GREENWICH PHOTO-HELIOGRAPHIC RESULTS.

1920.

[*Crown Copyright Reserved.*]

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

1920.

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

LONDON:
PRINTED & PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

To be purchased through any Bookseller or directly from H.M. STATIONERY OFFICE at the following addresses: Imperial House, Kingsway, London, W.C.2, and 28 Abingdon Street, London, S.W.1; York Street, Manchester; 1 St. Andrew's Crescent, Cardiff; or 120 George Street, Edinburgh.

1923.

Price 12s. 6d. Net.

GREENWICH PHOTO-HELIOGRAPHIC RESULTS, 1920.

INTRODUCTION.

§ 1. *Positions and Areas of Sun Spots and Faculæ for each Day in the Year* 1920.

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 Photo-heliograph, 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 Photo-heliograph 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 1920, those finally selected for measurement being supplied by the different observatories as under:—

Greenwich	195
Cape	153
Kodaikánal	15
Dehra Dûn	3
Total	366

(9647) Wt. 1016/102/77 300 Harrow 12/23 G 69

The names of those persons who measured the photographs for the year 1920 are as follows :—

H. W. Newton	Andrina M. Crommelin	
H. Barton	S. Woolford	H. F. Finch

At the principal focus of the Photo-heliographs, 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 Photo-heliographs 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 Photo-heliograph there is one wire fixed parallel to the equator.

The zero of position-angles for the Greenwich, Cape, and Kodaikánal Photo-heliographs 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 photo-heliograph 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 Photo-heliographs.

The adjustment of the wires in the Dehra Dûn Photo-heliograph 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.

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

The zero-corrections used throughout the year 1920 in the reduction of the photographs taken at Greenwich were—

Jan. 1 to April 30 + 2° 42′; May 1 to July 31 + 2° 39′; Aug. 1 to Dec. 31 + 2° 42′.

DALLMEYER PHOTO-HELIOGRAPH, GREENWICH.

Photographic Determination of the Zero of Position-Angles.

Date. Greenwich Civil Time.		Correction for Zero.	Date. Greenwich Civil Time.		Correction for Zero.
	d h	° ′		d h	° ′
1920 February	16. 11	+ 2. 38	1920 August	27. 11	+ 2. 53
June	18. 9	+ 2. 34	,,	27. 11	+ 2. 54
,,	18. 9	+ 2. 35	September	9. 10	+ 2. 45
July	16. 10	+ 2. 40	,,	9. 10	+ 2. 44
,,	25. 9	+ 2. 35	October	12. 10	+ 2. 43
August	14. 9	+ 2. 34	,,	12. 10	+ 2. 33

Visual Determination of the Zero of Position-Angles.

Date. Greenwich Civil Time.		Correction for Zero.	Date. Greenwich Civil Time.		Correction for Zero.
	d h	° ′		d h	° ′
1920 January	2. 12	+ 2. 45	1920 June	14. 8	+ 2. 41
,,	9. 12	+ 2. 42	,,	17. 10	+ 2. 42
,,	22. 11	+ 2. 41	,,	18. 9	+ 2. 39
February	1. 11	+ 2. 46	August	3. 9	+ 2. 40
,,	6. 12	+ 2. 44	,,	13. 10	+ 2. 38
,,	12. 11	+ 2. 42	,,	21. 9	+ 2. 38
,,	16. 11	+ 2. 44	,,	27. 11	+ 2. 41
,,	22. 11	+ 2. 44	September	8. 9	+ 2. 41
March	3. 10	+ 2. 41	,,	9. 11	+ 2. 43
,,	8. 11	+ 2. 42	,,	22. 14	+ 2. 44
,,	20. 11	+ 2. 44	,,	29. 15	+ 2. 41
,,	21. 10	+ 2. 41	October	8. 14	+ 2. 40
April	22. 9	+ 2. 37	,,	12. 10	+ 2. 45
,,	29. 9	+ 2. 39	,,	25. 10	+ 2. 43
,,	30. 11	+ 2. 40	November	2. 12	+ 2. 45
May	10. 9	+ 2. 37	,,	8. 11	+ 2. 45
,,	21. 8	+ 2. 34	,,	17. 12	+ 2. 45
June	2. 9	+ 2. 36	,,	25. 10	+ 2. 46
,,	13. 8	+ 2. 41	December	10. 11	+ 2. 44

On February 25, the camera box of the Greenwich Photo-heliograph was dismounted and slight adjustments were made in order to bring the scale of the photographs into exact agreement with that of the Cape photographs.

DALLMEYER PHOTO-HELIOGRAPH, CAPE OF GOOD HOPE.

Photographic Determination of the Zero of Position-Angles.

Date. Greenwich Civil Time.			Correction for Zero.	Date. Greenwich Civil Time.			Correction for Zero.
	d	h	° ′		d	h	° ′
1920 January	6.	8	− 1. 00	1920 July	21.	11	− 0. 38
,,	19.	8	− 0. 38	August	5.	8	− 0. 21
February	5.	9	− 0. 40	,,	19.	8	− 0. 27
,,	23.	9	− 0. 30	September	4.	8	− 0. 38
March	8.	8	− 0. 26	,,	21.	8	− 0. 25
,,	24.	9	− 0. 31	October	5.	8	− 0. 28
April	7.	8	− 0. 33	,,	22.	10	− 0. 30
,,	21.	9	− 0. 15	November	6.	8	− 0. 29
May	6.	8	− 0. 22	,,	22.	8	− 0. 38
,,	20.	9	− 0. 35	December	7.	7	− 0. 35
June	23.	11	− 0. 28	,,	27.	8	− 0. 50
July	7.	9	− 0. 22				

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

Jan. 1 to Jan. 31, − 0°·7 ; Feb. 1 to Feb. 29, − 0°·6 ; Mar. 1 to Dec. 31, − 0°·5.

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

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

The position-angle χ is found from the position-angle from the North Point by subtracting P, the position-angle of the 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. 516 of the *Nautical Almanac* for 1920.

The inclination of the Sun's axis to the ecliptic is assumed to be 82° 45′, the longitude of the ascending node for 1920·0 to be 74° 38′·6, and the period of the Sun's sidereal rotation to be 25·38 days; the meridian which passed through the ascending node 1854 January 1, Greenwich Mean Noon, being taken as the zero meridian.

§ 2. *General Catalogue of Groups of Sun Spots for* 1920.

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 1919 and previous years. Groups seen only once are not included, but appear in the Daily Results with a distinctive numeration.

During the year 1920, a number of groups of spots have been noted in the Catalogue as "Revivals." These have been tabulated in series in a table following the Catalogue. 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.

§ 3. *Ledgers of the Areas and Heliographic Positions of Groups of Sun Spots for* 1920.

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* 1920.

Particulars relating to this section are given in the headings on pages D 88-89.

F. W. DYSON.

Royal Observatory, Greenwich,
1923, *July* 18.

ROYAL OBSERVATORY, GREENWICH.

POSITIONS AND AREAS

OF

SUN SPOTS AND FACULÆ.

FOR EACH DAY IN THE YEAR

1920.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

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 derived from the measures.

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

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

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

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

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

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
0·362		·958	296·8					108
		·936	286·6					221
		·883	297·4					73
		·760	294·1					82
C		·699	282·8					81
	9092	·971	255·4	188·1	−14·9	8	31	554*sf*
	9096	·157	358·0	112·2	+ 5·9	1	4	
	9095	·172	114·8	102·9	− 7·2	96	424	
		·971	100·8					109
Jan. 1			(+2·4)	(111·9)	(−3·1)	(105)	(459)	(1228)
1·337		·985	249·5					90
		·970	287·0					117
		·966	298·8					70
		·860	288·5					81
C		·853	280·3					120
	9096	·308	306·3	113·5	+ 7·4	3	18	
	9095	·098	222·7	102·9	− 7·4	206	880	
		·940	103·3					91
Jan. 2			(+1·9)	(99·1)	(−3·2)	(209)	(898)	(569)
2·252		·942	277·4					125
	9096	·502	290·8	115·1	+ 7·3	5	11	
D	9095	·310	255·6	104·6	− 7·5	248	1150	
		·909	101·9					177
Jan. 3			(+1·5)	(87·0)	(−3·3)	(253)	(1161)	(302)
3·478	9096	·690	284·1	113·0	+ 7·1	2	14	
G	9095	·589	262·0	106·7	− 7·5	174	1005	
		·970	81·2					301
Jan. 4			(+0·9)	(70·8)	(−3·4)	(176)	(1019)	(301)
4·467		·945	284·0					68
		·835	280·9					76
G	9095	·777	263·1	108·7	− 7·5	160	902	
		·885	77·3					286
		·955	84·3					206
Jan. 5			(+0·4)	(57·8)	(−3·5)	(160)	(902)	(636)
1920.			°	°	°			
5·339		·931	276·3					178
		·839	243·4					72
		·829	254·3					188
	886e	·953	291·8	116·0	+19·5	0	18	122*p*
C	9095	·892	263·8	109·5	−7·2	134	857	581*c*
		·787	74·6					376
		·874	82·6					419
		·979	70·2					62
Jan. 6			(0·0)	(46·4)	(−3·6)	(134)	(875)	(1998)
6·413		·944	242·5					95
		·915	253·8					143
C	9095	·978	263·3	110·4	− 7·4	115	852	1094*c*
		·716	79·5					187
		·808	81·0					80
		·910	69·1					88
Jan. 7			(−0·5)	(32·2)	(−3·7)	(115)	(852)	(1687)
7·351		·982	263·1					479
		·955	251·8					139
		·889	242·6					57
	9907	·969	75·2	305·8	+13·3	28	197	195*n*
C	9098	·992	78·3	298·1	+11·0	0	14	
	9099	·989	104·6	297·9	−15·0	26	151	61*p*
		·801	64·1					105
		·947	62·3					49
		·981	110·4					146
Jan. 8			(−1·0)	(19·8)	(−3·8)	(54)	(362)	(1231)
8·436	9097	·884	72·9	305·6	+13·0	28	124	170*n*
	9098	·938	76·8	297·4	+10·9	21	92	216*f*
G	9099	·935	104·3	296·3	−14·8	44	170	158*f*
		·931	112·0					254
Jan. 9			(−1·5)	(5·6)	(−4·0)	(93)	(386)	(798)
9·103	9097	·809	70·2	305·5	+13·4	26	143	163*n*
K	9098	·876	75·0	297·5	+11·0	18	92	181*c*
	9099	·878	104·6	295·6	−14·7	32	158	341*f*

Group 9092. 1919, Dec. 22–1920, Jan. 1. A small spot from which develops a stream of small and unstable components.
Group 9095. 1919, Dec. 30–1920, Jan. 7. Revival of Group 9079. A very large stream developing from a few very small spots on Dec. 30. The leader, at first of regular type, becomes large and composite—noticeably so on Jan. 3—whilst the follower, though of regular type on Jan. 3, is unstable and rapidly breaks up and disappears. A spot, representing a cluster which closely follows the leader on Jan. 4, remains with it at the west limb.
Group 9096. Jan. 1–4. One or two small spots.
Group 9097. Jan. 8–17. A small regular spot dying out, with one or two small followers from Jan. 12–15.
Group 9098. Jan. 8–19. A small regular spot *f* Group 9097.
Group 9099. Jan. 8–21. Return of Group 9091. A regular spot with occasional small attendants.

(9647)

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1920.			°	°	°			
9·103	9100	·936	75·4	289·1	+12·1	0	27	287*c*
	9101	·952	104·5	284·5	−15·0	6	24	145*c*
K		·847	111·8					299
		·925	115·0					170
Jan. 10			(−1·8)	(356·8)	(−4·0)	(82)	(444)	(1586)
10·109	9103	·680	251·8	25·4	−15·3	1	11	
	9097	·666	64·5	305·5	+13·3	26	121	
	9098	·742	71·3	298·0	+10·8	14	81	158*c*
	9099	·750	105·9	295·5	−14·7	29	152	137*f*
K	9100	·826	72·2	290·2	+12·1	4	11	180*c*
	9101	·842	104·6	286·4	−14·5	7	19	167*f*
	9102	·994	86·7	260·2	+ 2·8	57	290	
		·746	116·4					110
		·850	116·9					118
Jan. 11			(−2·3)	(343·5)	(−4·2)	(138)	(685)	(870)
11·108	9103	·865	254·2	30·0	−15·8	2	11	111*f*
	9097	·516	54·4	304·9	+13·6	29	138	
	9098	·582	64·6	298·2	+10·8	12	83	
K	9099	·589	109·3	295·5	−14·7	40	193	
	9100	·681	67·0	290·7	+12·1	1	6	
	9101	·688	106·2	287·6	−14·2	5	18	
	9102	·943	85·7	260·4	+ 2·6	53	341	420*f*
Jan. 12			(−2·8)	(330·4)	(−4·3)	(142)	(790)	(531)
12·108		·938	255·4					100
	9097	·366	32·8	305·5	+13·6	25	121	
	9098	·409	51·3	298·3	+10·6	15	81	
K	9099	·407	117·2	295·3	−14·8	42	177	
	9101	·512	109·5	287·6	−13·6	0	4	
	9102	·841	84·3	260·5	+ 2·3	47	278	253*f*
Jan. 13			(−3·3)	(317·2)	(−4·4)	(129)	(661)	(353)
13·441		·877	282·7					255
	9097	·321	342·3	305·3	+13·3	19	77	
	9098	·261	364·9	298·3	+10·5	11	62	
G	9099	·200	156·9	295·0	−15·0	21	141	
	9104	·349	128·3	283·1	−16·8	0	18	
	9102	·638	81·0	260·7	+ 2·2	42	273	
Jan. 14			(−3·9)	(299·6)	(− 4·5)	(93)	(571)	(255)
1920.			°	°	°			
14·106		·932	282·6					411
		·839	279·1					275
	9097	·394	321·7	305·4	+13·5	10	64	
	9098	·299	333·2	298·6	+10·9	19	59	
K	9099	·189	201·3	295·0	−14·7	27	167	
	9104	·248	148·8	283·2	−16·8	2	9	
	9102	·513	77·6	260·9	+ 2·3	56	271	
		·965	76·6					321
Jan. 15			(−4·2)	(290·9)	(−4·6)	(114)	(570)	(1007)
15·110		·990	281·5					172
		·935	276·3					272
	9097	·550	303·9	305·6	+13·6	6	23	
	9098	·441	307·3	298·5	+11·0	10	59	
	9099	·340	237·2	294·8	−15·0	29	135	
K	9104	·230	205·3	283·6	−16·6	1	6	
	9102	·310	68·3	261·0	+ 2·0	48	246	
		·893	73·7					320
		·938	107·5					86
		·950	73·9					404
		·985	105·9					197
Jan. 16			(−4·7)	(277·7)	(−4·7)	(94)	(469)	(1451)
16·108	9097	·704	294·6	305·5	+13·3	1	22	
	9098	·610	295·4	298·5	+11·2	13	57	
	9099	·523	248·0	294·6	−15·4	33	154	
	9102	·129	23·2	261·6	+ 2·0	42	252	
K		·803	69·0					284
		·837	107·4					110
		·891	72·7					340
		·941	106·0					572
Jan. 17			(−5·2)	(264·5)	(−4·8)	(89)	(485)	(1306)
17·331		·854	300·2					66
		·819	246·8					184
		·724	292·0					118
	9098	·796	288·1	298·7	+11·2	7	27	163*p*
	9099	·729	252·9	294·6	−15·8	27	135	
C	9102	·265	296·1	262·1	+ 2·0	38	186	
	887a	·797	107·9	196·1	−17·1	0	6	144*np*
	9105	·929	108·3	179·9	−18·8	0	15	228*n*
	9106	·977	82·3	171·7	+ 6·4	9	30	274*f*
		·732	67·2					131
		·853	106·3					220

Group 9100. Jan. 10–12. One small spot *f* Group 9098 in the same general area of faculae.
Group 9101. Jan. 10–13. A small spot *f* Group 9099 in the same general area of faculae.
Group 9102. Jan. 11–23. A regular spot which is unstable after Jan. 18. A cluster of very small companions follows until that date.
Group 9103. Jan. 11–12. A pair of small spots on Jan. 11; a single spot on the next day.
Group 9104. Jan. 14–16. One or two very small spots *f* Group 9099.
Group 9105. Jan. 18–30. A single small spot for three days. On Jan. 21 a large stream commences to develop which is fully formed by January 25. The leader is a well-defined regular spot by January 25; the rear of the stream is made up of the original small follower and a large spot which has grown from the mid-portion of the group.
Group 9106. Jan. 18–21. A single small spot.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
17·331		·864	60·2					147
		·909	72·5					176
C		·920	86·5					226
		·959	59·9					101
		·971	71·4					129
Jan. 18			(−5·7)	(248·4)	(−4·9)	(81)	(399)	(2307)
18·169		·919	296·3					88
		·902	248·1					209
		·852	287·0					219
		·808	240·6					99
		·746	252·2					152
	9098	·901	285·1	299·6	+11·3	6	18	201*p*
	9099	·849	254·1	295·4	−16·1	22	129	179*c*
	9102	·443	284·5	262·7	+ 1·8	40	194	
D	9105	·845	108·5	180·1	−18·3	3	9	257*c*
	9106	·916	80·7	172·2	+ 6·4	11	34	362*f*
		·654	107·0					127
		·757	106·9					163
		·801	56·8					147
		·849	84·3					120
		·860	68·6					172
		·932	57·4					194
		·966	73·3					65
Jan. 19			(−6·1)	(237·4)	(−5·0)	(82)	(384)	(2754)
19·380		·971	283·8					346
		·965	248·3					199
		·924	290·1					129
		·902	243·7					79
	9099	·959	254·9	295·5	−15·9	28	134	216*f*
C	9102	·669	278·1	262·8	+ 1·6	21	169	
	887b	·375	23·6	212·6	+15·0	0	4	
	887c	·445	117·5	197·3	−16·5	0	2	
	887d	·575	111·7	187·8	−16·5	0	4	
	9105	·656	112·1	181·9	−18·2	3	5	
	9106	·754	78·3	173·8	+ 5·3	3	6	269*f*
		·856	71·1					102
Jan. 20			(−6·7)	(221·5)	(−5·1)	(55)	(324)	(1340)
20·341		·972	285·9					67
		·969	243·5					105
		·899	245·7					131
C	9099	·997	254·4	295·1	−15·9	0	134	119*f*
	887e	·909	261·7	274·4	− 9·7	2	4	102*c*
	9102	·819	275·6	263·2	+ 1·5	28	124	181*nf*
	9107	·824	284·2	262·5	+ 8·5	9	27	71*c*

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
20·341	9105	·498	118·5	181·5	−18·3	3	29	
	9106	·558	74·7	174·4	+ 4·5	0	5	
C	9108	·992	94·1	125·9	− 4·7	61	340	52*p*
		·659	74·3					167
		·738	67·3					137
Jan. 21			(−7·1)	(208·8)	(−5·2)	(103)	(663)	(1132)
21·432		·978	261·1					82
	9102	·936	273·3	263·3	+ 1·2	27	136	341*nf*
	9107	·933	281·5	261·8	+ 8·7	3	26	169*c*
	9105	·314	136·4	181·3	−18·3	40	177	
G	9109	·627	53·7	162·6	+17·2	12	24	
	9108	·958	95·0	120·9	− 6·3	189	1390	1070*c*
		·911	73·6					60
Jan. 22			(−7·6)	(194·4)	(−5·3)	(271)	(1753)	(1722)
22·355		·986	279·6					216
	9102	·991	272·8	264·2	+ 2·0	0	83	182*nf*
	9110	·360	239·2	200·9	−15·6	0	4	
	887f	·228	217·2	190·5	−15·6	0	3	
	887g	·344	343·4	188·1	+13·3	0	3	
C	9105	·220	175·1	181·2	−17·9	57	322	
	9111	·333	46·0	168·4	+ 8·2	0	14	
	9109	·494	40·6	162·7	+17·0	3	15	
	9108	·878	94·2	120·8	− 6·3	227	1473	922*c*
		·936	155·4					36
		·962	97·2					446
Jan. 23			(−8·0)	(182·3)	(−5·3)	(287)	(1917)	(1802)
23·563		·780	293·0					304
	9110	·586	254·0	201·7	−13·6	0	4	
	9105	·336	228·0	181·6	−18·2	129	626	
C	9111	·245	348·8	169·1	+ 8·5	0	3	
	9112	·615	85·0	128·8	− 1·2	16	27	
	9108	·711	93·5	121·0	− 6·3	216	1689	229*c*
		·893	100·3					320
		·912	116·7					64
Jan. 24			(−8·6)	(166·4)	(−5·4)	(361)	(2349)	(917)
24·448		·888	288·2					495
		·778	295·4					102
		·751	309·2					179
G	9105	·492	242·2	181·8	−18·1	167	905	
	9112	·413	82·5	130·6	− 2·0	21	98	
	9108	·569	94·4	120·1	− 7·1	374	2017	209*c*
		·794	100·4					367
Jan. 25			(−9·0)	(154·7)	(−5·5)	(562)	(3020)	(1352)

Group 9107. Jan. 21–22. A pair of small spots *n* Group 9102.
Group 9108. Jan. 21–Feb. 3. Return of Group 9095. A very long and complex stream inclined about 25° to the solar equator. Two very large and complex spots at the head of the stream are a prominent feature of the group for several days, but later they are comparable with the smaller but more stable components of the stream. A very extensive area of faculæ surrounds the group.
Group 9109. Jan. 22–26. Intermittent. A very small stream of few spots on Jan. 22 and 23. One small spot on Jan. 26.
Group 9110. Jan. 23–24. A minute spot.
Group 9111. Jan. 23–24. One very small spot.
Group 9112. Jan. 24–Feb. 1. A small regular spot *p* Group 9108 and just within the large area of faculæ which surrounds it.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
25·487		·947	285·6					618
		·944	199·5					95
		·931	214·0					57
		·915	190·8					130
		·873	301·4					204
		·851	253·7					280
		·755	294·2					136
		·745	309·5					103
C	9105	·667	248·4	181·7	−18·5	153	818	136*c*
	9109	·502	318·5	161·2	+16·8	0	3	
	9112	·163	69·5	132·2	− 2·3	17	101	
	9108	·359	94·4	120·1	− 6·8	295	2011	
		·824	113·4					163
		·916	158·3					35
		·920	168·3					100
Jan. 26			(−9·4)	(141·0)	(−5·6)	(465)	(2933)	(2057)
26·348		·971	286·8					184
		·924	255·0					212
		·918	298·6					205
		·863	289·2					124
C		·712	284·8					173
	9105	·792	250·0	181·5	−19·2	112	788	348*c*
	9112	·071	313·9	132·6	− 2·8	17	79	
	9108	·165	101·2	120·4	− 7·2	268	2037	
Jan. 27			(−9·8)	(129·7)	(−5·7)	(397)	(2904)	(1246)
27·493		·944	297·7					135
		·938	286·0					129
		·938	236·5					144
		·923	272·1					143
		·899	308·1					84
		·845	282·5					167
C	9105	·928	251·8	183·1	−19·1	104	638	725*c*
	9112	·320	276·9	133·1	− 3·3	11	25	
	9108	·099	256·7	120·2	− 7·0	273	1937	
		·853	99·4					50
		·979	104·2					305
Jan. 28			(−10·3)	(114·6)	(−5·8)	(388)	(2600)	(1882)
28·416		·937	280·1					210
		·870	292·5					101
	9105	·986	251·9	184·0	−18·8	152	572	433*c*
	887h	·667	258·9	144·3	−11·7	1	5	
G	9112	·520	272·3	133·7	− 3·7	20	76	
	9108	·309	265·2	120·5	− 7·0	304	1742	
		·923	104·3					526
Jan. 29			(−10·7)	(102·5)	(−5·8)	(477)	(2395)	(1270)
1920.			°	°	°			
29·435		·950	289·1					87
		·870	279·6					56
		·802	258·2					90
	9105	·992	250·7	173·2	−19·8	0	222	152*c*
G	9112	·711	270·1	134·4	− 4·2	16	60	
	9108	·522	266·0	120·6	− 7·2	212	1486	
		·826	103·5					464
Jan. 30			(−11·1)	(89·1)	(−5·9)	(228)	(1768)	(849)
30·450		·890	255·2					93
	9112	·865	269·2	135·6	− 3·7	9	59	106*c*
	9108	·717	266·0	121·6	− 7·1	168	1077	1062*c*
C	9113	·993	99·3	351·9	− 9·9	0	49	91*c*
		·694	103·2					293
		·953	68·7					86
		·955	78·6					378
Jan. 31			(−11·6)	(75·7)	(−6·0)	(177)	(1185)	(2109)
31·459	9112	·960	268·3	136·1	− 3·3	4	19	} 2083*c*
	9108	·853	264·9	121·1	− 7·5	121	805	
	9113	·937	98·6	352·4	−10·2	0	8	253*f*
G		·863	77·8					234
		·941	81·6					146
		·986	105·3					55
Feb. 1			(−12·0)	(62·4)	(−6·0)	(125)	(832)	(2771)
32·374	9108	·942	264·5	121·1	− 7·2	105	645	2492*c*
	887i	·266	323·9	59·4	+ 6·4	0	2	
	887j	·412	42·1	34·1	+11·9	0	3	
C		·863	97·7					176
		·875	81·6					152
		·938	104·9					122
		·978	71·3					113
Feb. 2			(−12·3)	(50·4)	(−6·1)	(105)	(650)	(3055)
33·501		·991	271·0					173
		·878	253·1					129
	9108	·975	261·0	113·3	−10·2	32	200	784*c*
G	9114	·740	96·2	347·6	− 8·8	9	33	118*c*
	9115	·822	106·4	340·2	−17·0	18	120	217*c*
		·923	66·8					276
Feb. 3			(−12·8)	(35·5)	(−6·2)	(59)	(353)	(1697)

Group 9113. Jan. 31–Feb. 1. A very small spot.
Group 9114. Feb. 3–4. A cluster of small spots.
Group 9115. Feb. 3–12. A stream of unimportant spots except the leader which shows moderate stability as a small regular spot.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
34·517		·987	266·8					64
		·987	257·2					242
	887k	·369	41·4	7·9	+ 9·9	1	4	
C	9114	·570	96·5	347·4	− 8·8	5	20	
	9115	·669	108·1	340·8	−16·8	34	183	
		·824	61·7					205
		·967	108·2					112
		·974	72·1					150
Feb. 4			(−13·2)	(22·2)	(−6·3)	(40)	(207)	(773)
35·418	*887l*	·586	259·2	46·1	−11·4	0	2	
	9116	·375	307·2	27·7	+ 7·0	17	59	
	9115	·514	111·8	340·6	−16·5	22	121	
G		·893	67·1					110
		·916	109·1					140
		·948	76·7					78
Feb. 5			(−13·6)	(10·3)	(−6·3)	(39)	(182)	(328)
36·499	9116	·564	293·2	27·5	+ 7·4	6	46	
	9115	·325	123·0	339·7	−16·2	20	152	
		·776	105·6					106
		·808	65·5					142
G		·815	115·6					167
		·885	73·3					154
		·895	106·0					143
		·916	116·7					165
Feb. 6			(−14·0)	(356·1)	(−6·4)	(26)	(198)	(877)
37·437		·788	255·2					355
	888a	·301	313·1	356·4	+ 5·5	5	17	
	9115	·180	160·0	340·0	−16·1	44	191	
G		·786	70·8					133
		·877	117·8					138
		·881	110·4					135
		·957	83·2					119
Feb. 7			(−14·4)	(343·7)	(−6·4)	(49)	(208)	(880)
38·461								
		·892	255·9					230
		·855	283·7					119
G	9115	·239	229·6	341·0	−15·3	16	81	
	9117	·648	64·2	293·9	+11·1	9	29	
		·883	84·7					74
		·925	76·9					194
Feb. 8			(−14·7)	(330·2)	(−6·5)	(25)	(110)	(617)
1920.			°	°	°			
39·106		·942	256·4					200
		·922	282·4					148
		·749	291·0					197
	9115	·366	242·8	341·4	−15·7	28	148	
K	9117	·555	57·4	293·3	+11·6	21	60	
		·805	81·8					136
		·880	73·9					174
		·995	84·6					101
Feb. 9			(−15·0)	(321·7)	(−6·5)	(49)	(208)	(956)
40·371		·990	256·1					93
		·887	283·3					193
	9115	·628	252·7	343·5	−15·9	22	128	
C	9117	·383	36·5	291·7	+11·5	8	18	
	9118	·947	82·5	234·8	+ 5·0	59	335	592*c*
		·982	110·9					192
Feb. 10			(−15·5)	(305·1)	(−6·6)	(89)	(481)	(1070)
41·354		·933	279·4					248
		·849	263·0					101
		·831	285·6					100
	9115	·788	254·9	344·2	−15·9	11	53	101*f*
C	9117	·315	1·3	291·7	+11·6	0	3	
	9119	·579	72·8	258·6	+ 4·2	4	11	
	9118	·844	79·7	235·8	+ 5·0	39	301	566*c*
	9120	·903	110·1	227·0	−21·1	5	26	211*f*
		·964	71·2					237
Feb. 11			(−15·8)	(292·1)	(−6·7)	(59)	(394)	(1564)
42·359		·970	272·4					107
		·954	282·9					123
		·945	262·2					113
		·845	299·8					109
	9115	·902	255·6	343·9	−15·9	6	34	220*f*
C	9119	·385	60·2	259·4	+ 4·7	10	37	
	9118	·682	74·7	237·7	+ 5·3	36	261	122*c*
	9120	·798	111·2	226·3	−20·9	8	26	142*c*
	9121	·987	97·4	197·6	− 8·3	21	106	202*c*
		·892	69·2					340
		·935	79·5					140
		·955	104·6					88
Feb. 12			(−16·2)	(278·9)	(−6·7)	(81)	(464)	(1706)

Group 9116. Feb. 5–6. A small, short-lived stream.
Group 9117. Feb. 8–11. A pair of very small double spots.
Group 9118. Feb. 10–19. A stream of normal type. The follower has broken up into several components by Feb. 13, but the leader persists as a regular spot and is the last to disappear.
Group 9119. Feb. 11–19. A stream of spots developing from a pair of very small spots on Feb. 11. The largest and most stable component is the rear spot which is roughly of regular formation.
Group 9120. Feb. 11–18. A small double spot on Feb. 11; a pair of spots until Feb. 14; a single small spot on the following days except Feb. 17 when nothing is visible.
Group 9121. Feb. 12–23. A regular spot contracting to a dot; a very small follower is seen on Feb. 19.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
43·360		·945	254·2					225
		·928	294·1					128
	9119	·224	31·2	259·1	+ 4·2	65	348	
	9118	·504	67·2	238·0	+ 5·2	25	169	
	9120	·661	114·4	225·7	−21·1	13	73	144*c*
	9121	·921	96·3	198·2	− 8·5	19	168	204*c*
C	9122	·977	107·0	186·7	−18·0	11	209	350*n*
		·780	64·2					238
		·866	105·4					121
		·961	69·8					170
		·967	74·0					124
		·981	96·0					134
Feb. 13			(−16·6)	(265·7)	(−6·8)	(133)	(967)	(1838)
44·334		·987	252·1					209
		·974	274·9					46
		·969	292·1					42
		·849	292·1					145
		·718	289·9					115
	9119	·223	330·1	259·3	+ 4·4	71	509	
	9118	·324	50·5	238·4	+ 5·3	26	160	
	9120	·499	120·5	225·7	−20·7	3	22	
	9121	·814	95·1	198·1	− 8·1	11	93	127*c*
C	9123	·870	69·5	196·0	+14·1	0	3	296*c*
	9124	·911	64·3	192·2	+20·0	12	82	173*c*
	9122	·911	106·3	186·6	−17·6	23	144	254*c*
	9125	·980	82·9	175·4	+ 5·5	10	123	142*n*
		·905	95·2					160
		·912	58·5					116
		·960	124·5					76
		·963	108·4					234
		·976	71·2					72
		·979	114·1					65
Feb. 14			(−16·9)	(252·9)	(−6·8)	(156)	(1136)	(2272)
45·339		·930	291·3					130
		·905	193·7					74
		·866	250·4					116
		·840	290·0					118
	9119	·388	298·8	259·6	+ 4·4	59	400	
C	9118	·204	362·2	239·2	+ 4·9	24	150	
	9120	·306	141·4	228·0	−20·4	2	6	
	9121	·659	94·2	198·3	− 7·9	14	110	
	9123	·761	65·2	194·5	+13·8	1	14	79*c*

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
45·339	9124	·805	58·6	192·8	+20·1	35	121	116*c*
	9122	·810	107·0	185·5	−17·7	33	190	250*c*
	9125	·908	80·8	175·8	+ 5·4	14	130	213*n*
C		·773	93·6					83
		·903	109·7					368
		·910	62·8					107
Feb. 15			(−17·2)	(239·7)	(−6·8)	(182)	(1121)	(1654)
46·414		·945	285·8					106
		·939	247·7					144
	9119	·574	288·0	258·6	+ 4·4	67	363	
	9118	·320	308·6	240·0	+ 4·7	26	104	
	9120	·241	192·0	228·6	−20·5	0	2	
	888b	·303	163·3	220·1	−23·7	1	5	
	888c	·368	113·9	205·2	−15·0	0	5	
	9121	·450	93·5	198·7	− 7·7	15	86	
G	*888d*	·481	101·8	196·9	−11·6	0	2	
	9123	·597	53·0	196·0	+15·0	1	4	
	9124	·652	48·9	194·2	+19·5	30	87	
	9122	·658	109·0	184·9	−17·7	41	180	
	9125	·782	77·6	175·6	+ 5·2	16	109	193*nf*
		·793	113·8					225
		·892	53·1					94
		·974	73·2					48
		·991	94·8					108
Feb. 16			(−17·6)	(225·5)	(−6·9)	(197)	(947)	(918)
47·376		·973	285·1					83
		·959	247·3					101
		·824	290·2					113
	9119	·734	283·1	258·4	+ 4·7	48	325	175*c*
	9118	·495	292·9	239·9	+ 4·9	19	115	
	888e	·385	308·9	230·3	+ 7·4	0	2	
	9121	·235	93·3	199·2	− 7·4	15	89	
	9124	·538	35·3	193·6	+19·5	25	94	
C	9122	·492	114·5	184·9	−17·9	20	108	
	9126	·620	113·1	175·7	−19·6	1	3	
	9125	·632	72·5	175·7	+ 5·5	20	105	70*nf*
	9127	·987	95·1	131·6	− 6·1	18	94	494*c*
		·875	51·3					126
		·945	90·7					145
		·948	70·5					140
		·957	99·2					272
Feb. 17			(−17·9)	(212·8)	(−6·9)	(166)	(935)	(1719)

Group 9122. Feb. 13–22. Return of Group 9105. A spot with double umbra; small companions appear northwards, usually in two clusters.
Group 9123. Feb. 14–16. One or two very small scattered spots, *s* Group 9124.
Group 9124. Feb. 14–23. A small irregular stream.
Group 9125. Feb. 14–25. A small regular spot gradually diminishing. Two clusters of very small companions appear on Feb. 20, and two or three distant spots on Feb. 23.
Group 9126. Feb. 17–25. A few faint spots in a sparse stream until Feb. 22, when two better defined spots have appeared.
Group 9127. Feb. 17–24. Return of Group 9108. A small regular spot gradually fading out. A very extensive area of faculæ follows it. Group 9132 develops just southwards on Feb. 22.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
48·422		·895	285·7					67
	9119	·860	279·7	257·1	+ 4·7	25	166	356*c*
	9118	·694	284·2	241·3	+ 4·7	10	61	
	9120	·513	240·5	227·4	−20·8	0	5	
	9121	·019	235·5	199·9	− 7·7	15	70	
	9124	·443	367·3	195·6	+19·0	11	66	
G	9122	·299	131·1	185·4	−18·0	19	70	
	9126	·401	123·0	178·2	−19·2	2	30	
	9125	·440	63·0	175·9	+ 5·0	15	86	
	9128	·863	67·7	143·4	+15·2	16	59	176*c*
	9127	·922	94·3	131·5	− 6·6	17	111	1392*f*
		·831	89·3					98
		·868	98·5					175
Feb. 18			(−18·3)	(199·0)	(−7·0)	(130)	(724)	(2264)
49·418		·962	283·7					72
	9119	·948	277·2	256·4	+ 4·5	29	167	329*p*
	9118	·840	280·5	241·8	+ 4·9	9	44	418*c*
	9121	·238	266·8	199·8	− 7·5	10	48	
	9124	·477	336·8	197·4	+19·0	12	57	
	9122	·186	176·2	185·3	−17·7	16	67	
G	9125	·270	39·5	176·1	+ 5·1	14	81	
	9126	·289	144·5	175·7	−20·5	7	16	
	9128	·747	62·6	142·8	+15·0	12	27	81*c*
	9127	·810	93·0	131·7	− 6·6	10	90	858*f*
	888f	·926	96·4	117·8	− 8·5	0	5	684*f*
Feb. 19			(−18·6)	(186·0)	(−7·0)	(119)	(602)	(2442)
50·538		·910	278·9					608
		·803	247·3					137
		·791	295·2					160
	888g	·582	304·7	200·5	+13·3	1	4	
	9121	·483	267·2	200·2	− 7·4	10	23	
	9124	·589	316·9	196·3	+19·0	10	39	
	888h	·479	317·3	190·7	+13·9	0	3	
C	9122	·299	231·5	185·3	−17·4	10	39	
	9126	·254	200·2	176·6	−20·8	5	19	
	9125	·235	337·3	176·4	+ 5·5	27	89	
	9128	·564	47·7	145·6	+15·9	43	179	
	9127	·629	91·7	132·1	− 6·5	12	65	285*f*
		·815	97·6					611
		·925	103·4					131
Feb. 20			(−18·9)	(171·2)	(−7·0)	(118)	(460)	(1932)
51·405		·970	277·2					291
C		·904	189·8					37
		·901	293·3					316

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
51·405		·893	248·8					199
		·861	284·4					125
		·723	254·2					130
	9121	·650	266·9	200·5	− 7·4	8	13	71*c*
	9124	·716	306·3	197·4	+19·4	9	15	
	9122	·454	245·2	185·3	−17·4	11	39	
C	9125	·358	307·6	176·3	+ 5·8	30	144	
	9126	·359	228·0	176·3	−20·6	6	26	
	9128	·452	28·8	146·7	+16·3	35	225	
	9127	·469	90·8	131·7	− 6·6	10	38	
	9129	·704	101·4	114·9	+13·0	1	9	502*f*
	9130	·989	103·7	76·9	−14·6	0	13	141*f*
		·897	103·4					108
		·926	182·4					26
Feb. 21			(−19·2)	(159·8)	(−7·1)	(110)	(522)	(1946)
52·450		·962	291·9					171
		·947	247·2					154
		·941	281·5					153
		·863	254·5					152
		·780	309·7					96
		·686	269·7					117
	9131	·890	290·0	205·4	+14·2	0	4	118*c*
	9121	·816	265·9	200·9	− 7·4	4	9	97*c*
	9124	·860	297·7	199·7	+19·5	9	13	282*f*
G	9122	·638	250·3	185·0	−18·0	4	14	
	9126	·553	243·2	177·7	−20·5	61	192	
	9125	·542	292·1	176·2	+ 5·6	23	135	
	9128	·398	358·6	146·6	+16·2	36	194	
	9132	·231	106·6	133·0	−10·7	0	24	
	9127	·243	89·5	131·9	− 6·8	9	20	
	9129	·508	103·3	115·7	−12·9	8	26	
	9130	·929	102·8	76·9	−14·5	19	70	346*f*
		·900	186·9					28
Feb. 22			(−19·5)	(146·0)	(−7·1)	(173)	(701)	(1714)
53·597		·959	254·1					96
		·876	302·1					67
		·855	266·7					110
G		·834	256·8					158
	9131	·980	285·6	206·9	+13·6	24	64	180*c*
	9121	·941	264·9	201·5	− 7·2	1	6	76*s*
	9124	·961	292·2	200·9	+18·9	0	7	194*f*
	9126	·741	248·8	178·2	−20·4	32	167	346*c*

Group 9128. Feb. 18–28. A stream developing from a pair of spots on Feb. 18. None of the components are conspicuous except the leader.
Group 9129. Feb. 21–24. A sparse stream of feeble activity.
Group 9130. Feb. 21–29. A small spot becoming a cluster on Feb. 23 with one or two distant companions. After Feb. 25, one very small but persistent spot remains.
Group 9131. Feb. 22–23. A small group near the west limb.
Group 9132. Feb. 22–26. A disturbed region, *s* Group 9127, in which small sporadic spots appear.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
53·597	9125	·728	284·5	175·8	+ 5·5	11	70	
	9128	·475	327·1	146·4	+16·5	38	196	
	9132	·099	236·3	135·7	−10·2	9	35	
G	9127	·028	284·3	132·5	− 6·7	8	12	
	9129	·294	109·7	114·5	−12·5	6	14	
	9130	·803	102·9	77·1	−14·5	21	53	436*f*
	9133	·942	97·0	59·9	− 9·0	0	9	43*f*
Feb. 23			(−19·9)	(130·9)	(−7·1)	(150)	(633)	(1706)
54·527		·991	262·1					90
		·969	290·7					199
		·961	299·5					32
		·934	266·5					83
		·921	255·9					267
		·874	304·1					92
		·820	290·9					139
	9126	·860	250·5	178·3	−20·3	25	119	464*c*
G	9125	·855	280·5	176·0	+ 5·1	11	44	365*c*
	9128	·593	311·5	146·2	+16·8	28	176	
	9132	·259	260·8	133·6	− 9·2	5	18	
	9127	·240	269·7	132·6	− 6·9	2	4	
	9134	·186	298·7	128·1	− 1·9	0	2	
	9129	·114	130·1	113·6	−11·3	1	6	
	9130	·664	104·3	77·2	−14·8	13	31	385*f*
	9133	·866	96·9	58·3	− 9·5	13	35	110*c*
		·954	105·5					90
Feb. 24			(−20·1)	(118·7)	(−7·1)	(98)	(435)	(2316)
55·340		·977	266·0					99
		·975	255·6					225
		·963	293·4					99
		·901	303·2					104
	9126	·942	251·8	179·5	−19·6	11	113	529*c*
	9125	·935	278·5	176·0	+ 5·3	4	21	405*nf*
C	9128	·713	303·0	146·6	+17·2	25	144	
	9132	·433	261·4	133·7	−10·2	6	41	
	9134	·313	289·4	125·1	− 0·9	0	1	
	9130	·522	105·8	76·9	−14·4	7	23	
	9133	·750	96·8	59·1	− 9·8	24	123	106*c*
		·912	104·8					152
		·968	104·2					135
Feb. 25			(−20·4)	(108·0)	(−7·2)	(77)	(466)	(1854)
56·407		·980	248·3					394
		·976	280·9					126
		·961	293·5					124
C	9128	·845	295·7	146·6	+17·2	19	151	209*c*
	888i	·724	258·2	140·5	−13·5	0	5	
1920.			°	°	°			
56·407	9132	·604	264·0	131·2	− 9·3	1	9	
	9134	·474	278·3	121·8	− 2·4	1	10	
C	9130	·346	114·0	74·9	−14·9	1	5	
	9133	·564	97·0	59·4	− 9·9	55	378	
		·824	105·1					225
Feb. 26		·924	108·1					186
			(−20·7)	(93·9)	(−7·2)	(77)	(558)	(1264)
57·340		·902	266·3					184
		·792	273·0					254
	9128	·931	291·9	146·2	+17·4	30	170	273*f*
C	*888j*	·820	263·5	137·1	− 9·4	0	6	439*f*
	9130	·159	143·5	76·0	−14·5	1	5	
	9133	·371	98·1	59·8	− 9·7	69	410	
		·829	107·6					85
		·945	77·4					145
Feb. 27			(−20·9)	(81·6)	(−7·2)	(100)	(591)	(1380)
58·422		·983	264·9					136
		·874	272·3					272
		·747	268·8					104
		·745	256·3					152
	9128	·989	288·4	146·0	+16·9	16	95	213*f*
	888k	·852	259·2	126·3	−13·0	1	2	633*p*
G	9135	·611	270·0	105·1	− 5·7	0	5	
	9130	·208	227·8	76·5	−15·1	0	15	
	9133	·132	109·7	60·2	− 9·7	73	437	
		·840	72·8					119
		·955	67·6					80
		·963	75·9					146
		·971	104·7					43
Feb. 28			(−21·2)	(67·4)	(−7·2)	(90)	(554)	(1898)
59·360		·949	258·7					755
		·945	270·9					420
		·920	283·2					101
		·879	269·2					272
		·843	256·2					482
		·830	280·7					105
C	9135	·768	268·1	105·3	− 6·1	3	11	122*c*
	9130	·387	252·7	77·2	−13·3	0	4	
	9133	·096	242·3	59·9	− 9·7	71	382	
		·846	62·1					125
		·889	94·5					52
		·910	73·5					203
		·938	104·9					192
Feb. 29			(−21·5)	(55·0)	(−7·2)	(74)	(397)	(2829)

Group 9133. Feb. 23–Mar. 6. A stream of normal type, except that the leader is the composite and shorter-lived component, and the follower is the stable regular spot.
Group 9134. Feb. 24–26. One or two minute scattered spots representing a disturbed region *s* Group 9127.
Group 9135. Feb. 28–Mar. 1. Two or three very small spots.
Group 9136. Mar. 3–13. A group of small ill-formed spots lengthening out into a stream, the components of which become more definite towards the west limb.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
60·436		·977	268·3					161
		·952	251·1					103
		·945	258·9					423
		·820	251·1					136
G	9135	·911	267·0	106·7	− 5·7	0	7	129*f*
	9133	·319	260·9	59·4	− 9·7	67	318	
		·802	67·0					152
		·874	105·5					263
		·926	69·8					63
Mar. 1			(−21·7)	(40·8)	(−7·2)	(67)	(325)	(1430)
61·342		·969	265·6					245
		·954	254·8					194
C	9133	·505	262·6	59·3	− 9·9	69	326	
	8881	·502	96·8	358·7	− 9·7	0	6	
Mar. 2			(−22·0)	(28·9)	(−7·2)	(69)	(332)	(439)
62·426		·852	257·4					214
	9133	·697	262·9	59·0	−10·1	58	296	175*c*
G	9136	·862	68·4	318·9	+14·5	4	14	65*c*
	9137	·969	76·5	301·1	+11·0	8	55	141*f*
		·959	66·8					84
Mar. 3			(−22·2)	(14·6)	(−7·2)	(70)	(365)	(679)
63·403		·932	256·8					337
	9133	·839	262·7	59·2	−10·0	47	293	277*c*
	9138	·710	55·4	323·9	+18·0	9	35	
G	9136	·764	62·4	317·2	+15·6	4	13	79*c*
	9137	·898	73·3	300·5	+11·6	4	15	230*f*
		·889	111·6					146
Mar. 4			(−22·4)	(1·7)	(−7·2)	(64)	(356)	(1069)
64·669		·851	257·1					92
	889a	·978	252·9	64·5	−18·2	14	58	99*c*
	9133	·951	261·8	57·8	−10·0	58	196	409*c*
G	9138	·523	37·3	325·7	+17·7	2	14	
	9136	·574	48·1	318·8	+16·0	22	62	
	9137	·733	69·1	301·3	+ 9·9	30	141	172*c*
		·965	84·5					101
Mar. 5			(−22·7)	(345·1)	(−7·2)	(126)	(471)	(873)
65·349		·880	251·9					134
	9133	·984	260·9	56·6	−10·2	27	175	306*c*
	9136	·487	35·8	318·9	+16·2	22	72	
C	9137	·630	64·0	301·1	+10·1	25	201	
		·899	80·9					279
		·951	84·2					378
Mar. 6			(−22·9)	(336·1)	(−7·2)	(74)	(448)	(1097)
1920.			°	°	°			
66·479		·902	251·3					80
		·822	288·2					70
	9136	·394	4·6	319·3	+15·9	26	163	
	9137	·454	50·9	300·3	+ 9·9	22	152	
G	*889b*	·817	80·9	267·5	+ 3·1	0	9	108*p*
	9139	·974	81·3	245·6	+ 6·7	0	48	156*f*
		·876	78·1					72
		·930	81·7					131
Mar. 7			(−23·1)	(321·2)	(−7·2)	(48)	(372)	(617)
67·535		·920	285·9					116
		·903	266·6					25
		·772	290·8					177
	9136	·446	331·8	319·9	+16·0	36	174	
G	9137	·310	18·9	301·5	+ 9·9	41	286	
	9140	·316	38·9	295·8	+ 7·1	14	69	
	9139	·890	79·8	245·8	+ 5·6	45	190	640*f*
		·820	78·5					169
		·975	111·1					49
Mar. 8			(−23·3)	(307·3)	(−7·2)	(136)	(719)	(1176)
68·451		·968	285·0					74
		·860	291·7					136
	889c	·977	264·6	13·4	− 6·8	0	55	134*c*
	9136	·549	314·1	319·3	+15·9	34	169	
	9137	·324	337·7	302·3	+10·2	60	353	
G	9140	·240	358·7	295·5	+ 6·6	22	81	
	9141	·325	115·5	277·6	−14·9	6	23	
	9139	·779	76·6	245·8	+ 5·8	16	95	491*f*
		·907	111·9					153
		·951	84·4					43
		·963	69·5					119
Mar. 9			(−23·5)	(295·2)	(−7·2)	(138)	(776)	(1150)
69·362		·942	285·6					159
		·931	256·9					86
		·810	255·4					146
	9136	·680	302·8	319·5	+15·8	34	211	
C	9137	·442	310·8	303·0	+ 9·9	77	717	
	9140	·328	317·7	296·0	+ 7·0	34	174	
	9141	·162	150·9	278·5	−15·3	31	109	
	9139	·654	71·5	244·8	+ 6·3	29	137	297*c*
		·811	110·9					96
		·892	82·0					72

Group 9137. Mar. 3–14. An irregular stream of spots in continual change. After Mar. 11, two more stable components have formed at the front and rear respectively of the stream. This group is closely associated with Group 9140 with which it practically merges after Mar. 10.
Group 9138. Mar. 4–5. A small spot *p* Group 9136.
Group 9139. Mar. 7–14. A spot at the east limb which breaks up into a cluster by Mar. 9, whilst a short train makes its appearance.
Group 9140. Mar. 8–15. An irregular stream showing frequent change, closely associated with Group 9137 of similar character. A regular spot has formed at the head of the stream on Mar. 12.
Group 9141. Mar. 9–16. A small but well-defined regular spot with a long train of very small followers which die out by Mar. 15.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
69·362		·898	73·7					85
		·914	62·9					256
C		·947	109·1					91
		·956	99·9					118
		·961	74·1					115
Mar. 10			(−23·7)	(283·2)	(−7·2)	(205)	(1348)	(1521)
70·341		·970	254·5					77
		·890	254·8					141
	9136	·825	296·8	320·4	+16·7	55	227	508*c*
	9137	·604	296·9	303·4	+ 9·8	118	679	
	9140	·490	298·2	296·0	+ 6·9	35	150	
	9141	·233	228·7	280·7	−15·9	31	142	
	889d	·077	99·5	265·9	− 8·0	1	7	
C	9139	·479	63·1	245·0	+ 6·0	9	62	
		·823	58·8					217
		·853	70·6					159
		·880	103·9					195
		·928	57·1					144
		·954	96·7					97
		·960	71·2					227
		·973	105·3					241
Mar. 11			(−23·9)	(270·3)	(−7·2)	(249)	(1267)	(2006)
71·480		·849	301·1					51
	9136	·943	291·0	322·1	+17·1	78	331	907*c*
	9137	·786	288·4	304·5	+ 9·7	98	581	512*c*
	9140	·698	288·1	297·1	+ 7·1	67	321	
	9141	·470	249·9	282·5	−15·7	29	110	
	9139	·266	35·9	246·3	+ 5·3	12	54	
G		·731	49·5					115
		·732	104·1					222
		·847	94·6					86
		·887	104·5					186
		·899	67·5					184
		·946	80·2					106
		·956	111·0					218
Mar. 12			(−24·1)	(255·3)	(−7·2)	(284)	(1397)	(2587)
72·342		·898	297·9					97
	9136	·987	289·8	321·1	+18·0	41	296	566*c*
	9137	·897	284·4	305·6	+ 9·6	89	588	589*c*
	9140	·835	283·7	298·6	+ 7·3	52	311	110*c*
	9141	·628	254·1	282·6	−15·6	19	122	
	9139	·225	350·7	246·0	+ 5·5	13	60	
C	*889e*	·172	160·9	240·6	−16·5	0	2	
		·798	106·4					124
		·825	60·6					265
		·871	76·9					65

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
72·342		·933	61·4					96
C		·934	112·8					259
		·946	75·5					73
Mar. 13			(−24·3)	(243·9)	(− 7·2)	(214)	(1379)	(2244)
73·396	9137	·977	281·6	305·9	+ 9·6	64	560	571*c*
	9140	·955	279·8	301·4	+ 7·1	32	250	} 420*c*
	889f	·898	278·6	292·8	+ 4·4	1	6	
	9141	·811	256·0	284·6	−15·6	19	96	144*c*
	889g	·584	315·0	255·7	+17·8	1	4	
C	9139	·365	306·6	247·2	+ 5·6	2	12	
		·798	71·6					112
		·811	53·8					110
		·837	114·6					324
		·990	103·4					130
		·965	94·2					173
Mar. 14			(−24·4)	(230·1)	(−7·2)	(119)	(928)	(1984)
74·369		·838	281·4					113
	9140	·995	281·8	299·6	+10·9	37	172	595*f*
	9141	·921	256·1	285·1	−15·6	15	93	180*f*
	889h	·712	108·6	172·1	−18·2	0	4	88*s*
	9142	·932	101·0	147·8	−12·7	6	54	266*c*
C	9143	·992	94·8	134·0	− 5·6	42	416	393*c*
		·788	119·0					105
		·866	65·9					92
		·896	93·0					73
		·905	52·6					75
		·956	69·9					82
		·993	101·8					130
Mar. 15			(−24·6)	(217·2)	(−7·1)	(100)	(739)	(2192)
75·478		·938	285·8					70
		·920	274·0					301
		·854	294·2					87
		·752	286·0					371
	9141	·990	256·0	285·9	−14·8	7	89	215*f*
	889i	·641	97·0	162·5	− 9·9	6	21	
G	9142	·816	99·8	147·5	−12·1	42	217	110*c*
	9143	·956	92·9	129·5	− 4·9	252	1397	410*c*
	9144	·997	94·9	116·8	− 5·4	49	195	
		·737	90·2					104
		·863	65·6					59
		·938	102·6					264
		·943	79·4					50
Mar. 16			(−24·8)	(202·6)	(−7·1)	(356)	(1919)	(2041)
76·669		·953	290·5					114
		·945	279·0					156
		·851	282·7					381

Group 9142. Mar. 15–24. Three small spots at the east limb which grow and coalesce to make a composite spot which then diminishes.

