

Kodakanal Observatory.

BULLETIN No X

LIST OF PROMINENCES OBSERVED BETWEEN 1906 JULY 1 AND 1906 DECEMBER 31

WITH AN ABSTRACT FOR THE WHOLE YEAR AND REMARKS ON THE GENERAL
DISTRIBUTION OF THE PROMINENCES IN LATITUDE

This list is a continuation of that published in Bulletin No IX and contains all the prominences that were recorded visually as well as those photographed with the spectro heliograph. The visual observations were made with the 3 prism reversed spectroscope attached to the 6 inch Cooke refractor using the C line. The photographs were taken in the line H of calcium. The image forming lens of the spectro heliograph is a Cooke photo visual objective of 12 inches aperture and 20 feet focus the image is therefore about 2.8 inches (58 millimetres) in diameter. Under good conditions the photographs show all the details which can be recorded visually and in general there is a remarkably close agreement between the drawings and the photographs not only in the general form and height but also in the minute structural details. When prominences are photographed in calcium which were not recorded visually Ca is entered in the remarks column but it must not be inferred that these prominences were composed of calcium vapour only without hydrogen so far no clear case has been recorded of a calcium prominence without hydrogen or of a hydrogen prominence without calcium. There is however some evidence of variations in the relative intensities of the calcium and hydrogen lines in the prominences.

Owing to the great intensity of the calcium lines it usually happens that more prominences are recorded on the photographs in a hazy sky than can be seen in the C line.

No photographs were obtained after December 18 owing to the dismantling of the old roof covering the siderostat which supplies light to the spectro heliograph.

In the lists which follow the Indian Standard Time (5 hours east on Greenwich Mean Time) at which each prominence was observed is entered in the second column. The true latitude corrected for inclination of the sun's axis in the direction of the line of sight is entered in the fourth and fifth columns and the heights measured from the chromosphere in the seventh column. The observer's initials are given in the first column. They were K V Sivarama Aiyar (K V S) S Sivarama Aiyar (S S) and G Nagaraja Aiyar (G N).

D t d b	I S	B	L t t d		L b	H t	R m k
			N th	S th			
1906	x						
July 2	SS	8	72.5		E	60	
		84	70		F	80	Γ t d t h d f m l m b
		81	90		E	15	
		80	20		F	10	
		28	8		L	10	B ght
		25		83.5	E	10	
		22		55	E	40	T p f t d l t a g uthward
		9		82.5	E	80	F t
		54		17	W	15	D
		52		45	W	10	D

Dt l b	H IST	B	L t t d		L b	H ght	R m k
			N th	S tl			
1908							
J ly 9	SS	8 47	6		14	W	55 C N ttp
		0 33	25	7		W	40
		32	4	2		W	20
		11		81		W	20
		6	2	43		W	10 B l tti
		(	05	46		W	60
		(	0	48		W	60
		0	05	0		W	1 V yf t
		8 58		55		W	20 D t l d f m l b
		57	1	6)5		W	10
		6		81		W	10
J ly 10	SS	8 44		715		F	15 S l y b m l d y b f th SW q d t
		12		53		D	20 l b d t b C
		41	05	455		I	2
		39	0	32		I	2 S l t t w d
		38	15	27		D	20
		6	3	17		E	20 A l w b k C d p l l t t p t w t (05 A n F)
		85		12		F	15
		30		8		E	20 A t l f w 5 f th t p t w d
		9	1		8	F	0 C
		28		8	8	F	10 T p l t thw d
		27		05	05	L	25
		4	2	27	27	I	65 A b g l t
		3		295	295	I	40 T l t t thw d
		20	05	33	33	E	55 D
		18	15	30	30	D	30
		16	1	71	71	E	1 N w t t p
		1		87	87	I	10
		0 9		48	48	W	10
		5	4	11	11	W	50 T p f w f l t - 18 W
		0	1	8	8	W	90
		8 58	0	24		W	50 A g l l
		58	05	11		W	80
		2	15	465		W	60
		51		49		W	35
		0	1	51		W	35 T p t w } S N t
J ly 11	GN	8 3	05	79		I	10 C p l t g p l - 91 31m
		37		45		I	20 F t
		38	1	18		J	25
		36		85		D	15
		74	1		285	E	25
		31	2		31	I	60
		34			305	D	0
		31	2		49	I	30 N w t t l
		30	1		585	I	0
		25	1		75	L	15
		28			79	E	15
		20	1		86	E	15 U p l l w h l p t l b y g p
		20			855	W	20
		50			78	W	70 T t
		47			15	W	0 B d C
		40	1	Eq t		W	40 C
		40		7		W	50 C F t S m t d b y t k b t 81 g
		45	4	27		W	30 A l w b k w h t k g g p f m t h
		44	4	495		W	65 l d
		40		72		W	30
J ly 12	SS	8 45	3	255		E	20 C p h i g p l w t k n t 81 40m
		43	1	95		D	10 T w t l l t g t w d h h d
		11		6		E	50 t t t p
		39	15		0	E	20 C l k
		30			185	I	50 A f t l d l t w y f m l m b
		26	15		585	D	20 S N t 1
		26	25		535	D	50 S N t 2
						D	50 B d t t l } M t g t t p

D t a b	H ISI	B	L t t d		L m b	H g h t	E l
			N t h	S t d			
1906							
J ly 12	SS	8 28	0		75 5	E	15
		9 24	1		86		40
		28			85	W	25
		21	1		80	W	4
		19	0		58 5	W	2
		1			87 5	W	2
		18	15		28	W	10
		18	15		9	W	30
		12	2		10	W	20
		10	05		25	W	30
		7		35		W	90
		5	15	12		W	25
				17 5		W	
		8 55	1	37		W	1
		5	2	51		W	00
		53		76 5		W	10
J ly 13	GN	11 20	8	95		F	45
		20	15	55		F	40
		16	05		3	F	30
		16			18	F	30
		15	05		30	E	30
		15	05		65	E	40
		27	1		85	E	10
		26	1		5	W	50
		3	0		22	W	30
		30	1	28		W	1
		30	05	42		W	30
		25	15	88		W	20
J ly 15	GN	9 2		20		F	30
		0	2	8		E	10
		23	15	8		W	25
		2	05	75 5		W	30
J ly 16	SS	8 1	25		4	E	80
		50			9	F	3
		4			19	I	15
		46	15		81	E	30
J ly 23	KVS	11 4		68		E	10
		42	1	39		E	25
			8			L	10
			15		8	E	2
		35	8		20	E	3
		12 0	05		37 5	F	40
		0	05		7 5	W	80
		11 55	0		75 5	W	20
		58	25		31 5	W	50
		55			29	W	50
		4			18 5	W	20
					05	W	20
				35		W	1
		2	1	10		W	25
		48	05	73 5		W	20
		48		74 5		W	20
		48		77		W	20
J ly 24	SS	8 27	05	51 5		E	30
		58	4	41		F	25
		24	25	4		D	50
		58		1		I	25
		22	2		12	E	25
		59	1		17	E	15
		40	1		5	E	5
		48	1		42	W	25

F t
 l b d t b O
 Slightly b d ttp
 D
 O f Lt - 32 W
 N t 3
 B d t O lightly d pl d t d t l
 p t
 N t 4
 B ght
 N w t t
 O i t pl w t k t 9 l 5 l
 B d t t l
 S l t t l w d
 T l w l l m b w m d y l
 w t h
 D l l
 C l d y O l y t l t l t q d t w
 d
 T l b d l w d m t l l g t l t
 + 9 F
 S l l t l
 I p r t l w d b t s
 F t
 B d t t p
 A l w b l
 F t
 N w t t p
 S l t t h w d N w p t b a
 F t

