KG
11365
236

abbaphae.proj . 236s

K, 26

26

Zones.

N°12

Feb. 18. 1862 May 1864

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

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236$

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

KG 11365.236

HARVARD
UNIVERSITY
LIBRARY
MAY 3 1956

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

Zone 2h 10m to.

2	10	6.77	+ 1	13 7.2	
	10	49.83		13 8.7	?
	20	52.79		20 33.9	
					No annual variation given —
	33	26.55		17 20.0	
	33	26.54		16 15.7	?
	42	32.11		14 15.3	
	44	20.14		10 12.2	
	50	5.48		20 9.7	B
	57	30.11		19 21.2	
3	8	17.57		10 55.0	
	8	23.38		16 32.2	
	12	32.39		11 18.5	Declination 1' too large —
	19	15.50		11 0.4	
	28	4.92		18 56.5	
	29	31.25		13 38.4	
	43	55.46		18 16.5	
	45	39.75		20 7.9	
	59	32.49		10 54.6	B
	59	32.97		18 46.9	AR is 59 32.89 sure —
4	7	17.03		14 24.4	B

All the quantities in this table have been verified —

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1663phae.proj.: 2363

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

$2^h\ 10^m - 4^h\ 7^m$

1862. Feb. 18.

Angle set 352° 48'

1	10	6.3	10.3		1	10	6.0	10.0
	11	36.9	~~40.9~~			11	36.6	~~40.5~~
*	11	40.9	44.8			11	40.5	44.5
	13	9.1	15.1			13	9.0	12.9
	13	54.4	58.2			13	54.1	58.0
	14	8.7	12.8			14	8.4	12.5
	14	~~56.7~~	56.7			14	~~53.4~~	56.3
	15	16.5	20.4			15	16.1	20.0
*	16	8.7	—			16	8.4	12.4
	16	12.2	16.2			16	—	15.8
	16	47.7	51.6			16	47.4	51.3
	17	12.7	16.6			17	12.4	16.2
	18	0.6	4.5			18	0.3	4.3
	18	54.8	58.8			18	54.7	58.5
	19	16.1	20.2			19	15.8	19.9
		D.D						
	19	32.8	36.7			19	32.4	36.3
	20	52.2	56.2			20	52.1	56.1
	21	26.8	30.7			21	26.5	30.5
	23	24.4	28.5			23	24.1	28.3
	24	11.5	15.4			24	10.8	14.9
		D					B	
	26	35.1	38.9			2		
	27	32.6	36.7			27	49.0	53.1
	27	49.3	53.3			~~28~~	~~2.8~~	
						[28	2.8]	
	29	25.6	29.6			29	25.5	29.3
	30	26.0	29.9			30	25.5	29.6
		D.D.D						

Feb. 20. 1862

Atmosphere better than last time

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj...236S

1° 10' - 1° 20'

7.8	3	6		Catalogue	7.7	8	3	10	
11.12	6	23	2 Le			11	6	27	2 Le
9.10	9	40			9.3	10B	9	43	
10.11	4	38				10.117	4	41	
11B	5	38				10.117	5	40	
107	0	51				10	0	52	
	BDD								
107	2	1	1 Le		9.5-	11B	2	3	
10B	1	58			9.4	10	2	1	
10	0	47	2 Le		9.3	10	0	51	
10	4	50			9.4	10	4	55	1 Le
10.11	4	15			9.5-	10.11	4	17	
10B	7	6				10B	7	7	
10	5	30				10.11	5	33	
9.10	7	14					D		
11	5	18				9.107	7	18	
	BD					11	5	22	
11B	5	5				11B	5	8	
7	10	23			6.8	7	10	25	
11B	4	8				11B	4	10	
11.12	8	58				117	9	1	first wire doubtful
117	0	42				107	0	45	
	D						B		
10.11	4	11							
9.10B	10	56							
10.11	2	28				107	2	30	
							4	14	-reject (one wire obs)
9.10	4	9			9.5	10B	4	18	
10.117	2	20				11B	2	24	
	DDD								

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

31	22.6	26.6	N 26	2	31	22.1	26.1	
33	26.4	30.3			33	26.1	30.0	
35	9.6	13.6			35	9.4	13.4	
35	40.2	44.2			35	40.0	44.1	
36	7.4	11.4	30		36	7.2	11.2	
37	19.7	23.7			37	19.3	23.4	
37	48.5	52.5			37	48.4	52.4	
38	39.3	43.4			38	39.3	43.5	
40	18.1	22.1			40	17.8	21.9	(23.8)
40	29.0	32.9			40	28.6	32.7	
41	28.8	32.7			41	28.3	32.3	
42	0.5	4.5			42	0.2	4.3	
	03.13							
42	32.0	36.1			42	31.8	—	
					42	—	36.0	
43	54.0		40		43	54.1	57.9	
44	5.0	9.0			44	4.7	8.7	
45	2.0	6.9			45	2.3	6.4	
	03.2.13							
46	28.3	32.3	43		46	27.8	31.8	
			44		47	13.8	17.6	
49	4.3	8.2	45		47	54.8	58.7	
			46		49	1.0	7.9	
49	30.4	34.6	47		49	29.9	34.0	
50	6.2	10.2	48		50	5.8	9.8	
			49		50	55.3	59.1	
50	56.7	60.5	50		50	56.3	60.2	
51	49.8	54.0			51	49.4	53.5	
52	14.0	17.8			52	13.7	17.7	
52	23.3	27.2			52	23.0	26.9	
54	25.7	29.8			54	25.4	29.4	
54	41.4	45.5			54	41.1	45.1	
56	1.4	5.4			56	1.1	5.2	
2 56	35.9	39.8	57	2	56	35.6	39.7	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj--236S

11	1	32			10.11	1	36		
8B3	6	10		8.5	8	6	24		
10	6	58			10.11B	7	1		
10B	7	9			107	7	10		
9B	9	5		9.0	97	9	7		
9.10	6	37		9.5	10	6	41		
9.107	10	33		9.5	9.10	10	36		
107	9	19				9	22		
107	8	4	another star fol. 2″ and 1′ south		10.11	8	7	2e wire N fol. star obs.	
10	2	32			107	2	35		
9.10B	3	44			97	3	46		
10	8	44			10.117	8	47		
	BB								
9	4	10		8.5	9B	4	13	2 Le	
9.10	10	36	AR not obs, nearly the same as prec	9.3	9.10	10	40	1 Le	
11B	5	54	2 Le		10.11	5	56	first wire wrong	
10	10	6			9.10	10	10		
9.10	2	45	2	9.4	9.107	2	46		
	BDB								
97	8	31		9.0	97	8	34		
11	2	16			1103	8	38		
9.10	1	31			1103	9	30		
					10.11	2	20		
					9.10	1	34		
8	9	54		7.8	8.9	9	58		
11	4	5	comp 13 mag. 3″ north 0.8 prec		117	4	9	comp north 4″ and prec 1′ comp obs 4h	
10	3	3		9.5	10	3	5		
10B	1	10		9.3	10B	1	11		
10B	10	5			B10	10	7		
9	3	10		9.0	9	3	12		
107	2	10			10.11	2	13		
11	9	8	Dec doubtful		11.10	9	10		
107	7	27			11	7	30		
	D								

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

	57	26.6	30.6	No 58	2	57	26.2	—
	57	30.0	34.0	59		57	29.6	33.7
	57	56.3	60.3	60				
	58	14.2	18.3	61		55		
	58	27.0	31.0			58	26.8	30.7
2	59	8.9	13.0		2	59	8.5	12.4
				dw.				
3	0	36.5	40.5	64	3	0	36.2	40.2
	1	28.2	32.4	66 65			43.5	47.6
	5	4.9	9.0	67		1	28.3	32.2
	5	12.7	16.6	68				
		13						
	8	17.6	21.6	69		8	17.2	21.1
	8	23.4	27.4	70		8	23.0	27.0
	8	49.8	53.8			8	49.4	53.6
	11	58.7	62.6			11	58.3	62.1
						[12	10.8	14.3]
	12	29.8	33.9	Catalogue the missing Examin	Ct.	2	29.5	33.4
	15	13.5	17.5	75		15	13.0	17.1
	17	11.9	16.1			1		
	17	46.8	50.7					
	19	3.6	7.6					
	19	15.8	19.8					
		D.						
	21	39.3	43.5	80		21	59.0	4.29
	24	7.8	12.1	82 81		4	53.2	57.2
	26	16.6	20.7	83 84		25	50.2	54.2
						26	16.1	20.4
	27	16.5	20.5	85		27	16.1	19.9
	27	22.3	26.4	86		27	22.0	26.0
	28	1.1	—	87				
	28	5.0	9.1	88	B	28	4.9	8.7
	28	54.8		89	B	29	49.5	49.3
3	29	5.8	9.7	90	3	29	05.3	9.3
		B.						

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj...236S

11.12	10	21	2 Le		117	10	30	
7	9	16		6.5	7	9	22	
11.12	4	22				4	29	AR lost
10.11	0	54		9.5?	11	0	58	AR lost
10	6	3	NS		10	6	5	
10	1	17		9.5	10.11	1	17	
9.10	8	51		8.5	9	8	54	
11	10	34		9.5	10.7	2	23	
11B	6	50			10.117	10	38	
10.11	9	23	Du doubtful					
	BB		vacant field					
9	0	53		8.7	97	0	55	
97	6	30		8.8	9.10	6	33	
9.10	3	16			107	3	21	
9.107	4	9				4	12	
					11.12	9	39	comp 12.13 fol.
10B	3	23			10	3	24	
97	6	31		9.5	9.107	6	34	
11.12	10	16			11	10	20	AR lost
11B	4	51			10	4	58	AR lost
11.12	5	19						
9	1	1		8.7				
	D							
10	7	46			9.10	7	50	
11.12	1	21?	a star free 6m 8s and 20" south		10	1	13	
10.11	7	43				7	42	
						7	45	
9.7	3	10	NS	9.3		3	12	
97	7	57		9.3		7	58	AR doubtful
107	10	46	2 Le	a				
9B	8	55		8.7		8	55	
117	3	4	2 Le					
9.10	7	57		9.3		7	59	
	B							

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

29	31.5	35.4	N° 91	3 29	31.1
29	40.5	44.5			
31	13.3	17.2			
31	42.0	46.1			
32	26.3	30.2			
34	5.4	9.5			
34	26.7	30.6			
	B D				
35	10.3	14.2			
36	6.1	10.			
36	11.8	16.1	100		
36	43.7	47.7			
37	36.6	40.5			
37	51.2	55.1			
38	28.7	32.7			
	D 73. D				
38	47.4	51.3			
39	53.4	57.3			
40	51.3	55.4			
42	19.7	23.7			
43	55.7	59.6			
45	5.7	9.6	110		
45	39.5	43.4			
45	47.8	51.8			
47	32.5	36.4			
49	3.4	7.3			
51	25.0	29.0			
52	20.4	24.4			
52	40.9	44.8			
	B. 83.				
3 53	10.4	14.4	118		

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj...236S

9	3	35		8.7	3	34	2 Le	Clouded
10B	5	20		9.5				
10.11	8	54	2 p. of a pair	9.5				
9.10	2	0		9.2				
107	5	18						
10,11	6	37		9.5				
11	1	39						
		B.D						
10.11	5	47						
107	3	7	Examine Wire					
10	4	11						
11	10	38						
107	2	29						
9.10B	2	7						
10	1	0						
		DBD						
10.11	7	2						
11	1	31						
9.107	3	46						
9.10	6	57						
8.9	8	12		8.0				
11B	6	48						
9B	9	56		9.0				
11	5	8	NS					
11	1	12						
9.10	9	13		9.3				
9.10B	5	6		9.0				
11	10	23						
11.12	4	41						
		BB						
10.11	8	6						

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

53	25.3	29.2	No 119
54	29.0	32.9	120
55	6.1	10.0	
56	2.9	6.8	
57	55.9	60.0	
59	33.4	37.3	
59	~~41.C~~	41.4	
0	27.8	31.8	
0	43.9	47.9	
2	32.3	36.1	
2	41.3	45.3	
2	57.4	61.4	130
3	25.4	29.4	
4	27.4	31.5	
5	2.0	6.0	
5	21.5	25.6	
7	17.3	21.5	135

127 stars.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj...236S

10	6	4		
9.10	2	36		9.0
11	2	12	Du doubtful	
11.12	9	57		
	Vacant Field			
10.11	3	34		
8	8	37		8.2
10	7	9	Examine Wire	
11B	5	33		
	03			
11	7	24		
10	8	46		
10.11	6	13	NS	
107	10	5		
9.10B	8	14		9.5
107	1	44		
10	4	37		
10	2	24		
8.9	8	23		8.0

Comps. of Mag. I – II .0.″217 ± 0.″037 • 45 comps • I – A +0.″432 ± 0.″044
1 comp ± 0.″266 comp. ± 0.219

-0.7	1		0.93	-0.5	1		0.66
-0.2	6		0.38	0.0	2		0.37
-0.1	2	-2.1	0.28	0.2	5		0.27
0.0	4		0.28	0.3	4		0.08
0.1	2		0.06	0.4	1		0.00
0.2	7		0.03	0.5	6		0.03
0.3	6		0.01	0.6	2		0.06
0.4	3	+4.6	0.05	0.7	4		0.29
0.5	7		0.39	1.0	3		0.97
0.6	1	+4.1	0.11	12.1	28		2.93
0.7	2		0.37				1085
1.0	4	+5.4	2.66				
	36						

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

$2^h\ 7^m$ – $5^h\ 5^m$

The magnitudes of this zone were estimated without knowledge of any previous estimations

3	7	49.07	+1 5	43.0	
	8	4.90	2	43.3	
	8	17.57	10	55.0	
	10	4.20	2	50.8	
	12	37.39	10	18.5	
	19	15.50	11	0.4	
	43	34.41	8	32.6	
	57	13.78	2	51.6	B
	59	32.49	10	54.6	B
4	2	24.33	4	19.1	
	28	36.10	9	30.8	
	38	53.10	1	3.1	
	39	17.87	3	27.5	
	44	42.45	0	43.5	
	46	59.68	5	10.6	
[illegible]		1.29.	1	5.44.	

All the quantities in this table have been verified –

1862. Mar. 1.
Asy Pos 82° 39 [Lamont 82° 48']
C–O

3	7	40.6	52.7		3	7	48.8	52.9
	8	4.9	8.9			8	4.8	8.8
	8	13.5				8	13.7	
	8	17.6	21.5			8	17.5	21.6
	9	7.3	11.2			9	7.5	11.4
	9	36.8	40.7			9	36.5	40.7
		BD 13					B	
	10		1.3			9	57.5	
	10	4.6	8.5			10	4.6	8.5
3	10	50.7	54.6			10		56.8

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

1° 0' – 1° 10'

ZHS vb
AH no.

1863 Feb. 17m ZHS vb
AHC no
Zen dist 353 n2'

8.9	5	44		8.8	9.2	5.37
9.7	2	44		9.0	9.0	2 39
11B	7	55	2 Le		10.0	7 5.1
9	10	59		8.7	8.0	10.5.5
10.7	1	56			10.0	1 5.0
11	3	36				3 31
	BD					BS
11	10	1	1 Le		10.5	9.5.6
8	2	55		8.0	8.0	2 4 8
10	1	47			9.7	1 4 0

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

3	10	52.8	56.7	3	10	53.0	56.8
1862	Mar 1.				D.		
D		Arg. Pos. 82° 39′					
3	12	28.3			12	28.4	
	12	37.5	41.4		12	37.5	41.7
	13	-	35.9		13	31.9	36.0
	13	51.8	55.8		13	52.0	56.0
	14	18.6	22.5		14	18.7	22.7
	15	22.8	26.8		15	22.8	26.8
		DDD				D.	
	16	26.8	30.7		16	26.8	30.8
	16	53.0			16	53.0	57.0
	17	21.5	25.3		17	21.9	25.8
	18	8.1	12.0		18	8.0	12.0
	18	57.8	61.9		18	58.0	62.0
	19	15.8	19.8		19	16.0	20.0
	19	21.3	25.3		19	21.3	25.6
	19	55.3	59.4			D.	
		D.					
	21	8.5	12.4		21	8.7	12.7
	22	21.7	25.7		22	21.9	25.8
	22	38.4	42.5		22	[39.2]	42.6
	22	44.9	48.9		22	45.0	49.0
	23	7.6	11.6		23	7.7	11.6
		D.13					
	23	56.0	60.3		23	56.5	60.5
	24	16.6	20.5		24	16.7	20.7
	24	17.9	22.0			03 D.	
	25	—	50.9		25		57.1
	25	56.7	60.6		25	57.8	60.8
3	26	25.9	29.9	3	26	26.0	29.9

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

9.10	5	26	nS	9.5	9.5-	5.21	n.o
	D		Stars mostly of 12th magnitude.		D		
107	0	44	2Le		10.7	0 8 8	2 Le,
9.10	10	19	Reg. star route 10'-	9.0	9. 2	10 1 4	
11	6	8	1Le		11. 0	6 0 3	
10	6	9		9.5-	10. 0	6 0 6	
9.107	4	56		9.5	9. 3	4 5. 2	
10.11	9	35-			9.5-	9 2 8	
			Few Stars				
	DDD				D.		
11.12	10	26			11. 0	10 2 0	
11.12B	2	25-	2Le		11. 2	2 2 1	
11	8	24			11. 0	8 2 0	
107	0	43			10.5-	0 3 5	
11B	5	23-			10.7	5. 1 9	
8.9	11	6		8.7	8. 0	11 0 2	
9.10	6	54	nS	9.5-	9.5-	6 4 7	n.o,
11	6	33					
	B				D		
9.10	7	35	B.	9.4	9.2	7 2 9	
97	6	51		9.5	9.0	6 4 5-	
10B	5	2			10.5-	4 5. 7	/ strong.
10.11	3	0			10.5-	2 5- 6	
10.11	0	45-			11. 0		Dec. 4
	DB						
11B	4	34			10.5-	7 2 8	
107	2	50		9.5	9. 8	2 4 5-	
11	2	34	nS, dec. doubtful		11. 0	2 3 0	AR. L.
					D, D		
11	8	20	1Le		10.5-	8 5-	Dec? / L.
10.11B	8	49		9.5-	9.5-	8 4 4	
11B	3	42			10. 3	3 3 7	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