Group 9143. Mar. 15–27. Revival of Group 9127. A magnificent stream. At first, two large and composite spots near the east limb. Considerable development takes place within a few days, especially with regard to a small spot appearing on Mar. 19 at the front of the group. This spot grows very rapidly and by Mar. 22 it is the dominating feature of the stream. The train of spots following it is now very compact in character, and although changes are constantly evident, several of the components can be identified from day to day. Towards the west limb, the stream simplifies to three chief components which follow the leader spot.

Group 9144. Mar. 16–29. A stable regular spot *f* Group 9143. A few very small close followers appear on Mar. 21–23.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1920			°	°	°			
76·669	*889j*	·977	269·4	264·5	− 2·1	0	9	109*c*
	889k	·548	94·5	153·6	− 8·4	1	5	
G	9142	·636	100·7	147·3	−12·3	45	233	
	9145	·771	98·8	136·1	−11·3	7	30	169*f*
	9143	·837	91·4	130·0	− 5·0	283	1659	778*c*
	9144	·941	93·3	116·4	− 5·5	51	412	411*f*
		·837	75·0					153
		·910	105·9					245
		·954	74·9					107
Mar. 17			(−24·9)	(186·9)	(−7·1)	(387)	(2348)	(2623)
77·534		·922	280·9					264
		·807	302·1					100
	9142	·477	102·9	147·2	−12·4	31	233	
	9145	650	98·9	134·8	−11·1	15	58	
G	9143	·706	89·5	130·6	− 4·8	248	1646	134*c*
	9144	·854	92·4	116·7	− 5·8	72	367	357*f*
		·658	69·9					36
		·780	74·8					70
		·786	107·5					132
		878	71·7					62
Mar. 18			(−25·1)	(175·5)	(−7·1)	(366)	(2304)	(1155)
78·524		·964	279·4					161
		891	251·8					113
		857	282·5					109
		854	298·4					269
		·731	256·7					104
G	9146	·178	165·2	159·8	−16·8	9	15	
	9142	·275	111·1	147·3	−12·4	27	182	
	9145	·465	100·8	134·9	−11·2	20	75	
	9143	515	87·8	131·6	− 4·9	328	1653	
	9144	712	91·1	117·0	− 5·8	71	355	389*f*
		·892	108·2					96
		·983	101·9					93
Mar. 19			(−25·2)	(162·5)	(−7·0)	(455)	(2280)	(1334)
79·408		·948	247·1					118
		·923	291·1					316
G		·905	305·6					209
		·846	257·2					116
		·786	299·8					124

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1920			°	°	°			
79·408	9146	·236	221·1	160·1	−17·1	23	46	
	9147	·089	258·4	155·8	− 8·0	0	4	
	9142	·108	149·3	147·6	−12·3	20	159	
	9145	·278	105·2	135·0	−10·9	16	46	
	9143	·304	83·9	133·2	− 4·8	327	1793	
G	*889l*	·426	51·9	131·1	+ 8·6	0	5	
	889m	·402	100·7	127·2	−10·7	0	4	
	9144	·554	89·7	117·1	− 5·7	65	343	
	9148	·611	97·7	113·0	−10·2	1	5	
		·825	110·1					57
		·929	103·1					146
		·986	100·9					96
Mar. 20			(−25·3)	(150·8)	(−7·0)	(452)	(2405)	(1182)
80·418		·956	297·6					119
		·952	283·6					150
		·928	255·9					275
		·882	293·4					201
		·804	255·6					229
	9146	·420	243·3	160·5	−17·4	20	47	
	9147	·333	269·8	157·0	− 6·6	2	6	
	9142	·202	241·3	147·9	−12·4	19	113	
	9145	·070	168·8	136·7	−11·0	51	145	
	9143	·056	42·3	135·3	− 4·7	365	2086	
G	9149	·182	145·0	131·3	−15·5	2	7	
	9144	·344	87·3	117·4	− 5·6	76	410	
	9148	·400	101·2	114·1	−10·9	0	14	
	889n	·863	73·4	80·5	+10·5	5	23	77*c*
		·825	101·9					187
		·919	178·7					42
		·932	97·3					178
		·940	107·2					158
Mar. 21			(−25·4)	(137·5)	(−7·0)	(540)	(2851)	(1616)
81·380		·916	264·7					74
		·910	254·0					299
		·904	281·8					82
		·886	297·4					245
		·789	286·4					62
G		·789	247·6					238
	9146	·611	250·6	161·7	−17·2	11	24	
	9147	·554	267·8	158·5	− 6·9	1	3	
	9142	·399	255·4	147·9	−12·1	17	72	
	9145	·224	253·9	137·4	−10·2	29	154	
	9143	·205	278·4	136·4	− 5·0	407	2262	
	9149	·155	213·5	129·8	−14·3	1	3	

Group 9145. Mar. 17–26. A small stream *s* Group 9143.
Group 9146. Mar. 19–23. A pair of small spots of which only the leader remains on Mar. 23.
Group 9147. Mar. 20–23. One or two very small faint spots.
Group 9148. Mar. 20–21. A small cluster of minute spots.
Group 9149. Mar. 21–24. A few tiny spots *f* Group 9145.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1920.			°	°	°			
81·380	9144	·126	79·6	117·7	− 5·5	60	338	
	889o	·280	99·8	108·6	− 9·3	2	8	
G		·797	100·6					179
		·887	96·2					152
		·898	108·8					203
Mar. 22			(−25·6)	(124·8)	(−6·9)	(528)	(2864)	(1534)
82·383		·975	252·0					97
		·912	240·9					132
		·906	192·5					57
		·900	204·7					63
		·894	252·0					272
		·821	241·5					232
	9146	·794	254·1	164·3	−16·8	3	11	100*f*
	9147	·720	266·7	157·8	− 7·2	2	10	
G	9142	·599	258·9	148·4	−12·1	13	31	
	9145	·437	261·0	137·5	−10·2	37	202	
	9143	·429	273·6	136·9	− 4·8	514	2690	
	9149	·335	242·3	129·4	−15·5	0	9	
	9144	·111	282·7	117·8	− 5·5	68	338	
		·763	95·8					101
		·774	110·1					142
		·882	165·1					35
		·915	110·9					121
Mar. 23			(−25·7)	(111·6)	(−6·9)	(637)	(3291)	(1352)
83·355		·980	242·4					56
		·973	250·5					162
		·968	282·2					74
		·941	295·6					143
		·928	203·8					24
		·916	242·8					181
		·899	307·2					73
		·884	253·5					161
		·871	263·6					176
C	9142	·763	259·5	148·7	−12·5	0	6	176*c*
	9145	·636	262·6	138·4	−10·0	32	208	
	9143	·622	270·6	137·2	− 5·1	377	2327	
	9149	·544	252·8	131·1	−15·0	0	2	
	9144	·328	272·6	117·8	− 5·7	59	317	
	9150	·971	78·9	24·2	+ 9·0	51	314	303*f*
	9151	·980	94·8	19·8	− 6·0	0	20	82*f*
		·884	111·3					81
		·947	189·4					42
Mar. 24			(−25·8)	(98·7)	(−6·9)	(519)	(3194)	(1734)
1920.			°	°	°			
84·379		·967	242·3					137
		·956	265·5					138
		·953	253·7					142
		·880	258·9					215
	9143	·792	269·2	137·7	− 4·9	311	2314	552*c*
G	9145	·788	262·7	137·6	− 9·9	20	117	116*c*
	9144	·537	270·3	117·8	− 5·6	48	260	
	889p	·327	95·7	66·2	− 8·3	3	13	
	9150	·889	76·1	24·6	+ 9·1	40	261	215*f*
	9151	·904	93·4	20·4	− 5·9	9	27	112*f*
		·956	78·3					101
Mar. 25			(−25·9)	(85·3)	(−6·8)	(431)	(2992)	(1728)
85·380		·973	258·7					141
		·868	282·1					104
		·792	252·8					116
	9143	·914	267·5	138·3	− 5·1	338	2108	860*c*
	9145	·906	261·5	137·6	−10·6	19	60	488*s*
G	9144	·718	268·7	118·1	− 5·7	60	300	232*c*
	889q	·538	334·9	86·3	+22·4	0	3	
	9150	·764	72·1	24·9	+ 8·9	46	245	190*f*
	9151	·774	91·9	21·3	− 5·8	9	14	75*f*
		·866	74·2					65
Mar. 26			(−25·9)	(72·1)	(−6·8)	(472)	(2730)	(2271)
86·347		·969	258·1					563
		·968	279·7					96
		·902	282·6					82
		·887	254·0					169
		·783	259·6					214
C	9143	·985	266·0	139·6	− 5·0	213	1661	1175*c*
	9144	·855	267·2	118·2	− 5·8	38	266	371*n*
	9150	·615	65·8	24·8	+ 9·1	26	192	
	9151	·614	90·7	21·4	− 5·7	2	7	
		·905	76·6					95
		·975	106·6					69
Mar. 27			(−26·0)	(59·3)	(−6·7)	(279)	(2126)	(2834)
87·375		·950	248·8					130
C		·938	286·7					79
		·923	260·7					427

Group 9150. Mar. 24–Apr. 4. A regular spot showing minor changes. A small cluster of companions appears to the *s* on Apr. 2.
Group 9151. Mar. 24–29. A small spot.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
87·375		·864	294·1					44
	9144	·951	265·9	118·0	− 6·0	38	224	616*p*
	9150	·444	53·3	24·7	+ 9·1	32	216	
C	9151	·408	88·9	21·6	− 5·7	1	6	
		·816	71·1					71
		·899	62·0					68
		·982	69·7					98
Mar. 28			(−26·1)	(45·7)	(−6·7)	(71)	(446)	(1533)
88·350		·980	283·3					93
		·914	249·8					60
		·745	256·0					229
	9144	·998	264·6	119·6	− 5·8	37	339	443*sf*
	9150	·299	27·2	25·0	+ 8·8	35	164	
C	9151	·182	84·8	22·5	− 5·5	2	7	
	9152	·983	79·7	315·0	+ 8·8	0	27	359*c*
		·940	172·2					80
		·951	67·9					446
		·977	92·2					51
Mar. 29			(−26·2)	(32·9)	(−6·6)	(74)	(537)	(1761)
89·377		·879	254·7					125
		·765	254·6					147
	9150	·283	339·8	24·9	+ 8·8	43	170	
	9152	·915	77·5	314·9	+ 8·5	12	33	393*c*
		·868	64·8					545
C		·897	89·2					92
		·918	163·4					48
		·939	174·8					55
		·972	77·6					512
		·993	103·4					69
Mar. 30			(−26·2)	(19·3)	(−6·6)	(55)	(203)	(1986)
90·392		·963	255·3					70
		·854	262·1					130
		·828	252·7					132
	9150	·414	308·9	24·8	+ 8·8	26	169	
G	9152	·802	74·0	314·8	+ 8·7	0	10	558*c*
	9153	·973	102·5	288·3	−13·6	0	6	129*sp*
		·780	55·1					202
		·907	75·6					621
Mar. 31			(−26·3)	(5·9)	(−6·5)	(26)	(185)	(1842)
91·347		·933	262·9					134
C		·912	250·9					145
	9150	·580	295·5	25·2	+ 8·9	39	209	
1920.			°	°	°			
91·347	9154	·815	69·8	302·0	+12·3	0	3	438*c*
	9153	·904	101·9	288·0	−13·6	2	12	218*sp*
		·675	62·0					192
C		·889	73·2					183
		·953	105·6					134
		·969	80·5					40
		·980	90·1					66
April 1			(−26·3)	(353·3)	(−6·5)	(41)	(224)	(1550)
92·381		·986	263·1					64
		·977	251·8					44
		·937	186·0					47
		·869	248·0					49
	9150	·745	288·0	25·3	+ 8·8	36	210	131*c*
	9154	·672	64·0	301·7	+12·1	0	9	110*c*
C	9153	·788	102·0	287·5	−13·3	0	2	208*sp*
		·770	69·0					128
		·871	106·2					121
		·898	76·6					87
		·915	89·6					141
		·938	177·6					31
		·983	85·2					88
April 2			(−26·4)	(339·7)	(−6·4)	(36)	(221)	(1249)
93·353		·896	293·8					62
		·789	265·7					89
	9150	·870	283·4	25·5	+ 8·3	33	218	192*c*
	9154	·369	40·2	313·0	+10·1	0	4	
	9153	·637	103·4	287·5	−13·4	0	2	
		·745	106·6					115
C		·779	76·2					108
		·816	87·3					103
		·930	82·6					162
		·967	95·2					148
		·985	81·4					62
April 3			(−26·4)	(326·9)	(−6·4)	(33)	(224)	(1041)
94·371		·975	356·8					42
		·975	290·6					122
		·916	266·8					60
	9150	·962	281·0	26·0	+ 8·8	32	209	315*c*
C	9154	·384	31·8	301·5	+12·8	0	13	
		·842	78·8					116
		·886	93·8					111
		·930	80·2					170
Apr. 4			(−26·4)	(313·4)	(−6·3)	(32)	(222)	(936)

Group 9152. Mar. 29–31. Return of Group 9137. A small spot followed by an extensive mass of faculæ.
Group 9153. Mar. 31–Apr. 3. Return of Group 9141. One very small spot.
Group 9154. Apr. 1–9. A disturbed region shown by faculæ and a few very small unstable spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
95·607	9154	·307	339·1	303·5	+10·4	3	17	
G		·705	93·2					58
		·790	75·9					169
Apr. 5			(−26·4)	(297·1)	(−6·2)	(3)	(17)	(227)
96·497	*890a*	·410	300·1	306·2	+ 6·0	1	3	
	9155	·693	76·9	243·0	+ 4·5	1	4	
	9156	·957	86·6	212·8	+ 1·4	0	8	183*c*
C		·852	86·8					79
		·924	69·2					241
		·939	100·0					95
Apr. 6			(−26·4)	(285·4)	(−6·2)	(2)	(15)	(598)
97·367		·817	289·6					57
		·800	303·4					73
	9154	·578	299·4	304·7	+11·2	0	4	
	890b	·572	306·6	302·1	+14·5	1	4	
	890c	·353	1·0	273·5	+14·5	0	2	
	890d	·430	44·8	255·9	+11·9	0	2	
G	9155	·530	73·4	243·4	+ 3·4	2	6	
	9156	·851	86·2	216·0	0·0	0	12	66*c*
		·844	99·2					98
		·873	108·6					29
		·881	73·0					76
		·881	61·3					139
		·968	107·8					108
Apr. 7			(−26·4)	(273·9)	(−6·1)	(3)	(30)	(646)
98·349		·937	290·5					140
		·887	304·2					71
		·856	290·9					232
		·829	279·0					186
	9154	·736	290·8	305·2	+10·8	0	5	328*c*
	890e	·107	92·4	254·8	− 6·2	0	2	
C	9155	·362	62·6	242·2	+ 3·9	3	29	
		·758	100·4					167
		·788	65·0					139
		·894	110·0					122
		·925	57·3					57
		·944	68·3					99
		·985	110·4					79
Apr. 8			(−26·4)	(260·9)	(−6·0)	(3)	(36)	(1620)
1920.			°	°	°			
99·401		·959	300·0					38
		·948	286·2					222
		·930	276·0					156
	9154	·864	287·6	304·1	+11·9	0	21	283*c*
	9156	·530	79·4	215·7	+ 0·4	0	4	
		·800	107·9					69
C		·826	64·4					77
		·886	51·0					30
		·920	65·3					69
		·935	110·8					100
		·962	167·8					40
		·987	101·8					73
Apr. 9			(−26·4)	(247·0)	(−6·0)	(0)	(25)	(1157)
100·405		·937	284·6					471
		·876	257·9					102
		·753	255·5					142
	9157	·997	96·0	148·0	− 6·4	73	573	154*p*
G		·834	111·6					129
		·864	58·4					98
		·886	92·7					65
		·926	102·7					94
		·936	118·2					46
Apr. 10			(−26·4)	(233·8)	(−5·9)	(73)	(573)	(1301)
101·399		·980	284·2					177
		·960	256·9					107
		·868	254·9					160
		·847	284·2					92
C		·845	276·0					92
	9157	·955	95·2	147·7	− 6·6	144	764	505*c*
		·871	98·5					300
		·890	117·2					138
		·949	106·1					69
Apr. 11			(−26·4)	(220·7)	(−5·8)	(144)	(764)	(1640)
102·357		·953	281·8					90
		·947	253·8					128
		·943	273·2					74
		·817	276·5					128
C	9156	·200	303·8	217·5	+ 0·7	2	6	
	9157	·869	94·3	147·5	− 6·6	123	686	489*c*
		·767	95·5					240
		·962	93·1					781
		·964	105·0					133
Apr. 12			(−26·3)	(208·0)	(−5·8)	(125)	(692)	(2063)

Group 9155. Apr. 6–8. One very small spot on Apr. 6; a pair on the two following days.
Group 9156. Apr. 6–12. Intermittent. One or two very small spots not seen on Apr. 8, 10, and 11.
Group 9157. Apr. 10–23. Return of Group 9143. A large regular spot followed by an extensive area of faculæ. Very small companions surround the spot on Apr. 15, 16, and 18.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
103·562		·937	276·6					133
		·878	265·3					63
		·805	279·9					195
	9157	·693	93·7	148·2	− 6·6	135	683	328*c*
G	9158	·943	93·3	121·4	− 5·0	12	99	373*p*
		·834	93·0					607
		·874	107·1					163
		·959	103·1					68
		·966	74·5					188
April 13			(−26·3)	(192·1)	(−5·7)	(147)	(782)	(2118)
104·347		·942	264·6					66
		·892	277·3					183
	890f	·633	260·2	220·9	−10·5	0	3	
	9157	·552	93·6	148·2	− 6·6	127	618	
	9158	·869	92·2	121·3	− 4·7	18	93	288*p*
G		·718	92·8					279
		·748	75·4					50
		·779	108·6					74
		·896	71·5					211
		·917	105·1					138
		·936	94·9					62
April 14			(−26·2)	(181·7)	(−5·6)	(145)	(714)	(1351)
105·341		·973	277·4					83
		·829	296·6					235
		·791	261·1					49
		·770	275·6					133
C	9157	·352	94·5	148·0	− 6·7	118	552	
	9158	·736	91·5	121·2	− 4·8	9	58	143*c*
		·802	68·0					201
		·816	103·2					227
		·945	106·9					76
April 15			(−26·2)	(168·6)	(−5·5)	(127)	(610)	(1147)
106·383		·914	286·8					107
		·893	298·2					128
		·883	273·5					93
		·853	260·3					58
		·831	250·1					64
G	9157	·118	99·3	148·2	− 6·4	102	511	
	890g	·260	43·7	144·6	+ 5·5	0	3	
	890h	·473	74·5	127·9	+ 2·4	0	4	
	9158	·548	90·3	121·7	− 4·7	15	56	
		·901	103·5					70
April 16			(−26·1)	(154·9)	(− 5·4)	(117)	(574)	(520)
1920.			°	°	°			
107·331		·965	272·0					103
		·955	259·8					54
		·951	293·8					150
		·919	251·6					55
C	9157	·100	260·0	148·1	− 6·4	98	505	
	890i	·060	85·6	139·0	− 5·1	0	3	
	9158	·354	89·4	121·7	− 4·8	5	31	
		·791	104·4					147
		·911	108·5					132
		·924	88·0					79
April 17			(−26·0)	(142·4)	(−5·4)	(103)	(539)	(720)
108·359		·913	250·4					140
		·898	297·2					119
		·763	243·5					89
	9157	·328	265·8	147·9	− 6·4	97	504	
C	9158	·124	87·0	121·7	− 5·0	4	9	
		·798	111·1					123
		·877	98·6					102
		·946	109·6					59
April 18			(−26·0)	(128·8)	(−5·3)	(101)	(513)	(632)
109·242		·981	254·7					78
		·866	245·7					98
K	9157	·511	266·6	147·8	− 6·2	104	479	
	9158	·082	273·4	121·8	− 4·9	1	6	
		·838	110·7					66
April 19			(−25·9)	(117·1)	(−5·2)	(105)	(485)	(242)
110·353		·943	245·8					49
		·933	293·4					53
		·840	261·6					184
G	9157	·712	266·4	147·8	− 6·1	101	473	229*c*
	890j	·637	282·4	140·8	+ 3·9	2	6	
	9159	·404	267·5	126·2	− 5·7	0	2	
		·959	76·0					97
April 20			(−25·8)	(102·4)	(−5·1)	(103)	(481)	(612)
111·577		·948	261·9					146
		·767	259·1					234
		·734	273·6					162
G	9157	·880	265·9	148·0	− 6·0	105	445	308*c*
	890k	·155	115·5	78·2	− 8·8	0	2	
		·855	72·4					138
April 21			(−25·6)	(86·3)	(−5·0)	(105)	(447)	988)

Group 9158. Apr. 13–19. Return of Group 9144. A small spot dying out.
Group 9159. Apr. 20–23. Intermittent. A minute spot on Apr. 20; a pair of small spots on Apr. 22 and 23.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
112·359		·940	248·8					64
		·937	279·0					79
		·860	260·9					334
G		·825	273·8					337
	9157	·954	265·2	148·5	− 6·0	115	528	439*c*
	9159	·734	266·8	123·1	− 5·7	4	23	68*c*
	890l	·371	111·3	55·3	−12·3	0	2	
		·758	70·3					84
Apr. 22			(−25·6)	(75·9)	(−4·9)	(119)	(553)	(1405)
113·358		·952	262·0					354
		·928	273·7					265
		·864	288·4					214
C		·778	255·5					122
	9157	·996	264·6	147·8	− 5·8	69	271	150*c*
	9159	·872	266·4	123·4	− 5·5	4	14	78*c*
	9160	·579	60·6	31·7	+12·4	0	4	
Apr. 23			(−25·4)	(62·7)	(−4·8)	(73)	(289)	(1183)
114·337		·979	251·7					94
		·969	267·9					318
C		·963	278·9					73
		·942	287·7					163
		·882	257·5					227
Apr. 24			(−25·3)	(49·5)	(−4·7)	(0)	(0)	(875)
115·380		·955	255·6					221
	9161	·990	78·4	315·6	+10·7	24	137	259*p*
C		·953	65·2					126
		·979	90·6					84
Apr. 25			(−25·2)	(36·0)	(−4·6)	(24)	(137)	(690)
116·346		·930	257·8					82
	890m	·385	33·2	10·8	+14·4	2	5	
	9161	·930	76·7	316·5	+10·6	16	109	527*f*
C		·877	76·2					296
		·889	63·2					78
		·909	88·4					99
		·967	57·0					97
Apr. 26			(−25·0)	(23·3)	(−4·5)	(18)	(114)	(1179)
117·481	9162	·643	63·5	332·2	+13·0	0	4	
	9161	·811	73·8	316·1	+10·4	16	116	414*f*
		·729	70·3					138
C		·761	55·6					68
		·809	84·7					117
		·872	61·7					56

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
117·481		·896	52·8					99
C		·933	76·1					152
		·943	104·4					98
Apr. 27			(−24·9)	(8·3)	(−4·4)	(16)	(120)	(1142)
118·359		·937	260·5					86
		·855	246·8					96
	891a	·580	266·5	32·1	− 5·5	0	6	
	891b	·130	32·9	253·7	+ 2·0	2	7	
	9162	·501	53·1	332·5	+13·5	5	23	
C	9161	·687	70·3	315·8	+10·1	19	106	253*f*
		·824	48·2					78
		·861	74·1					234
		·871	105·5					129
		·961	107·7					89
		·962	76·0					639
		·971	90·9					86
Apr. 28			(−24·7)	(356·7)	(−4·3)	(26)	(142)	(1690)
119·398	9160	·806	288·2	34·2	+11·9	0	5	95*n*
	9163	·434	289·0	7·1	+ 4·2	2	7	
	9162	·353	30·2	332·4	+13·6	7	27	
	9161	·508	62·2	315·9	+ 9·9	21	112	
G		·698	67·4					141
		·736	107·8					74
		·872	73·8					439
		·879	89·8					52
		·884	108·9					58
Apr. 29			(−24·6)	(342·9)	(−4·2)	(30)	(151)	(859)
120·413		·907	284·0					210
		·846	263·4					78
	9163	·646	280·5	8·9	+ 3·6	4	6	
	9162	·310	350·4	332·5	+13·6	2	11	
G	9161	·339	44·9	315·5	+ 9·9	21	117	
	9164	·959	75·0	257·8	+13·0	0	7	131*n*
		·752	70·2					356
		·844	81·6					135
Apr. 30			(−24·4)	(329·5)	(−4·1)	(27)	(141)	(910)
121·357		·977	283·6					242
		·970	266·0					89
	9163	·795	278·6	8·8	+ 4·3	9	34	99*c*
	9162	·405	318·8	332·9	+13·8	3	14	
C	9161	·242	4·8	315·8	+ 9·9	20	106	
	9165	·355	37·8	304·2	+12·4	0	2	
	9166	·524	114·0	287·3	−15·8	2	14	
		·878	69·5					185
		·926	79·8					117
May 1			(−24·2)	(317·0)	(−4·0)	(34)	(170)	(732)

Group 9160. Apr. 23–29. A very small spot seen only on Apr. 23 and 29.
Group 9161. Apr. 25–May 7. Revival of Group 9152. A small regular spot followed by three very small companions on Apr. 30. An extended area of faculæ follows the group, but it is less conspicuous than during the previous rotation.
Group 9162. Apr. 27–May 1. A diminutive stream.
Group 9163. Apr. 29–May 1. A very small spot with a faint follower on May 1.
Group 9164. Apr. 30–May 5. Intermittent. An ephemeral spot on Apr. 30; on May 2 a small stream develops, but only one small spot is left by May 5.
Group 9165. May 1–4. A small ephemeral spot each day in the disturbed area *f* Group 9161.
Group 9166. May 1–4. A few very small spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
122·429		·924	286·7					40
		·913	276·8					168
	9161	·327	316·7	316·0	+ 9·9	20	100	
	9165	·295	345·5	307·2	+12·7	0	2	
	9167	·348	50·8	287·1	+ 8·9	2	6	
C	9166	·356	127·5	285·9	−16·2	1	5	
	9164	·726	66·4	259·8	+14·0	6	27	97*c*
	9168	·988	98·8	221·6	− 9·3	0	6	228*n*
		·822	78·3					97
		·958	112·1					62
		·973	69·8					94
May 2			(−24·0)	(302·9)	(−3·9)	(29)	(146)	(786)
123·393		·972	276·3					117
		·690	296·6					107
	9161	·493	298·4	316·1	+10·1	19	97	
	9165	·434	309·1	310·2	+12·2	0	2	
	9167	·209	7·2	288·6	+ 8·1	0	3	
C	9166	·228	166·0	286·8	−16·5	2	15	
	9169	·276	17·3	285·3	+11·4	2	14	
	9164	·577	58·3	259·8	+14·3	4	19	
	9168	·929	98·3	221·8	− 9·1	0	11	420*c*
	9170	·992	97·6	207·1	− 8·0	23	88	220*c*
		·890	66·4					109
		·959	110·1					77
		·971	67·2					148
May 3			(−23·9)	(290·1)	(−3·8)	(50)	(249)	(1198)
124·419		·816	286·5					225
		·790	300·3					109
	9161	·667	289·8	316·0	+10·2	23	98	
	9165	·579	296·3	308·5	+11·6	1	9	
	9166	·273	213·9	285·7	−16·7	1	4	
	9169	·280	333·5	283·9	+10·8	0	3	
	9164	·426	42·1	259·5	+14·8	5	9	
G	*891c*	·693	54·9	239·5	+20·4	2	6	
	9171	·763	93·9	226·9	− 5·4	8	28	117*c*
	9168	·838	96·9	219·8	− 7·7	2	19	228*c*
	9170	·927	96·5	208·6	− 7·4	25	132	190*c*
	9172	·966	100·2	201·4	−10·8	15	112	276*c*
		·847	116·0					67
		·899	64·0					127
		·956	109·1					178
May 4			(−23·7)	(276·6)	(−3·7)	(82)	(420)	(1517)
125·345		·895	281·3					180
	9161	·805	285·7	316·1	+10·4	15	94	186*f*
1920.			°	°	°			
125·345	9169	·407	305·7	283·8	+10·3	0	4	
	9164	·322	6·8	262·0	+15·0	0	4	
	9171	·592	93·7	228·1	− 5·1	6	21	
	9168	·711	97·5	219·1	− 7·8	8	28	84*c*
G	9170	·819	95·8	209·4	− 6·8	33	160	161*c*
	9172	·887	100·3	201·8	−10·8	16	98	229*c*
		·723	118·1					81
		·872	109·3					96
May 5			(−23·5)	(264·3)	(−3·6)	(78)	(409)	(1017)
126·344		·961	280·9					177
		·920	270·7					84
		·787	285·1					126
	9161	·913	282·9	315·6	+10·2	16	94	251*f*
	891d	·633	298·7	286·0	+14·8	5	20	
C	9169	·598	290·9	285·4	+ 9·4	0	12	
	9171	·380	94·7	228·9	− 5·0	3	5	
	9168	·544	101·5	218·6	− 9·1	0	4	
	9170	·653	96·0	210·4	− 6·6	24	141	
	9172	·765	101·1	201·5	−10·7	2	34	101*c*
		·938	66·1					63
May 6			(−23·3)	(251·1)	(−3·5)	(50)	(310)	(802)
127·350		·893	286·3					105
		·768	286·4					210
	9161	·984	281·1	316·4	+10·2	11	151	208*f*
	9171	·147	97·5	229·4	− 4·5	3	5	
G	9173	·279	93·6	221·7	− 4·2	7	16	
	9170	·446	98·2	211·5	− 6·6	30	151	
	9172	·581	104·2	202·9	−11·0	5	17	
		·949	99·2					115
May 7			(−23·0)	(237·8)	(−3·4)	(56)	(340)	(638)
128·346		·976	283·0					101
		·964	254·6					93
		·890	285·5					437
		·886	272·8					35
		·873	252·0					62
	891e	·583	303·4	254·9	+15·8	0	4	
C	9171	·092	260·3	229·8	− 4·2	2	5	
	9173	·055	106·2	221·6	− 4·2	15	80	
	9170	·239	105·5	211·2	− 6·9	26	164	
	9172	·400	108·8	202·1	−10·4	0	3	
	9174	·956	94·0	151·7	− 4·8	7	55	447*sf*
		·815	116·8					48
		·848	98·8					110
		·922	101·8					156
May 8			(−22·8)	(224·6)	(−3·3)	(50)	(311)	(1489)

Group 9167. May 2–3. One or two very small spots.
Group 9168. May 2–6. A few small spots. Group 9169. May 3–6. One or two very small spots.
Group 9170. May 3–14. A small regular spot showing instability on May 5 and again on May 11, after which it splits into two portions and then disappears. There are occasional small companions.
Group 9171. May 4–8. A very small but persistent spot with one or two companions following on May 4 and 5.
Group 9172. May 4–8. A small regular spot dying out. Two very small spots appear near it on May 7.
Group 9173. May 7–12. A small stream of spots between Groups 9070 and 9071. The following member of the stream becomes temporarily conspicuous on May 9.
Group 9174. May 8–15. Return of Group 9157; third apparition. A small but definite spot with two or three faint companions after May 10.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
129·121		·954	283·4					251
		·940	253·3					84
		·783	295·6					160
	9173	·114	264·2	220·9	− 3·8	31	139	
K	9170	·080	142·1	211·6	− 6·9	32	148	
	9174	·889	93·8	151·7	− 4·9	22	70	384*s*
		·757	98·2					185
		·944	84·2					103
		·957	97·8					304
May 9			(−22·6)	(214·4)	(−3·2)	(85)	(357)	(1471)
130·354		·941	273·6					50
		·912	287·4					224
		·818	278·1					67
	9173	·373	267·3	219·9	− 3·9	15	85	
	9170	·239	253·7	211·4	− 6·9	23	149	
	891f	·161	228·8	205·1	− 9·1	0	2	
G	9175	·248	190·2	200·7	−17·1	2	8	
	9174	·724	93·5	151·8	− 4·7	6	24	174*sf*
	9176	·928	68·1	132·8	+18·9	12	29	210*c*
	9177	·969	69·1	124·8	+19·3	0	20	155*c*
		·806	75·4					66
		·846	98·9					323
		·882	87·5					194
May 10			(−22·3)	(198·1)	(−3·1)	(58)	(317)	(1463)
131·373		·977	286·3					78
		·953	198·2					55
		·902	278·1					64
	9173	·583	267·7	220·2	− 3·8	2	10	
	9170	·460	260·8	211·7	− 6·9	18	113	
	9175	·365	227·6	200·9	−17·1	0	3	
G	9174	·542	93·3	151·9	− 4·3	8	18	
	891g	·570	98·9	150·1	− 7·5	0	5	
	9176	·823	64·7	133·0	+18·6	19	43	130*c*
	9177	·898	66·6	123·9	+19·5	2	15	116*c*
		·679	102·8					91
		·746	87·3					110
		·930	102·5					53
May 11			(−22·1)	(184·6)	(−3·0)	(49)	(207)	(697)
132·383		·837	266·6					82
	9173	·745	268·4	219·3	− 3·1	0	6	115*c*
G	9170	·651	262·4	211·7	− 7·1	18	98	
	9174	·341	96·4	151·5	− 5·0	6	14	
	9176	·683	59·4	133·3	+18·0	18	46	139*c*

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
132·383	9177	·780	62·3	124·5	+19·2	3	16	190*f*
G		·827	104·0					108
		·910	108·0					100
May 12			(−21·8)	(171·3)	(−2·9)	(45)	(180)	(734)
133·437		·901	265·6					300
		·869	300·8					78
		·705	257·4					235
G	9178	·843	289·3	212·4	+14·6	8	59	101*c*
	9170	·814	263·2	211·6	− 7·2	9	64	202*c*
	9174	·124	111·0	150·7	− 5·3	6	12	
	9176	·520	48·6	133·3	+17·4	12	45	
	9177	·642	54·7	123·7	+19·3	3	17	
May 13			(−21·6)	(157·3)	(−2·8)	(38)	(197)	(916)
134·353		·973	265·7					277
		·959	293·3					97
		·897	248·3					121
		·866	258·0					193
	9170	·923	262·7	212·4	− 7·7	4	12	175*c*
C	9178	·929	287·3	211·7	+15·0	28	153	186*c*
	9174	·108	228·6	149·9	− 6·6	4	27	
	9179	·055	136·3	143·0	− 4·9	0	3	
	9180	·194	167·8	142·8	−13·5	0	9	
	9176	·388	28·7	134·0	+17·3	8	13	
	9177	·482	39·5	126·3	+19·2	0	8	
May 14			(−21·3)	(145·2)	(−2·6)	(44)	(225)	(1049)
135·354		·985	263·4					175
		·945	257·5					331
		·883	244·8					149
	9178	·986	286·2	211·1	+15·6	61	385	284*c*
G	9174	·319	256·2	150·1	− 6·7	4	15	
	9180	·260	225·0	142·8	−13·0	1	8	
	9176	·342	354·5	134·0	+17·4	6	14	
	9177	·397	23·4	122·5	+18·8	0	7	
		·992	79·1					107
May 15			(−21·0)	(132·0)	(−2·5)	(72)	(429)	(1046)
136·532		·991	256·3					90
	9179	·420	265·2	141·1	− 4·2	0	3	
	9176	·467	316·9	135·9	+17·6	2	5	
C		·915	77·3					76
		·970	94·5					182
		·975	78·4					99
May 16			(−20·7)	(116·4)	(−2·4)	(2)	(8)	(447)

Group 9175. May 10–11. Two very small spots.
Group 9176. May 10–20. A small cluster of which one spot remains after May 15. A temporary revival is shown on May 19.
Group 9177. May 10–18. A small cluster *f* Group 9175. No spots are seen on May 16.
Group 9178. May 13–15. A group forming at the west limb.
Group 9179. May 14–16. One very small spot not seen on May 15.
Group 9180. May 14–15. One or two very small spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
137·335		·956	289·1					94
		·882	259·6					165
		·738	258·3					223
	891h	·593	275·6	141·8	+ 1·5	1	6	
	9176	·583	304·7	135·8	+17·3	1	4	
C	9177	·464	320·7	123·8	+18·7	0	11	
	9181	·978	67·6	30·0	+21·3	8	57	107*c*
		·822	75·7					64
		·909	95·3					293
		·916	77·3					199
		·992	97·9					84
May 17			(−20·5)	(105·8)	(−2·3)	(10)	(78)	(1229)
138·461		·930	258·1					365
		·921	299·7					164
		·839	260·9					542
	9176	·733	297·1	134·0	+17·9	1	7	162*c*
G	9177	·634	305·5	124·0	+19·7	0	7	95*c*
	9181	·906	65·1	29·2	+21·4	23	117	186*c*
		·772	76·2					158
		·777	96·7					151
		·930	98·5					92
May 18			(−20·1)	(90·9)	(−2·2)	(24)	(131)	(1915)
139·345		·920	259·5					489
		·886	268·9					373
		·870	279·8					91
		·747	298·7					220
G	*891i*	·879	252·9	139·9	−16·0	0	2	93*sf*
	9176	·844	293·4	133·7	+18·3	15	52	235*c*
	9181	·825	62·4	27·8	+21·1	20	77	137*c*
		·839	99·4					103
May 19			(−19·9)	(79·2)	(−2·1)	(35)	(131)	(1741)
140·351		·980	279·2					106
		·971	256·3					287
		·965	267·4					274
C		·927	275·0					94
		·872	295·2					294
	9176	·933	292·4	132·4	+20·1	0	4	412*sp*
	9181	·693	56·2	27·9	+21·1	11	27	120*c*
May 20			(−19·6)	(65·9)	(−1·9)	(11)	(31)	(1587)
1920.			°	°	°			
141·385		·990	290·7					58
		·948	292·1					183
		·938	268·1					64
G		·872	257·0					160
	9181	·517	38·6	31·9	+22·0	6	9	
	891j	·531	114·5	22·4	−14·2	1	3	
		·961	77·7					53
May 21			(−19·3)	(52·2)	(−1·8)	(7)	(12)	(518)
142·357		·939	257·9					98
	9181	·424	17·0	31·6	+22·1	10	16	
G	9182	·971	81·5	323·8	+ 7·8	59	431	562*c*
		·887	72·5					121
May 22			(−18·9)	(39·3)	(−1·7)	(69)	(447)	(781)
143·376	9181	·416	346·9	31·7	+22·2	7	9	
	9182	·888	80·4	324·0	+ 7·7	36	341	471*c*
		·818	69·6					97
G		·944	101·7					84
		·946	78·8					736
		·967	71·3					185
May 23			(−18·6)	(25·9)	(−1·6)	(43)	(350)	(1573)
144·292	9181	·493	325·7	31·1	+22·5	5	9	
	9182	·758	78·7	325·3	+ 7·5	43	225	310*c*
		·816	101·3					72
G		·865	77·9					524
		·895	68·7					162
		·924	106·1					88
		·944	73·5					245
May 24			(−18·3)	(13·7)	(−1·5)	(48)	(234)	(1401)
145·354		·809	286·6					96
		·689	285·8					148
	9182	·578	74·9	325·6	+ 7·4	53	228	
	9183	·645	102·8	320·3	− 9·3	3	10	
	9184	·689	75·0	317·5	+ 9·2	0	8	179*c*
G		·771	66·2					132
		·841	71·2					264
		·881	108·6					95
		·932	75·2					154
		·973	104·0					55
		·988	89·8					72
May 25			(−18·0)	(359·7)	(−1·4)	(56)	(246)	(1195)

Group 9181. May 17–24. A pair of spots, the leader alone remaining after May 20.
Group 9182. May 22–June 2. Return or revival of Group 9161. A spot, nearly of regular formation, changing suddenly between May 25 and 26 into a triple spot with companions. It is very unstable and on May 27 it divides into two chief components which unite again by May 30.
Group 9183. May 25–27. One or two small spots.
Group 9184. May 25–30. A few faint spots *f* Group 9182.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
146·564		·953	265·7					55
		·876	282·0					174
		·834	263·9					102
		·750	302·0					135
	9185	·619	279·3	21·4	+ 4·8	20	70	
G	9182	·344	64·7	325·5	+ 7·2	74	323	
	9183	·373	111·0	323·2	− 8·8	8	11	
	9184	·476	65·7	317·7	+10·2	3	10	
	9186	·977	75·9	266·9	+13·5	0	25	156*c*
		·793	71·7					148
May 26			(−17·5)	(343·7)	(−1·2)	(105)	(439)	(770)
147·558		·954	281·0					185
		·951	264·6					134
		·865	297·6					184
	9185	·777	277·6	21·0	+ 5·2	9	40	125*c*
	9187	·289	297·2	345·4	+ 6·5	0	1	
G	*892a*	·254	316·6	340·6	+ 9·5	1	4	
	9182	·170	31·0	325·5	+ 7·2	59	328	
	9183	·231	130·0	320·2	− 9·6	1	14	
	9184	·307	46·2	317·5	+11·1	2	32	
	9186	·906	74·3	266·9	+13·7	19	90	479*c*
May 27			(−17·2)	(330·5)	(−1·1)	(91)	(509)	(1107)
148·356		·932	294·1					114
	9185	·871	276·5	20·1	+ 5·1	10	14	105*p*
	9188	·577	251·2	353·7	−11·5	4	9	
C	9182	·178	324·9	325·9	+ 7·4	40	324	
	9184	·223	14·5	316·7	+11·4	1	15	
	9186	·807	72·2	268·0	+13·6	24	99	324*f*
		·933	82·9					70
May 28			(−16·9)	(320·0)	(−1·0)	(79)	(461)	(613)
149·336		·978	289·8					66
		·959	276·0					108
	9188	·751	256·7	354·8	−10·5	30	82	
	9187	·630	281·3	345·3	+ 6·4	1	18	
C	9182	·358	294·0	326·2	+ 7·4	28	287	
	9184	·276	320·0	317·4	+11·3	3	15	
	9186	·663	68·6	267·8	+13·3	39	150	158*f*
		·925	66·4					183
		·977	97·2					156
May 29			(−16·6)	(307·0)	(−0·9)	(101)	(552)	(671)
1920.			°	°	°			
150·469		·939	185·2					73
	9188	·903	258·6	355·9	−10·5	31	160	189*c*
	9187	·807	278·2	345·2	+ 6·2	4	10	125*c*
	9182	·581	284·5	326·4	+ 7·7	44	272	
G	9184	·476	295·4	317·9	+11·0	1	5	
	9186	·460	58·2	268·4	+13·3	24	112	
	9189	·979	75·8	214·6	+13·7	24	115	576*c*
		·891	97·1					148
		·965	98·4					107
May 30			(−16·2)	(292·0)	(−0·7)	(128)	(674)	(1218)
151·348		·842	287·6					114
	9188	·972	258·9	356·4	−11·0	20	166	323*c*
	9187	·912	277·6	345·7	+ 6·6	30	93	212*c*
	9182	·727	281·1	326·2	+ 7·7	38	237	127*c*
	9190	·298	11·2	277·0	+16·3	3	4	
	9186	·314	38·0	269·0	+13·6	17	69	
G	*892b*	·481	49·8	257·8	+17·4	0	3	
	9189	·923	74·0	214·2	+14·5	39	202	603*c*
		·758	95·6					112
		·875	97·6					145
		·891	64·3					62
		·941	112·0					91
		·947	99·8					131
May 31			(−15·8)	(280·4)	(−0·6)	(147)	(774)	(1920)
152·372		·836	258·9					9[illegible]
	9187	·979	276·1	344·6	+ 5·8	23	168	170*c*
	9182	·869	279·0	326·5	+ 7·6	19	228	601*nf*
	9190	·349	325·9	278·5	+16·2	5	12	
C	9186	·249	350·4	269·2	+13·6	12	23	
	9189	·803	71·4	215·2	+14·5	53	308	466*c*
	9191	·965	95·9	192·3	− 5·8	0	9	132*f*
		·874	102·7					109
		·876	114·0					70
June 1			(−15·5)	(266·8)	(−0·5)	(112)	(748)	(1640)
153·354		·928	259·3					158
		·850	291·1					255
	9182	·957	278·3	326·4	+ 7·8	20	262	997*nf*
	9190	·482	307·4	277·2	+16·6	11	30	
G	9186	·378	309·7	271·1	+13·6	4	10	
	9189	·644	66·1	216·4	+14·8	90	419	356*c*
	9191	·877	95·8	192·8	− 5·2	6	16	117*c*
		·773	116·4					48
		·967	98·1					77
June 2			(−15·1)	(253·8)	(−0·4)	(131)	(737)	(2008)

