

# Kodaikanal Observatory.

BULLETIN No. XXV.

## LIST OF PROMINENCES OBSERVED BETWEEN 1911 JANUARY 1 AND 1911 JUNE 30.

THIS list is a continuation of that published in Bulletin No. XXIV, and contains all the prominences recorded both visually and photographically during the first half of 1911.

Remarks on the general distribution of the prominences and a diagram representing the mean profile areas for each zone of five degrees of latitude will be found on the last page.

The methods of observation and the observers are the same as for the last list.

The following table shows the number of days on which observations were made:—

									Days.
Complete visual observations	..	..	..	..	..	..	..	..	125
Partial do do.	..	..	..	..	..	..	..	..	42
No do do.	..	..	..	..	..	..	..	..	14
Complete spectroheliograph records	..	..	..	..	..	..	..	..	157
Partial do.	..	..	..	..	..	..	..	..	15
No do	..	..	..	..	..	..	..	..	9

Date and observer	Hour L.S.T.	Base.	Latitude.		Limb.	Height.	Remarks.	
			North.	South.				
1911.	H. M.	°	°	°		"		
January 2. S.S.	8 18	..	9	..	E	30	Ca.	
	9 43	11		36.5	E	60, 25		
	40			34.5	E	15		
	8 18			36.5	—	15	Ca.	
	9 39			33	W	20		
	20			43	W	10		
	8 18		14		39	W	30	Ca. Faint.
	16			14	W	40	Ca. Slants northwards.	
	16		31		W	30	Ca.	
							Visual observations partial. Ca photographs 3 <sup>h</sup> 16 <sup>m</sup> incomplete.	
January 3. S.S.	9 5	..	70.5	.	E	60	Ca. Seen only at 9 5 <sup>m</sup> .	
	8 42		62		E	15	Ca.	
	9 21		68.5		E	20		
	18	1	38		E	30	Faint in C.	
	16	6	29		E	35		
	14		13		E	15	Slants northwards.	
	13		4		W	15		
	8 42	4		4	E	60	Ca. A slanting arch,	
	9 12	1		9	E	15	30'' high in Ca.	
	12			12	E	10		
	10			15.5	E	15		
	8	8		37	E	30		
	4			47	E	25		
	8 59			79.5	E	15		
42			36.5	E	15	Ca.		
42			35.5	W	25	Ca.		

Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb.	Height.	Remarks.	
			North.	South.				
1911.	H. M.	°	°	°		'		
January 3. —contd.	S.S.	1	.	60.5	W	15	Double.	
		8 56			W	25		
		39		28	W	15		
		35	8	21	W	30		
		31		27	W	30		
		31		29.5	W	10	30" high, top bends and meets the limb at + 32° W in Ca.	
		8 42		35	W	45	Ca.	
		9 29	2	42	W	35	Top flows northwards. 50" high in Ca.	
		27		57	W	10		
		8 42		85.5	W	10	Ca. Ca photographs 8h 42m and 9h 5m.	
January 4.	G.N.	..	74.5	...	E	10		
		9 3			E	10	Ca	
		8 24		64	E	10	Ca.	
		24		36	E	30	Ca.	
		9 1	2.5	29.5	E	40	5° broad in Ca. } Connected in Ca.	
		0		25	E	30	Detached. }	
		8 59	4	18	E	20		
		56		7.5	E	—	No prominence. O was displaced to red for about 2.0 A.	
		53			4	E	50	See Note.
		45	1.5	35.5	E	55	40" high in Ca. } Connected in Ca.	
		45	8	39.5	E	30		
		42		68	E	10	Seen in Ca only at 8h 5m.	
		5		72.5	E	10	Ca. Seen only at 8h 5m.	
		40		78.5	E	10		
		5		84.5	W	10	Ca. Seen only at 8h 5m.	
		9 22	.	81.5	W	20		
		18	2	29	W	40		
		15		23	W	70	Wider at top. } Connected.	
		15	1	17.5	W	45		
		10	2	8	W	15		
8		26	W	15				
5	3	37.5	W	70, 20	7° broad in Ca. Top bends and meets the limb again at + 44° W. Ca photographs 8h 24m and 8h 5m.			
January 5.	S.S.	1	82.5	.	E	15	Slightly displaced to red at base.	
		9 21			E	20		
		20		67	E	10		
		14		55	E	10		
		12		32	E	15		
		11		22	E	15		
		8	4	14	E	10		
		5		4	E	40	An arch.	
		2			12	E	20	
		8 59	11	19.5	E	35		
		57		34	E	25	Faint.	
		57	3	41.5	E	60	Faint at top in C. 35" high in Ca.	
		54	3	48	E	60	Faint at top in C. 30" high in Ca.	
		53		52.5	E	15		
		50		62	E	10		
		26		78.5	E	15		
		26		66	W	15	Ca.	
		48		61	W	10	Ca.	
		40	6	46	W	10		
		36	3	26	W	60, 70		
9 34		10.5	W	15	Slightly changed at 9h 37m. 5° broad in Ca.			
30	3	22	W	10				
30	2	37.5	W	60	} Connected.			
26		48	W	80				
		59.5	W	15	Ca photographs 8h 26m and 8h 12m.			
January 6.	A.Y.S.	.	71.5	..	E	10		
		8 42			E	15		
		42		64	E	20		
		42	1	60.5	E	20		
		41		47	E	10	2° broad and 30" high in Ca.	
		40		35	E	15		
		38	3	7	E	45	30" high in Ca.	
		36		1	E	15		
36			10	E	10			

Date and observer.	Hour I.S.T.	Base.	Latitude.		Lamb.	Height.	Remarks.	
			North.	South.				
1911.	n. m.	°	°	°		"		
January 6. A.Y.S. —contd.	8 31	11	..	23 5	E	60		
	25	6		42	E	80, 40		
	21			65.5	E*	20		
	9 0			41.5	W	10		
	8 59	8		28	W	40 ±	Very faint in C 75" high in Ca.	
	9 9			11	W	60	Ca. A short streak about 20" high surmounted by a detached dot 60" high.	
	8 51		8.5		W	10		
	50	2	36		W	40	Faint. 60" high in Ca. A Ca streak from the top 100" high stretches northwards.	
	47	2	41		W	25	A Ca streak from the top joins the last Ca streak.	
	9 9	1	51		W	20	Ca.	
	8 46		56		W	10		
January 7. G.N.	10 35	...	86	.	...	15	Limb unsteady. Ca photographs 9h 9m and 8h 38m.	
	35		56		E	20	Ca.	
	35	1.5	91		E	25	Ca.	
	35		13		E	15	Ca.	
	8 50	6		25	E	50 ±, 80	75" high in Ca.	
	10 35	6		48	E	70	Ca.	
	8 46			62.5	E	45	Not in Ca.	
	38			78.5	E	15		
	9 5	2		55	W	20		
	10 35	3		48.5	W	30	Ca. An arch.	
	35			11	W	30	Ca.	
	35	3	18.5		W	30	Ca.	
	35	3	38.5		W	30	Ca. An arch.	
	35		40		W	50	Ca.	
8 59	1.5	43.5		W	30	Ca.		
January 9. S.S.	9 42	1	37.5	..	E	20		
	41		18		E	10		
	40		4.5		E	20		
	38			2.5	E	25		
	36			11	E	20		
	33	5		46.5	E	35		
	28	1.5		82	E	20		
	34			27	W	15	Ca.	
	34	1		10	W	75	Ca.	
	50		11		W	70	Broader at top. Nothing here in Ca	
	34	5	43.5		W	45	Ca. An arch.	
	January 10. G.N.	8 48	...	49.5	...	E	15	
		43		46.5		E	15	
41			39		E	30	2° broad in Ca.	
40		1	30.5		E	25		
40			23		E	25		
37		1		23	E	15		
35		4.5		46	E	60	45" high in Ca.	
30				84.5	W	15		
19				69.5	W	20	Ca. A short streak surmounted by another detached streak.	
19				62.5	W	20	Ca.	
19				25	W	15	Ca.	
19				2	W	80	Ca.	
46			22		W	25	Not in Ca.	
19		1.5	41		W	60	Ca. Ca photographs 8h 19m and 10h 34m.	
January 11. A.Y.S.	9 35	...	31	...	E	15		
	32	1		10	E	30	Broader at top.	
	31	2		14	E	20		
	30			27	E	10		
	26	6		45	E	60, 25		
	28			74.5	E	10		



Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb.	Height.	Remarks.
			North.	South.			
1911.	U. M.	°	°	°			
January 14. G.N. —contd.	8 48 48 39 37 9 7 8 35 9 5 3 20 3 0 20 8 56 9 20	2 2 1 6 1 1 2 1 2	.. .. .. .. .. .. .. .. .. .. 27 48 58 5	31 34 41.5 50 81 77 37 38 5 32 28 14	E E E E W W W W W W W W W W	30 45 30 40 15 15 20 45 ± 75 30 15 20 10 20	80" only in Ca. Faint.  Faint in O. Ca. Detached. Faint in O.  Ca.  Ca. Ca photographs 9h 20m and 8h 55m.
January 15. S.S.	8 56 51 48 46 9 5 8 45 42 40 9 10 6 4 2 0 8 58	.. 1.5  .. 0 1 1 5 1	73.5 24.5 5 .. .. .. 45 70.5	... .. 7 5 15 21 35 49 37 34.5 28.5 3.5	E E E E E E E W W W W W W W	15 25 50 10 25 30 10 20 110 45 20 15 20	Detached.  40" high and 2° broad in Ca. Ca. A slender streak slanting eastwards.  Faint. } Connected by a Ca streak,  Ca photographs 9h 5m and 9h 49m.
January 17. G.N.	18 12 28 10 28 22 20 18 28	1.5 .. 1.5 5 4 17	45 27 20 78 .. .. 22.5 42	... .. .. 36.5 12	E E E E W W W W	20 40 30 30 50 30 45 60	Ca.  Ca. Faint. 135" high in Ca. 8° broad and 45" high in Ca.  Ca. Ca photographs 13h 28m and 13h 39m. Ca. Ca.
January 18. S.S.	8 40 40 47 46 40 40 48 42 42 40 38 37 35 35 35 35 32 29 28  9 2 1 8 59 58 58 21	... 1 1 1 1 1 1 1 1 1 1 3 1 5  1 1.5 11 1	48 37 29 28 .. .. 48 .. Equator. 5 22.5 32 60 74	.. .. 1 7 16 23 25 27 39.5 60 85 58.5 55.5 54.5 53.5 49.5 37.5 28 14.5	E E E E W W W W W W E W W W W W W W W W W W W W W W W	40 20 30 10 10 20 15 15 10 10 10 10 10 10 20 10 10 50 25 60  20 25 45 15 30 45	Ca. photographs 13h 28m and 13h 39m. Ca. Ca. 20" high in Ca.  Almost detached. 35" high in Ca.  40" high in Ca. Streaks extend westwards. Slightly changed at 9h 2m.  Top bends slightly northwards. Ca. Seen only at 8h 21m. Ca photographs 8h 40m and 8h 21m.

Date and observer.	Hour L.S.T.	Base.	Latitude.		Limb	Height.	Remarks.
			North.	South.			
1911.	H. M	°	'	"		"	
January 19. A.Y.S.	9 2 0	.	70 45.5		E E	10 90 ±	Faint. The Ca prominence extends from +43° to +45° and is 20" and 45" high.
	8 48 56 48 48 54 52 50		37 32 28 15		E E E E E E	10 10 20 15 15 25 15	Ca. Ca. Ca.
	50 50 38 29 29	1.5 4 2		11 20 28.5 32 71	E E E E E	15 25 15 50 40	1° broad and 85" high in Ca See Note.
	29 29 22 22 21 21			85 88 61 47.5 40	— W W W W	10 15 10 25 25	
	8 48 9 19 19 19 15 15 10 10	1 1 5 1		34.5 32 29.5 17.5 10.5 1	W W W W W W	10 10 10 45, 80 15 10 40	Ca Slightly changed at 8h 7m. Streamers from top extend westwards.
	8 48 48 9 7 6	3	4.5 44 51.5 53.5 58.5		W W W W W	20 40 40 40 25 ±	Ca. Ca. Detached. Faint in C 40" high in Ca Ca photographs 8h 43m and 8h 7m.
January 20. G.N.	8 39 40 39 39 39 39 34 34 38 39 32 30 28 9 0	... 4 1	73.5 64.5 48.5 45 38.5 32 26 21 17		E E E E E E E E E E E E E E	30 15 20 20 60 15 10 10 30 40 15 25 25 15	Ca. Ca. Ca. Faint in C. 80" high in Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca.
	8 39 58 55 53 39 39 39 50 39 44 48	2 3		7 12 30 35 59 73.5 48 42 21 17.5 9 6 2 4 18 30 46.5 52.5	W W W W W W W W W W W W W W W W	40 ± 15 45 20 40 15 15 30 15 15 15 10 15 15 10	Shown a displacement of 2.0 Å to red in the adjacent chromosphere. 20" high in Ca. Ca. 20" high in Ca. } Connected in Ca. Ca. Ca. Ca. Ca. Ca. Almost detached. Ca photographs 8h 39m and 9h 0m.
January 21. A.Y.S.	8 31 49 31 42 40 39 38 37 31	.. 6 1 1.5	84.5 46.5 40 18		E E E E E E E E E	30 70 10 15 25 15 10 10 10	Ca. Ca. Ca. Faint. 15" high in Ca. Ca.

Date and observer.	Hour I.S.T.		Base.	Latitude.		Limb.	Height	Remarks.
				North.	South			
1911.	H.	M.	°	°			"	
January 21. A.Y.S. —contd.	8	35	...		84.5	E	10	
		34			77	W	15	O slightly displaced to red.
	9	6	4		42	W	60	
		4			27	W	25	
		0	1	16		W	25	
	8	58	1	20.5		W	10	
		58	8	28.5		W	40	
		55		44		W	15	
		54	1	48.5		W	10	
		31		60.5		W	40	Ca Top extends northwards. Seeing poor. Ca photographs 8h 31m and 8h 48m.
January 22. A.Y.S.	8	47	2	60.5		E	10	
		46	3	51		E	45	Very faint in C.
	9	10		48.5		E	10	Ca.
	8	48		14		E	20	Detached.
		41		4.5		E	20	
		41		1.5		E	15	
		37	2		5	E	20	A faint arch.
		33	6		9	E	35, 10	
		31	2		34	E	25	
		27			48.5	E	10	
		27			57.5	E	10	
		25	2		77.5	E	25	
		57	2		41	W	45	
		57	1		37	W	15	
		55	0.5	27		W	10	
		54	3	42.5		W	20	40" high in Ca. Unsteady limb. Ca photographs 9h 10m and 8h 55m (poor).
January 23. G.N.	10	15	2	53.5	...	E	40	Ca Faint.
	9	59	2	47.5		E	20	Faint in Ca.
	10	15	2	11		E	30	Ca.
		53	1	Equator.		E	15	
		3	2		48.5	W	20	Faint in Ca.
		3			41	W	30	Slants southwards. Faint in Ca.
		15			19	W	15	
		15		62		W	60	Ca. A detached cloud 7° broad. Seeing poor. Ca photograph 10h 15m (poor).
January 24. A.Y.S.	8	46	..	72.5	...	E	10	
		44	1	41.5		E	30	
		42	1	36.5		E	15	
	9	12		24		E	20	Ca.
	8	37	1	21		E	15	
	9	12		19		E	15	Ca.
	8	36	8	9		E	40	
		28			12	E	20	
		26			18.5	E	10	
		25	4		31	E	40	
		23			42.5	E	10	
		21			70	E	10	
		19			83	W	10	
	9	12	1		70	W	20	Ca.
	8	58	2		45.5	W	30	Rather faint in C.
		56	1		21	W	20	
	9	12			12	W	20	Ca.
	8	53	2		0.5	W	45	5° broad in Ca.
	9	12	3	4.5		W	70	Ca. Faint. A small portion 20" high was seen in C.
	8	49	2	56.5		W	20	Ca photograph 9h 12m (poor).
January 25. S.S.	9	4	...	36	...	E	15	1° 5' long. Detached.
		2		24		E	25	Detached.
		0		14		E	15	
	8	59		Equator.		E	25	Slants 4° north. 40" high in Ca.
		18	1.5		6	E	15	Ca. Faint.
		55	8		26	E	60	Tallest at southern end. 45" high in Ca.

Date and observer.	Hour I S.T.	Base.	Latitude.		Lamb.	Height.	Remarks.	
			North.	South.				
1911.								
January 25 <i>—contd.</i>	S.S.	8 53	2		35	E	30	Top connected to that of the last in Ca
		50			40	E	10	
		44			65.5	W	10	
		43	1		49.5	W	40	Slants 2° south.
		41	5		46	W	45	
		35			12	W	60	Detached. 90" high in Ca
		32	2		8	W	40	
		10 19	1.5	12		W	20	
		8 13	1	30		W	15	Ca. Seen only at 8 <sup>h</sup> 13 <sup>m</sup> .
		10 16		32		W	60	Detached. Seen only at 9 <sup>h</sup> 0 <sup>m</sup> in Ca.
		9 0		34		W	15	Ca. Seen only at 9 <sup>h</sup> 0 <sup>m</sup>
		10 14	0.5	45.5		W	15	
		14	0.5	47.5		W	15	Seen only at 9 <sup>h</sup> 0 <sup>m</sup> in Ca
		8 18	2	48.5		W	15	Ca.
		18		52.5		W	10	Ca.
		18		54.5		W	15	Ca. Ca photographs 8 <sup>h</sup> 18 <sup>m</sup> and 9 <sup>h</sup> 0 <sup>m</sup> .
	January 26.	G.N.	8 48	2	41	...	E	45
		45		30		E	10	
		43	3	19.5		E	15	
		39	2		20	E	35	
		36	2		32	E	40	
		36			39	E	40	
		13			43	E	50	Ca.
		9 4	7		47	W	50, 60	See Note 1.
		8 13	1		25.5	W	10	Ca.
		58			14	W	25	} See Note 2.
		58			13	W	30	
		13	2		5	W	20	Ca.
		13	2	Equator		W	40	Ca.
		56		3		W	60	
	53	1	44.5		W	30	Ca photographs 8 <sup>h</sup> 13 <sup>m</sup> and 9 <sup>h</sup> 8 <sup>m</sup> .	
January 27.	A.Y.S.	8 52	1	70.5	...	E	20	
		48	4	50.5		E	40	
		40	1	27.5		E	10	
		37	1	21		E	20	
		34	1	13.5		E	15	
		30	1		2.5	E	10	
		30			4.5	E	10	
		28			32.5	E	20	
		26			35.5	E	20	
		22	3		39	E	90	65" high in Ca.
		22			43	E	10	
		18			69	E	20	
		9 28	1		81	W	20	C slightly displaced to red. Not seen at 8 <sup>h</sup> 17 <sup>m</sup> .
		27			76	W	10	
		8 16	1		71.5	W	15	
		9 26	8		49.5	W	40	
		22	8		27	W	45, 70, 55	Two prominences with tops connected.
	8			12.5	W	20	} See Note 2.	
	8			10	W	20		
	9	3		5	W	40		
	4		1		W	45	Almost detached. 70" high in Ca.	
	8 18		19		W	10	Ca	
	58	5	44		W	35		
	53		33.5		W	10	Ca photographs 8 <sup>h</sup> 18 <sup>m</sup> , 8 <sup>h</sup> 32 <sup>m</sup> .	
January 28.	S.S.	9 22	..	84.5	...	...	15	
		20		56.5		E	20	
		10 3	1	54.5		E	15	Ca. Faint.
		9 18		43.5		E	20	Ca prominence faint, 40" high, and extends from + 43° E to + 50° E.
		15	1	35		E	15	
		12	1	6		E	15	
		10			4	E	10	
		1	10		34	E	100	
	8 57	0.5		43.5	E	25		



