

Kodakanal Observatory.

BULLETIN No V

LIST OF PROMINENCES OBSERVED BETWEEN 1905 JANUARY 1 AND 1905 JUNE 30

The following list is a continuation of that published in Bulletin No II but differs from it in containing not only the prominences that were recorded visually but also those that have been photographed with the spectrohelioscope. The visual observations have been made throughout with the five-sided 8 prism spectroscope mainly in the hydrogen line C. The spectrohelioscope is directed then in the calcium line H usually with an exposure of from 1 to 4 minutes. When prominences entered in the list were photographed but not observed (usually cases) of a prominence in the original column and when there was a marked difference between the spectroscopic size of the prominence and the photographic attention is called to the fact either in the original column or in the notes.

So far as general conclusions are involved it follows from the observations that near the time of maximum activity the prominences in hydrogen are in general very distinctly in form with those photographed in calcium light. There are a few prominences seen in hydrogen which are not photographed in calcium and probably a still larger number photographed in calcium which are not seen in hydrogen. It would however be unsafe without further examination to conclude that all those photographed but not seen were actually hydrogen prominences. In some cases at least almost certainly they were only fortuitous on account of the bright background of the solar disk. But while in the case of the calcium prominences there is a very close correspondence with the hydrogen observations frequently very marked differences are to be found especially in the outer part of the prominences. It is more abundant in the photographs than in the drawings and in cases where the prominence is fainter than in the photographs it is not always to be seen. The difference between the two classes however is that in a very large number of cases the calcium prominences are continuous while the hydrogen ones are not. The word continuous implies hardly requires a further definition but it is sufficient to say a better. In a large number of cases the hydrogen prominences consist of two or three filaments and in most of these cases it is found that calcium partly or completely fills in the interstices. This is not an illusion due to want of definition in the photographs which under favourable conditions have the finest details of the prominences quite sharply.

It may be mentioned that spectrohelioscopes of the disc occasionally show prominences extending to a considerable distance inside the limb either (1) as an area of very dark flocculent or (2) as an area of less dark than the surrounding area indicating greater absorption. In this connection reference may be made to the notes for March and when the displaced C line which was bright beyond the limb could be seen on the disc (still displaced) as a dark line.

The heights given in the tables are measured from the chromosphere and not from the photosphere. The detail of spectra given in the notes make no claim to being complete and the absence of any light line from the list must not be taken as an indication that it was actually absent from the spectrum but only that it was not conspicuous. Time is rarely available for anything like a complete examination of prominence spectra.

Dt nd b	H M M	B	L t t l		L b	H l t	B l
			N th	tl			
J y l S	1 39		69		W	24	Pl i ll
	17		46		W	30	
			2	2	W	1	Sl t g d d } C d t b
	54			27	W	24	I l g n l w d }
	14 5			60	W	80	S N t
	2			0	W	10	Pl l k w d t t l
					D	30	B g l t t l l
	18		9		D	46	L j d t l m L t t-29 l b y t k
	20		2		L	1	A b g l t l t f t g w y f m t h h m
	4		46		L		l h
D 5 S S	9 30	6	45		D	38	B d b g h t t l
		4	8		L	80	
	20	2	10 5		L	24	l l w b k
	16	1		15	D	4	S N t
	10	1		17	L	24	
	8 7	5		27 5	L	30	
		1		58	E		L w b g h t
	3	4		30	W	10	
	51	2			W	4	
	9 15		41		W	80	D t h d f m t h h m p h
			42		W	16	D
			15		W	16	
	13		60		W	30	V y f t
	18		69		W	42	
					W	4	
D 6 S S	11 45			66	D	30	Py d l
				54	F		l l h p h w d b l f 2 t h
							d
	5	6	2	47	D		l l w b k
			30	22	L	30	C n l l t g t w l
					L	4	l w b d l t h t l
					L	30	S N t
D 7 S S	J 4	1	60		L		L w f
	8 9	4	39 5		F	30	
		7	10		E		L t t t n t b
	5		2		D	42	
	50	2		7 5	D	4	S N t
	44			37	L	80	L p t
	37	2		64	E	30	
				84	W	1	
	10 33	1		6 5	W	00	
	0			5	W	38	D t h d f m t h h m p h b d
	20			3 5	W	90	
					W	80	S m l l b g h t
	9 3	1	1		W	24	
			42		W	24	
	2		45		W	30	
	1		66		W	48	
		0	2		W		S m l l b g h t
D 8 S S	11 3	10	34		D		S N t
	0	7	7 5		D	80	B g h t
		0 5		1	E	24	
		1		4	E	24	
		0		6	L		L w
		1		5	W	48	
		1	3		W	48	
	6		44		W	30	
			68		W	24	
D 9 S			69		D		S m l l f t
	9 35	0 5	46		F		L
		14	15		L	48	E p t E p d l y h g
				6	I		L b g h t

D t d b	II M M r	B	L t t d		L m b	H g h t	R m k
			N t h	S t h			
1905							
J y 9 SS	9 28 26 0	25 1 0		12 48 01 77 71 54 25 20 4	T L L W W W W W W W W	24 30	Th l m ph w d t l l m t h g L w E t d bl N m l t l b g l t j t L w d bl A l w f n t l d b g h t p l t h l m p l l w b g h t j t
D 10 GN	9 12 7 0 9 51 52 48 41 40 40 35 30 10 6 0 9 58	1 11 05 0 8 0 0 0 15 1 6	16 465 815 075 62 60 115	12 33 49 1 2 64 7	E I I L E L F I D W W	30 1 30 36 21 21 60 86 96 21 12 90 18 38 18	D p t D t h d f m t l h m p l V y b g h t D t l d f t h h m p h
D 11 SS	10 27 13 11 14 18 16 14 1	2 2 25 2 2 5 1	27 11 9 18 81 28 20 13 2 18 1 68	1 I L I D W W W W W W W	24 80 24 30 24 30 30	E l l m p l w l g h t A f w t l h t l l S m l l b g h t T l l p h w b h t S N t l V y b g l t l w U l l y b g h t l p t l l l S N t L w b g l t	
A 17 SS	9 15 J 0 33 28 27 22 20	4 0 1 8 2 2 25 1 2 1	38 8 20 12 18 53 78 47 815 6 12 19 255 295 52 60	E E D D L I I W W W W W W W	36 1 24 24 24 24 24 24 24 21 30 12	A l w A l d b l I l l n l k L w l t S N t I w b g l t l b l A l d b l D	
D 18 CN	0 26 23 15 45 48 40 35 32	4 15 10 4 3 3 85 1	825 32 49 8 19 83 48 54 9 88	F E L W W W W W W		S N t S p d t t l t p B g h t l w L g	

Date	Time	VMT	B	L t d		L mb	H ht	E m k
				N th	S th			
190		M						
J	11	SS						
	10	1	2	68		E	30	S N t l
		10	05	49		D	21	B g l t
		8	5	29		L	60	S N t
	9	58	4	16	15	L		L w i t t l d l y h g g
			1		325	T		L w l t
			4		54	L		T w l w l t l t h
		51	3		65	E	80	A l l b l f t l m d t h d f l
			1		30	W	24	h m p h
			15		17	W	24	
	10	55			11	W	24	
		40	10	2		W	90	v y b l t b t t l l
				38		W	2	
		85		44		W	30	T l l g
				19		W	4	
		2	8	51		W	90 & 21	
				01		W		
		19	0	78		W	24	A l d b l
D	16	(N				L		L
			2	45		L		L w
			2	34		L	16	
	10	35	4	19		D	18	
		34	8	05		D	50	
		82	1		8	D		L
			2		11	D	32	
		28	4		38	E	21	
		25	1		2	L	10	
	11	10	3		33	W	24	T h l t t h
			2		20	W	1	
		7	2	1	155	W	105	
		5	10	23		W		
		0	16	71		W		
			15			W		
D	1	SS				L		
			25	25		L	21	
	10	20	0	63		D	24	D t h d f m t l h m j l
		25		59		T	21	
			1	4		T	60	A g l h
		21	45	30		L	60	
		21	1	32		L	4	I
			1	24		L		A l l l t
			5	175		L		B g l
			15	7		L	30	T g l h d t d t h t l
		2	5		12	L	60	
	0	54	5		32	L	4	E t
		50	1		48	T		L w b g l t
			1		65	D	24	T t l d l y l g g
		40	4		7	L	4	
					64	W	0	
			1		62	W	24	
	10	58			9	W	5	B g l t m p t
		53	35		95	W	21	
		48	85		2	W	120	S N t
		40		255		W		
Do	17	GN				E	18	
			4	62		E	18	A l d b l
		29		54		D	44	T l k
		28	1	8		D	110	
		20	4		30	L	60	
		5	7		49	W	18	
		55			5	W	50 & 80	
		50			61	W	5	
					415	W	55	
		45	2		38	W	70	
		43	4		4	W	55	
		38	1	58 &		W		
Do	18	SS				L	24	A l w h
		10	8	62		L		A l w t g h k
			1	52		E		
				8		E		

D t d b	H M M T	B	L t t d		l b	H ght	R m l
			N th	S th			
1905	x						
y 18	SS	1		7	D		L w m
		2		19	T		L w l d bl
	9 45	1		29	T	48	S N t 1
	15	1		34	F	48	
	36	9		47 5	E	60	
				67	T	24	
	92			68	D	24	A l g l t f k d j t
		35		77	W		L w l t g
	40	14		89	W	60 & 24	S N t 2
		1	16	9	W		A l w l
	10 21	16	(		W	21	I w l t n g
		05	28		W	12	
			7		W		
			84		W		A l w l l l l
D 19	GN	05	07		E		
	9 4	8	03		D	40	
	50		1		I	21	
		3		95	I		
		2		35	E	30	L w
	15			88	T		
	45			40	T	55	
	10 10	2		48	L		
	34			71	W	30	
	30	05		87	W	70	T l y l d d y l y t th l mb
							g t L t - 32 W
	30			29	W	60	
	15	8		19	W	40	S N t
			17		W	30	
	5	5	24 b		W	10	I h b t l t L t + 33 W
	59		43		W	12	
			58 5		W		I h l l t t l
	50	5	67 5		W	175	
1 20	SS	1	62		I		L w
	10 20	1	60		I	24	
		2		11	E		A l w l
		1		32	I	24	
	30	4		49	I	30	
				5	I	24	
	38	15		64	F	48	
		1		66	I		A l d bl
	9 46			63	W		L w l n t g
	48	15		60	W	30	T w l t g t l
				38	W	24	
		1		45	W	0	
	52	5		45 5	W	24	V y b g h t p t
	10 0	5	55		W	21 t 30	
		1	30		W		L w l w l t h t l
	6		43		W	30	A f n b l d d t t l f t h l m p h
		1	50		W		L w l w l t l t h
			54		W		L w f t l t
	10	8	65		W	7	
1 21	SS	10 31	78		E	60	
		27	42		E	48	
		20	23		E	34 & 18	I h p m n t d t t l
		20	19		F		L w
				1	I		L w
				17	I		L w
		2		34	I	36	
		05		36	T	36	
		05		41	L	48	
	9 55	25	68 5		E	72	A l p
	10 48	2	60 5		W	12	D
		15		80	W		L w
		8		25	W		L w
	40		4		W	30	V t l j t w t h b n l g h t g l
	37	3	20 5		W	36	S N t
	38	3	35		E	48	