Group 9185. May 26–28. A small group of the "stream" type.
Group 9186. May 26–June 2. A stream of few spots with the leader as the chief component.
Group 9187. May 27–June 1. One very small spot on May 27 not seen on the following day. On May 29 a small group begins to develop in its place.
Group 9188. May 28–31. An insignificant stream of small spots.
Group 9189. May 30–June 10. Return of Group 9178. A composite spot followed by a train of small companions. The train dies out, but the leader increases in size and becomes of regular type.
Group 9190. May 31–June 6. Two small clusters of spots which have practically disappeared by June 5. Two spots have appeared on June 6 near the position of the following cluster.
Group 9191. June 1–5. First a single spot; then a pair, of which one spot remains on June 5.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
154·508		·983	280·6					136
		·912	286·4					219
	9190	·677	294·8	278·2	+16·2	5	55	
	892c	·632	282·9	276·9	+ 7·9	2	10	
G	*892d*	·381	60·6	219·0	+10·4	0	5	
	9189	·429	53·2	217·9	+14·5	105	462	
	9191	·714	97·0	193·4	− 5·2	10	25	109*c*
		·916	100·7					111
June 3			(−14·6)	(238·6)	(−0·3)	(122)	(557)	(575)
155·501		·957	286·1					97
		·844	271·6					89
		·803	280·4					122
		·683	290·5					192
	9190	·826	289·7	279·2	+16·1	5	31	165*c*
G	9189	·279	24·1	218·7	+14·6	94	440	
	9191	·529	98·7	193·9	− 4·7	3	13	
	9192	·956	102·5	153·0	−12·0	0	30	429*c*
		·800	100·0					239
		·951	91·7					198
June 4			(−14·3)	(225·4)	(−0·1)	(102)	(514)	(1531)
156·355		·902	279·3					136
		·801	287·5					308
	9190	·933	286·1	282·0	+15·0	0	12	244*f*
	9189	·255	341·7	218·8	+13·9	74	419	
C	9191	·353	104·9	194·2	− 5·2	3	10	
	9192	·878	103·6	153·6	−11·9	8	19	374*c*
		·920	94·0					270
		·939	82·9					98
		·964	71·3					209
June 5			(−13·9)	(214·1)	(0·0)	(85)	(460)	(1639)
157·447		·978	278·9					92
		·953	267·5					91
		·894	286·5					275
	9190	·974	285·3	275·8	+14·9	18	66	482*c*
	9189	·414	305·7	219·8	+14·1	73	372	
	9192	·736	106·5	153·6	−11·9	4	9	194*c*
C		·803	94·5					215
		·825	81·9					143
		·876	69·1					179
		·919	90·3					78
		·965	66·7					96
		·971	73·9					172
June 6			(−13·5)	(199·6)	(+0·1)	(95)	(447)	(2017)
1920.			°	°	°			
158·361		·955	285·6					141
		·891	279·9					56
	9189	·571	294·1	219·8	+13·6	74	378	
G	9193	·919	74·1	121·8	+14·6	3	11	177*n*
		·771	64·7					221
		·900	65·3					93
June 7			(−13·1)	(187·5)	(+0·2)	(77)	(389)	(688)
159·350		·625	296·8					253
	9189	·735	288·5	220·2	+13·7	80	382	251*c*
G	9194	·775	62·1	127·3	+21·4	0	9	114*c*
	9193	·765	71·8	126·2	+13·9	38	185	183*c*
June 8			(−12·7)	(174·5)	(+0·3)	(118)	(576)	(801)
160·377		·887	263·5					127
		·777	290·9					339
	9189	·869	285·1	220·2	+13·3	86	392	388*c*
G	9193	·594	67·2	126·7	+13·6	64	287	
	9194	·674	56·1	123·8	+22·4	1	4	
	9195	·958	79·7	88·0	+10·0	3	40	73*f*
		·986	78·5					44
June 9			(−12·3)	(160·9)	(+ 0·5)	(154)	(723)	(971)
161·643		·899	256·9					108
		·766	262·4					105
G	9189	·971	283·4	219·8	+13·2	94	449	602*nf*
	9193	·368	51·0	127·0	+13·9	56	274	
	9195	·856	78·8	85·9	+ 9·9	5	36	148*c*
June 10			(−11·8)	(144·1)	(+ 0·6)	(155)	(759)	(963)
162·672		·976	287·0					164
		·896	262·1					108
	9193	·235	14·4	127·1	+13·8	52	260	
G	9196	·377	40·6	115·7	+17·2	5	29	
	9195	·650	75·4	91·0	+ 9·9	0	3	148*f*
	9197	·964	78·5	56·4	+11·3	0	19	320*f*
June 11			(−11·4)	(130·5)	(+ 0·7)	(57)	(311)	(740)
163·535		·966	263·2					182
		·845	258·2					147
C	9193	·263	332·6	126·2	+14·2	60	356	
	9196	·311	16·2	113·9	+18·0	28	84	
	9197	·899	78·2	55·7	+10·9	6	18	328*f*
June 12			(−11·0)	(119·1)	(+ 0·8)	(94)	(458)	(657)

Group 9192. June 4–6. A single small spot.
Group 9193. June 7–18. A small spot on June 7 developing into a regular spot followed by two clusters of very small spots. These condense to a nebulous mass on June 13 and then disappear.
Group 9194. June 8–9. Two small spots separated 4° in longitude. The following one alone remains on June 9.
Group 9195. June 9–11. A disturbed area shown by an elongated mass of faculæ in which a few ephemeral spots appear.
Group 9196. June 11–17. An irregular stream of small spots *f* Group 9193.
Group 9197. June 11–12. One or two very small spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
164·431		·913	257·8					103
		·850	242·5					85
		·799	255·2					281
	9193	·390	308·0	125·6	+14·7	50	393	
C	9196	·315	340·1	113·6	+18·0	27	103	
	892e	·104	104·4	101·4	− 0·6	0	4	
	892f	·386	64·8	86·5	+10·2	2	6	
		·826	79·2					139
		·943	102·6					92
June 13			(−10·6)	(107·2)	(+0·9)	(79)	(506)	(700)
165·453		·968	259·8					112
		·889	246·0					159
		·873	258·5					363
C		·808	273·4					152
		·801	287·8					131
	9193	·572	295·2	126·0	+15·0	45	307	
	9196	·452	312·4	114·2	+18·7	26	73	
		·945	87·2					86
June 14			(−10·2)	(93·7)	(+1·1)	(71)	(380)	(1003)
166·590		·961	250·3					60
		·953	260·6					184
		·922	273·8					145
		·910	287·0					162
G		·863	296·6					67
		·738	302·7					55
	9193	·757	289·6	126·2	+15·5	43	312	168*c*
	9196	·639	297·8	115·0	+18·3	14	39	
	9198	·956	100·8	6·4	− 9·9	17	102	537*c*
June 15			(−9·8)	(78·6)	(+1·2)	(74)	(453)	(1378)
167·380		·979	267·8					122
		·955	286·4					103
		·932	294·8					88
		·902	278·2					124
		·821	299·4					79
G	9193	·859	287·4	126·3	+15·6	41	232	334*c*
	9196	·750	292·6	114·6	+17·6	12	45	170*c*
	9198	·888	102·2	6·6	−10·2	19	129	438*c*
		·938	102·0					358
		·964	81·4					115
June 16			(−9·4)	(68·2)	(+1·3)	(72)	(406)	(1931)
168·417		·925	294·9					140
	9193	·949	285·7	125·4	+15·3	36	206	556*nf*
168·417	9196	·873	290·1	113·8	+18·1	5	34	272*c*
	9198	·760	104·4	6·3	− 9·9	22	117	323*c*
G	9199	·979	98·0	336·7	− 7·5	29	168	101*f*
		·841	103·3					345
		·875	82·9					187
June 17			(−8·9)	(54·4)	(+1·4)	(92)	(525)	(1924)
169·345		·983	294·1					45
		·949	289·7					232
		·783	281·9					50
	9193	·994	284·9	125·8	+15·0	13	184	162*nf*
	9198	·610	108·3	6·4	− 9·8	17	96	
G	9199	·915	98·8	336·7	− 7·4	34	185	315*f*
		·722	107·1					156
		·759	80·9					108
		·929	74·4					198
		·948	83·9					211
June 18			(−8·5)	(42·2)	(+1·5)	(64)	(465)	(1477)
170·487	*892g*	·932	280·6	95·4	+10·4	3	14	191*f*
	892h	·250	175·2	25·8	−12·7	1	3	
	9198	·399	118·6	6·3	− 9·4	18	89	
G	9199	·776	100·6	337·0	− 7·1	27	147	413*f*
		·822	70·6					192
		·831	83·8					227
		·925	79·1					420
June 19			(−8·0)	(27·0)	(+1·6)	(49)	(253)	(1443)
171·518		·989	280·1					118
		·706	286·5					95
	9200	·347	290·7	32·5	+ 8·7	6	17	
	9198	·223	149·8	6·9	− 9·3	18	99	
	9199	·610	104·5	337·0	− 7·3	18	114	
C	*892i*	·731	101·1	327·3	− 6·9	0	7	124*p*
		·698	80·4					182
		·827	75·3					259
		·914	73·3					138
		·949	66·4					80
		·993	74·7					232
June 20			(−7·5)	(13·4)	(+1·8)	(42)	(237)	(1228)
172·345		·824	283·4					150
	9200	·522	282·4	33·3	+ 8·0	6	12	
G	9198	·209	204·7	7·5	− 9·1	18	81	
	9199	·456	110·1	337·0	− 7·3	21	93	
	892j	·489	82·0	333·5	+ 5·5	1	3	

Group 9198. June 15–25. Return of Group 9188. A small but perfectly formed regular spot which gradually diminishes.
Group 9199. June 17–27. A small regular spot usually with a few small followers.
Group 9200. June 20–21. A pair of small spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
172·345	9201	·991	76·2	280·2	+13·9	30	183	96c
		·694	76·4					59
G		·803	71·0					85
		·863	65·8					67
		·955	75·8					310
June 21			(− 7·2)	(2·5)	(+1·9)	(76)	(372)	(767)
173·355		·933	281·5					140
	9198	·366	239·7	7·7	− 8·8	14	69	
	9199	·263	128·3	337·1	− 7·4	11	62	
G	9201	·942	75·8	279·1	+14·1	60	365	516c
	9202	·983	77·9	269·7	+12·3	0	79	192c
		·883	74·5					457
		·991	94·6					83
June 22			(− 6·7)	(349·1)	(+2·0)	(85)	(575)	(1388)
174·349		·857	278·3					60
	9198	·557	250·9	7·9	− 8·7	11	35	
	9199	·168	188·3	337·3	− 7·4	13	57	
G	9203	·440	149·3	322·1	−20·1	7	18	
	9201	·844	74·7	279·1	+14·0	55	329	381c
	9202	·912	76·7	270·5	+13·0	4	44	303c
	893a	·924	94·8	268·8	− 3·6	3	8	179f
		·749	71·1					264
June 23			(−6·3)	(335·9)	(+2·1)	(93)	(491)	(1187)
175·400		·936	277·2					95
	9198	·739	256·2	8·4	− 8·6	5	17	229c
	9199	·319	237·3	337·7	− 7·8	9	41	
G	9203	·381	180·6	322·2	−20·1	29	62	
	9201	·696	72·2	279·1	+13·9	66	291	145c
	9202	·798	76·2	269·7	+12·3	4	10	171c
		·830	96·8					151
		·916	72·8					97
June 24			(−5·8)	(322·0)	(+2·2)	(113)	(421)	(888)
176·357		·788	255·1					184
	9198	·866	258·6	8·2	− 8·7	3	11	298c
	9199	·502	250·2	337·6	− 7·7	13	26	
G	9203	·451	211·5	323·8	−20·3	38	124	
	9201	·518	66·3	280·2	+13·9	48	250	
	9202	·651	73·0	269·8	+12·7	0	11	
	9204	·999	76·6	221·4	+13.5	0	366	
June 25			(−5·4)	(309·3)	(+2·3)	(102)	(788)	(482)
1920.			°	°	°			
177·348		·959	256·3					412
		·901	257·8					219
	9199	·688	256·2	338·4	− 7·7	7	14	
C	9203	·587	229·3	324·4	−20·3	15	78	
	9201	·338	52·3	280·3	+14·2	44	223	
	9204	·958	76·4	223·1	+13·7	69	358	607c
		·862	82·7					88
June 26			(−4·9)	(296·2)	(+2·4)	(135)	(673)	(1326)
178·384		·976	259·1					212
		·928	191·6					68
		·787	271·8					69
		·769	282·2					154
	9199	·838	259·1	338·4	− 7·7	2	7	334f
C	9203	·749	239·6	325·9	−20·4	10	40	130c
	9201	·211	8·1	280·7	+14·6	39	171	
	893b	·161	65·7	274·0	+ 6·4	3	8	
	9202	·273	47·5	270·6	+13·1	0	10	
	9204	·866	75·5	223·0	+13·8	62	346	307c
		·932	71·7					354
June 27			(−4·5)	(282·5)	(+2·6)	(116)	(582)	(1628)
179·478		·907	270·4					73
		·905	259·6					362
		·899	282·2					192
		·866	295·8					56
		·791	283·6					165
	9203	·896	245·2	328·2	−20·8	2	16	277f
G	9205	·418	300·4	289·8	+14·7	0	5	
	9201	·295	314·1	280·6	+14·4	35	180	
	9204	·719	73·6	223·0	+13·6	71	328	209c
	9206	·951	121·9	200·7	−29·1	10	26	164f
	9207	·963	105·6	195·1	−14·3	29	148	72c
		·840	69·8					271
		·857	109·8					114
		·886	93·4					48
June 28			(−4·0)	(268·0)	(+2·7)	(147)	(703)	(2003)
180·337		·969	261·1					360
		·968	270·4					45
		·967	281·4					239
		·948	292·5					105
C		·933	246·3					193
		·876	282·6					227
	9201	·444	298·2	280·4	+14·6	53	156	
	9204	·576	69·6	223·1	+13·9	63	289	
	9206	·901	125·7	199·1	−30·2	3	40	108c

Group 9201. June 21–July 2. Return of Group 9190. Three small but well-formed regular spots arranged as the apices of an equilateral triangle. By June 28, however, small proper motions of the spots have changed the appearance of the group. There are occasional small companions.
Group 9202. June 22–27. A few small unstable spots, *f* Group 9201, not seen on June 26.
Group 9203. June 23–28. A stream passing rapidly through its phases of development.
Group 9204. June 25–July 8. Return of Group 9189; third apparition. A stable regular spot with tiny companions on July 2 and 7.
Group 9205. June 28–30. Two faint spots on June 28 *p* Group 9201; none on June 29; a very small one on June 30.
Group 9206. June 28–30. Two or three very small spots in high latitude.
Group 9207. June 28–July 10. A stream of normal development. The leader, showing some departure from the regular type, is elongated with composite umbra.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
			°	°	°			
1920.								
180·337	9207	·889	107·0	195·9	−13·7	55	267	444*c*
		·745	66·2					110
June 29			(− 3·6)	(256·7)	(+2·8)	(174)	(752)	(1831)
181·359		·982	248·4					132
		·963	284·1					176
		·883	287·2					133
	9205	·728	287·5	288·8	+14·7	0	2	180*sp*
G	9201	·628	288·9	280·7	+14·0	21	108	
	9204	·387	60·3	222·9	+13·8	60	319	
	893c	·677	97·7	201·1	− 3·1	1	3	
	9206	·802	130·2	198·7	−29·1	0	2	192*c*
	9207	·768	111·7	195·8	−14·5	117	480	308*c*
		·974	101·7					111
June 30			(−3·1)	(243·1)	(+2·9)	(199)	(914)	(1232)
182·352		·965	289·2					192
		·877	284·6					297
	9201	·801	284·3	282·7	+13·2	16	84	295*c*
	9204	·225	32·6	222·9	+13·8	62	294	
C	9207	·621	118·6	195·8	−14·8	107	464	
		·727	139·6					99
		·892	103·8					193
		·954	115·2					130
		·976	104·6					293
		·976	83·1					140
July 1			(−2·6)	(230·0)	(+3·0)	(185)	(842)	(1639)
183·350		·959	283·2					336
	9201	·920	282·8	283·6	+13·0	2	26	327*f*
	9204	·209	331·4	222·7	+13·6	76	320	
G	9207	·459	131·8	196·2	−14·8	106	472	
		·795	104·7					89
		·909	88·4					121
		·912	107·0					247
		·931	73·2					130
July 2			(−2·2)	(216·8)	(+3·1)	(184)	(818)	(1250)
184·446		·980	285·4					391
		·929	281·9					441
	9204	·392	299·2	222·9	+13·9	70	302	
C	9207	·332	158·1	195·0	−14·7	110	509	
		·802	111·5					330
		·890	70·5					136
		·965	76·1					149
July 3			(−1·7)	(202·3)	(+3·2)	(180)	(811)	(1447)

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
			°	°	°			
1920.								
185·423		·976	280·7					209
	9204	·567	289·7	222·5	+13·8	77	356	
	9207	·322	197·3	195·0	−14·5	117	628	
G	9208	·954	73·3	116·8	+16·9	5	20	303*f*
		·889	74·8					184
		·942	106·2					184
		·961	66·1					124
July 4			(−1·2)	(189·3)	(+3·3)	(199)	(1004)	(1004)
186·349		·959	291·0					99
	9204	·726	286·4	222·8	+14·2	66	332	145*c*
	9207	·433	224·9	195·4	−14·6	91	488	
C	9208	·872	72·4	117·0	+17·0	8	35	226*f*
		·789	73·3					134
		·862	62·3					117
July 5			(−0·8)	(177·1)	(+3·4)	(165)	(855)	(721)
187·619	9204	·892	284·1	223·2	+14·2	54	306	605*f*
	9207	·639	240·9	195·5	−15·1	70	379	
G	*893d*	·531	252·2	190·7	− 6·2	1	9	
	9208	·715	69·7	116·0	+16·9	22	103	168*c*
		·856	77·3					120
July 6			(−0·3)	(160·3)	(+3·6)	(147)	(797)	(893)
188·362		·834	232·5					203
	9204	·952	283·7	222·7	+14·1	54	390	601*f*
C	9207	·744	246·6	195·1	−14·6	51	362	130*c*
	9208	·607	66·9	114·9	+16·7	18	90	
July 7			(+0·1)	(150·4)	(+3·6)	(123)	(842)	(934)
189·370		·898	234·0					262
	9204	·997	283·6	222·9	+13·8	73	458	338*f*
	9207	·878	250·8	196·0	−14·9	45	355	572*c*
G	9208	·434	58·5	114·5	+16·5	11	36	
	9209	·971	94·8	61·5	− 3·7	16	41	218*f*
		·964	76·4					83
July 8			(+0·6)	(137·1)	(+3·7)	(145)	(890)	(1473)
190·366		·957	237·3					97
	9207	·962	253·5	196·1	−14·7	43	382	616*f*
	9210	·342	243·3	141·7	− 5·2	3	6	
G	9208	·287	39·0	113·1	+16·5	3	25	
	9209	·902	95·4	60·0	− 3·2	17	47	272*c*
		·897	75·3					88
July 9			(+1·0)	(123·9)	(+3·8)	(66)	(460)	(1073)

Group 9208. July 4–15. More probably a revival than a return of Group 9196. A group of the "stream" type with few components but in frequent change.

Group 9209. July 8–19. Intermittent. A small spot followed by a distant companion. The group has disappeared on July 15, but other spots are forming in its place on July 17.

Group 9210. July 9–10. A single spot seen each day, probably connected with each other.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
191·348		·867	258·3					175
	9207	·996	255·1	194·3	−14·4	48	218	207*f*
	9210	·580	256·1	145·2	− 4·7	1	5	
C	9208	·240	336·5	116·6	+16·5	9	44	
	9209	·789	97·5	59·5	− 3·5	9	33	218*c*
		·990	103·7					117
July 10			(+1·5)	(110·9)	(+3·9)	(67)	(300)	(717)
192·428		·939	258·2					238
		·864	248·6					420
		·842	277·8					214
G	9208	·395	304·9	116·3	+16·9	23	52	
	9209	·610	101·4	59·9	− 3·6	9	35	
		·873	83·5					98
		·911	105·8					137
July 11			(+2·0)	(96·6)	(+4·1)	(32)	(87)	(1107)
193·359		·957	250·6					221
		·926	276·7					215
		·897	261·7					152
	9208	·587	293·9	118·3	+17·1	18	76	
C	9209	·429	107·3	60·2	− 3·6	8	33	
		·829	108·9					55
		·946	97·4					78
		·957	109·1					163
July 12			(+2·3)	(+84·3)	(+4·1)	(26)	(109)	(884)
194·344		·892	288·2					150
		·730	302·1					116
	9208	·749	289·3	118·8	+17·1	12	83	180*c*
G	9209	·239	125·0	60·0	− 3·7	2	15	
		·883	111·7					212
		·922	101·0					160
July 13			(+2·8)	(71·3)	(+4·2)	(14)	(98)	(818)
195·360		·972	276·5					84
		·933	293·5					155
	9208	·894	287·3	121·0	+17·4	9	32	471*c*
C	9209	·136	184·2	58·4	− 3·5	0	33	
	9211	·739	83·2	10·2	+ 8·0	4	10	
		·973	99·3					121
July 14			(+3·2)	(57·8)	(+4·3)	(13)	(75)	(831)
196·605	9208	·985	286·5	122·1	+17·1	6	28	320*f*
	9212	·975	105·4	326·0	−13·9	11	49	184*c*
1920.			°	°	°			
196·605		·891	75·6					143
		·894	88·0					82
G		·901	99·4					123
		·985	77·6					144
July 15			(+3·8)	(41·4)	(+4·5)	(17)	(77)	(996)
197·365		·975	289·4					188
		·887	289·2					73
	9212	·920	107·2	326·7	−13·9	8	39	289*c*
G		·842	102·6					131
		·867	70·2					153
		·935	117·1					86
		·942	77·8					209
July 16			(+4·2)	(31·3)	(+4·5)	(8)	(39)	(1129)
198·379	9209	·659	258·2	58·0	− 4·2	5	20	
	9212	·814	111·0	326·5	−14·1	6	17	172*c*
G	9213	·974	80·2	300·6	+10·6	26	218	428*c*
		·861	78·4					200
		·934	67·7					109
July 17			(+4·6)	(17·9)	(+4·6)	(37)	(255)	(909)
199·439	9209	·848	261·0	60·9	− 5·0	23	61	183*c*
	9212	·664	117·7	326·7	−14·2	8	15	111*f*
G	9213	·896	79·9	300·1	+11·1	28	173	629*c*
		·749	78·8					145
		·856	66·3					114
		·986	78·5					181
July 18			(+5·1)	(3·9)	(+4·7)	(59)	(249)	(1363)
200·347	9209	·951	262·1	62·9	− 6·0	5	14	378*c*
	9211	·363	277·3	13·0	+ 7·1	1	4	
	9212	·521	127·2	326·6	−13·9	8	19	
G	9213	·792	79·3	299·5	+11·3	34	185	415*c*
		·932	78·5					231
		·947	67·5					131
		·970	80·2					160
July 19			(+5·5)	(351·8)	(+4·8)	(48)	(222)	(1315)
201·353		·982	264·4					205
		·962	187·5					41
C	9211	·558	276·5	12·4	+ 7·7	0	7	
	9212	·384	148·7	326·7	−14·3	5	12	
	9213	·637	77·9	299·2	+11·5	39	201	
		·818	77·1					233

Group 9211. July 14–21. Intermittent. A pair of very small spots on July 14; nothing is then seen until July 19 when another pair makes its appearance.
Group 9212. July 15–20. A small but distinct spot with one or two very small companions from July 18–20.
Group 9213. July 17–29. A small regular spot with double umbræ from July 20–26. A few small companions usually appear with it.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
201·353		·865	66·9					118
		·907	79·3					307
July 20			(+5·9)	(338·5)	(+4·9)	(44)	(220)	(904)
202·368		·796	244·4					107
	9211	·719	276·9	11·1	+ 8·5	1	11	
C	9213	·457	74·3	298·5	+11·6	29	162	
		·831	77·5					171
		·981	96·5					86
July 21			(+6·3)	(325·1)	(+5·0)	(30)	(173)	(364)
203·421		·879	276·1					71
		·876	247·8					146
		·847	260·5					138
G	9213	·239	61·8	298·8	+11·4	26	125	
	9214	·584	83·1	275·5	+ 8·2	1	4	
		·915	99·4					175
		·964	82·2					94
July 22			(+6·8)	(311·2)	(+5·1)	(27)	(129)	(624)
204·467		·918	248·8					64
		·885	259·0					73
	9213	·115	345·3	299·0	+11·6	22	123	
G	*894a*	·236	63·6	284·9	+11·0	2	8	
	9214	·367	74·6	276·3	+10·4	1	5	
	9215	·955	77·8	224·1	+13·2	38	158	128*p*
		·813	.103·5					87
		·842	80·9					141
July 23			(+7·2)	(297·3)	(+5·2)	(63)	(294)	(493)
205·381		·812	260·6					155
		·799	280·8					118
		·732	300·4					99
G	9213	·250	299·2	298·1	+12·1	25	130	
	9214	·117	63·3	279·2	+ 8·3	3	12	
	9215	·873	77·7	224·3	+13·3	29	154	193*c*
		·744	82·6					124
		·934	67·5					164
July 24			(+7·6)	(285·3)	(+5·3)	(57)	(296)	(853)
206·338		·905	281·7					172
		·900	265·6					155
G		·820	250·7					237
		·754	285·3					129
	9213	·442	287·5	298·1	+12·4	25	146	
1920.			°	°	°			
206·338	9214	·109	295·3	278·3	+ 8·0	1	7	
	9215	·747	76·5	224·4	+13·6	25	143	128*c*
G	9216	·978	105·9	196·7	−14·3	24	172	131*c*
		·855	77·7					82
		·867	67·1					227
		·945	99·0					60
July 25			(+8·1)	(272·6)	(+5·3)	(75)	(468)	(1321)
207·500		·932	253·8					170
		·921	241·3					79
		·875	283·8					193
G	9213	·673	281·5	299·4	+11·7	21	98	102*c*
	9215	·546	74·2	224·7	+13·0	22	121	
	894b	·833	101·5	202·2	− 6·5	2	13	50*c*
	9216	·898	109·3	196·2	−14·7	41	206	341*f*
		·706	64·1					83
July 26			(+8·5)	(257·2)	(+5·4)	(86)	(438)	(1018)
208·462		·961	282·5					260
		·889	294·1					62
	9213	·818	280·7	299·5	+11·9	21	119	409*c*
C	9215	·362	66·9	224·6	+13·3	31	134	
	9216	·782	113·1	196·8	−14·2	30	168	364*f*
	9217	·979	98·6	167·4	− 7·2	5	24	97*c*
		·941	105·7					131
July 27			(+8·9)	(244·5)	(+5·5)	(87)	(445)	(1323)
209·357		·948	257·3					62
		·798	278·9					225
	9213	·920	280·3	300·0	+11·6	15	123	569*c*
	9214	·731	276·2	279·8	+ 8·3	4	10	
	9215	·190	45·9	224·7	+13·1	13	100	
C	9216	·654	119·5	196·9	−14·2	33	162	158*f*
	9217	·920	100·7	167·2	− 7·5	17	61	193*c*
		·863	109·3					94
		·964	85·9					198
		·972	116·0					84
		·975	105·7					113
July 28			(+9·3)	(232·7)	(+5·6)	(82)	(456)	(1696)
210·389		·932	183·2					50
		·875	279·6					472
G		·841	292·4					151
	9213	·986	281·1	300·1	+11·9	23	137	245*n*
	9215	·159	323·3	224·6	+13·0	18	92	
	9216	·495	132·3	196·9	−14·1	26	146	

Group 9214. July 22–28. Intermittent. One or two very small spots which have disappeared by July 26. A small distinct spot appears in the region on July 28.
Group 9215. July 23–Aug. 3. Return of Group 9204; fourth apparition. A regular spot diminishing rapidly after July 31. On Aug. 3, another small regular spot has appeared preceding it in longitude.
Group 9216. July 25–Aug. 5. Return of Group 9207. A regular spot disappearing rapidly after Aug. 4.
Group 9217. July 27–30. A pair of small spots, the following one alone remaining on July 30.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
210·389	9217	·794	103·9	168·2	− 7·4	7	25	79*c*
		·732	117·5					74
G		·890	91·9					74
		·893	79·5					68
		·899	105·7					140
		·906	117·9					80
July 29			(+9·7)	(219·0)	(+5·7)	(74)	(400)	(1433)
211·351		·986	280·4					280
		·936	291·0					150
		·923	279·1					284
	9215	·338	293·9	224·7	+13·3	16	90	
	894c	·561	186·9	210·5	−28·0	0	5	
	9216	·372	153·9	196·6	−13·8	24	135	
C	*894d*	·447	154·1	194·5	−18·0	1	10	
	9217	·681	108·5	165·7	− 8·1	0	3	76*c*
		·802	116·7					159
		·824	82·1					79
		·866	70·7					89
		·910	90·7					54
		·958	118·9					77
		·979	74·1					190
July 30			(+10·1)	(206·3)	(+5·7)	(41)	(243)	(1438)
212·505		·952	291·2					82
		·950	280·0					63
		·847	295·1					73
		·735	290·9					120
G		·720	275·9					252
	9215	·561	284·5	224·7	+12·9	20	103	
	9216	·348	195·4	196·4	−13·7	21	126	
		·891	123·6					123
		·905	73·4					210
		·970	72·6					160
July 31			(+10·6)	(191·0)	(+5·8)	(41)	(229)	(1083)
213·494		·908	293·7					67
		·833	280·5					209
	9215	·727	282·4	224·5	+13·0	18	90	72*c*
	9216	·450	222·9	196·2	−13·6	21	117	
G	*894e*	·398	199·5	185·8	−16·2	0	3	
	9218	·862	79·2	118·1	+12·2	2	5	29*f*
		·800	73·4					183
		·901	71·6					180
		·950	60·2					71
		·964	109·8					42
Aug. 1			(+11·0)	(177·9)	(+5·9)	(41)	(215)	(853)

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
214·342		·948	281·3					192
		·750	294·5					161
	9215	·847	281·8	224·8	+13·1	20	93	272*c*
	9216	·577	236·1	196·1	−13·6	20	98	
C	9218	·763	77·9	116·9	+13·0	8	26	47*c*
		·684	69·7					92
		·821	69·1					166
		·904	112·7					104
		·920	64·1					127
Aug. 2			(+11·3)	(166·7)	(+5·9)	(48)	(217)	(1161)
215·346		·843	292·1					156
		·794	256·2					88
	9215	·956	282·7	227·0	+13·9	31	205	384*c*
	9216	·728	244·9	195·9	−13·6	12	101	207*sf*
G	9218	·587	76·7	117·7	+12·7	4	14	
		·687	66·7					156
		·803	118·7					26
		·853	76·3					102
Aug. 3			(+11·7)	(153·4)	(+6·0)	(47)	(320)	(1119)
216·379		·993	284·1					114
		·918	291·8					141
		·910	259·5					68
G		·863	232·4					100
	9216	·859	250·3	195·8	−13·4	16	111	229*sf*
		·948	97·1					70
Aug. 4			(+12·1)	(139·8)	(+ 6·1)	(16)	(111)	(722)
217·403		·974	289·8					87
		·800	250·2					262
G	9216	·953	253·6	196·1	−13·6	8	33	301*sf*
		·886	100·1					103
Aug. 5			(+12·5)	(126·2)	(+6·1)	(8)	(33)	(753)
218·676		·986	255·4					67
		·894	256·8					175
G	9219	·907	282·0	175·0	+13·5	7	14	99*c*
	9220	·673	282·5	151·6	+13·0	8	19	
Aug. 6			(+13·0)	(109·4)	(+6·2)	(15)	(33)	(341)
219·359		·956	253·9					96
		·941	262·7					74
G		·890	240·1					117
		·879	253·9					93

Group 9218. Aug. 1–3. A pair of small spots.
Group 9219. Aug. 6–7. A pair of small spots near the west limb.
Group 9220. Aug. 6–8. A pair of spots 4° apart in longitude. The leader is alone left on Aug. 7 and 8.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
219·359		·871	275·3					120
	9219	·960	281·9	174·9	+13·2	0	18	90c
G	9220	·815	282·4	155·2	+13·8	4	14	136f
Aug. 7			(+13·3)	(100·4)	(+6·3)	(4)	(32)	(726)
220·422		·969	243·3					80
		·958	272·2					107
G		·916	289·7					42
		·880	264·3					111
	9220	·937	281·9	156·5	+13·3	0	8	168f
		·906	87·6					73
Aug. 8			(+13·7)	(86·3)	(+6·3)	(0)	(8)	(581)
221·443		·967	283·2					195
		·953	269·0					111
		·877	255·8					116
C		·782	288·5					139
	9221	·981	79·4	353·2	+11·6	5	52	295c
		·880	100·1					64
		·901	116·0					147
		·942	77·8					44
Aug. 9			(+14·0)	(+72·8)	(+6·4)	(5)	(52)	(1111)
222·382		·956	285·4					57
		·928	256·4					105
C		·889	287·8					139
		·781	289·6					103
	9221	·935	78·8	350·6	+12·7	13	117	371c
		·850	77·4					48
Aug. 10			(+14·4)	(60·4)	(+6·4)	(13)	(117)	(823)
223·436		·905	289·7					367
	9221	·824	79·6	350·7	+12·2	27	98	428c
G		·916	99·8					105
		·916	88·4					84
		·935	74·2					149
		·951	108·6					82
Aug. 11			(+14·8)	(46·5)	(+6·5)	(27)	(98)	(1215)
224·584		·971	290·3					131
	9221	·654	79·0	350·4	+12·2	12	70	
G	9222	·969	114·1	319·8	−21·4	48	302	297f
	9223	·965	105·2	318·8	−12·7	0	9	149c
	9224	·985	103·2	313·2	−11·7	0	17	200n
		·848	111·6					85
1920.			°	°	°			
224·584		·924	76·9					146
Aug. 12			(+15·2)	(31·3)	(+6·6)	(60)	(398)	(1008)
225·394	849f	·868	253·3	78·3	−11·0	0	5	86s
	9221	·520	77·1	349·5	+12·3	11	27	
	9222	·917	116·9	319·3	−21·4	45	331	433f
G	9224	·941	105·3	312·8	−11·9	9	20	236c
	9225	·973	79·3	303·2	+11·9	13	64	153c
		·904	107·2					189
		·969	72·1					157
Aug. 13			(+15·5)	(20·6)	(+6·6)	(78)	(447)	(1254)
226·364		·937	255·2					63
		·828	256·4					95
	9221	·313	70·9	350·3	+12·2	12	52	
	9223	·787	112·0	319·6	−12·7	0	4	123c
G	9222	·822	121·6	319·4	−21·1	41	275	484f
	9224	·839	107·8	313·5	−11·0	18	51	167c
	9225	·898	80·0	303·4	+11·9	11	69	130c
		·906	71·9					211
		·966	107·2					129
Aug. 14			(+15·8)	(7·8)	(+6·7)	(82)	(451)	(1402)
227·451	9221	·114	30·0	350·1	+12·4	18	116	
	9222	·704	130·4	318·3	−21·7	41	231	219f
	9224	·704	113·9	312·5	−11·5	13	30	71c
G	9225	·765	80·2	303·2	+11·8	9	46	72c
		·806	70·1					189
		·878	111·4					118
		·914	80·2					343
Aug. 15			(+16·2)	(353·4)	(+6·7)	(81)	(423)	(1012)
228·343	9221	·178	300·6	350·6	+11·9	21	93	
	9222	·603	140·6	317·4	−21·4	53	268	
	9225	·613	79·5	303·7	+11·9	9	21	
G		·766	87·5					82
		·767	74·9					95
		·774	116·7					76
		·886	80·9					217
		·904	67·9					131
Aug. 16			(+16·5)	(341·6)	(+6·8)	(83)	(382)	(601)
229·192	9221	·370	285·7	351·6	+11·6	8	45	
	9222	·519	157·3	318·0	−21·8	46	240	
D	9225	·461	77·7	303·1	+11·6	9	16	

Group 9221. Aug. 9–17. Two spots, the larger one following and breaking up into a small cluster on Aug. 14. The group then appears as a short stream of which two spots remain on Aug. 17.
Group 9222. Aug. 12–23. A regular spot followed by a train of small variable components which are never very conspicuous.
Group 9223. Aug. 12–14. One very small spot not seen on Aug. 13.
Group 9224. Aug. 12–15. A single spot developing into a very small short-lived stream.
Group 9225. Aug. 13–22. Return of Group 9213. A very small regular spot gradually diminishing to a mere dot near the west limb.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1920.			°	°	°			
229·192		·821	80·9					137
D		·834	67·9					107
Aug. 17			(+16·7)	(330·4)	(+6·8)	(63)	(301)	(244)
230·350	9222	·482	184·1	317·2	−21·8	50	225	
G	9225	·219	67·5	303·2	+11·5	9	18	
		·961	80·5					159
Aug. 18			(+17·1)	(315·1)	(+6·8)	(59)	(243)	(159)
231·412		·942	262·7					50
		·782	280·1					306
G	9222	·539	207·7	316·7	−21·8	33	208	
	9225	·092	331·7	303·6	+11·5	6	13	
		·889	79·4					292
Aug. 19			(+17·5)	(301·1)	(+6·9)	(39)	(221)	(648)
232·382		·891	280·5					319
		·763	284·6					78
G	9222	·650	223·3	316·8	−22·1	30	169	
	9225	·275	288·0	303·6	+11·6	6	14	
		·804	80·4					246
		·969	68·4					68
Aug. 20			(+17·8)	(288·2)	(+6·9)	(36)	(183)	(711)
233·351		·970	280·4					273
		·896	279·2					63
G		·737	244·6					167
	9222	·772	233·6	317·3	−22·1	23	151	149c
	9225	·471	281·9	303·3	+11·6	3	10	
		·914	66·5					157
Aug. 21			(+18·1)	(275·4)	(+6·9)	(26)	(161)	(809)
234·503		·888	283·7					139
		·860	250·3					235
		·731	275·7					91
		·709	290·1					72
	9222	·895	240·9	317·6	−22·1	21	155	342f
G	9225	·685	279·5	303·6	+11·7	0	3	
	9226	·945	80·5	188·6	+11·3	27	118	192c
		·845	65·7					152
		·886	112·0					126
		·962	98·9					81
		·990	76·1					79
Aug. 22			(+18·5)	(260·2)	(+7·0)	(48)	(276)	(1509)
1920.			°	°	°			
235·595		·958	253·9					184
		·873	276·2					74
		·837	287·8					164
G	9222	·969	245·2	317·0	−21·8	22	149	444f
	9226	·831	81·1	189·2	+11·3	9	91	102f
		·875	102·6					81
		·924	77·2					174
Aug. 23			(+18·8)	(245·8)	(+7·0)	(31)	(240)	(1223)
236·638		·990	246·0					75
		·930	288·1					197
		·912	279·6					88
		·762	281·0					168
G	9226	·673	81·5	189·5	+10·8	15	44	71f
		·808	77·7					150
		·852	113·1					170
		·944	76·4					110
		·980	95·5					69
Aug. 24			(+19·1)	(232·0)	(+7·0)	(15)	(44)	(1098)
237·448		·977	288·7					193
		·956	281·9					121
		·949	271·4					44
		·866	281·7					210
C	9226	·520	79·8	190·0	+11·3	9	37	
		·717	75·7					126
		·913	71·7					102
		·937	95·6					55
Aug. 25			(+19·3)	(221·3)	(+7·1)	(9)	(37)	(851)
238·352		·952	282·1					253
		·864	286·2					166
G	9226	·331	76·5	190·2	+11·1	13	29	
		·855	102·4					145
Aug. 26			(+19·6)	(209·3)	(+7·1)	(13)	(29)	(564)
239·356		·947	293·9					182
		·941	282·7					147
G	9226	·111	50·8	191·1	+11·0	8	14	
		·933	69·7					192
Aug. 27			(+19·9)	(196·1)	(+7·1)	(8)	(14)	(521)
240·605		·899	276·9					127
G		·800	282·6					181
	895a	·124	5·7	178·9	+14·2	0	8	

Group 9226. Aug. 22–30. Intermittent. A spot dividing by Aug. 24 into two portions which have disappeared by Aug. 28. A small ephemeral spot appears on Aug. 30.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures.		Position.		Area.		
		Dist.	Pos. Angle.	Long.	Lat.	Umbræ.	Whole Spots.	Faculæ.
1920.			°	°	°			
240·605		·805	69·8					179
		·884	102·6					66
G		·916	72·7					103
		·967	107·0					108
Aug. 28			(+20·2)	(179·6)	(+7·1)	(0)	(8)	(764)
241·441		·959	279·4					136
		·902	281·8					256
C	9227	·899	110·1	108·0	−14·5	21	75	167*c*
		·799	105·9					93
		·849	70·3					142
		·957	69·1					77
Aug. 29			(+20·5)	(168·5)	(+7·2)	(21)	(75)	(871)
242·352		·955	281·5					139
		·828	286·6					80
G	9226	·557	279·4	190·4	+11·2	1	8	
	9227	·784	115·3	109·5	−14·7	47	155	229*c*
	9228	·830	106·7	103·0	− 9·6	0	5	56*c*
Aug. 30			(+20·7)	(156·5)	(+7·2)	(48)	(168)	(504)
243·342		·853	294·4					153
		·706	282·0					62
C	9227	·645	122·8	109·5	−14·4	68	349	
	9228	·699	110·8	102·2	− 8·9	1	7	
Aug. 31			(+21·0)	(143·4)	(+7·2)	(69)	(356)	(215)
244·347		·946	247·0					76
		·940	293·7					161
C		·830	281·2					163
	895b	·251	31·8	122·2	+19·4	0	5	
	9229	·377	152·8	120·1	−12·4	3	6	
	9227	·502	136·2	109·3	−14·4	82	618	
Sept. 1			(+21·2)	(130·2)	(+7·2)	(85)	(629)	(400)
245·323		·968	297·3					110
		·911	305·1					47
C		·911	280·8					319
	9229	·338	189·7	120·6	−12·2	2	6	
	9227	·383	158·7	109·1	−13·7	219	1140	
	895c	·475	131·9	96·2	−11·7	0	3	
Sept. 2			(+21·5)	(117·3)	(+7·2)	(221)	(1149)	(476)
1920.			°	°	°			
246·665		·963	283·2					71
G		·859	283·8					157
	9227	·400	205·6	109·7	−13·9	272	1472	
Sept. 3			(+21·8)	(99·5)	(+7·2)	(272)	(1472)	(228)
247·339		·931	287·9					53
	9230	·432	292·5	115·0	+16·0	2	6	
C	9227	·477	221·8	109·6	−13·9	214	1427	
		·944	79·0					92
Sept. 4			(+22·0)	(90·6)	(+7·2)	(216)	(1433)	(145)
248·586		·786	290·9					135
	895d	·882	253·0	133·3	−11·3	6	20	40*c*
G	9230	·678	283·6	116·9	+14·5	13	51	
	9227	·674	239·4	110·8	−14·2	251	1536	
		·930	81·4					151
Sept. 5			(+22·2)	(742)	(+7·2)	(270)	(1607)	(326)
249·558		·968	256·3					110
		·899	289·1					145
G	9230	·841	282·0	119·0	+13·9	7	32	142*f*
	9227	·816	247·2	111·9	−13·9	225	1688	499*c*
		·822	81·9					117
		·930	82·8					152
Sept. 6			(+22·5)	(61·3)	(+7·2)	(232)	(1720)	(1165)
250·640		·973	288·5					96
G	9230	·958	282·9	121·3	+14·4	3	24	207*f*
	9227	·931	252·1	112·6	−13·7	228	1800	791*c*
Sept. 7			(+22·7)	(47·0)	(+7·2)	(231)	(1824)	(1094)
251·381		·963	284·9					154
	9227	·981	254·5	113·7	−13·7	349	1991	1068*c*
G	9231	·944	107·5	329·5	−13·8	0	34	153*c*
		·903	76·9					83
Sept. 8			(+22·9)	(37·3)	(+7·2)	(349)	(2025)	(1458)
252·348		·875	300·6					69*c*
	9227	·989	254·3	103·6	−14·2	36	259	407*c*
	9231	·849	111·1	330·1	−13·6	16	70	138*c*
G		·844	75·9					93
		·944	112·9					192
		·965	80·5					83
		·967	70·3					129
Sept. 9			(+23·1)	(24·5)	(+7·2)	(52)	(329)	(1111)

Group 9227. Aug. 29–Sept. 9. Four small spots on Aug. 29 developing rapidly into a very large irregular stream. The leader is for a short time one of regular type, but by Sept. 1 it is showing a composite umbra and by the following day a large double spot has formed. This divides completely into two parts which separate considerably in longitude. The rear of the stream is at first represented by a small cluster which becomes a large and very composite spot. The remaining spots of the group are small and unstable.

Group 9228. Aug. 30–31. One or two very small spots.

Group 9229. Sept. 1–2. A pair of very small spots.

Group 9230. Sept. 4–7. A small but distinct spot with a few very small followers.

