

# Kodaikanal Observatory.

BULLETIN No. XVII.

## LIST OF PROMINENCES OBSERVED BETWEEN 1908 JULY 1 AND 1908 DECEMBER 31, WITH AN ABSTRACT FOR THE YEAR.

THIS list is a continuation of that published in Bulletin No. XIV. and contains all prominences recorded both visually and photographically during the second half of 1908.

The methods of observation remain exactly the same as before. The visual observations are made chiefly in the C line of hydrogen and the photographs are taken in the K line of calcium.

The following table shows the number of observations made:—

										Days.
Complete visual observations	..	..	..	..	..	..	..	..	..	75
Partial do. do.	..	..	..	..	..	..	..	..	..	69
No do. do.	..	..	..	..	..	..	..	..	..	40
Complete spectrohelograph records	..	..	..	..	..	..	..	..	..	133
Partial do. do.	..	..	..	..	..	..	..	..	..	31
No do. do.	..	..	..	..	..	..	..	..	..	20

The visual observations were made by S. Sitarama Aiyar (S.S.), G. Nagaraja Aiyar (G.N.) & Subramanya Aiyar (A.Y.S.).

Date and observer	Hour L S T		Base.	Latitude.		Limb	Height.	Remarks
				North	South.			
1908	H	M.	°	°	°		"	
July 1.	G.N.	9 6	...	28	..	E	30	Ca.
		6	1.5	25		E	30	Ca.
		6	4	21		E	45	Ca.
		6		12		E	30	Ca.
		6	6		41	W	50	Ca.
		6			30	W	30	Ca.
		6	2		27	W	40	Ca.
								No visual observation.
								Ca photograph 9 <sup>h</sup> 6 <sup>m</sup> . Poor plate. Sky bad.
July 2.	S.S.	9 0	0 5	51		E	25	Not in Ca.
		8 58	1	34		E	10	
		56	5	22.5		E	15, 10	15" at northern end.
		55		9		E	20	
		38	1	7		E	10	Ca. Seen only on photograph taken at 8 <sup>h</sup> 38 <sup>m</sup> .
		53		4		E	20	Faint.
		53	3	1		E	45	Faint. Top 5° broad. Pointed at top and 60 high in Ca.
		52	4		6	E	45	A Ca streamer 5° long flows south.
		49	4.5		17	E	25	A low bank A short faint detached streak floats above it.
		9			24	E	50	Ca. A faint detached streak.
		46			28.5	E	40	Connected in Ca to prominence at lat. — 17° E
		9	2		39	E	60	Ca. Double.
		48			42	E	60	Connected in Ca.

Date and observer.	Hour L.S.T.	Base.	Latitude.		Limb.	Height	Remarks.
			North	South.			
1908.	H. M.	°	°	°		'	
July 2. —contd.	S.S.	..		49	E	45	A very faint detached streak slanting northwards.
	31			76.5	E	10	
	38			54	W	10	Seen only on photograph taken at 8 <sup>h</sup> 38 <sup>m</sup> .
	9 15	9		38.5	W	70	Slants southwards.
	8 9	1.5	3		W	60	Ca.
	8 9	3	46.5		W	30	Ca.
	9 3		87		W	15	Ca photographs 8 <sup>h</sup> 9 <sup>m</sup> and 8 <sup>h</sup> 38 <sup>m</sup> .
July 8.	G.N.	...	61	..	E	20	Ca.
	11 22		10		E	15	
	9 29	1.5		5	E	40	Ca.
	29	1.5		9	E	40	Ca. Joined to the last prominence. Ca streak extends to lat. — 16°
	29			20	E	60	Ca.
	11 19			21	E	60	
	19			24	E	30	± 60" high in Ca
	9 29			48	W	15	Ca.
	11 35			4	W	10	
	35	4	11		W	20	A Ca streak extends to lat. +5°.
	30	3	20		W	40	±
	25		87		E	20	±
							Weather bad for visual observations. Ca photograph, focculus plate, 9 <sup>h</sup> 29 <sup>m</sup> . No prominence plate
July 4.	...		66		E	15	Ca.
	45	6		18	E	30	Ca.
	45			86.5	E	15	Ca.
	45			44	W	20	Ca.
	45			5	W	40	Ca.
	45	4	20		W	30	Ca.
	45		24		W	20	Ca.
							Ca photograph 9 <sup>h</sup> 45 <sup>m</sup> . Very poor. No visual observation.
July 6.	G.N.	..	79.5		E	10	Ca.
	22		60		E	10	Ca.
	22		65		E	15	Ca.
	22	4	44		E	70	Ca. Connected to the limb by two stems.
	22		32		E	35	Ca.
	52		6		E	15	
	50	4		16	E	50	Connected to the limb by two stems
	49	1		23	E	35	Connected to the last by a Ca streak.
	49	1		26	E	20	Connected to the last by two Ca streaks.
	47			43	E	25	
	47			47	E	30	
	45			78.5	E	35	
	22			47	W	45	Ca.
	22			39	W	15	Ca.
	9 5			23	W	25	
	1	2		4	W	15	
	1	5	2		W	100	A number of Ca streaks extend on both sides.
	8 22		15		W	15	Ca.
	22	1	21		W	15	Ca.
	57		28		W	30	
	55		82		W	10	Ca photographs 8 <sup>h</sup> 22 <sup>m</sup> and 8 <sup>h</sup> 14 <sup>m</sup> .
July 7.	G.N.		17		E	20	Ca.
	58			11	E	20	
	54	3.5		27	E	60	±
	55			31	E	10	Ca.
	55			36	E	10	Ca.
	55			43	E	10	Ca.
	52	2		45	E	20	
	55			47	E	10	Ca.
	55			77.5	E	10	Ca.
	56			80.5	E	10	Ca.
	9 7			84.5	E	10	
	8 55			61	W	10	Ca.

Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb.	Height.	Remarks.
			North.	South			
1908.	M. M.	°	°	°		'	
July 7. —contd.	G.N.	.	.	41	W	20	Ca.
		.	.	38	W	15	Ca.
	9 5	.	.	22	W	30	
	4	.	.	14	W	10	
	4	1	.	11	W	30	A Ca streamer extends to lat — 7°.
	3	5	2		W	45 ±	A number of Ca streamers extend on both sides.
	8 55	.	5		W	10	Ca.
	55	.	30		W	20	Ca.
	55	.	67		W	10	Ca.
							Visual observations made in poor weather. Ca photographs 8 <sup>h</sup> 55 <sup>m</sup> and 8 <sup>h</sup> 21 <sup>m</sup> (poor).
July 8.	...	..	42	..	E	30	Ca. Faint.
		..	39	..	E	30	Ca. Faint.
		..	35	..	E	20	Ca.
		..		26	E	15	Ca. Faint.
		..		30	E	15	Ca.
		..		32	E	15	Ca. Faint.
		..					No visual observations. Ca photograph 10 <sup>h</sup> 33 <sup>m</sup> (very poor).
July 9.	G.N.	...	44	..	E	10	Ca.
		...	41	..	E	10	Ca.
		...	21	..	E	10	Ca.
		...	20	..	E	10	Ca.
		...	17	..	E	10	Ca.
		...	16	..	E	10	Ca.
	42	3	6	..	E	30	
	40	3	3	..	E	20	
	33	..		33	E	10	Ca.
	33	..		34	E	10	Ca.
	58	..		37	E	20	
	20	2		77.5	E	30	
	33	2		85.5	E	10	Ca.
	33	2		86	W	10	Ca.
	55	2		29	W	20	
	55	2		25	W	20	
	33	..		18	W	10	Ca.
	50	15	Equator.		W	30, 20	
	48	..	13	..	W	10	
	33	..	17	..	W	10	Ca.
	46	..	22	..	W	15	
	42	..	68.5	..	W	15	
		..					Ca. photograph 8 <sup>h</sup> 33 <sup>m</sup> (poor).
July 10.	...	..	45	...	E	30	Ca. Faint.
		..	42	...	E	40	Ca. Faint.
		..		15	E	15	Ca. Faint.
		..		25	E	15	Ca. Faint.
		..		27	E	10	Ca. Faint.
		..		77.5	E	10	Ca. Faint.
		..		80	E	15	Ca. Faint.
		..		4	W	15	Ca. Very faint.
		..	7	..	W	30	Ca. Very faint.
		..	13	..	W	30	Ca. Bright. Not seen in Ca photograph at 8 <sup>h</sup> 30 <sup>m</sup> . No visual observations. Ca photographs 8 <sup>h</sup> 49 <sup>m</sup> and 8 <sup>h</sup> 30 <sup>m</sup> . Flocculus plates.
July 13.	...	.	...	23	E	15	Ca. Bright.
		.	...	25	E	10	Ca. Bright.
		2	3	..	W	30, 20	Ca. Faint. No visual observations. Ca photograph 8 <sup>h</sup> 58 <sup>m</sup> . Flocculus plate. No prominence plate.
July 14.	..	5	...	26.5	E	60, 15	Ca. A group of streaks tallest at northern end. Prominences not observed visually. Ca photograph (only flocculus plate) 8 <sup>h</sup> 46 <sup>m</sup> .

Date and observer.	Hour I.S.T.	Base.	Latitude		Limb.	Height	Remarks
			North.	South.			
1908.	H. M.	°	°	°		"	
July 15. G.N.	9 11	1	50	...	E	30	Ca
	11		45		E	10	Ca
	11		42		E	10	Ca
	11		39		E	40	Ca A streamer extends to lat. + 34°.
	11		30		E	15	Ca.
	11		6		E	70	Ca.
	2	1	Equator.		E	80	
	11	5		4	E	20	Ca
	8 59	5		12	E	60	
	56			27	E	45	
	55			36	E	15	
	9 11	7		45	E	40	Ca
	11			52	E	40	Ca
	11			57.5	E	10	Ca.
	11			60.5	E	20	Ca
	11			65.5	E	10	Ca
	11	5		81.5	E	15	Ca.
	11			83	W	45	Ca
	15	8		21	W	45, 20	
	12	3		5	W	20	
	10	5	20		W	50, 20	
	10		27		W	25	A Ca streamer proceeds from the top of this to the top of the last prominence
	11		31		W	50	Ca Ca photographs 9h 11m and 9h 2m.
July 16. S.S.	8 22	...	84.5		E	10	Ca
	22	0.5	83.5		E	10	Ca.
	22		76.5		E	10	Ca Faint
	22		52		E	10	Ca
	22	5	46.5		E	10	Ca
	22	0.5	43		E	10	Ca
	22	1	40		E	15	Ca.
	14		34		E	10	Ca. Seen only on photograph taken at 8h 14m.
	47		29		E	10	Ca. Seen only on photograph taken at 8h 47m
	52	12	18		E	70	A group of 4 prominences
	50		7		E	60	} Connected in Ca.
	48		2		E	25	
	22		Equator		E	10	Ca.
	22			6	E	10	Ca
	48	0.5		30	E	10	
	40	1		47	E	10	
	22			50	E	30	Ca.
	39	2		53	E	60	Changing
	22			55.5	E	10	Ca.
	22			58.5	E	10	Ca
	36	1		62.5	E	10	A Ca streak 5° long and 30" high slants northwards from it.
	34	2		72.5	E	10	
	33			77	E	20	
	22			80	E	10	Ca.
	22	0.5		84	W	30	Ca Upper part detached from lower.
	22			60.5	W	10	Ca
	22			57.5	W	10	Ca.
	9 51	2		2.5	W	25	60" in Ca.
	8 22	12	20		W	30	Ca
	9 51		33		W	30	Ca prominence extends 3° further south.
	34		71		W	10	Faint +30° E to south pole observed in poor weather. Ca photographs 8h 22m, 8h 18m, and 8h 47m.
July 17. G.N.	8 33	...	71.5	...	E	10	Ca
	39		68.5		E	15	
	14		54		E	10	Ca
	14	2	22		E	30	Ca.
	14		15		E	30	Ca.
	38		8		E	15	
	36	4		1	E	30	
	14			6	E	50	Ca.
	34			10	E	15	
	14			24	E	20	Ca.
	14			38	E	10	Ca.

Date and observer	Hour I S.T.	Base	Latitude.		Limb.	Height	Remarks.
			North.	South			
1908.	H M.	.	°	°		"	
July 17. -contd.	G.N.	...					
	8 14				E	10	Ca.
	31			35	E	30	
	30			76 5	E	15	
	14			82 5	W	10	Ca.
	14			55 5	W	15	Ca.
	14			54	W	50	Ca. Detached.
	38			47	W	30	Ca.
	14	13		33	W	60, 15	Ca.
	14	11		12	W	40	Ca.
	14	2		1	W	80	Ca.
	14		8		W	10	Ca.
	14	10	20		W	70±, 50	Ca. A small portion of this was seen in hydrogen.
	14		31		W	10	Ca.
	14	6	36		W	40	Ca.
							Poor weather.
							Ca photographs 8h 14m, 8h 33m, and 9h 27m
July 21.	..	1	31	..	E	15	Ca.
	9 16		0		E	20	Ca.
	16			25	E	30	Ca.
							No visual observations
							Ca photograph (focculus plate) 9h 16m (poor).
July 22.	S.S.	1	81.5	.	E	10	Ca.
	11 12		77		E	10	Ca.
	12		46		E	60	Ca. Main part detached from limb.
	12	0.5	31		E	20	Ca. Bright.
	32	0.5	28		E	20	Faint in Ca.
	12	2	19		E	10	Ca.
	21	1	7.5		E	25	
	21	1		0.5	E	10	Not in Ca.
	20	4		21	E	20	Top 9° broad
	12	0.5		79.5	W	15	Ca.
	12	13		71	W	60	Ca.
	12	1		01.5	W	15	Ca.
	12	0.5		82.5	W	10	Ca.
	12	0.5		50.5	W	15	Ca.
	12			42.5	W	60	Ca. An irregular streak.
	12	4		34.5	W	45	Ca. Three vertical streaks crossed by a horizontal one 8° long.
							Prominences were visually observed only between +80°E and -84°E
							Ca photograph 11h 12m (incomplete.)
July 24.	S.S.	2	34	.	E	20	Ca.
	8 22	1	25.5		E	15	Ca. Surmounted by a streak 4° long.
	10 53	2	7		E	25	
	8 22			1	E	30	Ca.
	10 46	1		6.5	E	10	
	8 43	0.5		83.5	E	10	
	22	0.5		83	W	30	Ca.
	22			81.5	W	15	Ca.
	22	1		59.5	W	80	Ca.
	22	1.5		20	W	40	Ca. Slants as far as lat. -81°W
							Visual observation +10°E to south pole only; seeing poor
							Ca photograph (focculus) 8h 22m
July 25.	G.N.	3	32	...	E	30	
	0 18	2	25		E	30	Only 15° in Ca.
	47		7		E	10	Ca.
	12			1	E	20	
	47			22	E	10	Ca.
	10	2		26	E	40	
	8			40	E	15	
	47			63.5	W	30	Ca.
	47			61.5	W	40	Ca.
	47	3		58.5	W	60	Ca.
	47			56.5	W	30	Ca.

Date and observer	Hour I.M.T.	Base	Latitude.		Limb	Height.	Remarks.
			North.	South.			
1908.	H. M.	°	°	°		"	
July 25. —contd	G.N.	12		32	W	45	Ca.
				12	W	10	Ca.
				10	W	10	Ca.
			2		W	15	Ca.
	9 47	4	21		W	15	Ca.
	47	4	36		W	40	Ca.
							Only part of the limb observed visually. Ca photographs, focculus plate, 9 <sup>h</sup> 47 <sup>m</sup> (good), prominence plate 10 <sup>h</sup> 18 <sup>m</sup> (poor)
July 26.	S.S.	2		1	E	30	} Connected in Ca
		2		4	E	45	
		2		12.5	E	10	
		0.5		17	E	20	
		2		29	E	10	
		10		56.5	W	40, 50, 100	Ca. A group of three prominences.
		15		35.5	W	30	Ca.
				26	W	15	Ca.
				23	W	10	Ca.
		15		12.5	W	70, 150	Ca. General height 70". One streak reaches 150".
		3		1.5	W	15	Ca.
			1		W	45	Ca. Slants northwards.
			7		W	20	Ca.
			12		W	10	Ca.
		1	15		W	15	Ca. Bright
			16		W	30	Ca. Detached.
		5	20.5		W	45	Ca.
		0.5	30		W	10	Ca.
		6	35		W	70	Ca. Narrow at top. Only the south-east limb was examined visually. Ca photographs 10 <sup>h</sup> 18 <sup>m</sup> , 10 <sup>h</sup> 10 <sup>m</sup> , and 10 <sup>h</sup> 12 <sup>m</sup> . Focculus plates.
July 28.		0.5	32		E	10	Ca.
			30		E	10	Ca.
		0.5	28		E	15	Ca.
		1		26	E	40	Ca.
		1		31.5	W	40	Ca.
		1.5		26	W	40	Ca.
		1.5	2		W	20	Ca.
							Prominences not observed visually Ca photographs (focculus) 8 <sup>h</sup> 50 <sup>m</sup> and 8 <sup>h</sup> 21 <sup>m</sup> .
July 29.	G.N.	1	31	...	E	10	Ca.
			29		E	30	Ca.
			15		E	10	Ca.
			6		E	10	
				15	E	15	
				28	E	10	
				45.5	E	10	Ca.
				54.5	W	70	Ca.
		2		28	W	40	
		2		27	W	50	
		2		23	W	30	Ca.
	9 48	6		14	W	20, 45	
	10 17			8	W	10	Ca.
		13	10		W	45	Ca.
		3	37		W	40	Ca.
		4	43		W	40	Ca.
		7	54.5		W	45	Ca.
							Ca photographs 10 <sup>h</sup> 17 <sup>m</sup> and 9 <sup>h</sup> 21 <sup>m</sup> .
July 30.		3	10.5		E	45	Ca. An arch. Prominences not observed visually. Ca photograph (very poor) 8 <sup>h</sup> 41 <sup>m</sup> (focculus).

Date and observer	Hour I. S. T	Base.	Latitude.		Limb	Height	Remarks
			North.	South.			
1908.	h m	°	°	"		"	
July 31. G.N.	8 47		77.5	..	E	10	Ca.
	47		70		E	10	Ca.
	47		28		E	30	Ca.
	8 47		22		E	10	Ca.
	9 0	7	10		E	75	See Note
	8 47			11	E	60	Ca. Very faint. A detached cloud overhanging about 1" of limb.
	47	3		16	E	10	Ca.
	50	7		30	E	30	Four prominences joined together.
	9 30		66.5		E	20	
	28	3		38	W	30, 45	Faint.
	27			7	W	30	
	25	9	5		W	30	
	23	2	12		W	40	
	23		17		W	30	
	8 47	6	25		W	30	Ca.
	47		45.5		W	40	Ca.
	9 16	10	56.5		W	60, 45	
							Ca photographs 8h 0m (focculus), 8h 47m, 8h 57m, 9h 7m, 9h 25m, and 9h 34m
August 3. S.S.	10 56	1	47.5	..	E	10	
	56	3	45		E	15	
	53	4	38		E	30	
	9 47			12	E	10	Ca.
	10 20	1		20	E	10	
	24	0.5		50.5	E	25	
	44	3		60	E	25	
	9 47	15		10.5	W	40	Ca.
	8 51		41.5		W	15	Ca.
	9 47	1	67		W	40	Ca.
							Western half not observed visually. Ca photographs 9h 47m (poor), 8h 51m (focculus).
August 4. ..	15 24	3	42.5	...	E	30	Ca.
	24	2	38.5		E	30	Ca.
	9 57	6		27	W	20	Ca.
	15 24	6	29		W	15	Ca.
							Cloudy. No visual observations. Ca photographs (focculus) 9h 57m and 15h 24m.
August 5. S.S.	11 10	.	68	.	E	10	Ca.
	10		67		E	10	Ca.
	10		61.5		E	15	Ca.
	10		59.5		E	10	Ca.
	11		49.5		E	20	
	10	3	45		E	35	
	10	2	46.5		E	10	Ca.
	10	2	38		E	15	Ca.
	9		26		E	10	
	10		21		E	20	Ca.
	4		19		E	20	
	10	1.5	10		E	10	Ca.
	10 51			9	E	10	
	50			22	E	10	
	47	1		35	E	20	
	45	8		52.5	E	185	A streamer about 110° long flows northwards from top.
	11 26			16	W	10	
	23			4	W	10	
	10	3	10		W	25	Ca.
	10	3	20		W	15	Ca.
	20	3.5	34		W	30	
	18		52.5		W	10	
							Cloudy with breaks. Ca photographs 11h 10m, 11h 17m, and 11h 25m.
August 8. ...	8 21	1	83	..	E	20	Ca. Arched.
	21		78		E	15	Ca.

Date and observer.	Hour L.S.T.	Base.	Latitude		Limb.	Height	Remarks.
			North.	South.			
1908.	H. M.	°	'	°		'	
August 8 —contd.	8 21	.	74.5	...	E	15	Ca.
	21	2	51.5		E	20	Ca
	21		41.5		E	15	Ca
	21		39.5		E	10	Ca.
	21		37.5		E	15	Ca
	21	4	33		E	20	Ca Arohed
	21	4		31	E	15	Ca
	21	...		68.5	W	10	Ca.
	21	8		13	W	15	Ca.
	21	5		3	W	30	Ca
	21	16			W	45,30,15	Ca.
			28				Ca photograph 8h 21m. No visual observations.
August 9.	S.S.						
	9 46	3	51	.	E	35	
	45	3	37		E	20	
	33	1.5		33	E	30	
	10 13	9		53	E	30	A group of four prominences connected to one another.
	10	0.5		60.5	E	20	
	8 24	1		82.5	W	10	Ca.
	10 3	3		10.5	W	20	
	8 24	1		3	W	10	Ca
	24	1		1	W	10	Ca.
	10 1	1.5	3		W	25	Not in Ca.
	0	0.5	7		W	25	} Connected in Ca.
	9 59	2	13		W	20	
	8 24		26		W	10	Ca
	24	1.5	30		W	15	Ca.
	9 55	3	35		W	60	
							Cloudy with breaks. Ca photographs (poor) 8h 24m and 9h 35m.
August 10.	G.N.						
	8 39	.	83.5	.	E	10	Ca.
	57	3	49.5		E	45	
	39		34.5		E	15	Ca.
	39		34		E	10	Ca
	39		29		E	15	Ca.
	42	14		2	E	20	
	39			18	E	30	Ca
	40	2		21	E	50	
	39	6		39.5	E	10, 60	Ca.
	39			48.5	E	10	Ca.
	39			49.5	E	10	Ca
	35	10		58.5	E	60	
	39			66	W	30	Ca.
	39			61.5	W	20	Ca
	39			41.5	W	10	Ca
	39			37.5	W	10	Ca
	39	18		25	W	50, 15	Ca
	39	15		2	W	45	Ca
	9 5	17	15		W	45	
	8 39		82		W	10	Ca
							Ca photographs 8h 39m and 8h 10m.
August 11.	S.S.						
	9 14	.	73	.	E	15	Ca.
	14	0.5	49.5		E	15	Ca. Two short streaks.
	8 49	1.5	40.5		E	30	Faunt.
	9 14	3	24.5		E	10	Ca.
	14		8		E	15	Ca.
	14	2	4		E	15	Ca
	8 38	5		3.5	E	15	Faunt.
	35	1		15	E	20	
	33	25		24	E	50	Two short Ca streaks proceed southwards from th..
	9 14			38	E	15	Ca. A streak 5° long parallel to limb.
	8 28	13		53	E	30	
	9 24	2		48.5	W	20	
	14			30	W	60	Ca A streak 6° long parallel to limb.
	21			25	W	15	A streak about 8° long parallel to limb. In Ca it is attached to the limb and 60'' high.



