

Kodakanal Observatory.

BULLETIN No XIII

LIST OF PROMINENCES OBSERVED BETWEEN 1907 JULY 1 AND 1907 DECEMBER 31 WITH AN ABSTRACT FOR THE YEAR 1907

This list is a continuation of that published in Bulletin No XII and contains all the prominences observed and photographed. The instruments and methods of observations were exactly the same as those described in last bulletin. The visual observations were made chiefly in the U line of hydrogen and the photographs were taken in the H and K lines of calcium.

The time used is Indian Standard Time (1/2 hours fast of Greenwich Mean Time)

The visual observers were K. V. Sivarama Aiyar (K.V.S.) S. Sivarama Aiyar (S.S.) G. Nagaraja Aiyar (G.N.) and S. Mathuswamy Aiyar (S.M.)

Date	Observer	H IST	I	I t t d		L b	H l t	R e k
				N th	tl			
1907								
July 8	S M	8 46	1	4		L	40	
		45	6	44		I	80	
		30		31		D	10	
		34	2	5		I	15	
		31	3		12 5	I	20	
		30			28	I	10	Sl t H l
		28			31	F	10	D
		26	0		9	I	1	
		24			78 5	I	10	
		21			51	W	0	C
		9			52	W	20	C O C
		J			60	W	20	D t l l
		9 28	2		34	W	90	D abl
		16	1		15	W	80	C t d t t O
		1	0		9	W	75	S N t
2	4	35		W	30			
0	1	3		W	40 & 20	D l l		
8 5	3	5		W	0	O l k		
51		72		W	35	T t		
50		78		W		O ph t ph 81 29		
July 4	C N	8 41		64		L	80	C O
		41	4	44		L	40	C O N w t t p
		9 1	1	2		E	25	C
		8 41		Eq t		E	40	C
		0	1		11	E	0	O
		8 41	1		13	T	1	O
		9 8	2		28 5	T	80	O
5		60		T	2	S N t		
8 10	2		4	W	200	O ph t pl 81 41m		

Dt db	H IST	B	L t t d		L mb	H ght	R m k
			N th	S th			
1907							
J ly 5	C N	8 38	2	77 5	E	20	C
		8 38	3	28 5	E	10	O
		6	1	Bq t	E	40	40 O } Tw O t l tth tw
		55	2		E	45	80 O } C t d O ly O l gh n C
		58		19	E	30	
		8		38	E	30	
		5	0 5	48	E	0	
		88	4	8	E	60	C l l d ttp
		51		61	E	15	
		50	0 5	78	E	4	
		9		9	W	20	D t l d
		8 38	3	54	W	10	O
		38	2	45	W	40	O B d ttp
		9 2	0 5	38	W	15	
		1	3	14	W	80	A llk
		1		11	W	20	
		0	3	80	W	30	O lk 20 O O pl t g ph 8 98 d 9h
J ly 6	S M	9 15		71	F	10	
		10	1	19	E	25	A O t kp th gh t
		7	0 5	18	F	15	
		8 15		7	L	15	C Sl t thw d
		9 5	3	24	E	40	R d d lym t lmb tlt - 20 E n C
		8 15	1	35	D	10	V y b ht N t tll
		50	4	41	E	40	O
		80		48	F	15	S N t
		29	0 5	50	E	0	
		15	10	8	E	60	O M t t l l t P t lyth m
		27	1	08	E	15	N t ^p hyd g t l d y
		26		70	E	15	
		25		78	E	30	
		15		77 5	W	15	O D t h l
		15		71	W	00	O D t h l Ab t 4 b d
		15		65	W	20	O
		10 27	0 5	62 5	W	80	v y f t B d C
		24		50	W	15	
		23	0 5	17	W	15	} Sl ttw l h th
		8 15		13	W	10	O
		10 21	1	27	W	80	S b d t t l N th h C
		8 15	3	13	W	5	C l d d ly t lmb tlt - 4 W
		9 33	3	10 5	W	40	} M t ttp A O t kp t l gl th
		38	1	15	W	40	} l m th t p m
		5	3	31	W	85	
		20	0 5	78	W	10	N t l gh C
		8 15	0 5	72	W	15	O
							Th gh b k l d
							O p l t g pl 8 15 d 8 21
ly 8	S M	8 48		77	E	20	O
		9 5	1	54	E	15	
		3	1	39 5	E	35	
		2	1 5	22	E	40	
		0		18	E	85	B d ttp
		8 58		17	E	25	D t h d
		50	1 5	5	E	60	
		47		2	E	85	D t h d
		48	2 5	19	E	45	B ht t tll
				2J	E	15	
				80	E	10	
		38	3	82 5	E	95	
		37		40	E	95	
		35	1	51	E	10	
		9 32		84	W	10	
		8 48	1 5	57	W	90	C
		48	1	45	W	0	C
		9 30	1 5	8	W	15	
		28		27	W	10	

D t d b	H I S T	B	L t t d		I b	H ght	R m k	
			N th	S th				
1907								
July 8 — 13	S M	9 26	35		17	W	35	B ght
		8 48	1		15	W	30	O
		9 24			18	W	30	O D t l d
		22			7	W	25	
		20	2	5	1	W	3	
		19		8		W	15	
		16		48		W	25	) t h d
						W	20	
								O p h t p l 8h 48 y p p l t
July 9	S S	11 25	2		22	W	10	
		26		9		W	15	
		8	15	48		W	40 ±	S s b d h t l b n t m d t t l d
July 10	G N			5		D	85	D e h l
			1	85		Γ	35	
		10 40	5		14	Γ	30	W t l l i n D D b b b s d b s
		40	(		1	L	0	
		38	2		31	D	70 ±	
		56	15		485	L	30 ±	
		55	1		10	W	80	
				11		W	15	
		54	2	50		W	0 ±	
J l y 11	S S	8 53		78		D	25	
		52	2	02		L	30	O h g g
		5	8	58		D	40	D
		43	15	14		I	15	
		38			1	L	40 ±	
		38	2		55	E	10	C l B g l t D ₁ D ₂ b b b l b b g h t C l g h t l y d p l d t d t b
		14	6		14	Γ	25	A h l k
		12	2		28	L	80	T p m t l m b g t l t - 27 D
		10	2		38	L	100 ±	B g l t N t m t l l
		9 5	05		69	W	5	
4	05		57	W	85 ±	Γ t		
0	1		18	W	10			
8 58	05	50		W	10			
58		52		W	15			
58	1	515		W	25	C p l t g p h 8h 48m		
J l y 12	G N	8 29	1	75		I		
		27	05	68		I	10	
		27	1	60		E	40	
		5	05	475		E	40	
				21		D	25	
			05	18		E	1	
		24	2		4	F	30	
		0			17	Γ	20	
		20			19	Γ	20	} M t
			4		24	F	0	
	65		33	E	90	N w t t p		
	05		405	E	5			
			425	L	15			
	05		54	E	20			
	2		8	I	60			
	15		9	W	0			
	34	9	225	W	50	N w t t p l l t h w t d f t h t p C y b g l t p t h t		
		15		W	0			
	9 31		375	W	15			
		6	0	W	35	C p l t g r p h 8h 22m m d 8l 37m		
J l y 13	S S	9 10	05	285		F	15	
		9	1	28		E	25	
		8	1	215		E	10	
		6		3		E	10	

Dt d b	H ISr	B	L t t d		L b	H g l t	R m k
			N t l	S t l			
1907							
J ly 13	SS	9 3	05		11	1	
		0			15	20	
		8 58			9	30	
		57	2		8	50	
		11 30	15		Cl	0	
		28	0		91	1	
		28	1		28	5	
		28	1		35	0	
		28	1		1	70	M t d l t thw d
		5	4		1		
		10 46	1	8		10	B ght M t l l D D b b b d b 53168 41241 b l t Oh g p
J ly 14	SS	8 48		Cl	E	20	D t l d
		48		55 5	L	10	
		45	1	50	L	10	
		44	15	86	E	2	
		43	15	9	E	2	
		40		2	E	1	
		39			E	11	
		39	1		L	60	
		39			E	30	O t l t t l
		39			E	80	
		32	4	8	E	70	S N t
		26		8	r	10	r t
		28		9	L	75	Slightly b d t t l
		23	05	(	W	10	C
		9 9	15	81	W	2	
		8	1	27	W	20	
		8		21	W	60	S l t th d D t l d C t d t l b C
		2	9	85	W		
		2	4		W	30	C t f f l d l n t g t k
		8 58	2	15	W	5	B l t N t m t l l
		55	7	47	W	80 & 20	C p h t g p h 8 23 d 8 22
J ly 15	SM	8 28		1	L	20	
		55	2	61	F	25	
		53	1	48 5	D	25	F t
		51	05	88 5	E	80	
		48	2	81	E	45	
		45	8	4	E	25	
		43	05	10	L	0	B ght M t l l D D b b b d b b h t
		40	25	4	I	80	
		37		Eq t	I	25	
		34	6		L	60	B l t N w t t p } m t t t p
		32	05		E	45	
		28	2		E	45	B h l d
		25			F	35	D l d
		24			E	10	
		9 25	1		W	10	
		22			W	85	
		19	1		W	25	
		13	8	1	W	60 & 20	P t d t t l B ght n t m t l
		10	4	17	W	25	B ght t l l
		5	05	25 5	W	25	
		3	2	7	W	30	
		1		48	W	30	F t Slightly b d t t p
		0		5	W	15	C p h t g r p h 8 28 d 8 24
J ly 16	SS	9 46	05	67	J	10	
		39	15	59	l	0	
		39	05	54	E	20	
		39		52	E	20	
		39	05	50	L	20	
		39	2	4	F	20	
		33	9	36	P	40	
		30		19	L	1	D t h d