Group 9231. Sept. 8–15. A long sparse stream led by a regular spot. The whole group disappears somewhat suddenly between Sept. 15 and 16.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
253·350	9231	·695	117·1	332·1	−12·9	39	167	
		·901	118·8					221
G		·914	70·2					189
		·921	79·5					197
		·943	88·7					222
Sept. 10			(+23·3)	(11·3)	(+7·2)	(39)	(167)	(829)
254·346	*896a*	·140	320·3	3·3	+13·3	0	2	
	9231	·497	130·2	335·4	−12·0	49	219	
		·800	80·3					152
G		·813	69·3					241
		·831	122·6					203
		·850	91·7					243
		·954	74·5					164
Sept. 11			(+23·5)	(358·1)	(+7·2)	(49)	(221)	(1003)
255·355	9232	·365	277·5	6·2	+ 9·4	5	22	
	9231	·360	156·1	336·3	−12·0	43	251	
G		·707	94·1					109
		·876	72·9					126
		·895	84·8					111
Sept. 12			(+23·7)	(344·8)	(+7·2)	(48)	(273)	(346)
256·359	9232	·554	275·1	5·3	+ 8·8	52	194	
G	9231	·338	192·9	335·9	−11·9	36	172	
		·884	62·4					94
Sept. 13			(+23·9)	(331·5)	(+7·2)	(88)	(366)	(94)
257·456	9232	·757	275·7	6·6	+ 9·0	121	586	183*c*
	9231	·454	226·9	336·8	−11·3	31	123	
G		·931	82·3					181
		·945	101·3					101
		·958	71·1					239
Sept. 14			(+24·1)	(317·1)	(+7·2)	(152)	(709)	(704)
258·101	9232	·856	276·2	7·8	+ 9·1	114	702	341*c*
	9231	·557	237·4	336·9	−11·1	23	97	
K		·889	81·6					208
		·891	103·4					131
		·928	71·0					215
Sept. 15			(+24·2)	(308·5)	(+7·2)	(137)	(799)	(895)
259·599		·739	245·4					345
	9232	·985	278·0	9·6	+ 9·1	164	1138	669*c*
259·599	*896b*	·228	28·0	282·3	+18·7	0	1	
G		·982	100·2					88
Sept. 16			(+24·4)	(288·8)	(+7·2)	(164)	(1139)	(1102)
260·355		·953	354·9					72
		·852	250·4					272
C	9232	·994	277·8	3·3	+ 8·5	56	275	395*c*
		·921	107·2					105
		·943	100·9					244
		·991	78·3					101
Sept. 17			(+24·5)	(278·8)	(+7·2)	(56)	(275)	(1189)
261·366		·928	253·9					213
		·870	240·2					200
C		·850	104·5					155
		·933	78·8					99
Sept. 18			(+24·7)	(265·4)	(+7·1)	(0)	(0)	(667)
262·358		·954	254·6					46
		·903	241·9					153
		·800	266·6					174
		·795	280·8					118
G		·780	291·0					163
		·735	107·8					145
		·847	60·2					134
		·850	77·1					140
		·933	77·0					75
Sept. 19			(+24·8)	(252·3)	(+7·1)	(0)	(0)	(1148)
263·362		·959	245·8					96
		·898	269·0					175
G		·898	280·3					163
		·890	288·8					169
		·853	75·4					79
Sept. 20			(+25·0)	(239·1)	(+7·1)	(0)	(0)	(682)
264·337		·973	238·9					51
		·967	272·3					106
		·961	289·9					205
		·955	280·6					110
C		·820	282·9					153
	896c	·443	36·9	208·8	+27·5	0	2	
	9233	·990	101·3	146·2	−10·0	34	147	204*f*
		·903	82·1					101
		·914	71·1					107

Group 9232. Sept. 12–17. A small cluster of faint spots developing rapidly into a large stream containing two chief components and two clusters of very small spots.
Group 9233. Sept. 21–Oct. 1. A regular spot diminishing, usually with one or two very small companions.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
264·337		·920	4·6					111
		·921	351·1					84
C		·937	91·3					62
Sept. 21			(+25·1)	(226·2)	(+7·1)	(34)	(149)	(1294)
265·563		·945	277·5					100
		·923	287·5					164
	9233	·912	104·3	146·4	− 9·9	21	125	350*f*
G	9234	·956	70·9	135·9	+20·2	0	14	280*c*
	9235	·989	103·0	130·6	−11·6	95	617	417*c*
		·989	73·5					128
Sept. 22			(+25·3)	(210·0)	(+7·0)	(116)	(756)	(1439)
266·413		·975	285·2					97
		·857	297·4					122
	9233	·819	107·2	146·4	− 9·8	19	123	244*j*
G	9234	·865	71·2	138·6	+19·8	3	7	206*n*,
	9235	·942	104·2	130·6	−10·8	132	778	825*c*
		·956	71·4					260
Sept. 23			(+25·4)	(198·8)	(+7·0)	(154)	(908)	(1754)
267·340		·836	284·7					150
	9233	·689	112·1	146·4	− 9·6	14	114	186*f*
	9234	·770	68·7	136·7	+20·8	0	8	117*c*
C	9235	·862	107·5	129·8	−11·3	155	825	838*c*
	9236	·968	106·7	113·8	−14·2	22	98	484*f*
		·883	71·5					222
Sept. 24			(+25·5)	(186·6)	(+7·0)	(191)	(1045)	(1997)
268·388		·914	283·6					209
	9237	·230	308·8	183·4	+15·0	5	20	
	9233	·524	122·4	146·2	−10·1	15	103	
C	9235	·723	112·4	130·1	−11·0	157	823	249*e*
	9236	·888	110·0	113·6	−14·2	21	111	892*f*
		·748	68·8					120
		·853	74·4					52
		·949	72·0					55
Sept. 25			(+25·6)	(172·8)	(+6·9)	(198)	(1057)	(1577)
269·360		·946	285·6					134
		·846	255·9					138
G	9237	·429	289·6	184·5	+14·5	20	49	
	9233	·370	140·6	146·2	− 9·9	22	122	
1920.			°	°	°			
269·360	9235	·572	120·5	129·9	−10·8	191	909	
G	9236	·778	114·3	113·1	−13·9	25	122	978*f*
		·912	66·7					106
Sept. 26			(+25·7)	(159·9)	(+6·9)	(258)	(1202)	(1356)
270·596		·918	256·9					214
	9237	·676	283·4	186·1	+14·1	29	111	
	9233	·298	189·2	146·4	−10·2	9	54	
	9238	·347	177·0	142·5	−13·4	0	3	
	896d	·338	161·8	137·4	−11·9	2	12	
G	9234	·265	23·2	137·2	+20·8	1	2	
	9235	·375	143·9	130·6	−11·0	135	759	
	9236	·606	123·5	112·4	−13·7	32	165	269*f*
	9239	·562	72·8	109·9	+15·2	13	32	
	9240	·952	80·8	70·8	+10·8	0	6	88*f*
		·936	102·4					74
Sept. 27			(+25·8)	(143·6)	(+6·8)	(221)	(1144)	(645)
271·474		·957	258·1					112
		·883	298·7					135
	9237	·816	282·4	187·0	+14·1	54	259	252*c*
	9233	·384	220·1	146·5	−10·4	11	41	
	9238	·369	205·9	141·5	−13·2	2	12	
G	*896e*	·231	3·5	131·1	+20·1	1	2	
	9235	·313	175·5	130·6	−11·3	101	576	
	9236	·478	137·1	112·5	−14·0	27	130	
	9239	·383	66·6	110·8	+15·0	32	87	
	9240	·874	81·5	70·7	+10·7	0	4	105*c*
		·873	104·7					79
Sept. 28			(+25·9)	(132·0)	(+6·8)	(228)	(1111)	(683)
272·364	9237	·909	282·7	186·3	+14·4	46	308	320*c*
	9233	·517	237·0	146·3	−10·2	5	15	
	9235	·360	210·8	131·1	−11·3	72	413	
G	9239	·188	42·4	112·8	+14·7	42	166	
	9236	·375	158·7	112·3	−13·6	23	137	
	896f	·303	60·6	104·5	+15·0	1	3	
		·772	81·0					82
		·873	99·2					45
Sept. 29			(+26·0)	(120·3)	(+6·8)	(189)	(1042)	(447)
273·422		·871	262·4					122
		·866	280·5					120
G	9237	·983	283·8	186·9	+14·8	60	267	441*nf*
	9233	·692	247·6	146·7	−10·2	7	10	77*c*
	896g	·548	285·5	139·1	+14·1	0	2	

Group 9234. Sept. 22–27. Intermittent. Two small spots, both disappearing by Sept. 25. A very small spot appears temporarily on Sept. 27.
Group 9235. Sept. 22–Oct. 4. A very large regular spot which becomes elongated. After Sept. 25 it divides into two portions which persist to the west limb as a pair of small regular spots. Several clusters of small companions accompany the main spot, and indicate a disturbed area of considerable extent shown also by conspicuous faculæ.
Group 9236. Sept. 24–Oct. 5. Return of Group 9227. Part of the same general disturbance with Group 9235. A small but well-formed regular spot with a cluster of very small followers, after Sept. 26, and one or two more distant companions on Oct. 3 and 4.
Group 9237. Sept. 25–30. A small stream developing past the Central Meridian, whose leading component increases considerably towards the west limb.
Group 9238. Sept. 27–28. A few minute spots between Groups 9233 and 9235.
Group 9239. Sept. 27–Oct. 5. A small stream of spots on Sept 27 developing into one of normal type by Sept. 30. The rear portion then disappears rapidly, leaving the leader as a regular spot.
Group 9240. Sept. 27–28. A single very small spot.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
273·422	9235	·514	233·3	131·1	−11·8	64	287	
	896h	·374	208·8	116·9	−12·5	2	12	
G	9239	·178	319·1	113·2	+14·4	60	276	
	9236	·365	194·9	111·8	−13·9	29	144	
Sept. 30			(+26·1)	(106·3)	(+6·7)	(222)	(998)	(760)
274·332		·961	185·4					106
	9233	·822	253·1	147·0	− 9·8	2	9	77*c*
	9235	·657	243·9	131·2	−11·4	41	244	
	896i	·605	229·7	123·1	−17·1	0	3	
C	9239	·363	291·8	114·5	+14·0	39	221	
	9236	·458	219·8	111·8	−14·1	18	91	
	896j	·474	205·5	106·7	−18·6	1	4	
	9241	·970	84·3	18·0	+ 7·2	24	87	592*n*
		·950	96·3					156
Oct. 1			(+26·1)	(94·3)	(+6·7)	(125)	(659)	(931)
275·355		·911	253·8					251
		·802	294·6					164
		·742	287·6					70
		·710	245·4					133
G		·659	297·7					65
	9235	·808	250·0	131·5	−11·9	58	268	293*c*
	9239	·573	284·2	115·5	+13·5	41	192	
	9236	·609	236·4	112·2	−14·1	13	96	
	9242	·344	127·4	64·9	− 5·7	2	7	
	9241	·892	85·0	17·4	+ 7·4	26	104	741*n*
Oct. 2			(+26·2)	(80·8)	(+6·6)	(140)	(667)	(1717)
276·379		·983	256·8					130
		·919	292·3					179
		·900	284·4					56
		·871	239·6					49
		·862	252·0					332
C		·788	294·4					71
	9235	·917	253·6	131·1	−12·2	45	245	418*n*
	9239	·760	282·2	116·9	+13·6	25	155	80*c*
	9236	·751	245·2	111·7	−13·6	15	120	131*sf*
	9242	·200	157·8	63·0	− 4·0	4	12	
	9241	·763	85·6	17·4	+ 7·7	21	99	627*f*
Oct. 3			(+26·2)	(67·3)	(+6·6)	(110)	(631)	(2073)
277·425		·975	283·5					66
		·922	291·9					266
		·818	243·1					301
C	9235	·984	256·2	131·2	−12·2	44	170	701*f*

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
277·425	9239	·895	281·9	117·5	+13·6	24	138	262*f*
	9236	·883	250·3	112·2	−13·9	13	58	279*c*
	9242	·303	226·7	66·2	− 5·6	5	17	
C	9241	·592	85·9	17·1	+ 7·7	26	120	213*f*
	9243	·955	82·3	340·3	+ 9·3	30	152	244*n*
		·944	173·9					57
		·954	105·5					57
Oct. 4			(+26·3)	(53·5)	(+6·5)	(142)	(655)	(2446)
278·371		·991	259·9					101
		·914	293·3					54
		·907	245·4					332
	9239	·967	282·7	117·0	+13·9	12	135	327*f*
G	9236	·959	252·7	111·9	−14·5	21	52	374*f*
	9242	·485	245·7	67·3	− 5·8	7	24	
	9241	·430	85·5	15·5	+ 7·7	23	113	
	9243	·871	82·7	340·1	+ 9·5	83	478	272*n*
		·899	106·6					75
Oct. 5			(+26·3)	(41·0)	(+6·4)	(146)	(802)	(1535)
279·312		·984	255·2					353
		·979	285·5					238
		·973	246·4					279
	9242	·657	253·7	67·8	− 5·7	0	6	
C	9241	·182	83·1	18·1	+ 7·6	19	93	
	9243	·751	83·0	339·7	+ 9·5	92	508	77*nf*
		·854	109·8					63
		·958	81·4					95
		·965	90·2					103
		·980	70·8					162
Oct. 6			(+26·4)	(28·6)	(+6·4)	(111)	(607)	(1370)
280·440		·818	258·2					95
	9241	·044	295·7	16·0	+ 7·4	9	79	
	9244	·562	75·8	339·8	+13·2	1	5	
G	9243	·558	83·0	339·7	+ 9·1	81	438	
	9245	·963	108·6	302·3	−15·9	62	549	278*c*
	9246	·988	106·3	294·9	−15·0	41	186	199*f*
		·891	85·6					125
		·916	71·4					161
Oct. 7			(+26·4)	(13·7)	(+6·3)	(194)	(1257)	(858)
281·496		·935	261·0					92
	9241	·305	274·6	17·6	+ 7·4	12	50	
G	9244	·330	68·0	341·6	+13·0	7	34	
	9243	·344	81·0	339·8	+ 9·0	93	436	

Group 9241. Oct. 1–10. Return of Group 9232. A small regular spot followed by a train of a few small unstable spots which have disappeared by Oct. 9.
Group 9242. Oct. 2–6. A few small unstable spots arranged in a stream.
Group 9243. Oct. 4–16. A pair of spots at the east limb which at first grow rapidly. The rear spot breaks into two portions on Oct. 9, one of which remains with the leader as a tiny companion. From Oct. 7 to 10, there are one or two small attendants.
Group 9244. Oct. 7–13. A small stream *n* Group 9243.
Group 9245. Oct. 7–17. A large composite spot preceded by a cluster of unstable components.
Group 9246. Oct. 7–17. A group closely following Group 9245 and evidently connected with it. A cluster of very small spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
281·496	9245	·882	112·8	301·9	−16·7	66	524	257c
	9246	·937	109·4	293·4	−15·6	54	234	402c
G		·786	86·2					151
		·816	71·2					226
		·944	79·8					83
Oct. 8			(+26·4)	(359·8)	(+6·3)	(232)	(1278)	(1211)
282·443	9241	·541	273·6	20·1	+ 7·2	11	29	
	9244	·135	26·3	343·8	+13·1	6	27	
	9243	·134	70·2	340·0	+ 8·8	80	323	
G	9245	·764	117·5	302·6	−16·2	79	455	219c
	9246	·844	113·5	293·9	−16·0	17	123	229c
		·878	79·4					74
		·922	69·8					63
Oct. 9			(+26·4)	(347·3)	(+6·2)	(193)	(957)	(585)
283·344	9241	·707	274·0	20·5	+ 7·1	6	14	211c
	9244	·200	302·6	345·3	+12·2	10	38	
C	9243	·095	298·0	340·2	+ 8·6	55	270	
	9247	·501	83·7	305·3	+ 8·4	2	5	
	9245	·633	124·9	302·8	−16·1	62	435	
	9246	·738	119·4	293·4	−16·7	10	82	187c
Oct. 10			(+26·4)	(335·4)	(+6·1)	(145)	(844)	(398)
284·404		·900	277·4					162
		·790	283·5					106
		·785	273·6					101
	9244	·388	287·8	343·5	+12·4	8	30	
G	9243	·325	276·2	340·4	+ 7·8	42	244	
	9247	·260	77·3	306·6	+ 9·2	62	204	
	9245	·494	139·0	301·8	−16·0	64	403	
	9246	·585	130·2	293·7	−16·8	7	48	
		·900	62·2					50
		·949	75·0					69
Oct. 11			(+26·4)	(321·4)	(+6·1)	(183)	(929)	(488)
285·385		·924	278·1					537
		·824	276·4					207
	9244	·564	283·1	342·6	+12·3	8	55	
G	9243	·530	274·9	340·6	+ 7·7	34	186	
	9247	·055	0·8	308·5	+ 9·1	50	213	
	9245	·401	162·4	301·3	−16·5	68	315	
	9246	·459	148·3	293·9	−17·1	8	67	
		·885	75·9					175
Oct. 12			(+26·4)	(308·5)	(+6·0)	(168)	(836)	(919)
1920.			°	°	°			
286·424		·944	288·8					40
		·935	277·4					265
		·830	278·4					63
	9244	·739	281·8	342·5	+12·7	8	40	78c
G	9243	·717	274·9	340·7	+ 7·7	30	154	69c
	9247	·268	283·0	310·1	+ 9·1	39	183	
	9245	·394	195·2	301·0	−16·4	35	266	
	9246	·394	170·8	291·0	−16·8	4	30	
		·792	73·4					152
Oct. 13			(+26·4)	(294·8)	(+5·9)	(116)	(673)	(667)
287·436		·900	252·5					68
		·862	281·2					23
	9243	·860	275·4	340·9	+ 7·7	23	126	107c
G	9247	·505	278·1	311·7	+ 9·2	31	145	
	9245	·500	222·6	301·9	−16·0	35	213	
	9246	·466	211·6	296·2	−17·6	5	21	
	9248	·518	116·1	253·5	− 8·0	1	5	
		·863	102·3					139
Oct. 14			(+26·4)	(281·4)	(+5·9)	(95)	(510)	(337)
288·369		·945	282·3					353
	9243	·951	276·1	341·4	+ 7·6	18	118	320c
	9247	·692	277·3	313·0	+ 9·2	36	163	186p
G	9245	·630	234·1	301·2	−16·7	19	139	
	9246	·578	227·3	295·5	−17·8	4	32	
	9248	·369	129·4	252·4	− 8·0	28	82	
	9249	·976	77·7	191·0	+13·3	18	104	243n
Oct. 15			(+26·3)	(269·1)	(+5·8)	(123)	(638)	(1102)
289·341		·833	268·3					92
		·778	291·4					86
	9243	·996	277·3	341·6	+ 7·7	11	122	326n
	9247	·836	277·5	313·2	+ 9·4	39	175	353c
C	9245	·758	241·8	300·4	−16·8	7	50	388p
	9246	·731	239·3	297·4	−17·6	3	9	161f
	9248	·243	163·9	252·4	− 7·7	50	238	
	9249	·913	78·2	190·0	+13·0	19	90	283n
		·951	57·9					78
Oct. 16			(+26·3)	(256·3)	(+5·7)	(129)	(684)	(1767)
290·109		·878	289·1					199
	9247	·924	277·9	314·0	+ 9·4	37	198	505c
K	9245	·856	246·5	301·0	−16·7	5	30	622nf
	9246	·811	245·7	296·2	−15·9	0	20	338sf

Group 9247. Oct. 10–17. A single small spot on Oct. 10 developing with great rapidity into a stream of normal type. The rear component is never prominent and soon disappears.

Group 9248. Oct. 14–22. A small spot seen on Oct. 14 developing into a stream of normal type with brief maximum. None of the spots are well-formed.

Group 9249. Oct. 15–22. Return of Group 9237. A small decreasing regular spot. Some very small faint companions appear to the *s* on Oct. 19.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
290·109	9248	·253	207·3	252·9	− 7·3	65	348	
K	9249	·830	77·9	190·0	+13·3	10	68	103*n*
Oct. 17			(+26·3)	(246·2)	(+5·7)	(117)	(664)	(1767)
291·402		·979	251·4					458
		·971	278·0					357
		·960	270·3					97
		·939	291·6					125
G		·922	247·5					677
	9248	·476	243·3	254·4	− 7·4	49	253	
	9250	·353	225·8	243·9	− 8·8	12	38	
	9249	·629	76·6	190·4	+12·7	10	42	158*nf*
	9251	·983	71·9	148·6	+18·8	0	21	167*s*
Oct. 18			(+26·2)	(229·1)	(+ 5·5)	(71)	(354)	(2039)
292·398		·974	249·6					332
		·866	291·7					70
	9248	·660	252·4	255·2	− 7·2	46	164	
G	9250	·531	243·9	244·7	− 8·7	7	30	
	9249	·449	74·5	189·9	+11·9	11	37	
	9251	·932	72·2	146·8	+18·6	19	153	353*n*
		·880	102·2					136
		·972	104·9					422
Oct. 19			(+26·1)	(216·0)	(+5·5)	(83)	(384)	(1313)
293·419	9248	·832	257·5	257·3	− 7·3	24	93	116*c*
	9250	·678	249·5	242·4	− 9·6	0	3	83*p*
	9249	·241	70·3	189·2	+ 9·9	1	10	
	9251	·828	70·6	147·0	+19·0	42	145	284*c*
G		·776	104·9					77
		·894	105·6					387
		·938	69·7					212
		·955	105·3					463
		·991	74·3					144
Oct. 20			(+26·1)	(202·5)	(+5·4)	(67)	(251)	(1766)
294·522		·911	300·2					72
		·876	283·4					162
	9248	·945	260·2	257·6	− 7·4	28	141	283*f*
	9250	·861	256·2	245·7	− 9·1	19	61	111*c*
G	9249	·082	344·6	189·3	+ 9·8	4	14	
	9251	·706	67·2	144·4	+19·8	52	187	167*c*
	9252	·954	108·5	118·1	−15·9	2	8	} 857*c*
	9253	·974	104·8	113·0	−13·0	33	130	
		·769	110·8					220
		·836	67·6					193

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
294·522		·859	110·8					573
G		·955	72·9					576
Oct. 21			(+26·0)	(188·0)	(+5·3)	(138)	(541)	(3214)
295·341		·923	284·8					181
	9248	·993	261·3	259·3	− 8·0	17	127	368*f*
	9250	·937	257·7	245·1	− 9·6	7	37	219*c*
	9249	·191	292·5	187·4	+ 9·3	2	7	
	9251	·561	61·9	145·6	+19·7	30	136	
C	9254	·653	119·1	141·3	−14·2	2	6	
	9252	·880	111·2	119·0	−15·6	9	24	} 1124*c*
	9253	·918	106·6	112·9	−13·0	20	136	
		·739	65·8					192
		·767	112·7					404
		·855	72·2					363
		·928	71·1					488
		·966	111·2					298
Oct. 22			(+25·9)	(177·2)	(+5·2)	(87)	(473)	(3637)
296·469		·987	260·3					73
	9251	·357	45·6	146·7	+19·3	39	178	
	9254	·483	132·7	140·9	−14·3	21	58	
G	9253	·764	111·9	115·8	−13·0	61	190	474*c*
		·687	70·2					157
		·827	70·2					411
		·886	114·4					308
Oct. 23			(+25·8)	(162·3)	(+5·3)	(121)	(426)	(1423)
297·472	*897a*	·659	283·6	190·0	+12·7	0	1	
	9251	·227	352·7	150·8	+18·0	44	204	
	9254	·361	157·1	140·8	−14·4	28	97	
G	9253	·606	119·3	116·4	−13·0	92	238	
		·708	66·3					154
		·811	123·3					304
		·952	73·8					61
Oct. 24			(+25·7)	(149·1)	(+5·0)	(164)	(540)	(519)
298·416		·780	283·4					170
	9251	·333	312·4	151·5	+17·7	50	196	
G	9254	·338	190·6	140·3	−14·5	22	89	
	9253	·465	131·6	115·8	−13·3	52	187	
Oct. 25			(+25·6)	(136·6)	(+4·9)	(124)	(472)	(170)

Group 9250. Oct. 18–22. A small stream immediately *f* Group 9248.
Group 9251. Oct. 18–30. A long stream of unimportant spots led by one of regular type after Oct. 24. The train has died out by Oct. 28 leaving the regular spot.
Group 9252. Oct. 21–22. One or two very small spots in the same area of faculæ with Group 9253.
Group 9253. Oct. 21–30. Return of Group 9236. A spot roughly of regular type, preceding which a broad stream of small unstable spots develops. The group diminishes within a few days, the nucleus of the regular spot being last seen with a near cluster of very small spots.
Group 9254. Oct. 22–28. A pair of small clusters. The following one is alone represented by a small component on Oct. 27, but a small spot is seen the next day in the position of the leading cluster.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
299·423		·894	282·7					211
	9251	·529	295·1	153·2	+17·1	31	133	
	9254	·434	220·9	140·3	−14·5	13	34	
G	9255	·360	193·1	128·1	−15·6	4	12	
	9256	·251	27·7	116·3	+17·5	7	24	
	9253	·328	156·7	115·7	−12·7	27	129	
		·933	94·2					74
Oct. 26			(+25·5)	(123·3)	(+4·8)	(82)	(332)	(285)
300·482		·972	286·4					90
		·903	283·1					56
	9251	·708	289·2	153·5	+16·8	36	158	114*p*
	9254	·568	231·5	136·9	−16·5	3	9	
G	9255	·468	222·7	128·6	−15·6	29	109	
	9256	·269	322·5	119·2	+16·9	4	19	
	9253	·313	191·1	112·9	−13·1	15	99	
		·806	96·9					105
		·977	80·5					113
Oct. 27			(+25·3)	(109·4)	(+4·7)	(87)	(394)	(478)
301·461		·949	280·2					107
		·847	260·1					96
	9251	·843	287·0	153·6	+16·8	20	138	248*f*
	9254	·741	245·7	140·5	−14·4	0	10	296*c*
G	9255	·629	237·1	129·7	−16·1	40	223	
	9256	·432	296·8	120·0	+15·3	1	2	
	9253	·408	221·6	112·6	−13·3	7	34	
		·931	79·2					371
Oct. 28			(+25·2)	(96·5)	(+4·6)	(68)	(407)	(1118)
302·404		·955	352·6					48
		·933	258·1					74
		·869	252·7					529
		·745	291·8					85
	9251	·933	286·3	153·1	+16·8	16	99	574*f*
G	9255	·774	244·1	130·4	−16·6	37	173	197*c*
	9253	·554	236·3	112·2	−13·9	6	24	
	897b	·423	301·9	106·0	+17·1	2	9	
		·837	81·7					299
		·935	77·6					338
Oct. 29			(+25·1)	(84·0)	(+4·5)	(61)	(305)	(2144)
303·348		·947	255·9					497
		·747	290·9					206
C		·725	236·9					104

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
303·348	9251	·987	286·7	153·1	+17·2	48	218	441*f*
	9255	·893	247·9	131·5	−17·4	21	150	521*c*
C	9253	·709	246·3	113·2	−13·1	0	8	130*n*
	897c	·892	85·1	8·5	+ 6·4	0	4	175*n*
	9257	·967	81·6	356·1	+ 9·3	12	29	266*f*
		·849	81·3					121
Oct. 30			(+24·9)	(71·6)	(+4·5)	(81)	(409)	(2461)
304·360		·963	292·4					216
		·961	346·2					48
		·852	289·0					357
		·834	252·6					348
		·808	239·0					140
C		·753	292·0					155
	9255	·978	249·2	133·6	−19·2	24	148	651*f*
	9257	·897	81·2	354·3	+ 9·9	22	80	187*c*
	9258	·967	102·8	344·5	−11·1	80	338	145*c*
		·773	80·7					176
		·968	76·2					106
Oct. 31			(+24·8)	(58·2)	(+4·4)	(126)	(566)	(2529)
305·346		·987	255·6					358
		·942	288·2					332
		·936	330·4					31
		·932	254·3					498
		·898	243·2					207
		·857	293·4					294
C		·837	232·6					78
	9259	·501	297·6	72·8	+17·2	2	16	
	9257	·767	80·2	355·2	+10·2	24	66	150*c*
	9258	·882	105·0	345·2	−11·0	161	857	300*c*
		·877	83·5					61
		·903	75·8					192
		·989	83·3					177
Nov. 1			(+24·6)	(45·2)	(+4·3)	(187)	(939)	(2678)
306·453		·967	255·4					166
		·966	288·8					112
		·966	246·2					205
		·926	238·2					141
G		·918	296·3					189
	9259	·687	291·9	72·5	+17·9	1	8	
	9260	·401	63·8	8·9	+14·0	0	3	
	9257	·580	77·6	355·6	+10·5	21	50	
	9258	·725	109·8	346·7	−11·3	215	1185	
		·777	74·8					98

Group 9255. Oct. 26–31. A group linking up the disturbances of Groups 9253 and 9254. A pair of spot centres at which a regular spot and a small composite follower respectively appear.
Group 9256. Oct. 26–28. An extended cluster of very small spots. One component alone remains on Oct. 28.
Group 9257. Oct. 30–Nov. 9. A very small regular spot followed by unstable companions which together make up a stream.
Group 9258. Oct. 31–Nov. 11. A very large stream of normal type which develops rapidly. The leader is very large and shows several bright filaments across the umbra. The follower is a large compact cluster of spots rather than a single composite component. A small unstable cluster is situated between it and the leader.
Group 9259. Nov. 1–2. Two or three very small spots.
Group 9260. Nov. 2–3. A small ephemeral spot seen each day *np* Group 9257.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
306·453		·944	81·6					219
		·985	106·7					166
Nov. 2			(+24·4)	(30·6)	(+4·1)	(237)	(1246)	(1296)
307·340		·979	239·6					67
		·970	295·6					97
		·831	287·4					143
	897d	·210	293·8	30·1	+ 8·8	2	5	
	9260	·295	52·1	5·1	+14·4	0	5	
C	9257	·385	72·2	357·1	+10·5	13	62	
	9258	·579	115·6	346·9	−11·0	176	1122	
		·841	94·4					74
		·868	80·2					300
		·942	68·9					94
		·942	81·0					221
		·950	109·4					465
Nov. 3			(+24·2)	(18·9)	(+4·1)	(191)	(1194)	(1461)
308·524		·935	287·2					135
	9257	·124	31·8	359·5	+ 9·9	11	51	
	9258	·375	132·7	347·1	−11·0	203	1059	
		·731	79·8					110
G		·832	114·0					330
		·833	79·6					156
		·858	66·6					94
		·929	110·0					391
Nov. 4			(+24·0)	(3·3)	(+3·9)	(214)	(1110)	(1216)
309·348		·985	287·1					121
	9257	·157	315·9	358·8	+10·2	11	65	
	9258	·267	158·9	346·9	−10·5	179	1002	
C		·762	117·7					235
		·895	113·3					392
		·968	67·7					57
Nov. 5			(+23·9)	(352·5)	(+3·8)	(190)	(1067)	(805)
310·334		·791	280·3					190
	9257	·373	287·0	0·6	+ 9·7	11	53	
	9258	·276	210·3	347·6	−10·1	187	1166	
	9261	·153	353·4	340·5	+12·4	1	3	
C		·802	116·7					249
		·922	98·1					76
		·936	68·9					157
		·975	98·9					124
Nov. 6			(+23·7)	(339·5)	(+3·7)	(199)	(1222)	(796)
1920.			°	°	°			
311·347		·912	254·2					39
		·881	280·9					382
	898a	·898	253·4	28·0	−13·2	0	7	126*p*
	9257	·585	281·1	1·5	+ 9·4	7	17	
	9258	·440	239·8	348·7	− 9·4	145	1018	
C	9261	·290	304·4	340·2	+12·9	31	99	
	898b	·129	60·2	319·7	+ 7·2	0	3	
	898c	·317	66·2	309·0	+10·8	0	6	
		·898	101·5					182
		·974	101·2					187
		·993	85·7					65
Nov. 7			(+23·4)	(326·1)	(+3·6)	(183)	(1150)	(981)
312·455		·989	256·4					141
		·973	278·8					149
		·900	279·8					86
	9257	·769	279·2	1·6	+ 9·3	2	5	116*c*
	9258	·647	251·0	349·7	− 9·4	166	780	
G	9261	·501	289·9	340·3	+12·9	16	42	
	898d	·169	324·2	317·3	+11·3	0	1	
	898e	·927	83·9	243·6	+ 6·9	0	4	173*sf*
		·769	103·9					134
		·892	72·4					77
		·896	103·8					241
Nov. 8			(+23·2)	(311·5)	(+3·5)	(184)	(832)	(1117)
313·095		·917	279·5					188
	9257	·855	279·3	1·8	+ 9·7	2	5	297*nf*
	9258	·761	255·3	351·0	− 8·8	140	823	223*c*
K	9261	·623	286·7	340·7	+13·0	17	45	
		·846	106·1					273
		·880	87·4					201
		·882	69·5					128
Nov. 9			(+23·1)	(303·1)	(+3·4)	(159)	(873)	(1310)
314·598		·968	280·7					243
	9258	·942	259·4	352·5	− 8·9	95	698	838*c*
G	9261	·868	283·1	343·1	+13·0	6	9	155*f*
Nov. 10			(+22·7)	(283·2)	(+3·3)	(101)	(707)	(1236)
315·339		·973	279·4					58
		·914	283·5					366
C		·775	274·9					169
		·706	287·7					78
	9258	·982	260·5	351·8	− 8·7	99	714	1163*c*

Group 9261. Nov. 6–10. A small stream on the same meridian as Group 9258 but *n* of the equator.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
315·339	*898f*	·440	124·7	251·9	−11·5	0	3	
		·969	73·9					117
Nov. 11			(+22·5)	(273·5)	(+3·2)	(99)	(717)	(1951)
316·420		·991	258·1					408
		·986	282·4					237
		·877	278·8					216
		·844	248·2					190
G		·764	280·0					120
		·720	242·6					155
	9262	·633	269·7	298·3	+ 2·2	7	41	
		·879	74·4					123
		·975	95·2					95
Nov. 12			(+22·2)	(259·2)	(+3·0)	(7)	(41)	(1544)
317·338		·961	276·4					142
		·919	249·3					290
		·896	283·2					180
C		·826	246·8					320
		·727	237·8					105
	898g	·880	294·0	307·3	+22·4	0	7	100*c*
	9262	·767	270·0	297·0	+ 1·9	24	89	82*c*
		·924	96·6					159
Nov. 13			(+22·0)	(247·1)	(+2·9)	(24)	(96)	(1378)
318·400		·976	250·3					277
		·961	282·3					142
		·955	292·5					125
		·918	250·9					368
C		·882	297·9					67
		·865	240·1					101
	9262	·904	270·1	297·6	+ 1·3	24	147	318*c*
	9263	·989	72·2	151·4	+18·0	36	223	165*c*
		·812	98·7					145
		·909	58·1					73
Nov. 14			(+21·7)	(233·1)	(+2·8)	(60)	(370)	(1781)
319·340		·979	253·5					334
		·931	245·3					231
		·927	287·9					84
C		·851	290·7					102
	9262	·977	270·5	298·2	+ 1·0	44	179	386*f*
	9263	·943	71·7	150·6	+18·1	46	212	250*c*
		·967	106·3					320
Nov. 15			(+21·5)	(220·7)	(+2·7)	(90)	(391)	(1707)

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
320·411		·914	257·1					118
		·902	290·2					86
		·798	257·6					107
	9264	·690	249·6	247·8	−11·9	10	27	
G	9263	·843	69·8	150·4	+18·3	48	211	267*c*
		·878	109·8					346
		·926	66·1					155
		·972	110·4					303
		·977	101·2					81
Nov. 16			(+21·2)	(206·6)	(+2·6)	(58)	(238)	(1463)
321·450		·933	254·9					103
	9264	·851	255·5	249·7	−10·9	0	9	148*s*
	898h	·232	129·7	182·6	− 6·1	1	2	
	9263	·703	65·9	150·5	+18·5	32	190	
G		·747	113·1					178
		·831	63·5					119
		·889	110·1					406
		·931	70·9					211
		·969	105·0					193
Nov. 17			(+20·9)	(192·9)	(+2·5)	(33)	(201)	(1358)
322·513		·983	259·1					72
		·954	348·9					52
		·940	256·3					216
		·902	288·3					86
		·899	275·1					109
	9263	·542	58·3	149·9	+18·5	27	152	
		·708	59·5					114
C		·774	113·9					253
		·829	67·7					175
		·888	124·3					81
		·910	108·5					570
		·945	14·7					51
		·945	70·1					217
		·954	0·0					79
		·976	111·9					360
Nov. 18			(+20·5)	(178·9)	(+2·3)	(27)	(152)	(2435)
323·470		·954	271·2					105
	9263	·393	42·2	150·2	+18·9	25	154	
G		·796	111·0					394
		·876	69·8					199
		·928	114·1					442
		·978	77·4					80
Nov. 19			(+20·2)	(166·3)	(+2·2)	(25)	(154)	(1220)

Group 9262. Nov. 12–15. A small spot increasing towards the west limb with small followers and a companion preceding it on Nov. 14.
Group 9263. Nov. 14–27. Return of Group 9251. A regular spot diminishing, with very small attendants on Nov. 20 and 23.
Group 9264. Nov. 16–17. Three very small spots on Nov. 16; a pair on Nov. 17.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
324·344	9263	·299	19·0	148·9	+18·4	23	133	
	9265	·440	41·0	136·8	+21·3	0	7	
C		·725	114·8					207
		·881	60·7					140
		·900	120·2					237
		·927	73·9					112
Nov. 20			(+20·0)	(154·8)	(+2·1)	(23)	(140)	(696)
325·550		·906	282·8					50
	9263	·327	330·1	148·7	+18·3	21	118	
	9265	·312	3·8	137·6	+20·1	1	5	
G		·677	128·8					102
		·818	72·2					166
		·820	126·4					204
		·963	74·0					108
Nov. 21			(+19·6)	(138·9)	(+2·0)	(22)	(123)	(630)
326·449		·971	282·8					55
	9263	·462	308·3	149·3	+18·3	17	91	
G	9266	·982	101·1	48·7	−10·5	31	153	287*f*
		·986	71·9					150
Nov. 22			(+19·3)	(127·0)	(+1·8)	(48)	(244)	(492)
327·464		·922	262·0					90
	9263	·614	298·8	148·0	+18·6	21	96	
G	9266	·922	102·2	47·4	−10·5	47	213	343*c*
	9267	·990	102·4	32·6	−12·0	34	213	327*c*
		·786	70·0					91
		·977	80·0					99
Nov. 23			(+19·0)	(113·6)	(+1·7)	(102)	(522)	(950)
328·510	9268	·794	251·3	150·4	−13·7	15	28	111*c*
	9263	·768	293·0	147·9	+18·5	20	93	200*n*
G	9266	·800	104·6	48·1	−10·6	66	265	266*c*
	9269	·914	100·8	34·7	− 9·2	0	17	} 473*c*
	9267	·933	104·0	32·2	−12·4	32	177	
		·909	79·0					312
Nov. 24			(+18·6)	(99·9)	(+1·6)	(133)	(580)	(1362)
329·421		·778	297·0					63
		·761	240·5					115
	9268	·899	252·9	150·3	−14·6	20	97	213*c*
G	9263	·875	290·5	147·5	+18·6	18	107	168*n*
	898*i*	·704	255·6	131·4	− 8·9	1	4	47*p*
	9266	·649	107·9	49·2	−10·3	44	209	
1920.			°	°	°			
329·421	9269	·787	102·0	37·0	− 8·5	2	7	} 324*c*
	9267	·836	105·9	32·7	−12·4	10	83	
G		·820	83·2					107
		·869	69·7					118
		·951	79·3					138
Nov. 25			(+18·3)	(87·9)	(+1·5)	(95)	(507)	(1293)
330·449		·872	295·7					135
		·866	250·3					248
		·823	234·0					76
	9268	·974	254·1	150·1	−15·1	9	30	263*c*
G	9263	·961	288·9	147·5	+18·5	18	87	161*n*
	9266	·476	116·4	48·7	−11·0	42	170	
	9267	·693	109·5	32·5	−12·4	19	108	154*f*
	9270	·979	98·7	356·6	− 8·2	108	394	306*c*
		·945	79·0					106
Nov. 26			(+17·9)	(74·3)	(+1·3)	(196)	(789)	(1449)
331·309		·930	249·6					386
		·888	293·2					264
		·804	250·2					374
	9263	·995	288·4	147·0	+18·4	5	101	131*nf*
C	9266	·315	133·6	49·6	−11·3	32	150	
	9267	·546	116·6	33·1	−13·0	25	129	
	9270	·921	99·8	356·7	− 8·5	84	422	763*f*
		·860	78·9					170
		·981	76·4					134
Nov. 27			(+17·6)	(63·0)	(+1·2)	(146)	(802)	(2222)
332·343		·983	258·8					141
		·972	290·6					178
		·963	244·8					117
		·897	289·8					119
		·889	248·9					503
C		·822	232·1					106
		·800	294·4					105
	9266	·218	187·0	50·8	−11·3	26	118	
	9267	·361	132·6	33·5	−13·0	14	102	
	9270	·805	101·7	356·6	− 8·8	81	431	873*f*
		·925	72·0					117
		·981	80·6					53
Nov. 28			(+17·2)	(49·3)	(+1·1)	(121)	(651)	(2312)
333·393		·965	249·8					271
		·893	294·9					95
G		·882	237·4					225

Group 9265. Nov. 20–21. One small spot on Nov. 20; a pair on the following day.
Group 9266. Nov. 22–Dec. 2. A stream led by a regular spot which remains alone after Nov. 29.
Group 9267. Nov. 23–30. A regular spot with some small attendants.
Group 9268. Nov. 24–26. A small but definite spot with one or two companions.
Group 9269. Nov. 24–25. Two very small spots *np* Group 9267 in the same area of faculæ.
Group 9270. Nov. 26–Dec. 8. Return of Group 9258. A large regular spot which tends towards composite formation after Nov. 29. One or two very small companions usually appear with it. A large area of faculæ follows.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
333·393		·823	286·7					94
	9266	·360	233·4	52·6	−11·4	20	119	
	9271	·191	204·0	40·0	− 9·1	6	16	
G	9267	·241	172·4	33·6	−12·7	9	29	
	9270	·638	104·8	357·1	− 8·5	81	395	341*f*
		·900	79·4					207
Nov. 29			(+16·8)	(35·5)	(+1·0)	(116)	(559)	(1233)
334·458		·941	240·8					172
		·915	285·9					106
		·915	301·8					106
	898j	·807	258·5	74·4	− 8·8	1	5	
	9266	·560	248·1	53·4	−11·3	7	97	
G	9267	·291	217·2	31·8	−12·6	2	6	
	9270	·441	112·4	357·2	− 8·8	68	377	
		·764	77·4					149
		·909	79·4					159
		·911	70·0					128
		·937	109·6					264
		·982	89·9					207
Nov. 30			(+16·4)	(21·5)	(+0·8)	(78)	(485)	(1291)
335·451		·824	291·8					94
	9266	·726	253·3	53·4	−11·6	12	66	
	9270	·256	131·1	357·2	− 9·0	56	311	
G	*898k*	·915	89·1	302·4	+ 1·1	0	7	304*f*
		·828	111·8					100
		·942	108·2					173
Dec. 1			(+16·1)	(8·4)	(+0·7)	(68)	(384)	(671)
336·372		·960	253·1					158
		·699	251·1					230
	9266	·849	256·0	53·2	−11·5	3	25	160*sf*
	9272	·581	249·1	29·7	−11·3	3	13	
C	*899a*	·233	207·1	2·4	−11·3	4	16	
	9270	·173	184·6	357·0	− 9·3	68	262	
		·806	113·5					178
		·862	85·3					161
		·935	114·1					177
Dec. 2			(+15·7)	(356·2)	(+0·6)	(78)	(316)	(1064)
337·304		·977	289·1					159
		·930	256·9					243
C	9271	·850	259·4	41·5	− 8·7	4	13	} 184*c*
	899b	·811	251·4	36·4	−14·7	2	12	
	9272	·734	254·8	29·9	−10·7	8	27	126*c*
1920.			°	°	°			
337·304	9270	·280	232·6	357·0	− 9·3	64	309	
		·866	116·2					189
Dec. 3			(+15·3)	(344·0)	(+0·5)	(78)	(361)	(901)
338·306		·975	257·7					188
		·940	354·1					70
		·890	283·9					271
C		·803	253·7					92
	9272	·884	257·5	32·0	−10·8	9	42	313*s*
	9270	·470	249·1	357·1	− 9·3	50	280	
		·938	103·1					122
Dec. 4			(+14·9)	(330·8)	(+0·4)	(59)	(322)	(1056)
339·352		·959	283·5					148
		·897	253·9					166
		·783	256·7					68
C	9272	·973	259·5	33·2	−10·2	22	101	359*c*
	9270	·655	255·5	356·8	− 9·2	51	222	
	899c	·313	179·3	293·4	−18·0	1	3	
		·876	103·7					230
Dec. 5			(+14·5)	(317·0)	(+0·2)	(74)	(326)	(971)
340·313		·985	257·3					195
		·915	282·1					130
C		·718	249·9					130
	9270	·808	258·4	357·4	− 9·3	62	234	237*c*
Dec. 6			(+14·1)	(304·3)	(+0·1)	(62)	(234)	(692)
341·313		·949	282·3					133
		·804	251·1					155
C	9270	·920	259·6	357·5	− 9·6	47	253	604*f*
	9273	·994	101·1	207·7	−11·0	9	88	81*f*
Dec. 7			(+13·7)	(291·1)	(0·0)	(56)	(341)	(973)
342·345		·923	287·8					123
		·893	253·6					221
		·797	280·4					87
C	9270	·985	260·4	357·3	− 9·5	39	164	547*f*
	9273	·951	102·1	206·1	−11·6	40	187	519*f*
		·944	76·4					80
		·958	184·9					146
Dec. 8			(+13·2)	(277·5)	(−0·2)	(79)	(351)	(1723)

Group 9271. Nov. 29–Dec. 3 Intermittent. Three small ephemeral spots on Nov. 29 and two on Dec. 3.
Group 9272. Dec. 2–5. Two small spots.
Group 9273. Dec. 7–18. Intermittent. A close pair of small regular spots, of which the following one has disappeared after Dec. 13. A few very small followers are seen on and after Dec. 10. The group has disappeared by Dec. 16, but a pair of small spots appears temporarily on Dec. 18.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
343·350		·968	255·5					261
		·913	277·2					186
		·815	247·4					210
C		·740	235·8					133
	9273	·854	103·5	206·6	−11·6	21	156	696*f*
		·949	171·3					71
		·957	179·6					109
Dec. 9			(+12·8)	(264·3)	(−0·3)	(21)	(156)	(1666)
344·393		·978	275·8					80
		·889	244·6					212
C		·804	269·2					151
		·782	249·8					157
	9273	·711	106·0	206·6	−11·6	28	136	378*f*
		·908	95·8					63
Dec. 10			(+12·4)	(250·6)	(−0·4)	(28)	(136)	(1041)
345·318		·963	247·3					135
		·899	271·1					164
C		·879	251·6					115
	9273	·554	110·1	206·5	−11·3	30	114	
		·971	101·8					96
Dec. 11			(+12·0)	(238·4)	(−0·5)	(30)	(114)	(510)
346·307		·960	273·5					167
		·958	250·9					108
		·862	241·7					191
C	9273	·371	120·5	206·3	−11·5	12	87	
	9274	·994	98·7	141·8	− 8·7	13	83	
		·920	174·7					59
		·943	106·4					296
		·986	66·9					108
Dec. 12			(+11·5)	(225·3)	(−0·7)	(25)	(170)	(929)
347·340		·965	246·3					96
		·803	253·0					131
C	9273	·207	148·2	205·4	−10·9	23	77	
	9274	·948	99·3	140·6	− 9·1	12	79	616*sf*
		·856	107·1					274
		·927	65·5					202
Dec. 13			(+11·1)	(211·7)	(−0·8)	(35)	(156)	(1319)
348·330		·901	253·6					103
	899d	·283	212·2	207·6	−14·7	0	2	
C	9273	·212	215·8	205·9	−10·7	11	27	

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
348·330	9274	·866	99·8	139·2	− 8·9	20	91	650*sf*
		·808	111·4					248
		·842	62·6					262
C		·939	113·7					174
		·956	71·4					106
		·964	58·6					78
		·979	103·4					127
Dec. 14			(+10·6)	(198·7)	(−0·9)	(31)	(120)	(1748)
349·545		·933	288·1					79
		·908	257·0					87
		·882	274·0					155
	9273	·444	247·0	207·2	−11·0	1	6	
C	*899e*	·359	123·0	164·8	−12·3	3	6	
	9274	·704	100·9	138·5	− 8·5	7	31	545*sf*
		·694	53·7					106
		·885	120·7					158
		·928	105·9					336
Dec. 15			(+10·1)	(182·7)	(−1·1)	(11)	(43)	(1466)
350·307		·956	255·9					89
	9274	·578	102·0	137·9	− 7·9	2	10	218*sf*
		·832	108·1					275
C		·880	123·9					94
		·917	99·0					78
		·934	112·5					247
		·979	72·5					166
Dec. 16			(+9·7)	(172·6)	(−1·2)	(2)	(10)	(1167)
351·354		·759	256·4					249
C	9275	·909	71·4	95·3	+16·2	48	171	234*c*
		·898	115·7					275
Dec. 17			(+9·2)	(158·8)	(−1·3)	(48)	(171)	(758)
352·115	9273	·865	258·9	208·2	−10·2	4	14	407*f*
	9276	·314	20·2	142·4	+15·6	3	17	
K	9275	·831	68·9	95·0	+16·5	52	245	272*c*
	9277	·952	97·9	76·8	− 8·0	0	6	97*f*
Dec. 18			(+8·9)	(148·8)	(−1·4)	(59)	(282)	(776)
353·119		·924	257·8					480
	9276	·330	332·1	144·8	+15·3	31	128	
K	*899f*	·204	189·2	137·5	−13·0	1	23	
	9275	·702	64·7	94·4	+16·2	40	194	

Group 9274. Dec. 12–16. A small and quickly diminishing regular spot with a companion after Dec. 13.
Group 9275. Dec. 17–26. Two regular spots of which the leader breaks up on Dec. 20 into a small cluster and so dies out, whilst its companion persists as a very small spot.
Group 9276. Dec. 18–23. A pair of very small spots on Dec. 18 developing into two well-defined regular spots with a small cluster between them. The follower is, as usual, the first to break up and disappear.
Group 9277. Dec. 18–28. A pair of small spots (not seen on Dec. 20) developing into a small stream of feeble activity.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
353·119	9277	·854	98·2	77·3	− 7·7	9	37	131*c*
		·977	102·2					62
Dec. 19			(+8·4)	(135·6)	(−1·5)	(81)	(382)	(673)
354·375		·982	257·7					54
	9276	·503	304·0	144·4	+14·7	88	416	
C	9275	·515	54·8	93·2	+15·7	31	162	
	9278	·993	80·8	36·4	+ 8·9	37	326	118*p*
		·899	104·2					220
		·974	98·6					252
Dec. 20			(+7·8)	(119·0)	(−1·7)	(156)	(904)	(644)
355·440	9276	·689	293·6	145·6	+14·6	60	406	
	9275	·361	33·6	93·1	+15·6	22	103	
	9277	·497	101·0	75·7	− 6·9	1	6	
	899g	·862	98·9	45·8	− 8·5	3	6	262*f*
C	9278	·934	79·7	36·8	+ 9·0	32	370	457*c*
		·788	105·5					94
		·854	83·5					121
		·886	110·7					96
		·943	70·4					62
		·959	103·3					258
Dec. 21			(+7·3)	(105·0)	(−1·8)	(118)	(891)	(1350)
356·479		·891	248·4					150
		·744	252·9					103
	9276	·837	288·0	146·2	+13·9	44	297	202*c*
G	9275	·287	356·0	92·5	+14·7	9	18	
	9277	·272	111·0	76·5	− 7·4	6	25	
	9278	·826	78·1	36·7	+ 8·7	58	354	370*f*
		·741	101·4					95
		·875	103·0					330
Dec. 22			(+6·8)	(91·3)	(−1·9)	(117)	(694)	(1250)
357·312		·938	253·2					219
		·835	254·9					223
	9276	·933	285·4	147·9	+13·6	34	162	348*c*
C	9275	·336	325·6	91·6	+14·1	6	10	
	9277	·105	155·4	77·9	− 7·4	15	45	
	9278	·711	75·6	36·4	+ 8·7	57	382	223*c*
		·764	106·0					146
		·987	99·8					273
Dec. 23			(+6·4)	(80·4)	(−2·0)	(112)	(599)	(1432)
1920.			°	°	°			
358·370		·981	286·7					292
		·974	296·1					54
		·948	248·0					82
		·926	257·3					276
C		·801	254·9					87
	9275	·497	303·5	91·6	+13·9	10	18	
	9277	·218	242·7	77·6	− 7·8	28	71	
	9278	·527	69·7	36·5	+ 8·5	61	292	
	9279	·970	101·8	350·6	−11·9	26	57	} 621*f*
	9280	·978	104·3	348·6	−14·4	9	70	
Dec. 24			(+5·9)	(66·4)	(−2·2)	(134)	(508)	(1412)
359·338		·972	258·5					155
		·922	239·3					88
		·875	253·5					342
	9275	·664	293·9	92·2	+13·8	3	11	185*p*
C	9277	·424	255·9	78·1	− 8·0	17	91	
	9278	·347	57·5	36·6	+ 8·5	54	287	
	9279	·889	101·9	351·3	−11·6	8	36	} 684*f*
	9280	·912	104·1	348·3	−13·7	10	75	
	9281	·971	72·3	339·1	+16·5	2	10	182*f*
		·807	100·5					337
Dec. 25			(+5·5)	(53·7)	(−2·3)	(94)	(510)	(1973)
360·465		·951	247·6					120
		·849	238·1					105
	9275	·833	288·6	93·0	+14·0	5	13	157*p*
G	9277	·644	260·3	78·5	− 8·0	12	30	
	9278	·191	9·9	36·9	+ 8·4	47	280	
	9279	·724	103·1	353·1	−11·0	7	16	75*c*
	9280	·808	104·1	345·6	−12·7	76	398	412*c*
	9281	·901	68·9	337·0	+17·7	47	187	227*c*
Dec. 26			(+4·9)	(38·8)	(−2·4)	(194)	(924)	(1096)
361·452		·950	242·6					118
		·943	288·4					237
		·916	260·7					98
		·864	236·6					152
G	9277	·783	261·7	77·1	− 8·1	11	45	117*c*
	9278	·265	314·2	36·8	+ 8·0	45	272	
	9279	·543	106·6	353·9	−11·0	8	18	
	9280	·662	106·4	345·3	−12·7	66	396	209*f*
	9281	·795	65·4	336·7	+17·6	46	254	186*c*
		·933	105·4					138
Dec. 27			(+4·4)	(25·8)	(−2·6)	(176)	(985)	(1255)

Group 9278. Dec. 20– 921, Jan. 1. A large spot apparently breaking up on Dec. 24, but assuming within a few days the stable appearance of a regular spot.
Group 9279. Dec. 24–28. A small spot *p* Group 9280 in the same general disturbed area.
Group 9280. Dec. 24–1921, Jan. 5. A stream developing somewhat irregularly into one of normal type by Dec. 28. The leader, however, is unstable and divides into two portions after Dec. 31, whilst the remnant of the group is fast disappearing.
Group 9281. Dec. 25–1921, Jan. 1. An irregular stream of generally unimportant spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

G.M.T. (Civil.)	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1920.			°	°	°			
362·351		·980	286·2					143
		·942	238·2					132
	9277	·908	262·8	79·1	− 7·7	14	67	310c
	9278	·431	295·7	37·0	+ 8·2	37	257	
	899h	·262	338·0	19·7	+11·3	2	6	
C	*899i*	·204	12·5	11·4	+ 8·8	4	6	
	9279	·365	113·9	354·2	−11·0	3	4	
	9280	·495	110·7	345·8	−12·4	84	615	
	9281	·685	60·4	335·5	+17·7	38	186	
		·848	108·4					188
		·943	107·1					117
		·951	81·6					211
Dec. 28			(+4·0)	(14·0)	(−2·7)	(182)	(1141)	(1101)
363·325		·978	262·7					435
	9278	·613	287·4	37·2	+ 8·2	47	249	
C	9280	·296	124·7	346·7	−12·4	71	427	
	9281	·543	50·3	335·2	+17·7	28	139	
		·886	80·3					226
Dec. 29			(+3·5)	(1·1)	(−2·8)	(146)	(815)	(661)
1920.			°	°	°			
364·443		·943	255·0					166
		·847	260·3					158
	9278	·790	282·8	37·3	+ 8·2	35	212	241c
G	9280	·164	187·7	347·7	−12·2	60	289	
	9281	·403	26·3	335·6	+18·3	18	49	
		·781	74·1					123
		·898	115·0					127
Dec. 30			(+3·0)	(346·4)	(−2·9)	(113)	(550)	(815)
365·312		·950	256·9					333
		·849	257·9					223
C	9278	·895	281·0	37·4	+ 8·4	31	205	463c
	9280	·272	234·4	348·0	−11·9	55	287	
	9281	·370	1·9	334·3	+18·6	13	38	
	9282	·977	97·6	257·2	− 8·0	29	188	310c
Dec. 31			(+2·6)	(335·0)	(− 3·0)	(128)	(718)	(1329)

Group 9282. Dec. 31–1921, Jan. 10. A regular spot followed by a long train of numerous components which have died out by Jan. 9.