Date and observer	Hour L.S.T.	Base.	Latitude		Limb.	Height.	Remarks.
			North.	South.			
1908	h m.	°	°	°		"	
August 11.	S.S.	1.5	.	18	W	20	<i>See Note.</i> } Connected at base in Ca. Broad at top. Ca. A group of four prominences connected to one another. Visual observations through thin cirrus. Ca photographs 9 <sup>h</sup> 14 <sup>m</sup> and 9 <sup>h</sup> 23 <sup>m</sup> .
<i>-contd.</i>		4		16	W	10	
		1		9	W	45	
		2	7	2	W	30	
		18	23.5		W	40	
August 12.	G.N.	5	57.5		E	15	Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca.
		2	50.5		E	20	
		3	44.5		E	20	
		2	24		E	15	
		2		5	E	15	
		1		10	E	20	
		5		18	E	60	
		6		30	E	30 ±	
		11	47.5		E	10, 40 ±	
		5	59.5		E	40 ±, 50 ±	
		9		19	W	15, 15, 25	
		17		1	W	20, 40	
		7	33		W	75	
August 13.	S.S.	4	53.5		E	45	Ca. Only seen in photograph at 9 <sup>h</sup> 3 <sup>m</sup> .  } Connected in Ca. Detached. Surmounted by a Ca streak 11° long. Ca } Ca } Seen only at 7 <sup>h</sup> 59 <sup>m</sup> . Ca } Metallic. D <sub>1</sub> , D <sub>2</sub> , b <sub>1</sub> , b <sub>2</sub> , b <sub>3</sub> , b <sub>4</sub> bright. Ca. Big, loop-like. Eruptive. Gone by 8 <sup>h</sup> 23 <sup>m</sup> . <i>See Note</i> 50, 60, 80 Detached. Ca. Ca. Ca. Ca. Double. } In Ca they form a connected group extending } from lat. -9° to -23° and 45" high. Ca. Slants as far as lat. -8°W. At 9 <sup>h</sup> 3 <sup>m</sup> , it met limb again at lat. -12°W. Changing Detached. C slightly displaced to red. } Connected in Ca. Detached } Ca photographs 10 <sup>h</sup> 43 <sup>m</sup> , 7 <sup>h</sup> 59 <sup>m</sup> , 8 <sup>h</sup> 39 <sup>m</sup> , 9 <sup>h</sup> 3 <sup>m</sup> , 9 <sup>h</sup> 34 <sup>m</sup> , 9 <sup>h</sup> 55 <sup>m</sup> , 10 <sup>h</sup> 19 <sup>m</sup> , and 11 <sup>h</sup> 15 <sup>m</sup> .
		0.5	49.5		E	20	
		1	44.5		E	30	
		4	26		E	25	
		0.5	21.5		E	Low.	
		1	17.5		E	25	
		8	10		E	20	
		58	2		E	10	
		55		5	E	20	
		54		11.5	E	10	
		7	14		E	10	
		59	15		E	10	
		59	17		E	10	
		50	17.5		E	20	
		7	28		E	210	
		8	48.5		E	50, 60, 80	
		28	80.5		E	10	
		10	78		W	10	
		33	77.5		W	10	
		48	84.5		W	30	
		9	50		W	15	
		30	52		W	15	
		10	51		W	15	
		9	23		W	10	
		26	12.5		W	20	
		10	Equator.		W	30	
		43	5		W	90	
		9	18.5		W	10	
		45	23.5		W	25	
		20	26.5		W	25	
		17	35.5		W	60	
August 14.	G.N.	.	54.5		E	30	Ca Ca. Ca. Ca. Ca. Ca. Ca. Ca.
			58.5		E	30	
			18		E	30	
				19	E	20	
				26	E	15	
		18	48.5		E	20, 30.	
				49.5	E	60, 75.	
				65	E	60	
				66	W	10	

Date and observer	Hour I.S.T.	Base.	Latitude		Limb	Height	Remarks.
			North	South			
1908	H M.	°	°	°		"	
August 14. —contd	G.N.						
	9 28	.		68	W	10	Ca.
	10 1			35.5	W	30	
	1			33	W	20	
	9 36	18		16	W	10, 20, 45	
	36	2		9	W	20	
	10 14	9	5		W	30	
	9 28	2	26		W	40	
	28	5	36.5		W	70	Ca. Visual observations through clouds. Ca photographs 9 <sup>h</sup> 28 <sup>m</sup> and 8 <sup>h</sup> 55 <sup>m</sup> . (Poor)
August 15.	S.S.						
	9 18	1	76	..	E	20	Not in Ca.
	8 26		74.5		E	10	Ca.
	26		73.5		E	10	Ca.
	9 6		67		E	15	Ca. Seen only at 9 <sup>h</sup> 6 <sup>m</sup> .
	58		53.5		E	60	In Ca there are several faint connected streaks between lat. + 49° and + 54°.
	8 58	1	8		E	15	} Connected in Ca.
	55	8		4	E	50	
	9 55	1		12	E	10	} Faint
	8 50	1		23.5	E	10	
	9 45			42.5	E	10	Slants south
	40	15		57	E	70	A group of prominences, faint in hydrogen.
	8 26			69	E	10	Ca.
	9 31	2		44.5	W	10	Ca.
	30	1		34	W	45	Upper part faint. 20" high in Ca.
	29	2		25	W	10	Faint.
	27	3		18	W	30	} Ca prominence extends to Lat.—10°W.
	24			14	W	15	
	8 26	2		1	W	15	Ca.
	10 18		33.5		W	20	} In Ca they form a single group extending from lat + 27° to + 42° and 75" high at the tallest place
	5	2	37.5		W	25	
	9 18		46.5		W	30	Very faint. Seen in Ca photograph only at 9 <sup>h</sup> 6 <sup>m</sup> . Visual observations through cirrus. Ca photographs 8 <sup>h</sup> 26 <sup>m</sup> and 8 <sup>h</sup> 6 <sup>m</sup>
August 16.	S.S.						
	8 56	5	34		E	40	Ca.
	52		27		E	30	Ca.
	52	4	15		E	40	Ca.
	44	6		4	E	25	} Connected in Ca.
	41	2		16	E	25	
	52	2		25	E	15	Ca.
	33	4		60.5	E	60	} Detached. } Connected in Ca.
	32			65.5	E	10	
	30			72.5	E	40	
	9 24			67	W	10	Faint.
	22	1		48.5	W	20	
	22	1		45.5	W	10	
	19	4		35.5	W	40	Faint A Ca streamer flows as far as lat.—45°W.
	8 52			30.5	W	30	Ca.
	9 18	10		21	W	30	} Nearly connected by a Ca streak.
	8 52	5		7.5	W	10	
	52		P		W	10	Ca.
	9 11	4	32.5		W	20	
	9	5	41		W	50	
	6	1	55.5		W	20	
	5	1	61		W	10	
	4	2	67		W	10	
							Ca photographs 8 <sup>h</sup> 52 <sup>m</sup> (8 <sup>h</sup> 11 <sup>m</sup> ).
August 17.	G.N.						
	9 44	2	45.5		E	10	Ca.
	44	2	37.5		E	20	Ca.
	44	5	81.5		E	45	Ca.
	32	7		14	E	50	} ±
	30	2		21	E	20	
	0	3		26	E	30	
	44			55.5	E	40	Ca.



Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb.	Height.	Remarks							
			North.	South										
1908.	H M.	.	°	'		"								
August 20 <i>—contd</i>	G.N.				41.5	E	15	Shows displacement to violet for about 1.5 Å. Ca. A detached dot Ca. Only a portion of this is seen in H at 9 <sup>h</sup> 55 <sup>m</sup> .  <i>See Note</i> In Ca a streamer extends from top of this to lat. +5°.  Ca photograph 8 <sup>h</sup> 27 <sup>m</sup> . (Fair.)						
					62	E	10							
					59.5	W	15							
					49.5	W	60							
					41.5	W	20							
					30.5	W	80							
					24	W	30							
					18	W	30							
					5	W	15							
					Equator.	W	20							
					11	W	15							
					14	W	30							
					45.5	W	50 ±							
					79.5	W	15							
					August 21	S S			20		3.5	E	45	Surmounted by a streak about 4° long.  At 11 <sup>h</sup> 35 <sup>m</sup> there was a detached streak near its top 30' high Ca.  3° broad at top  Narrow at top Slants northwards. Visual observations through thick cirrus. Ca photographs 9 <sup>h</sup> 29 <sup>m</sup> . (Poor.)
15.5	E	25												
45.5	E	20												
52.5	E	10												
55.5	W	25												
42.5	W	15												
29	W	75												
19	W	10												
2	W	15												
47	W	60												
August 22.	S.S.							12			E	25	Ca. Detached, slants southwards. Faint Faint, slants southwards. 65'' in Ca at 8 <sup>h</sup> 6 <sup>m</sup> and 80'' at 8 <sup>h</sup> 58 <sup>m</sup> . Faint. Ca Faint  Ca. Faint. Faint. Ca. Ca. Ca.  Faint. Broader at top  Faint. Ca <i>See Note</i>  Double Faint. Ca photographs 8 <sup>h</sup> 6 <sup>m</sup> and 8 <sup>h</sup> 58 <sup>m</sup> .	
								8			E	30		
					43	E	20							
					41	E	65							
					30	E	30							
					8	E	20							
					38	E	20							
					37	E	15							
					6	E	15							
					38	E	10							
					0 37	E	10							
					37	E	10							
					8 6	W	10							
					6	W	10							
					6	W	10							
					9 33	W	20							
					31	W	35							
					30	W	10							
					29	W	20							
					22	W	30							
					20	W	15							
					19	W	10							
					8 6	W	10							
					9 16	W	10							
14	W	15												
10	W	60												
5	W	10												
August 23	G.N.				83	E	50	Ca.						
					40	E	25							
					24	E	50							
					12	E	50							
					3	E	30							
					4	E	60							
					15	E	15							
21	E	15												

Date and observer	Hour J S T.	Base.	Latitude.		Limb	Height.	Remarks.	
			North	South				
1908	H. M.	°	°	°		"		
August 23 —cont'd	G N				25	E	20	
					30	E	35	
					0 0	W	45	
					8 50	W	25	
					8 6	W	35	Ca
					8 48	W	25	
					9 6	W	50	Ca.
8 47	W	25						
18	W	60						
42	W	15						
Ca photographs 9h 6m and 8h 8m.								
August 24.	S.S.				21	E	10	
					13	E	80 ±	See Note 1
					8 5	E	30	Detached Not detached in Ca
					3	E	25	See Note 2.
						E	15	
						E	10	
						E	10	Ca. } A Ca streak 50" high floats over these.
						E	10	Ca. }
						W	10	Faint
					10 27	W	10	
					27	W	40	
					8 12	W	35	Ca.
					10 22	W	15	
					20	W	20	Slants northwards. } Tops connected by a Ca
					15	W	30	streak
					12	W	25	
					10	W	10	
9 20	W	90	Almost detached from limb					
18	W	30						
Ca photographs 8h 12m, 8h 56m, and 10h 4m.								
August 25.	G.N.				69	E	10	Ca.
					68	E	10	Ca
					62	E	20	
					9 10	E	15	Ca.
					8 40	E	20	Ca.
					56	E	30	
					40	E	30	Ca Detached.
					40	E	10	Ca.
					40	E	60, 80	Ca. In hydrogen only a bright jet 30" high was seen at lat. + 7° E.
					40	E	15	Ca
					40	E	40	Ca Detached
					40	E	30	Ca. A detached streak
					40	E	80	Ca. In hydrogen streamers were 90" and 100" high.
					40	W	30	Ca
					40	W	45	Ca
					40	W	10	Ca
					9 6	W	25, 40, 20	
8 40	W	10, 15, 80	Ca.					
9 3	W	20						
8 40	W	15	Ca					
40	W	15	Ca.					
9 0	W	15	Faint					
8 40	W	15	Ca. Faint					
Weather poor during part of the visual observations.								
Ca photographs 8h 40m, 9h 6m, and 9h 16m.								
August 26.	S.S.				73.5	E	10	Ca. Seen only at 8h 40m
					46.5	E	30	Ca. Seen only at 8h 40m.
					31.5	E	20	Ca.
					21	E	25	Detached. Ca prominence is 6° broad and 60" high.
					15	E	45	Ca. A detached streak
					0	E	30	Changing.
8 43	E	30	Ca.					
9 6	E	30	Ca.					

Date and observer	Hour LST	Base.	Latitude.		Limb.	Height	Remarks.
			North	South			
1908	H. M.	°	°	°		"	
August 26. —contd.	S.S.						
	9 6	..		3	E	15	Ca.
	8 41			8 5	E	10	Ca prominence .s 3° broad and 50" high.
	9 6	1		10	E	45	Ca.
	8 38	0 5		18 5	E	25	
	35			24	E	90 ±	Faint, detached. 6° broad and 50" high and the upper portion not seen in Ca.
	31	4		30 5	E	15	
	26			62 5	E	10	Faint.
	9 6			78 5	W	15	Ca.
	8 46			66	W	10	Ca. Seen only at 8h 46m.
	9 21	6		55 5	W	60	
	18	0 5		49	W	20	Faint, detached, changing - very low } Connected at 9h 15m. in Ca.
	6	2		44 5	W	20	Ca.
	6	3		38	W	15	Ca
	13	7		21	W	15	
	10			10	W	10	Metallic. b <sub>1</sub> , b <sub>2</sub> bright. } In Ca these three form a single prominence 95" high and extending from - 5° to - 81° W.
	8			5	W	10	
	6		12		W	10	Ca.
	5	3	15 5		W	50	Faint.
	0	1	20		W	10	Ca.
0	5	27 5		W	65		
6		46		W	10	Ca. } Connected in Ca.	
8 57	1 5	48		W	10		
57	1	51		W	25		
9 6		77		W	15	Ca. Ca photographs 9h 6m, 8h 46m, and 9h 37m.	
August 27.	G.N.						
	9 2	..	83		E	10	Ca.
	2		81		E	15	Ca.
	2		44 5		E	10	Ca.
	8 38	10	35 5		E	60, 45	Ca.
	38	0	20		E	90	Ca.
	38		18		E	20	Ca.
	55	4	9		E	20	Bright Shows slight displacement to red in O at one end
	55	2	5		E	30	
	38			15	E	30	Ca.
	38	3		21 5	E	45	Ca Narrow at top.
	50			31 5	E	30	
	38			35 5	E	30	Ca.
	38			47 5	E	10	Ca.
	38			83	W	10	Ca.
	9 10	10		53 5	W	45, 30	
	8 38	32		16	W	45, 75	Ca. Changing.
9 5		2		W	15		
2	8	27		W	20, 60		
8 59		42 5		W	20		
38		53 5		W	30	Ca.	
9 2		59 5		W	10	Ca.	
2		67		W	15	Ca.	
2		78		W	10	Ca.	
2		78		W	20	Ca. Ca photographs 8h 38m and 9h 2m.	
August 28	S.S.						
	10 48	21	32		E	90, 45, 60	Ca. A group of faint prominences.
	9 3		11		E	15	
	8 59	0 5		9	E	20	3° broad in Ca at 9h 21m
	58			11 5	E		No prominence, but O slightly displaced to red.
	10 48	5		17 5	E	20	Ca.
	8 52	1		30 5	E	25	
	52	1		36 5	E	25	
	41			67	E	10	
	10 48			58 5	W	15	Ca.
	48			56 5	W	10	Ca.
48			54 5	W	15	Ca.	
9 36			36 5	W	10		
31	5		2 5	W	30 ±		
30	2	5		W	30 ±	In Ca they form a single prominence 30" high at the two ends and 60" in the middle and ex- tending from lat. + 3° to - 15° W.	

Date and observer.	Hour L S T.	Base.	Latitude		Limb.	Height	Remarks.
			North	South			
1908	H. M	°	°	°		"	
August 28	S S	2	21		W	30	Ca Faint
—contd.	9 26	9	29.5		W	35	General height 15" with a cloudlet 35" high over it.
	10 48		58.5		W	15	The prominence was seen in Ca. only at 9 <sup>h</sup> 21 <sup>m</sup> . Ca. Seeing bad Ca photographs 10 <sup>h</sup> 48 <sup>m</sup> and 9 <sup>h</sup> 21 <sup>m</sup> . (Poor.)
August 20.	G.N	2	39.5		W	60	Ca
	5	30		26	E	70, 60, 30,	Ca. See Note.
	5			01	E	40	
	10 30			67	E	15	
	9 5			82	E	15	Ca
	5			51.5	W	15	Ca
	5			29	W	30	Ca. Detached
	20	14	1		W	60, 100,	Ca streamers extend on both sides to lat — 14° and + 12° W. Only 60" high in Ca.
	5	2	26		W	30	Ca.
	15		35.5		W	20	Not in Ca
	5		43.5		W	15	Ca.
	5		54.5		W	20	Ca. Ca photographs 9 <sup>h</sup> 5 <sup>m</sup> , 8 <sup>h</sup> 11 <sup>m</sup> , and 8 <sup>h</sup> 25 <sup>m</sup>
August 30	S S.		83	..	W	10	
	38		41.5		E	45	Ca.
	44			1	W	20	
	38			8	E	20	Ca. Meets the last prominence.
	42			11	E	10	
	37	1		17	E	30	Slants southwards.
	32	0.5		34.5	E	20	} Connected in Ca.
	30	3		39.5	E	45	
	28			47.5	E	25	
	9 16			88	W	10	
	15	0.5		78	W	15	Ca. Faint.
	8 38	1		57.5	W	30	Slants southwards.
	9 10			20	W	30	Not seen in Ca at 9 <sup>h</sup> 58 <sup>m</sup> .
	8 38			18	W	20	Ca.
	9 8	1.5		12	W	10	Surmounted by a Ca cloudlet 30" high.
	6	1	Equator.		W	25	A Ca streak from it meets limb at lat. — 8° W.
	2	1	26		W	15	
	2		29		W	30	
	8 58	1	44.5		W	30	
	57	1.5	49.5		W	20	
	55	0.5	76.5		W	10	
							Ca photographs 8 <sup>h</sup> 38 <sup>m</sup> and 9 <sup>h</sup> 58 <sup>m</sup>
August 31.	G.N.	...	81	..	E	10	Ca
	32		78		E	10	Ca.
	32		61		E	10	Ca.
	32	7	44.5		E	45	Ca.
	32		23		E	10	Ca.
	32	8	Equator.		E	90, 60, 20	Ca.
	42			25	E	30	
	32			29	E	15	Ca.
	40			44.5	E	20	
	40			47.5	E	45	60" in Ca.
	55	0		25	W	35	
	53	3	5		W	30	45" in Ca.
	32	3	30		W	20, 25	Ca.
	32	6	50.5		W	10, 30, 45	Ca. Only portions of this were seen in H
	32		68		W	15	Ca.
	32		80		W	10	Ca.
							Weather poor during part of the visual observations. Ca photograph 8 <sup>h</sup> 32 <sup>m</sup> .
September 1.	S.S		68	..	W	10	Ca
	19		66		E	10	Ca.
	19		60.5		E	10	Ca.
	19		58.5		E	10	Ca.

Date and observer.	Hour I S T.	Base	Latitude		Limb	Height.	Remarks	
			North.	South				
1908.	H. M	°	°	°		"		
September 1. — <i>conid</i>	S.S.							
		9 19		39 5	.	E	10	Ca.
		19		33 5		E	10	Ca
		44		8		E	80	A faint slanting detached streak. Not in Ca.
		43	0.5		1	E	10	
		14			3	E	30	Ca Slants northwards
		2	1		4.5	E		See Note
		8 50	7		24.5	E	10	
		57	0.5		34.5	E	10	
		54	3		46	E	25	} Connected by a Ca streak
		53	5		52	E	35	
		44			74.5	E	10	
		3 19			78	E	10	Ca
		19			80	E	10	Ca.
		19	1		80	W	10	Ca
		19	0.5		76	W	10	Ca
		45	0.5		31	W	10	Slants southwards
		8 53			28	W	10	Ca Slants southwards Seen only at 8h 53m
9 38	6		7	W	30 ±	Ca prominence was 7° broad and 40" high at 9h 19m and 2° broad and 30" high at 8h 53m		
19	2.5	10		W	45	Ca. Slants southwards		
35	1	35		W	40	} Form a single prominence extending from + 33° to + 44° W and 45" high in Ca.		
33	0.5	42		W	45			
19	0.5	61		W	20			
10 29		69.5		W	20	Ca. Detached Ca photographs 9h 19m and 8h 53m.		
September 2.	G.N.							
		9 22	.	52.5		E	10	Ca.
		32	3	40.5		E	20	
		22	14	28		E	90	Ca. A Ca streamer extends to + 40° E. Only a portion is seen in H
		22		12		E	10	Ca.
		22		7		E	10	Ca.
		25	11		6	E	30, 45, 55	See Note
		23	1		24	E	30	
		20	7		49.5	E	20, 35	
		11 9			74.5	E	45	Ca
10 45	2		4	W	80 ±	Top extends parallel to limb to lat -13° and -2° In Ca at 9h 22m top meets limb again at lat. -15°		
9 22		38.5		W	40	Ca		
11 9		67		W	10	Ca. Ca photographs 9h 22m and 11h 9m, (poor, except S W portion).		
September 4.	..							
		10 47	.	74.5		E	30	Ca
		47		25		E	15	Ca
		47	3		8	E	45	Ca
		47	1		20	E	30	Ca.
		47			39.5	W	30	Ca Detached.
47	3		6.5	W	45	Ca		
September 5.	S.S.							
		11 54	12		10	E	45	Very faint in Ca
		52			33.5	E	60	
		50	0.5		45	E	20	
		10 18		12		W	45	Ca Surmounted by 2 streaks 12° long
5		34.5		W	45	Ca. Seen only at 10h 5m Only S E. limb observed visually. Seeing poor. Ca photographs, (foculus) 10h 18m and 10h 5m.		
September 6.	S.S.							
		9 47	.	21		E	10	
		20		7		E	15	Ca. A short detached streak parallel to limb.
		44	2	2.5		E	50	} Connected.
		44	3		3	E	70	
		44			6.5	E	30	
		20	4		39.5	E	15	Ca
		19	1		46	E	10	
		17			54	E	45	
		20			57.5	E	30	Ca
20			61	E	10	Ca		
20	0.5		66	E	10	Ca		



Date and observer.	Hour I. S T	Base.	Latitude.		Limb	Height	Remarks.
			North.	South.			
1908.	n. m	°	°	°		"	
September 6. S S —contd.	9 20 20 10 6 3 1 9 59 57 56 54 52 51	.  0 5 3 0 5  1 1 3	     6 2 5 13 5 20 5 28 5 29 5	  69 67 48 5 41 5 7 5 0 5  18 5 20 5 28 5 29 5	W W W W W W W W W W W	10 10 10 15 20 20 30  15 75 20 15	Ca. Ca. Ca.  A faint detached streak No prominence. C slightly displaced both ways. Slants northwards } Connected by a Ca streak. Not in Ca. Visual observations through passing cirrus. Ca photograph 9 <sup>h</sup> 20 <sup>m</sup> .
September 8. S.S.	9 18 8 3 22 5 22 22 22 22 22 49 46 28	... 5  4 7  1 0 5 2 1 5 1 6	76 8 5 1        13 32 5	..   18 23 29 58 79 5 44 5 48 5 27 16  32 5	E E E E E W W W W W W W	10 90 15 40 35 40 30 30 15 15 10 60 10 90	Ca. Slants southwards. Ca Detached Detached. Ca. Ca. Ca Ca. Ca. Ca. C slightly displaced to red near base. Rapidly changing Height 120" at 9 <sup>h</sup> 36 <sup>m</sup> and about 180" at 9 <sup>h</sup> 41 <sup>m</sup> . S. W. quadrant not observed. The rest observed during breaks in clouds. Ca photographs 9 <sup>h</sup> 22 <sup>m</sup> (poor); 9 <sup>h</sup> 3 <sup>m</sup> , 9 <sup>h</sup> 4 <sup>m</sup> , and 9 <sup>h</sup> 48 <sup>m</sup> (focculus).
September 10. S S.	9 11 10 12 5 9 5 4 12 5 5 5 11 44 12 5 5 11 42	9 2  1  0 5 0 5 3 0 5  0 5	24 5 11 2       6 17 19	...   35 54 5 46 5 44 5 40 34 5   17 19	E E E E E W W W W W W W	60 40 15 20 20 10 10 15 20 20 30 20	Not in Ca. Ca. 2" broad at top. Seen in Ca only at 9 <sup>h</sup> 1 <sup>m</sup> . Ca. Ca. Ca. Ca. Ca Ca Ca photographs (focculus only) 12 <sup>h</sup> 5 <sup>m</sup> , 11 <sup>h</sup> 48 <sup>m</sup> , and 9 <sup>h</sup> 1 <sup>m</sup> .
September 11. ..	8 52 52 52 52	10	25 16 17 5	.. 53 5	E W W W	30 30 10 40	Ca. Ca. Ca. Very bright. Ca. Cloudy. Ca photograph (focculus) 8 <sup>h</sup> 52 <sup>m</sup> .
September 12. S.S.	7 58 58 8 22 7 58 58 8 41 7 58 8 15 12 41 7 58 8 43 40	3 0 5    0 5 2 4 7 4 4	57 52 5 26      55 5 67 5 49 5 41 5 32 5	..  4 8 11 21 48 55 5 67 5 49 5 41 5 32 5	E E E E E E E E E W W W	10 10 20 10 10 40 10 20 20 10 30 25 50	Ca. Ca. 5" broad and 30" high in Ca. Ca. Ca. Ca Seen only at 8 <sup>h</sup> 41 <sup>m</sup> Ca Double. Ca. Seen only at 8 <sup>h</sup> 41 <sup>m</sup> . Ca. } Form a single prominence in Ca 30" high.