D t d b	H M M I	B	L t t i		L m b	H g h t	R m l
			N t h	S t h			
1905 J y 22 G N	10 12 5 9 5 t 10 0 9 5 0 46 36 46 42 30 25 5 25 2 25 1	2 4 2 12 05 1 15 1 9 1 05 05 05 05 05 15	68 6 42 22 2 2 4 7 9 12 14 81		L L I D E E L L L W W W W W W W	90 180 90 & 30 24 12 4 10 18 30 18 18 18 16 90	L w A t l l I p m n l l t d t t p L w L w L w D t l l f m h m l h
D 23 S	9 55 9 20	05 15		7 6 85	L L	26 21	V y f t h g h t S N t
D 24 S S	9 10 10 10 0 0 45 8 55 9 3 23 28 21	5 3 15 25 4 1 3 2 4 2 05 1 4	6 145 7 185 11 1 275 605 61 12 7 0 8 49 58		L I I E D L L I I W W W W W W W W W	21 48 24 1 4 86 21 21 24	D bl L w L w I D bl Th i t l L w L w S N t
D 25 G N	J 44 44 4 88 3 3 0 30 7 20 28 5 22 0 56 51 0 43 48 18	1 1 4 35 5 1 7 0 1 1 1 1 7 1 1 1 1 1	70 65 68 17 87 29 28 45 12 19 38 3 43 58 56 15 21 14 1 10 20		I I L I I L F L I I E I D I E I I I W W W W W W	80 30 7 80 80 12 10 30 15 & 12 1 12 30 21 21 18 90 30 3 20	B l b t d t h d f m l l L L w D bl A b b L L
D 26 S S	9 30 28 8 5 8 59 5 50	2 2 0 05 1 8 4 2	77 52 7 3 1 2 47 56		D D D E E E D L	24 48 60 4 24 30 4 4	D bl I l t E l t V y f t

D t l b	H M M r	B	I t t l		L m b	H g l t	R l
			N t l	> t l			
J y 6 SS	9 45 39	(2 1 2 2 1 3 0	11 55 t	(1 41 2	W W W W W W	120 1 1 1 21	S N t M L w L w M
D 27 CN	) 31 30 2 23 0 0 17 10 7 0 9 5(	4 1 0 0 0 15 11 1 12 40 39	(7 37 19 0	2 8 40 67 1 5 8 25 15 0	F L L L W W W W W W W W W W W	30 1 100 1 1 2 18 10 0 12 1 1 30 30 2 15 1	11 m l l t t B d b t d t h d f l l
D 28 SS	) 8 8 4 20 1 10 0 0 0 1) 11 3b	3 4 9 7 1 2 8 4 2	42 27 r 25 20 10	10 5 0 23 (44 9 5	I I I L L I F W W W W W W W	4 09 72 30 108 18 15 21 49 31 1	D l l I w A m l l i k n t f w y f l b I p l S N t 13 l t t p b g l t d l l t b l d t h m l l I I h l m t d t t l (t l h
D 29 SS	10 5 5 9 5 1 1 10 7 1 17 17	3 0 r 1 2 3 8 0 r 0 5 1 1 0	2 16 12	10 5 14 7 37 82 33	F I I F I I W W W W W W	1 12 1 4 10 30 16 60 1 1 4 21	S N t 1 S N t 2 A l t p l l S N t 3 I w f t b t b d t t l
D 30 GN	10 7 5 28 0 0 8 5 50 47 46 45 40	5 6 2 1 5 1 4 6	2 6	7 27 5 31 37 40 5 5	F E D F I I W W W W W	10 18 60 14 14 30 14 80 80 10 10 45	D b l

Dt d b	M M F	B	L t t d		L m l	H g h t	R m k
			N t h	S t h			
1906	K						
J y d l	SS	10 15	7 0 3	45 18 285	E E E	42 18 24	L w l t g L w f t b k F t f l k
		9 8	5 15	88 895	E E	18 24	L w
		41 38	2 9	38 255	W W	21 38	L w f t
		38 8	5 5	05 825 71	W W W	48 80	A h w t h t l p l l S N t
F b y l	GN	J 4 51 50	1 d 1	45 125	E E E	10 0 15	
		47 45 44	3	6 175 35	E E E	15 15 30	A l d t k
		11 5	1 25	45 82 195	E W W	20 45	
		1 10 57 58 58	1 1 4 2	165 88 68	W W W W	2 20 35 20	l b l D D b b b b g h t
D 2	SS	10 48 10 10 10	5 5 4 4	11 85 125 18 81	E E E E D	24 21 24 24	Ch l t h y b g h t w t h l w y b g h
		8 4 38 34 31	15 05 15 1	62 64 88 18 J	E E W W W	24 54 24 21 30	A l d b l S l d d L w L w
		25 5 25	2 05 2	14 28 82 845 67	W W W W	48 48 21	
D 3	GN	9 50 50 11 50 48 4d 40	05 7 05 1 5	56 85	E E D L D E	45 15 80 80 45	C O l g m
		9 50 0 0 50	05 4	29 88 86	W W W	40	O O C C
D 4	SS	9 5 80	5 2	70 58 485	D F E E	7 & 90 4 21	L w O t d b y t k t t p
		10 37 37 97	1 1 25 2 05 1	21 18 12 8 2	F E E E E P E F E W W	21 24 30 84 80	L w b g h t E p t D I
		7 27 25	15 05 15	8 82 71 74 82 84 50 18	E E E E W W W	80 24 24 24 24 24	L w t h t d Th b g h t p m l l p t
		19 10	1 14				t d t th

D t a b	H M V T	B	L t l		L r b	H l t	T m k
			N th	S th			
1908							
F b y 4 S b				9	W	4	
				6	W	20	
		10	19		W	20	
			33		W	30	
			37		W	30	B d l t l t h d f t l h m p h
	9 54		41 5		W	24	t l t
	51	2	41		W	CO	
	15	9	6 5		W	30 & 48	
D 5 G N	10 35	05	79		I	1	
	32		59 5		I	0	B d t t p
	30	4	7		I	30	H h h t
	27	2		17	I	1	l i n l t l
	(	0 5		9 5	L	4	
	(	1		0 3	I	3	
	2	1		0 7	I	30	
	43	0	34 5		W	1	
	43	4	4		W	(0	
	38	(	6		W	10 t 8 c	
D 6 9 S	10 8		62		I	4	
	12	4		0 2	I	(0 30	
						& 9 c	
	9	5	41 5	71	I	4	v y f n t
	45		62		W	2	
	41	1	6		W	(0	
	35	1	70		W	48	
		1			W	20	
D 7 G N	9 1	1	61		D	1	
	22	2	54		I	30	
	1	1	1)		I	30	
	12	2	31		I	10	
	8	2	2)		I	30	D t l l i t l t p w t l t l
	(	2	2 5		F	17	
	5	0 5	1		L	15	
	0			21 5	I	4)	
	8 55			61	I	4	
	4			68	F	30	
	50	1		82	W	1	
	9 41	2	1 5		W	20	F t l
	39	1	21		W	30	
	98	6	11		W		
	93	0 5	47		W	15	
	80	8	01		W	(0 \ 10	C l n g p l l
	30	1	2		W	30	
D 8 S S	9 11	1	61		L	1	
	36	0 5	6		I	21	
	31	8		20 5	E	4	E l t
	20	0		68	I	1	
	20	0 5		60	L	(0	
	10 30	0 5		61	W	30	
	2			46	W	90	
		1		38	W	21	L w
	20	2		80	W	21	v y b g h t p t
	13	14	17	5	W	60	
	0		34 5		W	42	
	1	1	38		W	42	
	9 50	7	65 5		W	60	
D 9 G N	9 22	2	13		E	10	
	20	3		6 5	h		
	18	1		14	D	1	
	10 0		16		W	120	S N t
	9 58	8	42 5		W	60	

D t d b	H M M F	B	L t t d		L m b	H h t	E
			N t h	S t h			
1905							
F b y 10	SS	11 85	2	56	E	80	
			1	4	E	10	
			1	37	F	10	
			1	32 5	L	10	
		98	2	5	L	24	
		31	8		L	4	
		90	8		D	24	
		9 26			L	30	
		11 28	15		E	21	
			8		L	30	
		9 29	1		E	24	
		10 5			W	24	
					W	24	
		9 5		19 5	W	90	S N t 1
			0	8	W		L w b g h t
			8	27 5	W	4	
		11 1	2	J	W	48	S N t 2
		39	8	68	W	48	
D 11	GN	J 33		7	E	60	Sp l t t t p
		30	1	50 5	L	20	E d t t p n O
		27	4		L	30	
		25			E	15	D t h l f m t h l m l
					I	90	l m d f t O
		0	1		L	8	
		15	15		D	90	V y f t t t l H g h t 1 0
		10 10	1		W	0	
		20	0 5		W	30	B g h t
		0	6		W	30	M t l l
		J 30	5		W	60 &	S N t
		45	0 5	10 5	W	1	
		44	6	15	W	00 & 90	
		40	2	89 5	W	30	D b l
		38	1	08 5	W	3	H g h t 0 0
D 1	SS	J 30	1	3	L	30	
		31	2	20 5	E	24	S N
		10 0	3		W	60	B b 2 C
			1		W	60	
		47	2	5	W	4	L d b l
		11	0	6	W	24	S N t
D 13	CN	9 9	0 5	C4	L	80	P i f w y n b t h l
		96		18	E	30	
				7	E	45	
		0	5		L	27	
		48			F	30	D b l
		15	2		I		
		10 25	1		W	15	
		22	2		W	6	
		1	12		W	7	
			1	18 5	W	15	
			7	23 5	W	3	
		0	0 5	4	W	25	
		0	1	47	W	10	
D 11	SS	9 29		0	L	24	
		16	2	11	L	30	
				0	L	4	D l i f l l t
		5			L	80	
		55			E	80	L t l d l y l g
		8			W	48	
		53	2		W	30	
		49	8		W	24 & 44	
		43		10	W	46	
		0	4	13	W	10	B d t l
		35	1	18	W	24	S t
		4		46	W	24	
			1	40	W	24	
				88	L	24	

D t a b	H M M I	B	L t t d		L l	H g l t	R m l
			N th	S th			
1905							
FL y1 GN	9 25 25 2 3 5		2 24 8 22 20 5 17 12		I F E I L E T D L L F E W W	0 20 20 20 20 12 0 1 12 1 80 40	L pt pk L w
	35 17 1 1 10 4 40	4 1 35 15 05		1 33 34 70 14			
D 10 SS	10 20 16 16 16	1 1 1		16 20 22 25 70	T L I I L	1 21 14 1 4	S N t
D 17 GN	9 20 10 0	1 05	23	21	I W	0 30 & 15	
D 18 SS	9 14 8 6	1 8 3	17 14		T I F	1 84 24 20	B ght
	48 48	2		17 8 31 45	I L D E W W W W W	1 J 30 48 36 24	S N t I I I t
	9 9 28 5	2 3 2	1 15	69 50 7			L
	2 20	1 0	4			1 30	
D 19 GN	J 18 1 9 7 0 0	8 0 3 1 3 0	29 22 7	35 3 85 55	I I I L I I W	50 3 1 10 20 & 1 30 & 15	
	47 45 1	2 3	7 11 18		W W W W W W W	15 2 19 1 20 15 1	S N t U t p h h i t d t l i l t l
	88 88 8 31	1 1 2 4	21 31 19 8				
D 20 SS	9 25 21 10 52 5	15 2	81 42 29 26 11 6		I I I T J J T D W W W W W	1 30 40 300 36 96 10 86 60 80 21 48	B l t 10 n C B t d t L t + 38 I C C C B d t t l d l t b L w l h t V y l l y h p l B d t t p S N t I L S N t 2 H ght 65 C
	10 10 8 55 9 5 4 8 31 7	2 2 4 9 5 10 3	11 6 47 7 8 10 85 0	6			

