

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 8	1	72 5	E	60	
		84		70	F	80 ±	Γ t d t h d f m l m b
		81		90	E	15	
		80	4	20	F	10	
		28	1	8	L	10	B ght
		25			E	10	
		22	15		E	40	T p f t d l t a g uthward
		9	8		E	80 ±	F t
		54	05		W	15	D
		52	1		W	10	D

Dt	db	Ha IST	B	L t t d		L mb	H ght	R m k
				N th	S th			
1906								
J ly	22	SS	8 51 47 47 45	15 15 2 4 1	95 15 1 23 31		20 5 45 15 25	Γ p m t th tp m n B d t t p D bl
J ly 3		GN	8 21 46 4 44 37 88 35 34 9 0 8 59 8 58 56 55	1 0 25 1 1 1 05 15 05	745 715 49 30 175 135 4 65 11 19 4 345 50 1 66 81	52 54 505 39	00 30 25 10 40 10 10 10 8 10 20 85 20 15 15 5 10 10 60 5	C } t g t t i B 4 C F t I p w T p f w 3 f t l w t C T p f t d l g h t l y b l C i l t g p l w t k t 8 l 2 l m
J ly 4		GN	8 44 44 41 52	15 3 1 1	275 5 6	75 115 19	30 15 4 50 45 30	Slightly b l t t p Slightly b l t t i D
J ly 5		SS	11 45 14 4 11 10	1 1 0	38 26 7		60 20 35	l p w PA 180-320 w b db tw 111 112 ft g p 320 180 w s b ed tl S g b d
J ly 6		GN	11 34 32 25 20	1 2 05 2	14 29 62 27		40 40 20 15	
J ly 7		SS	8 28 53 51 50 43	2 3 1	80 69 71 585 30		50 20 15 10 40	Tl wh l l b w m d P ky S l l t th P ky
J ly 8		KVS	10 29	1	95		20	W th f bl
J ly 9		SS	8 51 44 47 44 41 42 41 40 38 37 36 33 30 28 47	05 1 15 1 05 05 05 1 1 05 1 15 1	30 4 Eq t 155 19 21 25 27 415 50 54 9 855 88 475		25 35 30 15 25 25 15 20 5 15 35 25 25 20	Slightly b d t t i L t h k b g l t t l th nth S l t g tw d S l t g thw d D D bl T p f w thw l F t S V t F t N w pt b C

