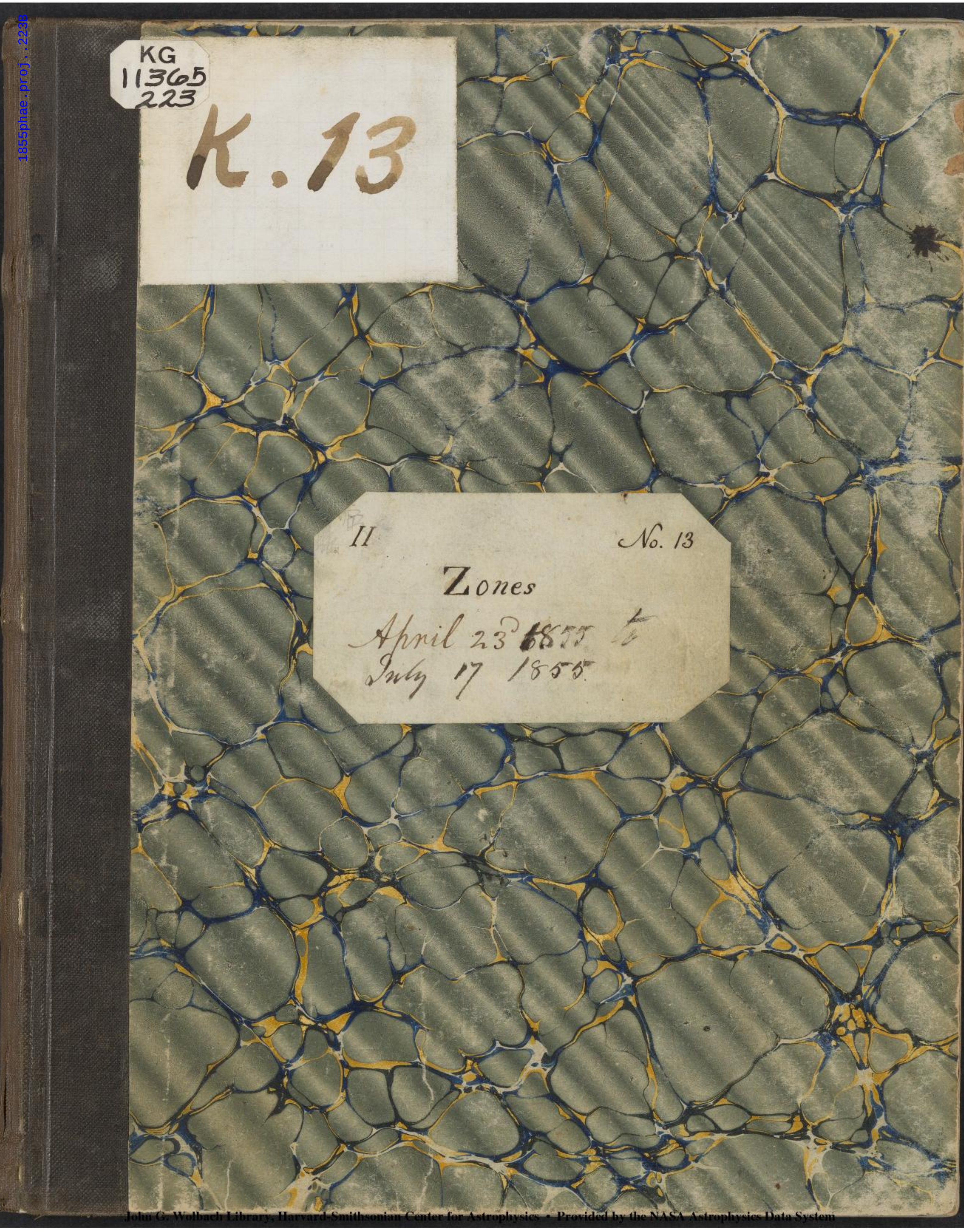
KG
11365
223

K.13



II No. 13

Zones

April 23d 1855 to
July 17 1855

KG-11365.223

KG-11365.223

20'-30'

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In first part of zone armature
did not work promptly

April 23, 1855
P. S. C. Observed

9	44	49.8	53.8	
	45	33.0	—	
	46	13.2	17.2	
	46	53.2	57.3	
	47	34.7	38.5	
9	48	45.9	49.8	
	51	07.9	—	
		47.9	51.4	bad interval!
9	53	12.8	16.7	
	56	00.1	04.1	
		7.5	11.6	
		34.4	38.5	

May 15, 1855
G. P. B. Observed

Th. at begin. 63°.7
end 62.5°

9..	44..	49.3	53.3
	45..	32.9	37.0
	46..	12.8	16.8
	46..	52.9	56.9
	47..	34.0	38.1
		D B	
	48..	45.1	49.1
	51	—	11.4
	51..	47.3	51.4
		B	
	53..	12.3	16.3
		B	B
	56..	59.5	3.5
	56..	6.9	11.0
	56	33.8	37.9

10h 20' to 30' 10h

Ther beg 42.6
End 40.3

Catalogue Stars 1855.0

May	AR	D
	h m s	° ' "
9	10.. 02 02.89	0. 26. 56.2
4	10.. 0[illegible].. 34.2	0. 20. 6.5
9	10. 07.. 23.37	0. 26. 3.7
8	10. 13.. 57.06	0. 30. 27.9
8	10. 17. 26.08	0. 19. 59.0
7.8	10.. 33.. 45.23	0. 28.. 50.30
8?	10.. 34. 19.67	0. 29. 03.3
7	10.. 49. 43.42	0. 27. 45.9
8	11. 21. 54.63	0. 27. 21.6
9	11. 40. 21.02	0. 28. 23.3
6.7	11. 41. 37.84	0. 29. 12.8

11..28
9..53
45

11..39
9..44
1.50

April 23

P.S.C. Observes
Scale so dirty as to make me lose not a few stars

10. 9..53
11.12 1..43 ns 2 wire lost
11 1..50
11 5..56
9.10 10..08
B B
11 8..44 comp 15 mg 3s n.f.
8 lost behind the wires
12 9..30 2 wire lost
11.12 5..32
D B
9.10 9..42
No stars visible in the field ?
10 2..09
10 9..51
12 5..00

May 15

G.P.B. Observes
Hazy

10 9..47
12 1..31 cent
11.12 1..42
11 5..47 cent
9.~~10~~ ~~9..50~~ 10..02
D B
12 8..37
~~12 6..22~~ ~~cent~~
12 9..20 1st wire lost
12 5..26
B
Hazy - small stars difficult to observe
9.10 9..37
B B
10 2..00
10 9..45 ns
12 4..50

	58	12.2	16.2	
		20.7	24.5	
		39.6	43.8	
	59	24.2	28.2	
10	0	03.5	07.4	
		31.0	35.0	
	1	51.5	55.4	
		56.4	60.4	
10	3	30.8	34.7	
	4	06.7	10.5	
		31.3	34.4	
10	5	50.5	54.7	bad cut!
	6	52.9	56.9	
	7	23.7	27.7	
10	11	28.3	32.1	
	12	46.9	50.8	
	13	57.3	61.1	
10	15	37.3	41.3	
	17	26.3	30.2	
		58.7	62.8	
10	19	50.8	54.6	
	21	6.4	10.3	
		18.9	22.9	
		33.9	37.6	bad cut!
10	22	46.5	50.4	
		53.1	57.0	
	26	—	49.0	
	27	49.9	53.9	
	28	41.5	45.3	

B D B			
9..58..11.6	15.6		
58..20.2	24.3		
58..39.0	42.9	59..00.5	4.4
9 59..23.5	27.5		
B			
10..00..2.6	6.7		
0..30.6	34.5	1..47.5	—
1..50.8	54.9		
1..55.9	59.7		
D			
3..30.2	34.1		
4..5.9	10.0		
4..30.7	34.7		
B B			
5..50.2	54.4		
6..52.4	56.2		
7..23.1	27.1		
D B D			
11..27.6	31.7		
12..46.3	50.3	13..21.2	25.2
13..56.7	0.7		
D D D			
15..36.9	40.8		
17..25.8	29.7		
17..57.9	1.9		
19..12.3	16.5		
B			
19..50.[illegible]	54.2		
21..5.8	9.9		
21..18.2	22.1		
21..33.2	37.0		
D B			
22..45.8	49.9		
~~26~~			
26..44.3	—		
27..49.3	53.1		
28..41.1	45.1		

107 20-30 102

Starless field

B

11 3..18

11 4..37 8? ms

10 1..18

10 5..30

B B

9 9 7..01 Cat. Star

4 4 0..13 Cat Star

12 7..48

12. 1..36 ms

[illegible] D B

10 7..30

10.11 4..50

12 1..00

D

11-12 1..10

11 2..20

9 9 6..05 Cat. Star *

B

10.11 0..59 comp. s.p 16 mag. 45"

12 0..19

8 9 10..33 Cat.

B B

10.11 2..39

8 8 0..01 Cat. Star

11 1..09

10..29 N.R.

B D

12 1..30

11 7..23

9.10 4..14

10 2..49

D

11.12 6..59

12 7..05 ms

11.12 9..25 1st wire lost

10 2..19 yellowish

11 -0..18

B D B 12 10..46 1st wire lost

12 3..09 cert

12 4..30

11.12 1..08 11 - 0..29

10.11 5..29

B Hazy - observation of small stars made with some difficulty

9 6..54

4 0..03 12 9..42 2 wires lost

12 7..39

11 1..37 cert ms

Long D

11 7..22

10-11 4..41

12 0..50

B B

12 1..02

11 2..13

9 5..58

D B D [illegible] ([illegible] (12) 3..08

12 0..48

12 0..10

8 10..25

D D D

10 2..29

8.9 -0..08

11.12 1..00 2 wire lost - cloudy

12 10..19

B

12 1..22

11.12 7..16

9.10 4..06

11 2..40

D B

12 6..49

12 6..58 [illegible] No. A2

12 9..16 2 wire doubtful

10 2..09

11.12 -0..29 cert

103 20'–30' 102

10h	29m	38.9	42.7		
	1	48.5	52.4		
10	30	24.7	28.8		
	31	22.6	26.7		
	32	09.3	13.1		
		47.8	—		
	33	~~49~~.6	49.6		
	34	8.0	11.9	10.4	14.3
10	35	36.2	40.3		
	36	16.2	20.1		
	3	44.7	48.4		
	38	14.7	18.7		
10	39	00.3	04.3		
	42	6.9	—		
		51.3	55.2		
	44	8.9	—		
		35.7	39.5		
10	45	17.4	21.3		
	46	57.8	61.6		
	49	19.8	23.8		
	49	43.9	47.8		
	50	15.5	19.5		
		—	23.9		
		26.1	30.0		
		—	54.0		
10	52	14.0	18.0		
		16.4	20.1	bad int!	
		38.0	41.9		
		41.2	44.2	bad int?	
	53	27.0	31.1		
	54	21.2	25.2		

10.. 29.. 38.2	42.2		
29.. 47.9	51.9		
B B			
30.. 23.9	28.2		
31.. 22.1	25.9		
32.. 8.7	12.7		
33.. 45.1	49.1		
34.. 7.4	11.2	34.. 9.9	13.8
B			
35.. 35.9	39.7	35.. 46.2	50.1
36.. 15.4	19.6		
36.. 44.1	48.1		
38.. 14.3	18.3		
D			
38. 59.9	3.8		
42.. 6.5	10.6		
42.. 50.6	54.5		
44.. 8.4	12.3		
44.. 35.3	39.3		
B			
45.. 16.7	20.8		
46.. 57.2	1.3		
D B D			
49.. 19.2	23.1		
49.. 43.3	47.3		
50.. 14.9	19.1		
50 —	23.3		
B			
52.. 13.6	—		
52.. 15.9	19.8		
52.. 37.4	41.6		
52 —	45.0		
53.. 26.6	30.7		
D			
54.. 20.7	24.6		

107 20′ – 30′ 102

12	9..50		11-12	9..43	
11	4..00		11	3..50	
	B			B B	
12	1..47	1st wire doubt.	12-13	1..45	
12	10..04		12	9..57	
12	5..42		12	5..33	
12	0..50	2 wire lost			
7.8 7.8	8..56	Cat. Star 1st wire lost ? "11 8..05' comp of 12 mgt blue"	7.8	8..47	12. 8..17 cent
9 9	9..09	comp s. f 60"	9	9..01	ms comp 11 mg 6" n.p.
	B D B			B	
12	1..31		12	1..25	12 0..12
12	3..55		12	3..47	
12	3..48		12	3..39	
12	1..41	comp. n.f. & bluish	12	1..52	
	B			D	
11	3..22		12	3..[illegible]	
12	6..14	comp s.p. 2 wire lost	12	6..0[illegible]	No comp. seen 10-11 10..45
11	9..30	~~[illegible]~~		Seen	
12	7..01	grayish 2 wire lost	12	1..[illegible]	
10	3..51		10-11	3[illegible]	
	B B			B	
10	2..18		10-11	2..08	
12	8..41		11	8..34	
	B			D B D	
8.9	5..44		8.9	5..33	
7 7.8	7..52		7	7..43	
12	4..17		12	4..08	
12	1..00	1 wire lost ms	12	0..50	ms 1st wire lost
12	3..14	ms			
12	3..57	ms 1 wire lost			
	D B			B	
11.12	8..32		11-12	8..22	2 wire lost
11.12	9..58	ms	11-12	9..47	ms
12	10..15		11	10..05	
12	8..27		12	8..16	ms 1st wire lost
11.12	4..37		11-12	4..27	
	B			D	
11.12	6..39		11	6..28	

10h

20′—30′

10h

---

55 52.9 – 56.8
56 24.8 – 28.6
59 2.9 6.9
44.1 48.1

---

11 1 19.0 23.0
50.6 54.5
2 1.8 5.8
3 9.5 13.5
35.0 39.0

---

11 4 45.8 —

5 24.1 28.0

---

11 8 20.5 24.5
9 28.1 32.1
11 39.4 43.1 bad wt.
12 10.0 14.0
29.8 33.8
36.8 40.9

change

11 14 — change 31.8
35.8 —
15 43.1 46.9
16 25.8 29.8

---

17 29.2 33.0
36.0 39.9
47.3 51.2

---

11 18 25.3 29.4
51.2 —
21 19.2 23.1
55.2 58.9
23 20.6 24.7

B
10.. 55.. 52.5 56.6
56.. 24.3 28.3
59.. 2.5 6.4
10.. 59.. 43.6 47.7
D
11.. 1..18.7 22.5
1.. 50.0 —
2.. 1.3 5.2
3.. 8.8 12.9
3.. 34.5 38.7
B B
4.. 45.3 49.2
4.. 50.0 54.0

6. 23.6 27.4
D
8.. 20.0 23.9
9.. 27.6 31.7

12.. 9.7? 13.2
12.. 29.3 33.4

B
14.. 30.9 —
14 — 35.1

16.. 25.2 29.3
B D B
17.. 28.7 32.6
17.. 34.8 39.4

D

20.. 00.9 5.0
21.. 18.7 22.7
21.. 54.5 58.5
23.. 20.0 24.2
23.. 36.0 40.0

10h 20' 30' 104

Dots for a minute

				B	
11	9..31		11	9..22	
11-12	5..57		12	5..48	
10	10..34		10	10..24	
10.11	6..24		10.11	6..15	
	B			D	
12	2..48		12	2..38	
12	−0..10		12	−0..20	cert. 2 wire lost
12	3..53		12	3..43	
11.12	0..00	R?	12	−0..08	
10.11	3..10		11	3..00	
	D B	Strong wind		B B	
8	2..43		8	2..36	
9-10	0..40	ns	9	0..33	ns
~~12~~	~~9..30~~	No R accidental mark	~~10~~	~~9~~..	
12	5..10		12	5..00	
	B			D	
11	10..00	1st wire doubt.	11	9..51	
10.11	5..14		11	5..04	
12	0..46			0..	
12	8..10		12	8..00	1st wire doubt
8	9..24	ns	10	9..16	
10	10..29	ns		~~10~~..	
	B B			B	
11	6..12	1st wire lost	11	6..06	2nd wire lost } never came R
9-10	1..59	ns 2 wire lost yellowish	9	1..47	ns 1st wire lost }
12	10..02				
11.12	5..50	comp. s.p	12	5..40	
	D B			B D B	
11	5..40		11-12	5..30	
11.12	1..09		12	0..59	ns
12	6..59			D	10 10..50
	B				
12	8..08				
12	1..40	? 2 wire lost			
11	9..46		11	9..34	
8 8	7..27		8	7..17	reddish
10.11	9..23		10-11	9..13	
12	2..49	No R	12	2..39	

10β　　20′–30′　　102

11 24 3.2 7.0

— — — — —

11 24 53.3 57.2
25 14.7 18.6
159 19.9
27.5 26.6
31 8 359

---

11 26 9.7 13.7
59.5 —
27 — 6.5
32.0 35.8

---

11 28 5.9 9.7
52.1 55.9
29 34.1 38.3

— — — — —

30 23.9 27.8
31.6 35.4
39.0 42.9
51.6 55.2
31 29.3 33.2

— — — — —

11 35 25.3 29.4
36 52.8 56.8
37 01.7 05.7

---

11 39 15.0 —
25.9 29.8
40 21.8 25.9
28.8 32.8
33.4 37 4

— — — — —

11 41 38.4 42.5
41.3 45.5

44 34.0 37.8

11.. 24.. 2.5 6.5
B
24.. 52.8 36.7
25.. 14.1 18.1
25.. 15.3 19.3
25.. 22.0 26.1
25.. 31.2 35.1
B B B
26.. 8.9 13.0
26.. 59.0 3.1

27.. 31.3 35.3
B D
28.. 5.0 9.2
28.. 51.4 55.5

D
30.. 23.3 27.3
30.. 30.8 —
30.. 38.2 42.3
30.. 50.7 54.8
31.. 28.8 32.8
B

40.. 21.4 25.5
40.. 2— 32.2

D
41.. 37.9 42.0

10 A			20′ 30′	102	
10	9..21		10	9..14	
	D			B	
8.9	3..33		8.9	3..25	~~3..32~~
12	4..41		11-12	3..32	
11	5..34 ns		12	4..25	?
11	0..33 ns		12	0..23	
11	8..29 ns		12	3..19	
	B			B B B	
10.11	8..49		11	8..40	
12	8..02	2d wire lost accidental mark	12	7..54	
11	−0..21 ns	1 wire lost	11	−0..3	No R
12	2..19 ns		12	2..08	
	B B			B D	Clouds
11	3..10	Bluish	11	3..02	
12	7..59		12	7..47	
13	7..11				
	D B			D	
12	7..08		12	7..00	
12	7..50		12	7..40	2 wire lost
10	1..43 ns		10	1..32	
10	−0..30		10	−0..36	Clouds
11	0..45			0.. Seen	
	D			B	
12	9..08				
12	5..12	4			
10	8..38	5			Clouds
	B				
13	10..19	2d wire lost			
10.11	0..26				
10	8..31		10	8..22	
11	0..24		11	0..15	1st wire lost
11	1..07 ns				
	D B			D	
6.7 7	9..18		6.7	9..09	
10	8..9 ns				

