·54	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued*.

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 8208.

August 13–23. A regular spot which has broken up by August 21. One or two very small spots occasionally appear near it.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917· d					°	°	°	°
224·462 G	5	26	13	67	8·3	326·3	−10·8	−77·3
225·348 C	11	71	15	94	8·1	326·0	−10·7	−65·8
226·585 G	21	126	17	102	8·3	325·9	−10·7	−49·2
227·354 G	27	146	18	99	8·2	325·7	−10·6	−39·1
228·447 C	19	177	11	103	8·4	325·7	−10·6	−24·5
229·417 C	25	146	13	77	8·8	325·9	−10·4	−11·3
230·414 G	30	142	16	74	8·5	325·4	−10·4	+ 1·6
231·408 G	26	121	14	65	9·0	325·7	−10·4	+15·2
232·362 C	12	42	7	25	8·5	325·1	−10·5	+27·3
233·439 G	0	6	0	4	10·4	326·8	−10·6	+43·5
234·566 G	0	10	0	10	8·3	324·4	−11·0	+56·3
Means ..	..	..	11	65	8·62	325·72	−10·61	..

Group 8210.

August 15–23. A pair of small unstable spots.

226·585 G	14	18	9	12	31·7	53·9	−24·1	−25·8
227·354 G	24	79	14	47	32·6	54·9	−23·6	−14·7
228·447 C	9	32	5	19	32·7	55·1	−23·4	− 0·2
229·417 C	9	17	5	10	31·2	53·7	−24·1	+11·1
230·414 G	26	80	17	51	30·1	52·7	−24·9	+23·2
231·408 G	24	91	18	67	30·5	53·2	−24·4	+36·7
232·362 C	20	109	19	102	31·5	54·3	−24·0	+50·3
233·439 G	6	19	8	25	27·9	50·8	−24·7	+61·0
234·566 G	0	14	0	48	29·6	52·6	−24·1	+77·6
Means ..	..	..	11	42	30·87	53·47	−24·14	..

Group 8213.

August 17–29. A large regular spot, which becomes elongated and then double as it is diminishing rapidly. At first it is followed by a long train of very small spots, but these have disappeared by August 24, when, for three days, it is preceded by a small cluster.

228·447 C	18	159	51	448	311·8	277·8	+14·2	−81·1
229·417 C	71	423	94	563	311·2	277·0	+13·6	−68·9
230·414 G	123	630	106	542	311·9	277·6	+13·6	−55·0
231·408 G	105	681	69	449	313·3	278·8	+12·9	−40·5
232·362 C	165	884	94	504	313·5	278·9	+12·6	−27·7
233·439 G	141	980	73	510	313·0	278·2	+13·0	−13·9
234·566 G	144	892	72	446	313·2	278·2	+13·0	+ 1·2
235·232 K	124	761	63	388	313·7	278·7	+13·0	+10·5
236·436 C	104	655	59	373	313·4	278·2	+13·1	+26·1
237·505 G	68	496	44	303	313·1	277·7	+13·0	+39·9

Group 8213—*continued*.

1917· d					°	°	°	°
238·340 C	42	384	33	303	313·6	278·1	+13·1	+51·4
239·360 G	19	235	22	270	313·5	277·8	+12·7	+64·8
240·421 C	7	114	18	287	314·6	278·8	+12·7	+79·9
Means ..	..	..	61	414	313·06	278·14	+13·12	..

Group 8216.

August 21–September 1. Revival in region of Group 8170. At first a wide pair of small spots; later, an indefinite spot with occasional very small companions.

232·362 C	0	4	(0	15	257·1	233·9	+15·7)*	−84·1
233·439 G	2	13	3	21	254·1	230·8	+16·2	−72·8
234·566 G	4	20	4	20	251·3	227·8	+16·2	−60·7
235·232 K	0	8	0	6	253·0	229·5	+16·5	−50·2
236·436 C	9	33	5	20	253·7	230·1	+16·4	−33·6
237·505 G	19	51	10	27	255·2	231·4	+15·9	−18·0
238·340 C	29	76	15	39	256·5	232·7	+15·8	− 5·7
239·360 G	19	40	10	20	257·0	233·1	+15·3	+ 8·3
240·421 C	10	49	6	27	257·5	233·5	+15·4	+22·8
241·357 C	8	67	5	42	257·8	233·7	+15·5	+35·5
242·377 C	19	117	14	89	257·8	233·6	+16·1	+49·0
243·361 C	10	58	11	63	259·2	234·9	+15·1	+63·4
Means ..	..	..	8	34	255·74	231·92	+15·85	..

Group 8219.

August 25–30. A wide area of disturbance shown by faculæ and a few small scattered spots.

236·436 C	7	37	7	35	232·3	192·8	−12·7	−55·0
237·505 G	2	8	1	5	234·4	194·7	−11·3	−38·8
238·340 C	2	7	1	4	233·8	194·0	−11·3	−28·4
239·360 G	1	9	1	5	233·2	193·2	−12·1	−15·5
240·421 C	0	8	0	4	229·6	189·5	−13·7	− 5·1
241·357 C	0	9	0	5	232·8	192·5	−10·7	+10·5
Means ..	..	..	2	10	232·69	192·78	−11·97	..

Group 8224.

August 26–September 3. Revival of Group 8186. Generally a pair of small spots. Small companions appear on August 30 and September 2.

237·505 G	17	30	10	18	242·0	212·8	−15·0	−31·2
238·340 C	20	60	11	32	241·0	211·7	−14·8	−21·2
239·360 G	37	86	19	44	240·4	211·0	−14·8	− 8·3

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(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 8224—*continued.*

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
240·421 C	12	54	6	28	240·5	210·9	+15·6	+ 5·8
241·357 C	19	139	10	74	239·5	209·8	+15·5	+17·2
242·377 C	15	52	9	30	239·2	209·4	+15·0	+30·4
243·361 C	8	29	6	20	240·1	210·2	+14·3	+44·3
244·475 G	4	18	4	19	243·1	213·0	+12·9	+62·0
245·377 G	0	2	0	3	243·2	213·0	+13·8	+74·0
Means ..	..	..	8	30	241·00	211·31	+14·63	..

Group 8225.

August 27–September 6. A group consisting of a few small unstable spots. It appears as a short stream after September 1.

238·340 C	0	9	0	10	204·5	222·9	−23·1	−57·7
239·360 G	14	35	11	29	205·3	223·7	−23·7	−43·4
240·421 C	2	15	1	10	203·7	222·2	−22·1	−31·0
241·357 C	0	7	0	4	203·9	222·5	−22·1	−18·4
242·377 C	2	10	1	6	203·4	222·1	−23·7	− 5·4
243·361 C	6	41	3	24	202·3	221·0	−23·2	+ 6·5
244·475 G	9	44	6	28	204·2	223·0	−22·7	+23·1
245·377 G	33	83	24	60	203·6	222·5	−24·1	+34·4
246·409 G	23	73	21	66	203·3	222·3	−24·3	+47·7
247·361 G	10	33	13	43	203·7	222·7	−24·5	+60·7
248·560 C	0	6	0	24	206·4	225·5	−23·6	+79·2
Means ..	..	..	7	28	204·03	222·76	−23·37	..

Group 8226.

August 27–September 3. Two or three very small spots.

238·340 C	1	14	2	26	187·4	131·4	− 5·8	−74·8
239·360 G	11	25	11	26	187·1	130·9	+ 6·0	−61·6
240·421 C	11	24	8	18	187·6	131·1	− 5·5	−47·1
241·357 C	6	21	4	13	186·2	129·5	+ 6·5	−36·1
242·377 C	9	17	5	9	187·7	130·7	− 5·5	−21·1
243·361 C	3	17	2	9	186·1	128·9	+ 6·9	− 9·7
244·475 G	0	3	0	2	188·0	130·6	− 5·4	+ 6·9
245·377 G	0	3	0	2	187·5	129·8	− 6·6	+18·3
Means ..	..	..	4	13	187·20	130·36	− 6·03	..

Group 8229.

August 31–September 5. A pair of small spots developing into a long sinuous stream. After September 2, two of the components grow considerably.

242·377 C	33	84	18	47	218·5	199·6	−19·9	− 9·7
243·361 C	22	120	13	72	218·7	199·7	−17·2	−22·9

Group 8229—*continued.*

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
244·475 G	30	150	21	107	219·6	200·5	−17·1	+38·5
245·377 G	78	236	67	203	219·6	200·5	−17·1	+50·4
246·409 G	63	327	88	458	221·2	202·0	−16·7	+65·6
247·361 G	25	88	71	258	220·4	201·1	−16·6	+77·4
Means ..	..	..	46	191	219·67	200·57	−16·93	..

Group 8235.

September 2–8. Revival in region of Group 8192. An unstable group of small spots, first as a cluster and then as a stream. The fore part is alone represented on September 8.

244·475 G	0	11	0	22	108·0	69·4	−12·3	−73·1
245·377 G	2	8	2	9	108·3	69·5	−12·7	−60·9
246·409 G	6	15	5	12	106·6	67·7	−13·3	−49·0
247·361 G	15	62	10	41	108·4	69·3	−13·8	−34·6
248·560 C	7	24	4	14	108·5	69·2	−14·4	−18·7
249·391 C	2	20	1	11	109·4	70·0	−11·3	− 6·8
250·418 G	0	2	0	1	113·0	73·4	−10·1	+10·4
Means ..	..	..	3	16	108·89	69·79	−12·56	..

Group 8238.

September 3–13. A long irregular stream of small spots in continual change. A revival rather than a return of Group 8201.

245·377 G	0	2	0	3	101·6	81·0	+16·2	−67·6
246·409 G	44	139	37	115	102·2	81·5	+16·0	−53·4
247·361 G	52	227	34	148	103·6	82·8	+15·9	−39·4
248·560 C	50	241	27	133	103·2	82·3	+16·7	−24·0
249·391 C	37	200	19	104	104·0	83·0	+17·1	−12·2
250·418 G	48	97	24	49	105·6	84·6	+17·4	+ 3·0
251·231 D	27	73	14	38	106·1	85·0	+17·7	+14·2
252·367 C	8	22	6	13	104·4	83·2	+17·1	+27·5
253·381 G	24	114	16	78	106·1	84·8	+16·9	+42·6
254·359 G	4	27	4	24	107·0	85·6	+16·3	+56·4
255·356 C	0	4	0	5	104·4	83·0	+15·6	+67·0
Means ..	..	..	16	65	104·38	83·35	+16·63	..

Group 8242.

September 6–15. A very small spot not seen on September 8. The group then reappears as two small clusters until September 14, when a small double spot marks the leading cluster, and the following cluster is represented by a tiny spot on September 15.