D t d b	H I S F	B	L t t d		L m b	H g l t	R e l
			N t h	S t h			
1907							
July 16	SS	9 28 4 24 28 21 0 19 10 18 10 7 10 10 9 51 50	4 4 1 25 1 1 5 25 05 1 1 1 15	10 4 7 95 145 3 27 36 44 605 745 88 86 28 10 8 115 61		80 80 25 1 10 20 0 10 60 10 20 0 10 50 2 10 20	<p>C t d t t p 70 S N t 1</p> <p>60 n C</p> <p>N w t t p i n C Ch m p h l t d 10 f l t - 1 E M t l l D D b b b b 58108 0188 d 40 41 b g h t</p> <p>D t h d S l n t t w d</p> <p>S N t 2 O l g h t y l l l d b t l w y V p m</p> <p>PA 185 - 240 t m l C l d y O p h t g l l 9 16</p>
July 17	GN	9 23 23 20 29 28 8 (25 20 9 3 23 23 28 3 3	1 15 2 08 1 25 1 05 1 2 2 4	62 50 38 25 16 13 75 2 9 27 42 51 35 85 725 02 205 1 6		25 5 25 20 15 15 30 0 3 10 25 20 00 20 120 10 15	<p>C t l t t p</p> <p>A C t k l t l g l t h t p</p> <p>O</p> <p>T p m t l m l g t l t - 15 D</p> <p>T p t d b y C t k</p> <p>C D t l d 60 h g h n d l n t t w l C</p> <p>C C D t l d S N t</p> <p>C C p m n t l f m l t - 13 t + 1 W</p> <p>C C p l t g p l 0 2 3</p>
July 18	SS	0 4 4 1 1 8 59 58 56 6 9 53 10 23 9 45 45 48	05 15 1 05 05 1 1 05 1 1 1	22 20 26 7 10 18 28 405 47 81 14 95 1 1		10 20 10 0 20 25 30 35 10 10 30 30 20 20 20	<p>S l t t w a d</p> <p>S S p</p>
July 24	SM	11 28 10 12 10	1 2 1	6 7 4		5 25 15	<p>b g b d T l g h t l l</p>
July 25	GN	11 8 10 30 1 1 1 1	55 15 1	50 1 58 85 84 75 51		10 25 70 15 65 0 20	<p>D t h d</p> <p>D t h d } C</p> <p>V y f t }</p>

Dt d b	H IS1	B	L t t d		L mb	H ht	R m k
			N th	S th			
1907							
July 25	GN	11 1	1	48	W	10	O
		1 15		32	W	15	O
		1 1		28	W	40	O
		10 49	15	24	W	20	N h
		11 1	05	17	W	10	O V y f t
		0 0		2	W	50	D t h d
		10 45	4	10	W	30	
		11 4	05	41	W	15	
		6 6	8	53	W	40	
							O p h t g p l l l
J ly 26	SS	9 8	1	50	E	10	
		53	8	12	E	25	
		50	2	25	D	35	
							S m g b d l d y w t h y f w h t b l
							W t l m b t b l
J ly 28	SS	9 20		48	D	10	
		18		32	E	40	D t h d
		17	8	18	D	1	
		13	4	9	E	15	S N t
		10	05	18	E	10	
		9	15	20	E	10	
		8		71	E	25	
		10 31	1	33	W	25	B g h t O
		14	15	10	W	25	
		12	15	29	W	5	
		9 28	1	52	W	20	
							C p m w a l p l t
							t k n t g h 19
J ly 29	GN	10 9		51	D	90	O D t l d
		20	2	26	E	80	
		18	8	18	E	50	A O t m f m t h t p m t h l t
			05				p m
				20	E	30	
				59	E	25	
				79	W	70	D t h d O p m 95 h g h d
				5	W	30	l t t h w d
		29		51	W	20	O D t h d
		29	1	48	W	45	C
		29	3	39	W	40	O
		17	15	255	W	60	45 d 8 O
		25					H g l t t d g 30 O t 10 29 nd
							10 45
		29	05	185	W	15	O
		29		81	W	15	O
		25	15	46	W	45	
							O p l t g p h 10 29 d 10 45
J ly 30	SS	8 35	05	58	D	10	
		35	05	51	E	35	
		31	2		E	20	
		30	05		D	25	O t d O
		28			D	25	
		9 31	1	60	E	25	
		8 10	05	48	W	80	O
		9 27	05	48	W	20	O p m d t h d f m l m b 60 h g h
							d m t l m b t l t - 35 W
		26	15		W	80	V y b g h t O
		24	05	21	W	20	
		22	1	27	W	30	A h l t } T p t l O
		21	4	34	W	50	
		20		47	W	25	
		18	05	50	W	10	
							O p h t p l 8 10
J ly 31	GN	9 4	05	79	E	15	
		3		55	E	20	
		2	05	44	E	15	
		0	2		D	40	O t m f w t h d

D t d b	H I S T	B	L t t d		L m b	H g l t	E m k	
			N t h	S t h				
1907								
J ly 31 - mid	GN	8 59 58 58 57 15 56 15 15 15 9 10 6 5 8 1 15	0 1 05 0 1 1 3 3 1 05 2		11 19 24 30 38 73 80 48 14 10 10 24 29 49 73	E E E E E E W W W W W W W W W W	15 30 35 10 15 15 70 60 60 15 35 45 10 10	O N t h g h O O D t h d O D t l d 11k O N l y n t t t p D b l } A O t k t t h t p f t h + A h l k h t s 1 h 8 l d 10 80
A g t 3	SS	1 20 20 18 17 14 14 10 9 22 31 5 4 3 0 14 59 58	1 2 3 1 1 15 1 05 1 15 7 05 1 1 1 05	56 51 40 27		F F E E E E W W W W W W W W W W W	10 15 1 15 15 35 20 10 10 10 60 10 10 20 & 20 40 10 0	O t d + D t l d O l d y w t h b k S t g w d
A g t 4	GN	9 26 4 10 1 8 7 40 90	1 2 05 15 3 1 2 1	55 35 5 20 28 45 5 64 78 12 0		E E E E F E E W W W W	20 15 20 10 60 75 20 50 60 30 15	B g l t D O m l t d i f t n d d t h d f m l m b O p l t g p h 40 y p p l t
Aug t	SM	10 55	1	7		W	15	W t y b d
A g u t 6	SM	0 27 ? 81 30 29 58 58 53 53 53 53 42 53 53 40	25 1 11 1 15 05 15 1 25 05	57 14 15 18 28 75 69 87 19 8 1 23 29 37		E E E E E E E E E E E E E E E E E	35 25 95 20 20 20 30 65 30 15 20 10 15 25 40 40	D b l O p m 55 h g l d m t l m b g t l t + 28 E A t k O l g l w t h w d f m t h t p O D t l d O S l t f 1 t - 46 W O O D t h d D t h d O t d t l m b n O C p h t g 1 l 8 58
Aug t 9	SS	9 52 50 48	05 2	33 15 11		E E E	10 25 30	

