KG
11365
227

K.17

Aug. 29 1859 Nov. 26

Zone

4

1859. 4.

123 – 135½

Sold by T. Groom & Co., Stationers, India Building, 82 State St., Boston.

KG 11365.227

T. H. SAFFORD

55. 37.8
[illegible] 34.3
36.2
[illegible] 20.4
7 44.5
25

KG 11365.227

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Certain magnitudes inserted between the columns of AR were estimated by THS on the following nights

Zones (125) (126) (18h 10m — 0°40′ — | 1862 Aug 30.
127 128 18 15 — 0 10 — — —

125

Mic. Angle 0.53

124

Aug 29. 1859
EC = 19 4 00
Ex Ther = 57°.3
Bar 29.726
Att Ther 67°.0
Done

At End.
Ext. Ther. 53.7.
7
Last second
EC 21h 36m 00
Zone begins EC. ____
— Ends EC. ____

Sept. 1. 1859.
EC = 18 44 00
Bar 29.882 in
Att Ther, 68°.0
Ex Ther 59.7
Done
End EC 26..13..00
Ext Th 58°
Bar 29.8500 Att Th 66

37 49.5 1'30"

18 10	55.8				
11	28.1				
	28.8				
12	13.7				
	14.6				
	53.1				
	53.6				
13	52.2				
	58.8				
15	30.6				
16	45.0				
17	6.3				
	9.7				
18	46.6	50.7	18	46.0	50.0
	52.0	56.0		51.4	55.3
	59.7	63.7		58.9	62.9
19	40.4	44.5	19	39.8	
	52.1	56.0		51.3	55.4
20	5.2	9.2	20	4.4	8.5
	26.3	30.3		25.5	29.5
x	59.9	64.0		59.2	63.3
21	24.1	28.1	21	23.4	27.4
22	3.2	7.3	22	2.5	6.4
	8.0	12.0		f	f
	42.2			41.3	45.5
	42.7			42.1	46.1
	56.2	60.2		55.4	59.4
23	6.9	11.0	23	6.3	10.2
24	13.9	17.4	24	13.1	17.1
	24.5	28.5		23.8	27.7
	43.5	47.6		42.8	46.9
26	59.7	63.6	26	58.8	62.6
28	58.9	63.0	28	58.3	62.3

Hor Angle, 0.53

18 10	55.8	59.8
11	28.1	32.2
	28.8	32.8
12	13.7	17.6
	14.6	18.6
	53.1	57.1
	53.6	57.7
13	52.2	56.3
	58.8	62.8
15	30.6	34.6
16	45.0	49.0
17	6.3	
	9.7	13.6
18	46.6	50.7
	52.0	56.0
	59.7	63.7
19	40.4	44.5
	52.1	56.0
20	5.2	9.2
	26.3	30.3
x	59.9	64.0
21	24.1	28.1
22	3.2	7.3
	8.0	12.0
	42.2	
	42.7	
	56.2	60.2
23	6.9	11.0
24	13.9	17.4
	24.5	28.5
	43.5	47.6
26	59.7	63.6
28	58.9	63.0

O, [illegible] (–),

18 10	55.2	59.1
11	27.5	31.6
	28.0	32.0
12	12.9	16.9
	13.9	17.9
	52.4	~~56.~~
	52.9	
13	51.5	55.5
	58.0	62.0
15	29.9	33.9
16	44.3	48.4
17	5.7	9.6
	8.6	12.5
18	46.0	50.0
	51.4	55.3
	58.9	62.9
19	39.8	
	51.3	55.4
20	4.4	8.5
	25.5	29.5
	59.2	63.3
21	23.4	27.4
22	2.5	6.4
	41.3	45.5
	42.1	46.1
	55.4	59.4
23	6.3	10.2
24	13.1	17.1
	23.8	27.7
	42.8	46.9
26	58.8	62.8
28	58.3	62.3

128 Aug 29th 1859 St. Bah. 7Hr. S. rec. 0°40'-50' Sept. 1st 126

Position 9° 29' Ext. Sav. 57.3 G.P.B observed C.W. Tuttle Rec

9	8 17		C.	9.3	9	8..18	
8.9	2 8		C.	8.6	8.9	2..08	
11.12	10 38	n.s.			11.12	10..40	ns
B. D.						B	
11	0 16				11	0..17	
8	7 15	n.s. orange	C.	7.9	8	7..15	Red n.s
12	9 29				12	9..29	2 wire lost
10	4 55		B.C.	9.4	10-11	4..56	2 wire lost
10	-0 8				10	-0..06	
12	2 14 (ns),				12-13	2..15	ns
B.B.D						D.B	
10/11	5 44				11	5..46	
9	4 14			8.8	9	4..16	
12	2 20	2d wire lost			12	2..22	
11	10 09	n.s.			12	11..00	ns
B.						D B	
10	8 6				10-11	8..07	
7	2 8	n.s.	L.	7.0	7	2..11	ns
12	10 7				11-12	10..08	ns
12/13	0 33				12-13	0..36	2 wire
12	9 22				12	9..24	
9/10	9 23			9.4	10	9..25	
11	0 30				11	0..32	
D.						D.B.D	
12	8 41				12	8..42	
8	2 44	2.5	C.	8.0	7-8	2..46	
10	7 43			9.5	10	7..45	
12/13	3 47	n.s.			12		
~~9/12~~	0 19	Assw.			11	0..21	
11	3 12	Assw	Bl. Bl.	9.5	11	3..13	ns
9/10	3 8			9.4	10	3..11	
12	3 12				12	3..14	
D.B.D						B	
12	9 42				12	9..43	
12	8 14				12	8..13	
10/11	5 32			9.5	9-10	5..34	Starless field
10	10 33	Starless field		9.5	10	10..35	
11	7 36				11-12	7..38	
B.D.D						B.D.B	

125 0°40'–50' 1 2 4

18h 29m	38.6	42.7				5	
	58.6	62.6		18 29	57.8	61.8	
30	4.6	8.8		30	3.9	7.9	
	24.4	28.5			23.6	27.7	
	45.2	49.2			44.2	48.3	
	50.5	54.6			49.6	53.7	
31	29.7	33.7		31	29.0	33.0	
32	27.5	31.5		32	26.7	30.6	
34	36.3	40.3		34	35.5	39.6	
	~~44~~	44.4				43.7	
35	12.3	16.4		35	11.7	15.7	
36	9.6	~~13.7~~		36	~~9.0~~	~~13.0~~	12.9
	—	13.7			~~12.9~~	—	9.0
	22.9	26.9					
	58.3	62.2			57.6	61.5	
37	10.9	14.9		37	10.1	14.1	
	59.3	63.2			58.6	62.6	
38	24.0	28.0		38	23.3	27.4	
39	4.9	9.0		39	4.1	8.1	
	14.3	18.4			13.7	17.9	
	19.0	22.8			18.2	22.2	
	35.4	39.3			34.7	38.7	
	40.5	44.4					
42	25.8	29.9	✗	42	25.2	29.1	
	38.0	42.1			37.2	41.4	
43	5.0	9.0		43	4.2	8.1	6.8 10.8
	24.6	28.8	11.7		23.9	28.0	
	34.5	38.4			33.6	37.7	
44	4.7	8.7		44	4.0	8.0	
	13.0	17.1	9.10		12.3	16.4	
	55.3	59.4	9.7		54.8	58.9	B.
	56.7	60.8			56.1	60.1	
45		5.0		45		4.4	
						7.9	
45	24.0	28.0		45	23.3	27.4	

12	0 31				0.32	
7	10 8	C.	6.8	7	10..10	
12	7 18	n.s. B.		12	7..2	
9	3 27		8.9	9	3..31	
9/10	6 36		8.9	9/10	6..36	
11/12	7 55	n.s.	9.5	12	7..56	ns
B. B.		starless field			B.D	
12	9 44			12	9..46	starless field
12	10 21	starless field		12	10..23	Very few small stars passed within last 10 min
10	3 8	comp. 13th mag. 20" s.f.		10-11	3..10	Double. comp. dist. 18" s.f. 14 May
10	0 15	n.s. 1st wire lost		10-11	0..17	ns 1st wire lost
11/12	5 28		9.5	12	5..29	
D. B.					B D. B	
12	3 0	2d wire lost		12	10..14	1st wire lost
12	10 12	1st wire lost no sky		12	13..02	2 " "
12	4 31			~~12~~	~~4 52~~	
11/12	5 50			11	5 52	
10	5 19		9.5	10	5..20	
10	−0 7		9.5	10	−0..05	
12	5 34			11-12	5..35	
D.					B	
9	6.7		9.2	9	6..08	
9	2 7	yellow. n.s.	9.2	9-10	2..08	ns
9	3 26	yellow. n.s.	8.9	8-9	3..27	ns
12	4 17			12	4..18	
~~12~~/13	5 26			13	5..	seen?
6-~~6~~	0 47	L.	6.5	6-7	0..48	
~~10~~.11	−0 14			11	−0..13	
B.					D B	
12	9 20			12	9..21	
12/13	8 26			12-13	8..26	
12	5 16			12	5..17	
8	0 16	C.	7.9	8	0..17	
10/11	5 51		9.3	10	5..52	
					B	
9/10	2 43			9.10	2..44	
10	1 6	ns	[9.2]	10	1..07	[illegible] ?
10	1 22	ns 1st wire lost	9.5	10	1..24	
11	7 51	R. lost		11	7..52	1st wire lost
					D	
12	6 13			12	6..14	
BD. B					BD	

0°40'–50'

18 46	17.0	21.0	9.	18 46	16.2	20.2	
	46.6	50.8	9.10 7		46.2	50.1	
	53.3	57.2			52.5	56.5	
47	21.0	25.1	10.	47	20.3	24.3	
	43.0	46.9	9.10		42.2	46.1	
	43.8	47.7			43.0	47.0	
48	26.7	30.8	10.11	48	26.1	30.1	
49	16.7	20.6	9.B	49	15.9	19.9	
	26.6	30.7	11 B		25.8	29.8	51 5.3 9.4
51	8.1	12.1		51	7.4	11.3	
	13.2	17.3	10		12.5	16.5	B.
	24.3	28.3			23.3	27.5	
	44.8	48.8	10.11		44.0	48.0	
	51.0	55.0			50.2	54.1	
52	11.7	15.8	9.10	52	10.9	14.9	
	39.4	43.6	~~11~~		38.7	42.7	
	59.1	63.1	10 B		58.3	62.5	
53	25.4	29.2	9	53	24.7	28.6	
	28.3	32.1			27.5	31.6	
54	11.4	15.4	10.11	54	10.7	14.7	
55	15.9	19.9	9.10 7	55	15.3	19.2	
	17.0	21.0			16.1	20.4	
	27.5	31.6	9 7		26.8	30.8	
	50.8	54.8	10.		50.0	54.1	< 59.2
56	4.6	8.5		56	3.6	7.8	
	5.7	9.7				9.0	
58	3.3	7.3	11.	58	2.5	6.5	
	26.5	30.6			25.7	29.7	
	52.3		9.10		51.7	55.5	
59	2.3	6.3		59	1.6	5.5	
	5.4	9.4			4.6	8.6	
		12.0	9.10 B			11.2	
19 0	3.5	7.3	9.	19 0	2.7	6.5	
	4.6	8.4			3.8	7.8	
0	38.0	42.1	~~9.10 B~~		37.4	41.3	

125 0°.40'-50' 18.51 / 21.02 / 2.14 5

8/9	2 13		L.	7.8	8	2..04	2d cent.
10/11	9 24			9.5	10-11	9..24	
12	8 37				11-12	8..38	ns
11	1 31			9.5	11	1..32	
11	1 37			9.5	10 11	1..38	
12	2 42	ns.			12	2..44	ns
	B.B.					D B	
12	6 18				12	6..19	
9	7 32		C.	8.5	8-9	7..33	
12	7 49				12	7..51	
9/10	11 3			9.5		11..03	[illegible]
10/11	2 10	ns.		9.5	11	2..13	ns
11	9 29				11	B 9..32	X—X
12	3 53				12	3..55	
12	1 40	ns.			12	1..41	ns
10	3 20			9.3	10	3..22	long sig.
	D.D.B.					D B	
12	10 43				12	10..43	
10/11	2 51			9.5	10/11	2..53	
9/10	10 39			9.0	9	10..38	
12	11 3	ns. For the last 10m many		11k	12	11..02	ns
	B.B.D.B.B.					D B.D	
12	5 27	mag. stars unobserved.			12	5..28	
10/11	5 27				11	5..29	Rev
12	7 7	ns			12	7..08	
11	9 43		B.C.	9.5	11	9..45	
12	7 50				12	7..50	< a new star partly observed
12	1 40				12	1..42	
11/12	2 27	ns.			12	2..29	
	B.	Several stars unobserved.				8. D	
12	0 45	Stars come in groups			12	0..48	
12/13	8 48	Comp. 12" sp.			12-13	8..49	Comp. 12" sp.
11	10 22	2d wire lost			11	10..24	
10	2 42			9.5	10	2..45	~~ns~~
12	1 59	ns			12	2..01	ns/
11	7 40	1st w. lost.			11	7..42	1st wire lost
9	1 54			9.5	9.10	1..58	
10	9 40	ns.		9.4	10	9..42	
~~10/11~~	B.					B	
10/11	0 34				10.11	0..36	

19	0	39.6	43.8	9.10 B
		56.3	60.1	
	1	3.5	7.4	
		9.2	13.2	10.
		40.5	44.6	
	2	7.2	11.1	9.
		27.0	30.9	8.
		43.2	47.2	10.
		56.6	60.6	7.8
	3	16.6	20.5	8.9
	4	2.0	5.6	
		50.3	54.5	
		53.8	57.7	
	5	27.9	31.8	
			35.5	
	6	12.7		
		16.9	20.9	
		40.7	44.8	
		47.9	51.8	
	7	5.6	9.6	
		36.9	40.9	
		38.4	42.3	
	8	2.8	6.8	
		9.3	13.3	
		33.3	37.3	
	9	~~[illegible]~~	~~[illegible]~~	
		41.4	45.3	
		52.7		
	10	4.4	8.3	
	11	21.9	26.0	
		47.3	51.3	
	12	6.4	10.4	
		14.2	18.3	
	13	7.7	11.6	
		8.0	11.9	

19	0	39.0	42.9
		55.5	59.5
	1	2.8	6.6
		8.5	12.4
		39.9	43.8
	2	6.4	10.4
		26.4	30.4
		42.6	46.5
		55.9	59.8
	3	16.0	20.0
	4	1.4	5.5
		49.7	53.8
		53.1	57.1
	5	27.2	31.3
		~~3~~	34.9
	6	11.8	~~[illegible]~~
		16.1	20.1
		39.9	44.0
		47.0	50.9
	7	5.0	9.0
		36.1	40.2
		37.6	41.7
	8	2.0	6.1
		8.7	12.7
		32.6	36.6
	9		
		40.7	44.6
		52.0	56.1
	10	3.6	7.7
	11	21.3	25.2
		46.7	50.8
	12	5.8	9.7
		13.6	17.[illegible]
	13	7.1	10.9
		7.3	11.2

10/11	7 50		B.C.	9.3	10.11	7..51	n s
10/11	8 27				11	8..30	
12	4 31				12	4..34	
11/12	5 36	n.s.			12	5..38	
D.						D.B.D	
12	0 51			9.5	10	0..54	
9/10	7 8			9.5	9-10	7..08	
9	2 8			9.0	9	2..09	
10/11	7 4	2	B.C.	9.4	10.11	7..05	
8	2 29		C.	7.8	8	2..31	
9	6 17	Double?	C.	9.1	9	6..18	
B.						~~B~~.D.B	
—	8 20	Nebula, perhaps resolvable, 1' diam. surrounded by many little stars. innumerable		9.5		8..15	Nebulae Darrest pg. 346.
10/11	0 49			9.5	10	0..50	
9	0 59	n.s. small stars in following fields.			8-9	1..07	n s Immense number of small stars
12	5 49				12	4..52	cest 2d wire lost
12	5 28	1st wire lost n.f.			12	5..29	n s
12	1 5	2d wire lost			12	1..10	2d wire lost
11	0 58			9.5	11	0..02	
10/11	6 46	comp. n.f. 10"		9.5	10-11	6..47	comp
12/13	9 24				12-13	9..24	n s
B.						B	
12	3 45				12	3..46	
12	10 49				11-12	10..59	
12	5 26				12	5..27	
12	8 25				12-12	8..27	
12	4 0				12	4..03	n s
D.B.D.						B.D	
12	4 0				12	4..01	
~~Dbly~~ dist.		Many 11th and some 10th [illegible] passed unobserved.					
10	5 14			9.5	10	5..16	
11	0 35	2d wire lost			11	0..39	
8	8 46		C.	8.2	8	8..47	
5	9 59		C.	5.0	5	10..03	Comp. 10 mag 4" south
9	3 58		C.	9.0	9	4..01	
12	4 46				12	4..47	
12	2 41				12	2..42	
9/10	0 55			[9.0]	9-10	0..56	
10	1 3				10	1..05	
B.B.*						B	

19 13	53.0	57.1
14	9.3	13.3
	12.4	16.2
	26.9	30.9
	29.4	33.5
	58.7	62.8
15	19.7	23.8
	41.9	45.8
	52.3	56.3
16	44.7	48.8
17	9.3	13.9
	~~10.7~~	16.7
	21.4	25.3
	41.3	45.3
	47.1	51.2
18	1.4	5.5
	28.8	32.7
	44.4	48.5
19	5.4	9.6
	22.4	26.4
	44.7	48.8
20	8.5	12.6
	30.9	35.1
	35.7	39.6
21	9.1	13.1
22	4.3	8.2
	54.5	58.6
	57.0	61.0
23	6.9	11.0
	29.1	33.0
	40.0	44.1
24	7.9	11.9
	25.9	30.0

19 13	52.4	56.5	
14	8.5	12.7	
	11.7	15.6	
	26.3	30.2	
	~~26.~~	—	
	—	—	
15	19.0	22.9	
	41.3	45.2	
	51.6	55.8	
16	44.0	48.0	
17	9.0	13.1	
	12.0	16.0	
	20.7	24.6	17 26.3 30.3
	~~40.6~~	—	
	46.3	50.4	
18	0.8	4.8	
	28.1	32.0	
	43.9	47.8	
19	4.9	8.8	
	21.7	25.7	
	44.0	48.0	
20	7.9	11.8	
	30.2	34.2	
	34.9	38.8	
21			
22	3.5	7.5	
	53.6	57.7	
	56.2	60.2	
23	6.1	10.2	
	28.2	32.3	
	39.3	43.4	
24	7.1	11.2	
	25.1	29.1	

12–5 0°.40'–50' 12–6

12	6 48			12	6..49	Great number of small stars —
9/10	3 51		9.5	9.10	3..53	
12	2 10	ns.		12	2..12	ns
12	4 46			12	4..47	
12/13	3 44	ns.		12-13	3..47	Ak lost
	B.				B.D	
12	9 24			12	9..24	Ak lost
10	4 46		9.1	10	4..46	
11	2 44		9.5	11	2..46	
11	4 50.		9.5	11	4..52	
	D.				B D D	
12	9 9	2 companions		12	9..09	
12	-0 19			11	-0..19	
12	0 5	1st missed [illegible]		12	0..06	
11	3 54		9.5	11	3..56	
12	7 54			12	7..56	
10	6 37	ns.	9.5	10-11	6..39	n
	B.				B	
11	1 39			11	1..42	
12	4 30			11-12	4..31	
11/12	9 4			11-12	9..07	
12	3 10			12	3..12	
12	4 18			12	4..22	
12	5 52			12	5..56	
	D.B.D.				B.D.	
10/11	9 56	Double?	9.5	10/11	9..57	
11	9 15			11	9..16	
10	10 30	ns	9.5	10	10..30	
11	11 10	Field crowded with small stars	9—			Field crowded with small stars
12	1..44			12	1..46	
9/10	5 44		9.1	9-10	5..46	
11	9 21	ns.		11	9..23	ns
9/10	4 11	2 comps. 15" sp. 10" f.	9.3	9-10	4..13	Double
10	8 42		9.4	10	8..44	
10	5 26	Comp. 12" f.	9.5	10	5..17	cert
	D.				B	
10/11	6 13		9.5	10-11	6..15	
12	5 0			12	5..01	
	B.				B B B B	