248·560 C	2	4	3	5	58·7	14·9	+11·4	−68·5
249·391 C	0	9	0	8	58·8	14·9	+11·2	−57·4
250·418 G	0	0	0	0	..	..	..	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Date G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8242—*continued.*								
1917. d					°	°	°	°
251·231 D	15	40	9	25	54·3	10·1	+11·3	−37·6
252·367 C	33	74	17	40	55·1	10·7	+11·7	−21·8
253·381 G	44	136	22	69	55·1	10·5	+11·0	− 8·4
254·359 G	23	76	12	38	56·5	11·7	+11·3	+ 5·9
255·356 C	13	57	7	30	56·5	11·6	+11·3	+19·1
256·420 G	7	19	4	12	60·4	15·3	+11·5	+37·0
257·378 G	0	2	0	1	53·9	8·6	+11·6	+43·2
Means ..	..	..	7	23	56·59	12·03	+11·37	..
Group 8243.								
September 7–18. A stream of spots in continual change.								
249·391 C	12	65	34	183	35·3	346·4	+ 9·7	−80·9
250·418 G	16	51	18	58	38·0	348·9	+10·0	−64·6
251·231 D	18	38	15	32	37·3	348·1	+10·1	−54·6
252·367 C	15	50	10	33	37·0	347·5	+ 9·5	−39·9
253·381 G	60	203	33	111	38·4	348·7	+ 9·9	−25·1
254·359 G	74	313	38	162	36·7	346·9	+10·2	−13·9
255·356 C	98	499	49	250	35·6	345·6	+10·3	− 1·8
256·420 G	66	388	34	200	36·3	346·0	+10·4	+12·9
257·378 G	54	230	30	128	36·8	346·4	+10·1	+26·1
258·561 G	19	75	13	50	37·5	346·8	+ 9·7	+42·4
259·361 C	16	41	14	35	39·3	348·5	+ 9·9	+54·7
260·311 C	0	4	0	5	40·7	349·7	+ 8·9	+68·7
Means ..	..	..	24	104	37·41	347·46	+ 9·89	..
Group 8250								
September 12–24. A large composite spot which divides after September 16, the fore portion disappearing, leaving the back portion as a spot, approximately of regular outline. A cluster of small companions appears *s* from September 15–18.								
254·359 G	20	233	52	603	329·8	359·8	+24·3	−80·8
255·356 C	55	582	69	728	330·1	0·1	+24·8	−67·3
256·420 G	67	789	58	679	329·5	359·8	+25·0	−53·9
257·378 G	74	819	51	565	328·7	359·1	+24·6	−42·0
258·561 G	98	852	58	502	327·9	358·4	+24·9	−27·2
259·361 C	136	655	74	360	327·6	358·2	+24·8	−17·0
260·311 C	82	509	43	269	326·9	357·6	+24·9	− 5·1
261·356 C	51	427	27	226	326·2	357·0	+25·0	+ 8·0
262·339 C	42	444	23	250	326·7	357·7	+25·0	+21·4
263·403 G	59	307	37	193	325·8	356·9	+24·9	+34·6
264·339 C	32	254	24	191	325·5	356·7	+25·0	+46·6
265·444 C	21	138	22	142	325·4	356·7	+25·0	+61·1
266·402 G	10	67	16	106	324·4	355·8	+25·0	+72·8
Means ..	..	..	43	370	327·27	357·98	+24·86	..

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8252.								
September 14–21. A large cluster of spots, the centre of which condenses into a large composite spot on September 17. After this, however, the group quickly declines as Group 8264 is forming just southwards.								
1917. d					°	°	°	°
256·420 G	13	94	26	184	310·5	271·8	−13·3	−72·9
257·378 G	34	197	37	214	311·1	272·2	−13·3	−59·6
258·561 G	75	457	57	346	311·3	272·3	−13·3	−43·8
259·361 C	49	438	32	285	310·8	271·6	−13·3	−33·8
260·311 C	53	516	30	295	310·1	270·8	−12·7	−21·9
261·356 C	57	340	30	184	310·5	271·0	−12·8	− 7·7
262·339 C	41	246	21	130	310·4	270·8	−12·7	− 5·1
263·403 G	6	57	3	32	312·3	272·5	−12·7	−21·1
Means ..	..	..	29	209	310·88	271·63	−13·01	..
Group 8254.								
September 15-21. One or two very small spots *s.* Group 8250; not seen on September 16.								
257·378 G	2	4	1	3	325·6	287·5	+13·6	−45·1
258·561 G	0	0	0	0	..	..	..	..
259·361 C	3	14	2	7	324·7	286·3	+13·3	−19·9
260·311 C	0	21	0	11	324·8	286·3	+13·0	− 7·2
261·356 C	0	11	0	6	325·5	286·8	+13·0	+ 7·3
262·339 C	0	10	0	5	325·2	286·4	+13·3	+19·9
263·403 G	2	7	1	4	324·7	285·7	+13·0	+33·5
Means ..	..	..	1	5	325·08	286·50	+13·20	..
Group 8262.								
September 18–27. A few unstable spots until September 21, when a pair of spots appear, of which the preceding one alone remains on September 26.								
260·311 C	6	26	5	19	283·8	256·7	+15·7	−48·2
261·356 C	12	54	7	33	283·8	256·6	+15·6	−34·4
262·339 C	20	67	11	36	283·5	256·2	+15·9	−21·8
263·403 G	31	170	16	87	283·6	256·2	+16·2	− 7·6
264·339 C	52	324	27	166	284·9	257·4	+15·9	+ 6·0
265·444 C	37	215	20	117	285·2	257·6	+15·9	+20·9
266·402 G	28	141	17	86	285·8	258·1	+15·3	+34·2
267·430 G	13	43	9	31	285·3	257·5	+15·3	+47·2
268·356 C	8	36	8	35	285·8	257·9	+15·0	+60·0
269·341 C	2	8	3	13	286·1	258·1	+15·4	+73·3
Means ..	..	..	12	62	284·78	257·23	+15·62	..

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(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 8264

September 20–24. A small stream; only one spot remains on September 23 and 24.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
262·339 C	6	23	3	13	312·0	299·4	−18·3	+ 6·7
263·403 G	19	58	11	34	311·8	299·2	−18·3	+20·6
264·339 C	8	31	6	20	311·8	299·1	−18·1	+32·9
265·444 C	2	7	2	6	315·6	302·9	−19·1	+51·3
266·402 G	4	10	5	11	311·0	298·2	−17·8	+59·4
Means ..	..	..	5	17	312·44	299·76	−18·32	..

Group 8266.

September 22–30. A small spot, behind which a stream of normal type forms in the same area of faculæ, whilst it itself disappears after September 24. The changes in the new group are rapid, and by September 29 the leader spot of the stream alone remains.

264·339 C	4	8	7	14	207·3	151·8	− 7·3	−71·6
265·444 C	8	41	8	44	204·3	148·6	− 7·8	−60·0
266·402 G	48	130	37	102	203·5	147·6	− 8·5	−48·1
267·430 G	34	292	22	187	203·4	147·2	− 9·1	−34·7
268·356 C	43	271	23	154	203·3	146·9	− 9·5	−22·5
269·341 C	20	165	11	87	203·4	146·8	− 9·4	− 9·4
270·367 C	14	42	7	22	204·7	147·9	− 9·1	+ 5·4
271·394 G	8	19	4	10	205·4	148·4	− 9·1	+19·6
272·423 C	3	10	2	6	205·7	148·5	− 8·8	+33·5
Means ..	..	..	13	70	204·56	148·19	− 8·73	..

Group 8268.

September 23–October 1. A long sparse stream of small unstable spots until September 29, when more definite components appear. A large regular spot has developed at the head of the stream on October 1.

265·444 C	0	8	0	5	232·2	174·6	+ 9·7	−32·1
266·402 G	11	46	6	24	235·6	177·8	+ 8·0	−16·0
267·430 G	21	82	11	42	235·1	177·1	+ 8·0	− 3·0
268·356 C	12	44	7	23	235·3	177·1	+ 8·0	+ 9·5
269·341 C	20	48	11	26	236·5	178·1	+ 7·6	+23·7
270·367 C	13	99	8	62	236·3	177·9	+ 8·5	+37·0
271·394 G	31	104	24	80	235·8	176·9	+ 8·3	+50·0
272·423 C	24	140	31	180	239·9	180·8	+ 7·2	+67·7
273·430 G	12	56	35	164	239·8	180·5	+ 7·2	+80·9
Means ..	..	..	15	67	236·28	177·87	+ 8·06	..

Group 8269.

September 25–30. A short stream of spots of which the leader is the largest and most stable member.

1917. d					°	°	°	°
267·430 G	46	156	26	86	242·6	219·9	−16·9	+ 4·5
268·356 C	28	218	16	125	243·6	220·8	−16·6	+17·8
269·341 C	41	150	27	96	244·3	221·4	−16·6	+31·5
270·367 C	15	66	11	51	243·8	220·9	−16·8	+44·5
271·394 G	4	28	5	32	245·3	222·2	−16·8	+59·5
272·423 C	0	8	0	18	247·2	224·0	−15·9	+75·0
Means ..	..	..	14	68	244·47	221·53	−16·60	..

Group 8278.

October 5–13. A stream some 12° in length. The largest and most stable component is a regular spot, *a*, at the head of the stream, with considerable proper motion in longitude.

277·362 C	9	53	5	31	76·5	76·0	+20·4	−30·5
278·529 G	29	140	15	74	77·6	77·1	+19·6	−14·0
279·427 C	42	226	22	116	77·5	77·0	+20·2	− 2·3
280·314 C	115	610	61	320	79·3	78·7	+20·1	+11·2
281·460 C	93	518	53	298	78·8	78·2	+20·5	+25·9
282·385 C	45	385	29	251	78·7	78·1	+20·7	+38·0
283·355 C	36	244	30	202	78·7	78·1	+20·8	+50·8
284·350 C	15	95	20	123	82·4	81·8	+20·5	+67·6
285·499 G	2	13	8	50	83·7	83·1	+20·0	+84·0
Means ..	..	..	27	163	79·24	78·68	+20·31	..

Spot *a*.

277·362 C	4	26	2	15	78·4	77·6	+19·7	−28·6
278·529 G	12	64	6	33	80·6	79·8	+19·2	−11·0
279·427 C	17	109	9	56	82·7	81·9	+19·5	+ 2·9
280·314 C	35	283	19	150	83·5	82·7	+19·8	+15·4
281·460 C	31	208	19	125	84·0	83·2	+20·8	+31·1
282·385 C	12	129	9	92	84·5	83·7	+21·3	+43·8
283·355 C	12	108	11	99	84·9	84·1	+21·1	+57·0
284·350 C	11	60	16	86	85·2	84·3	+20·7	+70·4

Group 8283

October 11–21. Intermittent. A pair of spots, of which the following one is left on October 17. Nothing is then seen until October 21, when three very small spots are seen in an area of faculæ.

283·355 C	11	62	21	112	313·1	265·2	+11·3	−74·8
284·350 C	17	100	17	102	313·4	265·3	+11·5	−61·4
285·499 G	23	120	16	85	314·0	265·8	+11·7	−45·7

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude System I.	Longitude System II.	Latitude.	Long. from C.M.
Group 8283—*continued.*								
1917. d					°	°	°	°
286·181 D	33	154	20	96	313·7	265·3	+12·2	−37·0
287·461 G	15	49	8	26	314·1	265·5	+11·9	−19·7
288·377 C	7	38	4	19	314·6	265·9	+11·9	− 7·1
289·332 C	4	18	2	9	314·8	265·9	+12·2	+ 5·7
290·325 C	0	0	0	0	..	..	..	..
291·432 G	0	0	0	0	..	..	..	..
292·416 G	0	0	0	0	..	..	..	..
293·370 C	2	14	2	14	315·6	266·0	+11·9	+59·8
Means ..	..	..	8	42	314·16	265·61	+11·83	..
Group 8284 October 11–16. A revival rather than a return of Group 8264. A regular spot on October 11, breaking up on the following days.								
283·355 C	2	39	6	123	309·8	299·6	−19·2	−78·1
284·350 C	2	29	3	40	309·9	299·7	−18·9	−64·9
285·499 G	5	11	4	10	309·6	299·3	−18·6	−50·1
286·181 D	2	20	2	15	309·0	298·7	−18·7	−41·7
287·461 G	2	7	1	4	308·7	298·4	−18·9	−25·1
288·377 C	2	4	1	2	308·6	298·2	−18·9	−13·1
Means ..	..	..	3	32	309·27	298·98	−18·87	..
Group 8286 October 12–15. A short-lived stream of small spots. Revival of Group 8243.								
284·350 C	20	78	11	44	42·2	345·6	+10·0	+27·4
285·499 G	13	52	9	37	45·3	348·5	+ 9·7	+45·6
286·181 D	9	66	8	58	45·8	348·8	+ 9·7	+55·1
287·461 G	0	7	0	11	45·8	348·6	+ 9·1	+72·0
Means ..	..	..	7	38	44·78	347·88	+ 9·63	..
Group 8288 October 13–19. Intermittent. On October 13, a diminutive stream which has disappeared by the next day. On October 16, a pair of small spots have appeared; these are superseded by two clusters on October 17, and a pair of indefinite spots on the two following days.								
285·499 G	3	15	2	8	356·5	298·5	−10·1	− 3·2
286·181 D	0	0	0	0	..	..	..	..
287·461 G	0	0	0	0	..	..	..	..
288·377 C	22	52	13	33	355·7	297·2	− 9·2	+34·0
289·332 C	24	196	17	146	354·5	295·8	− 9·3	+45·4
290·325 C	40	215	41	221	354·7	295·8	− 9·1	+58·7
291·432 G	10	60	18	116	355·0	295·8	− 9·1	+73·6
Means ..	..	..	13	75	355·28	296·62	− 9·36	..