Telescope seems to be moved by the wind

12 1..32 Clouds

No stars in the field

103 20′–30′ 104

1 46 10.9 14.9

Star A
= 1st of 109

47 18.3 22.3
47 47.0 51.0
48 7.8 11.8

11..46..10.3 14.4
B
47..17.8 27.7

11 49 5.90 9.80
49 21.2 25.0

107 20'-30'

B B B

10 9.. 31

12 9.. 49 No. Al

11 4.. 07

12 5.. 51

11-12 7.. 50

D B

11-12 4.. 15

12 5.. 15? as

102

Clouds

10 9.. 22

B

11 3.. 55

Clouds

11-12 4..05

~~105~~ 103   30-40′   ~~104~~ 105

May 17th 1855
G.P.B. obs. C.W.T. records

The first star is x of Zones 101-102

Therm at Begin. +50.7
.. at End 49.0

May 17, 1855 G. P. B Observes		May 18, 1855 J. H. S Observes	
10..19..28.0	31.9	10..19..26.7	30.7
21..25.0	29.1	21..23.9	—
21..31.6	35.6	21..30.4	34.1
21..49.0	53.2	21..47.8	52.2
22..2.5	6.5		
B D		B D	
24..9.8	—	24.. ~~20.5~~	12.8
24..21.9	26.0	24..20.5	24.3
24..25.7	29.5	24..24.8	28.3
24..38.7	42.6	24..37.7	41.6
B		B	
27..6.8	10.8	27..5.9	10.2
27..21.9	26.0	27..21.2	—
28..26.3	30.2	28..25.2	29.2
D		D-B	
29..32.6	36.6	29..31.7	35.8
29..38.6	42.6	29..38.0	41.8
30..25.2	29.1	30..24.2	28.2
30..30.2	34.2	30.. ~~29~~.4?	33.4
30..41.3	45.3	30..39.7?	44.2

~~105~~ 103   30′ – 40′   105 ~~107~~

8	10..19..27.83	+6°..35′..22″.0
9	38..35.96	40..35.3
8	49..55.78	36..25.0
8	10..59 3.47	40..19.9
8.9	12 12..50.25	39..37.6
8	14..12.55	38..50.3
8	18..15.93	37..10.0
9	19 8.07	37..12.7
8	19..20.99	37 7.9
8.9	25..34.10	37..23.3
8.9	28..57.26	30..14.3
9	29..50.58	36..32.8

May 17. 1855   Clear – Calm   May 18th S.T   Clear & Calm

G.P.B observes   T.H.S. observes

8	5..23	Orange color	8	5.22	Catalogue Star
12	0..26	cent	12	0.22	short sig
12	3..17	ns	12	3.16	on 2d scale
12	3..28	1st wire 2nd sig. correct	12	3.27	
12	10..12				not seen a star of 14th mag
	B D				sh B D.
12	7..15	2 wire lost double-comp 15 m 15″ nf.	12.	7.10	
11	7..48		11.12	7.47	
12	7..26	ns	11.12	7.26	ns
11-12	8..29		12	8.28	sh sig
	B			B	
12	4..05		12	4.03	
12	1..16		12.13	1.14	2d lost
12	5..29		12	5.29	
	D			D B	
12	3..58		12	3.56	
12	–0..13	ns	12	–0.21	doubtf?
10.11	2..09		11	2.06	
12	5..36	ns	12	5.33	ns 1st w. bad
12	10..00		12	10.00	ns 1′w bad

103 ~~105~~		105	
D B			
10..31..22.6	26.5	10..31..21.9	—
32..1.2	5.2	32..0.2	—
32..35.8	39.9	32..35.0	39.0
33..35.2	39.2	33..34.2	38.2
33..38.0	42.0	33..37.0	41.0
B B	B	B D	
35..28.8	32.8	35..28.1	31.9
35..29.3	33.2	35..28.4	32.2
35..42.5	46.6	35..41.6	45.8
36..40.1	44.1		
D		DBD	
37..49.8	53.9	3	
38..26.3	30.4	38..25.7	29.7
38..35.6	39.6	38..34.8	39.1
39..25.7	29.7	39..24.8	28.8
39..41.4	45.4	39..40.8	44.7
40..0.2	4.1	39..59.4	—
B	D	B.D.	B.
41..21.8	25.8	41..21.0	24.9
41..38.8	42.8	41..38.0	41.9
41..40.0	44.1	41..39.2	43.3
42..4.6	8.5	42..3.6	7.5
B		BDBD	
42..51.1	~~[illegible]~~	42..50.2	54.2
42..—	55.0		
43..18.4	22.4		
44..36.8	40.8	44..35.8	39.5
45..10.5	14.8	45 9.9	13.7
B B	D	D	
46..12.9	16.8		
46..37.9	41.8		
47..31.8	35.8	47..30.9	35.0
47..51.7	55.6	47..50.8	54.8
48..11.9	15.9	48 —	15.3
48..21.8	25.8	48..20.9	25.0
B		B	
48..51.3	55.2	48..50.3	54.3
49..38.6	42.7	49..37.9	41.9
49..56.1	0.1	49..55.1	59.1

~~105~~ 103 30 – 40 10~~3~~5

	DB				
12	−0..01		12	−0.04	2d lost
12	6..36		12	6.33	2d lost.
9	6..28		8.9	6.27	
10-11	8..17		10.~~11~~	8.14	
11	6..26	ns	10.11	6.23	ns
	BBB			BD	
~~11~~ 12	8..50	This is the comp. of pol. star	12	8.49	~~double star 19"~~ s.p.
11	9..06	ns double comp. 17 s.p	11	9.05	~~double com~~ comp. 19" s.p.
12	8..47		12	8.46	~~De~~
12	−0..20		not seen		
	D			~~D~~B~~D~~	
12-13	1..30		not seen		
11	9..24		12	9.22	
9	10..38	Cat. Star	8.~~9~~	10.39	Catalogue Star
9-10	6..29		9.10	6.26	
12	1..56		11	1.52	
11-12	4..57		10.11	~~BDB~~ 4.51	2d wire lost
	BD			BDB	
12	7..24		11.12	7.21	
11	3..59		11	3.57	
12	6..56	ns	12	6.52	ns
11	6..52		11	6.51	
	B			DBDB	
10	0..43	2 wire lost	11	0.41	~~Wire~~
11	−0..35	ns 1 wire lost	seen but not observed		
12	2..59		here is a star of the 14th mag		
11	7..09		11.12	7.07	
7	4..08		7	4.05	focus improved
	BBD			D	
12-~~13~~	4..52		lost		
12-13	9..20		lost		
12	9..24		12	9.21	
12	6..22		12	6.19	th sig
11	10..15		12	10.13	1st w. lost
11	9..23		12	9.26	
	B			~~D~~ B	
12	10..22		12	10.22	
10-~~11~~	3..20		11.12	3.20	
8	6..28	Comp. 12 mag 22" north	10	6.28	yellow comp 15 25

Cat Star

103 ~~105~~		105	
10.. 50.. 0.8	4.7	10.. 50.. 00.0	3.8
50.. 27.0	31.0	50.. 26.4	30.2
50.. 32.6	36.7		
D B D		D B	
51.. 28.3	32.3	51.. 27.4	31.2
51.. 54.4	58.4	51.. 53.6	57.4
52.. 16.3	20.2		
52 38.2	42.2		
B B		B D	
53.. 23.4	27.4	53.. 22.7	~~26.8~~?
53.. 23.7	27.7	53.. —	26.8
55.. 52.7	56.8	55.. 52.0	56.1
D B		D B B B	
56.. 33.5	37.7	56.. 32.8	36.9
56.. 39.4	—	56.. 38.9	42.5
56.. 41.5	45.6		
B			
59.. 2.8	6.8	59.. ~~02.8~~	~~6.2~~
10.. 59.. 3.7	7.7	10.. 59.. 2.8	6.2
11.. 00.. 2.8	6.8		
1.. 41.4	45.5	11.. 01.. 40.4	44.6
1.. 43.9	47.9	1.. 43.0	47.0
B B			
2.. 28.4	32.4	2.. 27.7	—
2.. 29.5	33.5	2.. —	32.7
4.. 11.9	16.0	4.. 11.3	15.1
7.. 05.7	9.5	7.. 5.0	8.9
7.. 8.0	12.2	7.. 7.0	11.4
D		D B D	
8.. 20.3	24.4	8.. 19.9	23.8
11.. 56.2	0.3	11.. 55.5	59.5
12.. 07.0	11.0	12.. 6.3	10.2
12.. 28.2	32.1	12.. no mark	
12.. 29.8	—		
B B B D			
15.. 42.9	46.9	15.. 42.4	46.2
17.. 17.3	21.3	17.. —	20.7

103 ~~105~~ 30′ – 40′ 10~~5~~

10	1..38 ms		10.11	1.32 ms			
11	5..38		12	5-38			
12	8..32 ms		lost	8			
	D B D			DB			
12	8..47		11.12	8.43			
11	9..23		11	9.21			
12	– 0..08			not seen			
12	0..08						
	B B			B D			
12	4..55		~~11~~.12	4.56	2d last		
11	3..44 ms		11.12	3.44	1st last ms		
11	– 0..32 ms		11.12	–0.32			
	D B			DB ~~D~~B			
12	5..09		12	5.07			
12	8..06	2 wire lost	12	8.02 ms			
12	10..40 ms			~~[illegible]~~			
	B						
~~10~~ 8	0..26		10	0.27	one of the wires lost		
8	10..24 ms	Cat. Star	8	10.23	Catalogue		
12	1..53		~~12~~	~~2.2~~			
12	4..22	double-comp. 16 mag 12″ n p	11.12	4.27			
11	1..10 ms		11.12	1.11			
	B B						
10	7..28		10	7.27	2d last		
9.10	1..29 m.s.		10.11	1.27	1st last		
12	7..18		12	7.17			
12	2..50		~~12.13~~	~~3.14~~		12	2.51
12	2..47 ms		~~12.13~~	~~2.~~		11.12	2.48
	D			DBD			
12	– 0..04		11.12	– 0.05 ms			
12	3..31		12	3.30			
8.9	6..40		8.	6.39			
12	0..56		12	0.55			
10	– 0..43	2 wire lost					

A number of smaller stars lost dots for a minute

	B B B D				
12	– 0..04	12	– 0.02	~~[illegible]~~	
12	1..25	12.13	1.25	1st last	

105		105 ~~107~~		
11.. 18.. 48.8	52.9	11.. 18.. 47.7	52.0	
20.. 1.3	5.2	20.. 0.6	4.4	
21.. 19.0	23.1			
21.. 26.5	30.4	21..		
D		D B		
22.. 47.8	51.7	22.. 46.8	50.8	
23.. 32.2	36.1			
25.. 16.8	20.9			
25.. 24.8	28.9	25.. 24.0	28.0	
26.. 6.5	10.6			
B				
28.. 35.9	39.8	28.. 35.3	—	Dob
30.. 32.7	36.7	30.. 31.7	36.0	[illegible]
30.. 53.2	57.1			
30.. 56.4	0.4	30.. ~~5~~	59.4	
B D B		B		
		34.. 00.2	4.1	
		D B D B D B		
38.. 51.4	55.3	35.. 57.0	0.8	
		38.. 50.6	54.7	
Ink faint		39.. 14.2	18.0	
39.. 51.1	55.2	39.. 50.3	54.2	
42.. 21.8	25.8	42.. 20.6	25.0	
42.. 26.9	30.9	42.. 26.3	30.0	
42.. 37.4	41.4	42.. 36.9	40.7	
43.. 1.8	5.8			
B B		D B D		
43.. 31.3	35.3	43.. 30.8	34.2	
43.. 56.0	0.1	43..		
46.. 43.7	47.7			
49.. 9.0	13.0			
50.. 14.0	18.0	50.. 13.2	17.1	
B		B		
50.. 49.6	53.6			
50.. 58.4	2.3	50.. 57.8	1.7	
51.. 30.7	34.7	51..		
51.. 43.2	47.2			
51.. 57.5	1.4	51.. 56.9	0.9	

103 30′ – 40′ 105 ~~107~~

12	9..50		12	9.50	
10-11	0..51		10.11	~~0.53~~	
11	– 0..21		11	– 0.21	R Cert
12	7..01 ns		12	7.17 cert.	
	D			~~D~~ D B	
12	7..20			} stars small to obs.	
12	6..16				
12	8..35				
11.12	1..04		12.	1.04	
12	9..21			not seen	
	B	Very few stars above 13 mag			
12.13	5..56	Several fields nearly vacant	12	5.57	2d lost Dots
11	1..46	double - comp 13 mag 3" s.p	11.	1.41 cert.	
12	0..40				
11-12	5..10 ns		12	5.11	1 w. lat
	B D B Few stars			B	
12	8..12		12.~~8~~	8.11	
	D B D B D B D B D B D B D B D			DB DB DB DB DB DB DB DB	
9.10	8..03		12	8.8 cert ‖ 9. 8.02	change
12	0..12 ns		~~11~~ 12	0.11	
10	8..49		10.11	8.48	
12 ~~✱~~	6..59		12	6.59	
10.11	6..09 ns		11	6.07	
10.11	3..00		11.12	3.00	
12	2..11		Lost		
	B B			D B D	
11	2..44		12	2.40	
12	7..09			7 meteor seen	
	Vacancy - No star except on extreme visibility				
12-13	5..11				
12-13	8..00				
10	7..46		10.11	7.47	
	B				
12	5..30		12		
11	6..16		11	6.13	
12	9..22				
12	7..04				
10	8..42		10	8.41	

11..52..31.3	35.4		11..52..30.7	34.5	
D B					
54..26.7	30.8				
54..42.2	46.2				
54..49.6	53.7				
56..59.5	—		56..58.9	—	
57..15.6	19.6		57..14.8	18.8	
57..24.0	28.0		57..23.4	27.0	
B			D D		
58..26.5	30.5				
11..59..19.4	23.5		11..59..18.9	22.7	
12..0..2.9	6.8				
4..22.0	26.0		12..04..21.0	25.0	
4..51.0	54.9		4..50.4	54.2	
D			B		
5..50.7	54.7		5..50.1	54.0	
7..32.3	36.3		7..31.4	35.5	
7..59.6	3.4		7..5		
9..42.3	46.3		9..41.4	45.4	
B D			D B		
[~~9..43.3~~	~~48.3~~]		9..		~~11..25.2 29.2~~
11..25.8	29.6	11..50.1 57.0	11..25.2	29.2	11..49.3 53.2
12..50.9	55.0		12..50.4	54.2.	
13..8.8	12.7				
13..9.8	13.8		13..9.2	13.0	
13..29.1	33.1		13..28.4	32.3	
13..45.5	49.5		13..44.8	48.4	
13..52.5	56.4		13..51.8	55.5	
B			~~D~~		
14..13.2	17.2		14..12.6	16.5	D
15..24.5	28.5		15..23.7	27.6	
15..55.5	59.5		15..54.7	59.0	
16..10.4	14.4		16..		
B D					
16..27.8	31.8		16..26.9	30.8	B
17..16.5	20.5		17..15.9	19.9	
B			BD		

103
~~105~~

30'–40'

B

105
~~107~~

12	1..32		11.12	1.33		
	D B					
12	3..25					
11-12	2..00					
12	0..27					
		A small & faint nebulae reads 5'..00				h. 1056
12	10..05	comp 16 mag 8" n f. 2 min lost	12	10.08 2d lost		
11	1..40		11	1.40		
11	4..56		11	4.58		
	B			D D		
12	1..55					
12	2..27		12	2.28		14.8
12	9..09					
	Vacancy					
11-12	6..34		11.12	6.34		
9.10	10..42		9.10 ~~9.10~~	10.42		
	D			B		
12	0..54		~~11~~.12	0.52		
12	4..16		12	7.39 ns cent	?	8?
9.10	2..21		9.10	2.22	acc. br?	
11	0..22		12	0.21		
	B D			D B		
12	9..09		11	9.8	r	♃
10.11	10..08		10.11	10.8	B	
89	9..43	Cat: Star	8	9.42		r 35 14.8
12	2..28					B 35..39.2
						24.4
10.11	1..11		11	1.12		
10.11	4..56		10	4.56		
12	3..45		12	3 41		
10-11	3..10		11	3 11		
	B			D		
8	8..55	Cat: Star	9.10	8.53	Dbl	
9.10	3..19		9.10	3.19		
12	1..40		12	1.40		
12	8..30		~~11~~	~~B~~		
	B D					
11	5..29		11.12	5.27	B	
11	5..29 ?		12	5.28		
8	B			B D		

103
~~106~~

12.. 18..	16.6	20.6
19..	9.3	13.2
19..	20.8	24.6
19..	21.6	25.6
	DBD	
21..	10.0	14.0
21..	26.4	30.4
21..	38.3	42.3
22..	17.5	21.6
23..	13.5	17.4
23..	20.6	24.6
12.. 24..	9.4	13.4

105
~~107~~

12.. 18..	16.0	20.0
19..	8.4	12.5
19..	19.7	23.8
19..	20.7	24.7
	DBD	
21..	9.3	13.5
~~21..~~	~~37.5~~	~~41.2~~
21..	37.5	41.2
22..	16.7	20.5
23..	12.5	16.5
23..	19.8	—
12.. 24..	8.6	12.6

103
105

30 – 40

205
~~107~~

acc. mark

8	1..15	Cat. Star	8.	1.. 16	Catalogue
9	9..20	Cat. Star	10	9 19	Catalogue
11	8..11		11	8.10	
8	7..15 ms	Cat. Star	~~8~~ 9	7.14	Catalogue
	D B D			DBD	
12	1..22		12	1.21	
12	0 9 not. vis.		12	0. lost	
12	0 30		12	0.28 doubt very	
12	8 48		11–12	8.46	acc. mark
12	6 26		11–12 ac	6.26	
12	5 55		12	5.53 ? lost	
11	9 22		11	9.23	

104
106

30'–40'

106
108

May 17, 1855

P. S. C. observed and J. H. S. recorded

Therm. at beginning 49°
end 49°

12.. 25.. 34.0 38.0
26.. 12.1 —
D
28.. 57.3 1.2
29.. 19.0 23.0
29.. 43.5 47.4
29.. 50.6 54.6
29.. 52.2 56.0
B
31.. 59.3 3.3
32.. 15.8 19.8
32.. 55.6 59.6
35.. 22.5 26.4
35 51.6 55.5
3
DB

May 18, 1855

G. P. B. observed and C. W. T. rec.

Therm. at beg. 49.1°
" end 45.6

Lost
12.. 26.. 11.2 15.1
D
28.. 56.7 0.5
29.. 18.4 22.3
29.. 42.5 46.6
29.. 49.9 53.9
29.. 51.3 55.2
DB
30.. 46.9 50.9
31.. 58.7 2.7
32.. 55.0 59.0
35.. 21.9 25.8
B
35.. 50.9 54.9

~~106~~ 104 ~~108~~ 106

1855 May 17 PSC observed. [illegible] recorded,

30′ – 40′

	h m s	° ′ ″
8.9	12..25..34.50 29..50.5	+ 0..31..23.8 36..33
9	12..31..59.34	30..2.1
9	13..30..5.04	31..4.7
	13..49..3.25	30..27.2
8.9	13..52..16.78	32..18.3
9	13..55..51.04	39..7.3
	14..0..14.49	38..08.0
7	14..0..25.18	38..~~25.4~~ 06.0
9	14..1..41.03	36..59.0
9	14..1..44.14	38..40.9
8	14..12..2.29	39..20.2
9	14..36..23.33	40..2.3

May 17, 1855

P.S.C. observed

BD BD BD BD BD BD BD BD BD BD

9–10 1 28 = } out of focus

11–12 6 39 2d wire lost }

Dots for 1 minute?