0°.40'–50'

19	24	50.2	54.1
	25	49.6	53.4
	26	2.5	6.5
			10.6
		53.2	57.3
	27	12.9	16.9
	28		
		47.4	51.3
	28	48.0	52.2
	29	37.3	41.3
		39.4	43.4
	30	31.8	35.7
		47.2	51.3
	31	6.9	10.9
	32	7.1	11.0
		25.9	29.8
		54.5	58.5
		57.2	61.0
	33	36.3	40.2
	34	36.5	40.7
		49.4	53.5
		55.0	58.9
	35	38.6	
		45.6	49.6
		46.1	50.3
	36	4.9	8.9
		42.7	46.7
	37	0.0	3.9
		13.5	17.4
		15.8	19.8
		39.1	43.2
	38	51.3	55.4
	39	2.9	6.8
		20.7	24.7
		33.0	37.2

19	24	49.4	53.5
	25	48.7	52.7
	26	1.7	5.7
		6.2	10.0
		52.7	56.6
	27	12.1	16.1
	28	44.6	
		46.8	50.7
		47.3	51.6
	29	36.4	40.4
		38.7	42.6
	30	31.0	35.0
		46.6	50.6
	31	6.2	10.2
	32	6.2	10.3
		25.0	29.0
		53.8	57.4
		56.6	60.4
	33	35.5	39.7
	34	35.8	39.8
		48.8	52.8
		54.2	58.3
	35	37.8	42.0
		~~45.6~~	~~49~~
		45.6	49.6
	36	4.2	8.3
		42.1	46.0
		59.3	63.2
	37	12.7	16.6
		15.3	19.0
		38.2	42.2
	38	50.3	54.5
	39	1.6	5.8
		19.9	24.0
		32.5	36.4

0°40'–50

12	1 29			12	1..31	
12	3 59			12	4.01	
11/12	10 11			11	10..13	
11/12	8 26	1st wire lost		11	8..26	
12	10 38			12	10..38	
12	7 57			12	7..59	
B.B.					B D	
11/12	8 16	~~2d wire lost~~ R lost.		11	8..17.	E wire lost
11	-0 13			11	-0..12	ns
12	+0 37			12	0..40	ns
12	6 50			12	6..50	Comp 10" prec-
12	10 9	ns.		12	10..09	
B.B.B.					B	
12	7 53			11-12	7..56	
12	3 33			12	3..36	
11/12	7 19			12-13	7..20	
12	7 16			12	7..16	
12/13	7 16			12	7..17	
12/13	3 54			12-13	3..56	
12	2 44	ns.		11	2..47	
D.D.					B.B.	
10/11	9 34			10-11	9..34	
10	0 0	red		11	0..03	
9	5 11		8.9	9	5..13	Red
8.9	9 16	C.	8.3	8.9	9..16	ns
10/11	8 14	2d wire lost ~~P.S.~~	9.7	10/11	8..15	
11	3 19			11	3..20	R lost
10	10 23		9.2	10	10..24	
10	0 19		9.4	10	0..22	
8.9	10 59	C.	8.8	8	10..59	
11/12	3 24			11-12	3..26	
11/12	2 1			12	2..03	
12	0 0			12	0..02	1st wire?
12	4 51			12	4..53	
B.D.					B B D	
12/13	10 20			12-13	10..21	
12/13	9 1			12-13	9..01	
12/13	6 2			12-13	6..02	
12	5.57			12	5..58	

12 8 0°, 40'–50' = 126

19 39	53.3	57.4
40	23.0	27.2
	28.7	32.8
	~~33~~	37.2
40	~~7.6~~	
	58.3	62.4 } ?
41	18.1	22.0 }
42	3.2	7.2
	29.3	33.3
43	32.3	36.4
	53.0	57.0 ?
	55.1	59.1
	6	61.1
44	34.5	38.6
44	45.3	49.3
	55.2	59.3
45	2.4	6.4
46	14.3	18.5
	28.8	32.8
	45.7	49.7
47	4.8	9.0
	45.9	50.1
48	1.5	5.3
	2.1	6.1
	10.2	14.1
	33.0	37.1
49	9.0	13.0
	11.7	15.7
	32.3	36.3
	35.9	39.9
	47.7	51.6
50	26.2	30.0
	30.4	34.7
	37.7	41.7

19 39	52.5	56.3
40	22.4	26.4
	28.0	32.3
	32.7	36.5
41	17.2	21.3
42	2.5	6.6
	28.6	32.6
43	31.7	35.8
	52.2	56.3
	54.4	58.5
		60.7
44	33.8	37.9
	44.6	48.6
	54.5	58.6
45	~~1.~~	5.7
46	13.7	17.8
	27.9	31.9
	45.0	49.0
47	4.1	8.3
	45.1	
48	~~1.5~~	~~5.4~~
	1.5	5.4
	9.[illegible]	13.6
	32.4	36.4
49	8.2	12.9^{3}
	10.8	14.7
	31.5	~~35.1~~
	35.1	—
	46.8	50.8
	9.4	13.3
50	25.2	29.4
	29.9	33.9
	37.0	41.1

40' to 90'

10/11	7 28		9.5	10	7..29	
7	5 19	C.	7.0	7	5..22	
11	4 18	ns. Bl	9.5	11	4..19	ns
11	2 47	ns. 1st wire lost		10	2..48	ns 1st wire ?
	D.B.				B D	
	3	ref. 2 wires			3..17	1st lost
11/12	4 25			11	4..26	
	B.B.B.				.B	
12	8 52			12	8..53	
12/13	7 1			12-13	7..02	
	D.				B B	
10/11	1 38			10 11	1..39	
11	2 7	2 companions } 1 or 2 w. 2nd		12	2..09	comp n.p. 10"
11/12	4 5			12	4 05	ns
12	2 31			12	2..34	ns 1 wire
	B.				B	
10/11	5 26		9.5	10	5..27	
10	1 48			10	1..48	
10/11	9. 0			10-11	9..01	
12	2 56	ns.		12	2..56	Stars below 11th mag – num
12	0 26			12	0..26	
12	2 1			12	2..03	
	D.B.				B.D	
8	10 3 ✓		8.5	9	10..03	
9.10	8 10	Bad seeing.	9.5	9..10	8..11	
11.12	5 8			11-12	5..09	1st wire lost
11.12	3 54			12	3..	
11.12	4 45	ns.		12	4..48	
10.11	5 6		9.5	10	5..07	
10.11	10 56		9.5	10	10..58	
					B.D.B	
9.10	0 52		9.3	9-10	0..55	
10.11	3 50	ns.		10-11	3..53	ns
11	2 52			11	2..52	
12	3 55	ns.		12	3..57	1st w. lost
10	2 4			10	2..05	
	D.B				B	
				10-11	-0..13	
11	0 00			11	1..03	
12	~~2 00~~	ns		12	2..04	ns
11	3 10	ns.		11	3..13	ns
	B				B B	

19	51		
		24.8	28.7
		26.8	30.6
		43.0	47.2
		46.2	50.1
	52	26.1	30.2
		34.6	38.7
	53	15.0	18.8
			22.3
		52.3	56.2
		57.8	61.9
	54	10.5	14.4
		15.2	19.1
		37.8	41.9
		39.1	43.1
		57.6	61.6
	55	37.0	41.0
		37.3	41.3
	56	10.2	14.1
	57	8.0	12.1
		18.2	
		22.2	26.2
		36.2	40.1
	58	17.1	21.2
		24.3	28.3
		54.6	58.5
	59	26.0	~~[illegible]~~
		28.2	32.1
		34.8	38.8
		52.0	56.1
20	0	16.7	20.7
		17.3	21.3
		26.2	30.2
		33.7	37.7

19	51		
		24.1	
		33.5	
		42.2	46.2
		45.3	49.4
	53	14.1	18.2
			21.6
		51.4	55.5
		57.1	61.1
	54	9.8	13.9
		14.3	18.3
		37.1	41.1
		38.3	42.2
		56.7	60.9
x	55	36.3	~~40.4~~
		—	40.4
	56	9.4	13.4
	57	7.2	11.3
		17.3	21.5
			25.4
		35.5	39.4
	58	16.6	20.5
		23.7	27.8
		53.7	57.7
	59	25.2	29.2
		27.2	31.3
		34.1	38.1
		51.2	55.2
20	0	15.9	20.0
		16.4	20.6
		25.4	29.5
		33.0	36.8

10/11	3 47		9.2	10-11	3..48	2 wire	
12	3 40			12	3..41	2 "	reject.
12	3 13			12	3..15		
11	3 44	ns.	9.3	11	3..47	ns	
	B.D.	Many			D.B.		
12	1 52	comp.		12			
12	0 40	comp.		12			
	D.B.						
9.10	0 41		9.0	10	0..43		
9.10	8 19	1st wire lost.		10	8..19	1st wire lost	
12	2 25			12	2..28		
12	4 31	ns		12	4..33		
12	2 13			12	2..17		
11	-0 4			11	-0..03		
	B.				B.D.		
10	10 10		9.3	10	10..12		
9	7 21	ns.	8.9	9	7..21	ns	
9/10	7 2		8.8	9.10	7..04		
9	9 13	} dif. St. too large	9.1	9	9..15	2d wire lost	
9-10	4 3		9.5	9-10	4..06	1st wire lost	
10	10 17			8-10	10..18		
11	10 0			11	10..02		
11	7 20	2d wire lost.		11	7..23		
10-11	7 40			10-11	7..41	1st wire lost	
8	5 48	C.	7.6	8	5..50		
10	9 6			10	9..07		
11.12	8 28			11-12	8..29	ns	
	D.				B.D.		
11	10 49		9.5	10-11	10..51		
10-11	7 52	2d wire lost.		10.4	7..53		
10	6 26	ns	9.3	9 10	0..27		
11	6 30	ns.		11	6..31	ns	
11.12	6 42			11	6..45		
	B.				B		
11	5 22			11	5..24		
10.11	2 29	ns		10-11	2..29		
10	7 3		9.5	10	7..03		
10	3 4	ns	9.35	10	3..06	ns	
	B.B				B.B.		

20	1	13.5	17.6
		18.5	22.5
		24.7	28.8
		30.3	34.3
	2	3.1	7.2
		48.0	52.0
	3	49.8	53.8
	4	13.2	[illegible]
		17.5	21.4
		38.0	42.1
	7	23.1	27.1
		31.5	35.2
	8	~~4.9~~	8.9
		13.3	17.3
		26.3	30.3
		35.1	39.3
		48.3	52.1
	9	17.1	21.1
		35.5	39.5
		50.8	54.8
	10	46.4	50.3
		46.9	50.9
	11	7.9	11.8
		18.0	22.0
		40.3	44.3
		55.4	59.6
	12	0.7	4.8
		13.5	17.5
		57.5	61.6
	13	14.7	18.7
	14	6.4	10.5
	15	20.3	24.1
		28.4	32.3
		31.2	35.3
		53.6	57.7

20	1	12.9	16.8
		17.8	21.7
		23.9	27.8
		29.5	33.5
	2	2.2	6.4
		47.4	51.4
	3	49.0	53.1
	4	12.5	16.6
			20.6
		37.2	41.2
	7	22.3	26.4
		30.6	34.5
	8	4.1	~~8.0~~
		12.5	16.5
		25.7	29.5
		47.6	51.6
	9	16.4	20.4
		34.8	38.8
		50.2	54.1
	10	[illegible]	49.6
		46.2	—
	11	7.0	11.1
		17.3	21.4
		39.5	[illegible]
		54.8	58.8
	12	0.1	4.2
		12.7	16.8
		56.9	60.9
	13		17.8
	14	5.8	9.7
	15	19.5	23.4
		27.5	31.7
		30.4	34.4
		53.6	57.0

10	3 58		9.5	10	9.00	~~Sun~~
11.12	9 18	comp. n.s.		11-12	9.19	Double n.s.
10.11	8 42	n.s.	? 9.5	10	8.45	n.s
11	6 34	n.s.		11	6.36	
10	3 39		9.5	10	3.42	
	B.B.D.				B.D.B	
12	5 9			12-13	5.09	
12	0 1			12	0.02	
11.12	1 12	2d wire lost.		11-12	1.12	
11.12	-0 5		? 8.4	11	-0.03	n.s 1st wire lost
12	9 40			12	9.41	
	B.				B.D	Many 12th mag. stars pass unobserved
12	6 49			12	6.50	
12	9 0			12	9.02	
10/11	10 59			10	10.59	
12	9 57			11-12	9.58	sig bet wires
9	2 9		8.8	9-10	2.10	
12	2 30			~~11~~	~~2.39~~	
10	0 35	Comp. n.s. prec.	9.3	10	0.37	
11	10 40	red.		11-12	10.40	
9	5 3		8.8	8.9	5.05	
12	6 38			12	6.39	
	D.				B.D	
12	3 26			12	3.27	1st wire lost
11/12	10 20	n.s.		11-12	10.21	n.s 2d wire lost
10/11	2 41			10-11	2.43	
10/11	5 27			10-11	5.28	
12	8 6			12	8.08	
12	4 34			12	4.36	
12	6 50	n.s.		12 ~~6.54~~	6.54	
11/12	9 59			11	10.02	
	B.				B	
9.10	2 18		9.3	9-10	2.20	
11.12	0 0			11-12	0.00	1st wire lost
12	2 0			12	2.02	
10	6 22			10	6.23	
10	3 54	Accompanied 14th 10" n.f.	n.s	11	3.53	Comp. n.s. dist. 15"
10	6 57	n.s.		10-11	6.58	
11/12	2 0				B	

20	16	29.1	33.2	
	17	20.2	24.3	
		29.8	33.9	
		31.1	35.0	
		50.2	54.4	
	18	15.7	19.9	
		39.5	43.7	
	19	12.0	15.9	
		27.9	31.7	
		35.3	39.5	
		45.6	49.7	
		56.5	60.5	
	20	10.8	14.8	
		35.4	39.5	
		54.7	58.7	
	21	21.2	25.2	
	22	3.7	7.6	
		36.6	40.4	
		45.5	49.5	
		47.6	51.5	
	23	57.8	61.8	
	25	7.9	11.9	
		9.6	13.6	
		33.1	37.1	
	26	26.6	30.5	✓
		58.0	~~62.3~~	✓
	27	.2.3	6.2	✓
		36.3	40.3	✓
		38.0	42.1	✓

20	16	28.5	32.5
	17	19.2	23.2
		~~2~~	33.1
		~~5~~	—
		—	—
	18	15.1	—
		38.7	42.8
	19	11.2	15.2
		27.0	31.0
		34.8	38.7
		44.9	48.8
		55.6	59.5
	20	9.9	13.9
		22.6	26.6
		34.7	38.7
		53.8	58.0
	21	20.6	24.5
	22	2.9	6.9
		35.8	
		44.7	48.7
		46.8	50.7
	23	57.0	61.1
	25	7.0	11.0
		8.8	13.0
		32.2	36.3
	26	25.7	29.8
		57.3	~~61.6~~
	27	01.6	05.6
		35.5	39.7
		37.4	40.3

53 24 29.3
8
31.8 4.5

D.B.					B	
11/12	6 46			11	6..47	
11	1 19			11	1..21	
12	1 9			12	1..09	n s
11/12	4 40			12	4..47	
#12	2 11			12	2..16	
12	-0 14			12	-0..10	2d wire lost
9	10 22		9.0	9	10..23	
B.					B.D.	
11	10 35			12	10..37	
11	0 52			11	0..54	
12	5 23			12	5..25	ns
12	7 26			12	7..28	
11	7 39			11	7..43	
10.11	2 45			10-11	2..48	
B.B.					B.B	
12	-0 13			12	-0..11	
				12	-0..14	
12	2 18		9.3	12	2..19	
10	5 5	Bright stars still very numerous.		9-10	5..07	
11.12	8 19			11-12	8..20	Comp. 10" s.f
10.11	3 18			10-11	3..21	2d wire lost
11.12	9 30			11-12	9..33	
12	4 52			12	4..53	
D.					B.D.	
12	9 0			12	9..08	
12	9 4		G.	12	9..07	
11	3 46	ns.	9.5	11	3..48	ns
11.12	3 36			~~[illegible]~~12	3..38	
8.9	7 38		8.1	8-9	7..39	
11	7 28	2d wire lost.		11	7..31	2d wire lost
9.10	8 22	~~[illegible]~~	9.3	9	8..23	
B.					B.D	
11	9 24			10-11	9..27	
11	5 12	(Compare this with 5th star of zone 129-130		10-11	5..14	

This zone does not include more than 1/2 of the 11th mag stars which passed the field & not one fourth of the 12th mag. Some also of the 10th & 10-11 were omitted. The collection of the brighter stars in groups was often remarked. The increased number of stars was most noticeable among the small 12th or 12/13 mag. stars - very few of which were ~~obtain~~ taken.

127 0°.50′–68 128

G.P.B Obs. C.M.T. Rec–

1859 Sept. 2d

Zero of Pos. 91..28

Sept. 2d

ZC = 18 49 00
Ex Ther 56.°5
Bar 29.900
Att Ther 67.0

Zone

ZC 21..15..00
Bar. 29.940 Ext. Th 52°
~~Att 64~~
Att. Th. 63°

17	9.3	13.2
	11.7	15.4
18	22.0	26.0
	30.8	34.8
	56.1	60.0
19	6.2	10.2
	34.0	37.9
	57.0	61.1
	57.9	61.9
20	16.5	20.6
21	31.7	35.9
	57.2	61.4
22	45.2	49.2
	56.8	60.8
23	21.5	25.6
	38.5	42.5
24	42.1	46.2
25	47.4	51.3
26	18.0	22.0
	35.8	39.9

Zero of pos 271..21 – 181..21
ZC =
Barom 30.022
Beg. Att ther
Ex ther 52
Rec.

at Beg
Bar 30.080
att th 68
ex th 61½
ZC 22h 58m..

~~18h 15m 10 4 reg~~ clock not working

Clock not working

"

18	22.4	26.4
	31.0	35.0
	56.3	60.2
	6.5	10.4
	B	
19	57.4	61.3
	58.2	62.2
20	16.8	20.9
21	—	36.0
	B D B	
	57.6	61.5
22		
	57.0	61.2
23		
	38.5	42.7
	B	
24	42.4	46.4
25	47.5	51.5
26	18.3	22.1
	36.2	40.0

0°.50' – 60 128

31 8
7 5
240

Zero of pos. 271„21 – 181.21
Σ C =
Barom 30.022
Beg. Att ther
Ex ther
Rec.

1022

Bar 30.080
att th 68
ex th 61½
Σ C 22„ 58 m..