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 t t l
		(	05	46		W	60	
		(	0	48		W	60	
		0	05	0		W	1	V y f 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	Sly b m l dy b f th SW q d t
		12		53		D	20	ld b m l v lly C pl t ph
		41	05	455		I	2	w t l t 81 t 7
		39	0	32		I	2	l b d t b C
		38	15	27		D	20	S l t t w d
		6	3	17		E		A l w b k C d pl l t t p t w t (05 A n F)
		85		12		F	15	A t l f w 5 f th t p t w d
		30		8		E	20	C
		9	1		8	F	0	T p l t thw d
		28			8	F	40	
		27			05	L	25	A b g l t
		4	2	27		I	65	T l t t thw d
		3		295		E	40	
		20	05	33		E	55	D
		18	15	30		D	30	N w t t p
		16	1	71		E	1	
		1		87		I	10	
		0 9		48		W	10	T p f w f l t - 18 W
		5	4	11		W	50	A g l l
		0	1	8		W	90	
		8 58	6	24		W	50	
		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 pl - 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	
		47		15		W	0	F t
		40	1			W	40	B d C
		40		Eq t		W	50	C
		45	4	27		W	30	C F t S m t d b y t k b t 81 g
		44	4	495		W	65	A l w b k w h t k g g p f m t h
		40		72		W	30	ld
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
		39	15	6		E	50	t t t p
		30			0	E	20	C l k
		26	15		185	I	50	A f t l d l t w y f m l m b
		26	25		585	D	50	S N t 2
		26			535	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	50
		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 p l 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 h 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
				2)	W	5	N ttp
			71		W	3	
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	40		D	0	m
		1	80		E	35	v t l
		8 16	28		F	80	S N t
		4	15		F	±	C
		50	95		F	±	B g h t l t t m t l l
		1			F	3	
		47		13	I	20	
		0 27		82	I	17	
		1		40	I	20	Tl f t l l t th
		8 45		47 5	E	1	
		9 22		81 5	W	0	E t
		18		14 5	W	1	
		15		12	W		
			19 5		W		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	30	
			89		F	2	
		1	90		F	20	
		9	0		F	0	B g l t
		27	17		I	1	
		6	1 1		E	25	
		5		19	F	15	
		4			I	10	
		21		10	I	0	q l t thw d
		18		73	W	3	C l k
		40	93 5		W	2	N w t t p
		89	37		W	10	
		88	40		W	10	
J ly 28	SS	9 43	82		F	90	
		19	81		F	20	
		89	52		I	10	D bl
		80	38		F	10	
		9		45	I	10	
		10 29		7	W	10	
		20	05	94	W	0	T p d t l t p m
		20	05	3	W	97	B d t t l
		18		10 5	W	10	
		1		8	W	0	
		17		8	W	0	
		17		8	W	0	
		9 16	77		W	95 ±	I ly
J ly 30	B	10 16	15	12	F	10 ±	D l l
		10		33	I	2 ±	
		9 87		79	I	2 ±	B l l y O l y t l th t q l t w
A g t 2	SS	8 53	84		F	10 ±	
		49	42 7		I	±	
		47	45		F	20	
		42	19		F	20	
		40			F	20	
		36		67	F	90	U l l p t f t } M t g t t p n d 40
		35		83 5	E	3 ±	D
		9 7		28	W	±	T t t p
		4		10 5	W	±	C l l
		2	7		W	10	
		1	13 5		W	40	q l t g t l d
		0	20		W	10	
		8 56	48		W	2	T t l t t l w d
		56	51		W	2	D t l l l m l m b
		14	88		W	75	C D t l l l m l m b C l h t l 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		3	W	30	S l t t l w d
		31		1	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 t u d		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		215	E	50 I ; f w t l b t 8
		10	3		805	F	25
		8			1	L	20
		8			14	E	10
		(			6	L	15 F t
		10	2		81	W	25 D
		40	4		75	W	40
		33	1	5		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 t l y b l t t l
		47		405		L	20 F t s l l t
		41	1			I	20 + b l g t l 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
		40			4		(5
		28			70	I	10
		J 2	0		71	W	11
		1	2		5	W	60 + N t t l
		8 51	05		14	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
		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
		4			18	F	20
		51			1	I	10
		1	0		41	I	(
		51			50	I	25 } M t (1 0 50
		) 44	1		1	I	25
		40	15		73	I	15 F
		8	1		9	W	10
		3			57	W	10
		20	1	11	48	W	50 + S N t 2
		)	35	22		W	15
			1	35		W	50 + V j f t l g l C
				81		W	10 l t 8 57 l l (l t g p l w t k
A g t 16	SS	J 2		9		I	0