D t a b	H IST	B	L t t l		Lmb	H l t	R m k
			N th	S th			
1906	M						
J ly 24	58			8	W	60 ±	D bl
— 24	44 46 51		71	21	W W	5 3	N ttp
J ly 25	KVS	85	50 5		F	90	Hgl d N th d b g l t th th t f th ;
	9 2 8 16 55 50 47 0 27 8 45 9 22 18 15	1 1 4 1 15 1 1 1 15 3	40 80 28 15 95	13 32 40 47 5 81 5 14 5 12	D E F F I I E W W W	0 35 80 ± 20 17 20 1 0 1	v t l S N t C B g h t l t t m t l l Tl f t l l t th E t B h t l A l w l k O p l t pl t l n t 8h 16m
J ly 26	SS	05	51		F	70	
	31 30 8 27 6 5 4 21 18 40 89 88	1 3 1 1 1 1 1 1 5	89 90 0 17 11 19 10 73	19	F F F I E F I W W W	2 20 0 1 25 15 10 0 2 10 10	B g l t S l t thw d C l k N w t t p
J ly 28	SS	05	82		F	90	
	9 43 19 89 80 9 10 29 20 20 18 1 17 17 9 16	1 1 1 05 05 1 0	81 52 38 7 94 3 105 8 C	(45 7 3 105 8 C	F I F I W W W W W W	20 10 10 10 0 97 10 0 0 95 ±	D bl T p d t t l t p m I ly
J ly 30	B	15	12		F	10 ±	D l l
	10 16 9 87	1	33 79		I I	2 ±	B l l y O l y t l th t q l t w
A g t 2	SS	05	84		F	10 ±	
	8 53 49 47 42 40 36 35 9 7 4 2 1 0 8 56 56 14	1 1 1 05 05 1 1 45 1 1 1	42 7 45 19 67 83 5 28 105 7 13 5 20 48 51 88	(67 83 5 28 105	F I F F F E W W W W W W	20 20 20 90 3 20 10 40 0 10 2 2 75	S N t 1 S N t 2 S N t 3 U l l p t f t } M t g t t p n d 40 D T t t p } h g h n C C l l S l t g t l d T t l t t l w d D t l l l m l m b C l h t l w t l t 8h 14m

D t d b	H IST	B	L t d		L l	H l t	R m k
			V th	S th			
1906							
A g t	SS	8	8		D	20	
		49	1	30	E	10	T p
		4	1	2	D	10	
		45			L	40	
		40	3		Γ	0	
		7		43	W	0	
		57	05	46	W	20	
		5	05	52	W	0	
		53	1	74	W	1	
A g t 6	SS	8	0	67	I	30	L b m d b t w P A 180 d 32 t f l d
		33		27	Γ	30	Γ k l k
		32		19	Γ	60	l l d t w y f m l m b
		30		11 5	Γ	90	S l t t l k
		29	0	5	Γ	10	D l l
		2	1		F	25	
		24	1			30	
		22	1		Γ	35	B l t w d p t h g h t h t j f t h t l m
		21	2		Γ	3	
		0			F	15	V f t
		19			F	10	
		18			Γ	0	V y f t S l t t w l
		16			Γ	10	
		15			Γ	15	
		7	4		W	1	V y f t
		5	1		W	95	
		3	1		W	25	l j m t l b g t L t - 18 W
		51	1		W	15	
		0	2		W	90	
		49	05	11	W	1	
		46	10	26	W	2	
		44	1	48	W	1	
		42	2	58	W	30	
A g t 7	SS	8	0	25 5	I	10	
		38		10	Γ	75 & 10	S N t 1
		3		5	Γ	0	
		27	1		Γ	40	S N t 2
		25	1		F	5	S l t t l d
		23	0		F	20	
		0	1		Γ	7	T l l l p m t l m l t L t - 32 E
		18			Γ	10	
		54			W	10	
		58	2		W	10	
		52			W	10	S l t t l w d
		49		99	W	25	D
		49	0	41	W	2	D
		4		5	W	75	
A g t 8	SS	9	05	9	F	100	S N t
		8	5		F	60	S t l l l f l g l t t h t h t
		85	1		Γ	25	
A g t 9		8	1		Γ	40	O l t h t h t q d h t w m d O l d y S N t l y
A g t 10	SS	10	05	8 5	Γ	30	
		1		21	Γ	25	
		1		15	E	50	
		35	1		W	80	V t t
		32			W	30	S l t t l w d
		31			W	25	D
		15		41	W	40	D
A g t 11	SS	8		84	I	20	S g b d
		22		49	F		

J t d b	H I S T	B	L t tnd		L b	H l t	R m
			N t l	S t l			
1808							
A g t 11	SS	8 20	2	43		F	6 + N w t t ; B d t l d d l C
		15		10		I	20 N t l
		17		7		E	20
		1	1	L 1		E	10
		18	3			E	50 I ; f w t l b t 8
		10	3		215	F	25
		8			805	L	20
		8			1	E	10
		(			11	L	15 F t
		10	2		6	W	25 D
		40	4		81	W	40
		33	1	5	75	W	80 B l t t t m t t l } M t g t
		33	2	19		W	60 D } t p
		33	1	18		W	4 ± I l t t l l t p m
			1	61		W	20 C l l t p l s l t l p g l d
A t 12	GN	8 18		73		I	20 S l g l t y b l t t l
		47		405		L	20 F t s l l t
		41	1			I	20 ± b l g l t y b d g t w d t h t t l
		41	15	3		F	15
		37		105		I	0
		96	1		15	I	3 D l l
		98			5	I	1
		32	05		315	I	10
		40	0		48	F	3
		30			4	I	(5
		28			70	I	10
		J 2	0		71	W	11
		1	2		5	W	60 ± N t t l
		8 51	05		11	W	25
		51	8		405	W	30
		5		1(5		W	25
		51	0	28		W	20 S N
		0	05	30		W	20 F p l l g h t l y t l d
				13		W	30 O l t g l w t l t 8
A t 13	SS	8 1		405		F	90
		(			7	I	20 ±
		0			8	F	30 V y f t D t l d f l l
		8 51	1		8	W	0
		9 8	0		(0	W	(0
		2	05		1	W	2
		8 1	f	0		W	I
							(S b b d (l t s p l w t k t 8 51
A g t 1	SS	) 8		70		I	60 ± L t l l l t t f d (
		8	2	18		I	4 S N l
		57	8	10		I	30 B l l t (p t j l t L t + (E
		5	1		19	E	10
		1			18	F	20
		51			1	I	10
		) 44	0		41	I	(
		40	15		50	I	25 } M t (1 0 50
		8	1		1	I	25)
		3			73	I	15 F
		2(	1		9	W	10
		)	35		57	W	10 ± S N t 2
			1		48	W	50
				11		W	15 ±
				22		W	30
				35		W	±
				81		W	± V y f t l g l C
A g t 16	SS	J 2		9		I	0 t 8 57
		25	1	50		I	50 ± I l l k t t p (
		5	1	47		I	2 S l g l t y t l l (
		17			18	F	0
		17	1		50	F	20
						F	8 S l g l t y t p

D t d b	H IST	B	L t d		Lmb	H ght	R m k
			N h	S tl			
1906							
A t 16	89	9 17	05			25	
- ntd		45		5	L	25	
		40		45	W	40	
		35		17	W	15	
		35	1	18	W	10	B ht
		33	05	23	W	20	V y l
		9		8	W	10	
		8	05	(5	W	40	V y f
				81	W		I) 4m l d O jlt pl tk t
A g t 17	8	8 37	05	80	D	40	
		32	1	805	E	3	Sl htly b l O
		30	1	385	D	15	
		29	1	29	t	2	B l
		28	15	35	F	0	U
		27	5	85	E	20	D
		24			D	20	
		15	05		E	0	
		14	8		I	25	
		13	15		F	20	
		10	15	545	E	5	
		9 8		3	W	15	
		8 17	1	61	W	3	50 l gh C
		8 32		49	W	40	C B l tp
		8 11		40	W	1	
		8 4	05	15	W	35	
		1	1	385	W	20	B ght
		3	1	80	W	3	F t
A t 20	88	15 37	2	59	F	30	P g l d C jhtg pl w tk
		9 14	1	85	E	0	8 32m
		8	05	15	L	20	O B ght N w ttp
		2	2		F	40	B ht
		10 30				10	
		25	05		W	30	
		5		45	W	40	
		2		58	W	10	
		2		53	W	30	
		5	35	19	W	40	I t l d f m l b
		1		48	W	35	D
					W	60	S N t
				81	W	10	N w ttp
A g t 30	C N	8 3	05	5	E	10	P l d S gl C jht jhw
		1	1	44	F	30	tk t 15 37
		1		29	E	10	Ab ght j t
		1		275	E	10	S N t
		9 20	05	17	E	15	
		20		11	E	40	C l t
		8 32			I	50	C A y f j t
		30	0		F	15	
		25		11	E	50	M d t l b ght lyd g V y t t O
		9 20	1	57	I	25	F t
		8 54	25	7	L	50	C F t
		50	05	88	J	30	Slghtly tll O
		49		54	W	30	C t d O
		48	5	1	W	30	
		48	1	28	W	10	
		15		21	W	10	
		4	1	95	W	20	
		4	1	7	W	30	
		4	15	49	W	5	
		40	05	78	W	8	
		9 20	05	77	W	10	Slghtly b d ttp (
				8	W	30	C
					W		C ph t ph w tk t 9 20