Date and observer.	Hour I.S.T.		Base	Latitude.		Limb.	Height.	Remarks.
	H	M		North.	South			
1911.								
January 28. S.S.	8	55	..		49	E	10	
—contd.		44	1		62.5	W	25	
		41			59.5	W	10	
		41			56.5	W	10	
		39	2		49.5	W	10	
	10	3			39	W	10	Ca.
	8	36	1		38	W	15	
	10	3			36	W	15	Ca.
	8	33			35	W	10	
		38	7		30.5	W	45	Two prominences connected to each other.
		29			25	W	20	
	10	3	2		6	W	35	Ca. Faint.
	9	41			2	W	40	Detached.
	10	3		5		W	40	Ca. Detached
	9	30	1	20.5		W	15	
		28		33		W	30	
		27		46.5		W	35	Detached. Chromosphere slightly elevated over 2° in Ca.
	10	3	1	68.5		W	15	Ca.
	9	22		84		W	15	Seeing rather poor Ca photographs 10h 8m and 8h 31m
January 29. A.Y.S.	9	1	...	76		E	10	Ca
	8	49		55.5		E	25	Top faint.
		46	2	50.5		E	15	
		45		44.5		E	30	Faint in C.
		43	1	27.5		E	45	
		40	2	6		E	30	Bright in C.
		39			13	E	20	Almost detached.
		30	13		33.5	E	135	235" high in Ca.
		26	1		42	E	30	Changing. It was an arch at 8h 33m. Nothing here in Ca.
		23	1		71	E	10	
		20			81	E	10	
		20			83.5	E	10	C slightly displaced to red.
	9	1			76.5	W	10	Ca.
		5			49.5	W	35	20" high in Ca.
		5			43.5	W	30	
		1	5		36.5	W	55	40" high in Ca.
	8	57			4	W	20	Detached and 45" high in Ca.
		57		1		W	25	Detached. 45" high in Ca.
		56	2	27		W	50	70" high in Ca.
		52		44		W	10	
		51		63.5		W	10	
	9	1		68.5		W	10	Ca.
								Unsteady limb. Ca photographs 9h 1m and 9h 33m.
January 30. G.N.	8	43	5	80	..	E	50	
		41	1	8.5		E	20	
		40	3		17.5	E	45	
		38	5		31.5	E	120	Ca. Only a part was seen in C.
		37			48.5	E	15	A Ca streak extends over the top.
		36			83.5	W	35	Ca.
		36			80	W	20	Ca.
		36			78.5	W	20	Ca.
		35	2		51.5	W	20	
		32	3		39	W	60	
		36			14	W	15	Ca.
		36			8	W	15	Ca.
		36	2		3	W	25	Ca.
		36	1	25.5		W	35	Ca.
		36		30		W	60	Ca. Detached.
		36		84		W	20	Ca.
								Ca photographs 8h 33m and 8h 26m.
January 31. S.S.	10	27	..	76.5	..	E	75	Ca. Faint A slanting streak.
	9	15		54.5		E	15	
		8	4	31		E	30	A streak from this meets limb at + 37°E.
		6	1	16		E	15	Extends to + 20°E in Ca.
		1	4		15	E	50	80" high in Ca.
	8	56	4		38.5	E	40	

Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb.	Height	Remarks.
			North.	South.			
1911.	H. M	°	°	°		"	
January 31. S.S.	8 50	...		81.5	W	10	
—contd.	41			78	W	10	
	10 27			69.5	W	30	Ca.
	8 34	4		51.5	W	30	Faint in C.
	10 27			6	W	20	Ca.
	27	4	29		W	35	Ca. Slightly changing.
	27		40.5		W	10	Ca.
	27	2	44.5		W	30	Ca.
							Seeing bad. Ca photographs 10h 27m (fair) and 8h 57m (poor).
February 1. A.Y.S.	8 52	...	81		E	10	
	52		77.5		E	10	
	50	1	32.5		E	25	
	50		28		E	15	Faint in Ca
	50		26		E	10	
	46	1	24		E	20	
	46	1	21.5		E	20 ±	
	46		20		E	10	
	40	2	7		E	20	Bright jets. Gone at 9h 18m. C was slightly displaced to red at the N. end.
							Bright. Changed slightly and 45" high at 9h 18m. 30" high in Ca.
	40	3	3.5		E	35	
	34	1		11	E	20	
	34	3		13.5	E	105	6° broad at top.
	29	3		36.5	E	45	A Ca streamer from top extends to — 44° E.
	29			43.5	E	10	
	24	2		46.5	E	30	
	22			71	E	10	C slightly displaced to red.
	20			83.5	E	15	
	9 16			83	W	10	
	14	2		53.5	W	15	
	9	1		38	W	10	
	9	3		29.5	W	35	
	6			25	W	10	
	6	1		28	W	10	
	5	1		9.5	W	10	Faint in Ca.
	8 58	2	3		W	10	Ca. Faint.
	9 2	1	29.5		W	30	
	8 59	2	43.5		W	15	
	57	1	58		W	15	
	56		63.5		W	10	
	56		66		W	10	
	55		72		W	10	
							Ca photographs 8h 58m and 8h 37m.
February 2. G.N.	8 54	..	63	..	E	50	Ca.
	54		43.5		E	10	Ca.
	54		38		E	10	Ca.
	54		34		E	10	Ca.
	51		28		E	15	
	50		7		E	15	
	50		2		E	15	
	46			30	E	40	
	54			31.5	E	20	Ca. Arched over the limb.
	48	2		36	E	55	Only 30" high in Ca.
	42	3		39.5	E	25	Only 10" high in Ca.
	40	4		45.5	E	75	Only 40" high and there was no streamer in Ca at 8h 19m
	58	1.5		34	W	55	
	58	3		31.5	W	65	Only 35" high in Ca.
	58			29	W	45	
	54			5	W	15	Ca. Faint.
	54		17		W	20	Ca. Faint.
							Ca photographs 8h 54m and 8h 11m
February 3. S.S.	9 11	...	82	...	E	10	
	6		59.5		E	35	Detached.
	0		29.5		E	10	
	8 55			4	E	10	
	49	6		42.5	E	45	
	40	0.5		30	W	15	Consists of 2 separate prominences in Ca.



Date and observer.	Hour I S.T.	Base.	Latitude.		Limb	Height.	Remarks.
			North	South.			
1911.	H. M.	°	°	°			
February 6. S.S.	9 28			4 5	W	10	
—contd.	8 25		12		W	20	
	8 21		29		W	80	Ca. A short streak parallel to limb.
	9 22		38.5		W	10	
	18		72.5		W	10	Ca photograph 8h 21m (dim)
February 7 A Y.S.	8 43		66.5		E	10	
	43		62.5		E	55	Detached and broader at the top. 40" high in Ca.
	41	3	58		E	20	
	41	1	54.5		E	20	
	39	1	41.5		E	20	Nothing here at 8h 38m. 40" high in Ca.
	36	1	29.5		E	25	
	36		24.5		E	10	
	32			2.5	E	15	
	30			8	E	15	
	30			13.5	E	20	Almost detached.
	30			20	E	10	
	30			22	E	15	
	28			30	E	10	
	27			41	E	15	
	24	7		51	E	60	40" only in Ca.
	21	1		73.5	E	15	
	19			83	E	10	
	19			79.5	W	10	
	9 4	6		28	W	75	
	8 39			20	W	20	Ca. Slants towards the last.
	59		11.5		W	15	
	58		16.5		W	25 ±	Faint in C.
	56		34		W	10	
	39		36.5		W	10	Ca.
	55	2	42.5		W	40	
	62	1.5	53.5		W	20	
	51		58.5		W	20	
	50		61.5		W	15	} Connected and 45" high in Ca.
	49		64		W	10	
	49		65		W	10	
	48		75		W	10	
	46		83		W	15	
							Ca photographs 8h 38m and 8h 25m.
February 8. G.N.	8 58	2	64		E	75	Only 45" in Ca at 8h 26m. } Connected at top in Ca.
	52		58.5		E	40	
	52		55.5		E	20	
	52		64.5		E	20	
	52		52.5		E	20	Ca.
	50		44.5		E	10	
	50		48.5		E	10	} Small short jets.
	50		42.5		E	10	
	49	2	37.5		E	15	
	47		31		E	15	
	26	8	8		E	75	Ca. Only a small part was seen in C.
	45	8		5.5	E	40	
	45			9	E	30	
	45			10	E	20	
	43			19	E	15	
	40	8		51.5	E	90	
	38			66	E	15	
	9 7			34	W	60	
	6	2.5		28	W	80	} Connected in Ca.
	2			41.5	W	10	
	2			42.5	W	20	
	0		50.5		W	15	
							Ca photographs 8h 26m and 8h 4m.
February 9. S.S.	8 15	2	66		E	160	Ca. Slants about 10° to south. 00" high at 8h 28m.
	15	0.5	58.5		E	60	Ca.
	9 5	0.5	26		E	20	40" high in Ca.
	8 15		23		E	40	Ca. Detached.
	15	0.5	12		E	20	Ca.
	15		10		E	30	Ca.

Date and observer	Hour I.S.T.	Base	Latitude.		Limb.	Height.	Remarks.
			North.	South.			
1911.	H. M.	°	'	"		'	
February 9. S.S. —contd.	8 16 9 1 8 58 54 48 46 40 38 36 15	.. 2 8 2 1 6     0.5	7 6         58.5	  4 18 35.5 48.5 54.5 78.5 82.5	E E E E E E E E E W	20 35 30 30 15 70 15 15 10 20	Ca. 45" high in Ca. 20" and 15" high in Ca. <i>See Note</i> 55" high in Ca.  Ca. Passing clouds. Ca photographs 8h 15m and 8h 28m.
February 10. A.Y.S.	8 22 5 38 38 38 36 33 31 25  28 51 10  49 47  45	       2 6  1    1	81 8 5 4 3       28	      3 24 34.5 49.5  64 88 78.5  32.5 14	E E E E E E E E E E E W W W W W	25 15 20 30 20 10 15 50 50  15 20 20  45 —  10	Ca. Seen only at 8h 22m. Ca. 45" high in Ca. Top flows eastwards.  Top flows eastwards. C slightly displaced to red at the base at the E end.  Faint in C. Bright. C slightly displaced to red. Prominence gone by 8h 19m  Chromosphere slightly elevated. Ca prominence here is 10" high.  Limb unsteady. Ca photographs 8h 5m and 8h 22m.
February 11. G.N.	8 45 44 23 43 25 40 40 34 34 50 28 26 26	...     1.5 1.5  2.5 0.5  6 1 3	74.5 40.5 23 15 7      31.5	...     33 35.5 39.5 47.5 52.5 39 34.5 22	E E E E E E E E E W W W W	20 15 15 40 40 30 35 20 30 30 15 50 25 20	Ca.  Ca. Ca.  } Connected by a streak.  Ca. Ca.  Ca photographs 8h 20m and 8h 38m.
February 12. G.N.	9 43 8 48 47 9 48 43 43 8 46 9 43 8 45 42 53 52 50	... 1.5 1   2  1.5  4  8	30 28 24 17 16 20    6 32	...     34.5 40.5 47.5 60.5 37.5	E E E E E E E E E E W W W	15 15 50 15 30 20 40 20 30 15 60 20 45	Ca.  Ca. Ca. Ca.  Ca.       Ca photographs 9h 43m and 8h 28m
February 13. S.S.	8 58 55 15 49 48 48	... 2 2  0.5 1.5	38.5 29 29  27 43.5	...    15 27 43.5	E E E E E E	15 60 20 60 10 15	Top bends and meets limb in Ca at + 41° E.  Ca. <i>See Note.</i>

Date and observer	Hour I.S.T.		Base.	Latitude.		Limb	Height.	Remarks.
	H	M		North	South.			
1911.			°	°	°		"	
February 13. S.S. —contd.	8	40	2		52.5	E	20	
		37	2		78	E	25	
		33			65	W	10	
		28	3		39	W	40	
		26	0.5		36	W	10	} Connected in Ca.
		26	2		33.5	W	35	
	9	20	1.5		17.5	W	15	
		19			2	W	15	
		15	5	80		W	40	
		9	2	56.5		W	30	20" high in Ca
		5		67.5		W	10	Ca photographs 8h 15m and 8h 32m.
February 14. A.Y.S.	8	40	4	44.5		E	25	40" high in Ca
		38	3	83		E	50	70" high in Ca.
		35	1	22.5		E	15	
		34		14		E	10	
		31			15.5	E	10	
		31			21	E	10	
		30	1		38.5	E	15	
		28	3		50	E	40	20" high in Ca.
		26	1		55	E	20	± Faint.
		25	1		61.5	E	20	
		55			58.5	W	20	
		50	1		40.5	W	15	
		50	1		38	W	25	
		50	2		34.5	W	20	
		49	1		30	W	10	
		50			16	W	40	Ca. A faint slanting streak.
		50			12	W	60	Ca. A faint slanting streak.
		47	4	2		W	20	
		50		28		W	20	Ca.
		50		80.5		W	15	Ca.
		50		85.5		W	15	Ca.
		50		71.5		W	60	Ca.
		50		73.5		W	30	Ca.
								Unsteady limb. Ca photographs 8h 50m and 8h 15m.
February 15. G.N.	8	39		48.5	...	E	45	
		32		19		E	15	
		32		17		E	15	
		13			28	E	20	Ca.
		30	1		30.5	E	20	
		47	0.5		78.5	E	20	
		45			47.5	E	15	
		45	3		38	W	40	
		44	3	4.5		W	30	
								Ca photographs 8h 13m and 8h 35m.
February 16. S.S.	9	3		46	..	E	15	A streak 3° long and parallel to limb.
		0	4	41.5		E	30	Double.
	8	57		29		E	10	
		51	2		3	E	30	In Ca it consists of 2 prominences at - 2° and - 4° and 80° and 40° high.
		48			57	E	10	
		42			69.5	E	25	Very faint.
		39	1		82.5	E	10	
		38			78.5	W	10	
		33	4		36.5	W	50	
		28			29	W	10	
		45			12	W	30	Ca. Slants up to - 18° W.
	9	20	2		8	W	80	45° high in Ca. A Ca streak from it meets limb at - 5° W.
		16	4	7		W	15	
		11	0.5	55.5		W	10	
		11		57.5		W	15	
		10		61.5		W	15	

Date and observer.	Hour I.S.T.		Base.	Latitude.		Limb.	Height.	Remarks.
				North.	South.			
1911.	H	M.	°	°	°			
February 16. S.S. —contd.	9	10		68.5	.	W	15	
	8	19	1	81.5	.	W	40	Ca, seen only at 8 <sup>h</sup> 19 <sup>m</sup> . Ca photographs 8 <sup>h</sup> 45 <sup>m</sup> and 8 <sup>h</sup> 19 <sup>m</sup> .
February 17. A.Y.S.	8	50	1	75	.	E	15	
	9	15		49.5	.	E	10	
	8	47		41.5	.	E	30	45" high in Ca.
		44	3	39	.	E	45	
		39	2	34.5	.	E	25	
		38		15	.	E	10	
		29		Equator.		E	45	Ca. A very faint streak.
		36		6		E	20	Faint.
	9	10	1	10		E	15	
		8		38		E	20	Almost detached. C slightly displaced to violet
		5	2	69		E	20	
		3		82.5		W	10	
		2	1.5	46.5		W	16	
		0	3	41		W	20	
		0	3	38		W	40	Only 1° broad in Ca.
	8	29		5		W	20	Ca. Seen only at 8 <sup>h</sup> 29 <sup>m</sup> .
		52		81.5		W	20	Ca photographs 8 <sup>h</sup> 29 <sup>m</sup> and 9 <sup>h</sup> 4 <sup>m</sup> .
February 18. G.N.	8	47	1	68.5	.	E	25	
		43	8	38.5	.	E	50, 40	Ca. Detached.
		18		19	.	E	60	Ca.
		18		9		E	15	
		35		21		E	15	
		34		52.5		E	15	
		31		75.5		W	30	
		56	1	47		W	30	
		56	2	48.5		W	25	
		18	1	39		W	15	Ca.
		58		21		W	30	
		52		16		W	25	Faint.
		51		9		W	20	
		50		10		W	20	
		18		36.5		W	15	Ca. Ca photographs 8 <sup>h</sup> 18 <sup>m</sup> and 8 <sup>h</sup> 30 <sup>m</sup> .
February 19. A.Y.S.	8	45	..	73.5	...	E	10	
		44		32	...	E	10	
		39	8	40.5	...	E	45, 25	
		37		32.5	...	E	25	
		53		28	...	E	10	Ca.
		36		22	...	E	15	
		34		10	...	E	30	
		33	2	10	...	E	15	
		32		4	...	E	10	
		30		13.5	...	E	20	
		28		16	...	E	10	
		27		26	...	E	15	
		26		40	...	E	15	
		25		48.5	...	E	10	
		23		63	...	E	10	Faint, 35" high, and seen only at 8 <sup>h</sup> 32 <sup>m</sup> in Ca.
	10	18	1	77.5	...	W	15	C was slightly displaced to violet. The prominence was not seen at 8 <sup>h</sup> 22 <sup>m</sup> .
	8	22		75.5	...	W	10	
	9	0		51.5	...	W	10	
		0	6	44.5	...	W	45	
	8	57	1	31	...	W	15	Ca.
		53		9	...	W	20	Not in Ca.
		50		24	...	W	20	A Ca streak from this extends westwards.
		50		30	...	W	60	
		48	1.5	38.5	...	W	15	
		53		39.5	...	W	10	Ca.
		53		45.5	...	W	15	Ca.
		47		57.5	...	W	10	Ca photographs 8 <sup>h</sup> 53 <sup>m</sup> and 9 <sup>h</sup> 32 <sup>m</sup> .

