Kodaikanal 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 C line of hydrogen and the photographs were taken in the H and K lines of calcium

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

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

Date		IST	I	Extent		L b	Height	Remarks
				North	East			
1907								
July 8	S M	8 46	1	4		L	40	
		45	6	44		F	80	
		30		31		D	10	
		34	2	5		J	15	
		31	3		12 5	J	20	
		30			28	J	10	Sl t tl l
		28			31	F	10	D
		26	0		9(	J	J	
		24			79 5	J	10	
		2)			51	W	0	C
		9			52	W	20	C
		J			50	W	20	C D t l l
		9 28	2		34	W	90	D ubl
		16	1		15	W	30	C t d t t C
		1	C		9	W	75	S N t
		2	4	35		W	30	
		0	1	3		W	40 & 20	D ll
		8 5	3	5)		W	0	C l k
		51		72		W	35 ‡	Γ t
		50		76		W		C ph t ph Sl 29
July 4	C N	8 41		64		L	80	C
		41	4	44		L	40	C N w t t p
		9 1	1	2		E	25 ‡	
		8 41		Eq	t	D	40	C
		0	1		11	E	0 ‡	
		8 41	1		13	Γ	1)	C
		9 8	2		26 5	J	30	
		5			C0	Γ	2 ‡	
		8 19	2		4	W	200	S N t
								C ph t pl Sl 41m

Dt d b		H IS T	B	L t t d N th	L t t d S th	L mb	H ght	R m k
1907								
J ly 5	C N	8 38	2	77 5		E	20	C
		38	3	28 5		E	10	C
		6	1	Eq t		L	40	40 C } Tw C t l t th tw
		55	2		19	E	45	80 C }
		58			30	D	90	} C t d C ly 0 l gh n C
		8			38	E	30	}
		5	0 5		48	E	0	
		38	4		3	E	60	C l l d t t p
		51			61	E	15	
		50	0 5		78	F	4	
		9			9	W	20	D t l d
		8 38	3		54	W	10	C
		38	2		45	W	40	C B d t t p
		9 2	0 5		33	W	15	
		1	3		14	W	30	A l l k
		1			11	W	20	
		0	3	30		W	30	C l k 20 C
								C pl t g ph 8 98 d 9h
J ly 6	S M	9 15		71		F	10	
		10	1	19		E	25	A C t k p th gh t
		7	0 5	13		F	15	
		8 15		7		L	15	C Sl t thw d
		9 5	3		24	E	40	B d d ly m t l mb t l t — 20 E n C
								V y b ht N t t ll
		8 15	1		35	D	10	C
		50	4		41	E	40	S N t
		30			46	F	15	
		29	0 5		50	E	0	
		15	10		6	E	60	C M t tl l t P t ly th m p d y
								N t hyd g tl d y
		27	1		68	E	15	
		26			70	E	15	
		25			76	E	30	
		15			77 5	W	15	C D t h l
		15			71	W	60	C D t h l Ab t 4 b d
		15			65	W	20	C
		10 27	0 5		62 5	W	30 ±	V y f t B d C
		24			50	W	15	} Sl t t w l h th
		23	0 5		47	W	15	}
		8 15			18	W	10	C
		10 21	1		27	W	30	S b d t t l N th h C
		8 15	3		13	W	5	C l d d ly t l mb t l t — 4 W
		9 33	3	10 5		W	40	} M t t t p A C t k p tl gl th
		33	1	15		W	40	} l m th t p m
		5	3	31		W	35	
		20	0 5	68		W	10	N tl g h C
		8 15	0 5	72		W	15	C
								Th gh b k l d
								C pl t g pl 8 15 d 8 21
ly 8	S M	8 48		77		E	20	C
		9 5	1	54		E	15	
		3	1	39 5		E	35	
		2	1 5	22		E	40	
		0		18		E	35	B d t t p
		8 58		17		E	25	D t h d
		50	1 5	5		F	60	
		47		2		E	35	D t h d
		43	2 5		19	E	45	B ht t t ll
					2J	E	15	
					30	E	10	
		38	3		32 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		3	W	15	
		28			27	W	10	

Date		HIST	Bar	Ltd North	Ltd South	Int	Height	Remark
1907		M						
July 8	S M	9 26	3 5		17	W	35	Bright
— td		8 48	1		15	W	30	C
		48			18	W	30	C Dt l d
		9 24			7	W	25	
		22			1	W	3	
		20	2	5		W	15	
		19		8		W	25	)t h d
		15		48		W	20	
								C ph t pl 8h 48 y p pl t
July 9	S S	11 25	2		22	W	10	
		26		9		W	15	
		8	1 5	48		W	40 ±	S s b d k t l b n t m d t t l d
July 10	G			5		D	35	D t h
			1	3 5		Γ	35	
		10 40	5		14	Γ	30	M t ll i n D D b b bs d b
		40	(		1	L	0	
		38	2		31	D	70 ±	
		36	1 5		13 5	h	30 ±	
		55	1		1C	W	30	
				11		W	15	
		54	2	50		W	0 ±	
J ly 11	S S	8 53		73		D	25	
		52	2	02		L	30	Ch g g D
		5	8	56		D	40	
		43	1 5	14		I	15	
		38			4	L	40 ±	
		38	2		5 5	E	10	Cl B g l t D1 D2 b b b l b b ght C l ghtly d pl d t d t b
		14	6		14	Γ	25	A hl k
		12	2		28	L	80	T p m t l mb g t l t — 27 D
		10	2		38	L	100 ±	B g l t N t m t ll
	9 5		0 5		C9	W	5	
		4	0 5		57	W	35 ±	Γ t
		0	1		18	W	10	
	8 58		0 5	50		W	10	
		58		52		W	15	
		58	1	51 5		W	25	
								C pl t g ph 8h 43m
J ly 12	G N	8 29	1	75		I		
		27	0 5	63		I	10	
		27	1	60		E	40	
		5	0 5	47 5		E	40	
				21		D	25	
			0 5	18		E	1	
		24	2		4	F	90	
		0			17	Γ	20	} M t
		20			19	F	20	
			4		24	F	0	
			6 5		33	E	90	N w t t p
			0 5		40 5	E	5	
					42 5	L	15	
			0 5		54	E	20	
		10	2		8	I	60	
		35	1 5		9	W	0	
		34	9		22 5	W	50	N w t t p Tl y b g l t p t h t th w t d f th t p C
			1 5		12	W	0	
	9 31			37 5		W	15	
			6	0		W	35	
								C pl t gr ph 8h 22m nd 8l 37m
J ly 13	S S	9 10	0 5	28 5		F	15	
		9	1	26		E	25	
		8	1	21 5		E	10	
		6		3		E	10	

Dt d b		H I S Γ	B	L t t d N tl	L t t d S tl	L b	H g l t	R m k
1907								
J ly 13 — *ntd*	S S	9 3	0 5		11	I	1	
		0			15	E	20	
		8 58			9	b	80	
		57	2		8	L	50	
		11 30	1 5		61	W	0	
		28	0		91	W	1	
		28	1		28	W	5	
		28	1		3 5	W	0	M t d l t thw d
		28	1		1	W	70	
		5	4		1	W		
		10 45	1	8		W	10	B g l t M t ll D D b b b d b 5316 8 4)24 1 b l t Oh g p
J ly 14	S S	8 48		C1		E	20	D t l d
		48		55 5		L	10	
		45	1	50		b	10	
		44	1 5	80		E	2	
		43	1 5	9		D	2	
		40		2		E	1	
		39			10	D	11	
		39	1		15	L	60	
		39			19	E	30	O t l t t l
		39			28	E	30	
		32	4		3	E	70	S N t
		26			8	Γ	10	Γ t
		23			9	L	75	Sl g l t ly b d t t l
		23	0 5		t	W	10	C
		9 9	1 5		31	W	2	
		8	1		27	W	20	
		8			21	W	60	Sl t th d D t l d C t d t l b C
		2	9		8 5	W		
		2	4	6		W	30	C t f f l d l nt g t k
		8 58	2	15		W	5	B l t N t m t ll
		55	7	47		W	80 & 20	C ph t g ph 8 23 d 8h 32
J ly 15	S M	8 28		4		L	20	(
		55	2	61		b	25	
		53	1	48 5		D	25	F t
		51	0 5	38 5		E	30	
		48	2	31		E	45	
		45	3	4		E	25	
		43	0 5	10		L	0	B g ht M t ll D D b b b d b b ht
		40	2 5	4		D	30	
		37		Eq t		I	25	
		34	6		17	b	60	B l t N w t t p m t t t p
		32	0 5		24	E	45	
		28	2		37	L	45	B gh
		25			43	F	35	D l d
		24			45	E	10	
		9 25	1		61	W	10	
		22			29	W	35	
		19	1		14	W	25	
		13	6	4		W	60 & 20	P t d t t B g ht n t m t ll
		10	4	17		W	25	B g ht t ll
		5	0 5	25 5		W	25	
		3	2	7		W	30	
		1		43		W	30	F t Sl g ht ly b d t t p
		0		5		W	15	
								C ph t gr ph 8 28 d 8h 34
J ly 16	S S	9 46	0 5	67		I	10	
		39	1 5	59		l	0	
		39	0 5	54		E	20	
		39		52		E	20	
		39	0 5	50		L	20	
		39	2	4		F	20	
		33	9	30		P	40	
		30		19		L	1	D t h d

D t d b		H IS r	B	L t t d N th	L t t d S th	L mb	H gl t	R m k
1907		H						
J ly 16 — td	S S	9 28	4	10		E	80	C t d t t p 70
		28	4	4		E	80	
		4	1		7	D	25	S N t l
		24	1		9 5	r	1	
		28	2 5		14 5	L	10	
		21	1		3	D	20	
		0			27	D	0	60 n C
		19	1		36	r	10	
		16	5		44	E	60	N w t t p i n C Ch m ph l t d 10 f l t — l E
		18	2 5		60 5	E	10	M t ll D D b b b b 58108 0186 d 49 4 l b ght
		10	0 5		74 5	D	20	
		7			88	E	0	D t h d Sl nt tw d
		10	1		86	D	10	
	10 10	1			28	W	50	S N t 2
					10	W		C l gl dy l l l d b tl w y N p m
	9 5(	1	6			W	2	
	51		11 5			W	10	
	50	1 5	61			W	20	
								P A 185 — 240 t m l Cl dy C ph t g l l 9 16
July 17	G N	9 23		62		E		C
		23		50		E	25	C
		20	1	38		r	5	C t l t t p
		29	1 5	35		E	25	
			2	16		r	20	A C t k l tl gl th t p
			0 5	13		L	15	
		23		7 5		D	15	C
	8 (		1	2		F	30	
	25		2 5		9	E	0	T p m t l ml g t l t — 15 D
			1		37	r	3	T p t d by C t k
			0 5		42	E	L w	
		20	1		51	D	10	
	9 3				3 5	L	35	C D t l d
			2		35	r	20	60 h gh nd l nt tw l C
		23			72 5	W	60	C
		43			62	W	20	C D t l d
		28			20 5	W	120	C S N t
		3	4		1	W	40	C p m n t l f m l t — 13 t + 1 W
		3		6		W	15	C
								C pl t g pl 0k 23
July 18	S S	0 4	0 5	32		L	10	
		4	1 5	30		r	20	Sl t twa d
		1	1	26		E	10	
		1	0 5		7	D	0	
	8 59		0 5		10	E	20	
	58		1		13	L	25	
	56		1		38	D	30	
	6		1		40 5	E	35	
	9 58		0 5		47	W	10	
	10 22				31	W	10	
	9 45				14	W	30	
	45				9 5	W	30	
	45	1			r	W	20	
	43	1			1	W	30	S g p
July 24	S M	11 28	1	6		D	5	
	10 12	2			7	W	25	
	10	1			4	W	15	b g b d Tl gh tl l
J ly 25	G N	11 8	5 5	50		D	10	
	10				1	D	25	
	30				56	E	70	D t h d
	1	1 5			35	E	15	D t h d C
	1				34	W	35	V y f t
	1				75	W	0	C
	1	1			51	W	20	

Dt d b		H IS 1	B	L t t d N th	L t t d S th	L mb	H ht	R m k
1907								
July 25 — 2d	G N	11 1	1		48	W	10	C
		1	1 5		32	W	15	C
		1	1		28	W	40	C
		10 49	1 5		24	W	20	N tl h
		11 1	0 5		17	W	10	C V yf t
		0			2	W	50	D t h d
		10 45	4	1C		W	30	
		11 4	0 5	41		W	45	
		6	3	53		W	40	
								C ph t g pl 11 l
J ly 26	S S	9 8	1	50		E	10	
		53	3		12	E	25	
		50	2		25	D	35	
								S mg b d l dy w th y f w h t b l W t l mb t b l
J ly 28	S S	9 20		48		D	10	
		18		32		E	40	D t h d
		17	3	18		D	1	
		13	4		9	E	15	S N t
		10	0 5		18	E	10	
		9	1 5		20	E	10	
		6			71	E	25	
		10 31	1		33	W	25	B ght C
		14	1 5		10	W	25	
		12	1 5	29		W	5	
		9 28	1	52		W	20	
								C p m w fi l pl t t k n t 9h 19
J ly 29	G N	10 9		51		D	90	C D t l d
		20	2	26		E	60	
		18	3	18		D	50	A C t m f m th t p m t th l t p m
			0 5		20	E	30	
					59	E	25	
		40			79	W	70	D t h d C p m 95 h gh d l t thw d
		29			5	W	30	C D t h d
		29			51	W	20	C
		29	1		48	W	45	C
		37	3		39	W	40	45 d 8 C
		35	1 5		25 5	W	60	H gl t t d g 30 C t 10h 29 nd 10h 45
		29	0 5		13 5	W	15	C
		29		31		W	15	C
		25	1 5	46		W	45	
								C pl t g ph 10 2 d 10 45
J ly 30	S S	8 35	0 5	58		D	10	
		35	0 5	51		E	35	
		31	2		5	E	20	
		30	0 5		10	D	25	C t d C
		28			23	D	25	
		9 31	1		60	E	25	
		8 10	0 5		48	W	60	C
		9 27	0 5		43	W	20	C p m d t h d f m l mb 60 h gh d m t l mb t l t — 35 W
		26	1 5		12	W	30	V y b ght C
		24	0 5	21		W	20	
		22	1	27		W	30	T p t l C
		21	4	34		W	50	A hl k
		20		47		W	25	
		18	0 5	50		W	10	
								C ph t pl 8 10
J ly 31	G N	9 4	0 5	79		E	15	
		3		55		E	20	
		2	0 5	44		E	15	
		0	2		4	D	40	C t m fi w t h d