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8291 October 16–26. A disturbed area *nf* Group 8290, in which one or two small and unstable spots appear. By October 20, a regular spot has formed, preceded by one or two small companions.								
1917. d					°	°	°	°
288·377 C	2	7	2	7	259·7	245·3	+17·8	−62·0
289·332 C	2	10	2	9	255·2	240·7	+18·3	−53·9
290·325 C	3	28	2	18	260·0	245·5	+17·4	−36·0
291·432 G	37	127	21	71	256·8	242·2	+17·5	−24·6
292·416 G	48	200	26	106	256·0	241·4	+18·6	−12·4
293·370 C	53	247	27	128	256·0	241·3	+19·1	− 0·2
294·321 C	40	260	22	139	256·4	241·7	+18·8	−13·1
295·424 G	39	177	23	101	256·8	242·0	+18·6	−28·0
296·415 G	23	110	16	75	256·8	242·0	+18·4	+41·1
297·321 C	10	50	9	41	257·0	242·1	+18·4	+53·3
298·598 G	4	26	6	36	256·5	241·6	+18·0	+69·6
Means ..	..	..	14	66	257·02	242·35	+18·26	..
Group 8292 October 16–27. An irregular stream in continual change, developing from a small spot at the east limb.								
288·377 C	3	10	5	16	249·0	187·9	+ 8·3	−72·7
289·332 C	6	65	7	78	243·6	182·3	+ 9·0	−65·5
290·325 C	26	171	21	140	243·1	181·6	+ 8·6	−52·9
291·432 G	33	218	21	138	242·9	181·1	+ 8·6	−38·5
292·416 G	67	288	37	159	244·1	182·1	+ 9·1	−24·3
293·370 C	59	216	30	111	243·8	181·6	+ 9·2	−12·0
294·321 C	36	298	19	150	243·6	181·2	+ 8·8	+ 0·3
295·424 G	62	349	33	181	244·5	181·9	+ 8·2	+15·7
296·415 G	39	341	23	194	243·7	180·9	+ 8·5	+28·0
297·321 C	18	220	12	144	243·9	180·9	+ 8·4	+40·2
298·598 G	10	47	10	45	245·8	182·5	+ 7·9	+58·9
299·428 G	1	25	1	34	244·4	180·9	+ 8·0	+68·4
Means ..	..	..	18	116	244·37	182·08	+ 8·55	..
Group 8295 October 19–27. Revival of Group 8268. A group appearing suddenly *f* Group 8292. A small regular spot is the chief member, but it has changed to a cluster by October 25.								
291·432 G	61	228	50	189	228·2	163·2	+ 7·9	−53·2
292·416 G	56	255	36	162	229·7	164·5	+ 8·0	−38·7
293·370 C	43	328	24	181	230·7	165·3	+ 7·6	−25·1
294·321 C	46	351	24	180	230·9	165·3	+ 7·3	−12·4
295·424 G	35	206	18	104	230·3	164·4	+ 7·6	− 1·5
296·415 G	39	146	20	76	230·6	164·5	+ 7·2	+14·9
297·321 C	30	125	17	70	230·4	164·1	+ 7·4	+26·7
298·598 G	11	65	8	46	231·1	164·5	+ 7·1	+44·2
299·428 G	1	14	1	12	231·3	164·5	+ 7·2	+55·3
Means ..	..	..	22	113	230·36	164·48	+ 7·48	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8296								
October 21–30. A stream of normal type, but in which the intermediate spots between the leader, *a*, and last member, *b*, are very few and evanescent. The leader, moreover, shows deviations from the "regular" type. The proper motions in longitude of *a* and *b* are characteristic of this type of spot group.								
1917. d					°	°	°	°
293·37c C	5	24	5	21	205·7	211·3	−21·6	−50·1
294·321 C	59	281	42	198	206·3	211·9	−21·5	−37·0
295·424 G	76	505	45	304	207·3	212·9	−21·1	−21·5
296·415 G	58	596	33	336	207·1	212·7	−21·1	− 8·6
297·321 C	85	666	48	373	206·9	212·5	−21·0	+ 3·2
298·598 G	98	621	58	367	207·0	212·7	−21·1	+20·1
299·428 G	81	546	53	356	206·5	212·2	−21·2	+30·5
300·450 C	68	362	52	288	206·6	212·3	−21·2	+44·1
301·337 C	37	269	39	281	207·5	213·2	−21·0	+56·7
302·543 C	21	108	43	231	208·5	214·2	−21·0	+73·6
Means ..	..	..	42	276	206·94	212·59	−21·18	..
Spot *a*.								
293·370 C	2	12	2	10	207·3	208·5	−21·2	−48·5
294·321 C	24	130	16	88	208·7	209·9	−20·9	−34·6
295·424 G	31	273	18	161	209·6	210·8	−20·4	−19·2
296·415 G	26	328	15	184	210·1	211·3	−20·3	− 5·6
297·321 C	42	325	24	182	210·2	211·4	−20·1	+ 6·5
298·598 G	69	333	41	200	210·1	211·3	−20·4	+23·2
299·428 G	37	288	25	193	210·2	211·4	−20·5	+34·2
300·450 C	29	209	24	176	210·4	211·6	−20·5	+47·9
301·337 C	22	174	25	195	210·2	211·4	−20·6	+59·4
302·543 C	12	73	30	180	210·5	211·7	−20·8	+75·6
Spot *b*.								
293·370 C	3	12	3	11	204·2	215·6	−22·0	−51·6
294·321 C	35	151	26	110	204·1	215·6	−21·9	−39·2
295·424 G	33	194	20	120	203·8	215·3	−21·8	−25·0
296·415 G	32	225	18	128	203·6	215·2	−21·7	−12·1
297·321 C	43	329	24	184	203·2	214·8	−21·9	− 0·5
298·598 G	29	288	17	167	202·5	214·1	−22·1	−15·6
299·428 G	44	258	28	163	202·1	213·8	−22·1	+26·1
300·450 C	39	153	28	112	201·7	213·4	−22·1	+39·2
301·337 C	15	95	14	86	201·5	213·2	−21·9	+50·7
302·543 C	9	35	13	51	201·4	213·2	−21·8	+66·5
Group 8298.								
October 23–28. A few small spots.								
295·424 G	5	13	4	10	180·9	188·9	+20·1	−47·9
296·415 G	30	63	19	40	179·3	187·3	+21·8	−36·4
297·321 C	8	90	5	51	179·0	187·0	+22·0	−24·7

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8298—*continued.*								
1917. d					°	°	°	°
298·598 G	4	37	2	20	178·9	187·0	+22·0	− 8·0
299·428 G	4	31	2	16	179·1	187·2	+21·8	+ 3·1
300·450 C	0	15	0	8	178·9	187·0	+21·1	+16·4
Means ..	..	..	5	24	179·35	187·40	+21·47	..
Group 8303.								
October 29–November 3. Two regular spots 5° apart with a few small companions, developing from a tiny double spot on October 29.								
301·337 C	0	4	0	2	157·9	85·3	+ 5·3	+ 7·1
302·543 C	23	98	13	54	158·8	86·9	+ 5·0	+23·9
303·472 G	64	357	40	222	158·5	85·4	+ 5·0	+35·9
304·316 C	38	277	28	205	158·8	85·5	+ 5·2	+47·3
305·498 C	22	146	26	167	160·5	86·9	+ 5·6	+64·6
306·398 C	12	132	28	286	160·2	86·4	+ 5·6	+76·2
Means ..	..	..	23	156	159·12	86·07	+ 5·28	..
Group 8305.								
October 30–November 4. A very small spot on October 30; afterwards an irregular stream.								
302·543 C	0	5	0	3	144·5	128·5	−18·0	− 9·6
303·472 G	4	21	2	12	143·1	127·0	−18·3	+20·5
304·316 C	48	149	30	94	142·4	126·3	−17·9	+30·9
305·498 C	56	206	45	167	142·5	126·3	−18·2	+46·6
306·398 C	21	152	23	170	143·3	127·1	−18·0	+59·3
307·488 G	8	40	21	110	144·8	128·5	−18·2	+75·1
Means ..	..	..	20	93	143·43	127·28	−18·10	..
Group 8306.								
October 30–November 6. Revival of Group 8278. A broad but sparse stream of unstable spots.								
302·543 C	4	23	4	22	77·2	105·3	+24·1	−57·7
303·472 G	15	86	11	63	78·2	106·4	+23·6	−44·4
304·316 C	22	139	13	90	77·4	105·7	+23·9	−34·1
305·498 C	30	144	17	81	77·3	105·7	+24·4	−18·6
306·398 C	14	79	8	43	74·7	103·2	+25·1	− 9·3
307·488 G	5	44	3	23	77·2	105·8	+24·4	− 7·5
308·537 C	0	4	0	2	77·6	106·3	+23·1	−21·8
309·346 C	0	9	0	6	78·2	107·0	+23·2	−33·0
Means ..	..	..	7	41	77·23	105·68	+23·98	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 8309.

November 2–12. Two regular spots, the smaller one, *a*, leading and remaining stable, whilst the following spot, *b*, becomes very composite. Two clusters of small spots appear; one midway in the group, the other following the composite spot. Thus, for some days, the group appears as an irregular stream, 14° in length, which is rapidly disappearing at the west limb.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
305·498 C	22	269	30	381	28·5	347·3	−14·0	−67·4
306·398 C	67	624	58	568	29·8	348·4	−13·5	−54·2
307·488 G	108	839	75	578	29·5	348·0	−13·6	−40·2
308·537 C	122	1155	71	679	29·3	347·7	−13·8	−26·5
309·346 C	220	1201	121	654	29·4	347·6	−13·7	−15·8
310·332 C	201	1024	106	539	29·5	347·6	−13·7	− 2·7
311·352 C	102	1042	54	556	29·6	347·6	−14·1	+10·9
312·473 G	103	736	60	430	29·9	347·7	−14·2	+26·0
313·325 C	47	491	31	322	29·1	346·8	−14·3	+36·4
314·324 C	30	240	25	201	29·6	347·2	−14·4	+50·1
315·372 C	4	30	5	41	32·4	349·8	−14·3	+66·7
Means ..	..	..	58	450	29·69	347·79	−13·96	..