27	25.6	29.5	3	27	25.7	29.8
27	44.7	48.6		27		48.6
29	20.1	24.2		29	20.1	24.1
	D.					
30	20.8	24.8		30	20.8	24.8
30	55.4	59.3		30	55.5	59.5
31	11.7	15.7		3		
31	21.3	25.5		31	21.5	25.5
31	39.5	43.4		31	39.4	43.5
32	4.8	8.7		32	4.8	8.8
32	13.0	17.9	exam 2° wire	32	13.1	17.1
D.	19.8	23.7				[32 33.6]
33	19.8	23.7		33	19.8	23.8
34	35.0	38.7		34	34.7	38.7
35	10.5	14.4		35	10.5	14.1
	D.				D.D.D	
36	5.1	8.9		36	5.2	9.1
36	14.7	18.6		36	14.7	18.6
36		23.2		36		23.4
36		36.8				
37	11.4	15.3		37	11.4	15.4
38	7.3	11.4		38	7.4	11.4
38	28.7	32.5		38	28.7	32.6
39	37.3	41.3		39	37.5	41.5
39	45.0			39		
40	36.7	40.7		40	36.7	40.6
40	38.3	42.4		40		
41	19.3	23.7		41	19.8	23.7
41	21.0	24.9		41	21.1	25.0
42	1.4	5.3		42	1.4	5.4
42	13.0	17.0	3	42	12.9	16.9

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj...236S

10.11	1	26			10.5-	121	
11	1	28			10.5-	124	1 Le,
10.11	6	30	faint comp. pree 5" dist,		10.5-	624-	double comp. D. 2 10" dist —
		BD					
8.9B	1	26		8.3	8.0	120	
10	6	39	Bl	9.5	10.3	6 32	
9	0	20					
9B	8	16	Examine mg.	9.2	9.0	8 18	
10B	2	43			10.0	2 37	
9.10	9	10		9.5	9.2	8.5-4	
107	4	6			10.0	401	
		Dbng			Ae. B,		
11	8	27			10.7	821	
9.10	3	44			10.0	038	
10.11	8	20			10.2	815-	
		D			D, D, D,		
9.10B	4	45		9.1	9.0	441	
10	10	28			10.0	1081	
10	2	33	1 Le		11.0	227	
10.11	9	2	1 Le				
10	5	17	Arg. 61	9.5	9.8	5.12	
9B	2	2		8.8	8.5-	14-6	
		B					
9.10	11	6			9.2	1101	
10.11	8	0			10.3	753	
10.11	3	25	2 Le		10.5-	920	
10.11	3	58			9.8	8 5-0	
10.11	8	30					
9	10	16		8.8	9.2	1012	
107	10	7			10.0	1001	
10	5	49					
10.11	7	39			10.0	5.48	
		BDB			10.0	783	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

	42	42.3	46.4	3	42	42.4	46.3
	43	34.7	38.6		43	34.7	38.7
	45	22.2	2 —		44	6.5	12.6
	45	22.2	26.3		45	22.2	26.3
	46	28.4	32.3		46	26.6	32.5
	46	36.3	40.2		46	36.3	40.3
	46	43.1	47.0		46	43.1	47.1
	47	14.7	18.4		47	14.5	18.7
	47	43.2	47.2		47	43.3	47.3
		D.B				B	
	48	23.0	27.0		48	22.8	26.8
	51	14.4	18.2		51	14.1	18.3
	52	4.3	8.4		52	—	8.3
	52	5.2	9.2		52	5.4	9.3
	52	12.4	16.4				
	52	55.3	59.2		52	55.3	59.3
	57	2.2	6.3		57	2.2	6.2
	59	27.2	31.2		59	27.4	31.3
		D3.					
3	59	42.4	46.5	3	59	42.4	46.5
4	1	6.0	10.1	4	1	6.1	10.1
	1	27.3	31.1		1	—	31.2
	1	47.0	51.0		1	47.1	51.0
	1	55.9	59.9		1	55.9	59.9
	3	2.1	6.2		3	2.3	6.3
		D.				DDD	
	3	54.2	58.3		3	—	58.2
	4	18.5	22.7		4	18.4	22.7
	4	48.7	52.7		4	48.7	52.6
	5	43.8	47.8		5	43.6	47.8
	5	52.8	56.8		5	52.6	56.6
4	6	28.1	32.1	4	6	27.9	31.7

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj...236S

11	7	58			10.7	7 5-0	
8	8	36		7.0	7.0	8 3 1	
11B	4	35	AR bad		10.3	4 3 0	
11	1	6			10.0	1 0 2	
10.11	7	52	Examine Dec		10.0	7 4 5-	
10.11	9	56			9.7	9 5-0	
10.11	9	4			10.0	8 5-9	
10.11	1	59			10.7	1 5-2	
10	10	25-			9.2	10 17	
	DB					D. D.	
11	2	43			10.3	2 3 5-	
	Field with no Star above 13 mag						
8.9	2	47		7.4	8. 5-	2 4 4	
	More double Stars than usual in this Zone						
10.11	6	2			11.0	5 5-6	1 Dc.
97	7	9		9.0	9.5-	7 0 4	
11	6	Decbse. double					
97	0	25			8.7	0 18	
9.10	5	0		9.0	9. 0	4 5-4	
9.10	9	45			9.3	9 3 6	
	B						
10	8	23			10.3	8 17	
10	5	55		9.5	9.8	5-4 5-	
11.12	4	57			11.0	9 4 7	
9.10B	7	16		9.0	9. 0	7 0 8	
10	3	39	a double Star comp. S. p. close	9.2	9. 3	0 8 2	
10B	7	56	comp. dist. 7"		10. 1	6 4 6	Comp S. p. dist 12" angle
	D					D. D. D.	of p. 210° mag. of
10B	9	12		9.5	10.0	9 0 4	comp. is 12th.
11	3	33			11.0	3 2 4	
107	10	46			9.8	10 3 6	
11	8	13			10.5-	9 0 5-	
10.11	5	24			10.0	5-1 4	
11	2	22			11.0	2 1 1	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

7	5.9	10.0	4	7	6.0	10.1
8	10.7	14.6		8	10.6	14.6
9	31.1	34.8		9	31.0	34.8
9	41.0	45.1		9	41.0	45.0
10	20.8	24.8		10	20.8	24.7
10	41.1	45.0		10	41.0	45.0
11	10.6	14.4		11	10.6	14.4
11	15.8	20.0		11	15.9	19.7
11	44.6	48.8		11	44.5	48.5
12	44.6	48.5		12	44.5	48.4
13	2.5	6.3		13	2.2	6.3
13	28.1	32.0		13	27.7	32.0
[14	59.8]			15	0.1	4.1
15	36.2	40.2		15	36.2	40.2
15	57.5	61.5		15	57.5	61.3
16	0.4	4.3		16	0.2	4.1
16	34.1	38.0		16	34.0	38.0
16	56.6	60.6		16	56.5	60.5
17	13.3	17.3		17	13.2	17.2
18	22.6	26.5		18	22.4	26.4
18	59.1	62.9		18	58.9	62.9
19	26.2	30.0		19	26.0	29.7
20	6.7	10.7		20	6.7	10.5
20	51.4	~~56.6~~		20	51.4	—
20	—	55.6		20	—	55.7
21	25.6	29.6		21	25.0	29.0
[21	32.3	~~36.0~~]				
21	47.6	51.6	4	21	47.6	51.6

20 52.5 Zeigel

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

11	9 37			11.0	9 24	
	B				B.	
107	8 42			10.0	8 32	
10,11	3 16		]	11.0	3 08	~~3 cl~~
107	1 5		]	10.0	0 4.4-	
10	8 1		]	10.0	7 4.7	
			]	9.8	7 4.1	
10.117	3 47			11.0	9 39	
11B	10 7		]	10.7	9 4.9	
107	3 15	nS	]	9.7	3 0 4-	n. e.
	D					
11	3 23			10,4-	3 14	
10.11	10 0			10,0	9 48	
10	6 26			9,4-	6 16	
10.11	0 38			10.7	0 28	
11	7 3	2 Le, K& Firm wire doubl.		11.0	6 4-4	
97	10 17	9.2		8.8	10 08	
10.11	4 52		(9.5)]	10,3	4 42	
10	5 20	nS	]	9.8	4-1 0	
10	1 40		]	11.0	1 3 0	
10 11	3 47	372		10,8	3 37	
10 B.	7 3	comp north 18° fol 7" dist 12 my		8. D 4-4-		
	D			9.3 D 4-4-	6 4-4-	9.3
10 11	0 58	HPJ recorded a few stars		10.0	0 48	
11	7 24	here; and made some mistakes,		10,4-	7 17	
11	2 2B	probably.		10,8	2 13	
	1					
11	10 16			10.4-	10 04-	
11	10 3	2 L	]	10,3	8 4-1	2 L
~~7-8~~	2 8	1 L	]		2 0 0	1 L
7	4 20	D = double star	5.7]	7.0	4 10	
8-8	9 37	* comp 11-12 (?)	Error]			
10	8 8			9.8	8 01	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

22	23.9	27.9	4	22	23.8	27.8
	BD.				B. D.	
23	40.2	44.1		23	40.0	44.0
24	——	41.0		24	37.4	41.3
24	55.5	59.7		24	53.2	59.6
25	13.9	17.8		25	14.0	18.0
25	41.8	45.9		25	41.7	45.7
26	39.4	43.2		26	39.2	43.3 /26 — 43.3
27	19.7	23.7		27	19.6	23.7
27	26.2	29.2		27	25.1	29.0
27	51.0					
28	1.2	5.2		28	1.1	5.1
	B.					
28	19.8	23.9		28	19.6	23.6
28	36.7	40.8		28	36.7	40.7
29	14.2	18.3		29	14.5	18.3
30	8.9	12.9		30	8.8	12.7
30	23.0	26.8		30	23.1	27.1
30	24.0	28.0		30	24.0	28.0
30	32.8	36.7		30	32.7	36.5
31	0.2	4.3		31	0.1	4.1
	DB					
31	24.6	28.6		31	24.7	28.5
31	26.3	30.1		31	26.1	30.2
31		39.6		31	35.5	39.5
32	32.6	36.5		32	32.5	36.4
32	46.3	50.3		32	46.1	50.1
32	56.0	60.1		32	56.1	60.1
	D. D					
34	9.8	14.0		34	9.7	13.7
34	32.1	36.0		34	32.1	36.0
34	37.8	41.6	4	34	37.7	41.7

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1963phae.proj..236S

9	0	35		9.1	9.3	025-	
	D				B.	B.	
9.10	8	18		9.3	9.5-	808	
11	8	41	1 Le		10.3	831	
9.10	9	2			9.5-	852	
10	9	36			10.2	928	
11	6	25	double probably		10.0	676	double comp. n.p.
9	10	46		9.3	9.3	1027	
10B	1	35-		9.5	10.2	1 2 3-	123 · 1 Le 11.5- is between 125- and 1027
107	2	6			10.5	15-6	Not considered of same value —
11B	5	19	2 Le				
10	1	29		9.3	10.0	120	
	B						
10.11	3	52			10.7	941	
9B	9	31		9.0	9.0	921	
10.11	9	54			10.5-	944	
11B	3	9			11.0	900	
11B	8	22			10.5-	811	
11B	8	11	ns		10.5-	801	
10.11	7	8			10.5-	657	
107	5	5-			10.2	45-9	
	DB						
97	10	51		9.5	9.0	1042	
10	2	55		(9.5	10.3	243	
10	3	39	Ex. wire		10.1	930	
10	10	13		?9.5	10.0	1003	
10	10	26		9.5	9.5-	1016	
10.11	0	52			10.5-	041	2?
	BD						
11	4	51			10.5-	440	
10	1	40			9.5-	128	
9.10	1	7		8.9	9.5-	05-8	n.s.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

35	12.0	16.0	35	11.9	15.9
35	~~24~~	24.8	35	21.1	—
35	28.4	32.3	35	26.5	32.4
35	58.9	63.0	~~35~~	~~3~~	
36	35.7	—	36	35.5	39.5
36	43.3	47.3	36	43.2	47.2
	B.B.			D.	
37	17.1	21.3	37	17.1	21.2
37	49.0	53.1	37	49.1	53.1
38	13.0	16.9	38	12.9	17.0
38	54.0	58.0	38	54.0	58.0
39	18.6	22.7	39	18.6	22.6
40	8.7	12.7	40	8.8	12.8
40	33.3	37.3	40	33.4	37.4
41	18.7	22.8	41	18.7	22.7
41	36.0	39.8	41	35.8	39.8
	D.			B.	
41	59.0	63.0	41	59.0	63.0
42	13.4	17.5	42	13.4	17.5
43	25.9	29.7	43	25.7	29.7
44	2.8	6.7	44	3.0	7.0
44	42.8	46.8	44	42.8	46.7
44	50.6	54.7	44	50.4	54.5
45	5.7	9.9	45	5.6	9.8
45	21.7	25.6	45	21.6	25.6
45	44.6.	[48.9]	45	44.5	—
45	48.0	51.9	45	47.9	52.0
46	7.0	10.9	46	7.0	11.0
	B.B.			B. ~~B.D~~	
46	59.4	63.3	46	59.2	63.2
48	2.8	6.7	48	2.8	6.8
48	4.1	6.0	48	3.8	7.9

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

10.7	1	41				10.5-	129	
10	2	0	Li			10.0	15-7	2 L. Dec!
9.10	11	9			9.0	8.5-	1101	
10.11	6	10						
10.11	6	9	Ex wire			11.0	600	
97	6	43			8.7	9.2	633	
	BBB						D.	
11	10	23				10.5-	1010	
9.10	5	24	(Ex mags.		9.0	9.0	5-12	
9.10	7	25			9.5	9.0	714	
97	1	2			9.0	9.3	05-0	
9B	3	26			8.6	9.3	915-	
9.107	8	3				9.7	75-0	
107	9	25				10.3	914	
11	4	15	ns			10.3	405-	
10.10	3	8				10.0	25-6	
	D						D.	
11	3	55				10 5-	841	
9	8	19			9.2	9.3	825-	
11B	9	24				10.2	912	
11	10	9				11.0	9.5-7	
8.9	0	43				8.8	030	
9	7	51			8.7	8.8	738	
10	4	33			9.5-	10.0	428	
10B	1	55-				9.7	145-	
10.11	6	4	2nd wire wrong		(8.7	10.5-	5-5-2	2 L
10	6	25-	ns			9.8	615-	
9.107	10	8			9.5	9.7	95-7	
	BB						D. D.	
9	5-	10			8.2	9.3	45-9	
	6	26			9.5	9.8	615-	
	3	7	ns			10.0	25-7	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

48	24.0		4	48	23.8	—	
48	27.4	31.3		48	27.3	31.4	
48	59.4	63.6		48	59.5	63.4	
49	13.4	17.3		49	13.3	17.3	
49	37.1	41.1		49	37.0	41.0	
50	19.2	23.1		50	19.2	23.1	
50	40.7 D.	44.7		50	40.6 B. B. B.	44.5	
51	31.9	35.7		51	31.6	35.6	
51	48.1	52.1		51	48.0	52.0	48 51.3
52	39.1	42.8		52	38.8	42.8	
53	11.4	15.2		53	11.2	15.1	
55	35.6	—		55	35.4	—	
55	44.1	—		55	44.3	—	
55	—	48.8		55	—	48.7	
56	27.2	31.3		56	27.2	31.2	
57	6.1	10.0		57	6.1	10.0	
57	46.0	50.0		57	46.0	49.8	
57	— B.B.B.	54.9		57	— B.B.	54.8	
59	33.6	37.3		59	33.2	37.2	
4 59	50.6	54.6	4	59	50.5	54.5	
5 0	10.1	13.9	5	0	10.0	14.0	
0	35.6 D.B	39.6		0	35.5	39.5	
1	30.8	34.8		1	30.7	34.6	
1	42.1	46.0		1	41.8	45.9	
2	16.4	20.8					
2	32.8	36.8					
3	5.5	9.4					
5 3	48.2	49.2					

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj...236S

10.11	2	28	2 Le			10.2	216	2 L.
10B	9	19	2			9.5	908	
97	3	34			8.8	9.3	320	
9	7	33			8.5	9.0	721	
10.117	3	15				10.0	303	
11	10	30				11.0	1019	
11	1	19				10.0	109	
	dd					B.	B. B.	
10.11	4	54				10.0	442	
10.11	8	25	a star of 11 may n.p. 11" dist			10.0	819	Comp. n.p. 1 more gut —
107	10	53				9.8	1042	
10.11B	8	6				10.0	755	
10.11	5	5	2 Le			10.8	453	2 L
9.10	10	22	2 Le		9.0	8.8	1009	2 L.
107	1	54	1 Le. n8.			10.0	142	1 L
10.117	2	59				10.5	295	
10.11	10	59	may doubtful			10.3	1044	
11B	3	42				10.5	328	
10.11	9	37	1 Le			10.3	925	1 L
	BdD					B.	D.	
10	1	47				10.0	135	
10	10	40				9.8	10.25	
10B	3	52			9.5	9.3	940	
9.10	10	26			9.3	9.0	1015	
	dB							
97	5	36			9.0	9.0	525	r byn
10.11	7	4				11.0	652	
10.11	8	49				10.3	834	
10	4	17				10.0	405	
10.117	10	31				10.0	1019	
10	8	0				10.0	746	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

5	4	28.7	29.8
	4	49.3	53.2
	5	11.4	15.5

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj...236S

9,10 7 51
9,10 4 15
97 9 27

9.4 9.4-6 2 2 Line —
9.5 9.7 9 02
9.0 8.8 9 14 —

S-A

-0.5			
-0.4	I	-0.4	0.4
-0.3	IIII	-1.2	0.2
-0.2	IIII	-0.8	0.76
-0.1	I	-0.1	0.11
0.0	XII III		0.46
0.1	II	+0.2	0.04
0.2	XIII XIII	2.0	0.02
0.3	XIII I	1.8	0.03
0.4	I	0.4	0.03
0.5	XIII XIII III	6.5	0.90
0.6			
0.7			
0.8	II	1.6	0.32
0.9			
1.0	II	2.0	0.58
1.1	I	1.1	0.74
	55	+13.1	5.58

1034
318

S-A 0".238 ± 0".029
Brass lamps ± 0".216

9.5		
9.5	XIII	
9.6		
9.7	II	0.4
9.8	III	0.9
10.0	XIII I	3.0
10.3	I	0.8
9.2	II	0.6

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

$5^h 42^m$ –

5	43	3.02	+1	19	55.3	
	50	56.89		12	17.7	
	56	33.91		20	6.5	
6	8	46.49		12	36.2	B
	16	57.22		19	2.5	
	17	0.85		15	26.5	
	18	3.95		18	13.0	
	30	2.22		13	10.6	
	34	0.65		18	22.0	
	45	14.43				
	~~44~~	~~55.95~~		14	26.3	B
	45	27.115		15	16.1	B
	52	27.96	1	15	18.4	

Groombridge 1940 53

All the quantities in this table have been verified — H.M.A.