Date		Hour IST	Bar	Latitude North	Latitude South	Lamb	Height	Remark
1907								
July 31 — Aug 1	GN	8 50	0		11	E	15	
		58	1		19	E	30	
		59	0·5		24	E	35	
		57	0		30	E	10	
		15	1		18	E	15	C
		56	1		72	D	15	N th g h C
		15			80	W	70	C D t h d
		15			48	W	60	C D t l d l l k
		15			14	W	60	C N l y n t t t p
		15			10	W	60	
		9 10	3	10		W	15	D bl A C t k t th t p f th
		6	3	24		W	35	
		5	1	39		W	45	r t
		8 1	0·5	49		W	10	C
		15	2	73		W	10	C A h l k
								C l h t s l h 8 l d 10 30
Aug 1	SS	1 20	1	56		F	10	
		20	2	51		F	15	
		18	3	46		E		
		17	1	27		E	15	
		14	1		18	I	15	C t d
		14	1·5		20	E	35	
		10	1		48	E	20	r t
		9	0·5		80·5	W	10	
		32	1		42	W	10	
		31	1·5		21	W	10	
		5	7		12·5	W	60	
		4	0·5		6	W	10	
		3	1	9		W	30 & 20	
		0		27		W	40	D t l d
		14 59	1	33·5		W	10	
		58	0·5	46		W	0	
								Cl dy w th b k St g w d
Aug 4	GN	9 28	1	55		E	30	
		4	2	38		E	15	
			0·5	5		E	20	
		10	1·5		20	E	10	B g l t
		1	3		28	F	60	D
		8	1		45·5	E	75	
		7			64	E	20	
		40			78	W	50	C
			2		12	W	60	l m l t diff t nd d t h d f m l mb
			1		6	W	30	C
		90		3		W	15	
								C pl t g ph 9l 40 y p pl t
Aug 5	SM	10 55	1	7		W	15	W tl y b d
Aug 6	SM	0 37	2·5	57		F	35	
		9	1	14		E	25	D bl C p m 55 h g l d m t l mb g t l t + 28 E
		31	1·1		1·5	E	95	A t k C l g ll w thw d f m th t p
		30	1		18	F	20	
		29	1·5		26	F	20	
		58			75	W	30	C
		58			69	W	65	C D t l d
		53	0·5		87	W	30	C Sl t f l t — 46 W
		58			19	W	15	
		53	1·5		8	W	20	C
		53	1		1	W	10	
		42	2·5	15		W	15	
		53	0·5	28		W	25	C
		58		29		W	40	C D t h d
		40		37		W	90	D t h d C t d t h mb n C
								C ph t g l l 9h 58
Aug 9	SS	9 52	0·5	23		E	10	
		50	2	15		E	25	
		48		11		E	30	

Dt d b		HIST	B	Ltlt l N th	Ltlt l S th	Lmb	H ht	Rmk
1907		H						
Ag t 9	SS	9 40	2		10	E	40 ±	Sl t tw d
— td		23	0 5		30	D	30	
		28	2		35	D	20	
		21			42	E	40 & 0	
		10 1	4		54	W	60 ±	90 C
		57			30	W	10	C
		0	7		19	W	60 ± & 25	D t d l t h d l yd g C t t d t l b d 05 l gl C
		9 59	5		1 5	W	25	B ght m t ll D D b b b d b b ght
		59	2 5	51		W	30	
		56	1 5	69		W	10	
								Cl ly w th b k S m g d C lh t g ph 10 57
Ag t 14	SS	9 15	2	16		L	40 ±	
		15		19		D	40 ±	
		10	0 5		25	E	0	
		10			28	E	0	
		10	0 5		30	D	10	
		57			30	E	10	
		48	3		35	D	50 ±	
		40	1	7		W	10	C lghtly d pl l t d
		32		9		W	20	
		32	1	11		W	20	
								C g b d
Ag t 16	SS	9 7	0 5	81		E	10	
		0		9J		E	10	
		0		36		D	10	
		8 56	0 5	17		D	20	
		55	6	10		E	25	
		55	1	4		E	35	
		53	1		4	E	20	
		50	6		17	D	30	
		50	2		24	E	25	
		46			68	E	15	
		9 36	1		79	D	30	
		20	0 5		63	W	15	
		24			45	W	50	D t l d
					40	W	10	
					30	W	10	
		20	3		16	W	35	
		1	2		4	W	30	A hl k
Ag t 17	GN	9 50	0 5	60		F	30	
		48	1	37		E	0	
		10 36			3	E	40 ±	C
		9 48	4		9	E	0	
		20	10		16	E	50 ± & 60	C t k t d b th d t f m th p m
					49	D	10	D t h d
		45			79	E	40	D
		10 36			39 5	W	1 40 & 15	C D t l d
			2		27	W	25	
		38			22	W	20	C
		9 42	8		14	W	50 & 70	
		10 36	0 5	7		W	45	C
				39		W	25	
								C ph t g pl 10 36
Ag t 18	SS	9 20	2	60		E	20	C V y f t A hl k
		20	1 5	44		E	20	C F t
		11	3	37 5		E	50	A t k l d f m th f l t + 31 E
		7	1 5	24		E	20	A l dl t f m th t p 60 h gh g f l t + 27 E
		20	4	1		E	60	C
		3	4		6	F	3	
		2	9		16 5	E	40	
		8 59			64	E	10	
		56	1		79	E	40	V y f t n C

D t l b		H I b T	B	L t t d N th	L t t d S tl	L mb	H ht	R m k
1907								
A t 18 st	S S	8 4			83	W	30	D t h d
		54			82	W	20	
		4	0 5		81	W	20	
		54	0 5		90 5	W	25	
		54	0 5		79	W	0	
		53	2		8	W	20	
		52	0 5		64	W	10	
		9 0			56	W	60	C
		20			48	W	30	C
		2	2 5		44	W	20	D bl
		24	1		20	W	25	
		2	0 5		11	W	20	
		20		2		W	1	C
		1		18		W	25	V y f t
		19		48		W		
								P g l l C l l t g l h 9l 20m
A g t 19	S M	8 56		70		L	10	C
		47	0 5	67		L	15	
		56	0 5	64		E	10	C
		6	2	60		L	10	C
		6		55		F	20	C V y f t
		18	1	49		L	f	9 l d C } C t l n C
		43		45		E	30	D t h d
		40	0	36		L	1	
		3		3		E	5	A C t k fi } C n t d t t p d f l t + 21 E 50 l gh n (
					55	L	60	A d t h d t l
		3	1		11	D	10 t 25	D bl
		8	0 5		11 5	D	0	C d l l d l A t d ly } V y b gl t m t lh D V y f t t D b b b nd b n C t 8l 56 b ght Alm t l pp d by 9l 21
		28	1		10 5	D	15	
		7	1 5		9 1 5	L	35	5 l d C
		5	5		70	F	50	
		56			83	F	40	
		6	1 5		8	W	25	
		56			1)	W	40	C
		9 3			18	W	20	
		3	1		4 1 5	W	15	
		3			18	W	35	
					20	W	30	} Γ t t b tw n n C
		0			11	W	0	± l t
		8 56		8		W	15	A hl k
		51	4 5	14		W	40	30 ly C
		5		38		W	15	8 b d d 40 h gh n C
		8	2	43		W	30	C
		50	4	50		W	35	± Γ nt C l h t l h 8l 50m
A g t 20	S S	10 10		40		E	25	D t h d
		7		7		E	10	
		C		Fq t		E	10	
		9 40	0 5		40	D	40	
		10			44	E	20	
								Cl dy w il f w b k P w b l nly b tw P A 65 d 180
A t 2	S S	8 54	1 5	75		E	20	
		53	0 5	66		F	10	
		50	1 5	55		E	25	
		47	2	20		D	70	60 ly C
		40		17		E	60	
		11		6		E	15	
		42		Eq t		F	15	
		41	2		1	E	45	A t k f m t p m t l mb } M t t t p g n t l t — 4 E
		38	4 5		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 IS T	B	L t t l N th	L t t l S th	L mb	H ght	R m k
1907								
A gu t 22	S S	8 30	0 5		8	E	25	
— *tō*		9 25	2		78	W	5	
		24			72	W	35	V y f t
		21			60	W	10	
		20	1		52 5	W	25	
		19	2		50	W	50	
		17			44	W	40	D t l d
		18	10		28	W	40	
		18	2		1	W	25	
		10			13	W	40	D t h d
		7	2	14		W	30	
		5		28		W	3	D t h d
		2		53		W	150	120 ly C
		58	2	02		W	50	
								C ph t g ph 8h 8m
A t 23	G N	10 2	5	16		D	30	
				8 5		F	15	
		1	2		5	F	25	
		0	2		26	D	45	
		9 58			30	D	20	
		58	0 5		32	L	20	
		10 16	1		08	W	15	
		9		1f		W	0	
		14	0 5	19		W	10	S A t
A g t 24	S W	11 0	1	52		E	20	
		10 49	1	17		D	25	C
		59	1	6		E	30	N t C
		58	1	2		E	15	
		49	10		21	D	50	C
		57	2		28	E	10	
		56	8		57	D	25 & 75	90 C
		49	0 5		73	F	20	C
		49	8		79	D	60	C
		49			77	W	40	C
		49			73	W	30	C
		49			31	W	15	C
		11 2	0 5	10		W	15	
		10 49		17		W	20	C
		49		49		W	35	C
								P A 180 t 300 t m d
								R t th gh th l
								C ph t g ph 10 49
A g t 25	S S	11 19	0 5	51		E	25	
		8 3	0 5	29		D	20	C
		11 17	1 5	17		F	0	C
		17	2	13		F	10	
		17		1		L	10	C
		8 35			14	E	25	C
		35			17	E	25	C
		35			23	E	130 & 60	C D t h d
		11 6	3		61	E	0	
		11	1		74	E	10	
		10	7		80 5	E	40	60 C
		8 3	4		74	W	45	C
		11 26	1 5		41	W	25	C ly 15 C
		8 3	0 5		36	W	1	C
		11 2	2		30	W	30	C ly 20 C
		24	1		6	W	25	
		8 35	2	31		W	30	C D bl
								C ph t ph 8l 35m
A t 27	S S	8 52	1	48		F	20	V y f t 30 C
		0		24		E	20	45 C
		30		15		D	30	C
		48		12		E	10	
		46	2	7		E	10 & 20	
		44		5		E	50	D t h d

D d b		H u I S T	B	L t t l N tl	L t t l S th	L b	H ght	R m k
1907		M						
Augu t 27 — t2	S S	8 44	2	2		E	1(& 20	
		30			18	E	30	C T p m t n t p mm
		98	0 5		22	E	30	T p l ng th l mb f l t — 27 E
		35	1		66	D	60	
		9 28			78	E	0	D t l d
		22	1 5		81	E	40	
		20	4		88	E	50	
		18	0 5		81	W	10	
		17	0 5		74	W	35	V y f nt
		8	2	15		W	30	
			2	21		W	20	
		5	0 5	26		W	60 ‡	F t t t p
		1	0 5	30		W	15	00 n C
		8 59	5	38 5		W	30 & 35	45 C
								C ph t g ph 8 30
A g t 28	S M	9 18		61		D	15	F t
		16	0 5	81		L	10	
		15		22		L	10	A C t l l nt p n h d f th p m
		12		12		E	25	D t h d
		10	2 5	9		D	20	D bl 50 n C
		8 48		4		E	70	C B d t p
		9 8	1		2	E	10	
		7	1 5		17	D	20	B ght m t ll D D b b b d b ht V y f nt n C
		4	1		81	D	35	O l 7 b d C
		1			84 5	E	35	
		1			80	L	35	
		0	7		72 5	L	45	Th w n t d by f t t m T l t d C
		52	3		80 5	E	35	
		49	2		83	E	20 ‡	V y f nt
		47	3		82	W	30	
		45			81	W	25	D t h d
		10	1		4	W	10	
		35			8	W	15	A b ght t
		32	11	4 5		W	45	A C t l f m t p m t th t p m
		30	2	18		W	15	
		28	3	25		W	35	45 C
		25	5	41		W	45	
		8 48	0 5	49		W	10	C
								C ph t ph 8 48
A gu t 29	S S	9 45	1	58		E	10	
		41	0 5	21		F	25	
		42		16		D	40 ‡	
		38			1	E	50	
		3	1		25	E	15	
		35	1		28 5	D	15	
		30	2		38	E	10 ‡	
		30	2		37	E	40	V t ll D D b b b b 58168 0186 d 49241 b ght
		29			40	E	30	
		27	0 5		69	E	10	
		27			78	E	10	
		26	4		78	E	40	
		24	2		81	E	3	
		22	4		82	W	60	
		20	0 5		79	W	15	
		18			74	W	15	
		17			72	W	25	D t h d
		10 10			62	W	20	
			2		57	W	10	D bl
		8	1		43	W	15	
		7	0 5		39	W	40	
		5	1		21	W	10	
		2	17	7 5		W	100	
		9 54	2	28		W	60	
		53	1	47		W	35	
								C ph t or ph 10h 20

Date	Hour	Tide	Barometer	Latitude North	Latitude South	Lamb	Height	Remarks
1907	M							
Aug 31 SS	10 42	0.5		51		D	60	
	39	1		8		E	25	
	8	0.5			2	E	10	
	21	0.5			37	E	20	
	21				43	E	60	
	21	0.5			46	E	80	
	11 0				83	W	50	D t h d
	0	1.5			79	W	25	D bl
	10 53	4			6	W	45	
	50	3		30.5		W	50	
	47			64		W	15	
								Cl dy w th b k
								S g p
Sept mb 2 SS	9 1	0.5		8		E	10	
	8 59			16		E	10	
	6	0.5		41		E	5	B d t t p
	5	0.5		15		E	10	l b d d t l t th t p m n O
	54	1		18		E	20	
	53	1		8		D	15	C t d t b
	5	0.5		1		E	10	
	51				14	E	50	Sl t f l t — 19 D
	47	2			21	E	10	
	46				24	E	15	
	42	4			46	E	100	5 5 b d d 90 high C
	9 32				65	E	15	
	29	1			8	W	20	
	8 32	7			70.5	W	1 0	C
	25	1			71	W	15	A hl l M t ll D D b b b nd b b ht Ch g g
	25				69	W	150	F N th h C
	5				65	W	60	
	19	1.5			33	W	10	
	18	1			31	W	20	
	3	0.5			2	W	15	C
	32	1			8	W	10	C
	9 16	3			2	W	2	
	15	1.5	3			W	10	
	13	0.5	6			W	5	
	11	0.5	28			W	50	
	6	1	60			W	30	
	5	1	68			W	10	
								C l h t g ph 8h 3
Sept mb 3 GN	8 41		58			E	30	D t h l
	40	2.5	40			E	15	
	37	1	13			D	60	
	35				14	E	30	A t m f m t l 60 l gh p l f l t — 18 D
	30	11			44.5	E	65 90 & 60	40 & 60 C
	9 0	0.5			69	E	15	
	8 9				32	W	40	C D t h d
	59	1			74	W	30	
	9				1	W	35	C D t h d
		3			17	W	0	D pt m t ll p m l w g l ght d pl m tt d d
	9	1	1			W	0	
	50	4	26			W	70 & 50	Sl t w tw d I C t p m t l mb g t l t + 13 W
	45		43			W	15	
	45	1	43			W	15	
	9	0.5	55			W	10	C
	44	2	61			W	30	
	42	0.5	82			W	15	
								C ph t g ph 8h 9
Sept mb 4 SS	9 1		6			E	25	
	3		58			E	20	C
	3		53			E	10	C
	3		48			E	30	C