D t a b	H I S T	B	L t t l		L m b	H h t	R m k
			N t h	S t h			
1807	H						
A g t 9 - t 2	SS	9 40 23 28 21 10 1 57 0	2 05 2 4 7	10 30 35 42 54 30 19	E D D E W W W	40 ± 30 20 40 & 0 60 ± 10 60 ± & 25	Sl t t w d 90 C C D t d l t h d l y d g O t t d t l b d 05 l g l C B g h t m t l l D D b b b d b b g h t
		9 59 59 58	5 25 15	51 69	15 W W W	25 30 10	Cl ly w t h b k S m g d O i h t g p h 10 57
A g t 14	SS	9 15 15 10 10 10 57 48 40 32 32	2 05 05 3 1 1	16 19 25 28 30 30 35	L D E E D E D W W W	40 ± 40 ± 0 0 10 10 10 60 ± 10 20 20	O l g h t l y d p l l t d
A g t 16	SS	9 7 0 0 8 58 55 55 53 50 50 48 9 38 20 24	05 05 6 1 1 6 2 1 05	81 91 86 17 10 4 17 24 68 79 63 45 40 30 16 4	E E D D E E D E E D W W W W W	10 10 10 20 25 25 20 30 25 15 30 15 50 10 10 10 15 10	C g b d D t l d A h l k
A g t 17	GN	9 50 48 10 36 9 48 20	05 1 4 10	60 37 3 9 16	E E E E E D E W	30 0 40 ± 0 50 ± & 60 10 10 1 40 & 15 25 20 50 & 70 45 25	O C t k t d b t h d t f m t h p m D t h d D O D t l d O O O C p h t g p l 10 36
		10 36 38 9 42 10 36	2 8 05	27 22 14 7 89	W W W W W		
A g t 18	SS	9 20 20 11 7	2 15 3 15	60 44 375 24	E E E E	20 20 50 20	O V y f t A h l k C E t A t k l d f m t h f l t + 31 E A l d l t f m t h t p 60 h g h g f l t + 27 E
		20 3 2 8 59 58	4 4 9 1	1 6 165 64 79	E F E E E	60 3 40 10 40	O V y f t n C

Dt l b	H I b T	B	L t t d		L m b	H h t	R m k
			N t h	S t l			
1907							
A t 18	SS	8 4		83	W	80	D t h d
		54		82	W	20	
		4	05	81	W	20	
		54	05	905	W	25	
		54	05	79	W	0	
		53	2	8	W	20	
		52	05	84	W	10	
		9 0		86	W	60	C
		20		48	W	80	C
		2	25	44	W	20	D b l
		24	1	20	W	25	
		2	05	11	V	20	
		90		2	W	1	C
		1		18	W	25	V y f t
		19		48	W		
							P g l l
							C l l t g 1 h 9' 20m
A g t 19	SM	8 56		70	L	10	C
		47	05	77	L	15	
		56	05	64	E	10	C
		6	2	60	L	10	C
		6		55	L	20	C V y f t
		18	1	49	L	7	3 l d O } C t l n C
		43		45	E	80	D t h d } C
		40	0	36	L	5	
		3		8	E	5	A O t k h } C n t d t t p d
							f l t + 24 E } 50 l g h n C
				55	L	60	A d t h d t l
		3	1	11	D	10 t 25	D b l
		8	05	115	E	0	C d l l d l A t d } V y b g l m t l l a D
							V y f t t } D b b b n d b
							n C t 8' 56 } b g h t A l m t l
							p p d b y 8' 24
		28	1	105	D	15	
		7	15	915	L	85	5 l d O
		5	5	79	L	80	
		56		83	F	40	
		6	15	8	W	25	
		58		1)	W	40	
		9 3		18	W	20	
		3	1	415	W	15	
		3		48	W	35	
		0		20	W	30	
		8 56		11	W	0	l t } F t t b t w n n C
		51	45	8	W	15	A h k
		5		14	W	40	80 l y C
		8	2	38	W	15	8 b d d 40 h g h n C
		50	4	43	W	80	O
				50	W	35	F n t
							O l h t 1 h 8' 50m
A g t 20	SS	10 10		40	E	25	D t h d
		7		7	E	10	
		9 40	05	Fq t	E	10	
		10		40	E	40	
				44	E	20	
							O l d y w l f w b k P
							b l n l y b t w P A 65 d 180 w
A t 2	SS	8 54	15	75	E	20	
		53	05	68	F	10	
		50	15	55	E	25	
		47	2	20	D	70	80 l y C
		46		17	E	60	
		11		8	E	15	
		42		8	F	15	
		41	2	Eq t	E	45	A t k f m t p m t l m b } V t t t p
							g n t l t - 4 E
		38	45	24	E	30	
		37		41	E	70	80 n C
		36	14	55	E	25 & 50	
		33	6	79	E	80	Det h d

D t d b	H IST	B	L t t l		L m b	H g h t	R m k	
			N t h	S t h				
1907								
A g u t 22 id	SS	8 30 9 25 24 21 20 19 17 16 18 10 7 5 2 58	05 2 1 2 10 2 2 2 2 2	14 28 53 62	8 78 72 60 52.5 50 44 28 1 13	E W W W W W W W W W W W W	25 5 85 ± 10 26 50 40 40 25 40 30 3 150 ± 50	V y f t D t l d D t h d D t h d 120 ly O O p h t g p h 8h 3m
A t 23	GN	10 2 1 0 9 58 58 10 16 9 14	5 2 2 05 1 05	16 85 5 28 32 68	D F F E L W W	30 15 25 45 ± 20 20 15 0 ± 10 ±	S A t	
A g t 24	SV	11 0 10 49 59 58 49 57 56 49 49 49 49 11 2 10 49 49	1 1 1 1 10 2 8 05 8 05	59 17 8 2 21 28 57 73 79 77 73 31 10 17 49	E E E E E E D F W W W W W W	20 25 30 15 50 10 25 & 75 20 80 80 40 30 15 15 20 35	C N t C C 90 O O O O O O O C PA 180 t 300 t m d E t th gh th l O p h t g p h 10 49	
A g t 25	SS	11 19 8 3 11 17 17 17 8 35 35 11 6 11 10 8 3 11 28 8 3 11 2 8 24 8 35	05 05 15 2 8 1 7 4 15 05 2 1 2	51 29 17 18 1 14 17 23 61 74 80.5 74 41 36 80 6 81	E D F F L E E E E E W W W W W W	25 20 0 10 10 25 25 0 10 40 45 25 1 80 25 30	C C C C C C 180 & 60 O D t h d 80 O O O ly 15 C O O ly 20 O C D bl O p h t p h 8l 35m	
A t 27	SS	8 52 0 30 48 48 44	1 2	48 24 15 12 7 5	F E D E E E	20 20 30 10 10 & 20 50	V y f t 80 O 45 C O D t h d	

D d b	H u I S T	B	L t t l		L b	H g h t	R m k
			N t l	S t h			
1907							
Augu t 27 — 22	SS	8 44 30 98 85 9 23 22 20 13 17 8 5 1 8 69	2 05 1 15 4 05 05 2 2 05 05 5	2 18 22 66 78 81 88 81 74 15 21 26 30 38 5		10 & 20 80 80 60 0 40 50 10 36 30 20 60 ± 15 80 & 85	C T p m t n t p m m T p l n g t h l m b f l t — 27 R U t l d V y f n t F t t t p 00 n C 45 C C p h t g p h 8 80
A g t 28	SM	9 18 16 15 12 10 8 48 9 8 7 4 1 1 1 0 52 49 47 45 10 35 32 80 28 25 8 48	05 25 1 15 1 7 8 2 8 1 1 0 11 2 3 5 05	61 81 22 13 9 4 3 17 81 84 5 80 72 5 80 5 88 82 81 4 8 45 18 25 41 49		15 10 10 25 20 70 10 20 35 35 35 45 35 30 30 25 10 15 45 45 10	F t A C t k l n t p n h d f t h p m D t h d D b l 50 n C C B d t p B g h t m t l l D D b b b d b l g h t V y f n t n C O l 7 b d C } T h w n t d b y } } f t t m t d b y } T 1 t d C ± V y f n t D t h d A b g h t t A C t k f m t p m t t h t p m 45 C C C p h t p h 8 48
A g u t 29	SS	9 45 41 42 38 3 35 30 30 29 27 27 26 24 22 20 18 17 10 10 8 7 5 2 9 54 58	1 05 1 1 1 2 2 11 2 3 5 05 1 05 1 17 2 1	58 21 18 1 25 28 5 38 37 40 69 78 78 81 82 79 74 72 62 157 43 39 21 75 28 47		10 25 40 50 15 15 10 40 40 10 40 80 15 15 26 20 10 15 40 10 100 80 85	C p h t p h 8 48 t ± V t l l D D b b b b 58168 0186 d 49241 b g h t D t h d D b l C p h t e r p h 10 20