4	3	25.0	29.1	4	3	24.0	28.0
	4	27.5	31.5		4	26.2	30.2
	5	1.9	5.8		5	0.7	4.6.
	5	21.4	25.5		5	20.1	24.2
	B.D						
	7	17.2	21.1		7	16.0	19.9
	7	54.3	58.7		7	53.6	57.5
	9	51.6	55.7		9	50.8	54.4
	10	17.4	21.5		10	16.1	20.1
	10	36.4	40.2		10	35.2	39.2
	10	43.7	47.6		10	42.6	46.6
	14	13.3	17.3		14	12.1	16.2
	14	43.1	47.0		14	41.9	45.8
	15	10.3	14.2		15	9.1	—
	15	19.2	23.1		15	18.1	22.2
4	15	~~43.8~~	47.6	4	15	42.5	46.4

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj.:236S

$4^h\,3^m - 5^h\,43^m$ $1°10' - 1°20'$

				a	$-3^m 52^s.0$	$-9''$	$9''.5$
8.0	$4^h\,7^m\,17^s.03$	$+1°\,18'\,24''.3$	90 bark.	b	$+2\,15.4$	$-2\,46$	10.
9.0	25 9.14	13 43.2		c	$+1\,58.85$	$-5\,59$	10.
9.0	30 29.00	13 8.9		-b+c	$+19^s.55$	$-2'13''$	
9.0	35 27.65	11 7.0					
8.8	43 21.16	12 10.7					
8.2	45 4.69	16 33.5					
8.5	49 43.85	18 7.7	L.				
	~~46 37.68~~	~~5 10.6~~					
9.0	5 3 30.60	11 26.9					
7.2	20 53.42	10 53.3	L.				
8.8	21 10.04	15 24.4	K.	AR non concordat. [illegible]			
7.2	26 49.17	18 38.2					
8.8	28 32.71	13 46.4					
9.0	43 3.02	+1. 19 55.3					

All the quantities in this table have been verified.
H.L.L.

1863 March 18 — Zero of Micr. Set at $17°32'$
T. H. S. Obs.
H. L. L. Recs — Hor. Arg. $3^h\,11^m$

1863 March 20 Position at 17h 42 Hill
T. H. S. Obs.
H. L. L. Recs —

9.5	811		9.5	9.7	821	-9.1	
10.3	140			11.0	1485		
10.2	435			10.8	445	5.8	
10.5	220			10.7	228		
	B. D.						
8.0	820	Catalogue	8.0	8.5	828		
10.7	~~223~~ 232	Correct —		11.0	242		
10.5	1025			10.8	1038		
11.0	608			11.0	615		
10.0	310			10.8	920		
10.3	832	D?		11.0	849	D?	
10.0	200			10.5	210		
9.5	834			10.3	845		
10.3	0519			11.0	1062	L.	
10.0	1417			10.8	1417		
10.8	842			11.0	851		

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

16	6.8	10.9		4	16	5.8	9.5
	D.				15	43.0	— Rim doubtful
16	22.5	26.2					
16	32.0	36.0					
16	44.5	48.3					
17	15.6	19.7					
17	24.5	28.4					
	D.D						
18	54.5	58.5			18	53.2	57.2
21	1.1	—			21	0.0	—
21	—	5.1			21	—	4.0
22	9.8	13.7			22	8.8	12.6
	D.					B.	
					23	29.0	33.1
24	11.7	15.9			24	10.6	14.5
25	9.4	13.4			25	8.3	12.2
26	39.2	43.0			26	38.2	42.1
27	26.6	30.7			27	25.6	29.6
28	D.D					D.D	
28	26.5	30.5	Examin from		28	25.4	29.4
29	5.6	9.7			29	4.5	8.5
29	34.0	38.0	Sheet,		29	33.0	37.1
30	29.0	33.0			30	2	
30	29.8	33.9			30	28.6	32.6
30	37.1	41.1			30	35.7	40.0
					30	43.3	—
31	24.7	29.6			31	23.6	27.5
32	56.6	60.9			32	23.1	27.2
32	59.5	63.6			32	55.9	59.9
					32	56.5	62.4
33	18.5	22.4			33	17.2	21.3
	D. B					B.D	
34	10.6	14.7			34	9.6	13.4
34	45.4	49.4			34	44.3	48.3
34	46.8	50.8			34	45.6	49.6
35	5.5	9.3			35	4.2	8.1
35	28.4	32.2			35	27.3	31.2
36	D3 —	4.5			35	59.3	63.3
36	44.9	—			36	43.7	47.6
36	52.8	56.8			36	51.8	55.6
37	1.0	5.0			36	59.9	63.9
37	34.7	38.6			37	33.5	37.4
4 37	48.2	52.2		4	37	46.9	51.0

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj. .236S

10.5	109			11.0	116
	D.				752
10.	954				probably 10 55
9.7	738				
9.5	110				
10.0	1081				
10.5	421				
	D. D.				
9.8	920			10,0	982
9.5	1016	2 D.		10.2	1026 2 D.
10.3	282	1 D.		10.8	241 1 D.
10.8	1012			10.7	1021
	D.				B. Stars omitted in previous zone
10.3	909			11.0	1206 of 11 mags.
8.5	332	Catalogue.	9.0	10.8	999
9.2	024		9.3	9.3	940
9.7	1116			9.3	004
	B. D.			10.0	1127
10.0	10.43				D. D.
10.0	11.15			10.8	1050
10.2	547			10.8	1127
8.8	2556	Catalogue	9.0	10.2	5556
9.7	4555		? 9.5	9.7	2055
10.0	040			10.2	1037
10.5	803			10.2	1447
10.5	606			10.6	612
10.5	751			10.7	615
10.3	901			10.7	802
	D. B.			11.0	910
10.5	543				B. D.
9.7	125			10.7	5539
10.7	242			11.0	1951
10.8	442			10.5	2541
9.0	057	Catalogue	9.0	10.0	451
11.0	449	m. o. 1 D.		9.0	106
10.0	1027	2 D.		11.0	506
9.3	1542			10.5	1038
10.0	140			9.8	1558
9.3	932		9.5	10.2	149
9.0	1037		8.5		941
				8.8	1046

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

38	1.1	5.1		4	37	59.9	63.9
	B				B.		
38	29.9	34.2			38	29.0	33.0
39	19.1	23.1			39	17.9	21.8
39	35.6	39.5			39	34.4	38.4
40	3.0	6.7			40	1.7	5.5
D.	BB						
40	52.0	56.0			40	50.9	54.8
41	17.1	21.0			41	15.9	19.9
42	15.0	19.0			42	14.1	18.0
42	—	38.8			42	33.9	37.7
42	55.2	59.1			42	54.1	58.0
43	21.6	25.4			43	20.4	24.3
43	48.5	52.5			43	47.4	51.3
44	19.2	23.2			44	18.0	22.0
	B					B.	
44	35.0	39.0			44	34.0	37.9
44	59.3	63.3			44	58.1	62.0
45	4.3	8.3			45	3.5	7.6
45	32.5	36.5			45	31.4	35.5
45	48.3	52.4			45	47.2	51.2
45	59.5	63.5			45	58.2	62.3
46	14.4	18.3			46	13.3	17.3
46	D					BD	
46	40.0	43.9			46	38.7	42.8
46	47.8	51.8			46	46.6	50.6
47	25.9	30.0			47	24.7	28.6
48	1.2	5.3			48	0.1	4.1
48	35.3	39.3			48	34.1	38.1
48	42.8	47.7			48	42.5	46.6
49	41.8	45.8			49	40.7	44.6
50	27.2	31.1			50	26.0	30.1
50	34.2	38.2			50	33.0	37.0
51	20.0	24.2			51	19.1	23.1
51	51.9	54.0			51	50.7	54.6
52	29.4						52 57.0 61.0 ?
52	38.7	42.7					
	B						
53	50.8	54.4	Examine		53	49.2	53.3
54	59.1	63.1			54	58.1	62.0

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

9.7	907			9.5	10.2	916
	B.				B	
10.0	5.04				10,5-	5.19
9.8	1024	)			10.2	1034
10.7	445	) m.s.			11.0	445.4
10.0	927				10.5-	944 sure
	D.D.D.					
11.0	5.3.8				11.0	606
8.0	302		x	8.7	9.2	310
10.5-	5.34	)			10.7	5.42
10.5-	118	) 12.			11.0	127
10.5-	212				10.5-	220
8.7	700		Catalogue	8.8	9.0	708
10.0	445.8				10.5-	5.06
10.3	1027				10.5-	1036
	B.				B.	
9.2	5.46			9.5	9.3	605-
9.2	1104			9.5	9.1-	1112
8.5-	615-		Catalogue	8.2	5.5-	625-
10.0	1033				10.8	1042
9.3	727	)		9.5-	9.3	736
10.5-	1037	)			10.2	1046
9.2	736			8.8	9.3	745-
	D.				B.D	
10.3	810				9.2	819
8.0	1011		Lalande	7.5	8.0	1016
9.8	934			9.0	9.5-	944
10.5-	825-				10.5-	835-
9.3	634			9.3	9.5-	644
9.7	916			9.5-	9.7	925-
8.8	746		Catalogue [Lalande]	8.5-	8.5-	75.6
9.5-	1035-				9.0	1045-
10.5-	246			?9.5-	9.5-	255-
10.3	782		I know soon-		10.0	741
9.8	5.40			9.4	9.5-	5.50
10.7	806	2 L.				816 seemed to be amiss
10.0	037					
	B.					
10.2	644				10.0	653
9.5-	5.92				10.0	5.30

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

4	55	30.0	34.1		4	55	28.8	32.7
	55	42.8	47.7			55	—	46.6
	55	53.6	57.6			55	52.3	56.2
	56	10.5	14.4			56	9.1	13.0
	56	34.8	38.6			56	33.5	37.4
	56	45.7	49.6			56	44.5	49.5
		B.D.D?					B.D.D.	
	57	38.1	42.1			57	37.5	41.5
	58	23.1	27.1			58	—	63.6
	58	31.1	35.0			58	22.1	26.1
	59	8.4	12.2			59	30.1	33.9
4	59	19.3	23.3			59	7.3	11.2
5	0	12.1	16.1		4	59	18.1	22.0
	0	22.0	26.0		5	0	11.1	14.9
	0	49.3	53.3			0	20.8	~~24.8~~
	1	27.4	31.4			0	48.1	52.1
	1	41.0	45.0			1	26.3	30.3
	2	34.1	38.1			1	39.9	43.8
	2	2.3	6.4			2	33.8	37.6
	3	5.6	7.6	(36?)		2	1.3	5.3
	3	28.0	?	Examine more		3	2.5	6.5
	3	31.3	35.4			3	27.1	—
	4	7.6	11.6			3	30.2	34.2
	4	43.1	47.1			4	6.6	10.4
	4	57.1	61.8			4	42.6	46.6
	5	48.2	52.0			4	56.6	60.6
		B.D.				5	47.0	51.0
	6	58.5	62.4			6	~~43.8~~	[37.0]
	8	6.5	—			6	57.2	61.3
	8	16.3	20.1			8	5.4	9.0
	8	31.8	35.6			8	15.0	19.1
	8	57.2	61.2			8	30.3	34.3
	9	8.3	12.3			8	56.1	60.2
	9	34.1	38.1			9	7.2	11.0
	9	36.1	40.0			9	33.2	37.1
	10	28.4	32.4			9	34.8	38.8
		B.				10	21.1	31.1
	11	5.8	9.8					
	11	49.4	53.5					
5	12	32.2	36.3					

battery weak
~~[illegible]~~ Doubtful

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1963phae.proj..236S

10.5-	1013			11.0	1023	
9.5-	102		9.5	10.5-	110	1 Lc.
	8			10.3	824	
10.0	445-			10.7	5.04	
10.0	826	D?		10.5-	835-	
10.0	904			10.1	914	
	B.D.B.				B.D.B.	
9.7	353			10.0	404	
10.8	500			11.0	940	1 Lc
9.5-	545-		(9.3)	10.8	510	
11.0	126			9.2	5.54	
10.5-	449			11.2	197	D?
10.5-	1002			11.0	506	
9.7	1039			10.8	1012	
10.3	238			9.2	1048	
10.0	825-			10.5-	247	
9.5-	402	Bon Cat.	9.3	9.5-	410	
11.0	730			10.7	739	
9.3	913		9.5-	9.8	920	
10.3	849	m.d		10.3	5.59	m.d
9.5-	945-		9.5	9.7	955-	2 Lc.
9.0	110	Catalogue	9.0	9.2	119	m.d
10.3	942			10.5-	952	
10.5-	440			10.5-	445-	
10.0	422			10.0	431	
10.3	645			10.3	905-	
	D.				D.	
9.8	886			10.0	949	
			9.2	9.2	846	
10.3	1009	2 Lc.		10.5-	1018	
9.3	1255-		9.4	9.2	1355	
10.5-	2455-			11.0	253	
9.8	434		9.5-	9.8	443	
10.2	206			10.8	215-	
9.5-	311		9.5-	10.0	320	
10.0	932	m.d.		10.0	939	m.d
10.5-	415-			10.8	422	
	B.					
10.5-	648			11.0	657	
10.5-	052			11.0	101	
9.7	904	Bon Catal.	9.5-	9.7	912	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

13	6.3	10.4					10
13	38.7	42.6					9.
14	28.8	32.7					9.
14	[illegible]	55.7	Examine Nire	5	14	50.6	54.6	9.
14	57.3	61.4		5	14	56.3	60.3	9.
	B.					B.B		
15	33.0	37.0			15	32.1	36.0	10
15	46.2	50.1			15	42.9	47.0	10
16	2.5	6.4			16	1.4	5.3	10
16	16.5				16	15.4	19.4	9.
16	22.8	26.8			16	21.7	25.7	9.
17	2.6	6.6			17	1.4	5.6	9.
17	15.2				17	14.0	18.3	9.
17	(19.3)	23.0			17	17.8	21.8	10
	03					D.		
18	14.3	18.2	L L Lo nucleus		18	13.0	—	10
18	41.4	45.3			18	21.5	25.5	9.
18	43.0	47.0			18	22.3	26.2	10.
19	2.2	6.2			19	1.0	5.0	10.
19	37.5	41.4			19	36.3	40.3	9.
19	54.2	58.2			19	53.3	57.1	9.
20	12.1	16.0			20	10.8	14.7	9.
20	30.7				20	29.9	—	10
20	35.3	39.3			20	34.3	38.3	9
20	54.5	58.3			20	53.5	57.4	8.
21	11.6	15.5			21	10.2	14.2	9.
21	46.0	48.1			21	42.8	46.7	9.
21	45.4	49.4			21	46.1	48.1	9.
22	32.2	36.2			22	31.1	35.1	10.
2	13.0					D.		
22	53.6	57.2			22	52.4	56.5	11.
23	37.1	41.1			~~23~~			11.
23	52.4	56.6			23		55.3	10.
24	6.3	—	Examine 2.		24	5.9	9.3	10.
24	9.9	13.9			24	8.8	12.8	9.
24	22.8	26.9			24	21.8	25.7	9.
24	45.6	49.6			24	44.3	48.3	10.
24	47.1	51.1						10
25	5.7	9.9			25	4.8	8.6	9.
5 25	45.5	49.5		5	25	44	48.4	9.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj. - 236S

10.3	5.28		10.5-	5.37	
9.8	15.6		9.5- 9.8	204	
9.5-	75.1		9.3 9.7	75.0	2nd
9.3	238		9.2 9.7	247	
9.2	24.4		9.4 9.5-	902	
	B.			B. D	
10.0	203		10.5-	211	
10.0	243		10.3	25.1	
10.0	936		10.0	944	
9.8	907		10.2	716	
9.8	232		10.0	240	
9.3	5.22		9.7	5.30	
9.8	75.2	2 L.	10.0	502	
10.0	840	[Wrong]	10.0	8.5.0	n.s
	B.			D.	
10.0	342		10.0	35.1	2 L
9.5-	5.30		10.5-	5.38	
10.3	930	n.s.	10.0	939	
10.0	1013		10.5- 10.2	5.05 1025	
9.7	643		9.7	645.3	
9.0	119		9.2 9.5-	128	
9.5-	942		9.7	95.1	
10.0	215-	2 L.	10.3	229	2 L
9.5-	5.06		9.5 9.8-	5.16	
8.0	027	Catalogue Lal.	7.2 8.2	096	
9.0	5.06	Catalogue	8.8 8.5	5.17	
9.7	216		9.7.	225-	
9.7	992		9.3	941	
10.3	710		10.3	720	
	D. D.			D.	
11.0	927		10.8	987	
11.0	600				
10.8	5.46			5.	2 L
10.0	629	2 L.	9.5	684	
9.5-	45.4		9.5 9.5	5.04	
9.5-	435-		9.5 9.2	444	
10.5-	801		11.0	809	
10.5-	782				
9.2	045-	Argel ?	9.2	05.4	
9.7	5.30		10.0	5.36	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

B.