Dt db	H ISL	B	Lttl		Lmb	Hlt	R l
			Ntl	9th			
1906							
A t 31 SS	8 10 21 20 18 16 14 1 31 31 48 13 43 41 16 1 31	1 1 1 1 1 1 1 1 5 6 1 05 25 1	82 23 10 5	14 46 81 (9 15 955 7 21 17	F J L F E F W W W W W W W W W	0 20 60 4 25 4 35 90 30 3 15 40 2 2 45 3	A m ll p b tw pl dlw p t B glt Up l p t d t h d f m l w d m l m b D bl f t B glt F t Sl g l t y b d O S N t O Sl g l t y b d t t l } 1 p m t g h t t t t t l p m t l b b t l t + 2 W C T l m t d b y t l t t h t f t h l l t l b g t l t + 81 O O l h t l h w t k t 81 31
S pt mb 1 GN	8 93 33 3 3 30 46 15 44 41 40 39 31 36	15 5 0 15 1 2 3 15 1	24 11	3 45 17 955 8 4 20 19 81	I I I F W W W W W W W W	10 10 10 15 20 25 20 20 10 70 4 90	O l k f t S l t d l d F t D } C t a t t t
S pt mb 2 SS	8 7 22 0 18 17 15 12 10 9 8 48 42 37 35 38 30 29	05 05 05 05 1 2 2 1 4	71 285 18 16 75 5	9 42 49 54 36 12 6 25 51 78 82	I I F I F F F I I V W W W W W W	90 15 5 2 20 20 40 10 3 25 40 50 10 20 70 60 35	q l t t h w d h l k t y l d t h w d t t l N w t l S l t l w d S N t l I r w S N t D bl T l l d l g t l y l i w d w t S l t t i C i l t p l t l t 81 53
S pt mb 3 GN	8 41 41 50 50 50 45 4 45	0 2 2 1 05 4		175 20 25 22 20 5 4 8	E F W W W W W W	20 15 60 40 25 90 80 15	C l l A t t t l d t h d f m d p l l t l m b O l k S N t C p l t g l h t k t 81 25 C q l t t h w d
S pt mb 4 Sb	9 4 4 8 3 50 9 0 20 8 47 47 9 19	1 1 05 1 05 15	79 56	Eq t 22 305 38 35 37 40	E F I F E E E L E	80 20 20 20 25 35 60 35 15	D bl B glt

Dt d b	H I b T	B	L t t d		L m b	H h t	R m l
			N t l	S t h			
1906							
S p t m b 4	SS	9 17		57 5	D	85 ±	
		10	8 5	22	W	4	D b l
		6	5	11 5	W	40	
		5		9	W	30	
		4			W	2	Slightly l t n thw d
			18		W	3	D
		8 58	0 5	7 6	W	20 ±	
S p t m b 6	SS	8 18		4	E	3	O h g phw tk t 9h 4
		6	1	41	E	45 ±	D b l
		6	0 5	44	L	1	S N t 1
		29	1	34	W	25	4 h l O
		2	1 5	8	W	25	D b l t l tw m t g t l t t t p
		2	8	32	W	25	S N t 2
		26	0 5	40	W	30 ±	O C p l t g ph w t l t 8l 26m S g
S p t m b 7	GV	9 1	3	22 5	L	40	
		0	2	14	L	4	N w t t p
		8 59		31	D	40 ±	
		9 11	2	38	W	60	N w t t p
		10	1	30	W	1	
		10		34	W	20	
		8	1	41	W	30 ±	
S p t m b 8	SS	8 18	0 5	7 5	E	2	O p h t g pl w t l 8l 2l
		33	1	48	E	2	O
		32	1 5	42	L	30	D t h l f m l b l d t t p
		30	1	22	I	1	
		30	3	18 5	E	30	B g t t N w t t p
		28	2	12	F	5	E t t D t h d f m l b
		21		49	I	0 ±	l t O
		18		55	E	30	
		58	1	65 5	W	15	
		9 00		58	W	10	
		01		47	W	20	
		8 4	2	32	W	40 ±	6 h g h n l p t d t t p O
		9 0	1 5	28	W	20	S l t t d w t t t p
		01		18	W	30 ±	A l l b t 6 l g w y f l m b
		8 48	1	34	W	30	S N t
		39	3	44	W	30	
		18		64	W	45	(F t
							O p h t g pl - 8l 18
S p t m b 9	GN	9 04	1	42	E	20	
		01	0 5	37	E	15	
		08	1	27	L	25	
		0	2	24	L	15	
		02		22	L	30	
		00	0 5	13	E	30	
		8 0		58 5	D	60 ±	
		9 12	0 5	46	W	60 ±	O p F t 70 h g h d b d t t p
		05	2	31	W	25	
		06			W	25	
		07	1 5	37	W	40 ±	
S p t m 10	SS	8 51	0 5	38	E	10	O p h t pl 9l 5m
		0	1 5	78	E	50	Ab t 60 h g l C
		49	0 5	73	D	20	V y f t
		40	0 5	48	E	25	S N t 1
		45		41	E	40	S N t 2
		48		31	F	20	
		48		20	D	25	
		40	0 5	26	E	30	
		40	1	23 5	F	30	O t d t t p C t b d d m
		40	2	19	E	30	
		38	2	4	E	10	I p m t b f n t } V t l
							P
		38		1	F	15	
		31	1	2	E	10	F t
		33		21	F	10	
		32	1	28 5	E	30	

Dt d b r	R IST	B	L t t d		I b	H glt	E
			N th	S th			
1906							
S pt mb 10 SS	8 30			5	D	35	D t h d f m l m b
	9			60	I	0	
	9 05			7	I	30	
	05			79	L	10	
	8 58			3	W	10	Th w l l t t l l y b d l p d 90 w y f m l b O
	7	1	1		W	15	O l g t l y d p l d b d l y N p m
S pt mb 11 G V	58	2	41		W	30	Th p m f w th d b t 5 t i l
	58		5		W		O p l t g p l 8 l 10
	9 08		72		I	10	C l t B d t t p
	8 51	1	67 5		D	10	S l g t l y b d O
	3	2	14		F	0	S N t
	32	1	17		I	18	b l t d l w d
S pt mb 12 SS	31	1 5	11		F	1	S l t d l w l
	30	3 5	7		I	5	A (t k i t p m l m b t l t + 3 l
	48	1			I	0	F + l
	26	0 5		4	L	1	
	9 06	1		51	J	80	C
	08			80	I	90	C v j f t D t h d f m l b
	8 38	1	18		W	10	O A h t t m f w th w d f m
	0 06		17		W	0	t l t p
	0		55 5		W	0	C
	06	1 5	62		W	30	C C l l t g p l - 9 l 0 C
S pt mb 13 SS	8 34	2	44 5		E	30	
	2	2	7		I	0	
	22	2		0 5	F	10	
	2				I	0	
	29	1		9	D	50	B l t l l } M t t t p
	20	1 5		17	J	25	
	1			30	L	30	
	9 18			67	I	15	
	1	1		82	W	30	
	8 40	4	22	40	W	10	B g h t B t l l w b k t l t + 17 W
S pt mb 14 SS	45	2	53 5		W	45	B n g h t F l l
	9 20	1 5		8	L	30	
	1			26 5	D	45	
	9 25	2 5	44		W	35	
	8 20	1 5	54		F	45	F l
	15	1	45 5		F	20	S N t
S pt b 14 SS	45	0 5		1	W	10	F l
	53	1 5		71	W	2	I t
	58			44	W	40	F t D t l l f m l m b } A l m t t l t
	36	2		42	W	20	O
	41			2	W	20	
	48	0 5		7 5	W	10	F t
	35	1 5	12 5		W	60	D b l
	32	1	18 5		W	3	b l g t l y b l t t p O
	31	2	38		W	C	
	29	0 5	46 5		W	80	
	28		49 5		W	20	
	26	1	70		W	0	F t O p l t g p h 9 l 8 m