9 ~~10~~ 0 9

10 6 44

10 3 18

9 6 38 Cat. Star ×

10 2 30 [illegible]

Brk.

9/10 0 3 Cat. Star ×

/12 8 49

11/12 9 10

11/12 5 39

~~12~~ ~~4~~

12 5 29

[illegible]

May 18, 1855

G.P.B. Observes

9–10 1 31

12 6 39

Dots for 1 minute

9 0..19 cert

10–11 6..47

10 3..19

9–10 6..38 ms

10–11 2..28 ms

D B

9–10 + 0..04 ~~cert~~

11.12 – 0..10

?

12 9..10

10 5..39

B

12 5..29

B B B

104
~~106~~

30 – 40

~~108~~ 106

12..38..24.5	28.4
38..29.0	33.0
39..14.5	18.3
39..25.5	29.3
40..9.2	13.2
40..46.2	50.2
B D	
41..18.0	21.6
44..47.0	50.9
45..49.8	53.5
46..42.0	45.7
B B D	
47..2.6	6.6
~~49..48.6~~	~~53.6~~
51..10.7	14.6
51..49.3	53.3
52..28.4	32.2
52..51.5	55.5
B D B	
55..00.7	4.8
56..44.2	48.0
57..5.3	—
59..28.3	32.3
12..59..37.1	—
B D	
~~13..00..34.5~~	~~38.5~~
~~2..1.5~~	~~5.3~~
~~3..32.8~~	~~36.8~~
~~5..24.2~~	~~28.1~~
~~6..51.1~~	~~55.2~~
~~5..58.1~~	~~2.2~~
10..45.1	49.1
11..39.7	—
11..44.8	
11..53.4	58.2
12..34.9	38.9
B B D	

!

2..01.5	5.3
5..24.2	28.1
5..51.1	55.2
5..58.1	2.2
6..40.7	44.5
7..06.0	9.9
7..10.9	14.5

~~6..40.7 44.5 – 7..06.0 9.9~~
~~7..10.9 14.5~~

37..51.9	56.0
12..38..23.9	—
38..28.3	32.0
39..13.5	17.6
39..24.9	28.9
> 40..08.5	12.5
40..45.6	49.5
D D	
4	
44..46.3	50.3
45..49.1	53.1
46..41.1	45.0
B	
47..1.9	6.0
51..9.9	13.9
52..27.8	31.6
52..50.9	54.7
D B D	
55..00.1	4.0
56..43.1	47.2
57..4.5	8.4
59..27.7	31.8
12..59..36.5	40.6
2..00.6 B	4.6
5..23.6	27.5
5..50.4	54.4
5..57.4	1.5
6..40.0	44.0
7..05.3	9.2
5..57.4	
6..40.0	
7..5.3	9.2
D	
10..44.6	48.5
11..38.9	42.8
~~11..53.2~~	~~57.2~~
11..53.2	57.2
D B	

39..58.3 3°	2.2
41..16.7	20.8
45..7.1	11.2
~~48..05.3~~	~~9.8~~
~~48..19.9~~	~~24.0~~
58..55.8	59.8
~~2..00.6~~	~~4.6~~
~~5..23.6~~	~~27.5~~
~~5..50.4~~	~~54.4~~
~~5..57.4~~	~~1.5~~
~~6..40.0~~	~~44.0~~
~~7..05.3~~	~~9.2~~

sig. for the * in 106

30'-40'

104
~~106~~

12 5 49
12 9 40 no. sig. R.?
12 2 29
12 6 29
12 10 29 2d scale
12 8 10
BD
12 2 19
12 7 19 R lost.
12 8 11
12 9 36 comp. 13. 30" np.
12 3 27
B.B.D 30Tc -
12 4.8 short signal ~~signal~~ much
~~13 9 10 signal R ?~~
12 7 19
12 9 22
9/10 3 11 very close double ?
12 8 38
B.D.B 3.8
12 5 18
12/13 4 49
11 10 4 — 2d wire lost
10 5 7
12 3 59 2d scale 2d wire lost
~~BD~~
12 7 1
12 5 18
12 5 10 bluish
11 0 44
12 7 7
13 10 10 2d ?
D.
Signal, the stars
12 9 25
11 10 40 2d wire lost
12 0 0 2d wire lost
12 1 51 1st wire ?
13 6 37
BBD

the * in 106

106
~~108~~

12 5..49 2 wire lost (12-13 1..09)
12 9..42
12 2..29 12 5..19
12-13 5..31 cert
12 0..19 cert
12 8..10
DD
12-13
12 faint
12 8..14 12 — 0..26
12 9..38 cert
12-13 3..27
B
12 4..11 ~~12-13 8..00~~
~~12-13 9..00 cert~~
12 7..19
12 9..23 No R
9 3..12
12 8..48 cert
DBD Several nearly vacant fields
12 5..18
12-13 4..49
11 10..44 cert. 12 — 0..12
9.10 5..14 cert.
12 3..59
B 9-10 10..48 (12) 8..48
12-13 5..18
12-13 5..10 ns
10 0..44
12-13 7..07 Starless field
D
12 9..28
11-12 10..42
12 ~~0..51 cert~~ seen
12 0..51 cert
13 6..36 No R
DB

30′-40′

	1024 ~~106~~		106 ~~108~~
13..13..13.4	17.6	13..13..12.5	16.8
14..5.7	9.5	14..5.0	9.0
14..44.0	48.0	14..43.4	47.4
15..31.0	35.0	15..30.2	34.2
17..21.8	25.6	17..21.0	25.2
DB		B B B B	
18..24.0	28.2	18..23.4	27.4
19..1.0	4.8	19..00.2	4.3
19..28.5	—	19..28.0	32.0
19..54.2	58.1	19..53.5	57.5
20..25.3	29.1	20..24.7	28.6
20..35.5	39.5	20..35.0	39.0
B D B		DB	
22..00.5	4.3		
22..17.4	21.5		
22 58.5	2.5		
23..28.7	32.7	23..28.0	32.0
24..42.3	46.3	24..41.8	45.8
B B		B	
26..19.4	23.3	26 —	22.4
26..49.4	53.6	26..48.9	52.8
D		D	
30..5.0	9.1	30..4.5	8.5
30..14.3	18.4	30..13.8	17.8
31..37.8	41.8	31..36.9	41.0
33..20.0	—		
34..24.1	28.1	34..23.5	27.6
34..32.3	36.3	34..31.6	35.6
B D		B	
36..23.9	27.8	36..23.0	27.1
37..17.8	21.5	37..16.8	20.8
37..52.0	55.9	37..51.2	55.1
41..47.6	51.7	41..46.8	50.8
42..20.9	24.8	42..20.2	24.1
B		DBD	
43..34.0	37.9	43..33.2	—
44..53.8	57.7	44..53.0	56.9
45..29.6	34.5	45..29.7	33.8
47..41.6	—		

104 ~~106~~	30′ – 40″	106 ~~108~~
12 5 59	12-13	5..59
12 5 30 bluish	12	4..30 cent
12 7 49 bluish gray	12-13	7..50
12 3 30	12	3..30
12 3 50	12-13	3..50
DB		B B B B
12 3 44	12-13	3..44
~~12~~ 11/12 2 12	12	2..15
~~12~~ 0 1 2d wire lost	12	0..02
11/12 7 2	12	7..04
11 3 18	11	3..19
11 7 19	11	7..19
BDB. [illegible]		D B
11/12 10 20		
12 7 —		
[illegible] no sig		
11 1 08	11	1..09 cent
11 1 18	11	1..18
B, B.		B
11 4 59	11	5..00 ns 1st wire lost
12 6 20 2d wire doubt.	12-13	6..21
Dots for [illegible]		D per one minute
10 1 3	9	1..07
12 4 29 2d sc.	11-12	4..29
12. 4 39 very faint atmos.	12	4.40 cent
12 4 22 2d wire lost	12	4..
11/12 6 29	11	6..29
11 7 22	10-11	7..22
B. D.		B
12 2 9	12-13	2..09
11 10 12 dew doubt.	12	10..10
12 3 25 ditto.	12-13	3..22
12 8 28	12-13	8..30
11 6 55	11	6..56
B		D B D Somewhat hazy
12 6 31	12	6..33 2 wire lost
12 2 24	12-13	2..23
12/13 2 21	12	2..20
12 0 55? [illegible] 2d wire lost [illegible]		0.. Seen but faint

104 ~~106~~ 30′ – 40′ 106 ~~108~~

13..49..3.9	7.9			13..49..03.1	7.2	
49..36.2	40.2			49..35.3	—	
50..4.6	8.4			50..3.8	7.8	
D B				B		
50..49.7	54.0			50..49.1	53.0	
50..58.5	2.3					
51..51.7	—			51..51.0	—	
51..56.0	0.0			51..55.6	59.7	
52..5.0	8.8			52..4.5	—	
52..17.3	21.3			52..16.5	20.6	
B D				D B		
53..4.7	8.9			53..04.0	—	
53..41.5	45.9			53..41.1	45.9	
53..55.7	59.6			circuit broken		
54..39.7	43.4					
55..51.5	55.3			55..50.7	54.7	
56..7.9	12.0			broken		
B B D				B B		
				broken		
13 57..1.8	5.7					
		0..14.8	19.0	0..14.4	18.4	This belongs to 9th mag.
14..0..25.3	29.4			0..24.7	28.7	
~~14..00~~	~~33.5~~	left out				
0..36.2	40.0			0..35.6	39.5	
1..12.9	16.7			1..12.1	16.2	
1..41.3	45.2			1..40.7	44.5	
1..44.3	48.6			1..44.0	47.9	
B D B				D B D		
2..18.0	22.0			2..17.4	21.4	
4..10.2	14.1			4..9.6	13.4	
4..35.0	—			4..34.2	—	
9..36.3	40.2			9..35.8	39.6	
9..44.2	48.2			9..43.6	47.4	
10..13.4	17.2			10..12.5	16.6	
10..19.2	23.2			10..18.3	22.3	
10..42.4	46.5			10..41.8	45.8	
11..3.2	7.0			11..2.4	6.5	
D D				B B		
12..02.5	6.5			12..1.9	5.9	
13..44.0	48.0			13..43.3	47.4	
14..9.0	13.0			14..8.2	12.2	

+2 43 104			30′ – 40′		106 ~~108~~
10 =	0 20		10	0..22	
12/13	8 19		12-13	8..20	2 wire lost
12	10 18		12	10..09	cent
DB			B		
12	8 30		12	8..30	
12/13	8 8		12	8..08	R lost Hazy
12	1 00	bluish 2d w lost	12	1..00	2 wire lost
11/12	5 18		12	5..20	
12	-0 20	? dre	12	-0..20	2 wire lost
10	2 15		10	2..17	
BD			DB		
12	1 37		12	1..37	2d wire lost
11	0 20		11	0..20	
11	6 50	accidental marks	11	6..52	
11/~~12~~	~~2~~ 51		11/12	2..56	cent
9/~~12~~	9 9		9	9..10	
11/12	1 49	1st wire?	11-12	1..52	
BBD.			B B		
12	0 20	{ scale is so dirty that many stars ~~[illegible]~~ are lost.	12	0..20	8 cent ~~g not this 8..09~~ ? No!
~~12~~ 9	~~8~~ 0..06	~~[illegible]~~	9	0..09	7/7 ✳
7	8 9	1st wire lost	7-8	8..12	yellowish
12	2 0	noisy	12	2..00	~~yellow~~
11	6 5		12	5..09	cent
10	7 58		11	7..02	cent
9	8 42		10	8..43	ns
BDB			DBD		
11	7 12		12	7..14	
11	6 49		12	6..50	
12	2 26	2d wire lost doubt.	12	2..36	2d wire lost
~~12~~		~~2d wire lost~~			
9	6 4		9/10	6..05	
10	2 59		10	2..59	
11	9 12		11	9..12	
11	4 58	noisy.	11	4..58	ns
12	4 39	1st wire d.	12	4..44?	
11	3 45		11	3..46	
DD.			BB		Clouding up
8	9 23	Cat. Star	8	9..26	
11	3 50		11	3..49	
12	~~4~~ 0 00	double 5″	12	0..00	

104
~~106~~

30′ 40′

14.. 14.. 32.3 36.3
D
16.. 52.0 56.0

18.. 33.0
18.. 39.9 w 2 min
19.. 22.5 ~~26.5~~
19.. 41.4 45.4
B B D
23.. 53.0 57.0

D B
28.. 16.0 20.1

106
~~108~~

14.. 14.. 32.0 35.9
B
16.. 51.5 55.4
18.. 28.6 32.4

19.. 41.0 44.9

25.. 49.0 53.0

D B

14 31.. 03.3 7.3

	104 ~~106~~	30 – 40	106 ~~108~~
12	3 43) no star in field	12	3..43
D.			B
10/11	10 8	11	10..07
12	2 59 noisy	12	2..00
12	1 19 ? altogether	~~12~~	
10	6 23	10	Clouds
9	8 28	9	8..28
9/10	8 39 2d wire lost	9.10	8..39
10	1 39 1st wire lost [? 0..39]	10	
BBD.			B Clouds
12	2 18	12	2..18 No R
12	~~2 01~~ ~~See~~		
12	~~9 03~~ ? 205		Clouds
11	6 59 2d wire?	11	6..58
12	2 05 1st? 2d lost.		
12	9 21 R lost		
12	3 46		
δB.			D B
12	8 39		8..
12	~~6 29~~ 5 –		
12	6 29 2d wire lost	12	
12	0 43 2d wire lost	12	
12	~~5 29~~		
11	~~0~~ 1	11	1..01

Work Zone since Lamont.

107
~~109~~ 20' to 30' 106

1855 The first star is A of Zone 103
reads 9..22

~~[illegible]~~
June 8th

G.P.B. obs.
C.W.T. rec.

1855 June 8th, ~~[illegible]~~ 1855 June 11

G.P.B. Observes

Therm. at begin. 56°.8 Therm at beg. 57.7 E.C. 14..30 h m
End E.C. 16..35 50.8 .. end 52.7 16..

11..46..09.8	13.8	11..46..09.4	13.3
47..17.4	21.3	47..17.0	21.0
47..45.9	49.5	47..45.6	49.7
48..6.7	10.6	48..6.2	10.2
B		D B	
49..04.9	8.8	49..4.5	8.6
49..20.2	24.2	49..19.9	23.9
49..35.2	39.2	49..34.9	38.8
49..36.0	40.2	49..35.9	39.8
D B		B B	
52..21.3	25.3	52..20.8	24.9
52 —	29.4	52 —	28.9
52..34.5	38.5	52..33.9	38.1
54..1.7	5.7	54..1.3	5.3
54..2.1	6.1	54..1.8	5.8
B B		D	
54..48.8	52.7	54..48.2	52.3

Catalogue stars, 20' to 30'

~~109~~ 107 ; 108 ~~110~~

	Æ h m s	δ ' "		α	δ ' "
9th	11..40..21.0	28..23	8th	13..16..55.8	26..28
6,7	41..37.8	29..12	9th	20..03.9	22..32
8th	11..54..02.2	25..43	9th	20..37.5	26..07
9th	12..00..42.3	24..24	7th	26..53.2	25..38
8,9	28..57.2	30..34	9th	49..03.2	30..24,
9th	31..59.3	30..02	---	49..57.2	22..12

June 8th 1855 Clear and fine
Definition excellent
G.P.B Observes

June 11 nearly calm Clear-good definition
G. P. B observes

10.11	9..25	10	9..25
11	3..59	11	3..59
12	4..42 cent	12	4..43
12	7..44	12	7..43
	B		D B
11	4..08	11-12	4..07
12	5..08	12	5..09
12	2..19	12	2..20
12	1..19 ms	12	1..20 ms
	D B		B B
12	0..00	12	—0..01
12	1..04 ms 1st wire lost	12	1..03 ms 1st wire lost
12	9..03	12	9..03
9	6..32	9	6..33
8.9	5..37 ms Cat-Star	8.9	5..37 ms A star of 12 mag. 20" n.f.
	B B		D
12	10..34	12	10..25 cent

107 ~~109~~ 20' to 30' 108 ~~110~~

11..55..14.2	18.1	11..55..13.8	17.9
58..15.5	19.5	58..15.1	19.1
11 59..39.5	43.5	11..59..39.1	43.1
D B D		B D	
12..0..17.5	21.5	12..00..17.1	21.0
0..42.2	46.2	0..41.9	45.9
1..5.7	9.7	1..5.4	—
1..—	13.7	1..9.4	13.4
D B		D B D	
3..24.0	—	3..23.7	—
3..25.7	29.7	3.. Ink failed	
4..15.0	19.0	4..14.8	18.7
4..30.4	34.5	4..30.0	34.0
6..27.7	31.8	6..27.3	31.4
6..29.2	33.0	6..28.9	32.9
6..39.3	43.3	6..39.0	42.9
B B		B	
7..34.2	38.2	7..33.9	37.9
7..50.2	54.3	7..50.0	53.9
7..51.5	55.5	7..51.0	55.1
9..41.4	45.4	9..41.1	45.1
9..58.2	2.2	9..57.9	1.9
10..37.8	41.8	10..37.4	41.5
B D B		D B D	
13..27.7	31.6	13..27.5	31.5
15..11.9	15.9	15..11.4	15.5
15..19.6	23.5		
15..56.6	0.5	15..56.2	0.2
17..00.8	4.9	17..0.5	4.4
17..24.7	28.7	17..24.4	28.3
B		D	
20..21.2	25.2	20..20.9	24.8
20..34.4	38.4	20..34.2	38.2
20..44.1	48.1	20..43.8	47.9
21..7.9	11.9	21..7.5	11.6
23..47.1	51.1	23..46.9	5[illegible]9
D B		B B	
24..30.0	34.1	24..29.8	33.7
24..46.2	50.2	24..46.0	49.9