Date and observer.	Hour I.S.T.	Base.	Latitude.		Lamb.	Height	Remarks.
			North.	South.			
1908.	n m	o	o	o		"	
September 12. S.S. -- contd	8 39	...		28	W	10	
	36		12.5		W	10	
	34	2	20		W	15	
	7 58	1	41.5		W	40	Ca Passing thin clouds Ca photographs 7 <sup>h</sup> 58 <sup>m</sup> and 8 <sup>h</sup> 41 <sup>m</sup> .
September 13 G.N	9 7		53.5		E	10	Ca.
	7	1	47.5		E	10	Ca.
	7		33.5		E	10	Ca.
	8 35	0.5		5.5	E	15	
	35	1		7.5	E	15	
	35	4		12	E	30	
	35			14	E	15	Top slants southwards.
	9 0			22	E	15	
	7			26	W	15	Ca
	7			24	W	10	Ca
							Ca photograph 9 <sup>h</sup> 7 <sup>m</sup> (poor).
September 14. S.E.	9 22		58.5		E	15	
	10 42		48.5		E	15	Ca.
	42	0.5	44.5		E	40	Ca
	42	2	31.5		E	15	Ca.
	42	1	29		E	15	Ca
	9 16	0.5	3.5		E	10	
	15			16	E	Low.	
	12	1		24	E	30	} Connected in Ca
	12	0.5		26	E	15	
	10 40			58.5	E	20	Not in Ca.
	8 27			62	W	15	Ca
	27			60	W	10	Ca.
	27			46.5	W	45	Ca } Seen only at 8 <sup>h</sup> 27 <sup>m</sup> .
	27			3	W	10	Ca.
	27		9		W	45	Ca.
10 0	2	40.5		W	40	Faint. 20" in Ca at 8 <sup>h</sup> 27 <sup>m</sup> and 40" at 10 <sup>h</sup> 42 <sup>m</sup> .	
3		52.5		W	10	Seeing poor. Through clouds Ca photographs 10 <sup>h</sup> 42 <sup>m</sup> and 8 <sup>h</sup> 27 <sup>m</sup> (poor).	
September 15. G.N	8 59	..	41.5		E	10	Ca
	59	1	35.5		E	45	Ca Hook-like.
	59		5		E	10	Ca
	59		1		E	10	Ca.
	9 3	3		16.5	E	20	
	3			19	E	20	Slants southwards.
	3	2		22	E	20	
	0			70.5	E	15	
	8 59			32	E	15	Ca.
	59			31	W	10	Ca.
	59			30	W	10	Ca.
	59			48.5	W	10	Ca Slants westwards
	59	1.4		27	W	30	Ca
	9 13	2		17	W	30	A Ca streamer from the top of this almost meets the last prominence.
	13	5		11	W	35	
	8 59			Equator.	W	15	
	59		5		W	45	Ca
9 11			27	W	10		
10			37.5	W	30	10" only in Ca.	
8 59	1.5		42.5	W	30, 45	Ca. Surmounted by small detached streaks	
9 9			63	W	15		
8 59			68	W	10	Ca. Ca photograph 8 <sup>h</sup> 59 <sup>m</sup> .	
September 16. S.S.	8 50		81.5		E	10	
	48		70.5		E	25	
	11 53	2	60		E	30	Ca.
	53	4	14		E	20	Ca A group of four prominences.

Date and observer.	Hour I.S.T	Base.	Latitude		Limb.	Height.	Remarks
			North.	South.			
1908.	n. m.	°	°	°			
September 16. S.S. —contd.	8 40	2		4	E	30	
	38	15		11	E	10	
	11 53	1		14	E	30	
	8 35	2		19	E	10	30" in Ca
	11 19	3		15.5	W	15	Ca. Seen only at 11h 19m.
	10	1		10	W	40 ±	Streamers extend on both sides. 50" in Ca.
	53		20		W	20	Ca. A detached cloudlet.
	53		26		W	50, 30	Ca. A streamer extending as far as lat. + 33° W. connected to limb at + 26' and surmounted by a Ca cloudlet
							Cloudy.
							Ca photographs, prominence plate, 11h 53m (very poor), flocculus 11h 19m.
September 17 A.Y.S.	9 3		81		W	Low	
	8 38		66		E	10	Ca. A jet
	38		59		E	20	Ca. Top broader.
	38		57.5		W	10	Ca.
	38		54.5		E	10	Ca. Two short slanting streaks surmounted by a horizontal one.
	38		53		E	10	Ca.
	38		51		E	10	Ca.
	38		49.5		E	10	Ca.
	38	5	31.5		E	60	Ca.
	32	4	11		W	15	In Ca a slanting streak 60" high proceeds from top eastwards.
	38			3	W	30	Ca.
	30	2		6	E	45	Covers 4" in Ca
	38			9	E	110	Ca. A detached spot.
	38			13.5	E	40	Ca. Top bends and almost meets the next prominence.
	38	6		19	E	90	Ca. Top slants eastwards
	38			35.5	E	20	Ca. Two slanting streaks crossing each other.
	38	1		41.5	E	10	Ca.
	38			59.5	W	10	
	38			81	E	20	Ca. A loop.
	38			58.5	W	40	Ca. A streamer from top of this extends as far as lat. - 67° W.
	38			49.5	W	10	Ca.
	38	9		25	W	30	Ca.
	38	3		15.5	W	20	Ca.
	38			3	W	10	Ca.
	38	4	7		W	10	Ca. A streak covering 4" of limb.
	38	10		25	W	70	Ca. Slants northwards.
	38		38.5		W	20	Ca.
	38		38.5		W	30	Ca. Faint.
	38	2	43.5		W	45	Ca.
	38		78.5		W	15	Ca.
	38		81		W	10	Ca.
							Weather poor. Visually observed only from - 65°E to + 75°E.
							Ca photograph 8h 38m.
	September 18 A.Y.S.	9 10	...	42.5	..	E	10
8 44			27		E	10	Ca.
49			14		E	30	Ca.
49			3		E	30	Ca.
49			Equator.		E	70	Ca. A slender streak.
49			20		E	10	Ca.
49			30.5		E	10	Ca.
49		1	43.5		E	10	Ca.
49			88		W	10	Ca.
49			53.5		W	30	Ca.
49		1	50.5		W	30	Ca. Top bends and meets the last prominence.
49		4	31.5		W	20	Ca.
49		7	24.5		W	10	Ca.
49			14		W	10	Ca.
49		7	7.5		W	10	Ca.
49		3.5	44.5		W	30	Ca.
							Weather poor Visually observed only from lat - 65°E to + 45°E. Ca photograph 8h 48m.

Date and observer	Hour I S.T.	Base.	Latitude.		Limb.	Height.	Remarks.	
			North	South.				
1908.	H. M.	°	°	°		"		
September 19. A.Y.S.	9 5		52.5	..	E	10		
	8 48	6	21		E	25		
	41		12		E	50	Ca.	
	41		11		E	50	Ca.	
	41	14	2		E	80	Ca. Only portions of this 15" and 10" high are seen in H.	
	40	8		11	E	10		
	41			15	E	50	Ca. Detached, faint.	
	41	3		20	E	90	Ca. A portion of the stem 15" high is seen in H at 8h 30m.	
	41	5		24.5	E	60	Ca.	
	30			28	E	30		
	12			60	E	10	Ca. Seen only at 8h 12m	
	41			82	W	10	Ca.	
	41			82.5	W	10	Ca.	
	41			75.5	W	10	Ca.	
	41	3		80	W	40	Ca.	
	41	2		54	W	70	Ca.	
	41	2		49.5	W	15	Ca.	
	41			45.5	W	15	Ca.	
	41			39.5	W	15	Ca.	
	41			23	W	30	Ca.	
	41	16		7	W	80, 60, 45	Ca.	
	41		4		W	15	Ca. Faint.	
	41		38.5		W	10	Ca.	
	41	7	48		W	70	Ca.	
	41		68.5		W	20	Ca. A loop. Lat. -65° E to +58° W not visually observed. Cloudy after 9h 5m. Ca photographs 8h 41m, 8h 12m, and 9h 15m.	
	September 20. G.N.	8 3	..	49.5	...	E	10	Ca
		47	4	26		E	20, 10	
		8		19		E	20	Ca
		43	2	12		E	20	10" only in Ca
		42	1.5	8		E	50 ±	} Form a single prominence in Ca 70" high.
40		4	1		E	20		
3		1.5		5	E	30	Ca.	
3		3		15.5	E	20	Ca.	
3		2		28	E	20	Ca.	
3				30.5	E	20	Ca.	
56				42.5	E	15	Ca. Seen only at 8h 56m.	
56				45.5	E	30	Ca. Do.	
3				78.5	E	15	Ca.	
56		1		60	W	30	} Continuous in Ca and 80" and 60" high and 10" broad in it	
56		2.5		82.5	W	60 ±		
57		1.5		56.5	W	25		
57		2		46.5	W	10		
57				42.5	W	10		
3				38.5	W	10	Ca.	
3		5		25	W	10	Ca.	
56			20	W	75	Ca. Seen only at 8h 56m. Slants southwards.		
3	32		2	W	40	Ca.		
56			31.5	W	30	Ca. Seen only at 8h 56m.		
55	3		35	W	20	Ca photographs 8h 3m and 8h 56m.		
September 21. A.Y.S.	8 36		80	..	E	10	Ca.	
	9 21		78		E	10		
	8 36		72.5		E	10	Ca.	
	9 20		65.5		E	10 ±		
	8 36	7	31		E	30	Ca.	
	35	2	20		E	20		
	36		13		E	40	Ca.	
	35		8.5		E	40	A slender detached vertical streak 90" high in Ca.	
	35		7		E	10		
	32	0.5		8.5	E	15		
36			11	E	30	Ca. Slants eastwards and almost meets the top of the last prominence.		
35	1		15	E	25			

Date and observer.	Hour I S T	Base.	Latitude.		Limb.	Height.	Remarks
			North.	South.			
1908.	H M	°	°	°		"	
September 21. A.Y.S. —cont'd	8 26	15	.	27	E	55	Slants northwards. { Form a single prominence in Ca 23" broad and 60" high
	17			39	E	55	
	16			40.5	E	15	
	10 48			81	E	25	
	8 38			77.5	E	15	Ca. A group of 3 small prominences.
	30	2		75.5	W	15	Ca.
	10 45			61	W	10	
	35	6		55.5	W	45	60" in Ca.
	8 36			46.5	W	10	Ca.
	36			38.5	W	10	Ca.
	36	11		20.5	W	80, 75, 110.	Ca. Only a portion of this, 45" high, is seen in H
	10 25	1.5		16	W	15	Not in Ca
	8 36			13	W	75	Ca. Detached
	36			10	W	10	Ca.
	10 17	2		2	W	10	7" broad in Ca
	13	4	13		W	40	30" only in Ca
	9 59			29	W	10	
	8 36			32.5	W	10	Ca.
	36			38	W	40	Ca.
	36			78.5	W	10	Ca.
36			82.5	W	10	Ca.	
						Fine weather when examining the S.E. quadrant The rest during breaks in clouds. Ca photographs 8 <sup>h</sup> 36 <sup>m</sup> and 8 <sup>h</sup> 13 <sup>m</sup> .	
September 22. G.N	8 20		82.5		E	15	Ca.
	45		48.5		E	15	Faint.
	43	1.5	30		E	80	50" only in Ca with a bright jet at 32°.
	40	2	20		E	20	
	20		0		E	10	Ca.
	39	1		3.5	E	10	
	20			19	E	15	Ca.
	36	11		32	E	30, 45	
	32			41.5	E	20	
	32			43	E	30	
	9 15			49.5	E	10	
	8 20			51.5	E	15	Ca. Detached
	20			52.5	E	10	Ca.
	20			53.5	E	10	Ca.
	20			60	W	10	Ca.
	9 10	7		51	W	70 ±	Filamental
	8 20			47.5	W	30	Ca.
	9 5	3.5		35	W	30	} See Note.
	3	2		28	W	40	
	8 20	1.5		16	W	10	Ca. Surmounted by a detached Ca cloud 75" away from limb
9 2	1		15	W	25	15" only in Ca.	
0			9	W	20		
0			7.5	W	15		
0			8	W	10		
8 20	1.5		3	W	10	Ca.	
56		3		W	15		
56		8		W	30		
55		15		W	30	Faint	
55		17.5		W	30	Bends and meets the last { In Ca connected at prominence base and slant away from each other.	
20		28		W	60	Ca. A streak slanting northwards and meeting the top of the next prominence	
52	2	30.5		W	75	Double Only 60" in Ca	
49		41.5		W	20		
20	3	53		W	30	Ca.	
20		61		W	10	Ca.	
20		68		W	10	Ca.	
						Ca photographs 8 <sup>h</sup> 20 <sup>m</sup> and 8 <sup>h</sup> 5 <sup>m</sup> .	
September 23. A.Y.S.	9 59		24		E	10	Ca
	59	1	15.5		E	30	A Ca streak from the top of this slanting north- wards reaches a height of 45".
	59		12		W	10	Ca.
	56	1.5	7		E	20	10" in Ca.
	55			1	W	15	Slants southwards

Date and observer.	L.S.T	Base.	Dist.		Wind	Height.	Remarks.
			North	South.			
1908.	K. M	°	°	°		"	
September 23 A.Y.S	9 50			10	E	10 ±	
-contd	50			12	E	10	
	49			19	E	10	
	47	2		25	E	10	
	45	1		41	E	10	
	43	2		51.5	E	25	It was a streak 45" high in Ca.
	40	1		59.5	E	25	Not in Ca
	59	4		81	E	30	Ca
	59			82	W	10	Ca
	30	1		73	W	30	Not in Ca.
	16	2		60	W	25	] Form a single prominence in Ca 14° broad and 45" high
	15	2		51.5	W	40	
	8	1		36.5	W	20	6° broad in Ca.
	59			27.5	W	20	Ca Slants southwards
	59			19	W	30	Ca A vertical streak.
	0			5	W	10	
	59			1	W	10	Ca
	59	8	8		W	20	Ca
	10 10	1	18		W	50	Bends southwards
	9 59	8	25		W	60	Ca
	59	3	32		W	75	Ca
	59	3	42		W	20	Ca
							Seeing poor.
							Ca photographs (poor), 9h 59m, 9h 12m.
September 24. G.N	9 25	1.5	71.5		E	15	
	17		42.5		E	30	Ca
	20			2	E	10	
	20			9.5	E	15	
	35	3		56	W	50	
	32			1.5	W	10	
	32		1		W	20	
	30		5		W	15	
	30	1.5	9		W	25	Very faint in Ca.
	25	0.5	24.5		W	30 ±	
	25		40		W	15	
	26		79.5		W	10	
	26		80		W	10	
	26		81.5		W	10	
							Weather poor.
							Ca photographs (foculus), 9h 17m, 9h 53m
September 25 A.Y.S	8 22		49.5		E	10	
	21		39.5		E	10	
	9 1		33.5		E	10	Ca
	1		32.5		E	10	Ca
	8 29	2	19.5		E	10	3° broad in Ca
	9 1		15		E	15	Ca. Detached
	1		10		E	15	Ca.
	1		5		E	10	Ca
	8 18			38.5	E	10	
	9 1	2		59.5	E	10	Ca.
	20			72.5	E	10	
	1			81.5	E	10	Ca
	1	2		83	E	80	Ca
	1			88	W	10	Ca
	10	4		53.5	W	50	
	1	6		45.5	W	30	Ca. Only a portion of this, 10" high, was seen in H.
	1	1		19.5	W	15	Ca. Slants southwards.
	1			18	W	15	Ca
	0	2		14	W	15	
	1			0	W	20	Ca
	8 50		1.5		W	10	] Form a single prominence in Ca 30" high and 5° broad.
	50		6		W	10	
	45	1.5	19.5		W	40	
	40	3	27.5		W	50	
	40		40.5		W	10	
	39		51.5		W	10	
	39	2	66		W	10 ±	
	9 1		74.5		W	10	Ca.
							Ca photographs 9h 1m and 9h 38m.

Date and observer.	Hour I S.T		Base.	Latitude.		Limb.	Height.	Remarks.
				North.	South.			
1908.								
September 26	G.N.	8 55	1	43 5		E	35 ±	Faint The prominence is 3" broad in Ca.
		1		32 5		E	40	Ca. A streak slanting northwards.
		1		5		E	10	Ca.
		52	1.5		4	E	30, 40	11" broad, 20" and 10" high at 8 <sup>h</sup> 1 <sup>m</sup> and 30" and 15" at 9 <sup>h</sup> 7 <sup>m</sup>
		1			22	E	10	Ca.
		1			29	E	10	Ca.
		50			37	E	50	4" broad in Ca
		1			43 5	E	10	Ca.
		1			47 5	E	15	Ca.
		1			55 5	E	10	Ca.
		1			60	E	20	Ca.
		1			78 5	W	15	Ca.
		9 7			57 5	W	15	Ca. Faint at 9 <sup>h</sup> 7 <sup>m</sup> and not visible at 8 <sup>h</sup> 1 <sup>m</sup>
		10	1		50 5	W	20 ±	2" 5" broad in Ca. Surmounted by a detached Ca prominence 70" high. } See Note 1.
		9			46	W	35	
		9	1.5		43 5	W	25	
		9	1		41 5	W	30	
		8 1			35 5	W	20	Ca.
		1	8		21	W	15	Ca. Only a portion of this is seen in H
		1	11		5 5	W	10, 50	Ca. See Note 2.
		9 7	3	16 5		W	20	Ca. Seen only at 9 <sup>h</sup> 7 <sup>m</sup> .
		8 1		25		W	10	Ca.
		9 1	4	28 5		W	60	Filamental. Ca photographs 8 <sup>h</sup> 1 <sup>m</sup> and 9 <sup>h</sup> 7 <sup>m</sup> .
September 27	G.N.	9 52	.	77		E	10	
		23		49 5		E	30	Ca.
		50	2	40 5		E	20	
		50	2	37 5		E	15	
		28		20		E	15	Ca.
		23		13		E	10	Ca.
		47		4		E	25	
		47	3		0 5	E	30	} Form a continuous prominence in Ca extending from + 5° to - 22° and 60", 45", and 30" high.
		45	7		12 5	E	15, 35	
		42	4		19 5	E	25	
		23			33 5	E	15	Ca.
		40	3		30	E	60	70" in Ca.
		23	2		17 5	E	30	Ca.
		23			60	E	10	Ca.
		23			65	E	20	Ca.
		23			32 5	E	10	Ca.
		23			28	W	10	Ca.
		10 0	0		24	W	40	
		9 23		0		W	20	Ca.
		23		12		W	30	Ca.
		23		13		W	30	Ca.
		23		14		W	15	Ca.
		23	5	19 5		W	15	Ca.
23		24		W	10	Ca.		
23		25		W	30	Ca.		
50		27		W	30	Faint.		
55	2.5	30 5		W	50	70" in Ca.		
23	3	63		W	10	Ca. Ca photographs 9 <sup>h</sup> 23 <sup>m</sup> and 8 <sup>h</sup> 45 <sup>m</sup> .		
September 28.	A.Y.S.	9 2	1	33		E	15	Ca.
		41	2	49 5		E	10	
		40	1	35 5		E	20	
		30	3.5	22		E	10	
		20	5		9 5	E	30	} Extends from - 4° to - 12° in Ca.
		15	2		14	E	40	
		9	4		28	E	25	
		5			39	E	10	
		4	2		43 5	E	60	} Continuous and 45" high in Ca.
		4			48 5	E	15	
		8 55			51 5	E	15	
		10 47			64	E	10	Faint. Detached, and 15" high in Ca.
		45			69	E	20	
45	1		73	E	20			