Dt	l b	H I S T	B	L t t l		L l	H l t	R m k	
				N t l	th				
1906									
S pt	b 1	GN	8 31 45 84 43 48 41 41 89 86 50 47 4	1 2 1 05 0 15 05 05	605 57 49 19 16 05 115 27 495 8		E E E E E L L E E E F W W	40 20 20 20 10 10 0 15 10 15 20	O S N t l S N t P t d t t p C p h t p h 81 84
S pt	mb 16	GN	9 46 08 01 9 01 00 1 1 15	1 1 2 05 1	57 50 48 18 7 24 25 28 20		E E E D L W W W	60 30 30 10 15 1 10 10 2	} F t Alm t t b t w n t l w d 45 h l C 41 t s l w l 4 l g h C O p l t g p l 110
S pt	mb 17	GB	8 31 20 20 6 29 20 15 49 46 45 4 44 41 42 40 37 3	1 1 05 1 0 05 15 15 5 2 2	82 5 50 48 6 13 23 76 53 0 49 37 30 22 16 4 18 t 16 20		F F F I F D F W W W W W W W W W W	0 60 60 50 10 10 50 85 10 20 10 5 0 10 1 2 -	} N t t t p I t } V y f t d l l l f l l } S N t B g h t I t D D C l l O l l l l t l A l w b l } C t d l y t k t t l C h t g p l 47
S pt	mb 21	SS	9 43 10 04 0 02	 1 05	10 17 21	4	I W W W	30 10 0 0	S N t B g h t B d g
S pt	mb 26	GN	8 53 9 01 8 0 47 46 41 41 9 01 00 8 59 56 55	 65 1 3 0 15 1 85 5 3	82 50 47 8 215 44 47 805 5 2 48 46		F I I I E E E L W W W W	15 15 7 20 30 80 50 70 45 25 25 60	C S N t F l f w t w l 2 h y d g d 4 O N w t t l O t d F t C C F t F k l l t t p F l t t t l d A O t k l t h g h t t p D t h d i l m b S l g h t l y t l l n O N w t t p C p l t g p h 91 01 m
S pt	mb 27	GN	9 10 00	3 45	435 34		E E	60 50	S N t

D t d b	H L S I	B	I t t d		L b	H ht	R m k
			N th	S th			
1806	x						
S pt mb 7 SS	8 34 32	2	J		I I	15 30	D b Slightly b d t t p A l d l t t p C
	28 27 5 4	2 1		5 4 56 61	F k I I	10 30 1 20	N t t p
	G N 9 31 30 9 2 10 02 9 2 23 14 1	1 15 4 1 1 1 3		91 h 54 30 21 17 48	I V W W W W W	10 20 30 40 50 60 70	Slightly b d C D bl D bl N tl nd l ght O ly f t t C C pl t g pl 10l 02m
S pt mb 28 G N	8 58 55 2 0 17 4 42 4 39 9 09 08 08 07 04 0 00	1 15 1 15 1 15 0 1 0 1 1 1 1 1	19 J 125		I I I I I I F I W W W W W W W W	5 3 0 10 40 80 10 60 10 80 2 1 95 10 17 30 3	60 l gl O } t d by t k O A d t l d l d l t D t h d f m l m b S N t C pl t g pl 10l 09
S pt mb 20 SS	9 07 8 20 11 14 16 14 4 47 4 43 9 0 8 11 4 10 37 98 3 33 32 30	2 05 05 05 05 05 05 05 05 05 05 15 2 2 0 0	4	1 19 23 1 4 9 17 15 12 1 17 2 2 325 475 51	I I I I I I W / W W W W W W W W W W W W	1 20 10 20 25 30 35 1 2 20 20 10 10 10 3 10 10 50 50	I t l f p fl w t w d d l y m t b J t t l y t l y t O C I t P t l t t p F t y t C pl t g pl 10l 07m R t B ght d l l B t d l w b n k f r l t + 10 L T l w l t th F t N w t t p D
S pt mb 30 SS	8 30 33 30 7 27 15 15 23 9 1 9 00 8 54 53	1 2 3 15 2 2 0 0 15 2	8 5 C 10	20 20 1 50 59 8 7 7J C 60	I I L E F I I L F T k W W	30 15 60 2 15 1 25 20 0 10 15 25 30	

Date	nl b	H n I s T	B	L t l		L b	H l t	E m k
				N th	S th			
1906								
Sept 30	SS	8 2	05		6	W	10	V y f t A b t 2 b d O
		50	1		28	W	0	} O l m p h l l t l y l t d b t w n t h
		18	1		21	W	10	
		47	1		16	W	10	B g h t
		17			18	W	30	A b l t d t h l l d l t
		48	2	1 J		W	5	B g l t A l t k p d t h w d f m
								t h t p
		42	25	9		W	30	
		11	1	43		W	1	
		19	8	46 5		W	50	
		37	1	88		W	15	
								O p h t g p h 8 5 m
Oct 1	GN	10 34	1	92		L		
		98	2		5	D	1	D b l
		31	15		19 5	F	4	
		31			8	E	30	
		30			27	D	30	
		29	1		27 5	E	85	P t d t t p
		28			64	I	15	
		27	1		71 5	L	10	
		26	0		74	I	30	
		24	05		74	W	15	
		41	1		59	W	50	S N
		39			28 5	W		
			05		16 5	W		B l t t p
		38			4	W	30	
					1	W	0	D t h l f m l l
		37	1	3		W	30	P t d t t l
		9	2	32		W	30	D
Oct 2	GN	8 0	1	81 5		I	30	
		18	2	5		E	10	
		7 0		26		L	40	O A f n d t l l l l t
		8 16	1	13		E	10	
				1		E	20	B d t t l
		15	05		4	F	30	
		1			7	E	30	} O t d t t l
		17			8 5	D	30	
		15			10	E	30	
		12	15		21	E	40	P t d t t p
		10	4		38	F	30	D
		8			40	F	20	
		7	05		53	E	5	
		7			55	E	20	
		30	15		58 5	W	8	
		28	8		8 5	W	95	N t
		25	05		16	W	2	
		21		71		W	10	S l t t w d
		0	1	82		W	20	
Oct 3	GN			8		L	10	O l h t g p h 8 0
		8 58		80		E	85	l t
		53		9		D	35	
		52		11		L	30	O l y 10 h g h t 8 18
		9 15	0		12	E	20	
		8 40	2		24	E	30	
		9 10			4 5	F	40	S N t l
		0	15		57	W	30	l t d t t p
		8 58	15	25		W	10	
		9 24	4	36		W	30	S N 2
		8 50	1	81		W	15	
		50	05	82		W	15	
								O l t g p h 8 3 m
Oct 4	GN	8 38	4	83		W	60	S N t
				79		I	45	} O t d O
				77 5		L	30	
		8 37		17 5		I	20	} O p m 45 1 5
		30		8		L	15	
		41	1	82		E	50	40 i h O