Date	H I S T	B	L t t d N tl	L t t d S th	Lmb	H lt	Rmk
1907							
S pt mb 4 — td S S	8 58	1	39		L	20	
	9 3	0 5	23		E	60	C
	8 54	1	11		F	40	
	51		8		F	50	D t h d } N ly m t C
	45	2		41	F	50	} C t d C tl f m g gl p m
	47			48	F	40	} 10 b d 85 l gh C
	40	3		71	E	10 & 20	D bl
	9 25			79	F	10	
	3			65	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 ht P b bly m t ll pt p m
	3	3	40 5		W	15	C
	8	6	62		W	20	
	3	1	78		W	10	C
							& p w t wh b vi g th w t n l mb
							C pl t g pl 9h 3
S pt mb 5 G N	11 37		25		L	25	C
	37	4	8 5		E	30	C
	10 0	1	12		E	1 ±	
	11 37	0 5		8	F	10	C
	37			16	F	15	C
	9 5			10 5	E	10	
	55			14	F	15	
	50	0 5		21	L	0 ±	
	11 37			8	E	30	C
	37	0 5		43	L	40	C
	9 50	2		55	E	15	
	11 37			72	W	4	C
	37			68	W	20	C
	37	15		21 5	W	20 25 & 100	C
	37	1		9	W	25	C
	10 9	1 5	21		W	1	
	5	3	49		W	50 ±	S ly C
	11 37	3	68		W	0 ±	C
							W tl p
							C pl t g pl 11h 37
S pt mb 6 S S	8 59		48		L		
	57	7	28 5		E	20 & 15	
	55		15		F	10	
	3	10	7		F	45	A blk C d pl d t ed 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		60	W	25	
	26	2		48	W	15	
	24	2 5		25	W	100 ±	1 0 C
	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	
	9		48		W	40	60 C
	9		50		W	20	
	4		82		W	15	
							C lh t g ph 8h 9

Date	Hour IST	Bar	Latitude N	Latitude S	Lumb	Height	Remark
1907	H M						
Septmb 7 GN	9 27	1	28		E	2	
	5	1		21	D	50 ±	
	25	0 5		6 5	E	4	
	29			36	D	1	
	23	0 5		8	E	15	
	28			40	D	25	
	15			53	E	15	
	15	0 5		54	E	15	
	15	0 5		56	L	40 ±	
	14	0		65	E	15	
	8 30			68	E	10	C
	9 35	0 5		66	W	20	
	8 36	0 5		58	W	0	C
	36			24	W	20	C
	9 33	1 5		8	W	25	
	32		22 5		W	40 ±	
	8 36	4	50		W	15	C
	9 29	2	81		W	15	
							W th p
							C ph t g ph 8h 36
Septmb 8 SS	9 6		55		L	15	
	42		37		L	60 ±	
	8		0		H	15	
	8 50		5		F	10	C
	9 2	2		8	F	15	
	8 59	0 5		28	E	25	
	58			27	L	1	
	9 33			49	E	40	
	32			51	E	2	
	8 50			65	E	60	C D t h d
	9 29			82	E	20	
	29	0 5		82	W	15	
	28			78	W	60 ±	
	26	1		73	W	20	
	25	2		70	W	10	
	23			65	W	25	
	23	2		59	W	15	
	21			53	W	20	D t h d
	17	0 5	5		W	20	A C t k f m t p g f l t + 10 W
	8 0	0 5	49		W	10	C
	9 13	3	57		W	10	25 C
							P g l d
							C pl t g ph 8h 50
Septmb 9 GN	9 3	2	56		E	20	
	8 7	0 5	49		E	10	C
	9 2	4	36		L	30	
	1	1	5 5		D	10	
	0		18		E	15	T bl
	8 58	5		10 5	D	25 ±	
	24			28	E	150 ±	C
	7	7		27 5	F	60	C A hl k
	56	2		35	D	15	
	5	0 5		46 5	E	0	
				49	D		C d plac d t l t f b t 2 A
				52	F	70	A l f m t p g f l t — 62 E
	9 21	1		74	E	20	
	20			79	E	5	
	20			81	D	5 J	
	19	1		74	W	30	
	18	0 5		6 5	W	30	
	16	1		59	W	15	
	8 7	0 5		31	W	30	C A t k f m t p g f l t — 20 W
	9 4	2		12	W	30	
	10	10	9		W	50 ±	M t ll
	8 7		21		W	30	C
	7	0	35		W	10	C
	9 5	6	57		W	70	
							C ph t g ph 8h 7

D t nd b	H I S T	B	L t t d		L mb	H gl t	R m k
			N th	S th			
1907							
S pt mb 10 S S	8 55	0 5	77		L	15	
	1	0 5	40		E	5	
	50	4	9		L	25	
	49	1	21		1	40	
	48	8	18 5		1	15	
	47		12		E	2	
	45	8	4		1	50	
	40			15	I	15	
	39	4		17	F	15	
	37			27	L	10	} B ght t ll D D b b b b 49241
	37	2		30	L	L w	5018 6 b ht
	30	0 5		19	F	10	
	29	1		53	D	20	
	27			65	L	60	
	9 28	0 5		80	L	50	
	26			78	W	30	
	25	1		6	W	20	
	23	1		3)	W	4	
	23	1 5		8	W	50	
	20			7	W	10	
	18			18	W	50	Sl ghtly d t l d
	17	0 5		11	W	2	
	16			5	W	45 ±	F m d ft t d 150 l gl O
	13		Eq	t	W	10	
	10	0 5	0		W	15	A l nt g t k 60 h gh fl w f m t t n O
	10		12		W	25 ±	
	8 47		14		W	40	O
	47		17		W	60	O
	0 4		46		W	15	
	8 47		50		W	15	
	9 3	6	61		W	100	S N t O ph t g ph 8^h 47
S pt mb 11	9 2	5	0 5		F	40	O
	2	3		71 5	E	70	O
	2	4		27	W	25	O
	2	0 5		9	W	10	O
	2	1 5	23		W	2	O
	2		55		W	30	O
							W th t p f l b t O ph g pl 9^h 02
S pt mb 12 S S	8 29		81 5		F	10	O
	9 0	1	64		E	2	8 n O
	6	1 5	59		1	50	D
	4	0	56 5		I	15	
	4		54		E	15	
	8 50	2	46		F	40	
	55		3		E	15	
	54		21		F	10	
	53	1	14		F	15	
	51		9		F	40	
	49	4	4		E	30	
	46	6		5	D	10	
	43	2		30	F	90	} O n t d n O 60 O
	39	8		41	F	45	
	29	6		50	L	25 ±	C
	35	3		55	E	35	N th g h O
	9 33			75	E	20	N th g l O
	30			80	L	15	
	28	2		68	W	25	
	26	0 5		58	W	20	
	26	2		50	W	25	
	25	3		41	W	30	
	24	1		35	W	20	
	23			27	W	20	
	22	7		20 f	W	0	
	21	1		13 5	W	25	
	21			11	W	10	
	19	3		1 5	W	120 ±	

Dt d b			H IST	B	L t t d N rth	L t t d S th	L b	H ght	R m k
1907			m						
S pt mb 12		S S	8 29		28		W	10	C
— td			9 14	7	58		W	90	60 C
									C lh t g ph 8 29
S pt mber 13		S M	9 8	0 5	69 5		E	10	
			8 11	0 5	56		E	15	C
			11		30		E	10	C
			9 4		15		D	20	N th g h C
			8 11		11		E	10	C
			9 2	5	2			35	Oh g g
			8 58	1		4	E	10	
			55			23	E	10	
			58			41 5	E	60	A t m g f l t — 28 5 E
			11			54	E	30	C M t th l t p m
			50			59	E	10	
			9 38	1		69	E	10	N t C
			8 11			7	E	75	C
			9 3			7	L	15	N t C
			31	1		31	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 l th t p f th
			24	3		24	W	35	
			20	1 5	6		W	25	N tl h C
			17	8	5		W	30 & 35	
			15	5	37 5		W	1	
			13		42		W	15	
			1		57		W	10	
									C ph t gr ph 8h 11
S pt mb 14		S S	10 25	0 5	61		E	40	C
			25	2	35		E	25	C
			8 50	1	11		E	10	
			10 25	0 5		2	E	20	C
			8 48	4		6	E	10	
			48	0 5		10	E	15	
			35	2		44	E	25 ±	F t
			9 19 }	5		80 5	E	15	
			10 20 }						
			25	0 5		J	W	15	
			9 14			45	W	50 ±	C t C C p m 28 b d
			12			14 5	W	30 ±	d 110 60 80 d 20 h gh
			10 25			7	W	80	C
			25			3	W	10	C
			5		8		W	10	C V y b ght
			9 1	1	12		W	20	
			7	3	15		W	40	
			3	1 5	21		W	25	50 C
			10 25		26		W	90	l b lly p dly h g g
									R d l p k bl n fl l pl t
			9 1			34	W	25 ±	k t 35 C
									C ph t g ph 10h 25
S pt mb 15		S M	10 1		69		E	15 ±	
			15	8	24		E	35 ±	F t
			10	1 5		21	E	10	
			8	1		33	F	20	
			8	10		39	W	35	
			26	0 5	8		W	15	
			24		28		W	20	
			24	4	38		W	25	
									S N t
S pt m 17		G N	8 47		68 5		E	35	C
			9 44		52		E	20	A hl k 30 C
			44	0 5	49		E	20	
			42	2	38		E	30	
			8 47		32 5		E	20 ±	C
			47	0 5	29		E	30	C
			47	2	24		E	110	C B d t t p T p m t hmb ag t l t + 16 E

Dt	d	b	H I S	Γ	B	L t t d — N	tl	— S	tl	L	b	H	lt	R	k
1907															
S pt mb — nsd	17	G N	8	4		8				E		10		C	
				17				1		I		10		C	
			9	5	1			95		I		50	±	T p ly m t l mb g n t l t — 87 E	
				40	0 5			7		F		2			
			8	46	4			45		W		50	±	80 C	
			9	28	1			4		W		0			
			8	47	1 5	49				W		20		C	
														C ph t g pl 8l 47	
S pt mb	18	S S	8	19	1 5	19				J		25		C	
				19	0	8				I		60		C	
				1	1	9 5				I		0			
				20	3					I		15			
				15	0 5			37		I		20		V y f t 3 C	
				19	1			8		E		20		C	
				19	1			46		W		30		C	
				19	0 5			40		W		30		C	
				19				1)		W		8		C	
				19	0 5			11		W		20		C	
			9	21	2 5			1		W		25			
			8	58	1	40				W		30	±	15 C	
				50		51				W		15			
														9 g b d P A 180 — 90 t b d	
														C ph t g pl 8l 13	
S pt mb	19	G N	10	15	0	55				F		80		F p b n l d m t th t p m	
			8	50	4	50				I		1			
			10	15	0 5	26				E		10		C	
			8	40	0 5	24				F		20			
				40	3 5	14				F		45			
				45	10			3		F		35			
				43	1			14		F		20			
				40	4			41		F		80		D bl	
			10	1f				9		I		15			
				1				88		E		10			
				1				82		W		10			
				15				28		W		50		C A t m f m t p 10 1 g m t th n t l m	
			3	0	0 5			7		W		1			
				6	0 5			3		W		1			
				0	4	9				W		20			
			8	58	2	14				W					
														C l1 t g ph 10 15	
S pt mb	20	S S	8	21	0 5	60				F		0		C	
				21	1	49				L		1		C	
				21		4f				F		15		C	
				21	2	21				I		10		C	
				21	1			5 5		F		10		C	
				1	2			17		F		60			
					1			21		E		15			
				27	0 5			2f		E		10			
					1			28		F		0			
				25				4f		I		2f		Upr p t i t	
				23				64		E		15			
				21	0 5			81		I		2(		C	
				21				88		F		20		C } Sl t t w d nd n ly m t l th	
				21				70		W		50		C	
				21	6			86		W		30		C	
				21				28		W		35		C A d t h d l dl t	
				21				2		W		30		C	
				21	1 5			18		W		15		C	
				21	7			4 5		W		30		C	
				21	0 5	7 5				W		1		C	
				21	0 5	26				W		10		C	
				21	8	45 5				W		30		C	
														P w m d ly betw P A l 0 — 180 Cl dy ft 8h 30	
														C lh t g pl 8h 21	

5

D t d b v	H IS T	B	L t t d N h	L t t d S th	L b	H ght	R m k
1907	v						
S pt mb 21 S S	9 35	0 5	08		E	10	
	10 38	2	58		E	60	C
	9 35	0 5	50		E	10	
	10 38		47		E	10	C
	38	1	41		E	10	C
	5		8		E	1	
	8		5		E	2	
	1	0 5		15	L	20	
	1	1		18	D	45 ±	
		0 5		21	E	15	} M t] M t C
	9 0	8		24 5	D	40 ±	
	29	0 5		94	E	10	
	28	1		48	L	10	T p m 1 mb t l t — 50 E
	58	0 5		71	E	90 ±	
	55	6		83	W	30	
	10 36	0 5		54	W	30	C
	9 51			46	W	25 ±	
	10 36	1		48	W	10	C
	9 50	5		34	W	35 ±	
	50			}	W	10	
	48	7		28 5	W	30	S N t
	10 36	4	Eq t		W	30	C
	9 47	8	18		W	20	
	42	1 5	6		W	25	
	42	1	32		W	10	
	42	2	35		W	25	
	40	1	54		W	10	
							C ph t g ph 10h 36 d 10h 27m
S pt mb 22 G N	11 5	3		6	D	35	
	4			26	E	20	
	3	1		50	E	20	
	30	3		70	E	20	70 C
	28	0 5		9	E	15	
	23	1 5		33	W	45	
	23			31	W	45	30 n C D t h d H b t ted } N ly m t t l mh C
	14	2		75	W	20	C A hhk
	14	0 5		62	W	15	C
	20	2		55	W	30	
	14			49	W	30	C F t
	18	1		48	W	20	
	14	4		42	W	35	C
	14	3	0 5		W	45	C A hl k
	15	0 5	7		W	15	
	15		11		W	10	
	14	2 5	16		W	40	
	14		24		W	30	
	14	1 5	27		W	60	40 ly C } C t C I C th f m t g th p m
	10	1	37		W	60	D 10 b d
	8	1 5	56		W	30	
	14		60		W	15	
	8		67		W	45	
							C ph t g pl 111 14m
							I ph t g ph 1 mb f m P A 0 t 150 w p l d by l d
S pt mbe 23 S S	8 32	1 5	60		F	15	
	29		58		E	35	
	26		50		E	10	C
	26	6	45		E	30	C F t
	26	0 5	30		E	15	T p ly m t l mb g t l t + 26 E
	24	2	18		E	10	
	21		7		E	40	D t h d
	20	2	3		E	10	
	16	6		18	E	55	
	15	3		90	F	10	V y f t
	12	2		54	E	20	
	9 13			71	E	10	
	12	0 5		7	E	1	
	10	1		82	W	1	