18 15 10.6 14.6
16 24.3 28.3
17 9.3 13.2
11.7 15.4
18 22.0 26.0
30.8 34.8
56.1 60.0
19 6.2 10.2

34.0 37.9
57.0 61.1
57.9 61.9
20 16.5 20.6
21 31.7 35.9

57.2 61.4
22 45.2 49.2
56.8 60.8
23 21.5 25.6
38.5 42.5

24 42.1 46.2
25 47.4 51.3
26 18.0 22.0
35.8 39.9

~~18h 15m 10.4 reg.~~ clock not working

Clock not working
"
18 22.4 26.4
31.0 35.0
56.3 60.2
6.5 10.4
B

19 57.4 61.3
58.2 62.2
20 16.8 20.9
21 — 36.0
B ⊃ B
57.6 61.5
22
57.0 61.2
23
38.5 42.7
B
24 42.4 46.4
25 47.5 51.5
26 18.3 22.1
36.2 40.0

127 $0^{\circ}.50-60$ 128

G. P. B. Obs. W. Mer. S. C. Obs. W. Mer.

Sept. 2^d				~~Sept. 26~~ Oct. 4^{th} Tuesday		
The average of magnitudes is a trifle large (numerically); say about $0.^m2$ compared with Bessel.						
9.10	9..17 B D		8.8	9.10	9..10 B	Bright Moonlight
12-13	4..52			12-13	4..47 B. D. B	~~seen~~ ns
12-13	0..48				0..	Both seen
13	1..50	ns				
12	6..12	lost		12	6..07	
11-12	8..01			11-12	7..55	
11-12	6..10			11.12	6..07	
10	7..58 D		9.4	10	7..52 B	
12	2..15			12	2..	seen
10-11	2..54		(9.5)	10-11	2..49	
11	3..55	ns		11	3..50	ns
10	9..13			9.10	9..07	
11	9..08 B. D			11	9..04 B D B.	... 1st wire lost
12	10..05			12	10..00	
12-~~13~~	4..53			12	4..48	Az lost
12-13	5..29			12-~~13~~	5..24	
12-13	9..05			12	8..59	Az lost
12	9..10 B B			12	9..02 B	ns
12	3..36			11-12	3..30	
11	9..29			11	9..24	
10.11	10..38			10.11	10..30	
10	10..09			10	10..02	

127

26	59.1	63.2
27	31.2	35.1
28	22.3	26.3
29	15.7	19.5
	58.0	62.1
30	54.5	58.4
31	26.3	30.3
32	27.0	31.0
	42.9	47.2 51.7
	58.1	62.1
33	34.2	38.3
	48.6	52.3
	53.1	57.1
34	29.9	33.9
	40.9	44.9
[illegible]	51.3	55.3
35	41.4	45.3
36	9.3	13.4
37	1.9	6.0
	9.1	13.1
38	3.7	7.8
	21.3	25.5
40	14.8	18.9
	49.8	53.8
	56.9	60.9
41	48.4	52.6
42	2.5	6.4
	58.7	62.7
43	30.1	34.1
	49.5	
44	4.0	7.8
	6.1	10.1
		13.5

128

26 ~~59.6~~	59.6	63.7
28	22.8	26.7
	BB	
29	16.2	20.3
	38.9	42.8
	58.6	62.6
30	54.8	58.8
31	26.8	30.9
	B	
32	27.7	31.5
	—	47.6
	58.5	62.5
33	34.7	38.7
	SB	
34	30.4	34.5
	41.3	45.3
	51.6	55.7
35	41.8	46.0
36	9.7	13.7
	B	
37	2.3	6.3
	9.6	13.4
38	4.2	8.2
	21.7	25.8
	BB	
40	15.3	19.2
	~~57.1~~	~~61.1~~
	57.1	61.1
41	49.0	52.9
42	2.8	6.9
42	59.1	63.2
	SB	
43	30.5	34.5
—		
44	4.7	8.7
	—	10.2 or 10.7
	—	14.2

Dec. 0..50 to 1..00 127

128

9-10	0..35		9.5	9.10	0..20	cert.
12	2..51			12	2..40	cert
	D. B	Very few stars visible			B D	
11-12	2..43					
12-13	4..12			11.2 12-13	4..09 4..04	
7	0..01		6.8	7	-0..03	
9	8..23		9.1	9	8..18	
8-9	6..03		8.7	8.9	5..59	
	B D B				B	
~~11~~ 12	0..12			12-13	0..07	
11	8..36			11	8..30	1st wire lost
12-13	8..39	1st wire lost ms		12	7..36	cert
11	7..38					
8	4..33		8.2	8	4..30	
12	5..37				seen	
12	2..52				seen	
	B				D. B	Bright Moonlight
10	1..12			10	1..09	
12	4..29			12	4..	Dec. lost
10-11	7..38			10.11	7..35	
9-10	1..50		9.3	9-10	1..46	
11	0..02			11	-0..01	
	B. D.				B.	
10-11	2..40			10.11	2..37	
12	7..36	ms		12	7..31	
11-12	3..35			11-12	2..10	
11-12	7..20	Very few small stars passed since the beginning of the zone		11	7..15	
	D				B B	Bright star 11 mag - fol 2s sds 3'
11-12	2..17			11.12	2..12	
13	8..60			~~12~~ 13	8.. seen	
9-10	9..16		9.4	9.10	9..09	
9-10	1..09		9.4	9.10	1..04	
12	4..26			12	4..19?	~~Dec~~
12	3..28			12	3..21	ms
	B D B				D. B.	
12	5..03			12.13	4..59	
12	1..04	2 wire lost				
11	3..57		9.5	11	3..50	
12	3..08	ms		12	3..00	1 wire lost
12	3..16	ms 1st wire lost		12	3..10	

	127		0° 50'–60'			128
1[illegible] 44	23.4	27.7		18.~~4~~		
	33.6	37.6				
45	59.4	63.5				
~~47~~	~~7.0~~	~~11.7~~		46	0.0	4.1
				47	8.2	12.2
	26.2	30.2		~~66~~	26.6	30.8
	43.8	47.9			44.1 BB	48.2
48	13.2	17.4				
	21.3	25.1	Please examine.			
		29.2		48	25.5 BB	29.5
48	56.4	60.7			56.9	61.0
49	52.8	56.6		49	53.3	57.[illegible]
	56.0	60.0				
					B	
50	30.1	34.0		50	~~42.5~~	~~46.5~~
	42.1	46.0			42.5	46.5
	57.8	61.9			58.4	62.2
51	7.7			51	8.4	—
	15.2	19.2			15.6 BB	19.6
52	18.9	22.9		52	19.3	23.3
	47.6	51.6			48.0	52.2
	50.4	54.2			50.8	54.9
53	2.9	6.9		53	3.4	7.4
	24.9	28.9			25.4 BB	29.5
53	39.7	~~43.8~~				
	43.8	47.6				
	52.6	56.6				
55	0.4			55	0.9	4.9
	4.0				4.3	8.3
	12.5				13.0	17.0
	21.9					
	25.8	29.9			26.3 BB	30.4
	53.2	57.3				
56	24.5	28.6		56	24.9	28.9
	45.7					
	51.3					

12~~7~~ 0°, 50′-60 128

11-12	9..20					
12-13	10..29					
12	3..39			12	3..34	
12	1..55	rt wire bad		11.12	1..50	~~rt wire?~~
11	2..06			11	2..00	
7	6..51	Cat. Star	7.6	7	6..45 D.B	
12	6..10					
11	10..03	ns			seen	
11.12	6..04 B			11	6..00 B B	
12	7..26			12	7..21	
10.11	7..13	ns?		10.11	7..09	
11	3..48 B B	ns		11	3.. seen B	
12	8..30			12	8 seen	
8-9	5..57		9.3	8-9	5..50	
11	3..18			11	3..11	
10	0..54	2 wire lost	9.5	10	0..47	2 wire lost
7	10..40 B B D		7.0	7	10..31 B B	ns
10	10..22		9.5	10	10..17	
11.12	7..00			11-12	6..52	
10.11	6..12			11	6..07	ns
10.11	9..09			10	9..03	suspected double
9	0..30 D.B		9.0	9	0..25 D.B	
12	7..34	2 wire lost				
12	1..53					
12	3..52 D B B	Group of			B	
11	2..13	2 wire lost		11	2..09	
12	3..32	" "		12	3 29	ns
12	9..34	" "			9..29	ns
11	6..08	2 wire lost			~~6~~	a 6..20 seen
11	4..08 B B	ns	9.5	11	4..00 B B	
12	0..57					
12	8..03			12	7..58	
11.12	10..24	2 wire lost				
11	9	" "				

125 0°50'-68' 126

18	57	0.3	4.5
		3.6	7.6
		29.4	33.7
		32.2	36.1
		51.8	55.7
		59.2	63.3
	58	17.3	21.3
		47.5	51.5
			55.8
	59	28.7	32.9
		31.7	35.7
19	0	7.4	11.3
		34.3	38.2
		36.2	40.2
		~~[illegible]~~	42.8
	1	13.0	17.0
		19.4	23.3
		32.3	36.3
		34.6	38.6
	2	12.3	16.2
		31.9	35.9
		59.3	63.3
	3	34.6	38.6
	4	38.5	
		49.7	
	5	2.6	6.5
		5.1	9.1
	6	14.7	18.8
		20.3	24.3
		34.4	38.4
		37.6	41.7
		50.6	54.7
	~~7~~		
	7	36.4	40.4
		48.3	52.5
19	8	3.2	7.2

18	57	0	
		4.1	8.0
		—	34.0
		—	36.6
	58	15.7	19.7
	58	17.9	21.8
		48.0	51.9
		52.4	56.2
		BD	
	59	29.2	33.2
		32.0	36.1
19h	0	7.7	11.7
		34.8	38.6
		36.4	40.5
		39.2	43.1
		56.7	60.6
	1	~~[illegible]~~	~~[illegible]~~
	1	19.9	23.9
		34.9	38.9
	2	12.8	16.8
		32.3	36.4
		59.9	63.9
		BBBBD	
	4		
		50.2	54.1
	5	2.9	7.0
	6	15.1	19.1
		20.8	24.8
		35.0	39.0
		49.9	~~42.~~ 47.0
		BB	
	7	37.1	41.0
	8	3.7	7.7

1250   0°,50'-60'   126

12	9..14					Bright Moon
10	8..28		9.5	10	8..22	
12	4..47			12	3..40	cert 1st wire lost
11	7..42				7..	" " "
11	8..23					
12	7..30	ms		10	3..16	
10	10..33			10	10..29	ms
10	3..21	M lost			seen	
11	1..13			11	1..08	
12	0..14	1st wire lost		12	0..08	
	D B				B D	
12	4..35			12	4..30	
11	2..42	ms	9.5	11	2..37	ms
10.11	10..50		9.5	10.11	10..42	
8.9	10..29		9.0	8-9	10..22	
9.10	7..18		9.4	9.10	7..10	ms
9	10..37	1st wire lost	9.1	9	10..33	ms
12	2..44			11	8..59	
12	2..48			11	2..42	
11	10..00				seen	
11	7..48			11	7.40	..
	B D				B D B	
9.10	10..30		9.2	9.10	10..25	
9	10..56		8.7	9	10..50	
12	1..31			12	1..24	
	B B B	Many bright stars pass un-			D B D	
12	0..13	observed				
12	6..24	E wire lost			seen	
11	6..19	" " " B.	9.4	11	6..13	
11.12	7..39		9.4	11.12	7..31	
10-11	10..49					
12	6..05			12	6..00	
12	1..11	ms		12	1..10	cert ms
12	14..09			12	1..08	
12	10..40			12	1..46	
12	4..17					
	B				B.B.	
12	0..42			12	0..36	
12	4..33					
12	1..38			12	1..35	

127 0°, 50'-60' 128

8	10.2	14.4	8	10.8	14.8
	25.4	29.3			
	34.6	38.4		34.8	38.9
	46.1	50.3			
8	·	51.3	8.	48.0	57.9 ---?
		No N.?			
9	27.4	31.5	9	27.9	32.0
9	58.3	62.3	9	58.8	62.8
10	13.8	17.8	10	14.0	18.1
	27.9	31.8		28.1	32.1
11	21.5	25.6	11	22.1	26.0
	32.5	36.5		—	36.9
				B	
13	15.4	19.4	13	15.9	19.9
	24.2	28.1		24.4	28.4
	26.7	30.7		—	31.3 ?
				IB	
14	11.4	~~15.6~~	14	11.7	15.9
	15.6	19.4		—	20.0
	30.3	34.3		30.8	34.8
	43.1	47.0		43.6	47.6
				BIB	
15	14.7	18.7	15		
	26.1	30.2		26.6	30.6
16	16.8	20.8	16	16.9	21.1
	24.8	28.8		25.2	29.1
	38.4	42.4		38.9	43.0
				BB	
17	46.4	50.3			
18	0.1	4.0			
	41.3	4			
	43.0				
	55.0	58.9			
	58.1	62.0			
20	8.2	12.1	20	9.8	14.0
	9.6	13.5			
	31.7	35.7			
	35.2	39.1		35.7	39.5

11B

12~~5~~7 0°,50'–60' 12~~5~~8

12-13	3,,57			12-13	3,,48	ms
12	10,,47					
12	5,,29			12	5,,23	double?
12	8,,59					
12	5,,33	1st wire lost				
11-12	3,,14	" " "		11.12	3,,09	ms
	B D				D. B	
1	1,,28			12	1,,20	sig. to both wires
12	7,,19			12	7,,14	
9	10,,00	Cat. Star	9.0	9	9,,55	
10	6,,48	B.	9.4	10	6,,41	
6~~7~~	−0,,08		5.0	6	−0,,11	
12	6,,59			12	6,,50	1st wire lost
	B B				B	
9	8,,01		8.9	9	7,,54	
11	9,,16	ms		11	9,,10	
11-12	4,,34	"		11-12	4,,29	B lost
	D B B				D. B	
11-12	3,,11	2d wire lost		11.12	3,,09	
12	2,,12			12	2,,09	1st wire lost
12	2,,30			12	2,,20	
11	3,,42		9.5	11	3,,38	
	B B D				B D. B	
12	1,,30			12	1,,	
	7,,06			11	7,,00	
9.10	9,,32		9.4	9.10	9,,26	
11	5,,57			11	5,,48	
10	3,,23			10	3,,20	
	B				B B	
12-13	6,,56					
12-13	5,,04					
11	10,,22	2d wire lost B.	9.5			
12	8,,00	" " "				
12	5,,57					
12/13	9,,19					
	D. B					
10	−0,,13		9.5		−,,10	lost
9.10	6,,25	ms	9.4	9.10	6,,20	
10.11	4,,22				ms	
10	0,,22		9.5	10	0,,15	2d wire?

127   0°.50'–60'   128

					B		
21	5.1	9.3		19^{L} 21		[illegible]	
	8.7	12.7	9.10 F		9.3	13.3	
	47.8	52.0	11 F.		48.2	52.0	
22	14.3	18.3	10.	22	14.7	18.7	
	29.8	33.9	9.10		30.3	34.1	
	31.2	35.2			31.7	35.8	
					D		
	53.4	57.4	9.		53.8	57.8	
23	15.1	19.2		23	^	~~19.2~~	19.2
	21.5	25.5			19.2	23.2	
					21.9	25.9	
	23.1	26.9	10.11 F		—	27.2	
		29.9	Examine.				
	45.8	49.6					
	52.7	56.7	11.12		53.0	57.0	
					DB		
24	15.6	19.4		24	*		
	~~[illegible]~~	25.2			21.8	25.8	
	28.2	32.1			28.7	32.7	
	49.5	53.5	11 B	24	49.9	54.0	
25	9.0	13.1	9.10 F	25	9.7	13.5	
	17.3	21.2	9.10 F.		17.8	21.7 m	
					BD		
26	2.2			26	~~6.9~~	6.9	
	13.3	17.5					
	27.5	32.0	11 F.				
	34.8			26	28.4	32.4	
	52.9	56.7					
27	2.6	6.5					
	4.3	8.5	10.				
	39.0	43.0					
	39.9	43.9					
	51.7	55.8					
	59.7	63.8					
28	7.4	11.5					
	17.5	21.8					
	42.6	46.8	10.				
29	19.8	23.6	10 F.				

127 0°.50′-60′ 128

	BD				B	
12	6..08			9.	0..58	
9.10	1..03			〃	〃	Lamp burns dimly
10	9..19			10	9..15	
10-~~11~~	8..11		9.5	10	8..05	
9-10	9..58		9.3	9.10	9..52	
10	9..40	ms		11	9..33	ms
	~~D~~ B				D	
9-10	9..00		9.0	9.10	6..54	
12	5..57			12	5..50	
12	3..18	ms		11	3..10	1st wire lost
12	5..50	ms		12	5..48	ms
					B.D.B	
12	10..29					
12	10..56					
12	8..29			12	8..21	
	BB				D.B	
12	11..01					
12	2..42	1st wire lost				
12	1..24			12	1..18	ms
12	5..10			12	5..07	
9.10	8..10		B. 9.2	9.10	8..07	
10	8..04		B. 9.5	10	7..59	ms
	B				B.D	
12	0..02	2 wire lost		12	0..00	1st wire lost
12	10..49			12		
12	3..50			12	3..49	ms cert
12	6..20	1st wire lost				New Lamp inserted
12	0..29					Instrument received blow
12	2..02					
11-12	1..30					
	B ~~D~~ B					
12	7..08					
9.10	9..46		9.1			
12	9..46					
12	7..50					
12	8..48					
11	6..26					
11-12	7..26					
11	1..08					
	BB					

127 0° 50'–60' 128

29	52.5	56.0					
30	19.2	23.2					
	35.3			9.107			
	39.3	43.2					
	55.2	59.2					
31	6.5	10.4					
32	27.7	31.4		10.11	32		
	~~34~~	35.6	Examine			29.0	33.2
	48.4	52.3		10 7.			
	54.0	58.1				49.6	53.6
						55.2	59.2
33	38.8	42.6					
	39.7	43.6					
34	15.4	19.3			34		
	21.7	25.7	Examine.			26.9	30.8
	29.7	33.5		9.107			
	48.2	52.2					
						49.5	53.7
35	41.7	45.7			35m		
	42.2	46.2				43.0	47.0
	52.4	56.4		9.		43.5	47.4
	57.7	61.7				53.8	57.6
36		5.9		9.10	36	3.3	7.3
	17.8	21.8				19.3	23.1
	42.2	46.3		8.9		DB	
	56.6	60.7					
37.	31.2			11.			
	47.6	51.6		8F.			
38	21.2	25.3					
	35.0	39.0		11.B			
	44.8	48.9					
39	16.5	20.6		10.11	39	16.9 17.7	21.9
40	1.6	5.5		10.	40		~~4.7~~
	3.5	7.5				4.7	
	5.0			9.10			
		9.0					10.3

127 0°, 50'-60 128

12	9..55						
11-12	6..57						
10	6..45	2d wire lost		(9.5)			
10.11	5..54						
11-12	4..24						
11	9..21						
	BD						
12	4..32						
11.12	10..03						
12	4..48				12	4..41	
12	5..18	ms			12	5..12	ms
	BBDD					B	
12-13	7..21						
11-12	5..32						
11-12	10..36						
12	0..58				10	0..53	
11	9..56		B	9.5	11	9..50	
9	1..30			8.7	9	1..26	
	BB					BB	
8-9	4..45			8.8	8-9	4..41	
10	5..04			9.3	10	5..09	cut ms
10	5..42		B.	9.2	10	5..38	
11	6..46			9.3	11	6..40	
10	7..12	1st wire lost		9.3	10	7..10	cut
10.11	2..04				10	2..00	
	BB					D.B	
8.9	0..51			8.3	8-9	0..46	
12	10..15				12	10	
12	10..32	2d wire lost			12	10..31	1st wire lost
9	3..31			8.7	9	3..27	
12	9..08				12	9..05	
	~~[illegible]~~					B	
12	5..29				12	5..25	2d wire?
12-13	6..41						
	D. B.					DD	
12	9..28				12	9..23	
10	2..30			9.5	10	2..26	
12	1..09						
10	5..52	2d wire lost		9.5	10	5..48	1st wire lost
10	8..46	1st wire lost					

12 ~~7~~ 8   0° 50' 60'   12 ~~8~~ 8

19	40	49.6	53.6	11B.
	41	37.3		
		39.1	43.0	10 7.
		45.0	49.0	
		50.5	54.4	
		58.0	62.3	
	42	12.2	16.2	
		37.6	41.7	
		59.8	63.8	
	43	15.2	19.2	
	43	39.3	43.3	9
		~~44.4~~	48.4	Examine.
	44	27.7	31.6	10.11
		35.3	39.6	10.11
		49.9	54.0	10 7.
		55.1	59.0	
	45	30.0	34.0	
	46	2.3	6.2	√11.
		6.9	10.5	11.
		15.8	19.9	
		38.6	42.7	10 13
		41.9	45.8	
		~~4~~ —	49.1	
	47	46.9	50.8	
	48	20.2	24.1	
		26.3	—	
		27.9	32.0	
		32.7	36.4	
u m		~~56.5~~	~~60.4~~	m u
	49	23.9	27.9	
		26.9	28.8	
m		~~57.2~~	~~61.3~~	m
u	50	~~32.7~~	~~36.4~~	u
u		~~38.3~~	~~42.0~~	u?