Date and observer.	Hour I.S.T.	Buse.	Latitude		Lamb.	Height	Remarks
			North.	South.			
1908.	" "	"	"	"	"	"	
September 28. A.Y.S. — <i>cont'd</i>	10 42	1		76	W	10	
	9 2			50.5	W	10	Ca
	10 35	2		34	W	20	In Ca streamers extend on both sides to - 27' and - 37'.
	33	9		18.5	W	10, 15	
	25	9		2.5	W	20	
	11	2		15	W	15	
	12	1		21.5	W	20	
	9 2	3		31.5	W	50	Ca. A portion of this is seen in H.
	10 5	1		40.5	W	15	
	1			48.5	W	15	
	9 2			52.5	W	10	Ca.
	50			70.5	W	15	
	50	1		81.5	W	15	
September 29. G.N.	8 30	..	83.5		E	20	Ca.
	30		79		E	10	Ca.
	30		78		E	20	Ca.
	30		48.5		E	30	Ca.
	30	3	40		E	10	Ca
	9 5		38		E	10	
	8 30		19		E	30	Ca.
	30		16		E	30	Ca
	30	16	8		E	60, 30	Ca An arch. A small portion of this is seen in H.
	30	6		11	E	60	Ca
	0 3	5		17.5	E	35	
	1	1		30	E	50	40" only in Ca.
	8 30	1		31.5	E	15	Ca.
	9 0	4		48.5	E	50	
	8 58	1		57	E	15	
	58	2		80.5	E	10	
	55			71	E	20	
	30			83	E	20	Ca
	9 20	2		71.5	W	20	Not in Ca.
	8 30			60.5	W	20	Ca.
	9 10			19	W	10	
	8 30			16	W	45	Ca.
	30	2		14	W	30	Ca.
30	2		9	W	30	Ca	
9 12	12		3	W	40		
8 30	3		20.5	W	30	Ca. Ca photographs 8 <sup>h</sup> 30 <sup>m</sup> and 8 <sup>h</sup> 49 <sup>m</sup>	
September 30. A.Y.S.	8 2	.	83		E	20	Ca.
	0 1		78.5		E	10	
	0	0.5	61		E	10	
	8 57	3	41		E	10	20" in Ca
	56		34		E	10	3" broad in Ca. } Connected in Ca by a streak
	51	2	29		E	20	
	2		27		E	15	Ca
	53		24		E	30	Slants eastwards
	48	16	13		E	20, 30	See Note 1
	40	1		4.5	E	40	
	40	1		8.5	E	40	A streak proceeds from top } See Note 2 as far as - 9° E
	31	11		19.5	E	40	50" in Ca at 8 <sup>h</sup> 2 <sup>m</sup> At 8 <sup>h</sup> 47 <sup>m</sup> it was 30" in Ca with a slightly different form
	2	2		27	E	10	Ca Only a small portion of this was seen in H.
	30	1		32	E	10	
	2			36.5	E	10	Ca
	20			50.5	E	15, 30, 50	
	20	0.5		61	E	15	Top faint.
	20			68	E	10	
	9 48			77	W	20	
	43			57.5	W	10 ±	Faint. 30" in Ca.
8 2			49.5	W	15	Ca.	
47			38.5	W	60	Ca.	
2			28	W	15	Ca	
9 35	15		12.5	W	20, 30, 50		



Date and observer.	Hour L.S.T.		Base	Latitude.		Limb.	Height.	Remarks
				North.	South.			
1908	H	M	"	°	°		"	
September 30 A.Y.S. —contd	8	2			2	W	10	Ca.
	9	31		Equator.		W	10	
	8	47		8		W	30	Ca. Faint.
	9	23	1	13.5		W	15	
	8	2		15		W	15	
	9	15		19		W	10	Ca. Faint.
	15			20		W	10	
	12		2	30		W	10	
	12		2	33		W	30	} Less than 10" in Ca
	12			35.5		W	25	
	8	2		39.5		W	40	Ca. Faint.
	2			41.5		W	15	Ca. do
	2			49.5		W	10	Ca.
	9	3		82.5		W	10	Faint. Ca photographs 8 <sup>h</sup> 2 <sup>m</sup> and 8 <sup>h</sup> 47 <sup>m</sup> .
October 1. G.N.	9	19		64		E	10	
	17		2	34		E	60 ±	
	16		3	28.5		E	25	
	58			3		E	10	
	19		3		16.5	E	30	Ca. Very faint.
	14				28	E	20	
	19		2		50.5	E	30 ±	Covers 6" in Ca.
	55				58	E	10	
	10	9			69.5	E	10	
	7				69	E	10	
	9	19			80.5	E	15	Ca.
	10	6			60.5	W	15	
	5				51.5	W	20	Slants southwards.
	9	19			45.5	W	10	Ca.
	19				21	W	15	Ca.
	19		1		15.5	W	50	Ca.
	19		2		12	W	40	Ca.
	19		2		6	W	20	Ca.
	19			Equator		W	60	Ca. Detached.
	19		2	1		W	10	Ca.
	19			10		W	45	Ca. Detached
	10	0		70		W	10	
								Ca photograph 9 <sup>h</sup> 19 <sup>m</sup> . Incomplete + 50" W. to -3" E
October 2 A.Y.S.	8	40	...	82		E	10	Ca.
	40			81		E	10	Ca.
	40		3	5.5		E	15	Ca.
	40				4	E	15	Ca. Slants southwards.
	23		2.5		9	E	20	5" broad in Ca.
	22		0.5		10	E	10	
	22		1.5		18.5	E	15 ±	} Formed almost a single prominence at 9 <sup>h</sup> 50 <sup>m</sup> .
	20		2		21	E	20 ±	
	10				26	E	10	Ca.
	16				30.5	E	10	
	40				42.5	E	40	Ca.
	10				49.5	E	50	Ca. Detached
	15				52	E	10	Bigger in Ca forming an arch 30" high.
	18		0.5		62	E	10	
	40				76.5	E	10	Ca.
	40				83	W	15	Ca.
	9	41			29	W	10	
	40				19	W	10	
	8	40	12		12	W	30, 15	(a. Only a small portion of this is seen in H.
	9	16	19	11.5		W	30, 10, 45, 35	
	6			34.5		W	10	
	6		3	38		W	35 ±	Faint 4" broad in Ca.
			1	44		W	15	Faint. In Ca a streamer proceeds from the top of this to meet the last prominence.
	0		1	45.5		W	10	
	40		0.5	78		W	10	
	40		0.5	82		W	10	
	40			83		W	10	Ca. Ca photographs 8 <sup>h</sup> 40 <sup>m</sup> and 8 <sup>h</sup> 8 <sup>m</sup> .

Date and observer	Hour I.S.T.	Base	Latitude		Limb	Height	Remarks.
			North	South.			
1908.	h m.	°	°	°		"	
October 3	G.N.						
	8 47		75.5	..	E	15	
	47		72		E	15	
	47		24		E	25	
	29		14		E	30	Ca Differently shaped at 8h 42m.
	29	3	7.5		E	40	Ca
	40			7	E	25	
	29	2		10	E	60	Ca Faint. Slants eastwards.
	39	5	22.5		E	30	8° broad and only 60" high in Ca.
	29		34.5		E	15	Ca
	35	2.5	40.5		E	20	4° broad in Ca
	29	7	49		E	70	Ca
	29		81		E	10	Ca
	29		82		E	10	Ca.
	29		46.5		W	10	Ca
	29	12	34		W	50	Ca. Only a small portion of this is seen in H.
	9 1	0.5		13	W	10	
	7	13	5		W	50, 60	See Note.
	8 59	11	24		W	65	45" only in Ca.
	51	1.5	48.5		W	30	
							Ca photographs 8h 29m and 8h 42m.
October 4.	...						
	9 45	2	.	48.5	E	60	Ca
	45		25		W	30	Ca. A streamer from top extends as far as lat. + 31° W
	45		51.5		W	30	Ca.
	45		53.5		W	30	Ca.
							Cloudy.
							Ca photograph (focculus, poor), 9h 45m.
October 5.	G.N.						
	8 41	..	15		E	15	Ca
	9 18		50		E	15	Not in Ca
	8 41		45.5		E	10	Ca.
	41	14	34.5		E	40	Ca. Small portions of the stem 40" and 20" high are visible in H
	9 12	1	16		E	40	
	12	2	10		E	40	
	12	0.5	7		E	45	Connected in Ca and cover 10° in it.
	8 41			15	E	50	Ca Slants as far as lat. - 26° E.
	9 5	1.5		27.5	E	15	Form a single prominence in Ca. 9° broad. A Ca streamer proceeding from - 21° 5 almost joins the last one forming an arch.
	5	1		30.5	E	20	Bright on one side. 13° broad and 60" and 36" only in Ca
	2	4		54	E	90	Ca
	8 41	4		78.5	W	30	Ca
	9 40	20		28	W	25	Ca
	8 41			16	W	15	Ca
	9 32			10	W	30	0° broad in Ca.
	8 54		15		W	30	Ca.
	9 30	3	21.5		W	20	7° broad and 45" high in Ca.
	28	4	31		W	50	Ca
	8 41		60.5		W	10	Ca
	9 22	1	70		W	30	Not in Ca
	8 41		76.5		W	15	Ca.
	41		77.5		W	15	Ca.
	41	1	79		W	20	Ca.
							Ca photographs 8h 41m and 8h 54m
October 6	A.Y.S.						
	8 5	3	51	...	E	20	Ca
	5	4	35.5		E	50	Ca.
	5	3	30.5		E	45	Ca. An arch
	5	2	27		E	30	Ca. do.
	9 30			16.5	E	10	
	29			22.5	E	15	
	8 45	5		32.5	E	30	60" in Ca.
	32			48.5	E	10	
	32			49.5	E	10	
	30	5		55	E	35	50" in Ca.
	5	2		79.5	W	30	Ca.
	5	3		10.5	W	15	Ca.
	5	17	18.5		W	20, 40	Ca. A streak connected to limb at + 10° and + 27°.

Date and observer	Hour I.S.T	Base	Latitude.		Limb	Height.	Remarks.	
			North.	South				
1908 October 6 —contd.	A.Y.S. 8 5	3	31.5	.	W	50	Ca. Prominences observed visually only between - 15° E. and - 68° E Cloudy. Ca photographs, flocculus, 8h 5m, prominence (poor) 8h 21m.	
October 7.	G.N.	6	41.5	.	E	10	Ca.	
		8 54	35	.	E	30	Ca.	
		9 18	25	.	E	30	20'' only in Ca.	
		8 54	22	.	E	15	Ca.	
		9 18	3	.	E	20	Ca.	
		8 19	.	23	.	E	15	Ca. Not visible at 8h 54m.
		9 15	5	33.5	.	E	100 ±	60'' only in Ca
		8	3	48.5	.	E	60 ±	In Ca base 10'' and height 90''
		8 54	3	11.5	.	W	10	Ca.
		19	.	8	.	W	15	Ca. Very bright jet at 8h 19m and fainter at 8h 54m
		54	8	32	.	W	60	Ca. Ca photographs, flocculus plates, 8h 54m and 8h 19m. Visual observations partial
October 8.	A.Y.S.	11 54	13	.	E	10	Ca.	
		51	7.5	.	E	30	Ca.	
		54	1.5	.	E	30	Ca. A small portion of this is seen in H.	
		38	.	5.5	.	E	20 ±	Ca.
		37	.	0	.	E	10	Ca.
		22	2	36	.	E	30	Ca.
		9 38	1	38.5	.	E	20	Only 10' in Ca
		11 54	9	60	.	E	180	Ca faint and only 135'' at 11h 20m on the floccu- lus plate. A small portion of this 10'' high was seen in H at 9h 35m.
		54	.	53.5	.	W	10	Ca.
		54	.	50.5	.	W	10	Ca.
		54	9	44	.	W	45	Ca.
54	1	29	.	W	130	Ca.		
54	1	38	.	W	30	Ca. Weather bad. Only part of the limb observed visually Ca photographs, prominence (incomplete) 11h 54m, flocculus 11h 20m and 11h 51m.		
October 9.	G.N.	8 20	78.5	.	E	40	Ca. Faint at 8h 36m.	
		20	71	.	E	30	Ca. do.	
		20	2	65.5	.	E	45	Ca.
		20	.	50.5	.	E	15	Ca.
		20	.	47.5	.	E	10	Ca.
		20	2	28	.	E	30	Ca.
		20	10	14	.	E	30	Ca. A small portion of this 18'' high is seen in H.
		12	1	6.5	.	E	30	Not in Ca
		20	1.5	.	5	E	10	Ca.
		20	.	.	19.5	E	20	Ca. A streak parallel to limb extending from - 15° to - 24°.
		20	.	.	25	E	20	Ca.
		20	.	.	27	E	10	Ca.
		38	.	.	28	E	45	Ca.
		37	.	.	39.5	E	15	Ca.
		20	.	.	40.5	E	20	Ca.
		35	5	.	62	E	120 ±	90'' only in Ca
		20	.	.	82	W	10	Ca.
		20	.	.	81.5	W	10	Ca.
		20	.	.	68	W	10	Ca.
		50	7	.	43.5	W	60 ±	12° broad in Ca.
20	.	.	34	W	10	Ca.		
20	.	.	28	W	10	Ca.		
20	.	.	19	W	10	Ca.		
45	1.5	.	11.5	W	30	Ca. A streak from top extends as far as - 14° W		
20	.	.	13	W	40	Ca.		
20	.	.	22	W	10	Ca.		
20	.	.	30	W	15	Ca.		
45	2	.	36	W	30	5° broad and 45'' high in Ca.		
20	.	.	44.5	W	15	Ca. Ca photographs 8h 20m and 8h 36m.		

Date and observer.	Hour I. S T	Base.	Latitude.		Limb	Height.	Remarks.
			North.	South.			
1908.	H. M.	°	°	°		"	
October 10. A. Y. S.	10 12		83		E	30	Ca.
	9 58	1	72		E	10	
	10 12		83 5		E	10	Ca.
	9 54		35		E	10	20" in Ca
	10 12		28		E	15	Ca.
	9 54	4	21		E	20	Ca
	10 12		16		E	15	Ca
	9 32		12		E	10	In Ca it is seen only at 9 <sup>h</sup> 59 <sup>m</sup> .
	30		5		E	20	10" only in Ca
	28	9		5.5	E	15	
	22			16	E	10	
	10	2		26	E	25	
	11	3		45	E	20	
	10 12	4		55 5	E	60	Ca.
	48			60	E	25	
	9 9			63	E	10	
	10 40	7		67 5	E	45 ±	Faint in H, bright and 60" high in Ca.
	12			53	W	20	Ca.
	20			38 5	W	25	90" in Ca A faint streamer 30" high proceeds from the top of this as far as - 47°.
	26			34	W	20 ±	Faint. Connected with the last in Ca. A Ca streak extends as far as - 31° W.
	21			25	W	35	Detached Slants westwards.
	20	5		16 5	W	35	45" in Ca
	16	1		9	W	20	} Very bright and changing in Ca between 9 <sup>h</sup> 12 <sup>m</sup> and 10 <sup>h</sup> 12 <sup>m</sup> .
	12	1		6.5	W	15	
	12	1		4.5	W	10	
	12		7		W	10	Ca.
	10		9		W	10	Ca
	9		26		W	10	An arch 15" high in Ca
	12		30		W	Low	Slants westwards.
	5		72		W	10	
	0		80		W	10	Ca photographs 10 <sup>h</sup> 12 <sup>m</sup> , 9 <sup>h</sup> 12 <sup>m</sup> , and 9 <sup>h</sup> 44 <sup>m</sup> .
October 11 A. Y. S.	8 45	.	30		E	10	
	40		10		E	10	
	40		11		E	10	} Tops connected by a Ca streak
	40		12 5		E	10	
	10	4		5	E	15	Ca
	10			11	E	10	Ca
	37			14	E	10	
	36			23	E	10	
	35	4		27	E	20	Filamental.
	28			45.5	E	15	
	28			47 5	E	15	
	26			50 5	E	10	
	9 51	4		70	E	30	Faint. 6° broad in Ca.
	49			81 5	E	10	
	47			78 5	W	10	
	42	1.5		52 5	W	20	
	40	6		41.5	W	35	75" high in Ca. Differently shaped at 8 <sup>h</sup> 36 <sup>m</sup> .
	33			30	W	10	
	27			26	W	10	
	21	9		19.5	W	20, 10	} Continuous and 40" high in Ca.
	21			13	W	10	
	19	2		9	W	15	
	13	1		5.5	W	20	
	6	7	39		W	20	Ca photographs 8 <sup>h</sup> 10 <sup>m</sup> and 8 <sup>h</sup> 36 <sup>m</sup> .
October 12. G. N.	8 17	12	60 5		E	60	Ca Faint streaks. A detached cloudlet 240" high floats over these
	10 11		48 5		E	375	Ca. Faint and streaky Connected to the limb only by a thin filament
	8 34		45 5		E	10	
	34		37		E	15	
	29	3	34		E	240	Ca.™ Streaky. At 8 <sup>h</sup> 57 <sup>m</sup> only a faint streak 45" high was seen Nothing seen later.

Date and observer.	Hour I.S.T.		Base.	Latitude.		Limb	Height.	Remarks.
				North.	South.			
1908.	H	M	°	°	°			
October 12 —cont'd	G.N.							
	8	33	3	18	...	E	15	
	10	11	2	15		E	10	Ca.
	8	29		8		E	20	
		30	10		3	E	20, 40, 30	
		28			13	E	15	
		28			18	E	20	
		27	2		30	E	30	
		27			33	E	15	
		25			38.5	E	20	
		25			46.5	E	20	
		58			49.5	E	45	
	10	11	12		67	E	30, 45	Ca. Faint
	8	17	10		78.5	E	150	Ca. See Note.
	10	11			69	W	10	Ca.
	8	52	5		48.5	W	65	
	10	11			43.5	W	15	Ca.
		11			28	W	10	Ca.
	8	45	9		15	W	25, 35, 40	
	10	11		1		W	20	Ca.
		11		11		W	15	Ca. Faint at 8h 29m.
	8	45		13		W	25	
		39		33		W	25	
	10	11		38.5		W	20	Ca.
		11		68		W	10	Ca.
								Ca photographs 8h 17m, 8h 57m, 10h 11m, 10h 38m, 10h 53m, 10h 57m, 11h 2m, 11h 26m, 11h 30m, 11h 34m, 14h 34m, and 15h 31m.
October 13.	A.Y.S.							
	8	16	.	81.5	..	E	10	
		30		62.5		E	10	Ca.
		30		68.5		E	10	Ca.
		12		38.5		E	10	
		11		38		E	10	
		7	7	22		E	15, 25	12° broad and 90° high in Ca.
	7	54	2	12		E	10	
	8	30		8		W	60	Ca.
	7	57		5.5		E	10	
		55	2		2	E	25	
	8	30			18	E	30	Ca.
	7	51	4		19	E	20	Very bright, metallic D <sub>1</sub> , D <sub>2</sub> , b <sub>1</sub> , b <sub>2</sub> bright.
		47			38.5	E	10	
		46			48.5	E	10	
		45			61.5	E	10	
	9	1	2		48.5	W	30	
	8	30			84	W	15	Ca.
	9	0			21.5	W	10	
	8	55	4		4	W	.0	Bright } Connected } Surmounted in Ca by a de- 51 } in Ca. } tached streak 120" high.
		49	2	7		W	10	Faint
		43	1	10		W	10	
		30	9	22.5		W	10	Ca. Small dots.
		40	8	34.5		W	10	Connected with the last. Ca photographs 8h 30m and 8h 16m.
				40		W	25	
October 14.	G.N.							
	9	50		75	...	E	20	Ca. Detached
	11	21	2	35		E	30	
		20	5	13.5		E	50	11° broad in Ca.
		20		7		E	20	10° only in Ca.
		11	2		4	E	30	
		11	2		9	E	35	
	9	50			17	E	15	Ca.
	11	10	1		22.5	E	15	Shows displacement to red of about 2 Å in C.
		25	3		27.5	W	35	
		25	10		15	W	40	
		22	1.5	3		W	10	
		20	2	30		W	35	
	10	24		49.5		W	20	Ca photographs, flocculus only, 9h 50m and 9h 48m.

Date and observer.	Hour L.S.T.	Base.	Latitude		Lamb	Height.	Remarks.
			North	South.			
1908.	H. M.	°	°	°		"	
October 15 A.Y.S.	8 14	.	84 5	.	E	10	
	58		87 5		E	30	Ca.
	58		60 5		E	10	Ca.
	58	2	51 5		E	15	Ca.
	58		40		E	90	Ca Detached.
	9 10	3	36		E	20	
	8 58		32		E	60	Ca Top slants northwards
	9 6		23		E	10	
	8 58		22		E	10	Ca.
	58		19		E	10	Ca
	9 1		16		E	10	Faint.
	8 58	8	8		E	15, 20	A thin Ca streamer from the top of this proceeds as far as equator } Connected in Ca
	51	7		4 5	E	25	
	58			12	E	10	Ca.
	58			42	E	10	Ca
	46			46 5	E	15	
	45			51 5	E	10	
	40			61	E	10 ±	
	40			68	E	10	
	58			77 5	E	20	Ca Slants southwards.
	10 18			79 5	E	10	
	8 58			52 5	W	10	Ca.
	58			50 5	W	10	Ca.
	10 14			48 5	W	20	50'' high in Ca.
	10	4		39	W	40	
	9 50	1		29 5	W	30 ±	
	42	16		12	W	50 ±, 25	Connected to the last by a faint streamer. } Continuous in Ca.
	8 58	3	4 5		W	20	Ca.
	58		22		W	10	Ca.
	9 21	1 5	30 5		W	30 ±	Slants northwards. } Connected in Ca.
	21		33		W	30 ±	Do.
	16		45		W	10	Observed through clouds. Ca photographs 8 <sup>h</sup> 58 <sup>m</sup> and 9 <sup>h</sup> 43 <sup>m</sup> .
October 16. ...	11 33		13		E	10	Ca. Slants northwards.
	33	13		5 5	E	30, 60	Ca.
	33			43	W	45	Ca.
	38	9		30 5	W	30	Ca
	33			25	W	30	Ca.
	33	5		17 5	W	45	Ca
	33	2	13		W	20	Ca
							No visual observation. Ca photographs, flocculus only, 11 <sup>h</sup> 33 <sup>m</sup> and 11 <sup>h</sup> 19 <sup>m</sup> .
October 17. A.Y.S.	8 10	.	77 5		E	15	Ca.
	10		76		E	10	Ca.
	27	2	72		E	20	Ca. Seen only at 8 <sup>h</sup> 27 <sup>m</sup> .
	36		62		E	10	
	10	1	48 5		E	40	Ca. Faint.
	10		38		E	10	Ca
	35	8	30		E	30	
	20	22	1		E	50 ±	In Ca, the highest point of the bank is 30' at the equator and slopes down to 10' at -8°; it is 45' high at -10°
	14			26	E	20 ±	In Ca top slants as far as -21°.
	10	5		32 5	E	15	Ca.
	10			40	E	10	Ca.
	10			59 5	E	10	
	10			76	W	10	Ca
	10			52 5	W	30	Ca.
	10	4		49 5	W	20	Ca.
	9 30	1		41	W	10	13° broad in Ca extending from -43° to -30°.
	20	6		22	W	35, 10	50' high in Ca.
	15			3	W	10	
	15	2	Equator.		W	15	30' in Ca. A Ca streak from top of this extends as far as -8° W

Date and observer.	Hour I S T.	Base.	Latitude.		Lumb	Height	Remarks.
			North.	South.			
1908	H. M	"	"	"		"	
October 17. A Y S. —contd.	8 10 9 13 10 8 10 10 59	. 5 3	8 24 36.5 46.5 66.5 94	.	W W W W W	30 50 ± 30 10 10 30	Ca. Faint, slender, hook-like Ca. Ca. Not in Ca Fine with passing clouds. Ca photographs 8h 10m and 8h 27m
October 18. G N.	9 6 5 27 3 3 8 8 18 8 20 12 11 8 8 8 8	5 3 2 4 1 20 7	29.5 19.5 10 15.5 27.5 49.5 54.5 73 78.5 77.5 47.5 24 17 37.5 15 69.5	.	E E E E E E E E E W W W W W W W	60 45 15 15 20 10 10 25 10 15 45 20 45, 50 15 50 30	50" only in Ca. 30" only in Ca. Ca. 3" broad in Ca. 5" broad in Ca. Ca. Ca. Ca. Ca. 30" high in Ca. Ca. Only a small portion of this, 20" high, was seen in H at 9h 10m at + 11° 5' W. 40" only in Ca. Ca. Ca. Faint. Ca photographs 9h 8m and 9h 27m.
October 19. A.Y.S.	9 13 21 8 48 38 9 10 11 20 25 24 10 32 11 20 13 10 32 32 29 32 32 26 32	.. 4 3 14 6 2 1 1 1 3 2 1 3 2 1	84.5 31 19 13.5 38 48.5 21 6 5 18.5 22 28.5 34 37 41 46 47.5 48.5	..	E E E E E W W W W W W W W W W W W W W	10 20 20 ± 20 50 ± 20 ± 45 10 30 10 25 ± 15 ± 100 35 15 120 15 15 ± 15	2" broad and 45" high in Ca. 5" broad and 45" high in Ca. In Ca top bends as far as + 19° W, height 60". Ca. A small portion of this, 25" high, is seen in H. } Meet at top. Ca. Ca. Only 50" at 9h 7m Ca. Ca. Ca photographs 10h 32m and 11h 19m (incomplete).
October 20. G.N.	11 30 30 30 30 51 38 30 30 52 30 30 30	10 17 2 2 1	26 6 1 14 10 10 10 34.5 68.5 58.5 48 35 38 31	...	E E E E E E E E E W W W W W W	45 60 60 20 10 15 70 30 40 50 45 20 20 10	Ca. Ca. Faint. A slender streak slanting northwards as far as + 9° E Ca. A slender streak slanting southwards as far as - 1° E. Ca. Ca. Ca. In Ca it is 75" and 60" high and a streamer from top of this extends to lat. - 48° W. Ca. Ca. A slender streak slanting westwards. Ca. Detached 6" broad in Ca. Ca. Ca. Ca.