107 ~~109~~ 20' to 30' 108 ~~110~~

9.10	5..01		10	5..02	
12	9..12		12	9..12	
12	8..53		12-13	8..55	
	D B D			B D	
12	4..34	Cat: Stars	12	4..36	
9	4..26		9	4..26	
11	−0..24		11	−0..24	2 wire lost
11	0..54 ms	1st wire lost	10	0..56 ms	
	D D			D B D	
11-[illegible]	8..23	2 wire lost	11	8..24	2 wire lost
9	1..39	ms	9.10	1..39 ms	yelowish
12	−0..12		12	−0..12	
10	−0..38		10	−0..38	
9	4..38		9	4..39	
12	0..48 ms		12	0..49 ms	
11-12	7..47		11-12	7..48	
	B B			B	
12	1..20		12	1..20	
11-12	0..40		12	0..40	
11	2..46 ms	Several starless fields	11	2..46 ms	
11	10..20		11	10..22	
12	3..31		12	3..32	
12	7..50		12	7..51	
	B D B			D B D	
12	3..09	Very few stars passing	12	3..09	Very few stars passing
12	5..30		12-13	5..31	
12	8..03	comp 15 mag. 16" s.f.			Seen after passed
10	1..00		10	1..03	
10	−0..40		10	−0..40	
10	4..49		10	4..51	
	B			D	
11	2..33	comp 16 mag 20" s.f.	11	2..33	
11	3..32		11	3..32	
9-10	1..12		9-10	1..19 cert	
12	9..21		12	9..25 cert	
11	4..06		11	4..07	Several 13 mag. near by
	D B			B B	
12	1..03		[illegible]-12	1..03	
10-11	2..03		10	2..03	

~~109~~ 107			108	
12.. 25.. 51.1	55.0		12.. 25.. 50.7	54.6
27.. ~~7.0~~	12.8		27.. 8.3	12.4
27.. 18.1	22.0		27.. 17.9	22.0
27.. 51.3	55.4		27.. 50.9	55.1
27.. 53.7	57.7		27.. 53.2	57.3
B			D	
28.. 24.6	28.5		28.. 24.0	28.1
28.. 57.3	1.3		28.. 57.0	1.0
29.. 10.9		no 2 wire	29.. 10.7	14.7
29.. 13.5	17.5		29.. [illegible]	17.1
30.. 8.4	12.5		30.. 8.1	12.1
30.. 30.7	34.7		30.. 30.3	34.3
30.. 47.6	51.7		30.. 47.3	51.3
30.. 58.3	2.3		30.. 58.0	2.1
B D B			B	
31.. 59.5	3.5		31.. 59.2	3.1
32.. 52.3	56.3		32.. 52.1	56.0
34.. 31.4	35.4		34.. 31.2	35.2
34.. 51.9	56.0		34.. 51.7	55.8
35.. 19.5	23.5		35.. 19.3	23.2
35.. 26.9	30.9		35.. 26.5	30.5
B			B	
36.. 51.5	55.4		36.. 51.2	55.0
37.. 13.9	18.0		37.. 13.5	17.5
37.. 42.4		nebulae h.1420	37.. 42.2	46.6
B D B D B D B D			D B D B	
39.. 2.9	7.0		39.. 2.8	6.7
40.. 9.5	13.4	?	40.. 9.1	13.0
40.. 41.8	45.8		40.. 41.1	45.1
			40 41.3	45.4
D			B B	
43.. 10.8	14.8		43.. 10.5	14.5
44.. 12.8	16.9		44.. 12.6	16.7
44.. 23.3	27.3		44.. 23.0	27.0
44.. ~~35.4~~	35.4		44.. 31.0	34.9
44.. 39.4	43.5		44.. 39.1	43.2
44.. 44.9	48.8		44.. 44.6	48.7
46.. 3.2	7.0		46.. 2.9	6.9
B B D			B	

107 ~~109~~ 20 30 108 ~~110~~

			~~[illegible]~~	~~[illegible]~~	
11-12	1..10		12	1..13	
11-12	4..11	reject 1st wire	12	4..14	
12	3..50		12	3..52	
12	7..49		12.13	7..51	
12	7..28 ns		12	7..29 ns	
	B			D	
12	4..06		12	4..07	
9	10..15	Cat. Star	9	10..16	
12-13	~~2..00~~ 3..45?	double 12-12 mag dist 1" fol	12-13	3..50	comp 12" fol — 12.13 mag
10	8..00		10	8..01 cert	
10.11	3..36		10	3..38	
12	7..14		12	7..16	
12	9..47		12	9..49	
11 12	3..03		11-12	3..05	A meteor of 11 mag.
	B D B			B	passed through the field leaving
9.~~x~~	10..03	Cat Star	9	10..02	a train
12	6..42		12	6..43	
10	4..52	This star is fol. by a star of	10.~~x~~	4..54	
8	9..10	12-13 mag. which is double	8	9..12	yellow
12	2..07	comp. 13 mag 7" n.f.	12	2..08	
12	1..49 ns		12	1..49	
	B			B	
12	0..00	the sig. was the time of passing	12	0..00	
9.10	5..12	between the wire	9.10	5..13	
Neb	−0..25	A ~~[illegible]~~ nebulae elongated	Neb	−0..25	Nebulae - elong~~ated~~
	B D B D B D B D	in the direct. s f. n.p.		D B D B	in dir. n.p. s.f.
10-11	−0..23		10-11	−0..22	
12	10..15	like the Nebula in	11	10..18	
12	8..10	Andromeda	12	8..13	
8	5..54		7-8	5..56 ns	
	D			B B	
11-12	5..28		11-12	5..29'	
10	3..50	A most remarkable	10-11	3..52'	
11	3..47	group of stars	11	3..49'	Two 12 mag
11	1..34	Two stars of 11-12 were	11	1..37'	not obs
12	4..34	not observed	12	4..38 ns	
9-10	4..48 ns		9.10	4..49	
12	3..57		12	3..59	
	B B B			B	

107 ~~109~~ 20 30 108 ~~110~~

12.. 46..36.5	39.5	12..46..35.3	39.4
47..35.8	39.8	47..35.4	39.5
49.. 8.6	12.6	49.. 8.4	12.4
49..28.2	32.2	49..28.0	32.0
50..28.7	32.7	50 —	32.3
50..41.8	45.7	50..41.3	45.3
DB		B	
51..42.9	46.8	51..42.4	46.5
53..51.9	55.8	53..51.8	55.7
54..28.9	—	54..28.7	32.6
54..37.5	—	54..37.2	41.2
54..46.1	—	54..45.9	50.0
54..55.7	59.7	54..55.3	59.3
B		D B	
56..39.2	43.1	56..39.1	43.1
57..8.3	12.3	57..8.0	12.0
58..37.2	41.2	58..36.9	40.9
58..43.7	47.6	58..43.2	47.2
58..56.8	0.8	58..56.5	0.5
B B		D D	
12..59.47.7	51.7	12..59..47.4	51.4
13.. 1..4.2	8.2	13.. 1..4.0	8.0
1..50.3	54.3	1..50.0	54.0
3..4.8	8.8	3..4.6	8.5
3..18.0	22.0	3..17.6	21.6
D		B	
		3..43.5	47.5
6..13.8	17.9	6..13.7	17.6
6..40.9	44.8	6..40.6	44.4
7..7.8	11.9	7..7.6	11.5
7..34.6	38.5	7..34.3	38.2
9..28.3	32.4	9..28.2	32.1
9..34.5	38.3	9..34.1	38.0
DBD		BDB	
11..44.7	48.7	11..44.4	48.3
13..8.0	12.0	13..7.7	11.7
13..38.2	42.4	13..38.1	41.9
14..29.7	33.7	14..29.6	33.3
B		D	

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20' to 30' 108

11	6..19		11	6..20		
11-12	6..11		11-12	6..13		
10	0..28		10	0..30		
10-11	6..17		10-11	6..19		
12	5..39		12	5..45	1" wire lost	
12	6..02		12	6..05		
	D B			B		
10	1..13	bluish	9-10	1..15		
12	6..35		12	6..36		
12	1..25	2 wire lost	12	1..27	1" wire perfect	
12	2..47	2 wire lost	12	1..52 ?		
12	3..11	2 wire lost	12	3..12		
12	6..39		12	6..41	Two faint comp. near	
	B			D B		
12	5..33		12	5..35		
12	6..33		12	6..36		
11	8..37		11	8..39		
11	1..36 ms		11	1..38 ms		
11-12	9..52		11	9..46	cert	
	B B			D D		
9.10	– 0..33		9-10	– 0..30		
11	4..55		10.11	4..57		
12	8..53		12	8..59		
12	6..08		12	6..11		
9	1..07	Slightly red	9	1..11		
	D			B		12-13 10..11 comp 14 mag
12	3..39		12	3..43		[12" n. f.
9	10..11		9	10..45	cert	
12	9..11		12	9..15		
10-11	8..59		10.11	9..01		
~~11~~12	5..36		12	5..39		
11-~~12~~	0..07 ms		11	0..09		
~~11~~	D B D			B D B		
11-12	~~10..26~~ 9..56		11-12	10..00		
12	8..40		12	8..44		
12	3..35		12	3..35		
12	0..31		12	0..35		
	B			D		

13..16..56.3	0.3					
17..36.1	40.1		13..17..35.9	39.8		
19.. 6.1	9.9		19.. 6.0	9.9		
19..28.9	32.8		19..28.7	32.4		
19..52.1	56.0		19..51.9	56.0		
20.. 4.1	8.1		20.. 4.0 B	7.9		
20..38.0	41.9		20..37.6	41.7		
B B			B B B B			
21..18.5	22.4		21..18.3	22.2		
26..14.7	18.8		26..14.5	18.5		
26..53.4	57.2		26..53.0	57.0		
27..59.3	3.3		27..59.0	3.0		
B			D B D			
31..43.0	46.9		31..42.6	—	~~31..5~~	
31..50.5	54.4		31..50.2	—	31..54.8	—
32.. 2.3	6.3		32.. 2.1	6.1		
34..15.9	19.8		34..15.8	19.9		
34..19.3	23.2		34..19.1	23.1		
34..25.8	29.9		34..25.8	29.8		
D B			B			
35..30.1	34.0		35..29.9	33.9		
36.. 0.9	4.9		36.. 0.6	4.5		
36..16.7	20.7		36..16.5	20.5		
36..45.6	49.4		36..45.0	49.2		
37..36.4	40.3		37..36.1	40.1		
D			D D D		39..04.6	8.8
40.. 3.0	7.0		40.. 3.0	6.9		
40..10.8	14.8		40..10.5	14.4		
41..38.0	42.0		41..37.3	41.7		
42..27.6	31.5		42..27.2	31.2		
43..21.0	25.2		~~43..20.~~			
43..58.7	2.7		43..58.3	2.3		
B			D			
47..37.3	41.3		47..37.1	41.0		
47..43.2	47.2		47..43.0	47.0		
47..57.5	1.5		47..57.2	1.2		
48..48.7		a single wire —	48..48.3	52.3		
49.. 4.0	8.0		49.. 4.0	7.9		
49..20.7	24.7		49..20.4	24.5		

107 ~~109~~ 20 h 30' 108 ~~110~~

8	6..29	Cat. Star		Not observed	
11	8..40		11	8..44	× The last-wire only good for another * from ~~the~~ a prec. wire [reject
12	3..15		12	3..17	
10-11	10..01		10-11	10..05	
10	9..00		10	9..03	
9	2..31	~~Cat~~ Cat. Star	9	2..34 B	
9	6..09	Cat. Star	9	6..62	
	B B			B B B B	
12	9..20		12	9..22	
11	9..08		10-11	9..09	
7	5..43	Yellow	7	5..45	Very close double - comp. 10 mag. 3" n. f.
11	0..40		11	0..43	
	B			D B D	
12	4..25		12	4..28 2 wire lost	
~~12~~ 12	2..59		12	3..03 2 wire lost	12 5..20 2 wire lost.
10.11	1..03		10-11	1..05	
12	8..18		12	8..19	
10.11	8..04 ms		10-11	8..06 ms	
11	−0..34		10	−0..32	
	D B			B	
11	7..42		10-11	7..45	
12	9..30		12	9..31	
	4..23		12	4..26	
12	0..11		12	0..12	Before this *, a varying mark
12	3..09		12	3..11	
	D			D D D	12 0..08
11	0..07		12	0..08	
12	2..08		11-12	2..11	
12	4..06		12	4..08	
12	5..23		12	5..26	
12	5..51				
12	2..06	There is another 12 mag in same AR dist. 50" south	12	2..09	
	B			D	
12	2..22		12	2..26	
11-12	5..12 ms		12	5..15 ns	
12-13	−0..11		12-13	−0..09	
11-12	0..41	Cat. Star 9th mag	12	0..43	
10	10..18	A small round nebula	9	10..19	A small nebula fol this star
10-11	3..49	[prec. this star 2'	11	3..49	

107 ~~109~~	20' to 30'	108 ~~110~~

13.. 49.. 58.2 2.1   13.. 49.. 57.8 1.9

9.10 2..07 9 2..09

June 12, 1855

G.P.B. Observes

E.C. 14..06 Ext Th at beg. 55°.5
16 End 50.2

13..49.. 3.6 7.6
49..20.2 24.3
49.. 57.7 1.6
51.. 26.8 30.8
51.. 34.5 38.7
B
52..4.9 9.0
53.. 6.9 10.9
53..41.6 45.5
B D
54..18.3 22.3
56..36.9 40.9
57.. 1.6 5.7
D
14.. 0.. 14.8 18.8
0..54.3 58.3

June 13, 1855

J.H.S. Observes

E.C. 14^{h}..33^{m} Therm 52°.7 J. F. Flagg Rec.
E.C. 16..42 49.0

13..49.. 3.2 7.2
49.. 19.8 23.9
49.. 57.3 1.2
51.. 26.0 30.0

D

52.. 4.2 8.2
53.. 6.0 10.2
53.. 41.2 44.9
D B
54.. 17.7 21.7
56..36.7 40.4
13.. 57.. 1.0 4.9
B
14. 0.. 14.3 18.0
0.. 53.9 57.8

20′ to 30′
Catalogue Stars

R	13..49..03.25	δ+ 0..30..27.2
R	49..57.24	22..13.1
8	56..36.59	20..9.4
R	14..0..44.49	30..9.0
9	17..20.68	26..49.3
9	23..46.32	24..30.7
8.9	32 3.97	22..45.1
8	40..8.78	20..00.8
7	43..34.87	20..33.8
9	43..55.48	21..12.1
6	50 7.40	25..9.1
9	52..27.29	30..20.1
6-7	54..23.47	26..8.8

		° ′
8.9	15..00..04.59	δ + 0..28..26.7
8.9	~~3..35.63~~	~~30..10.7~~
9	20..34.61	23..57.3
8	27..24.02	20..28.6
8	50..15.14	19..53.6
9	50..43.37	28..26.4
8.9	57. 7.33	22..44.5

June 12, 1855 Clear and calm. June 13, 1855

J. F. Flagg

G. P. B observes C. W. T records T. H. S. Obs. J. F. F. Rec.

☞ See Note at 15h

9	10..28	9	10.24	~~2..27..0.3~~ 35..31.½
11	4..01	11	5.56	
9	2,,16	9-10	2.11	
11	5..37	11	5.81	
12	7..19			second wire & dec. lost
B		D		
12	9..50	11	9.46	
10-11	9..22	10-	9.18	
10-11	10..31	10	10.36	
B D		D B		
12	7..42	12	7.36	
8	0..14	8	0.09	
12	10..29	12	10.23	
D		B		
7	10..16	7	10.10	
12	10..16 Comp. 12 mag. 13" n. p.	12	10.11	Comp. 13 Mag. 12 n. p.

169 ~~111~~ 20° to 30′ 110 ~~112~~

14.. 00..59.3	03.3	14.. 02..	
2..51.8	55.8	2..51.1	55.2
2..59.0	—		
3.. 1.9	5.8		
3.. 9.1	13.2		
B B			
3..47.0	51.0		
6.. 5.5	9.4	6.. 4.5	8.5
6..36.9	40.9	6..36.0 B D	40.4
D D		B	
8..39.0	43.0	8..38.6	42.7
9..50.0	54.0	9..49.4	53.4
11..19.0	23.0	11..18.7	22.4
11..46.7	50.7	11..46.1	50.0
B		D B	
12..31.9	36.0	12..31.5	—
12..33.4	—	12..33.0	—
12..37.8	41.8	12 —	41.2
13.. 4.5	8.3	13.. 4.0	7.8
13..14.1	18.1		
D D B		B	
14.. 8.9	12.8	14..08.4	12.1
14..30.8	34.7	14..30.0	34.1
14..59.0	3.0	14..58.4	2.3
15.. 7.5	11.5		
B		D	
16..00.6	4.7	16..00.2	4.0
17.. 8.1	12.1	17.. 7.8	11.7
17..15.0	19.0	17..14.5	18.6
17..20.8	24.8	17..20.3	24.2
D B		B	
19..28.3	32.1	19..27.8	31.8
21..23.1	—	21..22.5	26.7
21.. —	27.3	21..23.0	—
23..46.5	50.6	23..46.0	59.9
B		D	
24..22.6	—	24..22.0	—
24..38.8	—	24..38.0	41.9
24..50.1	54.0		

~~111~~ 109 | 20' to 30' | ~~112~~ 110

12	3..03 ms			—	lost
9	3..32		9-10	3.26	
12	5..12	2 wire lost			
11	0..23				
11	4..17	another star 12-13^m follows by [3^s and 4 in B		lost	
	B B				
12	7..15				
12	9..12		11-12	9.06	
				B D	
10	7..01		10-11	6.56	
	DD			B	
10-11	1..44		10-11	1.40	
11	8..27	comp. 12 mag 15" s.p.	11	6.21	Comp. 12-13 mag. s.p. 15"
12	5..25		12-13	5.18	
11	4..22		11	4.17	
	B			D B	
12	1..17			N.S	Dec. lost & 2nd wire lost
11	4..47	ns 2 wire lost		4.40 N.S	second wrong
10-11	8..08 ms			8.04 N.S.	first wire lost
10-11	6..59			6.52 N.S.	
12-13	5..56				
	DD B			B	
11-12	10..09	comp. 12-13 mag 12" n.p		10.02	
11-12	5..26		11	5.19	
10-11	4..37		10-11	4.24	severe
9	-0..38			lost	
	B			D	
12	3..20		12	3.14	
10	2..20		10-11	2.14	c
12	3..31 ns ~~2 wire lost~~		12	3.25	n.S
9	6..59 ns	Orange	9	6.51	n.S
	D B			B	
12	4..32	a star of 12 mag passed	12	2.28	
12	7..13	2 wire lost	11	7.06	
10	2..14	1st wire lost - comp. 13 mag 8" s.f.	10-11	2.08 n.S.	2nd w. lost
9	4..37		9-10	4.31	
~~12~~	B			D	
12	8..01	2 wire lost	12	7.36	2d w. lost
12	1..31	2 wire lost	12	1.25 n.S.	
12	6..11			lost	

109 ~~112~~ 20 to 30′ 110 ~~112~~

14..25..15.0	19.0	14..25..14.4	18.2
26..31.8	35.3	25..30.5	34.8
25..59.3	3.3	25..58.4	2.5
26..57.5	1.4	26..56.9	1.0
27..5.9	10.0	27..5.5	9.4
B B B B		D B	
28..23.8	27.7	28..23.4	27.3
28..46.3	50.5	28..46.0	50.0
29..33.8	37.9	29..33.4	37.[illegible]
29..48.8	52.8	29..48.3	52.3
D B		B	
32..4.0	8.0	32..3.5	7.5
32..11.8	16.0	32..11.2	15.4
32..43.7	47.2		
33..0.8	4.8	33..0.1	4.1
33..30.5	34.5	33..30.0	33.7
33..54.7	58.5	33..54.2	58.0
33..59.7	3.5		
B B		D	
36..8.0	12.0	36..07.3	11.2
36..55.5	59.6	36..55.0	58.8
37..50.2	54.1	37..49.6	53.7
38..42.2	45.0 Nebula		
40..8.9	12.8	40..8.7	12.3
40..49.2	53.2	40..48.5	52.5
D D		B	
41..34.9	38.9	41..34.2	38.2
41..57.2	1.2	41..56.8	0.7
42..48.0	52.0	42..47.4	51.4
42..58.4	2.3	42..58.1	1.7
B		D	
43..35.3	39.2	43..34.8	38.8
43..38.0	42.0	43 —	41.5
43..55.5	59.6	43..54.9	58.9
45..24.4	—	45 - - -	- - -
45..30.2	34.2	45..29.9	33.7
45..30.9	34.8	45..31.2	34.2
B B B		B D	
49..25.9	29.8	49..	