D t d b	I I S T	B	L t t d		L m b	H h t	E m k
			N t h	S t l			
1 08							
Oct 4	GN	8 96 3 39 36 37 36	15 3 1 15 1	8 53 56 415 16	I W W W W	80 80 25 90 0 20	C C 1 gl C C P t d t t p C l l t g i h 8 86
Oct 5	SS	9 51 50 47 18 8 17 5 10 3 8 31 32 53	(05 05	78 4 1 18 195 4 5 28 315 82	I D T L D D W W W	0 10 40 11 40 0	0 D b l # S N t 10 h g l d 2 b d C D b l S l t t h w l S l g l t h y b d t t p C p l t g p h 8 57
Oct 6	CN	9 50 10 1 1 1 9 48 48 48 47 51 51 57 52	05 8 15	77 41 9 90 14 17 1 10 8 3 1	F E E E L E L I W W W W	30 1 40 30 30 30 20 40 05 4 20 15	C B d t t p C A l l l D t l l i m l m b C F k l l t t p C p l t g p l 8 51 d 10 l m I t d t t p 65 h g l C D t h l f l b H y d g b t } S N t t l C A b h t t C 25 I 20 8 0 0 0 2 1 1 10 0
Oct 7	GN	8 35 34 33 31 30 29 23 26 5 58 58 41 28 38 38 37 36	2 1 0 5 1 1 15 0 15	77 36 80 21 12 1 81 (31 17 1	I I I I W W W W W W W	4 4 60 35 30 25 20 8 0 0 0 2 1 1 10 0	C p l t g p l 8 51 d 10 l m I t d t t p 65 h g l C D t h l f l b H y d g b t } S N t t l C A b h t t C 25 I 20 8 0 0 0 2 1 1 10 0
Oct 8	SS	8 57 56 53 50 91 19 18 9 20 19 2 16 10 8 5	0 05 1 2 2 4 1	81 8 8 285 9 50 605 325 26 11 885	J L J L E F I W W W W W	10 60 25 50 2 15 0 85 20 25 15 30 120	C p h t g l h 8 1 3 d 5 58 1 t 70 l g l C } C t d by d 3 h g l C 2 1 l C S l g l l t t h w d t t C l l C O O A b t 2 b d b t l t l l f m l b A t m b t 8 l g d t w d f m t t p
Oct 9	GN	8 58 9 2 8 55 9 1 1	1 2 1 1 1	70 51 24 5 45	E E E F E	25 45 20 15 15	C C O O A l l k F g l d O p l t g l h 9 2 m

D t d b	H IS F	B	L t t d		L b	H ght	B m k	
			N th	S th				
O t b 13 - 22	GN	8 0	1	81		F	15	} C t d t t l } C t d t b A l w l d t h h t t k t g t w t h t l m b } S l t t h d l l p h k d l l d f m t h l w S l g t l y b d O O p l t g p h - 8 l 23 O S l t t w d t h t l t t l t C P C D B d t t p } C t l t l t l A l t l l l d l t F t O R i b i b g l t B d t t p } O t t S l t t w d h t h d m t t t p A l t t l d l l d f m l m b d p l l l l t W 10 W 1 W 1 W 25
		8 50	1	29		E	15	
		8 50	1	6		I	15	
		8 40	1	21		F	1	
		8 30			11	E	0	
		8 28	05		2	F	10	
		8 50			70	E	20	
		8 48	15		04	W	80	
		8 17	1		50	W	30	
		8 7			31	W	15	
		8 7	05		28	W	15	
		8 40	2	28		W	35	
		8 40	1	41		W	2	
		8 46	15	01		W	4	
		8 5	0	07		W	10	
O t b 14	GN	8 29		62		D	25	C C B d t t p } C t l t l t l A l t l l l d l t F t O R i b i b g l t B d t t p } O t t S l t t w d h t h d m t t t p A l t t l d l l d f m l m b d p l l l l t W 10 W 1 W 1 W 25
		8 29		58		F	25	
		8 29	15	53		L	25	
		8 24	1	50		H	0	
		8 24	0	47		D	80	
		8 21	1	29		E	15	
		8 20		24		F	25	
		8 17	1		13	F	30	
		8 10	1		11	I	40	
		8 11	1		18	I	40	
		8 14	07		35	F	15	
		8 15			71	I	10	
		8 14			77	D	45	
		8 12	15		7	I	20	
		8 12			76	P	55	
8 11			69	W	70			
8 10	1	81	5	W	70			
8 10			32	W	30			
8 10	15		29	W	1			
8 7		8		W	10			
8 27		11		W	1			
8 27	3	29		W	1			
8 2		64		W	25			
O t b 15	S	8 38	2	84		I	20	O l h t g p l - 8 l 22 m V y f t } M t t t p A O t k f t l t p n l y t t l l b t L t + 56 D F t } S N t 1 } V y f t A l t t h l t g t l d t h d f m l m b B l i b t d t V y f t S l t w t w d } V y f t S l t w t w l } A l t t b d n O N w p t b S N t 2 P d t t p F l t t l w d O p l t g p h - 8 h 15 C 40 l g l O C C p h t g p h - 8 h 51 m
		8 37		71		I	15	
		8 33		51		I	50	
		8 33		51		I	50	
		8 33		47		I	50	
		8 31	1	40		I	15	
		8 8	4		9	F	35	
		8 24			10	E	15	
		8 21	1		21	F	20	
		8 20			57	F	15	
		8 16	25		59	I	50	
		8 16	05		75	I	10	
		8 5	1		71	W	85	
		8 3			51	W	25	
		8 50	4		85	W	40	
8 47	15		1	W	60			
8 45	1			W	40			
8 48	1	24		W	20			
O t b 16	GN	9 30	5	51		F	2	C 40 l g l O C C p h t g p h - 8 h 51 m
		9 25	2	49		I	20	
		9 25	15	14		F	30	
		9 25	3	9		F	15	
		9 2	15	6		I	20	
		9 20	1		50	E	20	
		9 23	1		28	W	20	
		9 26	1		2	W	15	

Dt	d b	H IST	B	L t t d		I m b	H l t	R m k						
				N th	S th									
1906														
O t b 28	SS	8 14	2	73		D	15	C D t l i f m l m b 55 h g l O C b l d 70 h g l } O t d w t h O F l l k C D						
		6		60			50							
		5		58			0							
		14		54			60							
		14		50			60							
		2		20 5			20							
		2		24			20							
		0					20							
		7 58		0			80							
		8 36		0 5			0							
		34		78			10							
		30		81			15							
		27		85			10							
		25		105			00							
		2		2			80							
20	3	85												
15	9	20												
	38 5	20												
O t b 24	SS	11 6	15	82		E	1	D b l A l t l y m d N D t t p P n l d s g p O p l t g p l 8 l l						
		55		58			35							
		12		8			25							
		10 58		17			25							
		52		10			15							
		48					25							
		46		10			20							
		46		43 5			20							
		12 12		51			5							
		3		9			25							
				78			15							
		1		86			00							
		0		54			25							
		0		17			0							
				9			25							
O t b 29	SS	8 16	2	15		E	20	O l d y w t l b k D t h l f m l b P t d t t l 30 h h O b l t i w d l l l l y m t t t p u C O p m 80 l g h						
		1					20							
		12		55			50							
		1		69			2							
		87		28			25							
		35		12			20							
		35		10			20							
		35		75			1							
		28		51			70							
		28		54 5			60							
		27		81			10							
		O t b 30		GN			8 54		9			E	40	C p h t p h 8 l 26 O r t O F t D t l d f m l b S l t t h w d S t g O C F t S t 45 & 30 A f t l d l t d t h d f m l m b O t d t t p A t m f w t h w d f m t l t p l t T p b d l g h l y t h w d B g h t T p m t t h l t p m n B d t t p C C p h t g p h 8 h 5 m
							20			8			40	
							20			31			30	
							54			71 5			30	
47	67		50											
54	56		30											
46	49		40											
45	28		30											
48	22		45 & 30											
	18		20											
38	18 5		20											
38	11		0											
38	9		20											
35			20											
31	18		90											
31	51	1												
28	54	50												
28	84	40												
54	56	45												

D t d b	H I S F	B	L t t d		L m b	H g l t	R l
			N t h	S t h			
1906							
O t b 31 S S	8 36	05	86			20	A C t l m t l m b t L t + 89 W
	36		71		D	0	H d t t p
	29	15		0	P	30	F t b l t t d
	28			3 5	E	5	
	28			43	I	50	D t N t t p
	3			52 5	D	20	
	21	15		80	L	20	N w t t l
	20			60	D	30	B l t t p
	3			72	E	20	
	8	2		71	-	20	B l t w t d
	7			C 8	W	15	O p m
	56			28	W	70	B l t g w t d d b t 30 h g h
	53	1		17	W	10	S t
	71	0		14	W	70	B g l t B d t t p
	0	0		15	W	1	
1		15		W	20	C l A B t l t k	
47		11		W	15		
13	5	51 5		W	80	A b l j d t l l t b l g h t l y	
33		90 5		W	2	l b n C	
						P g t l n C p l t l 8 l m	
N m b 1 C N	10 30	4		7 5	F	3	
				17	D	1	
	44	1		8	I	0	A l t
	47			10 5	W	45	
	4	2		29	W	15	
41			9	W	70		
48				W	15		
					80	C l l	
N m b 2 G N	8 19	3		8 5	I	70	
	16			38 5	D	15	
	1			18	E	30	
	1	15		50	L	80	
	15	0		51 5	I	30	
	15	1		53	I	45	T p w
	22			82	I	40	C C D t h d f m l b
	22	05		80	F	1	O
	30	1		80	W	10	20 l f l O
	22	2		18	W	40	C l l w
	2		40		W	20	
2	0	1		W	15	S t	
24	1	5		W	45	l t 70 l g l C	
						O p l t g l h 8 l	
N m b 4 G N	8 58	05	84 5		I	1	
	8	15	7		I	35	
	5	15	21		I	35	O t d t t j
	54	1	18		I	20	T p f w l w l 4
	53	3	7		D	0	A f n b h
	0	05		10 5	E	25	
				5	I	40	C l l
				39	W	10	
				80	W	10	
	9 3			0	W	55	
1		31		W	40	A w d t l d f l m b	
N b 5 G N	8 50		8		D	0	A b t 2 b d t b b t l t l y d t h d
							f m l m b
	50		84		E	20	
	47		51		E	20	A d t l d l d l t
	45	1	18 5		L	40	
	45	05	38		E	30	
	45	15	28		E	40	B d t t p
	42	2	18		F	20	S t
40	2	3		I	50	A b l l y m t l m b t L t + 8 E	