D t d b		H IS Γ	B	L tt d N th	L tt d S th	L b	H ht	R m k
1907		m						
Spt mb 23	S S	9 8	0 5		72	W	15	Γ p m t l mb g t l t – 70 W
– td		7			62	W	45	++ D t h d
		4			54	W	25	C n t d t t p n C H ght C 20 40
		3			45	W	0	++ & 60
		1	1		40	W	1	
		8 59			24 5	W	60	++ A f w d t d t k
		57	0		19	W	15	
		51	3	18 5		W	45	
		19		25		W	30	
		46		37		W	10	
		42	1 5	4		W	10	
		40	1	7		W	10	
		37	3	73		W	20	
								C ph t pl 8l 26m
S pt mb 25	S S	8 41		5		E	10	
			1	50		E	20	
		32	0 5	)		E	25	
		32	2			D	25	
		32	0 5	1		F	20	
		26	0		28	F	10	
		15	0 5		61	D	20	
		9 58			(	F	10	
		2	0 5		29	W	10	
		8 53	2	Lq t		W	15	
		47	1	5		W	25	
		46		61 5		W	15	
		43		73		W	10	
								P g d o m l l l
S pt mb 26	G N	8 9	1	16		F	20	C
		9 40	1	2		F	1	
		8 9	0 5	14 5		F	10	C
		3		8		L	1	
		9			J	I	40	C
		9			12	E	80	C
		9 35	0 5		37	L	10	
		35	0		63	E	45	++
		35	2		66	E	45	++
		10 7	2		7(	E	10	++
		9 3	1		83	D	4	++
		8 9	1		66	W	65	
		9	0		44	W	60	B d t t p
			1		27	W	1	} N ly m t C
			2		24	W	25	} S N t
		9 52	7		10 5	W	25	
		50	1	7		W	30	
		8)	1	35		W	15	
		9 45	1 5	05		W	15	
								C lh t g pl 8l 9
S pt mb 27	S S	8 4		81		F	10	C
		4		78		F	10	C
		9 15	3 5	1(		D	10	
		14		11		F	2	
		13	1 5	7		D	15	D bl
		8 4			3	E	35	D t h d Γ p m t l mb t th q t
		9 3	1		20	F	10	
		8 4			30	F	1	C
		4	1 5		34	F	15	C
		4	0		78	E	3	C
		4	1		83	W	80	C
		4	3		62	W	80	C
		4	9		45 5	W	65	C N t nt
		4	0 5		25	W	10	C
		4			17	W	10	C
		10 22	1(		8	W	30	} C t nu C
		9 48	3	1		W	35	++
		8 4		11 5		W	2	C
		9 39	2	26		W	5	
		8 4	0 5	38		W	15	

Date	H M S T	B	Ltd North	Ltd South	Lmb	Ht	Remk
1907							
Septmber 27 SS — *contd*	9 33	05	6		W	2	
	30	05			W	25	
							P \ 180 — 80 t b rv l g t l l O lht pl 8l 4
Septmber 28 SM	9 0	05	485		E	10	
	0	05	47		E	15	
	8 38	15	10		E	10	O
	38		8		E	1	O D t h d
	38	1		10	E	5	O
		1		22	E	0	} C nn t d t t p by C t l
		1		2	E	0	
	54	0		38	E	0	60 O C n t d t l t by O t l
	8 38	1		69	E	0	C
	9 50	8		5	E	8	
	8 38	0		81	E	10	C
	38			83	W	30	O
	38	05		79	W	10	C
	39	05		3	W	60	O
	38	3		C45	W	2	O
	38			3	W	10	O
	9 38	1		20	W		10 C
	8 38			14	W	50	O J t k ly m t g tl t p i tt l
	38	15		8	W	10	O
	9 10	05	11		W	1	
	8 38		14		W	20	C
	9		26		W	30	
	38	0	45		W	40	C A d t l f m t l p d w tw d PA 200 —4 0 t mu d ow g t l ds S l l C pl t l l 8l d8m
Septmber 29 SM	9 45	2	26		E	10	
	8 59	4	18		E	5	S N t
	56	05	11		E	10	
	50			11	E	15	B l t N m t ll
	49	3		18 5	E	80	B l t N t m t ll A t k f m t p m ot l mb t l t — 1d L
	6			84	E	90	C l t tl w d
	9 40			42	E	8	V y f t
	8 C			79	E	60	O
	26			82	W	1 0	O
	6			C7	W	140	O
	37			52	W	15	A l l k
	3			33	W	10	
	34	4		0	W	20	D bl
	3		5		W	10	
	30		7		W	1	
	50	05	12		W	1	B gl t C d l l d t d
	29		58		W		Ol l d g b k l d S b y b d C ph t g l l 8l 26
Septmber 30 SS	8 34	8	23		E	70	(0 C
	28	5		18 5	L	1	
	24	6		41	L	5 & 30	
	20	05		(	E	20	
	9 4	15		88	W	15	
	3	1		78	W	10	V y f O
	0	05		4	W	30	
	0	1		51	W	2	
	8 59			8	W	15	
	1)			26	W	1	
	57	4		21	W		O
	55	1	2		W	5	50 C
	19	05	6		W	35	N tl h C t 8l 5m
	2	8	23		W	35	C 8l t t d
					W	100	A t k f m t l m t l mb t l t + 12 W
	19	05	41		W	20	F t 115 C C

Date and Hour	H I S T	Bearing	Latitude		Limb	Height	Remarks
			North	South			
1907							
Sept mb 30 — tō	SS 8 45	05	55		W	30	} Mist t t t p n C
	43		59		W	25	
	42		62		W	10	
							Proj ng l d
							C ph t or ph 8l 19m
Oct b 1	GN 10 12		22		E	70	C
	20	6		18	E	20	
	5	2		2J	L	15	
	10	2		48	E	15	
	12	1		0)	E	20	C
	12	1		89	F	15	C
	12	4		51	W	10	C
	12	3 5		46	W	30	C
	12	4		14	W	60	C
	12	0 5			W	10	C
	1	8	7		W	130	C
	1	1 5	58 5		W	35	C
							W th b d
							C rl t g lh 10h 12m
Oct b 2	SS 11 10			14	E	25 ±	
							W th b d
Oct b 4	SS 8 48		44		E	40 ±	Dist h d
	9 41	05	40		F	35	
	8 44	1	12		F	25 ±	40 ± t 9h 38m
	9 36	2	7		L	30	
	35	1		5	F	10	
	32			20	L	15	
	31			3	F	40	30 C } C t d t t p
	29	2		28	E	100 ±	70 C Tl ly m t } C
							l b t l t — 37 E
	23			42 5	F	25	
	22			58	E	10	
	20	4		77 5	L	20	
	21	3		82 0	F	20	A hl l
	19			89 0	W	30 ±	
	1	0 5		76 5	W	25	} C n t l t t p n C
	17	0 5		78 5	W	25	
	10	1		53	W	1	} T p n t d C
	10	0 5		50	W	1	
	10	1		46 5	W	20	
	8	2		43 5	W	5	
	6	1		21 0	W	10	
	50	5	43 0		W	120 ±	
	49	0	52 5		W	15	
							C ph t g ph 9h 28m
Oct b 5	GN 10 38	1	65		I	1 ±	C
	38	0 5	25		I	15	C
	35	0 5	21		L	30	
	9 5	1		6	E	15	
	0	1		41 5	E	40 ±	
	10 38	2		65	E	20	
	42	0 5		5 5	F	20	
	30	2		89	D	20	C p m 5 b d
	42	6		49 5	W	30 & 15	
	40	1 5		11	W	15	45 n C
	38	4	48 5		W	120	C
	38	1	62 5		W	25	C
							C pl t g ph 10h 38m nd 11l 1m
Oct b 7	SS 8 58	1 5	47		F	35 ±	60 C
	51	0 5	20		L	15	
	45	4		35 5	F	20	N tl h n C
	21	2		41 5	E	5	C
	43	1		50 5	E	15	
	42	0		60 5	E	15	
	42	0 5		62 5	E	15	
	9 36	0 5		79 5	E	10	
	35	0 5		88	W	20	

D t d b		H IST		B	L t t d		L mb	H ght	R m k
					N th	S th			
1907									
O t b 7	S S	9	34	0 5		31	W	15	
— td			32	0 5		49	W	10	
			2			27	W	15	}C t d t t p d 30 h gh C
			20	1 5		20	W	20	
			15	1	5		W	10	
			14	2	21		W	15	
			1	1	30		W	20	45 O }O t d t t p by t k
				1	18 5		W	15	
			6		54 5		W	0	
			6	1 5	58		W	15	
		8	21	1	61 5		W	10	O
			21	2	66		W	40	O
									C ph t pl 8^h 1^m
O t b 9	S S	8	55	2	40 5		E	40 ±	
			53	1 5	34		I	1	
			51		17		Γ	10	
			50	0 5	4		L	15	Sl t utl w d
			32			6	E	15	O
			48	0		5	L	35	N th g h O
			32			10	E	20	O
			47	2		18	E	25	
			32			29	F	30 t 120	O A l t h d t k 9 l g
			42	3		35	E	15	Sl t thw d
			35			44 5	]	30	D t h d Th O 1 dl t b t 70 h h
			35	1		48 5	Γ	25	
			32	3		34	E	25	C
			32	6		31	W	45	C
			32	0 5		71	W	10	O
			32	0 5		66 5	W	15	C
			32	6		28	W	20	C
			32			18	W	20	C
			32	3		18	W	15	O
			32	9	1 5		W	40	C
			32	3	13		W	20	C
		11	10	0 5	14		W	40 ±	
			9	5	31 5		W	05	
		9	4	6	57		W	40	50 O
			13	3	66		W	30	
			11	1	7		W	10	
									Cl dy w th d b k PA 180 305 t
									(pl t g pl 8^l 32^m
Oct b 10	G N	9	55	0 5	37		L	10	O
			55	0 5			T	30	O }O t C
			55	3	21		D	25	O
		10	0	2	6		D	25	
		9	45			17 5	E	10	
		10	15	0 5		59 5	L	15	
		9	55	1 5		34	W	30	O
			5	1 5		50	W	45	O
			55	0 5		1	W	20	O
		10	14	12		37	W	70	120 O
			10	2 5		3	W	20	
		9	5	0 5	Eq t		W	30	O
		10	8	1 5	16		W	15	
			7	2	46 5		W	15	S N t
		9	55	1	52 5		W	30	O F
		10	3	4	60 5		W	4 ±	
									O ph t ph 9^h 55
O t b 11	S S	8	3	1	31		D	20	
			30	0 5	28		E	10	T p m t th p m t l t +15 [illegible]
			30	1	20		L	10	
			28		15		F	10	
			7	1 5	6		E	0	
			27		3 5		F	20	
			27	1	Eq t		E	10	
			41	0		15	E	1	C
			3	3		25	F	20	

Dat d b		H IS T	B	L t t d N th	L t t d S th	L mb	H lt	R m k
1907								
O t b 11 — 12	S S	8 20	10		39	I	4	A g p f 3 1 n t d t g th
		16	2		((5	L	4	
		15	0 5		(7	F	20	
		9 6	0		77	I	90	
		5	0		79	I	25	
		4	2		8	W	40	
		3			77 5	W	40	
		0	2 5		70	W	30	10 O
		8 58			38	W	1 0 ±	S N t
		55			22	W	35	O t d t l t p m O
		5			12	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	30	40 O
								O pl t g 1h Sl 1lm
O t b 12	G N	8 12	0 5	8(		1	10	C
		12		07		F	10	O
		12	4	48 5		F	20	C
		9 0	1	1 5		F	20	
		8 58	1	28		1	90	
		12		1		1	50	O D t l l
		57	2	6		I	30	
		57	1 5	1q t		I	f	
		56			(5	F	1	
		56	1		11	F	30	I p fl w tl w d
		5	0		1	F	1	
		55			19	F	15	
		4	2		18	I	20	
		45	8		43 5	I	(0 ±	
		12	0 f		5 5	I	20	O
		9 35	2		68 (	F	2	
		8 12			78 5	I	10	C
		12	18		77 5	W	20 40 (0 d 40	O A g p f 4 1 t d t h tl
		9 25	8		95	W	90	5 O
		25			98	W	10	} O t O
			4	17		W	45 ±	3 ly (
		5	2 5	28		W	30	
		18	1	29		W	15	S N t
		8 1	0 f	35		W	30	(
		9 3	2	46 5		W	20	
		8 12	1	74		W	20	(
								O ph t g pl Sl l
O t b 13	S M	8 55	4	20		F	3	b l d O
		51	0 5	17		k	)	
		47		15		1	25	D t l l
		47	2	11		1	60 t 40	S N t
		47		8		F	90	D t l l
		40		3		F	50	D V y f t
		39	1		17	F		I t ly l ght l t Tl w d t h l O l ll t ll l gl
		3(	1 5		44	1	10	0 ly O
		35	6		54 5	F	90	O ly 4 l l d 20 h gl O
		9 35	21		84	W	3 ±	90 d 100 O
		33			7 5	W	4f	
		30			72	W	15	
		30			71	W	0	A b glt l l t d t l ml by t k
		27	1 5		65 5	W	30	
		8 8			4 5	W	25	O
		8 8	0 5		42 5	W	5	O
		9 21			39 5	W	15	
		18	3		22	W	4	} (n t d F m d ff t n O
		16	7		15 5	W	30	
		12		b		W	15	
		10	1	24		W	25	N th l lf b ght
		6		48 5		W	50	

D d b	H I S I	B	L t t l N th	L t t l th	L mb	H ght	R m k
1907	v						
O t b 13 S M	9 5	8	55		W	5	
— td	0	1	68		W	25	
							C ph t g ph 8l 8m d 8l 58m
O t b 14 S S	8 21	1	74		F	1	C
	9 6		60 5		F	25	N th l C t 8h 21m
	5		50 5		E	15	
	3		35		E	40	V y f
	3		29		F	5	D t h d
	8 37	2	24		E	120	
	37	1	0		E	20	
	38	12	10		E	70	S N t
	25			43 5	E	10	
	1	0 5		50 5	E	30	C
	24	0 5		58 5	E	20	Sl t t d
	24	1		61	E	20	D
	22			64 5	E	30	D t h d
	9 28			71	E	20	
	8 21			76 5	W	0	C V y f t
	9 25	0 5		67	W	65	D t l d C
	23	1		44 5	W	60	
	21			42 5	W	25	A t kp ll 1t lmb
	19	14		22	W	5	
	17		14		W	10	
	8 21		16		W	30	C V y f t D t h d
	21	1	37		W	10	C
	21		62 5		W	25	C
	9 11		79		W	10	
	11		82		W	10	
							C ph t g ph 8h 21
O t b 15 S S	8 4	1 5	51 5		E	20	
	43	7	40		F	65	A t kf m t p m t lmb t l t + 32 E
	38		25		E	65	
	36	4	18		E	40	C l htly l pl d b tl w y } C t d by t l pl t b C t k
	35		7		E	30 ±	D t l d
	32	1		1	E	10	V bl D D b b b b d 49241
	30			20	E	15	D t h d
	28			31 5	E	25	D F t
	27			51	E	40	F t hyd
	25	2		66 5	E	70	
	23			69	F	10	
	9 10			8	E	1	
	8 16			68	W	10	C
	9 6			46 5	W	15	
	5	1		38 5	W	20	
	2	12		20	W	35	
	8 58		11		W	15	
	57	2	20		W	35 ±	V y f t
	53		38		W	20	
	53	1	41 5		W	20	
	51	1	68 5		W	25	
							C ph t g ph 8 16
O t b 16 S M	8 16		52 5		E	30	C D t h d
	9 12	4	49 5		E	20	
		2	45 5		E	15	
	3	8	38		E	75	} C t d C
	1	4	28		E	3	
	8 16		1		E	0	C D t h d
	50		10		E	35	D t h d
	46	1		6	E	30	
	45	0 5		24	E	30	A b ght p t t t t p
	44	2 5		38	E	20	
	40			44 5	E	60	D t h d
	40	3		51 5	E	80	
	34	1 5		67	E	60	} C t d m t ll D D b b b b d
	35	2		7	E	0	5316 8 b ght
	9 36			5	E	20	
	8 16			77 5	E	20	C