Date and observer.	Hour I S T.	Base	Latitude.		Limb.	Height.	Remarks
			North.	South.			
1908.	H. M	°	°	°		"	
October 20. G.N.	11 45	.		27	W	10	Ca.
<i>—contd.</i>	30	0.5		8	W	20	Ca.
	30		9		W	60	Ca Slants westwards.
	30	10	25		W	45, 25	Ca
	30	4	34		W	30	Ca Surmounted by a detached cloudlet 60" away from limb. Ca photographs 11h 30m, 11h 39m, and 11h 51m.
October 21 ..	8 6	1	0.5		W	20	Ca. Streamers extend both ways to - 3° W and + 4° W.
	6		5		W	30	Ca. Streamer from top extends to + 8° W.
	6	3	13		W	30	Ca. Top nearly meets the last prominence.
	6		33		W	30	Faint Ca. Faint
	6		37		W	40	Ca. do. No visual observations. Ca photograph (focculus) 8h 6m
October 26. A.Y.S.	9 10	.	70.5		E	15 ±	
	11 55	3	49		E	10	Ca.
	13 23		21		E	10	
	11 55	2	16		E	15	Ca
	13 20	1	1		E	20	Slants southwards.
	20			1	E	20	In Ca 30", and top slants down and meets the limb at - 4° N.
	10	13		19.5	E	35, 25	60" high in Ca.
	11 55	2		46	E	40	Ca
	55			78	W	10	Ca
	55			70.5	W	20	Ca.
	55			54.5	W	80	Ca.
	55	13		22.5	W	180	Ca Shape slightly altered and height 240" at 12h 32m
	55	9	11.5		W	30	Ca
	13 42	2.5	19		W	25 ±	
	11 55	6	21		W	60	Ca.
	13 40		25		W	10	
	11 55		40		W	40	Ca. Very faint at 11h 55m, stronger and 45" at 12h 22m; prominences observed through clouds. -65° E to + 15° W not examined. Ca photographs 11h 55m and 12h 22m.
October 27 A.Y.S.	8 21	...	74.5		E	20	Ca.
	21		72.5		E	10	Ca
	21		71.5		E	15	Ca
	30	1	46.5		E	20	Very faint, 45" in Ca.
	21		37		E	45	Ca.
	21		26		E	10	Ca.
	21		18		E	50	Ca. Slender streak.
	20		13.5		E	10	
	23	13		13.5	E	50 ±	90" high in Ca and a streamer extends as far as + 5° E.
	18			38	E	15	
	18			41	E	10	
	21			49	E	30	Ca. Slants eastwards.
	21			68.5	E	10	
	9 19			33.5	E	10	
	17			78.5	W	10	
	8 21			54.5	W	45	Ca. A slender vertical streak.
	21			27	W	30	Ca.
	9 10	2		20	W	10	
	8 55	28	8		W	40, 20, 25	37" broad, and 50", 40", 20" in Ca.
	21		50		W	30	Ca
	21		83.5		W	10	Ca.
	45	1	70		W	20	
	21		77		W	10	Ca.
	41		84.5		W	15	
							Observed through thin cirrus Ca photographs 8h 21m and 8h 7m.
October 30 ...	8 46	..	42		E	30	Ca.
	48			9	E	50	Ca. Top extends to - 5° and - 17° E.



Date and observer	Hour I S T.		Base	Latitude.		Limb	Height	Remarks
				North	South.			
1908.	H.	M	°	'	'		"	
October 30. —contd	8	46	2		26	E	30	Ca. A streamer from top extends to $-22^\circ$ E.
		46	2		52	E	20	Ca. Slants eastwards.
		46	1		38.5	W	30	Ca. Broader at top.
		46	19	2.5		W	20	Ca.
		46	2	22		W	20	Ca. A streamer from top extends to $+17^\circ$ W.
		46		28		W	120	Ca. A detached slender streak.
		46		38		W	10	Ca.
		46		54.5		W	10	Ca.
								No visual observations.
								Ca photographs (focculus only) 8 <sup>h</sup> 46 <sup>m</sup> and 8 <sup>h</sup> 8 <sup>m</sup> .
October 31. A.Y.S.	10	59		41		E	30	Ca.
		59		12		E	20	Ca.
	11	20	3		26.5	E	40	
	10	59			35	E	15	Ca. Slants southwards.
		59	5		50.5	E	60	Ca.
		59	5		85.5	W	15	Ca.
	11	50			42	W	10	
	10	59	20		32	W	30, 45	Ca. A streak almost parallel to limb.
		59	3		10.5	W	15	Ca.
		59			7	W	10	Ca.
	11	45	1.5	11.5		W	15	Top extends both ways in Ca.
		40	4	32.5		W	20 ±, 15	8" broad in Ca. A Ca streak from top reaches to 30".
								Seeing bad, Ca photographs, focculus, 10 <sup>h</sup> 59 <sup>m</sup> and 11 <sup>h</sup> 11 <sup>m</sup> , prominence 11 <sup>h</sup> 37 <sup>m</sup> and 11 <sup>h</sup> 44 <sup>m</sup> .
November 4. S.S.	9	14	..	47	...	E	10	Ca.
		14	1	15.5		E	150, 60	Ca. See Note.
		56	3	2.5		E	40 ±	
		22			4.5	E	10	
		20			16.5	E	10	
		18			24.5	E	10	
		16			31.5	E	50 ±	Top detached and very faint. In Ca the detached cloudlet is 90" from limb
		14			35.5	E	10	
		14			41	E	45	Ca.
		14			43	E	45	Ca.
		13			45.5	E	15	
		14	7		55.5	E	30	Ca.
		10	1		62.5	E	10	
	8	16			17	W	15	Ca. Seen only at 8 <sup>h</sup> 16 <sup>m</sup> .
	11	6	5	30.5		W	45 ±	} Tops connected in Ca.
		5		35.5		W	25 ±	
								Seeing poor.
								Ca photographs (focculus only), 9 <sup>h</sup> 14 <sup>m</sup> , 9 <sup>h</sup> 7 <sup>m</sup> , and 8 <sup>h</sup> 16 <sup>m</sup> .
November 5. G.N.	9	26		77.5	...	E	10	Ca.
		26		57.5		E	10	Ca.
		28		10		E	10	Ca.
		13	5		5.5	E	30	In Ca a streamer from top of this extends to $+3^\circ$ E.
		26	1.5		14	E	20	Ca. A streamer from top extends to $-20^\circ$ E
		26			22	E	15	Ca. Connected with the last streamer
		26			35	E	10	Ca.
		12	1		41.5	E	15	
		12	1		44.5	E	15	
		26	3		48.5	E	50	Ca.
		26	7		57.5	E	50	Ca.
		0			85	E	15	
		0			85.5	E	15	
		26	20		19	W	50	Ca.
		20	1	8		W	30 ±	In Ca a streamer from top of this extends to $+12^\circ$ W.
		26	1	14.5		W	30	Ca. Top slants and almost meets the last streamer.
		18	2	18		W	45	
		26		28.5		W	15	Ca.

Date and observer.		Hour I S.T.		Base.	Latitude.		Limb	Height	Remarks.		
					North.	South.					
1908.		H.	M.	°	°	°	'				
November 5	G.N	9	26	...	33			W	10	Ca.	
			26	51			W	10	Ca.		
Ca photograph 9 <sup>h</sup> 26 <sup>m</sup>											
November 6.	A.Y.S.	8	19	..	80.5	.	.	E	20	Ca.	
			19	77.5			E	20	Ca.		
			35	54			E	10			
			35	51			E	10			
			19	3	28.5		E	45	Ca. Top slants eastwards.		
			19	7	20.5		E	20	Ca.		
			19	2		1	E	10	Ca.		
			30	5		8.5	E	40	Form changed at 9 <sup>h</sup> 45 <sup>m</sup> . In Ca streamers extended to 0° and -13° E		
			25	5		18.5	E	20			
			20	2		25	E	30	A Ca streamer from this almost meets the last prominence		
				15	1.5		44	E	15	An arch.	
				10			59	E	10		
			9	1			39	W	15		
			8	58	1		25	W	20	45" high in Ca.	
				55	2.5		21.5	W	15	} Connected and 45" in Ca.	
				50	5		11.5	W	20		
				19			9	W	10	Ca.	
				19		1		W	10	Ca.	
				19		4		W	15	Ca.	
				19		12		W	10	Ca.	
				19		17		W	10	Ca.	
				44	1		20	W	40		
				48			31	W	10		
	19			44	W	10	Ca. Ca photographs 8 <sup>h</sup> 19 <sup>m</sup> and 8 <sup>h</sup> 3 <sup>m</sup> .				
November 7.	S.S.	8	28	..	75.5	.	.	E	10	Ca.	
			28	67.5			E	20	Ca.		
			9	12		63		E	20		
			8	50	10		22	E	50	16° broad in Ca.	
				37			8.5	E	25	} Connected and 20" high in Ca.	
				37			6.5	E	10		
				33	5		0.5	E	30	7° broad in Ca.	
				31			15.5	E	10	Faint.	
				29	2		23.5	E	20	3° broad in Ca.	
				29	1		26.5	E	20		
				27	1		29.5	E	25	Slants southwards.	
				23			33	E	15	Ca. Top meets the last prominence.	
				23	4		47	E	25, 30		
				21	1		53	E	10	30" high in Ca	
				20			68.5	E	10		
				23			72.5	E	10	Ca.	
				23			74.5	E	15	Ca.	
				23			80.5	E	10	Ca.	
				23			50	W	10	Ca.	
				23			49	W	10	Ca.	
			9	47	6		42	W	80		
				44	2		38	W	15		
				42	2		28.5	W	10	Very faint	
				40	1		25.5	W	35		
				35	4		15.5	W	25	} Connected in Ca.	
				35	1		9.5	W	40		
				8	23			7	W	15	Ca.
					23			6	W	10	Ca.
	9	31	7		1.5	W	25	A group of three prominences			
	8	28	4	8		W	15	Ca.			
	9	28	1	14.5		W	25	Surmounted by a streak 4° long.			
	8	23		21		W	10	Ca.			
	23			26.5		W	10	Ca.			
9	22	0.5		40		W	20				
	22	2		45		W	60	Very faint in hydrogen.			
	19	1.5		58.5		W	15				
	8	28		64		W	10	Ca.			
		24	0.5	76.5		W	10	Ca. Ca photographs 8 <sup>h</sup> 23 <sup>m</sup> , 8 <sup>h</sup> 32 <sup>m</sup> , and 8 <sup>h</sup> 9 <sup>m</sup> .			

Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb	Height	Remarks.
			North	South			
1908	H. M.	°	°	°		"	
November 8 A.Y.S.	9 4	6	22	...	E	40	Slants northwards } Tops connected in Ca.
	8 59	7	12.5		E	40	
	59	1.5	4.5		E	30	Ca. Detached.
	26		3		E	40	
	26	1.5		26	E	15	Ca.
	54	2		30	E	20	Ca. An arch.
	26	3		46.5	E	20	
	53			52.5	E	20	Ca. Faint.
	26			69.5	E	45	
	26			75.5	E	20	Ca.
	9 55			47	W	20	Two slender vertical streaks } See Note 2 See Note 1.
	50			38.5	W	20	
	35	15		27.5	W	70, 30	
	23	11		13	W	40	
	17			1	W	15	
	17	2		1	W	15	Ca.
	8 26			4	W	10	
	26			5	W	15	Ca.
	26	11		13.5	W	50	Ca. An arch.
	26			33	W	45	Ca. Faint at 8h 11m.
	26	5		41.5	W	60	Ca. Only a small portion of this was seen at 9h 14m in H
	26			79.5	W	20	Ca.
	9 11			84	W	10	Ca photographs 8h 26m, 8h 11m, 8h 45m, and 10h 48m
November 9. S.S. & G.N.	8 9	...	72		E	10	Ca.
	9		50		E	10	Ca.
	9		32		E	15	Ca.
	9	7	23.5		E	20	Ca. Faint
	46	16	11		E	80, 40, 50	45" in Ca 18" broad and 45" only in Ca
	42	3		4.5	E	30	
	40	10		19	E	60, 25	
	28			29	E	10	
	27	1		32	E	20	
	9			34	E	10	Ca
	9			35	E	10	Ca.
	25			37.5	E	10	
	9			75.5	E	10	Ca
	9			83.5	E	10	Ca.
	9 2	1		86	W	15	
	8 9			83.5	W	10	Ca.
	9			64	W	15	Ca.
	9	3		49.5	W	60	Ca. Top meets the next prominence
	9 0	1		46	W	60	} Tops connected in Ca.
	8 58	2		40	W	40	
9	1.5		20	W	10	Ca.	
9	2		15	W	20	Ca.	
9			Equator.	W	20	Ca	
55	2		40	W	30		
55			48	W	15		
52			65	W	15		
9			74.5	W	10	Ca Ca photographs 8h 9m and 8h 24m	
November 10. S.S.	9 10	...	64		E	25	
	8	4	42		E	10	
	8 5	3	29.5		E	40	Ca.
	9 6		25		E	70	50" in Ca Slants eastwards
	2	22	9		E	80, 20	100" in Ca.
	8 55	5		5.5	E	55	
	51			24	E	10	Slants southwards in Ca.
	50			32	E	10	Very faint.
	47			67	E	20	Slants eastwards.
	9 35	6		47	W	50, 45, 15	8" broad and 180" high in Ca
	28			16	W	10	
	8 5			11	W	10	Ca
	23	3		1.5	W	15	Ca. Seen only at 8h 23m
5			9	W	10	Ca. Faint	
5	4		16	W	40	Ca.	

Date and observer.	Hour I S T.	Base.	Latitude		Limb.	Height.	Remarks.	
			North	South				
1908.	H. M.	°	°	°		"		
November 10. S.S. --contd.	9 25	10	24	.	W	20		
	22	2	41		W	20		
	22		44		W	20	Top bends and almost joins the top of the last prominence.	
	8 5		51		W	15	Ca.	
	5		57		W	10	Ca.	
	5		86.5		W	10	Ca. Ca photographs 8 <sup>h</sup> 5 <sup>m</sup> and 8 <sup>h</sup> 23 <sup>m</sup> .	
November 11. A.Y.S.	11 4		68	.	E	10	Ca.	
	4		66		E	10	Ca.	
	8 25		63		E	15		
	11 4		59		E	15	Ca.	
	4	5	24.5		E	50	Ca. See Note 1.	
	8 20	16	9		E	50	The highest point is 70" in Ca.	
	13			1	E	10	Connected in Ca to the last prominence.	
							Do.	
		18			8	E	10	
		12	6		16	E	25	11° broad in Ca.
		8			54	E	Low	Not in Ca
		11 4			55.5	E	40	Ca. Slants eastwards.
		4			56	E	10	Ca.
		4	8		67	W	20	Ca.
		4			61	W	50	} Ca. Faint detached cloudlets
		4			60	W	180	
		4	1		56.5	W	40	Ca. Visible in H $\alpha$ of spectrograph.
		4	1		47.5	W	110	Ca. Slants southwards
		4	5		25.5	W	15	Ca.
		8 48	2		20	W	15	45" high and 8° broad in Ca.
	11 4		4		W	15	Connected by filaments to the last prominence	
	4		6		W	10	Ca.	
	8 48		13		W	20	An arch which is not visible on Ca photograph at 11 <sup>h</sup> 4 <sup>m</sup> .	
	43		16		W	40	See Note 3.	
	35	12	26		W	25, 15		
	29		44		W	10		
	11 4		57		W	15	Ca.	
	4		58		W	15	Ca. Ca photographs 11 <sup>h</sup> 4 <sup>m</sup> , 9 <sup>h</sup> 17 <sup>m</sup> , and 9 <sup>h</sup> 46 <sup>m</sup> .	
November 12. S.S.	8 15	.	78.5	.	E	10	Ca	
	58	5	60		E	15		
	15	13	23.5		E	75, 50	Ca. Only a small portion of this is seen in H.	
	53	1	9.5		E	10	See Note.	
	45	10		3	E	30	} Connected in Ca.	
								Metall. D <sub>1</sub> , D <sub>2</sub> , b <sub>1</sub> , b <sub>2</sub> bright
		35	8		16.5	E	45	Slants southwards.
		15			29	E	10	Ca.
		9 20			54.5	W	25	60" in Ca } Tops slant toward and meet each
		18	1.5		49.5	W	35	60" in Ca } other
		8 15	4		31	W	10	Ca.
		9 13	11		18.5	W	25, 15, 10	A group of prominences.
		8 15		10		W	15	Ca.
		15		18		W	15	Ca.
	15		21		W	15	Ca.	
	9 7	2	34.5		W	20		
	4	4	44		W	20		
	8 15		55		W	10	Ca. Ca photographs 8 <sup>h</sup> 15 <sup>m</sup> and 8 <sup>h</sup> 32 <sup>m</sup>	
November 13 A.Y.S.	9 54	2	55	.	E	10	Ca	
	54	10	26		E	80	Ca	
	8 31	11	11.5		E	50	A streamer from top meets the limb at + 5° E. Before 10 <sup>h</sup> 22 <sup>m</sup> the streamer reaches only to + 8° E. in Ca.	
		29	1	0.5		E	30	
		29	2		6.5	E	30	Top slants and joins the top of the last prominence.
	9 54			9	E	30	Ca. Faint	
	54			11	E	30	Ca. do.	

Date and observer.	Hour I S T	Base	Latitude		Limb	Height	Remarks
			North.	South.			
1908	H. M	°	°	°		"	
November 13. A.Y.S. - contd	8 25	2	.	24 5	E	20	13° broad in Ca.
	9 30			40	E	20	A jet
	8 19			56	E	15	
	9 51			59	E	10	Ca.
	54			71	E	10	Ca.
	54			79.5	E	20	Ca.
	54			81 5	W	45	Ca. Detached, faint
	10 6			78	W	20	
	9 28	2.5		58	W	15	Faint 6° broad and 50" high in Ca.
	54			42	W	10	Ca.
	16	2		27	W	60, 75	See Note.
	5	2		18	W	20	
	51			7	W	15	Ca.
	10 22			5	W	30	Ca.
	9 54	1	10		W	10	Ca 6" broad and 20" high at 10h 22m.
	54		36		W	20	Ca.
	0		51 5		W	15	Faint.
	54		60		W	10	Ca.
							Limb unsteady. Ca photographs 5h 54m, 9h 26m, and 10h 22m.
November 14. S.S.	14 20	3	40.5	..	E	30	Ca
	20	4	33		E	20	Ca.
	8 56	1	25		E	20	
	53		12 5		E	60 ±	Slants northwards. 3° broad and 45" high in Ca.
	14 20			1	E	15	Ca.
	20			32	E	10	Ca.
	9 16			68	W	10	
	14 20	10		55	W	60	Ca Only a portion of this 25" high was seen in H at 9h 14m.
	20			31	W	10	Ca
	20			28	W	10	Ca.
	9 12	1		21	W	30 ±	A streamer from top reaches as far as - 25°. Only 15" high in Ca at 14h 20m.
	12	6		17	W	15	A group of prominences.
	14 20			1	W	45	Ca. Detached.
	9 48	9	11		W	20, 35 ±	A group of prominences. Connected and 16° broad and 40" high in Ca.
	14 20		21		W	10	Ca.
	20		30		W	30	Ca. Detached Observed through cirrus. Strong wind and limb very unsteady. Ca photographs 14h 20m and 14h 28m.
November 15. S.S.	8 32		77	..	E	10	Ca
	32		73		E	10	Ca 30° at 8h 50m
	32	2	55		E	20	Ca. An arch.
	9 34	4	35		E	30	
	29	5	21		E	30	
	25	8	7.5		E	35	} Connected at base in Ca.
	20	3		4 5	E	40	
	8 32			10	E	60	Ca A slanting streak.
	9 9			57.5	E	15	
	7			70.5	E	10	
	8 32			82.5	E	30	Ca.
	32	2		73	W	40	Ca. Faint. Detached, and 15" only at 8h 50m.
	32	9		50.5	W	140	Ca Slants westwards.
	32			29	W	10	Ca.
	32			25	W	15	Ca.
	32			11	W	30	Ca.
	32			10	W	15	Ca.
	9 54	3		4.5	W	20	
	8 32		2		W	20	Ca.
	9 51	5	8		W	25	
	49	3	15.5		W	50 ±	A streak from top proceeds as far as + 25° W. } Connected in Ca.
	45		25.5		W	10	30" in Ca.
	8 22		67		W	15	Ca.
	32		70		W	15	Ca.
	32		77.5		W	15	Ca.
	32		87.5		W	15	Ca Ca photographs 8h 32m and 8h 50m.