Date and observer.	Hour I S.T.	Base	Latitude.		Lamb.	Height.	Remarks.
			North	South.			
1911.	H. M	°	°	°		'	
February 20. S.S.	9 14	.	4	.	E	10	
	8 55	.		62.5	W	10	
	48	6		42.5	W	30	4 prominences connected to one another.
	9 44		56 5		W	10	Seeing bad. No prominence photograph.
February 21 G.N.	8 58	1	42	.	E	90	Only 60" high in Ca at 8h 30m.
	55		30.5		E	25	
	30			9	E	15	Ca
	50			26	E	35	See Note
	40	4		29	E	45	A Ca streamer from the top extends to lat. - 24°.
	38			41.5	E	15	
	37			52.5	E	15	
	34	1		71.5	W	20	
	34			68	W	15	
	33			65	W	20	
	9 8	6		41.5	W	25	
	5	7		0.5	W	50	
	8 30			28	W	30	Ca
	30			32.5	W	15	Ca.
	30			44.5	W	50	Ca. Faint.
30			72.5	W	30	Ca Ca photographs 8h 30m and 8h 49m.	
February 22. A Y.S.	8 42	1	40.5		E	25	50" high in Ca.
	42	2	46.5		E	30	
	41		41.5		E	50	
	35		24		E	10	
	22		15		E	10	Ca.
	30	2		28	E	50	A streak from this extends southwards.
	29			34.5	E	20	Faint.
	20			60	E	10	
	20			65	E	10	
	19			75	W	10	
	9 16	2		42.5	W	40	C slightly displaced to red at the top. 20" only in Ca.
	10	3		27.5	W	25	C slightly displaced to red.
	8 22			18	W	30	Ca
	9 8			13.5	W	10	
	8 22			9	W	25	Ca. Detached.
	9 0	9		2.5	W	20	
	8 55			6	W	25	
52			41.5	W	15	30" high in Ca	
49	3		60.5	W	40		
46			79.5	W	10		
						Limb very unsteady during most of the time. Ca photographs 8h 22m and 8h 41m.	
February 23. S.S.	9 38	...	88	.	E	20	
	37		58		E	10	
	36	4	50.5		E	60	Two prominences connected to each other.
	8 23	2	49.5		E	50	Ca. Top meets the last prominence.
	28	1	41		E	30	Ca.
	9 18	1.5	15		E	25	Faint in Ca.
	8 23	2		8	E	40	Ca. Faint.
	9 6	3		35.5	E	45	
	6	1.5		38.5	E	45	Connected in Ca.
	6			42	E	20	
	8 53	0.5		76	W	20	Very faint.
	45	0.5		44.5	W	15	
	39	10		28	W	95	See Note.
	9 46			5	W	15	
	44			6	W	35	
43	1		8.5	W	25	45" high and a streamer from top flows to + 4° W in Ca. } Connected in Ca.	
42			12	W	15		
8 23			29	W	15	Ca. Faint. Surmounted by a streak 3° long. Limb unsteady. Ca photographs 8h 23m, 8h 34m and 14h 42m	



Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb.	Height.	Remarks.
			North.	South.			
1911	H. M.	°	°	°		"	
February 24. G.N.	8 18		73.5		E	15	Ca.
	52		66		E	15	
	50		61		E	25	
	18	6	49.5		E	70	Ca.
	18		29		E	15	Ca.
	50		4		E	45	Ca. Seen only at 8 <sup>h</sup> 50 <sup>m</sup>
	42			21	E	15	
	42			31.5	E	30	
	42	5		38	E	40	
	37			70.5	W	30	
	18	5		55	W	20	Ca.
	9 0	4		32.5	W	100	See Note.
	8 55		1		W	10	
	18	7	13.5		W	15, 40	Ca.
	18		31.5		W	20	Ca.
	50	2	87		W	15	Ca. Seen only at 8 <sup>h</sup> 50 <sup>m</sup> . Ca photographs 8 <sup>h</sup> 18 <sup>m</sup> , 8 <sup>h</sup> 50 <sup>m</sup> , 9 <sup>h</sup> 57 <sup>m</sup> , 10 1 <sup>m</sup> , 10 <sup>h</sup> 51 <sup>m</sup> , 11 <sup>h</sup> 18 <sup>m</sup> , 11 <sup>h</sup> 50 <sup>m</sup> and 15 <sup>h</sup> 6 <sup>m</sup> .
	February 25. A.Y.S.	8 36	1	53	...	E	50
35		1	51		E	25	40" high in Ca.
15			44.5		E	10	Ca.
31		3	8.5		E	25	Bright in C.
28				33	E	25	
28		1		36	E	25	
25		3		39	E	35	
21				57.5	E	10	
19				37	E	15	
18				32.5	W	10	
59		1		75.5	W	20	
58		1		58	W	15	
57		3		55	W	45	30" only in Ca.
54		3		34	W	70	50" high in Ca.
52				24	W	10	
51		1		9	W	15	
49		0.5	12		W	40	See Note.
44	5	22.5		W	20		
43		28		W	25		
15		30.5		W	20	Ca.	
41		30.5		W	10		
40		40.5		W	10		
15		50.5		W	15	Ca.	
39	1.5	60		W	15	Ca photographs 8 <sup>h</sup> 15 <sup>m</sup> and 8 <sup>h</sup> 40 <sup>m</sup> .	
February 26. A.Y.S.	9 16	1	81.5	...	E	10	
	15		68.5		E	15	
	14	1	55.5		E	20	
	8 28	11	7.5		E	45	An arch. The stem at the N. end is 3° broad.
	28	3	0.5		E	15, 35	See Note.
	28	5		7.5	E	40	Bright. Changing.
	21	5		35	E	50	30" high in Ca.
	18			47.5	E	10	
	18	1		50	E	10	
	18			52.5	E	15	
	16			54.5	E	15	
	14	1		81	E	10	
	13			70.5	W	10	
	9 25	7		52	W	35	
	23	3		35	W	60	
	20	2	6		W	15	
	8 41		13		W	70	Ca. A faint slanting streak.
9 19	1	21.5		W	40	] A small elevation in Ca extending to + 30° W	
19	2	26		W	40	] connects these at base.	
18	2	34.5		W	20	40" high in Ca.	
8 41		45.5		W	40	Ca. Very faint Ca photographs 8 <sup>h</sup> 41 <sup>m</sup> and 8 <sup>h</sup> 59 <sup>m</sup> .	
February 27. A.Y.S.	9 27	...	65	...	E	10	Ca.
	31		59		E	10	
	30		53		E	10	
	29	3	34		E	40	
	28	1.5	25		E	25	

Date and observer.	Hour I.S.T.	Base.	Latitude.		Lamb.	Height.	Remarks.
			North.	South.			
1911.	H. M.	°	°	°		"	
February 27. A.Y.S. —contd.	9 27 27 10 10 8 56 9 22 21 20 17 16 36 35 14 27 33 27 31	2 2 1 7 8 3 1 1	20 14 7 4 11 30 36.5 40.5 59.5	... 3 22.5 31 68 54.5 39 22 11.5	E E E E E E E W W W W W W W W W W	20 25 25 35 30 25 45 10 30 40 15 35 10 45 30 15 10	Ca. } Tops connected by a Ca arch 45" high. } Bright in C. Streamers from top extend eastwards.  Bright in C.  Ca. Ca. Seeing rather poor. Ca photographs 9 <sup>h</sup> 27 <sup>m</sup> and 9 <sup>h</sup> 39 <sup>m</sup> .
February 28. G.N.	8 35 35 45 35 43 40 39 39 35 32 27 49 35 35	4 3	56.5 52.5 33.5 19 4.5	... 25 32.5 34.5 80 51.5 41	E E E E E E E E E W W W W W	10 45 35 30 30 10 10 15 20 50 50 40 30	Ca Ca Ca.  Ca photographs 8 <sup>h</sup> 35 <sup>m</sup> and 8 <sup>h</sup> 20 <sup>m</sup> .
March 1. S.S.	8 19 24 19 19 9 12 9 4 2 8 59 58 56 53 50 47 42 41 38 36 34 19 31 27 9 29 27 25	0.5 1 1 1 3 2 1 1.5 2 5	82.5 70.5 64 23 7.5	9 15 21.5 28.5 34.5 39 42.5 58 62.5 80.5 83 63 55 50.5 22 20 17 5 35 42.5	E E E E E E E E E E E E E E E E E E W W W W W W W W W	15 30 45 40 40 30 40 20 10 40 30 30 20 30 15 20 10 25 20 20 10 15 40 40 55	Ca. Ca. Seen only at 8 <sup>h</sup> 34 <sup>m</sup> . Ca. Faint. Ca. Faint. 20" high in Ca. See Note.  A few very faint dots.  Ca.  40" high in Ca. Ca photographs 8 <sup>h</sup> 19 <sup>m</sup> and 8 <sup>h</sup> 34 <sup>m</sup> .
March 2. A.Y.S.	8 47 42 41 38 37 36 35 53 31	... 0.5 2 9 1	34 7	... 4 8 10 19 41 82 71.5	E E E E E E E E W W W W W	20 15 20 20 15 30 45 10 10	Detached. Top broader and flows eastwards.  25" high in Ca.



Date and observer.	Hour L.S.T.	Base.	Latitude		Limb.	Height.	Remarks.
			North	South.			
1911.	H. M.	°	°	°		"	
March 6. —contd.	S.S.	..	...	41	W	10	
				30	W	85	
				28	W	20	1° broad and 45" high in Ca.
		0.5		3	W	30	Ca.
			27		W	10	
		1	28		W	10	
		1	30.5		W	10	Ca.
		1	40.5		W	15	Ca photograph 8 <sup>h</sup> 15 <sup>m</sup> .
March 7.	G.N.	..	64		E	10	
			82		E	15	
			37.5		E	15	
			35.5		E	15	
			32.5		E	15	
		3	0.5		E	20, 35, 15	Ca.
				4	E	15	Ca.
				10	E	10	Ca.
				13	E	20	Ca.
				29	E	25	
		7		41	E	45, 30	
				47.5	E	30	Ca.
				83	—	20	
				78	W	15	
				25	W	30	
			9		W	15	
			30		W	40	Ca.
			31.5		W	50	Ca.
			68		W	45	See Note. Ca photograph 8 <sup>h</sup> 10 <sup>m</sup> .
March 8.	A.Y.S	2	40.5	..	E	40	
			32.5		E	30	
			8		E	40	Top faint in C.
		3	3		E	40	
		1		2.5	E	20 ±	
		4		6	E	20	
				13.5	E	20	See Note.
		4		17	E	30 ±, 20	Faint.
		5		22.5	E	25	
		1		38	E	45	
		1		41	E	40	
		2		44.5	E	35	40" high at 9 <sup>h</sup> 20 <sup>m</sup> . 25' only in Ca.
		1.5		52	E	20	
		3		85	W	40	
				13	W	10	
			3		W	15	
			40.5		W	15	Ca.
			45.5		W	15	
							Seeing poor. Ca photographs 9 <sup>h</sup> 5 <sup>m</sup> and 9 <sup>h</sup> 21 <sup>m</sup> , the latter incomplete and both poor.
March 9.	A.Y.S		54.5	..	E	10	
			50.5		E	35	
			48.5		E	45	Detached.
			40.5		E	60	Detached in C.
			34		E	55	Detached. Faint } See Note.
		4	32.5		E	75	Ca. Faint streaks. Seen only at 8 <sup>h</sup> 12 <sup>m</sup> .
			16		E	10	
			10		E	60	Ca. A cloud 5° long connected to the limb by a slender stem.
		3	2.5		E	20	
		2		2	E	20	Ca. Seen only at 10 <sup>h</sup> 5 <sup>m</sup> .
				14	E	45	Ca.
		15		29.5	E	20, 40	
				43.5	E	10	Ca.
		1.5		47.5	E	20	
		2		53.5	E	20	
				56.5	E	15	
		3		62	E	20	
				82.5	E	10	
				74.5	W	15	Ca.
				64.5	W	10	

Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb	Height.	Remarks.
			North.	South.			
1911.	n. m.	°	°	°		"	
March 9. A.Y.S.	8 26	1		61.5	W	10	
—contd.	26	1		56	W	20	
	9 2	1		37	W	30	Top broader. 50" high in Ca.
	8 12			84.5	W	10	Ca.
	9 0			21	W	10	
	0	1		16	W	20	
	8 12			0	W	60	Ca. Detached.
	59	2	22		W	20	
	56		26		W	15	
	55		41.5		W	20 ±	
	54		45.5		W	40	} Changing in Ca; 45" and 70" high in it at 8 <sup>h</sup> 12 <sup>m</sup> . Ca photographs 8 <sup>h</sup> 12 <sup>m</sup> and 10 <sup>h</sup> 5 <sup>m</sup> .
	53	2	51.5		W	35	
March 10. A.Y.S.	8 32	...	81	...	E	30	Ca.
	43	2	60		E	30	
	45		55.5		E	25	
	48		38.5		E	20	
	32		30.5		E	75	Ca A small detached streak.
	35	4	26		E	30	
	36	1	20.5		E	20	See Note.
	33		11		E	20	Faint and detached in C.
	32	1	0		E	20	
	32			4	E	30	Ca. Slants eastwards
	31			11	E	25	
	32			13	E	45	
	32			14	E	40	} Ca. Faint streaks.
	32			16	E	40	
	27	6	32.5		E	75	50" high in Ca.
	28	4	52.5		E	30	} Connected by a short Ca. streak.
	22	3	59		E	55	
	20				W	10	
	57	7		38	W	45	
	32			23	W	10	Ca.
	54		20		W	10	
	53	1	30.5		W	10	35" high in Ca.
	53		44.5		W	15	
	51	3	56		W	20	
	32		61		W	30	Ca.
	32		64		W	20	Ca.
	49		69		W	15	Ca photographs 8 <sup>h</sup> 32 <sup>m</sup> and 8 <sup>h</sup> 45 <sup>m</sup> .
March 11. A.Y.S.	8 40	2	64	...	E	20	
	40	3	60.5		E	40	
	38		38.5		E	10	Faint in C.
	29		36.5		E	45	Ca.
	29		30		E	20	Ca.
	29		28		E	55	Ca.
	29		16		E	25	Ca.
	29		14		E	35	Ca.
	29		8		E	10	Ca.
	29		5		E	10	Ca.
	37		2		E	15	Ca.
	29		Equator.		E	45	Ca. Detached.
	29		1		E	30	Ca.
	29		3		E	15	Ca.
	29		8		E	30	Ca.
	29		10		E	20	Ca.
	36		12		E	20	
	47	1	14.5		E	50	Ca. Seen only at 8 <sup>h</sup> 47 <sup>m</sup> .
	29		20		E	15	Ca.
	34		24		E	10	
	33	4	34.5		E	45	
	30		42.5		E	15	
	30		47.5		E	20	
	25	5	57		E	100	Only 75" high in Ca.
	22		60.5		E	20 ±	
	22		81		W	10	
	29		47.5		W	30	Ca.
	55	6	38.5		W	45	
	55	1.5	33.5		W	70	Slants over the last prominence.

Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb.	Height.	Remarks.
			North.	South.			
1911.	H. M.	.	°	°		"	
March 11. —contd	A.Y.S.	1	..	14 5 1	W. W. W. W. W. W. W. W. W. W. W. W.	10' 25' 20' 20' 75' 15' 50' 15' 30' 45' 110' 10' 20'	Ca. Seen only at 8 <sup>h</sup> 47 <sup>m</sup> . Ca. Seen only at 8 <sup>h</sup> 47 <sup>m</sup> . Ca. A detached streak 2° long. Ca. A short detached streak. Bright. Ca. A streak slanting westwards. Ca. A small portion of this was seen in C About 5° broad at the top
		1.5	52.5 64		W. W.	10' 20'	Ca photographs 8 <sup>h</sup> 29 <sup>m</sup> and 8 <sup>h</sup> 47 <sup>m</sup> .
March 12.	G.N.	4	68		E	40	
			57.5		E	30	
			39.5		E	20	Ca
			35.5		E	20	Ca.
			30.5		E	40	Ca.
			29		E	90	Ca Bent at top.
			28		E	20	Ca.
			21		E	15	Ca.
			18		E	15	Ca.
		3		35	E	30	
				38.5	E	40	
				39.5	E	00	
				47.5	E	130	Ca. A detached cloud.
		6		52.5	E	70	
				71.5	E	15	
		7		38	W	70	
				39.5	W	15	
				32.5	W	15	
				31.5	W	15	
		2		30	W	10	Ca.
				25	W	15	Ca.
				24	W	10	Ca.
				23	W	30	Ca.
		2		15	W	45	See Note.
		4		6	W	45	
					W	45	Ca.
				3	W	15	Ca.
				12	W	15	Ca.
				27	W	20	Ca.
				29	W	45	Ca.
				31.5	W	100	Ca.
				38.5	W	15	Ca.
							Ca photographs 8 <sup>h</sup> 22 <sup>m</sup> and 8 <sup>h</sup> 45 <sup>m</sup> .
March 13.	S.S.		82.5	...	E	80	Ca.
			81		E	20	
			79.5		E	20	
			77.5		E	10	
			76		E	10	
			75		E	10	
			72		E	10	
			70.5		E	10	
		0.5	69		E	20	Ca.
		8	57.5		E	25	40' high in Ca.
		4	33.5		E	100	See Note.
		0.5	11		E	10	Ca.
		0.5		20	E	15	
		1.5		51	E	10	
				55.5	E	20	
				64	E	10	
				78.5	E	15	
		0.5		78	W	10	
		3		27	W	30	
		0.5		34.5	W	10	} Connected in Ca.
				22	W	35	Slants south. A Ca streak 45' high slants north.
				20	W	45	Ca. A short detached streak.
				19	W	20	45' high in Ca.

Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb.	Height.	Remarks.
			North.	South.			
1911.	H. M.	°	°	°		°	
March 13. S.S.	8 16	...	...	17	W	45	Ca
—contd.	30	1		13	W	15	
	16	3		45	W	15	Ca.
	9 16	1	65		W	15	
	12	0.5	56.5		W	30	Upper part detached from lower.
	8 16		64		W	10	Ca.
	16		68		W	10	Ca.
	16		67		W	20	Ca.
	16	0.5	69		W	30	Ca.
							Ca photographs 8h 16m, 8h 34m, 9h 0m, 9h 12m, 10h 33m and 10h 38m.
March 14. A Y.S.	8 52	2	75.5		E	30	Only 10" high in Ca.
	52		73.5		E	10	
	51		63		E	10	
	46	1	49.5		E	10	
	45		41.5		E	10	Bright Not seen in Ca.
	37	2	38.5		E	90 ±	A Ca streak from top rises to 150" in height.
	34		35.5		E	75	
	34	1	33.5		E	75	Top about 4° broad. } 60" high in Ca.
	31		27		E	15	
	30		24		E	15	
	33		19		E	10	Ca.
	28		13		E	10	40" high and seen only at 8h 18m in Ca.
	33		3		E	30	Ca. Faint.
	27	1		21.5	E	20 ±	Faint.
	23			28	E	10	
	21			37.5	E	15	
	20			55	E	15	
	19			62	E	10	
	18	2		72.5	E	15	
	33			81.5	E	30	Ca.
	16	1		80.5	W	10	
	16			65	W	15	
	15	1		63.5	W	15	
	9 0	3		30	W	45	A streak from this meets limb at -25° W.
	8 33			23	W	30	
	33			21	W	50	Ca. Short detached streaks.
	33			17	W	15	Ca.
	33			7	W	20	Ca.
	57	0.5	6		W	20	2" broad in Ca.
	56	2	9		W	10	
	33	1.5	70		W	20	
	33		72.5		W	15	Ca.
	33		77		W	20	
	33	1	83		W	20	Ca photographs 8h 33m and 8h 16m.
March 15. G.N.	9 5	...	60	...	E	15	
	4	7	45		E	30	
	5		32.5		E	25	Ca.
	5		30.5		N	10	Ca.
	5	3	28.5		N	10	
	4			7	N	15	
	2			74.5	W	10	
	2			65	W	15	
	5			63	W	15	
	5			35.5	W	30	
	5			33.5	W	10	Ca.
	5			29	W	10	
	5			12	W	10	
	8	4	10		W	35	Passing clouds. Ca photograph 9h 5m.
March 16. S.S.	9 4	1	81	...	E	15	Not in Ca.
	0		49.5		E	30	
	0	10	42.5		E	45	Tops connected by a streak.
	39			5	E	30	Ca.
	8 48			62	E	10	
	42	0.5		77	E	10	
	42			79.5	E	10	
	37			69.5	W	25	





Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb.	Height	Remarks.
			North.	South.			
1911.	H. M.	°	°	°		"	
March 19 —contd.	A Y.S.	..	20	.	W	15	Ca.
	17		26		W	10	Ca
	33		44.5		W	15	
	17	8	47		W	15	Ca An arch.
	32		61		W	10	
	31		75		W	10	See Note 2.
	30		81.5		W	25	Seen only at 8h 46m in Ca Ca photographs 8h 17m and 8h 48m.
March 20.	S.S.	..	88	.	E	10	
	59		70.5		E	10	
	8 49	1	59.5		E	15	Ca
	49	1	80		E	15	Ca.
	49	0.5	19		E	40	Ca
	9 48	0.5	18		E	25	
	45	0.5	8		E	40	
	8 49			8	E	20	Ca. A detached cloudlet
	9 19			79	E	10	
	8 49	0.5		58.5	W	35	Ca.
	49	1		50.5	W	20	Ca.
	9 10	0.5		44	W	35	
	8 49	0.5		28	W	10	Ca
	9 3			23	W	30	
	10 6	0.5	23		W	10	
	1	0.5	08.5		W	10	Seeing poor. Ca photographs 8h 40m and 8h 33m.
March 21.	G.N.	...	44.5		E	30	Ca.
	53		34.5		E	20	
	50	4	29		E	40	
	45		22		E	35	
	45		19		E	30	
	31		16		E	10	Ca.
	45		7		E	15	
	31			25	E	40	Ca.
	31			31.5	E	30	Ca.
	30			34.5	E	15	
	31			49.5	E	10	Ca.
	31			47.5	W	20	Ca.
	31			45.5	W	30	Ca.
	31			43.5	W	40	
	31			12	W	30	Ca.
	31			10	W	40	Ca.
	9 2			1	W	70	
	8 57		16		W	20	
	31	3	19.5		W	45	Ca.
	31		30.5		W	75	Ca.
	58		43.5		W	20	Ca photographs 8h 31m and 8h 23m.
March 22.	A Y.S.	..	52	.	E	10	
	11	2	43.5		E	20	Ca.
	30	2	15		E	30	
	34	3	10.5		E	15	
	20	2		32.5	E	15	
	29	2		30.5	E	40	Only 20" high in Ca.
	27	1		41	E	10	
	27	1.5		43.5	E	10	
	24			51	E	10	
	20	1		31	W	25	
	9 2			73.5	W	10	
	2			70.5	W	10	
	8 11			56.5	W	10	Ca.
	9 0			47.5	W	10	
	0	4		44.5	W	30	Only 45" high in Ca.
	8 58			34.5	W	20	
	11			28	W	15	Ca.
	55	9		22.5	W	30, 20, 15	
	58	5		11.5	W	20	
	11			2	W	30	Ca Very faint in C.