D t l b	H M M I	B	L t t l		L m b	H l t	E m l
			N t h	S t l			
100							
F b y 25	GN	8	73		I	45	
		05	(4		H	15	
			68		L	1	
			49		D	4	
		18	20		D	(0 & 75	
			j		D	20	
		1		0	h	0	
		0		5	D	30	
				11	I	30	
				13	I	1	D t h d f m h m p h
		14		28	I	100 80	S N t 1
						& 15	
		05		10	H	15	
		05		5	F	15	
		8		68	T	30	
		2		1	W	30	
		5		15	W	60	
		0		40	W	30	B d t t p
		1		15	W	30	
		1		2 5	W	4	
				17	W	15	
				13	W	10	
		1	10 5		W	0	S N t 2
		05	19		W	20	
		15	52		W	30	
			(4		W	1	
D 26	GN	1	77		I	35	
		15	01		I	20	
		15	3		I	30	F t
		15	15 5		I	30	
			42		I	25	
		10	23		L	30 & 40	T i m t l m t g t t t + 3% L
		)		5	F	50	
		15		12 5	I	30	
		5		19	I	18	
		5		28 5	I	30	I l l l l l l f I t & L
		5		3	I	15	
				10	I	1	
				7	T	30	
		7		7	W	(0	
				(1	W	1	
		1		38	W	20	
		2	7	8	W	30	
		2	28 5		W	30	
			31		W	1	
			30		W	1	
			0		W	0	
		05	59		W	(0	
D 27	SS	1	79		I	30	
			70		I	4	T p p l t b t l
			(5		I	24	
		25	8		I	21	
		1	48 5		L	0	
		2	14		F	48	
		1	41 5		I	5	
			29		I	24	
		05	2		L	30	V y f t D t l d i m h l
		20		2	I	0	B h t
		45		1(	I	48 t 24	S N t 1
		28		48 5	I	48	b b b b g h t
		21		80	T	(0	T i v y f n t
		15		(5	I	3	
		2		5	W	)	S N t 2
		2		71 5	W	24	A h k
		2		68	W	8	
		05		65 5	W	12	
				51	W	1	C
				42	W	5	D h l

D t d b	H M M T	B	L t t d		L b	H ght	E k
			N th	S th			
1805	M	SS	9 4	56	E	80	
			85	7	E	80	S N t
			28	0	E	5	T p f O p m l g th n hyd g
			1	6	E	7	
			1	59	E	15 ±	
			1	62 5	E	20 ±	
			1	82 5	E	72 & 64	C p m 80 hgl d t d t Lt -78 H tb
			8 55	68	W	86	
			55	58	W	15	
			10 0	58 5	W	80 ±	C
			15	1	W	86	
			9	8 5	W	50	C
			8	19	W	60	
			8 55	62 5	W	86	
			55	86	W	86	
D 7	GN		9 28	56	E	30	
			28	86	E	20	
			29	82	E	20	
			20	28 5	E	20	
			20	21	E	18	
			10	7 5	E	75	O p m t l t Lt+2 E
				13	E	18	
				27 5	E	15	
				70	E	15	
			0	78 5	E	15	
			50	61 5	W	15	
			45	38	W	75	
			42	26	W	20	
			36	17	W	50 & C	
			36	10	W	18	
			36	22	W	19	
			80	62 5	W	30	
D 8	SS		9 24	69	L	20 ±	C
			57	60	E	24	
			45	37	E	1	B th th m t d by l d t k
			45	88 5	E	1	w l l n t th l m b t Lt+28 D
			40	17	E	15 ±	
			25	10	E	42	D bl H ght 150 O
			18	21 5	E	80	
			18	65	E	30	
			18	67	E	36	S N t
			0	61 5	W	60	Oh g d t 10h 35m
			10 32	46	W	24	
			28	84 5	W	120	Sh p d f t C
			18	11	W	48	T p t d by f t t l Ab t l f
			18	17	W	12	d l t l j t f Lt+28 W
			10	48	W	48 & 4	B d C
			2	02	W	75	C p m l g d m t th l m b g t Lt+72 W
D 9	GN		9 2	66	E	20	
			24	60 5	E	40 & 2	
			21	46	E	80	
			21	49 5	E	80	
			28	37	E	20 ±	C
			18	20 5	E	45	C p n w O h l t Lt+17 E d t l d t Lt+80 E
			1	8	E	15	
			1	18	E	30	B k b t d t l l f m th h m ph
			4	19	E	15	
			4	63	E	45	B d t t p
			8	68	W	20	H ght 5 C
			28	50 5	W	25 ±	C
			50	38	W	80	
			50	38	W	85	D t l d f h m ph } C t d t b n C

D t n d b r v	H M M F	B	L t u d		L m b	H g h t	R m l	
			N t h	S t h				
1905								
M h 13	SS	9 18	8		105	D	45	l p l m t m t t l l m b g m h y d d
		1			24	L	90	d t m l t l y O t L t 17 E
		7	1		285	L	48	B d p t b
		0			9	L	80	\ M I l b g l t t b
		8 55	1		63	E	24	
		55			(7	E	24	
		10 9	8		3 5	W	12	
		8	8		28	W	175	
		0 58	3		11	W	86	S N t
		3	15	46		W	30	
D 14	GN	9 91	15	08		E	25	O
		31	8	95		F	5	(
		0	2	19		E	19	H g l t 15 O
		5	1	1		E	10	O l g l d y
		0			14	L	1	
		8 10			16	D	15	
		40	0		0	E	45±	S N
			8		35	D	30	
					6	D	30	
			05		28	E	30	
		35	2		t.)	D	80	
		8			50	F	1	
		35			3	E	15	D t h d f t h l m p h
		8			5	E	80	
		8	25		76	D	20	F m l l
		30			79	D	15	
		9 4	15		81	W	20	
		11			1	W	15	A t m f w g w t } C t b t d t g t h
					8	W	20	w l f m t l t p O }
		41			85	W	0	
		40	25		4	W	35	S l g h t l y t l l O
					05	W	5	
		9	05	8		W	20	
				7		W	80	D t h d f m t l h p h
		0	3	105		W	30	
				1		W	20	
		8		19		W	0	
				23		W	12	
		2		3		W	15	A l l k
				66		W	15±	
			1	80		W	1	A h l l
D 15	SS	9 1		28		F	10	F t p t t p H h t 60 O
		9	3	4		E	38	
		2	3		4	E	06	
		8 4	1		27	D	80	T l l p y f t
		45	7		50 5	F	45	M m O
					70	D	0	V y f t
			1		81	W	1	
			2		01	W	98	
		10 9	2		4	W	48	
					12	W	54	B t l t l l b b d O
		9 5	05	25		W	4	
		5	05	7		W	80	
			05	85		W	18	
				1		F	0	
		5	1		17	W	20	T l l l d l A d d { E l t N M g
			05	16		W	20	d F l
		40	5	5		W	20	b g h t
		40	15	80		W	24	
D 16	GN	9 16	15	61		E	5±	
		10		22		F	0	S N t
		10		175		E	0	A l l t t g b t w t h d t h l t
					1	D	50	p m
		5	1		1	D	30	
		0			2 5	I	75 & 30	
		7	9		4	D	20	
		8 55	1					

Dt d b	H M M T	B	L t t l		L m b	H g l t	R m l
			N t l	S t l			
1905							
Mar h 16	GN	8 55 52 1 27 9 1 0 15 14 14	1 7 15 1 1 20 9 0 05 05	10 56.5 3 13 28 18 5 45 3 14 70	E E E W W W W W W	20 30 45 60 4 30 05 30 35 40 2	B ght tth tw l th n t th mddl B d t b O S b d t b O C F nt O C nt O
17	SS	J (12 0 8 1 24 9 4 7	1 6 2 15 7 6	(1 21 10 24 12 53 4 81 6	I L I D I F W W W	21 18 1 45 1 21 1 18 0	D hl B l t p E pf O l l t a t g w y f m th h b
D 18	GN	J 44 11 10 5 3 5 53 0 48 5 40	3 7 6 1 3 1 05 2 1 1 18 05 40	8 185 54 82 745 655 16 33 22 7 215 37 41 18	E E E I W W W W W W W W	30 J 55 10 5 35 30 1 30 7 18 20 20 2	C i m n t l f m Lt + 88 Dt + 61 E C An t l d t l l f m t h m ph O O O O S N t
D 19	SS	9 28 28 4 1 2 8 5 10 0 51 39 37	05 0 2 2 1 2 2 10 2 10 2	(1 28 58 21 9 05 65 18 0 7 3 18 18	I I E E E F W W W W W W	18 30 30 4 45 10 30 30 1 4 4 60 30	Cl l t p w b l t 0 12m E l l m n b g g O B t l t t I t - 1 W
D 20	GN	9 80 18 18 18 5 13 13 10 8 3 0 40 36	15 15 05 1 25 2 2	68 41 39 835 7 J 55 85 48 65 82 59 11	I F F F E E I F I E W W W	0 35 35 20 10 18 20 30 15 70 1 35 60	00 l g l d t d t L t C + 2 I t d f m Lt - 88 Dt L t C - 15 D l d t l t L t C - 07 I t b N t q t t h g th l l O I m lightly gg 170 hgl

D t n d b	H ur M M T	B	L t t d		L m b	H g h t	R m l
			N t h	S t h			
190							
M h 20	GN						
			7		W	20±	O
		1	26 5		W	15	
			32		W	15	
		1	40		W	20	
		0 5	49		W	20	
D 21	SS		64		L		A p t t y l g l m S k y b m l l y b f t h b t l d b d t n d H g h t O 85
		2 5	43		E	48	
		3	39		E	24	
		1	11		E	80	D b l
		1		25 5	E	20±	O
				80	E	20±	C
		0 6		84 5	E	20±	
		7		40 5	E	10±	O t n O t l b
		2		68	L	120±	D b l t l t g d t h d p m n b t l m
				68 5	W	24	
		1 5		60	W	48	
		9	48 5		W	25±	O S N t
D 22 S	& G V		16		D	20	
		1 5		5	E	20±	B d t t p
				9	E	90±	
		1		40 5	D	90±	
		1		77 5	W	10	
		2 5		04	W	40	S N t
D 23	SS		64		D	48	
		3	41 5		E	36	
		5	22 5		E	30	
		2	14		E	86	T p f t l d t h b p m n t d O
		2	11		D	86	
		1 5	5		D	60	C t l t t p
		1	0		E	30	
				1 5	E	48	D t h d f m l m p l
				8	E	10	S N t
		1		16	E	24	
		1 2		27	F	86	O l g t l y d p l d
		2		38	F	2	
		5		42 5	F	70±	
		3		68 5	W	36	A h l k
				2	W	30	
		1 5	8	0 5	W	24	
		2			W	30	
		1 5	80 5		W	80 & 24	
			61		W	24	
			8		W	24	
D 24	GN		65		E	80	
		1	45		D	40±	
		2	15		E	30±	
		1	12		E	30	
		0 5	12		E	30	
		1	6 5		E	30	
				1 8	E	3	O p m w 50 l g h n d m t l m b t L t - 16 E
				1 5	E	24	
				1 7	E	50	D t h d f m h m p h
		0 5		1 8	D	22	
		8		2 8	L	45	T p m t l m b g t L t - 32 E O p m t d t L t - 19 E
		1		3 5	E	80	
		1 5		3 9 5	E	15	
		2		50	E	60±	C
		3		54 5	E	80	
		1 5		6 5 5	W	45	
		1		6 2 5	W	25	T p m t t h l t p m
				1 9	W	55	C p m n a b d t b
		0 5		6	W	2±	
			19		W	15	