Dt d b	H IST	B	L t t d		Lmb	H g l t	R m l
			N th	S th			
1906							
N mb 5 GN	8 40 37 51	1 1 1	El t 58 5 74 56 5 39 5 8 5		D P E W W W W W	20 40 10 20 15 20 50 20 20	N ttp C F t D bl N w ttp N w ttp
N mb 6 GN	8 58 0 9 5 5 1 2 0	1 1 8 5 1 1 2 0 5	88 5 El t 0 8 10 2 34 5		L P W W W W W	85 15 80 20 20 40 40	O p t g ph 81 51 D t N w ttp Q t t El t thw d
N mb 9 SS	11 1 15 5	1		26 20 31	D D F	40 50 20	Sl t tlw d Sl t tlw l Th lmb w d ly f m PA 140 t 180 Cl ly
N mb 10 SS	8 51 50 47 40 44 44 44 40 40 89 37 88 9 81 80 10 0 3		04 51 48 25 10 7 4 2 5 16 5 20 28 8 6 5 87 63		F E E E E F L E E L P F W W	10 15 30 20 20 50 20 15 15 35 25 40 40 0	Ad t l d l l t Tw f t l t t k m t g t t p l b l t l t l l t l t l t l F t n w l t tlw d B ght D bl Sl t thw l D t l l l lmb l t tlw d D t l d f m lmb bl t l l t h d f m lmb Ab t 2 b d F k l k
N mb 12 SS	10 58 6 52 52 50 11 27 25	1 1 0 5 0 5 1 0 5 1	48 6 25 26 5 55		E E E I P W W	25 25 50 20 25 25 45	Sl t tlw l Sl t tlw l B d ttp Sl t thw l Sl htly l d t t l Ol dy w t l b k
N mb 13 SS	8 7 10 2 28 9 4 47 47 8 35	0 5 0 5 1 15 0 5 0 5		91 5 28 19 21 28 71	I W W W W W W	20 25 30 20 10 20 80	N w l t b D bl l t w t w d S t
N mb 18 KVS	8 5 18 8 58 55 50	0 5 0 5 0 5 5 0 5	6 57 11 5 8 5 30 5 86 5		E D E E E	25 20 80 55 45 15	T p l y m t lmb g t t h p l C N w ttp Sl t tlw d D

Dt db	H ISF	B	L t t u l		L b	H ght	R m k
			N t l	S t l			
1906							
D mb 2 SS	8 50	4		99	W	20	Al w b n k
	4			35	W	30	Sl t n h w d
	15	5	1	4	W	30	Sl t n t l w d
	18		82		W	80	F t
	4	05	50		W	2	V y f t Sl t t w d
	40	1	89		W	40	Sl t w t d
						80	O l k
D b 3 68	8 3		71		1	90	O A l d l f y f m l m b
	10	05	09		D	15	
	87	2	41		D	0	
	86		38		I	80	D t h d f m l m b } O t l t t p b y O
	86	3	355		E	35	t k
	83		8		T	20	
	83		80		L	10	
	J	1	28		T	60	Tl b t d t L t + 19 D w t l h g h t f
						15	15
	6	15	0		I	15	
	8	3		3	T	20	
		15		39	D	30	
	21	05		13	D	35	T p y f t } A y f t t k t t h
	19			53	D	60	S N t 1 } t p
	1	05		81	L	2	
	1	05		87	E	10	
	14			87	W	25	
	11	05		85 5	W	10	
	13	05		88	W	30	V y f t
	11	05		80	W	25	B d t t p
	5	15		4	W	10	
	51			18 5	W	20	W t n d l g t l y t l l C
	50	1		8	W	30	F t D t l d f m l b t d t t n O
	0	2	8		W	20	
	19	8	1 5		W	15	
	17		31 5		W	15	
	28		14		W	40	O l t
	44	2	4 5		W	30	S N t 2
	23	05	7 5		W	30	O C l k
							O i h t g p h 8 h 28 m
D mb 1 GN	8 6	7	39		T	35	S N t 1
	4	05	32		E	15	C P w t t l t l l f t h t l
	8	15	22		I	35	N w t t l
	8	15	19		l	85	S N t
	0		5 5		E	20	F t
	8)	05		11	E	20	Int l y b l t
	50			14	L	1	D b l p t
	54	1		17 5	L	25	D p l p k O d p l d t d b t l A
	52	6		26 5	E	7	S N t 3
	49			12	D	20	Al m t d h d f m l m b
	43			45	E	85	D
	47			54	T	0	
	42			66	E	30	
	9 95			78	E	20	T t D t l l f m l b
	25			80 5	D	15	
	25			87	E	30	S N t 4
	8 40			80	W	1	O D t l d f m l m b
	9 22			49	W	20	
	21	15		43	W	20	
	8 48			31	W	70	O A f t t l 10 l 5 l t g w t w d
	9 18	15	8		W	25	S N t 5
		2	12		W	5	
	12	15	16		W	50	S N t 6
			23 5		W		S N t 7
		05	24 5		W	15	
	8 46	25	47		W	20	O
	9 08		51 5		W	0	
	8 46	05	81 5		W	25	O
	46	05	88		W	5	O
							O p h t g p h 8 h 46 m

Dt db v	H IST	R	L t t l		L mb	H ht	R mark
			N th	S th			
1900	M						
D mb 15	SS						
	11 7			7	W	20	
	7			15	W	20	
	(	0		53	W	40	C t d by C l
	1	0		0	W	5	
	8			11	W	50	C t d O
	2	3		37	W	10	
	1	1		31.5	W	0	
	10 50	1	1	20	W	15	S N t l
			5	65	W	60 ±	S V t
				08	W		P l d O ph t g ph 11 23m
D mb 10	SS						
	8 77		18		E	40	Ab t s b db t d t h d f m hmb
	51	15	3		E	40	N w t t p
	5	(		6	I	5	Sl t t l d
	17	2		17	k	10	D
	4	9		10	l	40 ±	V y f t
	1	1		7	E	35	Sl h t l y b d t t p
				61	W	30	P t d t p
				1	W	5	O p m b t 50 h g h a n d m t t h t
	17	1		41	W	5	
	17	1		87	W	7	M t g t t p
	1	1		88	W	20	
	13	17	10	4	W	47	S N t 1
	7	1	24		W	150	S N t 2
	7	1	3		W	90	C t d t t h
	7	1	37		W	90	O ph t g ph 5h 42m
D mbe 18	SS						
	8 43	1	87		E	25	
	10		54		E	30 ±	V y f t Sl t t h w a r d S h g h t l y b d
	3	1	35		E	25	Sl t t h w d
	31	1	19		E	20	D
	38	1	7		E	0	D
	20			44	I	80	Sl t h w d Sl h t l y b d t t p
	)	1		46	I	15	O l k
	9 1	1		4	W	25	N w p t b
	H 78	2		30	W	120 ±	S N t
	5			85	W	30	A l t l w y f m l m b
	49				W	25	Sl t t h w l
D mbe 19	GN						
	9 8	1	97.5		E	40	B d t t p
	(		5		E	0	
	5	17	9		E	15	
	4	2	21.5		E	10	
	8	15	17		E	20	
	1	1	85		E	10	
	0	1		21.5	I	80 ±	S m t d by b d h t
	8 78	1		17	E	60	
	9 13	05		58	I	30	
	13	07		1	W	10	
	13		85	45	W	10	
	10	15	41		W	80 ±	
D e mb 20	SS						
	9 18	2	30		F	20	V y f t Sl t t h w a r d
	2	1		22.5	E	30	
	8 58	1		45.5	E	40 ±	W t
	57	15		18	L	60 ±	W t
	70	1		60.5	E	20	
	55			71	I	10	
mbe 22	SS						
	9 5	05	87		E	45	S g b d
	8	15	87		E	20	w t t p