Date and observer.	Hour I.S.T	Base.	Latitude		Limb.	Height	Remarks	
			North	South				
1908.	H. M	°	"	"		"		
November '6 A.Y.S	8 28	..	76.5	.	E	10	Ca.	
	8 38		55		E	20		
	8 28		42.5		E	10	Ca.	
	8 0		36		E	10		
	8 0	4	33.5		E	35 ±	Very faint. 5" broad in Ca.	
	8 52	8	21		E	30		
	8 45	6	9		E	40	Slants eastwards Ca streamer from top reaches to + 6° E.	
				Equator	E	10		
		42 28			5.5	E	50	Ca. A slender streak Differently shaped at 8h 37m.
		40			85	E	10	
		38			19	E	10	
		28			53.5	E	15	Ca.
		36			62	E	20	
		28			87	W	10	Ca.
		28			85	W	10	Ca.
		9 30			52	W	20	
		8 28	2		51.5	W	30	Ca.
		8 28	6		27.5	W	50	A streamer from top reaches as far as -22° 5.
		8 28	3	9		W	30	Ca. A group of three prominences.
		8 28	4	15.5		W	75	Ca.
		9 20	5	21		W	25	45" in Ca at 8h 37m.
		8 28		31.5		W	45	Ca.
		28		33.5		W	20	Ca.
		28		37.5		W	60	Ca. Detached.
		28		50.5		W	15	Ca.
		28		61.5		W	10	Ca.
								(Observed during breaks in clouds Ca photographs 8h 28m and 8h 37m)
	November 17. S.S.	8 30	..	73		E	10	Ca.
30			71		E	10	Ca.	
30			68		E	10	Ca.	
55			56		E	10		
30			49		E	10	Ca.	
30			48		E	10	Ca.	
30			47		E	10	Ca.	
8 52		8	33		E	25, 45	Two prominences connected at top.	
9 20			27		E	20	Ca. Connected with the last, seen only at 9h 20m.	
8 41			7		E	20	Slants eastwards, very faint.	
39				9	E	20		
37		2		24	E	20		
34		10		38	E	15, 25		
32		3		53	E	10	A group of three prominences	
30				61	E	15	Slants eastwards	
28				70	E	10		
30				85.5	W	15	Ca.	
30				51	W	15	Ca.	
9 20		5		28.5	W	45	See Note	
8 30		3		16.5	W	30	Ca.	
9 15				13	W	15		
13				9	W	35	A slanting streak, 120" high in Ca. } Connected in	
11				13	W	50		
10		5		23.5	W	25	A group of three prominences. } Ca.	
8 30				33	W	50	Ca. Slants northwards	
30		7		37.5	W	30	Ca.	
9 5				47	W	10		
1				64	W	10		
						Ca photographs 8h 30m, 8h 41m, and 9h 20m.		
November 18. A.Y.S.	8 56	..	70		E	10	Ca.	
	58		69		E	10	Ca.	
	55	10	32		E	40		
	56	4	24		E	35	Ca. An arch not visible on earlier photographs.	
	56		19		E	15	Ca.	
	45	9		20	E	65 ±	Faint, filamental. Ca streamers from top extend as far as -10° N.	
	58			36	E	20	Ca. Not visible on earlier photographs.	
38	0.5		37	E	25	Slants southwards and almost meets the next prominence.		
	38	1	48.5	E	20			

Date and observer.	Hour I S.T.	Base	Latitude		Limb	Height	Remarks
			North	South			
1908	h m	°	°	°			
November 18 A.Y.S. —contd	8 35	...	..	69	E	10	
	56			69	W	10	Ca
	9 32			51	W	10	
	29	1		36 5	W	30	
	27			19	W	20	Ca A streamer from the top of this goes to meet the next prominence
	27	0 5		11 5	W	25	
	8 56			1	W	10	Ca.
	9 23	12	9		W	15	
	12		17		W	20	
	12	5	22 5		W	70	} Connected in Ca, and the highest point is only 60" in it.
	5		27		W	30	
	5		29		W	30	Very faint.
	8 56		30		W	15	Ca.
	56		43		W	15	Ca.
	56		48		W	10	Ca. Ca photographs 8 <sup>h</sup> 56 <sup>m</sup> , 8 <sup>h</sup> 21 <sup>m</sup> , 8 <sup>h</sup> 29 <sup>m</sup> , and 8 <sup>h</sup> 36 <sup>m</sup> .
November 19. S.S.	8 25	..	80	.	E	20	Ca.
	9 9		18 5		E	15	
	5	5	32 5		E	20	
	5		24 5		W	10	
	4		13		E	10	
	8 25		8		E	15	Ca.
	9 2			7 5	E	10	
	8 25			9	E	15	Ca.
	9 0			12 5	E	10	
	8 57	5		25 5	E	90	See Note.
	9 36			44	W	15	
	8 25			30	W	15	Ca.
	9 32			22	W	25	A Ca streak from top extends to -27° W.
	32				W	20	} Connected in Ca,
	32			20	W	10	
28	2		17	W	10		
28			10	W	30		
25			2 5	W	15		
8 25	4	6		W	20	Ca	
9 23	2	10 5		W	20	Connected with the last Very bright. Not metallic C slightly displaced to violet.	
21		13 5		W	10	} Eruptive. Forms changing rapidly } Maximum height varied from 105" to 80".	
8 25		21		W	10		
25		27		W	15	Ca. A short streak parallel to limb.	
10 19		36		W	10	Ca photographs 8 <sup>h</sup> 33 <sup>m</sup> , 9 <sup>h</sup> 29 <sup>m</sup> , 10 <sup>h</sup> 19 <sup>m</sup> , and 11 <sup>h</sup> 53 <sup>m</sup> .	
November 20. A.Y.S.	8 38	2	34	..	E	15	25" high in Ca.
	15		31		E	15	Ca
	15	2	17		E	15	Ca.
	15		11		E	20	Ca.
	32	6	1		E	40	In Ca only some streaks 30" high were seen at 8 <sup>h</sup> 15 <sup>m</sup> .
	32	1		5	E	15	
	25	3		11 5	E	35	Bigger and 40" high at 8 <sup>h</sup> 55 <sup>m</sup> .
	20	5		25 5	E	65	Ca streamers from top extend to the top of the last prominence
	15			70	E	15	Ca.
	15			20	W	10	Ca.
	15	1		20	W	15	Ca.
	15			15	W	10	Ca
	15	20	20		W	65	Ca. Very faint. Only small portions of this 10" high were seen in II at 8 <sup>h</sup> 42 <sup>m</sup> .
	15		79		W	10	Ca. Ca photographs 8 <sup>h</sup> 15 <sup>m</sup> and 9 <sup>h</sup> 8 <sup>m</sup> .
	November 21. A.Y.S.	8 38	..	40	...	E	35
9 13			7		E	10	
8		2		4	E	20	
6				5	E	15	
6				10	E	10	

Date and observer.	Hour I S T.	Base.	Latitude		Limb.	Height	Remarks.
			North	South.			
1908.	" M	°	°	°		"	
November 21. A.Y.S —contd.	8 33	.		24	E	25	Ca
	9 5			34	E	25	Slants as far as $-30^\circ$ E
	8 33			83 5	W	10	Ca.
	33			70	W	10	Ca.
	9 49	2		80	W	25	
	8 33		2		W	10	Ca
	9 45		6		W	10	
	38	4	17		W	50, 30	} Connected and 65" high in Ca Seeing bad Through clouds. Ca photographs 8h 38m and 8h 22m
	33		24		W	30	
	November 22. S.S.	9 30	.	8	.	E	20
26			5 5	.	E	10	
23				15	E	60	Almost detached. Connected in Ca to the promi- nence at lat. $+ 8^\circ$ E.
20		0.5		24.5	E	10	
20		1.5		32	E	20	
20		1		36	E	70	} Connected in Ca.
16		3		44	E	70	
0		1		56	E	25	10" in Ca
8 59				59	E	20	
54				82	E	10	Ca
54				85 5	E	10	Ca
54				44	W	10	Ca
54				33	W	20	Ca.
54		2		30	W	20	Ca.
54		13		20.5	W	00	Ca.
54			6		W	30	Ca.
54		8		12	W	50	Ca.
54				26	W	15	Ca
54	1		36	W	20	Ca	
November 23. A.Y.S	8 41	0.5	20		E	10	Observed visually only between $+10^\circ$ E and $-70^\circ$ E. Cloudy, Ca photograph 8h 54m. Good.
	40	0.5	11		E	20	30 in Ca.
	33	2		10	E	45	See Note.
	8 26			41	E	45	Faint. } Slanting streaks connected and 75" high Faint. } in Ca. The prominence extends in Ca to $-53^\circ$ E.
	23			49	E	30	
	25			58	E	10	Ca.
	25			54	W	25	Ca.
	25			48	W	20	Ca.
	25			44	W	10	Ca.
	9 0			34	W	20	
	8 55	12		19	W	70	Streamer from top extends to $-30^\circ$ W
	50	1	11		W	25	} Connected in Ca.
49	5	15 5		W	30		
45	1	37		W	15		
25			65	W	10	Ca.	
November 24 S.S.	8 47	1	31	.	E	20	Streamers extend both ways from top to $+34^\circ$ and $+26^\circ$ E.
	43	0.5	16		E	40 ±	
	40	2	12		E	25	Metalho, D <sub>1</sub> , D <sub>2</sub> , b <sub>1</sub> , b <sub>2</sub> , b <sub>3</sub> , b <sub>4</sub> bright. Top meets the last prominence.
	38		8		E	10	
	36		4		E	20	
	33			15	E	10	
	31	1.5		21	E	25	
	24			47 5	E	10	Ca.
	27			51	E	10	20" in Ca.
	25			68	E	20	Very faint.
	9 36			69	W	15	
	34			63	W	35 ±	
	31			58	W	15	
	30	1		50	W	15	
18	6		21	W	70	A Ca streak from top extends as far as $-15^\circ$ W. 7" broad in Ca, extending from $-5^\circ$ to $-12^\circ$ W.	
14			8.5	W	20		



Date and observer	Hour I S.T	Base	Latitude.		Limb	Height.	Remarks
			North	South			
1908.	h. m	°	°	°		"	
November 24. S.S. —contd.	9 12	0.5	0.5	..	W	25	Slants southwards. A Ca streak passes through the middle of this prominence
	8	1	12		W	35	} Tops slant towards and meet each other Ca photographs 8 <sup>h</sup> 24 <sup>m</sup> and 8 <sup>h</sup> 36 <sup>m</sup>
	5	2.5	18.5		W	25	
	0		68		W	10	
November 25. A.Y.S.	10 51	..	45		E	25	Faint. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Only half the limb examined Ca photographs, 10 <sup>h</sup> 15 <sup>m</sup> (Hoculus), 10 <sup>h</sup> 22 <sup>m</sup> (prominence, poor).
	49	3	37		E	35	
	45	0.5	20		E	25	
	39			22	E	30	
	30			25	E	35	
	15			50	E	40	
	15			18	W	30	
	15			12	W	20	
	15			9	W	20	
	15		4		W	15	
	15		22		W	10	
	15		38		W	10	
November 26. S.S.	8 16	1	55		E	30	
	51	1	50		E	25	Very faint. Meets the last in Ca.
	50		43.5		E	25	Metallic D <sub>1</sub> , D <sub>2</sub> , b <sub>1</sub> , b <sub>2</sub> , b <sub>3</sub> , b <sub>4</sub> bright. In Ca it is a streak extending from +5.5 to +9°. 90° in Ca.
	47	4	37		E	30	
	43		5.5		E	10	
	37			42	E	10	
	31			50	E	75	
	31			53	E	25	
	29			58	E	10	
	26			75	E	15	
	21			58	W	75	
	19	2.5		27	W	20	
	16	5		17.5	W	30	
	12	16	4		W	20	
	9	3	16		W	40	
	7		24		W	10	
	7		26		W	10	
	8 59	3	40		W	35	Ca Detached Ca photographs 8 <sup>h</sup> 16 <sup>m</sup> , and 8 <sup>h</sup> 13 <sup>m</sup>
	16		47		W	25	
November 27. A.Y.S.	8 20	0.5	39	...	E	60	70° in Ca
	39		19		E	20	Ca.
	9 10		15		E	20	} Very faint. } Almost connected in Ca.
	8 39		18		E	20	
	14	9		21.5	E	45	Base extends to -29°E in Ca.
	10	2		51	E	45	} A faint streamer from top bonds and meets limb at -57°E. The height is 120° in Ca.
	9 0			72	W	10	
	8 53	0.5		33	W	20	} Slant toward and meet each other.
	59			28	W	20	
	53	3		25	W	20	
	50			8	W	10	
	37	13	20.5		W	85	
							Only 65° and 40° in Ca. Cloudy with breaks. Ca photographs 8 <sup>h</sup> 30 <sup>m</sup> and 8 <sup>h</sup> 19 <sup>m</sup> .
November 28. S.S.	8 38	1.5	45	...	E	25	Ca.
	46		42.5		E	10	Faint.
	38		25.5		E	30	Ca.
	41	3	18.5		E	35	} 7° broad and 45° high in Ca. 5° broad and 45° in Ca A Ca streamer from it extends to +4°E. } Connected in Ca.
	39	3	10.5		E	35	
	37		3.5		E	10	D <sub>1</sub> , D <sub>2</sub> bright at base. A faint streak from top reaches to a height of about 60°
	32	4	19		E	35	

Date and observer.	Hour I.S.T.		Base.	Latitude.		Limb.	Height.	Remarks.	
	H.	M.		North.	South.				
1908 November 28. S.S. -contd.	8	27	1		26	E	15	Connected with the last by a streak. A Ca streamer from top extends as far as $-31^{\circ}$ E and meets the next prominence.	
		25			31	E	15	Faint.	
		22	5		53.5	E	30, 50	Two prominences; 60" high in Ca.	
		19			65.5	E	10		
		38	5		37.5	W	100	Ca Only a small portion of this, 20" high, was seen in H at 9 <sup>h</sup> 20 <sup>m</sup> .	
		9 10	3		28.5	W	70 ±	Faint. 100" high and continuous with the last in Ca.	
		15	2		15	W	15		
		13			5	W	35		
		11			Equator.	W	15		
		9		9		W	20		
		4	9	22.5		W	100	90" only in Ca.	
		8 59		36		W	30	} Form a single continuous prominence in Ca, 25" high.	
		57		44		W	10		Ca photographs 8 <sup>h</sup> 38 <sup>m</sup> , 8 <sup>h</sup> 19 <sup>m</sup> , and 10 <sup>h</sup> 1 <sup>m</sup> .
	November 29. A.Y.S.	10	46	2	48	..	E	50	Ca.
			48		25.5		E	45	Ca. A vertical streak
		8 16		24		E	20	1" 5 broad and 45" high in Ca.	
		10 46		17		E	30	Ca. Detached.	
		46		15		E	40	Ca. A slanting slender streak.	
		8 14	3	6.5		E	25	9" broad and 40" high in Ca.	
		13			2	E	25	A jet.	
		10 46			6	E	50	Ca. A slanting streak.	
		8 11	2.5		20	E	25	35" high in Ca. A Ca streamer from top meets limb at $-14^{\circ}$ E.	
		8	5		55.5	E	60	70" in Ca.	
		10 46			77	E	35	Ca.	
		46			58	W	20	Ca.	
		46			58	W	20	Ca.	
		8 40			13	W	80	A Ca streamer from top extends as far as $-20^{\circ}$ W.	
		40			10	W	20	Connected with the last by a Ca streak.	
November 30. S.S.		38		4.5		W	10		
		38		12		W	10		
		30	8	27		W	90		
		25	4	32		W	40	60" in Ca.	
		25	0.5	35		W	40	Passing clouds	
		9 10		54	...	E	15	Ca photographs 10 <sup>h</sup> 46 <sup>m</sup> , 8 <sup>h</sup> 25 <sup>m</sup> , and 7 <sup>h</sup> 56 <sup>m</sup> .	
		8 47		46		E	15	Ca.	
		9 8		41		E	10		
		6		30		E	15		
		8 47	3	25.5		E	30	Ca.	
		9 5	2	23		E	20	Continuous with the last.	
		0	10	12		E	25	Continuous with the last in Ca. N end changing rapidly D <sub>1</sub> , D <sub>2</sub> , b <sub>1</sub> , b <sub>2</sub> bright over lower half. Height in Ca 60".	
		8 56	1	1.5		E	25 ±		
		55			19	E	10		
		48	2.5		54	E	35		
	9 45			40	E	25	Was not seen at 8 <sup>h</sup> 45 <sup>m</sup> .		
	8 47			28	W	80	Ca		
	9 38			20	W	10			
	32	8	15		W	40	50" in Ca. D <sub>1</sub> , D <sub>2</sub> , b <sub>1</sub> , b <sub>2</sub> bright near base.		
	30		26		W	25 ±	Faint.		
	25	2.5	36		W	140	125" only in Ca.		
December 2 S.S.	8	44		50	..	E	25	Ca photographs 8 <sup>h</sup> 47 <sup>m</sup> and 8 <sup>h</sup> 21 <sup>m</sup>	
		15		46		E	10	Ca	
		15		37		E	15	Ca.	
		15		33		E	110	Ca. Top broader and slants eastwards.	
		42	6	21		E	35	Slants eastwards, 8" broad in Ca.	
		38		13		E	80	} Faint, detached.	
		38		11		E	60 ±		
		32	22		3	E	35, 25	D <sub>1</sub> , D <sub>2</sub> bright over the lower half. C slightly displaced to red at lat. $+3^{\circ}$ near base.	
		22			34.5	E	10		
		22			35.5	E	20		

Date and observer.	Hour L.S.T		Base	Latitude		Limb.	Height	Remarks
				North	South			
1908								
December 2 —contd.	S S	8 22	.			E	10	
		15	.			W	15	Ca.
		15	2	11		W	20	Ca.
		18		16.5		W		See Note
		15		30		W	25	Ca Detached.
		15		33		W	15	Ca.
		15		36		W	10	Ca.
		15	2	39		W	35	Ca. On photographs 8h 15m and 8h 27m.
December 3.	A.Y.S.	8 50	8	28	.	E	120 ±	Ca. A cloud connected to limb by two stems at + 32° and + 21° E.
		9 8		19		H	10	
		0 0	10		16	E	45, 60	75° in Ca. A streamer from top flows eastwards.
		8 59		42		E	20	Ca.
		53		40		E	15	50° in Ca.
		9 25		67		W	10	
		23	3	24		W	20	8° broad in Ca.
		8 50	0.5	10		W	10	Ca.
		9 18	4		4	W	30	Ca A streamer from top proceeds as far as + 1° W.
		8 58		19		W	20	Ca
		58		30		W	20	Ca. } Tops connected by a streak
		58		35		W	20	Ca. } Top broader
		9 12		40		W	65	A Ca streak connects the top of this to the last prominence
		45		W	10	Seeing bad. Ca photographs 5h 59m and 9h 37m.		
December 4.	A.Y.S.	10 45	.	80.5	...	E	10	} Not on Ca photographs.
		45	0.5	71.5		H	20	
		12 3		1		E	15	Ca
		9 25	8		29	E	30, 40 ±	A group of three prominences 30° and 50° high and surmounted by a detached spot 170° high in Ca.
		12 3			48	W	10	Ca.
		3	9		30.5	W	20, 30	Ca.
		3	14		12	W	20, 10	Ca.
3		12		W	10	Ca		
		2	15		W	30	Ca x shaped. Seeing bad Ca photograph 12h 3m.	
December 5	A.Y.S.	9 17	...	62	.	E	10	Ca.
		17		42		E	10	Ca.
		17		36		E	15	Ca.
		17		30		E	30	Ca. Detached.
		17		19.5		E	45	Ca A detached arch.
		17		18		E	10	Ca.
		17		17		E	10	Ca.
		17		13		E	15	Ca.
		17		6.5		E	30	Ca.
		8 19	0.5		5	E	20	Ca
			3		31.5	E	35 ±	A Ca stem from this meets limb at - 26° E
		15			35.5	W	35 ±	Very faint. } Connected in Ca and extends to - 39° E. in it.
		9 17			61	E	15	Ca.
		17			87	W	10	Ca.
		17			72	W	10	Ca.
		0	2		38.5	W	30 ±	5° broad and 45° high in Ca.
		17			30	W	15	Ca.
17			28	W	15	Ca.		
17	3		17.5	W	60	Ca. Somewhat faint		
8 55	13		3	W	20, 30	Slightly altered at 10h 25m.		
9 17		8		W	20	Ca.		
17		11		W	15	Ca. Observed through cirrus. Ca photograph 9h 17m.		
December 6.	S.S.	8 26	...	84	...	E	15	
		9 14		80.5		E	25 ±	
		11		60.5		E	15	
		7		38.5		E	20	Faint; slants northwards.