		25	1	50		I	50 + I l l k t t p (
		5	1	47		I	2 S l g t l y t l l (
		17			18	F	0
		17	1		50	F	20
						F	8 S l g t l 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		W	35	
		1	1	15	W	20	B ght
		3	1	805	W	3	F t
				80	W		P g l d C jhtg pl w tk
A t 20	88	15 37	2	59	F	30	8 32m
		9 14	1	85	E	0	O B ght N w ttp
		8	05	15	L	20	B ht
		2	2		F	40	
		10 30		45		40	
		25	05	58	W	10	
		5		53	W	30	
		2		51	W	40	
		2		19	W	3	I t l d f m l b
		5	35	48	W	35	D
		1	8		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	
		8 20		11	E	40	C l t
		8 32		1	I	50	C A y f j t
		30	0		F	15	
		25	0	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	1	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	H lt	R l
			N tl	9 th			
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 W	0 20 60 4 25 4 35 90 30 3 15 40 2 2 45 3 8	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 a 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 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 pt mb 4	SS						
	9 17			57 5	D	85 ±	
	10	8 5		22	W	4	D bl
	6	5		11 5	W	40	
	5			9	W	30	
	4		18		W	2	Slightly l t n thw d
			49		W	3	D
	8 58	0 5	76		W	20 ±	
S pt mb 6	SS						
	8 18		4		E	3	O h g phw tk t 9h 4
	6	1		41	E	45 ±	D bl
	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 bl tl 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 pt mb 7	GV						
	9 1	3	22 5		L	40	
	0	2	14		L	4	N w t t p
	8 59			81	D	40 ±	
	9 11	2		38	W	60	N w t t p
	10	1	80		W	1	
	10		84		W	20	
	8	1	41		W	30 ±	
S pt mb 8	SS						
	8 18	0 5	75		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	
	28	2	12		F	5	B g t t N w t t p
	21			49	I	0 ±	E t D t h d f m l b
	18			55	E	60	l t O
	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	24		W	30	S N t
	39	3	44		W	80	
	18		64		W	45	(F t
							O p h t g pl - 8l 18
S pt mb 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	2	17		W	25	
	07	1 5	37		W	40 ±	
S pt m 10	SS						
	8 51	0 5	88		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	78		D	20	V y f t
	40	0 5	48		E	25	S N t 1
	45		41		E	40	S N t 2
	43		31		F	20	
	43		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	
	34	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 r 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
S pt mb 13 G N	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
	8 24	2	44 5		E	30	
	2	2	7		I	0	
S pt mb 14 SS	22	2		0 5	I	0	
	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	1		67	I	15	
S pt mb 18 G N	1			82	W	30	
	11			49	W	10	
	8 40	4	22		W	20	B g h t B t l l w b k t l t + 17 W
	45	2	53 5		W	45	B n g h t F 6 l l
	9 20	1 5		8	L	30	
	1			26 5	D	45	
S pt b 14 SS	9 25	2 5	44		W	35	
	8 20	1 5	54		F	45	F t
	19	1	45 5		F	20	S N t
	15			1	E	20	
	45	0 5		71	W	10	F t
	53	1 5		18	W	2	T t
S pt b 14 SS	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
S pt b 14 SS	31	2	38		W	C	
	29	0 5	46 5		W	80	
	28	1	49 5		W	20	
	26		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 tl	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 34 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 slw l 4 l g h C C 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 l 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 B 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 ttp A l dlt tp C
	28 27 5 4	2 1		5 4 56 61	F k I I	10 30 1 20	N ttp
	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 36 0 1 80 10 00	9ightly b d C D bl D bl N tl ndl ght O ly f tt C C pl t g pl 10l 02m
S pt mb 28 G N	8 58 55 2 0 17 4 42 4 9 9 08 08 08 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 40 10 60 10 30 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 2 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 E F I I L E F T T W W	30± 15 60 2 15 1 25 20 0 10 15 25 00	