D t d b		H IS T	B	L t l N th	L t l S th	L mb	H lt	R m k
		907						
O t b 16	S M	0 35			83 5	E	25	D t h d
— td		8 16	2		84	E	20	C
		9 32	0 5		47 5	W	10	
		30	5		41	W	55	
		27			2	W	30	B d t t p
		2			14	W	10	
		24	2		11	W	10	
		2		Eq t		W	20	
		20		4		W	10	
		1)	1	1		W	15	
		18		30		W	10	
		15	3	65		W	35	
								C ph t g pl S 16
O t b 17	S S	8 31		09 5		D	15	C
		52	1	48		I	1	
		50	4	3C		I	7	
		43	1 5	2C		D	30	
		48		18		D	30	A y f t d t u t l l nt g f l t + 4 F
		45	6	8		D	20	
		43			8	F	100	bl t tw l
		39	1		24	D	4	
		34			47	I	135	A l t g l d 7 l g w th t b 30 w y f m l l
		29	10		78	E	75 & J	l t
	9 16		6		72	W	20	
		14	2		39	W	50	S l t t p C l m 125 l gh d m t l mb g t l t—31 W
		12	1 5		84	W	1	
		12			26	W	15	
	8 31				13	W	2	C T l ly t tl t f th l t p m
	9 10		1 5		5	W	10	
		9			1	W	30	T ni D t h d
		7		10		W	30	D C t d C
		6		18		W	30	D
		5		23		W	15	
			0 5	43		W	40	
		10		65 5		W	10	
	8 31			75		W	1	C
								C lh t g pl S 31
O t b 19	G N	9 27	0 5	65 5		l	20	
		2		80		D	10	V y m ll
		2		82		I	10	
	8 42			71		E	10	C
	9 20		1	23		F	30	
		20			6	E	15	
		20	2		14	E	60	
		37			54	L	25	
			2		7 5	E	35	I t
	8 43				82	E	20	C
	9 8		2		46 5	W	20	
	8 43		0 5		96	W	45	C
	9 30		2		26	W	15	
		30			23	W	15	
	8 42		2		12 5	W	65	C
	9 29		1	14 5		W	25	
								C ph t g ph S h 13
O t b 20	S M	8 5		19 5		D	45	
		50		6 5		E	20	
		4	2		22	D	25	
		42			58 5	E	30	
								Th k S g b d P A 180 t 90 t m d l dy
O t b 21	S S	8 18		84 5		D	10	C
		18		82		E	10	C
	9 55			67 5		E	10	
	8 18		4	63 5		E	90	C
	9 4		1 5	55 5		D	25	

Dt d b		H IST	B	Ltt l N tl	Ltt l S th	L b	H ght	R m k
1907								
Otb 1	SS	8 45	10	26		E	70	
— td		84	05		24	E	45	
		29	3		29	E	40	t d t th l tp m by C t k
		18	1		35	E	120	O Cl m ph l t d l f m th p m t th h p l
		18	3		47	W	35	C
		18	1		10	W	10	C
		18	1		7	W	10	C
		18	1	1		W	15	C
		18	3	26 5		W	30	C
		18		40		W	15	C
		18	25	56		W	25	C
								Ob d d b l l d PA 180 t 40 t m d C pl t g pl 8 18
Otb 2	GN	8 42	1	8 5		W	60	C
		10 10		63 5		E	35	
		8 12	15	51 5		E	20	
		4	15	29		E	90	C
		10	25	12		E	20	
		5		3 5		E	40	
			1		3	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	30	C
		10 28	4		45 5	W	30	
		8 12				W	15	C
		42		4		W	15	C
		10 30		6		W	10	
		30		10		W	10	
		8 42		38		W	20	C
		42		49 5		W	60	C
								C lh t g ph 8 42
Otb 3	SS	8 27		63 5		L	10	C
		34	05	58		E	0	
		30		44		E	20	V yf 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		53 5	E	0	
		9 8			63 5	D	15	
		8 27			81 5	E	15	C
		27			33	W	20	C
		9 4	1		48	W	25	
		4	4		43 5	W	30	
		8 58	05		2	W	15	
		27	4	48		W	60	C S g p P g l l C lh t g ph 8h 27
Otb 26	CN	8 46		73 5		E	10	
		18		58 5		D	100	C V yf t
		45	15	28		D	25	
		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	2		37	E	20	
		40	1		1 5	L	10	
		18	15		82	L	25	
		18	1		84	E	25	
		18			51 5	W	10	C
		18	05		39	W	15	C
		55	4		10	W	35	

Dt d b			II I ᵴ l	B	L tt d N th	L tt d ᵠ tl	L nb	H glt	R n k
1907									
O t b 26		G N	8 2	1		1	W	30	
— *ntd*			52	1	5		W	10	
			18		0		W	60	} C t l t p
					16		W	60	
			18		18		W	80	} An h d l d v tl l b C
					29		W	30	
			18		33		W	90	M t l mb g t P A 338
									C lh t g ph ᵴ 18
O t b 27		S S	10 18	0	41		L	10	
			17	0 5	8		E	0	
			17	0 5	30		Γ	20	
			1	0 5	12		L	20	
			15	1	9		L	5	
			1	13		20 5	E	2	
			11			36	E	2	
			13			G4 5	E	10	
			4			83 5	L	10	C l m n 7 b d (— 81 E t — 89 W) nd 45 l gh
			10	1		77	W	50 ±	15 C
			80	2		56 5	W	25	D bl
			35	8		81	W	0	
			31	1 5		16	W	0	
			38	8		5 5	W	20	
			3	2	1		W	45	
			8 11		9		W	80	C Ad t l d t k
			10 29	2	10		W	30	
			8	2	15		W	10	P b lly m t ll W tl b d f m t n fl ght l
			28	1 5	21		W	60	ᵠl t g w t d
			24	1	83		W	8	
			21		87		W	30	
			8 11		39		W	80	
			10 28	0 5	54 5		W	0	Ob d tl ᵴl lt l l d C pl t lh 8h 41
O t b 28		S S	11 8		54 5		Γ	40	
			12 6		48		I	30	C
			11	0		1	D	2	
			10 31	2		17	F	50	
			32			38	D	10	
			3	1		42	I	40	
			1 6	3		68	W	20	C
			(	9		28	W	35	C Ag l f ᵴl m
			6			10	W	0	
			8		1		W	10	
			(		7		W	20	
			(		11		W	10	
			6	0	16		W	10	
			6	11	28		W	65	C
									C n S gb l Th k p g l u l C ll t g lh l l (
O t b 29		S M	8		67 5		D	20	C D t l d
			4	1 5	61 5		D	15	
			40	3	5 5		F	10	
			36	4		7	E	50	
			31			15	F	15	V y f t
			30	8		19 5	F	80	
			28			28	E	15	
			4	8		49 5	I	40	
			21			(0	E	15	
			20	1 5		66 5	I	25	
			9 59	2 5		69 5	E	20	
			8 2			72	D	45	C Ad t h d t k
			9 57			75 5	h	10	
			55	4		64 5	W	95	
			50			57 5	W	15	
			49	1		45	W	15	
			18	4		40	W	80	} C n t d by t k
				5		2 5	W	40	
			40			12	W	35	

D t d b		H IS T	B	L t t d		L mb	H ght	R m k
				N th	S th			
190								
O t b 29	S M	9 37	4		3 5	W	35	
— 2d		38		8		W	40	
		8		26		W	25	B lt
		8		27		W	35	
		5	2	29		W	25	
		8	0 5	32 5		W	55	
		8	1	34		W	20	
		2	0 5	8		W	50	
		8 58	8	44 5		W	40	
		58	8	55		W	8	V y f t
		50	1	64		W	20	
		50	1	66		W	10	D bl
		48	0 5	80		W	20	
								C ll t g lh 8 22
O t b 30	S S	10 53		46 5		E	30	
		54		42		E	10	
		17		33		F	30	} C t l C
		8 40		30 5		E	30	
		46		9		E	10	} S N t
		46		1		E	20	
		43	2		0	E	70	Sl t tw d
		40			19	F	0	
		9 56			2	F	25	
		11 0			35	F	45	C l t tw d
		8 37	2		41	F	10	
		36	2		44	E	25	
		9 34	6		55	W	40	
		3	8		30 5	W	60	Sl t thw l
		30	6		2(	W	4	
		28	0 5		14 5	W	10	
		28	1 5		12 5	W	10	
		28	1 5		10	W	10	
		27			3	W	45	
		26	0 5	9		W	20	
		10 45	1	31		W	20	
		27	5	3(		W	40	
		9 23	0	45		W	60	
		10 25		54		W	45	
								P g d m l l d
								C ph g ph 8h 26 d 11h 6
O t b 31	S S	9 29		65 5		E	10	
		20		30		E	25	
		20	0 5	28 5		E	20	
		17		6		E	20	V y f t
		14	0 5		21	E	20	
		18			2(5	E	10	
		10			35	E	60	±
		6	2		44	E	25	
		10 30	1	20		W	10	
		9 31	0 5	47		W	25	
								P g l d P A 180—310 w t d
								W th b d ft 10 90
N mb 2	S S	9 32	5	49		E	10	D bl
		2		40		E	30	D t h d
		28	1	27		E	20	
		10 32	0 5	21		E	5	
		31		7		E	15	
		9 25	1		11 5	E	20	D bl } A C t l 40 h gh fl t
		10 27			14	E	25	} th
		27	0 5		15	E	10	T h t t k M t ll
		9 21			21	E	1	
					23	E		N p m b t C l ghtly d pl d t d
								Oh m pl d p d t l t — 24 E
		10 17			27	E	20	C l m t t h tlw d d m t
								p m tl t — 39 5 E
		15	1		38	E	10	
		15	0 5		39 5	F	50	} M t
		15			4	E	30	
		15			43	E	30	
		14			48	E	25	
		16			61 5	E	10	

Dt nd b	H IS Γ	B	Lttl N tl	Lttl S th	L b	H lt	R l
1907	M						
N mb 2 SS — tZ	10 7	4		81	I	60	
	1			86	W	30	A d t h d tr l
	9 57	2		60	W		I t
	5			59	W	30	D
	54	2		46	W	3	D bl
	52	3		33	W	10	
	50	8		25	W	60	
	47	1		185	W	10	
	4C	1			W	15	
	41		2		W	30	
	4	2	18		W	2	
	49		5)		W	15	A C l d 7 l g d 180 l gh fl t tl
	39		(45		W	10	
	38		6l 5		W	10	
							S l C l l t g pl 9l 41
N mb 7 GN	J 7	1	49		I	60	C
			85		F	85	C
			81		F	80	} C C t l tt l
	57		38		I	0	
	10 29	15	11		E	0	A t m t d t l A 106
	29			10	F	4C	
	22	1		05	I	5	
	22			24	E	20	
	20			44	I	60	
	20			51	D	25	
	9 7			725	I	1	(
	57			785	W	50	C
	57			55	W	30	C
	57			4	W	25	C
	57			39	W	30	C
	57			2(	W	20	C
	57			10	W	15	C
	57			4	W	20	C
	57		57		W		C V y f t
							Ob d ly f m P A 00 t 180
							O l l t g pl J 57
N mb 11 SS	14 18	8	8C		F	90	C
	0	2	22		E	25	V y f t l l t l mb g t l t + 17 D
	13 CC	1		2	E	25	
	C5	4		12	I	30	
	50	05		20	I	25	} C t l n C
	50	05		28	I	25	
	14 18			29	W	20	
	1(			8	W	30	
							Ob v l d g b k l d
							O lh t g l l 18
N mb 12 SS	10 5	7		14 5	E	10	O ly P A 120 — 180 w m d W th b l
N v mb 14 SS	9 29	05	28		I	25	
	27	1	11		E	10	
				28	E	10	
				27	F	10	
	8 3	05		41	E	25	I m d nly b tw P A 80 l 180 W th b d
N mb 15 GN	8 47		60		I	15	O
	47	3	54 5		E	40	O
	47		50		I	20	O B d n th d m dts the p m t P A 57 5
	47	4	26		E	20	O
	9 36	1		85	E	20	
	34	2		48	E	25	

Dt d b	H IST	S	Lttd N th	Lttd S th	Lmb	H ght	R m k
1907	M						
N mb 15 G N	9 34	1		46	E	15	
— tt	9			68	E	30	
	9			65	E	30	
	9			69	E	30	
	8 47			84	W	45	C
	47			80 5	W	10	C
	9 57			78 5	W	20	
	8 47	0 5		70	W	30	C
	47			47	W	15	C
	9 57			44	W	10	
	8 47			41	W	15	C
	47			35	W	15	C
	47			19	W	40	C
	47			14	W	50	C
	9 55	0 5		10	W	35	
	8 47		12		W	10	C
							W th p
							C ph t g ph 8h 47m
N mb 16 S S	9 35		77 5		E	10	
	29	1	56		E	0	
	29	1	53		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	C
	13			1	E	15	C
		2		45	E	10	
	8 54	1 5		51	E	10	B ght
	48			60	E	25 ±	D pl d by 10l 20m
	48	1		67 5	E	20	S t 10l 10m
	10 15	6		87	W	65	V y f t hyd g
	12			75	W	90	St m fl b tl w y f m th t p t t l l gth 4
	6	1		33	W	30	
	6	11		28 5	W	30	
	3			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	C
		1 5	20		W		L w hy l g 30 C
	9 50		28 5		W	20 ±	
	39		71		W	10	
							C ph t g ph 10h 13m
N b 17 G N	8 25		87 5		W	35	C V y t t
	9 20	1 5	53		E	35	
	18	5	24		E	45	
	15		3		E	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	E	20	
	10			62	E	15	
	8 25			83 5	W	10	C
	25			70	W	10	C
	25	9		32 5	W	25	
	9 30	15		21	W	60	A t m p t d t P A 282
	24	1	Eq t		W	10	
	28		2		W	10	
	28		9		W	20	
	22		17		W	20	
	22		59		W	10	
							C ph g ph 8l 5
N mb 18 S S	53	1 5	59		E	25	
	51		54 5		E	2	
	51	0 5	52		E	25	C t d t t p
	50		8		E	5	
	47	1	9 5		E	70	Sl t thw d 6
	46				E	0	D t h d l t g