Date and observer.	Hour I.S.T	Base.	Latitude		Limb.	Height	Remarks.
			North	South.			
1911.							
March 22. —contd.	A.Y.S.						
	8 49	.	7		W	25	40" high in Ca.
	48		12		W	20	} Connected in Ca.
	46		13		W	20	
	46	4	17		W	60	
	11		46.5		W	10	Ca.
	11		61		W	10	Ca.
41		61		W	15	Ca photographs 8h 11m and 8h 29m.	
March 23.	S.S.	8 5	0.5	82.5	E	15	Ca.
		5		79.5	E	25	Ca.
		9 8	2	73.5	E	Low.	25" high in Ca.
		7	1.5	51.5	E	15	
		6		45.5	E	80 ±	See Note 1.
		8 5	8	48	E	20	Ca. An arch
		5	0.5		E	15	Ca.
		58		14	E	50	Faint
		56		28	E	10	
		55	8	30.5	E	20	
		54	1	34	E	20	
		5	0.5	42	E	30	15" high in Ca.
		42		47.5	E	20	Ca.
		39		69.5	E	10	
		36		88	E	40	
		36		61	W	10	
		32	8	58	W	10	
		27	18	46.5	W	45	See Note 2.
		5	0.5	24.5	W	40, 80	See Note 3.
		5	0.5	12	W	15	Ca.
		5	0.5	9	W	10	Ca.
		5	0.5	4	W	10	Ca.
		9 22	2.5	2	W	40	40" high in Ca.
21		8	W	30	15" high in Ca.		
20		18	W	30	Slants south.		
20		15	W	40	Slants north. 30" high in Ca.		
19		28	W	15	A Ca streak 15" high passing through the top extends from + 24° to + 34° E.		
8 5	0.5	41.5	W	40	Ca. Slants south.		
5		44.5	W	30	Ca. Slants south.		
Ca photographs 8h 5m and 8h 22m.							
March 24.	G.N.	8 20		52.5	E	45	Ca.
		53		49.5	E	10	
		20		47.5	E	10	
		20		45.5	E	15	Ca.
		20		30	E	10	Ca.
		20		27	E	20	Ca. Faint.
		20		11	E	20	Ca.
		20		9	E	15	Ca.
		20		8	E	30	Ca.
		20			E	15	
		33		4	E	15	
		33		14	E	15	
		42	3	19	E	40	
		9 10	2	38	E	25	
		5	6	50.5	W	25	
		3	2	30.5	W	45	Bright.
		2		11	W	20	
0		22	W	50			
20		29.5	W	50			
20		35.5	W	15			
20		39.5	W	30			
Ca photographs 8h 20m and 8h 33m.							
March 25.	A.Y.S.	8 48	..	51.5	E	10	
		47		34	E	10	
		46	4.5	6	E	25	Only 15" high in Ca.
		41	2		E	15	
		44	2	3	E	10	
		41		5	E	10	
		27	4	18	E	20	
		27		18	E	20	Two Ca streaks from the top are 60" in height.
		23	3	39	E	40	
		25		60	W	30	O slightly displaced to red.
		51.5	W	15			

Date and observer.	Hour I.S.T.	Base	Latitude.		Limb	Height.	Remarks.			
			North.	South.						
1911.										
March 25. —contd.	A.Y.S.	4	..	48.5	W	45	Bright.			
			33	41	W	15				
			33	35.5	W	60				
			59	25.5	W	10				
			58	2	W	20				
			56	8	W	15				
			56	15	W	10				
			52	29.5	W	90				
			27	37.5	W	90				
			27	70.5	W	30				
			49	88	W	10				
			Ca { Connected Ca. Slants to — 69° W.							
			Ca photographs 8h 27m and 8h 40m.							
March 26.	A.Y.S.	..	70.5		E	10	30' high and seen only at 9h 41m in Ca.			
			51	38.5	E	20				
			51	30	E	20				
			42	22	E	60				
			38	6	E	10				
			9 41	3	E	15				
			8 37	3	E	30				
			84	2	E	20				
			33		E	10				
			33		E	20				
			9 41		E	15				
			8 32	1	E	25				
			30		E	25				
			42		E	15				
			42		E	10				
			42		E	15				
			28		W	10				
			42		W	10				
			42		W	10				
			22		W	15				
			23	2	W	25				
			25	2	W	50				
			42		W	10				
9 2	1	W	10							
8 58	3	W	25							
53	5	W	30							
54		W	20							
42		W	15							
42		W	20							
42		W	25							
Ca. Faint and seen only at 9h 41m Only 15'' high in Ca. Only 15'' high in Ca. Ca. Ca. Ca. Ca. Ca. Seen only at 9h 41m. See Note 2. Ca photographs 8h 42m and 9h 41m.										
March 27.	S.S.	..	79.5	...	E	40	Not in Ca.			
			22	76	E	40				
			14	56.5	E	10				
			10	6	E	20				
			18 9		E	20				
			9 9	1	E	40				
			9 39	4	W	20				
18 9		W	45							
Ca. Detached. Ca. Ca. Seeing bad. Ca photograph 16h 9m.										
March 28.	G.N.	...	56.5	..	E	15	Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. Ca. photographs 8h 29m and 8h 41m.			
			29	10	E	10				
			29	6	E	10				
			29		E	40				
			30		E	15				
			29	5	E	30				
			43		E	20				
			41		W	15				
			29		W	20				
			29		W	30				
			40	8	W	45				
			39		W	10				
			29		W	30				
37		W	15							
Equator. 32.5 39.5 53.5 64										

Date and observer.	Hour L.S.T	Base.	Latitude.		Limb.	Height	Remarks.
			North	South.			
1911.	H. M	°	°	°		"	
March 29. A.Y.S.	8 52	1.5	71		E	10	
	50	1	52		E	10	
	50	1	47.5		E	10	
	49	1	34		E	20	
	48	2	22		E	30 ±	Faint in C. Only 15" high in Ca.
	45		8		E	15	
	45		6		E	15	
	43	2		7	E	20	
	38			27	E	10	
	40	6		39.5	E	55	40" high in Ca.
	26			50.5	E	10	
	26	1		52.5	E	15	See Note
	26	1		62.5	E	20	
	38			82.5	E	10	Ca.
	24			88	E	10	
	16			76	W	10	
	38			57.5	W	10	Ca.
	9 13	4		48.5	W	30	Only 2° broad in Ca.
	8 38			41.5	W	10	Ca.
	9 11			27	W	10	
	8 38			28	W	15	Ca.
	38			10	W	20	Ca.
	9 9	2		4	W	35	50" high in Ca.
	8 38		2		W	15	Ca.
	9 8		5		W	25	Detached.
	8 38		9.5		W	40	Ca. Detached.
	38	3	12.5		W	10	Ca.
	59		27		W	10	
	59	1	31		W	15	
	38		41.5		W	15	Ca. Detached.
	57		45.5		W	30	
	57	7	50.5		W	45	Only 4° broad in Ca.
	54		70.5		W	20	C slightly displaced to red at base. Ca photographs 8 <sup>h</sup> 38 <sup>m</sup> and 8 <sup>h</sup> 11 <sup>m</sup> .
March 30. S.S.	8 30		79		E	20	Ca.
	30	0.5	74.5		E	30	Ca.
	9 30		51.5		E	30	
	8 30		24		E	40	Ca Detached. Slants north.
	9 23			8	E	10	
	21			20	E	20	
	20			28	E	20	
	8 30	1		35	E	20	Ca.
	9 17	4		38.5	E	50	
	8 30			41.5	E	15	Ca. A short streak parallel to limb.
	9 8			63	E	10	
	6			73.5	E	20	
	1			81	E	10	
	8 55			60.5	W	10	
	50			51.5	W	35	Detached in C. } Connected.
	50			48.5	W	30	Detached. }
	50	1.5		46.5	W	10	Nearly connected to the last by a thin streak
	30			45.5	W	15	Ca.
	48			13	W	50 ±	Faint Detached.
	44			12	W	40	Faint. Detached.
	44	2		10.5	W	30	Faint
	40	2		6	W	25	Faint.
	30	3		0.5	W	45	Ca.
	30		6		W	10	Ca.
	30		19		W	10	Ca.
	9 38		27.5		W	15	
	36	1	44.5		W	60	
	36	3	51		W	60	
	8 30	0.5	82.5		W	20	Ca. Observed through thin cirrus. Strong wind. Ca photographs 8 <sup>h</sup> 30 <sup>m</sup> and 8 <sup>h</sup> 48 <sup>m</sup>
March 31. S.S.	10 24		70.5	...	E	20	Ca.
	24		60.5		E	15	Ca.
	9 5		49.5		E	10	
	2		26		E	Low.	15" high in Ca.
	1		19		E	Low.	20" high in Ca.

Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb.	Height.	Remarks
			North	South.			
1911.	H. M.	°	°	°		"	
March 31. — <i>conid.</i>	S.S.						
	9 0	2	15	..	E	15	
	0	1	8		E	40	Very faint in C. Slants towards the last.
	10 24	15	5		E	20	Ca
	8 55			16.5	E	15	
	58	0.5		36.5	E	20	
	10 24	1		41.5	E	20	Ca
	8 51	1		46	E	20	
	44			70.5	W	15	
	10 24			62.5	W	10	Ca
	24	1		67.5	W	10	Ca.
	8 39	1		35.5	W	15	
	37			23	W	Low	C slightly displaced to red.
	36	1		20	W	20	
	35			15	W	15	
	34			9	W	15	
	34			6	W	15	
	33			2	W	35	
	9 14		11		W	35	Very faint. Not seen in Ca at 10h 24m.
	13		19		W	46	
	11	8	46.5		W	60	
							Ca photographs 10h 24m and 8h 7m.
April 1.	G.N.						
	8 13	..	88		E	15	Ca.
	13		56.5		E	35	Ca.
	13		49.5		E	10	Ca.
	9 40	1	38		E	25	Ca.
	40		36.5		E	10	Ca.
	8 13		24		E	10	Ca.
	13		20		E	10	Ca.
	13		16		E	15	Ca.
	13		14		E	15	Ca.
	13	0	10		E	25	See Note.
	9 40			5	E	15	
	8 13			20	E	30	Ca faint.
	9 12			35.5	E	35	Eruptive. Not seen at 8h 43m.
							Top showed displacement of 1.0 Å. to violet.
	9 40			39.5	E	20	Ca.
	8 42	2		42.5	E	15	
	9 0	1		19.5	W	20	
	8 13		20		W	20	Ca.
	13		24		W	10	Ca.
	9 40		30		W	40	Ca.
	4	4	47.5		W	35, 50	Changing. 75" high at 9h 40m. Ca photographs 8h 13m and 9h 40m.
April 2.	A.Y.S.						
	8 41	...	29	..	E	30	} Ca.
	41		27		E	20	
	41		23		E	15	
	41		20		E	15	
	41		18		E	20	
	41		15		E	15	
	9 1	1	12		E	30	Only 10" high in Ca.
	8 41		1		E	40	Ca.
	41			10	E	40	Ca. The stem only was seen in C.
	41			13	E	30	Ca.
	41			16	E	40	Ca.
	49	2		34	E	160	Changing rapidly, the upper part } 26" long and extending towards } the equator. } See Note 1.
	42	3		40.5	E	45	Changing.
	41	2		50.5	E	30	Ca
	36	3		55	E	40	C slightly displaced to violet over top.
	34			58	E	20	
	30			81	E	10	
	29			73.5	W	10	
	28	1		67.5	W	15	
	27	2.5		52.5	W	15	
	9 18			88	W	20	C slightly displaced to violet.
	8 41			80	W	15	Ca.
	41	2		20	W	75	Ca.
	9 16		Equator.		W	30	
	8 41		4		W	40	Ca.

Date and observer.	Hour I.S.T		Base.	Latitude		Limb.	Height	Remarks.
				North.	South			
1911.	h.	m.	°	°	°		'	
April 2. A.Y.S. —contd.	9	15	.	9		W	10	
	8	41		11		W	15	Ca.
	9	13	1	30.5		W	25	
		8	8	40.5		W	75	An arch. Faint in C.
	8	41		46.5		W	40	Ca.
	9	3		79		W	15	30" high in Ca. Ca photographs See Note 2.
April 3. S.S.	9	17	.	88		E	20	
	8	29	0.5	78		E	20	Ca.
		29		65		E	10	Ca.
	9	15		59.5		E	30	
	8	29		49.5		E	20	Ca.
	9	13	0.5	40		E	20	
	8	29	1	34.5		E	20	Ca
	9	11	1	25		E	15	6" broad in Ca.
	8	29		16		E	10	Ca.
		29		15		E	80	Ca Detached. Slanting from — 2° to + 5° E
	9	6	2		5	E	30	
		2	1		35	E	10	
		2	0.5		45	E	10	
		0	2		47.5	E	15	
	8	58	4		52.5	E	45	30" high in Ca.
		54			76.5	E	10	
		29			88	E	45	Ca.
		51	1		83	E	10	
		47			78	W	15	
		46			64.5	W	10	
		45			59.5	W	10	
		29			57.5	W	15	
		41			46.5	W	35	
		29	1		44.5	W	15	Ca.
		29			41.5	W	10	Ca.
		39	2		35.5	W	15	
		35			23	W	20	
		35			22	W	10	
		35	0.5		16	W	15	
		35	1.5		14	W	15	
	9	25		4.5		W	10	
		55	2	9		W	20	Ca. Seen only at 9h 55m
	8	29		18		W	10	Ca.
		29	1.5	20		W	15	Ca.
		29	1	26.5		W	15	Ca.
		29		33.5		W	20	Ca.
	9	23	0.5	36.5		W	10	30" high in Ca.
	8	29	0.5	55.5		W	15	Ca. Ca photographs 8h 20m and 9h 55m
April 4. G.N.	8	13	.	82.5		E	20	Ca
		13		79		E	25	Ca.
		43	13	16.5		E	30,40,30	
		13		Equator.		E	30	Ca.
		13			4.5	E	50	Ca.
		40	4		10	E	20	
		37	5		50	E	60	
		33			83	W	15	
		13			7	W	20	Ca.
		52	1	9.5		W	20	
		13		34.5		W	20	Ca.
		13		82		W	20	Ca. Ca photographs 8h 18m and 10h 0m.
April 5. A.Y.S.	8	55	.	84		E	10	
		17		33		E	10	Ca.
		17		27		E	10	Ca.
		54		20		E	15	
		54	10	13		E	30	75" high at the N. end in Ca.
		49	4	Equator.		E	20	Faint in C. 40" high in Ca.
		43	2		21.5	E	10	
		42			35	E	10	
		40			44.5	E	20	
		40	3		48	E	70	

Date and observer.	Hour I.S.T	Base	Latitude.		Lmb.	Height.	Remarks.	
			North.	South.				
1911.	h. m.	°	°	°		"		
April 5. —contd.	A.Y.S.							
	8 37	...	...	75.5	E	15	Faint and seen in Ca only at 8 <sup>h</sup> 41 <sup>m</sup> . See Note.	
	37			77.5	E	10		
	36			69	W	10		
	35			58.5	W	15		
	9 7	3		32.5	W	20		
	8 17			26	W	15	Ca	
	9 3		5		W	15	Seen only at 8 <sup>h</sup> 41 <sup>m</sup> in Ca. } Connected by a streak.	
	3	2	11		W	20		
	2		40.5		W	40	} Connected at top in Ca.	
0	2	48.5		W	40			
8 58	2	50.5		W	15	Ca photographs 8 <sup>h</sup> 17 <sup>m</sup> and 8 <sup>h</sup> 41 <sup>m</sup> .		
April 6	H.S.							
		9 12	..	50.5		E	35	Detached. Bright in Ca.
		8 31		17.5		E	45	Ca.
		57	0.5		10.5	E	10	
		53	3		48	E	50	
		40	4		38	W	25	
		35	1		8	W	15	C slightly displaced to red at base.
		9 22	1	7.5		W	15	
		8 31	1	11		W	20	Ca. A streak from top extends to + 18° W.
		31	1	44.5		W	20	Ca. Seeing bad. Ca photograph (focculus only) 8 <sup>h</sup> 31 <sup>m</sup> .
April 7.	G.N.							
		8 45	.	41.5	...	E	30	
		48		19		E	45	
		37			89	E	10	
		37			34	E	15	
		37			37	E	30	
		34	5		46	E	60	
		48			42.5	W	40	Ca.
		48			31.5	W	30	Ca.
		48			0	W	30	Ca.
		48			3	W	40	Ca.
		48		Equator.		W	75	Ca.
		48		1		W	40	Ca.
		48		3		W	45	Ca.
		48		9		W	30	Ca.
		48		13		W	10	Ca. Three jets.
		48	3	20.5		W	20	Ca
		48		31		W	20	Ca.
48	3	40		W	40	Ca.		
48		45.5		W	15	Ca. Seeing poor. Ca photograph 8 <sup>h</sup> 48 <sup>m</sup> and focculus plete 10 <sup>h</sup> 3 <sup>m</sup>		
April 8.	A.Y.S.							
		8 46	...	80.5		E	10	
		45	2	81.5		E	15	
		43	1	56.5		E	15	
		43		54.5		E	15	
		40		43.5		E	15	Ca.
		39	.	35		E	85	60" high in Ca.
		39	2	31		E	50	Faint at the base in C. 70" high in Ca.
		33		25		E	10	
		33	1	17.5		E	15	Bright in C.
		40			3	E	15	Ca.
		40			28	E	10	Ca.
		31			32	E	20	
		30	3		38.5	E	20	
		40			42.5	E	15	Ca.
		40			45.5	E	15	Ca
		40			65.5	E	15	Ca
		25	1		78.5	E	10, 20	
		9 18	2		65.5	W	20	Not seen at 8 <sup>h</sup> 24 <sup>m</sup> .
		8 40	1		31	W	25	Ca.
9 18	6		38.5	W	35			
8 40			29	W	15	Ca.		
9 13	3		11.5	W	30	7" broad in Ca.		
8 40			3	W	20	Ca. A detached streak 2" long.		
9 12			3	W	15	Bright in Ca.		
8 40			1	W	40	Ca.		