D t d b	H I T	B	L t t d		Lmb	H ght	R m k
			N th	th			
1907							
A g t 31	SS	M					
		10 42	05	51		60	
		39	1	8	E	25	
		3	05		E	10	
		21	05		E	20	
		21			E	60	
		21			E	30	
		11 0	05		W	50	D t h d
		0	15		W	25	D bl
		10 53	4		W	45	
		50	8	80 5	W	50	
		47		64	W	15	
							O l dy w th b k
							S g p
S p t m b 2	SS						
		9 1	05	8	E	10	
		8 59		18	E	10	
		6	05	41	E	5	B d t t p
		5	05	15	E	10	i b d d t l t th t p m n
							O
		54	1	18	E	20	
		58	1	8	D	15	
		5	05	1	E	10	] O t d t b
		51			E	50	S l t f l t - 19 D
		47	2		E	10	
		46			E	15	
		42	4		E	100	5 5 b d d 90 hgh O
		9 32			E	15	
		29	1		W	20	
		8 32	7	70 5	W	10	
		25	1	71	W	15	O
							A h l k M t l l D D b b b n d b
							b h t O h g g
		25		69	W	150	F N th h O
		5		65	W	60	
		19	15	88	W	10	
		18	1	91	W	20	
		3	05	2	W	15	
		32	1	8	W	10	O
		9 16	3	2	W	2	O
		15	15	8	W	10	
		18	05	6	W	5	
		11	05	28	W	50	
		6	1	60	W	80	
		5	1	68	W	10	
							O i h t g ph 8 3
S p t m b 3	GH						
		8 41		58	E	30	D t h l
		40	25	40	E	15	
		37	1	18	D	60	
		85			E	80	A t m f m t l 60 l g h p l f
							l t - 18 D
		80	11	44 5	E	65 90 & 40 & 60	C
		9 0	05	69	E	15	
		8 9		82	W	40	O D t h d
		59	1	74	W	30	
		9		1	W	85	O D t h d
			8	17	W	0 ±	D p t m t l l p m l w g l g h t d
							p l m t t d d
		9	1	1	W	0	
		50	4	26	W	70 & 50	S l t w t w d I O t p m t l m b g t
							l t + 13 W
		45		48	W	15	
		45	1	48	W	15	
		9	05	55	W	10	C
		44	2	61	W	80	
		42	05	82	W	15	
							O p h t g ph 8 9
S p t m b 4	SS						
		9 1		6	E	25	
		3		59	E	20	C
		3		58	E	10	O
		8		48	E	80	C

D t d b	H I S T	B	L t t d		L m b	I l t	R m k
			N t l	S t h			
1907							
S p t m b 4	S S						
	8 58	1	39		L	20	
	9 3	0 5	23		E	60	
	8 54	1	11		F	40	C
	51		8		F	50	D t h d } N l y m t O
	45	2		41	F	50	} O t d O t l f m s O g l p m
	47			48	T	40	
	40	8		71	E	10 & 20	D b l
	9 25			78	F	10	
	3			85	W	10	C
	19	7		18 5	W	40	S N t
				14	W		
	13		1 5		W	10	
	11		7		W	10	
	3	1	7		W	1	C V y b h t P b b l y m t l l p t
	8	3	40 5		W	15	C p m
	8	6	62		W	20	
	8	1	78		W	10	C
							l m b p w t w h b w g t h w t n
							C p l t g p l 9 3
S p t m b 5	G N						
	11 37		25		E	25	C
	37	4	8 5		E	30	C
	10 0	1	12		E	1	±
	11 37	0 5		8	T	10	O
	37			16	F	17	C
	9 5			10 5	E	10	
	55			14	E	15	
	50	0 5		21	E	0	±
	11 37			8	E	30	O
	37	0 5		43	L	40	O
	9 50	2		55	E	15	
	11 37			72	W	4	O
	37			68	W	20	C
	37	1 5		21 5	W	20 25 &	C
						100	
	37	1		9	W	25	C
	10 9	1 5	21		W	1	
	5	3	49		W	50	± s l y C
	11 37	8	68		W	0	± C
							W t l p
							C p l t g p l 11 37
S p t m b 6	S S						
	8 59		48		I		
	57	7	28 5		E	20 & 15	
	55		15		F	10	
	3	10	7		F	45	A h l k O d p l d t e d b t 2 A t l t
							+ 7 L
	49	1		1	E	30	
	49	1 5		4	L	50	
	47	3		9 5	E	20	
	46	1		19	E	25	
	44			41	E	10	
	43	0 5		45	F	25	
	42	1 5		48	F	1	
	9 29	0 5		71	W	30	
	27	0 5		80	W	25	
	26	2		48	W	15	
	24	2 5		25	W	100 ±	1 0 O
	20	2		15	W	25	
	20	0 5		9	W	10	
	18	1		4	W	15	
	14	5	20 5		W	60	50 C
			42		W	10	
			47		W	10	
			48		W	40	60 C
	9		50		W	20	
	9		82		W	15	
	4						C l h t g p h 9 9

Dt n l b	H IST	B	L t t d		L m b	H g l t	R m k
			N th	S th			
1907							
S p t m b 7	GN						
	H M						
	9 27	1	28		E	2	
	5	1		21	E	50	±
	25	05		65	E	4	±
	29			26	E	1	
	23	05		8	E	15	
	23			40	D	25	
	15			59	E	15	
	15	05		54	E	15	
	15	05		56	L	40	±
	14	0		65	E	15	±
	8 30			63	E	10	O
	9 25	05		68	W	20	
	8 36	05		58	W	0	O
	36			24	W	20	O
	9 23	15		8	W	25	
	22		225		W	40	±
	8 26	4	50		W	15	±
	9 24	2	81		W	15	±
							W th p O ph t g ph 8h 36
S p t m b 8	SS						
	9 6		55		L	15	
	42		87		Γ	60	±
	8		0		H	15	±
	8 50		5		F	10	O
	9 2	2		8	F	15	
	8 59	05		28	E	25	
	58			27	E	1	
	9 22			49	E	40	
	22			51	E	2	
	8 50			65	E	60	±
	9 29			22	E	20	±
	29	05		22	W	15	
	28			78	W	60	±
	26	1		72	W	20	
	25	2		70	W	10	
	22			65	W	25	
	22	2		59	W	15	
	21			53	W	20	
	17	05	5		W	20	D t h d
	8 0	05	49		W	10	A O t k f m t p g f l t + 10 W
	9 12	3	57		W	10	O 25 C P g l d O pl t g ph 8h 50
S p m b 9	GN						
	9 3	2	56		E	20	
	8 7	05	49		E	10	C
	9 2	4	26		L	30	
	1	1	55		D	10	
	0		18		E	15	T bl
	8 52	5		105	E	25	±
	24			22	E	150	±
	7	7		275	Γ	60	±
	56	2		35	D	15	O A h k
	5	05		465	E	0	
				49	D		
	9 21	1		52	F	70	O d p l a c d t l t f b t 2 A
	20			74	E	20	A l f m t p g f l t - 62 E
	20			79	E	5	
	19	1		81	D	5J	
	18	05		74	W	30	
	18	1		65	W	30	
	8 7	05		59	W	15	
				31	W	30	O A t l f m t p g f l t
	9 4	2		12	W	30	-20 W
	10	10	9		W	50	±
	8 7		21		W	30	M t l l
	7	0	35		W	10	O
	9 5	6	57		W	70	O
							O ph t g ph 8h 7

D t n d b	H IST	B	L t t d		L m b	H g i t	R m l
			N t h	S t h			
1907							
S p t m b 10 S S	8 55	05	77		L	15	
	1	05	40		E	5	
	50	4	9		L	25	
	49	1	23		l	40	
	48	8	185		l	15	
	47		12		E	2	
	46	8	4		l	50	
	40			15	l	15	
	39	4		17	F	15	
	37			27	L	10	
	37	2		30	L	10	} B ght t l D D b b b b 49241 50188 b ht
	30	05		19	L	10	
	29	1		53	E	20	
	27			65	L	60	
	23	05		80	h	50	
	22			78	W	30	
	25	1		8	W	20	
	28	1		3)	W	4	
	22	15		2	W	50	
	20			7	W	10	
	18			18	W	50	Slightly d t l d
	17	05		11	W	2	
	16			5	W	45	W m d f t d 150 l g l O
	18		Eq		W	10	
	10	05			W	15	A l n t g t k 60 h g h f w f m t t
	10		12		W	25	
	8 47		14		W	40	
	47		17		W	60	
	0 4		48		W	15	
	8 47		50		W	15	
	9 3	6	61		W	100	S N t C p h t g p h 8 47
S p t m b 11	9 2	5	05		F	40	
	2	3		715	E	70	
	2	4		27	W	25	
	2	05		9	W	10	
	2	15	28		W	2	
	2		55		W	30	
							W t h t p f l b t C p h g p l 8 02
S p t m b 12 S S	8 29		815		F	10	
	9 0	1	64		E	2	
	6	15	59		l	50	
	4	0	565		l	15	
	4		54		E	15	
	54	2	48		E	40	
	55		2		E	15	
	54		21		F	10	
	53	1	14		F	15	
	51		9		F	40	
	49	4	4		E	30	
	48			5	E	10	
	48	2		30	F	30	
	39	8		41	F	45	
	39	6		50	E	25	
	35	2		55	E	15	
	33			75	E	20	
	30			80	L	15	
	28	2		68	W	25	
	26	05		53	W	20	
	26	2		50	W	25	
	25	8		41	W	30	
	24	1		35	W	20	
	23			27	W	20	
	22	7		20 r	W	0	
	21	1		135	W	25	
	21			11	W	10	
	19	2		15	W	120	
							C n t d n O 60 O N t h g h O N t h g l O