D t d b	H I S T	B	L t t d		L mb	H ght	R m k
			N tl	S th			
1907							
N mb 18 S S — ntd	9 45			10	E	15	
	14			19	I	10	
	1	2		80	E	10	
	11			39	D	10	
	10	1		5	D	10	
	8 7	5		20 5	W	65	C
	27			12	W	10	O
	11 13		1		W	10	
	1	1	41		W	15	
	8 27	1	46		W	20	O
	27		5		W	35	O
							Ob d tl gh l d
							C ph t g ph 8l 27m P A 5 t 05 t h w
N mb 19 G N	9 8	1	57		E	80	
	7		8		L	15	
	7	1	28		E	25	
	6	1	17		E	15	
	0			64 5	E	55	
	30			71	W	0	
	20	2		40	W	10	
	27			22	W	15	M t l mb g t P A 275
	1	3	7 5		W	80	
	0		3		W	30	O
	0		45		W	80	O
	10	3	6		W	80	
							C ph t g 1h t 9h
N mb 20 S S	8 3	2	58		–	10	
	28	1 5	81		D	15	
	8		32		L	30	
	28		29		D	15	
	28		27		F	10	
	24		9		F	15	
	2			15	D	10	
	21			21	E	20	
	17	2		55	D	35	
	) 2			67	W	0	
	1			4)	W	0	
	8 0			39	W	10	O
	57	14		19	W	40	Y t O
	54	1		11 5	W	10	
	51			9	W	35	
	51	4	6		W	(0	
	49		14		W	35	A d t l l t k
	48		23		W	10	
	46	2	36		W	0	A t l t th t th t p n
	43		43		W	70 ‡	Th w g ı f l t p m C
	43		49		W	70 ‡	
	41		51		W	15	
	89	8	59		W	25	
	39	0 5	65		W	5	
							C ph t g ph t 8h 6m
N mb 21 G N	8 56	3	58		E	80	
	56		53		E	15	
	46	1	83		E	40	
	48		22		E	25	D t h d f m l mb
	44	2	Eq t		E	45	
	43			16	E	15	
	40	1		28	L	35	A t m t nl t P A 132
	36			55	L	15	
	9 21			80	W	25	
				45	W	0	
	21			41	W	15	
	20			31	W	20	
	19	6		0	W	25	
	17	2 5		11	W	50	
	6	16	12		W	45 & 60	M t ll d ı l d O t d f b t 2 5 A
	2		34		W	80	

Dt d b				H IST	B	Lttd N th	Lttd S th	Lmb	H ht	Emk
1907										
N mb 21			GN	9 1	1	36		W	30	
— tt				0		30		W	15	
				0		48		W	20	
				0		49		W	0	C t d t g th t t p
				0		54		W	50	C t d t g th t t p
				8 58		60		W	40	O h g g th l mb d t d w th t by S t m
				58		65		W	20	
										C ph t ph 8h 13
N mb 22			SS	9 12	3	50		E	35	
				9		39		D	20	
				9		33		F	8	
				2	2	15		E	10	A l t g C t l 65 h gl p d f m th th d
				8 53	1			D	25	
				57	18		2	E	30	
				49	5		57 5	E	0	
				38			79	E	20	
				38			81	J	15	
				37	1		83 5	E	15	
				2			85 5	E	5	C A t l d t b d t k
				2			88	E	40	C A l t g t k m t tl l t
				10 16	5		74 5	W	35	D bl
				11	2		46	W	25	
				9			8	W	25	M t
				9	1		87	W	25	M t
				9			28	W	10	M t
				7	4		1	W	35	M t
				9 35		8		W	20	A d t t l l t g thw d
				35	5	8 5		W	25	S N t
				30	19	2 5		W	45 25	S N t
				22		51		W	30	S N t
				14	6	60		W	35	S N t
										C pl t g pl 81 22
N mb 23				11 3	1 5		32	E		C
				3			9	W	30	C
				3	8	2		W	65	C
				3	3	17		W	90	C
										C pl t g ph 111 8m
N mb 25			GN	8 47		60 5		F	10 15	Sl t j t
				31		27		E	15	F t C
				46		19		E	15	
				45	1	8		F	15	
				30			17	D	15	
				38			28	E	20	
				38	1		30	D	45	
				38	2		34	D	60	
				38			38	E	40	
				34	2 5		57	E	20	
				9 0			77	D	30	C t l tt r C
				0			33	E	10	C t l tt r C
				8 59	2		52	W	30	C C t d C
				31			46	W	25	C C t d C
				57	1		41	W	20	
				58	2		37	W	20	
				50	2		91	W	25	
				55	3		11	W	20	
				54	3		5 5	W	50	
				31		21		W	60	
				51		27		W	15	
				51		31		W	15	
				50		39		W	65	D t l d f m l mb
				50		41		W	15	D t l d f m l mb
										C ph t g pl 8l 31m
N mb 26			SS	11 4	1	0 5		E	15	
				3	1		8	E	20	
				3			13	E	20	

Dt d b	H IS T	B	Ltt l N t	Ltt l tl	Lmb	H glt	Γ m l
1907							
N mb 26 S S	11 1	2		0	E	10	
— tz	0	2		41	E	80	
							Cl dy tl l t b l
							E t h m ph ly w m d
N v mb 27 G N	8 2		67		E	15	C Γ t
	25		6		E	10	D
	9 8	15	29		E	35	
	7		23		L	40	
	5	1	12		D	20	
	8	1		3	D	15	
	1	3		19	D	10	
	0	5		48	D	30 15	
	8 58			62	D	30	
	58			67	E	20	
	56			69	D	15	
	55	3		78 5	D	15	
	25	1		81 5	W	25	C
	9 2(			51	W	10	
	2	2		38	W	0	
	28	15	7		W	15	
	8 25		18		W	2	C
	9 20		2		W	15	
	20		3 5		W	50	N w th m ddl f th p m
	18	25	46		W	20	
							C l l t g pl Sl 25m
N mb 28 S S	9 28	0 5	75 5		F	20	
	20		47		D	25	
	17	0 5	28		E	10	
	16	1	18		E	20	
	15			18	E	25	D t l d
	8	2		41	E	30	
	8 59			64	D	15	
	11 38	2		78	L	50	
	37			88	E	15	
	9 41	5		42 5	W	30	
	38			22	W	20	D t h d t l
	34	2	9(		W	15	
	32		4		W	20	
	25		74 5		W	10	
							C ph t g ph 91 56m
							P A 350 135 t l w
N mb 29 G N	8 45		64		E	30	
	18		28 5		E	15	C D t h d f m l mb
	42		11		E	15	
	42			1	E	15	
	42	1		13	D	15	
	40			31	E	35	C h g g th l mb nd n t d w th t
	35	4		44	E	30	
	37			66 5	E	30	
	36	1 5		79	E	30	
	18			65	W	20	C
	18			59	W	10	C
	58	2		48	W	20	
	58	3 5		42	W	30	
	54			26	W	50	A t m xt nd t P A 257
	54	1		21	W	75	A t m t nd t j n th l t p m
	51	1		8	W	35	
	50	3	17		W	30	
	47	2	47		W	65	
							C pl t g ph 8h 18m
N mb 30 S S	8 57		27		F	40	B nd thw d
	56	1	23		D	10	
	9 8		1		E	30	C Sl t n thw d
	8 54	8	8		E	20	
		0 5		3	E	25	
	51	4		1	E	25	
	9 8			18	E	30	C Tw d t h d t k

D t d b	H IS T	B	L t d N tl	L t d S th	L b	H ght	R m l
1907							
N mb 80 S S	8 50			20	Γ	30	D t h l
— td	48	13		36 5	E	8	
	43			57 5	E	10	
	40			66	E	90	
	40	0 5		69	E	90	B d t t p } M t t t p
	38	5		79 5	E	50	
	9 8			64	W	25	C V y f t
	21	1		50	W	10	
	20	2		45	W	25	N w t t p
	19	1		32	W	35	
	18	1 5		2	W	30	} C t l by C l
	17	1 5		20	W	60	
	14	4		8	W	10	
	8	4	18		W	20	} C t d by C t k
	7	1	25		W	25	
	4		48		W	15	A C t k 6 l fl w ıtl w d f m t p
	1		80		W	10	
							C ph t ơr ph 9] 8m
D mb 1 G N	9 48		84		W	20	C
	30	1	2		D	15	
	29	8			E	15	
	27			17	L	40	S N t
	48			28	U	30	C V y t t
	25	8		3	E	30	St m t d b th l t P A 135 d tl th t 154
	48			47 5	D	15	C J l t p m
	20	4		80	D	60	
	48			86	E	30	C M t l t_1 m
	46	1		66	W	30	
	46			63	W	50	±
	44			47	W	30	
	44			46	W	15	
	40	17		25	W	45 & 20	M t C A t n t d t P A 276
	48		27		W	15	C
	35	1 5	29		W	30	
	48		46		W	35	C
	48		48		W	15	C
							C lh t g ph 9l 48m
D mb G N	9 35		71		E	10	C
	35		67		E	15	C
	8 39		44		E	10	
	9 35		33		E	20	C
	8 39	1 5	28		E	20	
	9 35		21		D	50	C
	8 38		9		E	15	
	36			27	E	20	
	36	1 5		36	E	50	} C t d
	34	2 5		42	E	60	
	32	0 5		44	E	30	
	32	0 5		49	E	60	
	30			79	E	30	
	30	1		3	E	40	A t t d t P A 200 C
	44			76	W	60	C
	44			72	W	50	C
	44			69	W	50	C
	45			66	W	30	
	44	7		30 5	W	60	
	43			11	W	45	
	42		Eq t		W	15	L pt d pl d t d fb b t 0 2 A C
	41	2	49		W	25	
	44		54		W	25	
							C ph tog ph 8h 44
O mb 3 S S	9 6	5	47 5		L	10	
	4	0 5	39		E	20	
	10 23		32		E	25	C }
	9 2		23 5		E	30	} C t d C
	2	2	21		F	15	
	2	1 5	17		L	20	

D t d b	H IS T	B	I t t d N tl	I t t d b h	L b	H gl t	R m k
1907	m						
D mb 3 S S	9	15	12		F	20	
— *ntd*	8 53	1		29	Γ	1	
		05		32	E	10	
	1	1		40	Γ	10	D bl
	48	1		49	E	90	
	9 25	6		38	W	60	
	0	2		2	W	10	
	10 23		10		W	30	C D t h l
	9 15	15	32		W	20	
							Ol l tly th gh l l
							Tl l p g l
							C ph t g l 10h 28
D mb 4 G N	11 4(		58		E	25	C
	1(	8	48		Γ	30	C
	9 4	05		13	Γ	40	A t m t nd t P A 1 7 C
	11 46	0		36	I	15	C
	9 45	2		10	Γ	30	‡
	11 16			63	E	20	C
	40	14		26	W	20 & 25	C
	4(			10	W	60	C
	48		39		W	30	C
	8 57		52		W	0	
	11 16		59		W	15	C
	9 17		(3		W	30	‡
							W tl p
							C lh t g lh 11 46
D mb 5 S S	8 49	1	82		F	10	
	47	05	(7		E	1	
	10	92	81		D	25 30	A b p f p t d t th
						45	H t C
	35	05	12		D	10	
	35	0	10		I	10	
	35		9		I	10	
	81	2		14	E	30	S N t
	8			27	L	35	D t l d
	27	05		32	E	70	B d t t p l t tl d
	25			41	E	40	
	22			50	E	10	
	) 17	1		89	W	25	V y f t
	16	05		79	W	40	D
	11	1		61	W	20	
	10	14		28	W	15 30 20	4 p m n i d t tl
	5		J q t		N	25	B l t t p } N ly t d by C
	4	4	5		W	10	t k
	8 58		18 5		W	20	
	59	1	59		W	2	
							C lh t g pl 8 40
D mb 6 G N	8 2		70		E	15	C
	22		55		E	40	C
	22	2	49		E	25	C } J d t t l
	22	2	48		I	25	C } A t m t d t P A 68
	2		42		L	120	A l t l d l d C
	22		24		E	60	C h d t l
	2		18		D	60	C
	47	1			D	20	
	45	1		1	E	35	
	48	5		11	E	55	
	41	6		43	D	45	
	9 8			72	D	20	N t f d C
	8 22			84	W	20	C
	59	8		57	W	15	
	22	12		29	W	50 & 30	
	22	3		20	W	20	
	24	3		5	W	10	
	54		2		W	10	
	50		6		W	20	Sl gl tly d pl l t d d (b t 05 A) P
							bl n D D b b b d b
	2	3	57		W	60	C
							C ph t g ph 8h 22

Dt d b	H IbT	B	Lttd N tl	Lttd S th	L b	H ght	R m k
190							
D mb 7 SS	1 1		9		E	25	C Adt h l t k
	9 38	8		25	E	45	
	35	2		11	E	40	C lk
	34			2	E	20	AC k 2 l g t t l tw d t tp
	34	6		28	E	30	
	8	1		36	E	0	
	10 11			39	E	15	C M tl l t
	9 0			4	E	10	
	10 11			69	E	10	C
	11	7		80 5	W	60	C
	14	0 5		57 5	W	10	C p 40 l l d t d f m l t —50 t 61 W
	12	1		34	W	30	P t d t t l
	11			30	W	35	C
	11			23	W	40	C
	11			16 5	W	10	
	11			14	W	15	C
	0	0 5		6 5	W	30	C p m t d 4 f tl tl
	9	2		1	W	30	
	7		15		W	30	C l m 4 b d nd 90 l gl d l t tl w d
	6		27		W	30	
	11		30		W	15	
	1	0 5	36		W	15	
	5	0 5	46		W	15	
	0		60		W	15	
							Ob d tl gl
							C ph t g ph 10l 11
D mb 8 KVS	9 23		61		E	10	
	8 2		15		E	45	C
	9 15	1 5	11		E		L w p k
	10	2		3	F	2	D t l d l d C n ct d to l mb C
	10	4		7	E	20	
	3	2		22	E	45	Sl t t w l t
	8 50	0 5		47	E	2	
	10 10			82	W	45	70 h h C
	8 2	11		76	W	30	C A t l t l mb t l A 213
	10 9	3		56	W	40	
	9 50	1		37	W	50	M t l b 5 C t F A 244
	45			33	W	30	F t d t l d l d 8 b l d co t t l mb C
	35		1 t 15		W		S l y l w l m
	8 2		25		W	20	C
							C ph t g lh 8 22
D mb 9 SS	8 51		30		E	20	
	47	2	51		h	10	
	48	0 5	46		E	10	C
	4		41		D	20	
	41		17		E	20	
	38	6		9	E	25	
	35	4		18	E	20	B l t
	3	1		37	E	30	Sl t thw d
	29	2 5		46	E	35	B g l t N w t t p
	25			71	D	10	
	23			30	W	20	
	21	1		61	W	15	
	20	2		56	W	15	
	9 15	10		36	W	70	S N t
	11			28 5	W	25	
		0		20	W	20	
	7	1		13	W	15	
		1 5		5	W		A C t k 25 h g l n ct d t t
	2	1	24		W	25	
	8 55	0 5	69		W	15	
	24		86		W	40	C D t h d N t t ph togr ph tak n at 8h 46
							C ph t gr ph 8h 46m nd 8h 24