19^h

40	50.8	54.8	
41.	38.3	—	
	40.3	44.1?	
	46.1	50.2	
	51.7	55.5	
42	13.4	17.3	
	38.8	—	
43	16.7	—	
43	40.6	44.8	
	BD		
44	28.9	32.9	
	36.7	40.6	
	51.2	55.3	
45	31.6?	35.3?	
	DB		
46	3.8	7.6	
	8.2	11.9	
	~~39~~ 40.0	43.8	
	~~DBD~~	50.6	
47	48.1	52.1	
48	—	25.4	
	27.6	31.5	
	34.0	38.0	
	43.6	47.7	
	B		
49	25.1	29.1	
	26.0	~~30.0~~	
	41.8	45.6	
50	1.8	5.8	
50	33.7	37.6	42.1?
	39.3	43.2	

12 ~~7~~ 7 0°50′–60′ 12 ~~8~~ 8

	B B				D B.D	
10-11	3..56			10-11 -	3..50	
11.12	8..53	2 wire lost		11-12	8..50	
11	6..52			11	6..48	2 wire lost
12	7..36			12	7..30	ns
11.12	8..28			11-	8..22	
12-13	9..24					
	B					
12	3..34			12	3..30	
12	9..23			12	9..19	2 wire lost
12	10..15				Seen	Moon
12	9..11			12	9^{B}..09	2 wire lost
9.10	6..46	Cat Star	9.0	9.10	6..42	
11.12	10..01					
	B.D				BD	
11	7..03			11	6..59	
11	5..11			11	5..08	
11	5..00			11	4..56	
12	0..21			12	0..	
12.13	0..16			12	0..10	
	B				D. B	
12	5..16			12	5..12	
12	6..00			12	5..56	ns
12	3..00			12		
10	7..15		9.5	10	7..40	cert
10	10..32	ns		10	10..	
9.10	-0..06	1st wire lost Catalogue	8.5	9-10	-0..10	1st wire lost
	B				~~D.~~ B.D	
12	7..01			12	6..57	
11.12	7..25			11-~~12~~	7..20	1st wire lost
11.12	8..36	2 wire lost		11	8..30	ns
12	2..02					
11	0..46		9.5	11	0..41	
11	10..48			11	9..09	
	B B B				B	
10.11	8..24		? 9.5	10	8..20	
9.10	10..32	ns	9.2	9..10	10..29	ns
12	10..40			12	4..30	
11.12	8..56			12	3..16	
				11	8..50	
12	6..38	ns		12	6..32	

127   0° 50'–60'   128

19 50	40.8	44.8					
51	1.7	5.6					
	2.3	6.2					
52	3.8	7.7		52			
	4.1	8.1					
	12.1	16.1			13.4	17.4	
					B		
53	16.4	20.5		53	17.6	21.7	
	28.0	32.1			29.3	33.3	
54	2.9	6.6		54	4.0	8.0	
m	13.1	17.3	m ?		14.8	18.7	
	35.1	39.0			B	40.4?	
m	37.4	41.4	m ?		38.8	42.7	
					D		
55	10.0	14.1			11.2	15.2	
	26.6	30.6			27.8	31.9	
56	9.6	13.5		56	10.9	14.9	
	24.4	28.5			25.7	29.6	
	33.2	37.2			34.5	38.6	
					BBD		
m 57	7.4	11.5	m	57	10.6	14.6	26.8?
	46.7	50.4		57	48.0	52.0	
58	15.9	19.8		58	~~[illegible]~~	16.9	20.9
	36.7	40.7			38.0	42.1	
	53.9	57.9			55.3	59.3	
	55.8	59.5			55.		
59	33.4	37.5			34.8	38.7	
	34.9	39.0			36.2	40.2	
	53.5	57.7			54.9	58.7	
20 0	9.8	13.8	m ?	20. 0	11.0	15.0	
m	23.8	27.8			25.0	29.1 ?	
	47.0	51.1			48.5.	—	
	50.3	54.3			51.3	55.4 52.2?	
m			m ?				
1	43.0			1.	44.3	48.3	
	45.8				47.1	5[illegible].9	
	56.5	60.6			57.9	61.9	
2	3.4	7.6			4.8	8.8	

127 0°,50–60' 128

	2..47					
11	9..05					
11	11..0?	ms				
	B B					
7?	6..28					
11	5..10	ms				
7	9..45		6.7	7	9..40	
	B B D				B	
11	10..37			11	10..33	
9 ~~8.10~~	8..41		Catalogue Star. 8.5	9	8..36	
9.10	9..10		8.6	9.10	7..08	Cert.
12	0..58				0..51	ms
12	0..36		9.3	12	B 0..36	
10	0..04	False sig.		10	– 0..01	
	B. D.				D	
12	9..00			12	8..56	
12	8..01			12	7..55	
10	0..08			10	0..03	
9.10	7..04		8.8	9.10	7..40	Cert
10	2..03		9.0	10	2..00	
	D. B.				B B D	
12	– 0..06			12	5..03 1..03	
11	0..54		9.5	11	0..50	
11	6..36			11	6..30	
11	1..12			11	1..06	
11	0..41		(9.5)	11	0..35	
12	– 0..04	ms			seen	
	B				B	
10	7..46		9.2	10	7..40	
10	4..16	ms		10	4..11	ms
10.11	8..58			10-11	8..55	
10	7..17		9.5 9.3	~~10~~ 9.10	~~6..55~~ 7..13	~~Cert [illegible]~~
10	10..52		9.3	9.10	10..46	
11	7..22			11	7..18	
12	5..57	ms		12	5..47	ms
	B D B				B. D	
12	4..30	2 min lost		12	4..25	
12	4..20	" " "		12	4..15	ms
11	9..12	B.	9.5	11	9..08	
11.12	4..11			11.12	4..07	

727 0", 50-60 128

10 2 4.7 8.6
46.3 50.4
51.7 55.7
3 30.9 34.8
4 19.3 23.5
34.8 38.8
~~u 5 10.9 14.9 u?~~
12.7 16.6
34.6 38.5
~~7.9~~
37.9 41.7
~~u 6 10.1 14.1 u~~
26.4 30.3
7 3.0
6.4 10.3
8.4 12.4
8.8 12.8
28.9 32.9
36.2 40.2

8 4.4 8.4
12.7 16.8
9 16.6 20.7
32.8 36.8
10 3.2 7.2
6.6 10.4

10 37.2 41.0
40.4 44.1
11 0.6 4.6
~~u 11.8 15.8 u?~~
18.1 21.9
35.9 39.9
37.9 41.8
43.9 47.8

12 12.7 16.7
27.1 30.1

49.4 53.4

136
137
138

2
47.6 57.6

3 32.0 36.0
BB
4 20.6 24.7

5 13.9 17.8?

39.1 43.0
57.1 57.1
6 11.4 15.6
27.7 31.7
BB
7 6.2 10.4
7.6 11.5
9.7 13.8

30.3 34.2
37.4 41.4
BB
8 5.8 9.
9
17.9 22.0
34.0 38.1
10 4.6 8.6
7.7 11.7
B

11 1.8 6.0
13.0 17.0
— 23.2
37.1 41.1

45.1?
B
12 14.0 18.0
28.3
BB
50.8 54.7

~~12~~7 0°,50'–60' ~~12~~8

12-13	2.43					
12	8.48			12	8.44	
12	10.22			12	10.	
11	10.11			11	10.07	
	B B				D. B D	
10	9.35		9.3	10	9.30	
12	8.14		9.5	10	8.56	est
11	10.33					
10	9.00	→				
12	3.39					
10	4.33			10	4.29	
				11	9.00	
10-11	2.31			10	2.26	
9-10	4.48		9.1	9-10	4.41 D B	
10	2.44	Doubles	9.5	10	2.40	
11.12	6.36		(9.3)	11.12	6.31	ns
11.12	7.30			11.12	7.28	ns
10	9.30					
11	5.20			11	5.18	ns
11	2.31			11	2.24	~~ns~~
	B.				D. B	
12	0.50			12	0.43	
12	–0.16			12	seen	Dim
11	0.28			10-11	0.23	
10.11	6.29		9.5	10-11	6.23	
11	6.37			11	6.33	
8.9	3.01		8.5	8-9	2.56	This is larger than 8-9th
	B D				B	
12	2.36					
12	3.17					
11	4.52			11	4.50	
11	9.02			11	8.58	
12	5.03			12	5.00	[illegible] best
11	6.34			11	6.30	
12	3.34	ns		12	3.29	
11.12	5.52			11	5.49	
	D				D	
12	6.00			12	5.56	
12	6.00			12	6.00	[illegible] best
	B				D. B	
11	8.08			11-12	8.03	

127 0°,50'-60' 128

13	11.0	15.1	139	13	— J03D	16.5
	32.8	36.8	140		34.1	38.2
14	3.9	7.8	141	14	5.0	9.2
	11.2	—	142			
	34.5	38.7	143		36.0	40.0
	40.3	44.5	144			
m				15	28.2 28.9 B	32.2 32.7
16	25.1	29.1	145	16	—	30.2
17	3.3	7.3	146	17	4.6	8.6
	31.1	35.2	147		32.5 33.3	36.4
	42.4	46.5	148			
18	33.0	~~38~~	149	18	34.3	38.3
	34.6		150			
	36.5		151		37.8	41.8
	39.0	43.0	152			
19	8.4	12.5	153	19	9.8 B	13.7
	11.5	15.5	154			
	39.0	43.1	155		40.3	44.3
20	15.9	19.9	156	20	17.1	21.1
	33.8	37.7	157			
	41.7	45.7	158		43.0	47.1
	59.7	63.8	159			
21	8.4	12.3	160	21	9.7	13.6
	42.9	46.9	161		44.2	48.2
22	30.7	35.0	162	22.	32.2	36.5
	41.0	44.8	163		42.3	46.3
23	13.3	17.5	164	23	14.9	18.9
	20.1	24.1	165		21.3 B	25.3
	42.6	46.5	166		43.7	47.7
	56.3	60.3	167		57.6	61.7
24	36.4	40.5	168	24	—	41.9
	48.1	52.2	169		49.5	53.6
m	53.1	57.2	170		54.5 55.1	58.4 59.1
			171			
25	6.3	10.3	172	25		

127 0°50'-60' 128

11.12	1..05			11-12	1..00	
	B D				D.B D	
8.9	6..52	Blueish	8.2	9	6..50	
10.11	8..21		9.4	10-11	8..15	
11-12	2..34			11	2..20	cert Dec.
11	2..32			11 11	~~2..12~~ 2..32	~~[illegible]~~
12	-0..08				2..12	ms
	B.D.				B	
11.12	5..18			11-12	5..12	1st wire lost
10.11	10..26	B.	9.4	10	10..20	
7	5..03	Cat Star	6.9	7	4..59	
12	10..41			12		
	B				D.B	
12	6..50	2 wire lost		12	6..47	
12	6..14	2 " "				
11	4..48	2 " "		11	4..	ms
9	0..12		9.0		seen	
10	4..43		9.3	10	4..38	
12	0..28			12		
	B B				B B	
11.12	6..24			11.12	6..20	
10	3..45		9.1	10	3..41	
12	6..53			12	6.. —	
10.11	8..06			11	8..02	
10.11	5..16			10	5..11	
	B				B.D	
12	1..22			12	1..20	n.s. <9.4 lost here
11.12	4..08			11-x	4..04	
12	0..15			12	0..11	cert
11	2..40			11	2..35	
12	7..43			11-12	7..41	
12	6..46	ms			6.. —	
	B B.				B	
10.11	6..48			10-11	6..47	
11.12	8..59			11-12	8..55	
9.10	7..22		9.2	9-10	7..18	1st wire lost
x2						
9.10	3..28		9.0	9-10	3..25	
9.10	5..22		9.2	9-10	5..18	
12	10..08			12	2..06	

127 50-60 128

25	~~30.4~~	~~34.4~~	
	30.4	34.4	173
	44.4	48.4	174
	50.3	54.3	175
27	10.4	14.4	176
	18.7	22.7	177
	37.9	41.9	178
	58.6	~~62~~	179
28	—	2.7	180
	28.5	32.4	181
	35.1	39.1	182
29	44.4	48.5	183
	57.8		184
30		62.0	185
	42.9	46.8	186
	43.3	47.3	187
31	10.4	14.3	188
	18.6	22.4	189
	30.0	33.9	190
32	2.5	6.5	191
	13.2	17.4	192
	18.7	22.8	193
			194

	BD	
25		
	51.7	55.7
27	11.9	15.8
	20.1	24.0
	39.3	43.2
28	60.0	4.0
28	—	?
	29.7	33.7
	—	40.5
29	45.7	49.7
	59.2	63.2
30		
	44.1	48.0
	44.8	48.8
31	11.6	15.5
	19.9	23.8
	31.3	35.3
32	~~7~~ 3.8	7.8
	14.7	18.5
	1	
33	16.7	20.7

12~~9~~0°. 50' _ 60' 128

	~~D~~ B				B.D seen	Tuesday Eve Oct. 4, 1859
11.12	7..42					
12	5..14					
10	9..35			10	9..30	
11.12	6..45			11	6..50	est
12	6..21			12	6..20	
11	3..33		9.5	11	3..10	est
+9.10	1..17	2 win lost	brightest star 9.2 ✳ 9.0			
×9	8..28	1 " "	of zone 134	9.10	8..25	1 win lost
				10	1..09	2 " "
11	8..36			12	8..30	
12.	4..37			12	4..31	ns 1 win lost
	B				B.D, B	
9.10	0..44		B 9.0	9-10	0..39	
11	1..36	2 win lost	9.3	11	1..33	
10.11	6..58	1 " "	zone	10	6.. seen but	
10	3..52		134 9.3	10	3..50	
12	2..35	ns		12	2..32	ns
11.12	6..32			11-12	6..29	
10.11	4..03		9.5	10	4..00	ns
9.10	1..23		9.4	9.10	1..18	
	B D				B	
11.12	9..15			12	9..11	
11	5..46			11	3..42	est
12	1..23	Double Comp 15'' n.p.				
				11	2..03	

Moon very troublesome. Scale very dirty. Very badly observed zone. Could not easily see stars of 10 mag. before their coming up to mica and very often not at all before it

October 5th. 59. The microm
scale: During the operation the scale.

October 6th The position of zero
found to be 177°. 0'.

ster was unscrewed to ~~cleanse~~ dust mica came out, and was put back. after cleansing ~~it~~
M.C.

was determined by Altair carefully and
S.C.

~~In the [illegible]~~

129 0° 40′ – 50″ 178

Oct. 12 Wednesday
S.C. Obs. C.W.L. Rec
position circle 177°

at Beg.
EC 22h 46m 00s
22h 47m 00
Bar 30.320
att th 60
ext th 44

at End
E.C. 00.00
Bar 30.296
att th 59
ext th 42

S.C. Obs. C.W.L. Rec

pos. circle 177.02
Oct 24

at beg.
EC
Bar 29.952
att th 60°
ext th 46

at End
E.C. ~~00.00~~ 00h 13m
Bar 29.952
att th 56
ext th 44

position circle was not adjusted tonight the old reading of Oct 20th was adhered to

20h 26m	26.6s	30.7	1	K.	20h 26m	26.2s	30.1
26	58.2	—	2			38.4s	42.5
27	2.5	6.5	3	K.	27	2.1s	6.0
	B					B	
27	36.5	40.3	4				
27	38.4	42.3	5				
28	21.9	26.1	6				
29	19.5	23.4	7		20h 29m	19.2s	23.1s
29	31.8	35.7	8		29	31.4	35.5
29	37.1	41.0	9			36.9	40.8
	BD					DB	
29	59.5	63.4	10		29	59.1	63.1
30	34.0	37.8	11		30	33.3	37.5
30	50.5	54.5	12		30	50.3	—
30	55.3	59.4	13		30	55.1	59.0
	DB					B	
31	20.8	24.7	14		31	20.4	24.4

~~127~~ 129 40'–50" ~~128~~ 130

Bright Moonlight

Catalogue stars.