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	F	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		l	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 45 lgl C C P t d t t p C l l t g i h 8 2 86 C
Oct 5	SS	9 51 50 47 18 8 17 5 10 3 8 31 32 53	(05 05	78 4 1 18 28 315 82	I D T L D D W W W	0 10 40 11 40 0	D b l # S N t 10 hgl 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 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 hgl 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 0	77 36 80 21 12 1 81 (31 17 1 1 37 39 17 77	I I I I W W W W W W W	4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	P t d t t p S l t t w d C F T p t d b y d t t l 8 8 l g h t t l h g h t p t C l k C p h t g l h 8 1 3 d 5 5 8 D 70 lgl C } C t d by d 3 hgl C 2 1 l C S l g l l t t l w d t t C l l C O O O 120 10
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 W	10 60 25 50 2 15 0 85 20 25 15 30 120 10	Ab 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 F g l d O p l t g l h 9 2 m C 4 b l C O A l l k
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	

Dt nd b	H IST	B	L t t d		L ml	H ght	R m k
			N tl	S th			
1908	M						
Oct 9	GN	1		4	E	3	B l t t t
				18	F	40	
				79	E	10	
				83	W		
				275	W	10	30 h l C
				45	W	20	
				7	W	20	D bl
					W	50	C A l l l
Oct 10	GN	5	58		W		C r l t g l 1 8 52m
		1	515		E	20	AC 140 l l tl tw p m
		4	48		E	25	
		1		5	E	45	
		05		10	E	50	S N t 1 } S N t 2
		1		115	E	0	
		05		18	E	5	D t l l f l b
		1		40	L	20	
		1		51	E	10	F t
		1		58	E	30	V y f t
		1		51	W	1	w t p
		1		48	W	0	
		1	485		W	70	S N t 3
		45	5		W	5	N tip S l t l g l t y w d
							C l t g l 1 8 20m
Oct 11	GN	8	67		F	1	O
		15	5		E	40	
		15	05		E	50	} M t t t t
		2	48		E	20	O t l t h t l t p m ly O t
		1	25		I	15	
			Eq t		I	15	
		4		19	D	4	
		65		19	E	80	T i w d l t t w d
		05		25	I	15	D bl
				28	L	25	l t D t l l f m l b
		15		44	E		N w l t
		8		41	W	30 & 35	S N t
				19	W	15	R d th d t p
			49		W	50	C F t
		2	56		W	60	l h w t d f t l p l b g t
					W		tl tl th O
		15	71		W	4	O V y f t
							(ph t l 1 8 18
Oct 12	GN	8	80		D	0	+ Γ t L w l l f l t
		1	70		E	0	tl l l l l k } O t d by C
		05	515		E	0	l t
		05	48		I	00	Al t 1 5 b l O
		1	8		D	25	+ V y f l l t t t
		8	5		E	25	
		15		32	E	25	A l t p d t w d f m th
					E	5	tp
					E	1	O l g h t l y d p l d t l tl w h l p m
		2		67	I	15	N t p
				68	W	15	
				65	W	1	
		05		15	W	25	± C
		1		195	W	30	
		05		48	W	30	
		1	15		W	80	B l t t t
		7	65		W	45	
		1	85		W	80	} l l t l C
		2	8		W	5	S l t th l
Oct 13	GN	8	57		L	20	± C l t g p h 8 25m
		15	48		F	20	O l m t l m b g t l t + 7 E
							A O t l t th w l th l t p m

D t d b	H I S T	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 p l t g p h - 8 l 23 C P C D B d t t p } C t l t l 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 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 C B d t t p } C t l t l 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 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 20			69	W	70			
8 20			60	W	70			
8 31	1	81	5	W	80			
8 40			32	W	1			
8 30	15		29	W	10			
8 7		8		W	10			
8 27		11		W	1			
8 20	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 s 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 39		47		I	15	
		8 31	1	40		I	35	
		8 8	4		9	F	15	
		8 24			10	E	15	
		8 0	1		21	F	20	
		8 20			57	F	15	
		8 16	25		59	I	50	
		8 58	05		75	T	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	
9 26	05	75		W	65			