Spot *a*.

305·498 C	9	59	10	65	34·8	343·2	−11·9	−61·1
306·398 C	36	220	29	176	35·1	343·3	−11·7	−48·9
307·488 G	28	285	18	180	35·0	343·0	−11·9	−34·7
308·537 C	33	310	18	173	34·8	342·7	−11·8	−21·0
309·346 C	45	294	24	156	35·0	342·7	−11·7	−10·2
310·332 C	55	315	29	164	34·9	342·5	−11·8	+ 2·7
311·352 C	21	280	11	151	35·0	342·4	−11·9	+16·3
312·473 G	35	248	21	151	34·9	342·1	−11·9	+31·0
313·325 C	29	139	20	97	35·0	342·0	−11·8	+42·3
314·324 C	11	71	10	67	35·5	342·4	−12·1	+56·0
315·372 C	2	17	3	26	35·8	342·5	−12·1	+70·1

Spot *b*.

305·498 C	11	206	17	311	27·1	351·1	−14·5	−68·8
306·398 C	27	362	26	355	27·1	350·9	−14·5	−56·9
307·488 G	67	477	48	343	26·9	350·6	−14·3	−42·8
308·537 C	70	690	42	414	27·1	350·7	−14·5	−28·7
309·346 C	141	663	78	365	26·9	350·4	−14·4	−18·3
310·332 C	125	594	65	314	26·9	350·3	−14·6	− 5·3
311·352 C	72	604	38	320	26·8	350·1	−15·3	+ 8·1
312·473 G	62	447	35	255	26·7	349·8	−15·6	−22·8
313·325 C	18	352	11	225	26·5	349·5	−15·3	+33·8
314·324 C	19	169	15	134	27·0	349·9	−15·4	−47·5
315·372 C	2	13	2	15	27·3	350·1	−15·4	−61·6

Group 8312.

November 6–15. Revival in region of Group 8283. A group of the "stream" type which gradually dies out. The two chief members, the leader and rear spots, are in continual change.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
309·346 C	4	15	(14	54	322·6	283·0	+13·8)*	−82·6
310·332 C	14	83	24	126	321·1	281·4	+14·1	−71·1
311·352 C	27	133	26	124	321·3	281·5	+13·8	−57·4
312·473 G	40	250	27	179	318·9	278·9	+14·8	−45·0
313·325 C	21	253	12	155	318·8	278·7	+14·8	−33·9
314·324 C	19	157	11	86	319·4	279·2	+14·5	−20·1
315·372 C	12	98	7	51	318·9	278·5	+14·8	− 6·8
316·335 C	2	29	1	15	319·0	278·5	+14·5	+ 6·0
317·322 C	2	16	1	9	321·6	281·0	+14·2	+21·6
318·395 C	0	14	0	8	320·9	280·1	+13·3	+35·0
Means ..	..	..	12	84	319·99	279·76	+14·31	..

Group 8313.

November 7–12. A wide pair of small spots / Group 8307 on November 7 and 8. Others form on the following days, but the leader only is conspicuous as a regular spot on November 11 and 12.

310·332 C	16	54	9	27	39·1	334·5	+ 9·1	+ 6·9
311·352 C	21	75	11	41	40·0	335·2	+ 9·4	+21·3
312·473 G	31	140	19	87	39·9	334·9	+ 9·4	+36·0
313·325 C	26	130	18	97	40·4	335·2	+ 9·5	+47·7
314·324 C	24	208	27	237	43·6	338·2	+ 8·5	+64·1
315·372 C	5	41	13	106	44·8	339·2	+ 7·5	+79·1
Means ..	..	..	16	99	41·30	336·20	+ 8·90	..

Group 8314.

November 9–19. A small spot on November 9; a pair on November 10, which separate considerably in a few days. By November 13, the rear spot, *b*, has broken up, and a few faint spots have formed between. The leader, *a*, appears alone after November 16.

312·473 G	0	4	0	7	294·1	286·3	−23·1	−69·8
313·325 C	10	38	11	39	295·2	287·4	−20·6	−57·5
314·324 C	21	87	16	69	295·0	287·1	−21·4	−44·5
315·372 C	16	132	11	83	296·1	288·2	−20·6	−29·6
316·335 C	22	140	13	79	298·3	290·4	−19·2	−14·7
317·322 C	19	82	11	44	301·4	293·5	−18·2	+ 1·4
318·395 C	14	103	8	58	301·3	293·3	−18·1	+15·4
319·337 C	11	84	7	52	302·7	294·7	−18·0	+29·2
320·315 C	15	63	11	46	303·0	295·0	−18·1	+42·4
321·408 C	9	37	9	37	303·2	295·2	−17·8	+57·0
322·338 C	2	11	3	17	302·6	294·5	−17·7	+68·7
Means ..	..	..	9	48	299·35	291·42	−19·35	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued*.

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8314—*continued*.								
Spot *a*.								
1917. d					°	°	°	°
313·325 C	4	18	4	17	297·0	280·4	−19·1	−55·7
314·324 C	15	29	11	21	298·3	281·6	−18·7	−41·2
315·372 C	6	67	4	40	299·9	283·2	−18·3	−25·8
316·335 C	16	91	9	50	300·9	284·1	−17·7	−12·1
317·322 C	17	71	9	38	302·4	285·6	−18·0	+ 2·4
318·395 C	12	89	7	50	302·7	285·8	−17·8	+16·8
319·337 C	11	80	7	50	303·1	286·2	−18·0	+29·6
320·315 C	15	63	11	46	303·0	286·0	−18·1	+42·4
321·408 C	9	37	9	37	303·2	286·2	−17·8	+57·0
322·338 C	2	11	3	17	302·6	285·5	−17·7	+68·7
Spot *b*.								
313·325 C	6	20	7	22	293·8	312·0	−21·7	−58·9
314·324 C	6	58	5	48	292·6	310·8	−22·9	−46·9
315·372 C	10	65	7	43	291·9	310·2	−23·0	−33·8
316·335 C	6	30	4	18	291·4	309·7	−23·1	−21·6
Group 8319.								
November 13–22. A small spot on November 13, which has increased and become regular by the next day. It is unstable, however, and soon breaks up, being represented latterly by a small cluster. South, preceding it, there is an unstable companion from November 14 to 19.								
316·335 C	4	21	5	25	247·8	209·5	−15·0	−65·2
317·322 C	55	253	46	208	248·2	209·8	−14·6	−51·8
318·395 C	56	307	37	199	248·4	209·9	−14·4	−37·5
319·337 C	47	275	26	158	247·6	209·0	−15·0	−25·9
320·315 C	32	159	17	84	247·8	209·1	−14·7	−12·8
321·408 C	14	95	7	49	247·4	208·5	−15·0	+ 1·2
322·338 C	12	97	7	52	247·2	208·2	−14·5	+13·3
323·342 C	5	21	3	12	245·7	206·6	−15·4	+25·0
324·349 C	5	19	3	13	247·6	208·4	−14·2	+40·2
325·326 C	10	32	8	28	247·8	208·4	−14·4	+53·3
Means ..	..	..	16	83	247·55	208·74	−14·72	..
Group 8320.								
November 15–25. A short stream with a small, but stable regular spot as leader. The following portion of the stream is intermittent in activity, none of the spots persisting long.								
318·395 C	0	9	(0	34	203·0	134·9	+ 8·3)*	−82·9
319·337 C	9	159	17	290	199·4	131·1	+ 7·9	−74·1
320·315 C	23	149	23	150	200·6	132·0	+ 7·8	−60·0
321·408 C	30	183	22	131	200·8	132·0	+ 8·2	−45·4
322·338 C	37	189	22	110	202·2	133·2	+ 8·2	−31·7

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8320—*continued*.								
1917. d					°	°	°	°
323·342 C	22	138	12	73	202·9	133·7	+ 8·5	−17·8
324·349 C	24	165	13	83	201·2	131·8	+ 8·8	− 6·2
325·326 C	47	183	24	93	201·5	131·9	+ 8·8	+ 7·0
326·497 G	15	34	8	19	203·1	133·2	+ 8·4	+24·0
327·553 C	18	64	11	40	201·1	131·0	+ 8·4	+35·9
328·139 D	11	48	8	35	202·7	132·5	+ 8·4	+45·3
Means ..	..	..	16	102	201·55	132·24	+ 8·34	..
Group 8324.								
November 19–28. A group in the same general area of disturbance as Group 8323. The spots, excepting the leader, are very small, and are arranged in a sparse stream.								
322·338 C	3	9	3	8	178·0	135·8	−15·0	−55·9
323·342 C	0	9	0	7	174·8	132·4	−13·0	−45·9
324·349 C	14	84	9	52	173·9	131·4	−13·0	−33·5
325·326 C	18	92	10	51	174·8	132·2	−14·4	−19·7
326·497 G	53	162	28	84	177·4	134·6	−15·1	− 1·7
327·553 C	17	235	9	123	177·3	134·4	−14·2	+12·1
328·139 D	33	188	18	105	177·8	134·8	−13·9	+20·4
329·466 C	9	46	7	33	182·9	139·7	−14·2	+43·0
330·425 G	0	13	0	13	184·7	141·4	−14·7	+57·4
331·390 C	0	11	0	12	176·7	133·3	−13·9	+62·1
Means ..	..	..	8	49	177·83	135·00	−14·14	..
Group 8325.								
November 20–25. A short-lived stream forming near the central meridian.								
323·342 C	21	112	12	66	212·5	295·9	−29·0	− 8·2
324·349 C	20	174	11	103	214·0	297·7	−29·6	+ 6·6
325·326 C	33	103	21	64	212·6	296·5	−29·4	+18·1
326·497 G	8	25	6	18	213·7	297·9	−29·6	+34·6
327·553 C	4	11	3	10	212·7	297·2	−29·4	+47·5
328·139 D	2	7	2	7	212·4	297·1	−29·9	+55·0
Means ..	..	..	9	45	212·98	297·05	−29·48	..
Group 8326.								
November 21–26. A small unstable group of few spots.								
324·349 C	0	26	0	15	179·1	155·4	+17·4	−28·3
325·326 C	19	60	10	33	177·1	153·3	+17·5	−17·4
326·497 G	1	52	1	27	176·3	152·5	+17·4	− 2·8

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8326—*continued.*								
1917. d					°	°	°	°
327·553 C	2	13	1	7	178·2	154·3	+17·0	+13·0
328·139 D	4	40	2	22	180·6	156·6	+17·0	+23·2
329·466 C	2	5	1	4	181·9	157·9	+16·7	+42·0
Means ..	..	..	3	18	178·87	155·00	+17·17	..
Group 8327. November 22–December 2. At first a pair of small regular spots, of which the leading one has disappeared by November 26, whilst a cluster has taken the place of the other.								
325·326 C	12	90	21	162	121·0	68·0	−11·7	−73·5
326·497 G	43	164	42	160	121·3	68·1	−11·6	−57·8
327·553 C	22	123	15	89	121·3	67·9	−12·3	−43·9
328·139 D	31	121	20	79	119·7	66·2	−12·3	−37·7
329·466 C	21	154	12	85	119·3	65·6	−11·9	−20·6
330·425 G	41	144	21	75	119·3	65·4	−11·9	− 8·0
331·390 C	31	101	16	53	118·8	64·8	−12·4	+ 4·2
332·323 C	20	104	11	56	119·2	65·0	−12·5	+16·9
333·337 C	11	70	7	42	119·2	64·9	−12·7	+30·3
334·406 C	4	74	3	53	119·3	64·8	−12·7	+44·5
335·498 C	2	15	2	16	121·5	66·8	−12·4	+61·1
Means ..	..	..	15	79	119·99	66·14	−12·22	..
Group 8330. November 24–30. A group of partially formed spots of unstable character.								
327·553 C	26	146	13	76	154·7	83·0	− 8·5	−10·5
328·139 D	90	420	45	214	154·8	82·9	− 8·8	− 2·6
329·466 C	57	506	31	269	156·0	83·8	− 8·2	+16·1
330·425 G	67	543	39	318	157·6	85·2	− 8·0	+30·3
331·390 C	47	424	34	304	159·3	86·7	− 7·4	+44·7
332·323 C	26	162	24	153	159·5	86·7	− 7·4	+57·2
333·337 C	2	61	3	104	161·1	88·1	− 6·9	+72·2
Means ..	..	..	27	205	157·57	85·20	− 7·89	..
Group 8333. November 26–December 5. A stream of spots in continual change until December 1, when a regular spot has appeared which alone remains on the following days.								
329·466 C	5	60	4	46	93·9	81·1	−16·1	−46·0
330·425 G	7	35	5	23	90·2	77·3	−19·6	−37·1
331·390 C	5	48	3	28	92·8	77·9	−19·4	−23·8