Date and observer	Hour I S T	Base	Latitude.		Limb.	Height	Remarks.
			North.	South			
1908.	H. M.	°	°	°		"	
December 6. S S —contd	8 26	..	31		E	30	Ca.
	28		19		E	45	Ca.
	9 5	3	11 5		E	35	45" high and base extends 3° further east in Ca.
	2	3.5		3 5	E	50 ±	Slants northwards in Ca
	0			7 5	E	20	Faint.
	8 59			19.5	E	20	Faint.
	57			24.5	E	25	} Connected and 20" high in Ca.
	57			28	E	20	
	55	4		38	E	70	
	26			38	E	15	Ca.
	26			40	W	10	Ca.
	9 46			40	W	15	} Connected in Ca.
	44			36	W	30	
	43	1		32	W	40	
	36	25		9 5	W	50	
	27	6	10		W	25	The highest point is 100" in Ca.
	23		21.5		W	25	
19		44.5		W	40	Detached. Not quite detached but lower portion-faint in Ca.	
						Ca photographs 8 <sup>h</sup> 26 <sup>m</sup> , 8 <sup>h</sup> 51 <sup>m</sup> .	
December 7. A.Y S.	9 2	.	81	.	E	15	Ca.
	2		78		E	15	Ca.
	2		70		E	15	Ca.
	2		51		E	15	Ca.
	8 29		38		E	10	Faint
	9 2		15		E	20	Ca
	8 25		14		E	15	
	25		13		E	15	
	9 2	4	1		E	20	Ca. An arch.
	2	3		3 5	E	20	Ca. An arch.
	8 21	5		23.5	E	20	9° broad in Ca.
	19	3		33.5	E	30	
	9 0	5		39.5	W	50	} Almost connected in Ca.
	8 56	2		32	W	30	
	9 50	13		16 5	W	90	The highest point is 120" in Ca.
9 2		13		W	30	Ca.	
8 45		17.5		W	30	Faint	
35		41.5		W	50	Detached	
						Ca photographs 9 <sup>h</sup> 2 <sup>m</sup> , 8 <sup>h</sup> 27 <sup>m</sup> .	
December 8. S S.	8 46	2	42		E	10	
	46		34		E	20	Ca.
	42	1	16 5		E	25	
	34		6		E	20	Ca.
	34			1	E	30	Ca.
	34			4	W	20	Ca.
	34	4		8	E	40	Ca. Slants southwards.
	37			12	E	10	
	9 25			80.5	W		No prominences. C slightly displaced both ways
	19	5		41 5	W	40	
	11			21	W	70	Attached to chromosphere by fine filaments. 90" high in Ca.
	8 46	3		1.5	W	20	Ca.
	9 7		2		W	15	
	0	3	22 5		W	15	
8 58	1	34.5		W	20	5° broad in Ca.	
57		43 5		W	10		
46		50		W	50	Ca.	
						Ca photographs 8 <sup>h</sup> 46 <sup>m</sup> , 8 <sup>h</sup> 34 <sup>m</sup> .	
December 9. A.Y S.	8 40	...	88	.	E	10	Ca.
	40		38		E	10	Ca.
	40		36		E	10	
	35	18		1	E	20, 25	
	31			10	E	25	Not in Ca. Slants southwards.
	29			24	E	20	Slants southwards.
	25			46.5	E	10	

Date and observer	Hour I S.T.	Base	Latitude.		Limb	Height	Remarks
			North.	South.			
1908	H M	°	°	°		"	
December 9 A Y.S. —contd.	8 22	3	.	71.5	E	20	
	9 0	3		43.5	W	25	
	8 55		3.5		W	10	
	52	8	32		W	45	
	45	8	47		W	20	Ca photograph 8h 40m
December 10 S.S.	8 53		44		E	15	
	49	0.5	15		E	15	
	46	1		0.5	E	30	A streamer from top extends to +8° E.
	34			8	E	45	Ca
	40			20.5	E	20	Base extends to -22° in Ca. } Connected in Ca.
	36			31	E	10	
	34			50	E	30	Slants southwards.
	34			86	W	10	Ca.
	9 17			48	W	20	
	14			11.5	W	15	
	8		19.5		W	25	Changing rapidly. There was very little of it at 8h 10m.
	5	1	30.5		W	35	Slants northwards. In Ca top extends further north to +45° W and height 50"
	8 34		53		W	15	Ca.
	34		55		W	10	Ca.
	December 11. A Y.S.	8 25		76		E	10
25			57		E	10	Ca.
25			42		E	20	Ca
40		2	40		E	10	Faint in Ca.
25			38		E	10	Ca.
25		0.5	26.5		E	20	Ca. Top flows eastwards.
33			22		E	15	Top slants northwards and almost meets the last prominence
33		4	18		E	20	
25			12		E	20	Ca
32				19	E	Low.	Bright
25				34	E	10	Ca
30				51	E	10	
25				56	E	10	Ca
25				80	E	45	Ca
25				84	E	10	Ca
25				70	E	35	Base very faint.
20				75	E	10	
25				82	W	15	Ca.
9 7				51	W	15	Very faint.
8 25				43	W	30	Ca
9 1				29	W	40	Very faint. A slanting hook
8 25				17	W	10	Ca.
52			6		W	10	
52			9		W	20	Faint. } Connected in Ca.
52			16		W	10	
52		19		W	10		
25		20		W	60	Ca	
25		25		W	75	Ca	
47		42		W	10		
25		45		W	10	Ca	
25		64		W	10	Ca	
25		73.5		W	20	Ca	
45	1	75.5		W	20	Continuous with the last in Ca. Ca photographs 8h 25m and 8h 38m.	
December 12 S S	8 35		41		E	40	Ca. A detached spot. Seen only at 8h 35m.
	9 7		38		E	40	
	0	8	25		E	60, 40	
	8 57	7	10.5		E	35	
	50			8	E	25	
	45			17	E	30	Top faint
	45			12	E	10	
	45			13	E	10	Very bright. D <sub>1</sub> , D <sub>2</sub> , b <sub>1</sub> , b <sub>2</sub> bright.
	19			33	E	10	Ca
	40			35	E	30	Faint.
19			50	E	10	Ca.	

Date and observer	Hour L.S.T		Base	Latitude		Limb	Height.	Remarks.
				North	South.			
1908.	H	m.	°	°	°			
December 12 S.S. —contd.	8	35	4		57	E	30	
		35			60.5	E	10	Faint
		30			80	E	10	
	9	43			85	W	25 ±	Very faint.
		37	2		54	W	35	50'' high in Ca
		35			50	W	10	A Ca streamer from top goes to meet the last prominence.
		34			45.5	W	10	Faint
		33			34.5	W	15	Detached
		32			31.5	W	15	Slants southwards.
	8	35			22	W	15	Ca.
		35			20	W	15	Ca.
	9	27	3		10.5	W	10	20'' high in Ca
		24		1		W	30	A Ca streak from top meets limb at — 5° W.
		22	1	7		W	80	Top flows northwards Base broader and height 40'' in Ca.
	8	19		21		W	10	Ca.
		19		23		W	10	Ca.
		19		33		W	10	Ca.
		19		39		W	10	Ca
		19		48		W	10	Ca.
		19		53		W	15	Ca.
		19		58.5		W	15	Ca
								Ca photographs 8 <sup>h</sup> 19 <sup>m</sup> and 8 <sup>h</sup> 35 <sup>m</sup> .
December 13. A.Y.S	9	37		64		E	10	
		30	4	39		E	25	Two prominences meeting at top.
		24	14	25		E	50, 20	
		21	2.5	11		E	30	
		16	2		29	E	35	A streak slanting eastwards as far as — 22° E.
		14	2		30.5	E	30	Faint 3° broad in Ca
	8	37			51.5	E	10	
		36			64	E	10	
		36			66	E	10	
	10	2	4		54	W	30 ±	Faint 45'' in Ca
		11	6		18	W	50	Ca. Faint
		47	2	9		W	35 ±	Very faint. A Ca streak proceeds both ways as far as + 3° and + 13° W
		45	0.5	18		W	10	
		44		21.5		W	10	
								Seeing bad, through cirrus
								Ca photograph 9 <sup>h</sup> 11 <sup>m</sup> .
December 14 S.S.	8	51		44		E	10	
		48	2	37.5		E	35	
		45	9	29		E	60	
		41		19		E	10	
		38		10		E	15	
		37		6		E	10	
		58		3.5		E	10	2° broad in Ca.
		58			2	E	20	Surmounted by a detached Ca streak 110'' high } Connected in Ca.
		30			12	E	30	Ca.
								Rapidly vanishing. Nearly gone at 8 <sup>h</sup> 34 <sup>m</sup> 20'' only in Ca.
		58	5	16.5		E	80	Ca
		24	2	37		E	45	Bright in Ca
		21		45		E	30	
	11	45		49		E	70	Ca. Seen only at 11 <sup>h</sup> 45 <sup>m</sup> .
	8	18		65.5		E	10	
		28		67		W	10	
		21	2	54		W	35	Faint in H. Bright at 11 <sup>h</sup> 45 <sup>m</sup> in Ca.
	8	58	12	35		W	75	Ca. An arch. A small portion of this 30'' high seen in H at 9 <sup>h</sup> 19 <sup>m</sup> .
		58		28		W	10	Ca
		58	11	3.5		W	30	Ca.
	9	14	10	7		W	30	Form changed and 40'' high at 13 <sup>h</sup> 33 <sup>m</sup> }
		10	4	22		W	20	
		9		29		W	60 ±	Very faint at top In Ca it is 120'' at 8 <sup>h</sup> 58 <sup>m</sup> and only 75'' at 11 <sup>h</sup> 45 <sup>m</sup> . } Connected in Ca.
	8	58	1	38.5		W	20	Ca
	12	3		38.5		W	10	3° broad in Ca.

Date and observer	Hour I S.T	Base	Latitude.		Limb.	Height	Remarks
			North.	South.			
1908.							
December 14. S.S. —contd	4		44		W	Low	Bright
	58		48		W	20	Ca. Faint
	11 50		65		W	20	
	9 0		75.5		W	20 ±	Very faint Ca photographs 6 <sup>h</sup> 58 <sup>m</sup> , 8 <sup>h</sup> 34 <sup>m</sup> , 11 <sup>h</sup> 23 <sup>m</sup> , 11 <sup>h</sup> 45 <sup>m</sup> , 12 <sup>h</sup> 16 <sup>m</sup> , 13 <sup>h</sup> 45 <sup>m</sup> , 14 <sup>h</sup> 6 <sup>m</sup> , 14 <sup>h</sup> 37 <sup>m</sup> , 15 <sup>h</sup> 3 <sup>m</sup> , and 16 <sup>h</sup> 8 <sup>m</sup>
December 15. S.S.	9 10	.	81	...	E	10	
	45		42		E	10	Ca
	3	3	39.5		E	20	80" in Ca.
	3	2	36		E	20	
	45	3	4.5		E	20	Ca
	45	2	1		E	30	Ca
	8 57			1	E	20	Faint.
	52			39	E	25	
	9 45	2		67	W	15	Ca.
	45			56	W	20	Ca.
	45	1		28.5	W	50	A streak slanting southwards as far as - 35° W. 75" high in Ca.
	34	14		9	W	50	Streamers extend both ways 70" high in Ca.
	25	0.5	10		W	Low	Bright in hydrogen
	23	1	15		W	Low	O slightly displaced to red.
45	2.5	29.5		W	30	Ca	
18	1	35.5		W	25 ±	See Note.	
December 16. S.S.	11 51	0.5	35	...	E	30	Ca. Faint
	45		23.5		E	25	
	42		1		E	10	
	40	1		29.5	E	30	
	12 5			83	W	10	
	0			71.5	W	10	
	11 58			35	W	50 ±	Detached faint. 30" only in Ca.
	55	2		23	W	10	
	55	21		5.5	W	100, 35, 30	A group of 3 prominences with tops connected. 150" and 120" in Ca
	52		9		W	10	
52		14		W	30 ±	Observed during breaks in clouds. Ca photograph 11 <sup>h</sup> 51 <sup>m</sup> (imperfect)	
December 17. A.Y.S	9 51	3.5	85.5	..	E	20	Two prominences meeting at top.
	45	0.5	81		E	20	Changing.
	39		57.5		E	10	
	33	0.5	37		E	30	
	30		34		E	20	
	27	2	30		E	35	Detached
	11		27		E	30	Ca.
	21	0.5	13.5		E	15	
	17			1.5	E	10	
	15	3.5		81	E	35	
	14			40	E	Low	
	8			87.5	E	10	
	10 15			43	W	10	
	15			42.5	W	10	
5	15		10.5	W	65	50" only in Ca	
2		2		W	10	Faint	
1	2	7		W	25	Bright. Slants westwards	
9 11		34		W	10	Ca.	
11	0.5	45		W	20	Ca.	
57	1	49		W	20	Not in Ca.	
11	2	54		W	15	Ca	
11		78		W	15	Ca	
December 18. S.S.	9 5	..	67	...	E	20	Slants eastwards.
	0		39		E	10	
	0		37.5		E	40	Faint.
	8 55	19	17		E	35, 30, 25, 10	A group of prominences with tops connected.

Date and observer.	Hour I.S.T.	Base	Latitude.		Lamb	Height	Remarks.
			North	South.			
1908.	H. M.	°	°	°		"	
December 18. S.S. —contd.	8 48	..		3	E	20	Top flows eastwards.
	45			18	E	10	
	43	7		80.5	E	35	
	22			42	E	15	Ca
	32			43.5	E	10	Nothing here in Ca
	25			49	E	55	See Note 1
	35			52	E	15	See Note 2.
	22			61	E	10	Ca.
	22			62	E	15	Ca.
	22			82	E	10	
	22	2		71	W	10	Ca.
	9 33			40	W	15	C slightly displaced to violet. Displacement had disappeared by 9h 34m
	30	4		29	W	20	} Tops connected in Ca.
	28			24	W	20	
	27	4		17	W	20	C slightly displaced to violet at top
	23			14.5	W	10	
	8 22		1		W	10	Ca.
	9 19		30		W	50 ±	Detached
							Not detached } Connected and 90" high in Ca in Ca
	16		35		W	40	
	8 22		44		W	20	Ca Faint
	9 12		54		W	35	6" broad in Ca. Ca photographs 8h 22m and 8h 31m.
December 19 S.S.	8 57	.	54		E	15	
	56		36		E	15	Slants northwards
	22		31		E	20	Ca
	53	1	20.5		E	10	Faint
	52		14		E	10	
	22	1	2.5		E	20	Ca. } Tops connected in Ca
	47	1.5		1	E	20	
	46	1		8.5	E	10	
	44	1.5		19	E	20	Bright Not metallic. C slightly displaced to red at base. Thinner and 20" high at 8h 39m.
	96			31	E	25	
	35			40	E	10	
	34			45	E	10	
	32			69.5	W	20	
	9 30	0.5		43	W	15	4" broad in Ca.
	27	5		80.5	W	35	
	23			16.5	W	10	
	8 22			3	W	40	Ca Detached.
	9 14	16	28		W	80 ±, 60 ±, 25 ±, 50 ±	Two prominences meeting at top with a small prominence between. 100" in Ca. Faint, detached. Ca photographs 8h 22m and 9h 14m.
	12		39		W		
December 20. S.S.	8 37		50		E	20	Ca Faint
	9 17	3	28.5		E	20	See Note
	14	2	14		E	30	A streamer from top proceeds as far as + 12° E
	14		9		E	20	
	6	11		17.5	E	20, 30	Only 3" broad in Ca
	2			28	E	10	
	0			33	E	50	Detached.
	8 57			37	E	40	
	54	1		44	E	25	
	50			61	E	20	
	10 1			76	E	10	C slightly displaced to red at base.
	8 37			86.5	W	10	Ca
	37			64	W	15	Ca.
	9 53			33	W	30	
	43		6		W	10	Very faint.
	45		9.5		W		No prominence. C slightly displaced to red.
	43	6	15		W	35	
	36		34.5		W	10	Ca photographs 8h 37m and 9h 12m. Very faint.



Date and observer	Hour I.S.T	Base.	Latitude.		Limb.	Height	Remarks.
			North	South.			
1908.	H. M.	°	''	''		''	
December 21. A.Y.S.	8 30		47		E	10	Ca.
	9 30		42		E	10	
	25	3	10.5		E	35±	A Ca streamer proceeds from the middle of the prominence as far as +19° E.
	8 30		2		E	10	Ca
	40	1		18.5	E	40	Top bends both ways. A Ca streak from -9° E proceeds parallel to the limb and meets this prominence
	40	1		21.5	E	40	
	30	3		34.5	E	60	
	30			41	E	60	} Meet at top.
	26	1.5		47	E	20	} Connected in Ca
	24	0.5		53	E	10	
	9 48			35	W	10	
	8 30			30	W	10	Ca.
	30			29	W	10	Ca
	9 45	1		9	W	15	2° broad and 60" high in Ca.
	8 30			3	W	15	Ca
	9 42	1	7		W	20	
	8 30	3	11.5		W	20	Ca
	9 40		33.5		W	10	
	8 30	1	37.5		W	20	Ca.
	30		41		W	10	Ca.
30		48		W	15	Ca.	
9 37		52		W	10		
35		82		W	10		
							Observed mostly through cirrus Ca photographs 8h 30m and 8h 44m.
December 22. S.S.	9 22		65		E	10	
	21		50		E	10	
	20		45		E	40	
	12		33.5		E	30, 45	Detached in H. Connected to limb, 15° broad and 60" high in Ca.
	16		41		E	10	
	6	0.5	11		E	25	Top flows northwards as far as +21° E.
	8 41	1.5	2		E	20	Ca.
	9 0		Equator.		E	10	O slightly displaced to red at base
	8 58			6	E	20	
	58			11	E	20	
	57	6		18	E	30	4° broad and 50" high in Ca.
	53			32	E	10	
	51	4		30	E	40	Slants southwards 50" high in Ca.
	47	1		46	E	40	
	39			81	E	15	Detached
	11 24			53	W	15	
	28			15	W	15	
	9 40	0.5		11	W	10	} Tops connected by a streak at 11h 28m
	40			7	W	15	
	3	11	0.5		W	15	
11 30		27.5		W	30	Detached.	
8 41		44		W	15	Ca.	
41		16		W	15	Ca. Western half observed through cirrus. Ca photographs 8h 41m and 8h 29m.	
December 23 A.Y.S.	9 45		38.5		E	10	
	40	7	27.5		E	40, 25	Slants northwards, 75" in Ca. A Ca streamer from top extends to +42° E.
	14	1		1.5	E	10	
	8 55	3		43.5	E	30	Very faint. 5° broad in Ca.
	10 10			54	E	10	
	8 45			77.5	E	10	
	44			82.5	E	10	
	10 22	3		13.5	W	20	Ca
	22			9	W	10	Ca.
	9 55	13		1.5	W	45, 80	
53	2	19		W	20	Observed through cirrus. Ca photographs 8h 51m (fair) and 10h 22m (incomplete).	

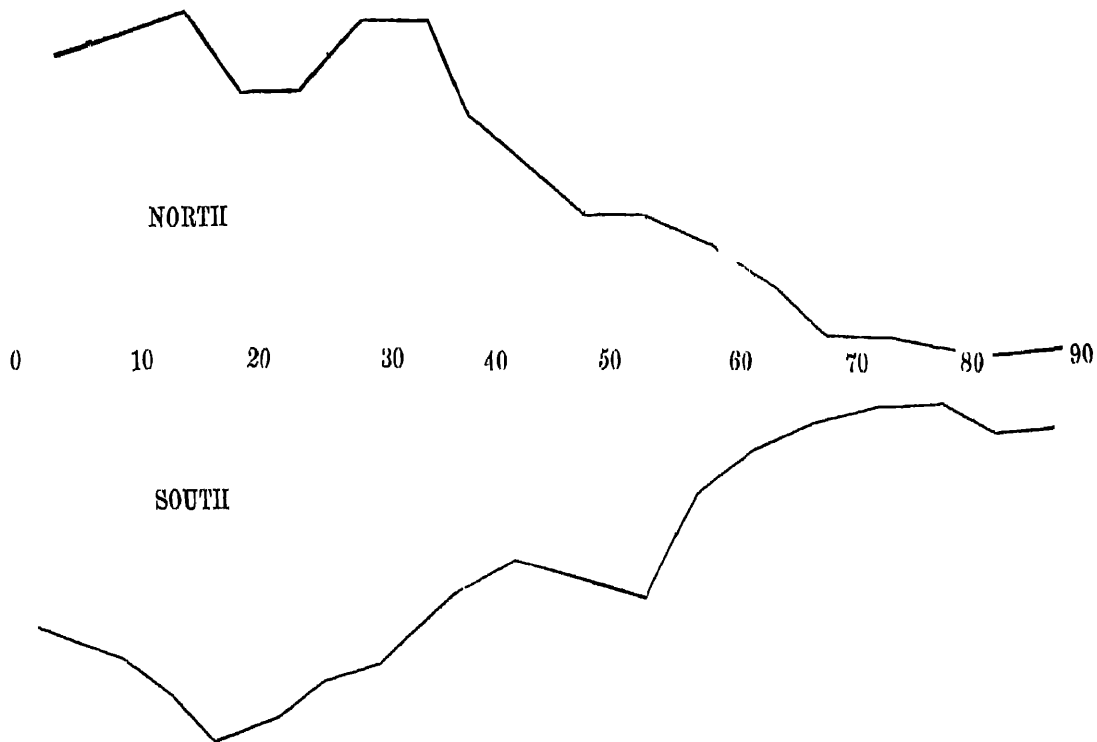
Date and observer.	Hour I.S.T.		Base	Latitude.		Limb.	Height.	Remarks.
				North	South.			
1908.	H	M	°	°	°		"	
December 24. S.S.	14	59	.	86.5		E	15	Ca.
		31		46		E	15	Ca.
		43	2	37		E	35±	Slants northwards in Ca as far as +43° E.
		45	1	19		E	15	
		49			27	E	10	20'' in Ca.
		51			48.5	E	20	Ca } Connected in Ca.
		51			53	E	15	
		51			58	E	20	Ca
		53			63	E	30	
		51			69	E	20	
		51			77	W	30	Ca
		51			74	W	10	Ca.
	15	31			45	W	35±	
	14	31			8	W	30	Ca.
		59			3	W	10	Ca.
		59			1	W	10	
		59		1		W	10	
	15	29	1	3		W	25	10'' in Ca
		13	3	19.5		W	20	5° broad in Ca. } See Note
		14		26		W	20	Faint in Ca. }
	14	59		35		W	10	Ca
	15	27		41		W	10	
		26		71		W	10	
	14	31		78		W	10	Ca.
								Cloudy with breaks
								Ca photographs (poor) 14h 31m and 14h 59m.
December 25. S.S.	9	41		5		E	30	Ca
		41		2		E	30	Ca
		41	0.5		1.5	E	30	Ca. Top flows southwards as far as -4° E.
		41	4		51	E	30	Ca.
		41	4		62	E	20	Ca. Three small prominences
		41			85	E	10	Ca
		41			82	W	10	Ca
		41			83	W	10	Ca.
		41			68	W	10	Ca
		41			38	W	30	Ca. Bright on flocculus plate at 9h 4m.
	10	25	1		38.5	W	15	Faint in Ca.
		22		5.5		W	10	
		20		12.5		W	20	
		20		14		W	45	A detached streak slanting southwards. In Ca it is connected to limb at +14° W.
		19		20.5		W	25	Slants northwards.
		18		24		W	25	Do. 3° broad in Ca. } Connected in Ca.
		17		27.5		W	10	
		16		31		W	10	Top flows westwards in Ca.
	9	41		83		W	10	Ca.
		41		84		W	10	Ca
	10	10		85.5		W	10	
								Cloudy with breaks. Examined only from -35° W to -50° E.
								Ca photograph 9h 41m (poor).
December 26. S.S.	11	23	9	24.5		E	50, 30, 20	Ca. Very faint
		23		11		E	15	Ca. Faint
		17		9		E	15	Ca.
		41	5	2		E	30	See Note.
		21			45	E	10	
		20			51	E	30	Faint in Ca
		24			55	W	20	
		23			36	W	20	Ca. Slants southwards
		27	1		23	W	20	Bright in Ca.
		23	2		15	W	20	Ca
		23		5		W	40	Ca.
		23		8		W	10	Ca.
		23		22		W	10	Ca.
								Observed through passing clouds.
								Ca photographs (good; flocculus only) 11h 23m and 11h 17m.