26	50.1	54.0	
26	59.8	63.8	
27	18.7	22.7	
27	—	31.6	
28	38.3	42.3	
28	45.3	49.3	
29	7.5	—	
29	10.7	14.6	
29	57.0	61.0	
30	12.1	16.1	
30	38.6	42.5	

D.

30	59.8	63.5	
31	12.5	13.4	Second 16.4 ?
31	36.7	40.6	

D.13 (new star)

34	2.7	6.7	
34	9.5	13.5	
35	8.8	12.8	
36	—	14.5	
36	19.4	23.4	Comp (18.5 / 22.6)

B.B.

38	26.1	30.1	
38	27.5	31.5	
38	34.5	38.5	
39	50.1	54.0	
39	56.1	62.1	
40	12.1	16.1	
40	14.3	18.3	
43	3.6	7.7	Cloudy here ?

Several bright stars omitted see Argelander.

5	26	49.1	53.1
	26	58.6	62.7
	27	17.5	21.6
	~~27~~		
	28	37.4	41.2
	28	44.2	48.2
	29	6.2	10.2
	29	9.7	13.7
	29	56.1	60.1
	30	10.9	14.9
	30	37.5	41.5

B.

	30	58.5	62.4
	31	11.3	15.7
	31	35.6	39.4
	32	28.2	32.4
	34	1.6	5.7
	34	8.3	12.3
	35	7.5	11.4
	36	9.6	13.7
	36	18.3	22.3

D.D.D

	38	25.1	29.1
	38	26.3	30.5
	39	33.6	37.5
	39	49.1	53.0
5	39	57.1	61.1

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

	B.					
8.4	814	Lal. Catalogue	7.2	7.4	822	
10.0	414			10.0	424	
9.0	4.26		8.8	9.2	506	
10.8	4.24	1 ℞ n.s.				
8.8	324	Catalogue	8.8	9.2	336	
9.2	4.36		9.5	9.4	4.46	
10.7	34.9	2 ℞		10.4	409	
10.2	946			10.0	94.6	n.s
10.3	630			10.0	640	
10.2	140			16.2	149	
10.0	816			9.8	826	
	D.				B.	
10.8	716			10.7	726	
9.4	4.47		9.3	9.3	606	
9.3	128		9.0	9.0	136	
	D. B.			11.0	926	not observed in previous zone
11.0	14.8			11.0	206	n.s
10.8	94.2			10.8	1002	
10.0	1008			9.4	1018	
9.8	419	1 ℞,	9.5	10.0	428	
10.0	926	comp. about ℞ about 4" s		10.3	986	comp. s, p. 12 mag.
	B. B.	R. A. of comp. observed			D. D. D.	
10.0	729		[9.5]	11.2	735	not in R.A. 20" dist
10.0	94.2			10.3	1002	
10.7	320			10.7	930	
9.8	911		[9.3]	9.4	919	
9.7	104.8			9.4	1107	
9.4	126			9.4	134	
9.4	4.4.3			9.4	601	
9.3	934	Catalogue	9.0	9.0	944	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

$5^h\ 1^m - 6^h\ 34^m$

5	1	29.59	+1	5'44."5
	15	56.73		9 18.3
	17	56.15		3 26.3
	21	34.31		6 42.0
	21	58.73		2 25.7
	22	11.33		4 4.0
	23	34.07		0 39.7
	23	48.96		2 23.8
	39	28.16		7 1.7
	55	15.19		5 7.9
	55	33.72		6 36.9
6	1	12.02		7 25.5
	9	13.60		7 32.0
	29	28.31		9 48.2
	34	18.29	+1	5 8.2

Riggi

B

B.

All the quantities in this table have been verified —

H.A.H.

4	59	49.5	53.6	4	59	49.4	53.2
5	0	9.2	13.0	5	0	9.0	12.9
	0	34.6	38.5		0	34.5	38.5
	0	42.6	46.4		0	42.4	46.3
	1	29.9	33.8		1	29.7	33.7
	1	40.7	44.8		1	40.7	44.7
	2	15.6	19.5		2	15.3	19.1
	2	31.7	35.7		2	31.5	35.4
		B. D.				B.	
	3	44.2	48.3		3	44.3	48.2
	4	10.3	14.4		4	10.4	—
	4	24.8	[28.4]		4	24.7	28.6
	4	48.3	52.3		4	48.3	52.3
	5	3.3	7.3		5	3.0	7.1
	5	10.5	14.4		5	10.5	14.5
	5	25.6	29.5		5	25.3	29.3
	5	53.0	57.0		5	52.7	56.8
		D.				(D.D.H.?)	
5	6	23.8	27.8	5	6	23.6	27.3

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj.:236S

1° 0' - 1° 70'

Position set ∠ 354° 42'

1863 March 19
T. H. S. Obs. Seeing not good
H. L. L. Recd. Illumination with neus
Screens not good.

10.2	10 5·0		
9.5-	4 0 4		
9.3	10 4 0		
10.5-	9 5·8		
9.2	5·4 8	Catalogue	
11.0	7 1 6		
11.0	9 0 1		
10.7	4 2 9		
	23. 9. 93.		
10.5-	8 1 2-		
11.0	8 3 1		
9.8	7 0 3	2 bis	
9.0	4 2 6		
10.0	10 1 4	m.s	
9.0	9 3 6		
9.5-	4 3 6		
10.5-	3 0 2		
	D.		
10.8	6 0 2		

1863 March 26
T, H, S Obs.
H, L, L, Recd.

	10.5-	10 8 9
9.5	10.2	3 5·4
9.3	9.5-	10 2 6
	10.7	9 4 7
9.0	9.3	5·3 7
	11.0	7 0 5-
	10.8	6 4 8
	10.7	4 1 7
		B
	10.3	8 0 1
	11.0	8 2 1
9.4	9.7	6 5·1
9.5-	9.8	4 1 4
	10.0	10 0 2
9.0	9.3	9 2 6
9.5-	10.5-	4 2 5-
	11.2	2 5·0
	D	D. D
	11.2	5·5·0

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

5	6	46.1	52.3
	6	54.1	58.0
	7	49.7	53.6
	8	13.2	17.1
	8	34.6	38.5
	8	31.4	40.4
	8	49.6	53.4
		B. B. B.	
	9	45.6	49.6
	11	21.5	25.5 / slit inserted
	11	47.7	51.7
	12	14.1	18.1
	12	36.6	40.5
	12	~~41.6~~	45.6 / slit inserted — Exquimia Wire
	13	11.2	16.2
	13	36.8	42.8
		D. B.	
	14	31.5	35.5
	14	50.1	54.0
	15	12.5	16.4
	15	58.1	62.0
	15	59.1	63.0
	16	22.2	26.4
	17	6.4	—
	17	—	10.2
		D.	
	17	56.0	60.0
	18	2.5	6.8
	18	21.8	25.7
	18	42.1	46.1
	19	28.0	32.3
	19	30.3	34.4
	19	40.6	44.5
	20	25.8	29.8
	20	53.7	57.6
	21	34.3	38.3
	21	59.0	63.0
	22	11.2	15.2
	22	41.2	45.2
5	23	1.3	5.2

5	6	46.3	52.3
	6	54.0	58.0
	7	49.4	53.5
	8	12.9	16.9
	8	34.4	38.4
	8	36.3	40.3
	8	49.4	53.5
		B.	
	9	45.4	49.5
	11	21.2	25.3
	11	22.6	26.8
	11	47.5	51.8
	12	14.0	18.0
	12	36.4	40.8
	12	41.5	45.4
	12	56.3	60.7
	13	11.0	15.0
	13	36.8	42.7
		B.	
	14	31.2	35.2
	14	54.0	58.0
	15	12.2	16.3
	15	58.0	62.0
	15	59.0	63.0
	16	22.0	26.0
	17	~~—~~	10.2
	17	6.1	—
	17	B. 55.9	59.9
	18	2.5	6.4
	18	21.5	25.4
	18	44.3	?
	19	28.1	32.0
	19	30.3	34.1
	19	40.5	44.4
	20		Flattery weak
	21	58.7	62.8
	22	11.0	14.9
	22	41.0	44.9
5	23	1.9	4.9

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1962phae.proj..236S

9.2	1 3 4		9.3	9. 8	1 2 4	
9.2	2 1 6		9.5	9. 5-	2 0 5-	
10.8	1 0 0			10. 5-	0 4 8	
10.3	4 3 0			10. 5-	4 1 8	
9. 5-	3 2 4		9.3	9. 7	3 1 2	
9. 8	8 2 2		9.5	10. 0	8 1 0	m.s.
9. 0	10 1 8		8.7	9. 0	10 0 6	
D.	B. B.			B		
11. 0	9. 2 1			10. 3	9 1 0	
9. 5-	6 3 5-		9.0	9. 0	6 2 4	Comb, mode 6 5-0 11. 5-
10. 5-	3 3 2			10. 5-	3 1 9	mag.
11. 0	7 4 8			10. 8	7 3 9	
10. 5-	5-0 6			11. 0	4 5- 6	
9. 3	10 2 3		9.4	8. 7	10 1 4	< 70 5- 10.8 mag.
10. 0	4 2 6		9.5	10. 7	4 1 3	
10. 3	7 1 6			10. 7	7 0 4	
D.	B.			B.	D.	
10. 7	9 2 5-			10. 2	9 1 2	
10. 0	5-3 5-			10. 3	5-2 2	
10. 5-	5-2 0			10. 5-	5-1 8	and
9. 0	9 2 5-	Catalogue	7.8	7. 5-	9 1 5-	
10. 0	10 2 8			9. 8	10 1 7	
11. 0	4 5-0			11. 0	4 3 9	
10. 0	2 5-9	2 Lc.		10. 5-	24 7	1 Lc
10. 0	8 0 1	1 Lc.		9. 8	7 4 8	2 Lc
D				B		
9. 2	3 3 5-	Catalogue	8.2	8. 5-	3 2 4	
9. 5-	8 0 2		9.2	9. 5-	7 4 7	
10. 7	1 1 3			10. 2	10 2	< 5-91 and 5-85- both 10. 5-
10. 8	5-4 4					
9. 7	5-1 6		9.3	9. 5-	5-0 4	
10. 5-	9 5-6	m.s.		10. 2	9 4 4	
10. 0	5-4 3			10. 0	5-3 2	
10. 7	5-4 9			10. 3	5-3 7	
8. 0	10 5-	Catalogue (Tail)	7.2	6. 8	10 4 4	
8. 5-	6 5-0	Catalogue	8.3	8. 8	6 3 7	
9. 0	2 3 2	Catalogue	8.7	9. 0	2 2 1	
9. 2	4 1 0	Catalogue	9.2	9. 5-	4 0 0	
10. 0	9 3 0			10. 2	9 1 8	
8. 7	8 1 7		9.3	9. 3	8 0 7	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

B.

5	23	34.1	38.1
	23	48.8	52.7
	23	57.0	61.0
	24	23.2	27.2
	~~25~~	D.D	
	25	17.8	22.0
	26	6.6	~~10.6~~
	26	—	10.6
	26	42.5	46.5
	26	55.9	59.8
	27	20.2	24.2
	27	25.0	29.0
	27	45.4	49.4
	28	0.7	4.8
	28	15.3	19.3
	28	26.1	30.1
	28	48.7	52.7
		B	
	29	11.3	15.4
	29	48.8	52.6
	30	19.9	23.8
	31	13.5	17.5
	31	14.5	18.5
	31	34.9	38.8
	32	2.8	6.9
	32	4.1	8.2
	32	32.3	36.3
		D	
	32	59.9	63.8
	33	37.6	41.4
	34	16.5	20.5
	34	50.3	54.3
	35	23.2	27.2
	35	30.4	34.2
	36	24.0	28.0
	36	26.1	30.0
	36	53.3	57.3
	37	40.4	44.4
5	39	4.0	8.0

5	23	34.0	38.0
	23	48.6	52.5
	23	56.5	60.5
	24	22.0	26.9
		D.	
	25	—	21.6
	26	6.5	~~10.8~~
	26	—	10.8
	26	42.1	46.3
	26	55.4	59.5
	27	20.0	24.0
	27	24.5	28.6
	27	45.1	49.1
	28	0.7	4.7
	28	15.0	19.1
	28	26.1	51.2
	28	48.4	52.3
		B	
	29	11.0	15.0
	29	48.5	52.5
	30	19.4	(23.4 ?) Signal between
	31	13.2	17.2
	31	14.5	18.5
	31	34.6	38.5
	32	2.8	6.6
	32	23.7	~~27~~ ?
	32	56.6	63.7
	33	37.2	41.4
	34	16.3	20.2
	34	50.0	54.1
	35	23.0	27.1
	35	30.4	34.5
	36	23.6	27.7
	36	25.7	29.8
	36	53.1	57.1
	37	40.5	44.4
5	39	4.0	7.9

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj. - 236S

B-

9.2	0 40	Catalogue	9.4	9.3	0 31
9.0	2 26	Catalogue	9.4	8.8	21 6
9.3	4 5.9			9.3	4 42
9.3	5.02		9.5	10.0	4 5-1

D. D. Stgd. Stn ? 5'

11.0	1 00	n.s.		11.0	0 48
11.0	3 09	2 ℓ.		11.0	9 00 2 ℓ.
11.0	5.35-	1 ℓ.		10.8	5.23 1 ℓ.
10.7	1 04			10.7	0 54
10.0	9 5.6			10.2	9 45-
10.3	6 36			10.3	6 25-
10.0	8 16	n.s.		10.0	8 05-
9.3	5.48		9.5-	9.7	5.35-
11.0	5.26			10.8	5 14
9.3	8 24	D?	9.5-	9.3	8 14
10.5-	5.10			11.0	5.08
11.0	4 09			11.0	3 59 Count #1 421 precedes 3 59 — it 11 maj —

B 8 17

11.0	8 17	n.s.		10.7	8 06
9.3	1 22		9.5-		10 9
9.2	8 08		9.5	9.5-	7 5-6 10 21 10.5-
10.5-	9 5.5-				9 43
9.7	3 22	n.s.	9.4		2 11 dure
10.5-	7 14			10.7	7 01
10.0	4 5.7			10.7	4 46 10.0 reads 10.25—
9.8	8 39		9.5	10	
10.2	2 22				

D

10.3	8 49		9.5-	9.5-	8 36
10.0	3 00			10.3	2 5.1
9.8	5.36		9.4	9.7	5.26
11.3	4 22			10.5-	4 11
10.0	2 42		9.4	9.5-	2 30
9.8	10 01			9.5-	9 51
10.2	10 07			10.3	9 5.5-
10.2	8 5.4			10.5-	8 43
10.8	5.28			10.7	5.17
9.7	8 40		9.5-	9.3	8 29
10.8	6 06			10.3	5 53

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

5	39	28.1	32.1	5 39	25.1	32.0
	40	2.1	6.3	40	—	6.0
	40	9.3	13.3	40	9.1	13.0
	40	35.2	39.3	40	35.2	39.2
		D.			D?	
	40	51.2	55.7	40	51.0	55.0
	42	30.1	34.0	42	29.7	33.8
	42	58.5	62.5	42	58.5	62.4
	44	26.3	30.3	44	~~26.3~~	30.3 44 27.0?
	44	56.8	60.8	44	56.6	60.6
	46	53.7	57.8	46	47.8	51.8
	47	8.1	12.1	46	53.6	57.9
	48	12.5	16.4	~~49~~	5.8	9.9
	49	6.1	10.1			
	49	~~41.7~~	41.2	49	5.8	9.9
	49	48.3	52.1			
	50	30.1	34.0	49	47.8	51.9
	50	53.0	57.0	50	29.8	33.7
		B. D		50	52.8	56.6
	51	57.3	61.1		D3.	
	52	46.9	52.7	51	57.0	61.0
	53	43.7	—	52	48.6	52.6
	53	50.8	54.8	53	43.4	47.3
	54	15.5	19.5	53	50.9	54.8
	54	17.0	21.0	54	15.4	19.3
	54	46.2	50.3	54	16.8	20.8
	55	15.4	19.5	54	46.0	50.0
	55	33.4	37.5	55	15.0	19.1
	55	41.2	45.1	55	33.2	37.2
	56	44.8	48.7	55	41.0	41.0
	57	22.3	26.2	56	44.7	48.8
	57	51.4	55.4	57	22.1	26.1
	58	11.0	15.0	57	51.3	55.2
		D.		58	10.8	14.9
	58	38.0	41.9		D.	
	58	57.7	61.9	58	38.0	42.0
5	59	30.4	34.2	58	57.8	61.6 59.4 ?
6	0	23.0	27.0	5 59	30.2	34.2
	1	12.5	16.6	6 0	22.7	26.6
6	1	20.1	24.2	1	12.4	16.4
				6 1	19.8	23.9