Dt d b	H IST	B	L t t d		L b	H ght	R m k
			N rth	S th			
1907	x						
S pt mb 13 SS	8 29		28		W	10	O
— 22	9 14	7	58		W	90	60 O C l h t g p h 8 29
S pt mber 13 SM	9 8	05	69 5		E	10	
	8 11	05	56		F	15	C
	9 11		30		E	10	C
	9 4		15		D	20	M th g h C
	8 11		11		E	10	C
	9 2	5	2			35	Oh g s
	8 58	1		4	E	10	
	55			28	E	10	
	58			41 5	E	60	A t m g f l t - 28 5 E
	11			54	E	30	C M t h l t p m
	50			59	L	10	
	9 38	1		69	E	10	} N t O
	8 11			7	E	75	C
	9 3			7	L	15	N t C
	8 1	1		81	W	10	
	8 11	1		78	W	20	C v y f t
	9 30	4		46	W	75	
	26	5		38	W	50	
	25	2		8	W	35	} A t k j th t p f th
	24	3		24	W	35	
	20	15	6		W	25	N t l h C
	17	8	5		W	30 & 35	
	15	5	37 5		W	1	
	13		42		W	15	
	1		57		W	10	
S pt mb 14 SS	10 25	05	61		E	40	C p h t g r p h 9 11
	25	2	35		E	25	O
	8 50	1	11		E	10	O
	10 25	05		2	E	20	O
	8 48	4		6	E	10	
	48	05		10	E	15	
	35	2		44	E	25	± F t
	9 19						
	10 20	5	80 5		E	15	
	25	05		J	W	15	
	9 14			45	W	50	} C t d 110 60 80 C p m 28 b d
	12			45	W	80	±±± d 20 h g h
	10 27			7	W	80	C
	25			1	W	10	O
	5		8		W	10	O v y b g h t
	9 7	1	12		W	20	
	7	3	15		W	40	
	3	15	21		W	25	±0 C
	10 25		26		W	90	l b l y p d l y h g g
	9 1			34	W	25	± R d l p k bl n d l p l t
S pt mb 15 SM	10 1		69		E	15	± C p h t g p h 10 25
	15	8	24		E	85	±± F t
	10	15		21	E	10	
	8	1		34	F	20	
	8	10		39	W	85	
	28	05	8		W	15	
	24		28		W	20	
	24	4	38		W	25	
S pt m 17 GN	8 47		68 5		E	35	S N t
	9 44		52		E	20	C
	44	05	49		E	20	A h k 80 O
	42	2	38		E	80	±
	8 47		32 5		E	20	±± O
	47	05	29		E	80	O
	47	2	24		E	110	O
							O B d t t p T p m t h m b a g t l t + 16 E

Dt d b	H IS R	B	L t t d		L b	H l t	R k
			N t l	S t l			
1907							
S pt mb 17 GN	8 4		8		H	10	O
— mtd	17			1	I	10	O
	9 5	1		95	I	50	± T p l y m t l m b g n t l t - 87 E
	40	05		75	F	2)	80 O
	8 48	4		45	W	50	± 80 O
	9 28	1		4	W	0	O
	8 47	15	40		W	20	O
							O p h t g p l 8 47
S pt mb 18 SS	8 19	15	19		J	25	C
	19	0	8		I	30	O
	1	1	95		I	0	
	20	J			I	15	
	15	05		37	I	20	V y f t d O
	19	1		8	D	20	O
	19	1		4f	W	30	O
	19	05		40	W	30	O
	1J			1)	W	8	O
	19	05		11	W	20	(
	9 21	25		1	W	25	
	8 58	1	4J		W	30	± 15 O
	50		51		W	15	
							g b d P A 180 - 80 t b d
							O p h t g p l 8 13
S pt mb 19 GN	10 15	0	55		F	30	F p b n l d m t t h t p m
	8 50	+	50		I	1	
	10 15	05	28		E	10	C
	8 40	05	24		F	20	
	40	J 5	14		F	45	
	45	10		3	F	35	
	43	1		14	F	20	
	40	4		41	F	30	D bl
	10 17			7	I	15	
	1			88	E	10	
	1			82	W	10	
	15			28	W	50	O A t m f m t p 10 l g m t t h n t
	J 0	05		7	W	1	i m
	6	05		3	W	1	
	0	+	9		W	20	
	8 58	2	14		W		O p l t g p h 10 15
S pt mb 20 SS	8 21	05	60		F	0	O
	21	1	49		L	1	(
	21		47		I	18	C
	21	2	21		I	10	C
	21	1		55	I	10	O
	1	2		17	I	30	
	1	1		21	E	15	
	27	05		2f	E	10	
		1		28	F	0	
	25			47	I	2f	U p r p t i t
	29			64	E	15	
	21	05		81	I	2f	C } S l t t w d n d n l y m t l t h
	21			88	F	20	C
	21			70	W	50	O
	21	8		88	W	30	O
	21			28	W	35	(A d t h d l d l t
	21	15		2	W	30	C
	21	7		18	W	15	C
	21	05	75	45	W	30	C
	21	05	28		W	10	O
	21	8	455		W	30	C
							P
							1 0 - 180 w m d ly betw P A
							O p h t g p l 8 21

Dt d b v	H IST	B	L t t d		L b	H ght	R m k
			N h	S th			
1907							
S pt mb 21 SS	v						
	9 35	05	08		E	10	
	10 38	2	58		E	60	C
	9 35	05	60		E	10	
	10 38		47		E	10	C
	38	1	41		E	10	O
	5		8		E	1	
	8		5		E	2	
	1	05		15	L	20	
	1	1		18	D	45	
		05		21	E	15	
	9 0	3		245	E	4)	} M t } M t O
	29	05		94	E	10	
	28	1		48	L	10	T p m lmb tlt - 50 E
	58	05		71	E	90	
	55	8		89	W	80	
	10 36	05		54	W	80	O
	9 51			48	W	25	
	10 36	1		48	W	10	O
	9 50	5		34	W	95	
	50			285	W	10	
	48	7			W	30	S N t
	10 38	4	Eq t		W	30	O
	9 47	8	18		W	20	
	42	15	8		W	25	
	42	1	82		W	10	
	42	2	85		W	25	
	40	1	54		W	10	
S pt mb 22 GN							O ph t g ph 10 ^h 38 d 10 ^h 27m
	11 5	3		6	D	35	
	4			28	E	20	
	3	1		50	E	20	
	30	3		70	E	20	70 O
	28	05		9	E	15	
	28	15		88	W	45	
	28			81	W	45	80 nC D t h d H b t ted } N ly m t
	14	2		75	W	20	O A hlk
	14	05		62	W	15	O
	20	2		55	W	30	O
	14			49	W	30	O F t
	18	1		48	W	20	
	14	4		42	W	35	O
	14	3	05		W	45	O A hlk
	15	05	7		W	15	
	15		11		W	10	
	14	25	18		W	40	
	14		24		W	30	
	14	15	27		W	60	40 ly C } O t } O I O th p m
	10	1	37		W	60	D } f m t g th } 10 b d
	8	15	56		W	30	
	14		60		W	15	
	8		67		W	45	
S pt mbe 23 SS							O ph t g pl 111 14m I ph t g ph lmb f m P A O t 150 w p l d by l d
	8 32	15	00		F	15	
	29		58		E	35	
	26		50		E	10	C
	25	6	45		E	30	C F t
	26	05	30		E	15	T p ly m t lmb g tlt + 26 E
	24	2	18		E	10	
	21		7		E	40	D t h d
	20	2	3		E	10	
	16	6		18	D	55	
	15	3		30	F	10	V y f t
	12	2		54	E	20	
	9 18			71	E	10	
	12	05		7	E	1	
	10	1		82	W	1	