Date and observer.	Hour L.S.T		Base.	Latitude.		Lamb.	Height	Remarks.
				North.	South.			
1911.	H.	M.	°	°	°		"	
April 12.	S.S.	10 31	1.5	..	12	E	20	Ca
—contd.		14 5			55	E	15	
		18 57	0.5		38.5	W	20	
		8 34			29	W	10	
		34			28	W	10	
		18 55	1	19 5		W	20	} Very faint traces in Ca.
		55		22.5		W	20	
		14 25	1	32.5		W	15	
April 13.	G.N.	8 41	..	80.5	..	E	30	Ca.
		41		54.5		E	20	Ca
		28		44.5		E	25	
		28		43.5		E	30	
		28	2	40		E	45	
		41		18		E	20	Ca.
		41			12	E	30	Ca.
		41			14	E	20	Ca.
		41			23	E	15	Ca.
		41			32	E	20	Ca.
		41			58.5	E	10	Ca.
		41			59.5	E	10	Ca.
		41			68.5	E	10	Ca.
		41			71	E	10	Ca.
		28			83	W	15	
		41			77.5	W	15	Ca.
		41			48.5	W	15	Ca
		41			34	W	10	Ca
		36	11	3.5		W	30, 50	
		41		15		W	30	
		35	2	20.5		W	70	Detached at top.
		41		25		W	10	
		41		28		W	15	
		41	1	46		W	20	Ca.
		41		34		W	15	Ca.
April 14.	G.N.	8 29	...	52.5	..	E	30	Ca.
		47		46.5		E	20	
		47		44.5		E	40	
		47		42		E	20	
		48			54.5	E	15	
		52	2		1	W	25	
		50	2	27		W	30	
April 15.	S.S.	15 27	8	52.5	...	E	70, 40	Ca. A group of 3 prominences.
		27	2	41		E	25	Ca.
		27	1	33		E	45	Ca.
		27		11		E	15	Ca.
		27		9		N	10	Ca.
		10 4			19	E	20	
		15 27	2		22	E	60	Ca.
		10 3	3		27.5	E	30	
		15 27	0.5		69.5	E	20	Ca.
		27			82	E	15	Ca.
		9 58			50	W	10	
		57	5		48.5	W	45	
		57	0.5		38	W	15	
		55	1		8.5	W	20	A short Ca streak extends S. from top.
		55	1	Equator.		W	15	A short Ca streak extends N. from top.
		54		15		W	15	
		10 12		23.5		W	10	
		15 27		38		W	15	Ca.
April 16.	S.S.	9 7	..	83	...	E	25	Seeing poor. Ca photograph 15 <sup>h</sup> 27 <sup>m</sup> .
		7		82		E	25	
		7		80.5		E	25	
		55	14	57.5		E	70, 50	Ca. Four prominences connected to one another.
		55		47.5		E	20	Ca.
		55		43		E	45	Ca. Detached.
		55	1	33		E	15	Ca.

Date and observer.	Hour I.S.T.	Base.	Latitude.		Lamb.	Height.	Remarks	
			North.	South.				
1911.	H M.	°	°	°		'		
April 16 —contd.	S.S.	1	31	.	E	15	Ca.	
		0.5		28	E	25	In Ca. it is 40' high and a short streamer extends northwards.	
			2		29	E	15	
			0.5		78.5	E	30	Ca. Seen only at 9h 28m.
					80.5	E	10	Ca. Do. do.
		8	1		54.5	W	15	Ca.
			9		43.5	W	40	
			0.5		38	W	10	Ca.
					31	W	40	Ca. See Note.
			0.5		27	W	30	Ca.
		9			18	W	25	
		8			16	W	10	
		9			11	W	20	
		8	4		7	W	40	Ca.
		9			2	W	15	
	8		13		W	10	Ca.	
	8	2	38.5		W	15		
							Ca photographs 8h 55m and 9h 28m.	
April 17.	S.S.	...	81	..	E	10	Ca.	
			64.5		E	10	Ca.	
			68.5		E	25	Ca.	
			59.5		E	60	Ca.	
			57.5		E	15	Ca.	
			50.5		E	60	Ca. A streamer extends 6° north.	
			48.5		E	10	Ca.	
			1	43		E	45	Ca.
				33		E	10	
				34.5		E	90	Ca. Detached.
			1	32		E	30	Ca.
				18		E	10	Ca.
			3	9.5		E	30	Ca.
			2		20	E	30	Ca.
			1		25	E	25	
			0.5		33	W	10	
			0.5		71	W	10	
			6		43	W	25	
					31	W	15	Ca.
			1		25.5	W	20	
			18	W	15	Ca.		
			38	W	15	Ca.		
						Seeing poor. Ca photograph 8h 27m.		
April 18.	S.S.	...	83	..	E	25	O slightly displaced to red at base.	
			66.5		E	20		
			65.5		E	20		
		8	61		E	30	Ca.	
		9	57		E	25		
		8	43		E	15		
		8	36		E	60	Ca.	
				8	E	45	Ca. Detached. Very faint.	
			2	25	E	30	Ca.	
				33	E	15	Ca.	
				36	E	15	Ca.	
		9		57.5	E	25	10" high in Ca.	
				77	E	10		
		8		67	W	10		
				59.5	W	Low.	] O slightly displaced to violet.	
			1	42.5	W	40		
			9		21.5	W	30	
	1		16	W	20			
9	2	15	W	15				
8	4	27	W	20	Ca.			
9	8	64	W	20				
					Ca photograph 8h 25m.			
April 19.	A.Y.S.	...	48	...	E	15	Ca.	
			46		E	15	Ca.	
			44		E	50	Ca.	
		1	35		E	40		
			34		E	40	Ca.	

Date and observer.	Hour I.S.T.	Base.	Latitude.		Dir.	Height.	Remarks.
			North.	South.			
1911.	H. M.	°	°	°		"	
April 19 —contd.	A.Y.S.		25		E	60	} Connected in Ca See Note 1. See Note 2.
		5	17.5		E	40	
				6	E	15	
				15	E	10	
		2		20	E	20	
				34	E	15	
		2		38	E	30	
				44	E	15	
				45	E		
				59.5	E	10	No prominence. C slightly displaced to red.
		1		64	E	20 ±	
				78.5	W	10	
				80	W	40	
		8		28	W	50	
				8	W	40	Ca. Faint.
			6		W	15	Ca.
			9		W	45	Ca.
			10		W	40	Ca.
		1	15		W	25	A Ca streak from this 70" high extends westwards.
			18		W	40	Ca.
			20		W	25 ±	Faint. 40" high in Ca.
			23		W	10 ±	Ca. Seen only at 8 <sup>h</sup> 2 <sup>m</sup> .
			27		W	20	Ca. Do. do
			47		W	15	
			52.5		W	30	Ca. Top extends bothways.
			62.5		W	20	Ca.
							Seeing poor. Ca photographs 8 <sup>h</sup> 41 <sup>m</sup> and 8 <sup>h</sup> 2 <sup>m</sup> .
April 20.	S.S.	...	79.5	...	E	45	Ca. Seen only at 9 <sup>h</sup> 23 <sup>m</sup> .
			43		E	20	
			37		E	20	
		1	28.5		E	15	Ca
		0.5	26		E	90 ±	Broad at top.
			21		E	90 ±	Broad at top. Two streamers extend 0° } See Note. south.
			1		E	25	Very faint.
				15.5	E	10	Very faint.
		3	35.5		E	35	20" high in Ca.
		2	50.5		E	20	
			55.5		E	10	
			68.5		E	30	Ca. Faint.
		1	74		E	15	
			80.5		W	15	
		5	80.5		W	45	
			20		W	10	
			Equator.		W	15	Ca.
			11		W	20	Ca. Slants south.
			22		W	35	60" high and extends 0° south in Ca.
			35		W	15	
			46		W	15	
		3	55		W	30	
			62.5		W	20	
April 21.	A.Y.S.	..	67.5	..	E	10	Ca photographs 8 <sup>h</sup> 20 <sup>m</sup> , 8 <sup>h</sup> 31 <sup>m</sup> and 9 <sup>h</sup> 23 <sup>m</sup> .
			65.5		E	80	Ca.
		2	44		E	40	
		11	19.5		E	30, 40	Changing slightly. } Connected by a short Ca streak.
		1	10		E	30	Ca.
			1		E	10	See Note.
				2	E	15	Only 20" high in Ca.
		2		9	E	35	
				19	E	15	
				21	E	15	
		3	28.5		E	40	Top faint in C. 50" high in Ca.
			75		E	15	
			68.5		W	10	
		3	49		W	20	Only 1° broad in Ca.
		3	32.5		W	40	Do. do.
			24		W	40	Ca.
			8		W	20	Ca. Faint.
			10		W	20	Ca. Do.
		13	24.5		W	35 .5	

Date and observer.	Hour I S.T		Base.	Latitude.		Limb.	Height.	Remarks.	
				North.	South.				
1911.	H.	M.	°	°	°		"		
April 21. —contd.	A. Y. S.	9 0	...	33		W	15	Faint in O.	
		8 59		43		W	30		
		57		81.5		W	20	Ca photographs 8 <sup>h</sup> 14 <sup>m</sup> and 8 <sup>h</sup> 25 <sup>m</sup> .	
April 22.	S.S.	8 10	0.5	79		E	25	Ca.	
		10	0.5	47		E	20	Ca.	
		9 12	0.5	40		E	15	30" high in Ca.	
		8 10		38		E	60	Ca.	
		10		35		E	10	Ca.	
		9 11	0.5	30		E	45	Very faint.	
		8 10		27		E	35	Ca.	
		10		25		E	25	Ca.	
		9 9	4	19		E	10	} Tops connected in O; not in Ca.	
		8	1	14		E	15		
			7	11		E	15		
			5	0.5	5		E	15	
			2			2	E	25	} In Ca the 2 prominences form an arch 80" high.
		8 58	2		6		E	100 ±	
			10		24		E	10	Ca.
			55	1	26		E	75	See Note 2.
			52	7	44.5		E	25	
			48		60		E	20	
			47		68		E	Low.	O slightly displaced to red.
			43	1	74.5		W	15	
			38	6	51.5		W	35	
			10		38		W	15	Ca.
			35		37		W	15	
	34		35		W	30			
	10	1	10		W	30	Ca.		
	9 25	3	7.5		W	25			
	23	4	38		W	40	A short Ca streamer extends S. from the top.		
	8 10	0.5	52.5		W	30	Ca.		
	10		88		W	20	Ca. Ca photographs 8 <sup>h</sup> 10 <sup>m</sup> and 8 <sup>h</sup> 44 <sup>m</sup> .		
April 23.	A. Y. S.	8 49	...	66		E	10		
		47		60		E	15		
		46	2	48		E	25	40" high in Ca.	
		45	2	44		E	15	A small arch. 30" high in Ca.	
		44		30		E	15		
		44		27		E	15 ±	30" high in Ca.	
		58		24		E	70	Ca. Wider at top.	
		42	2	7		E	20	Faint in O.	
		58		2		E	105	Ca. A narrow streak slanting northwards to + 22° E.	
		39			1.5	E	10		
		58			17	E	15	Ca.	
		35			26	E	15	Faint.	
		35	3		29.5	E	30	Faint.	
		31	3		41.5	E	30		
		58			48	E	10	Ca.	
		28	1		75.5	E	10		
		27			83.5	E	15		
		9 3	1		47.5	W	20		
		1			43	W	15		
8 58	1		38.5	W	30				
58			19	W	15	Ca.			
55	5	11		W	10				
		35.5		W	40 ±	70" high in Ca. Seeing rather poor. Ca photographs 8 <sup>h</sup> 58 <sup>m</sup> and 8 <sup>h</sup> 27 <sup>m</sup> .			
April 24.	S.S.	8 23	...	85		E	30	Ca.	
		23		78.5		E	25	Ca.	
		23		68.5		E	40	Ca.	
		23		67.5		E	20	Ca.	
		9 10	1	80		E	30		
		6		25		E	15	30" high and seen only at 10 <sup>h</sup> 14 <sup>m</sup> in Ca.	
		8 23		28		E	40	Ca.	
		9 3	1		0	E	20		
		8 23			6	E	45	Ca. Detached.	
		9 1			9	E	15	Ca. Do.	
0	14		18	E	70	A group of 3 prominences connected by a Ca streak.			

Date and observer.	Hour I.S.T.		Base.	Latitude.		Limb.	Height.	Remarks.
				North.	South.			
1911.	H	M	°	°	°		"	
April 24. —contd.	S.S.	8 54	1	...	31	E	40 ±	Very faint. } Connected in Ca.
		52	1		34	E	10	
		52			35	E	10	
		52			37	E	10	
		51	2		42	E	30	In Ca the base is 5° broad and a short streamer extends N. from top.
		28			57.5	E	15	Ca.
		48			80.5	E	25	
		48			82	E	25	
		46			84	E	10	40" high and seen only at 10 <sup>h</sup> 14 <sup>m</sup> in Ca.
		43			78	W	20	
		38	0.5		62	W	15	
		9 32			43	W	10	
		8 33			38	W	20	Faint and 60" high in Ca.
		30			18	W	35	Slants south. 20" high in Ca.
		28	1		18	W	20	Slants north. Very faint.
		10 14			6	W	20	Ca.
		14			8	W	15	Ca.
		9 31		2		W	40	A short streamer extends N. Seen in Ca only at 10 <sup>h</sup> 14 <sup>m</sup> .
		8 23	3	5.5		W	45	Ca.
		9 28	1	15		W	60	
		10 14	1	20		W	15	Ca. Seen only at 10 <sup>h</sup> 14 <sup>m</sup> .
		9 25	5	85.5		W	70	Two connected prominences.
		10 14	1	41		W	30	Ca. Slants south. Seen only at 10 <sup>h</sup> 14 <sup>m</sup> .
		8 23		67.5		W	25	Ca.
		9 17		72.5		W	15	
		15	1	8.5		W	30	
								Ca photographs 8 <sup>h</sup> 23 <sup>m</sup> , 10 <sup>h</sup> 14 <sup>m</sup> and 8 <sup>h</sup> 45 <sup>m</sup> .
April 25.	G.N.	8 47	...	82.5	...	E	15	Ca.
		47		78.5		E	30	Ca.
		43		71.5		E	25	
		20		57.5		E	40	
		47		51		E	15	
		46	4	22		E	20	
		47	6	15		E	30	Ca.
		47	1	8.5		E	15	Ca.
		47		Equator.		E	25	Ca.
		40	13	8.5		E	30	
		47	2	20		E	45, 75	
		35	4	42		E	45, 70	Changing. A streamer extends to — 34°.
		50	3	55		E	20	
		47		69.5		E	15	Ca.
		55		44		W	15	
		47		28		W	15	Ca.
		53		17		W	15	
		47		10		W	40	Ca.
		47		2		W	30	Ca.
		47		8		W	15	Ca.
		47		7		W	10	Ca.
		47		10		W	20	Ca.
		47	6	20		W	20	Ca. Faint. Changing. 240" high at 9 <sup>h</sup> 16 <sup>m</sup> and barely visible at 11 <sup>h</sup> 38 <sup>m</sup> .
		52	8	36		W	45	
		47	4	43		W	15	Ca.
		47		54.5		W	25	Ca.
		47		78		W	10	Ca.
		47						Ca photographs 8 <sup>h</sup> 47 <sup>m</sup> , 8 <sup>h</sup> 20 <sup>m</sup> , 9 <sup>h</sup> 26 <sup>m</sup> and 11 <sup>h</sup> 38 <sup>m</sup> .
April 26.	A.Y.S.	9 3	1	75	...	E	15	
		3		72.5		E	15	
		1	2	51		E	25	
		8 10		48		E	35	Ca.
		9 0		31		E	25	
		0		29		E	20	
		8 50	4	25		E	60	} Connected by Ca streaks 75" high.
		50	9	12.5		E	60	
		43	1	6		E	20	
		40			1	E	35	} Connected by a slender Ca streak.
		40			4	E	35	
		40			5	E	20	

Date and observer.	Hour I.S.T.		Base.	Latitude.		Limb.	Height.	Remarks.
				North.	South.			
1911.								
April 26.	A.Y.S.	8 39		...	12	E	15	
—contd.		38			28	E	10	
		34	6		40	E	75	
		31			48.5	E	10	
		29			74.5	E	15	
		16			80	E	15	Ca.
		28			72.5	W	10	
		9 18	1		55.5	W	20	
		18	1		53	W	15	
		8 18			48	W	45	Ca.
		9 18			42	W	10	
		15			21	W	36 ±	Very faint and detached in C. Connected to limb and 45" high in Ca.
		12			14	W	15	
		8 16		4		W	30	Ca. Detached.
		16		5		W	40	Ca. Detached.
		16	3	14.5		W	20	Ca.
		9 10	7	39.5		W	40	60" high in Ca.
		4		71.5		W	10	
								Ca photographs 8 <sup>h</sup> 16 <sup>m</sup> and 8 <sup>h</sup> 31 <sup>m</sup> .
April 27.	S.S.	8 28	1	84		E	30	Ca.
		9 20		54.5		E	20	
		8 28		48		E	15	Ca.
		28		34		E	10	Ca.
		9 16	0.5	30		E	10	
		16	0.5	28		E	15	
		15	6	24		E	60	
		11	5	12.5		E	45	65" high in Ca.
		8		7		E	15	} Connected and 50" high in Ca.
		6	1	4		E	25	
		2			26	E	10	
		0	6		38	E	60	75" high in Ca.
		8 53			67.5	E	10	
		28			71.5	E	15	
		40			80	W	15	
		48			75.5	W	25	
		48			72.5	W	20	
		45			68.5	W	25	
		41	2		58	W	30	
		38	2		49	W	10	
		34			41	W	15	C slightly displaced to red at base.
		9 32			8	W	10	
		8 28		26		W	15	Ca.
		28		35		W	50	Ca.
		9 29	8	40		W	30	45" high at the S. end and 35" high at the N. end in Ca.
		28		82.5		W	20	Ca photographs 8 <sup>h</sup> 28 <sup>m</sup> and 8 <sup>h</sup> 40 <sup>m</sup> .
April 28.	G.N	8 42		64.5	...	E	30	Ca.
		42	2	28		E	50	
		42	3	24.5		E	30	Ca. Surmounted by a detached streak 45" high
		39	2	18		E	40	
		42		11		E	20	
		42		10		E	45	
		42	4	2		E	25	An arch.
		36			4	E	70	
		34	2		37	E	45	
		34			40	E	20	
		32			44	E	20	
		32			47	E	30	
		30	2		70.5	E	15	
		52	4		52	W	30	
		48			45	W	30	Ca.
		42			42	W	30	Ca.
		42			41	W	45	Ca.
		42			28	W	28	Ca.
		42			24	W	10	Ca.
		42			10	W	15	Ca.
		42			1	W	25	Ca.