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

7.0	707		6.5	7.5	655	
10.8	056	)		10.8	046	1 L
10.5-	5.04-	)		10.7	44-4	
10.0	437	)		10.0	426	
	B				D	
9.8	938		9.5	9.5	925-	
10.8	044-			10.7	040	sure
10.8	826			10.8	815-	
10.5-	1001			11.2	~~947~~	D 2 L 1 L
9.3	1084-		9.5	10.2	947	(1024- 10.0
10.0	0	D 0 something lost-				
10.0	441					
11.5-	432			11.0	5.34	(5.72 D
9.8	745-		9.5-	10.0	728	
10.4-	8	1 L. D. L. head & something.			~~728~~	
10.0	139			10.3	128	
10.0	1043			10.3	1031	
9.8	916		9.3	9.4-	804-	sure
	B. D.				B.	
10.8	1020			10.5-	1007	
9.5-	2.42	Seeing bad-	9.5-	9.4-	240	
10.0	432	) 2 L.	9.5	9.4-	423	
9.5-	1042	)	9.5	9.3	1033	
10.8	0.49	)		10.0	048	
9.3	1001	)	9.3	9.3	849	sure
9.5-	9.5.6		9.5-	9.5	844	sure
8.4-	5.11		9.1	8.8	5.00	
8.8	699		8.7	8.5-	629	
10.7	686	D?		10.8	625-	
10.7	784			10.8	714	sure
11.0	7.53			10.7	740	
10.3	5.00			10.5-	449	
9.4-	5.25		9.5-	10.0	5.14	
	D.				B D.	
10.8	704-			11.0	6.4-	
10.5-	998			10.7	926	Comp fpr. nearly about
10.2	1008		9.5	10.0	9.57	1020 1 of comp-
11.0	5.42	comp. n.p. 12th mag.		11.0	5.81	Lost-
8.8	791	) Catalogue	9.0	9.2	721	comp n.p. 5.81 about 14th
10.0	1822	)		10.0	1012	mag of comp 11

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

6	1	32.1	36.0				
	2	3.0	7.0	6	2	2.8	6.8
	2	15.5	19.4		2	15.1	19.1
	2	58.1	62.0		2		
	3	34.4	38.6		3	34.4	38.3
	4	15.3	19.2				
	4	45.2	49.2				
	5	47.6	51.5				
	6	28.2	32.1				
	7	13.0	17.0				
	7	34.7	38.6				
	7	45.7	49.7				
	8	51.6	55.6				
	9	7.2	11.1				
	9	14.0	17.9				
	10	4.0	8.0				
	10	58.1	62.2				
	11	16.7	20.7				
	11	44.1	47.8				
	12	29.2	33.1				
	12	59.0	62.8				
	13	12.2	16.1				
	13	44.7	48.6				
	14	0.2	4.2				
		D.					
	14	15.4	19.7				
	15	16.6	22.6				
	15	43.2					
	15	[43.6]	47.7				
	17	29.0	33.0	17		28.8	32.8
	17	51.5	55.5		17	51.2	55.3
	18	29.3	33.1		18	29.1	33.2
	19	25.4	29.4		19	25.3	29.3
		B.D.				B.D.	
	20	12.4	—		20	12.0	16.0
	20	25.7	29.7		20	25.7	29.5
	20	32.2	36.1		20	32.2	36.2
	21	0.7	4.5		21	0.5	4.6
	21	14.5	18.5		21	14.4	18.5
6	21	17.0	20.7	6	21	17.0	20.9

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj. .236S

10.3	8.0 1			10.2	75.0	R. A. last —
10.0	4 0 6		9.5-	9.8	4 2 6	
9.8	1 0 0 8		9.5	9.3	95.6	
11.0	3 2 8	D?		11.0	8 2 9	
10.5-	4 4 7			10.7	4 3 4	
10.5-	9 0 1			11.2	85.0	
11.0	8 4 0	cluster of small stars —		10,8	8 3 1	
11.0	1 0 0 5-	another cluster —		10,5-	95.2	
11.0	1 1 3			11.0	1 0 4	
9.8	0 8 0	< magnificent cluster —	9.3	9.3	0 2 0	n. s
10.5-	5.19	)		10. 5-	5.08	
9.8	7 1 0	)	9.4	9.5-	7 0 0	
9.3	4 0 6		9.3	9.5-	35.6	
10.0	1 0 2 4			10.2	1 0 3	
8.0	7 2 6	) Catalogue Lal.	7.0	8.0	71.-	
9.0	2 5.0		9.0	9.2	2 3 6	
11.0	8 2 5			10.7	9 1 4	
10.0	2 3 8		9.5	9.8	2 2 7	
9.8	1 0 4 0	Stg? 5.9	9.5-	9.5-	1 0 2 6	
10.5-	9 1 1			10.2	9 0 1	
10.0	9 2 3		9.5-	10.0	9 2 2	Sure
10.3	2 0 7			10.3	1 5.6	
9.5-	1.0 0 4		9.2	9.3	95.4	
10.7	8 0 8			10.5-	75.8	
	D.				D. B.	
10.5-	2 0 0			10.8	1 4 9	
10.2	9 3 8		9.5-	10.0	9 29	
10.3	8 1 2	) 2 L. D?		9.7	8 1	2L
9.5-	3 4 5	) n. s reject /	9.3	9.3	3 34	1L
10.3	5 4 8		9.5	10.0	5.3 7	
9.2	1 1 5-		9.0	8.8	10 5-	~~10.5- 10.5.0~~
10.0	9 1			10.5-	95.5-	9.8 8 5.0
10.5-	4 5.7			11.0	4 4 7	95.5 is a many star-
	B. D.				B. B.	85.0 9.8 should take
10.3	2 2 2	) 2 L.	9.5-	10.3	2 1 0	its place —
10.5-	8 0 6	) n. s.		10.2	75.3	
10.0	8 5.6	)	9.4	9.5-	3 4 5-	
10.3	9 2 2	) (Stg? 4.9)	9	10.3	9 1 0	
9.8	9 4 5-	)	9.5-	9.5-	9 3 5-	
10.2	2 3 5-	)		10.2	2 2 9	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

6	21	31.3	35.5	6	21.	31.2	35.2
		D 13				D.	
	22	22.6	26.5		22	22.8	26.8
	22	37.1	41.1		22	—	41.0
	23	0.6	4.6		23	0.6	4.5
	23	13.2	17.3		23	13.2	17.1
	23	25.6	29.5		23	25.5	29.5
	23	35.1	39.1		23	35.1	39.1
	23	43.6	—		23	43.2	47.1
		D.					
	24	52.7	56.8		24	52.8	56.6
	24	—	61.7		24	57.7	61.6
	25	25.8	29.9		25	25.9	29.8
	25	43.1	47.1		25	43.1	47.1
	25	52.2	55.9		25	52.0	56.0
		3. D					
	26	16.7	20.7		26		21.7
	26	19.4	23.2		26	19.1	23.1
	26	35.0	39.0		26	±	No Alt. Im
	26	53.7	57.6		26	53.6	57.4
	27	29.9	33.9		27		33.6
	27	46.2	50.2		27	46.0	50.0
	27	59.8	63.7		27	59.7	63.5
	28	2.5	6.4		28	—	6.4
					28	21.5	25.7
	29	21.7	—		29	21.6	25.7
	29	29.2	33.0		29	29.0	33.0
	30	12.1	16.1		30	11.9	13.7
	30	33.5			30	53.3	57.3
	31	2.3	6.1		31	2.0	6.0
	31	16.1	20.0		31	15.8	19.8
	31	39.6	43.5		31	39.3	43.2
	32	3.0	7.0		32	2.7	6.7
	32	39.0	43.0		32	38.8	42.8
		D.					
	33	12.1	16.2		33	12.0	16.0
	33	26.1	30.1		33	26.1	30.0
	34	6.2	10.3		34	6.3	10.2
6	34	19.3	23.4	6	34	19.2	23.3

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

9.8	938	D?	9.5-	9.8	926	
	B. B.			D		
10.4-	1 4 9			11.0	148	D?
10.2	6 0 2			10.7	4 4 1	
10.3	6 0 0			10.7	4 4 8	
10.2	4 0 4-			10.4-	3 4 3	
10.0	4 2 7		9.5-	10.7	4 1 6	
10.3	6 1 7			10.8	6 0 6	
10.3	3 2 4-	D & probably -	9.4	10.2	3 1 4	
	D.				B. D.	
9.8	3 1 4		~~9.3~~	9.3	3 0 3	
10.0	1 1 4-	1 L.	9.5-	9.4-	1 0 4	n. s.
9.8	1 0 2 0			9.7	1 0 8	
9.2	3 3 2		9.2	9.3	3 1 9	
9.4-	4 3 4-		9.5-	9.4-	4 2 4	Star not 906 since R.A. of 919-424 -
	B. D.			D. B. D		
10.0	3 1 4-		[9.5]	10.0	904	1 L
10.0	6 2 6			10.0	4 1 6	
10.4-	6 0 6					D + L
10.0	4 2 7		9.3	9.4-	4 1 9	
10.3	2 0 0			9.4-	1 4 7	1 L.
9.8	1 0 4 3			10.0	1041	
9.8	9 1 4		[9.5]	10.0	900	
10.2	4 3 0	n. s.			4 2 1	1 L.
10.0	4 3 6	A. R. L -			4 3 2	
10.4-	7 1 2	2 L.		10.0	702	
8.4-	9 4 2	Catalogue	8.3	9.0	941	
10.0	2 0 1			10.4-	1 4 1	
10.0	4 4 6	2 L. Asy?		10.0	4 3 6	
9.2	8 1 4		9.0	9.2	8 0 4-	
10.0	9 0 4			10.0	8 4 3	
10.3	4 2 7			10.4-	4 1 8	
10.2	6 1 9			10.7	6 0 8	
9.7	4 4 1		9.2	9.4-	4 3 2	
	B.					
10.4-	9 0 2			10.7	8 4 0	
9.2	4 2 9	Catalogue comp., s. f. 20" dist., 11 mag.	[8.2]	9.2	413	
10.0	8 4 8			9.4-	8 1 7	same -
9.0	4 0 0			8.4-	4 4 8	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

5 38 25.1 29.2
39 49.1 53.2
41 11.3 15.2
41 13.5 17.4
43 2.7 6.8
D
44 56.8 61.0
45 37.6 41.7
45 52.0 52.3 Battery acting badly.
45 — 55.0 illegible
46 33.3 37.3
B
47 13.5 17.5
47 35.6 39.6
48 21.4 25.2
48 52.4 56.5
B.D
50 19.1 23.1
51 17.0 51.0
5 51 18.0 22.3

5 38 24.4 28.6
39 48.4 52.5
41 10.4 14.4
41 12.8 16.7
43 1.8 5.8
BD
44 56.1 60.1
45 36.8 40.8
45 50.0 54.0
46 5.9 9.6
46 32.6 36.6
D.B
47 12.7 16.9
47 35.0 39.0
48 20.7 24.7
48 51.7 55.7
BD
50 18.4 22.4
51 46.2 50.2
5 51 17.2 21.2

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj.::236S

7° 10' – 1° 20'

1863 Apl. 13

T. H. S Obs.s Zero position set
H. L. L. Re's at 174° 38'

10	7 4 8				
10	9 2 9				
9.5-	1 5 0				
9.3	6 1 6				
9.0	9 5 7	Catalogue			
	D.				
10.0	0 3 3				
10.5-	1 1 4				
10.7	1 0 8				
10.8	6 2 2	1 ℓ			
10.5-	7 3 7				
	B.				
10.0	8 2 7				
10.0	7 1 0				
10.5-	10 5-2	Comp. n. p. 30" ± dist-			
10.7	5 1 6				
	B. D				
10.2	5 1 6				
7.5-	2 2 0	Catalogue			
11.0	1 0 6				

1863 Apl. 14

T. H. S. Observes
H. L. L. Records –

Zero position 35.4° 40'

	7				
10	7 4 5-				
10	9 3 0				
9.0	9 7 1 4 6				
9.0	9 7 6 1 2				
9.0	9.0 9 5-4				
	B. D.				
9.5-	9 8 0 2 9				
10.7	1 1				
11.0	1 0 3				
11.0	6 1 9				
10.5-	7 3 4				
	D. B.				
9.5-	10.2 8 2 3				
10.7	7 0 5-				
11.0	1 0 4 8	Comp. brighter by 2/10 mag.			
10.5-	5 1 3				
	B. D				
10.5-	5 1 4				
7.2	7.0 2 1 5-				
11.0	1 0 2				

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

	51	50.2	54.2		5	51	49.2	53.3	1
	52	56.5	62.4			51		58.4	
	53	26.2	30.1			52	57.6	61.6	11
	53	51.1	55.2			53	25.2	29.1	10
		B.B.				53	50.3	54.3	10
	54	9.4	13.6				D.D.D		
	55	49.6	53.9			55	8.9	12.9	10
	56	1.2	5.2			55	49.0	53.1	9
	56	34.1	38.2			56	0.5	4.4	9.
	57	13.3	17.4			56	33.2	37.3	9.
	57	24.1	28.1			57	12.7	16.7	9.
		D.				57	23.3	27.3	9.
							D.B.		
	58	14.1	18.3			58	13.4	17.5	9.
	58	16.3	20.2			58	15.1		10
	58	53.1	57.1			58	52.3	56.3	10
5	59	15.0	19.1		5	59	14.6	18.4	10.
6	0	11.2	15.2		6	0	10.3	14.3	9.
	0	29.3	33.3			0	25.2 28.7	32.8	9.
							B.		
	1	8.5	12.5			1	7.7	11.6	10.
	1	46.2	50.2			1	45.5	49.5	9.
	2	5.7	9.7			2	5.1	9.1	10.
	2	46.1	50.1			2	45.3	49.5	10
	3	12.1	16.2			3	11.4	15.4	11.
	3	30.0	34.0			3	29.2	33.3	9.
	3	41.8	45.8			3	41.1	45.1	10.
	4	1.1	5.1	Examine		4			11.
	4	35.5	39.5			4	35.0	39.0	10.
		B.					B.D.		
	4	58.8	62.6			4	57.9	61.8	10.
	5	29.5	33.6			5	29.0	32.8	10.
	6	2.3	6.4			6	1.6	5.7	10.
	6	20.3	24.3			6	19.5	23.7	10.
	6	40.2	44.3			6	39.5	43.5	9.
	7	30.3	38.9 ?	Examine nie		7	29.5	33.4	11.
		D.D.D					D.D		
	8	6.1	10.2			8	5.3	9.4	9.
	8	25.7	29.6			8	24.9	28.9	9.
	8	46.8	50.6			8	46.0	50.0	7.
6	8	25.0	29.0	55.3	6	8	54.7	57.6	9.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1862phae.proj. - 236S

10.0	357		9.5-	10.0	351	<723 10.7 1 L-	
11.2	627			11.0	629		
10.8	314			11.0	311		
10.2	040		9.5	10.5-	036		
D	B.			D.	D.		
10.2	25-0			10.0	245-		
9.5-	502			9.8	458		
9.3	045-		9.5	9.5-	040		
9.2	1006	Catalogue	9.0	9.0	1002		
9.5-	554		9.3	9.5-	549		
9.7	616			9.7	612		
D.				D.	B.		
9.7	222		9.5	10.2	218		
10.0	046	n.s.		10.5-	042	n.s. 2 L.	
10.5-	631			10.7	628		
10.5-	534			10.5-	526		
9.0	449		> 9.5-	9.5-	445-	<731 10.0 2 L-	
9.0	216		9.5-	9.7	211	n.s.	
A.	B.	A. B. = accidental knock-		B			
11.0	418			10.7	413		
9.0	903		9.5	9.3	856		
10.5-	029		? 9.5	10.2	024		
10.0	128			10.3	125-		
11.0	424			10.5-	421		
9.5-	421		9.3	9.0	416		
10.0		D. L.		10.5-	492	2 L.	
11.0	25-0			10.0	244		
10.5-	1014			10.5-	1010		
B-				B.	D.		
10.3	129		9.5-	10.0	125-		
10.5-	930		9.5-	10.2	926	comp. 30° dist — nearly —	
10.5-	509			10.2	506		
10.2	812			10.5-	807		
9.5-	737		9.4	9.7	782		
11.0	344			11.0	339		
D	D. D.			D.	D.		
9.7	804			9.8	759		
9.8	731	B.C.	9.4	9.7	726		
7.0	235-	Lalande	9.5-	7.0	227		
9.7	340		9.3	9.7	334	n.s.	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