D t d b	H I S F	B	L t t d		L b	H t	R m k
			N th	S th			
1907	x						
S pt mb 23 SS	9 8	05		72	W	15	F p m t l m b g t l t - 70 W D t h d C n b d t t p n C H g h t C 20 40 & 60 A f w d t d t k C p h t p l 8 l 26 m P g d o m l l l B d t t p N l y m t C S t C h t g p l 8 l 9 D b l D t h d F p m t l m b t t h q t C C C C C N t n t C t n u C
- id	7			82	W	45	
	4			54	W	25	
	3			45	W	0	
	1	1		40	W	1	
	8 59			245	W	60	
	57	0		19	W	15	
	51	3	185		W	45	
	19		25		W	30	
	46		37		W	10	
	12	15	4		W	10	
	40	1	7		W	10	
	37	3	73		W	20	
S pt mb 25 SS	8 41		51		E	10	
		1	56		E	20	
	32	05			E	25	
	32	2			D	25	
	32	05	1		F	20	
	28	0		28	F	10	
	15	05		61	D	20	
	9 58			r	F	10	
	2	05		29	W	10	
	8 53	2	Lq t		W	15	
	47	1	5		W	25	
	46		615		W	15	
	43		73		W	10	
S pt mb 26 GN	8 9	1	18		F	20	
	9 40	1	2		L	1	
	8 9	05	145		F	10	
	33		8		L	1	
	9			J	L	40	
	9			12	L	80	
	9 35	05		37	L	10	
	35	0		63	E	45	
	35	2		66	E	45	
	10 7	2		71	E	10	
	9 9	1		83	D	4	
	8 9	1		88	W	65	
	9	0		44	W	60	
		1		27	W	1	
		2		24	W	25	
	9 52	7		105	W	25	
	50	1	7		W	30	
	8)	1	35		W	15	
	9 45	15	05		W	15	
S pt mb 27 SS	8 4		81		F	10	
	4		73		F	10	
	9 15	35	10		F	10	
	14		11		F	2	
	13	15	7		D	15	
	8 4			8	E	35	
	9 3	1		20	F	10	
	8 4			30	F	1	
	4	15		34	F	15	
	4	0		73	E	3	
	4	1		83	W	80	
	4	9		82	W	80	
	4	9		455	W	65	
	4	05		25	W	10	
	4			17	W	10	
	10 22	10		8	W	30	
	9 43	3	1		W	35	
	8 4		115		W	2	
	9 39	2	26		W	5	
	8 4	05	38		W	15	

Date and b	H IST	B	L t d		Lmb	H ght	R m k	
			N th	S th				
1907								
S p t m b 30	SS	8 45 48 42	05	55 59 62		W W W	30 25 10	} M t t t p n O
								P n g l d C p h t g r p h 8 l 19m
O t b 1	GN	10 13 20 5 10 12 12 12 12 12 1 1	8 4 2 1 1 4 3 5 4 0 5 8 1 5	22 7 58 5	18 20 48 80 89 51 46 14	E E L E E I W W W W W W	70 20 15 15 20 15 10 30 60 10 130 25	O O W t h b d C r l t g r p h 10 h 12m
O t b 2	SS	11 10			14	E	25 ±	W t h b d
O t b 4	SS	8 43 9 41 8 44 9 36 9 35 32 31 29	05 1 2 1 2 2 2 2	44 40 12 7 42 5 58 77 5 82 0 89 0 76 5 78 5 53 50 46 5 43 5 21 0 43 0 52 5	5 20 3 28	L F I L F L F E F E E W W W W W W W	40 ± 35 35 ± 30 10 15 40 100 ±	D t h d 40 ± t g h 38m 30 70 100 ±
								O l l l l y m t } C t d t t p l b t l t - 37 E
								A h l l
								O n t l t t p n O
								T p n t d C
								C p h t g p h 9 h 28m
O t b 5	GN	10 38 38 35 9 5 0 10 38 42 30 42 40 38 38	1 0 5 0 5 1 1 2 0 5 2 0 1 5 4 1	65 25 21 48 5 62 5		I I L E E E F D W W W W	1 ± 15 30 15 40 ± 20 20 20 80 & 15 15 120 25	C C C p h t g p h 10 h 38m n d l l l 1 m
O t b 7	SS	8 53 51 45 21 43 42 9 36 9 35	1 5 0 5 4 2 1 0 0 5 0 5 0 5	47 20 35 5 41 5 50 5 60 5 62 5 79 5 88		F L F E E E E E E E W	35 ± 15 20 5 15 15 15 10 20	60 N t l h n O C

Dt db	H IST	B	L t t d		Lmb	H ght	R m k	
			N th	S th				
1907								
Oct 7 - 12	SS	9 34	05		81	W	15	
		32	05		49	W	10	
		2			27	W	15	
		20	15		20	W	20	
		15	1	5		W	10	
		14	2	21		W	15	
		1	1	30		W	20	
			1	485		W	15	
			6	545		W	0	
			6	58		W	15	
			8 21	1	615	W	10	
			21	2	66	W	40	
C t d t t p d 80 hgh C								
45 O } O t d t t p by t k								
C O C ph t pl 8h 1m								
Oct 9	SS	8 55	2	405		E	40 ±	
		58	15	34		L	1	
		51		17		L	10	
		50	05	4		L	15	
		32			6	E	15	
		48	0		6	L	45	
		32			10	E	20	
		47	2		18	E	25	
		32			29	F	80 ± 120	
		42	8		35	E	15	
		35			445	L	30	
		C Alt h d t k 9 l g						
		C Sl t thw d						
		C D t h d Th O i d t b t 70						
		C h h						
		C 35 1 485 L 25						
		C 32 3 84 E 25						
		C 32 6 81 W 45						
		C 32 05 71 W 10						
		C 32 05 665 W 15						
		C 32 6 28 W 20						
		C 32 18 W 20						
		C 32 3 W 15						
		C 32 9 15 W 40						
C 32 8 13 W 20								
C 11 10 05 14 W 40 ±								
C 9 6 315 W 05								
C 9 4 6 57 W 40								
C 18 3 66 W 30								
C 11 1 7 W 10								
C 50 O								
C Ol dy with b k PA 180 805 t								
C (pl t gr pl 8l 32m								
Oct 10	GN	9 55	05	87		L	10	
		55	05			L	30	
		55	8	21		D	25	
		10 0	2	6		D	25	
		9 45			175	E	10	
		10 15	05		595	L	15	
		9 55	15		84	W	30	
		5	15		50	W	45	
		55	05		1	W	20	
		10 14	12		37	W	70	
		10 10	25		8	W	20	
		9 5	05		Eq t	W	30	
		10 8	15		16	W	15	
		9 7	2		465	W	15	
9 55	1		425	W	30			
10 3	4		605	W	4 ±			
C S N t								
C O F								
C ph t ph 9h 55								
Oct 11	SS	8 8	1	31		L	20	
		30	05	28		E	10	
		30	1	20		L	10	
		28		15		F	10	
		7	15	6		E	0	
		27		35		F	20	
		27	1	Eq t		E	10	
		41	0		15	E	1	
		9	8		25	F	40	
C T p m t th p m tlt +15 M								

Dat d b	II IST	B	L t t d		L mb	II l t	R m k	
			N th	S th				
1907								
O t b 11 — 22	SS	8 20	10		89	I	4	Ag p f 31 n t d t g th
		16	2		77 5	L	4	
		15	0 5		77	F	20	
		7 6	0		77	I	30	
		5	0		79	I	25	
		4	2		8	W	40	
		3			77 5	W	40	
		0	2 5		70	W	30	
		8 58			38	W	10 ±	10 O
		55			22	W	35	O S N t t d t l t p m O
		5			19	W	30	D t h d
		50			10	W	20	D
		45	1	4		W	35	
		43	2	47		W	2	
41		52 5		W	15			
40	)	61		W	80	40 O O p l t g l h s l l m		
O t b 12	GN	8 12	0 5	84		I	10	C
		12	4	67		F	10	O
		12	1	48 5		F	20	C
		9 0	1	1 5		F	20	
		8 58	1	28		I	30	O D t l l
		12		1 6		I	80	
		67	2	1 q t		I	7	
		67	1 5			I	1	
		58		11	5	F	30	F p f w t w d
		56	1	1		F	1	
		5	0	19		F	15	
		4	2	38		I	20	
		45	8	48 5		I	70 ±	
		12	0 r	5 5		I	20	O
		7 35	2	68 r		F	2	
		8 12		78 5		I	10	C
		12	1 5	77 5		W	20 40	O Ag p f 41 t d t h
		9 25	2	95		W	90	O S O } O t O
25	4	28		W	40	S l y {		
5	2 5	17		W	45 ±			
18	1	20		W	30	S N t		
8 1	0 r	29		W	15	C		
9 2	2	35		W	30			
8 12	1	46 5		W	20	C		
8 12		74		W	20	O p b t g p l s l l		
O t b 13	SM	8 56	4	20		F	3	O l d O
		51	0 5	17		I	J	
		47		15		I	25	D t l l
		47	3	11		I	00 ± 40	S N t
		47		8		F	30	D t l l
		40		3		F	50	D
		39	1	17		F	50	I t l y l k h t l t T w d t h l O
		30						l h t l l l g t
		30	1 5	4		I	10	O l y O
		9 35	8	54 5		F	30	O l y 4 l l d 20 h g l O
		38	21	84		W	3 ±	30 d 100 O
		30		75		W	47	
		30		79		W	15	
		27		71		W	0	Ab g l t l l t d t l m l by t k
		8 8	1 5	85 5		W	20	O
		8	0 5	4 5		W	25	O
		9 21		42 5		W	5	
		18	3	39 5		W	15	
16	7	22		W	4	} t n t d F m d f t n O		
12		15 5		W	30			
10		6		W	15			
6	1	24		W	25	N th l l f b g h t		
		48 5		W	50			