ROYAL OBSERVATORY, GREENWICH.

GENERAL CATALOGUE

OF

GROUPS OF SUN SPOTS.

FOR THE YEAR

1920.

GREENWICH PHOTO-HELIOGRAPHIC RESULTS, 1920.

GENERAL CATALOGUE of GROUPS of SUN SPOTS for the YEAR 1920.

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 1919 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 (ϕ) in accordance with the formula

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

In both systems the longitude of the centre of the Sun's disc is adopted as 116°·66 for 1920 Jan. 1^{d}·0, the longitudes given under System I. being thus rendered uniform with those given in preceding volumes of the Greenwich Photo-Heliographic Results. The longitudes according to System II. for Groups 9092 and 9095 are computed here from 1920·0 instead of from 1919·0, as in the volume for 1919.

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	1919.	°	1920.	°			°	°	°		
9092	11	Dec. 22	−58·6	Jan. 1	+76·2	13	57	184·5	184·9	−16·4	II.	*See* Ledger for 1919.
9095	9	30	−38·4	7	+78·2	133	701	105·3	104·7	− 7·2	I. 914 (1)	
		1920.										
6	4	Jan. 1	+ 0·3	4	+42·2	3	12	113·4	113·0	+ 6·9		
7	10	8	−74·0	17	+41·0	20	103	305·5	303·8	+13·4	II.	
8	12	8	−81·7	19	+62·2	12	60	298·3	296·0	+10·9	II.	
9	14	8	−81·9	21	+86·3	29	152	295·4	293·9	−15·2	I. 913 (2)	
9100	3	10	−67·7	12	−39·7	2	15	290·0	288·3	+12·1		Revives as Group 9117.
1	4	10	−72·3	13	−29·6	4	16	286·5	285·2	−14·3		
2	13	11	−83·3	23	+81·9	38	219	261·8	257·7	+ 2·0	II.	Revival near Group 9089.
3	2	11	+41·9	12	+59·6	1	11	27·7	26·6	−15·6		
4	3	14	−16·5	16	+ 5·9	1	11	283·3	282·1	−16·7		
5	13	18	−68·5	30	+84·1	77	409	181·6	180·6	−18·5	I. 915 (1)	Revival of Group 9092.
6	4	18	−76·7	21	−34·4	6	19	173·0	168·6	+ 5·6		Revives as Group 9125.
7	2	21	+53·7	22	+67·4	6	26	262·2	257·8	+ 8·6		
8	14	21	−82·9	Feb. 3	+77·8	229	1526	120·7	114·5	− 6·9	I. 914 (2)	
9	3/5	22	−31·8	Jan. 26	+20·2	3	8	162·2	160·4	+17·0		
9110	2	23	+18·6	24	+35·3	0	4	201·3	198·4	−14·6		
1	2	23	−13·9	24	+ 2·7	0	8	168·8	163·8	+ 8·4		
2	9	24	−37·6	Feb. 1	+73·7	15	60	133·0	126·0	− 2·9	II.	
3	2	31	−83·8	1	−70·0	0	28	352·2	346·2	−10·0		
4	2	Feb. 3	−47·9	4	−34·8	7	26	347·5	340·4	− 8·8		
5	10	3	−55·3	12	+65·0	22	121	341·5	338·0	−16·1	II.	
6	2	5	+17·4	6	+31·4	11	52	27·6	19·5	+ 7·2		
7	4	8	−36·3	11	− 0·4	9	27	292·6	285·7	+11·4		Revival of Group 9100.
8	10	10	−70·3	19	+55·8	27	170	238·7	227·8	+ 5·0	II.	Revives as Group 9139.
9	9	11	−33·5	19	+70·4	42	258	258·5	247·3	+ 4·5	II.	Revival near Group 9102.

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	1920.	°	1920.	°			°	°	°		
9120	7/8	Feb. 11	−65·1	Feb. 18	+28·4	4	20	227·0	227·4	−20·8	II.	
1	12	12	−81·3	23	+70·6	12	68	199·4	188·8	− 7·7	II.	
2	10	13	−79·0	22	+39·0	19	106	185·5	182·6	−17·7	I. 915 (2)	
3	3	14	−56·9	16	−29·5	1	7	195·5	189·7	+14·3		
4	10	14	−60·7	23	+70·0	15	58	196·0	194·8	+19·4	II.	
5	12	14	−77·5	25	+68·0	16	95	175·9	164·0	+ 5·4	II.	Revival of Group 9106.
6	9	17	−37·1	25	+71·5	17	76	177·4	177·1	−20·2	II.	
7	8	17	−81·2	24	+13·9	11	54	132·0	120·0	− 6·6	I. 914 (3)	
8	11	18	−55·6	28	+78·6	27	147	145·7	141·0	+16·4	II.	
9	4	21	−44·9	24	− 5·1	4	14	114·7	106·2	−12·4		Revives as Group 9148.
9130	9	21	−82·9	29	+22·2	7	24	76·6	69·7	−14·5	II.	
1	2	22	+59·4	23	+76·0	12	34	206·2	199·0	+13·9		
2	5	22	−13·0	26	+37·3	4	25	133·4	122·8	− 9·9		Revives as Group 9145.
3	13	23	−71·0	Mar. 6	+80·5	49	260	59·1	47·3	− 9·8	II.	
4	3	24	+ 9·4	Feb. 26	+27·9	0	4	125·0	110·8	− 1·7		
5	3	28	+37·7	Mar. 1	+65·9	1	8	105·7	91·6	− 5·8		Revives as Group 9144.
6	11	Mar. 3	−55·7	13	+77·2	32	157	319·6	313·2	+16·2	II.	
7	12	3	−73·5	14	+75·8	53	361	302·5	289·4	+10·1	I. 916 (1)	
8	2	4	−37·8	5	−19·4	5	25	324·8	321·0	+17·8		
9	8	7	−75·6	14	+17·1	16	82	245·8	229·3	+ 5·8	II.	Revival of Group 9118.
9140	8	8	−11·5	15	+82·4	37	194	297·2	281·4	+ 7·0	I. 916 (1)	
1	8	9	−17·6	16	+83·3	20	98	282·2	274·4	−15·4	I. 917 (1)	
2	10	15	−69·4	24	+50·0	22	130	147·8	135·0	−12·3	II.	
3	13	15	−83·2	27	+80·3	330	1966	134·4	115·0	− 4·9	I. 918 (1)	Revival of Recurrent Series 914.
4	14	16	−85·8	29	+86·7	57	319	117·6	98·1	− 5·7	I. 919 (1)	Revival of Group 9135.
5	10	17	−50·8	26	+65·5	25	109	136·6	121·5	−10·6	II.	Revival of Group 9132.
6	5	19	− 2·7	23	+52·7	13	29	161·3	155·2	−17·1		
7	4	20	+ 5·0	23	+46·2	1	6	157·3	139·0	− 7·2		
8	2	20	−37·8	21	−23·4	1	9	113·6	98·6	−10·6		Revival of Group 9129.
9	4	21	− 6·2	24	+32·4	1	5	130·4	121·0	−15·1		
9150	12	24	−74·5	Apr. 4	+72·6	37	215	25·0	6·5	+ 8·9	II.	
1	6	24	−78·9	Mar. 29	−10·4	4	13	21·2	0·8	− 5·8	II.	
2	3	29	−77·9	31	−51·1	4	23	314·9	296·0	+ 8·7	I. 916 (2)	
3	4	31	−77·6	Apr. 3	−39·4	0	5	287·8	274·7	−13·5	I. 917 (2)	Revives as Group 9166.
4	8/9	Apr. 1	−51·3	9	+57·1	0	8	304·5	287·8	+11·4	II.	Revives as Group 9165.
5	3	6	−42·4	8	−18·7	2	13	242·9	218·6	+ 3·9		Revival of Group 9139.
6	4/7	6	−72·6	12	+ 9·5	0	4	215·5	190·0	+ 0·6	II.	
7	14	10	−85·8	23	+85·1	108	542	148·0	123·1	− 6·3	I. 918 (2)	
8	7	13	−70·7	19	+ 4·7	9	50	121·5	95·6	− 4·8	I. 919 (2)	
9	3/4	20	+23·8	23	+60·7	2	10	124·2	97·6	− 5·6		
9160	2/7	23	−31·0	29	+51·3	0	1	33·0	13·8	+12·2		
1	13	25	−80·4	May 7	+78·6	19	111	316·0	292·6	+10·2	I. 920 (1)	Revival of Recurrent Series 916.
2	5	27	−36·1	1	+15·9	3	16	332·5	315·4	+13·5		
3	3	29	+24·2	1	+51·8	5	16	8·3	338·4	+ 4·0		
4	5/6	30	−71·7	5	− 2·3	3	11	259·8	243·8	+14·2	II.	Revives as Group 9186.
5	4	May 1	−12·8	4	+31·9	0	4	307·5	287·5	+12·2		Revival of Group 9154.
6	4	1	−29·7	4	+ 9·1	1	9	286·4	275·3	−16·3		Revival of Recurrent Series 917.
7	2	2	−15·8	3	− 1·5	1	4	287·8	261·8	+ 8·5		
8	5	2	−81·3	6	−32·5	2	14	220·2	194·0	− 8·6		
9	4	3	− 4·8	6	+34·3	0	8	284·6	261·1	+10·5		
9170	12	3	−83·0	14	+67·2	22	118	210·7	181·5	− 7·1	II.	
1	5	4	−49·7	8	+ 5·2	4	13	228·6	197·8	− 4·8		
2	5	4	−75·2	8	−22·5	8	53	201·9	178·6	−10·7		
3	6	7	−16·1	12	+48·0	12	56	220·6	188·3	− 3·8	II.	
4	8	8	−72·9	15	+18·1	8	29	151·2	119·4	− 5·3	I. 918 (3)	
5	2	10	+ 2·6	11	+16·3	1	5	200·8	191·0	−17·1		
6	11	10	−65·3	20	+66·5	9	24	133·8	125·5	+18·1	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	1920.	°	1920.	°			°	°	°		
9177	8/9	May 10	−73·3	May 18	+33·1	1	11	124·2	120·4	+19·2	II.	Revives as Group 9194.
8	3	13	+55·1	15	+79·1	32	199	211·7	196·3	+15·1	I. 921 (1)	
9	2/3	14	− 2·2	16	+24·7	0	2	142·0	108·8	− 4·6		
9180	2	14	− 2·4	15	+10·8	1	8	142·8	123·0	−13·2		
1	8	17	−75·8	24	+17·4	11	40	30·2	34·8	+21·7	II.	
2	12	22	−75·5	June 2	+72·6	43	290	325·6	292·8	+ 7·5	I. 920 (2)	
3	3	25	−39·4	May 27	−10·3	4	12	321·2	291·4	− 9·2		
4	6	25	−42·2	30	+25·9	2	14	317·4	290·1	+10·7	II.	
5	3	26	+37·7	28	+60·1	13	41	20·8	345·0	+ 5·0		
6	8	26	−76·8	June 2	+17·3	17	72	268·4	247·1	+13·5	II.	Revival of Group 9164.
7	5/6	27	+14·9	1	+77·8	10	48	345·2	310·2	+ 6·3	II.	
8	4	28	+33·7	May 31	+76·0	21	104	355·2	327·8	−10·9	I. 922 (1)	
9	12	30	−77·4	June 10	+75·7	74	361	218·0	197·2	+14·0	I. 921 (2)	
9190	7	31	− 3·4	6	+76·2	7	30	278·3	263·0	+15·9	I. 923 (1)	
1	5	June 1	−74·5	5	−19·9	4	15	193·3	156·1	− 5·2		
2	3	4	−72·4	6	−46·0	4	19	153·4	127·1	−11·9		
3	12	7	−65·7	18	+83·6	42	251	125·9	105·7	+14·6	II.	
4	2	8	−47·2	9	−37·1	0	6	125·6	131·6	+21·9		Revival of Group 9177.
5	3	9	−72·9	11	−39·5	3	26	88·3	56·8	+ 9·9		
6	7	11	−14·8	17	+59·4	17	58	114·4	105·1	+18·0	II.	Revives as Group 9208.
7	2	11	−74·1	12	−63·4	3	18	56·0	26·7	+11·1		
8	11	15	−72·2	25	+58·9	15	77	7·2	332·4	− 9·3	I. 922 (2)	
9	11	17	−77·7	27	+55·9	17	83	337·4	298·7	− 7·5	II.	
9200	2	20	+19·1	21	+30·8	6	14	32·9	356·1	+ 8·4		
1	12	21	−82·3	July 2	+66·8	40	198	280·6	256·7	+14·0	I. 923 (2)	
2	5/6	22	−79·4	June 27	−11·9	1	26	270·1	242·7	+12·7	II.	Revival of Group 9186.
3	6	23	−13·8	28	+60·2	17	56	324·4	324·2	−20·3	II.	Revives as Group 9222.
4	14	25	−87·9	July 8	+85·8	65	328	222·9	198·0	+13·9	I. 921 (3)	
5	2/3	28	+21·8	June 30	+45·7	0	2	289·3	267·5	+14·7		
6	3	28	−67·3	30	−44·4	4	23	199·5	245·8	−29·5		
7	13	28	−72·9	July 10	+83·4	76	396	195·5	172·7	−14·6	I. 924 (1)	
8	12	July 4	−72·5	15	+80·7	12	52	117·1	102·0	+16·9	II.	Revival of Group 9196.
9	10/12	8	−75·6	19	+71·1	8	28	60·1	11·7	− 4·0	II.	
9210	2	9	+17·8	10	+34·3	2	5	143·4	97·0	− 5·0		
1	4/8	14	−47·6	21	+46·0	1	4	11·7	327·9	+ 7·8	II.	
2	6	15	−75·4	20	−11·8	8	25	326·5	300·1	−14·0	II.	
3	13	17	−77·3	29	+81·1	26	149	299·3	263·9	+11·6	I. 925 (1)	
4	5/7	22	−35·7	28	+47·1	1	5	277·8	234·4	+ 8·6	II.	
5	12	23	−73·2	Aug. 3	+73·6	23	124	224·8	193·9	+13·2	I. 921 (4)	
6	12	25	−75·9	5	+69·9	23	131	196·4	167·6	−13·9	I. 924 (2)	
7	4	27	−77·1	July 30	−40·6	7	28	167·1	120·5	− 7·6		
8	3	Aug. 1	−59·8	Aug. 3	−35·7	5	15	117·6	83·9	+12·6		Revives as Group 9230.
9	2	6	+65·6	7	+74·5	3	16	175·0	143·2	+13·4	I. 926 (1)	
9220	3	6	+42·2	8	+70·2	4	14	154·4	122·6	+13·4		
1	9	9	−79·6	17	+21·2	14	74	350·8	313·6	+12·1	II.	
2	12	12	−71·5	23	+71·2	38	225	317·9	325·5	−21·7	II.	Revival of Group 9203.
3	2/3	12	−72·5	14	−48·2	0	4	319·2	284·0	−12·7		
4	4	12	−78·1	15	−40·9	10	29	313·0	273·7	−11·5		
5	10	13	−77·4	22	+43·4	7	27	303·4	264·1	+11·7	I. 925 (2)	
6	7/9	22	−71·6	30	+33·9	9	38	189·9	147·3	+11·1	I. 926 (2)	
7	12	29	−60·5	Sept. 9	+79·1	180	1114	110·3	77·8	−14·1	I. 927 (1)	
8	2	30	−53·5	Aug. 31	−41·2	1	6	102·6	53·1	− 9·2		
9	2	Sept. 1	−10·1	Sept. 2	+ 3·3	2	6	120·4	80·7	−12·3		
9230	4	4	+24·4	7	+74·3	6	28	118·0	87·9	+14·7		Revival of Group 9218.
1	8	8	−67·8	15	+28·4	30	142	334·1	292·8	−12·3	II.	
2	6	12	+21·4	17	+84·5	91	528	7·1	314·1	+ 9·1	I. 928 (1)	
3	11	21	−80·0	Oct. 1	+52·7	14	78	146·4	94·2	−10·0	II.	

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	1920.	°	1920–21.	°			°	°	°		
9234	4/6	Sept. 22	−74·1	Sept. 27	− 6·4	1	5	137·1	137·1	+20·4		
5	13	22	−79·4	Oct. 4	+77·7	100	532	130·7	83·2	−11·4	} I. 927 (2)	
6	12	24	−72·8	5	+70·9	22	110	112·4	75·9	−14·0		
7	6	25	+10·6	Sept. 30	+80·6	36	169	185·7	151·8	+14·5	I. 929 (1)	
8	2	27	− 1·1	28	+ 9·5	1	7	142·0	102·4	−13·3		
9	9	27	−33·7	Oct. 5	+76·0	32	156	114·2	78·6	+14·2	II.	Revives as Group 9256.
9240	2	27	−72·8	Sept. 28	−61·3	0	5	70·8	20·6	+10·8		
1	10	Oct. 1	−76·3	Oct. 10	+45·1	18	79	17·8	315·6	+ 7·4	I. 928 (2)	
2	5	2	−15·9	6	+39·2	4	13	65·8	359·3	− 5·4		
3	13	4	−73·2	16	+85·3	52	273	340·4	280·0	+ 8·5	II.	
4	7	7	−33·9	13	+47·7	7	33	342·7	298·5	+12·7	II.	Revives as Group 9261.
5	11	7	−71·4	17	+54·8	46	307	301·6	276·0	−16·4	II.	
6	11	7	−78·8	17	+50·0	14	77	294·5	270·5	−16·6	II.	
7	8	10	−30·1	17	+67·8	37	161	310·3	251·5	+ 9·1	II.	
8	9	14	−27·9	22	+82·1	34	161	255·0	190·3	− 7·6	II.	
9	8	15	−78·1	22	+10·2	9	46	189·6	139·4	+11·6	I. 929 (2)	
9250	5	18	+14·8	22	+67·9	9	34	244·4	184·2	− 9·2		Revives as Group 9264.
1	13	18	−80·5	30	+81·5	33	151	149·8	134·1	+18·1	I. 930 (1)	
2	2	21	−69·9	22	−58·2	5	16	118·6	88·5	−15·8		
3	10	21	−75·0	30	+41·6	31	118	114·0	69·5	−13·1	I. 927 (3)	
4	7	22	−35·9	28	+44·0	13	43	140·1	104·0	−14·7	II.	
5	6	26	+ 4·8	31	+75·4	26	136	130·3	105·6	−16·8	II.	
6	3	26	− 7·0	28	+23·5	4	15	118·5	92·7	+16·6		Revival of Group 9239.
7	11	30	−75·5	Nov. 9	+58·7	12	44	358·4	297·9	+ 9·9	II.	
8	12	31	−73·7	11	+78·3	154	897	348·2	287·6	−10·1	I. 931 (1)	
9	2	Nov. 1	+27·6	2	+41·9	1	12	72·6	52·8	+17·6		
9260	2	2	−21·7	3	−13·8	0	4	7·0	327·1	+14·2		
1	5	6	+ 1·0	10	+59·9	14	40	341·0	292·9	+12·8		Revival of Group 9244.
2	4	12	+39·1	15	+77·5	25	114	297·8	216·1	+ 1·6		
3	14	14	−81·7	27	+84·0	25	141	149·1	134·2	+18·4	I. 930 (2)	
4	2	16	+41·2	17	+56·8	5	18	248·8	192·2	−11·4		Revival of Group 9250.
5	2	20	−18·0	21	− 1·3	1	6	137·2	139·8	+20·7		
6	11	22	−78·3	Dec. 2	+57·0	30	144	50·5	350·5	−11·0	II.	
7	8	23	−81·0	Nov. 30	+10·3	18	106	32·8	340·5	−12·6	II.	
8	3	24	+50·5	26	+75·8	15	52	150·3	109·1	−14·5		Revival near Group 9254.
9	2	24	−65·2	25	−50·9	1	12	35·8	327·1	− 8·8		
9270	13	26	−77·7	Dec. 8	+79·8	66	312	357·0	287·4	− 9·0	I. 931 (2)	Revives as Groups 9279 and 9280.
1	2/5	29	+ 4·5	3	+57·5	2	6	40·8	331·0	− 8·9		
2	4	Dec. 2	+33·5	5	+76·2	10	46	31·2	328·7	−10·8		
3	10/12	7	−83·4	18	+59·4	15	74	206·6	144·7	−11·1	II.	Revives as Group 9284.
4	5	12	−83·5	16	−34·7	11	59	139·6	66·1	− 8·6		Revives as Group 9283.
5	10	17	−63·5	26	+54·2	23	94	93·2	52·3	+15·1	II.	
6	6	18	− 6·4	23	+67·5	43	238	145·2	101·6	+14·6	II.	
7	10/11	18	−72·0	28	+65·1	10	38	77·5	358·4	− 7·7	II.	
8	13	20	−82·6	Jan. 1	+77·3	44	283	36·9	320·5	+ 8·5	II.	
9	5	24	−75·8	Dec. 28	−19·8	10	26	352·6	288·8	−11·3		
9280	13	24	−77·8	Jan. 5	+81·0	41	232	347·8	292·1	−12·9	I. 932 (1)	Revival near Recurrent Series 931.
1	8	25	−74·6	1	+13·0	25	110	335·9	314·8	+17·9	II.	
2	11	31	−77·8	10	+65·0	39	175	262·4	177·6	− 6·8	II.	

GENERAL CATALOGUE of SUN SPOTS—*continued*.

REVIVAL GROUPS of SUN SPOTS, 1920.

Groups of spots, noted in the preceding Catalogue as "Revivals," 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.

Reference No. of Series.	Group No.	No. of Rotation.	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	1919–20	°	1919–20	°		°	°	°	
1	9089	886	4	Dec. 21	−10	Dec. 24	+38	26	252	254	+ 3	
	9102	887	13	Jan. 11	−83	Jan. 23	+82	219	262	258	+ 2	II.
	9119	888	9	Feb. 11	−34	Feb. 19	+70	258	259	247	+ 4	II.
2	9092	886	11	Dec. 22	−59	Jan. 1	+76	57	184	185	−16	II.
	9105	887	13	Jan. 18	−68	30	+84	409	182	181	−18	I. 915
	9122	888	10	Feb. 13	−79	Feb. 22	+39	106	186	183	−18	
3	9095	886	9	Dec. 30	−38	Jan. 7	+78	701	105	105	− 7	I. 914
	9108	887	14	Jan. 21	−83	Feb. 3	+78	1526	121	115	− 7	
	9127	888	8	Feb. 17	−81	24	+14	54	132	120	− 7	
	9143	889	13	Mar. 15	−83	Mar. 27	+80	1966	134	115	− 5	I. 918
	9157	890	14	Apr. 10	−86	Apr. 23	+85	542	148	123	− 6	
	9174	891	8	May 8	−73	May 15	+18	29	151	119	− 5	
4	9100	887	3	Jan. 10	−68	Jan. 12	−40	15	290	288	+12	
	9117	888	4	Feb. 8	−36	Feb. 11	0	27	293	286	+11	
5	9106	887	4	Jan. 18	−77	Jan. 21	−34	19	173	169	+ 6	
	9125	888	12	Feb. 14	−77	Feb. 25	+69	95	176	164	+ 5	II.
6	9118	888	10	Feb. 10	−70	Feb. 19	+56	170	239	228	+ 5	II.
	9139	889	8	Mar. 7	−76	Mar. 14	+17	82	246	229	+ 6	II.
	9155	890	3	Apr. 6	−42	Apr. 8	−19	13	243	219	+ 4	
7	9129	888	4	Feb. 21	−45	Feb. 24	− 5	14	115	106	−12	
	9148	889	2	Mar. 20	−38	Mar. 21	−23	9	114	99	−11	
8	9132	888	5	Feb. 22	−13	Feb. 26	+37	25	133	123	−10	
	9145	889	10	Mar. 17	−51	Mar. 26	+66	109	137	122	−11	II.
9	9135	888	3	Feb. 28	+38	Mar. 1	+66	8	106	92	− 6	
	9144	889	14	Mar. 16	−86	29	+87	319	118	98	− 6	I. 919
	9158	890	7	Apr. 13	−71	Apr. 19	+ 5	50	122	96	− 5	
10	9140	889	8	Mar. 8	−12	Mar. 15	+82	194	297	281	+ 7	I. 916
	9152	890	3	29	−78	31	−51	23	315	296	+ 9	
	9161	891	13	Apr. 25	−80	May 7	+79	111	316	293	+10	I. 920
	9182	892	12	May 22	−76	June 2	+73	290	326	293	+ 8	
11	9141	889	8	Mar. 9	−18	Mar. 16	+83	98	282	274	−15	I. 917
	9153	890	4	31	−78	Apr. 3	−39	5	288	275	−14	
	9166	891	4	May 1	−30	May 4	+ 9	9	286	275	−16	

GENERAL CATALOGUE of SUN SPOTS—*continued* (REVIVAL GROUPS).

Reference No. of Series.	Group No.	No. of Rotation.	Duration.	First Seen. Date.	First Seen. Longitude from C.M.	Last Seen. Date.	Last Seen. Longitude from C.M.	Mean Area.	Mean Position. Longitude System I.	Mean Position. Longitude System II.	Mean Position. Latitude.	Reference to Ledger.
			d	1920–21.	°	1920–21.	°		°	°	°	
12	9154	890	8/9	Apr. 1	−51	Apr. 9	+57	8	305	288	+11	II.
	9165	891	4	May 1	−13	May 4	+32	4	308	288	+12	
13	9164	891	5/6	Apr. 30	−72	May 5	− 2	11	260	244	+14	II.
	9186	892	8	May 26	−77	June 2	+17	72	268	247	+14	II.
	9202	893	5/6	June 22	−79	June 27	−12	26	270	243	+13	II.
14	9177	891	8/9	May 10	−73	May 18	+33	11	124	120	+19	II.
	9194	892	2	June 8	−47	June 9	−37	6	126	132	+22	
15	9196	892	7	June 11	−15	June 17	+59	58	114	105	+18	II.
	9208	893	12	July 4	−73	July 15	+81	52	117	102	+17	II.
16	9203	893	6	June 23	−14	June 28	+60	56	324	324	−20	II.
	9222	895	12	Aug. 12	−71	Aug. 23	+71	225	318	325	−22	II.
17	9218	894	3	Aug. 1	−60	Aug. 3	−36	15	118	84	+13	
	9230	895	4	Sept. 4	+24	Sept. 7	+74	28	118	87	+15	
18	9239	896	9	Sept. 27	−34	Oct. 5	+76	156	114	79	+14	II.
	9256	897	3	Oct. 26	− 7	Oct. 28	+24	15	118	93	+17	
19	9244	897	7	Oct. 7	−34	Oct. 13	+48	33	343	299	+13	II.
	9261	898	5	Nov. 6	+ 1	Nov. 10	+60	40	341	293	+13	
20	9250	897	5	Oct. 18	+15	Oct. 22	+68	34	244	184	− 9	
	9264	898	2	Nov. 16	+41	Nov. 17	+57	18	249	192	−11	
21	9254	897	7	Oct. 22	−36	Oct. 28	+44	43	140	104	−15	II.
	9268	898	3	Nov. 24	+51	Nov. 26	+76	52	150	109	−15	
22	9258	898	12	Oct. 31	−74	Nov. 11	+78	897	348	288	−10	I. 931
	9270	899	13	Nov. 26	−78	Dec. 8	+80	312	357	287	− 9	
	9280	900	13	Dec. 24	−78	Jan. 5	+81	232	348	292	−13	
	9289	901	12	Jan. 20	−77	31	+70	25	356	290	−12	I. 932
	9290	901	7	20	−81	26	− 5	30	350	291	−13	

ROYAL OBSERVATORY, GREENWICH.

LEDGERS

OF

GROUPS OF SUN SPOTS

FOR THE YEAR

1920.

LEDGER I.—RECURRENT GROUPS.

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1920.

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

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 913.

Group 9091 seen in Rotation 886.
" 9099 " " 887.

Group 9091.—1919, December 22–24. A small regular spot followed by one or two companions.

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.
1920. d					°	°	°	°
10·523 C	23	121	19	98	292·3	293·5	−14·2	+50·8
9·407 C	21	141	23	157	292·7	293·8	−14·0	+62·9
8·439 G	12	90	26	199	293·2	294·2	−14·3	+77·0
Means ..	..	..	23	151	292·73	293·83	−14·17	..

Group 9099.—1920, January 8–21. A regular spot with occasional small attendents.

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.
7·351 C	8	46	26	151	297·9	297·1	−15·0	−81·9
8·436 G	32	122	44	170	296·3	295·4	−14·8	−69·3
9·103 K	31	152	32	158	295·6	294·6	−14·7	−61·2
10·109 K	38	203	29	152	295·5	294·4	−14·7	−48·0
11·108 K	64	312	40	193	295·5	294·3	−14·7	−34·9
12·108 K	76	322	42	177	295·3	293·9	−14·8	−21·9
13·441 G	41	277	21	141	295·0	293·5	−15·0	− 4·6
14·106 K	52	328	27	167	295·0	293·4	−14·7	+ 4·1
15·110 K	54	254	29	135	294·8	293·1	−15·0	+17·1
16·108 K	56	261	33	154	294·6	292·8	−15·4	+30·1
17·331 C	37	185	27	135	294·6	292·6	−15·8	+46·2
18·169 D	23	138	22	129	295·4	293·3	−16·1	+58·0
19·380 C	16	77	28	134	295·5	293·3	−15·9	+74·0
20·341 C	0	22	0	134	295·1	292·8	−15·9	+86·3
Means ..	..	..	29	152	295·44	293·89	−15·18	..

RECURRENT SERIES 914.

Group 9095 seen in Rotation 886.
" 9108 " " 887.
" 9127 " " 888.

Group 9095.—1919, December 30—1920, January 7. A very large stream developing from a few small spots on December 30. The leader, *a*, at first of regular type, becomes large and composite—noticeably so on January 3—whilst the follower, though of regular type on January 3, is unstable and rapidly breaks up and disappears. A spot, representing a cluster which closely follows the leader on January 4, remains with it 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.
1920. d					°	°	°	°
2·357 C	20	50	12	32	99·9	100·3	− 6·6	−38·4
1·357 C	91	372	50	204	101·7	101·8	− 6·6	−23·4
0·362 C	188	832	96	424	102·9	102·8	− 7·2	− 9·0
1·337 C	405	1743	206	880	102·9	102·6	− 7·4	+ 3·8
2·252 D	466	2170	248	1150	104·6	104·1	− 7·5	+17·6
3·478 G	276	1611	174	1005	106·7	105·9	− 7·5	+35·9
4·467 G	205	1140	160	902	108·7	107·7	− 7·5	+50·9
5·339 C	119	783	134	857	109·5	108·3	− 7·2	+63·1
6·413 C	42	356	115	852	110·4	109·0	− 7·4	+78·2
Means ..	..	..	133	701	105·26	104·72	− 7·21	..

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.
2·357 C	13	22	8	14	101·5	101·9	− 6·6	−36·8
1·357 C	42	173	23	93	104·2	104·3	− 6·6	−20·9
0·362 C	44	317	22	159	105·8	105·7	− 7·2	− 6·1
1·337 C	162	824	83	420	106·7	106·4	− 7·6	+ 7·6
2·252 D	320	1402	173	757	108·1	107·6	− 7·5	+21·1
3·478 G	170	923	111	600	110·0	109·2	− 7·7	+39·2
4·467 G	133	763	110	633	111·1	110·1	− 7·7	+53·3
5·339 C	87	493	104	587	111·9	110·7	− 7·4	+65·5
6·413 C	33	190	100	576	113·0	111·6	− 7·4	+80·8

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued.*

RECURRENT SERIES **914**—*continued.*

Group 9108.—January 21–February 3. A very long and complex stream inclined about 25° to the solar equator. Two very large and complex spots, *a* and *b* at the head of the stream are a prominent feature of the group for several days, but later they are comparable with the smaller but more stable components of the stream, *c*, *d*, *e*, *f* and *g*. A very extensive area of faculæ surrounds the group.

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.
1920. d					°	°	°	°
20·341 C	16	89	(61	340	125·9	121·3	− 4·7)*	−82·9
21·432 G	112	807	189	1390	120·9	116·0	− 6·3	−73·5
22·355 C	216	1420	227	1473	120·8	115·7	− 6·3	−61·5
23·563 C	296	2380	216	1689	121·0	115·6	− 6·3	−45·4
24·448 G	605	3315	374	2017	120·1	114·5	− 7·1	−34·6
25·487 C	544	3740	295	2011	120·1	114·3	− 6·8	−20·9
26·348 C	524	4003	268	2037	120·4	114·4	− 7·2	− 9·3
27·493 C	539	3848	273	1937	120·2	113·9	− 7·0	+ 5·6
28·416 G	575	3292	304	1742	120·5	114·0	− 7·0	+18·0
29·435 G	360	2520	212	1486	120·6	113·9	− 7·2	+31·5
30·450 C	232	1494	168	1077	121·6	114·6	− 7·1	+45·9
31·459 G	128	842	121	805	121·1	113·9	− 7·5	+58·7
32·374 C	73	436	105	645	121·1	113·7	− 7·2	+70·7
33·501 G	14	89	(32	200	113·3	105·8	−10·2)*	+77·8
Means ..	..	..	229	1526	120·70	114·54	− 6·92	..
Spot *a*.								
20·341 C	16	89	61	340	125·9	121·0	− 4·7	−82·9
21·432 G	48	305	65	415	125·6	120·5	− 4·8	−68·8
22·355 C	76	525	68	472	125·7	120·3	− 4·6	−56·6
23·563 C	83	981	55	647	125·3	119·6	− 4·5	−41·1
24·448 G	178	1280	101	730	125·2	119·3	− 5·2	−29·5
25·487 C	139	1401	72	729	125·6	119·5	− 4·8	−15·4
26·348 C	152	1367	76	684	125·7	119·4	− 5·2	− 4·0
27·493 C	141	1043	72	531	126·0	119·4	− 5·3	+11·4
28·416 G	156	855	86	470	126·3	119·5	− 5·8	+23·8
29·435 G	123	668	77	421	126·6	119·5	− 6·2	+37·5
30·450 C	74	428	58	338	126·7	119·4	− 6·3	+51·0
31·459 G	38	278	43	316	126·9	119·3	− 6·4	+64·5
32·374 C	20	146	41	299	126·8	119·0	− 6·2	+76·4
Spot *b*.								
21·432 G	45	357	82	653	119·9	114·8	− 5·8	−74·5
22·355 C	76	551	82	595	119·6	114·3	− 5·8	−62·7
23·563 C	103	740	74	533	120·0	114·4	− 6·0	−46·4
24·448 G	165	916	101	559	120·0	114·2	− 6·4	−34·7
25·487 C	120	915	64	485	120·3	114·3	− 6·1	−20·7
26·348 C	145	1110	74	566	120·2	114·0	− 6·4	− 9·5
27·493 C	91	1226	46	613	120·0	113·5	− 6·4	+ 5·4
28·416 G	99	847	51	440	119·9	113·2	− 6·1	+17·4
Group 9108—Spot *b*—*continued*.								
1920. d					°	°	°	°
29·435 G	71	587	41	340	120·1	113·1	− 6·1	+31·0
30·450 C	51	219	36	153	120·3	113·1	− 5·2	+44·6
31·459 G	22	168	21	160	120·8	113·3	− 5·3	+58·4
32·374 C	10	60	15	87	120·6	112·9	− 4·7	+70·2
Spot *c*.								
21·432 G	8	60	19	141	116·2	111·3	− 7·0	−78·2
22·335 C	24	128	29	152	116·6	111·5	− 6·9	−65·7
23·563 C	30	185	23	142	116·8	111·4	− 7·0	−49·6
24·448 G	50	219	32	138	116·7	111·2	− 7·4	−38·0
25·487 C	49	282	27	155	116·7	110·9	− 7·0	−24·3
26·348 C	31	249	16	127	116·7	110·7	− 7·7	−13·0
27·493 C	50	222	25	111	116·8	110·6	− 7·4	+ 2·2
28·416 G	41	199	21	103	117·0	110·6	− 7·3	+14·5
29·435 G	34	156	19	89	117·3	110·6	− 7·2	+28·2
30·450 C	22	162	15	109	117·6	110·7	− 6·9	+41·9
31·459 G	14	74	12	64	117·8	110·6	− 6·8	+55·4
32·374 C	10	45	13	58	117·8	110·4	− 6·4	+67·4
Spot *d*.								
22·355 C	11	28	12	30	119·6	115·0	− 9·2	−62·7
23·563 C	38	290	28	212	119·4	114·5	− 9·2	−47·0
24·448 G	69	318	42	194	119·8	114·8	− 9·4	−34·9
25·487 C	66	348	36	188	119·8	114·5	− 9·0	−21·2
26·348 C	59	338	30	172	119·8	114·4	− 9·3	− 9·9
27·493 C	57	286	29	143	119·8	114·1	− 9·3	+ 5·2
28·416 G	59	281	31	149	120·2	114·3	− 9·3	+17·7
29·435 G	34	168	20	97	119·9	113·8	− 9·1	+30·8
30·450 C	21	146	15	102	120·0	113·7	− 8·8	+44·3
31·459 G	18	99	17	91	119·8	113·3	− 8·7	+57·4
32·374 C	7	22	9	30	119·7	113·0	− 8·3	+69·3
Spot *e*.								
23·563 C	24	98	20	81	113·1	108·2	− 9·1	−53·3
24·448 G	46	147	31	98	113·1	108·0	− 8·6	−41·6
25·487 C	49	251	27	141	113·9	108·6	− 8·2	−27·1
26·348 C	57	285	30	148	114·6	109·1	− 8·6	−15·1
27·493 C.	63	298	32	149	115·2	109·5	− 8·8	+ 0·6
28·416 G	47	240	24	122	115·6	109·7	− 9·1	+13·1
29·435 G	31	159	17	89	115·9	109·8	− 9·4	+26·8
30·450 C	23	130	15	85	116·1	109·8	− 9·4	+40·4
31·459 G	9	66	7	55	116·0	109·5	− 9·6	+53·6
32·374 C	6	52	7	61	115·8	109·1	− 9·1	+65·4

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued*.

RECURRENT SERIES **914**. Group 9108—*continued*.

Spot *f*.

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.
1920. d					°	°	°	°
23·563 C	11	27	10	24	109·6	105·1	−10·4	−56·8
24·448 G	58	200	41	142	109·5	104·9	−10·2	−45·2
25·487 C	75	306	44	181	109·6	104·8	− 9·7	−31·4
26·348 C	43	223	23	118	109·8	104·8	−10·2	−19·9
27·493 C	54	308	27	154	109·8	104·6	−10·2	− 4·8
28·416 G	72	349	37	178	109·6	104·2	−10·4	+ 7·1
29·435 G	40	341	22	184	109·6	104·0	−10·8	+20·5
30·450 C	13	195	8	119	110·2	104·5	−10·6	+34·5
31·459 G	15	109	11	82	110·8	104·8	−11·0	+48·4
32·374 C	13	85	13	84	110·7	104·6	−10·4	+60·3
33·501 G	7	41	13	76	110·7	104·4	−10·7	+75·2

Spot *g*.

25·487 C	40	207	22	116	114·0	110·0	−12·7	−27·0
26·348 C	35	287	18	149	114·3	110·2	−12·7	−15·4
27·493 C	52	255	26	128	114·6	110·3	−12·5	0·0
28·416 G	39	177	20	92	115·2	110·8	−12·5	+12·7
29·435 G	19	121	11	68	115·6	111·0	−12·9	+26·5
30·450 C	12	47	8	31	116·4	111·7	−12·7	+40·7
31·459 G	9	15	8	13	117·0	112·1	−13·0	+54·6

Group 9127.—February, 17–24. A small regular spot (probably *a* of Group 9108) gradually fading out. A very extensive area of faculæ follows it. Group 9132 develops just southwards on February 22.

47·376 C	6	31	18	94	131·6	120·7	− 6·1	−81·2
48·422 G	13	87	17	111	131·5	120·3	− 6·6	−67·5
49·418 G	12	106	10	90	131·7	120·3	− 6·6	−54·3
50·538 C	19	102	12	65	132·1	120·4	− 6·5	−39·1
51·405 C	18	67	10	38	131·7	119·8	− 6·6	−28·1
52·450 G	17	38	9	20	131·9	119·8	− 6·8	−14·1
53·597 G	16	23	8	12	132·5	120·1	− 6·7	+ 1·6
54·527 G	3	8	2	4	132·6	120·0	− 6·9	+13·9
Means ..	..	..	11	54	131·95	120·05	− 6·60	..

RECURRENT SERIES **915**.

Group 9105 seen in Rotation 887.
" 9122 " " 888.

Group 9105.—January 18–30. A single small spot for three days. On January 21, a large stream commences to develop which is fully formed by January 25. The leader, *a*, is a well-defined regular spot by January 25; the rear of the stream is made up of the original small follower and a large spot which has grown from the mid-portion of the group.

17·331 C	0	11	0	15	179·9	179·1	−18·8	−68·5
18·169 D	3	10	3	9	180·1	179·3	−18·3	−57·3
19·380 C	4	8	3	5	181·9	181·0	−18·2	−39·6
20·341 C	5	51	3	29	181·5	180·6	−18·3	−27·3

Group 9105—*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.
1920. d					°	°	°	°
21·432 G	76	336	40	177	181·3	180·3	−18·3	−13·1
22·355 C	112	626	57	322	181·2	180·2	−17·9	− 1·1
23·563 C	242	1183	129	626	181·6	180·5	−18·2	+15·2
24·448 G	290	1565	167	905	181·8	180·7	−18·1	+27·1
25·487 C	229	1223	153	818	181·7	180·6	−18·5	+40·7
26·348 C	132	964	112	788	181·5	180·3	−19·2	+51·8
27·493 C	78	481	104	638	183·1	181·9	−19·1	+68·5
28·416 G	47	198	152	572	184·0	182·7	−18·8	+81·5
29·435 G	0	58	(0	222	173·2	171·9	−19·8)*	+84·1
Means ..	..	..	77	409	181·63	180·60	−18·48	..

Spot *a*.

21·432 G	37	186	19	97	183·4	182·3	−18·0	−11·0
22·355 C	51	280	26	143	184·5	183·4	−17·4	+ 2·2
23·563 C	129	529	70	286	185·4	184·2	−17·9	+19·0
24·448 G	130	767	78	460	186·0	184·8	−18·0	+31·3
25·487 C	94	528	68	380	186·7	185·4	−18·3	+45·7
26·348 C	83	444	76	408	187·0	185·7	−18·7	+57·3
27·493 C	43	261	69	420	187·5	186·1	−18·8	+72·9
28·416 G	28	95	123	417	187·8	186·4	−18·4	+85·3

Group 9122.—February 13–22. A spot with double umbra; small companions appear northwards, usually in two clusters

43·360 C	5	91	11	209	186·7	184·1	−18·0	−79·0
44·334 C	19	118	23	144	186·6	183·9	−17·6	−66·3
45·339 C	38	221	33	190	185·5	182·7	−17·7	−54·2
46·414 G	62	272	41	180	184·9	182·1	−17·7	−40·6
47·376 C	36	187	20	108	184·9	182·0	−17·9	−27·9
48·422 G	36	134	19	70	185·4	182·4	−18·0	−13·6
49·418 G	32	131	16	67	185·3	182·3	−17·7	− 0·7
50·538 C	19	73	10	39	185·3	182·2	−17·4	+14·1
51·405 C	20	70	11	39	185·3	182·2	−17·4	+25·5
52·450 G	6	22	4	14	185·0	181·8	−18·0	+39·0
Means ..	..	..	19	106	185·49	182·57	−17·74	..

RECURRENT SERIES **916**.

Group 9137 (and 9140) seen in Rotation 889.
" 9152 " " 890.

Group 9137.—March 3–14. An irregular stream of spots in continual change. After March 11, two more stable components have formed at the front and rear of the stream respectively. This group is closely associated with Group 9140 with which it practically merges after March 10.