6	9	25.0	29.0	6	9	24.1	28.1
	10	26.5	—		10	~~25.4~~	29.7 (?)
	10	—	30.0				
	11	9.4	13.4		11	8.8	12.7
	11	34.7	38.8		11	34.0	38.0
	11	44.2	48.2		11	43.2	47.3
	12	2.5	6.4		12	1.9	5.8
	12	29.4	33.5		12	29.0	32.9
	13	11.2	15.2		13	10.6	14.7
		D. B.				B. D. B.	
	13	49.0	53.0		13	48.1	52.1
	14	33.3	37.2		~~14~~	3	
	15	30.8	34.7		15	30.0	34.0
	16	9.7	13.8				
	16	41.1	45.2				
	16	57.7	62.0				
	17	1.2	5.4				
	17	31.4	35.4		17	—	34.8
	17	46.3	50.4				
	18	4.5	8.7		18	3.7	7.8
		B				B. D.	
	18	28.4	32.5		18	27.8	31.6
	18	33.1	37.1		18	32.5	36.4
	19	46.4	50.5		19	45.6	49.6
	19	56.4	60.8		19	56.2	61.2
	20	17.7	21.8				
	20	19.2	23.3				
	20	44.0	48.0		20	—	46.9
	21	1.0	5.0		21	0.1	4.0
	21	14.8	19.0		21	14.1	18.2
		D.				B	
	21	39.0	43.1		21	38.3	42.3
	21	44.7	48.7		21	44.0	48.0
	22	19.5	23.5		22	18.8	22.9
	22	56.5	60.6		22	56.0	60.0
	23	55.7	59.5		23	55.0	59.0
	24	37.4	41.4		24	36.7	40.8
	25	9.1	13.1		25	8.2	12.3
	25	18.3	22.5		25	17.5	21.5
6	25	33.3	37.1	6	25	32.6	36.5

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj...236S

9.5-	10 23		9.1	9.5-	10 17	
10.0	4 5-4	2 L.	9.5-	10.3	4 5-0	1 L.
10.0	10 30	1 L.				
10.5-	6 28			10.3	8 23	
10.3	2 21	mag. m 10.3 -		10.0	2 15-	
10.0	0 36			10.0	0 32	
10.2	10 03	n.s.		10.3	8 5-9	n.s dure
10.5-	4 44	n.s.		10.2	4 38	
10.0	2 15-		9.5	9.7	2 12	
	D. B.			B. D. B.		
9.0	4 24		9.2	9.2	4 22	
12.0	7 20	Comp. n.g. 10" distant -				
8.5-	5 11		6.7	8.8	5-0 7	
10.0	4 25-					
9.8	5 08	Distances Dunn	9.4			
9.0	9 01	Catalogue	9.2			
9.3	4 5-4	n.s. Catalogue	9.0			
9.7	9 03		9.5	10.0	8 5-8	1 L.
10.3	1 27					
9.3	8 11		9.1	9.0	8 06	
	B-			B. D-		
9.0	2 5-5-	Bl	9.0	9.0	2 5-0	
9.5-	5 12		9.0	9.3	5-06	n.s.
10.0	0 44			10.5-	0 39	
10.0	5-39			10.5-	4 34	
10.0	6 21		(9.5	10.5-	6 16	A. R. Lost -
10.5-	6 24	n.s.		11.0	6 19	A. R. Lost -
10.5-	5 21			10.0	5-16	
11.0	1 23		9.5?		11 7	
9.8	3 13		9.2	10.0	3 09	
	D-			B		
10.3	5-5-6			10.5-	5-5-1	
10.2	7 45-		9.5-	10.2	7 38	
10.2	4 30		9.4	10.2	4 25-	
10.2	6 28			10.3	6 23	
10.0	1 10			10.2	1-07	
10.5-	8 19			11.5-	8 14	
9.7	6 12		9.3	9.3	6 08	
9.8	5-01		9.5-	9.5 —	4 5-7	
9.5-	7 5-2		9.3	9.2	7 47	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

4863phae.proj..236S

6	26	31.1	34.8
	27	11.3	15.4
	27	36.6	—
	27		50.1
	28	14.1	18.1
	29	19.4	23.4
	30	3.2	7.1
	30	9.0	13.0
	30	17.2	21.2
	30	28.0	32.0
	30	34.5	38.4
	30	46.2	57.4
		D.	
	31	26.0	30.0
	31	50.0	54.0
	31	54.6	58.6
	32	1.1	5.1
	32	37.1	41.1
	32	57.7	61.8
		D.	
	33	40.8	44.7
	33	43.4	47.4
	34	1.3	5.2
	34	2.5	6.5 Companion of Preceding
	34	10.	15.5
	34	56.4	62.4
	35	—	13.3
		D.	
	36	9.6	—
	36	19.4	23.3
	36	32.3	36.0
	36	53.7	57.6
	37	10.9	14.9
	37	29.7	33.7
	37	42.4	46.3
	37	53.2	57.2
	38	14.6	18.4
6	38	23.1	27.1
		D.D	

6	26	30.4	34.4	
	27	10.4	14.5	
	27	38.0	42.1	
	27	45.5	49.5	
	28	13.2	17.1	
	29	18.8	22.7	
	30	2.4	6.5	
	30	[8.5]	12.0	
	30	16.3	20.4	
	30	27.3	31.2	
	30	33.7	37.7	
	30	47.4	51.4	
		D.D		
	31	25.1	29.1	
	31	49.3	53.3	
	31	53.8	57.8	
	32	0.4	4.3	32 (4.5)
	32	36.4	40.3	
	32	57.2	61.2	
	33	8.5	12.6	
		D.		
	33	40.0	43.7	
	33	42.8	46.7	
	34	0.5	4.6	
	34	10.9	14.9	
	34	51.4	55.6	
	34	57.5	61.7	
	35	6.8	12.9	
		D.D		
	36	9.0	13.0	
	36	18.4	22.5	
	36	46.0		
	36		54.9	
	37	10.0	14.0	
	37	29.0	33.0	
	37	41.4	45.4	
	37	52.5	56.5	
	38	13.7	17.5	
6	38	22.3	26.3	
		B.D		

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae..proj..236S

11.0	901				10.7	856	
11.0	811				11.0	807	
10.7	425-	2 Le.			10.7	432	sure
11.0	11.0	047 is correct Dec. 12			10.5-	044	
10.0	456				10.5-	455-	
10.5-	612				10.3	607	
9.0	305-	Bb		9.2	9.2	300	
9.5-	923	m.s.		9.3	9.7	917	1 wrong m.s.
9.3	315-			9.5	9.5-	910	
9.0	955-			9.2	9.3	948	
9.7	952			9.3	9.5-	946	
9.3	930	Bb		9.0	9.2	925-	
D					D,	B,	
10.3	846				10.7	842	
9.8	904				10.0	900	
9.7	244	Bb		9.2	9.7	240	m.s.
9.0	224	Bl		8.8	9.2	221	wire got accidentally
10.2	310				10.8	306	
9.3	708			9.5-	9.2	705-	822 10.0 after B
B-					B		and before 033
9.5-	037				10.2	033	
9.5-	734			9.5-	10.0	749	
9.8	819	Cataloguer Comp. filtered a little South			9.0	815-	
9.8	1006	1 Le m.s		9.5-	9.5-	1002	
10.2	239	1 Le.			10.5-	234	
9.2	800			9.3	9.0	755-	
10.2	725-	1 Le.			10.8	721	
D-					D.	D.	< Accidental B,
10.5-	508	2 Le.			10.7	504	m.s
9.5-	109			9.1	9.3	104	
10.0	1037						
10.5-	751				10.7	746	1 Le
9.3	822			9.3	9.5-	815-	
10.0	822				10.2	614	
9.0	456			9.2	9.0	452	
9.2	806			9.4	9.7	811	
8.8	635-	Bl		9.2	9.5-	532	
10.0	308				10.5-	303	
D.	B				B	D	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

6	39	7.1	11.1		6	39	6.3	10.4
	39	17.8	21.9			39	17.1	21.0
	39	27.4	31.2			39	26.5	30.4
	40	0.7	4.8			40	0.0	4.0
	40	15.0	19.1			40	14.5	18.4
	40	~~29.1~~	29.1	Same wire		40	24.4	28.6
	40	[33.2]	36.8			40	32.0	36.0
		B.						
	41	9.1				41	8.4	12.5
	41	19.3	23.2			41	18.4	22.4
	41	34.2	38.1			41	33.3	37.2
	41	37.1	41.0			41	36.2	40.0
	42	4.8	8.5			42	3.8	7.7
	42	20.8	24.8			42	20.0	24.0
	42	38.1	42.1			42	37.2	41.2
	42	52.1	56.3			42	51.3	55.2
	43	21.5	25.6			43	20.8	24.8
	43	—	29.3			43	—	26.6
		D.					B. D.13	
	44	0.6	—			44	0.1	—
	44	—	4.9			44	—	4.2
	44	17.4	21.5			44	16.9	20.9
	44	38.1	42.2			44	37.3	41.2
	45	0.0	4.0			44	59.1	63.2
	45		19.8			4		
	45	28.8	32.8			45	28.0	32.0
	45	42.6	46.5			45	41.6	45.6
	45	50.0	54.0			45	49.3	53.3
		D.					D.13	
	46	48.3	52.3			46	47.4	51.4
	47	7.4	11.4			47	6.6	10.7
	47	39.7	43.0			47	38.3	42.3
	48	8.0	12.0			48	7.1	11.1
	48	39.2	43.4			48	38.6	42.6
	48	54.5	58.2			48	53.6	57.5
	49	36.2	—			49	35.4	39.4
	49	44.8	48.7			49	44.0	48.2
6	50	3.2	7.3			50	2.5	6.4
		B.13					B	
6	50	27.2	31.2		6	50	26.4	30.3

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1963phae.proj..236S

10.5-	308			10.5-	303	
9.5	45-9			9.5-	9.5-	455-
9.5-	1037			9.5	10.0	1031 n.s
10.5-	600				10.7	555-
10.2	839			9.5-	10.3	835-
10.3	208				9.5	9.8	203
10.3	547	1 wrong-			10.2	542
	B.				D.	
9.2	614	2 L.		9.3	9.2	609
9.0	1046			9.2	9.0	1042
9.5-	724			9.4	9.3	719
9.2	1000	n.s.		9.2	9.0	855- sure n.s-
10.0	815-				9.8	810
10.0	708				10.2	702
9.8	615-			9.5-	9.7	609
10.2	902	n.s.			10.5-	259
10.0	219				10.2	215-
10.0	613	1 L.			10.2	610 1 L.
	D				B. D. B.	
9.0	624	2 L		9.2	9.0	618 2 L
9.0	1028	1 L. n.s.		9.0	9.0	725- 1 L
10.0	120			9.4	10.3	115- n.s.
9.8	914				10.0	910
9.3	016		Bb	8.6	10.0	D. L.
9.0	016	1 L.	Bl	8.5		
8.8	504		Lalande	8.7	9.2	500
9.2	~~446~~	445- in night		9.3	9.5	440
9.7	156			9.4	9.4	152
	B. D.				D. B	
10.0	259			9.5-	10.0	255-
10.0	814			9.5-	9.8	806
10.2	751				10.5-	746
10.5-	908				10.5-	905-
10.2	317				10.5-	313
10.0	1029				10.3	1024
9.7	700	2 L.			9.5-	655-
9.8	616				9.8	612
10.0	306				10.0	302
	B. B-				B	
10.5-	227				10.0	221

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

6	50	45.4	49.5	6	50	44.9	48.8	10.
	51	20.3	24.3		51	19.5	23.6	9.
	51	31.0	35.0		51	30.1	34.1	9.
	51	53.3	57.1		51	52.6	56.4	9.
	52	17.1	21.2		52	16.4	20.5	9.
	52	29.2	[33.4]		52	28.4	32.4	9.
	52	58.9	63.0		52	58.2	62.2	9.
	53	36.6	40.4		53	34.3	38.2	9.
	53	44.7	48.8		53	44.0	48.0	9.
	54	16.0	20.0		54	15.3	19.5	9.
	54	41.2	45.2		54	40.4	44.5	9.
	55	1.0	5.0		55	0.2	4.2	10.
	55	23.0	27.1		55	22.3	26.3	10.
	56	17.5	21.4		56	16.9	20.9	10.
		B				B		
	56	29.3	33.3		56	28.8	32.8	10.
	56	56.7	60.5		56	55.8	59.9	9.
	57	12.2	16.2		57	11.4	15.4	9.
	57	27.1	31.0		57	26.3	30.4	9.
	57	46.0	52.0		57	47.1	51.3	9.
		D						
	59	1.2	5.2		59	0.5	4.5	10.
	59	9.7	13.7		59	9.1	13.1	9.
6	59	26.0	30.0	6	59	25.3	29.3	10
7	0	11.0	14.8	7	0	10.2	14.2	10.
	0	27.7				X		10.
	0	31.3	35.2		0	30.8	34.6	9.
	0	58.0	62.0		0	57.3	61.2	9.
	1	19.0	23.1		1	18.5	22.4	10.
7	1	34.8	38.8	7	1	34.1	38.0	9.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

10.5	7 22		Bc	9.4	9.7	7 18	
9.5-	11 8		Bc	9.3	9.3	11 5-	
9.2	25 6		Bc	9.2	9.3	25 4	
9.7	5 44			9.5-	9.8	5 40	
9.2	10 41				9.0	10 36	
8.8	5 12	2 Harvard – Catalogue			8.5-	5 08	
9.3	6 47			8.7	8.8	6 45	∠ 948 9.5-
9.2	5 06		Bc	9.2	9.0	5 04	m.s,
9.5-	6 26			9.0	9.3	6 21	
9.7	8 07			9.4	9.5-	8 03	
9.3	8 23		Lbc star omitted	9.1	9.2	8 20	
10.0	4 07				10.2	4 03	
10.7	6 32				10.8	6 29	
10.0	4 37				10.7	4 34	
	B					B,	
10.0	9 46			9.5	11.0	9 42	
9.8	5 57			9.5-	9.8	5 58	
9.7	8 19			9.3	9.5-	8 16	
9.7	9 56			9.4	9.3	9 55-	
9.0	7 44			8.7	8.5-	7 41	
	D						
10.3	5 34				10.8	5 30	
9.7	10 45-				9.5-	10 40	
10.8	5 59			9.5-	10.5	5 55-	
10.2	9 36					9 32	942
10.5-	8 29	2 4					
9.7	9 46			(9.2)		9 42	
9.5-	5 04		Bc	9.4	10.0	4 58	
	B-						
10.3	15 1				10.5-	14 8	
9.0	25 3			8.8	8.0	24 0	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

This Zone was observed in part Cup to 7^h $6^h\ 31^m - 7^h\ 42^m$

6^h	34^m	$18^s.29$	$+1^\circ\ 5'\ 08''.2$
	41	22.02	5 52.2
	41	53.95	9 12.7
	52	24.48	6 8.8
	58	13.70	6 7.4
7	26	4.25	8 51.0
	27	3.93	9 11.7
	40	26.43	9 5.8
	41	57.74	0 13.4
7	41	52.07	1 9.3.

Obs'd also at Bann

Last Zone but one joins this.

1864 May 3

6	31	1.3	5.3	6	31	1.3	5.3	6^h 31^m 1.0	$5^s.0$
	31	15.0	19.0		31	15.2	19.1	31 14.7	18.0
	31	38.6	42.5		31	38.6	42.6	31 38.2	42.1
	32	37.9	41.9		~~32~~	38.2	42.2	~~32~~ 37.6	41.6
	33	16.4	20.5		33	~~16.6~~	20.5	33 16.2	20.2
	33	25.1	29.0		33	25.2	29.0	33 24.7	28.8
	34	5.4	9.1		34	5.5	9.5	34 5.0	9.0
	34	12.1	16.1		34	12.3	16.3	34 11.9	16.0
	34	18.2	22.3		34	18.4	22.5	34 18.0	22.0
	34	30.2	— Lost by battery						
	B.								D.
					35	5.2	9.3	35 4.9	8.8
					35	27.3	31.3	35 26.7	30.8
					36	28.3	32.2	36 27.5	31.6
					36	42.3	46.4	36 43.7	47.7
			Examine sheet		37	12.7	15.6	37 11.0	14.9
					37	30.2	34.3	37 29.5	33.5
						B			B.D.
					37	—	55.2	37 50.8	54.7
					37	52.3	56.1	37 51.5	55.3
					38	22.1	26.1	38 21.6	25.5
				6	38	42.9	47.1	38 47.4	51.5

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj.-2368

1° 0′ – 1° 10′

1864 Apr 22
11h 9m 52s Zero for 81° 45′
51
49
49
81 48.5

Apr 22 '64
Ent. Thr. at Leg 49.6

Strong twilight

1863 Apr. 21 — 1864 Apr 22

J. H. Sch's — Sch's obs
H. L. L. rec'd —

Zero found but at 81°48
Zero found at Left 10.