47..27.6 31.5

~~111~~ 108 20′ to 30′ ~~112~~ 110

11-12	0..18		11-12	0.12	
10	1..46	Several stars of 12 mag. not	10-11	1.39	
9	5..26	Reddish [observed	9	5.19	
10	0..49		10	0.42	
11	0..38		10-11	0.32	
	B B B B			D B	
12.13	4..13	comp. 12-13 mag 12″ n.f.	13	4.06	n.s Comp. 13 mag. n.f.
12	5..42		12	5.36	
9-10	9..27		9-10	9.21	
10	3..05		10-11	2.59	
	D B	Small stars numerous		B	
9	2..55		8-9	2.49	
10	10..47		10	10.41	
Neb.	0..20	Faint-nebulous; cometary; 1′ in diam		lost	Neb. h. 1857
11	4..31	~~Nebular~~ ^ ~~1′ in diameter – Cometary~~ ~~N. uncert.~~	11-12	4.24	
11	0..23		11	0.17	
12	7..21		12-13	7.17	
12	5..04 ns			lost	
	B B			D	
12	8..02		12-13	7.56	
12	6.14		12	6.08	
12	2..40		12	2.34	
Neb	3..30	Nebular, round – cometary with a nucleus – diam 40″ Rated 8 uncert.	Neb.	3.15	Nb not obs. h.1875
7.8	0.05		7-8	−0.01	n.s
12	2..14		11-12	2.08	n.s
	D D			B	
12	2..18		11-12	2.11	
10	0..56		10-11	0.49	
11-12	7..19		12	7.11	
11-12	5..55		12	5.49	
	B			D	
7	0..42		6-7	0.35	
12	3..17 ns		11	3.10	n.s 1st wire lost
9.~~10~~	1..23		10	1.16	
12	5..05	2 wire lost	12	4.59	~~n.s~~ ~~Chr. lost~~ Chr. lost
10.11	4..02 ~~ns~~		11	3.57	(n.s.?)
11	6..29 ns		10-11	6.22	n.s
	B B B			B D	
12	−0..11		12	−0.19	

~~111~~ 109 20' to 30 ~~112~~ 110

14..49..43.7	47.7	14..49..43.2	47.1		
50.. 3.8	—	50 ·3.3	~~7.2~~		
50.. 7.8	11.7	50.. 7.2	11.2		
50..10.4	14.3	50.. 9.9	13.9		
B D		D			
51..15.9	19.8	51..15.2	19.0		
52..27.4	31.4	52..27.1	31.0		
52..34.2	38.2	52..33.7 D	37.7		
53..15.3	19.4	53..15.0	18.8		
B		~~D~~		53..38.2	42.2
54..24.0	28.0	54..23.6	29.6		
54..51.0	55.0	54..50.2			
56..23.3	27.3				
56..28.0	31.9				
D					
57..50.5	54.5	57..49.5	53.6		
57..51.9.	55.8	57..51.1	54.9		
58..17.0	20.8				
14..58..20.1	24.0				
B B		D B			
15.. 0.. 4.7	8.7	15..00.. 4.1	8.0		
9.2	13.2		12.7		
0..36.0	40.0	0..35.6	39.1		
1.. 1.2	5.2	1..			
1.. 3.3	7.2	~~B~~			
B D					
3..12.1	16.1	3..11.7 B	15.4		
3..40.2	44.2				
4..55.0	58.9	4..54.4	58.5		
6 33.6	37.6				
D		B			
7..31.1	34.9	7..30.8	34.5		
7..40.9	45.1	7..40.6	44.7		
8..24.7	28.6	8. 24.2	28.0		
8..25.5	29.5	8..25.1	29.0		
8..52.5	56.5	8..51.9	56.0		
B		D B			
9..20.5	24.5	9..19.8	23.8		

As Zones 111 & 112 agree there is probably an error in Bessels Zone 74 or

Note to Zone 111

In refilling the pen it is possible that AR altered 1s.

A change of 0s.5 appears on comp with Weisse's Stars but a new Zone also begins in Bessel at 15h..01m & it may be that it is in error

109
~~111~~

20' to 30'

110
~~112~~

~~12~~12 ~~[illegible]~~ 6..49
11 4..13 2 wire lost
6 5..14
10-11 0..46
B D
12 8..51
9 10..32
11 7..32 ns
12 4..47
B
6~~8~~ 6..16 Golden
12 4..50 2 ~~starlost~~
12-12 6..20
12 5..10
D
11 7..00
10 10..29 ns
11-12 3..51
11-12 9..14 ns
B B
9 8..39
12 6..35 ns
~~12~~ 8 10..19
12 10..43
12 4..19 comp
B D Pen re-filled
12 4..19
11-12 3..04
10 8..25
12 2..36
D
10 4..09 pale garnet
12 0..29
12 1..07
12 9..08
9-10 2..14
B
11 9..11

12 6.44 n.s 2d wire lost
10 4.05 n.s
6 5.07 n.s
10-11 0.40 n.s
D
11-12 8.44
9 10.25
10-11 7.28
~~12~~ lost
D ~~B~~
lost
12 4.40
13 6.14 5.40+ 2 w. lost
7 6.9

~~Z~~ (?) (?)
3.48 one or more observed
very uncertain

D B
9-10 8.32
11 6.28 n.s.
8 10.12
11-12 4.11
B
lost
10 8.20
lost
B
10 4.02
12-13 0.21 n.s.
12 1.01
11 9.01 n.s.
8-9 2.09
D B
11 9.04

109 ~~111~~ 20ʹ 10ʹ 30ʹ 110 ~~112~~

15.. 9..46.4	50.6	15.. 9..46.1	49.7
9..58.7	2.8	9..58.3	1.9
10..18.4	22.4	10..17.9	21.8
10..35.0	39.1	10..34.4	38.3
D B D		B D	
11..10.1	—	11..9.5	13.7
11..14.4	18.4	11..14.1	17.9
11..26.8	30.7	11..26.2	30.0
12..47.7	51.7	12..47.0	51.0
B		D	
13..37.7	—	13..37.4	40.9
13..43.0	47.0	13..42.7	46.4
13..49.9	53.8	13..49.4	53.2
14..11.9	15.9	14..11.5	15.2
15..6.5	10.5	15..5.9	9.8
15..25.6	29.7	15..25.1	29.3
D B		B D	
15..55.2	59.2	15..54.6	58.3
17..33.2	37.3	17..32.9	36.8
18..10.3	13.9	18..9.7	13.8
18..16.0	20.0	18..15.5	19.5
B B		D	
18..37.3	41.2	18..36.8	40.4
19..6.9	10.9	19..6.2	10.0
19..20.1	24.3	19..19.7	23.6
20..35.6	39.4	20..35.0	39.0
D		B B	
21..10.0	13.8	21..09.4	13.6
21..12.4	16.5	21..11.9	15.7
21..38.8	42.9		
24..51.0	55.0	24..50.4	54.4
25..9.4	13.3	25..9.0	12.9
25..14.8	18.8	25..14.0	18.2
B D B		B	
25..52.0	55.8	25..51.2	55.2
26..6.2	10.0	26..5.7	9.7
26..9.0	13.0		
26..44.2	48.2	26..43.5	47.5
27..0.9	5.0	27 0.7	4.3

20' to 30

11.12	5..20	11	5.16
10.11	10..25	10	10.18
11	10..42	10	10.36
12	3..59	12	3.51
	D B D		B D
11-12	−0..25 2d wire lost	—	−0.30
9.10	2..00	9	1.53 n.S
12	2..10	11	2.06
12	7..22	11-12	7.16
	B		D
12	1..51 2 wire lost	12	1.42
11	2..26	11-12	2.19 n.S.
11-12	2..46	11	2.39
11	5..53	10-11	5.47
12	2..48	12	2.41
12	0..11	12	0.05
	D B		B D
11	2..34	11	2.28
12	4..41	12	4.36
10-11	9..53	11	9.47
10	9..44 ns	10	9.38
	B B		D
12	3..12	12	3..10
12	6..49	11-12	6.41
12	7..28	11	7.18
9	4..06	10	4.01
	D		B B
12	1..48	12	1.41
12	2..02 ns	12	1.57 n.S
12	−0..19	12	dec lost n.s 2nd wire lost
12	8..12	12	8.06
11	7..27	10-11	7.19
11	5..43 ns	11	6.36 n.S ?
	B D B		B
11	2..50	11	2.45
10	−0..05	10	(0.50?) ?
11	10..20 ns		
10-11	1..22	10	1.17
9.10	3..42	10	3.37

20' to 30'

24.9
15.. 27.. 24.9   28.9
28.. 2.3   6.3
B
28.. 18.3   22.5
28.. 30.3   34.4
29.. 39.9   43.7
29.. 50.0   54.0
D
31.. 20.2   24.2
35.. 2.3   6.1
35.. 22.2   26.2
36.. 41.5   45.6
37.. 52.5   56.5
B B
38.. 36.8   40.8
38.. 57.2   1.3
40.. 59.2   3.2
41.. 22.5   26.2
D
42.. 13.9   17.9
42.. 21.8   25.9
43.. 4.8   8.7
43.. 43.6   47.6
D
44.. 29.8   33.6
45.. 8.7   12.5
45.. 9.4   13.5
47.. 57.3   1.4
48.. 24.5   28.4
B B DD
50.. 15.8   19.7
50.. 44.6   48.5
50.. 56.0   0.0
51.. 43.9   48.0
52.. 1.7   5.6
B
54.. 32.9   36.9
Z 54.. 44.5   48.5

15.. 27.. 24.2   28.2
28.. 1.9   5.6
D B
28.. 2
28.. 29.9   33.9
29.. 39.3   43.0
29.. 49.5   53.3
B
31.. 19.3   23.5
35.. 1.7   5.5
35.. 21.6   25.5
36.. 41.2   44.8
37.. 52.0   55.9
D B
38.. 36.2   40.0
38.. 56.8   0.4
40.. 58.9   2.8
41.. 21.8   25.6
D B
42.. 13.3   17.2
42.. 21.2   25.3
43.. 4.1   8.1
43.. 43.0   47.0
B
44.. 29.1   33.1
45.. 8.1   12.1
45.. 9.1   12.9
47.. 57.0   1.1
48.. 24.0   28.0
B B
50.. 15.2   18.9
50.. 44.0   47.9
50..   59.2
51.. 43.4   47.3
52.. 1.0   5.1
D
54.. 32.2   36.5
Z 54.. 44.0   48.0

~~111~~ 109 20' to 30' ~~112~~ 110

~~8~~ 8	0..36	8	0,29	
12	9..39	11-12	9.42	?
	B		D B	
12	0..15	12	0,08	m.s
10	7..40	10	4,36.	m.s
10-11	9..51	11	9.45	
12	3..47 2.8 [illegible]	11-12	3.44	
12	D		B	
9-10	5..15	10	5.07	
10	5..36	10	5.30	
11	3..35	11-12	3.30	
12-13	5..05	12-13	5.00	
12	8..09	12	8.02	
	B B		D B	mark made accid.
9	8..16	9	8.10	
12	5..05	11-12	4.58	
11	4..13	11	4.08	
11	8..47	11	8.40	
	D		DB	
12	−0..15	12-13	−0,19	
12	1..45	12	1.41	
10.11	2..18	10-11	2.14	
10	9..20	10	9.12	
	D		B	acciden. mark
10	3..23	10+11	3,18	
11	1..41	11	1.34	
~~A~~ 12	2..58 m s	11	2.52	m.s
~~A~~ 9	10.48	9-10	10.42	m.s
12	2..55	11	2.49	
	B B D D		B B	
8.9	−0..06 Cat. Stars	9	−0.11	
9.10	8..33 Cat. Stars	10	8.26	
12	10..37	12	10.23	m.s. 1° m. lost
12	6..03	12	5.56	
12	5..21	11	5.14	
	B		D	
12	7..09	12	7.03	
9.10	7..26	10	7.19	

109
~~111~~

20' to 30'

110
~~112~~

15„ 56„ 8.2 7.2
55„ 31.2 35.3
55„ 52.0 56.0

15„ 55„
55„ 31.2 34.8

111			112	
12	0..42		lost	
12	4..19		11	4.14
9-10	3..11		10	3.06
8.9	2..52	Orange color	9-10	2.45
12	4..26 ms		11	4.20
11-~~12~~	7..20 ms B		10	7.17

july 5, 1855 G. P. B. observes

E.C. 17..47..00 $\overset{h\ m\ s}{}$ .. Therm at beg 73.°0
end 71.5

14..19..22.1 26.2
19..41.1 45.2
20.. 2.8 6.8
B
23..35.3 39.4
23..52.9 56.7
D B
25.. 4.1 8.0
25..49.3 53.3
26..17.2 21.2
26..45.9 50.0
27..56.6 0.5

july 12, 1855

G. P. B. observes
J. F. Flagg Records

14..19..21.4 25.5
19..40.3 44.4
20.. 2.0 6.0
B. D.
23..34.6 38.7
23..52.0 56.0
B
25.. 3.3 7.2
25..48.4 52.4
26..16.5 20.5
26..45.2 49.2
26..55.9 59.9

~~113~~ 111 30' to 40' ~~114~~ 113

Catalogue Stars

		' "
8	14..12..02.29	+0..39..20.2
9	14..36..23.33	0..40..2.3
8	42..38.00	0..35..53.
9	43..8.20	0..34..32
9	43..37.20	0..34..20
9	45..12.10	0..36..55
9	52..27.30	0..30..20
8	59..59.90	0..35..21
8.9	15..0..35.60	0..30..11
9	24..38.8	0..36..41
9	28..34.7	0..33..8
9	41..34.8	0..39..24
8.9	47..56.0	0..30..44

		° ' "
8	15..52..53.4	+0..33..22
9	16..6..58.7	33..25 #
9	16..14..55.6	34..07
9	16 17..46.4	36..04
9	16..19..33.7	35..50
9	16..20..15.9	33..47
8	16..21..45.3	34..31
9-10	16..21 50.1	34..54
7	16 29..33.1	32..56

July 5, 1855

Angle of Pos. 98°..27'

G.P.B observes
C.W.T. records
Rather warm in the dome

Calm & good definition

11 6.22
10 8..24
11-12 8..33
B.
12-13 9..14
12 2..14
D B
11-12 9..10
11 6..53
12 2..03
12-13 9..18
12 3..42

July 12 1855

Began at 16..17
#

G.P.B obs
J.F.F. Rec.