Dt	db	H IST	B	L t t d		I mb	H lt	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					50	
		5					0	
		14					60	
		14					0	
		2					20	
		2					20	
		0					20	
		7 58					0	
		8 36					0	
		34					10	
		30					15	
		27					15	
		25					80	
		2					85	
20	20							
15	20							
O t b 24	SS	11 6	15	82		E	1	D b l
		55					35	
		12					25	
		10 58					25	
		52					15	
		48					25	
		46					20	
		46					5	
		12 12					25	
		3					15	
		1					00	
		0					25	
		0					0	
		0					25	
		O t b 29					SS		8 16	2	15		E	20	O l d y w t l b k
1	20							
12	50							
1	2							
87	25							
35	20							
35	20							
35	1							
28	70							
28	60							
27	10							
27	10							
27	10							
27	10							
O t b 30	GN		8 54	9	9			E	40					C p h t p h 8' 26 O r t
		20	40					
		20	30					
		54	30					
		47	50					
		54	30					
		46	40					
		45	30					
		48	45 & 30					
		38	20					
		38	20					
		38	0					
		35	20					
		31	90					
		28	50					
54	40							
54	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			14	W	70	B g l t B d t t p
	0	0		15	W	1	
	1		15	11	W	20	C l A B t l t k
	47		51 5		W	15	
	13	5	90 5		W	80	A b l j d t l l t b l g h t l y
33				W	2	P g t l n C p l t l 8 l m	
N m b 1 C N	10 30	4	75		F	3	
			17		D	1	
	44	1	8		I	0	
	47		10 5		W	45	A l t
	4	2	23		W	15	
	41		9		W	70	
48		4		W	15		
N m b 2 G N	8 19	3	85		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	0	40		W	20	
	24	1	5		W	45	S t
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	
	9 3		81		W	10	
	1		8		W	55	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
	50		84		E	20	f m l m b
	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 glt	R m l
			N th	S th			
1906							
N mb 5 GN	8 40 37 51	1 1 1	E l 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 O 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	8 5 E l t 0 8 10 2 3 4 5		L P W W W W	8 5 1 5 8 0 2 0 4 0 4 0	O p t g ph 81 51 D t N w ttp Q t t S l t thw d
N mb 9 SS	11 1 1 5 5	1		2 6 2 3 1	D D F	4 0 5 0 2 0	S l t tlw d S l t tlw l T l l m b w d ly f m P A 1 4 0 t 1 8 0 C l ly
N mb 10 SS	8 51 5 0 4 7 4 0 4 4 4 4 4 0 4 0 8 9 3 7 8 8 9 8 1 8 0 1 0 7 3		0 4 5 1 4 8 2 5 1 0 7 4 2		F E E E E F L E E L L P F W W	1 0 1 5 3 0 2 0 2 0 5 0 2 0 1 5 1 5 3 5 2 5 4 0 4 4 0 0	Ad t l d l l l t T w f t l t t k m t g t i p l b l t t l t l l t l t l t l F t n w l t tlw d B ght D bl S l t thw l D t l l i l m b l t tlw d D t l d f m l m b b l t l l t h d f m l m b A b t 2 b d F k l k
N mb 12 SS	10 5 8 6 5 2 5 2 5 0 1 1 2 7 2 5	1 1 0 5 0 5 0 5 1	4 8 6 2 5 2 0 5 5 5		E E E I P W	2 5 2 5 5 0 2 0 2 5 2 5 4 5	S l t tlw l S l t tlw l B d ttp S l t thw l S l h t l y l d t t l O l d y w t l b k
N mb 13 SS	8 7 1 0 2 2 8 9 4 4 7 4 7 8 3 5	0 5 0 5 1 1 5 1 5 0 5		9 1 5 2 8 1 9 2 1 2 8 7 1	I W W W W W	2 0 2 5 3 0 2 0 1 0 2 0 8 0	N w l t b D bl l t w t w d S t
N mb 18 KVS	8 5 1 8 8 5 8 5 5 5 0	0 5 0 5 0 5 5 0 5	6 5 7 1 1 5 8 5 3 0 5 3 6 5		E D E E E	2 5 2 0 8 0 5 5 4 5 1 5	T p l y m t l m b g t t h p l O N w ttp S l t tlw d D