D d b	H M V I	B	L t d		I mb	H ht	E k
			V h	S tl			
1 05							
M h 29	SS	1		26	W	10±	
		3	13	1	W	L w	O
		1			W	30±	
		4			W	30	O p m t t Lt + 66 W
					L	L w	
D 80	GN	12	40		E	120	tl l m l j g t t th
		8	25		F	60 ± 35	th d C H glt 0
		8		2	D	60	O p m m tn
		20		4 5	E	15	
		2		6 5	W	15	O p m l g d 60 l gh
		8			W	85	D t l l f m h m ph
		0		38 5	W	0	O p m b l d 50 l gh
		5		2 5	W	30	
		9 18		18	W	50	
		0 5		7 5	W	5	O
		8 3			W	0	
		1	21		W	1	
		1	24		W	0	
		1	42 5		W	0	
		1	45		W	30	
D 31	SS	2	30		E	90	S N t
		2	21		D	60	
		1	19		D	4	O t t g tl tb
		1	14 5		T	15±	
		4		8	L	18	D t h d f m l m ph b t l t
				34	D	7	l t p m
		1	16	16	L	21	B l t
		1	6 3	81	E	10	
		0 5		1 5	W	10	
		1		10 5	W	40	O
					W	5±	
Ap 1 1	GN	2	3		L	0	O
		2	41		I	0±	
		2	81		D	80±	
		5	16		F	80±	
		1	8		F	80±	
		2		0	E	2	O
		2		3	W	20	C C C
		1		4 5	W	30	
		1		17 5	W	20	
		1	13		W	40	C C
		6	66		W	0	C C
D 2	SS	3	65 5		E	50	C
		2	16 5		I	0	
		2	25		E	21	
		2	25		F	15	
		5	20		E	2	B d t t 1
		2	1	5 5	E	15	
		2			E	15	
		1		1	E	15	
		1		3	F	20	
		3		60	E	10	
		4		5	E	40	C p m m t
				48	W	10	
		3		6 5	W	10	
		5		2	W	10	
		1		19	W	0	
		3			W	55	C O l g l dly H ht 75 t 8 83m
		3	6		W	24	
		1	12		W	10	
			29		W	20±	
			37		W	20±	
			41		W	20±	
			44		W	20±	
		2 5	60		W	30	O p m b l by 3

D t a b	H M M 1	B	L t t d		L m b	H g l t	R m k	
			L t h	S t t				
1905								
A p 1 4	S S	8 34	1	C		F	50	C C C
		9 25	05	28		E	18	
		8 34	1	9		E	80	
		9 16	2		5	D	24	
		8 34	3		58	T	10	
		17			83	W	18	
		47	0		70	W	18	
					48	W	18	
		10 0	1		81	W	30	
		13	4		20	W	30	
10	05		17	W	36			
			39	W	24	C l m t n l t L t + 48 W n d 35 h g h		
D 5	G N	8 1	05	65		L	15	V y f n t S N t
		49	3	6		I	10	
		45	1		195	P	0	
		1	05		675	E	12	
		10			64	W	12	
9 5		1		W	30			
0		50		W	80			
D 6	S S	8 37	15	81		E	10	C C C C C C C C C C C C C C C
		30	1	59		D	4	
			0	24		D	10	
		10 6	1	20		E	20	
		8 25	15	10		I	30	
		25	1	5		D	30	
		9 37	1	25		L	30	
			25		60	F	30	
		8 (	3		645	I	80
			05		80	W	10	
			15		77	W	10	
		J 1	15		71	W	10	
		14	4		42	W	24	
					30	W	24	
		7	65		26	W	10	
	3		19	W	18			
8 5	)	(	9	W	18		
5	0	9		W	30			
15	2	48		W	60			
10	05	485		W	48			
13	05	58		W	44			
		77		W	18			
D 7	G N	11 40		805		I	15	B d t t p B d t t p B d t t p
		38		7		E	0	
		35		175		F	25	
		10 5	4		14	E	10	
		11 30			32	F	10	
		5			75	W	15	
		2			70	W	30	
		17 50			58	W	30	
		48			37	W	30	
		10 0				W	15	
11 4	4		24	W	15			
10 11	1		155	W	0			
11 42				W	15			
10 19	0	33		W	15			
11 42	0	47		W	0			
D 8	S S	28	15	7		E	18	A t f w g w t w d f m t h t D T p f w g f L t + 17 E S N t
		8	1	65		E	40	
		0	1	485		E	10	
			15	39		F	24	
		10	5	255		E	10	
1		5		E	60			

Dt nd b	H MMT	B	L t t d		l mb	H glt	B m l		
			N ul	S th					
1905									
Ap 18	SS	8 55				86	I	80	
		52	15			40	E	21	
		45	05			2	E	24	D bl
						88	W	18	
		42				76	W	4	
			1			68	W	10	D bl
			15			68	W	10	D
		9 47				355	W	48	
		45				0	W	18	
		42	1	19			W	18	
		38	5	485			W	80	
		35	1	685			W	88	
32		68			W	20			
D 9	SS	9 25		61			E	20	
		23	4	50			E	88	
		20		42			E	80	B l t t p
		18		25			F	80	
		6	45	22			I	24	D bl
		10	1		85		E	20	CD pl d l g t l y t d d
		7	1		41		F	18	
		5			50		I	20	
		8 45			71		W	88	D t h l f m l m ph
		42	2	64			W	20	R p d l y l g g
		9 50			50		W	18	
		41	5	345			W	72	
		40	1	20			W	24	
		38	1	9			W	20	
		37	25	1			W	18	A h l k
34		89			W	31			
32	15	46			W	80			
30	1	585			W	18			
29	35	67			W	86			
D 11	SS	9 0	1	64			I	48	
		0	4	60			E	60	
		52	2	46			I	12	
		50	25	15			I	36	T t C l
		47	05		8		E	18	T p t d f t y b g h t d 5 h g l
									m t l m b g t L t + 4 I
		45	2	16			L	20	E p t 65 h g h C
		9 8	2	22			F	20	C A h l k
		8 42	105	84			D	20	B d t L t - 22 F
		38		42			D	80	
		30		17			E	10	D t h d f n l m pl
		30	9	585			E	18	
			05	77			F	18	
			15	81			W	18	T p l t 80 C d m t l m b g t
									I t 89 W
		22	05	74			W	20	
		18		70			W	108	B d t t p } O t l O
		15	05	68			W	51	D
		9 8	05	64			W	20	
		35	15	38			W	60	C
							F p m t l m b g		
							t L t - 39 W		
30	7	275			W	60	C n t d d l t l		
25		185			W	90	m t		
							D t h d f m l		
							m ph		
	05	19			W	18	S l y d f t O		
20		5			W	60	D t d f m h m pl h y d g t		
							O		
17	8	85			W	18	A h l k		
13	0	385			W	88			
11		485			W	20	S m w h t t l l C		
8		58			W	20	C		
8	4	65			W	38	A h l k		
8	1	69			W	24			
4		84			W	14			

Dt nd b	H MMT	B	L t t d		L b	H ght	B m l	
			N th	S tl				
1906								
Ap 11	GN	9 8	2	61		Π	40	
		0		19		Γ	5	D d pt tb
		0		14		L	20±	
		8 56	15		05	Γ	1	A gl i r d t h d f h pl
		50			16	I	1	D ll
		40			215	Γ	90	D l d f m l m ph
		9 9	03		4	Γ	1	
		42	3		95	W	80	D bl
		10	1		185	W	22	
		88			8	W	20	
		80	6	24		W	2	
		70	2	88		W	80	} O t l m C
		20	0	885		W	20±	El d t l l O
		18		58		W	80	
		1		74		W	20	Alm t d t l d f m l m pl
D 18	SS	8 58	1	71		L	60	
		4	4	25		L	24	
		1	45	19		I	15	
		40	0	12		F	24	D bl
		45	1	7		I	0	
		41	15		24	I	20	
		39	1		415	E	21	D bl
		9 75	15		8	D	90±	O D bl
		8 52	1		74	W	80	
					71	W	12	
		30			56	W	18	
		25			19	W	60	B d pt tb
		22	05		4	W	12	
		9 2	1		98	W	12	
		6	6		26	W	24 C 80	
					21	W	12	
		20	15		125	W	21	
		13	8	20		W	60±	Sh p d f t O
		9	8	875		W	1	
		35	35	42		W	2±	O
		7	1	517		W	48	
				885		W	19	
D 14	GN	8 55	1	58		Γ	80	O p t d t L t + O l L
		0	05	48		I	10	
		47		27		F	40	B l pt tb
		47	25	21		Γ	10	
		1	05		1	I	15	
		1	1		7	I	80	
		42	1		21	D	75	
		9 9	15		125	I	20±	O
		8 39			44	I	30	
		39	05		45	F	20	
		36			63	I	15	
		35	1		885	E	16	D bl
		32	2		64	W	35	
		30			5)	W	80	
		18	1		105	W	7	
		9 15	15		31	W	25	D bl
		12	2	15		W	18	
		8	25	8		W	80	
		4	5	105		W	0	
		0	1	24		W	10	} O n t d t b O
		0	15	37		W	80	
		8 57	05	40		W	20	
				88		W	40±	
D 16	SE	9 22		65		F	30	
		20	1	565		E	24	
		1) 5	1	8		E	120	R p d l h n g g H l t C C
		9 8	1		16	E	20	R p d l h n g g B 4 O C
		58			625	E	36	
		58			645	E	60	
		56	1		815	E	80	
		59	05		85	E	24	

D t d b r v	H MMT	B	L t l		Lmb	H ht	
			N th	S th			
1905							
Ap 115	SS	x					
		8 28	15	6	W	48	
		9 54		62	W	30	
		1	05	515	W	30	R p dly l s
		48	4	84	W	50	
		46	1	21	W	18	
		46	1	155	W	4	
		4		0	W	80	A l l t f t g w y f m t h h m p h
		40	85	5	W	50	
		35	25	165	W	60	Ch g g l d y
		32	7	205	W	45	l d p l d t r l l A t w d d
		28	8	45	W	48	V y b g h t
		26	1	60	W	4	
		24		82	W	21	
D 16	GN	9 10	1	75	E	15	
		9		60	E	50	C p 2 b l t b 70 h g h d
		0		85	E	15	m t l m b g t L t + 65 E
		8 50	1	185	E	35	B d t t l
		4		9	E	60	D t l d f m l b n h y d g t O
				45	E	10	O t d b t h l t O
			5	1d5	E	0	
		41	05	21	E	25	
		49		28	E	15	D t l l f m h r m p l
		39	15	31	E	30	
		38	05	68	E	20	
		35	05	79	E	20	
		35	2	83	I	30	O t l O O p m 35 h g h
		3		85	F	1	
		30	1	81	W	30	S N t
				66	W	5	O p m 40 l g l d t d t L t
		J 23	3	415	W	30	- 63 W
		26	3	345	W	20 & 25	
		1		205	W	10	
		0	15	2	W	30	l m t l m b g t L t - 65 W O p
							m 6 b d
		19		5	W	30	
		8 38	3	145	W	50	C
		9 17	2	48	W	30	D bl
		15	05	51	W	15	
		14	2	65	W	2	D bl
		12	1	885	W	10	
D 19	SS	10 20	6	68	E	I w	O S N t
		20	1	255	L	L	C
		5	25	0	E	0	
		2	3	155	E	18	B g l t
		18	05		E	30	L w p m f i t h d
		18	05	11	F	24	
		14 45	4	18	E	30	D bl
		40	8	395	E	10	p m 10 b d n d 60 h g h
		38	05	65	E	25	O l b t 60 h g h
		10 20	25	68	E	L w	C C C C
		20		71	E	50	
		14 8	1	32	W	30	C C p 6 b l d 40 h g h
		11 4			W	30	
		10 0		1	W	55	
		20		14	W	30	
		58	14	8	W	40	
		48		67	W	4	
		40	1	69	W	18	
D 20	GN	9 9	15	28	E	85	C
		8 49	15	19	E	20	V y b g h t t b
			1	05	E	15	
		45	25		E	95	
		40	15	45	E	50	
		9 39	4	17	E	0	C
		39		69	W	40	O