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8333—*continued.*								
1917. d					°	°	°	°
332·323 C	57	254	31	137	92·1	79·1	−19·2	−10·2
333·337 C	30	217	16	115	92·6	79·6	−18·7	+ 3·7
334·406 C	39	239	22	135	94·1	81·1	−18·9	+19·3
335·498 C	22	90	14	58	95·8	82·7	−18·9	+35·4
336·325 C	19	79	15	61	95·6	82·5	−18·9	+46·1
337·441 G	6	44	6	47	95·1	81·9	−18·9	+60·3
338·324 C	0	8	0	13	94·4	81·2	−18·8	+71·2
Means ..	..	..	12	66	93·46	80·44	−18·74	..
Group 8335 November 26–December 8. Revival of Group 8308. A small spot, following which, others form the next day. One of these becomes nearly of regular type and, although slowly disappearing, it persists as the spots preceding it die out.								
329·466 C	0	4	0	9	63·2	74·1	+21·1	−76·7
330·425 G	5	30	6	37	62·4	73·3	+20·5	−64·9
331·390 C	56	275	52	252	60·1	71·0	+21·3	−54·5
332·323 C	36	251	26	184	58·8	69·8	+21·5	−43·5
333·337 C	30	348	19	216	58·7	69·7	+21·4	−30·2
334·406 C	47	290	26	162	57·3	68·3	+22·1	−17·5
335·498 C	24	187	13	101	57·3	68·4	+22·4	− 3·1
336·325 C	24	81	13	44	55·7	66·8	+22·7	+ 6·2
337·441 G	10	41	6	23	55·5	66·6	+21·9	+20·7
338·324 C	9	32	6	20	55·9	67·1	+22·0	+32·7
339·355 C	4	13	3	10	55·9	67·1	+21·9	+46·3
340·387 C	0	13	0	15	58·6	69·8	+20·8	+62·6
341·330 C	0	15	0	25	54·7	66·0	+22·6	+71·1
Means ..	..	..	13	84	58·01	69·08	+21·71	..
Group 8345 December 1–8. A short stream of small spots until December 4, when a regular spot has formed in front and the remaining spots are disappearing.								
334·406 C	2	12	1	7	48·3	46·6	−19·4	−26·5
335·498 C	19	83	10	46	47·4	45·7	−19·5	−13·0
336·325 C	37	131	20	69	48·2	46·5	−19·5	− 1·3
337·441 G	55	173	31	97	49·1	47·4	−20·2	+14·3
338·324 C	27	126	16	76	50·8	49·1	−20·4	+27·6
339·355 C	14	75	10	55	52·4	50·7	−20·6	+42·8
340·387 C	5	31	5	30	53·0	51·3	−20·7	+57·0
341·330 C	0	11	0	15	53·1	51·4	−21·0	+69·5
Means ..	..	..	12	49	50·29	48·59	−20·16	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued.*

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Group 8346

December 1–8. A short stream. The leader is the only significant member, and alone remains on December 6.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
334·406 C	4	24	3	16	33·9	316·7	− 6·6	−40·9
335·498 C	16	71	9	40	35·4	317·9	− 6·4	−25·0
336·325 C	48	165	25	86	35·3	317·6	− 6·5	−14·2
337·441 G	34	161	17	80	36·4	318·4	− 6·7	+ 1·6
338·324 C	24	71	12	37	37·4	319·2	− 6·6	+14·2
339·355 C	7	39	4	24	38·2	319·8	− 6·7	+28·6
340·387 C	7	19	5	13	38·1	319·5	− 6·7	+42·1
341·330 C	0	4	0	3	37·9	319·1	− 6·7	+54·3
Means ..	..	..	9	37	36·58	318·53	− 6·61	..

Group 8347

December 4–9. A few minute spots *s* Group 8346 until December 7. A small regular spot then appears followed by a small cluster.

337·441 G	4	11	2	6	37·8	5·1	−15·3	+ 3·0
338·324 C	0	4	0	2	36·4	3·6	−16·2	+13·2
339·355 C	2	16	1	9	37·4	4·5	−17·1	+27·8
340·387 C	7	36	5	25	37·5	4·5	−15·7	+41·5
341·330 C	32	142	28	126	37·9	4·8	−15·6	+54·3
342·458 C	7	87	12	136	39·3	6·1	−16·0	+70·6
Means ..	..	..	8	51	37·72	4·77	−15·98	..

Group 8349

December 7–17. A small regular spot with a train of small followers, which are not seen on December 13 and after December 15, when the leader is also disappearing. In the same disturbed area as Group 8316.

340·387 C	7	40	16	92	278·7	208·9	+ 8·8	−77·3
341·330 C	28	129	32	155	278·7	208·7	+ 8·8	−64·9
342·458 C	17	185	14	147	278·5	208·3	+ 8·8	−50·2
343·347 C	47	273	31	178	278·5	208·1	+ 9·0	−38·5
344·614 C	51	314	27	170	279·1	208·5	+ 9·1	−21·2
345·344 C	46	296	24	154	279·0	208·2	+ 9·1	−11·7
346·342 C	25	214	13	109	280·0	209·0	+ 9·1	+ 2·4
347·365 C	23	136	12	71	278·5	207·3	+ 9·4	+14·4
348·488 G	6	76	4	45	279·1	207·7	+ 9·1	+29·8
349·454 C	5	11	4	8	280·9	209·3	+ 9·6	+44·3
350·459 C	0	9	0	9	281·0	209·2	+ 9·8	+57·7
Means ..	..	..	16	103	279·27	208·47	+ 9·15	..

Group 8350

December 8–13. Two spots on December 8 which have enlarged by December 9. Other spots form the next day to make an irregular stream which, however, is short-lived. *np* Group 8348.

Date G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
341·330 C	6	27	4	16	310·4	261·3	+13·2	−33·2
342·458 C	25	146	14	79	311·1	261·8	+13·9	−17·6
343·347 C	58	298	30	155	311 8	262·4	+13·8	− 5·2
344·614 C	35	277	19	147	311·9	262·3	+13·5	+11·6
345·344 C	25	132	14	74	313·0	263·3	+13·6	+22·3
346·342 C	7	53	4	33	313·3	263·4	+12·5	+35·7
Means ..	..	..	14	84	311·92	262·42	+13·42	..

Group 8352

December 10–22. A regular spot, *a*, followed by a broad train of numerous ill-formed spots which die out as the west limb is approached.

343·347 C	0	27	(0	119	233·6	183·1	−12·7)*	−83·4
344·614 C	44	383	53	482	234·3	183·6	−12·2	−66·0
345·344 C	104	775	95	708	234·9	184·1	−12·7	−55·8
346·342 C	139	978	98	687	234·5	183·6	−13·0	−43·1
347·365 C	163	1029	96	605	234·7	183·6	−12·7	−29·4
348·488 G	161	829	85	436	236·1	184·9	−13·1	−13·2
349·454 C	134	728	69	372	236·1	184·7	−13·0	− 0·5
350·459 C	100	669	53	354	237·6	186·1	−13·3	+14·3
351·323 C	85	642	48	367	237·9	186·3	−13·8	+26·0
352·411 C	64	423	42	281	237·5	185·7	−13·9	+39·9
353·426 C	34	283	29	238	236·9	184·9	−13·7	+52·7
354·318 C	26	173	32	210	237·9	185·8	−13·9	+65·4
355·330 C	7	55	19	151	238·8	186·6	−13·9	+79·6
Means ..	..	..	60	408	236·43	184·99	−13·27	..

Spot *a*

344·614 C	25	117	27	129	238·1	190·5	−13·3	−62·2
345·344 C	37	277	31	233	238·4	190·7	−13·5	−52·3
346·342 C	45	300	30	198	238·7	190·9	−14·2	−38·9
347·365 C	53	336	30	192	239·4	191·5	−14·4	−24·7
348·488 G	52	342	27	178	239·8	191·7	−14·1	− 9·5
349·454 C	70	364	36	186	239·6	191·4	−13·9	+ 3·0
350·459 C	78	473	41	251	239·3	190·9	−13·6	+16·0
351·323 C	45	390	26	226	239·2	190·7	−13·6	+27·3
352·411 C	44	255	30	173	239·1	190·5	−13·5	+41·5
353·426 C	24	206	21	181	238·8	190·0	−13·7	+54·6
354·318 C	23	160	29	198	238·5	189·6	−13·7	+66·0
355·330 C	7	55	19	151	238·8	189·8	−13·9	+79·6

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917.—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 8355.

December 12–24. Revival of Group 8320. A large spot, nearly of regular formation, which shows signs of breaking up on December 19, although the actual separation does not take place until December 22. The two portions then rapidly disappear. There are occasional small companions—those from December 18–21 being at some distance.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
345·344 C	11	84	35	265	210·2	137·1	+ 8·8	−80·5
346·342 C	36	253	49	349	209·2	135·8	+ 8·8	−68·4
347·365 C	56	356	50	314	209·4	135·8	+ 8·5	−54·7
348·488 G	99	445	64	289	210·5	136·6	+ 8·2	−38·8
349·454 C	73	529	41	297	210·7	136·6	+ 8·2	−25·9
350·459 C	77	510	40	265	210·9	136·6	+ 8·2	−12·4
351·323 C	85	589	43	300	211·0	136·5	+ 8·5	− 0·9
352·411 C	96	601	50	311	211·0	136·3	+ 8·2	+13·4
353·426 C	88	450	51	259	210·9	136·0	+ 8·3	+26·7
354·318 C	69	303	46	198	211·6	136·5	+ 8·8	+39·1
355·330 C	37	140	32	120	212·6	137·3	+ 8·9	+53·4
356·455 C	5	72	7	100	212·7	137·1	+ 8·9	+68·4
357·321 C	3	10	7	26	211·3	135·5	+ 8·5	+78·4
Means ..	..	..	40	238	210·92	136·44	+ 8·52	..

Group 8357.

December 13–24. A small but persistent stream of very small spots.