Therm at beg. 71.9
end 69.8

11 6..22
9/10 8..21
12 — 8..31
B.D
12/13 — 9..11
12 — 2..13 22..25
B
12 9..08
11 6..51
12 2..03
12-13 9..16
12 3..42

30 & 40

~~113~~ 111

14.. 27.. — 10.3

37..16.3 20.3
37.. 29.4 33.3
39..12.5 16.5
39.. 31.2 35.3
40..55.1 59.2

B

42.. 38.3 42.3
43.. 8.2 12.3
43.. 37.9 41.8
44.. 20.3 24.3
45.. 12.6 16.5
45.. 39.5 43.5

D B

47.. 08.0 12.1
47.. 38.4 42.3
47.. 54.0 58.0
48.. 49.3 53.3
48.. 58.9 2.9
49.. 17.7 21.7

B B D

52.. 7.6 11.6
52.. 27.1 31.2
53.. 11.4 —
53.. 15.2 19.0

~~114~~ 112

B

14.. 3
14.. 30.. 18.7 22.7
30.. 24.2 28.3
31.. 2.8 6.8
32.. 10.9 14.9
32.. 41.5 45.5

B D

33.. 12.8 16.8
33.. 28.3 32.2
35.. 50.6 54.5
36.. 5.8 9.8
36.. 22.3 26.3

D B

37.. 15.5 19.4
37.. 28.6 32.6
39.. 11.5 15.7
39.. 30.5 34.5
40.. 54.4 58.4

D

42.. 37.5 41.5
43.. 7.6 11.7
43.. 37.0 41.0
44.. 19.6 23.4
45.. 11.7 15.7
45.. 38.7 42.6

B

47.. 07.1 11.2
47.. 37.5 41.5
47.. 53.2 57.2
48.. 48.5 52.5
48.. 57.9 1.9
49.. 16.9 20.9

B D

52.. 6.8 10.8
52.. 26.4 30.3
53.. 10.7 [illegible]
53.. 14.4 18.4

~~H3~~ 111 30′ - 40′ 112 ~~114~~

BB			B		
10-11	−0..40	S. doubt 1st wire lost			
12	0..44		12	0..43	
12	5..42	ms	12	5..40	mS
11-12	0..58		11	0..58	
12	0..34		12	0..32	
12	9..19		12	9..17	
D			BD		
12	2..05		12	2..03	
12	0..32		12	0..30	
12	5..31		12	5..29	
10-11	4..24		10-11	4..21	
9	10..04	Cat. Star	9	10..02	
BDB			DB		
11	10..27		11-12	10..24	
12	7..41		11 12	7..38	
11	8..35		11	8..32	
11-12	4..53		12	4..51	
12	7..06		12	7..04	
B			D		
8	5..53	attended by many small stars	8	5..52	a triple star of 13th mag. m.p.c
9	4..31	comp 4" S. fol. 9-10 mag.	9-10	4..29	Comp. 10th mag.
9	4..22	Slightly reddish compared (with 8 mag. prec.	9	4..20	or orange
12	7..15		12	7..13	
9	6..58	Cat. star reddish	9	6..56	or orange
12	5..12		12	5..09	
DB			B		
12	5..32		12	5..29	
12	4..50		12	4..47	? if close double in direc. of [illegible] the elongation is perhaps occasioned by distortion.
11	10..16		10-11	10..13	
11	4..57		11-12	4..55	
10	5..40	ms	10-11	5..38 mS	
9-10	3..43		10	3..40	
BBD			BD		
11-12	4..47		11-12	2..45 ?	
9	0..21	Yellowish - attended by a (group of small stars	9	0..18	group 13 mag. stars & less
11	4..32	2 wire lost -	11 12	4..29	2d wire lost
12	5..03	ms	12	5..01	m.s

~~113~~ 111 306' 40' 112

14..56..43.3	47.3
56..59.3	3.3
B	
57..51.7	55.6
58..10.7	14.6
14..59..25.2	29.2
15..0..00.1	4.2
0..35.9	39.9

DBD	
4..59.8	3.8
5..10.4	14.4
6..37.3	41.3
7..35.4	39.4
B	
8..42.2	~~46.3~~
8 —	46.3
9..3.9	7.9
9..36.8	—
9..46.2	50.2
9..58.7	2.7
10..18.2	22.1
10..24.5	28.4
D	
11..18.1	22.1
12..26.5	30.5
13..1.7	5.6

14..47.5	51.5
14..53.0	57.0
14..58.8	2.8
15..40.5	44.6
16..39.6	43.6
16..45.5	49.5
DB	
18..10.0	14.0
18..16.0	19.9

D	
14..57..50.8	54.8
58..9.8	13.8
59..24.4	28.5
14..59..59.4	3.4
15..0..35.0	39.0

B. D.	
4..58.9	2.8
5..9.7	13.5
6..36.3	40.4
7..34.5	38.6
D	
8..41.2	45.2
8..41.4	45.4
9..3.0	7.0
9..35.8	39.8
9..45.5	49.4
9..57.8	1.9
10..17.3	21.4
10..23.8	27.8
DB	
11..17.2	21.2
12..25.8	29.7
13..00.8	4.8

14..46.9	50.9
14..52.2	56.1
14..58.0	2.0
15..39.7	43.7
16..38.9	42.9
16..44.8	48.8
B	
18..9.2	[illegible]2
18..15.2	19.1

~~113~~ 111 30' to 40'

12 10..10
12 3..30
~~11-12~~ B
11-12 0..16 A pair of 12 mag. nearly same R.A. (and 9' north
12 ~~6~~..29
11-12 0..58
8.9 5..24 Cat. Star Yellowish
9 0..09 Cat. Star
A large number of small stars pal. in the succeeding field
D B D
12 3..20
11 8..04
9 2..43
11 8..13 A Group
B
12 8..43 2win lost
12 9..59 n.s 1win lost
10 6..51
11-12 0..56 2win lost
12 8..56
11 0..14
12 0..27
12 9..19 n.s
D
10.11 9..03 Bluish red
12 9..08
12-13 10..24
Field nearly vacant - none but very small stars
12 7..51 }
12 8..11 ms } A group of 12 mag. and smaller stars
12 4..45 }
12 5..29
12 8..21
12 4..05 ms
D B
12 -0..17
11 -0..26 ms

~~114~~ 112

D
11 0..14 3' north
11.2 6..25 3' north
11-12 0..54
8-9 5..20
9 0..06
B D
12 3..18
11 9..58
9-10 2..40
11 8..09
D
12 8..39
12 9..52 ns
10 6..48
11 0..52 group
12 8..52
11 0..10
12 0..26
12 9..16 n.s
D B several 12 mag. passed unobserved.
10 8..58 reddish
12 9..05 certain
12-13 10..20
12 4..49 faint comp. 15" preceding
12 8..07 n.s
12 4..40 n.s another 12 mag. s unobs.
12 5..25
12 8..19
12 4..02 (n.s?)
B
11-12 -0..19
11 -0..24 n.s

~~113~~ 111

30' to 40'

15.. 20..13.8 17.9

B

23.. 33.2 37.3
24.. 35.0 38.9
24.. 39.4 43.5
24.. 51.2 55.3
25.. 25.0 28.8
26.. 30.5 34.6

DD

27.. 14.7 18.5
28.. 36.0 40.0
29.. 39.6 43.6
30.. 55.4 59.5
35.. 26.4 30.4

B

36.. 54.4 58.5
37.. 28.2 32.1
41.. 35.8 39.8
42.. 37.7 41.7
42.. 54.7 58.7
43.. 6.0 10.0
43.. 55.5 59.5

D

45.. 05.9 9.8
46.. 13.5
46.. 47.5 51.5
47.. 28.7 32.8
47.. 57.3 1.2

DDB

48.. 29.5 33.3

D

51.. 44.4 48.4
51 — 51.7
52.. 43.0 47.0
52.. 55.9 59.9

B B

112

15.. 18..56.3 0.3
19.. 20.0 24.1
15.. 20..13.1 17.0

K lost

24.. 34.2 38.2
24.. 38.9 42.5
24.. 50.4 54.5
25.. 24.0 28.0 26..08.0 11.9
26.. 29.8 33.8

B

27.. 13.8 17.7
28.. 35.3 39.2 29..12.7 16.7
29.. 38.8 42.8
30.. 54.6 58.5
35.. 25.9 29.8

D

36.. 53.7 57.6
37.. 27.3 31.4
41.. 35.0 39.0
42.. 36.8 40.9
42.. 53.8 57.8
43.. 5.2 9.1
43.. 54.8 58.8

B D

45.. 5.1 9.1
46.. 14.0 18.0
46.. 46.8 50.7
47.. ~~[illegible]~~ 31.8
47.. 56.5 0.5

B

48.. 28.5 32.5

D. B

51.. 43.6 47.7
51 — 50.9
52.. 42.2 46.2
52.. 55.1 59.3

D

~~113~~ 112   30′ to 40′

11 4..53
A slight haze is forming
Several fields with but few stars
B
12 5..56
9.10 10..04
9.10 6..46 ms Cat Star
12 7..00
12 2..06
12 0..59
D D
12 1..41
9 3..08 Cat. Star
9·12 —0..17
12 6..47
12 10..11 probably thin clouds
B
12 4..45
12-13 8..39
9-10 9..28 reddish
12 6..15
11-12 2..41
11-12 6..56
12 5..05 ? a star lost
Long D
12 2..54
12 8..36
12 1..09
11 —0..36
8.9 0..39 Some what cloudy
D D B
12 10..09
Great number of small stars follow
D
12 7 02
12 5 07 1st lost
12 1 42
9 3 17
B B

~~114~~ 112

12 1..41
12 8..59
11 4..49
Field nearly vacant

11-12 5..52 no ch obs.
9 10..00
9-10 6..40 m.s
12 6..57
12 2..03 12 ‖ 0..08
12 0..55
12 0..55
B
11-12 1..37
9 3..05 12 9..06
12 —0..22
12 6..44
12 10..7
D
12 4..39
12-13 8..35
9-10 9..24 group of 13 mag.
12 6..12
11-12 2..37
11-12 6..50 great no. of small stars,
12 5..02
B D
12 2..50
12 8..31
12 1..06
10 —0..20 1st w. lost.
9 0..35
B
12 10..05

D B
12 6..58
12 5..03 m.s 1st w. lost
12 1..38
9 3..16
D

30' to 40'

~~113~~ 111		~~114~~ 112			
15..53..58.2	2.2	16..53..57.5	1.5		
54.. 9.1	13.0	54.. 8.3	12.4		
54..52.5	56.7	54..51.8	55.9		
56..11.8	16.0	56..11.2	15.2		
58..53.2	57.2	58..52.3	56.2		
58..55.1	59.0	58..54.2	58.2		
15..59..52.9	56.9	15..59..52.0	56.0	59..59.1	3.2
16..01..34.5	38.5	16..1..33.7	37.7		
B D		B			
2..00.5	4.5	1..59.8	3.9		
5.. 4.9	9.0	5.. 4.2	8.2		
6..59.6	3.5	6..58.6	2.6		
7.. 1.0	5.0	7 —	4.2		
7..56.3	0.3	7..55.5	59.4		
8.. 6.3	10.3	8.. 5.5	9.5		

~~113~~ 111 30 to 40 ~~114~~ 112

12	9..20	12	9..16
12	10..00	12	9..55
Many small stars			
12	1..22	12	1..19
12-13	6..10	12-13	6..06
12	— 0..09	12	—0..11
11	4..17	11	4..12 m.3
12-13	8..05	12	8..00 < 12 10..42 ? on verge of field
12	5..45	12	5..41
	B D		B
10	9..24	10-11	9..18
11	3..57	12	3..52
9	3..25 Cat Star	10	3..22 this star is certainly less than 9 mag
12	4..03	12	4..00 m.3 10 m. lost
12	2..22	12	2..19
12	6..17	12	6..17

Thin clouds gathering

~~115~~ 113 30' to 40' ~~116~~ 114

July 12, 1855

J. H. S. observed
C. W. T. recorded

16

11..29.0 33.0
B

11..46.7 50.2

D

12..48.2 —
12..52.0 55.8
13..13.6 —
13 — 17.2
B D
13..33.3 37.2
14..38.1 42.0
14..56.3 59.6
15..0.9 4.9

July 16, 1855

Th. at begin. 71°.0
" " end 69.2

G. P. B. observed
C. W. T. Recorded

16..7..56.0 00.0
8..5.9 19.0
8..41.8 45.7
10..29.2 28.2 9..41.7 45.5
10..54.5 58.6

D

11..47.0 51.0
12..8.5 12.6
12 13.3 17.4
B B

12..52.2 56.2

13..13.6 17.7
D

14..38.5 42.5
14..55.8 —
15 no mark — 5.2

~~115~~ 113

30′ to 40′

~~116~~ 114

Catalogue Stars

*		
9	16h 6m 58s.76	+ 0° 33′ 25″.2
9	14 55.67	34 6.9
9	17 46.42	36 4.0
9	19 33.74	35 50.3
9	20 15.93	33 47.7
8	21 45.30	34 31.4
9/10	21 50.13	34 55.0
7	29 43.17	32 55.4
8/9	16 52 56.28	9 34 30.1

7	17h 5m 30s.62	+ 0° 3, ′ 58″.1
9	24 33.01	38 30.7
9	31 33.60	39 14.0
9	40 57.00	36 48.3
8/9	42 33.05	33 39.5
R.	17 52 2.34 48. 22.	+0 35 17.6

July 12 1855

T H S obs Began 18..08

C. W. T. Recorded

Therm. at beg. 69°.8

" " end 67.0

11 3..38

~~10~~ 11 5..16 Clear

12 13 3..51 light wind

B

11-12 2..48

11-12 9..38

11 3 20

D

12 13 4..49 2nd lost

10 4..29 ns

11-12 3 52 2nd lost

11 6 25 1st "

B D

11 7..13 sig?

11 – 0..03

10 4..01 Cat. Star

11 5..46

July 16th 1855 Monday Evening

G. P. B obs

9. 3..26

12 4..03 ms

12 2..24

12 6..17 comp. s. fol. – faint

12 4..16 ∠ (12) 5..05

10.11 3..43

12 5..20

Seen – too small

D

12 2..50

12-13 9..41

12 3..26 ms

B B

Seen – too small

10 4..32

12 6..30

D

12 0..00

9. ~~10~~ ~~11~~ 4..07

12 5..52 ms

~~115~~ 113

16..15..10.8 14.8
15..28.9 32.7
15..42.0 46.0
16.. 8.0 12.0
16..26.8 30.7
B D
17..17.2 21.1
17..46.2 50.2
17..48.2 52.0
18 0.5 4.5
B B
~~18..36.2~~ ~~40.1~~
18..36.2 40.1
19..34.1 38.0
20.. 7.3 11.1
20..10.0 13.8
20..16.3 20.3
B
21..45.6 49.5
21..50.0 54.0
B B
23.. — 47.6
23..48.1 52.2
24..21.1 25.0
24..53.2 57.2
24..53.6 57.5
25.. 5.4 9.4
D B
26..43.4 47.1
26.43.6
27..36.0 40.0
27..38.0 42.0
27..53.3 57.3
B
29..43.1 47.2
29..46.8 50.9
30..44.1 47.9
31.. 3.7 7.8
32..27.2 31.1

33.1

21..07.0 11.0

~~116~~ 114

16..16..11.2 15.2
15..29.1 33.1
15..42.2 44.3
16.. 8.5 12.5
16..27.3 31.3
B D B

17..46.3 50.4
17..48.6 52.5

D
18..36.5 40.6
19..34.4 38.4

Pen did not mark

27..36.5 40.5
38.5 —

	~~Hs~~ 113		30 h 40		~~116~~ 114	
	B	~~12 0..15~~			(12) 0..46 cert (12) 5.02	
10-11	1..39					
10.11	4..57		42.3 15.7 32.4	12	5..02	
10.11	6..19			12	6..26	cert
10	7..39			11	7..44	
12	5..49			12-13	5..52	
	B D				B D B	
12-13	2..11				too small	
10	5..58	Cat. Star		9	6.02	Reddish
10.11	6..57	ms		12	7..00	ms
11	5..37			12	5..42	▨
	B B				D	
10-11	0..33			11	0..38	
10	5..47	Cat. Star		9	5..51	12 3..43
10.11	4..29	[No star like this visible Aug. 3d There is a star of 12 mag. reads 3..43 in the place]		12	3..?	?
~~10~~ 11	5..51	ms		9	4..57	ms cert
9	3..45	Cat. Star		9	3..48	ms
10.11	5..50			12	5..57	
	B				B B	
8	4..28	Cat. Star		8	4..31	
9.10	4..51	ms Cat. Star		10	4..55	m.s
	B B				B	
12	9..52	1st wire lost		12.13	9..57	
11-12	7..03			12	7..08	ms
11	7..05			12	7..09	
10.11	0..51			9	0..57	comp 9.10 9" s. fol
10.11	0..45	m.s		9.10	0..52	This is the comp.
10	0..31			10	0.26	
	D B				B D	
11.12	2..01			12	2..08	
11	3..11	ms		11	3..16	
11-12	2..01			12	2..06	
10-11	6..43			10	6..47	m.s.
10..11	4..47			10	4..50	
	B				D B D	
7	2..58	Cat. Star		7	2..58	Faint comp. 14 mag. 4" n. f.
11-12	−0..13			11	−0..12	m.s 1st wire lost
11-12	2..57			12-13	2..58	
10.11	0..26			12	0..28	
11	8..51			11	8.57	

~~115~~ 113 30′∠40′ ~~116~~ 114

16. 32..50.5	54.1			
33..2.8	6.5			
DB				
33..21.0	24.7			
34..37.2	41.2	34..28.8	32.9	?
34..37.8	41.7	37.7		
35..23.8	27.6			
35..32.4	36.4	35..32.8	36.8	
B				
36..23.7	27.8			
37..0.0	4.1			
37..59.4	3.1			
38..37.8	41.3			
39..36.5	40.0	39..36.7		
39..55.1	58.9			
B B				
40..22.2	26.0			
40..29.9	33.6			
42..12.4	16.3			
42..18.1	21.9			
43..14.7	18.4			
D B				
43..29.8	33.3			
43..57.7	1.9	43..58.1	2.1	
44..5.8	9.5			
44..47.5	51.6	Pen adjusted		
45..8.9	12.8			
B				
45..32.3	36.2			
46..33.2	37.0			
47..25.3	29.4	47..25.7	29.7	
47..46.0	48.7	47..46.1	49.2	
48..40.7	45.0	48..41.0	45.0	
49..43.2	47.0	B		
B D				
50..3.2	7.2	50..3.6	7.6	
50..34.0	37.8	50..34.0	38.1	
51..10.3	14.2	51..10.9	14.8	

~~115~~ 113

11-12 4,,36
11 2,,28
D B
12 9,,35 m.s
11 4,,32
11 8,,29 m.s.
11-12 3,,28
11 8,,27
B
11 8,,34
11-12 2,,51.
11 6,,48 b
11-12 9,,39 c
11-12 10,,29
11 6,,01
B B
11 0,,22
11-12 2,,50
11 5,,58
11 9,,28 [No such star Aug 3? visible]
10-11 4,,21
D B
11-12 7,,49 m.s
9-10 2,,59
11-12 5,,30 m.s
11- 6,,21
11-12 6,,52
B
11-12 7,,18
12 1,,39
10-11 8,,00
11 2,,40
11-12 7,,49
11-12 7,,16
B D
10 11 2,,11 m.s
11 8,,31
12 5,,44

[b 3,,37.4
c 4,,15.8
38.4]

30 to 40

~~116~~ 114

12 4,,39
12 2,,31
B
12 9,,39
12 5,,38 m.s cent
12 4,,38 cent.
12 8,,31 m.s
B B B
12-12 8,,29
12 1,,47 cent m.s
B
12 6,,50 ~~8,,53~~ 11.12 8,,39
11-12 9,,49 cent
12-13 10,,29 ~~8~~ (~~12) 6,,50~~
12 6,,06
D
12 0,,27 8
12 2,,52
12 6,,01