62·426 G	4	28	8	55	301·1	289·1	+11·0	−73·5
63·403 G	4	14	4	15	300·5	288·3	+11·6	−61·2
64·669 G	41	195	30	141	301·3	288·8	+ 9·9	−43·8

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*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 916. Group 9137—*continued.*								
1920. d					°	°	°	°
65·349 C	40	312	25	201	301·1	288·5	+10·1	−35·0
66·479 G	41	273	22	152	300·3	287·5	+ 9·9	−20·9
67·535 G	79	543	41	286	301·5	288·5	+ 9·9	− 5·8
68·451 G	112	666	60	353	302·3	289·1	+10·2	+ 7·1
69·362 C	138	1280	77	717	303·0	289·6	+ 9·9	+19·8
70·341 C	188	1082	118	679	303·4	289·8	+ 9·8	+33·1
71·480 G	118	714	98	581	304·5	290·7	+ 9·7	+49·2
72·342 C	77	519	89	588	305·6	291·6	+ 9·6	+61·7
73·396 C	28	245	64	560	305·9	291·7	+ 9·6	+75·8
Means ..	..	..	53	361	302·54	289·43	+10·10	..
Group 9140.—March 8–15. An irregular stream showing frequent change, closely associated with Group 9137 of similar character. A regular spot has formed at the head of the stream on March 12.								
67·535 G	27	130	14	69	295·8	280·5	+ 7·1	−11·5
68·451 G	42	160	22	81	295·5	280·0	+ 6·6	+ 0·3
69·362 C	65	330	34	174	296·0	280·2	+ 7·0	+12·8
70·341 C	61	261	35	150	296·0	280·0	+ 6·9	+25·7
71·480 G	95	452	67	321	297·1	280·9	+ 7·1	+41·8
72·342 C	56	338	52	311	298·6	282·2	+ 7·3	+54·7
73·396 C	19	146	32	250	301·4	284·8	+ 7·1	+71·3
74·369 C	8	36	(37	172	299·6	282·7	+10·9)*	+82·4
Means ..	..	..	37	194	297·20	281·41	+ 7·01	..
Group 9152.—March 29–31. A small spot followed by an extensive mass of faculæ								
88·350 C	0	10	0	27	315·0	296·3	+ 8·8	−77·9
89·377 C	10	27	12	33	314·9	296·0	+ 8·5	−64·4
90·392 G	0	12	0	10	314·8	295·7	+ 8·7	−51·1
Means ..	..	..	4	23	314·90	296·00	+ 8·67	..
RECURRENT SERIES 917. Group 9141 seen in Rotation 889. ,, 9153 ,, ,, 890.								
Group 9141.—March 9–16. A small but well-defined regular spot with a long train of very small followers which die out by March 15.								
68·451 G	12	44	6	23	277·6	270·2	−14·9	−17·6
69·362 C	60	216	31	109	278·5	271·0	−15·3	− 4·7
70·341 C	61	275	31	142	280·7	273·1	−15·9	+10·4
71·480 G	53	194	29	110	282·5	274·8	−15·7	+27·2
Group 9141—*continued.*								
1920. d					°	°	°	°
72·342 C	31	189	19	122	282·6	274·8	−15·6	+38·7
73·396 C	22	113	19	96	284·6	276·7	−15·6	+54·5
74·369 C	12	73	15	93	285·1	277·1	−15·6	+67·9
75·478 G	2	26	7	89	285·9	277·7	−14·8	+83·3
Means ..	..	..	20	98	282·19	274·43	−15·42	..
Group 9153, March 31—April 3. One very small spot.								
90·392 G	0	3	0	6	288·3	275·4	−13·6	−77·6
91·347 C	2	10	2	12	288·0	274·9	−13·6	−65·3
92·381 C	0	3	0	2	287·5	274·3	−13·3	−52·2
93·353 C	0	3	0	2	287·5	274·1	−13·4	−39·4
Means ..	..	..	0	5	287·82	274·68	−13·48	..
RECURRENT SERIES 918. Group 9143 seen in Rotation 889. ,, 9157 ,, ,, 890. ,, 9174 ,, ,, 891.								
Group 9143.—March 15–27. Revival of Recurrent Series 914. A magnificent stream. At first, two large and composite spots near the east limb. Considerable development takes place within a few days especially with regard to a small spot, *a*, appearing on March 19 at the front of the group. *a* grows very rapidly and by March 22 is the dominating feature of the stream. The train of spots following it is now very compact in character, and although changes are constantly evident, several of the components, *b*, *c*, *d*, *e*, and *f*, can be identified from day to day. Towards the west limb, the stream simplifies to three chief components which follow the leader spot.								
74·369 C	11	109	(42	416	134·0	115·9	− 5·6)*	−83·2
75·478 G	144	833	252	1397	129·5	111·2	− 4·9	−73·1
76·669 G	315	1813	283	1659	130·0	111·4	− 5·0	−56·9
77·534 G	357	2342	248	1646	130·6	111·8	− 4·8	−44·9
78·524 G	568	2818	328	1653	131·6	112·5	− 4·9	−30·9
79·408 G	624	3406	327	1793	133·2	113·9	− 4·8	−17·6
80·418 G	724	4138	365	2086	135·3	115·8	− 4·7	− 2·2
81·380 G	791	4401	407	2262	136·4	116·6	− 5·0	+11·6
82·383 G	918	4830	514	2690	136·9	116·9	− 4·8	+25·3
83·355 C	578	3641	377	2327	137·2	116·9	− 5·1	+38·5
84·379 G	367	2828	311	2314	137·7	117·2	− 4·9	+52·4
85·380 G	276	1713	338	2108	138·3	117·5	− 5·1	+66·2
86·347 C	79	587	213	1661	139·6	118·6	− 5·0	+80·3
Means ..	..	..	330	1966	134·44	115·03	− 4·92	..

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued.*

RECURRENT SERIES **918.** Group 9143—*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.
Spot *a*.								
1920. d					°	°	°	°
78·524 G	78	186	41	99	143·0	124·2	− 5·2	−19·5
79·408 G	146	606	73	303	144·4	125·4	− 5·5	− 6·4
80·418 G	198	1028	99	514	144·5	125·3	− 5·8	+ 7·0
81·380 G	314	1649	166	874	144·4	124·9	− 5·9	+19·6
82·383 G	354	1720	209	1015	144·4	124·7	− 5·8	+32·8
83·355 C	267	1337	190	949	144·2	124·3	− 5·8	+45·5
84·379 G	162	880	157	854	144·5	124·3	− 5·5	+59·2
85·380 G	92	635	145	1003	144·1	123·7	− 5·5	+72·0
86·347 C	22	190	105	910	143·8	123·2	− 5·5	+84·5
Spot *b*.								
76·669 G	33	174	29	151	131·8	112·4	− 3·6	−55·1
77·534 G	31	152	22	106	131·1	111·5	− 3·4	−44·4
78·524 G	34	145	20	86	131·3	111·4	− 2·8	−31·2
79·408 G	25	126	13	67	131·0	110·9	− 2·7	−19·8
80·418 G	19	145	10	74	130·6	110·3	− 2·8	− 6·9
81·380 G	15	122	8	61	130·5	109·9	− 2·7	+ 5·7
82·383 G	9	77	5	41	130·4	109·6	− 2·6	+18·8
Spot *c*.								
75·478 G	24	105	56	247	124·7	105·8	− 2·7	−77·9
76·669 G	60	297	63	312	125·2	106·0	− 3·5	−61·7
77·534 G	52	523	40	403	125·5	106·1	− 4·1	−50·0
78·524 G	101	480	63	298	126·0	106·4	− 3·9	−36·5
79·408 G	95	499	52	274	126·3	106·4	− 4·1	−24·5
80·418 G	61	332	31	169	126·5	106·4	− 3·9	−11·0
81·380 G	52	256	26	128	127·0	106·6	− 4·1	+ 2·2
82·383 G	38	180	20	94	127·3	106·7	− 4·2	+15·7
Spot *d*.								
75·478 G	22	119	48	258	125·3	107·7	− 6·3	−77·3
76·669 G	42	384	45	408	124·7	106·8	− 6·2	−62·2
77·534 G	56	286	44	223	125·0	106·9	− 6·4	−50·5
78·524 G	60	336	38	212	125·2	106·9	− 6·6	−37·3
79·408 G	61	356	34	196	125·1	106·6	− 6·6	−25·7
80·418 G	49	254	25	130	125·4	106·7	− 6·6	−12·1
81·380 G	48	266	24	133	125·7	106·7	− 6·4	+ 0·9
82·383 G	52	308	27	160	125·9	106·7	− 6·5	+14·3
83·355 C	43	327	24	183	126·0	106·6	− 6·4	+27·3
84·379 G	33	273	22	180	126·7	107·0	− 6·1	+41·4
85·380 G	35	199	30	171	127·0	107·1	− 6·1	+54·9
86·347 C	14	57	19	76	127·6	107·5	− 6·2	+68·3

Group 9143—*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.
Spot *e*.								
1920. d					°	°	°	°
76·669 G	14	119	13	113	128·2	109·3	− 4·8	−58·7
77·534 G	0	196	0	143	128·5	109·4	− 4·1	−47·0
78·524 G	22	377	13	226	128·4	109·0	− 3·9	−34·1
79·408 G	46	491	25	265	129·3	109·7	− 3·8	−21·5
80·418 G	51	789	26	402	129·2	109·3	− 4·0	− 8·3
81·380 G	74	779	37	389	129·3	109·2	− 4·7	+ 4·5
82·383 G	96	687	51	364	129·7	109·3	− 4·5	+18·1
Spot *f*.								
76·669 G	114	625	93	512	134·3	115·9	− 5·5	−52·6
77·534 G	169	916	112	604	134·3	115·7	− 5·3	−41·2
78·524 G	185	1090	105	621	134·5	115·7	− 5·6	−28·0
79·408 G	147	922	76	479	134·3	115·2	− 5·5	−16·5
80·418 G	104	615	52	308	133·6	114·3	− 5·3	− 3·9
81·380 G	136	632	69	322	133·0	113·5	− 5·0	+ 8·2

Group 9157.—April 10–23. A large regular spot, *a* of Group 9143, followed by an extensive area of faculæ. Very small companions surround the spot on April 15, 16, and 18.

100·405 G	12	94	73	573	148·0	124·6	− 6·4	−85·8
101·399 C	86	456	144	764	147·7	124·1	− 6·6	−73·0
102·357 C	123	686	123	686	147·5	123·7	− 6·6	−60·5
103·562 G	196	990	135	683	148·2	124·1	− 6·6	−43·9
104·347 G	212	1030	127	618	148·2	123·9	− 6·6	−33·5
105·341 C	222	1042	118	552	148·0	123·5	− 6·7	−20·6
106·383 G	203	1022	102	511	148·2	123·4	− 6·4	− 6·7
107·331 C	196	1010	98	505	148·1	123·1	− 6·4	+ 5·7
108·359 C	183	950	97	504	147·9	122·7	− 6·4	+19·1
109·242 K	179	826	104	479	147·8	122·4	− 6·2	+30·7
110·353 G	142	666	101	473	147·8	122·1	− 6·1	+45·4
111·577 G	101	428	105	445	148·0	122·0	− 6·0	+61·7
112·359 G	70	322	115	528	148·5	122·3	− 6·0	+72·6
113·358 C	13	51	69	271	147·8	121·4	− 5·8	+85·1
Means ..	..	..	108	542	147·98	123·09	− 6·34	..

Group 9174.—May 8–15. A small but definite spot, *a* of Group 9143, with two or three faint companions after May 10.

128·346 C	4	33	7	55	151·7	120·8	− 4·8	−72·9
129·106 K	20	65	22	70	151·7	120·6	− 4·9	−62·7
130·354 G	8	33	6	24	151·8	120·4	− 4·7	−46·3
131·373 G	13	31	8	18	151·9	120·2	− 4·3	−32·7
132·383 G	12	26	6	14	151·5	119·6	− 5·0	−19·8
133·437 G	11	24	6	12	150·7	118·5	− 5·3	− 6·6
134·353 C	8	54	4	27	149·9	117·5	− 6·6	+ 4·7
135·354 G	6	28	4	15	150·1	117·5	− 6·7	+18·1
Means ..	..	..	8	29	151·16	119·39	− 5·29	..

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued*.

RECURRENT SERIES 919.

Group 9144 seen in Rotation 889.
,, 9158 ,, ,, 890.

Group 9144.—March 16–29. A stable regular spot *f* Group 9143. A few very small close followers appear on March 21–23.

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.
1920. d					°	°	°	°
75·478 G	8	32	49	195	116·8	98·8	− 5·4	−85·8
76·669 G	35	282	51	412	116·4	98·1	− 5·5	−70·5
77·534 G	76	386	72	367	116·7	98·3	− 5·8	−58·8
78·524 G	100	500	71	355	117·0	98·3	− 5·8	−45·5
79·408 G	108	571	65	343	117·1	98·2	− 5·7	−33·7
80·418 G	143	774	76	410	117·4	98·3	− 5·6	−20·1
81·380 G	120	675	60	338	117·7	98·3	− 5·5	− 7·1
82·383 G	136	676	68	338	117·8	98·2	− 5·5	+ 6·2
83·355 C	111	599	59	317	117·8	98·0	− 5·7	+19·1
84·379 G	82	440	48	260	117·8	97·7	− 5·6	+32·5
85·380 G	84	416	60	300	118·1	97·8	− 5·7	+46·0
86·347 C	40	277	38	266	118·2	97·7	− 5·8	+58·9
87·375 C	24	140	38	224	118·0	97·2	− 6·0	+72·3
88·350 C	5	41	37	339	119·6	98·6	− 5·8	+86·7
Means ..	..	..	57	319	117·60	98·11	− 5·67	..

Group 9158.—April 13–19. A small spot dying out.

103·562 G	8	67	12	99	121·4	96·1	− 5·0	−70·7
104·347 G	18	93	18	93	121·3	95·8	− 4·7	−60·4
105·341 C	12	79	9	58	121·2	95·5	− 4·8	−47·4
106·383 G	25	93	15	56	121·7	95·7	− 4·7	−33·2
107·331 C	10	59	5	31	121·7	95·5	− 4·8	−20·7
108·359 C	7	18	4	9	121·7	95·3	− 5·0	− 7·1
109·242 K	2	11	1	6	121·8	95·2	− 4·9	+ 4·7
Means ..	..	..	9	50	121·54	95·59	− 4·84	..

RECURRENT SERIES 920.

Group 9161 seen in Rotation 891.
,, 9182 ,, ,, 892.

Group 9161.—April 25–May 7. A small regular spot, followed by three very small companions on April 30. An extensive area of faculæ follows the group, but it is less conspicuous than during the previous rotation.

115·380 C	7	40	24	137	315·6	293·4	+10·7	−80·4
116·346 C	12	81	16	109	316·5	294·2	+10·6	−66·8
117·481 C	19	136	16	116	316·1	293·5	+10·4	−52·2
118·359 C	27	154	19	106	315·8	293·1	+10·1	−40·9

Group 9161—*continued*.

1920. d					°	°	°	°
119·398 G	37	193	21	112	315·9	293·0	+ 9·9	−27·0
120·413 G	40	221	21	117	315·5	292·4	+ 9·9	−14·0
121·357 C	39	203	20	106	315·8	292·5	+ 9·9	− 1·2
122·429 C	37	189	20	100	316·0	292·5	+ 9·9	+13·1
123·393 C	33	171	19	97	316·1	292·4	+10·1	+26·0
124·419 G	35	146	23	98	316·0	292·1	+10·2	+39·4
125·345 G	18	112	15	94	316·1	292·0	+10·4	+51·8
126·344 C	13	78	16	94	315·6	291·3	+10·2	+64·5
127·350 G	4	55	11	151	316·4	292·0	+10·2	+78·6
Means ..	..	..	19	111	315·95	292·65	+10·19	..

Group 9182.—May 22–June 2. Probably a return but perhaps a revival only of Group 9161. A spot, nearly of regular formation, changing suddenly between May 25 and 26 into a triple spot with companions. It is very unstable, and on May 27 it divides into two chief components which unite again by May 30.

142·357 G	29	210	59	431	323·8	292·2	+ 7·8	−75·5
143·376 G	33	316	36	341	324·0	292·2	+ 7·7	−61·9
144·292 G	56	296	43	225	325·3	293·3	+ 7·5	−48·4
145·354 G	87	373	53	228	325·6	293·3	+ 7·4	−34·1
146·564 G	138	608	74	323	325·5	293·0	+ 7·2	−18·2
147·558 G	115	644	59	328	325·5	292·7	+ 7·2	− 5·0
148·356 C	79	636	40	324	325·9	293·0	+ 7·4	+ 5·9
149·336 C	51	532	28	287	326·2	293·0	+ 7·4	+19·2
150·469 G	72	446	44	272	326·4	293·0	+ 7·7	+34·4
151·348 G	52	325	38	237	326·2	292·6	+ 7·7	+45·8
152·372 C	19	228	19	228	326·5	292·7	+ 7·6	+59·7
153·354 G	12	154	20	262	326·4	292·4	+ 7·8	+72·6
Means ..	..	..	43	290	325·61	292·78	+ 7·53	..

RECURRENT SERIES 921.

Group 9178 seen in Rotation 891.
,, 9189 ,, ,, 892.
,, 9204 ,, ,, 893.
,, 9215 ,, ,, 894.

Group 9178.—May 13–15. A group forming at the west limb.

133·437 G	9	64	8	59	212·4	197·1	+14·6	+55·1
134·353 C	21	115	28	153	211·7	196·3	+15·0	+66·5
135·354 G	19	125	61	385	211·1	195·5	+15·6	+79·1
Means ..	..	..	32	199	211·73	196·30	+15·07	..

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued.*

RECURRENT SERIES **921**—*continued.*

Group 9189.—May 30–June 10. A composite spot followed by a train of small companions. The train dies out but the leader increases in size and becomes of regular type.

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.
1920. d					°	°	°	°
150·469 G	11	46	24	115	214·6	194·6	+13·7	−77·4
151·348 G	32	156	39	202	214·2	194·1	+14·5	−66·2
152·372 C	61	364	53	308	215·2	194·9	+14·5	−51·6
153·354 G	137	643	90	419	216·4	196·0	+14·8	−37·4
154·508 G	190	835	105	462	217·9	197·3	+14·5	−20·7
155·501 G	181	845	94	440	218·7	198·0	+14·6	− 6·7
156·355 C	142	806	74	419	218·8	198·0	+13·9	+ 4·7
157·447 C	132	677	73	372	219·8	198·9	+14·1	+20·2
158·361 G	122	619	74	378	219·8	198·7	+13·6	+32·3
159·350 G	110	523	80	382	220·2	199·0	+13·7	+45·7
160·377 G	86	392	86	392	220·2	198·9	+13·3	+59·3
161·643 G	46	219	94	449	219·8	198·3	+13·2	+75·7
Means ..	..	..	74	361	217·97	197·22	+14·03	..

Group 9204.—June 25–July 8. A stable regular spot with tiny companions on July 2 and 7.

176·357 G	0	36	(0	366	221·4	197·4	+13·5)*	−87·9
177·348 C	40	208	69	358	223·1	199·0	+13·7	−73·1
178·384 C	63	349	62	346	223·0	198·7	+13·8	−59·5
179·478 G	99	455	71	328	223·0	198·6	+13·6	−45·0
180·337 C	103	473	63	289	223·1	198·6	+13·9	−33·6
181·359 G	112	591	60	319	222·9	198·2	+13·8	−20·2
182·352 C	121	577	62	294	222·9	198·1	+13·8	− 7·1
183·350 G	149	628	76	320	222·7	197·8	+13·6	+ 5·9
184·446 C	129	559	70	302	222·9	197·8	+13·9	+20·6
185·423 G	127	583	77	356	222·5	197·3	+13·8	+33·2
186·349 C	92	461	66	332	222·8	197·5	+14·2	+45·7
187·619 G	49	278	54	306	223·2	197·7	+14·2	+62·9
188·362 C	34	247	54	390	222·7	197·1	+14·1	+72·3
189·370 G	12	75	(73	458	222·9	197·1	+13·8)*	+85·8
Means ..	..	..	65	328	222·90	198·03	+13·87	..

Group 9215.—July 23–August 3. A regular spot diminishing rapidly after July 31. On August 3, another small regular spot has appeared preceding it in longitude.

204·467 G	23	95	38	158	224·1	194·0	+13·2	−73·2
205·381 G	28	151	29	154	224·3	194·1	+13·3	−61·0
206·338 G	33	191	25	143	224·4	194·1	+13·6	−48·2
207·500 G	36	201	22	121	224·7	194·2	+13·0	−32·5
208·462 C	58	249	31	134	224·6	194·0	+13·3	−19·9
209·357 C	25	195	13	100	224·7	193·9	+13·1	− 8·0
210·389 G	36	181	18	92	224·6	193·7	+13·0	+ 5·6
211·351 C	31	170	16	90	224·7	193·6	+13·3	+18·4

Group 9215—*continued.*

1920. d					°	°	°	°
212·505 G	34	172	20	103	224·7	193·5	+12·9	+33·7
213·494 G	25	123	18	90	224·5	193·1	+13·0	+46·6
214·342 C	21	99	20	93	224·8	193·3	+13·1	+58·1
215·346 G	18	118	31	205	227·0	195·3	+13·9	+73·6
Means ..	..	..	23	124	224·76	193·90	+13·23	..

RECURRENT SERIES **922.**

Group 9188 seen in Rotation 892.
" 9198 " " 893.

Group 9188.—May 28–31. An insignificant stream of small spots.

148·356 C	7	15	4	9	353·7	326·5	−11·5	+33·7
149·336 C	39	107	30	82	354·8	327·5	−10·5	+47·8
150·469 G	27	133	31	160	355·9	328·4	−10·5	+63·9
151·348 G	8	72	20	166	356·4	328·7	−11·0	+76·0
Means ..	..	..	21	104	355·20	327·78	−10·87	..

Group 9198.—June 15–25. A small but perfectly formed regular spot which gradually diminishes.

166·590 G	10	61	17	102	6·4	332·6	− 9·9	−72·2
167·380 G	18	119	19	129	6·6	332·6	−10·2	−61·6
168·417 G	28	152	22	117	6·3	332·1	− 9·9	−48·1
169·345 G	27	153	17	96	6·4	332·0	− 9·8	−35·8
170·487 G	33	165	18	89	6·3	331·7	− 9·4	−20·7
171·518 C	35	194	18	99	6·9	332·1	− 9·3	− 6·5
172·345 G	35	158	18	81	7·5	332·5	− 9·1	+ 5·0
173·355 G	25	127	14	69	7·7	332·5	− 8·8	+18·6
174·349 G	18	58	11	35	7·9	332·5	− 8·7	+32·0
175·400 G	7	23	5	17	8·4	332·8	− 8·6	+46·4
176·357 G	3	11	3	11	8·2	332·4	− 8·7	+58·9
Means ..	..	..	15	77	7·15	332·35	− 9·31	..

RECURRENT SERIES **923.**

Group 9190 seen in Rotation 892.
" 9201 " " 893.

Group 9190.—May 31–June 6. Two small clusters of spots which have practically disappeared by June 5. Two spots have appeared on June 6 near the position of the following cluster.

151·348 G	5	8	3	4	277·0	262·0	+16·3	− 3·4
152·372 C	10	23	5	12	278·5	263·4	+16·2	+11·7
153·354 G	20	53	11	30	277·2	262·0	+16·6	+23·4
154·508 G	7	81	5	55	278·2	262·9	+16·2	+39·6

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*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 923. Group 9190—*continued*.								
1920. d					°	°	°	°
155·510 G	5	36	5	31	279·2	263·8	+16·1	+53·8
156·355 C	0	9	0	12	282·0	266·5	+15·0	+67·9
157·447 C	8	30	18	66	275·8	260·2	+14·9	+76·2
Means ..	..	..	7	30	278·27	262·97	+15·90	..
Group 9201.—June 21–July 2. Three small but well-formed regular spots *a*, *b*, and *c*, arranged as the apices of an equilateral triangle. By June 28, however, small proper motions of the spots have changed the appearance of the group. There are occasional small companions.								
172·345 G	8	50	(30	183	280·2	257·1	+13·9)*	−82·3
173·355 G	40	244	60	365	279·1	255·9	+14·1	−70·0
174·349 G	58	353	55	329	279·1	255·7	+14·0	−56·8
175·400 G	94	418	66	291	279·1	255·6	+13·9	−42·9
176·357 G	82	426	48	250	280·2	256·6	+13·9	−29·1
177·348 C	82	422	44	223	280·3	256·5	+14·2	−15·9
178·384 C	77	332	39	171	280·7	256·8	+14·6	− 1·8
179·478 G	69	344	35	180	280·6	256·6	+14·4	+12·6
180·337 C	94	281	53	156	280·4	256·2	+14·6	+23·7
181·359 G	33	167	21	108	280·7	256·4	+14·0	+37·6
182·352 C	21	102	16	84	282·7	258·3	+13·2	+52·7
183·350 G	2	21	2	26	283·6	259·0	+13·0	+66·8
Means ..	..	..	40	198	280·59	256·69	+13·99	..
Spot *a*.								
172·345 G	3	31	10	106	280·7	255·7	+12·7	−81·8
173·355 G	17	98	23	133	280·7	255·6	+13·0	−68·4
174·349 G	20	132	18	116	281·0	255·7	+13·0	−54·9
175·400 G	40	163	27	109	281·6	256·2	+13·1	−40·4
176·357 G	44	208	25	119	282·4	256·8	+13·1	−26·9
177·348 C	29	166	15	86	283·3	257·6	+13·4	−12·9
178·384 C	35	170	18	87	283·9	258·0	+13·7	+ 1·4
179·478 G	27	152	14	81	284·0	258·0	+13·6	+16·0
180·337 C	41	107	23	61	284·3	258·2	+13·9	+27·6
181·359 G	15	86	10	58	283·9	257·6	+13·7	+40·8
182·352 C	12	37	10	32	284·0	257·6	+13·6	+54·0
183·350 G	0	12	0	15	284·0	257·4	+13·5	+67·2
Spot *b*.								
172·345 G	5	19	20	77	279·3	262·4	+15·9	−83·2
173·355 G	12	76	18	112	279·1	262·1	+15·6	−70·0
174·349 G	19	123	18	114	279·1	262·0	+15·6	−56·8
175·400 G	31	148	22	104	279·2	262·0	+15·5	−42·8
176·357 G	18	135	11	80	279·3	262·0	+15·6	−30·0
177·348 C	33	160	18	86	279·4	262·0	+16·0	−16·8
Group 9201, Spot *b*—*continued*.								
1920. d					°	°	°	°
178·384 C	18	92	9	48	279·4	261·9	+16·2	− 3·1
179·478 G	22	98	11	51	279·0	261·4	+16·2	+11·0
180·337 C	21	41	12	23	279·3	261·5	+16·5	+22·6
181·359 G	6	16	4	10	279·2	261·4	+16·2	+36·1
182·352 C	0	5	0	4	279·1	261·2	+16·2	+49·1
Spot *c*.								
173·355 G	11	64	19	111	275·9	252·3	+13·7	−73·2
174·349 G	19	92	19	93	275·8	252·1	+13·5	−60·1
175·400 G	23	107	17	78	275·9	252·1	+13·3	−46·1
176·357 G	20	78	12	48	275·8	251·8	+13·3	−33·5
177·348 C	16	54	9	29	276·0	251·9	+13·4	−20·2
178·384 C	24	70	12	36	275·9	251·6	+13·9	− 6·6
179·478 G	20	94	10	48	276·1	251·7	+14·0	+ 8·1
180·337 C	24	93	13	50	276·5	252·0	+14·8	+19·8
181·359 G	12	54	7	33	276·5	251·8	+14·4	+33·4
182·352 C	6	19	4	14	276·7	251·9	+14·4	+46·7
RECURRENT SERIES 924. Group 9207 seen in Rotation 893. ,, 9216 ,, ,, 894.								
Group 9207.—June 28–July 10. A stream of normal development. The leader, *a*, which shows some departure from the regular type, is elongated with composite umbra.								
179·478 G	17	81	29	148	195·1	173·0	−14·3	−72·9
180·337 C	51	245	55	267	195·9	173·7	−13·7	−60·8
181·359 G	150	610	117	480	195·8	173·5	−14·5	−47·3
182·352 C	168	730	107	464	195·8	173·4	−14·8	−34·2
183·350 G	188	833	106	472	196·2	173·6	−14·8	−20·6
184·446 C	208	954	110	509	195·0	172·3	−14·7	− 7·3
185·423 G	222	1186	117	628	195·0	172·2	−14·5	+ 5·7
186·349 C	164	878	91	488	195·4	172·5	−14·6	+18·3
187·619 G	109	584	70	379	195·5	172·4	−15·1	+35·2
188·362 C	68	482	51	362	195·1	171·9	−14·6	+44·7
189·370 G	43	344	45	355	196·0	172·7	−14·9	+58·9
190·366 G	24	212	43	382	196·1	172·7	−14·7	+72·2
191·348 C	9	41	48	218	194·3	170·8	−14·4	+83·4
Means ..	..	..	76	396	195·48	172·67	−14·58	..
Spot *a*.								
179·478 G	17	70	29	119	196·4	174·1	−14·1	−71·6
180·337 C	39	188	40	194	197·6	175·2	−13·7	−59·1
181·359 G	103	411	77	308	197·8	175·3	−14·2	−45·3
182·352 C	123	533	76	330	197·8	175·2	−14·6	−32·2

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*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 924. Group 9207—Spot *a—continued.*								
1920. d					°	°	°	°
183·350 G	140	659	78	369	197·7	175·0	−14·9	−19·1
184·446 C	145	613	77	325	197·0	174·1	−14·7	− 5·3
185·423 G	175	804	93	426	196·6	173·6	−14·8	+ 7·3
186·349 C	118	673	66	377	196·2	173·1	−14·6	+19·1
187·619 G	102	552	66	359	196·0	172·7	−14·8	+35·7
188·362 C	60	432	46	328	195·8	172·4	−14·7	+45·4
189·370 G	43	325	45	338	196·0	172·5	−14·9	+58·9
190·366 G	24	212	43	382	196·1	172·5	−14·7	+72·2
Group 9216.—July 25–August 5. A regular spot, *a* of Group 9207, disappearing rapidly after August 4.								
206·338 G	10	73	24	172	196·7	168·6	−14·3	−75·9
207·500 G	36	182	41	206	196·2	168·0	−14·7	−61·0
208·462 C	37	210	30	168	196·8	168·4	−14·2	−47·7
209·357 C	50	245	33	162	196·9	168·4	−14·2	−35·8
210·389 G	45	256	26	146	196·9	168·3	−14·1	−22·1
211·351 C	45	250	24	135	196·6	167·9	−13·8	− 9·7
212·505 G	40	237	21	126	196·4	167·5	−13·7	+ 5·4
213·494 G	38	209	21	117	196·2	167·2	−13·6	+18·3
214·342 C	33	160	20	98	196·1	166·9	−13·6	+29·4
215·346 G	17	138	12	101	195·9	166·6	−13·6	+42·5
216·379 G	16	114	16	111	195·8	166·4	−13·4	+56·0
217·403 G	5	20	8	33	196·1	166·5	−13·6	+69·9
Means ..	..	..	23	131	196·38	167·56	−13·90	..
RECURRENT SERIES 925. Group 9213 seen in Rotation 894. ,, 9225 ,, ,, 895.								
Group 9213.—July 17–29. A small regular spot with double umbra from July 20 to 26. A few small companions usually appear with it.								
198·379 G	12	99	26	218	300·6	266·3	+10·6	−77·3
199·439 G	25	154	28	173	300·1	265·6	+11·1	−63·8
200·347 G	42	227	34	185	299·5	264·8	+11·3	−52·3
201·353 C	61	310	39	201	299·2	264·4	+11·5	−39·3
202·368 C	51	287	29	162	298·5	263·5	+11·6	−26·6
203·421 G	51	245	26	125	298·8	263·6	+11·4	−12·4
204·467 G	43	243	22	123	299·0	263·6	+11·6	+ 1·7
205·381 G	49	252	25	130	298·1	262·6	+12·1	+12·8
206·338 G	44	262	25	146	298·1	262·4	+12·4	+25·5
207·500 G	31	146	21	98	299·4	263·5	+11·7	+42·2
208·462 C	24	137	21	119	299·5	263·4	+11·9	+55·0
209·357 C	12	98	15	123	300·0	263·8	+11·6	+67·3
210·389 G	8	47	23	137	300·1	263·7	+11·9	+81·1
Means ..	..	..	26	149	299·30	263·94	+11·59	..
Group 9225.—August 13–22. A very small regular spot gradually diminishing to a mere dot near the west limb.								
1920. d					°	°	°	°
225·394 G	6	30	13	64	303·2	264·7	+11·9	−77·4
226·364 G	10	61	11	69	303·4	264·7	+11·9	−64·4
227·451 G	12	59	9	46	303·2	264·3	+11·8	−50·2
228·343 G	14	34	9	21	303·7	264·7	+11·9	−37·9
229·192 D	17	28	9	16	303·1	263·9	+11·6	−27·3
230·350 G	18	36	9	18	303·2	263·8	+11·5	−11·9
231·412 G	12	26	6	13	303·6	264·0	+11·5	+ 2·5
232·382 G	12	27	6	14	303·6	263·9	+11·6	+15·4
233·351 G	6	17	3	10	303·3	263·4	+11·6	+27·9
234·503 G	0	5	0	3	303·6	263·5	+11·7	+43·4
Means ..	..	..	7	27	303·39	264·09	+11·70	..
RECURRENT SERIES 926. Group 9219 seen in Rotation 894. ,, 9226 ,, ,, 895.								
Group 9219.—August 6–7. A pair of small spots near the west limb.								
218·676 G	6	12	7	14	175·0	143·3	+13·5	+65·6
219·359 G	0	10	0	18	174·9	143·1	+13·2	+74·5
Means ..	..	..	3	16	174·95	143·20	+13·35	..
Group 9226. August 22–30. Intermittent. A spot dividing into two portions by August 24, which have disappeared by August 28. A small ephemeral spot appears on August 30.								
234·503 G	18	78	27	118	188·6	146·6	+11·3	−71·6
235·595 G	10	102	9	91	189·2	147·0	+11·3	−56·6
236·638 G	22	66	15	44	189·5	147·1	+10·8	−42·5
237·448 C	16	64	9	37	190·0	147·5	+11·3	−31·3
238·352 G	25	54	13	29	190·2	147·5	+11·1	−19·1
239·356 G	15	28	8	14	191·1	148·3	+11·0	− 5·0
240·605 G	0	0	0	0	..	..	..	..
241·441 C	0	0	0	0	..	..	..	..
242·352 G	2	13	1	8	190·4	147·0	+11·2	+33·9
Means ..	..	..	9	38	189·86	147·29	+11·14	..

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued.*

RECURRENT SERIES 927.

Group 9227 seen in Rotation 895.
,, 9235 and 9236 seen in Rotation 896.
,, 9253 seen in Rotation 897.

Group 9227.—August 29–September 9. Four small spots on August 29 developing rapidly into a very large irregular stream. The leader, *a*, is for a short time one of regular type, but by September 1, it is showing a composite umbra and by the following day a large double spot has formed. This divides completely into two parts, a_1 and a_2, which separate considerably in longitude. The rear of the stream is at first represented by a small cluster, *b*, which becomes a large and very composite spot. The remaining spots of the group are small and unstable.

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.
1920. d					°	°	°	°
241·441 C	19	66	21	75	108·0	76·1	−14·5	−60·5
242·352 G	57	194	47	155	109·5	77·5	−14·7	−47·0
243·342 C	104	533	68	349	109·5	77·4	−14·4	−33·9
244·347 C	141	1064	82	618	109·3	77·0	−14·4	−20·9
245·323 C	401	2095	219	1140	109·1	76·7	−13·7	− 8·2
246·665 G	496	2699	272	1472	109·7	77·1	−13·9	+10·2
247·339 C	372	2490	214	1427	109·6	77·0	−13·9	+19·0
248·586 G	368	2278	251	1536	110·8	78·0	−14·2	+36·6
249·558 G	258	1954	225	1688	111·9	79·0	−13·9	+50·6
250·640 G	165	1320	228	1800	112·6	79·5	−13·7	+65·6
251·381 G	118	775	349	1991	113·7	80·5	−13·7	+76·4
252·348 G	11	79	(36	259	103·6	70·3	−14·2)*	+79·1
Means ..	..	..	180	1114	110·34	77·80	−14·09	..
Spot *a*.								
241·441 C	12	39	13	42	109·5	77·2	−14·4	−59·0
242·352 G	22	122	17	95	110·8	78·3	−14·4	−45·7
243·342 C	75	384	48	246	110·9	78·3	−13·8	−32·5
244·347 C	91	662	52	377	111·2	78·5	−14·0	−19·0
245·323 C	211	1180	114	637	111·8	78·9	−13·3	− 5·5
Spot a_1.								
246·665 G	190	724	105	398	114·2	76·0	−12·7	+14·7
247·339 C	148	662	87	391	115·4	77·1	−12·5	+24·8
248·586 G	134	618	98	451	117·0	78·5	−13·1	+42·8
249·558 G	103	702	100	681	117·1	78·4	−13·0	+55·8
250·640 G	57	356	99	619	118·1	79·3	−12·4	+71·1
251·381 G	29	119	177	726	120·7	81·7	−12·7	+83·4
Spot a_2.								
246·665 G	90	734	50	404	111·5	81·2	−14·7	+12·0
247·339 C	85	611	49	354	112·1	81·7	−14·2	+21·5
248·586 G	67	516	47	361	113·2	82·6	−14·7	+39·0
249·558 G	56	405	50	365	113·2	82·5	−15·1	+51·9
250·640 G	46	482	63	665	112·8	82·0	−14·8	+65·8
251·381 G	61	445	130	948	111·3	80·4	−14·2	+74·0

Group 9227—*continued.*

Spot *b*.

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.
1920. d					°	°	°	°
241·441 C	7	27	8	33	106·1	77·1	−14·8	−62·4
242·352 G	26	43	23	37	106·2	77·1	−15·6	−50·3
243·342 C	29	149	20	103	105·7	76·5	−15·9	−37·7
244·347 C	50	402	30	241	105·7	76·4	−15·2	−24·5
245·323 C	190	915	105	503	105·4	76·0	−14·7	−11·9
246·665 G	216	1241	117	670	105·4	75·8	−14·8	+ 5·9
247·339 C	139	1217	78	682	105·8	76·1	−14·5	+15·2
248·586 G	146	1026	92	646	105·2	75·4	−14·9	+31·0
249·558 G	87	768	65	576	104·9	75·0	−14·5	+43·6
250·640 G	62	482	66	516	105·8	75·7	−14·0	+58·8
251·381 G	28	211	42	317	105·0	74·8	−14·2	+67·7
252·348 G	11	79	36	259	103·6	73·3	−14·2	+79·1

Group 9235.—September 22–October 4. A very large regular spot, *a*, which becomes elongated after September 25 and divides into two portions, a_1 and a_2, which persist to the west limb as a pair of small regular spots. Several clusters of small companions accompany the main spot, and indicate a disturbed area of considerable extent shown also by conspicuous faculæ. This group is closely associated with Group 9236 which is the return of Group 9227.

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.
265·563 G	29	188	95	617	130·6	84·1	−11·6	−79·4
266·413 G	88	513	132	778	130·6	84·0	−10·8	−68·2
267·340 C	158	836	155	825	129·8	83·0	−11·3	−56·8
268·388 C	216	1136	157	823	130·1	83·1	−11·0	−42·7
269·360 G	310	1491	191	909	129·9	82·8	−10·8	−30·0
270·596 G	249	1399	135	759	130·6	83·2	−11·0	−13·0
271·474 G	192	1088	101	576	130·6	83·1	−11·3	− 1·4
272·364 G	143	796	72	413	131·1	83·4	−11·3	+10·8
273·422 G	110	495	64	287	131·1	83·3	−11·8	+24·8
274·332 C	61	366	41	244	131·2	83·2	−11·4	+36·9
275·355 G	67	313	58	268	131·5	83·3	−11·9	+50·7
276·379 C	34	182	45	245	131·1	82·7	−12·2	+63·8
277·425 C	15	60	44	170	131·2	82·7	−12·2	+77·7
Means ..	..	..	100	532	130·72	83·22	−11·43	..
Spot *a*.								
265·563 G	29	188	95	617	130·6	83·9	−11·6	−79·4
266·413 G	77	435	112	635	131·0	84·1	−11·3	−67·8
267·340 C	116	622	110	591	131·1	84·1	−11·6	−55·5
268·388 C	149	854	106	606	131·0	83·8	−11·4	−41·8
269·360 G	186	1036	112	622	131·1	83·7	−11·2	−28·8
270·596 G	182	1101	98	595	131·2	83·6	−11·0	−12·4

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued.*

RECURRENT SERIES 927. Group 9235—*continued.*

Spot a_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.
1920. d					°	°	°	°
271·474 G	78	521	41	276	132·4	87·3	−11·6	+ 0·4
272·364 G	67	407	36	220	132·4	87·2	−11·3	+12·1
273·422 G	55	277	32	163	132·2	86·8	−11·9	+25·9
274·332 C	21	132	14	90	132·7	87·2	−12·1	+38·4
275·355 G	21	108	18	94	132·6	86·9	−12·5	+51·8
276·379 C	9	58	12	78	133·1	87·2	−12·5	+65·8
277·425 C	7	23	24	79	133·4	87·4	−12·5	+79·9

Spot a_2.

271·474 G	68	383	36	203	129·4	83·0	−11·3	− 2·6
272·364 G	52	254	28	135	129·3	82·7	−11·3	+ 9·0
273·422 G	50	196	29	112	129·4	82·7	−11·6	+23·1
274·332 C	26	186	17	121	129·7	82·8	−11·6	+35·4
275·355 G	28	139	23	113	129·4	82·3	−12·1	+48·6
276·379 C	18	80	21	93	129·5	82·2	−11·9	+62·2
277·425 C	8	37	20	91	130·0	82·6	−12·1	+76·5

Group 9236.—September 24–October 5. Part of the same general disturbance with Group 9235. A small but well-formed regular spot with a cluster of very small followers after September 26, and one or two more distant companions on October 3 and 4.

267·340 C	11	50	22	98	113·8	78·0	−14·2	−72·8
268·388 C	19	103	21	111	113·6	77·6	−14·2	−59·2
269·360 G	32	155	25	122	113·1	77·0	−13·9	−46·8
270·596 G	52	263	32	165	112·4	76·1	−13·7	−31·2
271·474 G	47	227	27	130	112·5	76·1	−14·0	−19·5
272·364 G	43	254	23	137	112·3	75·8	−13·6	− 8·0
273·422 G	53	267	29	144	111·8	75·2	−13·9	+ 5·5
274·332 C	31	164	18	91	111·8	75·0	−14·1	+17·5
275·355 G	20	153	13	96	112·2	75·3	−14·1	+31·4
276·379 C	20	160	15	120	111·7	74·7	−13·6	+44·4
277·425 C	12	55	13	58	112·2	75·0	−13·9	+58·7
278·371 G	12	30	21	52	111·9	74·6	−14·5	+70·9
Means ..	..	..	22	110	112·44	75·87	−13·98	..

Group 9253.—October 21–30. A spot, *a*, roughly of regular type, preceding which a broad stream of small unstable spots develops. The group diminishes within a few days, the nucleus of *a* being last seen with a near cluster of very small spots.

294·522 G	15	60	33	130	113·0	69·1	−13·0	−75·0
295·341 C	16	109	20	136	112·9	68·9	−13·0	−64·3
296·469 G	78	241	61	190	115·8	71·6	−13·0	−46·5
297·472 G	148	377	92	238	116·4	72·1	−13·0	−32·7
298·416 G	91	329	52	187	115·8	71·3	−13·3	−20·8

Group 9253—*continued.*

1920. d					°	°	°	°
299·423 G	50	242	27	129	115·7	71·1	−12·7	− 7·6
300·482 G	29	187	15	99	112·9	68·1	−13·1	+ 3·5
301·461 G	13	62	7	34	112·6	67·7	−13·3	+16·1
302·404 G	10	40	6	24	112·2	67·1	−13·9	+28·2
303·348 C	0	11	0	8	113·2	68·0	−13·1	+41·6
Means ..	..	..	31	118	114·05	69·50	−13·14	..

Spot *a*.

294·522 G	15	60	33	130	113·0	73·5	−13·0	−75·0
295·341 C	14	91	18	114	113·0	73·4	−13·3	−64·2
296·469 G	43	122	35	100	113·0	73·3	−14·1	−49·3
297·472 G	64	176	42	116	113·4	73·5	−14·4	−35·7
298·416 G	36	165	21	96	113·1	73·1	−14·4	−23·5
299·423 G	17	66	9	36	113·0	72·9	−14·4	−10·3
300·482 G	7	23	4	12	112·9	72·6	−14·5	+ 3·5

RECURRENT SERIES 928.

Group 9232 seen in Rotation 896.
,, 9241 ,, ,, 897.

Group 9232.—September 12–17. A small cluster of faint spots developing rapidly into a large stream containing two chief components and two clusters of very small spots.

255·355 G	9	40	5	22	6·2	313·6	+ 9·4	+21·4
256·359 G	86	326	52	194	5·3	312·5	+ 8·8	+33·8
257·456 G	156	757	121	586	6·6	313·6	+ 9·0	+49·5
258·101 K	118	719	114	702	7·8	314·6	+ 9·1	+59·3
259·599 G	53	354	164	1138	9·6	316·1	+ 9·1	+80·8
260·355 C	13	64	(56	275	3·3	309·7	+ 8·5)*	+84·5
Means ..	..	..	91	528	7·10	314·08	+ 9·08	..

Group 9241.—October 1–10. A small regular spot followed by a train of a few small unstable spots which have disappeared by October 9.

274·332 C	12	43	24	87	18·0	316·8	+ 7·2	−76·3
275·355 G	24	95	26	104	17·4	316·0	+ 7·4	−63·4
276·379 C	27	127	21	99	17·4	315·8	+ 7·7	−49·9
277·425 C	41	192	26	120	17·1	315·2	+ 7·7	−36·4
278·371 G	43	205	23	113	15·5	313·4	+ 7·7	−25·5
279·312 C	36	183	19	93	18·1	315·8	+ 7·6	−10·5
280·440 G	18	157	9	79	16·0	313·5	+ 7·4	+ 2·3
281·496 G	22	95	12	50	17·6	314·8	+ 7·4	+17·8
282·443 G	18	49	11	29	20·1	317·1	+ 7·2	+32·8
283·344 C	8	20	6	14	20·5	317·3	+ 7·1	+45·1
Means ..	..	..	18	79	17·77	315·57	+ 7·44	..

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*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 929.								
Group 9237 seen in Rotation 896. ,, 9249 ,, ,, 897.								
Group 9237.—September 25–30. A small stream developing past the central meridian, whose leading component, *a*, increases considerably towards the west limb.								
1920. d					°	°	°	°
268·388 C	10	40	5	20	183·4	149·9	+15·0	+10·6
269·360 G	36	88	20	49	184·5	150·8	+14·5	+24·6
270·596 G	42	164	29	111	186·1	152·3	+14·1	+42·5
271·474 G	63	300	54	259	187·0	153·1	+14·1	+55·0
272·364 G	38	256	46	308	186·3	152·3	+14·4	+66·0
273·422 G	22	94	60	267	186·9	152·7	+14·8	+80·6
Means ..	..	..	36	169	185·70	151·85	+14·48	..
Spot *a*.								
269·360 G	19	56	11	31	186·3	149·9	+13·7	+26·4
270·596 G	33	113	23	78	187·7	151·2	+13·5	+44·1
271·474 G	43	234	38	206	187·8	151·2	+13·6	+55·8
272·364 G	26	184	33	232	187·8	151·0	+13·9	+67·5
273·422 G	15	74	45	224	188·1	151·2	+14·9	+81·8
Group 9249.—October 15–22. A small decreasing regular spot, *a* of Group 9237. Some very small faint companions appear to the *s* on October 19.								
288·369 G	8	46	18	104	191·0	141·4	+13·3	−78·1
289·341 C	16	74	19	90	190·0	140·2	+13·0	−66·3
290·109 K	11	76	10	68	190·0	140·1	+13·3	−56·2
291·402 G	15	65	10	42	190·4	140·3	+12·7	−38·7
292·398 G	20	65	11	37	189·9	139·6	+11·9	−26·1
293·419 G	2	18	1	10	189·2	138·7	+ 9·9	−13·3
294·522 G	7	27	4	14	189·3	138·6	+ 9·8	+ 1·3
295·341 C	4	14	2	7	187·4	136·6	+ 9·3	+10·2
Means ..	..	..	9	46	189·65	139·44	+11·65	..
RECURRENT SERIES 930.								
Group 9251 seen in Rotation 897. ,, 9263 ,, ,, 898.								
Group 9251.—October 18–30. A long stream of unimportant spots led by one of regular type after October 24. The train has died out by October 28 leaving the regular spot. Measures of area on October 30 are difficult owing to bad definition.								
291·402 G	0	8	0	21	148·6	133·2	+18·8	−80·5
292·398 G	14	109	19	153	146·8	131·3	+18·6	−69·2
293·419 G	44	160	42	145	147·0	131·4	+19·0	−55·5
294·522 G	75	263	52	187	144·4	128·8	+19·8	−43·6
295·341 C	51	223	30	136	145·6	129·9	+19·7	−31·6
Group 9251—*continued*.								
1920. d					°	°	°	°
296·469 G	72	330	39	178	146·7	131·0	+19·3	−15·6
297·472 G	86	398	44	204	150·8	135·0	+18·0	+ 1·7
298·416 G	95	366	50	196	151·5	135·7	+17·7	+14·9
299·423 G	53	228	31	133	153·2	137·3	+17·1	+29·9
300·482 G	50	223	36	158	153·5	137·6	+16·8	+44·1
301·461 G	22	150	20	138	153·6	137·6	+16·8	+57·1
302·404 G	12	72	16	99	153·1	137·1	+16·8	+69·1
303·348 C	16	72	48	218	153·1	137·0	+17·2	+81·5
Means ..	..	..	33	151	149·84	134·07	+18·12	..
Group 9263.—November 14–27. A regular spot diminishing with very small attendants on November 20 and 23.								
318·400 C	11	68	36	223	151·4	136·8	+18·0	−81·7
319·340 C	31	143	46	212	150·6	135·9	+18·1	−70·1
320·411 G	52	229	48	211	150·4	135·7	+18·3	−56·2
321·450 G	45	272	32	190	150·5	135·7	+18·5	−42·4
322·513 C	46	257	27	152	149·9	135·1	+18·5	−29·0
323·470 G	47	285	25	154	150·2	135·3	+18·9	−16·1
324·344 C	45	255	23	133	148·9	134·0	+18·4	− 5·9
325·550 G	39	223	21	118	148·7	133·7	+18·3	+ 9·8
326·449 G	30	163	17	91	149·3	134·3	+18·3	+22·3
327·464 G	32	152	21	96	148·0	132·9	+18·6	+34·4
328·510 G	25	119	20	93	147·9	132·8	+18·5	+48·0
329·421 G	17	104	18	107	147·5	132·3	+18·6	+59·6
330·449 G	10	49	18	87	147·5	132·3	+18·5	+73·2
331·309 C	1	21	5	101	147·0	131·8	+18·4	+84·0
Means ..	..	..	25	141	149·13	134·19	+18·42	..
RECURRENT SERIES 931.								
Group 9258 seen in Rotation 898. ,, 9270 ,, ,, 899.								
Group 9258.—October 31–November 11. A very large stream of normal type which develops rapidly. The leader *a*, is very large and shows several bright filaments across the umbra. The follower, *b*, is a large compact cluster of spots rather than a single composite component. A small unstable cluster is situated between it and the leader.								
304·360 C	38	157	80	338	344·5	285·8	−11·1	−73·7
305·346 C	153	815	161	857	345·2	286·3	−11·0	−60·0
306·453 G	299	1624	215	1185	346·7	287·6	−11·3	−43·9
307·340 C	288	1812	176	1122	346·9	287·6	−11·0	−32·0
308·524 G	377	1954	203	1059	347·1	287·6	−11·0	−16·2
309·348 C	347	1936	179	1002	346·9	287·2	−10·5	− 5·6
310·334 C	360	2243	187	1166	347·6	287·7	−10·1	+ 8·1
311·347 C	257	1821	145	1018	348·7	288·6	− 9·4	+22·6
312·455 G	252	1179	166	780	349·7	289·4	− 9·4	+38·2
313·095 K	183	1060	140	823	351·0	290·6	− 8·8	+47·9
314·598 G	64	475	95	698	352·5	291·8	− 8·9	+69·3
315·339 C	40	276	99	714	351·8	290·9	− 8·7	+78·3
Means ..	..	..	154	897	348·22	287·59	−10·10	..