D d b	H IS1	B	L t t l		L m b	H g h t	R m k
			N t h	t h			
1907	v						
O t b 13	SM	8 5	3	55	W	5	
- t d		0	1	68	W	25	C p h t g p h 8' 8m d 8' 58m
O t b 14	SS	8 21	1	74	F	1	C
		9 6		605	F	25	N t h l O t 8h 21m
		5		505	E	15	V y f
		8		35	E	40	D t h d
		8 37	2	24	F	5	
		37	1	0	E	120	S N t
		38	12	10	E	20	
		25			E	70	
		1	05		E	10	485
		24	05		E	30	505
		24	1		L	20	585
		22			E	20	61
		9 28			L	30	645
		8 21			L	20	71
		9 25	05		W	0	765
		28	1		W	65	67
		21			W	00	445
		19	14		W	25	425
		17			W	5	22
		8 21		14	W	10	
		21	1	16	W	30	
		21		37	W	10	C V y f t D t h d
		21		625	W	25	O
		9 11		79	W	10	O
		11		82	W	10	
O t b 15	SS	8 4	15	515	L	20	C p h t g p h 8' 21
		48	7	40	F	65	A t k f m t p m t l m b p l t + 32 E
		88		25	E	65	
		86	4	18	E	40	C l h t l y l p l d b t l w y } C t d b y
		35		7	E	80 ±	t l p l t b }
		32	1		E	10 ±	D t l d
		30			E	15	V b l D D b b b b d 49241
		28			E	25	D t h d
		27			E	40	D R t
		25	2		E	70	F t h y d
		23			F	10	
		9 10			E	1	
		8 16			W	10	O
		9 6			W	15	
		5	1		W	20	
		2	12		W	85	
		8 58		11	W	15	
		57	2	20	W	35 ±	V y f t
		53		38	W	20	
		53	1	415	W	20	
		51	1	685	W	25	
O t b 16	SM	8 18		525	E	30	C p h t g p h 8 16
		9 12	4	495	E	20	C D t h d
			2	455	E	15	
		3	8	38	E	75	
		1	4	28	E	8	} C t d O
		8 18		1	E	0	C D t h d
		50		10	E	35	D t h d
		48	1		E	30	
		45	05		E	30	A b g h t p t t t t p
		44	25		E	20	
		40			E	60	D t h d
		40	8		E	60	
		34	15		E	60	
		35	2		E	0	} C t d m t l l D D b b b b d
		9 86		7	E	20	53168 b g h t
		8 16		775	E	20	O

Dt d b	H IST	B	L t l		Lmb	H l t	R m k		
			V th	S th					
O t b 16 ⁸⁰⁷ — 16 ¹⁶	S M	9 35		88 r	E	25	D t h d		
		8 16	2	84	E	20	O		
		9 32	0 5	47 5	W	10			
		30	5	41	W	55			
		27		2	W	80	B d t t p		
		2		14	W	10			
		24	2	11	W	10			
		2		Eq t	W	20			
		20		4	W	10			
		11	1	1	W	15			
		18		80	W	10			
		15	8	65	W	85			
		O t b 17	S S	8 31		09 5	D	15	O p h t g p l 8 1 6
				52	1	48	I	1	O
50	1			30	I	7			
43	1 5			20	D	80	A y f t d t u t l l n t g f		
48				18	D	80	l t + 4 F		
45	6			8	D	20			
43				8	F	100	b l t t w l		
39	1			24	D	4			
34				47	I	185	A l t g l d 7 l g w t h t b 30 w y		
29	10			78	E	75 & J	f m l l		
9 16	5			72	W	20	l t		
14	2			39	W	50	B l t t p O 1 m 125 l g h d		
12	1 5			84	W	1	m t l m b g (l t - 31 W		
12				28	W	15			
8 31				13	W	2	O T l y t t l t f t h l t p m		
9 10	1 5			5	W	10			
9				1	W	80	R n t D t h d } O t a O		
7				10	W	80	D		
6		18	W	30	D				
5		22	W	15					
10	0 5	43	W	20					
8 91		65 5	W	10					
		75	W	1	O				
O t b 19	G N	9 27	0 5	65 5	I	20	C l h t g p l 8 1 81		
		2		80	D	10	V y m l l		
		2		82	I	10			
		8 48		71	E	10	O		
		9 20	1	23	F	30			
		20		6	E	15			
		20	2	14	E	00			
		37	2	54	L	25			
				7 5	E	25	I t		
		8 43	2	82	E	20	O		
		9 8	2	46 5	W	20			
		8 43	0 5	98	W	45	O		
		9 30	2	26	W	15			
		8 30		23	W	15			
8 48	2	12 5	W	65	O				
9 29	1	14 5	W	25	O p h t g p h 8 1 48				
O t b 20	S M	8 5		19 5	D	25	Th k F A 180 t 90 t m d l dy		
		50		6 5	E	20			
		4	2	22	D	25			
		42		58 5	E	20			
O t b 21	S S	8 18		84 5	D	10	O		
		18		82	E	10	O		
		9 55		97 5	E	10	O		
		8 18	4	68 5	E	90	O		
9 4	1 5	55 5	D	25					

Dt	a b	H IST	B	L t t l		L b	H ght	R m k		
				N th	S th					
O t b 1	1907 id	SS	8 45	10	26		E	70		
			84	05		24	E	45		
			29	8		29	E	40		
			18	1		85	E	120	O	t d t t h l t p m by O t k O l m p h i t d l f m t h p m t t h h p l
			18	8		47	W	35	C	
			18	1		10	W	10	C	
			18	1		7	W	10	C	
			18	1	1		W	15	C	
			18	8	26 5		W	30	C	
			18		40		W	15	C	
18	25	56		W	25	C				
O t b 2	GN	8 42	1	8 5		W	60	C		
		10 10		08 5		E	35			
		8 12	15	51 5		L	20			
		4	15	29		E	90	O		
		10	25	12		L	20			
		5		35		L	40			
			1		8	E	15			
		8 40	15		19	E	30			
		10	0		25	E	40	||		
		10	1		30	F	20			
		9 54			48	F	10			
		8 37	1		5 5	D	20			
		37	0		51 5	E	15			
		12			78 5	F	80	C		
		10 28	4		45 5	W	30			
8 12				W	15	O				
42		4		W	15	O				
10 30		6		W	10					
30		10		W	10					
8 42		38		W	20	O				
42		46 5		W	00	C				
O t b 3	SS	8 27		63 5		L	10	C		
		34	05	58		E	0			
		30		44		E	20	V y f t		
		29		38		D	20	D		
		28	05	31		E	15			
		27	05	28		E	25	75 hgl C		
		26	15	13		E	15			
		24	4			D	80			
		21	15		18	L	2			
		16	1		58 5	E	0			
		0 8			63 5	D	15			
		8 27			61 5	E	15	C		
		27			53	W	20	O		
		9 4	1		48	W	25			
		4	4		48 5	W	30			
8 58	05		3	W	15					
27	4	48		W	60	C				
O t b 26	CN	8 46		78 5		E	10			
		18		58 5		D	100	C		
		45	15	28		D	25	V y f t		
		45	1	20		E	20			
		44			10	E	10			
		44	3		18 5	D	0			
		41	0		28	E	45			
		41			29	E	30			
		41	3		37	E	20			
		40	1		15	L	10			
		18	15		82	L	25			
		18	1		84	E	25			
		18			51 5	W	10	C		
		18	05		39	W	15	O		
		55	4		10	W	35			