Date and observer	Hour L.S.T	Base.	Latitude.		Limb	Height	Remarks.
			North.	South.			
1908.	H. M.	°	'	"		"	
December 27. A.Y.S	8 52	..	79		E	10	
	50		58.5		E	10	
	48		35		E	25	
	24	4	29		E	60	Ca.
	40	16	8		E	70	See Note
	24			47	E	10	
	24	3		53.5	E	20	Ca. An arch
	9 16			83	W	20	
	12			86	W	15	
	8 24			32	W	30	Ca Slants southwards
	24			26	W	10	Ca.
	9 10			16	W	15	
	8 24			17	W	20	Ca.
	24	4		7	W	15	Ca.
	9 6	1	8.5		W	40	60" in Ca. } Tops connected. Connected in Ca
	4	1.5	15		W	30	
	3		19		W	20	
	8 59	4	40		W	50, 30	30" in Ca
53			61	W	10		
							N.E. quadrant observed through cirrus. Ca photographs 8h 24m, 9h 22m, and 9h 47m. East limb only 10h 0m, 10h 5m, 10h 32m, 10h 41m, 11h 4m, and 11h 12m.
December 28. A.Y.S.	8 48	..	11		E	10	Ca.
	9 20	4	7		E	30	
	8 48	5		55.5	E	76	Ca.
	10 35			24	W	10	
	9 58	2	7		W	40	4° broad in Ca. } Tops connected by a Ca streak. Slants westwards.
	55		15		W	15 ±	
50	5	39.5		W	50	Ca photograph (focculus only) 8h 48m.	
December 29. A.Y.S.	9 30	0.5	85	..	E	10	
	20	1	33.5		W	15	Ca Slants northwards.
	20	2	18		E	20	Ca. A streak from top extends as far as + 14° E.
	20		15		E	10	
	20		9		E	10	Ca.
	15	1	3.5		E	30	Slants eastwards
	13	1.5		5	E	15	} Form a connected prominence at 10h 10m, 20" in Ca.
	4	4		13	E	30	
	8 59			55	E	40 ±	Faint in H. 3.5° broad and 70" high in Ca.
	56			68	E	10	
	9 52			15	W	10	} Connected and 60", 40" and 30" in Ca.
	50	2		6	W	45	
	47	4	Equator.		W	25	
20			9	W	50	Ca Detached	
20	2	45		W	45	Ca. A streak slanting westwards.	
43	5	38.5		W	35	45" in Ca Observed through cirrus. Ca photograph 9h 20m.	
December 30. A.Y.S.	8 12	1	81	...	E	15	Ca.
	12		67		E	15	Ca.
	12	1	58		E	15	Ca.
	12	5	35.5		E	50	Ca. Changing. Differently shaped and 45" high at 8h 52m.
	56		32.5		E	15	
	12		17		E	20	Ca. Slants northwards.
	12		12		E	30	Ca. A streak slanting eastwards. } Form a single prominence at 8h 52m, 50" high.
	12		10		E	50	Ca. do.
	54		5		E	15	Detached.
	53		Equator		E	10	
	52	1.5		3.5	E	20	3° broad and 30" and 45" high in Ca.
	12			13	E	20	Ca.
	49	2.5		19.5	E	60	Slants southwards. 4° broad in Ca. } Connected in Ca.
	46	1		24	E	25	
	45			27	E	10	
12			28	E	10	Ca.	
12			31	E	10	Ca.	

Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb	Height.	Remarks.
			North.	South.			
December 30 A.Y.S. —contd	h m	°	°	°		"	
	8 12	.	..	34	E	40, 75	Ca. A streak slanting southwards.
	43			38	E	10	
	41			52	E	30, 50	Two streaks slanting southwards, 6° broad and 100" high in Ca.
	37			72	E	15	
	12			40	W	20	Ca. An arch
	12			36	W	30	Ca. Detached
	12			28	W	15	Ca
	9 10			19.5	W	10	} Form a single connected prominence in Ca extending from + 5° to -25° W and 20", 40", and 80" height.
	9	1		17.5	W	25	
	6	1		8	W	35	
	4	1.5		2	W	15	
	2			8	W	10	Faint
	8 12	3		19.5	W	20	Ca. Top flows westwards.
	12	8		30	W	50, 45	Ca. A small portion of this is seen in H.
12	4		39	W	20	Ca photographs 8 <sup>h</sup> 12 <sup>m</sup> and 8 <sup>h</sup> 52 <sup>m</sup> .	

REMARKS ON THE DISTRIBUTION OF THE PROMINENCES IN 1908.

The general features of prominence distribution during the year are shown in the accompanying diagram which represents graphically the mean profile areas found for each zone of 5° of latitude.



The distribution in 1908 differs from that of the previous year chiefly in the northern hemisphere. The active zone in north latitude 55° recorded in 1907 is not shown, whilst the region between the equator and north latitude 15° increased in activity to an extent which more than balanced the decrease at latitude 55°. In the south, the polar region has remained slightly active but less so than during 1907, and there was a progressive diminution of activity during the year. The region between south latitudes 10° and 30° has been the most prolific on the sun

The activity of each hemisphere expressed in mean areas, shows a considerable increase compared with 1907, as is indicated in the following table : —

MEAN DAILY PROFILE AREAS OF PROMINENCES.

									1907.	1908.	
									Square minutes.	Square minutes.	
North	..	..	..	..	..	..	..	..	1.92	2.41	
South	..	..	..	..	..	..	..	..	2.27	2.98	
Total	..									4.19	5.39

The year as a whole must be considered as one of great activity. The mean total area for the first six months reached 6.67 square minutes *per diem*, this being considerably in excess of any previous estimate. During the second half of the year it fell to 3.93 square minutes.

This reduction of area during the second half of the year was common to both hemispheres and has been noticed in previous years. It is probably largely due to the less favourable observing conditions prevailing here during the autumn months. The mean frequencies show very little reduction, confined to the 3rd quarter, as will be seen on referring to the abstract on page 127. In deriving the mean areas an approximate allowance is made for obviously imperfect observations yet the effect of slightly veiled skies will remain and will certainly have a greater effect in obscuring the fainter portions of prominences than in reducing the mean number seen.

If allowance is made for imperfect observations in deriving the mean frequencies, the half yearly results indicate a very slight increase for the second half as well as a small total increase compared with 1907. The corrected frequencies are given in the following table:—

Period.	Effective days of observations	Mean frequency <i>per diem</i> *		Total mean frequency <i>per diem</i> .
		North.	South	
January 1 to June 30 ..	164	9.2	10.7	20.0
July 1 to December 31 .	144	9.8	10.7	20.6

\* Excluding equatorial prominences

Metallic prominences were far more numerous in the southern hemisphere than in the northern and they extended over a greater range of latitude in the south.

The mean and extreme latitudes observed are given in the following table:—

	Number observed.	Mean latitude.	Extreme latitudes
North .. .. .	23	14° 6'	3°, 34°
South .. .. .	58	16° 8'	2°, 50°

There were, in addition to the above, three metallic prominences recorded in high latitudes; one in the north in latitude 69° and two in the south in latitudes 69° and 78°.

Sixty-five prominences of 2' or more in height were recorded during the year. Eighteen of these were in the northern hemisphere and forty-seven in the southern, eight of the latter occurring in the south polar region. Large prominences and eruptive outbursts were of rather frequent occurrence, especially in the southern hemisphere. One of the largest ever observed was recorded on February 18 extending from south latitude 17° to 63°. The successive photographs of this remarkable prominence showed the entire mass to be rising vertically from the sun's surface with an accelerating speed, and the highest point attained, measured on a photograph exposed shortly before sunset, was 9' above the limb.

Another ascending prominence was photographed on October 12 near the south pole. This became detached from the sun's limb and ascended as a small bright cloud reaching finally a height of 6' above the limb.

Attention may also be called to the prominence associated with spot Greenwich No. 6491. This was observed on the east limb in latitude +10° on July 30th and 31st and was noteworthy for its remarkable ring-like or horse-shoe form, and for the stability of the ring exhibited in successive photographs, no material change occurring in an interval of 26 hours

[J. E.]

ABSTRACT FOR 1908.

Months.	Number of days of observation	Number of prominences.	Mean daily frequency.	Mean height.	Frequency in each hemisphere.		Mean heliographic latitude.	
					North	South.	North	South.
January ... ..	28	561	20.0	30.0	9.4	10.5	39.1	41.1
February . . . . .	27	491	18.2	26.8	8.6	9.4	38.4	41.8
March . . . . .	29	554	19.1	30.0	9.2	9.8	32.5	37.0
April . . . . .	30	715	23.8	27.8	10.6	13.1	36.8	37.4
May . . . . .	31	596	19.2	28.7	6.5	10.6	33.7	35.0
June . . . . .	25	372	14.9	26.7	6.7	8.1	31.3	33.0
July ... ..	23	315	13.7	26.7	6.1	7.4	30.7	35.8
August ... ..	27	509	18.9	26.5	8.6	10.1	36.9	33.7
September ... ..	27	556	20.6	24.1	9.3	11.2	34.8	35.1
October . . . . .	25	469	18.8	25.8	9.2	9.5	34.8	33.7
November ... ..	27	560	20.7	26.9	10.1	10.5	32.1	35.9
December . . . . .	20	555	19.1	24.8	9.8	9.2	31.8	35.5
First quarter ... ..	84	1,606	19.1	29.0	9.1	9.9	36.6	39.9
Second quarter .. .	86	1,683	19.6	27.9	8.7	10.8	34.5	36.3
Third quarter ... ..	77	1,380	17.9	25.6	8.1	9.7	34.6	35.0
Fourth quarter . . .	81	1,584	19.6	26.7	9.7	9.7	32.8	36.0
First half-year .. .	170	3,289	19.3	28.4	8.9	10.3	35.5	38.0
Second half year .. .	158	2,904	18.8	26.2	8.9	9.7	33.6	35.5
Year ... ..	328	6,283	19.1	27.4	8.9	10.0	34.6	36.8

Heliographic latitude of prominence in 1908.		Number of prominences in 1908.						Mean daily frequency (308 days).
		First quarter.	Second quarter.	Third quarter	Fourth quarter.	First half-year	Second half-year.	
North	90° to 81° ... ..	17	18	26	31	35	57	0.298
	80° to 71° . . . . .	24	25	40	46	49	86	0.438
	70° to 61° ... ..	62	56	40	43	118	83	0.653
	60° to 51° ... ..	120	92	41	40	212	81	0.951
	50° to 41° .. . . .	112	97	84	89	209	173	1.240
	40° to 31° ... ..	116	121	93	132	237	225	1.500
	30° to 21° .. . . .	113	106	93	118	218	211	1.393
	20° to 11° .. . . .	81	118	96	145	199	241	1.429
10° to 1° . . . . .	117	116	110	143	233	253	1.578	
Equator . . . . .	11	9	10	8	20	18	0.123	
South	1° to 10° ... ..	109	150	125	120	259	245	1.636
	11° to 20° ... ..	118	158	120	127	276	247	1.693
	21° to 30° ... ..	107	133	116	114	240	230	1.526
	31° to 40° .. . . .	108	104	78	110	212	188	1.298
	41° to 50° ... ..	115	117	91	98	232	189	1.367
	51° to 60° .. . . .	72	101	92	86	173	178	1.140
	61° to 70° . . . . .	71	65	54	57	136	111	0.802
	71° to 80° ... ..	80	54	41	38	124	79	0.692
81° to 90° . . . . .	53	44	30	39	97	69	0.539	

## NOTES.

- 1909.
- July 31. Lat. + 10° E. Horse-shoe-like prominence. Shows slight displacement of C and F both ways. Some of the bright jets close to it disappeared by 9<sup>h</sup> 30<sup>m</sup>. There was much change in the prominences close to the horse-shoe, which however were seen to persist till 9<sup>h</sup> 34<sup>m</sup>.
- August 11. Lat. - 16° W. There was no prominence at 9<sup>h</sup> 9<sup>m</sup>, but F was displaced both ways over 2° of limb - 4 Å to red and 3 Å to violet. At 9<sup>h</sup> 12<sup>m</sup> the displacement was almost gone, but there was a prominence 20" high. Height very rapidly increasing - 70" at 9<sup>h</sup> 14<sup>m</sup>, 90" at 9<sup>h</sup> 18<sup>m</sup>. No displacement at 9<sup>h</sup> 16<sup>m</sup>. D<sub>1</sub>, D<sub>2</sub>, b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub>, 5316.8 bright on chromosphere even before the prominence formed. Top very faint at 9<sup>h</sup> 18<sup>m</sup>.
13. Lat. - 48° 5' E. A group of closely connected bright eruptive prominences. F displaced 2 Å and D<sub>3</sub> about 1 Å to red on a streamer extending from lat. - 35° to - 40°. The displacement had disappeared by 9<sup>h</sup> 35<sup>m</sup>. The group was photographed eight times and showed many changes between 7<sup>h</sup> 59<sup>m</sup> and 10<sup>h</sup> 43<sup>m</sup>.
20. Lat. - 5° W. The portion of the prominence at lat. - 7° W showed displacement to violet of about 3 Å; the chromosphere at - 1° W showed displacement to red of about 2 Å.
22. Lat. + 21° W. Slants northwards. In Ca a streak from top passes through the top of the next prominence and extends to lat + 36° W.
- 24 (1) Lat. + 13° E. General height 20", but there was a detached slanting streak at the northern end about 80" high; the streak disappeared by 11<sup>h</sup> 10<sup>m</sup>. In Ca the height was 110" at 8<sup>h</sup> 12<sup>m</sup> and 75" at 10<sup>h</sup> 4<sup>m</sup>.
- (2) Lat. + 3° E. Slants southwards. Metallic. Almost the whole prominence was seen in D<sub>1</sub>, D<sub>2</sub>, b<sub>1</sub>, b<sub>2</sub>. Slanting part had disappeared by 11<sup>h</sup> 5<sup>m</sup>.
29. Lat. - 26° E. Ca. A number of prominences arched over the limb and connected together. Only a few stems were seen in H.
- September 1. Lat. - 9° 5' E. F displaced 3 Å to violet generally and 4 Å in some places; maximum 6 Å at 9<sup>h</sup> 5<sup>m</sup>. Displacement confined to a small area at 9<sup>h</sup> 0<sup>m</sup>, but extended over a wide area at 9<sup>h</sup> 5<sup>m</sup>. Height less than 10" at 9<sup>h</sup> 2<sup>m</sup>, 100" at 9<sup>h</sup> 8<sup>m</sup> and 120" at 9<sup>h</sup> 10<sup>m</sup>. Not metallic. At 9<sup>h</sup> 13<sup>m</sup> displacement was confined to one place and was only 3 Å in F. At 9<sup>h</sup> 15<sup>m</sup> there was a long detached streak over the prominence and the height was 150". Amount of displacement and area affected was small at 9<sup>h</sup> 25<sup>m</sup> but it was still toward violet. At 9<sup>h</sup> 27<sup>m</sup> F was displaced 1.5 Å to red from lat - 10° to - 14°. Amount 6.4 Å to red in C at 9<sup>h</sup> 30<sup>m</sup>. The long cloud had disappeared by 9<sup>h</sup> 32<sup>m</sup>. The height was 40" at 9<sup>h</sup> 33<sup>m</sup>, 25" at 9<sup>h</sup> 39<sup>m</sup>, and 15" at 9<sup>h</sup> 49<sup>m</sup>. Ca prominence consisted of a group of slanting streaks 40" high at northern end and 70" at the southern.
2. Lat. - 6° E. Changing. The prominence at lat - 7° shows displacement to red of 2.5 Å at 10<sup>h</sup> 35<sup>m</sup>; that at - 10° shows displacement to violet of about 2 Å at 10<sup>h</sup> 35<sup>m</sup>. The height of the prominence is only 30" in Ca.
22. Lats - 35° and - 28° W. Connected at base in Ca. In Ca a streak connecting the tops of these extends as far as lat. - 19° W.
- 26 (1) Lats. - 50° 5', - 46°, - 43° 5', and - 41° 5' W. These form a single prominence in Ca extending from lat - 41° to - 54°. The prominence was differently shaped at 9<sup>h</sup> 7<sup>m</sup>.
- (2) Lat. - 5° 5' W. Ca. A number of small prominences with an overhanging Ca streak extending from + 2° to - 9°. Form slightly changed at 9<sup>h</sup> 7<sup>m</sup>. Only a small portion of this is seen in H.
30. (1) Lat + 13° E. Surmounted in Ca by small detached streaks 120" away from limb. A Ca streak 45" high proceeds from the top of the prominence at lat. + 8° and extends as far as the equator.
- (2) Lats. - 4.5° and - 6.5° E. Connected and only 20", 15", and 10" high in Ca at 8<sup>h</sup> 2<sup>m</sup>. At 8<sup>h</sup> 47<sup>m</sup> the Ca prominence consisted of several streaks 45" and 30" high.
- October 3. Lat. + 5° W. Eruptive jets at base at lat + 10°. D<sub>1</sub>, D<sub>2</sub>, b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub>, b<sub>4</sub> bright. The whole prominence was changing rapidly. Prominence at + 1° shows displacement to red of about 3 Å. Ca filaments extend to + 19°.



- 1909.
- October 12 Lat.  $-78^{\circ}5$  E. Ca. Connected to the limb by a streak at  $-75^{\circ}$ . Changing, and top slowly rising.  $240''$  at  $10^h 11^m$ ,  $300''$  at  $10^h 56^m$ ,  $360''$  at  $11^h 30^m$ , at which time there was only a detached cloudlet. The whole prominence had disappeared by  $14^h 30^m$ .
- November 4. Lat.  $+15^{\circ}5$  E. Ca. A cloud connected to limb by a short stem. The cloud extended on one side to  $+26^{\circ}$  E where it reached to  $150''$  in height, and on the other side to  $-2^{\circ}$  E where it met the top of the next prominence and was  $60''$  high.
8. (1) Lat.  $-27^{\circ}5$  W. Changing fast. Surmounted by a faint, detached cloud  $70''$  away from limb.
- (2) Lats.  $-47^{\circ}$ ,  $-38^{\circ}5$ ,  $-27^{\circ}5$ , and  $-13^{\circ}$  W. Showed considerable changes in the successive Ca photographs, heights varying from  $45''$  to  $120''$ .
11. (1) Lat.  $+24^{\circ}5$  E. Ca. An irregular arch, shapes different at  $9^h 17^m$  and  $9^h 46^m$ . At  $9^h 17^m$  it was a curved streak  $80''$  high connected to limb at  $+27^{\circ}$  E and extending as far as  $+17^{\circ}$  E. At  $9^h 46^m$  it was only  $75''$  high forming a regular arch connected to limb at  $+27^{\circ}$  E and  $+15^{\circ}$  E.
- (2) Lats.  $-1^{\circ}$  and  $-8^{\circ}$  E. The filaments connecting these prominences with the big prominence at lat.  $+9^{\circ}$  E were incomplete at  $9^h 17^m$  and  $9^h 46^m$ .
- (3) Lat.  $+16^{\circ}$  W. Detached.  $50''$  away from limb in Ca at  $9^h 46^m$ . This was connected with the last prominence at  $9^h 17^m$  and  $9^h 46^m$  in Ca, and had sunk down nearer to the limb at  $11^h 4^m$  and was only  $40''$  high.
12. Lat.  $+9^{\circ}5$  E. Slants eastwards. Bigger in Ca, and a streak from top met limb at  $+4^{\circ}$  E, thus forming an arch. This arch was broken in the middle at  $8^h 34^m$ .
13. Lat.  $-27^{\circ}$  W. Highly eruptive. Showed considerable changes in H and in the successive Ca photographs reaching to a maximum height of  $270''$  at  $9^h 26^m$  and disappearing altogether at  $10^h 22^m$ .
17. Lat.  $-28^{\circ}5$  W. C slightly displaced to violet at top. Base extends both ways in Ca to  $-35^{\circ}$  and  $-22^{\circ}$ . Ca streamer from top goes as far as  $-20^{\circ}$  W.
19. Lat.  $-25^{\circ}5$  E.  $7^{\circ}$  broad and  $80''$  high in Ca. Forms different at  $8^h 25^m$  and  $10^h 19^m$ . At  $9^h 29^m$  a fine Ca filament extended from  $-19^{\circ}$  to  $-9^{\circ}$  joined to the extremity of this prominence.
23. Lat.  $-10^{\circ}$  E.  $9''$  high in Ca. A long strip, almost detached, extending from  $0^{\circ}$  to  $-20^{\circ}$  E and connected to limb at  $-20^{\circ}$  E by a filament. Differently shaped and  $120''$  high in Ca at  $14^h 34^m$ .
- December 2. Lat.  $+16^{\circ}5$  W.  $15''$  high in Ca. In H it was low but very bright. C slightly displaced both ways;  $D_3$  slightly to red. Bright lines:  $7055 \pm$  (Young),  $6,677$ ,  $D_1$ ,  $D_2$ ,  $5,316.8$ ,  $5276.2$ ,  $b_1$ ,  $b_2$ ,  $b_3$ ,  $b_4$ ,  $5018.6$ ,  $5016$ ,  $4924.1$ ,  $4922$ . F displaced  $1.5 \text{ \AA}$  to red,  $9^h 14^m$ .
14. Lats.  $+37^{\circ}5$ ,  $+29^{\circ}$  and  $+19^{\circ}$  E. Formed a single prominence in Ca,  $90''$  high, at  $8^h 58^m$ . Eruptive and showed considerable changes both in H and Ca. In the successive photographs taken in Ca there was a change in height accompanied by a change in form. At  $8^h 58^m$  it was a continuous prominence  $90''$  high extending from  $+19^{\circ}$  E to  $+41^{\circ}$  E. It rose up to  $180''$  in height at  $11^h 45^m$  with a distinctly different form. It reached to the maximum height of  $4'$  at  $13^h 45^m$  and in the last photograph, taken at  $16^h 8^m$ , it was an irregular arch  $15^{\circ}$  broad at base but only  $180''$  high.
15. Lat.  $+35^{\circ}5$  W. Very faint streaks. In Ca a streamer from top,  $105''$  high, bends southwards and extends as far lat.  $+16^{\circ}$  W.
- 18 (1) Lat.  $-49^{\circ}$  E. Slanting eastwards. Changing rapidly both in H and Ca. Completely gone in hydrogen at  $8^h 35^m$ . The prominence was  $20''$  at  $8^h 22^m$  and  $60''$  at  $8^h 31^m$  in Ca, when it was very faint and only barely visible.
- (2) Lat.  $-52^{\circ}$  E. C displaced to violet. Nothing here at  $8^h 25^m$ . Height  $20''$  at  $8^h 37^m$ . Nothing here at  $9^h 45^m$ . Not in Ca.
20. Lat.  $+28^{\circ}5$  E. Slants northwards. General height  $20''$ . A slanting bright line at the centre  $30''$  high. Changing. Top faint, about  $60''$  at  $9^h 20^m$  and  $40''$  at  $9^h 23^m$ .
24. Lats.  $+19^{\circ}5$  and  $+26^{\circ}$  W. In Ca at  $14^h 29^m$ , these two prominences formed an arch  $30''$  high extending from  $+18^{\circ}$  to  $+26^{\circ}$  W.
26. Lat.  $+2^{\circ}$  E. Two prominences with tops connected.  $12^{\circ}$  broad in Ca. At  $11^h 17^m$  in Ca these two small arches were connected with each other,  $15''$  and  $20''$  high and extending from  $+5^{\circ}5$  E to  $-4^{\circ}$  E.

1909.

December 27. Lat. + 6° E. Highly eruptive both in H and Ca. This eruption was apparently associated with the big spot, Greenwich No. 6591, which was just nearing the east limb. In the first photograph in Ca, at 8<sup>h</sup> 24<sup>m</sup>, it was a massive prominence 50" high occupying 16° of the limb. It rose to 70" at 8<sup>h</sup> 40<sup>m</sup> without any change in form however. At 9<sup>h</sup> 22<sup>m</sup>, only an arch could be seen shooting northwards from the equator and 140" in height, with a small detached cloud that had just made its appearance. In the photograph taken at 9<sup>h</sup> 47<sup>m</sup>, besides the original prominence and the floating cloud that was drifting further and further northward, and was now 5' away from the limb, another outburst from a point 5° south of the equator was seen in the shape of an arch 5' in height. The height of the prominence as shown by subsequent photographs was falling until in the last photograph there were only small specks of the original prominence visible. These were only 45" high; but the floating cloudlet was 5' away from the limb.

KODAIKANAL,  
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