Date and observer.	Hour I.S.T.	Base.	Latitude.		Lamb.	Height.	Remarks.	
			North.	South.				
1011.	H. M.	°	°	°		"		
April 28 —contd.	G.N.	8 42	...	4	..	W	20	Ca.
		42		22		W	15	Ca.
		46	3	41.5		W	50, 45	
		42		47		W	15	Ca.
		42	4	55.5		W	45	Ca.
		9 1		04.5		W	45	Ca.
April 29.	A.Y.S.	8 48	1	74.5	...	E	10	
		45		37.5		E	10	
		45		32.5		E	15	
		44	12	24		E	60	
		38	1	2.5		E	25	
		52			1	E	15	Ca.
		52			4	E	50	Ca. See Note.
		52			25	E	15	Ca.
		35			29	E	45	Detached.
		35			32.5	E	10	
		52			42	E	30	Ca.
		22	1		45	E	15	
		52			32.5	E	15	Ca.
		20	4		53	W	30	
		52			49	W	15	Ca.
		52	8		35.5	W	20	Ca. An arch.
		9 1			28.5	W	10	
		8 52			24	W	30	Ca.
		52			23	W	15	Ca.
		52			19	W	10	Ca.
		52			18	W	30	Ca.
		52			14	W	10	Ca.
		59			9	W	20	Only 10" high in Ca.
		58			3	W	10	
		58			1.5	W	20	
		52	2		8	W	15	Ca.
		57			10	W	20	Only 10" high in Ca.
56			15	W	10			
55			27	W	15			
51			45	W	15			
51	5		58.5	W	45	Rather faint in C.		
52			80	W	15	Ca.		
						Ca photographs 8h 52m and 8h 32m.		
May 1.	G.N.	8 15	...	68.5	..	E	13	Ca.
		9 8		59		E	15	
		8		57		E	15	
		8 15	9	12.5		E	75	Ca.
		9 5			25	E	15	
		8 35			84	W	15	
		35			34	W	80 ±	
		31			27	W	10	
		31			25	W	30	
		15			19	W	20	Ca. } Faint.
		15			17	W	15	Ca. }
		9 13			11	W	15	
		8 15			21	W	20	Ca.
		9 10	9		50.5	W	65	Ca. Only part was seen in C.
8 15			57	W	15			
15			60.5	W	20			
						Ca photographs 8h 15m and 8h 42m.		
May 2.	A.Y.S.	8 9	...	39	...	E	30	Ca.
		48		24		E	30	
		48		23		E	15	
		45	1	9		E	20	
		9		8		E	105	Ca. A detached cloud 8° long.
		9		8		E	45	Ca. A detached dot.
		9		7		E	20	Ca.
		44	2	1		E	40	
		37	12		9	E	55	Jets, faint in C.
		31			20	E	15	
28	12		29	E	40, 15			

Date and observer.	Hour I S T.	Base.	Latitude.		Limb	Height.	Remarks.
			North.	South.			
1911.	H. M.	°	°	°		"	
May 2. A.Y.S.	8 23	3		48.5	E	25	Only 15" high in Ca.
—contd.	21	1.5		68	E	25	
	21			64	E	15	
	19			85	W	20	
	18			71.5	W	15	
	9	2		68.5	W	45	Ca. Faint.
	9 0			35	W	25	
	8 58			15	W	20	
	9		1		W	15	Ca.
	56		13.5		W	20	
	9		20		W	45	Ca.
	55		26		W	10	
	54	2	51		W	35	6" broad and 80" high in Ca. Observed through thin cirrus. Ca photographs 8h 9m and 8h 34m.
May 3. G.N.	8 45	.	79	..	E	10	
	45		78.5		E	10	
	43		61.5		E	15	
	34	1	32		E	15	Ca.
	34		17		E	30	Ca.
	41		6		E	30	
	34		2		E	10	Ca.
	40	6		8	E	55	
	34	8		11	E	70	Ca. Only a part was seen in C
	38	12		32	E	35	
	33	6		51	E	25	
	31			35	W	20	
	34			24	W	10	Ca.
	34		10		W	40	Ca.
	34	9	19.5		W	70	Ca. Part was seen in C.
	34	5	32.5		W	50	Ca. Do. do.
	34		40		W	20	Ca.
	46		53		W	25	
	34		75.5		W	10	Ca. Ca photographs 8h 34m and 8h 10m.
May 4. A.Y.S.	8 35	..	52	.	E	25	
	34		43		E	15	
	33		37		E	30	Ca.
	31	1	33		E	10	
	30	3	20.5		E	30	Top faint in C.
	28			19	E	10	
	27	5		32.5	E	30	
	23			40	E	10	
	23	4		49	E	45	Only 30" high in Ca.
	20			63.5	E	15	
	17	1		62	W	25	See Note.
	9 5	6		33	W	30	
	0			2	W	30	
	8 58		6.5		W	10	
	50	28	28		W	50, 60	A number of prominences connected in Ca.
	33		52		W	30	Ca. Detached
	40		69.5		W	25	Only 10" high in Ca.
	40		64.5		W	10	
	37		82.5		W	25	Ca photographs 8h 33m and 8h 4m.
May 5. S.S.	8 13	...	86	...	E	20	Ca. Faint.
	9 19		70.5		E	10	
	13			6	E	15	
	10	0.5		21	E	15	
	0	1		35	E	25	15" high in Ca.
	8 57	7		50.5	E	25	
	50			81	E	15	
	46	1		81	W	15	Two short streaks
	40			46	W	15	
	37	6		38	W	25	
	13			28	W	15	Ca. Slants south.
	29			14	W	10	
	9 30	3		8	W	20	
	8 13			3	W	30	Ca. Faint.
	9 28	5	19.5		W	50 ±	See Note.



Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb.	Height	Remarks.
			North	South.			
1911.	H. M.	°	°	°		"	
May 5.	S.S.		24	..	W	65	Ca.
—contd.		1 5	37		W	15	30" high in Ca.
			70.5		W	10	Ca.
		0.5	77.5		W	25	Ca photographs 8 <sup>h</sup> 13 <sup>m</sup> and 9 <sup>h</sup> 2 <sup>m</sup> .
May 6	G.N.	.	54	..	E	20	
			45		E	45	Ca.
			38		E	15	
		4		51	E	40	
				40	W	10	Ca
				31	W	40	
				5	W	50	
			10		W	25	
			31		W	20	Ca.
			48		W	20	Ca
							Ca photograph 9 <sup>h</sup> 27 <sup>m</sup> , poor.
May 7	G.N.	..	35	...	E	20	
				45	E	20	
				50	W	40	
		4		31.	W	55	
		5	32.5		W	45	
							Ca photographs 8 <sup>h</sup> 23 <sup>m</sup> and 9 <sup>h</sup> 34 <sup>m</sup> .
May 8.	A.Y.S.	1	62	...	E	30	
			58		E	10	30" high in Ca.
			49.5		E	10	
			45		E	15	
			40		E	15	
		2	32		E	15	
			14.5		E	15	
			5		E	20	Top broader and extends both ways.
		2	Equator.		E	15	
			27		E	20	Ca
		1	35.5		E	10	
			43		E	15	
		4	43		E	30	2" broad and only 15" high in Ca.
		1.5	86.5		E	20	
			74.5		W	20	
			68.5		W	55	See Note
			50		W	15	
			49		W	25	
		1	45		W	15	
			44		W	15	
			38		W	20	Ca.
			35		W	30	
			33		W	60	Only 30" high in Ca.
			31		W	60	Only 45" high in Ca.
			30		W	10	Ca.
			27		W	20	Ca.
			21.5		W	20	
		3	15.5		W	50	
			10		W	10	Ca.
			2		W	40	Ca. Detached.
		1	11		W	25	
			18.5		W	20	
			36		W	10	Ca.
		1	44		W	15	
			85.5		W	10	Ca photographs 8 <sup>h</sup> 12 <sup>m</sup> and 8 <sup>h</sup> 20 <sup>m</sup> .
May 9.	S.S.	0.5	85.5	..	E	15	Ca.
		0.5	80.5		E	15	Ca.
			78.5		E	25	
			73.5		E	30	Ca.
			58		E	10	
			37		E	15	
		0.5	34		E	35	
			10		E	10	Ca.
			8		E	10	Ca.
			4		E	10	Ca

Date and observer.	Hour I.S.T.	Base.	Latitude		Limb.	Height.	Remarks.
			North.	South.			
1911.	H. M.	°	°	°		"	
May 9.	S.S.		...	6	E	10	Ca.
<i>—contd.</i>				12	E	20	
		1		49	E	25	Ca.
				84.5	E	15	
		8		48	W	55	75" high in Ca
		5		34.5	W	30	50" high in Ca
		1		22	W	50	
		7		16.5	W	25	45" high in Ca.
				10	W	15	
				6	W	10	C slightly displaced to red.
				3	W	10	
	9	7	11.5		W	20	
			41		W	30	<i>See Note.</i>
	8		71.5		W	15	Ca.
		1	72.5		W	15	Ca.
							Ca photographs 8 <sup>h</sup> 51 <sup>m</sup> and 9 <sup>h</sup> 0 <sup>m</sup> ; through cirrus.
May 10	G.N.		80.5	...	E	15	Ca.
		1	39.5		E	40	
			8		E	15	Ca.
				1	E	20	
				40	E	10	Ca.
		9		39.5	W	30	
		10		14.5	W	45, 70	
			18		W	30	Ca.
			29		W	45	
			41		W	15	
			80.5		W	40	Ca.
							Ca photographs 8 <sup>h</sup> 43 <sup>m</sup> and 8 <sup>h</sup> 25 <sup>m</sup> .
May 11.	A.Y.S.		60		E	15	Ca.
		1	58		E	15	
			46		E	15	Ca.
			42		E	10	Ca.
			38		E	40	Ca.
			31		E	15	Ca.
				8	E	15	
		1		10	E	20	
				33.5	E	10	
				47.5	E	20	
				86.5	W	15	
		1		76.5	W	15	
				68	W	15	
				60.5	W	10	
		11		39.5	W	60, 50	
				29	W	10	Ca.
				24	W	15	
		8		17.5	W	30	
				11	W	15	
				10	W	30	Faint. }
				5	W	25	Faint. } Connected by broken Ca streaks 70" and
		1	3.5		W	20	20" high.
		1	19.5		W	20	
		3	26		W	30	45" high in Ca.
		2	47.5		W	20	
			75		W	15	
							Ca photographs 8 <sup>h</sup> 10 <sup>m</sup> and 8 <sup>h</sup> 18 <sup>m</sup> .
May 12.	S.S.		56	..	E	25	
			44		E	46	
		2	41		E	45	Slants northwards. Faint in Ca.
			37		E	15	
		1.5	33		E	15	
			27		E	15	
	8	3	22.5		E	30	Ca. Faint.
	9		9		E	10	
				17	E	30	5" broad at top. 20" high in Ca.
	8			24	E	20	Ca.
	9			33	E	20	
		1		50	E	20	
		0.5		54	E	15	

Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb.	Height	Remarks.
			North.	South.			
1911.	h. m.	°	'	"		"	
May 12. —contd.	S.S.	0.5	...	82.5	W	20	
				78.5	W	10	
				70	W	10	
				63	W	10	45" high in Ca.
				51	W	10	
		10		40	W	45	
				31.5	W	Low.	C slightly displaced to red.
				28	W	10	
				27	W	10	
	9			2	W	20	
			86		W	25	
May 13	G.N.	4.5	43.5		E	50	Ca photograph 8 <sup>h</sup> 29 <sup>m</sup> ; through cirrus.
				1	E	15	
		1		21.5	E	40	Ca.
		6		32	E	90	
				60	E	20	
				63	E	15	
				87.5	W	50	Ca.
		7		42.5	W	30	
		1		7.5	W	50	Ca
			1		W	15	
			19		W	15	
			28		W	20	
May 14.	A.Y.S.	..	62		E	10	Ca photograph 8 <sup>h</sup> 14 <sup>m</sup> .
		2	53		E	40	Ca.
		1	51		E	15	
		1	48.5		E	40	Ca.
		1	46		E	25 ±	
		1	23		E	15	
			21		E	30	
				2	E	10	
		1		8	E	20	See Note.
		2		17	E	10	
		4		31	E	30 ±	
				70.5	W	10	
		0.5		40	W	50	
		2		43	W	20	
		2		22	W	25	
		1	51.5		W	15	
May 16.	G.N.	4	50		E	70	Ca photographs 8 <sup>h</sup> 5 <sup>m</sup> and 8 <sup>h</sup> 45 <sup>m</sup> .
		1		37	E	40 ±	
		1		41.5	E	40 ±	
		1		29	W	40	
	9		15		W	30	Ca.
		10	26		W	50	Ca.
			46		W	15	
May 17	A.Y.S.	...	54	...	E	10	Ca photograph 9 <sup>h</sup> 15 <sup>m</sup> . Weather poor.
		1	50.5		E	120	
			45		E	120	Detached.
			40.5		E	35	
		1	38.5		E	45	Faint in C.
		2	26		E	50	Ca.
		2	10		E	35 ±	
		2		5	E	20, 15 ±	
		3		36.5	E	40	
				56	E	10	
		1.5		74.5	E	40	
				37	W	30	Ca.
				78	W	10	
		1		62.5	W	30	C slightly displaced to V.
		1		32.5	W	40	
				30	W	15	
		5	23.5		W	70, 60	Extends 3° further west and is 100" high in Ca.
		2	59		W	20 ±	Ca photograph 8 <sup>h</sup> 41 <sup>m</sup> .

Date and observer.	Hour I.S.T.	Base.	Latitude		Lumb.	Height	Remarks.
			North.	South.			
1911.	H. M.	°	°	°		'	
May 18. G.N.	10 45	...	35	...	E	50	Ca.
	45		25		E	80	Ca.
	45		19		E	20	Ca.
	45			1	E	60	Ca A detached dot.
	80	6		86	E	25	
	45		Equator		W	20	Ca
	45		21		W	40	Ca
	45		25		W	30	Ca
							Weather poor. Ca photograph 10h 45m.
May 19. A.Y.S.	8 48	..	82	..	E	15	Ca.
	48		76		E	15	Ca.
	48		39		E	40	Ca. } Detached dots
	48		87		E	30	Ca. }
	48			3	E	70	Ca A detached curved streak.
	14			5	E	10	
	12	1		29	E	25	Faint in Ca.
	10			38	E	25 ±	
	10	1		35	E	15	
	9	3.5		41	E	25	Faint in Ca.
	7			70.5	E	10	
	5			69	W	15	
	23	3		49.5	W	40	
	21	6		36	W	20	
	43			29	W	35	Ca.
	43			39	W	30	Ca.
43			41	W	30	Ca.	
							Observed through cirrus. Ca photographs 8h 43m and 8h 22m.
May 20. A.Y.S.	9 24	...	66	...	E	10	Bright.
	14		23		E	50	Ca Detached.
	22	2	14		E	80	
	21		4		E	15 ±	
	18			19	E	15	C slightly displaced to violet.
	14			24.5	E	20	Ca.
	14			27.5	E	20	Ca.
	16	1		31.5	E	30	
	15	2		41	E	40	
	14			46	E	30	
	12			74	W	10	
	38	3		49.5	W	60	
	27			32	W	15	
	14			39	W	65	Ca. Top about 4° broad. The N. end at top meets lumb at + 42° W. Bad weather Ca photograph 9h 14m.
May 21. G.N.	9 44	..	88	.	E	60	Ca. A detached dot
	12		55		E	15	
	10	2	14		E	25	
	7			14	E	30	
	7			16	E	30	
	10 2	1		32.5	E	25	
	9 18			80	W	30	Not seen in Ca
	44		36		W	90	Ca.
	44	2	39		W	100	Ca. Ca photograph 9h 44m
May 22. S.S.	9 7	.	51		E	10	
	11		23		E	105	Ca. Changing.
	0	1		18	E	25	
	0			18	E	25	
	8 52	0.5		81.5	E	10	
	40			53	W	10	
	40	2		51	W	30	
	38	0.5		43.5	W	20	} Connected in Ca.
	9 11	5	38.5		W	60	Ca A small portion 10" high was seen in C.
	11		58		W	30	Ca. Two small dots one above and separated from the other. Seeing bad. Ca photographs 9h 11m and 8h 34m.

Date and observer.	Hour I S.T.	Base.	Latitude.		Lamb	Height.	Remarks.
			North.	South			
1911.	H. M.	°	°	°			
May 23. A.Y.S.	9 41	.	56		E	15	<i>See Note.</i>
	40		25		E	15	
	50		13		E	10	
	55			8	E	15	
	55	1		10.5	E	20	
	52			21	E	10	
	52	2		24	E	10	
	32	3		42.5	E	45	
	31	1		45.5	E	20	
	48	1		50.5	W	20 ±	
	47			52	W	25	
	46	1		40.5	W	20	
	45			41	W	10	
	43	1		22	W	10	
	10 0			1	W	15	
	9			38	W	45	
			40	W	45		
May 24. G.N.	8 42	...	47		E	15	<i>Ca.</i>
	37		44		E	30	
	40		37		E	15	
	40		30		E	15	
	37		30		E	30	
	38		28		E	30	
	35	2	14		E	25	
	34	0		0	E	40, 30	
	37			10	E	30	
	37	0		22	E	35	
	25			30	E	15	
	23			48	E	20	
	28			53	E	15	
	37			85	W	20	
	37			78	W	30	
	37			74	W	10	
	37			73	W	15	
	37			47.5	W	40	
	40			39	W	15	
	40			35	W	15	
	47			12	W	15	
	37			7	W	45	
	37			34	W	45	
	37			40	W	50	
37			45	W	30		
37			57	W	15		
37			76	W	25		
37			80.5	W	15		
37			88	W	10		
May 25. S.S.	9 10	...	38	..	E	20	<i>Ca.</i>
	10	2	29		E	20	
	7	1		2.5	E	30	
	8 54			4	E	40	
	54			9	E	30	
	9 0	1.5		15	E	25	
	0	1.5		19	E	25	
	0	1		23	E	20	
	8 55	6		42	E	60	
	52			57.5	E	10	
	48	0.5		87	W	20	
	45			78.5	W	50	
	37			40.5	W	10	
	9 25			18.5	W	10	
	28			4.5	W	10	
	22	0.5	15		W	20	
	22	0.5	16.5		W	20	
	21		35		W	30	
	20	7	41.5		W	75	
						<i>Connected.</i>	
						<i>Ca photograph 8h 54m.</i>	

Date and observer.	Hour I S.T.	Base.	Latitude.		Limb.	Height.	Remarks.
			North.	South.			
1911.	H. M.	°	°	°		°	
May 26. A.Y.S.	8 21	.	82	...	E	20	Ca.
	21		75		E	30	Ca.
	21		59		E	20	Ca.
	21		56		E	30	Ca.
	35	1	41.5		E	15	5° broad and 25" high in Ca.
	21		38		E	15	Ca.
	35		30.5		E	10	
	21		34		E	15	Ca.
	33		23		E	10	
	21		15		E	30	Ca.
	31		13		E	15	
	31		9		E	15	See Nots.
	28	1	7		E	15	
	21	2	Equator.		E	15	Ca.
	21			12	E	20	Ca.
	25			26	E	10	
	25			28	E	10	
	18	4		43	E	75	
	17			46	E	10	
	15	1		70	E	25	Faint and 60" high in Ca.
	14			56.5	E	10	
	52			78	W	15	] Not seen at 8 <sup>h</sup> 14 <sup>m</sup> .
	52	1		75	W	15	
	13			78	W	15	
	50			25	W	15	
	49		1		W	25	
	21		8		W	10	Ca.
	47	3	17.5		W	35 ±	Very faint in C. 50" high in Ca.
	46		23		W	40	Detached in C. Connected to limb and 50" high in Ca.
	21		25		W	45	Ca.
	43		27		W	10	
	40	3	39.5		W	40	Rather faint in C. 60" high in Ca.
	40		42		W	10	
	37		45		W	20	
	21	2	87.5		W	35	Ca.
							Ca photographs 8 <sup>h</sup> 21 <sup>m</sup> and 8 <sup>h</sup> 42 <sup>m</sup> .
May 27. G.N.	8 11	..	82	...	E	25	Ca.
	11		77		E	15	Ca.
	11		74		E	15	Ca.
	11		70		E	15	Ca.
	33	2	35		E	15	
	33		25		E	25	
	30		19		E	20	
	29	4		42	E	50	
	26			73	E	15	
	48			78	W	15	
	47	3		52.5	W	25	
	11			27	W	15	
	45	13		5.5	W	110	
	11		15		W	10	Ca.
	42		19		W	105	
	39	3	43.5		W	45	
	11		48		W	10	
	11		57		W	15	
							Ca photographs 8 <sup>h</sup> 11 <sup>m</sup> and 8 <sup>h</sup> 35 <sup>m</sup> .
May 30. S.S.	9 30	...	41	..	E	30	Ca.
	30		34		E	25	Ca.
	30		25		E	50	Ca Detached.
	20		16		E	45	Detached.
	20		15		E	60	Do.
	30		13		E	45	Ca. Detached.
	30		5		E	40	Ca.
	30		4		E	50	Ca.
	13			24	E	30	
	30	0.5		38	E	15	Ca.
	30	0.5		34	E	15	Ca.
	12	3		45.5	E	80	
	9			60.5	E	20	
	4			60	W	10	