979	8-9	20h 26m 26s.3	+0° 47' 28".9
980	9-10	27..02.6	48..15.5
982	8	31..50.3	42..23.0
986	9	32..53.1	48..39.6
989	9	43..14..04	48..24.4
991	9	46..48..5	48..34.4
999	8-9	55..38..7	48..54.1
1007	9-10	21..7..11.35	46..37.7
1015	8	14..39.28	45..54.7
1023	9	24..43..17	43..20.3
1037	8-9	48..01.32	44..50.2

14
36
50

30
26
56

22..56
20 26
2 30

23..30
20..26
4

42
36
14

Oct. 20

Oct. 24th

	B.D						mag	
8-9	7..41		8.1	9	7..41		9	7..41
11	7..32	2 win lost		12	7..30	2 wire lost	12	7..30
9	8..25	Cat Star	9.3	9.-10	8..22		9.10	8..24 ms
	B				B.D			B B
10-11	9..29			10-11	9..29	2 wire lost.	10-11	9..29
10-11	5..25	ms		10-11	5..24	ms	10-11	5..24 ms
11	0..52			11	0..50		11	0..50
9	4..40		9.3	10	4..39		9	4..39
11	3..10			10-11	3..10		11	3..09 ms
9-10	9..22	ms		9-10	9..21	1 wire lost	9-10	9..21
	BD				B			D.B
9-10	5..13		9.5	9-10	5..13	win lost	9	5..11
11-12	6..50						11	6.– Dec lost
9	2..33	Cat. Star.	9.4	9	2..36		9	2..31 2 w lost
9-10	6..10	ms		9-10	6..10	1 wire lost	9-10	6..10 ms
	D.B				D.B			B
11	3..15	ms 2 Dec ?					11	3..19

1.29   40'–50'   ~~5.8~~ 130

20h 31	50.8	54.9	15	20h 31	—	54.7
32	13.3	17.3	16	32	13.0	17.0
32	22.4	26.6	17		22.4	26.3
			reject			
	BD					
32	52.8	—	18		52.3	56.2
32	56.6	60.5	19		—	60.3
33	7.3	11.4	20			
33	16.0	19.9	21			
	BD					
34	16.8	20.7	22			
34	17.4	21.3	23			
34	41.1	45.2	24	34	40.5	—
35	22.5	~~26.6~~	25			
35	26.6	30.9	26			
35	35.7	39.7	27	35	—	39.4
	DB				BD	
36	45.7	49.7	28	36	45.1	49.1
36	53.0	57.2	29		52.7	56.7
37	7.1	10.9	30	37	6.7	10.8
37	32.0	35.8	31		31.7	35.6
38	2.2	6.0	32	38	1.8	5.8
38	4.0	8.0	33		3.6	7.6
	DD				BB	
38	31.3	35.1	34	38	—	34.7
38	44.7	48.7	35			
39	15.8	19.7	36	39	15.2	19.3
39	27.8	32.0	37		27.7	31.7
40	21.0	24.9	38	40	20.6	24.6
40	55.0	58.9	39	—	54.4	58.6
41	17.9	—	40	41	17.6	21.7
41	27.8	31.8	41		27.5	31.4
					DBD	
	BDB					
42	37.7	41.7	42	42	37.2	41.3
43	16.7	20.6	43	43	16.4	20.3

~~8 52 9~~ 40'-50' ~~12 8~~ 190

						Fals track	mag	
7	2..38		7.9	7	2..37		7..	2..36 1st w lost
11-12	3..30	ns					11	3..30
9-10	1..29	ns	9.4	10	1..27		9-10	1..27
	[6..39]	Sk lost reject						& Sun
	B D							
8-9	8..54	2 win lost	Cat Ster 8.8	8-9	8..52		8-9	8..57 ns
10	3..59			10	3..55		10	3..59 1st w lost B B
11	5..48				B		11	
11	6..39	Dec!						
	B D							
					+			
11	2..56			1	1..52	& cert		
11	4..07	ns		11	4..03			Clouds
9-10	4..45		9.4	9-10	4..40		9.10	4..41 2 w lost
12	6..08	2 win lost	~~8.8~~	12	6..09	2 win lo		
9	7..15	no	8.8	9	7..14			
9-10	1..58		9.5	10	1..57	no	9-10	1..55
	& B B				B B			B.D
11	1..11			11	1..10		11	1..10
11	3..28	Dec?		11	3..32		11	Dec lost
10-11	6..00			11	6..00		10-11	5..58
11	3..48			11				~~3..~~ De
9	9..10			10	9..10		* 9.10	2..40
9-10	1..11	ns	8.8	10	1..20	& cert	9	9..10
	D.D				B D		9.10	1..20 cert
								B B
12	3..08	R & D?					12	3..10 ns 1st w lost
12	2..37	ns 2 win?						
10	4..05		9.4	10-11	4..05		10..	4..04
11	3..18			12	3..19		11	3..17
10	-0..27			11	-0..29		10-11	-0..30
11	7..00			12	6..59		11	6..56
11-12	1..01	2 win lost		12	1..00		11-12	1..00
8	5..02	ns	8.5	8-9	5..00		8	5..00
					B.D			~~D~~ B.D
	B. D B	(Moon very bright						
11	4..02			11	5..01	& cert	11	5..01 cert
11	6..42			12	6..40		11	6..41

54 2

15129 40–50' 13

29h 43	47.6	51.3		43	47.1	51.3
44	14.2	18.4		44	13.9	18.0
44	22.7	26.8			22.6	26.5
	B				BB	
44	57.5	—		44	57.2	~~61.3~~
44	59.0	62.9			58.7	62.6
45	1.8	5.7		45	1.3	5.3
45	16.5					
45	34.0	37.9			33.8	37.6
46	34.5	38.4		46	34.0	—
	BD				B	
~~47~~	~~39.6~~	~~43.8~~	reject			
47	39.6	43.8				
47	—	52.0				
48	2.6	6.8				
48	3.6	7.5		48	3.2	7.2
	BB				DB	
48	41.9	46.0			41.7	45.4
48	44.4	48.4	B.		43.9	47.8
49	15.7	19.0		49	15.3	—
49	19.6	23.0			18.6	22.7
49	42.9	47.0			42.7	46.6
	B				BB	
50	27.4	31.4	B.	50	27.9	31.9
50	45.0	49.1			44.8	48.7
50	50.6	—			50.3	54.3
51	2.5	6.5		51	~~2.2~~	6.2
51	7.1	11.1			—	10.5
51	13.0	16.9			12.8	16.7
51	[illegible].1	33.2		51	28.7	32.7
	BB				BBB	star 141
52	21.0	25.1	69 70	52	14.3 ~~14.3~~ ~~24.6 which wire~~	18.4 ~~18.~~ — 24.6 2d wire
52	50.7	54.6	reject. .71			
53	1.8	5.9	.72		50.2	54.1
					1.4	
53	25.5	? rej		53	~~53.~~ 28.9	32.0 ?
53	33.6	? 2d wire 25.6			53.4	57.2 ?

129 40–50′ 138

11	7..22			11	7..22	Elongated?	11	7..21.	
9	8..40	ns Cat Ste	9.7	9	8..37		9	8..40	
11	7..19			11	7..18		11	7..18	
	B				B			B B	
11	6..39	2 wire lost	[8.5]	11	6..37	2 wire lost	11	6..36	2 w lost
11	7..17			11	7..12		11	7..	ns
11	7..02	ns		11	7..00		11	7..01	ns
11	7..38	on 2 wire					~~7..10~~	~~8..33~~	seen
9.10	8..52	Cat Ste	8.8	9-10	8..50		9..10	8..53	
11	3..14						11	3..11	In a haze 2 w. lost
~~11~~	~~0..09~~		~~9~~					B	
	B. D								
11	3..30	R lost	? 9.5				11-12	3..30	R lost
10.11	1..00						10-11		
(10..11)	2..26	Dec? 1st wire lost							
10.11	~~8..00~~ 5..08							Clouds	
11	8..00						11..	7..59	
	B. D							D, B	
11	3..59						11	3..58	
9-10	2..19	ns	Bl. 9.3			Dobes per comm	9..10	2..19	
9-10	5..40		-9.5				9-10	5..39	2 w lost
9-10	0..53	ns 1′ Dec? subtract see Som correct					9.10	-0..09	
10	6..17			10-11	6..12		10 11	6..11	
9..10	B	D.B.D.B						B B	
9	3..18	Aug 30. 4 14 ~~4 17~~ Break and new Start Aug 30, 1860 J.H.S	9.5	10	3..13		9	3..14	
9	5..00	5 56 2d wire 6 16 See below	9.5	9.10	4..59	ns 1 seen	9	4..58	
9	6..18	7 18 2d wire first wire lost	?	9.10	6..19		9	6..19	
9	8..07	Declination lost	? 9.5	9.10	8..08	ns	9	8..04	1 w lost
10	10..19	do sec wire	~~9~~	10	9..59	cat 2 wire?	10	10..00	ns
9	5..50	6 41 ns. 7 47 25 8.0	9.3	9.10	5..50	1st wire lost	8-9	5..48	ns
11	4..08	5 5 6 5 " 24.5		12	4..08		11	4..07	
	B B	7 40 " 22.5			B D B			B D B	
(69) 10-11	1..44	2 39	9.5	10-11	1..41		10..11	1..41	
	9.30	R lost			seen			seen	
(70). 11	-0.50				seen		11	-0..67	1st w lost
9	3..18			10-11	3..19	2 wire lost	9.10	3..08	
10-11	4..20	5 18 1st wire		11	4..19		10-11	4..	Clouds 2 w lost
	0..28				not seen				
12	2..50	3..50 AR lost		12	2..51		12	2..50	
					B				

129 40–56 1308

20h 54	46.6	50.4				46.0	50.0	7.6
55	4.9	—		—	55	4.6	8.5	8.5
55	8.4	12.6	~~240~~ —	~~4~~		~~8~~		8.5
55	30.0?		240	240		29.6	33.6	239
55	39.3	43.3	9	9.		38.9	42.8	9.9
55	58.6	62.7	6.27 Ex. from this point	56 – 22.0		58.3	62.0	6.27
~~55~~ ~~[illegible]~~ 56m 20.0–24.0 ✓								
~~55~~ ~~[illegible]~~ 56 22.0?								
Dots for 1m.			Mayer. Obs'd by J. H. Safford Sept. 17 1863					
58	25.3	29.2		10 b				
58	30.9	35.0		10-11				
59	6.0	10.0		9-10				
59	9.2	13.1		10 b				
21h 0m	10.8	15.0		10				
0	24.6	28.3		12				
0	44.7	48.7	✓	9-10	21h 0m	44.2	48.2	
0	51.6	55.3				50.9	—	
1	27.3	31.3		9.2	1	26.8	31.0	
1	52.0	55.8		9.3		57.2	55.4	
2	—	2.2		9.8	2	47		
					2.	17.1	20.8 ?	
2	52.0	55.9				57.5	55.3	
2	56.4	60.0		8.8		—	59.6	
	DB					B		
3	37.8	42.0	Ex. up to this point	10.2				
4	00.1	04.3						
4	8.0	12.1		9.8	4	7.7	11.9	11
4	35.8	40.0		10.0	4	35.6	39.6	
4	57.4	61.3	8.48			5		
5	33.0	—						
5	35.2	39.0		10.2				
5	44.0	—		10	5	43.7	—	
5	48.0	?						

~~15~~ 29 40–50 138

Monday 24th

	D B. D							B
9	7..39	10 30	9.5	9-10	7..38		9.10	9..39
		6 59		11-12	8..02		9	7..36
		o.		14	28.40		10	9..50
bright	—	8 11						8..05 [illegible]
								2..39
9.10	2..40	4° wire lost	9.5	10	2..40			
8	9..	~~10 8~~	8.7	9	9..08		8	9..09
11	6..27	[sec. wire lost]	9.5	10-11	6..24		11	6..27
	B. D.				B			D
11	3..55	1st wire lost		11	3..53		11.12	3..52
11	5..10	6 8 both wires again 2°	(9.5)	11	5..09	ns	11	5..08
11.	10..28	Dots		11.	10..18?	ns		
	Dots for a minute	6 22			B			B B B
10	5..15	6 10						Cloudy
10-11	6..46	7 42 2° wire lost Dec lost 7 46 [illegible]						
11.10	0..52	Doubt.						
11	6..50	ns. 7 51?						
10-11	6..48	o. o. 7 42		10-11	6..48			
11	8..53	—			not seen			
11	9..07	10 3		11-12	9..05		11	9..07 comp 18" prec
10	−0..28	ns. seen		10	−0..30	? ns	10	−0-28 ns [illegible]
9.10	2..21	3 19		9.10	2..20		9.10	2..19
9.0	1..45	2 41 2° wire lost	9.5	9-10	1..43		9.10	1..41
	7..39	1st wire lost 8 36		12	7.36		12	3..09
		5 8			B B			
9.10 W. 11								31 9
	9..26	10 26 2° wire lost		9	9..28	2° wire lost	10	9..29 1st w.
9	3..57	n's 43 comp 0.5 s.f.	9.0	9.10	3..49		9	3..50 1st w lost
	D. B				D. B			B
11	7..45	8 40.		12	7..		12	Cloudy
	8..09							
11.	3..02 ?	~~3 40~~ o3. 1						
10	2..48						10	2..56 cert
11	7..23			11	7..22		11	7..25?
10-11	8..48	Da? 2° wire?		10-12	8..42	1st wire lost	10.11	8..40 [illegible]
11.12	5..00	D		~~12~~	~~4..4~~	seen		
11	9..25	2 wire lost						
	9..57							9..38 [illegible]

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Mag. Obs'd Sept 17

2[illegible]h							
	B						
6m	12.5	16.6		9.3	6m	16	16.0
7m	11.7	15.7		9.0	7	11.7	15.4
7	45.1	49.2		10.	7	44.8	48.9
						BBD	
					8	22.9	26.9
						57.3	55.0
					9	2.4	6.4
						5.1	9.1
						21.7	—
						54.5	58.7
10	18.7	22.6		10.2	10	18.2	22.3
10	31.9	35.9		10.8		31.5	35.5
11	24.3	28.5		10.8	11	24.0	27.9
11	33.6	37.6		8.8		33.3	37.0
						53.2	—
12	9.4	13.4		10.8	12	9.0	13.0
12	~~42.5~~	46.7		11.0		42.2	—
13	~~1.1~~	~~1~~ 1.1		10.8	12 ~~13~~	56.8	60.7?
						58.5	62.6?
13	2.3	6.4		10.	13	—	6.0
	B					~~22.9~~	~~26.6~~
13	23.0	27.0		10.5		22.9	26.6
14	14.3	18.5				42.2	46.1
14	39.9	43.7			14	39.5	43.4
15	12.2	16.1		8.0			
15	26.1	30.3			15	11.9	15.8
16	14.8	18.8				25.9	30.0
16	44.9	48.9			16	—	18.2
16	51.5	55.5		9.5		44.6	48.6
			(Dec 2'.52") —	10.8		57.0	55.2
	BD						
17	53.7	57.6		11.2			
18	6.4	10.5		10.7	18	6.3	10.0
18	11.5	15.6		9.2		11.2	15.3
~~18~~	~~39.1~~	~~39.1~~				B	
18		39.9					
18	41.9	45.8		10.5	18	41.6	45.3
19	0.2	~~4~~		10.7			
19	5.7	9.8					
	S						
19	55.5	59.0	(Dec 3' 11") —	11.0			
20	7.2	11.1		10.2			
20	13.6	17.6		10.7			

0„40 to 0„50

~~8~~ 129 40′–50′ ~~8~~ 138

	B.	Bright (Moonlight			B				
10	9„49	10 45					10-11	9„50 ns	7 w lost
10	6„52	7 47	9.0	10-11	6„50		10	6„57	
10.11	7„02	8 0 1st wire false break		12	7„02		11	7„00	
~~10-11~~		8 30			D.B.D			D B.D	
1		1 29					11	0„30	
		6 11					11	5„10	
		5 40					11	4„44	
		10 0 1st wire lost					11	9„00	
		3 42 D D						2„42	2nd wire lost
10-11	7„18	8 15		11	7„18	7.18		9„40	
11	9„01	9 56		11	9„02	9.00 7„12	11	~~9„~~	
11-12	11„11	Break				8.10 11 9„00 11 8„10			
9-10	1„54	ns 2 52	9.5	10	1„57	1.52 9.10 1„52 11 9„30 2nd wire			
12	4.35	5 38 ✱		12	4„40	11-12 4„42 11-12		~~4„42~~	2nd wire lost
11-12	2„20	ms 3„20 lost				11-12 2„21 11		~~9„40~~	
11-12	4„56	ns 5 50 2nd wire lost				11 4„55 11 11-12 4„04 ns	10-11	~~7„12~~	
11.	3„00	3 57		11	3„00	11.12 2„56 ns			
11	8„B				B				
11	8„30	9 30	~~9.5~~ 9.5′				11	8„29 B.B	
					Hazy				
							11	1„50	
10	10„25	11 — Aw?							
7	6„11	8ᵐ 7 12 dots before ✱	7.3	7	6„09		7	6„10	
10-11	0„18	1 19		11-12	0„12	1st wire lost	11	0„15	
12	8„20	ns 9 18 ter?							
11-12	7„28	11-12 8 24 ns					11	7„30	1st w lost
9	5„03	5 58 3 38	9.4	9.10	5„00		9.10 11	4„59 2„40	
10	4„01 B D						10		
11	2„47	3 39 2nd w			Hazy		11	2„42	1st lost
11	4„50	ms 5 45 2nd w					11	4„49 ns	
9 11	3„24	~~...~~ 4 24 ns 2 Hr. of ~~129~~ 131	8.8	10	3„20		9	3„20 ns B′	
11	0„09	1 18 2nd w 1st wire lost ns		Clouded up –				Clouds.	
11	2„50	3 48 ns					11	2„40?	
11	9„43	2 wire lost							
10	0„32	off 2 scale					Thick	Clouds	
~~11~~	D	3 48							
11	3„27	ns 4 26							
10-11	0„23	1 31							
11	1„38 ns	2 30 1st w lost							

Mag. Obs'd by J.H.S.
Sept. 17 1862

21 20	40.8	44.7		10.2
21	26.9	30.7		11.2
22	11.0	15.1		9.8
22	22.5	26.5		9.7
	BD			
22	56.6	—		11.0
24	19.6	23.5		10.0
24	37.4	41.9		
24	47.5	51.4		9.0
[illegible]	[illegible]	[illegible]		
25	22.9	26.9		11.0
26	45.2	—		9.7 ~~9.0~~
26.	56.5	?	[illegible]	9.0

129   40'–50'   1908   Oct 24

10	7..26	8 10?	
11-12	1..15	2 17	
10-11	2..28	3 23 ?	
10..11	5..13	6 15	9.5
10			
	B.D		
11-12	1..30	not seen 1st wire wrong – 2d wire lost	
10-11	5..26	6 18	9.5
10-11	0..24	not observed	
9	3..49	On 2d 47 scale	8.8
11	0..37	1 32 2d wire	
9-10	10..22	2d wire lost	
~~9-10~~	~~5..57~~	* of 11 mg obsern	
~~10..12~~		6 44	
9.10	5..57		9.0

Moon too bright to proceed

Angle of Pos. 355° 38'
during preceding revision

Clouds
see 5..08 AR last
this belongs here

~~1859 Oct. 24~~ 131 ~~139~~ 40 – 5 ~~40′ – 50′ – 60′~~ 132

Nov. 14. 59
pos. circle 352 14

at beg. EC 0h. 21m 0
Bar. ~~29.628~~ 30 180
att th. ~~43°.0~~ 61
ex th. ~~32.0~~ 317
at End. EC 1h. 41.0
Bar 30 203
att th 64
ex th 30.5

Obs S. C.
Rec A. H.

~~Mica Scale had been cleaned~~

weather ~~hazy~~ moon bright though far from horizon

Nov. 15th 1859
pos. circle 352.12

at beg. EC 21.9.
Bar 30.401
att th 58
ex th 36.0
at end EC ~~22.57 – 8.42~~ 22h. 30.20
Bar 30.505
att th 69
ex th 31.5

Zones 130 & 131 Observed the same evening
of 131

Observer S. C.
Rec A. H.

weather clear & calm

On the 15th the position Circle Agrees
S. C. 82°.12
A. H. 82 11
Mean 2 8. 11. 30

21h.18m 6.9 11.1 1
18 12.0 16.0 2
18.36.2 40.1 3
42 4 46.5 4

B

20 41.4 45.4 5
21 27.5 31.4 6
22 11.8 15.7 7
22 23.3 27.3 8

21.18 ~~8~~.72 ~~11.1~~
12.3 16.2
36.2 40.1
— 46.6
~~20~~ 19 14.3 18.3 } rej.
55.8 59.6 }

20 41.4 45.4
21

~~129~~

~~2152~~ 131 ~~40' 50 60'~~ 40–50 130

Catalogue stars.

1023	9	21h 24 43.17	+0° 43' 26".3	1115	9	23h 44 53.3	+0° 43' 12".8
1037	8.9	45 01 32	44 56.2	1118	9	45 04.4	42' 50.8
1062	9	22 23 28 10	45 46.8	1179	8	57 33.4	45 9.0
1080	9	49 30 24	41 59.1				

these are the cat. stars.

rcle was determined by d

Mg. Argl.