9 3 03 at 17h,,25 of 424

11 8,,04
12 2,,42
12-13 B 7,,53 m.s
D
12 2,,16
12-13 8,,36
12-~~13~~ 5 48

~~115~~ 113   30 to 40   11

16.. 51..51.7	55.5	16..51..51.9	55.9	
52.. 2.4	6.3	52 02.8	6.8	
B		B D		
52..57.0	0.7	52..57.0	0.9	
53.. 5.4	9.4	53..5.8	9.8	
53..35.5	39.4	53..35.9	—	
54.. 0.5	4.4	54.. 1.0	—	
4 54..11.4	15.5	54..11.5	15.6	
4 54..14.0	17.9	54..14.4	18.4	
D B		D B D		
54..48.5	52.2	54..48.6	52.6	
54..49.8	53.1	54..50.2	54.1	
55.. 8.5	12.5	55.. 9.1	13.0	
55..18.0	22.1	55..18.5	22.7	
B		D		
55..35.6	39.5	55..36.0	40.0	
55..42.5	46.3	55..42.9	46.8	
56..32.6	36.7	56..32.9	36.8	
56..52.1	56.0	56..52.3	56.4	
57.. 6.5	10.1	57..6.9	11.0	
B B		B		
58..25.8	29.6	58..26.0	30.0	
16.. 59 —	42.7	16.. 59..39.2	43.2	
17.. 00..00.5	4.2	17.. 0..0.7	4.7	0..21.1 25.2
2..17.7	21.5	2..18.1	21.9	
2..19.0	23.0	2..19.5	23.3	
lost				
2..29.4 Time		2..26.0	29.9	
B		B		
2..52.2	56.0	2..52.3	56.3	
4..45.5	49.5	4..45.8	49.8	
5.. 1.0	5.2	5.. 1.6	5.6	
5.. 3.0	7.0	5.. 3.5	7.4	
5..30.1	34.0	5..30.3	34.2	
D B		D		
6..14.3	18.3	6..14.7	18.7	
7.. 5.0	9.0	7.. 5.0	9.0	7..23.7 27.7
7..53.1	57.2	7..53.4	57.4	
8..18.0	22.0	8..18.4	22.3	

~~115~~ 113

11 5„58
11 9„15
B
9.10 4„26
11 6„01
11-12 7„32
12 8„44
11-12 4„52
11-12 6„18 ms
D B
11 6„21
11 2„59 ms
11 4„02
10-11 6„23
B
10 8„51
11 9„12
11 2„49
11 8„44
11 7„40
B B
11 10„03
11 — 0„20 1st wire lost
11 4„11
10 9„58
10 0„56 ms
11-12 do
11 2„00 ms
B
8 10„05
11 6„20
11.12 0„38
11 4„66
7~~8~~ 1„57 Cat. Ster
D B
11-12 7„49
11 5„23
11 9„06
11-12 3„21

30 to 40

114

12 6 2
12 9 16
B. D.
9 4 28
12 6 04
12-13 7 34 2d wire lost
12-13 8 68 2d wire lost
12. 4 59
12. 6 20 no. sig.
D. B. D.
12 6 26
12 3 42 no. sig.
12 4 46
11-12 6 29
D.
12 8 56
13 9 15
~~12~~ 2 51
12 8 48
12 7 44
B.
11 10„06
11 — 0„17
12 4„15 (12) 8„05
11 10„00
9.10 1„00 ms
11 12 2„02
Red
~~B~~ B
8 10„08
12 6„33
12 0„49
12 4„09 m.s?
7 1„57 Comp. 13 mag 30″ South
D
12 7„55 Comp 14 mag 10″ s. f.
11 5„17 cert 12 8„42
12 9„09
12 3„26

113 ~~115~~ 30640 ~~116~~ 114

17..08..36.0 39.7
D B D
11..29.5 33.4
14..46.4 50.3
14..57.8 1.7
15..22.9 26.9
B
16..1.9
16..31.3 35.2
16..42.6 46.6
17..5.1 9.0
D
17..18.0 22.1
18..6.7 10.3
18..19.4 23.5
18..40.1 44.0
B B
20..37.8 41.8
21..17.4 21.5
21..51.0 55.0
21..51.2 56.2
22..49.2 53.8
22..52.7 56.4

B
23..06.0.. 9.9
23..14.8 18.5
23..15.8 19.2
23 — 23.9
D B
24..17.1 21.0
24..24.4 28.3
24..33.0 36.9
24..49.2 53.0
25..13.8 17.7
B
25..34.7 38.9
25..41.3 45.2
25..52.4 56.0

17..8..36.1 40.2
D B
11..30.0 34.0
14..46.8 50.8
14..58.2 2.2
15..23.2 27.1
D
15..58.7 2.3
16..31.7 35.6
16.. 47.0
17..5.3 9.4
B
17..18.2 22.1
18..6.9 10.9
18..20.0 23.8
~~18..~~
D B
20..38.0 42.0
21..17.9 21.8
21..51.7 55.6
21.. —

24..11.2 —

~~B~~

23..16.2 20.2
23..24.3 ~~20~~

24..33.1 37.1
2
25..14.0 18.0
D
25..41.8 46.7
25..52.7 56.8

~~115~~ 113   30' to 40'   ~~116~~ 114

12 5..29
D B D
11.12 6..48
10.11 4..20
11 7..16
11 9..01
B
11-12 1..58
11 9..43
9.10 8..58
11 9..30
D
11 5..45 ms Dots just before
10 8..59
11-12 6..46
12 7..17
B B
11-12 9..13 χ

[χ 19..54.8
ϑ 20..35.2
40.4]

~~11-12 0..~~ No R
11 1..47 ms } ~~2 star fol. 1st by one tenth~~
11 3..38 } [2d star fol. one tenth]
11 1..51 }
~~large star~~
10 10..18
11 5..36 ms
B
11 4..11
10.11 2..29
9 8..30
11 1..11 1st wire lost ms
D B
10.11 6..01
11-12 3..19
10 8..31 Cat-Star
11-12 2..59
11 1..09
B
11-12 10..03
11 3..50
11 4..39

13 5..30 reject
D B
11-12 6..47 cert
11 4..22
12 7..16
12-13 9..04
D
12 1..59
12 9..47
9.10 9..02
11-12 9..35
B
11-12 5..48
10 8..04 cert
12-13 6..48
too small
D B Great many small stars
12 9..16
11-12 −0..02 No R
12 1..48 ms
11 3..43 1st wire lost
10 1..55 ms 2 wire lost
9.10 8..34 (11)1..17
2d wire lost
11 6..04
B
9 8..34 red Wind disturbs the telescope
10-11 1..09
D
12 3..55
12 4..46

~~115~~ 113 30 to 40' ~~116~~ 114

17.. 25..53.9	57.9			17.. 25..59.2	58.0		
D. B D				D B			
26..23.3	27.8			~~26..26.7~~	~~30~~		
26..26.3	30.4			26..26.7	30.7		
26..58.5	2.2			26..58.8	2.8		
27..23.0	27.2			27..23.5	27.4		
27..36.2	40.2			27..36.8	40.7		
27..48.0	52.0			27..48.3	52.3		
B				D			
28..47.6	51.8			28..47.9	51.9		
28..55.3	59.3			28 55.8	59.8		
29..6.0	10.1			29..6.5	10.5		
29..20.5	24.4						
29..30.6	34.7			29..30.9	34.9		
29 38.1	42.1			29..38.5	42.5		
29 —	44.2			29..40.7	44.6		
B B				B			
30..10.4	14.2			30..10.8	14.7		
30..57.2	1.0			30..57.3	1.4		
31..33.6	37.6			31..34.0	37.9		
32..40.0	44.3			32..40.7	44.3		
33..3.8	7.8			33..4.3	8.3		
D B				B B			
33..33.6	37.5			33..34.1	38.1	33..43.1	47.5
34..23.0	26.9			3			
34..24.7	28.7			34..25.1	29.1		
34..36.2	40.2	~~34..53.5~~	~~57.7~~	34..36.6	40.5		
34..53.5	57.7	34 —	54.2	34..54.2	58.2	34..50.1	—
35..4.6	8.5						
B				D			
36..7.5	11.9			36..08.0	11.8		
36..52.0	56.0			36..52.2	56.2	36..42.4	46.3
37..14.9	18.7			37..15.1	19.1	37..40.0	44.0
38..37.5	41.3			38..37.8	41.7		
D B				~~B~~ D		38..57.6	01.6
39..42.6	46.5			39..42.8	46.0		
39..52.2	56.0			39 —	56.5		

~~H6~~ 113		~~H6~~ 114	
11	0..09 ms	12	0..12 ms
	D B D		D B
11.12	7..48	~~12~~	~~9..31 ms~~
11	9..29	12	9..31 ms
10.11	8..28	10	8..32
11	0..26	11	0..29
11	0..46	11	0..49
10.11	2..39	11	2..43
	B		D
9.10	1..33	9-10	1..36
12	0..43	12	0..46
11.12	6..51	12	6..57
12	7..49		
11	6..31	11	6..36
11	0..56 ms	10	1..00
11.12	4..34 1st wire lost ms	12	4..38 ms
	B B		B
11.12	8..56	12	8..59
11	2..39	11	2..43
9	9..13 Cat	9	9..19 est Violet color
11.12	3..31	11.12	3..34
12	5..49	12	5..52
	D B		B B
12	4..24	12	4..27
12	6..00	12	7..05 ~~est~~
11	−0..27 ms	11	−0..22
11	8..22 11.10..03 1st wire lost	10.11	8..29 12.12 10..04 2 wire lost
11	10..09	12	10..13 ms
11	~~B~~ 7..24		
	B		D
11.12	7..11	12	7..16
11.12	6..51	12-13	6..57
11.12	1..19	12-13	1..22
11	1..01	11	1..05
12	D 5..01	12	5..03
11.12	0..14	11	0..15
	~~D~~ B		B ?D (11) 1..48
10.11	7..18	10	7..20
11	6..19	12	6..21 1st wire lost ms

~~115~~ 113 30′6 40′ ~~116~~ 114

17.. 40..103	14.3			17..40..10.6	14.7		
40..41.3	45.1			40..41.3	45.3		
40..52.3	56.0			40..52.5	56.5		
40..57.6	1.6			40..57.9	1.8		
D B D				D B			
41..42.8	47.0			41..43.0	47.0		
42..22.5	26.4						
42 —	30.3			42..26.6	30.7		
42..33.2	37.2			42..33.4	37.4	42..38.4	? [illegible]
43..21.6	25.8			43..22.0	26.0		
B				D			
44..07.2	11.0			44..7.5	11.4		
45..43.7	47.6			45..43.9	48.0		
46..00.2	4.6			46..0.8	4.8		
46..8.8	12.4						
46..33.2	37.1			46..33.5	37.6		
46..33.8	37.6			46..34.2	38.1		
B B				D D			
47..16.7	20.6			47..16.8	20.8		
48..5.1	9.1			48..5.5	9.6		
48..21.1	25.1			48..21.3	25.4		
48..53.1	57.0			48..~~53~~	57.4	[illegible]	
49..44.8	48.7			49..45.0	48.9		
49..51.0	54.9	49..55.7	58.9	49..57.5	55.4	49..55.9	59.7
D B D				D			
50..57.2	1.3			50..57.3	1.3		
51..5.8	9.5			51..6.1	10.0		
51..15.2	19.2			51..15.8	19.8		
52..2.2	6.1			52..2.7	6.7		
52..52.2	56.1			52..52.5	56.5		
53..6.0	10.4			53..6.0	9.8	54..10.3	[illegible]
B							
53..14.7	18.4			53..14.9 B	16.9	53..53.0	57.0
54..54.7	58.7			54..54.9	58.9		
56..16.4	20.1			56..17.0	21.0		

~~H5~~ 113   30 to 40   ~~H6~~ 114

11	0..19		12	0..23	
10.11	1..03		10.11	1..07	
11	9..32		11	9..36	
9	6.51	Cat. Star	9	6..57	ms
	D ~~B~~ D			D B	
11.12	8..55	m.s	12	9..00	
12	8..07			~~8..~~ too small	
12	1..40	1st wire bot	12	1..46	
8.9	3..39	Cat. Star	8.9	3..42	(11) 0..00 ms
11.12	6..36		12	6..38	
	B			D	
10	10..08		10	10..09	
10	2..18		11	2..19	
10.11	5..30		12	5..33	
11	1..06			too small	
9.10	7..55		9.~~10~~	7..59	
~~8~~.10	9..48		9	9..48	
	B.B.			D D	
11	10..09		12	10..12	(12) 3..16
10	−0..14		9	−0..12	
11.12	3..14		12	3..18	
11	7..20		11	~~7~~ 7..25	
11-12	3..37	4 [4 & 3 dif. in R $4^{s}.9$ Ang. 3?]	12	3..45	m.s.
12	5..01	3	12	5..05	ms ? interval
	D B D			D	
12	2..21		12	2..26	
12	4..11		12	4..12	
12	3..37		12-13	3..39	
10	5..14		9	5..18	
7	8..30		7	8..33	white
10.11	4..29		11	4..32	← 11-12 1..02 Strong Wind
	B				
10.11	7..59	ms	12	8..01	
12	1..09		12.13	B 1..15	(12) 1..11
11	10..21		11-12	10..25	

July 17, 1855
G. P. B. Observed
J. F. F. Recorded

15„ 54„ 43.5	47.4
55„ 2.1	6.0
55„ 30.1	34.1
55„ 50.8	54.8
57„ 6.7	10.7
57„ 12.0	16.1
57„ 13.0	17.0
B D	
59„ 30.6	34.6
59„ 39.0	43.0
15„ 59„ 55.2	59.7
16„ 0„ 10.0	14.1
0„ 11.9	15.9
B	
2„ 50.0	53.9
3„ 19.0	23.0
6„ 54.1	58.0
7„ 41.0	45.0
7„ 47.9	51.0
7„ 50.0	53.9

Aug. 1st, 1855
G. P. B. Observed
C. W. T. Recorded

E. C. 17„ 03„ 00 Therm. 68.5
" 18„ 50. 00 " 66.7

15„ 54„ 43.2	47.2
55„ 1.8	5.9
55„ 30.0	33.9
55„ 50.5	54.4
57„ 6.5	10.5
57„ 11.7	15.9
57„ 12.8	16.8
B	
59„ 30.2	34.2
59„ 38.7	42.9
15 59 55.4	59.4
16 0„ 9.9	13.9
0„ 11.7	15.7
D	
2„ 49.8	53.8
3„ 19.0	23.0
6„ 53.9	57.9
7„ 40.8	44.9
7„ 46.9	50.8
7„ 49.8	53.7

~~117~~ 115 20' to 30' ~~118~~ 116

Catalogue Stars

mag.	h m s	° ' "			h m s	° ' "
9	15..50..43.3	+ 0..28..26.5	17..53..52	– 3	17..04..21.2	+ 0..28..34.9
8-9	57.. 7.3	22..44.6		– 7	5.. 30.0	31..58.2
9	16..10..12.8	23..34.2		– 9	21.. 23.1	27..45.3
9	13.. 6.7	23..00.0		– 6	21..26.0	27.. 5.6
* 7	21..18.2	23.. 4.2	17..10..50	– 8	36..46.0	25..25.5
– 8	30..22.8	20..47.0		– 9	41..54.9	20.. 1.9
– 8.9	35..27.2	21..13.0		– 8.9	41..59.8	28..43.0
– 8-9	47..59.5	19..52.3		9	17..48..21.3	29..46.0
– 9	55..27.6	29..26.5		* 9	18.. 2.. 6.2	22..19.0
– 9	55..38.1	27..56.0		9	2..22.4	23..35.0
– 9	59..23.0	28.. 1.4		9	3..32.7	28..15

Clear, good definition, some wind.

July 17 16..44–15
15 45

~~July 18, 1855~~. Aug. 1st, 1855
Clear and ~~Re~~ calm – def. good

G. P. B Obs
J. F. F. Rec.

15..54..44

9–10	7..26	commenced at ⊥ of Zone 111
12	0..45	
12	4..22	
10	9..12	reddish
8–9	2..51	red-orange
12	4..26	n.s
11	7..22	n.s

BD

12	4..33	
12	9..19	n.s
12	2..20	
12	3..36	
10–11	5..36	n.s

B

12	1..58	
12	4..50	
12	5..50	
9	3..54	group
12	0..06	n.s
12	5..07	n.s

11

10	7..17	
12	0..36	
11.12	4..12	
10	3..04	
8.9	2..42	
12	4..19	m.s
11-12	7..13	m.s

B

12	4..25	
12	9..10	ns
12	2..18	
12	3..26	cent
11	5..26	m.s.