D t n l b	H M M T	B	L t t d		L m b	H g h t	R m k	
			V l h	S t h				
1905								
Ap 1 0	C N	8 35 58 55	1 15 25	275	655 18	W W W	21 ± 0 40	Slightly t l C Slightly t l C
D 21	G N	8 41 10 19 37 35 34 30	15 1 1 05 5	60 40 325 185 10	155 49 61 69 73 265 125	E E E E F L F E W W W W	10 80 30 0 15 00 15 80 75 60 ± 0 15 ± 25	M t f t y b g l t N m t l l D t h d f m l m p h V y f t d t h d f m l m p t d b l
D 22	G N	10 8 6 4 1 3 1 9 55 10 20 17 6 15 12	45 0 15 4 05 1 1 1	73 51 15 1 18 65 835 25 1	18 8) 65 835 25 1	E F F E F W W W W W W	25 ± 35 50 1 30 12 30 15 14 15 20 15 75 ± 80	I h l l D b l D t h d f m h m l h
D 23	S S	9 6 4 1 8 58 48 16 4 1 86 85	5 5 1 4 15 05 55	64 515 89 5	24 36 78 69 74 6 935 5 16 8	D E F F F W W W W W W W W W	80 24 0 30 1 20 18 10 8 15 0 10 ± 10 ± 20 ± 10 ± 18 10 ±	E p t N T d M g l y b g h t B d t t p O t d t b A h l l
D 24	S S	8 59 52 4 45 42 38 38 30 4 3	10 9 1 1 1 1 5 6 1 05	81 45 165 35	4 8 155 4 58 77 8 115 40 8 185	I E E E E E E E E W W W W	20 72 ± 24 21 48 60 40 20 48 15 15 L w L 21 10 ±	F p m V T d t t l L p t V T d M g l y b g h t O p m S b d O t d b y n h 70 h g h O S V t e A t l l w t h b k t h d d l D b l

D t n d b	H M M T	B	L t t d		L m b	H g h t	R m k
			N t l	S t l			
1905	x						
Ap r 24	SS	9 15		11	W	0	A h k d t h d f m t l h m p h n l f t g b t h l t l m
		14	8	85	W	24	
		12	05	7	W	24	
		10	1	255	W	24	V y f t
		6	5	42	W	40	} O t t b
		6	15	455	W	80	
		6	1	49	W	18	
		8	15	62	W	24	
		1		71	W	24	
		0	05	815	W	18	
D 2	GN	9 0		47	E	12	
		0		45	F	12	
		8 55	65	32	E	25	B g h t
		58		18	E	5	A b g h t l t
		49	05	15	D	50	V y f t
		47		155	E	1	
		46	05	215	E	15	
		45	1	335	E	1	Th m l l
		44		425	D	12	
		40		80	D	10	
		40	05	98	L	30	
		9 23		46	W	30	} S l t g t w l h t h d t g } b t w t l m 2 l w l m
		28		42	W	80	
		20	1	295	W	20	B g h t
		20		27	W	60	D t h d f m l m p l
		18	15	11	W	1	Th m l l i t
		1	45	21	W	20	
		7	15	84	W	20	
		4	05	725	W	30	
D 26	SS	9 9	2	68	E	86	Ar l l k
		4		58	F	20	
		0	9	46	I	40	A l l l
		8 56	3	215	D	40	
		54		115	D	95	
		54		8	F	85	
		0		3	E	150	F l l D t h l f m l m p h
		46		65	F	24	
		45		115	L	0	S l d
		42		28	E	30	
		35	4	80	E	85	E l t
		30	15	875	D	3	
		24	2	855	W	24	
		9 31	4	46	W	00	
		25		265	W	60	B d f l k
		18	8	20	W	00	Th t m t d t t p
		18	1	26	W	15	
D 27	GN	9 13	2	68	D	0	
		10	8	395	D	20	
		R 4	35	22	E	40 & 80	S N t 1
		39	1	145	D	90	L w l t y l g h t
		34	4	4	D	90	O p m l g 1180 l g h t 81 45
		34	1		D	10	
		31	05	05	F	20	
		29	05	8	E	20	
		28		655	D	15	
		28	1	68	W	45	T p b d n O
		9 2	2	47	W	20	
		28	15	90	W	80	S N t 2
		28	15	26	W	80	} O t d O
		18	1	20	W	25	
		18	1	55	W	20	
D 28	SS	8 46	2	68	E	48	
		40	1	485	E	60	D b l
		38	4	41	E	70	
		24	2	84	E	80	

D t d b	H M M T	B	L t t d		L m b	H c l t	E L	
			N t h	S t h				
A p l 28	SS	0	29		D	L	} S l t g t d l t l l t t } t l B f t h f t p l t t E p t V y l l O D d V y f t O C p t l m l t l t - 38 W T l t l m l t l t - 38 W L p t D l l C C D l l D I l l p l l t l m l f l t t D b l N t f t l m d t l l f m l m l l M t C D t l l f m l l l l l b t t O A l d l t t l t l t f t l f m t l l l C A y l w p t l l t h y l g t d t l l l f p D l d f l l l D l l D t h d f l l l D d y l g l t t l l l d y l g t S h d p l m t S N t V y b d j d t t l b b y l d t C D t l d f l l l C M t C	
		8 20	2	11		I		72
		8 29	9	1		L		72
		17	2		83	D		30
		18	2			E		30
		8	05		70	F		30
		6			86	E		30
		0	55		05	W		0
		9 18	4		0	W		48
		18	05		11	W		30
		9 1			C	W		150
		9 10	10		20	W		30
		0			8	W		30
		0				W		30
		8 53	15	C 5		W		48
D 29	C N	9 30	5	C 5	D	00	C C C D l l D I l l p l l t l m l f l t t D b l N t f t l m d t l l f m l m l l M t C D t l l f m l l l l l b t t O A l d l t t l t l t f t l f m t l l l C A y l w p t l l t h y l g t d t l l l f p D l d f l l l D l l D t h d f l l l D d y l g l t t l l l d y l g t S h d p l m t S N t V y b d j d t t l b b y l d t C D t l d f l l l C M t C	
		24	1	11 5	I	15		
		21		9	F	10		
		2	15	25	F	20		
		22	2	28	F	15		
		20	2	21	F	15		
		20	1	10 5	F	5		
		18		2	L	0		
		10	1		F	30		
		16	1		E	30		
		14			E	15		
		8			F	3		
		8			F	20		
		8	1	68 5	I	40		
		D 30	G N	5	4	67		W	50	C A y l w p t l l t h y l g t d t l l l f p D l d f l l l D l l D t h d f l l l D d y l g l t t l l l d y l g t S h d p l m t S N t V y b d j d t t l b b y l d t C D t l d f l l l C M t C
47	2			52	W	10		
45				35	W	4		
42	05			24	W	15		
19	15			21	W	20		
8 10	2				W	10		
40				1	W	10		
10				5	W	10		
0 10				4	W	1		
38				18	W	0		
	05			53	W	15		
34				C 3	W	30		
34				15	W	10		
10 2	1			68	F	20		
2	3			C	L	30		
0	3	53 5	F	40				
9 8	1	48	I	40				
10	3	21 5	l	20				
M y 1	S N	8 53	1	28	E	1	C A y l w p t l l t h y l g t d t l l l f p D l d f l l l D l l D t h d f l l l D d y l g l t t l l l d y l g t S h d p l m t S N t V y b d j d t t l b b y l d t C D t l d f l l l C M t C	
		53	1	28	F	30		
		50	1		F	1		
		45	1	68 5	D	3		
		37	4 5	74	W	90		
		35		67 5	W	60		
		54	1	61 5	W	15		
		10 1	0	42	W	15		
		10		28	W	1		
		8 54	15	4	W	25		
		54	1	28	W	25		
		10 8	1	31	W	20		
		7	15	37	W	25		
		5	4	68	W	30		
		9 0	3	71	E	48		

L t d b	H L M I	B	L t t d		L m b	H g h t	R m l	
			N t h	S t h				
M y 1 1905	SS	9 20	05	65		D	48	B d p t t b
		11		54		L		S N t 1
		0	11	27 5		J	24	S N t 2
		8 55	05	6		L	40	
		48	8		27	L	96	O p 2 l d
		9 40	5		64	L	0	D b l
			05		67 5	D	18	
			05		66	W	18	
		8 35	05		71	W	40	} O t d t t h n C H g h t l t g l 26 m n l l 30 t 10 l 31 m
		31			07	W	90	
		28			61	W	150 ±	
		10 0	0		82	W	60	
		J 5			1	W	0	T d p l d t 108 A
		50	05	5		W	30	B d t t p
		48		12 6		W	30	
48		35		W	40	B d t p		
	05	38		W	0	S l h t l y l g O } O n t d l b n C		
10	0	41		W	30			
35		6		W	60			
10 31	3	71 5		W	0	O		
D 2	CN	9 0	1	73 5		L	36	
		20	1	71		J	25 ±	
		20	6	05		L	45 & 35	V y b g h t M t O
		10	4	90		I	0	
		8 45	1		1 5	D	0	P t f t y b l t d l g h t l y d p l d t d
		45			19	L	20	
		40	1		28	I	15	
		9 52	2		38	T	15 ±	C
		8 30	8		65	I	90 & 60	' N t
		9 5			70 5	L	30 ±	
		52	1 5		73	E	20 ±	O
		3	4		82	W	100	H g h t (5 O
		1			85	W	20 ±	
		10	4	2		W	30	
		40	3	10		W	30	
86	1	1 5		W	20			
85	8	24		W	0			
34	05	20		W	15 ±			
34	1	81		W	0			
34		84		W	5 ±			
30	10	12		W	30			
	05	t		W	15			
24	5	(		W	5			
D 3	SS	8 59		78		L	0	
		5		74 5		I	10 ±	V y f t
		48	5	65		L	4	
		4		05		L	20	
		45	05	44		I	20	D l l
		8	1 5	31		L	21	
		35	1	8		I	1	} O t d t t t
		3	1	6		T	24	
		8		05		D	24	
			4 5		8	I	4	
		19	2 5		8	I	36	
		1	5		71	L	20	A l l l
		9 35	8		38	W	100 & 48	
		0			18 5	W	0	D t h l f l m p h
					5 5	W	20	
24	05	8		W	15			
		16 5		W	0	A l l b t 5 b l s p t f m l m b		
0	8	26		W	18	P t l y t d t l m b n C		
10	1	38 5		W	20	M t O		
10	8	48		W	20	D b l		
10		4		W	80	D h l h f t g l d l t t p		
0	4	69		W	80			
8 55	1	84		W	100	F t O		
D 4	GN		1			E	15	
		9 10	2		1 5	L	25	
		8	1 5		90 5	E	30 & 25	
		8 48	05		61 5	L	0	
		47	8	66 5		L	0 ±	Th l t n th