REMARKS ON THE DISTRIBUTION OF THE PROMINENCES IN 1906

During the first half of the year the general distribution in latitude of all classes of prominences was very much the same as in 1905 there being two regions in each hemisphere where prominences were specially numerous separated by a narrow zone where they were almost absent

The positions of the zones of maximum activity in the period January 1st to June 30th were at latitude + 25 / 80 in the northern hemisphere and 15 / 25 in the southern These are practically the same as were observed in the previous year

The zones of secondary maxima in high latitudes show however an increase of 10 in latitude as compared with 1905 being situated between parallels + 70 / 75 in the northern hemisphere and - 75 / 80 in the southern The zones of minimum activity intervening between the high latitude and mid latitude prominences also advanced from latitude 55 / 60 in both hemispheres to + 60 / 65 in the north and - 65 / 70 in the south

The strong development of prominences near the equator and in mid latitudes which became evident in 1903 and has continued since that date appears to be correlated with this advance of the high latitude zones towards the poles and the year under review is of especial interest as marking the culminating point in the prominence period when the high latitude zones finally reach the polar regions and prominences are seen at the position angles of the poles themselves

In the years preceding 1894 a similar sequence of events took place culminating in the final dissolution of the polar prominences at about the epoch 1895 0

The second half of the year is characterised by a great reduction of activity in most zones but mainly in the northern zone between the parallels + 15 and + 35 which up till June had displayed by far the greatest activity of any region on the sun Polar prominences are still shown but greatly reduced both in number and size

In the following abstract tables are given showing the monthly quarterly half yearly and yearly frequencies in the two hemispheres It may be remarked that some portion of the general reduction of activity shown after the month of May may be apparent only being due to the less favourable condition of the sky for observation during the latter half of the year Excepting in the latitude analysis in deriving the mean frequencies per diem no allowance has been made for partial observations or those which are considered defective from the presence of thin cloud Thus on 21 out of the 274 days of observation the sun's limb was not completely examined and probably there are many others particularly in the second half of the year when owing to the presence of thin cirrus cloud only the brighter prominences were recorded

If allowance is made for the partial observations the half yearly frequencies work out as follows —

P e r i o d	N o. o f p r o m i n e n c e s		M e a n h e i g h t		T o t a l n u m b e r
	N o. o f p r o m i n e n c e s	M e a n h e i g h t	N o. o f p r o m i n e n c e s	M e a n h e i g h t	
January 1 to June 30	156	10.8	100	0.8	0.8
July 1 to December 31	105	7.8	78	15.1	15.1

Fifty one metallic prominences were observed during the year They were with one exception confined to the sunspot zones and were far more numerous in the northern hemisphere than in the southern The following table gives the mean and extreme latitudes observed for the 50 ordinary metallic prominences —

No. of	Mean latitude	Maximum latitude	Minimum latitude
Northern	38	+ 19.8	+ 1
Southern	12	- 0.0	- 6

The exceptional metallic prominence was observed on May 5 in latitude - 76 and was 70 in height In general these prominences are small and very bright seldom exceeding 30 in height The bright lines observed in their spectra were those of sodium magnesium and some of the enhanced lines of iron

LARGE PROMINENCES — Thirty four prominences exceeding 2 in altitude were recorded during the year 18 in the northern and 16 in the southern hemisphere The greatest altitude observed was on May 16 in latitude - 78 W In the calcium photograph this prominence could be traced to 350 above the chromosphere Another on May 19 reached 240 in calcium at latitude + 80 E On February 19 a large prominence in the mid latitude zone of activity (lat + 33 E) reached 180 in calcium but no others were recorded exceeding 160 and no great eruptions were recorded

I n t e n s i t y f a c t o r s w i l l f i n d m b f p m b d

ABSTRACT TOP 1908

1908	N mb f b	f p N mb mm	M n d ly f M i	M n l l t	L h l m l l		M h l g p h l t t d	
					el s	th s	th s	th s
J n y	7	5	05	267	97	107	414	900
F b y	7	57	1	830	115	100	442	413
M h	29	592	04	822	107	98	390	418
A p l	8	618	2 0	8 4	111	109	391	433
M y	30	65	18	315	117	101	117	142
J n	18	4	13 1	29	80	54	388	301
J ly	19	230	12	7	64	60	843	897
Aug t	15	218	14	307	76	0	304	412
S p mb	2	22	134	2 3	61	0	72	819
O t b	1	32	1 8	301	0	8	415	387
N b	18	217	121	275	61	89	3 6	360
D mb	20	319	160	321	79	81	326	433
F t q t	88	1 24	08	305	100	10	415	40
S d q u t	76	1513	191	319	103	86	893	411
Th d q	56	75	185	292	68	67	360	98
F t l q t	9	8 8	145	303	70	4	376	898
F t h l y	19	3 36	200	313	104	15	04	410
S d l l y	11	1(10	140	98	60	0	371	387
Y 1908	274	4811	170	306	86	82	388	403

H l g r l l t t d f p m 1906	N m f p l d 1906						M d l y f q y 1906 (2 f d y)	
	F t l t	S d l t	Th d l t	F t l l t	F t l l y	F t l l y		
N th	0 t 81	39	67	22	31	106	53	0(09
	80 t 71	156	94	32	20	250	52	11 7
	70 t 61	0	35	14	11	10		0408
	60 t 51	46	54	27	0	100	77	0678
	0 t 41	112	71	65	54	188	11)	11 7
	40 t 31	105	111	3	50	219	85	1 16
	30 t 21	139	134	57	80	273	117	1494
	20 t 11	120	130	68	4	250	117	1408
10 t 1	90	98	59	58	188	117	1165	
M q t		0	4	4	4	10	8	00(9
	1 t 10	119	80	108	63	199	170	141
S tl	11 t 20	86	10	194	61	191	3 5	20(2
	21 t 30	114	75	318	58	180	871	157
	31 t 40	92	68	190	4	160	244	1 18
	41 t 50	67	88	175	44	170	219	1490
	51 t 60	91	98	191	62	184	253	1674
	61 t 70	56	55	35	44	111	79	0 28
	71 t 80	180	93	35	35	223	70	1123
	81 t 90	64	52	63	2	116	36	0774