Date and observer.	Hour I.S.T.	Base.	Latitude		Limb.	Height	Remarks.
			North	South.			
1911.							
May 30.	S.S.						
<i>—contd.</i>							
	H. M.	°	°	°		"	
	8 55	1.5	...	54	W	20	
	50	2		39	W	30	
	9 30	1.5		33	W	15	
	30			28	W	15	
	30			5	W	15	
	8 38		9	4	W	15	
	9 30		26		W	30	Extends to + 11° W in Ca.
	30		46		W	40	
	30		51		W	15	
					W	15	
May 31.	G.N.						
	8 40	..	80	..	E	10	
	32		70		E	15	
	59		50		E	30	
	59		45		E	15	
	59		30		E	10	
	28	1	24.5		E	50	
	30	2	17		E	55	
	30		13		E	45	
	45		12		E	20	
	45		4.5		E	30	
	27			22	E	15	
	27			35	E	20	
	28	3		45.5	E	25	
	28			80	E	30	
	28			88	E	15	
	55			77	W	20	
	28			51	W	30	
	28			52	W	30	
	52	6		40	W	30	
	28			12	W	40	
	50	2		3	W	20	
	30		7		W	20	
	28	7	34.5		W	50, 70	
	28		41		W	30	
	28		49		W	15	
							Ca. photographs (through cirrus) 8 <sup>h</sup> 28 <sup>m</sup> and 8 <sup>h</sup> 59 <sup>m</sup> .
June 1.	S.S.						
	10 33	...	14	...	E	20	
	29	1		38	E	25 ±	
							Seeing poor, observation partial. No prominence photographs.
June 2.	G.N.						
	8 42	...	75	...	E	10	
	41		68		E	20	
	42		58		E	15	
	40	3	28.5		E	45	
	38		12		E	20	
	41		10		E	15	
	41		5		E	15	
	41			2	E	15	
	41			4	E	15	
	41			11	E	15	
	37			25	E	15	
	41			31	E	30	
	36			50	E	30	
	41			48	W	15	
	9 0	7		37.5	W	30	
	8 55	17		15.5	W	20, 45, 60	
	52			6	W	10	
	41			8	W	40	
	51		2		W	15	
	41		7		W	10	
	41		9		W	10	
	50	2	18		W	75	
	43		18		W	40	
	42		75		W	15	
							Ca. photographs 8 <sup>h</sup> 41 <sup>m</sup> and 8 <sup>h</sup> 12 <sup>m</sup> .
June 3.	S.S.						
	9 56	...	48	...	E	20	
	8		44		E	20	
	54		36		E	15	

Date and observer	Hour I.S.T.	Base.	Latitude.		Limb.	Height	Remarks.	
			North.	South.				
1911.	H. M.	°	°	°		"		
June 3 —contd.	S.S.	0.5		1	E	35		
				8	E	15		
		3		49.5	E	75	Ca.	
					E	20		
					85	W	10	
					43	W	30	
		2			43	W	15	
					30	W	60	
		10			10	W	10	
					18	W	15	Ca.
					9	W	10	
					4	W	10	
				2	3	W	10	
				3	14.5	W	70	
					18	W	20	
				1	84.5	W	15	
					38	W	10	Ca.
			41	W	10	Ca.		
			43	W	10	Ca.		
			53	W	15	Ca.		
			65	W	15			
						Ca photograph 9 <sup>h</sup> 31 <sup>m</sup> . Through cirrus; incomplete.		
June 4.	G.N.	..	79	...	E	10		
			58		E	25	Ca.	
			48		E	15	Ca.	
				22	E	10		
				27	E	15		
		1		43	W	60		
				31	W			
				3	23	W	50	
				2	2	W	20	
					7	W	10	
					14.5	W	60	Ca. Detached.
					57	W	15	
			71	W	10	Ca.		
			76	W	10	Ca.		
						Ca photographs 8 <sup>h</sup> 29 <sup>m</sup> and 9 <sup>h</sup> 9 <sup>m</sup> .		
June 5.	G.N.	11	73		E	15		
			18		E	30	Ca.	
			15		E	10	Ca.	
				5	E	50	Ca.	
				51	E	25		
		2		48	W	80	Ca.	
				42.5	W	55		
				19.5	W	20	Ca. Detached.	
				1	W	30	Ca. Detached.	
		2	20		W	80		
			47		W	20	Ca.	
	79		W	45	Ca.			
	88		W	15	Ca.			
						Seeing poor. Ca photograph (through cirrus) 11 <sup>h</sup> 13 <sup>m</sup> .		
June 6.	S.S.	8	85		E	10	Ca.	
			88		E	10	Ca.	
		9	79		E	10		
			70		E	20		
		1	52		E	20	Ca.	
			37		E	25		
				10	E	10		
			50	2.5	E	40		
			41		E	15		
			39		E	10		
			22	1	64	W	10	Ca.
			33	1.5	48	W	15	
			31		42	W	10	
9	18	2	18	W	30	} Connected and 30" high in Ca. See Note.		



Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb	Height	Remarks.		
			North.	South.					
1911.	" M.	"	"	"	"	"			
June 6. —contd.	S.S.	5	1.5		W	30	Ca, slants south		
			8		W	10			
			17		W	25			
			18		W	50	Detached. } Connected, 80' high, and extend to + 18° W. in Ca.		
			15		W	40			
			22	1	23		W	10	Ca.
			8	5	27.5		W	30	
			9	0.5	33		W	20	Ca
			22		77		W	20	
			9	1	79.5		W	20	
						Ca photographs 8 <sup>h</sup> 22 <sup>m</sup> and 8 <sup>h</sup> 10 <sup>m</sup>			
June 7.	G.N.	.	40		E	40			
			38		E	40			
			12		E	10	Ca.		
			9		E	10			
			28		48		E	15	
			31		50		E	45	Ca.
			31		55		E	170	See Note.
			25	3	48.5		W	50	
			31		17		W	30	Ca
			22		15		W	70	} Connected at top in Ca.
			22		22		W	30	
			31	3	25.5		W	15	Ca. Ca photographs 9 <sup>h</sup> 3 <sup>m</sup> and 8 <sup>h</sup> 32 <sup>m</sup> .
			June 13.	S.S.	2	85.5		E	30
43		E				30			
30		E				30	45' high in Ca.		
25		E				30	40' high in Ca.		
22		E				40	30' high in Ca.		
14	0.5					5	E	20	Ca.
23		14					E	30	Ca
12		25.5					E	20	
11	2	34					E	35	45' high in Ca.
28	0.5	60					W	20	Ca.
0	4	47					W	30	
9	5	33.5					W	30	
15		29					W	45	A group of 8 prominences. } Connected in Ca.
15							W	50	
11	1	7					W	20	Ca
23		11					W	10	Ca.
23		14					W	30	Ca.
23		16					W	20	Ca.
23		25		W	75	Ca. Detached.			
23		28		W	15	Ca. Ca photographs 11 <sup>h</sup> 23 <sup>m</sup> and 11 <sup>h</sup> 33 <sup>m</sup> , poor.			
June 14.	G.N.	2	64		E	40	Ca.		
			30		E	45			
			28	1	34		E	30	
			27	1	48		E	30	
			45	4	48		W	30	
			45		41		W	30	
			40	7	25.5		W	45	
			16		27		W	15	Ca } Faint.
			16		24		W	20	Ca. }
			10		22		W	15	Ca. }
			37	10	20		W	40, 45, 30	
			35		46		W	15	
37		74		W	15	Ca photograph 8 <sup>h</sup> 16 <sup>m</sup> Through cirrus.			
June 15.	S.S.	...	76	...	E	20			
			14		E	30			
			56	1	51		E	15	Ca. } Seen only at 14 <sup>h</sup> 56 <sup>m</sup> .
			56		48		E	10	
			56		28		E	10	
			10	0.5		4	E	40	Slants south. }
			29			9	E	40	
			26	0.5		14	E	15	} Connected in Ca.
			26	1		18	E	15	
			26	2		20	E	35	
26	8		36	E	50				

Date and observer.	Hour L.S.T.	Base.	Latitude		Limb.	Height	Remarks.
			North.	South			
1911.	h m.	.	°	°		"	
June 15. —contd.	S.S.						
	10 24			46	E	15	45" high in Ca.
	24			48	E	15	85" high in Ca.
	43	0.5		50	E	10	Ca.
	45	1		47	W	15	} Connected in Ca.
	19			44	W	15	
	45	1		42	W	15	
	41			15.5	W	15	
	89	2	21		W	30	Extends to +26° W in Ca.
	37		31		W	25	Ca photographs 10h 43m, 14h 56m; 11h 18m (poor)
June 16.	G.N.						
	8 40		74		E	10	
	19		51		E	40	Ca.
	19		45		E	15	Ca.
	19		41		E	20	Ca.
	38		13		E	15	
	19			14	E	20, 35	Ca.
	28	21		29.5	E	40, 60	
	19			48	E	45	Ca.
	45			52	W	15	
	45			49	W	15	
	19		42		W	15	Ca. Ca photographs 8h 19m and 8h 28m.
June 17	S.S.						
	8 24		51		E	30	Ca.
	24	1	41.5		E	30	Ca.
	9 13		35		E	15	
	11		19		E	10	
	8 24		17		E	45	Ca. 2° broad at top.
	9 10	2	11		E	25	
	8	1		13	E	30	
	5	1		25	E	45	} Tops meet.
	5	3		34.5	E	45	
	2			48	E	45	Very faint.
	8 24	0.5		77	E	10	Ca. 50" high at 8h 58m.
	24			82	E	10	Ca.
	52	2		51	W	45	Slants north.
	50			46	W	10	
	49			38	W	20	
	9 22			6	W	15	30" high and a streak 60" high slants to -15° W. in Ca. Changing in Ca.
	8 24			4	W	70	Ca. A detached slanting streak 2° long. Ca photographs 8h 24m and 8h 58m.
June 20.	S.S.						
	11 41	1.5	...	10	E	30	
	37	3		55.5	W	45	Observed only between E. limb and -40° W. Ca photograph, flocculus only, 11h 23m.
June 22.	A.Y.S.						
	8 8		72	...	E	15	Ca.
	32	1	52		E	25	
	32		47		E	20	40" high in Ca.
	3		11		E	15	Ca.
	25	1.5		6	E	15	
	23			28	E	10	
	23			36	E	10	
	21	2		45	E	50	A short Ca streak from this position meets the limb at -45° E
	3			57	E	20	Ca.
	45	2		53	W	45	
	42	3		31.5	W	20	
	3		21		W	30	Ca.
	8	2	47		W	30	Ca. Seeing poor. Ca photograph 8h 3m, partly streaked with cloud.
June 23.	G.N.						
	8 18		33	...	E	15	
	15	6		43	E	60	
	18			49	E	15	
	23	3		52.5	W	30	
	18			44	W	20	Ca.
	26	4		30	W	45	
	18			16	W	45	Ca.

Date and observer.	Hour I.S.T.	Base.	Latitude.		Limb.	Height.	Remarks.
			North.	South.			
1911.	H. M.	°	°	°		"	
June 23. —contd.	G.N.						
	8 18			14	W	20	Ca.
	18			11	W	10	Ca.
	18			9	W	15	Ca.
	23		20		W	150	Ca.
	18		23		W	15	Ca.
	18		27		W	130	Ca.
	18		43		W	70	Ca.
	21	5	46.5		W	50	
	18		84.5		W	30	Ca. Ca photographs 8 <sup>h</sup> 18 <sup>m</sup> and 8 <sup>h</sup> 41 <sup>m</sup> .
June 24	S.S.						
	8 31	..	19	..	E	40	Ca.
	31		15		E	70	Ca.
	31	1	7.5		E	50	Ca.
	31			3	E	75	Ca.
	32	5		42.5	E	60	
	27			88	W	10	
	23	3		48.5	W	30	Extends to -- 40° W in Ca.
	19			30	W	30	Faint.
	20			27	W	20	
	31	1	40		W	45	Ca
	31	3	46.5		W	55	Ca.
	49		67		W	20	
	31	1	81		W	15	Ca. Seeing poor. Ca photograph (through cirrus) 8 <sup>h</sup> 31 <sup>m</sup>
June 25.	A.Y.S.						
	9 9	.	62	..	E	10	
	38	2	35		E	10	Ca.
	7	2	27.5		E	25 ±	See Note.
	8 47		19.5		E	20	
	9 38		13		E	40	Ca.
	38		5.5		E	45	Ca. Detached.
	38		4		E	10	Ca.
	38			1	E	10	Ca.
	38			2	E	60	Ca. A detached dot.
	38			3	E	10	Ca.
	38			5	E	125	Ca. A slanting streak.
	38	3	16.5		E	15	
	36		22		E	10	
	36		27		E	15	
	34	8	44		E	45	
	31	1.5	62		E	20	
	27	1	73.5		E	15	
	27	1	87		E	15	
	9 38		60		W	35	Ca.
	18	1	40.5		W	25	
	18		38.5		W	25	
	18		35.5		W	45	Top 3° broad.
	15	2	30		W	25	
	38		34		W	20	Ca.
	38		42		W	10	Ca.
	38	4	46		W	45	Ca. Two prominences connected at top. Seeing poor. Ca photographs 9 <sup>h</sup> 38 <sup>m</sup> and 9 <sup>h</sup> 14 <sup>m</sup> .
June 26.	G.N.						
	8 8	..	79.5	..	E	30, 40, 15	Ca. 4 jets.
	7 57		71		E	15	Ca.
	8 8		61		E	30	Ca.
	7 57		38		E	10	Ca.
	8 34	7	25.5		E	75	Fine filaments.
	7 57	2		5	E	100	Ca.
	8 31	1		9.5	E	15	
	7 57	2		21	E	10	Ca.
	8 27	0		46	E	30	
	7 57			58	W	10	Ca.
	8 42	7		38.5	W	40	
	40	2		32	W	30	
	38			27	W	15	
	7 57			6	W	15	Ca.
	57		3		W	40	Ca. Faint.

Date and observer.	Hour I.S.T		Base.	Latitude.		Limb.	Height.	Remarks.
				North	South.			
1911.	H	M.	°	°	°		"	
June 26.	G.N.	7 57	2	40	.	W	15	Ca.
— contd.		57	2	49		W	15	Ca.
		57		81.5		W	10	Ca. Ca photographs 7h 57m and 8h 8m.
June 27.	S.S.	8 22	1	87.5		E	40	Ca.
		22	1	88		E	15	Ca.
		47		67		E	10	
		22	1	50		E	10	Ca.
		22	0.5	48		E	10	Ca.
		43		80		E	90	40" high and extends to + 27° E in Ca.
		43		22		E	15	75" high in Ca.
		43		17		E	10	
		22			7	E	80	Ca Detached.
		34			34	N	10	
		33	3		46.5	E	80	
		24			47	W	15	Slants south and is 75" high in Ca.
		22			39	W	15	Ca.
		9 6			35.5	W	10	
		8 22			31	W	10	Ca.
		9 4	8		12	W	80	
		8 22		8		W	10	Ca.
		9 0		14		W	10	
		8 58	1	31		W	20	Extends 2° south in Ca.
		22	0.5	48		W	15	Ca.
		22	0.5	58		W	10	Ca.
		59		64.5		W	10	Observed through cirrus. Ca photographs 8h 22m and 8h 8m.
June 28.	A.Y.S.	8 49	1	80	...	E	15	
		9		68		E	30	Ca.
		35		61		E	15	Ca. Seen only at 8h 35m.
		35		60		E	15	Ca. Do. do.
		50		42		E	10	
		52	1	31.5		E	40	
		58	2	24		E	45 ±	Very faint in C. 100" high in Ca.
		9		9		E	10	Ca.
		9		2		E	15	Ca.
		55			7.5	E	10	
		56	2		38	E	20	
		9			36	E	10	Ca.
		9			38	E	10	Ca.
		57	1		40.5	E	20	Faint in C.
		57	2		48	E	15	80" high in Ca.
		14			60	E	20	
		12			69	E	20	
		12			78	E	15	O slightly displaced to violet.
		10			85.5	W	15	Do. do.
		27	4		47	W	20	
		30	4		24	W	70	
		35	2		9	W	100 ±	Faint. 135" high in Ca. } Connected by extensive streaks.
		42	2		4	W	80	
		35		4		W	30	Ca. Seen only at 8h 35m.
		46	1.5	27		W	20	Only 10" high in Ca.
		9	1	30		W	15	Ca.
		9		36		W	15	Ca.
		46		38		W	10	
		9	1.5	78		W	30	Ca. Faint.
		47		78		W	15	
		47		83		W	10	Observed through thin cirrus. Ca photographs 8h 9m and 8h 35m.
June 29.	G.N.	8 8	...	68	..	E	10	Ca.
		8		67		E	10	Ca.
		30		48		E	20	
		28	5	30.5		E	30, 25	
		8		28		E	45	Ca.
		28		16		E	15	
		8			12	E	10	Ca.

Date and observer.	Hour I.S.T.		Base	Latitude		Lamb.	Height.	Remarks.
				North.	South.			
1911.	H.	M	°	°	°		"	
June 29 -contd	G.N.	8 3	.	..	18	N	10	Ca.
		3			22	E	15	Ca.
		26	2		37	E	10	
		25			47	E	30	
		3			83	W	15	Ca.
		3			81	W	15	Ca.
		10	3		44.5	W	40	Ca.
		37	2		85	W	40	Streamers extend both ways
		32			22	W	40	
		32			16	W	15	
		3			7	W	30	Ca. Faint Detached.
		3			85	W	15	
June 30	S S	8 54	1	86.5	..	N	15	On photographs 8h 3m and 8h 13m. See Note 1.
		44	2	58		E	40	Ca.
		48	0.5	40		E	30	
		41		38		E	10	Ca.
		47		34		E	15	
		44		80		E	30	Ca. Surmounted by a streak 3° long. See Note 2.
		41	1		4	E	10	
		41			36.5	E	10	
		40	1		42	E	15	
		37	5		52	E	30	
		44			76.5	E	20	Ca.
		35			82.5	E	10	
		32			62	W	15	
		30			46	W	25	
		28			40	W	15	
		27	1		38	W	25	
		27	0.5		35	W	40	} Connected in Ca. Detached
		27			34	W	30	
		25			28	W	20	
		24	1		27	W	20	
		22	1		24	W	10	
		41	1		22	W	15	Ca.
		9 0	8		14	W	10	
		6			2	W		Low. O slightly displaced to red
		5	1	34		W	15	
		3		50		W	15	
		5		77.5		W	10	
		5		80.5		W	15	
		8 41		86.5		W	20	Ca. Ca photographs 8h 14m and 8h 21m.