346·342 C	0	7	0	25	195·8	185·8	−19·3	−81·8
347·365 C	4	22	6	34	194·1	184·0	−20·4	−70·0
348·488 G	4	8	4	7	195·1	185·0	−19·7	−54·2
349·454 C	18	37	13	26	195·4	185·3	−19·9	−41·2
350·459 C	8	37	5	22	196·4	186·2	−19·4	−26·9
351·323 C	15	59	8	32	196·5	186·3	−19·6	−15·4
352·411 C	14	63	7	33	196·2	186·0	−19·8	− 1·4
353·426 C	15	33	8	18	195·2	185·0	−20·1	+11·0
354·318 C	5	74	3	42	197·2	186·9	−19·2	+24·7
355·330 C	11	61	7	41	198·6	188·3	−18·0	+39·4
356·455 C	0	37	0	34	200·2	189·9	−17·4	+55·9
357·321 C	0	4	0	6	201·7	191·3	−17·4	+68·8
Means ..	..	..	5	27	196·87	186·67	−19·19	..

Group 8359.

December 14–20. A small group, in the same general area of faculæ as Group 8355, showing feeble but sustained activity.

347·365 C	0	2	0	2	203·2	113·9	+ 1·7	−60·9
348·488 G	9	28	6	20	203·2	113·6	+ 0·5	−46·1
349·454 C	6	12	4	7	205·0	115·2	+ 1·4	−31·6
350·459 C	5	28	3	15	203·2	113·1	+ 1·5	−20·1

Group 8359—*continued.*

1917. d					°	°	°	°
351·323 C	4	45	2	22	201·7	111·4	+ 1·8	−10·2
352·411 C	5	42	2	21	202·7	112·1	+ 1·9	+ 5·1
353·426 C	4	22	2	12	203·4	112·6	+ 1·8	+19·2
Means ..	..	..	3	14	203·20	113·13	+ 1·51	..

Group 8362.

December 16–22. A pair of spots which gradually die away.

349·454 C	6	31	13	65	160·9	164·7	−20·8	−75·7
350·459 C	6	58	7	67	160·4	164·3	−20·7	−62·9
351·323 C	18	61	15	52	160·6	164·5	−21·3	−51·3
352·411 C	21	55	14	36	161·3	165·2	−20·9	−36·3
353·426 C	6	51	3	30	160·8	164·7	−21·1	−23·4
354·318 C	5	27	3	15	160·3	164·2	−20·3	−12·2
355·330 C	0	5	0	3	161·2	165·1	−20·7	− 2·0
Means ..	..	..	8	38	160·79	164·67	−20·83	..

Group 8364.

December 16–27. Two spots seen at the east limb. The leader grows and becomes composite, and the other becomes the centre of a small cluster which disappears after December 24. Meanwhile, the leader is breaking up, and a few small spots alone represent the group on December 27.

349·454 C	5	49	12	127	157·8	127·0	−15·8	−78·8
350·459 C	22	217	30	281	156·9	126·1	−15·9	−66·4
351·323 C	49	371	45	340	157·0	126·1	−16·1	−54·9
352·411 C	80	469	55	323	156·5	125·5	−16·4	−41·1
353·426 C	83	559	48	329	156·7	125·6	−16·4	−27·5
354·318 C	75	554	40	297	156·6	125·4	−16·5	−15·9
355·330 C	60	471	31	245	157·3	126·0	−16·3	− 1·9
356·455 C	47	396	25	210	157·8	126·4	−16·2	+13·5
357·321 C	40	425	23	242	157·8	126·4	−16·5	+24·9
358·405 C	40	174	26	115	157·9	126·4	−16·8	+39·2
359·359 C	15	111	12	91	157·2	125·6	−16·9	+51·1
360·373 C	4	55	5	64	156·4	124·7	−17·7	+63·7
Means ..	..	..	29	222	157·16	125·93	−16·46	..

Group 8365.

December 18–26. Revival of Group 8324. A single spot on December 18; a short stream of numerous small spots on December 19, most of which soon disappear.

351·323 C	4	22	2	13	184·5	140·6	−13·6	−27·4
352·411 C	47	222	24	115	185·3	141·3	−14·2	−12·3
353·426 C	36	188	18	96	186·2	142·0	−14·0	+ 2·0

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917.—*continued.*

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8365—*continued.*								
1917.d					°	°	°	°
354·318 C	23	158	12	82	184·9	140·6	−14·0	+12·4
355·330 C	17	59	10	34	186·7	142·3	−14·5	+27·5
356·455 C	4	27	3	19	189·0	144·4	−15·3	+44·7
357·321 C	3	10	2	9	184·2	139·5	−14·4	+51·3
358·405 C	3	15	4	18	184·0	139·2	−15·4	+65·3
359·359 C	0	4	0	13	187·3	142·4	−14·9	+81·2
Means ..	..	..	8	44	185·79	141·37	−14·48	..
Group 8367. December 19–24. A pair of composite spots, quickly developing and soon disappearing. Two very small spots represent the following one on December 24.								
352·411 C	66	192	42	121	173·8	241·8	+27·3	−23·8
353·426 C	41	385	24	226	172·7	240·9	+27·1	−11·5
354·318 C	29	188	17	107	172·0	240·4	+27·1	− 0·5
355·330 C	16	104	9	61	172·3	240·9	+27·2	+13·1
356·455 C	6	58	4	37	170·4	239·2	+27·4	+26·1
357·321 C	2	17	1	12	169·4	238·4	+28·3	+36·5
Means ..	..	..	16	94	171·77	240·27	+27·40	..
Group 8368. December 19–28. Two spots with maximum development near the central meridian. They have evolved from two small nuclei on December 19 and 20. The leader is regular for a few days.								
352·411 C	3	17	2	12	158·6	191·4	+24·6	−39·0
353·426 C	12	55	7	35	157·3	190·2	+24·8	−26·9
354·318 C	62	316	36	183	156·9	189·9	+24·7	−15·6
355·330 C	84	552	46	310	158·0	191·1	+24·0	− 1·2
356·455 C	55	385	31	221	157·7	190·9	+24·1	+13·4
357·321 C	60	306	37	189	158·9	192·1	+23·7	+26·0
358·405 C	37	117	27	85	159·1	192·4	+23·4	+40·4
359·359 C	16	74	16	72	160·6	194·0	+23·0	+54·5
360·373 C	7	44	11	66	160·4	193·9	+23·1	+67·7
361·348 C	1	17	3	51	158·7	192·3	+24·2	+78·8
Means ..	..	..	22	122	158·62	191·82	+23·96	..
Group 8371. December 20–29. A group of few faint spots until two regular ones appear on December 23 as the leader and rear spots of a stream. These remain as the smaller members die out.								
353·426 C	2	20	2	17	131·7	156·4	−22·8	−52·5
354·318 C	25	119	17	82	132·9	157·7	−22·3	−39·6
355·330 C	2	22	1	13	133·2	158·1	−23·1	−26·0

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
Group 8371—*continued.*								
1917.d					°	°	°	°
356·455 C	40	191	22	105	132·4	157·4	−22·7	−11·9
357·321 C	72	337	39	180	133·8	158·8	−23·1	+ 0·9
358·405 C	69	325	39	182	133·4	158·5	−23·1	+14·7
359·359 C	79	318	46	191	133·1	158·3	−23·7	+27·0
360·373 C	30	217	21	154	133·2	158·4	−23·9	+40·5
361·348 C	24	91	22	81	133·0	158·3	−23·6	+53·1
362·324 C	2	17	3	25	135·8	161·2	−23·1	+68·8
Means ..	..	..	21	103	133·25	158·31	−23·14	..
Group 8372. December 20–31. Perhaps related to Group 8333; in the same general area of faculæ as Group 8370. A regular spot slowly disappearing. A few very small companions appear on December 26–27.								
353·426 C	2	50	8	191	101·5	65·5	−15·2	−82·7
354·318 C	9	89	14	140	101·3	65·2	−15·2	−71·2
355·330 C	20	123	19	119	100·7	64·5	−15·3	−58·5
356·455 C	11	222	8	158	100·2	63·8	−15·3	−44·1
357·321 C	18	195	11	119	100·0	63·6	−15·3	−32·9
358·405 C	35	153	19	83	99·9	63·3	−15·7	−18·8
359·359 C	25	149	13	77	99·7	63·1	−15·6	− 6·4
360·373 C	32	145	17	75	99·3	62·5	−16·6	+ 6·6
361·348 C	17	76	9	42	99·6	62·7	−16·1	+19·7
362·324 C	11	61	7	37	99·3	62·3	−15·9	+32·3
363·400 C	7	31	5	23	98·7	61·6	−16·1	+45·8
364·351 C	4	16	4	16	99·0	61·8	−16·5	+58·7
Means ..	..	..	11	90	99·93	63·33	−15·73	..
Group 8375. December 21–1918, January 2. A close pair of spots at the east limb, coalescing to form a regular spot by December 23. A few very small markings follow the spot on December 27.								
354·318 C	0	32	0	97	91·8	21·6	− 9·4	−80·7
355·330 C	14	119	18	154	91·9	21·5	− 9·8	−67·3
356·455 C	14	137	12	114	91·7	21·1	− 9·4	−52·6
357·321 C	29	185	19	122	92·4	21·6	− 9·6	−40·5
358·405 C	30	216	17	121	92·3	21·3	− 9·6	−26·4
359·359 C	38	235	20	122	92·5	21·3	− 9·5	−13·6
360·373 C	44	263	22	131	92·2	20·8	− 9·7	− 0·5
361·348 C	37	241	19	125	93·0	21·4	− 9·7	+13·1
362·324 C	31	195	17	109	92·9	21·2	− 9·9	+25·9
363·400 C	31	143	20	94	93·0	21·0	− 9·7	+40·1
364·351 C	17	88	14	74	93·7	21·6	−10·3	+53·4
365·421 C	10	59	13	76	93·7	21·3	− 9·9	+67·5
366·350 C	3	22	8	62	94·2	21·7	−10·2	+80·2
Means ..	..	..	15	108	92·72	21·34	− 9·75	..

LEDGER II.—AREAS and HELIOGRAPHIC POSITIONS of the PRINCIPAL NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1917—*continued*.

(The columns in this Ledger correspond in all respects to those in Ledger I.)

Group 8382

December 27–1918, January 2. A stream of small spots, *n* Group 8374, of which the last, though prominent on December 29, is soon disappearing.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
360·373 C	17	84	9	44	96·6	35·0	+11·0	+ 3·9
361·348 C	43	225	23	122	97·6	35·8	+11·3	+17·7
362·324 C	42	285	25	168	96·3	34·3	+11·6	+29·3
363·400 C	30	187	21	131	94·5	32·4	+12·1	+41·6
364·351 C	20	63	17	54	93·1	30·8	+11·9	+52·8
365·421 C	6	17	8	23	93·7	31·2	+12·1	+67·5
366·350 C	0	6	0	17	92·9	30·3	+12·1	+78·9
Means ..	..	..	15	80	94·96	32·83	+11·73	..

Group 8384.

December 28–1918, January 2. A wide pair of very small spots of which the following is alone visible after December 31.

Date. G.M.T. (Civil) Place.	Projected Area. Umbræ.	Projected Area. Whole Spots.	Corrected Area. Umbræ.	Corrected Area. Whole Spots.	Longitude. System I.	Longitude. System II.	Latitude.	Long. from C.M.
1917. d					°	°	°	°
361·348 C	7	35	6	32	23·0	323·4	−11·9	−56·9
362·324 C	8	57	6	40	23·2	323·4	−11·6	−43·8
363·400 C	18	54	10	31	24·2	324·2	−11·7	−28·7
364·351 C	13	22	7	11	22·1	322·0	−11·8	−18·2
365·421 C	5	13	3	7	20·5	320·2	−12·5	− 5·7
366·350 C	0	10	0	5	20·9	320·5	−13·3	+ 6·9
Means ..	..	..	5	21	22·32	322·28	−12·13	..

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

1917.