* I l d g p t l b t 21 d y

NOTES

1906

- July 9 Lat - 59 E A bright slender streak 20 high with a faint streamer flowing southward from the top
- 10 Lat + 44 + 46 5 + 49 5 + 51 W A Ca streak about 30 high and parallel to limb passes across these four prominences
- 12 Note 1—Lat - 6 E Very faint Ca prominence is 30 high and extends to Lat + 2 E and is 35 high at the northern end
- Note 2—Lat - 18 5 E No prominence in this position but F was displaced 1 A to red and 0 5 A to violet D₃ also was slightly displaced both ways 49211 b b b; 5316 8 D and D were bright At 8^h 37^m the displacement almost completely disappeared but there was a sharp vertical streak 25 high in its place At 9^h 48 it was a faint prominence 15 high and about 0 5 broad
- Note 3—Lat + 3 5 W A cloud floating above limb with its top brighter than the base It extends as far as Lat + 11 W in Ca
- Note 4—Lat + 17 5 W No prominence in this position but O was slightly displaced both ways
- 25 Lat + 36 E Top bends down and meets limb at the base of the last prominence
- August 2 Note 1—Lat + 84 E Base is slightly broader height 60 and the top nearly meets limb again at Lat + 76 E in Ca U₁ pair faint in hydrogen
- Note 2—Lat + 42 5 E Ca prominence is 30 high and a streamer flows northwards from its top Faint in hydrogen
- Note 3—Lat + 19 E Top flows in both directions but more towards east 90 high in Ca
- 7 Note 1—Lat + 10 E A long bright cloud about 8 long 75 high at the eastern end and 150 at the southern
- Note 2—Lat - 8 5 E Faint An arch extends northward from this position meeting the limb at Lat - 5 E
- 8 Lat + 9 E A short streamer proceeds southwards from the top
- 9 Lat + 42 E Ca A streamer flows northwards from the top The prominence was photographed on a focculi plate
- 12 Lat + 28 W Top flows northwards and meets that of the next prominence
- 15 Note 1—Lat + 48 E 100 high in Ca Top of the Ca prominence meets limb again at Lat + 59 E and also meets on the other side the top of the next prominence
- Note 2—Lat - 48 W A cloud about 4 long and 75 high proceeds westwards from above this position It meets limb at Lat - 42 W in Ca
- 29 Lat + 8 W A bright cone with a faint extension proceeding from the top Faint in Ca
- 30 Lat + 44 5 E Slightly slanting eastwards Not found in Ca Ca prominence is on the other hand a streak 60 high and slanting northwards
- 31 Lat - 69 W Ca A cloudlet connected to limb by a very slender streak
- September 2 Note 1 Lat - 26 W A short streamer proceeds westwards from the top It meets limb again at Lat - 18 W in Ca
- Note 2—Lat - 6 5 W 30 high in Ca but it is narrow except near base Metallic O displaced slightly to violet at several places
- 3 Lat - 4 W A short bright vertical jet detached from limb O displaced 1 5 A to violet
- 6 Note 1—Lat 41 - 44 E Very faint Both slant southwards Ca prominence covers both is narrow at top and 120 high
- Note 2—Lat + 32 W Faint Ca prominence is 30 high and a streak flows northwards from its top till it nearly meets the next prominence
- 8 Lat + 34 W Fork like at top A streak from the top meets base at Lat + 30 W in Ca
- 10 Note 1—Lat + 46 E Ca prominence 45 high and has two short streamers flowing northwards

1906

- September 10 Note 2 — Lat + 41 E Broader at top Ca prominence 50 high and bends northwards at top
—cont'd
- 11 Lat + 44 L A Ca streak runs across it and meets limb at Lat + 38 and Lat + 46 E
Another short Ca streak at top
- 14 Lat + 45 5 L Very faint Slants northwards Ca prominence about 45 high and proceeds nearly as far as the top of the last prominence
- 15 Note 1 — Lat + 49 E C A cloud about long connected to limb by a slender slanting streak
Note 2 — Lat + 16 E Surmounted by a short streak The streak is longer and passes through the top of the last prominence in Ca
- 17 Lat — 13 — 2 D Ca prominence quite different in form It is a long arch 40 high with a slanting column 60 high at the southern end
- 24 Lat — 4 L Slants southwards The height was about 60 at 10 15 when the seeing was better
- 26 Lat + 47 E 9 high in Ca A streamer from top meets the limb at Lat + 55 E in Ca
- 27 Lat + 4 E Ca prominence 9 high and short streamers flow both ways from the top
- 28 Lat — 54 W Connected in Ca to prominence at Lat — 51 W by a streak
- October 1 Lat — 59 W Double the taller one being detached from the other and from the limb
- 2 Lat — 26 5 W From this prominence two streamers flow northwards one from its middle and the other about 6 long from its top
- 3 Note 1 — Lat — 42 5 E A slanting cloud 100 in vertical height narrow at base the base being 40 away from limb Only a faint trace in Ca
Note 2 — Lat + 30 W A faint rectangular cloud floats above it in Ca making the total height 60
- 4 Lat + 83 W Ca Top connected to that of the next prominence by a very faint Ca streak
- 5 Lat — 13 E A streamer flows southwards from the top over about 7 the southernmost point of it being 0 away from limb The streamer was about 3 long at 8 17^m and 7 at 10^h 6^m
- Lat + 0 + 21 E Connected by a curved Ca streak at top its highest point being 70
- 10 Note 1 — Lat — 11 5 E A slanting streamer proceeds from the southern end its highest point being 110
Note 2 — Lat — — 10 — 11 5 E Connected at top Bright in hydrogen but only a very faint trace in Ca
Note 3 — Lat + 18 W Ca faint Slants northwards till its top nearly meets that of the next prominence
- 11 Lat — 49 W Two irregular arches connected to one another Ca photograph shows a double prominence 3 broad and 35 high at the western end and a low band quite separated from it at the southern
- 15 Note 1 — Lat — 8 E Slants southwards Top narrow A streamer 4 long flows southwards from the middle of it
Note 2 — Lat — 1 W Slants southwards A short broad streamer flows southwards from the top The streamer meets the last prominence in Ca
- 30 Lat — 26 W Ca prominence 60 high and slants northwards till it meets the next prominence
- 31 Lat — 6 W Ca prominence 70 high and slants southwards
- November 2 Lat + 51 W Ca A Ca streak connects the top of this with the base of the next prominence
- 5 Lat + 18 E Top flows southwards over 4 Shape size and position almost exactly the same as on the previous day
- 16 Prominences were observed except between P.A. 180 and 280 Very bad seeing
- 23 Lat + 21 D Two prominences slanting in opposite directions and meeting at base
- 26 Note 1 — Lat + 56 5 E Narrow at top Faint Ca prominence is 10 high and extends nearly to Lat + 50 E

1906

- November 23 Note 2—Lat +8 E Double A Ca streak proceeds from the top of this prominence passes through that of the next and meets limb at Lat - 2 L
—*cont'd*
- 28 Note 1—Lat -18 W Divides into two broad branches at top lying one on each side of it the northern one bending down and nearly meeting the next prominence
Note 2—Lat -1 W A slanting Ca streak about 50 high lies over the prominence but detached from it
Note 3—Lat +12 W Belt metallic Mg Fe Na lines strong Prominence not found in Ca
- 29 Western limb was not examined on account of clouds the eastern was examined during short breaks
- December 3 Note 1—Lat -53 E Slants eastwards A short branch branches southwards from near the top
Note 2—Lat +49.5 W Quite different in shape in Ca A bank about 20 high connects this and the next prominence in Ca
- 4 Note 1—Lat +39 E Tallest at the eastern end Ca prominence is generally slightly higher is 65 high at the eastern end and extends 1 further north
Note 2—Lat +19 E Double one of them the upper being detached from the limb and from the other prominence It is however connected to limb at Lat +1 W in Ca
Note 3—Lat -26.5 E Changing very rapidly The greatest height in Ca was 60 at 8^h 46^m and 100 at 9^h 18
Note 4—Lat -87 E Ca prominence is pointed at top as in hydrogen but extends 2 westwards at base
Note 5—Lat +8 W A Ca streak from the top meets limb again at Lat +4 W Another Ca streak from the top meets that of the prominence at Lat +16 W
Note 6—Lat +16 W Divide into two branches at top one of which meets the Ca streak from prominence at Lat +8 W (see note 5) and the other meets limb again at Lat +21 W Ca prominence more continuous and 60 high
Note 7—Lat +23 W No prominence in this position But C was displaced about 6 A to red at 9^h 8 The displacement disappeared within 3 minutes after that
- 5 Note 1—Lat -23 E Slanting tree like A branch from near the top hangs down and nearly meets the next prominence The prominence was clearly seen in the Ca flocculi photograph up to 150
Note 2—Lat +50 W A faint slanting streak proceeds westwards from near the top as far as Lat +15 W where it is about 60 high
Note 3—Prominences were observed hurriedly during breaks in clouds I A 0 -115 was not examined
- 15 Note 1—Lat +9 W The prominence narrows in the upper half into a narrow strip about 5 long flowing northwards
Note 2—Lat +32 W The western end is tallest and a short streak flows northwards from its top
- 16 Note 1—Lat +10 W Separates into two branches covering about 8 from end to end at top
Note 2—Lat +28 W A cloudlet far away from the limb but nearly connected to the top of the next prominence by a narrow streak
- 18 Lat -26 W Slants southwards Faint tree like More discontinuous at 9^h 35
- 25 Lat -23 W Two streaks proceed westwards from it the lower one meeting the limb at Lat -17 W
- 29 Lat -32.5 E Divides into two branches at top one of which meets the last prominence at top An irregularly shaped cloudlet floats between the two

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Ag Director Kodakánal and Madras Observatories