D t d b	II MMF	B	L t t d		I ml	II ght	R m l
			N th	b tr			
1905							
V y 4	GN	05		84	D	15	
				67	W	15	
				55	W	25 ± C	
		6		42	W	05	
				37	W	0	
		1	0		W	90	
		05	125		W	80	B d t t p
		2	25		W	25 ± W t	
		3	305		W	20	
		3	44		W	10	
		05	1		W	20	
		3	135		W	5	Ab t 40 hgh C
			70		W	30	B k th m ldl
			855		L	15	
			88		L	5	
			305		E	15	
D 5	SS	1	() 5		L	30	D bl
		1	65		L	50	
		9	15		E	10 L 85	
				10	I	20	
		15		32	E	50 & 80	C l m 3 b l
		4		61	I	30 & 1	I l t t l
		1		78	W	20	
		1		655	W	0	
		5		195	W	31	D t l l f h m l
				89	W	20	
				30	W	20	
		05		88	W	21	B d t t l
		1	4	8	W	20	A l l t t p l l t l m l d d t t d f m t
		3	17		W	30	
			20		W	30	
		05	43		W	30	A l l t t l l d f l n b
			16		W	30	
		3	635		W	30 ±	V y f t d l w C l m t g n d
		1	71		W	18	30 hgl
D 6	GN	05	655		E	15	Ab t t l l C
		1	37		D	10	
		05	33		L	25	
		8	815		I	41	
			65		F	10	
		1	15		D	15 & 30	M t m C l m t t h t p f t
		25		8	E	55	C
				11	I	15 ±	C
				197	I	15	D bl
				4	I	15	S l g l t l y l 6 C
		7		855	I	20 ±	
		6		61	I	30	
				885	W	0	Al t 30 hgl C
				2	W	15	
				18	W	10	B l p t b
		05		4	W	20	
		1	31		W	30 ±	C
		1	14		W	25 ±	C
		05	52		W	15	
		2	64		W	30 ±	
D 7	SS	3	655		D	7	
		1	38		I	21	
		15	81		I	4	C t d t b C
		4	29		E	21	
			0		I	24	
		0	4		F	40	C
		0		3	D	24	S N t
		15		28	L	21	
		2		28	F	15 ±	D pl d l g h t l y t d
		2		68	D	86	

D t d b	H M M T	B	L t t d		L m b	H l t	R m l	
			N t h	S t h				
M y 7	1905 S	M						
		8 59	1		88	D	24	
			1		79 5	E	25	
		50	1		78	W	18	
		50			71	W	18	D t l d f m h ph
		50	0 5		69	W	18	
		47			60	W	18	D t h d f h m l l
		9 51			54	W	20	
		50			48	W	20	
		48			30	W	30	
		47	0 5		25	W	1	
		45	4		18 5	W	30 & 0	
		45	0 5		9	W	90	B d t t p
		39			0 5	W	30	
		38	3	7		W	21	
		32	4	41		W	40	T p f w p l l t l m b f b t l o t w l
		30	1	51 5		W	24	
		29		55		W	24	B d t t l
		28		74		W	21	
		27	0 5	88		W	20	
(	1	87		W	0			
D 8	G N	10 5	0 5	5		L	20	C S N t
		5	1	68		L	35	C
		0 25	0 5	50 5		T		q l l
		34			28 5	E		M l t
		10 5	1		85 5	D	30	C
		9 33			48	D		Sm l l
		10 5	0 5		46	L	15	C
		5			51	F	15	C
		5	1		58	D	15	C
		5	1 5		63	T	25	C
		9 30	0 5		68	L		D b l m l l
		30	0 5		69	F		Sm l l
		10 5	0 5		69	W	25	C
		9 45	1		01 5	W		Sm l l
		48	0 5		27	W		Sm l l
		10 5	7		55 5	W	L	C
		5	0 5		6	W		C Sm l l
			2	28		W		
		9 40	2	29		W	L w	Sm l l 80 l t h t d t L t + 37 W
		D 9	G N			17		W		M d t d B l t t p
	1			54		W		M l l
9 2	1			82		D	18	
0	8			87		I	30	
8 49	8				28 5	T	24	
45	5 5				44 5	J	43	
38					63	T	72	
35	1				68 5	L	30	
3					72	I	48	
d1					87	W	1	A l d b l
26					65	W	60	B d t l m d l l C l m 76 l g h t
								9 l l l
28	3				08 5	W	20	B d t t l
9 35	3				34 5	W	72	D b l T p b t G l g
28	1 5				28	W	80	
28					25	W	60	D t l l f m h m ph
28	1				28	W	21	A l d b l
24	0 5				6	W	1	T p f w b t q l t l w y
21				1 5		W	90	I l g h t 90 n C
20	1 5			8		W	21	I l g h t 90 n C
18		31 & 40		W	120	A l g l d f w y f m l m b		
7	1	58		W	40			
D 10	G N	9 6	0 5	17 5		E	15	
		11	1	0		F	80	
		10 30			10 5	E	90	C
		9 57	2		15	T	20	B k t h m d d l
		55	4		20	D	10	S N t
		8 52	4 5		46	E	45	
		45	1 5		64	W	25	
		0 45	9		91 5	W	40	
			1		25	W	30	

D t d b r v	H MMT	B	L t t l		L m b	L i t	R n l	
			N t h	S t l				
M , 10	GN	10 11	1	2		W	2	Q l l t n C
		9 80	15	18		W	4	A l l i t l t l d u t d w t h t
		89	2	175		W	5	l g t h t l l g t 100
		11	4	80		W	90	O
		9 25	8	8		D	20	B f C l 10 l d
		20	0	275		D	40	C
		8 18	8	105		D	35	t f f t f g m t
		10 7	2	4		D	90	
		9 15	8		65	D	21	3 b d O
		5	1		145	D	60	} S N t l
5	05		17	D	24			
5	1		1	D	18			
5	1		235	D	10			
3	1		865	D	60	\ y f t S l d		
8 50	4		17	D	48			
6	05		2	D	20			
5	1		635	D	40			
40	8		685	D	60			
			83	W	18	S l l		
25	05		67	W	1	O D t h d f m l m j h		
9 25	4		57	W	60			
9	1		36	W	100			
			815	W	21			
			1	W	24	A l l i d t h d f m l m b m t g t O		
48	8	35		W	0	T l l } T l m t n O		
46	2	11		W	75	\ y b g h t		
43	2	17		W	24			
39	2	25		W	24	S N t 2		
39	2	8		W	80			
34	2	40		W	80	O t f d t h d f t		
31	5	655		W	80	B l t t l		
28	5	70		W	40			
D 14	GN		8	605		F	20	O p m 10 l g h l r b d
		9 87	1	385		F	25	
		87	2	255		I	20	
		98	1	13		I	30	} O l m m t d b y 1 12
		83	1	6		I	60	l b
		80			19	I	10	
		2)			30	I	15	
		29			405	F	1	
		8 30			13	F	20	O
		9 2			63	W	15	B d t l p t l t l t t
10 5	1	11		W	15	O		
8 30	2	28		W	35			
10 0	2	31		W	15			
8 30	2	31		W	30	O		
9 50	2	71		W	60	F t O p m l g d X h g l		
D 15	SS	10 50	2	64		H	75	S N t
		50	1	95		F	38	
		9 5		35		F	35	
		8 59	15	185		F	80	
		8 54	35	4		F	30	B g l t
		10 48	2		28	F	20	
		8 49			27	F	20	
		49			295	F	24	
		9 27	05		47	W	80	
		27	8		81	W	20	B d t t p
28			1	W	24			
11 8		8		W	24			
4	7	325		W	L w			
0	4	69		W	60			
D 16	GN	9 12	1	805		F	80	
		10	05	45		F	12	C l m 8 b l
		20	2	395		H	10	O
		7	8	18		D	15	B g h t
		4	2	5		H	80	
		1	2	0		H	15	
8 59			12	H	10			

D t and b	H MMT	B	L t t l		L b	H gh	R m k
			N tl	S tl			
1905							
M 3 18	GN	9 20 6 54 52 9 0 19 19 17 15	4 1 1 1 15 2	88 61 745 165 20 35 69	E L W W W W W	30± 15 15 5± 10 15 & 20 15 4	C C B ght (l d b)
D 17	SS	8 5 48 45 11 30 31 33 6 4 13 9 10 8 8 24 9 0	5 2 8 05 0 5 45 8 4 10 05 8 05	10 45 895 85 31 22 10 5 11 395 88 71 20 85 185 685	E E E E E E E E D L L W W W W	48 46 0 36 25± 30 36 0 30 40 Lw 30 30 0 30	S N t C t d C V y f t Sl d V f t H t d t L t + 13 D O B d t t p C i m 4 b d
D 18	GN	J 0 10 15 13 11 9 5 2 0 50 98 85 35 6 8 9 30 8 35 35	2 2 15 15 15 05 15 15 05 2 2 3 15 15 15 15 15 15 15 15	59 15 35 23 95 18 285 44 15 15 885 5 13 135 37 57 68 72	E E E E E E D F W W W W W W W W W W W	50 20 25 20 30± 30± 30± 20 20 30 20 20 20 20 25 1 30 15	B d t t p 65 hgh C l d C B l t l l d l l p } C n C t d a t t p p t b l D Ab t t w hgl C Sl ghtly t l l C } C t d t t p O C i 4 b l C C C
D 19	SS	10 5 53 58 50 50 48 4 14 4 10 40 34 32 2 24 17 15	15 45 6 1 35 15 15 1 1 15 1 1 5 1 1 11 45 8	67 11 48 23 6 31 37 115 45 70 86 82 16 32 245 165 155 65 715	L F I L F E F I I F W W W W W W W W W	20 60 70 20 30 L w 18 18 24 18 20 60 38 80 80 40 86 0	L d Sl i L g pt b R p dly h n g g B 8 b d C
D 22	GN	8 41 37 30	65 1 05	26 165 65	D E E D	35± 20± 4±	S N t H ght 40 n C B d t t p 65 hgh C

D t d b	H M M T	B	L t t d		L m b	H g h t	i i	
			N t h	S t h				
1905								
M y	C N	8 30 40 50 4 40	1 1 2	10 78	88 68 395	L W W W	80± 0 1 20± 30±	B d t t p O B d t t p O
D 23	S S	10 17 17 7 89 88 3 89	4 2 1 05 1 1 2 1	995 28 175 11 2 795	3 295 48	D D E L D F W W	30 48 0± 20± 30± 70 10± 20±	O V y f t A l m t d t h d f m l b O
D 24	G N	8 50 17 45 9 37 8 48 29 37 85 24 80 80 9 37 5 2 8 51 5	1 25 2 7 1 8 1 05 1 05 05	79 35 7 6 0 25 87 6 83 78 7 675 525 85 8	25	L L D E D D D W W W W W W W W	10 0 60± 3± 20± 45± 2 0 10 15 15 25± 40± 10 10	B d t t p I r g m t y O p m n t b l 170 h g h C B l t t p D b l C F t F t t y t g O l p t l m b t L t - 17 S W S l g t l y l g d t l l O
D 25	S S	8 5 44 44 36 30 2 25 5 2 9 55 59 59 35 3 80 1	19 1 1 2 15 05 0 05 1 1 8 25 2 9 66	58 205 0 125 88 37 08 6 67 20 80 0 485 215 17 10 9 66	125	T I I L I F I L F W W W W W W W	24 120± 75 20 60 85 4 20± 0 20 10± 10± 10± 21 18 60 60	S l d M t O D b l O p 42 W t d f m L t - 57 W t A t l l d f m t t p t L t - 2 W B l t t p I g n c B d t t p
D 26	G N	8 50 42 41 40 9 15 15 19 9 0 8 59	0 1 25 1 85 6 15 2 15	245 815 40 55 08 74 52 47 14 9 4 95 86 69	815	D E T D V W W W W W W W W	90 & 95 20 1 20 0 20 100 & 60 45 15 80 20 1 10± 80	130 l g l O B d t t l B d t t l B l t t p l l l c S l n d
D 27	S S	9 12 18 18	2 2 15	67 51 475		D E E	45 30 30	V y f t d t h d f m l m b