TOTAL AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

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

The place where the photograph was taken is indicated in the second column. A photograph taken at Greenwich is indicated by the letter G, and those taken at the Cape, Kodaikanal and Dehra Dun, by the letters C, K and D respectively.

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

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

Greenwich Civil Time.	Place.	Projected Area.			Area Corrected for Foreshortening.		
		Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1917 d							
January 1·364	C	806	4259	3713	528	2800	3433
2·342	C	854	3994	3947	504	2422	3705
3·364	C	679	3752	3042	398	2214	3554
4·478	G	681	3591	936	381	2011	1160
5·483	C	507	3367	2746	298	1989	3134
6·630	C	401	2634	1897	264	1731	2220
7·521	G	476	2417	1237	370	1846	1379
8·364	C	333	2896	2498	310	2138	2793
9·307	C	259	1539	2523	254	2060	3177
10·332	C	226	1136	1829	179	979	2208
11·341	C	178	883	1592	157	938	2204
12·370	C	160	965	1532	104	624	1659
13·318	C	159	900	1883	126	721	2262
14·329	C	185	999	1593	155	1045	2582
15·307	C	154	948	1262	100	631	1270
16·348	C	119	758	1422	80	500	1394
17·320	C	90	749	1291	72	501	1281
18·360	C	94	557	1259	75	449	2076
19·347	C	85	493	2146	74	400	2748
20·351	C	50	518	1593	34	402	1747
21·448	C	110	608	1539	81	438	1630
22·340	C	96	608	1123	62	375	1325
23·402	C	115	901	1176	68	529	1412
24·338	C	86	733	1555	47	414	2197
25·339	C	121	759	1723	74	452	2232
26·344	C	125	703	2193	82	489	2352
27·339	C	146	831	1919	117	640	2321
28·542	C	102	712	2024	85	621	1989
29·323	C	112	724	1796	95	631	1938
30·351	C	97	597	2011	133	804	2943
31·323	C	66	671	1565	66	626	2183
February 1·390	C	99	624	2353	79	485	2591
2·342	C	94	470	3064	72	341	3249
3·365	C	87	462	3012	55	307	3591
4·345	C	98	657	1520	88	593	2077
5·323	C	261	1356	2701	209	1110	3062
6·534	C	364	2590	1500	247	1749	1761
7·537	G	819	4216	1988	477	2452	2536
8·470	G	862	5303	2343	478	2858	2560
9·374	C	946	5393	2393	484	2759	2814

Greenwich Civil Time.	Place.	Projected Area.			Area Corrected for Foreshortening.		
		Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1917 d							
February 10·584	C	719	6225	1218	388	3339	1472
11·360	C	1076	6534	1102	615	3802	1840
12·325	C	776	5396	1118	523	3580	1612
13·510	G	709	4564	2687	586	3844	2904
14·397	G	478	3368	1831	521	3776	2210
15·592	G	328	1972	2265	493	3320	3159
16·363	C	276	1207	1120	220	1201	1671
17·349	C	314	1339	656	179	775	765
18·419	C	184	1101	1193	98	612	1573
19·366	C	165	875	1153	93	486	1634
20·319	C	149	667	1237	89	413	1387
21·427	C	107	482	1705	75	351	1994
22·351	C	51	213	1975	45	219	2269
23·393	G	17	75	1572	12	52	2097
24·347	C	28	134	1766	42	210	2396
25·634	G	38	195	1330	32	211	1691
26·335	C	39	241	1997	38	248	2607
27·313	C	41	294	1077	32	252	1308
28·325	C	72	372	2167	55	285	2263
March 1·324	C	71	365	1881	55	286	2519
2·410	C	128	616	2121	124	621	2733
3·441	G	258	1475	2396	231	1391	3424
4·349	C	430	2695	3943	319	2012	4358
5·325	C	477	3113	1316	360	2315	1658
6·568	C	600	3554	1391	425	2735	1806
7·322	C	489	3116	2486	367	2316	2747
8·460	G	385	2495	1166	296	1953	1445
9·394	C	328	2191	1413	213	1454	1519
10·353	C	280	1718	1263	208	1289	1750
11·647	C	289	1342	2334	183	869	2757
12·160	D	291	1421	1577	179	877	1820
13·425	G	228	1382	2170	146	944	3225
14·332	C	264	1306	2625	213	1078	3558
15·453	G	155	795	2333	132	691	3069
16·630	C	233	1193	1791	200	1025	2238
17·328	C	249	1315	1360	189	1106	2093
18·354	C	192	1076	966	129	760	1399
19·359	C	183	999	996	121	712	1874
20·516	G	227	932	1452	199	742	1914
21·360	C	163	1046	1598	120	741	1654

TOTAL AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

Greenwich Civil Time.		Place.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1917	d							
March	22·414	G	221	1340	725	149	874	744
	23·338	C	230	1294	1258	147	967	1747
	24·379	G	270	1399	1539	234	1159	1934
	25·385	C	215	1218	1171	177	990	1364
	26·345	C	241	1599	1615	169	1170	2033
	27·339	C	283	1427	1561	189	944	1995
	28·325	C	203	1383	2242	131	905	2745
	29·321	C	234	1371	2133	154	892	2530
	30·386	G	268	1340	1383	166	902	1818
	31·346	C	210	1261	1644	158	1020	2329
April	1·646	G	129	664	1679	87	458	1799
	2·616	G	62	416	2497	60	398	2781
	3·391	G	33	240	2083	42	303	2527
	4·345	C	9	67	927	17	109	1216
	5·374	C	5	33	1282	2	18	1376
	6·554	G	6	57	1262	4	32	1345
	7·448	C	10	53	1233	5	28	1437
	8·459	G	0	13	1931	0	7	2219
	9·410	G	16	100	1785	22	156	2149
	10·411	G	22	115	1144	24	135	1522
	11·371	C	52	409	2223	72	606	3121
	12·363	C	214	1147	1290	184	1123	1741
	13·349	G	387	2425	1367	255	1646	2121
	14·349	C	510	2970	1322	327	1903	1737
	15·460	C	460	3263	1204	276	1887	1588
	16·315	C	474	2793	1169	294	1698	1347
	17·422	C	424	2290	1415	262	1449	1632
	18·351	C	406	2148	1277	279	1440	1352
	19·423	C	314	1787	1412	234	1430	1680
	20·359	G	264	1548	582	227	1450	783
	21·351	C	219	1358	2556	183	1146	3098
	22·383	C	185	1160	1429	176	1077	1899
	23·305	C	247	1055	1712	153	637	1988
	24·352	G	400	1599	3105	262	1058	3423
	25·339	C	248	1563	1774	171	1071	2451
	26·349	C	227	1744	1718	182	1380	2381
	27·424	C	232	1635	1984	185	1463	2533
	28·344	C	193	1388	1216	161	1373	1358
	29·429	C	276	1595	1678	168	996	2017
	30·364	C	284	1775	2240	176	1113	2974
May	1·388	C	334	1913	1251	209	1202	1580
	2·332	G	343	1883	1499	212	1153	1448
	3·351	C	322	1628	871	195	992	1398
	4·317	G	304	1529	1769	193	969	1785
	5·364	C	237	1404	1252	191	1114	1452
	6·447	C	212	1207	1189	182	1044	1622
	7·378	C	172	1177	1863	157	1220	2572
	8·480	G	202	1232	2113	168	1075	2769
	9·461	G	240	1474	4410	170	1049	4730
	10·369	C	264	1467	1534	166	958	1892
1917	d							
May	11·377	G	301	1718	1698	177	1142	2405
	12·319	C	310	1759	1253	172	962	1534
	13·499	C	248	1679	1243	135	945	1732
	14·396	C	328	1998	1171	186	1110	1481
	15·368	C	334	2179	1104	200	1287	1245
	16·412	C	396	1999	1162	256	1325	1317
	17·453	C	359	1863	1171	257	1411	1388
	18·446	C	351	1929	915	260	1488	1018
	19·372	C	395	2212	1645	268	1579	2339
	20·462	C	367	1944	1422	203	1187	1895
	21·191	K	360	2079	1917	202	1167	1896
	22·350	C	324	1601	2514	202	1007	3029
	23·394	G	276	1430	4570	244	1314	5133
	24·676	G	289	1624	5105	290	1727	6480
	25·340	G	373	1992	3115	362	2024	4133
	26·327	G	454	2401	2960	338	1878	3598
	27·381	G	728	4065	2366	549	3173	3233
	28·373	C	506	3880	1187	336	2542	1495
	29·455	C	604	3980	629	350	2321	722
	30·170	D	634	3805	486	357	2161	518
	31·354	G	760	3988	1422	443	2297	1545
June	1·334	C	535	3336	1808	329	2036	1897
	2·425	G	495	2671	1220	361	1931	1377
	3·374	C	290	1862	2388	271	1679	3110
	4·335	C	232	1580	2563	249	1649	3829
	5·358	G	163	1155	532	144	1124	708
	6·493	C	173	1129	2290	154	1030	2698
	7·446	C	145	1040	584	94	700	877
	8·363	C	194	1545	1320	155	1280	2287
	9·393	C	259	1632	2114	269	1644	2901
	10·284	G	357	2053	4734	309	1813	5276
	11·562	G	478	2653	3119	374	2098	3625
	12·399	G	478	2489	1976	356	1848	2194
	13·383	G	555	2770	2644	361	1848	2628
	14·460	G	446	2127	2892	330	1578	3406
	15·396	G	365	2034	2457	253	1419	3139
	16·411	C	416	2729	1492	259	1688	1858
	17·467	G	699	3427	4953	501	2489	4880
	18·453	G	588	3220	4213	410	2213	4581
	19·352	C	555	3292	4773	465	2540	5828
	20·401	C	464	3047	3893	368	2429	5584
	21·400	C	452	2692	2593	286	1754	3761
	22·162	D	547	2699	2381	345	1662	2469
	23·376	C	391	2569	1658	272	1997	2343
	24·362	G	465	2593	2083	318	1922	2559
	25·494	C	423	2553	732	262	1652	962
	26·625	G	602	2927	1519	364	1751	1576
	27·132	K	546	2455	123	325	1510	235
	28·410	C	414	2243	961	282	1580	1078
	29·500	C	296	1702	850	244	1420	1100
	30·350	C	271	1421	1937	238	1232	2424