Dt nd b	Il IST	B	Ltd N th	Ltd S th	Lmb	H glt	Rmk
1907	m						
D mb 10 KVS	9 17		80		F	0	C
	5	2	42		D	2	Fpbl thn th b C p mn t d t PA 69
	17	3	26 5		D	20	C
	10	2	8		E	30	
	5	4		7	E	15	Bght D D b b b b f tly d
	0	1		20	D	15	C p m 30 lth t p t d t PA 118
	17			36	D	15	C
	17			10	D	0	C
	8	4		1	L	15	
	9 17			72	I	30	C
	17	10		80	W	90	C Dt l l l d
	17			67	W	2	C
	43	1		5)	W		Lw I t 4 b d d20 h gh C
	40			41 5	W	40	50 h gh nC
	17			30	W	30	C
	17	3		1 5	W	1	C
	30	0 5		16	W	15	
	25	1		3	W	10	C t d nC d 25 h gh
	25		2		W		Lw
	17	1	5		W	0	C
	17		24		W	4	C
							Flh t g l l 9l 17
D mb 11 SS	9 2		50 5		I	10	
	1		47 5		I	15	
	1		43 5		L	15	
	0	0	40		F	40	B l t w d th l t
	8 58	1	35		D	50	C t k b h w y f m t b th d s
	55		15		E	20	i d t l d b l t k
	52	1		3 5	F	Lw	C lghtlyd pl d t d t
	17	1		10 5	F	20	
	43	1 5		54	I	25	
	9 17	0 5		70	W	15	70 C
	15			75	W	30	
	43	1		63	W	40	F t
	8 1			56	W	10	C
	1			50	W	15	C
	9 10	3 5		42	W	40	
	37			21	W	15	
	36	1		5	W	10	N ly t d
	34	1		20	W	10	
	32	0 5		14	W	1	
	31			8	W	10	
	29	1	5		W	10	
	27	1	23		W	30	
	20	0 5	27		W	10	
	5		36		W	20	
	23	1	10		W	3	Sl ltly l d t t p
	20	1	7		W	10	
	18	1 5	62		W	25	
							C pl t g ph Sl 51
D mb 1 KVS	8 27	7	48 5		I	40	C
	7		24 5		F	60 & 75	C A t k fl w tlw l f m tl t p f b t10
	27	15		17 5	F	25	C
	27			40	F	0	C
	9 35	2 5		42	E	10	20 C
	8 27			55	E	40	C M t l b g tl A 155
	27			61	W	0	C
	27			48	W	35	C
	27	8	67 5		W	30	C
							W th f hl f n l b t C ph t g ph Sh 2
D mb 14 KVS	11 1		30		E	20	C
	0		31		E	35	
	0		24		E	60	C t l t l t p m

Dt d b	H I ϟ T	B	L t t d N tl	L t t d th	L mb	H ht	I m l
1907							
D mb 14 K V S — *cntd*	10 40	11	10 5		E	35	D t l l t l 80 l gl C
		14		8	E	10	A t k f tl m t l b C t I A 9
	0	25		91 5	E	35	
	15			7	Γ	10	
	5			59	h	10	
	11 1			78	h	30	C
	1			86	E	30	C
				7	W	3	C
	45			1	W		\ th h (
	1	6		48	W	20	C
	30	5		81	W	1	N tl l C
	10 17	4		1	W	90	D pp l l y 11 8
	17	3	0		W	1	C
	11 2	1	18		W	20	N tl l C
	10 1		5		W	70	C
	17	5	40		W	20	C
	17	8	54		W	40	C
	11 20		6		W	10	C 0 C
							C ph t 10 17 W l ml d 11 1 1m L L b
D mb 15 b S	11 47		53		E	60 ±	C V y f t Sl t n thw d
	10 49		35		E	3	
	48	3	3		E	35	
	46		4		E	20	B gl
	46		2		h	35	D
	11 47			3	h	35	
	10 39			20	E	10	} \ l l C p m 90 h gh t d
	37	1		24	E	20 ±	} f tl t tl tl
	35			30	E	45	
	11 47	0 5		38	W	15	(
	47			28	W	15	C
	5	1		1 5	W	10	
	47	6	14		W	40	C
	47		46		W	80	C
							Tl k S g b l C lh t g pl 11 47
D mb 17 S S	10 26		51		E	80	
	0	6	84		h	40	A s p f s p n n H ght t tl l d 100 C
	11 36		1		I	10	C
	11 16	1		5	E	80	V y f t
	11 36	5		12 5	F	65	C
	10 12	1		49	E	10	
	9	0 5		6	Γ	0	
	8	0 5		78	E	15	
	55	0 5		6	W	20	
	11 36			67	W	15	
	10 53	0 5		4	W	45	
	53	0		40	W	25	
	51	5		8	W	20	
	1 36			11	W	60	A y f t l t h l t l
	10 48	4		8	W	15	S N t
	4	11	1		W	10	
	40		30		W	35	
	38	6	39		W	50	M t C A C t k f m it m ts l t p m
	31	0 5	47		W	25	l p b d d w l m t l mb ga t lat + 50 W C
	30		61		W	10	
							C pl t g l1 11 36
D mb 19 S S	10 4	2	5		D	20	
	40		15		E	25	l b
	3			14	E	35	
	33	3 5		18	E	10	
	3			26	l	25	
	31	0 5		32	E	15	
	31	0 5		35	E	20	

Date	Time	Intensity	Duration	Height	Direction	Remarks
1907						
D mb 19 SS — std	10 9			E	20	
	4	3	69	I	2	
	10		88 5	I	15	C
	10	7	78	W	40	C Tp t l f tl th d 60 hgh tl
	40	2	63	W	1	C
	40		5	W	15	C
	40	4	41	W	40	C
	40	1 5	91	W	15	C
	40	3	9	W	15	C
	11 13	C	10	W	50	N w t t l A C t k f m t p m t l mb t l t — 29 W
	10 40	1		W	0	C
	1 11	1 5	7	W	40	
	1)	1	10	W	0	
	10 5C	2	28	W	25	
	5	1	34	W	20	T p b d l t l mb t l t + 39 W C
		0	44	W	5	
	1)		88	W		N p m A lghs l p l m lh
						I g l d l 1 180 t 260 t b d C ph i l1 10 40m
D mb 20 KVS	1 15		61	I	30	C
	0		58	I	15	60 C
	0	1	57	I	15	C t d C
	0	0 5	51	E	45	
	1		49	F	60	C
	14 45		38	L	20	C t
	45		25	I	10	
	1 15		5	I	10	C
	14 35	C	14	F	30	
	30	3	38 5	E	60	
	25		64	E	5	
	2		(	I	15	D t l l
	15 15	6	75	F	90	C l nt Sl nt tw d
	14 1		8C 5	W	5	M t t t l
	1	1	89	W		
	5		4	W	15	
	19 0	1	9	W		Sl nt f b t t w l th
	45	2	11	W	10	
	40	3 5	2	W	10	J l m l l J
	15 17	1 5	41	W	0	C
	15		88	W	J	C l l t g Ih 15 15
D mb 21 KVS	9 20	1	60	I	J	M t t t p
	0		51	I	3	
	8 5		59	I	15	C
	9 14		41	I	J w	
	8 52		33	I	0	C
	52		13	I	30	C
	9 12	6	14	I		
	10	2	31	I	50	T p t d t w d t C
	8 2		46	I	25	C
	J 5		55 5	I	25	l l t g l d
	0	0 5	(5	I	50	60 C
	40		71	I	25	I l t g l l 60 C
	8 52		78	I	90	C
	52	4	80	W	20	C
	9 30	2	8	W	L w	
	8 52		10	W	30	C
	9 7		18	W	10	C ph t g pl 5l 52
D mb 22 SS	9 21	4	59	I	60	D ubl
	8		34	I	50	C Sl t tl w d
	2	1	24 5	F	15	
	21		7	I	20	
	20		0 5	E	20	
	18	7	13 5	I	35	N w t t p

D t d b	H IS T	B	L tt d N th	L tt d S th	L b	H ht	R m k
1907							
D mb 22 SS	9 15			84	E		N p m C l gl tly d pl d t r d
— tt	13	2		65	E	5	
	13			68	E	40	l t tl w d
	23			79	E	110	C A d t b d t k
	23			84 5	E	80	C A d t h d l t g t k
	39			41	W	10	
	38	2		38	W	25	M t t t p
	38	1		26	W	25	
	35			19	W	10	
	34	0 5		17	W	10	M t H I D b l b b b ght h m l l j b ght
	32	3		11	W	15	
	28		20		W	20	C A t k p ll l t l mb
	28	1	48		W	15	
	3	5	56 5		W	40	C I t C ph t ph 9 23
D mb 23 KVS	9 5	4	58 5		E	60	
	10 5		18		E	10	C
	9 48	4			E	30	T p t d C
	45	2		8	D	35	C p m t d f m PA 90 t 114
	40	3		15	L	15	
	35	1		5	E	10	I C tl l t h d l d v th 120 h gl
	10 5			40 5	E	30	
	9 0			64	E	L w	3 b d 120 l gt n C
	10 35			72 5	E	1	
				77	D	40	
	5			84 5	D	10	
	2			86	L	10	
	5			87	E	25	C
				64	W	2	C
	5			52	W	35	C
	28			19 5	W	10	
	28	1 5		44 5	W	30	C p 5 b d
	25	1		32	W	60	B d t t p 40 C
							T p t d f l t 6 b th d s C
	10	1 5		11	W	10	A t k t l t w d th
	5			7	W	20	C D t h
	7	1	3		W	0	Fl ng l d C t d t b f m g l C
	5	0 5	12		W	5	T p t d b th d C t d t l p m C
	9 58	3	47		W	4	S N t
	10 5		70		W	10	C A H t t k l l g At 8 45 tl w t d t l mb d 80 h gh C pl t g pl 10h 5
D mb 24 KVS	9 30	1	60		E	35	
	8 5		46		E	50	C
	5		42		E	10	C
	5		38		F	10	C
	9 25		33		E	10	
	8 52		3		E	10	C
	52			14	E	15	C
	15	6		26	E	3	D D l b b l ght
	5			48	E	25	T p t d f l t — 44 E
	2	1		64	D	45	C t d
	8 58	1		78	L	50	F t C p m 6 b d n C
	9 58	3		54	W	35	C p m n 8 b d d 65 h gh
	50	4		33	W	45	Fl t l
	8 52			17 5	W	50	C D t h d
	52			13	W	10	C
	9 47	1 5	12		W	15	T p 6 b d C
	43		19		W	15	T p t d t w d th
	40	2	30		W	20	T p b d A t k f m t p t d f l t 34 W
	37		36 5		W		L w
	35		49		W		L w C t d n C t p m t l t +43 5
	8 52	3	43 5		W	135	C T p t d f b t 8 C
	52	3	9 5		W	10	C
							C ph t g ph 8h 52

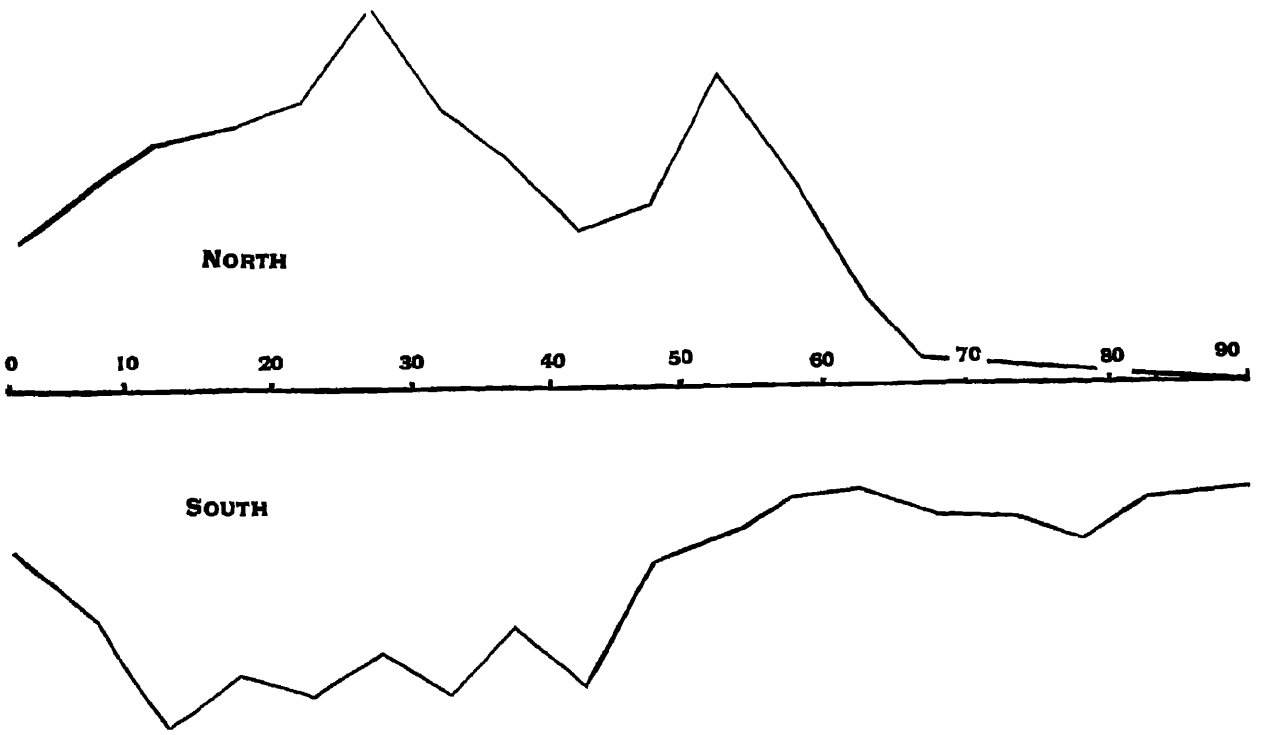
D t d b	H IST	B	L t t l N tl	L t t l S tl	L mb	H ht	R
1907							
D mb 25 K V S	8 36		77		I	25	C
	3		75		F	0	C
	9 45		63		I	20	
	8 36		19		I	0	C D t l d
	36		37		F	10	C
	36		25		E	20	C Sl t g tl w d
	9 45		0		D	I 0	C
	8 36		17		F	40	C
	36		10		E	15	C
	9 40	15			I	30	}C t d C
	40				F	10	
	39	15		1	I	5	
	33			26	I	10	
	30	4		14	I	2	
	0			02	F	L	
	18	1		01	I	20	t C t k f tl t p f th m t l t I m d t d t P A 154
	15			7	I	30	
	10			8	I	5	l t
	10 17	0 5		71	W	10	
	8 36			47	W	15	C
	36			14	W	10	C
	36	4		33	W	30	C
	10 10			13	W	10	
	2		31		W	17	Γ t }C t l by C t l
	0		43		W	25	l 0 C
	9 55		50		W	15	A l t l d t l C ph t g pl Sl 30
D mb 26 K V S	8 16		h l t		I	17	
	10 0			38	I	0	Sl t g t d tl
	9 r			40 r	L	15	lb l m C t C
	53			58	I	17	
	50	1 5		02	I	10	S N t
	18			7	I	17	
	8 16			8	E	1	C
	1(			8	W	20	C
	) 4			70	W	30	N U l l
	10			12	W	15	I l C t n d 4 b d C
	8 16			8	W	10	C
	9 3	1		7	W	1	}l l t l C l y l g t k t d
	38	2	1 5		W	0	
	39	1	5		W	15	S f l 4 260
	27	2	14		W	20	A (t k t t l t d f 3 t w d w t
	2		21		W	15	
	2	0 5	24		W	1	
	8 1(	(	58		W	120	C I I 15 l d
						1 0	C pl g l 8 1C
D b 27 K V S	9 5		47		F	15	F l b d
	10 90		12		I	10	C
	8 59		24		I	10	
	57			7	I	10	S N t
	55	2		2(	I		T l w p m
	10 30			47	E	15	C
	8 70	1		70	E	10	
	10 90			00	I	60	C 80 y f l ml
	30	2		(7	D	20	C
	30	2		71	I	15	C
	0	1 5		70	I	20	
	30			80 5	I	30	C D t h l
	9 55	9		11	W	70	Tw I c l t g tl
	0			15	W	0	
	15	1		8	W	25	}T l t d n C
	15	2	0 5		W	2	
	15				W	L	
	40		15 5		W	10	
	35	10	20		W	25 t 10	A fp w th top tad 4lm t d t h d f m l mb
	10		77 5		W	20	
			87		W	10	C l h t g pl 10l 30m