D t a b	H M M T	B	L t t d		L b	H ght	R m k	
			N th	S th				
1905								
M y 27	SS	9 11	4	88		E	86	O p m t d t L t + 81 D
		8	7	25 5		L	20	D p t N t l d 85 l g h n O
			85	19		D	10	
		6	05	13		D	20	B g l t H k l k
		50	1	10 5		D	30	O
		2		2		F	1	R g l t
		8 59	1		88 5	L	30	D b l
		51	05		10 5	E	24	D b l
		48			51	L	24	B l t t p
		85	25		64	W	60	
		9 88	1		41	W	50	B d t t l B G b d n O
		82	1	19 5		W	48	
27	2	68		W	60	L g C		
D 28	SS	10 81	05	68		D	90	O
		9 4	4	87 5		F	60	
			7	29 5		D	L w	
		50	1	19 5		D	24	S m t d by f g m t y t k 6 l g
		45	2		48	F	24	D b l
		10 81			65 5	W	45	O F t
		22	0		41	W	40	B d t t l
		20	05		5	W	20	T p f w f b t 8 t W
		18	3		17 5	W	36	
		14		10 t 15		W	75	A l g l d w y f m t h l m b
		10	05	32 5		W	40	
		8		38 5		W	30	B d t t p
5	1	64 5		W	38			
D 29	GN	10 88		76		F	25	V y f t l g O
		28	05	70 5		D	85	C B l t t p
		28	1	60 5		D	25	O
		85	15	80		E	15	
		84	1	10		E	12	
		81	05		8	I	13	
		80	05		48	E	20	
		80	1		45 5	D	30	
		28	6		58	L	95	O
		27	05		71	D	12	
		45	05		42	W	20	F t
		88	1	35 5		W	50	O p m 30 h g l d m n t d by l t g t k
D 30	SS	88	1	88		W	30	
		9 27	1	74		F	3	
		14	4	19 5		F	60	V y p d l y h g l
		5	15	10		E	20	D l t l g h t l y d p l a
		1		8		E	20	
		8 55	2		48	E	40	
		55	2		45	D	40	
		9 27	0		68	W	90	C
		52	1		64 5	W	20	V y f t
		48	3		51 5	W	40	V y f t 60 h g h O
		42	1		11 5	W	24	
		89	4	28		W	80	
85	15	85		W	20			
D 31	GN	8 45	1	72 5		L	80	
		41		29		F	15	S l g h t l y l g n C
		40	5	21 5		L	1	S l t l y t l l n C
		38	35	18		E	30	
		9 40			9	D	2	O
		40			15	E	2	O
		8 34			55 5	E	20	
		31	05		57 5	E	15	
		30	05		75 5	F	12	
		9 4			72	W	15	S l l
		40	25		58	W	L w	
		2	1		50 5	W	80	F t
0	1		45	W	30	S l g h t l y t l l n C		
10 05	05		37 5	W	15	S l h t l y t l l n C		

Dt db	H MMT	B	L t t l		L l	H l t	R m l
			N h	S th			
1905							
M y 1	GN	8 55	8	28		W	15 D bl
		9 40		8		W	5 ± Sl d C
		8 51	2	40		W	30 Ab t 0 hgl C
J 1	SS	9 35	3	70			90 s d C
		25	1		18	I	30 ± O
		14	1		21	L	15 ± O
		2			20	I	25 ± O
					32	I	20 ± O
			2		42	I	25 ± O
			3		68	W	35 C p n n t d t Lt - 32 W
			05		44	W	5 C
			05		30	W	10 C
			9	10	13	W	20 El m t g t p 10 hgh C
U 2	GN	9 10	2	70		F	90 r l t t p C
		8	05	165		F	1 B t t t l C
		7	05	85		I	15 C Sl t l l
			3		175	I	30 ± I l f C l t l b t t - 11 D
		5	3		37	L	4 El f O l t l b t Lt - 32 D
		1	3				60 d 28 D
			1		635	F	20 C
			05		67	F	20
			05		715	F	1
			5		815	W	30 B d t l l
D 3	SS	9 29	05			W	0 D bl C p m s b d 1100 l gl
		26	5			W	30 30
							6 0
							3
							30
							20
							30
							20
							30
							20
D 4	SS	10 34	2	31		F	0 C
		28		175		I	W l y 0 5 b l t 10 t
		1	1		18	F	30
		17	2		2	F	30
		15	2		39	F	12
		9	3		6	J	30
		4	0		115	W	31 ±
		5	05		11	W	21
		46	4	40		V	0
		D 4	SS	11 41		685		F	0 S N t
41				17		L	91
41				11		I	
46	8					I	40
53	05				195	I	25 B d t t p
5	1				29	F	10
20	1				51	W	20 l l
					15	W	0
23	1				32	W	0 D t l
30				3		W	20
37	1	54		W	10 ±		
D 5	KVS	11 14	1	73		E	0 F t d t l t 53 l C
		0	8	155		L	30 C t l t l l l
		0		11		F	1
		10 58	3		15	F	I w 30 hgh C
		9 9	6		16	F	75
		18			22	E	90 ± C
		16			21	E	30 ± O
		5	2		115	E	30
		8	3		88	F	24
		4	25		70	E	40
0			61	F	20		
10 19			88	W	30 Sl d		
9 18			855	W	25 ±		
10 15			58	W	10		

D t d b	H MMT	B	L t t d		L mb	H ght	R m k
			N th	S th			
1906							
J 5	KVS			58	W	20	Sl d
				34	W	30	55 hgh O
		2		18 5	W	20	
			26		W	30	
		14	37		W	60 & 40	B 8 b d O
D 6	KVS		67 5		E	80	B k l
		5	51		E	30 & 95	
		4	40 5		E	L w	B ght
		1		12	E	30	O
		2		17	E	20	C
		8		20 5	E	15	
				23	E	15	
				28 5	E	d	
		6 5		42	E	40 & 80	
		1		68 5	E	JO	
				70	W	85	
				8	W	80	C
		1		0 5	W	30	T p m t hmb g t Lt + 6 W Ca
			19		W	30	B t h d l d t
		2	31		W	90	C p m m h l g d 105 hgh
		1	6		W	20	
D 7	KVS		71		E	70	F nt 7 b d O
		4	6		E	25 ±	C
		1	19		E	30	
				12	E	20	
		1 5		21	E	3	O
				25	L	20	C
				27	E	35	
				42	E	30 & 20	D bl 4 b d O
				57	E	20 ±	O
				7	E	25	
		0 5		4 5	W	30	O
		1		38 5	W	30	C
		1		8 4	W	20	
			6		W	10	E t d t Lt + Ll W O
		0 5	17		W	30 ±	C
		1 5	4		W	40	
		1	26		W	L w	t t d t b O B ght
			36		W	80	Ad t h l l d t Alm tm t th lmb O
		0	58		W	8	
		1	76 5		W	20	
D 11	KVS		38 5		L	80	
		1	3		L	20 ±	C
		0 5	25		E	15	T l m t l b t Lt + 29 E m O
		8	0 5		E	20	
		6		5	F	25	C A h l k
				24	E	50	B d t t p
		4		23 5	E	85	
		3		39 5	E	60	T p m t lmb g t Lt - 32 E O
		4		6	L	50	l t
		0 5		7 4	W	20	
		8		25 5	W	1 w	
		0 5		2	W	30	
		1	7		W	6 1	F
		1	17		W	30	C
		1	76 5		W	L w	B ht
					W	20	F +
D 12	KVS		69		L	80 ±	O
		0 5	38 5		E	45	A t m f w tw d f mth top in O
		8	22 5		F	90	
		1	17		E	35	B k th mddl Upp p t l g
			6 5		E	30	

Dt d b	H M M T	B	L t t l		L ml	H ght	E m l	
			N th	th				
1905	M							
Ju 16	GN	11 58 52 9 28 11 40 46 4	1 8 6 05	4 37 455 52 77	31	W W W W W W	25 80 20± 10 15 15	N t
D 17	GN	8 50 48 40 26 9 0 8 58 58 55 52	8 2 05 35 15 1 15 15	87 47 28 285 405 28 18 22 28		F E E E W W W W	1 25 25 25± 30± 15 15 12 12	O
D 21	SS	10 40 11 58 5 55 58	2	20 14	315 17 15	E W W W W	30± 40± 60± 25 60±	S N t
D 22	KVS	9 5 8 48 39 9 15 40 25 31 2	2 05 2 2 15 15	25 25 28 39 445 85 10		I E E W W W W W	120 20 20 45 L 25 30 30 0±	S N t S N t B 2 b l C
D 23	SS	11 20 51 51 51 47 44 10 58 11 59	0 8 1 5 8 1 15	285 1 75 12 245 39 61 66 425 12		D D F E D D W W W W	20 25 2 25 40 25 0 4 30 25 30	I pt E pt
D 24	KVS	9 35 27 10 18 9 5 7 0 9 56 10 16 8 52 48 10 12 5 0 55 55 43	05 1 15 2 25 1 05 1 2 2 1 4	78 61 545 40 80 215 85		D D E D D E E E E W W W W	35 20 20± 35 45 20 20 40± 20 20 60 60 40± 120 55	R ght n dl lk S m wh tt l C M t g t t p n C B d t t p C D t h d f m l m b S N t M t g t t p
D 5	KVS	11 2 0 14 11 0 10 50 44	05 05 6 05 1 4 25	41 345 12 1 38 40 66		D E E E W W W W W	30 2 2 20 15 70 85 30 25	C H ght 80 C S N

D t d b	H MMT	B	L t t d		Lmb	H ght	R m l
			N th	S uth			
1906							
Jun 28	KVS	9 48 42 22 15 5 10 20 18 10 0	35 05 1 1 1 15 9 2	57 385 1	805 88 75 24 10 35	H H H H I H W W W	70 40 ? 30 20 20 60 45 36 H ght t ky b ght
D 29	SS	10 25 10 5 9 58 54 25 28 15 11 2 9 28 10 51 47 45 44 41 35 30 30	5 5 2 2 1 15 1 1 1 05 2 2 2 3 05 1	675 28 95 2	11 21 305 615 86 66 605 48 31 17 2 18 37 68 78	H I H H H F H H W W W W W W W W W W	80 80 70+ 38 25 30 36 10 20 40+ 30+ 75+ 25 10 20 10 30 20 10 D bl A hll I ll D t h lf m lmb B d t t l C B d t t p D bl L w d f t H 30 l gl C S N t 60 l gh C C 65 hgh C B gl t f s hgl C L w L w 45 20 T p n l y m t l m b t t L t + 10 W C
D 30	KVS	10 25 18 23 55 52 5 45 30	1 2 2 4 65 05	70 245 8 2	28 66 18 5	H H H F W W W W W W	40 ? 25 30+ ? L w L w 45 20