TOTAL AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

Greenwich Civil Time.		Place.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1917 July	d 1·412	G	161	849	2835	170	899	3537
	2·414	G	166	782	2639	134	644	3472
	3·391	G	438	1796	3662	295	1187	3592
	4·390	C	289	1737	1594	191	1079	2059
	5·401	C	305	2277	2373	196	1503	3549
	6·396	C	328	1835	2565	260	1428	3485
	7·457	G	366	1410	4342	296	1048	5202
	8·413	C	405	2066	2665	379	1984	3177
	9·399	C	355	2625	2651	292	2238	2659
	10·365	C	426	3248	2971	318	2467	3406
	11·403	G	604	3578	2430	406	2346	2964
	12·343	G	638	4193	1865	370	2420	2348
	13·389	G	762	4805	1689	420	2679	2186
	14·438	G	666	4278	2335	415	2601	2745
	15·340	G	575	3420	4425	367	2164	4232
	16·350	C	370	2424	1904	277	1767	2378
	17·377	G	382	2294	3993	320	1900	5056
	18·432	C	294	1630	4014	268	1450	4765
	19·584	G	178	1097	4456	199	1175	5221
	20·454	G	163	989	2416	113	691	3728
	21·374	G	154	942	5990	104	732	6294
	22·337	G	223	1214	3199	194	1125	3829
	23·448	C	292	1737	2621	245	1389	2994
	24·409	C	241	1786	1775	182	1332	2054
	25·438	C	411	2438	1594	281	1772	1660
	26·449	C	337	2222	1208	239	1523	1435
	27·391	C	359	1947	1666	216	1174	2091
	28·345	C	403	2045	1984	237	1196	2601
	29·437	C	431	2517	2107	245	1418	2592
	30·327	C	424	2474	1084	248	1466	1273
	31·343	C	386	2128	1159	272	1454	1460
August	1·455	C	249	1592	2772	212	1401	3594
	2·305	D	256	1193	3170	243	1223	3586
	3·389	C	224	1159	2516	289	1801	3400
	4·700	G	298	1813	3757	410	2609	5360
	5·522	G	412	3103	4008	382	3006	4864
	6·669	G	660	4919	4824	482	3702	5241
	7·487	G	1085	6903	4051	717	4520	4531
	8·362	C	1382	8183	1731	841	5111	2112
	9·353	C	1337	9060	1118	768	5267	1566
	10·402	G	1585	8745	1925	919	5124	2518
	11·386	G	1449	7675	2336	830	4387	2510
	12·413	G	1349	7544	3265	954	5000	3804
	13·462	G	1242	7104	4313	904	5297	5199
	14·348	C	921	6482	3701	736	5446	4108
	15·585	G	825	5191	6592	714	4931	7896
	16·354	G	756	4641	6623	673	4775	8238
	17·447	C	637	4097	2358	446	3041	3285
	18·417	C	627	4090	2073	444	2876	2749
	19·414	G	695	3949	2904	453	2539	3324
	20·408	G	503	3460	2881	343	2311	3519
	21·362	C	494	3449	1128	352	2698	1646
	22·439	G	451	3100	2084	350	2433	2455
1917 August	d 23·566	G	433	2410	3213	374	2062	4235
	24·232	K	443	2318	2085	440	2093	2623
	25·436	C	279	1741	1993	178	1283	2663
	26·505	G	337	1996	669	202	1204	854
	27·340	C	355	1917	2284	207	1195	2550
	28·360	G	330	1664	1969	206	1104	2267
	29·421	C	166	1297	1121	115	1020	1489
	30·357	C	183	1407	2133	167	1369	3206
	31·377	C	242	1393	2460	243	1499	3816
September	1·361	C	212	1551	5317	215	1726	5278
	2·475	G	194	1236	2355	169	1254	2769
	3·377	G	260	1337	3956	183	893	4571
	4·409	G	300	1581	3904	246	1231	4465
	5·361	G	265	1474	1977	227	1152	2372
	6·560	C	183	1075	1298	113	674	1730
	7·391	C	181	1057	1902	136	794	2148
	8·418	G	129	715	3326	113	556	3855
	9·231	D	168	681	1652	134	594	1823
	10·367	C	136	635	3076	114	568	3561
	11·381	G	220	889	5561	144	605	6227
	12·359	G	221	1142	3151	172	1171	3735
	13·356	C	305	1949	2143	236	1631	2709
	14·420	G	231	1794	2707	191	1555	3313
	15·378	G	232	1544	2358	197	1289	3003
	16·561	G	248	1750	1801	240	1894	2452
	17·361	C	350	2225	1820	372	2787	2491
	18·311	C	415	3079	2473	375	2953	3103
	19·356	C	600	3873	3028	444	2951	3373
	20·339	C	721	5078	1855	460	3260	2363
	21·403	G	851	5902	892	493	3423	1371
	22·339	C	808	6475	1386	450	3537	1754
	23·444	C	793	6633	1350	445	3650	1702
	24·402	G	1026	5887	2644	601	3395	2891
	25·430	G	867	5347	1870	576	3485	2184
	26·356	C	570	3828	1516	451	3088	2227
	27·341	C	434	2775	2614	426	2715	3254
	28·367	C	242	1490	2963	268	1683	3739
	29·394	G	142	803	3033	219	1260	3821
	30·423	C	83	617	2439	64	476	3073
October	1·430	G	115	672	1416	92	537	2440
	2·498	G	128	685	995	84	433	1268
	3·360	C	102	702	1184	70	480	1403
	4·357	C	46	611	1167	34	459	1331
	5·362	C	116	666	950	100	579	1043
	6·529	G	124	793	792	136	948	853
	7·427	C	89	647	1293	153	1431	1710
	8·314	C	132	702	978	71	417	1412
	9·460	C	117	599	1805	68	352	2210
	10·385	C	51	460	779	33	299	947

TOTAL AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1917.

Greenwich Civil Time.	Place.	Projected Area.			Area Corrected for Foreshortening.			Greenwich Civil Time.	Place.	Projected Area.			Area Corrected for Foreshortening.		
		Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1917 d								1917 d							
October 11·355	C	51	380	1893	58	499	2513	Nov'mber 21·349	C	97	767	1199	69	606	1406
12·350	C	54	317	1600	51	325	1995	22·326	C	191	770	1314	144	699	1732
13·499	G	100	517	1421	124	693	1925	23·497	G	146	507	640	98	351	843
14·181	D	195	866	1826	295	1200	2348	24·553	C	109	766	1049	69	492	1251
15·461	G	213	1070	1654	186	945	1850	25·139	D	214	1049	1048	131	650	1162
16·377	C	282	1407	1529	199	994	2019	26·466	C	245	1682	790	162	1155	1132
17·332	C	240	1811	1440	151	1154	1464	27·425	G	255	2125	951	156	1337	1138
18·325	C	326	2036	999	202	1258	1149	28·390	C	375	2336	1520	240	1520	1663
19·432	G	409	2258	294	251	1364	407	29·323	C	483	3083	1487	294	1917	1995
20·416	G	442	2337	731	241	1271	880	30·337	C	408	3473	1066	240	2083	1418
21·370	C	357	2285	1151	197	1280	1347								
22·321	C	404	2536	803	278	1749	1276								
23·424	G	468	2823	782	353	2329	1142								
24·415	G	396	2663	2700	331	2195	3095	December 1·406	C	568	3977	535	367	2573	1042
25·321	C	285	2364	1765	240	1980	2025	2·498	C	465	3320	551	346	2557	671
26·598	G	224	1910	1061	207	1674	1237	3·325	C	387	2376	561	294	2161	790
27·428	G	199	1462	1055	127	930	1423	4·441	G	246	1294	360	234	1438	531
28·450	C	178	1125	912	117	743	1321	5·324	C	144	887	1086	150	1255	1547
29·337	C	134	961	1026	95	682	1468	6·355	C	124	668	732	108	574	877
30·543	C	151	634	1236	125	558	1555	7·387	C	114	719	1820	100	631	2249
31·472	G	163	778	1067	111	525	1094	8·330	C	154	884	1335	123	728	1765
								9·458	C	157	1052	739	109	781	1001
								10·347	C	216	1228	625	118	774	1043
								11·614	C	239	1595	875	155	1120	1073
November 1·316	C	140	696	1753	97	504	1880	12·344	C	339	2213	408	249	1694	565
2·498	C	141	827	1656	133	877	2080	13·342	C	666	3771	775	413	2435	1200
3·398	C	122	1033	1018	124	1107	1247	14·365	C	716	4783	1638	449	2989	2040
4·488	G	121	959	681	99	731	932	15·488	G	829	4485	886	559	3008	981
5·537	C	177	1503	591	99	857	716	16·454	C	561	3871	1249	449	3143	1818
6·346	C	345	1730	803	196	975	1244	17·459	C	378	2983	1346	355	3042	1600
7·332	C	335	1782	862	195	1028	939	18·323	C	377	2531	1448	347	2349	1597
8·352	C	258	1817	772	159	1073	800	19·411	C	492	2598	1029	401	2148	1346
9·473	G	272	1787	607	271	1507	830	20·426	C	435	2734	1819	347	2286	2245
10·325	C	186	1561	835	186	1500	1269	21·318	C	504	2989	992	400	2547	1326
11·324	C	194	1370	1140	205	1584	1484	22·330	C	564	3280	1721	426	2514	2430
12·372	C	122	964	759	97	767	980	23·455	C	454	3601	1065	291	2377	1322
13·335	C	137	920	514	86	568	676	24·321	C	710	4458	1903	455	2997	2550
14·322	C	210	1184	505	131	708	545	25·405	C	863	5198	1566	556	3421	2069
15·395	C	195	1508	271	110	850	393	26·359	C	884	5456	1962	534	3367	2328
16·337	C	210	1556	1024	126	1051	1269	27·373	C	972	6071	2316	606	3816	2886
17·315	C	222	1549	917	140	983	1195	28·348	C	905	5434	1040	581	3522	1710
18·408	C	222	1602	942	173	1243	1400	29·324	C	764	4880	1405	528	3399	1498
19·338	C	173	1303	1999	165	1201	2340	30·400	C	642	3970	1658	504	3103	2079
20·342	C	111	758	1331	126	918	1610	31·351	C	492	3179	1779	357	2461	2238

MEAN AREAS of SUN SPOTS and FACULÆ for each ROTATION of the SUN, from 1916 December 18 to 1918 January 3.

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 1873–1916 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							
846	1916	December	17·53	27	324	1780	2128	240	1326	2414
847	1917	January	13·86	27	207	1257	1854	137	837	2217
848		February	10·20	28	312	1960	1689	233	1502	2109
849		March	9·53	27	199	1095	1637	144	813	2085
850		April	5·83	27	250	1474	1584	174	1061	1960
851		May	3·09	28	353	2045	1880	242	1435	2315
852		May	30·31	26	420	2419	2417	305	1782	2935
853		June	26·51	28	381	2213	2679	274	1586	3189
854		July	23·71	27	703	4259	2838	494	3089	3446
855		August	19·94	27	276	1660	2545	214	1332	3070
856		September	16·19	27	344	2333	1724	253	1752	2182
857		October	13·47	28	253	1571	1150	186	1149	1418
858		November	9·77	27	238	1606	931	172	1213	1198
859		December	7·09	28	518	3232	1353	369	2367	1744

MEAN AREAS of SUN SPOTS and FACULÆ for the YEAR 1917.

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.
1917	365	346	2101	1882	247	1537	2305

MEAN HELIOGRAPHIC LATITUDE of SUN SPOTS for each ROTATION of the SUN, from 1916 December 18 to 1918 January 3.

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			°		°	°	°
846	1916 December 17·53	27	1113	13·97	213	20·02	+ 8·50	14·94
847	1917 January 13·86	27	393	17·39	444	16·33	− 0·49	16·83
848	February 10·20	28	417	19·83	1085	16·22	− 6·21	17·22
849	March 9·53	27	586	14·14	227	13·38	+ 6·46	13·93
850	April 5·83	27	695	13·70	366	18·41	+ 2·66	15·29
851	May 3·09	28	606	12·51	829	17·45	− 4·79	15·36
852	May 30·31	26	902	14·32	880	15·07	− 0·20	14·69
853	June 26·51	28	1130	15·17	456	16·49	+ 6·11	15·55
854	July 23·71	27	2174	14·18	915	16·92	+ 4·97	14·99
855	August 19·94	27	583	14·01	749	17·76	− 3·86	16·12
856	September 16·19	27	951	15·51	801	14·19	+ 1·94	14·90
857	October 13·47	28	493	11·35	656	15·85	− 4·14	13·91
858	November 9·77	27	512	11·06	701	13·38	− 3·06	12·40
859	December 7·09	28	1416	9·46	952	12·03	+ 0·82	10·49

MEAN HELIOGRAPHIC LATITUDE of SUN SPOTS for the YEAR 1917.

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.		
			°		°	°	°
1917	365	860	13·82	677	15·66	+ 0·84	14·63