Dt db	H IST	B	L t t d		Lmb	H ght	E m k
			N th	S th			
1906	M						
N mb 18 KVS	8 40 9 5 20 19 15	05 15 05 2		8 8 2	E W W W W	20 25 0 25 20 40	Sl t th d I p b d thw d B d ttp B ght A l l 4 l g n t b t l w y f m lmb
N mb 19 KVS	8 6 5 J 18 8 40 J 48 8 30 9 27 48 0	1 05 1 05 1 05 10	26 5 88 9 39 5 34		W E D I J I T W W W	15 35 1 10 45 45 45 20 80 20 5	Sl t thw d C pl t g i h 9 18m C C B d ttp D bl n t g ttp O A C l d l t t 60 l h h t b t Tl l t d t t l
N mb 22 9 S	14 51 8 27 25 21 21 1 20	0 05 05 05 05 05 05 05	8 27 3 5 80		W W W W W W W	20 20 30 40 5 10 30 90	B d t p Sl t th l D D bl th tw b g t l t h th O i h t 6 l l 9 18m Sl t t l d D t h d f m h b 2 b d t b n w t t l
N mb 28 9 S	8 8 34 38 31 30 2J 26 21 1J 1 9 0 8 5 5 58 4J 46 44 42	0 15 05 05 1 1 05 05 05 05 05	69 11 37 35 80 21 11 7 1 29 1 62 5 83 33 29 2 19 5 8 7 21 30 40		F I F E I I I I I F F I W W W W W W W W W W	1 85 15 10 20 60 20 1 10 30 2 15 15 1 40 10 30 20 20 30	I t i ttp D D bl 9 N t B ght 9 l g l t y b d th m d U P t d ttp A l t t l d t l d f m d l l l t l m b E l l ttp l t thw d D bl C pl t g r p h 9 l l l D bl S N t l V y f t B ght m t l l S N t 2 V y f t A f t I k l l C Sl t w tw d
N mb 26 9 S	8 41 39 37 38 30 29 26 24 28 9 0 8 56 27 58 50 47 46	1 8 1 0 15 8 1 1 1 1 1 1 1 1 1 3	74 58 5 42 16 8 8 27 38 50 72 5 67 32 27 15 35 46 5		E F F D I I E L F W W W W W W W W W	20 30 10 50 10 30 1 25 10 10 15 20 25 10 10 15	

Dt d b rv	H IS1	B	L t t l		L mb	H g l t	R m k
			N th	S th			
1906	H						
N mb 20 SS	8 4	05	85		W	25	S m t l by g l t k O i h t g p h 8h 27
N mb 7 SS	14 0	0	88		D	50 ±	B d t t p
	18 55	05	80		E	20	
	14 0	15		48	F	25	D bl
	4	05		76	E	30	
	7	15		0	W	30	
	10	2		5	W	15	
	1	1		13	W	25	
N b 8 SS	17		26		W	20	
	8 8		26		E	10	
	27		15		D	15	F t
	24	15		21	L	10	
	21	0		50	F	25	
	18			78	D	25	F t t l d t h d f m l m b
	5	2		69	W	35	Slightly b d w t w d t t p
	45	15		18	W	70 ±	S N t 1
	40	6	12		W	10	S N t 2
	36	1	50		W	30	S N t 3
	35	15	5		W	15	D bl
33		87		W	20	50 h g h O C p h t g I h 9h 11	
N mb 9 SS	10 10		765		D	80 ±	F t S l t t h w d
	7	05	225		L	30	F g m t y B d t t p
	5	05	185		D		
	3		2		D	0	
	9 5	15		8	L	4	
	8 46	4		16	F	20	
	14 3	25		28	D	20	
	10 15		87		W	30	S N t
mi 30 SS	55		25		F	15	
	54	15	13		L	L w	O t d t t h n t p m
	3	1	95		L	20	B g h t m t l l
	35	4		15	F	35	D bl l t t l w d } O t d t t p
	3	15		21	D	35	
	9			26	E	25	
	9 4	1		54	D	20	N w t t p
	41			87	L	20	
	40	15		77	D	10	
	37	2		80	W	15	
	35			69	W	35	
	3	1		88	W	15	
	3			28	W	10	
	32	1		7	W	75	Sh t l t d t h d f m l m b
	32			4	W	10	S l t t w d l t h l m t t t p
	9		4		W	60	F t
	28	1	275		W	25	
19	2	51		W	30		
13		84		W	25		
13	15	88		W	60	Tw l t g t k t h p p h l f w h t t C l d y w h b k	
D mb 2 SS	8 37	1	315		E	15	N w t t p
	35		25		D	20	F k l k t t p
	35	7	15		D	25	H g h t t t l t h d d l w t t t h
	34	15	4		F	20	S l t t h w d
	33			8	E	10	
	3			65	E	50	A t m b t 4 l g f w s u t h w d f m
	27	25		8	E	70	t h t p N w t t p
	24			38	F	5	S l n t t h w d
	54			32	L	10	
	52	15		65	W	20	F t