The battery began to go very badly, quite soon

1864 May 3
Decr. omitted

			1st scale		2nd scale			
9.2	8 20			9	8 24	9.0	8 27	9m
9.7	9 10			10	9 13	10.3	9 15	10
10.0	4 32			11	4 38	10.7	4 44	11
9.5	5 49	549		9	5 51		D.	B.
10.0	4 0 0	359		10.11	3 59	10.0	5 5 6	9.10
9.2	4 28	Com 4 30		8.9	4 31 ns	10.8	4 0 6	11
9.5	8 32	8 35		10	8 35	9.2	4 8 5	9 ns
10.5	7 5 3					10.2	8 4 0	10
8.8	5 0 5	56 Catalogue		8	5 9	10.5	8 0 1	11 ns
10.3	0 4 8					8.8	5 13	8.9 ns
	B.				B.13.			D.
10.5	8 19	8 16		11.12	8 21	10.7	8 27	12
10.0	5 8 5	5 37		11	5 38.5	11.0	5 4 9	12
10.7	9 5 8	9 53 uncertain		12	9 53 25 rejected	11.0	10 0 2	11.12
10.7	7 37				D	11.3	7 4 6	11.12
10.5	1 6 5	~~5 57~~		12	1 57 95	11.0	2 0 2	12 another star follows 7' north
10.5	2 3 5	2 38		11.12	2 38	11.0	2 4 3	12 some
	D.						B.	B.D.
10.7	5 28	~~5 24~~		1st observ.	5 29	11.0	5 3 6	11
10.2	5 1 4	5 7			5 7	10.5	5 1 2	10 ns
10.7	4 4 8					10.7	6 2 9	10.11
10.5	6 2 2				No NS 6 23		~~9.5 6 5 9~~	
9.2	6 5 1	6 51 Al			6 52.7	9.5	6 5 1	9 2 small comp n.p

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

6	39	8.8	12.8				10.
	40	2.1	6.1				10.
	40	16.1	22.2				10.
	40	48.5	—				10.
	41	22.7	26.6				9.
	41	33.5	37.1				10.
	41	44.0	—				10.
	41	56.1	60.1				8.
	42	45.1	49.0				10.
		D					
	43	14.5	18.5				9.
	43	22.0	26.0				9.
	44	5.0	9.4				10.
	44	14.0	18.2				10.
	44	29.6	33.6				9.
	44	44.5	48.6				10.
	45	1.6	5.5				9.
	45	14.4	18.5				8.
	45	39.4	43.5				
		D.					
	46	21.9	25.9				10.
	46	34.6	38.7				10.
	47	6.9	10.8				10.
	47	15.6	19.6				10.
	47	35.2	39.1				10.
	47	56.0	60.0				9.
	47	57.4	61.6				10.
	48	22.0	26.0				10.
	48	28.9	32.4				10.
	48	31.4	35.3				9.
	48	45.7	49.6				10.
	48	52.1	55.9				10.
	49	6.1	10.1				
	49	31.3	35.2				9.
	49	59.2	63.2				10.
		D.					
6	51	21.4	25.7				10.

6	39	8.3	12.8				
Dec ??	39	40.5	44.8				
	40	1.6	5.7				
	40	17.4	21.5				
	41	22.1	26.2				
	41	32.5	36.8				
	41	43.5	47.3				
	44	55.6	59.8				
	42	44.6	48.8				

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..2368

			1st read	2d read			
10.8	5 5 8	accidental B, Regne last,			11.2	607	12
10.3	9 0 3	avre — 9 4"	9 4		10.8	910	11
10.3	7 0 0	2 L, 72	7 3 9.4		11.0	708 < 10.0	3 3 9 probably 2 337 — 11 #
10.0	1 2 0	n. s.					#
9.7	3 3 7		3 49				
10.5	2 3 9	"	241 12	2 42	10.7	249	
9.5	6 0 0		6 catalogue	6 1 9.4	9.5	608	9.10.
10.0	9 0 2		9 2 11	9 3	10.0	910	10
10.5	1 0 3	2 L.			10.7	110 2 Sp.	12 ns
8.0	9 1 6		9 18 Catalogue	9 19 7.0	8.0	924	7
10.5	7 2 4		7 26 11	7 26	10.8	732	11
B.	D.				D.		DDB
9.5	5 2 3		522 B. 10	526 9.3	10.0	532	10
9.2	7 3 6		~~11 10.11 11~~ 738 ns	740 9.0	9.5	745	9 ns
10.0	8 5 4				10.7	902	2d bet 12
10.0	10 6	R.A.?			10.7	114 < 925 9.7	1st bet. 12
9.3	4 1 6			9.2			
10.3	4 3 8	1 L,				445 D;	11 ns
10.2	8 0 2						
9.2	10 25		132 10	134 9.5		10 something lost —	
10.3	1 3 4	n. s. Dec. 10" doubtful.				138	10
8.8	10 23		B.L 8.4			1032 < 705 10.8	
D.	D. D.		13.13.		D		B
10.5	5 5 1		552 ns	554	10.7	559 n. s	11
10.7	6 1 6		6 18	6 20	10.8	623	12
10.2	9 15		9 17 11	9 18	10.8	921	12
10.2	9 2 9		9 30	9 32	10.8	939	ns 11.12
10.8	2 2 1		219 11.12	2 22	11.0	229	12
9.5	7 2 3		723 9	724 2	10.0	730	9.10
10.3	3 2 2				11.0	330	12 ns
10.3	8 5 0		852 *		11.0	900 n. s	12
10.0	7 2 8		— ns	724 9.5	10.2	730 < There are ns 12	
9.8	9 3 4		##	9.5		941 read 5 something —	
10.2	8 1 3			9.3		822.	
10.3	8 3 9		841 11.13	842 9.5	10.0	845	11 —
B.				13.13			
9.0	7 3 7		740 8	739 9.6	9.3	745	9
10.5	9 1 6		919	920 9.5		927 < B.	10.11
10.7	5 11		512 11	514	11.0	520	13.13.13. 11

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

6	51	50.3	54.3
	52	24.4	28.4
	52	27.4	31.3
	53	18.6	22.6
	53	18.8	22.6
	53	34.5	38.5
	54	11.3	~~4.3~~
	54	14.5	18.8
	54	49.6	53.7
	56	14.2	18.2
	59	1.0	5.2
	59	7.7	11.8
	59	—	14.0
	59	52.8	56.9
7	59	58.7	62.9
7	0	52.0	56.0
	1	7.2	11.1
	1	15.0	19.1

D.

Battery

Circuit broken by key.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj.-2368

			1st scale neg	2nd scale Ag Hy				
9.8	712		713	9.3	9.3	719		9
8.8	611	Dark? Edge of	613	8.3	9.0	619		8.9
9.5-	945-			9.2	9.7	945-	n.s.	ns
10.0	135-	Mon Dec	Lo,	9.1		143	R. A. Lo,	bet. AR
10.2	212		212		10.0	228		10.12
9.8	221		10 221	9.2	9.2	228		10
11.0	821		41 823			830	2 L.	11.12
8.5-	545-	n.s.	40 548			553	Exam neg.	ns 10.
10.3	116		117 10.11	119 9.5-	10.5-	125-		11
11.0	501	1 Lo						12
10.7	245-		247 10	248				10.11
D,			13 neg.		Military visitor came up.			13.
9.5-	111		112 10	112				10
10.0	344		343	344				11
9.5-	755-							ns Akst
9.5-	648		Akst.	648				ns D.D. " "
9.3	703		702	9=74				9.10
10.5-	616							12
9.2	603		6 Cata	8.9 63	8.8	9.2	610	9
10.3	042	1 Lo	041	0402	9.5	10.5-	055-	11
9.8	921		919	921	9.5	9.8	928	10.=
10.0	515-		Akst	515	9.5-	11.5-	522	1 L 10.11
9.7	959		9 5822			10.5-	1016	10.11
10.0	309		310	312	9.5	10.5-	316	ns 10.11
9.2	710		711	711	9.2	9.3	716	9.10
10.2	855-		ns 12 856			10.5-	902	12
10.3	511			513	9.4	10.7	519	ns 11.12
D,	13,			13 for sight meter		D.		
10.0	916		916	917		10.2	923	11
10.0	1006		10 5ns	10		10.2	1014	10.11
11.0	749					11.0	757	22.7.55" very + two poor observation
10.0	54		55	12 55		10.7	511	print — 10.11
10.2	825			14 636	10.2	10.5-	639	11
10.0	62		559	560		10.5-	609	10.7
10.0	46		44	46		10.2	414	11
10.0	621		619	10 621	22	10.3	628	10.11
10.0	545-		545	10.11 846	ns	10.3	853	1 Lo. 12 ns 10.11
						B.		13. D

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

9	7.3	11.3	
10	0.3	4.2	
11	7.4	11.3	
11	42.3	46.3	
	B. D		
13	17.5	21.4	
14	16.2	20.1	
14	39.9	43.6	
14	54.6	58.6	
15	28.3	32.3	
15	50.5	54.4	
16	5.5	9.5	
16	22.2	26.1	
	B		
17	16.8	20.9	
17	—	24.4	
18	4.3	—	
18	7.8	11.8	
18	30.1	34.1	
19	11.0	15.0	
19	38.3	42.4	
19	40.6	44.6	
19	—	47.3	Examine wire
20	5.1	9.1	
20	23.3	27.3	
20	59.7	63.7	
21	21.1	25.0	
	D		
21	43.3	47.3	
23	27.0	31.0	
23	34.3	38.6	
23	56.2	60.0	

7 13	17.5	21.5	
14	16.2	20.1	
14	39.6	43.8	
14	54.6	58.6	
15	28.4	32.4	
15	50.5	54.4	
16	5.4	9.3	
16	22.0	26.2	
16	44.3	48.3	
17	—	21.0	
17	—	24.5	
18	4.3		
18	7.8	11.9	
18	30.1	34.0	
19	11.0	15.0	
19	—	42.4	
19	40.8	44.8	
20	5.1	9.2	
20	23.3	27.2	
20	57.8	63.8	
21	21.2	25.1	
	B.D.		
21	43.4	47.4	
23	27.0	31.3	
7 23	34.5	38.5	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae..proj..236S

											Sky clear 3 1864
9.5	0 53		0 50	9.10	052	12	10.0	1 01			10
9.7	5 30	12	5 28	9.10	5 29	ns	10.0	5 38		12	10 ns
	7 26	12			7 25	Atlant.	10.5	7 34			11
9.8	5 44		5 42	11	5 43		10.5	5 51			(no halos)
6.3	1 51		1 49	8	1 57		9.0	2 04			9
10.0	4 58		4 57	10	4 58			5 06			10.11
9.2	8 19		8 19	9	8 21	9.4	9.5	8 30			9.10
9.5	5 1		4 59	10	5 0	9.2					10
10.5	7 50	(Copy -	7 48	11	7 49	bil					12
10.0	8 48	N° Comp	4 49	10	8 48	not					10.11
B. D		water	8 23	B.	B.						B. D. B
9.0	8 43		8	9	8 43	9.3	9.2	8 50			9.10
10.3	9 52		9 50	11		2L	10.3	10 00		Saw Dr Neely	11.12 12
10.5	8 20		8 18	12	8 20		10.7	8 29			11
10.2	4 19		—		4 19		10.3	4 29			11
10.0	3 36		3 34		3 35		10.0	3 43			10
9.8	10 16							10 23			
9.5	4 00							4 07			
10.0	6 32							6 40	< 8 14		
B-									Perhaps a signal in here -		
10.3	9 54						10.5	10 01	n. D. 1 Lo.		
9.0	0 36	1 Lo.				9.1	9.0	0 45	n. D. 1 Lo.		
10.5	7 50	2 Lo.					11.0	8 00	2 Lo.		
10.0	5 16	A. begins 2nd. curve - n. D.					10.5	5 23			
10.0	10 08	before 1st.					10.2	10 17			
9.5	0 27						9.8	0 32			
10.0	2 15						10.0	2 24			
9.0	10 31					9.4	9.0	10 38			
9.5	7 46						9.5	7 54	R. A. low T		
10.3	4 30						10.2	4 39			
9.3	9 13						9.8	9 21			
9.5	8 15					9.5	9.5	8 22			
10.2	3 47						10.5	3 55			
D.							B. D.				
9.0	2 00					9.2	9.3	2 07			
9.7	3 52						10.2	3 59			
10.0	6 11						10.	6 18			
10.3	8 50										

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

7	24	30.7	34.7	7	24	30.7	34.7
	25	16.3	20.3		25	16.2	20.2
	26	1.2	5.4		26	1.3	—
	26	4.8	8.8		26	4.9	8.7
	26	40.1	43.9		26	39.9	44.0
	27	4.0	8.0		27	4.1	8.0
	27	38.7	—		27	38.9	—
	27	42.7	46.7		27	42.8	46.7
	28	9.6	13.5		28	9.6	13.6
	28	15.6	19.7		28	15.8	19.6
		D 13				B.B.	
	29	7.3	11.2		29	7.2	11.4
	29	35.0	39.0		29	34.9	38.9
	30	18.8	—		30	19.3	—
	30	21.9	25.8		30	21.9	26.0
	30	24.8	28.8		30	24.8	29.0
	30	56.2	60.3		30	56.3	60.3
	31	27.0	31.0		31	26.7	30.8
	32	9.9	13.8		32	9.7	13.6
	32	29.5	33.5		32	29.4	33.3
	32	51.6	55.6		32	51.7	55.7
	34	3.8	7.7		34	3.8	7.9
	34	16.9	20.8		34	16.8	20.9
	34	27.8	31.8				
	34	35.4	39.3		34	35.5	39.4
		B.					
	35	4.4	8.5		35	4.5	8.5
	35	22.1	26.0				
	35	31.4	35.5		35	31.6	35.4
	35	36.8	40.8		35	36.8	40.8
	35	59.1	63.1		35	59.1	63.1
	36	27.0	31.0		36	27.0	31.0
	37	42.2	46.3		37	12.5	6.5
	38	14.5	18.4		37	19.3	23.3
	38	26.1	32.1		37	42.3	46.3
	38	46.5	50.5		38	14.5	18.4
		D.			38	28.1	32.1
	38	59.4	63.5		38	46.5	50.5
	40	10.3	14.4				
7	40	26.6	30.5		38	59.4	63.4
						D. 13.	
					40	10.3	14.4
				7	40	26.7	30.8

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj...236S

10.8	6 14			10.7	6 2 2	
11.0	9 19	n. s, Dec, not very good-		11.0	9 2 5	
10.2	5·4 2			10.3	5·5·0	
9.0	8 4 9	Catalogue	9.0	8.8	8 5·7	
11.0	4 5·9			11.0	5·0 6	
8.8	9 0 9	Catalogue		9.2	9 1 6	
9.7	3 2 8	2 L.	(9.5)	9.8	3 3 7	2 L.
9.7	5·2 1			9.7	5·3 0	n. s.
10.5-	6 4 5			10.3	6 5·3	
10.5-	5·0 4			10.0	5·1 2	
	D. B.				B. D.	
10.3	8 0 2			10.5-	8 0 8	
10.7	8 4 8			11.0	8 5·6	
10.5-	1 1 4	2 L.		11.0	1 2 1	2 L.
10.5-	8 4 0			10.7	8 4 8	
9.7	8 4 7		9.2	9.8	8 5·5-	
9.8	10 2 3		9.5-	10.0	10 3 0	
9.8	1 2 1			10.2-	1 2 7	
10.7	10 3 9			11.0	10 4 6	
10.0	10 1 5-			10.8	10 2 3	
11.0	7 2 1			11.2	7 3 0	
10.0	4 5·2			10.0	4 5·9	
10.2	3 2 3			10.0	3 3 2	5·0 2 R. A. Lost-
10.7	4 5·5-					
10.5-	5·4 7				5·5·6	
	B-					
9.2	6 3 2		9.2	9.2	6 3 7	
11.0	7 3 5-					
9.7	0 3 4	Bl.	9.7	10.0	0 4 2	
9.5-	7 0 5	Bl.	9.3	9.2	7 1 3	
9.3	1 4 5-		9.1	9.5-	1 5·3	
9.3	7 1 7	Bl.	8.9	9.5-	7 2 5-	
9.5-	7 2 6	Bl.	9.4	11.0	7 3 8	
10.5-	9 0 2			11.0	9 1 2	5·7 3 4 9.5-
10.5-	8 0 3					Here are a 910 and
9.5-	9 3 8			9.2	9 4 6	an 8 something got-
	D.					734 is probably for
10.5-	5·3 8				5·4 5-	7 2 6-
10.3	2 2 4				D. B.	
9.0	9 0 0	Catalogue	8.5-	11.3	2 2 8	
				9.0	9 4 6	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

7	41	15.3	19.2	7	41	15.3	19.3
	41	49.6	–		41	49.7	53.5
	41	52.4	56.4		41	52.6	56.7
	42	33.3	37.5		42	33.3	37.4
	42	45.8	49.8		42	45.8	49.8
	42	56.1	60.2		42	56.2	60.2

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj.:236S

10.5-	644			10.7	65-0
10.5-	409	2 Le.		10.7	415-
9.0	107	Catal. also BC.	9.2	9.0	114
9.8	342		9.2	9.5-	55-0
9.7	746		9.4	9.7	754
9.3	839	BL.	9.1	9.2	645-

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

7 01 – 8 20 +1°0 – 1h0' — 7h 0m 8h 24m

Previous Zone

1st Star in Zone 7 0 10.9 9 34 10.2
X 22.7 8 27 } 9.3
31.3 9 46 }
38.0 5 2 9.4
1 19.1 1 50 10.4
34.8 2 52 8.8

+0.56	9m.4	7	0 57	+1° 15' +	Bonn Catalogue — So best two in three Stars
+0.5	9.4		2 1	1 10 +	" "
+0.3	9.3		6.40	1 12 +	" "
+0.25	9.3		16 33	1 19 +	
+0.15	9.4		19 20	1 14 +	
0.0	8.0		31 53.18	1 16 21.9	
0.0	9.1		33 53	1 17 +	
0.6	9.5		37 41	1 17 +	
0.3	7.8		40 2.68	1 15 19.8	
0.0	9.2		44 50	1 16 +	
+0.4	8.3		45 43.19	1 10 17.0	
	9.4		47 41.	1 13 ±	
	9.0		47 45.4	1 10 48.	Lalande only
	9.4		51 10.	1 18 +	
	9.4		51 30.	1 12 +	
−0.7	8.5		58 38.9	1 14 48	Lalande only Nebulosity at Limb
−0.2	9.4	8	6 36	1 15 +	
+0.1	9.1		7 16.02	1 11 7.9	
−0.2	9.4				
−0.1	8.8		11 26.30	1 16 22.2	
−0.4	8.0		20 23.37	1 16 41.5	
−0.3	9.0		20 52.55	1 14 20.4	

Read off by Mr. Hayes

7	0	26.4	30.6
		29.9	33.9
		56.4	60.4
	1	33.1	37.2
	2	—	4.4
		27.8	31.9
		27.0	
	3	6.3	10.3
	4	4.7	8.8
		31.7	35.8
	5	29.4	33.2
		32.0	36.0

Read off by Mr. Hayes

7	0	26.0	—
	0	29.5	33.4
	0	56.0	60.0
	1	32.7	36.7
	2	0.3	4.3
	2	27.5	31.4
		D.D.	
	3	5.8	9.8
	4	4.2	8.3
	4	31.3	35.4
	5	29.0	32.9
	5	31.7	35.4

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

$4^{\circ}10' - 1''20'$

1864 May 4 G.1st B obs.
J.H.S rec.

Zero of position set at 351° 55'.