D t a b	II I S I	B	L t t d		L n b	H g l t	R n k	
			N t h	q t l				
1907 O t b 26 - n i d	GN	8 2 52 18 18 18	1 1	5 0 16 18 29 38	1	W W W W W W	30 10 60 60 80 30 30	} O t l t p } A n h d l d v t l l b O M t l m b g t P A 338 O j h t g p h s 18
O t b 27	SS	10 18 17 17 1 15 1 11 13 4	0 05 05 05 1 13	41 3 30 12 9		L E T L L L E E L	10 0 20 20 6 2 2 10 10		C l m n 7 b d (- S i E t - S S W) n d 45 l g h 15 O D b l C A d t l d t k P b l l y m t l l W t l b d f m t n f l g h t l q l t g w t d O b d t l l l t l l d O p l t j h 8 4 1
		10 8 25 31 38 3 8 11 10 29 8	1 2 8 15 3 2	77 565 81 18 55		W W W W W W W W W	50 25 0 0 20 45 30 30 10	
O t b 28	SS	11 8 12 6 11 10 31 32 3 1 8 6 8 6 6	0 2 1 3 9	545 48	1 17 38 42 68 28 10	T I D T D I W W W W W W	40 30 2 50 40 40 20 35 0 10 20 10 10 65	C O A g l f 3 1 m C O n S g b l T h k p g l u l C l l t g j h l l t C D t l d V y f t O A d t h d t k } O n t d b y t k
O t b 29	SM	8 4 40 36 31 30 28 4 21 20 9 59 8 2 9 57 55 50 49 18 40	15 3 4 8 8 15 25	875 815 55	7 15 195 28 435 10 885 985 72 755 845 875 45 40 25 12	E E E E E I E D L W W W W W W W	20 15 10 50 15 80 15 40 15 25 20 45 10 95 15 15 80 10 35	

Dt db	E IST	B	L t t d		L mb	H ght	R m l					
			N th	S th								
O t b 29 190 — 23	SM	4	8	35	W	35	B l t					
			26		W	40						
			27		W	25						
			29		W	25						
			32.5		W	55						
			34		W	20						
			3		W	50						
			44.5		W	40						
			55		W	8						
			64		W	20						
			66		W	10						
			80		W	20						
			O t b 30		SS			46.5		D	80	C i l t g 1 h 8 22
								42		D	10	
83	F	30										
80.5	E	30										
9	D	10										
1	E	90										
	E	70										
	F	0										
	F	25										
	P	45										
	P	10										
	E	25										
	W	40										
	W	60										
	W	4										
	W	10										
	W	10										
	W	10										
	W	45										
O t b 31	SS			9				D		10	P g l d P A 180-310 w t d C ph g ph 8 26 d 11 6	
			20	D	25							
			20	E	20							
			17	D	20							
			14	D	20							
			18	E	10							
			10	E	60 ±							
			6	D	25							
			10 80	W	10							
			9 81	W	25							
			N mb 2	SS		49			E	10		D b l D t h d
						40			E	30		
						27			E	20		
						21			E	5		
7	E	15										
	D	20										
	F	25										
	E	10										
	E	1										
	D	1										
	E	20										
	E	20										
	D	10										
	P	50										
			88		D	10	D b l } A O t l 40 h g h f t T h t t k M t l N p m b t O l g h t l y d p l d t d O h m p l d p d t t - 24 E C i m t t h t l w d d m t p m s l t - 39 5 D } M t					
			89.5		P	50						
			4		E	30						
			48		E	30						
			48		E	25						
			81.5		E	10						

Dt nd b	H IS F	B	L t t l		L b	H l t	R l
			N t l	S t h			
1907	x						
N mb 2 SS	10 7 1 9 57 5 54 52 50 47 47 41 4 49 39 38	4 2 2 2 2 1 1 2		81 80 80 59 46 33 25 185 2 18 5)		80 30 30 30 10 60 10 15 30 2 15	Ad t h d t r l I t D bl A C l d 7 l s d 180 l g h f t il
N mb 7 GN	J 7 57 10 29 23 22 20 20 7 57 57 57 57 57 57	1 15 1	49 85 81 28 11	10 05 24 44 51 725 785 55 4 33 21 10 4	J F F I E F T E I D I W W W W W W W	60 35 30 0 0 47 5 20 30 25 1 50 30 25 30 20 15 20	C C C C C C C C C C C C O t l t t l A t m t d t l A 106 C C C C C C C C C C C Ob v l d g b k l d O j h t g l l l l 18
N mb 11 SS	14 18 0 13 70 75 50 50 14 18 10	8 2 1 4 05 05	37 22	2 12 20 23 29 8	F E E I I I W W	90 25 25 30 25 25 20 20	V y f t l l t l m b g t l t + 17 D C t l n O Ob v l d g b k l d O j h t g l l l l 18
N mb 12 SS	10 5	7		145	E	10	O l y P A 120 - 180 w m d W t b l
N v mb 14 SS	9 29 27 8 8	05 1 05	28 11	28 27 41	E E E E	25 10 10 10 25	F m d n l y b e w P A 80 l 180 W t h b d
N mb 15 GN	8 47 47 47 47 9 36 34	3 4 1 2	60 545 50 26	85 48	E E E E E E	15 40 20 20 20 25	C O C B d n t h d m o t s t h e p m t P A 57 5 C

Dt d b	H IST	S	L t t d		L mb	H ght	R m k
			N th	S th			
1907	M						
N mb 15 GN	9 34	1		46	E	15	
	9 9			68	E	30	
	9 9			65	E	30	
	8 47			69	E	30	
	8 47			84	W	45	
	9 57			80 5	W	10	O
	8 47	0 5		78 5	W	20	O
	8 47			70	W	30	O
	9 57			47	W	15	O
	8 47			44	W	10	O
	8 47			41	W	15	O
	8 47			35	W	15	O
	8 47			19	W	40	O
	9 55	0 5		14	W	50	O
	8 47		12	10	W	35	O
						10	O
							W th p
							O ph t g ph 8h 47m
N mb 16 SS	9 35		77 5		E	10	
	29	1	56		E	0	
	29	1	58		E	45	
	24		49		E	45	
	15	8	28		E	50	
	4	0 5		7	E	25	
	4	0 5		10	E	25	
	10 13			12	E	25	O
	13			1	E	15	O
		2		45	E	10	
	8 54	1 5		51	E	10	B ght
	48			66	D	25	D pl d by 10h 20m
	48	1		67 5	D	20	80 t 10h 10m
	10 15	8		87	W	65	V y f b hyd g
	12			75	W	90	St m f btl w y f m th t p t t l
		1		33	W	30	l gth 4
	6	11		28 5	W	30	
	8			14	W	60	F l m t l l d
	9 57	0 5	9		W	25	F t
	10 13	0	13		W	10	O
		1 5	20		W	10	L w hyl g 30 O
	9 50		28 5		W	20	
	39		71		W	10	
							O ph t g ph 10h 13m
N b 17 GN	8 25		87 5		W	35	O V y f t
	9 20	1 5	53		E	35	
	18	5	24		D	45	
	15		3		D	15	
	13	1 5		15	E	60	
	13	5		19	E	15	
	12	1		24 5	E	15	
	11	1		30	E	30	
	10			51	D	20	
	10			62	D	15	
	8 25			88 5	W	10	O
	25			70	W	10	O
	25	9		32 5	W	25	
	9 30	1 5		21	W	30	A t m e t d t PA 282
	24	1	Eq t		W	10	
	28		2		W	10	
	28		9		W	20	
	22		17		W	20	
	22		59		W	10	
N mb 18 SS	58	1 5	59		E	25	O ph g ph 8h 5
	51	0 5	54 5		E	2	
	50		52		E	25	O t d t t p
	47	1	8		E	5	
	46		9 5		E	70	Sl t thw d 6
					L	0	D t h d l t g

November are probably mainly due to the unfavourable weather in those months. If allowance is made for the partial observations the half yearly frequencies work out as follows —

P l	N d y	nb t m	f p t l b	b t	g s d y	M l d g	f l m	i y p	d q t	m l	T t l m f q d m		
												q p l t t l	N t h
J u y 1 t J u n e 3 0					165						82	114	197
J u l y 1 t D e c e m b e r 3 1					182						84	108	194

Metallic prominences were of frequent occurrence 111 having been recorded. Of these 104 were confined to the sunspot zones the northern and extreme latitudes observed being given in the following table —

	N m b	d d	M l t t u d	D t m l t t u d
N o t h	4		157	+ 8 + 44
S o u t h	50		156	- 7 - 50

The remaining seven were widely distributed in longitude but occurred in a narrow zone of south latitude entirely outside the spot regions the mean being -72 . The only metallic elements observed in these high latitude prominences were Na, Mg and Fe while many of those in the spot latitude gave in addition the lines of Ba and Ca together with a considerable number of unidentified lines probably including Ni, Mn, Cr and Ti.

Sixty prominences of 2 minutes or more in height were recorded during the year. Twenty four of these were in the northern hemisphere and thirty six in the southern. Twelve of the latter occurred in the high latitude zone of activity having a mean latitude of -72 . The highest altitude was recorded on March 14 in a transient eruption in north latitude 63 in the calcium photograph this reached 67 minutes. Another short lived prominence nearly in the same heliographic position was observed and photographed on May 11 in latitude $+59$ it attained 20 in calcium. Eruptive prominences attaining considerable altitudes were also photographed on the following dates — May 3 $+20$ E (290) May 25 $+15$ W (270) May 30 -8 W (30) July 4 -63 W (315) July 25 -26 W (240)

[J E]