D

11.12	1..48	
12	4..41	
12	5..40	
9-10	3..44	Group
12	– 0..02	m.s
12	4..57	ms

~~117~~ 115 20 h 30 ~~118~~ 116

D B			
16.. 8..30.7	34.7	16..8..30.6	34.5
8..45.0	49.0	8 44.8	48.8
9..14.9	19.0	9..14.9	18.9
9..44.9	48.8	9..44.8	48.8
B B		B	
10..12.7	16.8	10..12.8	16.7
11.. 3.0	7.0	11.. 2.8	6.8
11..25.1	29.0	11..25.0	29.0
11..46.2	50.4	11..46.1	50.1
11..51.5	55.4	11 —	55.3
B D		D B	
12..28.1	32.0	12..—	31.8
12..45.5	49.4	12..45.2	49.2
13.. 6.5	10.5	13.. 6.5	10.5
14.. 9.9	13.8	14..09.8	13.6
14..37.9	42.0	14..37.8	41.6
14 41.0	44.9	14..40 9	44.9
14..50.8	54.8	14..50.6	54.5
15.. 1.5	5.6	15.. 1.2	5.3
D		B	
16..09.8	13.8	16.. 9.7	13.6
17..48.5	52.5	17..48.4	52.5
18..35.7	39.9	18..35.9	39.8
19..33.9	37.8	19..33.7	37.7
19..36.3	40.3	19..36.1	40.2
19..58.5	2.5	19..58.4	2.5
B D B		B D	
20..31.0	34.9	20..30.9	34.9
21..17.7	21.7	21..17.4	21.4
25.. 5.4	9.5		
25..23.6	27.6		
25..38.4	42.6	25..38.3	42.3
B B		D	
28..23.9	27.9	28..23.8	27.7
28..53.8	57.8	28..53.5	57.5
29..33.1	37.1	29..33.0	37.0
29..46.9	50.9	29..46.7	50.6
D		B B	
30..22.3	26.5	30..22.3	26.2

* 17,, 10,,50

~~117~~ 115 20 to 30 ~~118~~ 116

D B		D B	
12	7,,28	12	7,,~~22~~18
12	8,,32	12	8,,2~~[illegible]~~2
11	0,,30	12	0,,2~~3~~0
12	9,,46	12	9,,~~47~~37 ~~[illegible]~~ ~~[illegible]~~
B B		B	
10	3,,43 comp. 13th mag. 7" s.p.	10	3,,3~~8~~3 comp n.p 20" 13 mag.
11-12	8,,18	12	8,,~~12~~08
12	5,,19	10	5,,~~12~~09
11	8,,42	11	8,,3~~8~~4
12	5,,33 m.s	12	5,,25 m s 1st wire lost
B D		D B	
12	9,,37 faint comp. n.f.p. 6"	12	9,,~~[illegible]~~27~~7~~ 1st wire lost
11	6,,03	10-11	5,,5~~8~~4
9	3,,07 is not this in cat.(?)	9	~~[illegible]~~ 2,,58
7-8	5,,42 yellow	7.8	5,,3~~8~~2
11-12	10,,10	11-12	10,,~~12~~01
12	6,,25 m.s	12	6,,~~22~~16
12	E 6,,27	12	6,,17 m.s
12	8,,16 last wire is first of dots.	12	8,,06 m.s?
D		B	
9-10	6,,31	10	6,,2~~8~~2
12	0,,25	12	~~[illegible]~~0,,16
10	10,,47 on verge of the field R&Dec. unc.	10	10,,~~40~~38
12-13	5,,29	12-12	5,,19
12-13	5,,37 m.s	12	5,,27 m s
12	4,,58	12	4,,48
B D B		~~[illegible]~~ B D	
12	0,,47	12	0,,37
7	3,,09	~~[illegible]~~7	3,,0~~[illegible]~~1
10	10,,34	10	~~[illegible]~~ ~~[illegible]~~ lost
12	5,,38		
10	3,,22	11-12	3,,1~~7~~3
B B		D ~~[illegible]~~	
12	5,,14	12	5,,05
12	8,,36	12	~~[illegible]~~ 8,,27
12	3,,59	12	3,,49
12	9,,59	12	9,,5~~2~~0
D		B B	
8	0,,48	8	0,,~~48~~39

~~117~~ 115 20 to 30 116

16.. 31.. 03.7	8.7	16.. 31.. 03.6	7.6
31.. 52.3	56.2	31.. 52.1	56.1
32.. 13.5	17.5	~~32.. 15.0~~	~~19.0~~
32.. 15.0	19.1	32.. 15.0	19.0
B		D B	
33.. 6.0	10.0	33.. 6.0	10.0
33.. 26.1	30.2	33.. 26.0	30.0
34.. 36.4	40.4	34.. 36.4	40.4
34.. 46.2	50.2	34.. 46.2	50.1
D B		B	
35.. 21.6	25.6	35.. 21.6	25.7
35.. 22.8	~~2~~	35 no mark	26.8
35.. 26.8	30.8	35.. 26.8	30.7
35.. 46.2	50.2	35.. 46.1	50.1
36.. 33.0	36.9	36.. 32.9	36.9
D D B		D D	
37.. 43.7	47.7	37.. 43.7	47.7
38.. 10.0	14.0	38.. 9.9	14.0
38.. 55.3	59.3	38.. 55.2	59.2
41.. 47.8	51.8	41.. 47.6	51.7
42.. 11.1	15.0	42.. 10.9	15.0
D		D	
42.. 41.1	46.2	42.. 41.1	46.1
44.. 41.0	45.0	44.. 40.9	44.9
46.. 32.0	35.9	46.. 31.8	35.8
46.. 45.0	49.0	46.. 45.0	49.0
B. B. B.		B D	
47.. 59.7	3.7	47.. 59.5	3.5
49.. 6.2	10.1	49.. 6.1 B	10.0
49.. 19.7 B	23.6	49.. 19.5	23.5
51.. 33.7	37.7	51.. 33.8 D	37.8
51.. 35.6	39.5	51.. 35.5	39.4
51.. 49.8	53.8	51.. 49.8	53.8
52.. 9.6	13.4	52.. 9.3	13.4
52.. 10.1	14.0	52.. —	14.0
D B D		B	
52.. 31.0	35.0	52.. 31.0	34.9
53.. 1.0	4.9	53 0.7	4.8

~~117~~ 115

a large group of small stars follows about 1 min. the bot. star.

12	10..39	
12	7..01	
12-13	7..10	
12-13	6..22	n.s
	B	
12	0..16	
12-13	1..37	
11-12	4..29	
12	6..50	
	D B	
12-13	8..18	
12-13	8..16	2nd w. lost n.s
8-9	1..20	n.s
12	1..29	
12-13	0..30	
	D D B	
12	0..52	
9	1..14	
12	5..57	
11-12	9..22	
12	-0..18	
12-13	D	
12	D 6..56	
12	9..11	
12-13	0..41	
11-12	4..32	
	B B B	
8-9	-0..03	
12	6..00	
11	6..48	
	B	
12	0..10	many smaller stars
11	8..00	n.s
12	0..01	
12	6..22	
12	-0..09	n.s
	D B D	
12	9..21	
12	0..56	

~~118~~ 116

12	10..30	
12	6..58	[illegible]
12-13	6..52	
12-13	6..12	a star precedes this 2^{s} reads 7..02
	D B	
12	0..08	
12	1..28	
12	4..20	
12	6..42	
	B	
12-13	8..09	comp 13 15" fol
	8..09	
8.9	1..12	twin & breaks night
12	1..19	
12	0..21	
	D D	
12	0..43	
9	1..05	reddish
12	5..47	
12	9..12	
12	-0..28	
	D	
10-11	6..45	
12	9..03	Large number of stars
12-13	0..30	less than 12 may
11-12	4..21	have passed within
	B D	last 20 minutes
9	-0..41	ns cent
12	B 5..51	
11-12	D 6..39	
12	0..01	
11	7..50	ns
12-13	-0..09	
11-12	6..12	
12	-0..18	ns twin lost
	B	
12	9..14	
12	0..45	

~~117~~ 115

16.. 53.. 45.6 49.4
54.. 15.0 19.0
54.. 28.0 32.0
D B
55.. 27.6 31.4
55.. 38.0 41.9
56.. 5.5 9.6
56.. 48.8 52.7
57.. 11.0 15.0
B B D
57.. 45.5 49.6
59.. 22.9 26.9
16.. 59.. 38.7 42.7
B
17.. 2.. 28.3 32.0
2.. 29.5 33.5
D
4.. 11.0 15.0
4.. 20.8 24.7
5.. 43.7 47.5
5.. 54.4 58.4
B D B
6.. 43.5 47.5
7.. 34.6 38.6
7.. 46.5 50.5
7.. 58.3 2.3
B B
9.. 33.7 37.8
9.. ~~41.8~~ 41.8
9.. 44.4 48.3
10.. 15.5 19.6
D B D

12.. 34.3 38.2
12.. 40.2 44.2
15.. 2.2 6.1
15.. 42.0 46.0
15.. 54.4 58.5
B B B
17.. 1.5 5.7

~~118~~ 116

16.. 53.. 45.3 49.3
54.. 15.0 19.0
54.. 27.8 31.8
B D
55.. 27.4 31.3
55.. 37.8 41.9
56.. 5.4 9.5
56.. 48.6 52.5
57.. 10.9 14.9
B
57.. 46.5 49.5
59.. 22.8 26.8
16.. 59.. 38.5 42.5
D
17.. 2.. 28.0 32.0
2.. 29.4 33.4
B
4.. 10.9 15.0
4.. 20.7 24.7
5.. 43.5 47.6
5.. 54.2 58.2
D B D
6.. 43.4 47.3
7.. 34.6 38.4
7.. 46.4 50.3
7.. 58.1 2.2
D
9.. 33.8 37.9
9 —— 41.7
9.. 44.3 48.3
10.. 15.5 19.4
B

12.. 34.0 38.0
12.. 40.0 44.0
15.. 2.1 6.1
15.. 42.0 45.9
15.. 54.3 58.4
D B
17.. 1.5 5.7

~~117~~ 115

12 9..42
12-13 7..26
12 8..03
D B
cat star 9-10 9..35
cat star 9 8..05 cert. orange
12 3..48
12 9..52
11 5..58
B B D
12 2..23
9-10 9..11
11-12 9..52
12 B
12 8..38
9-10 3..31
D (?)
12-13 4..37
8-9 8..44
12-13 4.00
12 7..37
B D B
12 2..34
12 5..21
12 3..12
12 1..18
B B
11-12 3..43
12 2..07 1st w. lost
11-12 8..43 n.s.
11 8..20
D B D
D (by mistake)
12 9..56
11-12 5..50 n.s.
12 2..30
12 0..42
12-13 4..27 group of small stars
B B B
12 −0..06

~~118~~ 116

12 9..33
12-13 7..18
12 7..54
B D
9 9..24
9 7..55
12 3..38
12 9..44
10 5..49
B
12 2..13
9-10 9..01
12 9..43
D
12 8..29
10 3..23 ns
B
12-13 7..29
8-9 8..36
12-13 3..50
12 7..29
D B D
12 2..25
12 5..12
12 3..03
12 1..09
D
11 3..33
12 1..58 1st wire lost ns
11-12 8..34
11 8..11
B
12 9..48 comp. faint
12 5..42 ns
12 2..20
11-12 0..32
12-13 4..18
D B
12 −0..16 2 wire lo

	~~117~~ 115		20′ to 30′	~~118~~ 116		Zone 118 completed Aug. 2	
17	17.. 1.8	5.7					
	18.. 00.2	4.2	17.. 18.. 00.1	4.0		17.. 18.. 00.7	4.6
	18.. 1.8	5.6					
	D		B			D B	
	18.. 28.3	32.2	18.. ~~28.~~	32.0		18.. 28.5	32.5
	18.. 29.5	33.6				18.. 29.9	33.8
	18.. 46.5	50.5	18 —	50.2		18.. 46.8	30.8
	18.. 54.6	58.7	18.. 54.3	58.5		18.. 55.0	59.0
	B D B		D			B	
	19.. 24.5	28.5	19.. 24.3	28.4		19.. 24.9	28.9
	21.. 13.5	—	21.. 13.4	17.4		21.. 14.0	17.9
	21.. 22.9	26.8	21.. 22.8	26.7		21.. 23.2	27.2
	21.. 25.8	29.7	21.. 25.7	29.6		21.. 26.1	30.1
	23.. 43.7	47.7					
	B		Transferred from column in red ink			B. D	
	24.. 3.2	7.3	24.. 03.4	7.3	0.5 subtracted	24.. 03.9	7.8
	24.. 8.1	12.0	24.. 8.0	12.0		24.. 8.5	12.5
	24.. 56.7	0.7	24. 56.7	0.7		24.. 57.2	1.2
	24.. 57.7	1.8	24. 57.6	1.5		24.. 58.1	2.0
	D B					B	
	25.. 52.5	56.5	25.. 52.5	56.5		25.. 53.0	57.0
	25.. 53.8	57.5	25.. 53.5	57.5		25.. 54.0	58.0
	29.. 7.6	11.6	29.. 7.5	11.5		29.. 8.0	12.0
	D					B B	
	29.. 58.7	2.8	29.. 58.7	2.6		29.. 59.2	3.1
	30.. 49.2	53.2	30.. 49.3	53.2		30.. 49.8	53.7
	31.. 7.7	11.7	31.. 7.7	11.7		31.. 8.2	12.2
	31.. 57.2	1.2	31.. 57.2	1.2		31.. 57.7	1.7
	32.. 18.0	22.0	32.. 18.0	21.9		32.. 18.5	22.4
	B					D	
	32.. 42.0	46.0	32.. 41.8	45.7		32.. 42.3	46.2
	33.. 6.0?	11.5	33.. 6.9	11.0		33.. 7.4	11.5
	33.. 56.8	0.8	33.. 56.6	0.6		33.. 57.1	1.1
	34.. 24.6	28.6	34.. 24.5	28.4		34.. 25.0	28.9
	34.. 42.0	45.9	34.. 41.8	45.8		34.. 42.3	46.3
	B B D					D B	
	36.. 45.7	49.7	36.. 45.5	49.5		36.. 46.0	50.0
	38.. 37.0	41.1	38 37.2	41.1		38.. 37.7	41.6
	39.. 34.0	38.0	39.. 33.9	38.0		39.. 34.4	38.5
	D.B.					B	

~~117~~ 115

11 3..39 n.s.
12. 2..54
12 −0..25 n.s
D
12 6..01
12 0..02 n.s
11 8..58
11-12 7..01
BDB
11 4..23
11-12 3..43 2nd w. lost
Cat. star 10 7..58
Cat. star 5 7..19
12 7..23
B

(12) var. star
star is visible to the naked eye & is attended by fine group of stars of 11-12 mag. & less

12 1..50
12 6..11 n.s
12 5..01
12 8..06 n.s
DB
12 8..03
12 10..22 n.s
11 3..48
D
11-12 5..05 re
11 8..32 reddish
12-13 2..09 comp. 13th m. 14" n.f.
11 −0..03
9-10 1..45
BP
11-12 3..23
12-13 7..47
12 8..51
12 9..47
12 5..53
BBD
Cat. Star 9 5..38
11 10..26
12 1..42
DB

~~118~~ a little less AR this dec. belongs to prec. star 116

11 3..28 1st wire lost Aug. 2
12 2..44 12 2..44
B DB
12 5..51 ns 1st wire lost 12 5..52
12 0..08 ns
11 8..48 ns 1st wir lost 12 8..49
6..50 11-12 6..52
D B
10-11 4..15 11 4..14
11-12 3..34 11-12 3..33
11 7..47 11 7..47
6 7..10 ns Attended by a fine group of stars 5 7..10 ns
12 clouds
BB BD
12 1..41
12 6..02 ns
12 4..51
12 7..57 ns
Boo B
B. 12 7..55
12 10..14 red
11 3..38 Gt. number of small stars
BB
11-12 4..56
11 8..22 reddish
12 2..00 comp 12-13 14" n. fol.
11 −0..13
10 1..36
D
11 3..14
12-13 7..37
12 8..42
12 9..39
12 5..44
DB
9 5..28 A 11 mag. precedes reads 1..13
11 10..16 The majority of the smaller stars are of the 13 & 14 magnitudes
12 1..32
B

~~117~~ 115 116

17.. 40..10.2	14.0	17..40..10.0	13.8	17..40..10.5	14.3
41..55.0	59.0	41..54.9	58.9	41..55.4	59.4
41..59.9	3.7	41..59.5	3.5	42..00.0	4.0
42..12.0	16.0	42..12.1	15.9	42..12.6	16.4
42..27.2	31.2	42..27.2	31.2	42..27.7	31.7
B 8 B				D D	
43..5.7	9.8	43..5.7	9.7	43..06.2	10.2
44..8.9	13.0	44..9.0	12.9	44..9.5	13.4
45..14.9	18.8	45..14.8	18.8	45..15.3	19.3
45..33.8	37.8	45..33.7	37.8	45..34.2	38.3
46..1.2	5.1	46..1.2	5.2	46..1.7	5.7
46..12.4	16.4	46..12.3	16.3	46..12.8	16.8
46..30.5	34.5	46..30.3	34.4	46..30.8	34.9
B				B B	
47..56.5	0.6				
48..13.0	—				
48..20.8	24.7	48..20.7	24.7	48..21.2	25.2
48..22.7	26.7	48..22.7	26.6	48..23.2	27.1
D				B	
49..40.2	44.2	49..40.3	44.2	49..40.8	44.7
49..42.5	46.4	49..42.5	46.5	49..43.0	47.0
50..14.6	18.6	50..14.7	18.7	50..15.2	19.2
52..24.4	28.6	52..24.5	28.5	52..25.0	29.0
52..47.0	51.0	52..47.0	51.0	52..47.5	51.5
B D				D	
54..32.6	36.5	54..32.5	36.4	54..33.0	36.9
54..37.7	41.7	54..37.6	41.6	54..38.1	42.1
55..00.2	4.2	55..00.3	4.3	55..00.8	4.8
55..34.0	38.0	55..34.1	—	55..34.6	3—
55..36.2	40.0	55..36.2	40.1	55..36.7	40.6 ms
		55..49.6	53.5	55..50.1	54.0
56..17.8	21.8	56..17.6	21.6	56..18.1	22.1
56..18.8	23.0	56..18.9	22.7	56..19.4	23.2 ms
B					
56..32.7	36.7	56..32.6	36.6	56..33.1	37.1
				B	
58..54.3	58.3	58..54.3	58.3	58..54.8	58.8
59..14.3	18.3	59..14.3	18.4	59..14.8	18.9
B D				B B	
17..59..53.6	57.6	17..59..53.6	57.5	17..59..54.1	58.0
18..00..4.6	8.7	18..0..4.6	8.7	18..00..5.1	9.2
0 5.0	9.0	0..4.8	8.9	0..5.3	9.4
0..11.5	15.5	0..11.4	15.5	0..11.9	16.0
0..25.7	29.7	0..25.5	25.5	0..26.0	30.0
D D					

12 10..33
9 1..12
8-9 8..58 n.s
12 5..29
12 5..23

B D B

12 4..30
11 5..55
12 6..34
9-10 2..49
12 6..59 faint comp. 10" n.f.
12 5..49
12 6..39

B

12 10..17
12 3..39 2nd w. lost
9 10..00
11 6..38 n.s

D

12-13 1..30
11 2..46 n.s
12 0..27 faint comp 9" n.p
12 7..25
12 5..05

B D

12 2..01
12 1..58 n.s
11 2..47
12 3..59
10-11 4..53 n.s.
11 2..58
12-13 4..20 n.s

B

12 2..32
~~great~~
12-13 6..40 great no. of
11-12 4..22 small stars

B D

12 9..47
12 9..48 n.s.
12 8..59
11 6..08
12 7..33

D D

12 10..25
9 1..02 cent
8-9 8..49 ns
12 5..19
12 5..13

D D

12 4..21
11 5..46
12 6..25
9-10 2..39
12 6..49
12 5..39
12 6..31

B B

10 9..50
11 6..28

B

12-13 1..22
11 2..37
12 0..17 faint comp 10" n.p.
12 7..17
12 4..57

D

12 1..52
12 1..48 ns
11 2..38
12 3..50 2 wires lost
4..45 ns 12-13 3..01
10 2..49
11 4..11 ns
12-12 2..22
12

B

12-13 6..32 faint comp 12" s.f.
11-12 4..14

B B

12 9..38
12 9..42
12 8..52 ns
11 5..59
12 7..25

D

~~117~~ 115

18.. 01.. 26.4	30.2
1.. 51.3	55.3
2.. 6.1	10.2
2.. 18.2	~~22.0~~
2.. 22.0	26.0

2060 30'

18.. 01.. 26.5	30.4
1.. 51.4	55.4
2.. 6.3	10.1
2.. 17.9	22.0
2..	26.2
2. 25.2	39.3
3.. 32.5	26.5

116

~~115~~

18.. 01.. 27.0	30.9
1.. 51.9	55.9
2.. 6.8	10.6
2.. 18.4	22.5
2.. —	26.7
2.. 25.7	39.8
3.. 33.0	37.0

~~117~~
115

12	7..42
10	1..31
9	2..32.
12	7..01
11	3..49

B

20 to 30 116 Bolo

12	7..34	
10	1..23	
9	2..24	
12	6..53	
11	3..42	1st wire bar
12	5..03	
9-10	8..26	

Zone ~~118~~ 116 finishes the series of 24h
Dec 20' to 40'