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued.*

RECURRENT SERIES **931.** Group 9258—*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.
1920. d					°	°	°	°
304·360 C	16	61	25	96	348·2	286·7	−10·9	−70·0
305·346 C	75	363	70	338	349·5	287·8	−11·0	−55·7
306·453 G	197	895	134	609	350·1	288·2	−11·0	−40·5
307·340 C	198	1021	117	602	350·5	288·4	−10·7	−28·4
308·524 G	235	1096	125	581	351·1	288·8	− 9·9	−12·2
309·348 C	238	1161	121	592	351·3	288·8	− 9·4	− 1·2
310·334 C	231	1287	120	669	351·6	288·9	− 8·4	+12·1
311·347 C	181	1130	103	644	352·2	289·3	− 8·2	+26·1
312·455 G	175	883	119	600	352·8	289·7	− 8·2	+41·3
313·095 K	135	872	108	698	353·1	289·9	− 8·2	+50·0
314·598 G	56	410	87	636	353·7	290·2	− 8·5	+70·5
315·339 C	31	233	87	657	352·8	289·1	− 8·3	+79·3

Spot *b.*

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.
304·360 C	16	73	44	200	340·0	290·4	−11·7	−78·2
305·346 C	66	340	79	405	341·5	291·7	−11·6	−63·7
306·453 G	102	729	81	576	342·0	292·1	−11·3	−48·6
307·340 C	72	730	48	482	341·2	291·1	−11·6	−37·7
308·524 G	106	723	59	405	340·9	290·6	−11·9	−22·4
309·348 C	98	744	52	394	340·9	290·5	−12·0	−11·6
310·334 C	109	848	57	441	340·9	290·3	−12·4	+ 1·4
311·347 C	64	623	35	336	341·5	290·8	−12·2	+15·4
312·455 G	61	233	37	140	340·9	290·0	−13·0	+29·4
313·095 K	44	174	29	115	340·7	289·7	−12·7	+37·6
314·598 G	8	65	8	62	340·0	288·7	−13·4	+56·8
315·339 C	9	43	12	57	339·7	288·3	−13·3	+66·2

Group 9270.—November 26–December 8. A large regular spot (*a* of Group 9258) which tends towards composite formation after November 29. One or two very small companions usually appear with it. A large area of faculae follows.

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.
1920. d					°	°	°	°
330·449 G	45	164	108	394	356·6	288·2	− 8·2	−77·7
331·309 C	66	332	84	422	356·7	288·1	− 8·5	−66·3
332·343 C	96	513	81	431	356·6	287·8	− 8·8	−52·7
333·393 G	125	607	81	395	357·1	288·1	− 8·5	−38·4
334·458 G	121	673	68	377	357·2	288·0	− 8·8	−24·3
335·451 G	108	599	56	311	357·2	287·8	− 9·0	−11·2
336·372 C	132	513	68	262	357·0	287·4	− 9·3	+ 0·8
337·304 C	123	595	64	309	357·0	287·2	− 9·3	+13·0
338·306 C	87	491	50	280	357·1	287·1	− 9·3	+26·3
339·352 C	77	337	51	222	356·8	286·6	− 9·2	+39·8
340·313 C	74	279	62	234	357·4	287·0	− 9·3	+53·1
341·313 C	37	201	47	253	357·5	286·8	− 9·6	+66·4
342·345 C	14	58	39	164	357·3	286·4	− 9·5	+79·8
Means ..	..	..	66	312	357·04	287·42	− 9·02	..

ROYAL OBSERVATORY, GREENWICH.

LEDGERS

OF

GROUPS OF SUN SPOTS

FOR THE YEAR

1920.

LEDGER II.—NON-RECURRENT GROUPS.

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1920.

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 Area Corrected for Foreshortening given in the *fourth* and *fifth* columns is expressed in millionths of the Sun's visible hemisphere.

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.

Group 9097.

January 8–17. A small regular spot dying out, with one or two small followers from January 12 to 15.

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.
1920. d					°	°	°	°
7·351 C	14	99	28	197	305·8	304·7	+13·3	−74·0
8·436 G	26	117	28	124	305·6	304·4	+13·0	−60·0
9·103 K	30	168	26	143	305·5	304·2	+13·4	−51·3
10·109 K	39	181	26	121	305·5	304·0	+13·3	−38·0
11·108 K	50	237	29	138	304·9	303·3	+13·6	−25·5
12·108 K	46	225	25	121	305·5	303·7	+13·6	−11·7
13·441 G	35	146	19	77	305·3	303·4	+13·3	+ 5·7
14·106 K	18	119	10	64	305·4	303·4	+13·5	+14·5
15·110 K	10	38	6	23	305·6	303·4	+13·6	+27·9
16·108 K	2	32	1	22	305·5	303·2	+13·3	+41·0
Means ..	..	..	20	103	305·46	303·77	+13·39	..

Group 9098.

January 8–19. A small regular spot *f* Group 9097.

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.
7·351 C	0	4	0	14	298·1	296·8	+11·0	−81·7
8·436 G	15	64	21	92	297·4	295·9	+10·9	−68·2
9·103 K	17	89	18	92	297·5	295·8	+11·0	−59·3
10·109 K	19	109	14	81	298·0	296·2	+10·8	−45·5
11·108 K	19	136	12	83	298·2	296·2	+10·8	−32·2
12·108 K	28	148	15	81	298·3	296·1	+10·6	−18·9
13·441 G	22	120	11	62	298·3	295·9	+10·5	− 1·3
14·106 K	37	113	19	59	298·6	296·0	+10·9	+ 7·7
15·110 K	18	106	10	59	298·5	295·8	+11·0	+20·8
16·108 K	21	90	13	57	298·5	295·6	+11·2	+34·0
17·331 C	8	33	7	27	298·7	295·6	+11·2	+50·3
18·169 D	5	16	6	18	299·6	296·3	+11·3	+62·2
Means ..	..	..	12	60	298·31	296·02	+10·93	..

Group 9102.

January 11–23. A regular spot which is unstable after January 18. A cluster of very small companions follows until January 18.

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.
1920. d					°	°	°	°
10·109 K	13	66	57	290	260·2	257·6	+ 2·8	−83·3
11·108 K	36	229	53	341	260·4	257·6	+ 2·6	−70·0
12·108 K	51	301	47	278	260·5	257·4	+ 2·3	−56·7
13·441 G	65	419	42	273	260·7	257·3	+ 2·2	−38·9
14·106 K	95	466	56	271	260·9	257·3	+ 2·3	−30·0
15·110 K	91	473	48	246	261·0	257·1	+ 2·0	−16·7
16·108 K	84	503	42	252	261·6	257·5	+ 2·0	− 2·9
17·331 C	73	358	38	186	262·1	257·7	+ 2·0	+13·7
18·169 D	71	346	40	194	262·7	258·0	+ 1·8	+25·3
19·380 C	31	252	21	169	262·8	257·8	+ 1·6	+41·3
20·341 C	32	143	28	124	263·2	258·0	+ 1·5	+54·4
21·432 G	19	97	27	136	263·3	257·8	+ 1·2	+68·9
22·355 C	0	23	0	83	264·2	258·5	+ 2·0	+81·9
Means ..	..	..	38	219	261·82	257·66	+ 2·02	..

Group 9112.

January 24–February 1. A small regular spot *p* Group 9108, and just within the large area of faculæ which surrounds 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.
23·563 C	25	43	16	27	128·8	122·8	− 1·2	−37·6
24·448 G	38	178	21	98	130·6	124·4	− 2·0	−24·1
25·487 C	33	198	17	101	132·2	135·7	− 2·3	− 8·8
26·348 C	34	158	17	79	132·6	125·9	− 2·8	+ 2·9
27·493 C	20	47	11	25	133·1	126·1	− 3·3	+18·5
28·416 G	35	131	20	76	133·7	126·5	− 3·7	+31·2
29·435 G	23	84	16	60	134·4	127·0	− 4·2	+45·3
30·450 C	9	60	9	59	135·6	127·9	− 3·7	+59·9
31·459 G	2	11	4	19	136·1	128·1	− 3·3	+73·7
Means ..	..	..	15	60	133·01	126·04	− 2·94	..

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued.*

Group 9115.

February 3–12. A stream of unimportant spots, except the leader which shows moderate stability as a small regular spot.

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.
1920. d					°	°	°	°
33·501 G	20	137	18	120	340·2	337·1	−17·0	−55·3
34·517 C	52	274	34	183	340·8	337·6	−16·8	−41·4
35·418 G	38	208	22	121	340·6	337·3	−16·5	−29·7
36·499 G	38	285	20	152	339·7	336·3	−16·2	−16·4
37·437 G	88	375	44	191	340·0	336·5	−16·1	− 3·7
38·461 G	31	157	16	81	341·0	337·4	−15·3	+10·8
39·106 K	52	275	28	148	341·4	337·7	−15·7	+19·7
40·371 C	35	202	22	128	343·5	339·7	−15·9	+38·4
41·354 C	13	66	11	53	344·2	340·3	−15·9	+52·1
42·359 C	5	30	6	34	343·9	339·9	−15·9	+65·0
Means ..	..	..	22	121	341·53	337·98	−16·13	..

Group 9118.

February 10–19. A stream of normal type. The follower has broken up into several components by February 13, but the leader, *a*, persists as a regular spot and is the last to disappear.

40·371 C	37	219	59	335	234·8	225·0	+ 5·0	−70·3
41·354 C	41	318	39	301	235·8	225·7	+ 5·0	−56·3
42·359 C	54	381	36	261	237·7	227·4	+ 5·3	−41·2
43·360 C	45	294	25	169	238·0	227·5	+ 5·2	−27·7
44·334 C	48	302	26	160	238·4	227·6	+ 5·3	−14·5
45·339 C	47	294	24	150	239·2	228·2	+ 4·9	− 0·5
46·414 G	47	196	26	104	240·0	228·7	+ 4·7	+14·5
47·376 C	34	201	19	115	239·9	228·4	+ 4·9	+27·1
48·422 G	14	89	10	61	241·3	229·5	+ 4·7	+42·3
49·418 G	10	49	9	44	241·8	229·8	+ 4·9	+55·8
Means ..	..	..	27	170	238·69	227·78	+ 4·99	..

Spot *a*.

40·371 C	16	108	22	146	237·8	227·9	+ 5·2	−67·3
41·354 C	24	160	21	138	239·0	228·9	+ 5·1	−53·1
42·359 C	37	244	24	161	240·0	229·7	+ 5·0	−38·9
43·360 C	33	206	18	115	240·5	229·9	+ 4·7	−25·2
44·334 C	32	203	17	106	240·5	229·7	+ 4·7	−12·4
45·339 C	34	184	17	94	240·6	229·5	+ 4·7	+ 0·9
46·414 G	36	177	20	94	240·6	229·3	+ 4·7	+15·1
47·376 C	28	124	16	72	240·9	229·3	+ 5·0	+28·1
48·422 G	14	89	10	61	241·3	229·5	+ 4·7	+42·3
49·418 G	10	46	9	42	242·0	230·0	+ 4·7	+56·0

Group 9119.

February 11–19. A stream of spots developing from a pair of very small spots on February 11. The largest and most stable component is the rear spot, *b*, which is roughly of regular formation.

1920. d					°	°	°	°
41·354 C	7	18	4	11	258·6	248·4	+ 4·2	−33·5
42·359 C	18	69	10	37	259·4	249·0	+ 4·7	−19·5
43·360 C	126	676	65	348	259·1	248·4	+ 4·2	− 6·6
44·334 C	140	998	71	509	259·3	248·4	+ 4·4	+ 6·4
45·339 C	108	738	59	400	259·6	248·5	+ 4·4	+19·9
46·414 G	108	593	67	363	258·6	247·2	+ 4·4	+33·1
47·376 C	65	443	48	325	258·4	246·7	+ 4·7	+45·6
48·422 G	25	172	25	166	257·1	245·2	+ 4·7	+58·1
49·418 G	19	108	29	167	256·4	244·3	+ 4·5	+70·4
Means ..	..	..	42	258	258·50	247·34	+ 4·47	..

Spot *b*.

43·360 C	39	286	20	149	257·2	246·6	+ 4·4	− 8·5
44·334 C	75	469	38	239	256·5	245·7	+ 4·5	+ 3·6
45·339 C	50	388	27	206	256·6	245·5	+ 4·7	+16·9
46·414 G	65	418	39	250	256·6	245·2	+ 4·7	+31·1
47·376 C	45	339	32	241	256·9	245·3	+ 5·0	+44·1
48·422 G	20	166	19	159	256·7	244·8	+ 4·6	+57·7
49·418 G	19	108	29	167	256·4	244·3	+ 4·5	+70·4

Group 9120.

February 11–18. A small double spot on February 11; a pair of spots until February 14; a single small spot on the following days except February 17 when nothing is visible.

41·354 C	4	23	5	26	227·0	227·4	−21·1	−65·1
42·359 C	9	31	8	26	226·3	226·7	−20·9	−52·6
43·360 C	19	109	13	73	225·7	226·1	−21·1	−40·0
44·334 C	6	40	3	22	225·7	226·1	−20·7	−27·2
45·339 C	4	11	2	6	228·0	228·5	−20·4	−11·7
46·414 G	0	4	0	2	228·6	229·1	−20·5	+ 3·1
47·376 C	0	0	0	0	..	..	..	..
48·422 G	0	8	0	5	227·4	227·9	−20·8	+28·4
Means ..	..	..	4	20	226·96	227·40	−20·79	..

Group 9121.

February 12–23. A regular spot contracting to a dot; a very small follower is seen on February 19.

42·359 C	7	35	21	106	197·6	188·2	− 8·3	−81·3
43·360 C	15	132	19	168	198·2	188·6	− 8·5	−67·5
44·334 C	13	108	11	93	198·1	188·3	− 8·1	−54·8
45·339 C	21	167	14	110	198·3	188·3	− 7·9	−41·4

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued.*

Group 9121—*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.
1920. d					°	°	°	°
46·414 G	27	154	15	86	198·7	188·4	− 7·7	−26·8
47·376 C	29	175	15	89	199·2	188·7	− 7·4	−13·6
48·422 G	30	140	15	70	199·9	189·2	− 7·7	+ 0·9
49·418 G	19	92	10	48	199·8	188·9	− 7·5	+13·8
50·538 C	18	41	10	23	200·2	189·0	− 7·4	+29·0
51·405 C	12	20	8	13	200·5	189·1	− 7·4	+40·7
52·450 G	5	11	4	9	200·9	189·3	− 7·4	+54·9
53·597 G	1	4	1	6	201·5	189·7	− 7·2	+70·6
Means ..	..	..	12	68	199·41	188·81	− 7·71	..

Group 9124.

February 14–23. A small irregular stream.

44·334 C	10	68	12	82	192·2	191·1	+20·0	−60·7
45·339 C	43	145	35	121	192·8	191·7	+20·1	−46·9
46·414 G	46	130	30	87	194·2	193·1	+19·5	−31·3
47·376 C	43	160	25	94	193·6	192·5	+19·5	−19·2
48·422 G	19	119	11	66	195·6	194·4	+19·0	− 3·4
49·418 G	21	100	12	57	197·4	196·2	+19·0	+11·4
50·538 C	16	62	10	39	196·3	195·1	+19·0	+25·1
51·405 C	12	20	9	15	197·4	196·2	+19·4	+37·6
52·450 G	9	13	9	13	199·7	198·4	+19·5	+53·7
53·597 G	0	4	0	7	200·9	199·6	+18·9	+70·0
Means ..	..	..	15	58	196·01	194·83	+19·39	..

Group 9125.

February 14–25. A small regular spot gradually diminishing; two clusters of small companions appear on February 20; and two or three distant spots on February 23.

44·334 C	4	50	10	123	175·4	164·8	+ 5·5	−77·5
45·339 C	12	110	14	130	175·8	164·9	+ 5·4	−63·9
46·414 G	20	136	16	109	175·6	164·5	+ 5·2	−49·9
47·376 C	32	164	20	105	175·7	164·3	+ 5·5	−37·1
48·422 G	27	154	15	86	175·9	164·3	+ 5·0	−23·1
49·418 G	27	155	14	81	176·1	164·2	+ 5·1	− 9·9
50·538 C	54	174	27	89	176·4	164·3	+ 5·5	+ 5·2
51·405 C	58	270	30	144	176·3	164·0	+ 5·8	+16·5
52·450 G	37	227	23	135	176·2	163·6	+ 5·6	+30·2
53·597 G	15	96	11	70	175·8	162·9	+ 5·5	+44·9
54·527 G	11	46	11	44	176·0	162·9	+ 5·1	+57·3
55·340 C	3	15	4	21	176·0	162·7	+ 5·3	+68·0
Means ..	..	..	16	95	175·93	163·95	+ 5·37	..

Group 9126.

February 17–25. A few faint spots in a sparse stream until February 22, when two better defined spots have appeared.

1920. d					°	°	°	°
47·376 C	1	4	1	3	175·7	175·5	−19·6	−37·1
48·422 G	3	54	2	30	178·2	178·0	−19·2	−20·8
49·418 G	13	30	7	16	175·7	175·5	−20·5	−10·3
50·538 C	9	37	5	19	176·6	176·3	−20·8	+ 5·4
51·405 C	11	49	6	26	176·3	176·0	−20·6	+16·5
52·450 G	103	317	61	192	177·7	177·4	−20·5	+31·7
53·597 G	43	225	32	167	178·2	177·9	−20·4	+47·3
54·527 G	26	121	25	119	178·3	178·0	−20·3	+59·6
55·340 C	7	75	11	113	179·5	179·2	−19·6	+71·5
Means ..	..	..	17	76	177·36	177·09	−20·17	..

Group 9128.

February 18–28. A stream developing from a pair of spots on February 18. None of the components are conspicuous excepting *a*, the leader.

48·422 G	16	60	16	59	143·4	139·1	+15·2	−55·6
49·418 G	17	37	12	27	142·8	138·4	+15·0	−43·2
50·538 C	69	297	43	179	145·6	141·1	+15·9	−25·6
51·405 C	62	406	35	225	146·7	142·1	+16·3	−13·1
52·450 G	67	353	36	194	146·6	141·9	+16·2	+ 0·6
53·597 G	67	349	38	196	146·4	141·6	+16·5	+15·5
54·527 G	44	282	28	176	146·2	141·3	+16·8	+27·5
55·340 C	35	203	25	144	146·6	141·7	+17·2	+38·6
56·407 C	20	163	19	151	146·6	141·6	+17·2	+52·7
57·340 C	22	126	30	170	146·2	141·1	+17·4	+64·6
58·422 G	5	29	16	95	146·0	140·8	+16·9	+78·6
Means ..	..	..	27	147	145·74	140·97	+16·42	..

Spot *a*.

50·538 C	26	175	16	105	147·0	143·0	+16·2	−24·2
51·405 C	53	351	30	196	147·0	142·9	+16·5	−12·8
52·450 G	59	327	32	180	146·8	142·7	+16·5	+ 0·8
53·597 G	62	279	35	157	146·9	142·7	+16·9	+16·0
54·527 G	41	226	26	142	147·0	142·7	+17·1	+28·3
55·340 C	31	194	22	138	146·8	142·4	+17·3	+38·8
56·407 C	19	156	18	145	146·7	142·2	+17·2	+52·8
57·340 C	22	126	30	170	146·2	141·7	+17·4	+64·6
58·422 G	5	29	16	95	146·0	141·4	+16·9	+78·6

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued*.

Group 9130.

February 21–29. A small spot becoming a cluster on February 23 with one or two distant companions. After February 25, one very small but persistent spot remains.

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.
1920. d					°	°	°	°
51·405 C	0	4	0	13	76·9	70·5	−14·6	−82·9
52·450 G	14	52	19	70	76·9	70·3	−14·5	−69·1
53·597 G	25	63	21	53	77·1	70·4	−14·5	−53·8
54·527 G	20	47	13	31	77·2	70·4	−14·8	−41·5
55·340 C	12	39	7	23	76·9	70·0	−14·4	−31·1
56·407 C	1	9	1	5	74·9	67·8	−14·9	−19·0
57·340 C	2	10	1	5	76·0	68·8	−14·5	− 5·6
58·422 G	0	30	0	15	76·5	69·2	−15·1	+ 9·1
59·360 C	0	7	0	4	77·2	69·8	−13·3	+22·2
Means ..	..	..	7	24	76·62	69·69	−14·51	..

Group 9133.

February 23–March 6. A stream of normal type, except that the leader, *a*, is the composite and shorter-lived component, and the follower, *b*, is the stable regular spot.

53·597 G	0	6	0	9	59·9	49·3	− 9·0	−71·0
54·527 G	13	35	13	35	58·3	47·5	− 9·5	−60·4
55·340 C	33	167	24	123	59·1	48·2	− 9·8	−48·9
56·407 C	95	621	55	378	59·4	48·2	− 9·9	−34·5
57·340 C	128	763	69	410	59·8	48·5	− 9·7	−21·8
58·422 G	145	863	73	437	60·2	48·6	− 9·7	− 7·2
59·360 C	139	760	71	382	59·9	48·1	− 9·7	+ 4·9
60·436 G	126	601	67	318	59·4	47·4	− 9·7	+18·6
61·342 C	119	563	69	326	59·3	47·2	− 9·9	+30·4
62·426 G	82	423	58	296	59·0	46·6	−10·1	+44·4
63·403 G	52	320	47	293	59·2	46·6	−10·0	+57·5
64·669 G	36	122	58	196	57·8	45·0	−10·0	+72·7
65·349 C	10	64	27	175	56·6	43·7	−10·2	+80·5
Means ..	..	..	49	260	59·07	47·30	− 9·78	..

Spot *a*.

54·527 G	2	13	2	12	61·5	50·5	− 9·3	−57·2
55·340 C	13	65	9	45	63·0	51·8	− 9·4	−45·0
56·407 C	23	158	12	92	63·6	52·2	− 8·9	−30·3
57·340 C	38	289	20	150	63·8	52·2	− 8·8	−17·8
58·422 G	51	360	26	180	64·3	52·5	− 9·2	− 3·1
59·360 C	64	326	33	166	64·2	52·2	− 9·5	+ 9·2
60·436 G	57	206	31	113	64·5	52·3	− 9·5	+23·7
61·342 C	45	196	27	120	64·8	52·4	− 9·6	+35·9
62·426 G	27	113	21	88	65·1	52·5	− 9·7	+50·5
63·403 G	13	85	14	93	65·3	52·5	− 9·7	+63·6
64·669 G	5	16	12	40	64·4	51·3	− 9·8	+79·3

Group 9133—*continued*.

Spot *b*.

1920. d					°	°	°	°
54·527 G	11	22	11	23	56·5	45·9	− 9·6	−62·2
55·340 C	14	78	11	61	57·4	46·7	− 9·9	−50·6
56·407 C	62	396	37	246	57·6	46·7	−10·3	−36·3
57·340 C	72	443	40	244	57·3	46·2	−10·2	−24·3
58·422 G	94	503	47	257	57·3	46·0	− 9·9	−10·1
59·360 C	75	429	38	214	56·8	45·3	− 9·9	+ 1·8
60·436 G	69	395	36	205	56·7	45·0	− 9·9	+15·9
61·342 C	74	353	42	198	56·8	44·9	−10·0	+27·9
62·426 G	55	310	37	208	56·4	44·3	−10·2	+41·8
63·403 G	39	235	33	200	56·3	44·0	−10·1	+54·6
64·669 G	31	106	46	156	56·1	43·5	−10·1	+71·0
65·349 C	10	64	27	175	56·6	43·9	−10·2	+80·5

Group 9136.

March 3–13. A group of small ill-formed spots lengthening out into a stream, the components of which become more definite towards the west limb.

62·426 G	4	14	4	14	318·9	313·0	+14·5	−55·7
63·403 G	5	17	4	13	317·2	311·2	+15·6	−44·5
64·669 G	37	102	22	62	318·8	312·7	+16·0	−26·3
65·349 C	38	125	22	72	318·9	312·8	+16·2	−17·2
66·479 G	48	302	26	163	319·3	313·1	+15·9	− 1·9
67·535 G	63	310	36	174	319·9	313·6	+16·0	+12·6
68·451 G	57	281	34	169	319·3	312·9	+15·9	+24·1
69·362 C	50	310	34	211	319·5	313·0	+15·8	+36·3
70·341 C	64	260	55	227	320·4	313·8	+16·7	+50·1
71·480 G	55	221	78	331	322·1	315·4	+17·1	+66·8
72·342 C	15	101	41	296	321·1	314·3	+18·0	+77·2
Means ..	..	..	32	157	319·58	313·25	+16·15	..

Group 9139.

March 7–14. A spot at the east limb which breaks up into a cluster by March 9, whilst a short train makes its appearance.

66·479 G	0	22	0	48	245·6	229·8	+ 6·7	−75·6
67·535 G	41	174	45	190	245·8	229·8	+ 5·6	−61·5
68·451 G	21	119	16	95	245·8	229·6	+ 5·8	−49·4
69·362 C	45	210	29	137	244·8	228·4	+ 6·3	−38·4
70·341 C	17	108	9	62	245·0	228·4	+ 6·0	−25·3
71·480 G	23	103	12	54	246·3	229·4	+ 5·3	− 9·0
72·342 C	26	117	13	60	246·0	228·9	+ 5·5	+ 2·1
73·396 C	3	22	2	12	247·2	229·8	+ 5·6	+17·1
Means ..	..	..	16	82	245·81	229·26	+ 5·85	..

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued*.

Group 9142.

March 15–24. Three small spots at the east limb which grow and coalesce to make a composite spot which then diminishes.

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.
1920. d					°	°	°	°
74·369 C	5	40	6	54	147·8	135·7	−12·7	−69·4
75·478 G	49	252	42	217	147·5	135·3	−12·1	−55·1
76·669 G	69	359	45	233	147·3	134·9	−12·3	−39·6
77·534 G	54	408	31	233	147·2	134·6	−12·4	−28·3
78·524 G	51	350	27	182	147·3	134·6	−12·4	−15·2
79·408 G	39	319	20	159	147·6	134·7	−12·3	− 3·2
80·418 G	38	221	19	113	147·9	134·9	−12·4	+10·4
81·380 G	32	133	17	72	147·9	134·7	−12·1	+23·1
82·383 G	21	50	13	31	148·4	135·1	−12·1	+36·8
83·355 C	0	8	0	6	148·7	135·2	−12·5	+50·0
Means ..	..	..	22	130	147·76	134·97	−12·33	..

Group 9145.

March 17–26. A small stream *s* Group 9143.

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.
76·669 G	9	39	7	30	136·1	121·8	−11·3	−50·8
77·534 G	22	88	15	58	134·8	120·4	−11·1	−40·7
78·524 G	36	133	20	75	134·9	120·3	−11·2	−27·6
79·408 G	32	89	16	46	135·0	120·2	−10·9	−15·8
80·418 G	102	290	51	145	136·7	121·7	−11·0	− 0·8
81·380 G	56	302	29	154	137·4	122·3	−10·2	+12·6
82·383 G	66	360	37	202	137·5	122·2	−10·2	+25·9
83·355 C	51	320	32	208	138·4	122·9	−10·0	+39·7
84·379 G	25	144	20	117	137·6	121·9	− 9·9	+52·3
85·380 G	8	51	19	60	137·6	121·7	−10·6	+65·5
Means ..	..	..	25	109	136·60	121·54	−10·64	..

Group 9150

March 24–April 4. A regular spot showing minor changes. A small cluster of companions appears to the *s* on April 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.
83·355 C	25	153	51	314	24·2	6·9	+ 9·0	−74·5
84·379 G	37	242	40	261	24·6	7·0	+ 9·1	−60·7
85·380 G	60	318	46	245	24·9	7·1	+ 8·9	−47·2
86·347 C	41	305	26	192	24·8	6·8	+ 9·1	−34·5
87·375 C	58	386	32	216	24·7	6·5	+ 9·1	−21·0
88·350 C	68	315	35	164	25·0	6·6	+ 8·8	− 7·9
89·377 C	83	327	43	170	24·9	6·3	+ 8·8	+ 5·6
90·392 G	48	308	26	169	24·8	6·0	+ 8·8	+18·9
91·347 C	64	343	39	209	25·2	6·2	+ 8·9	+31·9
92·381 C	48	280	36	210	25·3	6·1	+ 8·8	+45·6
93·353 C	33	217	33	218	25·5	6·1	+ 8·3	+58·6
94·371 C	18	116	32	209	26·0	6·4	+ 8·8	+72·6
Means ..	..	..	37	215	24·99	6·50	+ 8·87	..

Group 9151.

March 24–29. A small spot.

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.
1920. d					°	°	°	°
83·355 C	0	8	0	20	19·8	0·0	− 6·0	−78·9
84·379 G	8	23	9	27	20·4	0·4	− 5·9	−64·9
85·380 G	11	18	9	14	21·3	1·1	− 5·8	−50·8
86·347 C	3	11	2	7	21·4	0·9	− 5·7	−37·9
87·375 C	2	11	1	6	21·6	0·9	− 5·7	−24·1
88·350 C	4	14	2	7	22·5	1·6	− 5·5	−10·4
Means ..	..	..	4	13	21·17	0·82	− 5·77	..

Group 9154.

April 1–9. A large disturbed region shown by faculæ and a few very small unstable 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.
91·347 C	0	4	0	3	302·0	286·0	+12·3	−51·3
92·381 C	0	13	0	9	301·7	285·5	+12·1	−38·0
93·353 C	0	7	0	4	313·0	296·7	+10·1	−13·9
94·371 C	0	23	0	13	301·5	285·0	+12·8	−11·9
95·607 G	5	32	3	17	303·5	286·8	+10·4	+ 6·4
96·497 C	0	0	0	0	..	..	..	..
97·367 G	0	6	0	4	304·7	287·7	+11·2	+30·8
98·349 C	0	7	0	5	305·2	288·0	+10·8	+44·3
99·401 C	0	21	0	21	304·1	286·7	+11·9	+57·1
Means ..	..	..	0	8	304·46	287·80	+11·45	..

Group 9156.

April 6–12. Intermittent. One or two very small spots not seen on April 8, 10 and 11.

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.
96·497 C	0	5	0	8	212·8	187·9	+ 1·4	−72·6
97·367 G	0	13	0	12	216·0	190·9	0·0	−57·9
98·349 C	0	0	0	0	..	..	..	..
99·401 C	0	6	0	4	215·7	190·1	+ 0·4	−31·3
100·405 G	0	0	0	0	..	..	..	..
101·399 C	0	0	0	0	..	..	..	..
102·357 C	3	12	2	6	217·5	191·1	+ 0·7	+ 9·5
Means ..	..	..	0	4	215·50	190·00	+ 0·63	..

Group 9164.

April 30–May 5. Intermittent. An ephemeral spot on April 30; on May 2, a small stream develops, but only one small spot is left by May 5.

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.
120·413 G	0	4	0	7	257·8	242·2	+13·0	−71·7
121·357 C	0	0	0	0	..	..	..	..
122·429 C	9	38	6	27	259·8	243·9	+14·0	−43·1
123·393 C	7	31	4	19	259·8	243·8	+14·3	−30·3
124·419 G	9	16	5	9	259·5	243·3	+14·8	−17·1
125·345 G	0	7	0	4	262·0	245·7	+15·0	− 2·3
Means ..	..	..	3	11	259·78	243·78	+14·22	..

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued.*

Group 9170.

May 3–14. A small regular spot showing instability on May 5 and again on May 11, after which it splits into two portions and then disappears. There are occasional small companions.

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.
1920. d					°	°	°	°
123·393 C	6	23	23	88	207·1	179·1	− 8·0	−83·0
124·419 G	19	100	25	132	208·6	180·4	− 7·4	−68·0
125·345 G	38	184	33	160	209·4	181·0	− 6·8	−54·9
126·344 C	37	214	24	141	210·4	181·7	− 6·6	−40·7
127·350 G	53	270	30	151	211·5	182·6	− 6·6	−26·3
128·346 C	50	321	26	164	211·2	182·1	− 6·9	−13·4
129·106 K	64	296	32	148	211·6	182·3	− 6·9	− 2·8
130·354 G	45	292	23	149	211·4	181·8	− 6·9	+13·3
131·373 G	32	202	18	113	211·7	181·9	− 6·9	+27·1
132·383 G	28	148	18	98	211·7	181·7	− 7·1	+40·4
133·437 G	11	74	9	64	211·6	181·3	− 7·2	+54·3
134·353 C	3	9	4	12	212·4	181·9	− 7·7	+67·2
Means ..	..	..	22	118	210·72	181·48	− 7·08	..

Group 9173.

May 7–12. A small stream of spots between Groups 9070 and 9071. The following member of the stream becomes temporarily conspicuous on May 9.

127·350 G	13	31	7	16	221·7	190·0	− 4·2	−16·1
128·346 C	30	159	15	80	221·6	189·6	− 4·2	− 3·0
129·106 K	62	276	31	139	220·9	188·7	− 3·8	+ 6·5
130·354 G	28	154	15	85	219·9	187·5	− 3·9	+21·8
131·373 G	4	16	2	10	220·2	187·5	− 3·8	+35·6
132·383 G	0	8	0	6	219·3	186·3	− 3·1	+48·0
Means ..	..	..	12	56	220·60	188·27	− 3·83	..

Group 9176.

May 10–20. A small cluster, of which one spot remains after May 15. A temporary revival is shown on May 19.

130·354 G	9	22	12	29	132·8	125·8	+18·9	−65·3
131·373 G	22	49	19	43	133·0	125·9	+18·6	−51·6
132·383 G	26	68	18	46	133·3	126·1	+18·0	−38·0
133·437 G	21	77	12	45	133·3	126·1	+17·4	−24·0
134·353 C	15	24	8	13	134·0	126·8	+17·3	−11·2
135·354 G	11	26	6	14	134·0	126·7	+17·4	+ 2·0
136·532 C	3	9	2	5	135·9	128·5	+17·6	+19·5
137·335 C	2	7	1	4	135·8	128·4	+17·3	+30·0
138·461 G	2	9	1	7	134·0	126·5	+17·9	+43·1
139·345 G	16	56	15	52	133·7	126·2	+18·3	+54·5
140·351 C	0	3	0	4	132·4	124·8	+20·1	+66·5
Means ..	..	..	9	24	133·84	126·53	+18·07	..

Group 9177.

May 10–18. A small cluster *f* Group 9175. No spots are seen on May 16.

1920. d					°	°	°	°
130·354 G	0	10	0	20	124·8	121·2	+19·3	−73·3
131·373 G	2	13	2	15	123·9	120·2	+19·5	−60·7
132·383 G	4	20	3	16	124·5	120·8	+19·2	−46·8
133·437 G	4	26	3	17	123·7	120·0	+19·3	−33·6
134·353 C	0	13	0	8	126·3	122·5	+19·2	−18·9
135·354 G	0	13	0	7	122·5	118·7	+18·8	− 9·5
136·532 C	0	0	0	0	..	..	..	..
137·335 C	0	20	0	11	123·8	120·0	+18·7	+18·0
138·461 G	0	10	0	7	124·0	120·1	+19·7	+33·1
Means ..	..	..	1	11	124·19	120·44	+19·21	..

Group 9181.

May 17–24. A pair of spots, the leader alone remaining after May 20.

137·335 C	4	25	8	57	30·0	34·5	+21·3	−75·8
138·461 G	19	97	23	117	29·2	33·8	+21·4	−61·7
139·345 G	23	87	20	77	27·8	32·4	+21·1	−51·4
140·351 C	16	38	11	27	27·9	32·5	+21·1	−38·0
141·385 G	11	16	6	9	31·9	36·6	+22·0	−20·3
142·357 G	19	29	10	16	31·6	36·3	+22·1	− 7·7
143·376 G	12	16	7	9	31·7	36·4	+22·2	+ 5·8
144·292 G	9	15	5	9	31·1	35·9	+22·5	+17·4
Means ..	..	..	11	40	30·15	34·80	+21·71	..

Group 9184.

May 25–30. A few faint spots *f* Group 9182.

145·354 G	0	12	0	8	317·5	290·6	+ 9·2	−42·2
146·564 G	5	17	3	10	317·7	290·6	+10·2	−26·0
147·558 G	3	60	2	32	317·5	290·2	+11·1	−13·0
148·356 C	2	29	1	15	316·7	289·3	+11·4	− 3·3
149·336 C	6	29	3	15	317·4	289·8	+11·3	+10·4
150·469 G	2	8	1	5	317·9	290·1	+11·0	+25·9
Means ..	..	..	2	14	317·45	290·10	+10·70	..

Group 9186.

May 26–June 2. A stream of few spots with the leader as the chief component.

146·564 G	0	11	0	25	266·9	246·1	+13·5	−76·8
147·558 G	17	77	19	90	266·9	246·0	+13·7	−63·6
148·356 C	28	117	24	99	268·0	246·9	+13·6	−52·0
149·336 C	57	224	39	150	267·8	246·6	+13·3	−39·2
150·469 G	43	200	24	112	268·4	247·0	+13·3	−23·6

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued*.

Group 9186—*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.
1920. d					°	°	°	°
151·348 G	31	132	17	69	269·0	247·5	+13·6	−11·4
152·372 C	24	43	12	23	269·2	247·6	+13·6	+ 2·4
153·354 G	8	19	4	10	271·1	249·3	+13·6	+17·3
Means ..	..	..	17	72	268·41	247·12	+13·52	..

Group 9187.

May 27–June 1. One very small spot on May 27 not seen on the following day. On May 29 a small group begins to develop in its place.

147·558 G	0	2	0	1	345·4	311·0	+ 6·5	+14·9
148·356 C	0	0	0	0	..	..	..	..
149·336 C	2	28	1	18	345·3	310·5	+ 6·4	+38·3
150·469 G	5	12	4	10	345·2	310·1	+ 6·2	+53·2
151·348 G	25	77	30	93	345·7	310·4	+ 6·6	+65·3
152·372 C	10	65	23	168	344·6	309·1	+ 5·8	+77·8
Means ..	..	..	10	48	345·24	310·22	+ 6·30	..

Group 9193.

June 7–18. A small spot on June 7 developing into a regular spot, *a*, followed by two clusters of very small spots. These condense to a nebulous mass on June 13 and then disappear.

158·361 G	2	.9	3	11	121·8	102·3	+14·6	−65·7
159·350 G	49	238	38	185	126·2	106·6	+13·9	−48·3
160·377 G	103	462	64	287	126·7	107·0	+13·6	−34·2
161·643 G	105	511	56	274	127·0	107·1	+13·9	−17·1
162·672 G	101	508	52	260	127·1	107·1	+13·8	− 3·4
163·535 C	115	685	60	356	126·2	106·1	+14·2	+ 7·1
164·431 C	92	720	50	393	125·6	105·4	+14·7	+18·4
165·453 C	75	508	45	307	126·0	105·6	+15·0	+32·3
166·590 G	56	411	43	312	126·2	105·7	+15·5	+47·6
167·380 G	42	239	41	232	126·3	105·7	+15·6	+58·1
168·417 G	23	131	36	206	125·4	104·7	+15·3	+71·0
169·345 G	3	42	13	184	125·8	105·0	+15·0	+83·6
Means ..	..	..	42	251	125·86	105·69	+14·59	..

Spot *a*.

159·350 G	29	160	22	122	127·1	106·9	+13·6	−47·4
160·377 G	58	328	35	200	127·8	107·4	+13·3	−33·1
161·643 G	81	382	43	202	128·1	107·6	+13·6	−16·0
162·672 G	76	345	39	176	127·9	107·2	+13·7	− 2·6
163·535 C	87	431	45	224	127·3	106·5	+13·9	+ 8·2
164·431 C	80	435	44	239	126·8	105·9	+14·2	+19·6

Spot *a*—*continued*.

1920. d					°	°	°	°
165·453 C	63	367	38	224	126·7	105·7	+14·8	+33·0
166·590 G	56	293	43	223	126·3	105·1	+15·3	+47·7
167·380 G	42	224	41	217	126·2	104·9	+15·6	+58·0
168·417 G	23	131	36	206	125·4	104·0	+15·3	+71·0
169·345 G	3	42	13	184	125·8	104·3	+15·0	+83·6

Group 9196.

June 11–17. An irregular stream of small spots *f* Group 9193.

162·672 G	9	53	5	29	115·7	106·6	+17·2	−14·8
163·535 C	53	158	28	84	113·9	104·7	+18·0	− 5·2
164·431 C	51	195	27	103	113·6	104·4	+18·0	+ 6·4
165·453 C	46	130	26	73	114·2	104·9	+18·7	+20·5
166·590 G	22	60	14	39	115·0	105·7	+18·3	+36·4
167·380 G	17	61	12	45	114·6	105·2	+17·6	+46·4
168·417 G	5	32	5	34	113·8	104·4	+18·1	+59·4
Means ..	..	..	17	58	114·40	105·13	+17·99	..

Group 9199.

June 17–27. A small regular spot usually with a few small followers.

168·417 G	12	70	29	168	336·7	299·1	− 7·5	−77·7
169·345 G	28	150	34	185	336·7	298·9	− 7·4	−65·5
170·487 G	34	186	27	147	337·0	299·0	− 7·1	−50·0
171·518 C	27	179	18	114	337·0	298·8	− 7·3	−36·4
172·345 G	37	165	21	93	337·0	298·6	− 7·3	−25·5
173·355 G	22	119	11	62	337·1	298·4	− 7·4	−12·0
174·349 G	25	112	13	57	337·3	298·4	− 7·4	+ 1·4
175·400 G	17	78	9	41	337·7	298·6	− 7·8	+15·7
176·357 G	22	44	13	26	337·6	298·3	− 7·7	+28·3
177·348 C	10	21	7	14	338·4	298·9	− 7·7	+42·2
178·384 C	2	8	2	7	338·4	298·6	− 7·7	+55·9
Means ..	..	..	17	83	337·35	298·69	− 7·48	..

Group 9202.

June 22–27. A few small unstable spots, *f* Group 9201, not seen on June 26.

173·355 G	0	30	0	79	269·7	242·7	+12·3	−79·4
174·349 G	3	35	4	44	270·5	243·3	+13·0	−65·4
175·400 G	5	12	4	10	269·7	242·3	+12·3	−52·3
176·357 G	0	17	0	11	269·8	242·3	+12·7	−39·5
177·348 C	0	0	0	0	..	..	..	..
178·384 C	0	20	0	10	270·6	242·8	+13·1	−11·9
Means ..	..	..	1	26	270·06	242·68	+12·68	..

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued.*

Group 9203.

June 23–28. A stream passing rapidly through its phases of development.

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.
1920. d					°	°	°	°
174·349 G	12	32	7	18	322·1	321·9	−20·1	−13·8
175·400 G	53	115	29	62	322·2	322·0	−20·1	+ 0·2
176·357 G	67	220	38	124	323·8	323·6	−20·3	+14·5
177·348 C	25	125	15	78	324·4	324·2	−20·3	+28·2
178·384 C	13	53	10	40	325·9	325·7	−20·4	+43·4
179·478 G	2	14	2	16	328·2	328·0	−20·8	+60·2
Means ..	..	..	17	56	324·43	324·23	−20·33	..

Group 9208.

July 4–15. More probably a revival than a return of Group 9196. A group of the stream type with few components but in frequent change.

185·423 G	3	12	5	20	116·8	102·2	+16·9	−72·5
186·349 C	8	35	8	35	117·0	102·3	+17·0	−60·1
187·619 G	31	144	22	103	116·0	101·2	+16·9	−44·3
188·362 C	29	142	18	90	114·9	100·0	+16·7	−35·5
189·370 G	19	65	11	36	114·5	99·5	+16·5	−22·6
190·366 G	6	49	3	25	113·1	98·1	+16·5	−10·8
191·348 C	18	87	9	44	116·6	101·5	+16·5	+ 5·7
192·428 G	42	96	23	52	116·3	101·1	+16·9	+19·7
193·359 C	29	122	18	76	118·3	103·0	+17·1	+34·0
194·344 G	16	109	12	83	118·8	103·4	+17·1	+47·5
195·360 C	8	29	9	32	121·0	105·6	+17·4	+63·2
196·605 G	2	10	6	28	122·1	106·6	+17·1	+80·7
Means ..	..	..	12	52	117·12	102·04	+16·88	..

Group 9209.

July 8–19. Intermittent. A small spot followed by a distant companion. The group has disappeared on July 15, but other spots are forming in its place on July 17.

189·370 G	8	20	16	41	61·5	14·3	− 3·7	−75·6
190·366 G	15	41	17	47	60·0	12·6	− 3·2	−63·9
191·348 C	12	41	9	33	59·5	11·9	− 3·5	−51·4
192·428 G	14	55	9	35	59·9	12·0	− 3·6	−36·7
193·359 C	14	59	8	33	60·2	12·1	− 3·6	−24·1
194·344 G	3	28	2	15	60·0	11·6	− 3·7	−11·3
195·360 C	0	64	0	33	58·4	9·8	− 3·5	+ 0·6
196·605 G	0	0	0	0	..	..	..	..
197·365 G	0	0	0	0	..	..	..	..
198·379 G	7	31	5	20	58·0	8·6	− 4·2	+40·1
199·439 G	24	65	23	61	60·9	11·2	− 5·0	+57·0
200·347 G	3	9	5	14	62·9	13·0	− 6·0	+71·1
Means ..	..	..	8	28	60·13	11·71	− 4·00	..

Group 9211.

July 14–21. Intermittent. A pair of very small spots on July 14; nothing is then seen until July 19, when another pair makes its appearance.

1920. d					°	°	°	°
195·360 C	5	14	4	10	10·2	327·4	+ 8·0	−47·6
196·605 G	0	0	0	0	..	..	..	..
197·365 G	0	0	0	0	..	..	..	..
198·379 G	0	0	0	0	..	..	..	..
199·439 G	0	0	0	0	..	..	..	..
200·347 G	2	7	1	4	13·0	329·1	+ 7·1	+21·2
201·353 C	0	11	0	7	12·4	328·3	+ 7·7	+33·9
202·368 C	2	15	1	11	11·1	326·8	+ 8·5	+46·0
Means ..	..	..	1	4	11·67	327·90	+ 7·82	..

Group 9212.

July 15–20. A small but distinct spot with one or two very small companions from July 18–20.