## NOTES.

- 1911.
- January 4. Lat. — 4° E. Eruptive. The prominence showed displacement in C at the top, 1.5 Å to red. The Ca prominence consists of short jets 15" high extending from the equator to — 3° E.
13. Lat. — 85° 5 W. Showed displacement of 2 Å to violet in C. Changing. 45" high at 8<sup>h</sup> 55<sup>m</sup>. Nothing was seen here in the Ca photographs
19. Lat. — 71° E Bright Changing The top consisted of small bright jets bending over and almost meeting the limb at 8<sup>h</sup> 34<sup>m</sup>. Form changed at 8<sup>h</sup> 36<sup>m</sup>, and only a small stem about 20" high was seen at 8<sup>h</sup> 48<sup>m</sup>. Metallic The following were the bright lines observed.—4890 948 (Fe), 4904·597, 4924·107 (Fe), 5018 629 (Fe), b<sub>1</sub> (Mg), b<sub>2</sub> (Mg), b<sub>3</sub> (Fe), b<sub>4</sub> (Fe, Mg), 5234·791,  $\left. \begin{matrix} 5276\ 169 \\ \cdot 237 \end{matrix} \right\} \begin{matrix} \text{Fe } \overset{p}{?} \\ \text{Cr } \overset{p}{?} \end{matrix}$ , 5284 281 (Ti), 5316·790 (Fe), D<sub>1</sub> (Na), and D<sub>2</sub> (Na).
26. (1) Lat. — 47° W Only 30" and 45" high in Ca. The prominence was visible at 7<sup>h</sup> 57<sup>m</sup> as two small arches in the Ca flocculi plates
- (2) Lats. — 14° and — 13° W. In the Ca flocculi plates these were just above a flocculus; but at 8<sup>h</sup> 13<sup>m</sup> they were detached and were 120" and 130" high
- February 9. Lat — 13° E. Metallic. 7065, 6677, D<sub>1</sub>, D<sub>2</sub>, b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub>, b<sub>4</sub>, 5316·8, 5018·6, and 4924·1 were bright. The Ca prominence was 20" high at 8<sup>h</sup> 15<sup>m</sup> and 10" high at 8<sup>h</sup> 28<sup>m</sup>.
13. Lat. — 15° E. Detached In Ca it is connected to the limb, extends to — 20° E, and is surmounted by a detached slanting streak 60" high.
21. Lat. — 26° E. A jet with smaller jets near. Showed displacement to red in C, about 2·0 Å.
23. Lat. — 28° W. Several streaks extend northwards and two of them meet the limb again at lats. — 19° and — 14° W. The Ca prominence was 80" high at 8<sup>h</sup> 23<sup>m</sup> and 110" high at 14<sup>h</sup> 42<sup>m</sup>. It was continued on disc on the Ca flocculus photographs, as an absorption marking.
- February 24. Lat. — 32° 5 W. Showed slight displacement to violet at the top. Changing. At 10<sup>h</sup> 40<sup>m</sup> it was 150" high and showed displacement to red near the centre about 1.5 Å, and to violet about 2·0 Å at the top. At 11<sup>h</sup> 50<sup>m</sup> it had changed completely in shape and was 165" high.
25. Lat. + 12° W There is a faint hydrogen streamer from the top which meets the next prominence in Ca.
26. Lat. + 0°·5 E. Connected with the last. A bank with a very bright jet about 15" high almost on the equator, and surmounted on all sides by faint eruptive filaments. It was metallic and changing At 8<sup>h</sup> 28<sup>m</sup> F was displaced both ways about 0·5 Å. The following were the bright lines observed.
- 4872·332 (Fe), 4924·107 (Fe), 5017 060 (Fe), 5018·629 (Fe), b<sub>1</sub> (Mg), b<sub>2</sub> (Mg), b<sub>3</sub> (Fe), b<sub>4</sub> (Fe, Mg), 5186·274, (—), 5188·863 (Ti), 5196·227 (Fe),  $\left. \begin{matrix} 5204\ 680 \\ 5204\ 768 \end{matrix} \right\} \begin{matrix} \text{Cr} \\ \text{Fe} \end{matrix}$ , 5206 372 (—), 5208·776 (Fe), 5226·707 (Ti), 5233·122 (Fe), 5234·791 (—), 5237·493 (Cr?), 5239·992, 5269·723 (Fe), 5270·558 (Fe),  $\left. \begin{matrix} 5276\ 169 \\ 5276\ 237 \end{matrix} \right\} \begin{matrix} \text{Fe } \overset{p}{?} \\ \text{Cr } \overset{p}{?} \end{matrix}$ , 5283·802 (Fe), 5284·281 (Ti), 5316·790 (Fe), 5324·373 (Fe), 5325·738 (—), 5328·696 (Fe), 5328·747 (Fe), 5363·058 (—),  $\left. \begin{matrix} 5371\ 656 \\ 5371\ 734 \end{matrix} \right\} \begin{matrix} \text{Cr } \overset{p}{?} \\ \text{Fe} \end{matrix}$ , D<sub>1</sub> (Na), D<sub>2</sub> (Na), and 6677 (He). The bright jet was visible in almost all the above lines. Both this and the last prominence were changing and were found to be altered in shape at 9<sup>h</sup> 12<sup>m</sup>. Spot No. 6928 (Greenwich) came round the East limb in this position on the 27th
- March 1. Lat. — 15° E. A detached cloud; in the Ca photographs it was 6° long and 40" high at 8<sup>h</sup> 19<sup>m</sup>. At 8<sup>h</sup> 34<sup>m</sup> it was connected to the limb at lat. — 16° E and was only 30" high.

1911.

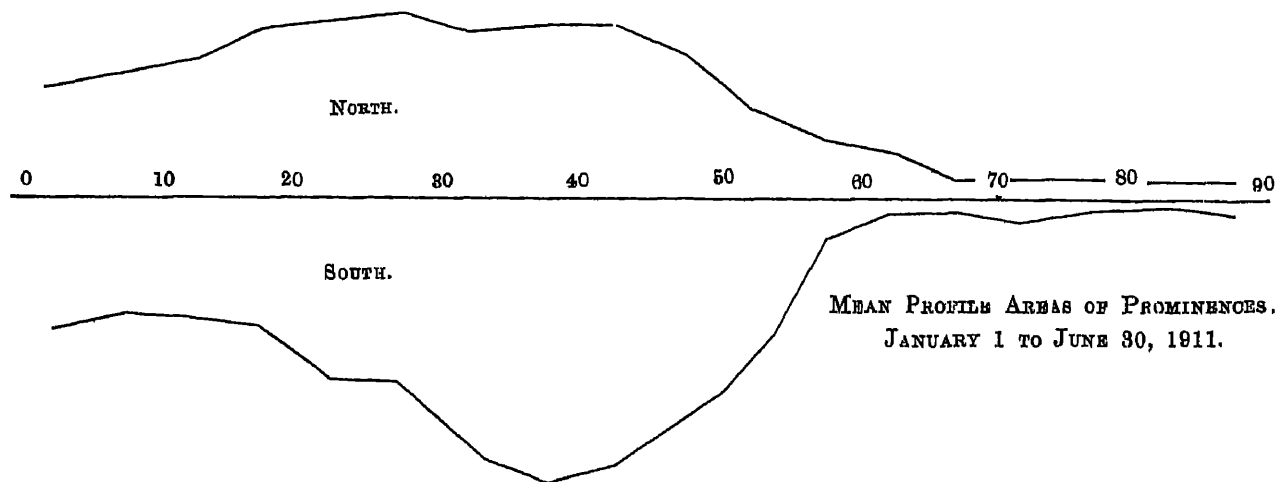
- March 7. Lat. + 68° W. Eruptive. Showed slight displacement to red in C. Top faint. Only very faint streaks remained visible at 9<sup>h</sup> 4<sup>m</sup>. Nothing was shown here in the Ca photographs.
8. Lat. — 13° 5 E. Bright Metallic. Changing. 6677, D<sub>1</sub>, D<sub>2</sub>, b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub>, b<sub>4</sub>, and 4924·1 were bright. There was displacement both ways in F at 8<sup>h</sup> 52<sup>m</sup>.
9. Lats. + 40° 5 and + 34° E. Changing in Ca. At 10<sup>h</sup> 5<sup>m</sup> the prominence at + 34° was 90" high and a streak from the top met the limb at + 30° E.
10. Lat. + 20° 5 E. Bright. The prominence was not seen at 8<sup>h</sup> 34<sup>m</sup>. C was slightly displaced to red at the top. Changing; 30" high at 8<sup>h</sup> 38<sup>m</sup> and 35" high at 8<sup>h</sup> 39<sup>m</sup>. 2° broad and 45" high at 8<sup>h</sup> 40<sup>m</sup>. The top was faint and was about 50" high at 8<sup>h</sup> 41. Nothing was seen here at 9<sup>h</sup> 0<sup>m</sup> except a faint streak 20" high.
12. Lat. — 15° W. Eruptive jets. Showed displacement to red 2·0 Å. Metallic. D<sub>1</sub>, D<sub>2</sub>, b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub>, and b<sub>4</sub> were bright.
13. Lat. + 33° 5 E. Faint. Narrower at the top. Not connected to the limb except at the two ends. The Ca prominence was changing, 150" high, and detached at the northern end but extending to + 27° E.
17. Lat. — 1° E. Changing. Very faint and about 20" high at 9<sup>h</sup> 8<sup>m</sup>. 40" high at 8<sup>h</sup> 33<sup>m</sup> in Ca. Not visible in Ca at 8<sup>h</sup> 17<sup>m</sup>.
19. (1) Lat. + 14° E. Changing. 35" high at 8<sup>h</sup> 47<sup>m</sup>, 30" high in Ca at 8<sup>h</sup> 46<sup>m</sup>. Not visible in Ca at 8<sup>h</sup> 17<sup>m</sup>.
- (2) Lat. + 75° W. Changing. At 8<sup>h</sup> 52<sup>m</sup> the prominence was 3° broad and 35" high with narrow jets close to it. These jets became faint by 8<sup>h</sup> 54<sup>m</sup>.
23. (1) Lat. + 45° 5 E. Three faint detached streaks the northern one slanting northwards. The prominence was quite different about an hour earlier in Ca in which it was an irregular arch extending from lat. + 47° to + 50° and 40" and 20" high at the southern and northern ends.
- (2) Lat. — 46° 5 W. A bright cone in the centre with low faint extensions on both sides. C was slightly displaced to red at the base at lat. — 42° 5 W.
- (3) Lat. — 24° 5 W. A group of four prominences. The whole prominence at — 26° 5 W was faintly visible in b<sub>1</sub>, and b<sub>2</sub>.
26. (1) Lat. + 22° E. Changing. C was slightly displaced to violet at the top. At 8<sup>h</sup> 45<sup>m</sup> there was no displacement and the prominence was almost detached. Only 40" high at 8<sup>h</sup> 49<sup>m</sup>. In Ca at 8<sup>h</sup> 42<sup>m</sup> it was almost detached and 40" high. It was not seen on the plate exposed at 9<sup>h</sup> 41<sup>m</sup>.
26. (2) Lat. — 10° E. Changing. 45" high in Ca at 8<sup>h</sup> 42<sup>m</sup>. At 9<sup>h</sup> 41<sup>m</sup> it was only a small curved streak 50" high.
29. Lat. — 52° 5 E. Bright. Changing. C was slightly displaced to violet at 8<sup>h</sup> 29<sup>m</sup>. Brighter and the displacement was stronger at 8<sup>h</sup> 31<sup>m</sup>. Metallic. 4924·1, b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub>, b<sub>4</sub>, D<sub>1</sub>, D<sub>2</sub> were bright. Base broader and height 30" at 8<sup>h</sup> 31<sup>m</sup>. The prominence had gone entirely at 8<sup>h</sup> 37<sup>m</sup>. Nothing was photographed here in Ca at 8<sup>h</sup> 11<sup>m</sup> or at 8<sup>h</sup> 37<sup>m</sup>.
- April 1. Lat. + 10° E. Very bright. Eruptive. Metallic at base. The top at lat. + 6° showed a displacement to violet of 2 Å, and the base at lat. + 12° showed a displacement to red of 2 Å.
2. (1) Lat. — 34° E. An enormous mass, attached to the limb at this position only, extends towards the equator over 24° of latitude. It reaches an altitude of 160" at lat. — 12° at 8<sup>h</sup> 49<sup>m</sup> but was rapidly rising. A series of nine Ca photographs were taken which show an accelerating motion upwards, and a complete break up of the prominence into faint scattered fragments between 10<sup>h</sup> 51<sup>m</sup> and 11<sup>h</sup> 8<sup>m</sup>. The highest fragment was 10' above the limb at 11<sup>h</sup> 23<sup>m</sup>.
- Measures of the velocity of ascent of the main mass give the following results:—
- |  |                               |
|--|-------------------------------|
| Between 9 <sup>h</sup> 26 <sup>m</sup> and 10 <sup>h</sup> 09 <sup>m</sup> | ... 80 Kilometers per second. |
| "    10 <sup>h</sup> 09 <sup>m</sup> and 10 <sup>h</sup> 12 <sup>m</sup>   | ... 45 " " "                  |
- A small bright spot which could be identified on successive images was also measured and gave the following results:—
- |  |                               |
|--|-------------------------------|
| Between 9 <sup>h</sup> 26 <sup>m</sup> and 10 <sup>h</sup> 09 <sup>m</sup> | ... 46 Kilometers per second. |
| "    10 <sup>h</sup> 09 <sup>m</sup> and 10 <sup>h</sup> 12 <sup>m</sup>   | ... 69 " "                    |
| "    10 <sup>h</sup> 12 <sup>m</sup> and 10 <sup>h</sup> 28 <sup>m</sup>   | ... 87 " "                    |
- (2) Ca photographs. 8<sup>h</sup> 41<sup>m</sup>, 8<sup>h</sup> 52<sup>m</sup>, 9<sup>h</sup> 22<sup>m</sup>, 10<sup>h</sup> 8<sup>m</sup>, 10<sup>h</sup> 11<sup>m</sup>, 10<sup>h</sup> 37<sup>m</sup>, 10<sup>h</sup> 51<sup>m</sup>, 11<sup>h</sup> 8<sup>m</sup> and 11<sup>h</sup> 23<sup>m</sup>.

- 1911.
- April
5. Lat.  $-77^{\circ}5$  E. Faint and seen in Ca only at 8<sup>h</sup> 41<sup>m</sup>. Changing. C was slightly displaced to red 25" high at 9<sup>h</sup> 58<sup>m</sup>.
  8. Lat.  $+17^{\circ}5$  W. Faint and almost detached in C. 75" high in Ca and streaks from the top extend both ways
  10. Lat.  $+37^{\circ}$  E. The prominence consists of faint slanting streaks. The Ca prominence is 60" high and extends from  $+29^{\circ}$  to  $+38^{\circ}$  E.
  16. Lat.  $-31^{\circ}$  W. Ca A streak 2° long and parallel to the limb At 9<sup>h</sup> 28<sup>m</sup> it was a slanting streak connected to the limb at lat.  $-32^{\circ}$  W.
  - 19 (1) Lat  $+25^{\circ}$  E. Very faint in C. A Ca streak 135" in height extends eastwards from the top
  - (2) Lat.  $-6^{\circ}$  E. Bright Changing. Metallic. The lines D<sub>1</sub>, D<sub>2</sub>, b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub>, b<sub>4</sub> were bright. The prominence was not seen at 8<sup>h</sup> 43<sup>m</sup>.
  20. Lats.  $+26^{\circ}$  and  $+21^{\circ}$  E. Changing. The maximum heights in Ca were 140", 130" and 120" at 8<sup>h</sup> 20<sup>m</sup>, 8<sup>h</sup> 31<sup>m</sup>, and 9<sup>h</sup> 23<sup>m</sup> respectively
  21. Lat.  $-2^{\circ}$  E. A Ca streak 50" high slants northwards from this position. The stem was bright and was seen in the Ca flocculus plate at 7<sup>h</sup> 50<sup>m</sup>.
  22. (1) Lat  $-6^{\circ}$  E C was slightly displaced to red at the base. The base was bright, metallic, and was visible in D<sub>1</sub>, D<sub>2</sub>, b<sub>1</sub>, and b<sub>2</sub>
  - (2) Lat.  $-26^{\circ}$  E. Streamers from the top extend both to north and south The northern streamer meets the prominence at lat.  $-6^{\circ}$  E in Ca.
  27. In Ca a number of low scattered dots were seen in the region lat.  $-26^{\circ}$  W to  $+30^{\circ}$  W.
  29. Lat.  $-4^{\circ}$  E. Ca. A vertical streak surmounted by a slanting streak at the top. Only the lowest portion was seen in C.
- May
4. Lat.  $-62^{\circ}$  W. Bright. C was slightly displaced to violet at the top. Only a faint trace of this prominence was seen in the Ca photograph at 8<sup>h</sup> 33<sup>m</sup>
  5. Lat.  $+19^{\circ}5$  W. Very faint except in the southern half of the base. C was slightly displaced to red at  $+19^{\circ}$  W. No trace of this prominence was seen on the Ca photographs.
  8. Lat.  $-68^{\circ}5$  W. Detached in hydrogen. In Ca at 8<sup>h</sup> 20<sup>m</sup> it was connected to the limb by a slender stem and was 40" high It was not seen in the photograph taken at 8<sup>h</sup> 12<sup>m</sup>.
  9. Lat  $+41^{\circ}$  W. A short detached streak. In Ca there was a prominence 10" high in this place connected to the limb.
  14. Lat.  $-8^{\circ}$  E. Bright Changing F was displaced to violet 1.0 Å. Metallic. 4924.1, 5018.6, b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub>, b<sub>4</sub>, 5284.3, 5276.2, 5316.8, D<sub>1</sub>, D<sub>2</sub>, and 6677 were bright. 30" high at 8<sup>h</sup> 34<sup>m</sup>.
  23. Lat.  $-10^{\circ}5$  E. Changed and 15" high at 9<sup>h</sup> 38<sup>m</sup>. Nothing was seen here at 9<sup>h</sup> 54<sup>m</sup> except a displacement to red in the chromosphere.
  26. Lat.  $+9^{\circ}$  E. Bright. Metallic. Showed slight displacement to violet in C. Slightly changing. 4924.1, 5018.6, b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub>, b<sub>4</sub>, 5316.8, D<sub>1</sub> and D<sub>2</sub> were bright.
- June
6. Lat.  $-13^{\circ}$  W. Metallic. D<sub>1</sub>, D<sub>2</sub>, b<sub>1</sub> and b<sub>2</sub> were bright. C was slightly displaced to violet over the whole prominence.
  7. Lat.  $-55^{\circ}$  E Ca. A faint streamer extending to lat.  $-45^{\circ}$  E. Changing. At 8<sup>h</sup> 32<sup>m</sup> it was only 90" in height.
  25. Lat.  $+27^{\circ}5$  E. The Ca prominence consists of short jets extending from  $+25^{\circ}$  to  $+30^{\circ}$  E, the middle jet rising to 105" in height.
  30. (1) Lat.  $+86^{\circ}5$  E. Changing. 25" high at 8<sup>h</sup> 58<sup>m</sup>. Metallic. D<sub>1</sub>, D<sub>2</sub>, b<sub>1</sub>, and b<sub>2</sub> were bright. The prominence consisted of two slanting disconnected streaks at 9<sup>h</sup> 0<sup>m</sup>.
  - (2) Lat.  $-4^{\circ}$  E Faint, 20" high, and extends to  $-2^{\circ}$  E in Ca. Height 45" in Ca at the northern end.



REMARKS ON THE DISTRIBUTION OF THE PROMINENCES IN LATITUDE  
DURING THE FIRST HALF OF THE YEAR 1911.

The general features of prominence distribution during the six months ending June 30, 1911, are shown in the accompanying diagram which represents graphically the mean profile areas found for each zone of five degrees in latitude



The distribution appears very similar to that found for the previous six months but there is a general decrease of activity, amounting to about 22 per cent. The zones of latitude between 30° and 40° in each hemisphere have increased in activity slightly but these were regions of relatively low activity during 1910, the curves therefore show a smoothing out of the irregularities which were specially prominent during the first half of 1910. The maximum prominence activity is indicated between latitude 35° and 40° in the southern hemisphere.

The mean daily profile areas for the two hemispheres are : -

		SQUARE MINUTES.
North	.. .. .	1.27
South	.. .. .	1.56
	Total ..	2.83

Metallic prominences were very infrequent only three being recorded in the northern and eight in the southern hemisphere. The majority were associated with sunspots and were in low latitudes, ranging from the equator to + 9° and - 13°. Three were observed in high latitudes, one of them being situated in latitude + 86°5

Displacements of the hydrogen lines were recorded in 51 prominences and three times in the chromosphere. Thirty-one of these displacements were towards the red, nineteen towards the blue and four in both directions. Most of these disturbances were found in the southern hemisphere ranging from the equator to within five degrees of the pole.

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THE OBSERVATORY, KODAIKANAL,  
12th October 1911.

*Director, Kodaikanal and Madras Observatories.*