NOTES

1905

J y 4 Lt - 27 W Bg b gtt t lk lghtly l tng nthw d th bgt ft ttp
 5 Lt 105 L E pt Fd pl dbth wy b t 15 A Al g mb f m t l l w t
 m m t f l g Th kyw d w th th n l l
 6 L + 80 D Th p m p t t y b d d p t d f m th t th b b t n t d t th t p
 by gl l lghtly dl
 Th wh l l m b w t m l t f l d
 7 Lt - 75 D E pt Fd pl d b t l t d N m l t l b g h t j t f f w d g n th d
 8 Th th t q l t w t m d f p m th t f th l m b w b d m t l y th g h t h l d
 H g h t d d p p t
 Lt + 34 L S l l w b d b k f 5 n th d f th p t
 11 N t 1 - Lt - 0 W S l f g m t t g h t l n t g l
 N t 2 - Lt + 48 W M n y f t j t f 5 th d - H g h t g g f m l 2 t 30
 12 Lt - 81 5 W A f t t m f w g f m t l t p n d l m t m t g h l m b t p n t b t 7 d t t th
 w t d
 13 W t l f b l t m g h g h t
 14 N t 1 - Lt + 49 E A l d h l th h g h b g h l h p d d d t h d f m th h m p h
 N t 2 - Lt + 21 5 D T w p m m g t t p th b t t m f f th m w b g h t n d p t v
 16 Lt + 25 5 W A y l g d b d l d f t n w y f m th h m p h d j d t t b y 8 4 w
 t m
 18 N t 1 - Lt 9 D D p t F d M g l y t
 N t 2 - Lt - 9 W T l th d f th p m n w y b g h t d d t b d l t w l p d l y h g g
 Th t l l t p t d p p a r d f t t i t b d F p m p t w d p l d b t l A t d
 t b t h l f d p t l t t l n d b t 0 A t l t t w t l p t Th th d f
 th p m n w l y b g h t Th f l g l w b l th p m n p t m m b t w n D
 d F -
 4922 446 (C) 4924 107 (F) 4984 { 217 (B) 1952 461 (F) 5016 840 (T) 018 C 29 (F) b (Mg)
 277
 b (Mg) b (F) b (F n d Mg) 5204 768 (F) 5203 215 (C T) 5 08 776 (T) 5197 748 (-)
 5189 018 (C) 5227 048 (F C) 5 84 91 (-) 5269 728 (T) 5 70 488 (C) 76 { 169 (T P) 5316 790 (F)
 287 (-C P)
 5325 738 (-) 5328 236 (T) 5362 944 (F C) 5371 { 658 (O P) 5397 844 (I) 540 989 (T) 5435 464
 734 (T)
 (-) 5439 911 (T) 5434 740 (F) 5535 061 (F) D (N) D (N) A b t w t y b g l t l t l t
 w b d th l t d f T D f u l l f l t l t h O b v d t 10h 50m - 11h 30m S k y b d t
 11h 40m
 19 Lt - 19 W Th b g h t p p m m t d b y f t t k t d g b t l I 10 m m u t
 th wh l g p w p l d b y f w b g h t j t D D b b b g h t t b
 21 Lt 20 5 W S p l d t t f m th A b g h t t f t t h t p f b I l d h g d t 10h 55m
 22 Th l m b w m d f m p 120 t 180 l y n f l d
 24 Lt 58 W L w t g l N th d b h t d h g g p l y
 26 Lt - 64 W T w q l l y t l l p m n q t l t t t h b b t w t l t l p p h l n n g q t l
 d p l l t h th
 28 Lt - 10 5 E D h l f l f w g th t p f th th I l f l w g b g l t l w b d th
 l g -
 4922 446 (C) 4924 107 (F) 5018 468 (N) l (Mg) b (Mg) b (F) b (Mg d F) 5197 748 (-) 5269 728
 (F) 5276 { 169 (F P) 5316 790 (F) 5284 791 (-) D (N) D (N) Th p m n l l l l y b n
 287 (-C P)
 m t f th l 8h 45m - 9h 5m Th l y d g l w d p l l (15 A t l t d 2 A t d n F) t
 t w y b g h t l t l t t h t l d f h p S d m h l m d m g n m h w
 y d t t d
 29 N t 1 - Lt + 15 W A f t t m f w f m t l t p l m t th l m b t Lt + 21 E
 N t 2 - Lt - 14 E A m b f t l l t g p l l m t g t p t T p l g i t d O l g h t l y d p l d b th
 w y th m
 N t 3 - Lt - 82 E D h l f th m d d l n t t w d th th d d t h d f m h m p h
 31 Lt 71 W N p m t th p t b t l w b d l t f th l m p h f 8 th d
 F b y 9 Lt + 16 W A b d l t g b t t h g h l m b t l y p t
 W th b d f p m b t
 10 N t 1 - Lt + 19 5 W A b d l m t d i h l f m l m b d w th t m f w g f m t t p
 N t 2 - Lt + 44 W A f t p b h w y f m th m d d l f th m d m t th l m b t Lt
 + 39 h
 11 Lt - 14 W M t l Th w t d f t w t n l y b g h t p d l y h g g f m d h w g d p l m t
 b th w y t p n t m t t 2 A F 7065 466 () 6678 235 (F) D (N) D (N) 5316 { 906 C
 958
 4924 107 (F) 501 840 (T) d 5288 802 (F) w b g h t
 1 Lt + 29 5 E D h l h y l g I p f l l d u p n d t p f w g t m n l m
 Th wh l l m b w b d th g h l d
 14 Lt + 16 W E pt O D d F d p l d t d m t F b t 1 A t 10h 11m

1806

F b y16 Th lmbw m d lybtw p 60 1180 t fbdw th
 18 Lt - 81E Alwly mdwtl tll t l t k tbt tt hgt
 19 Lt + 18W Tp t d b t7 dt l ght f2 l m
 20 Nt 1 - Lt - 57W A th t l th t pdt hdf mt df th lmb
 Nt - Lt + 30W Tw py md j dt l th Ol mp m t l t Lt + 46 W
 1 Nt 1 - Lt - 1W F f t l l l l - t l fth mdt l df mth h m jh
 Nt 2 Lt - 2W Tl y lym t th l t p m B l t l dt pb d l m
 22 Lt + 48D Ol mp ll b d t b l t
 24 L 17W D l t Th hyd g l w d l l l t t pl t (1A I) d t tw pl t l t
 (1A d 5A F) D d pl l b t w y Mg d l l y b ght t l l 48
 5 Nt 1 - Lt - 29D M t l l P y h b k pp Tl w l l g l t y d t b d
 Th H l p m d pl dt d d f 32A Th b g t l n b d 708 5 (H F) 66784 (H F)
 5318 790 (I) 5284 281 (F) 5 76 37 (C F) 5281 791 () 1977 18 (-)
 Nt 2 Lt + 16 l + 19W Al g t k th t p fth tw p m n p l l t th lmb
 27 Nt 1 - Lt - 16D Th l l m ll m t d by l d m f d m t d t th
 b b b y b ght
 Nt 2 Lt 7 8W Th p m l d w t m h l d l p d b f 101 52
 Nt 3 Lt + 10W Fl t p f w l l l t lmb d m t th l f th p n t Lt + 14W
 28 Nt 1 - Lt - 7) d 7 W Tl t p f th tw l l t tly t d l m wh l th y b ly
 t h h t l y l
 Nt - F d l l y d t h l f h m ph T l m t th l m t l t - 26 W
 Nt 8 - S l b t w t l l f th t l t Lt + 51W d + 58W l l d l l m
 M h 1 Lt + 7F Tl l w t n l b d by l t l n O D l t V j p dly h g g F w
 d l l 12A t l t t g l p t t 8 l l l d d pl m t f t l l w m l t t 20 At 8h
 45 I w d pl d l A t l t t w l t l 5A t l t th pl B g l l n l 22 388 (N)
 1924 107 (I) 016 340 (I) 5018 62 (F) 5110 574 (I) l b l l 5197 718 () 276 { 169 F 5816 700 (F)
 86 844 (F C) 425 161 (-) 525 081 (L)
 2 Nt 1 - Lt + 9 E V y p dly l g g U g h t b t 00 l (810) d b m 60 hyd g t
 8h 10m At 81 10 h b b g d lly th g t l Ol th p w d pl dt v l t
 d f b t 40A nd t w t d g h t w t t l b l y f d d l l d g f m p t
 t l p t l t th lmb
 Nt 2 - Lt 7 E B l d l g l t 9 l (J Om) Th l p n t l f m th t p f t
 t Lt - 77 W
 4 Th p n w l l g t f th l j h t g l l k t 8h 27m Ob t w n t m d th O
 l n th d m l d t l p d t i t g w d
 6 Lt + 27F D pl y b ght Alm t th wh l l m w d m d g ml
 8 Lt - 67F V y f t A th t l t k b l t q t d t h d f m t T l l g h t 90
 10 Fl b t m d m tly t gh l t t l d
 11 Lt + 5051 R l dly h g g D t l l f n t l lmb n l y d g b t j d t t l m
 12 Lt - 26W t t 101 m t t l f t l t b t l th 28 d 120 l g t p t ly d p t d
 by g p 30 h g l t l h l p p t h d t w t f w g w t w l
 101 15m B t t m h d d l p l
 101 Om Th bl k l l t w th t p t d f m 30 t 80
 10h 25m Th p m b l g p d l pp g l m l l t g p l t k t 8h 16m h d t l p m
 ly 65 h g h b t 10 b d t b
 14 Lt 20F A t l y l g h t p t l m l g d pl t t l f 6A O l b t 4A D
 Fl d pl m t d pp d t 81 45m
 16 Lt + 22E D t h d f m t l h m pl Ol m l m w j d t t b t 2 b d t b d 78
 h g h
 18 P w t l
 21 O l y h f th l b m d t f l l
 22 O l y p t f th lmb m d t f b d w th
 23 Lt - 8E S l t d f th h n pl by 80 F d l l d b t l A t l t
 25 Jb t w m l th gh th k l d
 29 Ob t w m d th gh l d H g l t pp m t
 31 Th w t h j h w t m n d t f l d
 Ap l 1 W th b d
 5 Ob t w t m d b t n p 180 nd 60 t f b d w th
 8 Lt + 8E Tw l t th h m ph t h g h t n th g l l l b t y d t b d 5 d m m g m
 nd n l y b g h t F d pl l b 15A t l t l b t 05A t d
 16 Lt - 81W D t h l f m th l m ph Ol p m j d t t d t d t Lt - 78W
 19 Ob d m tly th gh l d g
 24 Lt + 25E d - 4E O t d by h 70 h g h l m A th h 05 h g h t t f m th l t t
 p m d l m t m t th lmb g t Lt - 13D

1906

April 27 N t 1 - Lt + 22 E V y b ght N th nd fth p m h w D D b b b b 51187 b ght A
 f w th l b ght t b ly
 N t 2 - Lt - 47 W T p m t th l b g t t - 51 W It t d m d t th th d l m
 29 Lt 2 L T p f w t w d th th f b t 3 n hyd g t m t th m pl d t d th
 w d f 10 l m
 30 Lt 24 E t 8h 48 m th w b d d pl m n t t d d f 30 A l t th pl f th p m b t
 t d pp d t 8h 4 m
 May 1 N t 1 - A l d f w y f m th l mb - b t 90 f m th t p t f h mb t Lt + 60 D nd l t 160 t th
 f th t p t Lt + 58 E Oh g d h p p dly d h d l m t d l p d pl t g i h t k t 10h 31 m
 N t 2 - Erupt Tw d k h l w t Lt + 24 E d + 28 D th b dy f th p m th l t w
 th d l f t l t w
 Cl m p m 180 h gh d t t p m t l mb g f t t l t Lt 4 D
 7 Lt - 3 E It n t d t t p t th l m t Lt + 4 E It l t l th t l 10 t w d th
 th t b
 8 V r y p w th f b t
 10 Lt 15 D It ly b ght t b w p dly h g g d pp d f w m t l t l ng nly f t t
 Cl w d pl d n th p m t d d f 7 4 A t 10 20 m Th d pl m t d pp l t 10h 28
 11 N t 1 - Lt - 145 E - 17 E - 21 E - 23 E All th w pt C D l r d pl d l t w y t
 th b f th p m Th t Lt - 145 E nd - 17 E w l y l ght Tl Cl t l m w
 d pl d 15 A t l t d 05 A t d d
 N t 2 - A t k b t 8 l g t th f m th t p f th p m t t l th l m ly d 70
 h ght Th t p f th p m e t d w th th t Lt + 28 W n b t l y d g d l m
 15 S p
 17 S g p d g th l t t p t f th b t
 22 S g p
 J 4 Th l mb f mp 108 t 180 w n t m n d w i g t t l k l d m g
 12 Cl m p m 2 b d t b d l t th ward m th hyd g
 14 V y p w th f b t
 16 Lt + 4 W Th p m w p dly h g pp f p m t l mb g n t + 17 W l m O
 l w d pl d t d d f 10 A t th w t d f h t p f th p m ly
 21 Th wh l l mb w m d th gh d
 22 Lt + 25 E R p dly h g g n f m d t ght Tl t p w b t 20 l g l um
 24 Lt 1 W Ohang g p dly H gl m l m w 120 t 10 l Om
 25 Cl m p m Th g l d t b m d hyd g t f b d w th
 30 B ght ky with p g l d

19th Ap 1906

O MICHEL SMITH
 D e t Kod k e l and Madr s Obser at r es