196·605 G	5	22	11	49	326·0	299·9	−13·9	−75·4
197·365 G	6	31	8	39	326·7	300·5	−13·9	−64·6
198·379 G	7	20	6	17	326·5	300·1	−14·1	−51·4
199·439 G	12	22	8	15	326·7	300·2	−14·2	−37·2
200·347 G	14	33	8	19	326·6	300·0	−13·9	−25·2
201·353 C	10	22	5	12	326·7	299·9	−14·3	−11·8
Means ..	..	..	8	25	326·53	300·10	−14·05	..

Group 9214.

July 22–28. Intermittent. One or two very small spots which have disappeared by July 26. A small distinct spot appears in the region on July 28.

203·421 G	2	7	1	4	275·5	232·6	+ 8·2	−35·7
204·467 G	2	10	1	5	276·3	233·2	+10·4	−21·0
205·381 G	5	24	3	12	279·2	235·9	+ 8·3	− 6·1
206·338 G	2	12	1	7	278·3	234·8	+ 8·0	+ 5·7
207·500 G	0	0	0	0	..	..	..	..
208·462 C	0	0	0	0	..	..	..	..
209·357 C	5	14	4	10	279·8	235·6	+ 8·3	+47·1
Means ..	..	..	1	5	277·82	234·42	+ 8·64	..

Group 9221.

August 9–17. Two spots, the larger one following and breaking up into a small cluster on August 14. The group then appears as a short stream, of which two spots remain on August 17.

221·443 C	2	20	5	52	353·2	316·7	+11·6	−79·6
222·382 C	9	83	13	117	350·6	313·9	+12·7	−69·8
223·436 G	31	110	27	98	350·7	313·8	+12·2	−55·8

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*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.
Group 9221—*continued*.								
1920. d					°	°	°	°
224·584 G	18	106	12	70	350·4	313·3	+12·2	−40·9
225·394 G	18	45	11	27	349·5	312·3	+12·3	−31·1
226·364 G	23	99	12	52	350·3	312·9	+12·2	−17·5
227·451 G	35	232	18	116	350·1	312·6	+12·4	− 3·3
228·343 G	41	182	21	93	350·6	312·9	+11·9	+ 9·0
229·192 D	15	84	8	45	351·6	313·8	+11·6	+21·2
Means ..	..	..	14	74	350·78	313·58	+12·12	..
Group 9222. August 12–23. A regular spot followed by a train of small variable components which are never conspicuous.								
224·584 G	24	152	48	302	319·8	327·2	−21·4	−71·5
225·394 G	36	264	45	331	319·3	326·7	−21·4	−61·3
226·364 G	47	314	41	275	319·4	326·9	−21·1	−48·4
227·451 G	58	332	41	231	318·3	325·8	−21·7	−35·1
228·343 G	85	427	53	268	317·4	324·9	−21·4	−24·2
229·192 D	80	410	46	240	318·0	325·6	−21·8	−12·4
230·350 G	89	396	50	225	317·2	324·8	−21·8	+ 2·1
231·412 G	56	351	33	208	316·7	324·3	−21·8	+15·6
232·382 G	45	258	30	169	316·8	324·5	−22·1	+28·6
233·351 G	29	194	23	151	317·3	325·0	−22·1	+41·9
234·503 G	19	140	21	155	317·6	325·3	−22·1	+57·4
235·595 G	11	75	22	149	317·0	324·8	−21·8	+71·2
Means ..	..	..	38	225	317·90	325·48	−21·71	..
Group 9231. September 8–15. A long sparse stream led by a regular spot. The whole group disappears somewhat suddenly between September 15 and 16.								
251·381 G	0	22	0	34	329·5	288·8	−13·8	−67·8
252·348 G	17	74	16	70	330·1	289·2	−13·6	−54·4
253·350 G	56	237	39	167	332·1	291·1	−12·9	−39·2
254·346 G	83	377	49	219	335·4	294·2	−12·0	−22·7
255·355 G	81	467	43	251	336·3	294·9	−12·0	− 8·5
256·359 G	69	324	36	172	335·9	294·4	−11·9	+ 4·4
257·456 G	55	221	31	123	336·8	295·1	−11·3	+19·7
258·101 K	39	161	23	97	336·9	295·1	−11·1	+28·4
Means ..	..	..	30	142	334·13	292·85	−12·32	..
Group 9233. September 21–October 1. A diminishing regular spot usually with one or two very small companions.								
264·337 C	10	43	34	147	146·2	94·9	−10·0	−80·0
265·563 G	17	103	21	125	146·4	94·9	− 9·9	−63·6
266·413 G	22	141	19	123	146·4	94·7	− 9·8	−52·4
Group 9233—*continued*.								
1920. d					°	°	°	°
267·340 C	21	165	14	114	146·4	94·5	− 9·6	−40·2
268·388 C	27	177	15	103	146·2	94·1	−10·1	−26·6
269·360 G	41	225	22	122	146·2	93·9	− 9·9	−13·7
270·596 G	18	103	9	54	146·4	93·9	−10·2	+ 2·8
271·474 G	20	75	11	41	146·5	93·8	−10·4	+14·5
272·364 G	8	26	5	15	146·3	93·5	−10·2	+26·0
273·422 G	10	14	7	10	146·7	93·7	−10·2	+40·4
274·332 C	2	10	2	9	147·0	93·8	− 9·8	+52·7
Means ..	..	..	14	78	146·43	94·15	−10·01	..
Group 9239. September 27–October 5. A small stream of spots on September 27 developing into one of normal type by September 30. The rear portion then disappears rapidly, leaving the leader as a regular spot.								
270·596 G	21	54	13	32	109·9	74·7	+15·2	−33·7
271·474 G	60	161	32	87	110·8	75·5	+15·0	−21·2
272·364 G	82	325	42	166	112·8	77·4	+14·7	− 7·5
273·422 G	117	439	60	276	113·2	77·7	+14·4	+ 6·9
274·332 C	72	411	39	221	114·5	78·8	+14·0	+20·2
275·355 G	68	313	41	192	115·5	79·7	+13·5	+34·7
276·379 C	32	201	25	155	116·9	81·0	+13·6	+49·6
277·425 C	22	124	24	138	117·5	81·4	+13·6	+64·0
278·371 G	6	70	12	135	117·0	80·8	+13·9	+76·0
Means ..	..	..	32	156	114·23	78·56	+14·21	..
Group 9243. October 4–16. A pair of spots, *a* and *b*, at the east limb which at first grow rapidly. The rear spot breaks into two portions on October 9, one of which remains with the leader as a tiny companion. From October 7 to 10, there are one or two small attendants.								
277·425 C	18	89	30	152	340·3	281·2	+ 9·3	−73·2
278·371 G	82	468	83	478	340·1	280·8	+ 9·5	−60·9
279·312 C	122	672	92	508	339·7	280·2	+ 9·5	−48·9
280·440 G	133	726	81	438	339·7	280·0	+ 9·1	−34·0
281·496 G	174	815	93	436	339·8	279·8	+ 9·0	−20·0
282·443 G	157	641	80	323	340·0	279·8	+ 8·8	− 7·3
283·344 C	109	538	55	270	340·2	279·8	+ 8·6	+ 4·8
284·404 G	81	463	42	244	340·4	279·8	+ 7·8	+19·0
285·385 G	57	313	34	186	340·6	279·8	+ 7·7	+32·1
286·424 G	42	214	30	154	340·7	279·7	+ 7·7	+45·9
287·436 G	23	129	23	126	340·9	279·7	+ 7·7	+59·5
288·369 G	11	73	18	118	341·4	280·0	+ 7·6	+72·3
289·341 C	2	23	11	122	341·6	280·0	+ 7·7	+85·3
Means ..	..	..	52	273	340·42	280·05	+ 8·46	..

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*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.
Group 9243—*continued*.								
Spot *a*.								
1920. d					°	°	°	°
277·425 C	11	49	17	77	341·4	280·9	+ 9·0	−72·1
278·371 G	52	278	50	267	341·8	281·1	+ 9·1	−59·2
279·312 C	69	359	50	258	341·9	281·0	+ 8·8	−46·7
280·440 G	56	321	33	189	341·9	280·8	+ 8·2	−31·8
281·496 G	72	331	38	175	341·8	280·4	+ 7·9	−18·0
282·443 G	68	322	34	161	341·9	280·3	+ 7·9	− 5·4
283·344 C	62	323	31	162	341·8	280·0	+ 7·7	+ 6·4
284·404 G	59	346	31	183	341·4	279·4	+ 7·4	+20·0
285·385 G	42	233	25	140	341·6	279·4	+ 7·2	+33·1
286·424 G	31	171	23	125	341·6	279·2	+ 7·2	+46·8
287·436 G	19	116	19	115	341·5	278·8	+ 7·4	+60·1
288·369 G	11	68	18	111	341·7	278·8	+ 7·4	+72·6
289·341 C	2	23	11	122	341·6	278·5	+ 7·7	+85·3
Spot *b*.								
277·425 C	7	33	13	63	337·9	282·4	+ 9·9	−75·6
278·371 G	30	190	33	211	337·2	281·5	+10·2	−63·8
279·312 C	53	313	42	250	337·1	281·2	+10·1	−51·5
280·440 G	64	329	40	204	337·3	281·2	+ 9·9	−36·4
281·496 G	78	377	42	204	337·5	281·2	+ 9·7	−22·3
282·443 G	70	277	36	141	337·6	281·1	+ 9·7	− 9·7
283·344 C	34	174	17	87	337·9	281·2	+ 9·5	+ 2·5
284·404 G	22	117	11	61	337·3	280·4	+ 9·3	+15·9
285·385 G	15	73	9	42	337·5	280·4	+ 9·1	+29·0
286·424 G	11	43	7	29	337·3	280·0	+ 8·9	+42·5
287·436 G	4	13	4	11	337·0	279·5	+ 9·2	+55·6
Group 9244.								
October 7–13. A small stream *n* Group 9243.								
280·440 G	2	8	1	5	339·8	296·1	+13·2	−33·9
281·496 G	13	63	7	34	341·6	297·7	+13·0	−18·2
282·443 G	12	53	6	27	343·8	299·7	+13·1	− 3·5
283·344 C	19	74	10	38	345·3	301·1	+12·2	+ 9·9
284·404 G	15	56	8	30	343·5	299·1	+12·4	+22·1
285·385 G	13	92	8	55	342·6	298·1	+12·3	+34·1
286·424 G	11	54	8	40	342·5	297·8	+12·7	+47·7
Means ..	..	..	7	33	342·73	298·51	+12·70	..
Group 9245.								
October 7–17. A large composite spot preceded by a cluster of unstable components.								
280·440 G	34	300	62	549	302·3	277·1	−15·9	−71·4
281·496 G	64	501	66	524	301·9	276·6	−16·7	−57·9
282·443 G	101	585	79	455	302·6	277·2	−16·2	−44·7
283·344 C	95	667	62	435	302·8	277·3	−16·1	−32·6
Group 9245—*continued*.								
1920. d					°	°	°	°
284·404 G	111	698	64	403	301·8	276·2	−16·0	−19·6
285·385 G	124	574	68	315	301·3	275·6	−16·5	− 7·2
286·424 G	66	493	35	266	301·0	275·2	−16·4	+ 6·2
287·436 G	62	372	35	213	301·9	276·0	−16·0	+20·5
288·369 G	30	215	19	139	301·2	275·2	−16·7	+32·1
289·341 C	9	66	7	50	300·4	274·4	−16·8	+44·1
290·109 K	5	31	5	30	301·0	274·9	−16·7	+54·8
Means ..	..	..	46	307	301·65	275·97	−16·36	..
Group 9246.								
October 7–17. A group closely following Group 9245 and evidently connected with it. A cluster of very small spots.								
280·440 G	13	59	41	186	294·9	271·3	−15·0	−78·8
281·496 G	38	166	54	234	293·4	269·8	−15·6	−66·4
282·443 G	18	132	17	123	293·9	270·2	−16·0	−53·4
283·344 C	14	111	10	82	293·4	269·6	−16·7	−42·0
284·404 G	12	78	7	48	293·7	269·8	−16·8	−27·7
285·385 G	15	120	8	67	293·9	269·9	−17·1	−14·6
286·424 G	8	56	4	30	291·0	266·9	−16·8	− 3·8
287·436 G	8	37	5	21	296·2	272·1	−17·6	+14·8
288·369 G	7	52	4	32	295·5	271·3	−17·8	+26·4
289·341 C	4	12	3	9	297·4	273·1	−17·6	+41·1
290·109 K	0	23	0	20	296·2	271·8	−15·9	+50·0
Means ..	..	..	14	77	294·50	270·53	−16·63	..
Group 9247.								
October 10–17. A single small spot on October 10 developing with great rapidity into a stream of normal type. The rear component is never prominent and soon disappears.								
283·344 C	3	9	2	5	305·3	247·2	+ 8·4	−30·1
284·404 G	120	394	62	204	306·6	248·3	+ 9·2	−14·8
285·385 G	98	425	50	213	308·5	250·0	+ 9·1	0·0
286·424 G	75	352	39	183	310·1	251·4	+ 9·1	+15·3
287·436 G	54	249	31	145	311·7	252·8	+ 9·2	+30·3
288·369 G	52	236	36	163	313·0	253·9	+ 9·2	+43·9
289·341 C	42	191	39	175	313·2	253·9	+ 9·4	+56·9
290·109 K	28	151	37	198	314·0	254·5	+ 9·4	+67·8
Means ..	..	..	37	161	310·30	251·50	+ 9·12	..
Group 9248.								
October 14–22. A small spot seen on October 14 developing into a stream of normal type with brief maximum. None of the spots are well formed.								
287·436 G	2	9	1	5	253·5	189·7	− 8·0	−27·9
288·369 G	52	153	28	82	252·4	188·4	− 8·0	−16·7
289·341 C	97	462	50	238	252·4	188·2	− 7·7	− 3·9

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*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.
Group 9248—*continued.*								
1920. d					°	°	°	°
290·109 K	125	672	65	348	252·9	188·5	− 7·3	+ 6·7
291·402 G	88	447	49	253	254·4	189·7	− 7·4	+25·3
292·398 G	70	246	46	164	255·2	190·3	− 7·2	+39·2
293·419 G	26	101	24	93	257·3	192·2	− 7·3	+54·8
294·522 G	19	92	28	141	257·6	192·2	− 7·4	+69·6
295·341 C	4	30	17	127	259·3	193·7	− 8·0	+82·1
Means ..	..	..	34	161	255·00	190·32	− 7·59	..
Group 9254.								
October 22–28. A pair of small clusters. The following one is alone represented by a small component on October 27, but a small spot is seen the next day in the position of the leading cluster.								
295·341 C	3	10	2	6	141·3	105·6	−14·2	−35·9
296·469 G	38	102	21	58	140·9	105·0	−14·3	−21·4
297·472 G	51	179	28	97	140·8	104·8	−14·4	− 8·3
298·416 G	41	168	22	89	140·3	104·2	−14·5	+ 3·7
299·423 G	23	62	13	34	140·3	104·1	−14·5	+17·0
300·482 G	5	15	3	9	136·9	100·5	−16·5	+27·5
301·461 G	0	13	0	10	140·5	104·0	−14·4	+44·0
Means ..	..	..	13	43	140·14	104·03	−14·69	..
Group 9255.								
October 26–31. A group linking up the disturbances of Groups 9253 and 9254. A pair of spot centres at which a regular spot and a small composite follower respectively appear.								
299·423 G	7	22	4	12	128·1	103·5	−15·6	+ 4·8
300·482 G	51	192	29	109	128·6	104·0	−15·6	+19·2
301·461 G	63	348	40	223	129·7	105·0	−16·1	+33·2
302·404 G	47	215	37	173	130·4	105·6	−16·6	+46·4
303·348 C	20	132	21	150	131·5	106·6	−17·4	+59·9
304·360 C	10	63	24	148	133·6	108·6	−19·2	+75·4
Means ..	..	..	26	136	130·32	105·55	−16·75	..
Group 9257.								
October 30–November 9. A very small regular spot, *a*, followed by unstable companions which together make up a stream.								
303·348 C	6	15	12	29	356·1	296·6	+ 9·3	−75·5
304·360 C	20	70	22	80	354·3	294·6	+ 9·9	−63·9
305·346 C	30	85	24	66	355·2	295·4	+10·2	−50·0
306·453 G	33	82	21	50	355·6	295·5	+10·5	−35·0
307·340 C	25	115	13	62	357·1	296·9	+10·5	−21·8
Group 9257—*continued.*								
1920. d					°	°	°	°
308·524 G	21	101	11	51	359·5	299·0	+ 9·9	− 3·8
309·348 C	21	128	11	65	358·8	298·2	+10·2	+ 6·3
310·334 C	20	98	11	53	0·6	299·8	+ 9·7	+21·1
311·347 C	11	27	7	17	1·5	300·5	+ 9·4	+35·4
312·455 G	3	6	2	5	1·6	300·4	+ 9·3	+50·1
313·095 K	2	5	2	5	1·8	300·4	+ 9·7	+58·7
Means ..	..	..	12	44	358·37	297·94	+ 9·87	..
Spot *a*.								
303·348 C	6	15	12	29	356·1	295·4	+ 9·3	−75·5
304·360 C	11	29	11	30	356·9	296·0	+ 8·5	−61·3
305·346 C	11	46	8	34	357·7	296·6	+ 9·4	−47·5
306·453 G	18	37	11	22	358·8	297·5	+10·2	−31·8
307·340 C	16	73	8	39	359·3	297·8	+10·2	−19·6
308·524 G	21	89	11	45	0·5	298·8	+10·1	− 2·8
309·348 C	15	81	8	41	1·0	299·1	+10·0	+ 8·5
310·334 C	20	93	11	50	1·4	299·3	+ 9·6	+21·9
311·347 C	11	27	7	17	1·5	299·2	+ 9·4	+35·4
312·455 G	3	6	2	5	1·6	299·1	+ 9·3	+50·1
313·095 K	2	5	2	5	1·8	299·2	+ 9·7	+58·7
Group 9266.								
November 22–December 2. A stream led by a regular spot, *a*, which remains alone after November 29.								
326·449 G	12	59	31	153	48·7	349·6	−10·5	−78·3
327·464 G	37	164	47	213	47·4	348·1	−10·5	−66·2
328·510 G	80	316	66	265	48·1	348·6	−10·6	−51·8
329·421 G	66	314	44	209	49·2	349·6	−10·3	−38·7
330·449 G	74	300	42	170	48·7	348·9	−11·0	−25·6
331·309 C	61	284	32	150	49·6	349·6	−11·3	−13·4
332·343 C	50	231	26	118	50·8	350·6	−11·3	+ 1·5
333·393 G	37	220	20	119	52·6	352·3	−11·4	+17·1
334·458 G	11	162	7	97	53·4	352·9	−11·3	+31·9
335·451 G	17	92	12	66	53·4	352·7	−11·6	+45·0
336·372 C	3	27	3	25	53·2	352·3	−11·5	+57·0
Means ..	..	..	30	144	50·46	350·47	−11·03	..
Spot *a*.								
326·449 G	12	59	31	153	48·7	348·3	−10·5	−78·3
327·464 G	25	103	30	123	49·2	348·6	−10·2	−64·4
328·510 G	48	179	37	140	50·7	349·9	− 9·4	−49·2
329·421 G	40	201	26	129	51·3	350·4	− 9·5	−36·6
330·449 G	41	184	23	101	51·5	350·4	−10·4	−22·8

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued.*

Group 9266—Spot *a*—*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.
1920. d					°	°	°	°
331·309 C	43	213	22	111	51·6	350·3	−11·0	−11·4
332·343 C	39	193	20	98	52·2	350·7	−11·3	+ 2·9
333·393 G	37	205	20	111	53·0	351·3	−11·4	+17·5
334·458 G	11	162	7	97	53·4	351·5	−11·3	+31·9
335·451 G	17	92	12	66	53·4	351·3	−11·6	+45·0
336·372 C	3	27	3	25	53·2	351·0	−11·5	+57·0

Group 9267.

November 23–30. A regular spot with some attendants.

327·464 G	10	62	34	213	32·6	340·9	−12·0	−81·0
328·510 G	23	129	32	177	32·2	340·3	−12·4	−67·7
329·421 G	11	91	10	83	32·7	340·7	−12·4	−55·2
330·449 G	27	155	19	108	32·5	340·3	−12·4	−41·8
331·309 C	42	215	25	129	33·1	340·8	−13·0	−29·9
332·343 C	26	189	14	102	33·5	341·0	−13·0	−15·8
333·393 G	18	56	9	29	33·6	340·9	−12·7	− 1·9
334·458 G	3	12	2	6	31·8	339·0	−12·6	+10·3
Means ..	..	..	18	106	32·75	340·49	−12·56	..

Group 9273.

December 7–18. Intermittent. A close pair of small regular spots of which the following one has disappeared after December 13. A few very small followers are seen on and after December 10. The group has disappeared by December 16, but a pair of small spots appears temporarily on December 18.

341·313 C	2	20	9	88	207·7	146·6	−11·0	−83·4
342·345 C	25	116	40	187	206·1	144·8	−11·6	−71·4
343·350 C	22	163	21	156	206·6	145·1	−11·6	−57·7
344·393 C	39	192	28	136	206·6	145·0	−11·6	−44·0
345·318 C	51	193	30	114	206·5	144·7	−11·3	−31·9
346·307 C	22	164	12	87	206·3	144·3	−11·5	−19·0
347·340 C	43	151	23	77	205·4	143·2	−10·9	− 6·3
348·330 C	20	54	11	27	205·9	143·5	−10·7	+ 7·2
349·545 C	2	11	1	6	207·2	144·6	−11·0	+24·5
350·307 C	0	0	0	0	..	..	..	..
351·354 C	0	0	0	0	..	..	..	..
352·115 K	4	14	4	14	208·2	145·2	−10·2	+59·4
Means ..	..	..	15	74	206·65	144·70	−11·14	..

Group 9275.

December 17–26. Two regular spots of which the leader breaks up on December 20 into a small cluster and so dies out, whilst its companion persists as a very small spot.

351·354 C	39	143	48	171	95·3	54·9	+16·2	−63·5
352·115 K	56	272	52	245	95·0	54·5	+16·5	−53·8
353·119 K	57	275	40	194	94·4	53·8	+16·2	−41·2

Group 9275—*continued.*

1920. d					°	°	°	°
354·375 C	53	279	31	162	93·2	52·4	+15·7	−25·8
355·440 C	42	192	22	103	93·1	52·2	+15·6	−11·9
356·479 G	17	33	9	18	92·5	51·5	+14·7	+ 1·2
357·312 C	11	18	6	10	91·6	50·5	+14·1	+11·2
358·370 C	17	31	10	18	91·6	50·4	+13·9	+25·2
359·338 C	4	16	3	11	92·2	50·9	+13·8	+38·5
360·465 G	6	14	5	13	93·0	51·5	+14·0	+54·2
Means ..	..	..	23	94	93·19	52·26	+15·07	..

Group 9276.

December 18–23. A pair of very small spots on December 18 developing into two well defined regular spots with a small cluster between them. The follower is, as usual, the first to break up and disappear.

352·115 K	6	32	3	17	142·4	99·1	+15·6	− 6·4
353·119 K	59	241	31	128	144·8	101·4	+15·3	+ 9·2
354·375 C	152	720	88	416	144·4	100·8	+14·7	+25·4
355·440 C	88	585	60	406	145·6	101·9	+14·6	+40·6
356·479 G	48	318	44	297	146·2	102·4	+13·9	+54·9
357·312 C	26	114	34	162	147·9	104·0	+13·6	+67·5
Means ..	..	..	43	238	145·22	101·60	+14·62	..

Group 9277.

December 18–28. A pair of small spots (not seen on December 20) developing into a small stream of feeble activity.

352·115 K	0	4	0	6	76·8	359·0	− 8·0	−72·0
353·119 K	9	38	9	37	77·3	359·3	− 7·7	−58·3
354·375 C	0	0	0	0	..	..	..	..
355·440 C	2	11	1	6	75·7	357·1	− 6·9	−29·3
356·479 G	11	48	6	25	76·5	357·7	− 7·4	−14·8
357·312 C	30	89	15	45	77·9	358·9	− 7·4	− 2·5
358·370 C	55	140	28	71	77·6	358·4	− 7·8	+11·2
359·338 C	31	166	17	91	78·1	358·7	− 8·0	+24·4
360·465 G	19	47	12	30	78·5	358·8	− 8·0	+39·7
361·452 G	13	55	11	45	77·1	357·2	− 8·1	+51·3
362·351 C	12	56	14	67	79·1	359·0	− 7·7	+65·1
Means ..	..	..	10	38	77·46	358·41	− 7·70	..

Group 9278.

December 20–1921, January 1. A large spot apparently breaking up on December 24, but assuming within a few days the stable appearance of a regular spot.

354·375 C	9	80	37	326	36·4	321·3	+ 8·9	−82·6
355·440 C	23	266	32	370	36·8	321·4	+ 9·0	−68·2
356·479 G	66	402	58	354	36·7	321·1	+ 8·7	−54·6

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1920—*continued*.

Group 9278—*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.
1920. d					°	°	°	°
357·312 C	80	538	57	382	36·4	320·6	+ 8·7	−44·0
358·370 C	104	495	61	292	36·5	320·5	+ 8·5	−29·9
359·338 C	101	542	54	287	36·6	320·4	+ 8·5	−17·1
360·465 G	93	550	47	280	36·9	320·5	+ 8·4	− 1·9
361·452 G	86	524	45	272	36·8	320·2	+ 8·0	+11·0
362·351 C	68	467	37	257	37·0	320·2	+ 8·2	+23·0
363·325 C	74	396	47	249	37·2	320·2	+ 8·2	+36·1
364·443 G	43	262	35	212	37·3	320·0	+ 8·2	+50·9
365·312 C	28	185	31	205	37·4	320·0	+ 8·4	+62·4
366·407 C	12	82	29	197	37·9	320·2	+ 8·8	+77·3
Means ..	..	..	44	283	36·92	320·51	+ 8·50	..

Group 9281.

December 25–1921 January 1. An irregular stream of generally unimportant 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.
359·338 C	1	5	2	10	339·1	318·3	+16·5	−74·6
360·465 G	39	159	47	187	337·0	316·1	+17·7	−61·8
361·452 G	55	304	46	254	336·7	315·7	+17·6	−49·1
362·351 C	58	268	38	186	335·5	314·5	+17·7	−38·5
363·325 C	48	234	28	139	335·2	314·1	+17·7	−25·9
364·443 G	34	90	18	49	335·6	314·5	+18·3	−10·8
365·312 C	22	70	13	38	334·3	313·1	+18·6	− 0·7
366·407 C	9	29	5	16	333·6	312·3	+18·8	+13·0
Means ..	..	..	25	110	335·88	314·83	+17·86	..

Group 9282.

December 31–1921 January 10. A regular spot, *a*, followed by a long train of numerous components which have died out by January 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.
1920. d					°	°	°	°
365·312 C	13	78	29	188	257·2	173·5	− 8·0	−77·8
366·407 C	34	217	36	230	258·9	175·0	− 8·0	−61·7
367·330 C	58	311	44	237	259·7	175·6	− 7·9	−48·7
368·474 G	147	472	89	285	260·3	175·9	− 7·7	−33·0
369·395 C	140	501	75	267	261·9	177·3	− 7·0	−19·3
370·332 C	125	602	63	303	261·8	177·0	− 6·7	− 7·1
371·338 C	72	371	36	187	262·2	177·2	− 6·7	+ 6·6
372·305 C	39	209	21	112	265·0	179·7	− 6·1	+22·1
373·304 C	34	147	21	89	264·5	179·0	− 6·1	+34·8
374·329 C	12	32	10	25	267·3	181·6	− 5·3	+51·1
375·347 C	0	4	0	5	267·8	181·8	− 5·8	+65·0
Means ..	..	..	39	175	262·42	177·60	− 6·85	..

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.
365·312 C	9	46	16	83	260·9	174·7	− 7·4	−74·1
366·407 C	22	140	21	133	262·1	175·6	− 7·1	−58·5
367·330 C	34	161	24	114	262·9	176·2	− 6·7	−45·5
368·474 G	58	201	34	117	263·7	176·7	− 6·3	−29·6
369·395 C	54	205	28	107	264·9	177·7	− 5·6	−16·3
370·332 C	47	179	24	89	265·9	178·5	− 5·3	− 3·0
371·338 C	22	135	11	69	266·9	179·3	− 5·4	+11·3
372·305 C	17	73	9	40	267·6	179·7	− 5·3	+24·7
373·304 C	12	44	8	28	268·2	180·1	− 5·0	+38·5

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

1920.

TOTAL AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

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

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

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

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

Greenwich Civil Time.		Place.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1920	d							
January	1·362	C	194	854	903	105	459	1228
	2·337	C	410	1777	400	209	898	569
	3·252	D	475	2189	234	253	1161	302
	4·478	G	279	1631	149	176	1019	301
	5·467	G	205	1140	520	160	902	636
	6·339	C	119	794	2004	134	875	1998
	7·413	C	42	356	1351	115	852	1687
	8·351	C	22	149	650	54	362	1231
	9·436	G	73	303	560	93	386	798
	10·103	K	82	443	1408	82	444	1586
	11·109	K	123	608	1024	138	685	870
	12·108	K	180	960	382	142	790	531
	13·108	K	201	1003	331	129	661	353
	14·441	G	163	996	248	93	571	255
	15·106	K	206	1043	775	114	570	1007
	16·110	K	175	883	923	94	469	1451
	17·108	K	163	886	1167	89	485	1306
	18·331	C	122	607	2100	81	399	2307
	19·169	D	111	538	2768	82	384	2754
	20·380	C	55	361	1052	55	324	1340
	21·341	C	66	346	1134	103	663	1132
	22·432	G	227	1296	1135	271	1753	1722
	23·355	C	334	2140	1245	287	1917	1802
	24·563	C	563	3618	1014	361	2349	917
	25·448	G	933	5058	1573	562	3020	1352
	26·487	C	806	5166	1915	465	2933	2057
	27·348	C	690	5125	1213	397	2904	1246
	28·493	C	637	4376	1462	388	2600	1882
	29·416	G	659	3628	926	477	2395	1270
	30·435	G	383	2662	796	228	1768	849
	31·450	C	241	1566	2311	177	1185	2109
February	1·459	G	130	859	2741	125	832	2771
	2·374	C	73	444	2231	105	650	3055
	3·501	G	46	271	1232	59	353	1697
	4·517	C	62	315	461	40	207	773
	5·418	G	69	322	264	39	182	328
	6·499	G	48	360	904	26	198	877
	7·437	G	98	408	935	49	208	880
	8·461	G	45	201	552	25	110	617
	9·106	K	86	374	865	49	208	956

Greenwich Civil Time.		Place.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1920	d							
February	10·371	C	87	455	673	89	481	1070
	11·354	C	65	431	1417	59	394	1564
	12·359	C	93	546	1384	81	464	1706
	13·360	C	210	1302	1384	133	967	1838
	14·334	C	240	1687	1731	156	1136	2272
	15·339	C	274	1704	1601	182	1121	1654
	16·414	G	314	1515	810	197	947	918
	17·376	C	247	1368	1151	166	935	1719
	18·422	G	183	1017	1825	130	724	2264
	19·418	G	170	812	2250	119	602	2442
	20·538	C	205	797	2102	118	460	1932
	21·405	C	195	919	1862	110	522	1946
	22·450	G	272	1128	1555	173	701	1714
	23·597	G	206	892	1620	150	633	1706
	24·527	G	127	589	2243	98	435	2316
	25·340	C	100	577	1365	77	466	1854
	26·407	C	120	832	921	77	558	1264
	27·340	C	152	906	1421	100	591	1380
	28·422	G	150	933	1564	90	554	1898
	29·360	C	143	781	2391	74	397	2829
March	1·436	G	126	607	1177	67	325	1430
	2·342	C	119	574	241	69	332	439
	3·426	G	90	465	648	70	365	679
	4·403	G	75	400	956	64	356	1069
	5·669	G	124	466	665	126	471	873
	6·349	C	88	501	730	74	448	1097
	7·479	G	89	607	513	48	372	617
	8·535	G	210	1157	1065	136	719	1176
	9·451	G	244	1294	1003	138	776	1150
	10·362	C	358	2346	1431	205	1348	1521
	11·341	C	393	2000	1769	249	1267	2006
	12·480	G	344	1684	2446	284	1397	2587
	13·342	C	205	1269	1855	214	1379	2244
	14·396	C	74	537	1631	119	928	1984
	15·369	C	36	264	1379	100	739	2192
	16·478	G	212	1175	1840	356	1919	2041
	17·669	G	429	2505	2319	387	2348	2623
	18·534	G	509	3224	1198	366	2304	1155
	19·524	G	771	3830	1332	455	2280	1334
	20·408	G	851	4508	986	452	2405	1182
	21·418	G	1056	5582	1397	540	2851	1616

TOTAL AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

Greenwich Civil Time.		Place.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1920	d							
March	22·380	G	1024	5574	1521	528	2864	1534
	23·383	G	1148	5960	1342	637	3291	1352
	24·355	C	765	4733	1263	519	3194	1734
	25·379	C	524	3701	1565	431	2992	1728
	26·380	G	439	2521	2263	472	2730	2271
	27·347	C	163	1180	1916	279	2126	2834
	28·375	C	84	537	1021	71	446	1533
	29·350	C	77	385	1112	74	537	1761
	30·377	C	93	354	1581	55	203	1986
	31·392	G	48	323	1840	26	185	1842
April	1·347	C	66	357	1551	41	224	1550
	2·381	C	48	296	1267	36	221	1249
	3·353	C	33	227	986	33	224	1041
	4·371	C	18	139	654	32	222	936
	5·607	G	5	32	292	3	17	227
	6·497	C	4	17	441	2	15	598
	7·367	G	6	44	612	3	30	646
	8·349	C	5	65	1717	3	36	1620
	9·401	C	0	27	961	0	25	1157
	10·405	G	12	94	1089	73	573	1301
	11·399	C	86	456	1267	144	764	1640
	12·357	C	126	698	1635	125	692	2063
	13·562	G	204	1057	2132	147	782	2118
	14·347	G	230	1127	1421	145	714	1351
	15·341	C	234	1121	1289	127	610	1147
	16·383	G	228	1128	486	117	574	520
	17·331	C	206	1075	579	103	539	720
	18·359	C	190	968	623	101	513	632
	19·242	K	181	837	203	105	485	242
	20·353	G	145	678	650	103	481	612
	21·577	G	101	432	1065	105	447	988
	22·359	G	76	357	1321	119	553	1405
	23·358	C	17	71	907	73	289	1183
	24·337	C	0	0	566	0	0	875
	25·380	C	7	40	389	24	137	690
	26·346	C	15	91	846	18	114	1179
	27·481	C	19	142	1132	16	120	1142
	28·359	C	38	216	1397	26	142	1690
	29·398	G	53	261	958	30	151	859
	30·413	G	49	255	964	27	141	910
May	1·357	C	57	297	538	34	170	732
	2·429	C	52	253	572	29	146	786
	3·393	C	53	298	777	50	249	1198
	4·419	G	90	415	1366	82	420	1517
	5·345	G	92	476	1125	78	409	1017
	6·344	C	67	403	743	50	310	802
	7·350	G	85	393	555	56	340	638
	8·346	C	88	534	1113	50	311	1489
	9·121	K	146	637	1261	85	357	1471
	10·354	G	94	529	1366	58	317	1463

Greenwich Civil Time.		Place.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1920	d							
May	11·373	G	73	326	690	49	207	697
	12·383	G	70	270	880	45	180	734
	13·437	G	56	265	1024	38	197	916
	14·353	C	47	239	762	44	225	1049
	15·354	G	38	206	540	72	429	1046
	16·532	C	3	15	222	2	8	447
	17·335	C	8	62	1068	10	78	1229
	18·461	G	21	116	1980	24	131	1915
	19·345	G	39	145	1734	35	131	1741
	20·351	C	16	41	1150	11	31	1587
	21·385	G	13	21	368	7	12	518
	22·357	G	48	239	440	69	447	781
	23·376	G	45	332	1177	43	350	1573
	24·292	G	65	311	1373	48	234	1401
	25·354	G	92	401	1283	56	246	1195
	26·564	G	189	766	738	105	439	770
	27·558	G	151	870	906	91	509	1107
	28·356	C	126	811	569	79	461	613
	29·336	C	155	920	507	101	552	671
	30·469	G	160	845	855	128	674	1218
	31·348	G	153	775	1623	147	774	1920
June	1·372	C	124	728	1582	112	748	1640
	2·354	G	183	884	1899	131	737	2008
	3·508	G	215	975	469	122	557	575
	4·501	G	192	921	1498	102	514	1531
	5·355	C	156	851	1481	85	460	1639
	6·447	C	145	719	1637	95	447	2017
	7·361	G	124	628	654	77	389	688
	8·350	G	159	773	1102	118	576	801
	9·377	G	193	883	999	154	723	971
	10·643	G	156	768	848	155	759	963
	11·672	G	110	576	525	57	311	740
	12·535	C	173	859	525	94	458	657
	13·431	C	146	934	734	79	506	700
	14·453	C	121	638	956	71	380	1003
	15·590	G	88	532	1077	74	453	1378
	16·380	G	77	419	1688	72	406	1931
	17·417	G	68	385	1783	92	525	1924
	18·345	G	58	345	1130	64	465	1477
	19·487	G	71	367	1406	49	253	1443
	20·518	C	73	414	1117	42	237	1228
	21·345	G	93	399	637	76	372	767
	22·355	G	87	520	965	85	575	1388
	23·349	G	118	596	1174	93	491	1187
	24·400	G	176	646	1031	113	421	888
	25·357	G	174	754	528	102	788	482
	26·348	C	157	776	847	135	673	1326
	27·384	C	160	777	1594	116	582	1628
	28·478	G	193	919	1973	147	703	2003
	29·337	C	250	1033	1373	174	752	1831
	30·359	G	297	1378	1157	199	914	1232

TOTAL AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

Greenwich Civil Time.		Place.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1920	d							
July	1·352	C	310	1409	1347	185	842	1639
	2·350	G	339	1482	1055	184	818	1250
	3·446	C	337	1513	1089	180	811	1447
	4·423	G	352	1781	606	199	1004	1004
	5·349	C	264	1374	749	165	855	721
	6·619	G	191	1021	1010	147	797	893
	7·362	C	131	871	904	123	842	934
	8·370	G	82	504	1180	145	890	1473
	9·366	G	51	314	783	66	460	1073
	10·348	C	41	178	553	67	300	717
	11·428	G	56	151	1032	32	87	1107
	12·359	C	43	181	639	26	109	884
	13·344	G	19	137	870	14	98	818
	14·360	C	13	107	696	13	75	831
	15·605	G	7	32	653	17	77	996
	16·365	G	6	31	868	8	39	1129
	17·379	G	26	150	658	37	255	909
	18·439	G	61	241	1265	59	249	1363
	19·347	G	61	276	1094	48	222	1315
	20·353	C	71	343	752	44	220	904
	21·368	C	53	302	356	30	173	364
	22·421	G	53	252	551	27	129	624
	23·467	G	71	364	465	63	294	493
	24·381	G	82	427	937	57	296	853
	25·338	G	89	538	1305	75	468	1321
	26·500	G	105	544	982	86	438	1018
	27·462	C	121	606	1230	87	445	1323
	28·357	C	105	600	1452	82	456	1696
	29·389	G	97	515	1292	74	400	1433
	30·351	C	78	451	1077	41	243	1438
	31·505	G	74	409	1057	41	229	1083
August	1·494	G	65	342	865	41	215	853
	2·342	C	64	293	1210	48	217	1161
	3·346	G	41	280	1167	47	320	119
	4·379	G	16	114	599	16	111	722
	5·403	G	5	20	672	8	33	753
	6·676	G	18	40	266	15	33	341
	7·359	G	5	26	639	4	32	726
	8·422	G	0	6	446	0	8	581
	9·443	C	2	20	778	5	52	1111
	10·382	C	9	83	703	13	117	823
	11·436	G	31	110	1113	27	98	1215
	12·584	G	42	269	537	60	398	1008
	13·394	G	66	358	866	78	447	1254
	14·364	G	100	535	1334	82	451	1402
	15·451	G	123	666	1097	81	423	1012
	16·343	G	140	643	643	83	382	601
	17·192	D	112	522	277	63	301	244
	18·350	G	107	432	90	59	243	159
	19·412	G	68	377	687	39	221	648
	20·382	G	57	285	721	36	183	711
	21·351	G	35	211	747	26	161	809
	22·503	G	37	223	1429	48	276	1509
1920	d							
August	23·595	G	21	177	962	31	240	1223
	24·638	G	22	66	1019	15	44	1098
	25·448	C	16	64	697	9	37	851
	26·352	G	25	54	476	13	29	564
	27·356	G	15	28	359	8	14	521
	28·605	G	0	15	745	0	8	764
	29·441	C	19	66	754	21	75	871
	30·352	G	59	213	505	48	168	504
	31·342	C	106	543	250	69	356	215
September	1·347	C	147	1085	344	85	629	400
	2·323	C	405	2113	361	221	1149	476
	3·665	G	496	2699	201	272	1472	228
	4·339	C	375	2501	100	216	1433	145
	5·586	G	393	2372	316	270	1607	326
	6·558	G	266	1989	1183	232	1720	1165
	7·640	G	167	1334	865	231	1824	1094
	8·381	G	118	797	826	349	2025	1458
	9·348	G	28	153	656	52	329	1111
	10·350	G	56	237	654	39	167	829
	11·346	G	83	380	1052	49	221	1003
	12·355	G	90	507	377	48	273	346
	13·359	G	155	650	89	88	366	94
	14·456	G	211	978	578	152	709	704
	15·101	K	157	880	830	137	799	895
	16·599	G	53	356	772	164	1139	1102
	17·355	C	13	64	696	56	275	1189
	18·366	C	0	0	595	0	0	667
	19·358	G	0	0	1266	0	0	1148
	20·362	G	0	0	592	0	0	682
	21·337	C	10	47	861	34	149	1294
	22·563	G	46	299	746	116	756	1439
	23·413	G	113	661	1298	154	908	1754
	24·340	C	190	1061	1689	191	1045	1997
	25·388	C	272	1456	1400	198	1057	1577
	26·360	G	419	1959	1386	258	1202	1356
	27·596	G	388	2019	637	221	1144	645
	28·474	G	387	1881	666	228	1111	683
	29·364	G	308	1637	435	189	1042	447
	30·422	G	315	1334	567	222	998	760
October	1·332	C	180	1006	499	125	659	931
	2·355	G	183	888	1772	140	667	1717
	3·379	C	120	694	2020	110	631	2073
	4·425	C	118	553	1987	142	655	2446
	5·371	G	155	815	1157	146	802	1535
	6·312	C	158	864	689	111	607	1370
	7·440	G	200	1250	571	194	1257	858
	8·496	G	311	1640	1107	232	1278	1211
	9·443	G	306	1460	646	193	957	585
	10·344	C	248	1419	529	145	844	398

TOTAL AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1920.

Greenwich Civil Time.	Place.	Projected Area.			Area Corrected for Foreshortening.		
		Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1920 d							
October 11·404	G	339	1689	487	183	929	488
12·385	G	307	1524	815	168	836	919
13·424	G	202	1169	676	116	673	667
14·436	G	149	796	345	95	510	337
15·369	G	160	775	855	123	638	1102
16·341	C	170	828	1699	129	684	1767
17·109	K	169	953	1741	117	664	1767
18·402	G	125	591	1320	71	354	2039
19·398	G	117	470	797	83	384	1313
20·419	G	72	284	1475	67	251	1766
21·522	G	137	509	2740	138	541	3214
22·341	C	92	435	3072	87	473	3637
23·469	G	188	673	1615	121	426	1423
24·472	G	285	956	613	164	540	519
25·416	G	227	863	212	124	472	170
26·423	G	147	601	244	82	332	285
27·482	G	143	654	429	87	394	478
28·461	G	100	577	1137	68	407	1118
29·404	G	73	344	2085	61	305	2144
30·348	C	42	234	2177	81	409	2461
31·360	C	68	290	2253	126	566	2529
November 1·346	C	187	927	2050	187	939	2678
2·453	G	334	1722	841	237	1246	1296
3·340	C	316	1945	1125	191	1194	1461
4·524	G	398	2055	1177	214	1110	1216
5·348	C	368	2064	730	190	1067	805
6·334	C	382	2346	762	199	1222	796
7·347	C	327	2060	825	183	1150	981
8·455	G	284	1263	914	184	832	1117
9·095	K	212	1135	1411	159	873	1310
10·598	G	70	484	1001	101	707	1236
11·339	C	40	281	1349	99	717	1951
12·420	G	11	64	1140	7	41	1544
13·338	C	30	121	1311	24	96	1378
14·400	C	32	196	1302	60	370	1781
15·340	C	50	221	1011	90	391	1707
16·411	G	67	268	1222	58	238	1463
17·450	G	47	285	1236	33	201	1358
18·513	C	46	257	1996	27	152	2435
19·470	G	47	285	1104	25	154	1220
20·344	C	45	267	714	23	140	696
1920 d							
November 21·550	G	41	232	680	22	123	630
22·449	G	42	222	252	48	244	492
23·464	G	79	378	572	102	522	950
24·510	G	146	612	1295	133	580	1362
25·421	G	115	609	1295	95	507	1293
26·449	G	160	682	1087	196	789	1449
27·309	C	170	852	1728	146	802	2222
28·343	C	172	933	1950	121	651	2312
29·393	G	192	914	1182	116	559	1233
30·458	G	136	853	991	78	485	1291
December 1·451	G	125	697	562	68	384	671
2·372	C	148	592	1102	78	316	1064
3·304	C	140	659	827	78	361	901
4·306	C	95	531	843	59	322	1056
5·352	C	88	387	727	74	326	971
6·313	C	74	279	641	62	234	692
7·313	C	39	221	817	56	341	973
8·345	C	39	174	1134	79	351	1723
9·350	C	22	163	1477	21	156	1666
10·393	C	39	192	1157	28	136	1041
11·318	C	51	193	377	30	114	510
12·307	C	25	183	637	25	170	929
13·340	C	51	202	995	35	156	1319
14·330	C	40	150	1524	31	120	1748
15·545	C	19	67	1551	11	43	1466
16·307	C	4	17	1076	2	10	1167
17·354	C	39	143	760	48	171	758
18·115	K	66	322	799	59	282	776
19·119	K	126	600	530	81	382	673
20·375	C	214	1079	379	156	904	644
21·440	C	158	1060	1061	118	891	1350
22·479	G	142	801	1342	117	694	1250
23·312	C	147	759	1277	112	599	1432
24·370	C	193	724	874	134	508	1412
25·338	C	153	824	1704	94	510	1973
26·465	G	258	1261	1113	194	924	1096
27·452	G	267	1506	1230	176	985	1255
28·351	C	300	1890	833	182	1141	1101
29·325	C	258	1445	396	146	815	661
30·443	G	194	920	846	113	550	815
31·312	C	170	887	1013	128	718	1329

MEAN AREAS of SUN SPOTS and FACULÆ for each ROTATION of the SUN, from 1920 January 10 to December 29.

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 1873–1919 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							
887	1920	January	9·86	27	278	1686	1253	192	1166	1434
888		February	6·20	28	151	806	1341	100	542	1544
889		March	4·54	27	384	2156	1444	272	1575	1703
890		,,	31·84	27	84	429	966	67	348	1068
891		April	28·11	27	56	280	968	43	227	1119
892		May	25·33	28	134	692	1080	94	498	1199
893		June	21·53	27	146	699	985	105	537	1154
894		July	18·73	27	56	301	879	44	242	998
895		August	14·95	27	126	736	628	97	575	724
896		September	11·20	27	160	824	934	128	684	1137
897		October	8·48	28	193	942	1224	132	656	1392
898		November	4·78	27	127	688	1097	96	518	1322
899		December	2·09	28	114	587	971	82	427	1129

MEAN AREAS of SUN SPOTS and FACULÆ for the YEAR 1920.

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.
1920	366	156	837	1052	112	618	1219

MEAN HELIOGRAPHIC LATITUDE of SUN SPOTS for each ROTATION of the SUN, from 1920 January 10 to December 29.

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			°		°	°	°
887	1920	January	9·86	27	166	5·63	1001	9·81	− 7·61	9·21
888		February	6·20	28	277	8·74	265	12·54	− 1·66	10·60
889		March	4·54	27	371	10·21	1204	5·91	− 2·11	6·92
890		,,	31·84	27	51	9·07	297	6·34	− 4·06	6·75
891		April	28·11	27	135	12·22	92	7·03	+ 4·43	10·12
892		May	25·33	28	425	12·58	72	8·94	+ 9·46	12·05
893		June	21·53	27	302	13·94	236	14·11	+ 1·63	14·01
894		July	18·73	27	140	12·39	103	15·99	+ 0·35	13·92
895		August	14·95	27	32	12·04	543	14·84	− 13·35	14·69
896		September	11·20	27	284	10·66	400	11·75	− 2·46	11·30
897		October	8·48	28	227	12·12	429	12·84	− 4·20	12·59
898		November	4·78	27	104	14·74	414	9·80	− 4·88	10·79
899		December	2·09	28	222	12·14	205	10·77	+ 1·16	11·48

MEAN HELIOGRAPHIC LATITUDE of SUN SPOTS for the YEAR 1920.

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.		
1920	366	208	° 11·31	410	° 9·98	° − 2·83	° 10·43

(9647)