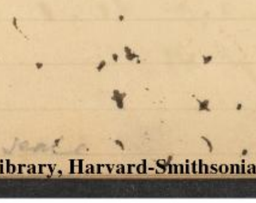
	D	E			Soto, Aug 31. 1860			
12	4 49			m	4 49		4 49	
9	3 22		n.s.	8.9	3 24	9	3 23	
12	0 07				0 07	12	0 07	
	2 50		on Dec. scale		2 49		2 50	first in list (on 2d scale)
					5 40		2.48?	
					9 45			
					2 49			
	B.				B. D 3 15		not seen	
					0 32 1 37	12–11	2 4 8	
12	7	13			7 15		not seen	7. 12
12	1	14			1 16			
12–11	2	27	slightly blue n.s.		2 26			
12 11	5	13		9m.5	5 16	11	3 14	

Nov. 14. 1859 ~~129~~ 131 0°,40'–50' 138

21h 22	31.0	34.8	9		21h			
	BD							
24	20.2	24.3	10		24	204	24.3	
24	38.6	— ~~per circle 82 14~~	11					
24	48.5	52.4	12			48.5	52.4	
			13		25	10.0	.3.9	
25	23.8	27.8	14		25	23.7	27.6	
	DBD							
26	28.6	32.6	15					
26	46.3	—	16		26	46.3	—	
						51.5	55.5	rej.
26	53.3	57.5	17			53.5	57.4	
27	31.3	35.4	18 fx.		27	31.5	35.4	
27	46.5	50.6	19			~~46.4~~	50.6	
27	58.1	62.1	20					
	BDBD							
29	36.0	39.9	21		29	36.0	40.0	
30	22.7	—	22		30	22.9	26.7	
30	24.7	~~28~~ rej.	23			—	28.5	
30	30.0	34.0	24			30.0	34.0	
30	~~48~~	48.1	25					
31	48.8	53.1	26		31	48.8	52.8	
32	0.4	4.4	27		32	0.4	4.4	
	B					D		
32	40.2	44.3	28		32	40.3	44.3	
33	1.6	—	29		33	1.3 D	5.4	
33	16.8	20.7	30	10.3	t	16.7	20.8	
	BD							
33	57.2	61.1	31	8.5	33	56.9	61.0	
33	59.9	64.0	32	11.0	33	59.4	63.5	
						D		
36	3.7	7.7		9.7	36.	3.8	7.7	
36	—	18.1		10.5		14.3	18.3	
36	—	21.5		10.7		17.6	21.6	
37	4.3	8.8 ?		11.3	37	4.9	8.8	
	D					10.7	14.3	?
37	37.6	41.6		10.7	37	37.7	41.6	
37	47.0	51.1		10.8	37	47.0	50.9	

Nov. 14 ~~129~~ 131 0°, 40′–50′ 132

10	10 34			10 37?	~~10~~	~~0 35~~	first w. lo. n.s. [illegible]
	B.D.			D.B	~~11~~	7 12	
12-11	5 23		9m.5	5 27	12	5 23	
12-11	-0 29	sec wire lost				not seen	✱
9	3 48		8m.8	3 48	9	3 47	
12	0 30			0 27?	12-13	0 31	~~[illegible]~~ in decl.?
	D.B.D			0 34 10	12	0 34	
12	3 08			3 8		not seen	
9-10	9 20	doubtful in dec, sec. wire lost		9 26		~~10~~ 22	
9	5 50		9m.0	5 52	10-9	5 58	
12	2 40			2 42 rej.		~~0 51~~	n.s.
11	6 25			6 26	11	~~0 11~~	~~first wire lost~~
11	dec lost	8 — nota	8m.2 [illegible]	B 9 18	12	2 40	
	B.D.D.D.					B	
			9m.3	4 11	11	6 26	
12-13	2 52			2 52	12	2 51	
11-12	10 00	sec wire lost	9m.5	B.D. 10 6	11-12	10 00	
11	8 48	n. sig. seen doubtful	n.s.	8 50	11	8 49	first wire lost n.s. [illegible] 51″
11	8 50			8 50	11	8 50	" " 51
12	3 54	first wire lost		3 54		seen	
12	1 55			1 56	12-11	1 56	
12-13	4 08	n. sig. false B.		4 12	12-13	4 12	
	B.					D	
12	~~8~~ 4 40			4 42	12	4 39	
12	6 36	n. sig. sec wire lost		6 38	12	6 38 D.	
10-11	6 .33		9m.5	6 36	11-10	6 33	
	B.D.			B			
9	0 27		8m.5	0 28	9	0 29	
12	0 28	n. sig.	8	0 26 n.s.	12	0 28	n. sig. first wire
					Solo for one minute		few stars passing
10-11	7 25		9m.5		10-11	7 25	
11-12	9 20	first wire lost			11	9 19	
11-10	4 35	first wire lost		4 38	11-10	4 36	n. sig.?
12	7 02			7 03	12	7 03	5 stars in form of V
	D				12	8 20	
12-11	8 20			8 19	12-13	8 39	sure
12-11	0 20	on sec. wire [illegible]		8 38	12-11	0 20	



131 ~~129~~ 0°40′–50′ 130

Mag. by J.H.? 1862 Sept. 17

22h 38	52.5	56.5	40	10.2
39	55.4	59.3	41	10.8
40	43.7	—	42	10.7
40	50.0	53.9	43	10.8
41	~~17.9~~ 18.0 B	22.2	44	11.5
41	43.5	47.6	45	11.0
42	11.3	15.5	46	10.8
42	35.5	39.5	47	10.2
42	54.5 D.	58.8	48	11.2
43	33.9	38.1	49	
~~44~~	10.8	14.8	50	
	1		51	
44	~~B~~ 10.8 BDB	14.8	52	
44	32.0	36.2	53	
45	2.3	6.3	54	8.8
45	38.3 DBD	42.3	55	11.0
46	20.0	24.0	56	11.2
46	21.8 D	25.8	57	10.8
47	—	24.7	58	11.7
47	36.6	40.6	59	9.8
48	5.2	9.1	60	11.7
49	1.8	5.8	61	11.2
49	18.9 B	22.9	62	11.2
49	41.1	45.2	63	
50	29.4 D	33.5	64	
			65	
52	5.0	9.1	66	
52	56.0	60.2	67	
52	58.8	62.*	68	
			69	
53	57.6	—	70	
54 DBD	—	10.0	71	

21h 38	52.3	56.3	
39	55.2	59.2	
40	13.4 DB	17.6	
	49.9	53.9	
41	17.8	21.8	
~~41~~	~~[illegible]~~	~~[illegible]~~	
41	43.5	47.5	
42	11.2	15.3	
42	35.8	39.6	
	54.4	58.5	
43	29.6	~~[illegible]~~ —	
	34.1	38.1	
1	57.0	0.8	
44	10.7	14.7	
	32.0	36.0	
	2.3	6.3	
	38.	42.3	
46	20.0	24.0	
46	21.8	25.7	
47	36.6	40.7	
48	5.0 B	9.0	
49	1.9	5.8	~~[illegible]~~
~~49~~			
49	41.4	45.3	
50	29.2 DB	33.3	
51	15.1	19.0	~~[illegible]~~
52	5.2	9.1	
	56.0	60.1	
	59.0	~~63.7~~	62.7
53	31.7 57.7	—	61.6
54	6.5	10.1	

B. B. A.

Nov. 14 ~~129~~ 131 0°, 40'-50' 130

				6 9	6 0		Shot D.		
11	1	50		1	52	11	1	50	
11-12	2	10		2	14	11-12	2	11	
11-12	1	26	see wire lost	1	27	11-12	1	28	
12	7	01		7	02	12	D B 7	02	
12-13	0	22	doubtful Sn	0	20	12-13	0	14	
	B.			B					
12	4	50		4	52	12	4	50	
11	6	20		6	25	11	6	21	
10	10	38	$9^{m}.3$	10	—	10	10	39	
12	5	27	see wire doubtful	5	28	12	5	27	
	D. B			B. B					
11-10	0	08	? attention in 130	1	11	11-10	1	08	sure, see wire lost
11-10	3	09		3	10	11-10	3	09	
10	10	—	lost	10	35 !	10	10	41	
11	3	30		3	38 n.S	11	3	36	sure
	B. D B				sure				
10	8	38		8	45	10-11	8	40	
8-9	5	19	$8^{m}.5$	5	23	9	5	19	
11-12	2	07		2	07	11-12	2	06	
	D. B. D.			Dots, Dots,					
12	5	01		5	03	12-17	5	01	
12	7	09	no sig.	7	11	11-12	7	10	n.S.
	D.								
12	10	32	first wire lost Sn?	10	•	Dot. B D			~~first wire lost, seems doubtful~~
10	8	33	$9^{m}.5$	8	36	10-10	8	33	
12-13	3	43	first wire doubtful	3	44	12-13	3	42	~~[illegible]~~ steady light.
12-13	7	29		7	24	12-13	B. 7	20	slightly nebulous
12	4	13	n.S	4	16		not seen		✱
	B.			B. D.					
12-11	8	24		8 1	27 13	12-11	8	25	
11	-0	31				11	-0	32	
	D for a minute						D. B.		Sec.?
12-13	3	38		3	38	12-13 12	~~not seen~~ 1	39 00	a new star
11	6	34		6	37	12-11	6	35	
13	7	03	n.S. Moon affects mags.	7	04 n.S	12-13 12	7 7	03 59	n.S see w. lost
12-15	5	27	see wire lost	5	18	12-13	5	22	~~n~~ on see scale
12	10	11	first wire lost on see scale	10	20	12	10	18	n.S
	D B. D B								

D D D

131 ~~129~~ 0°40'–50' 132

mag. obs'd by T.H.S

21h 55	4.9	8.9		9.3	21m 55	4.7	8.7	
55	24.8	28.9 ?		9.5	55	24.6	—	6
55	39.4	43.8 ..		11.0	55	39.4	43.3	
55	42.6	46.4		10.8	.	—	46.5	
56	14.5	18.6		11.8				
56	15.7	19.8		9.3	56	15.6 B	19.5	[illegible]
56	42.0 BDB	46.0		12.0	5			
57	38.4	42.5		10.7	57	38.7	42.5	
58	6.3	10.3		9.7	58	6.4	10.3	
58	15.3	19.3		9.5	58	15.4	19.3	
58	28.1	32.0		9.7	.	27.8	31.9	
58	51.6 BDDB	55.4		9.2	.	51.4 D	56.4	
22h 0m	2.7	6.7		9.5	22h 0m	2.6	6.8	
0	11.2	15.0		10.0		11.4	15.3	
0	22.8	—				22.9	26.9	
0	36.3	40.2				~~22.7~~ 36.3	40.1	
0	37.3 ?	41.4				—	41.3	
1	18.6 B	22.7	89	✳	1	18.7	22.7	
			90		2	21.1	25.3	
? 2	22.5 24.9	26.2 ?	91		2	21.9	26.0	
2	—	36.6	92			32.3	36.4	
2	45.8	50.2 ? ~~reject~~	93	~~reject~~	✳	~~34.0~~ 34.0	~~38.1~~ 38.1	reject.
3	1.7	5.4	94		3	1.6	5.5	
3	10.6	14.4	95 9.15			— BDB	14.5	
4	6.2	9.9	~~6.1~~ 96	7	4	6.2	10.2	
4	7.5	11.7	97			7.3	11.4	
4	21.7 B	25.8	98			21.8 B	26.0	
5	26.6	30.6	99 [Right]		5	26.3	30.3	
			.00			51.6	55.8	
			101		6	1.9	5.8	
			102 103 104		7	51.9 0.3 44.6	6.2.4	
7	44.4	48.6						
8	54.2	58.2	105		7	53.9	58.1	
8	23.0 D	~~black wire~~ ?	106		8	23.2 BD	27.1	

131 ~~129~~ 0°, 40'–50' 132

10	4	22	9^m.1	4 24	10	4	22	
10	7	16	9^m.3	7 08	10–9	7	06	sure
12	5	54		4 55	12	4	57	~~see more brt~~
12	6	38	n.s. faint wire doubtful does this not belong 1 place higher?	6 41 n.s	12	6	39	n.s 1st Winlock
13	0	28		0 –				
10–9	0	59	n.s 9^m.3 n.s	1 00	9–10	1	00	
12–13	8	11	doubtful in dec	~~8 53, 03~~	12–11	8	50	~~D [illegible]~~ certain Where is decl?
	B.D.B		very few stars [illegible]? 85-2					
12–11	8	49						
10	9	41		9 20 9 28	10	9	23	
10–9	10	14		10 10	10	10	05	
9–10	4	59	n.s	5 0	9–10	4	59	
9	2	08	Lamp troublesome 8^m.4	2 12	9	2	08	
	B.D.D.B			D.D.		D.		
11–10	5	23	n.s. ? 9^m.2	5 28	11	5	23	
12–11	8	54	doubtful in dec	9 08	12–11	9	05	cert
12	7	07	see more brt?	7 11	12	7	08	
12	2	04	ns	2 06	12	2	04	see more brt
12–11	7	24	ns	7 31	12–11	7	25	n.s 5 [illegible]
12–11	7	19	R? reject sure 8 21			not seen		
12	6	42		6 46		6	44	
	B.			D.D.B				
12	9	00	n.S. first in box	9 6	12	9	02	
12	7	04	n.S	7 6	12	7	03	n.s
12	4	30	first in box	4 32	12	4	31	
12	3	36	doubtful	3 41 3 35		brt		
11–12	2	01	n.s	2 6	10–11	2	03	
13	2	39	n.s rej. this dec. on sec scale. doubtful	D.D.B.D		2	50	
12	6	34		6 37	12	B.D.D 6	36	
12–11	0	35	n.s n	0 36	11	0	37	n.s
11–12	9	30		9 36	11–10	9	35	see doubtful
	B.			D long		B.		
12–11	4	03		4 6	12	4	03	
~~12~~	~~4~~	~~20~~		10 10	12	10	8	
				3 25	12–11	3	23	n.s
				6 24	11	6	19	
12	4	20		0 04	10	0	04	
12–13	2	29	n.s	4 26	12	4	22	
12	6	31	not seen		12–13	2	30	
	D			6 36	12	6	32	
						B.D		

131 0°, 40′–50′ 132

22h 9m	0.0	4.1	107		22h 8	59.9	63.9	
9	14.9	19.0	108	Mag. obd by J.H.S.	9	9.0	12.8	
9	32.3	36.3	109	1862		14.9	19.0	
10	9.1	13.1	110	Sept. 17		32.5	36.7	
			111		10	8.9	12.8	
10	15.3	19.0	[112]			15.2	19.2	
			113	9.3		38.9	42.8	
10	38.8	42.7	114	9.5		57.3	61.3	
11	4.5	8.6	115	9.2	11	4.3	8.3	
11	22.3	26.6 ?	116	10.2		22.4	26.4	
	BB					BBB		
12	25.6	—	117	9.2	12	25.2	29.3	
			118	9.3		26.1	30.0	
12	30.7	34.6	119	9.3		—	34.3	
13	8.6	12.6	120	10.0	13	8.3	12.4	
13	23.3	27.4	121	11.2		23.2	27.2	
	BBB							
14	16.3	20.4	122	9.2	14	16.4	20.4	
14	45.9	49.8	123	10.7		45.6	49.7	
			124			49.0	55.1	Exp. Sheet
15	29.7	33.6	125		15	29.8	33.5	
	B				~~16~~	~~46.5~~	~~50.5~~	
					~~17~~	~~10.1~~	~~14.0~~	
~~16~~	~~25.9~~	~~30.0~~ rej	125					
16	46.6	50.7	126		16	46.5	50.5	
17	10.4	14.2	127		17	10.1	14.0	
18	6.6	10.5 ? 9	128		18	6.3	10.2	
			129		18	59.8	63.6	
20	25.2	—	130		20	25.1	29.2	
20	59.3	63.54	131			59.3	63.1	
21	31.8	35.8	132		21	—	35.8	

Nov. 14 ~~129~~ 131 0°40'-50' 132

12	5	01			5	5	12	5	02	
12-13	—		[illegible]		7 7	25 12?	12.13	7	23	
11	2	08		$9^m.3$	2	12	11	2	09	
12	8	09			8	13	12	8 D	10	
12-*	0	39			0	43	12-13	0	39	
·12	8	27	n.s on Dec scale doubtful			29	12	8	30	
10	10	29	lost in AR	$9^m.2$?	10	30	10	10	30	
10	3	59	n.s lost in R	$9^m.2$	4 B	3	10	4	00	
10	0	07		$9^m.2$	0	11	9-10	0	07	
12	6	13			6	19	11-12	6	15	
	D.B.				8	39		DDB		
11	4	14	see no last	$9^m.3$	D.D.4	18	10-11.	4	16	
11	8	30	~~[illegible]~~ lost in AR	$9^m.3$	8	35	11-10	8	32	n.s
11-10	2	51		$9^m.2$	2	56	10.11	2 D	53	first wire,^{bt} last dig
12	4	44			4	47	12	4	48	cir.
13	6	31			6	36	12-13	6	33	
	B, B, B				~~6~~ B			~~6~~		
11-12	6	52		$9^m.3$	6 ~~6~~	44 ~~57~~	11	6	55	
11-12	3	06			3	08	11-12	3	07	
12	4	—	omitted		5	37	12	5	32	n.s
12	10	25	doubtful w the		10	27	12	10	27	
	B. for one minute									
10-11	3	12			3	17	11	3	15	
11	-0	07		$9^m.3$	-0	5	11	-0	05	
6-7	0	13		$4^m.5$	0	15	6	B 0	12	
12	-0	33	doubtful. see no last				12	-0	32	
	no stars above the 14 mag visible							field with no stars		
								DB. DB		
12-13	3	35	see wire last		3	36	12-13	3	34	
12	1	06		* obj —	1	6	12	1	05	
12	8	03			8	3	12.	8	04	n.s first wire last

field with no star above 13th mag

131 0°.40 – 50 132

22h 22	51.4	55.7	132	22h 22m	51.0 B	55.7
23	58.6	62.6	133		58.5	62.6
	B					
24	55.7	59.3	134	24	55.7	59.6
25	9.5	13.5	135	25	9.9	13.8
25	20.2	—	136	~~25~~	~~29~~	
25	29.4	33.4	137	25	29.5	33.4
25	38.9	42.9	138		38.8	42.8
25	—	50.7	139		46.8	50.8
~~26~~	B				B	
26	15.8	20.0	140	26	15.9	20.0
26	20.8	—	141			
			142		22.1	26.1

131
129 0°. 40.50 132

12	7	23	doubtful on first wire	7 33	12-13	7 30
11	2	48		2 48	12-11	2 47
	B.					
12	8	50		8 54	12	8 51
12	10	05		10 8?,	12	10. 8!
11	2	08	see wire here	2 14 n.s.		same
10	6	22	1st Star of 133 8m.8	6 26	10	6 23
11	1	12		1 18	12	1 20
12	4	39	first wire here	4 33	12	4 39
	B					
12	5	24		5 29	12	5 28
13	2	21	see wire here n.s	2 30?,		seen here not obs
				Dotes		9 13

Moon-light puts a stop to observation

zone 129 130

Nov. 15th 1859

position circle determined by δ Aquilae

S.C. 82°, 12'.0
A.H. 82°, 11'.0
82° 11' 30

133 40–50 136 bis

15th Nov. 1859
pos. circle 352.12.

19th November
pos. circle 352 11½ ½

at beg.
EC 22h.5
Bar
att th
ex th

} the zone 130. the zones 130 & 131 were observed on the same night

at end
EC 0h.47m.
Bar 30 505
att th. 69
ex th 315
Obs. S.C.
Rec. B C.W.T.
weather clear & calm
1 telescope east
h continued from zones 129–130

at beg.
EC h m s 21 7 30
Bar. 29.588
att th 70.0
ex th 4 0 55 1/4

at end
EC 2 17 30
Bar
att th
ex th haze put a stop to observation
Obs.
Rec.
weather, hazy
telescope

22h25	29.6	33.7	Catalogue	1	22h25	29.1	33.9
	47.0	51.0	2 omit 3	2		—	42.1 50.5
26	16.3	20.3 }	4 }		26	15.7	—
	22.4 B	26.2 }	5 }			21.6	25.5
	42.5 BJBJ	46.3	6				
28	48.9	52.9	7		28	48.2	52.3
29	7.0	11.3	8				
	21.7	25.7	9				
30	37.9 D	41.8	10		30	37.2	41.2
30	58.0	62.0	11		30	57.3	61.3
31	34.9 JB	38.8	12		31	34.0	38.1
			13		32	16.2	20.2
32	49.0	53.0	14		32	48.3	52.5

1859 Nov. 15 133 40 – 50 136 (see note)

S. C. Observed
C. W. T. Recorded

Note) Zones 134 and 135) (50′ – 60′) ~~was~~ were observed before 133 was repeated. Its repetition therefore is 136

For a complete repetition of Zone 133 see vol. 6 of this series, after Zones 147. 148.