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			W	15	
	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	I n t 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 a t d b t l A
	52	6		26 5	E	7	S N t 3
	49			12	D	20	A l 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

D t d b	H IST	B	L t d		Lmb	H ght	R m l
			N th	th			
1906	M						
D mb SS	15 49 14 84 15 25 28 21 21 21 19 19 17	25 4 15	11 20 21 22 25 40 50	12 23 33 68	D D F W W W W W W	5 150 20 80 15 70 0 70 15 20 20	Sl d t l d t l d f m l b S N t 1 Sl t w t w l Sl l t y b d t t p M t U S N t 2 S N t 8
D mb 11 GN	8 34 46 46 46 46 46 46 46 46 9 11	15 05 15 1 2 0 1 05 05	47 16 185 80 68 76 78 5 47 58		E D D D D F W W W W	30 20 80 20 40 45 0 15 50 15 15 10 10 10	N w t t p O A h t t l p d n t l w d f m t h O I R t O A l t g d t l d f m l l O U p l i t f t l p m l i d f m t h l w O A t l l t 7 l g l d t h l f t h m d d l f t O r l t g p l 8 l 48 O p m 30 h g l d t d l f t l th L w l t n y l g l t O l O l h d 40 b d S 6 p C p h t g l h 8 l
D mb 12 SS	8 33 29 27 25 25 20 47 5 6 9 11	05 2 2 15 1	49 17 11 15 18 88 76 1 48 55		F W W W W	0 15 50 15 60 60 10 60 10 15 10	O O O O O O O O O O O
D mb 13 GN	8 22 22 9 35 8 22 22 22	2 1 4 1 1	50 35 5 16 49		D L D F W W	20 20 20 150 15	C O C D b l C O W t h p (t l l) C p h t g l 8 22
D mb 14 GN	9 4 2 0 8 59 8 55 55 38 14 38 38 9 11 10 8 7 6	85 05 1 1 05 45 4 25 2 1 1 1	85 49 97 18 18 575 615 715 55 50 98 28 185 10 245 805		D F D D L D E E W W W W W W W	45 30 20 50 80 15 20 65 10 40 30 80 20 20 15 20	N w t t p W t O I t l l O F t 45 h g h O C p h t p h 8 l 8 m V y f t 80 h g h O 45 h g h O Ab t l b d b t d t l d f m l m b
D mb 15 SS	10 49 43 41 40 11 10	1 1 6 1	46 225 5 345 71		E E F D E	80 25 30 20 35	

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		24		W	150	S N t 2
	7	1	3		W	90	C t d t th
	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 thward Slightly b d
	3	1	35		E	25	Sl t thw d
	31	1	19		E	20	D
	38	1	7		E	0	D
	20			44	I	80	Sl thw d Sl h t l y b d t t p
	)	1		46	l	15	O l k
	9 1	1		4	W	25	N w p t b
	H 78	2		37	W	120 ±	S N t
	5			85	W	30	A l t l w y f m lmb
	49				W	25	Sl t thw 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			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 thward
	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
	3	15	87		E	20	w t t p