D t and b	H IST	B	L tt d		L mb	H ght	R m k
			N tl	S th			
190							
D mbe 8 SS	9 4		80 5		h	20	
	1	1	49 5		E	10	
		1	24		E	30	
	14	9	16 5		E	20	F d pl d l A t l t l t +19 l
		1 5	8		E	15	
				7	E	1	
	9			10	E	15	A f t t kp ll l t l mb
	6	0		2	E	5	
	8	5		41 5	E	25	
	8 53	2		49	E	0	
	1			67	E	10	
	50	1		7	E	25	
	48			79 5	E	50	
	4			4	W	10	
	5			6	W	10	
	48	0 5		38	W	30	Sl t thw l
	47	0 5		24	W	10	
	44	12		12	W	10	S A t
	41	0 5	2		W	10	
	39	2	27		W	20	
	36		34		W	5	
	31	1 5	50		W	2	
							C ph t g l h 8h 20
D mb 9 SS	9 6		0		E	10	
			56		E	20	
	1	2 5			E	10	
	8 59	1	18		E	70	
	9		1		E	20	
			14		E	30	
	54	16		5	E	25	
	52			6	E	15	C A t k p ll l t l mb
	46	14		45	E	40	
	44			60	E	10	
	44			6	E	15	
	42	0 5		80 5	E	60	
9	44	1		76	W	10	
	42	2		47	W	4	D bl
	38	6		31	W	40 35	D
	37			4	W	30	
	32			16	W	1	Sl t thw d 5
8	32	0 5		1	W	40	(
9	28	5	7 5		W	2	B ght
	6	5	29		W	15	
	18	0	33		W	15	
	1	1	50		W	70	
							C ph t ll 8h 32
Decemb 30 SS	8 38		75 5		E	10	C
	38		61		E	20	C
9	28		36		h	20	
	25	0 5	19		E	60	Th t k b h w y thwa ds f ft f th m m t l mb g i t lat +26 L
	1	2	4		E	25	N w t t p
	18	1		11	E	35	bl t thw d
	18	3		17 5	E	35	
	14			35	E	20	
	14	0 5		38 5	E	30	} C t d by t k t t p
	11	5		46 5	E	20 & 25	
	8			68	E	15	
	6			82 5	E	0	
8	33	1 5		75 5	W	10	C
	33			72	W	10	C
	33			68	W	20	C
10	8			56	W	70	A l dl t w y f m l mb
8	33	6		51	W	150	C E pt
10	6			41	W	90	A d t h d l t g t k
		6		27	W	90	N w t t p C p m n t d 5
	9 55	0 5	20		W	15	f th tl

D t nd l	H IS Γ	S	L t t l N tl	L t t l S th	L b	H ht	R m k
1907							
D mb 30 S S	9 57		38		W	40	
— td	58		51		W	60	Tl w h t d t h d t k t t p
	52		58		W	15	Sl t thw d C
	41	1	80		W	2	
	8 33		84		W	15	C
							C ph t g ph 8 33
D mb 31 S S	8 26	1	78 5		I	15	C
	26		60		E	80	C F m t y
	9 24		50		E	20	
	4	1	41		E	25	V y f t C p m 5 b d
	28	6	34		E	2	} T p ly t d C
	20	0 5	20 5		E	1	
	18		4		E	10	
	17			6	E	1	
	16	10		14	E	20 10 & 80	T ll t t th th n d B g l t th t
	1	8		25	E	90	
	9	8		38	E	25 0	
	4	5		65 5	E	50	E p dly h g V y l w t 9h d 20 †9 5
	0	3		84 5	E	90	
	43			56	W	15	
	39	5		5 5	W	15	
	34	4	49		W	30	Im g u t dy P g S g p C ph t g pl 8 28

REMARKS ON THE DISTRIBUTION OF THE PROMINENCES IN 1907

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



Unlike the previous year the zonal distribution in 1907 is quite unsymmetrical in the two hemispheres The polar prominenc s which have been so marked a feature in both hemispheres since 1905 have practically ceased to exist n the north although strongly epresented in the south In the north again well marked maxima of acta ty are sh wn in the zones 25 — 30 and 50 — 55 whilst in the south the entire region between 10 and 45 has been almost uniformly prolific

Dividing the year nto two p riods of six months brings out another fe tu e namely a great f lling off n mean areas in the northern zones during the s cond half of the year notwithstanding a slight increase in the mean frequencies and it is curious that a similar reduction of activity affecting the northern maxima occurred du ing the second half of 1906

The d stribution of the southern prominences has remained practically the same throughout the year

The total ctivity of each hemisphere of the sun compared with the previous year may be inferred from the following table —

MEAN DAILY PROFILE AREAS OF PROMINENCES

	1906	1907
	Sq t	S m n t
No th	2 51	1 92
S uth	2 17	2 27
T t l	4 68	4 19

In th abstract on page 456 tables are given showing the monthly qu rterly half yearly and yearly frequencies a well as the mean heights and latitudes derived for the two hemispheres It is to be noted that the mean frequencies are derived from the total numb er of days of observation without allowing for partial or imperfect observations and the smaller frequencies found for the months of June July August and

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 —

Period	Number of days of prominences	Mean latitude N hemisphere	Mean latitude S hemisphere	Total mean latitude
January 1 to June 30	165	8·2	11·4	19·7
July 1 to December 31	132	8·4	10·8	19·4

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

	Number	Mean latitude	Extreme latitudes
North	54	15·7	+8 +44
South	50	15·6	−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 6½ minutes Another short lived prominence nearly in the same heliographic position was observed and photographed on May 11 in latitude +59 it attained 2 0 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 −68 W (315) July 25 −26 W (240)

ABSTRACT FOR 1907

190	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	N [illegible]	[illegible]	N [illegible]	[illegible]
J y	27	518	19 2	34 5	8 0	11 0	17	4
F b y	8	112	21 9	0 1	8 8	12 0	0 6	42 3
M h	3	662	21 4	90 6	9 1	12 2	31 9	40 0
Ap l	30	34	17 8	30 7	7 3	10 4	3 7	4 6
M	31	604	19 5	38 8	8 3	1 1	36 1	13 3
J	2	33	15 1	28 2	6 0	9 0	34	37 1
J ly		34	15 7	8 7	6 4	9	37 0	3 4
A t	19	298	15	29 0	6	1	9	13 2
S pt mb	7	543	0 1	27 9	8 9	11 1	33 7	41 9
O t b	5	491	1J	29 9	9 1	10 0	34 8	1 6
N mb	20	3	16 9	27 1	7 0	9 7	3 0	33 1
D mb	28	8	1J 9	27 1	8 5	11 2	35 8	12 3
F tq t	86	1 792	20 8	31 6	8 7	1 1	0	11 7
S lq t	83	1 470	17 7	31 4	7 3	10 3	35 3	11
Th d j t	68	1 186	1 4	8 4	7 4	9 9	3	40 3
F th j t	73	1 37	1b 8	8	8 3	10 1	3	11 4
Fr th lf y	160	3 26	19 8	31 5	8 0	11	3 C	11 7
S ndh lf y	141	2 59	18 1	28 3	7 9	10	91	10 J
Y 190	810	5 5 1	18 8	90 1	8 9	10 7	38 4	41 3

H l ph l t t d fp n 1 07		N ml fp 1907						M d ly f l y 1907 (J(l y)
		F t q t	S d q t	lh d q t	Γ tl l t	F t h lf y	S i l lf y	
N th	90 t 81	13	14	6	16	7	2	0 10C
	80 t 71	5	16	19	2	41	10	(27 t
	70 t 61	1	8	35	49	54	84	0 11 6
	60 t 51	10	102	70	4	204	144	1 1 6
	50 t 41	7	78	3	88	148	156	1 027
	40 t 31	88	94	1	8	182	13	1 061
	30 t 1	134	10C	3	100	210	1 3	1 39
	20 t 11	1 2	92	80	91	211	171	1 102
	10 t 1	180	3	3	38	21	186	1 845
D t		10	9	8	9	19	1	0 122
S th	1 t 10	124	114	83	81	238	1 4	1 358
	11 t 20	1 3	109	99	118	2C	21	1 60
	21 t 30	1	92	110	97	229	207	1 478
	31 t 40	114	9	70	89	09	1	1 248
	41 t 50	89	13	84	108	24	1	1 405
	1 t 60	1J7	7	47	58	184	105	0 978
	61 t 0	11	80	56	79	1J6	135	1 115
	71 t 80	187	3	81	1	30	16	1 824
	81 t 90	61	59	46	52	1 0	98	0 736

NOTES

1907

July

8 Lat — 9 W Bright not metallic Narrower at top A streak connects its top to the limb at Lat — 4 W A Ca streak 12 long proceeds northwards from the top Height 0 in Ca

4 Lat — 4 W Ca Intensely bright eruptive At 8h 14m it was detached and 240 high with the lower end about 80 from the limb At 8h 18 it was 315 high and connected to the limb by two streaks At 8 41 it is parted into two slender prominences 150 high and connected to the limb at Lats — 3 and — 5 W

6 Lat — 41 E Bright There was a very bright point at the base at Lat — 40 L Not met H A low Ca streak connects it to the limb again at Lat — 6 E

14 Lat — 3 E Slants southwards Two slender streaks from it meet the limb at Lats — 3 and — 41 E D D H b b b1 5316 8 5018 6 and 4924 1 were bright at the base

16 *Note* 1 Lat — E A streak 40 high slants eastwards from it The streak is longer and about 0 high in Ca

Note 2 Lat — 28 W Surmounted by a strip extending from — 30 to — 18 W Base 5 broad in Ca

17 Lat — 26 5 W Ca A long cloud extending from Lat — 38 to — 15 W Its western end was 80 high

28 Lat — 9 E Double very bright metallic Very bright also in D D b1 b2 b3 b4 C slightly displaced to red at base There was a bright Ca flocculus near it

August 2 Lat + 19 W At 10h 10 there was no prominence there but C was slightly displaced to red one or 2 of the chromosphere At 10h 11 short jets began to appear and the displacement became less and less till it completely disappeared at about 10h 15m

September 4 Lat — 10 5 W A Ca streak proceeds from its top as far as Lat — 27 E and another as far as — 11 E

10 Lat + 61 W The top meets the limb again in Ca at Lat + 48 W

15 P A 180 — 250 not examined and the rest through thick cirrus Ca photograph 9h 51m only west limb visible in it

21 Lat — 28 5 W Slants as far as — 30 W Southern end 45 high in Ca

26 Lat — 10 5 W Top extends in Ca as far as Lat — 18 W There is above it a detached Ca streak 50 high

29 Lat + 18 W A streak from the top meets the limb again at Lat + 8 L height of streak 35 The Ca prominence is 6 broad

October 10 Lat + 46 W Nothing seen here in Ca at 9h 05 C slightly displaced to violet at top

11 Lat — 38 W The top flows westwards and meets the limb again at Lats — 99 and — 6 W Height 120 in Ca

12 Lat + 29 W Not found in Ca not in hydrogen at 9h 5 At 9h 18m C was slightly displaced to red in it

13 Lat + 11 I Rapidly changing very bright metallic

14 Lat + 10 I Metallic Bright lines —6677 (H) D D 5316 8 b1 b b3 b4 5018 6 5016 0 4 24 1 and 4924 4

30 Lat + 9 and + 1 E Met at top Ca prominence slants southwards reaches to 120 at + 2 E and to 150 at — 5 L and nearly meets the limb again at Lat — 13 E

1907

November 22 Lat + 8 5 and +22 5 W A g oup of about half a dozen eruptive and metallic prominences A streak slanti g no th wards fio n the top was 90 high in hydrogen at 3' 30 but it was 150 h gh n Ca at 8 22m Ihe prominenc s were all rapi lly changing especially those at Lat + 9 and + 16 W F was displaced there about 2 A both way l ut the direc tion and amo unt were rapidly chang ng (9h 8 m) Bright l nes —6677 (Ho) D D 5 35 1 (Fe) 5316 8 (Fe) 5283 8 (Fe) 5276 2 ($\frac{1}{0}\frac{?}{?}$) 5234 8 (—) 5197 4 (Ni Mn) b_1 b b_3 5018 6 (Fe) and 5016 0 The prominence at Lat + 9 was completely visible in 6677 D D 5316 b b and b

December 1 Lat — 17 E een in Ca photographs at 8h 2m and 8h 57m but not at 9h 46

5 Lat — 14 E B i ht Ihere were b ut half a dozen prominences l high betwoen I at — 11 and — 21 E They were continuous in Ca

9 Lat — 36 W Ch n ing and mo e continuous i Ca Hoi ht 120 in Ca at 8' 48

17 Lat — 8 W B ght metallic D D 5316 6 b b b b 5018 6 and 4)24 1 brilliant

2 I at + 47 W Ca promi ence 120 high and 12 broad at base A C streal 8 long p oceeds so thwards from it

6 Lat — 62 E Connected by a Ca streak with the last prominence Another Ca streak extends as far as Lat — 65 E

27 Lat — 7 E b b b_3 bright Height 2o in Ca A Ca streak from the top extends to Lat — 13 E

28 Lat — 12 W D D b b b_2 and b_1 bright and C slightly displaced to rol at the southern end

KODAIKÁNAL
28*th May* 1908

C MICHIE SMITH
Director Kodaikánal and Madras Observatories