					D	
10	6.27		8.8	10-11	6 24	
					1.10	first wire lost
11-	~~4.36~~	examine the decl. in 132		12	4 33	
12	5.30			12	5 26	sec wire lost
12	9.26 B	ns wrong		12	9.14	
12	8.49			12		
	B D BD	very few stars			B	
12	6.53			12	6 49	
12-13	1.51	ns		12	1.5 puff on s.s, no AR	
13	4.29				not seen	
11	8.55 D		9.3 ✳	12	8 50	
12	9.06			12	9 04	
13	4.20	ns		12-13	4 21	
	D. B.					
12-13	8.22	~~[illegible]~~ at last		12-13	8 19	n.s
12	3.31	rej:		12	2 38	[illegible]

1,33. 0° 40'–50' 136 bis

22h 33	8.9	12.8	15	22h 33	8.3	12.0	
	BDB						
33	44 0	47.9 } 2	16	33 33	43.1	—	
	55.0	58.8	17	5	53.8	58.0	
34	32.6	36.7	18	34	31.9	36.1	
35	—	38.6	19	35	33.8	37.9	
	BD		20		8	20.9	
36	49.58	53.3	21	36	~~not seen~~		
37	47.5	51.6	22	37	47 0	50 6	
38	8.5	12.3	23	38	7 2	11.4	
	18.4	22.4	24		not seen		
	2'						
	46.7	50.5 ?	25		45.9	49.8	
	56.2	59.7 } 4	26				
39	6.0	10.0	27	39	— (13.0)	(9.0 – 13.0) reject	
	18.2	22.1	28		BDB		
	BD						
40	14 4	18.6	29				
	27.4	—	30				
	859.4	533.3	31				
41	1.8	5.0	32				
	~~14.7~~	14.7	33				
	16.1	—	34				
	19.2 ~~19.2~~	23.1 ~~23.1~~ ~~19.2~~	35	41	18.2	22.0	
41	[illegible]	41.6	36		364	40.6	
	BD		37		BD		
					0.9	4.9	
44	24.3	28.2	38	44	23.5	27 8	
	25.9	30.0	39		25.3	29.3	
45	36.1	40.0	40	45	35 4	39.3	
46	~~33.6~~	~~37.6~~	41	46	32 7	36.9	
47	~~3.3~~	~~7.3~~ 33.6 37.6	42	47	2.5	6.5	
47	3.3	7.3					
	33.4	—	? 43 rej				
	—	34.6	44				
48	44.6	48.7	45				
49	31.9	35.9	(4.9. 10.9) 46	49	31.4	35.2	Catalogue
49	—		47	50	41.7 3 9	45.4 47.7	
50	lost	56.2	48 49		51.0	55.2	
59	lost	57.0	50				

135 0° 40′–50′ 136bis

11-12	5..09			12	5 05	
	B.D.B.					
12	5..46			12-13	5 41	sec wire lost
10	10..21		9.5	~~10 9~~	10 9	sure
12	6..15			13	6 11	
13	6..12	Dec? 1st wire lost		13-14	6 10	
	BB				D 4.05	front wire lost
13	7..58		✳		not seen	[9 20] of twelfth mg
12-13	5..03			12	? 4 01	
12	8..00				? was no obs	
12	0..09	ns	✳		not seen	
	D					
12	4..15		4.07	1	?	(4 19 15)
12	0..59	attention in 135bis		13	(4 59)	
12	9..01	ns				
12	4..12	1st wire lost				
	B D					
12	8.19					
12-13	7..59	2d wire lost				
12-~~13~~	9.00					
12	8..01	ns f				
11	10..30	2d wire lost				
11	7..22	ns 2d wire lost				
14	9..13	1st wire lost		12	9 10	
11	10..31	On D scale [illegible]		12	10 23	
	BB				B D	
12	6..08			13 12	6.00 6.02	
11	2..32	ns	9.3	12	2 28	
11	5..46	D		12	BDB 5 41	Meteor north fol. to
13	4..—	slightly nebulous. AR lost			—	South prec.
12	1..21	comp. 14 mag 20″ following		12	1 18	
12-13	5..02			13	4 59	
12-11	-0..28	2d wire lost		13	-0 20	
12	8..48	1st wire lost ns			not seen	
	D					
12-13	8..12				seen but not obs.	
10-11	2..30		8.8	~~12~~-11	2 27	
12	10..02	AR lost	~~9.0~~		9 58	Dec doubtful
12	8..10	comp 16? fol		12	9 10 8 9	
12	8..00	This is the above comp.				

11 11 30
22 2 48 22 5 43

133 · 0°, 40–50′ 136

22h 57 5.2 9.1 }2 !
57 5.9 9.7
B

51 46.3 50.3
52 25.5 29.6 }2
35.3 39.2
BB

53 37.9 38.9
53 50.0 54.0
54 41.4 45.6
BD

55 53.9 —
56 10.9 5.1
56 15.5 19.6
56 37.8 41.7
BBD

58 13.3 17.4
27.9 31.9
BBB

59 15.5 18.9 }2 !
20.1 24.2
23h 0. 3.1 —

— 41.1
46.4 50.3 }2
56.3 60.0
B

1 ~~27~~ 28.7
33.9 37.9
52.9 56.9 }2
58.5 62.1
2h 9.7 13.7 }2 !
10.9 14.9

2 27.8 31.8 }3 !
30.9 34.0 } Rept
39.8 43.7

22h 51 4.3 8.6
8.6?

52 24.6 28.7
34.2 38.0

52 56.7 60.8
39.1 38.2
53 49.0 53.1
54 40.1 44.3

Did by J. H. S.
Sept. 22 1862

55 52.9 56.6
9.5 56 0.1 4.1
11.5 14.2 18.6
9.8 37.1 41.1
BBBD

12.0 57 17.5 21.5
45.1 49.3

11.0 58 12.6 16.7
9.3 B 27.2 31.0

59 19.7 18.4
19.5 23.5
BBBB
11.5 23h 0 23 6.3

10.8 36.2 40.4
10.5 45.7 49.8
9.5 B

9.8 1 23.8 27.8
10.5 32.8 37.1 Same star?
10.8 51.7 55.7

11.2 2 9.3 13.1
11.2

4 9.5 2 27.0 31.0
10.0
10.2

138 —: 0°,40′–50′ 136 ~~obs~~

12	0.. 09			12	0 01	one wire obs
12	1.. 39	ns.		12	1 32	" "
	B					
12	2.. 59				seen not obs.	
12	9.. 18			12	9 12	
12-13	4.. 03	ns		13	4 00	n.s.
	D B				D.B.D	
12	-0.. 20			12	0.30 ~~±0 30 ns~~	-0.27 decl?
12-13	4.. 39			12-13 13	~~-0 27~~ 4 36	doubtful ~~obs~~
12	8.. 39			~~13~~ 13	~~seen but not obs~~ 8 35	
	B.D.					
12-13	3.. 00	2 wire lost		13-12	2 58	
10-11	5.. 34		? 9.3	11	5 30	
12	7.. 08	ns		12	7 06	
11	-0.. 13		9.5	11	-0 09	
	D.B.D.				B.D.B.D	
12				12-13	1 12	
				12	0 13	
12-13	7.. 01				7 00	n.s
10-11	5.. 41		9.2	11-10	B 5 38	
	B.D.B.					
11-12	0.. 11			12	0 10	n.s
11	-0.. 19			12-11	-0 20	n.s
12-13	8.. 58	2 wire lost		13	D.B.DB. 8 58	
	10 —	lost in Dec. & AR			lost Dec	
12	3.. 10	1st wire lost		13	3 07	
12	2.. 30			12-13	2 30	
11	10.. 45	Dec.?			B	
	B					
12	6.. 40	1st wire lost			6.38 ns	
12	5.. 55			12	5.57 ns	
12	7.. 22				7.12 doubtful	
	3.. —	Dec. lost			seen but not obs	
12	1.. 58	[0 58]			1 5	
12	4.. 00	ns				
	D					
10	7.. 57		9.3	11-10	7 52	
11-12	1.. 12	ns			lost	
12	0.. 44				0	

137 0°, 40′–50′ 13 ~~2 h~~ 6

Mag. obs'd by J.H.S Sept. 22 1862

23h 2 49.7 53.7 — 23h 2m 48.7 —
DB

3 56.9 60.9 — 10.3 — 56.2 56.2 60.2
4 22.5 26.5 — 10.0 — 4 21.7 25.5
SB SB

5 13.8 17.7 — 10.5 — 5 12.8 16.8
6 4.0 8.0 — 10.2 — 6 3.4 7.1
11.7 ~~Wind wires~~ } 1st wire — 10.2 — 10.7 14.4
20.1 23.9 } — 11.0 — 18.5 22.9 ?
29.2 33.2 } 3 ! — 10.0 — 28.2 ~~31.0~~ 32.3
32.3 36.2) (Gr. A begins) — 10.0 — 31.9 35.3
D

7 15.2 19.2 — 9.8 — 7 14.3 18.3
9 19.0 22.8 — 10.0 — obs for 1 hr.
~~14~~ 44.1 48.2 — 9.3 — 9 18.2 22.1
10 4.2 7.9 } Group A — 11.5 — 43.1 47.4
10 18.9 23.8 } 3 — 10.2 — 10 18.9 23.1
22.8 26.8 } — 10.5 — 21.7 25.6
SB — B

---

11 00.4 4.3 (Turn over.) — ~~11 7.7 3.4~~
8.0 ~~12.1~~ — ~~8.9 12.8~~
12.1 — ~~12.8~~ ?
11 36.6 40.6 — ~~35.4 39.9~~ 0
12 59.0 62.6 ?
13 3.8 7.5 — ~~13 2.1 6.4~~
BB
15 1.0 4.9 — ~~15 13.6 18.0~~
1 16.1 20.0 — ~~27.1 31.2~~
D — ~~16 15.1 19.0~~
~~56.1 60.1~~
~~19 46.0 50.0~~
19 47.9 52.0 — ~~19 46.8 57.0~~
20 59.7 63.6 — ~~20 58.9 62.7~~
21 20.0 24.0 } 2 ! — ~~21 19.1 23.5~~
21 21.9 25.7 } — ~~20.6 —~~
22 39.9 43.4
53.8 57.3
SBD

133 0°,40'-50 136

12	0.11			12.	0.8	2^d w. lost
	DB					
12	1.52			12	1.50	
12,11	1.06			12	BDB 1.03	
	DBDB					
12	6.19			12.13.	6.16 B	
12	4.28			13	4.22	
12	6.32	ns		12	6.30	
12	$3.5\overset{9}{2}$?	ns		12.	3.48	ns
12	6.03			12	6.00	(Corrected for see note)
11,12	5.23	ns		12	5.20	
	D				DBD	
12	5.35	635?		12.	5 31	
12.13	0.54		*	12,13	0.41 Dots for 1 minute	
11,12	5 21		? 9.5	12,11	5.19	
12.13	1.30			12.13	Seen not obs.	
12.	6.22				BD 6.19	
12	6.01	ns			5.59	ns
	BD				B	

zone 136 bis begins here

133

136 bis
~~12~~ (see note

1859 Nov. 15.

Date Nov. 26th 1859
position circle 352 11½

at beginning	E C	0 54 00
	Bar	29.737
	att th	60.0
	ex th	39.0
at end	E C	2 07 00
	Bar	29.737
	att th.	62.0
	ex th.	36.0
	Obs.	S. C
	Rec.	A. S. L
	weather	calm & warm
	telescope	East of Merid

Continued from zone 134

23h.11 00.4 4.3 } 3!
8.0 ~~8.0~~ 9 —
12*
11 36.6 40.6
12 59.0 62.6 }
13 3.7 7.5 }
13 B
15 1.0 4.9
13* 2.0
16.4 20.0
126 +
D
23 19 47.9 51.9
20 59.7 63.6
21 20.0 24.0 } 2!
21 21.9 25.7 }
22 39.4 43.4
53.0 57.3 ri.
D. B. D.

9

1
2
3
4.7

Gr. C. Tejido

Mag. Obsd by J. H. S.
Sept 28 1862

	23h 11m	—			
		—	11.7		
9.8	13	3.4	7.4	– 8	
10.0	13	14.5	18.7	– (Group B)	
	14	5			
1 10.0	15	0.7	4.8	(6 34)	Gr. C. 1
2 9.0		—	19.7	(10 40)	
3 11.0	16	57.0	60.9	(4 56)	
4 10.0	19	47.6	51.7		
9.8	20	59.4	63.4		
10.0	21	19.8	24.2		
10.0		21.5	25.6		
11.0	22	39.3	43.2	18s	
		57.3	61.2	same star? *	

2
~~[illegible]~~
~~5.2 4.7~~

worst

133. 0°40'50' 13~~4~~ ~~5~~ 6 bis (see note

Note.) This zone is 13~~5~~6 bis because zones 13~~4~~ 4 (and 135 ~~135~~) ~~was~~ were observed before zone 133 was repeated. In repeating 133 ~~it~~ it clouded up before it could be finished. The end therefore was repeated tonight and called bis to distinguish it from the repetition of the beginning

12	7 47		1~~4~~	7	
12	9.28	sec wire lost ?m		9 29	first w lost
12,	3.00		13	seen	not obs,
12.13	3.17				
11.12	8.50	Comp 18 prec. 14th mag	13	8 51	comp. n.p. 25"
·	6.03	no star above 12th mag	1	6 05	n.s. doubtful desert starless field
	BB				
12	8.30		13.14	6 30	cut.
10	10.38	(starless field no *s above 15th) 9.5	12	10 40	first w lost
vi 12	2.00	very few stars			
	D		13-14	6 59	
12	7 12.		13-14	7 12	
12	8 12		13	8 14	
12	8 8		13	8 8	
12	7 49		13	7 50.	first wire doubt
12	1 2		14-13	1 03	
11-12	0 11		12-13	0 14	
	D.B.D.				

~~139~~ 40′–50′ 136 bis

Mags obsd by THS Sept 22 1862

23h 23	214	253		9.7	23	21.1	25.0	
	312	35.2		9.8		31.0	35.1	
24	394	43.2		11.0		39.0	43.1	
	552	whichwin? 1st		10.2		55.2	59.1	*
	B							
25	370	— }2!						
	—	40.6		10.5				
27	46.9	51.0		9.3	27	469	507	
				11.2	28	—	2.6	
~~27~~	~~58.9~~	~~62.9~~	~~Reject~~		~~29~~	~~23.4~~	~~27.8~~	
~~28~~ 29	290	33.0 }2!			29	28.8	32.7	
	31.6	35.5		10.0		31.~~4~~5	35.8	
30	429	469		10.2		43.0	47.1	
				10.2	3x			
	BB							
31	278	319 }2!		11.5	31	28.3		
	30.2	342		9.3		30.0	34.3	
	B DB							
32	26.8	30.8		9.5	32	269	31.0	
	50.1	54.1		9.3		50.2	54.2	
33	46.0	49.9		11.0	33	46.0	—	
	57.0	60.7		10.8		57.0	60.8	
34	20.4	whichwin?				20.6	24.6	
	BB					~~4130~~		
~~34~~	~~204~~	~~Whichwin~~?	35. 29.3–33.4		35	29.4	33.5	
					35	47.7	51.9	
36	396	43.4 }2			36	40.2 43.6		
	45.3	49.3				45.4	49.3	
	DB							
37	44.7	48.6			37	44.8	48.8	
39	45.8	49.8				46.1	50.1	
	BDB							
41	174	21.5			41	176	21.5	
42	49.4	53.4 }2			42	495	55.4	
43	00.8	4.8						
	B							
43	54.6	58.7 }2!			43	54.8	58.9	
	55.7	59.7				55.8	599	
44	170	21.0			44	17.2	21.2	
~~37~~	37.8	41.6				379	42.0	
~~44~~	55.3	59.6			44	55.9	59.8	

Catalogue

13~~7~~3 0°,40′–50′ 13~~8~~6 bis

12-11	9..55			12	9 57	
11-12	6..03			12-13	6 05	
12	3..30	ms		13-14	~~not there~~ 3 31	
11-12	10..39			12-13	10 31	sure
	B					Starless field
11	-0..28	2d wire lost				passing clouds
12	2..99	1st wire lost				
11	10..01		9.3	12	10 03	close comp. south?
12	5..29	ms		13	5 29	first wire lost
11-12	~~[illegible]~~	lost				
12-13	-0..57			13	-0 14	
11-12	7..30			12	7 27	n.s
12	0..19	ms		12.13	0 19	n.s
12	6..23			12	6 39	sure Instrument struck with head
	B B					
12-13	9..17			13	9 29	} 1st wire lost
10	8..08	ms +	9.2	12-11	8 23	} sure
	B.D.B					
10-11	3..51		9.2	11-12	4 05	
9-10	6..04		9.0	11	6 19	
13	7..22			13	7 38	1st wire lost
13	4..50			13	5 03	n.s
11-12	0..06			13, 12	0 19	
	B B	Meteor crossed field from prec. to foll.			D.B.D	
12	6..43			13	6 58	
12-13	9..29			13	10 00	sure
				13	9 40	
12-13	1..16	On 2 scale		13	1 28	n.s
	D B					
12-13	2..09			13	2 30	n.s See doubt
11-12	0..11			12-11	0 27	
	B D B					
12	7..36			12	7 49	
11-12	1..19		9.5	12	1 30	
13	5..21			13	seen one ds	
	-B			1		
12	1..20			12	1 33	
10-11	8..01	ms	9.1	10	9 11	sure
10-11	8..07		9.5	10-11	8 —	
12	0..22	ms		13	0 36	
10	3..46	1st Catalogue Star	9.2	10	3 59	1st Star of zone 141

133 0°40'–50' 136 bis

23	45	lost.	10 4	} 3	3	Group D begins	23 45	6.4	10.5	of Gr. D	1 Catalogue
		—	22.3								2
		33 8	37.8					34 0	38.0		3
		D									
	45	53.9	57.7	} 2			46	54.0	57.9		4
	47	0.5	4.6				47	1.1	4 5		5
		B									
	47	32.5	~~rej 37.1~~	} 2!				z			
		33.3	37.1					33.3	37.3	) 9 9 7 39	
>	48	56.3	60.3	} 2!	4			~~46.4~~	~~50.0~~		
							48	56.4	60 4	→	
		59 6	63 6					59 7	63 8		
		B B									
	49	48 0	52.0			end of group D.	49	48.1	52.1		
	50	~~30~~ 26.7	31.0	} 3!			50	26.8	31.0		
		29.8	33 7					29.8	337		
		34.6	38.6					34.7	38.6		
								36.2	40.0		
	51	11.5	15.5	} 2			51	11.5	15.8		
		24.3	28.4					~~24 4~~	~~28.7~~		
	(53)	1	(36.0).					24 4	28.7		
		D.									

133 0°40'–50' 136bis

9	3..25	ns 1st	Catalogue Star 8.3	8-9	3 38	
13	-0..08	1st wire lost			lost	
12	0..49			12	1 02	
	Starless field					
	D					
12	7..52			12	8 07	
12-13	2..51	&		13	3 05	first wire doubt n.s.
	B					
12	8..—			12	9 00	
12-13	7..31	ns. 2d wire lost.?		12	7 39	n.s
11	7..05	comp. 15 mag. 10" north	9.6	11	7 19	comp 17" north
12	1..50	ns		13	2 04	n.s
	B. B.					
12	7..48			12	8 02	
12-13	5..59	ns		13	6 10	
12	5..27	ns		13	5 39	
12	5—	ns		13	5 40	
11-12	4..		9.5	13	—	
11-12	8..57			12	9 10	
11-12	4..30	2d wire?		12	4 42	
	D					

Zone 134 20h 27m 58s — 22h 31m 48s

	Date Nov. 17 1859		Date Nov. 26.
	pos. circle 352°. 11'½		pos. circle 352. 11½
at beginning	EC 21h 36m 00	at beginning	EC 22 30 00
	bar. 30.401		bar 29.739
	att th 61.0		att th 63.0
	ex th 44.¼		ex th 44.¼
at end	EC S. G run down	at end	EC 0h 36m 00
	bar 30.446		bar 29.787
	att th 60.0		att th 60.0
	ex th 40.0		ex th. 39.0
	Obs. P.S.C.		Obs. S.C
	Rec. A.H		Rec. A.H
	weather hazy and calm		weather calm & warm
	telescope East of meridian		telescope East of meridian

continued from zones 127–128

A.H

Note In the last half of observation the haze was very thick & the object glass covered with moisture affecting the magnitudes very considerably S.C.