D t nd b	H I S I	B	t d		L b	H ght	R m k
			N th	S th			
1906 D mb 22 - nit	SS						
	M						
	9 0	05	45		E	50	} O t d t t p B th l nt alw d
	0	15	42		E	50	
	8 57		32		F	25	N w t t p
		15	11		E	0	
	5	6	5		E	0	N w t t p
	52	25		28	E	35	
	50			47	E	50	
	48	05		58	E	0	
	48			59	E	40	
	48			64	E	30	+ D d t w b h t t l
	9 21			46 5	W	30	
	19	05		7	W	21	
	18	15	25		W	1	
	17	2			W	15	N w t t p
	15	2	14		W		
	14	15	21		W	15	
	11	1	48		W	10	
	10	15	50		W	30	
D mb 23	SS						
	8 46	1	86 5		F	70	E t n t l d t k w t t o p
	41	2	47		L	80	
	40	1	35		D	2	D bl
	39		16		D	10	
	38	1	105		E	10	D bl
	35	1	4		E	90	
	33	1		22	D	5	T lk
	31			30	F	25	
	30	25		61	D	35	
	9 5	05		77 5	W	10	Y y f t
	4			71	W	15	
	3			60	W	20	F t
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	0	2		50	W	4)	C lk
	8 57			19	W	10	
	57			15	W	15	
	54		7		W	10	
	54		9		W	10	} O t d t b B ght m t l l
	54	2	11		W	20	
	54	1	15		W	10	
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	47		78 5		W	0	S l t w t w d N w t t p
D mb 24	GN						
	8 39	1	34		F	90	+ F t
	38		4		L	50	
	9 3	1		(45	E	0	+ A l d l t b t 4 l g w y f m l m b
	30	1		80 5	D	25	
	45	25	50		W	45	D bl
	4	05	80		W	0	
D mb 25	GN						
	9 12	15	44 5		E	30	+ B ght
	10		27		F	10	
	9	5	115		E	10 & 20	D bl
	8	8		14 5	L	10	
	3			6	E	40	A l d l t l m b
	1	05		83	l	15	
	42	05		67	W	20	
	40	15		28	W	4	S N t
	38	2		65	W	3	
	24		65		W	40	A t l f m t h t p m t l m b g t L t -
	22	25	11		W	20	
	22	7	185		W	10 & 20	B ght
	19		26		W	2	
	16	2	50		W	45	D
	15	1	58		W	60	
	14	1	82		W	60	+ B ght co t
D mb 29	GN						
	9 31		30 5		E	40	} y b ght O t d b y t k
	28	45	26		E	50	
	28	85	18		E	60	
	17	15	)		E	75	

Dt db	H IST	B	L t t d		I nt	H lt	R m k
			N tl	S th			
1308 D mb 9 GN td	9 14				I	4	
	10	1		46 5	F	100	
	7			3	I	10	S N t
	8	0		3	I	20	
	0	1		02	I	10	
		1		8	E	15	D bl y f nt
	5	0		81	L	80	y i t
	(	05		05 5	W	1	
	45	15		44	W	45	
	1	1		40	W	1	q d d m t l l t p m n
	43	15		32	W		V y l ght
	48	3		2	W	20	D
	41	0		13	W	20	
	40	1			W	30	I t
4		2	89	W	2	I	
38	2	40		W	45	I t fl m t l p t d t t p	
D mb 30 GN	10 25	0	0		E	10	
	2	1	27		F	0	
	22	35	12		E	10	V y b ght } O t l
	20		0	4	I	40	D
	19	4		31	I	1	
	1	1		88	I	7	V y l ght
	1	15		8	I	2	D
	14	0		07	F	10	
	1	2		43	W	1	
	39	1		3	W		Sl t thw d
	39	1		31	W	10	D
	38	0		1	W	5	
	37				W	35	D t h d f m l m b
	38	10	8		W	10	Sl g l y b d t t p
30	0	30		W	10	D	
24		18		W	1	D	
D b 31 GN	9 11	1	63		D	10	
	10		55		L	1	
)	15	3		D	15	
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	7		15		L	1	A f t m g l t l l g d t l d f m
	(2	18 5		E	20	l m l
	6		16		E	2	
		1	3		I	2	R i d i y h n g } I t l y b g h t O l g h t l y
		1	10		I	20	d i l d t d
	8 5	1			I	15 45	
	4	9		98	I	140	
	14	0		37 5	F	30	
	33	2		51	L	20	
	37			80	L	35	
38	05		86	E	30	D p p d + 9 10	
10			84	W	15		
97	05		75 5	W	0	R i th m l d l	
36	1		03	W	20		
40	10		41	W	10	B g l t h g g	
22	1			W	10 50	B g l t	
17			87	W	40		
16			17	W	00	B d t t p	
15			50	W	40		

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- 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
—*contd*
- 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 Bright 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 L in Ca
Note 3—Lat -26.5 L 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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June 24 1906 }

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