N.B. After beginning the zone (May 4) I noticed that the scale readings for the 2nd set of divisions were not so large (further north) compared with the 1st set preceding the R. wires as usual by 1" It has usually read further north than 1st set by 1".0 to 1".5

Make these less, read about 30" more,

G

11	8 28			11	8 10	2 l
10	9 45 ns		9.3	9.8	10 26	M. Sun
9.10	5 3	B. C.	9.4	10	5 44	
8.9	2 51		8.8	9	2 32	
11	−0 4 12	B.6	9.4	10.8	0 36	
12	7 10			11.2	7 51	
	BD				BD	
9	4 29	Star got east 5' here?	9.3	10	4 59	
12	4 34			11	5 16	
11	5 42			11	6 22	
12	5 18			11.2	5 55	
12	5 16 ns			11.3	5 56	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

$7^h\,0^m - 8^h\,24^m$

	B.	B.					
7	6	40.0	44.0	7	6	39.5	43.4
	7	13.5	17.4		7	12.9	16.9
	8	1.9	5.9		8	—	[6.8]
	8	4.5	8.4		8	4.1	8.0
	8	46.4	50.4				
		D.					
	9	29.6	33.6		9	29.3	33.2
	9	39.7	43.8		9	39.2	43.4
	10	8.7	12.8				
	11	12.9	16.8				
	11	58.9	62.9		11	D. 36.7	40.9 ?
	12	22.8	26.8		12	—	26.1
	12	25.0	28.9				
		B				B.	
	13	2.6	6.7		13	2.2	6.1
	13	19.7	23.9		13	19.7	23.6
	14	8.9	12.9		14	8.2	12.4
	14	43.6	47.5		14	43.2	47.2
	14	52.5	56.4		14	51.6	[55.6]
		D. B				D. B	
	15	30.5	34.6		15	30.2	34.2
	15	50.1	53.9		15	49.7	53.8
	16	32.9	37.0		16	32.7	36.5
	17	13.8	17.8		17	13.3	17.4
	18	29.7	33.6		18	29.5	33.3
		B. B. D.				B. B	
	19	19.9	24.0		19	19.6	23.7
	19	40.2	44.2		19	40.0	43.9
	21	10.0	13.9		21	9.8	13.7
	21	34.5	38.4		21	34.1	38.2
	22	15.0	18.9		22	14.7	18.7
		D. B. D.				B	
	23	35.2	39.3		23	35.0	38.8
	24	36.3	40.2		23	36.0	—
	24	—	43.9		24	—	43.8
	25	33.3	37.3		25	—	10.0
	26	28.6	32.6		25	32.9	36.9
	26	35.5	39.4		26	28.4	32.3
				7	26	34.9	38.9

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

1°10' - 1°20'

	B. B.						
9.10	2 10		9m3 B.6		5.5	2 50	Lignac
12	5 27	ns			11.0	6 8	
~~11.12~~	6 19				11	7 0	1 l 2 bad
9	4 47	ns	8.8		9.7	5 27	ns
12	0 25				~~10.3~~	~~1 32~~	
	D.				~~9.0~~	~~3 45~~	Transferred to their right places below
9.10	0 52			9.3	10.3	1 32	
9.	3 6			8.4	9.0	3 45	
11	7 12			9.4			
10	8 6						
11	5 38					6 17	A R l
11.12	5 9				10.5	5 51	1 l
11	2 49	ns				3 1	B
	B.		Star read 5°.				
10.11	8 7			9.5?	10	8 46	
10.11	3 17		Star read 5°?		9.7	8 57	
11	8 18				11	8 59	
9.10	4 44			9.0 ~~9.5~~	9.3	5 24	
10.11	6 14				9.5	6 55	2 bad
	D. B.					~~D~~	
11	5 52				10	6 33	
10.	0 5				10.2	0 46	
9.10	9 3		B.6.	9.3	?	9 41	Doubtful
10	5 59			9.4	9.2	6 38	
11	-0 2		~~Examine~~		10	0 39	
	B. B. B. D		Signal somewhat muddled			B D	
9.10	3 43		B.6	9.4 Examine	~~9.0~~	~~0 57~~	Lost - D. & e.
9	0 19		(Examine map)	9.4	9.0	0 57	Star lamp
11.12	4 58				11.3	5 34	
11.12	6 59				11.2	7 38	
12	3 38				11.0	4 17	
	D. B. D					B	
10	8 55			9.4	9	9 35	
10	5 18			9.5-	9.3	6 26	2 l
11.12	7 40	ns. 12.			10.7	5 17	1 l
9.10	9 6			9.5-	9	10 46	
10	8 52				9.2	9 45	
10	7 52	ns			8.5	9 33	
					9.6	8 32	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

7h 0m – 8h 24m

		B.				
1	27	11.2	15.2	7 27	10.7	14.8
	27	46.1	50.1	27	45.7	49.8
	28	30.6	34.7	28	30.3	34.2
	28	57.1	61.2	28	56.7	60.8
	29	23.8	27.8	29	23.0	26.9
	30	25.6	29.5	30	25.4	26.4
	30	27.8	31.8	30	27.5	31.4
	30	55.8	59.9	30	55.6	59.7
	31	53.2	57.2	31	52.8	56.7
	32	28.8	32.9	32	28.5	32.7
		D. 19			D. 19	
	33	52.9	56.8	33	10.2	14.2
				33	52.6	56.6
	34	48.6	52.6	34	48.3	52.5
	35	16.5	20.4	35	16.1	[20.3]
	35	18.2	22.1	35	17.8	21.7
	37	12.4	16.5	37	12.0	16.2
	37	40.4	44.5	37	40.1	44.2
		D. 13			13.	
	38	24.2	28.4	38		
				38	45.7	49.6
	39	26.6	30.6	39	26.2	30.4
	40	2.4	6.4	40	2.0	6.0
	40	38.9	42.8	40	38.4	42.5
		D. 13				
	41	29.8	33.8	41	29.5	33.5
	42	36.0	40.0	42	35.8	39.6
	42	58.2	62.2	42	57.8	61.9
				44	18.6	22.5
	44	50.1	54.1	44	49.7	53.7
	45	42.7	46.8	45	42.6	46.5
				45	56.6	60.6
				46	40.5	44.6
				47	35.5	39.4
				47	43.7	47.8
				47	—	58.2 (Wire possibly uncertain)
				48	50.0	53.9
				49	20.9	24.9
				49	25.6	29.8
				49	28.6	32.4
					D. 8	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

346 22

9°00' – 10°20'

		B					
9.10	7 20		(Ez. very ms)	9.2	7 58		
10	6 51			10	7 31	B	
11	7 58			9.5	8 36		
11	9 8			10	9 47		
11	8 46			9.5	9 26		
11	8 18			10	8 56		
9.10	9 50	ms	Dte. a little (2) doubtful	9.5	10 31		
9.10	0 11			10.2	0 51		
8	6 7		Catalogue	8.0	8 6 46		
11	0 3				10.2	0 44	
	D.D						
8.9	7 28		B.C	9.1	10.2	5 46	
11.12	2 28				8.7	8 8	
11	0 17		Minute doubtful 1'47"?		10.5	3 6	
9.10	3 43	ms		9.3	10.2	2 26	2 doubt.
9	5 50			9.0	9.7	4 24	
10	7 11		B.C		9.2	6 29	
	D.D.13				9.5	7 50	B
10.11	6 25					B	
9	-0 33		AR test.	9.3		7 5	
9.10	9 24		Examine wires	9.5	9.3	0 5	
7.8	5 0		Catalogue	7.8	9.5	10 5	
11	4 37				7.5	5 40	
	D.13				11.3	5 17	
10	5 34					D	
10	2 34		2 small comps 14 mag.		10.5	6 15	
9	6 23		~~B.C~~ nebula ?		11.2	3 15	
9	6 37		Cloudy.		9.3	7 02	
8	-0 3		Catalogue	8.3	10.2	9 26	
			Cloudy		9.3	7 15	
				8.8	8.5	0 37	n.s.
					11	8 12	not very good Dec.
					9.2	7 56	
				9.3	10	4 48	
			Catalogue Lady	9.0	9	0 7	
					10	0 46	
					9.5	2 42	
				9.0	9.0	2 2	
					10.0	8 6	
					10.3	8 28	Dec not very good
						D	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

$7^h\,0^m - 8^h\,24^m$

				7 50	8.9	12.9
				51	9.5	13.6
				51	29.6	33.6
				51	55.4	59.5
7	52	38.3	42.6	52	—	42.2
	53	4.6	8.7	53	4.3	8.2
	53	27.9	31.9			
		D.D.B			B.D	
	54	31.0	35.0	54	30.6	34.6 #
	55	13.7	17.6	55	13.5	17.5
	55	58.6	62.6	55	58.3	6
	56	1.4	5.4	56	1.1	5.4
	56	43.2	47.2	56	—	46.7
	56	55.8	59.9	56	55.4	59.4
		B.B.B			D	
	57	42.4	46.6	57	42.3	46.2
	57	44.0	48.2	57	43.8	47.8
	58	39.1	43.2	58	38.7	42.8
	58	46.0	50.0	58	45.4	[49.7]
	59	59.0	62.9 #	59	58.6	62.6
8	0	1.0	4.9	8 0	9.1	12.9
		B.D				
	0	32.1	—			
	0	41.1	45.1			
	1	15.1	19.2	1	14.7	18.8
	1	—	43.5			
	2	46.7	50.7	2	46.5	50.4
	3	21.6	25.5	3	21.1	25.0
	4	14.5	18.5	4	14.2	18.2
		D.B			B.	
	4	56.5	60.6	4	56.1	60.1
	5	2.2	6.2	5	—	5.6
	5	31.9	35.9	5	31.6	35.5
	6	22.8	26.8 Both Stars	6	22.5	26.4
	6	—	40.3	6	36.0	39.9
	7	18.0	21.9	7	17.5	21.5
	7	49.1	53.0	7	48.6	52.5
		B. D.				

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj.:236S

+ 1°10' - 1°20'

					10.3	8 35	
			B6	9.4	9.8	8 37	
			B6	9.4	9.7	2 46	
				9.5	9.7	8 46	
11	-0 5						
10	1 36				10	0 35	1 l
11	9 10				10.5	2 15	perhaps not the same star lost
	D.D.B					B.D.	
10.11	6 47				10	7 28	
11	-0 11				11.2	0 30	ns
10.11	2 21				11	8 2	
10.11	-0 19	ns			11	0 21	Dsc. doubt.
10.11	6 44				11	7 23	1 l
10.	8 25		(ns)		10.8	9 5	ns
	B.D					D	
9.10	-0 2	ns	~~Catalogue~~	9.5?		0 97	
9.10	3 20	ns	Catalogue	9.5		4 1	ns
8	4 29				8.4	5 8	
9	6 20	ns		9.0	9.7	7 1	2 doubt.
10.11	4 27				10.5	5 8	
11	3 18	ns			11.5	8 24	lost
	B.D					D	
11	1 31	2 l					
10	2 19						
9	0 47			9.0	9.8	8 28	
8	-1 5	1 l	Catalogue	8.0			lost
11	9 37				11.3	11 17	
11	5 21				10.3	6 11	
9	2 50			9.0	9.8	3 30	
	D.B					B	
10	9 47				10	10 27	
10	6 41	ns?			11.3	6 51	
9	5 29			9.0	9.5	6 8	
10	7 58			9.8			
9	6 52	~~ns~~	Same as very nearly		9.7	7 32	
10	5 18.	1 l	B6	9.4	10.2	5 58	
9	0 48		Catalogue	9.1	9.5	1 28	
9	6 0			9.3	9.3	6 42	
	B.D						

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

7h 0m — 8h 24m

8	8	29.1	33.2				
	9	15.2	19.3	8	9	15.0	19.0
	9	21.2	25.3		9	20.8	24.9
	11	23.9	27.9		11	23.4	27.5
	11	26.2	30.2		11	25.8	29.8
	12	28.0	31.9		12	27.7	31.7
		D.				D. D.	
	13	16.4	20.5		13	16.3	20.2
	13	56.8	~~60.0~~		13	56.3	~~60.~~
	14	1.0	—		14	0.6	4.7 *
	14	53.7	58.6	Some trouble in RR	14	53.4	57.4
	14	55.8	59.9		1.		
	15	49.0	53.2		15	51.0	54.8
		D. D. 13				13	
	17	31.6	35.6		17	31.2	35.3
	18	40.3	44.3		18	40.1	44.0
	19	39.2	43.2		19	39.0	43.0
	20	23.8	27.8		20	23.4	27.4
	20	53.8	57.9		20	53.7	57.6
	21	23.6	~~27.7~~		21	23.5	27.5
	21	~~33.6~~	37.5		21	33.2	37.3 *
	22	~~54.0~~	~~58.0~~		22	53.6	57.6
	23	15.1	19.1		23	14.7	18.6
	23	49.7	53.7		23	49.4	53.4
	24	9.2	13.2	8	24	8.9	12.9

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj.:236S

1° 10' – 1° 20'

9.10	-0 40		R6	9.m5				lost
10	10 0				97			Dε C. lost-
10	8 28	ns			10.2	9	7	
11	3 28				10.2	4	08	
9	6 0	ns	Catalogue		9.2	6	38	ns
10.11	5 44				9.5	6	24	
	D.							
9	6 26			9.3	9.3	7	6	
10.11	7 0	2l			10.8	7	39	2l
10	7 4	2l			10.3	7	45	
11	8 30				11.2	8	10	Dε0 doubt- minute probably not double
11	4 22	ns			10.8	4	59	new star.
11	9 27							lost-
	B.D. 13				B			
9.10	6 21			9.5-	9.10	4	2	
11	1 21				10.5	2	1	
	3 17				10.8	3	58	
7.8	6 21			8.0	8.3	7	07	
9	3 57			9.0	9.2	4	30	
10.11	5 41				10.3	4	22	
10	3 0			9.5-	10.2	3	39	
11	0 24				11.0	1	4	
10	1 0				10.2	1	43	
9.10	0 24			9.0	9.3	1	5	
10	3 11			9.5?	10.2	3	50	

W. A. R. Rec.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

N.B Zones Nos. 213. 214. 215. 216 – 227 are in Book 11a. 11b.

	No.					
					No. Obs.	
X	210	2h 10m – 4h 7m	1° 10′ – 1° 20′	1862 Feb. 18	S.H	
	211	2 10 – 3 29	" "	Feb 20	S.H.	Clouded up
X	212	3 7 – 5 5	1 0 – 1 10	1862 Mch. 1	S.H. H.C	
	228	3 7 – 5 1		1863 Feb 17	S.C	4.13 3.57 – 5.39
X	229	4 3 – 5 13	1 10 – 1 20	1863 Mch. 18	H. S.C.	8.30
	231	4 3 – 5 39	" "	Mch 20	S.H.C.	
X	230	4 59 – 6 34	1 0 – 1 10	1863 Mch 19	S.H.C	
	232	" 6 11	" "	Mch 26	S.H.C.	
	233	5 30 7 01	1 10 1 20	1863 Apr 13	S.H.S	
	234			14	S.H.S	
	235a	6 31 – 7 15	1 0 – 1 10	1864 Apr 22	0.0	} To supplement 230-232
	235b	6 31 – 7 15	1 0 – 1 10	" May 3	0.0.	
	236	7 0 – 8 24	1 10 – 1 20	1864 May 4	S.C.	
	237	7 0 – 8 24	1 10 – 1 20	"	S.C	

Series began at 7h 40m 1° 0′ – 1° 10′ } Vide Nov 1.
" " 8 20 1 10 – 1 20 }

C & S.C are the initials of Mr Sidney Coolidge
H.C or H.C of Mr Conger
B. G.P. Bond.

N.B. Nov 13 1863 To complete the zones +1° 00′ to +1° 10′ will require repetition of the interval R 6h 31m to 7h 01m until double observations of interval 6 54 7. 13

To complete Zones +1° 10′ to +1° 20′ Double observations of the interval R. 7h 01m to 8h 20m

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj.:236S

Scale - Zero Observed

	I'	Mean Time Observed
1863 March 2	264° 49'	0h 50m - 4s

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

The Zones are read off from the Chronograph

Sheets by oral dictation. Since P.S.L left off ~~this~~
writing them Boyer
~~this it has~~ the reading off has been done by

A. Hall, ~~W.C.~~ Corey and W.A Rogers.

Mr. Corey began after Mr. Hall left the Observatory Oct 1862
and Mr. Rogers in May 1864.

JHS has always written in the numbers since P.S.L left.

10 10 43
10 11 15
10 2 5 57

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1863phae.proj..236S

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System