20h

20h 27m	58s 4	—	1			
28	—	2.6	2			
	JB					
	28.3	33.2	3	28	28 1	32.2
	—	38.9	4	-		
29	6.6	10.3	5	29	6.5	10.5
	B				B	
	37.2	41.2	6		37 3	41.0
	40.4	44 4	7		40 3	44.4
	—	48.2	8			
29	57 7	—	9		57.6	61.5
30	—	1.9	10			
	Y					

lookout for a star at 29.35 +0°, 4.37 (12m)

Zone ~~134~~ 0°-50'-60' Zone √35

Catalogue Stars

988	8	20ʰ„41„31.48	+ 1°. 0'. 34.4	1053	9	22ʰ„6„38.83	+ 0° 54' 42„8 ~~+1°. 0 34.4~~
1000	6.7	55„53„89	58„505 5	1060	8.9	20„38.04	56 20.9 ~~58 50.5~~
1008	9	21„ 7„29.85	54„59.0	1069	9	37„16.06	57. 17.1 ~~54 59.0~~
1021	9	22„41.16	59„28.8	1082	9	ʰ49„42.10	57 28.9 ~~59 28.8~~
1047	9	58„ 1.75	55„54.9	1087	9	22ʰ 58 15ˢ.19	1° 0 24.7 ~~55 41.6~~
1050	9	22ʰ„2.11.36	54„42.8				

[illegible]

[illegible]

	D.				D		
9-10	1	00	2 wire lost	9.2	9-10	1 10	first wire lost
10-9	8 D.B	09	1 wire lost n.s	9.0	9-10	8 29	first wire lost
12-11	8	17			12-11	8 30	
	4	21	~~[illegible] the 1st wire lost~~		1	~~seen~~	Not obs.
12	10	18			12	10 31	
	B					B,	
12	9	00			12	9 10	
12	8	17	n.s		12	7 29	n.s.
10	0		first wire lost due to B.	9.0			
11	1	20	[illegible]	9.3	11	1 31	
12-11	6	41				6 52	noAR
	D						

134 $20^h 27^m 58 - 22^h 31^m$ 135

20^h 30	42.5	46.7	11
	43.3	47.3	12
31	10.0	14.1	13
	18.3	22.2	14
	29.8	33.7	15
	BD		
32	2.3	6.3	16
	13.1	17.2	17
	—	22.2	18 ✳
	B		
33	1.4	5.6	19
	15.2	19.2	20
	20.4	24.3	21
	41.7	45.3	22
35	24.0	w.w?	23
		27.9 w.w?	24
	31.6	35.6	25
36	3.5	7.5	26
	—	~~32.0~~	[27] 36.1.? . 40.0.?
	—	44.1 w.w?	[28]
36	—	55.9 w.w?	29
37	42.3	46.3	30
38	33.5	37.5	31
	40.3	44.1	32
38	56.2	60.0	33
	JB		
39	15.5	19.6	34
	D		
40	17.8	21.8	35
	24.9	—	36
	35.8	39.7	37
41	0.0	4.0	38
	B		
41	25.5	29.5	39
	31.0	34.9	40
	42.9	46.8	41
	45.3	49.4	42
	JB		
42	37.0	—	43
	47.6	51.6	44

attention

20 30	42.5	46.6
31.	10.0	Spring gov.
	18.0	22.1
	29.7	33.7
32	2.3	6.3
	13.2 JB	17.3
33	15.0	18.9
	20.2	24.0
	~~—~~ B JB	45.3
36	3.5	7.4
	51.7	55.8
37	42.4	46.3
38	33.5	37.4
	40.3	44.2
	JBD	
40	35.3	39.6
41	0.0	3.9
	JBD	
	31.2	35.0
42	37.0	41.0
	47.6	51.7

Spring governor breaking up

134 0° 50'-60' 135

11	3	35	9.3	11-12	3 47	
12-13	2	27	n.s		seen	not obs
12-13	6	12		12	6 25	cstl
12-11	4	45	9.5	12	4 58	
11	1	05	9.4	10-11	1 19	
	B D					
12	7	57		12	9 9	sure six wire doubt
12	3	30		12	3 42	
12	1	08	dist. comp. n. p. first wire lost		B, D, not seen	
	B.				seen not obs.	
12-13	10	21		~~12-11~~		
11	1	50		12-11	2,09	
12	3	09	n.s,	12	3	lost AR.
12	8	22	double. lost one obs. comp 12 mg. 25" off n. p.	12	8 33	
12-13	1	09			B, D, B 1 2 3	lost AR
13	0	35	doubtful in dec.		not seen	
12-11	5	25			* obs here	
12	5	19	first wire lost			
12	1	56				
12	8	03	first wire lost			
12	5	59		12	6 11	
12-11	2	57		12	3 9	
12-13	1	50		12-11	2 01	
13-12	2	57	n.s,	12-13	3 08	
12-13	1	09				
	D B.					
12	5	32			seen	
	D. long				D, B, D	
13	6	30	n.s.		seen	
13	1	43	six wire lo	12-13	1 56	
11	8	20		11	8 34	six wire loss
12	9	56	comp of 13 20" fol		1 05	double
	B				D, B, D	
11-12	-0	10			~~0 00~~	not obs
✓9	10	21	n.s × 8.0	9	18 35	
12	4	00	n.s		seen	
12	1	32	n.s on the scale		seen	
	D. B.					
12	3	02	six wire lost	12	3 15	
12	9	21		12	9 31	

134. $20^h 27^m$ — $22^h.31$ 135 –

2h 42	58.4	62.4		45	20^h ✳			
43	8.3 B	12.3		46	43	8.4 B	12.2	
	57.0	61.1		47		57.3	61.2	
	59.5	63.4		48	44	—	3.4	
44	13.0	16.8		49				
	22.4 B D B ✗	26.4		50	~~44~~ 44	22.3 D	26.3	
45	16.4	20.6		51				
	35.9 B	40.0		52	45	— D	39.8	
45	reject.	62 3		53				
46	58 DB	—		54	46	59	9.7	
	43 8	—		55 ✳				
		44.6 w.w?		56 subtr. from nos.				
	48 0	52.1		57	—	47.9 59.6	51.9 63.6	rej.
47	23.8	27 8	4.	~~58~~ 58	47	23.7	277	
	41 7 DBDBDB	45.7		59		41.8 DBDB	457	
48	45 0	49.1		60	48	451	—	
	48.3	52.3		61		—	524	
~~4~~	59 9 D	64.0		62	49	0.0	3.9	
49	15.0	19.0		63		15.2	19.1	
	33.8	37.7		64		33.7	377	
	48 4	52.5		65		48.5	52.3	
50	7.9 DB	12.0		66	50	8 0 BD	12 0	
50	59.2	62.9		67	57	6.3	10.1	✳
51	8.6	12 5		~~68~~ 69	51	—	12.5	
	40.9 B	44.7		70				
52	17.9	21.0		71	52	173	21.1	
	not see.	30 6 rej.						
	36.1 D	40.2		72		36.2	40.2	

134 0°50'-60' 135

12-13	7	08	n.s					
12	8	08	8 10 on su seul		12-11	8	20	
	B					B		
11-12	7	21			12-12	7	44	sure n.s
13-12	2	40	n.s	9.4	12-13	2	55	first wire lost
10-10	9	29			~~11~~	~~9~~	~~39~~	
11-10	9	25		9.4	11	9	39	
	B.D B.D.							
12-13	0	omitted						
12-13	7	23				7	26	
12-13	2	15	doubtful Dec			2	29	first wire lost n.s
	B.							
13	3	20	n.s first wire doubtful	9.2				
9-10	2	19			10	2	30	
	D, B							
13	7	36	see wire lost	7??		look for carefully, not seen		
10	3	23			9	3	36	
12	2	32*	lost (lost)		12	2	43	
12	8	44			11-12	8	59	
12-11	9	15			12	9	29	
	D, B. D.D.D.B.					D.D.D.B		
12	2	41			12	2	54	see wire lost
12	9	39	n.s			10	01	sure first wire lost
12	2	03			12	2	17	
	D							
12-13	2	14	n.s		13	2	30	
12-11	6	30			12-11	6	44	
12-13	1	01			12-13	1	12	
10	1	00	n.s	9.0	9	1	12	
	D.B					B.D		
12-13	9	06				seen		not obs
11	9	29			10 11	0 7	20 39	n.s. first wire lost
12-13	9	34	doubtful Dec.			not seen look for		
	B.							
11	9	51			12	10	7	
12	8		Dec lost					
12-11	1	09			12	1	20	
	D							

134 | $20^h 27^m$ — $22^h 31^m$ | 135

$20^h 52^m$	52.5	56.3	73	$20^h 52^m$	52.3	56.0	1
53	—	73	74	53			13
	B						
53	47.7	51.7	75		47.7	51.9	12
54	22.7	26.4	76	54	22.4	26.3	1
	40.8	—	77				10
	44.6	48.3.9	78				11
55	2.7	6.5	79				12
	3.4	7.4	80				1
	DB						
55	31.7	35.7	81	55	31.5		12
	47.1	51.1	82		47.4		12
	53.3	57.3	83		53.3	57.2	✓6
	B				4		
56	23.2	27.0	84	56	23.2	27.1	1
	32.3	36.3	85		3		1
	33.2	37.2	86		33.4	37.3	1
	57.5 w.w.?		87		57.3	61.2	1
	DBDB						
57	32.1	—	88	57			12
	34.8	38.8	89		34.7	38.8	1
	39.4	43.5	90		39.6	43.4	1
	52.2	56.0	91		52.0	55.7	1
	B				D		
58	30.7	34.7		58	30.0	34.9	12
	33.5	37.5					12
	BDBD						
59	21.3	25.5	Obsd by T.H.S.	59	21.3	25.2	12
	24.5	28.4	Sept 22 1862		24.5	28.5	12
$21^h 0$	47.7	51.4?		$21^h 0$	47.8	51.6	12
	1.0	5.1	9.0		1.1	5.0	9
	D						
	43.7	47.7	8.5		43.7	47.6	9-
	—	59.2	9.7		—	59.9	1
	sp. grav. break. (Sept 22 1862 This star precedes by 0s.4)		9.5		63.9	—	1
1	20.3	24.0	9.0	1	20.1	24.3	1
	BD						
2	2.0	lost	Rej. 11.5				1
2	19.3	23.3	9.0	2	19.8	23.8	10

These are probably misplaced.

[illegible] looking at the Record [illegible]

134 0°,50'-60' 135

12	9	39			13	9 52	
13	8	26	first wire best beautiful [illegible]			seen not obs.	
	B						
12	10	03			12-13	~~sig no. obs~~ false sig 10 17 doubt.	
10-9	7	05	dots to both wires	8.5	8	7 19	~~hazy~~ hazy blur
	~~D, D,~~		~~both wires~~				
10	10	27	see wire best			seen not obs	
11	10	39	~~same~~				
12	3	10				hazy } best	
12	7	34	n.s				
	D, B						
12-13	-0	21			12	-0 10	
12	4	42				4 58	see wire best
✓ 6-7	8	37	on the scale	7.7		8 49	
	B,						
12	2	35	~~n.s~~		12	3 48	sure
12	2	04				seen not obs	
11	3	57	n.s		12	5 9	sure
12	-0	14			12	-0 02	
	D, B, D						
12-13	+0	20	see wire best			seen not obs	
12	5	23			12	5 36	
11	6	50			11	7 07	n.s
11	9	59			12	10 9	
	B					D	
12	9	39			12-13	9 50	
12.13	4	47	n.s			seen not obs.	
	B. D. B, D						
12.	6	09			12-13	6 19	
12-13	6	51	on the scale		13-14	7 4	
12-13	6	08			12 13	6 16	
9-10	4	00		8.8	9	4 13	
	D						
9-10	6	46		8.7	10-9	6 58	
10	5	56	first wire best	9.3	10	6 9	first w. best
10	7	50	see wire best . B.	9.3	10	8 03	see wire
10-11	10	11		9.3	10	10 26	
	B. D						
12	9	10				seen not obs	
10-9	9	53	n.s	8.7	10-9	9 57	sure

134   20h 27m   22h 31m . 135

Mag. obs'd by T.H.S. Sept. 22 1862

21h	20.0	24.0	9.8	21h		
	B B					
3	0.0	3.9	11.0	2	59.9	63.8
	11.2	15.0	11.2			
	11 9	15.8	10.5	3	12.0 DBD	16.0
	DB					
4	2.5	6.6	11.0			
4	21.3	25.2	10.5	4	21.3	25.3
	44.3	48.5	10.5		44.6	48.6
	B					
5	44.7	48.8	9.3	5	44.9	48.8
6	2.3	6.2	10.2	6	2.3	6.5
	10.6	144	10.0	.	10.6	14.7
	DB				B.	
7	29.0	33.0	9.3	7		
	33.6	37.6	11.0		33.7	37.6
	49.7	53.6	10.5		49.8	53.6
	55.5	59.6			55.6	59.7
	D					
8	8.4	12.2	10.5	8	8.6	12.~~4~~5
	14.5	18.4	9.7		14.7	18.7
	22.3 short	26.2 break	9.5			
	40.5	44.5	9.8		S.g SB	44.6
	DB					
9	9 5	1—	10.5	9	9.6	13.4
	13.4	17.3	9.3		Sg SB	17.3
	38.7	42.7	9.3		38 8	42.8
	51 9	—	9.2			
10	11.3	15.4	9.0	10	S.g	15.3
	17 8	21 6	10.8		Spr. gov.	
	DB					
10	44 6	48.8	8.9		44.8	48.8
	46.1	50.0	10.5			
	D for ½ m					
12	18	6.1	10.7			
	2.7	6 6	10.3	12	2 6	6.5
	5 4	9 4	11.0			
	B					
	5.4	9.4				

and then until 21h 10m ±

✳

Spring governor breaking

134 . 0°50'–60' 135

10	4	14	this pair the last star	9.5		seen not obs		
	B.B.							
12	3	45			13	3	59	
12	4	23				seen not obs		
12	1	53	n.s		12	2	8	
	D.B					D.B.D		
13	2	11	on the scale		13–14	seen not obs		
12–13	7	13			13	7	27	double
12–13	0	39	with comp. n.f. abt 25"		13	0	50	comp 22" dist.
	B.					B.		
11	9	51		9.5	10–11	10	07	
12	9	33			13	9		n.s bet dim
11–12	~~9~~	~~28~~	9 20 on see scale	9.5	12,13	9	30	n.s
	D.B.					B		
12	4	48		(9.2)	12–11	5	01	
12–11	5	18	n.s		12–13	5	30	
12	9	58	n.s		12–13	10	05	
12–11–	0	01	n.s		12	0	09	
	D.					8	02	
12–13	7	48			12			
12	6	21	on the scale		12	6	35	
11	0	51		9.3	11	1	03	bet CAB
12	7	19	D short		12	7	33	first in bet.
	D.B							
12–13	5	41	on same list		12	5	55	on w bet
11–12	4	21		9.3	11–12	4	33	n.s.
11–10	2	34	a reddish *	9.5	11	D.B. 2	47	
11	10	40	doubtful Dm. see new list		~~11~~	not seen		
10	9	50		9.0		9	35	sure
12	2	30	on the scale			list		
	D.D							
10–11	2	51		9.0	10–11	3	04	
13	7	22	n.s		13	bet, seen not obs		
	D for ½ a minute							
12–13	8	35			13	8	50	
12	7	28	n.s		12	7	—	
12	0	41	n.s on the scale		12	0	55	see ne bet
	B							

134 20h 27m – 22h 31m. 135

Mag' Red by T.H.S. Sept 22 1862

20h 12	54.6	58.4	10.32 /			
13	00.0	4.1	11.2			
13	20.3	24.3	10.3	13	20.7	sp gov
	26.4	30.2	9.3		26.5	30.5
	32.8	36.7	9.7			
	42.7	46.6	10.0			
	DBD					
14	13.3	17.1		14	Sp gov.	17.5
	23.0	27.0	10.8		Sp gov.	
	31.1	35.2	9.7		—	35.0
	44.7	48.5	10.2			
	BB					
15	35.8	39.8	9.8	15	35.8	39.9
	41.5	45.7	10.0		41.6	45.7
16	3.2	7.0	10.0	16	3.1	7.0
	11.7	15.7	10.0		11.7	15.7
	B					
	39.0	43.0	10.5		39.2	43.0
	47.0	— ~~(50.5?)~~	11.5		47.0	51.0
17	3.8	w.w.?	9.7	17	3.9	17.7
	32.3	36.4	10.7			
	B					
	45.3	49.3	10.0		Sp gov.	
	BB					
18	23.4	27.3		18	23.6	sp gov.
	38.7	42.5	11.2		38.8	42.8
	B					
19	21.6	25.7	9.7	19	21.8	25.8
21	35.2	39.0	11.5			
	43.3	47.1			43.2	47.1
	48.7	52.7	10.0		48.8	52.7
22	2.5	6.7	10.5	22	2.7	6.8
	29.2	33.2			29.3	33.2
	—	50.0 ?	8.7		(41.0	45.0)

up badly Spring governor
breaking up untill
21h, 22m +

Frez

134 . 0°50'–60' 135

13-12	9	01			12-13	9	13	
13	2	32	n.s		13	2	45	
12	9	54			12	9	59	sure
10	7	03		9.5	11	7	18	
10-11	0	59				seen not obs.		
12-13	6	30	on the scale					
	D.B.D.							
12-13	-0	20			13	-0	11	
12	4	49				5	08	first wire best
12-11	7	41	n.s	9.5		7	56	first wire last
13	8	31				seen		not obs.
	B.D							
13	omitted							
11	3	05			12	3	18	
11-12	9	09	n.s		12-13	9	20	
12	9	02	n.s		13	9	16	
12	9	28			12-13	9	39	doubt
	B							
12	6	54			13	7	10	
12	4	40	on wire lost n.s		13	4	54	doubt
12	7		lost					
11	9	57				10	9	
13	4	24	doubtful in					
	B					B		
12	6	06			12	6	20	
	D.B		Lamp altered					
13	-0	07	on the scale		13-12	0	02	sure
13	6	38	on the scale		13	6	49	
	B							
12	4	08			12	4	21	
	no stars above fourteenth mag							no * above fourteenth
						B.D		
12-13	10	18				seen		no obs
12-13	1	29	on the scale		12	1	29	
12	8	06	comp of 14" mag 20" s.f.		12	8	20	close comp & dist comp n.s
12	4	12	comp n.p		12	4	34	on *
12	0	08			11	0	19	
10	8	19	first wire lost	8.8				
~~12-13~~			n.o					

over

134 $20^{h}27' - 22^{h}31^{m}$ 135

23	4 6 4	50.3	} ?	160
23	20.1	24.0		161
	55 6	59.6		162
23	56.9	6.10		163

Continued in next Book

24
12 1′ 21″
5 11
5 41
4 29

Reduction of magnitudes. from C to S.

Zone 133. See also book „Revision of Zones"

C	S
13.	11.0
12.5	10.6
12.	10.2
11.5	9.8
11.	9.4
10.5	9.0
10.	8.6
9.5	8.2
9.	7.4

B.v