KG
11365
23

A.23

Transit Circle.

from
March 27th – 1856,
to
June 17 ~~15th/16~~ 1856.

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KG 11365,23

KG 11365.23

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Error of T. C. at 7h..00m +3m..19s.45

1856. March. 27th Transit circle illumination West,
II – Catalogue stars. Observer. J. F. F

7..14..16.2	7..17..6.2	7..22..30.9	7..26–1.7	7.29..27.8	7..34..14.4
29.5	19.9$^{3.7}$	44.3$^{3.4}$	15.3	41.5	28.3
43.9	34.2$^{4.3}$	58.8$^{4.5}$	29.6	55.9	42.5
37.0	47.2$^{3.0}$	12.3$^{3.5}$	42.7	9.1	55.7
10.3	1.3$^{4.1}$	25.9$^{3.6}$	56.7	22.9	9.6
24.5	15.3$^{4.0}$	39.6$^{3.7}$	10.1	36.5	23.2
15..37.9	18..28.2$^{2.9}$	23..52.8$^{3.2}$	27..23.7	30.49.8	35.36.4
199.3	152.3	264.6	179.8	243.5	210.1
25 ~~31~~9.3	332.3	84.6	299.8	63.5	390.1
7..14..~~45~~ 37.04	7..17..47.47	7..23..12.09	7..26..42.83	7..30..09.07	7..34..55.73
a −.32					
b −.12					
c −.11					
δt −3..19.45					
sum −3..20.00	−3..20.00	−3..20.00	−3..20.00	−3..20.00	−3..20.00
rate 00	−.01	−.01	−.01	−.01	−.01
7..~~14~~ 11..17.04	7..14..27.46	7..19..52.08	7..23..22.82	7..26..49.06	7..31..35.72

Rate + 0^s.5

used in red. of Cat. stars { a = -.28
b = -.17
c = -.11

March. 27th Transit Circle & M. west
+28
2d Catalogue, Observer J. F. F.
B Geminorum

7..39..3.7	7..44..12.5	7..44..13.0	7..48..4.1	7..52..31.0	7..56..7.1
19.3	26.4	26.8	17.6	44.8	20.8
35.7	40.7	41.1	32.2	59.2	35.1
50.7	53.9	54.4	45.5	12.2	48.3
6.3	07.6	8.0	59.4	26.1	2.0
21.4	21.6	21.9	12.9	39.8	15.8
40..36.9	45..34.8	35.2	49..26.1	53..53.0	.57.28.9
174.0	197.5	200.4	197.8	266.1	158.0
354.0	377.5	380.4	317.8	86.1	338.0
7..39..50.57	7..44..53.93	7..44..54.34	7..48..45.40	7..53..12.30	7..56..48.29
-.14					
-.19					
-.12					
7..39..50.12					
7..36..30.74	-3..20.00	-3..20.00	-3..20.00	-3..20.00	-3..20.00
+ 3..19.38	-.01	-.02	-.02	-.02	-.02
3..19.37	7..41..33.92	7..41..34.32	7..45..25.38	7..49..52.28	7..53..28.27
3..19.54					
+ 3..19.45					
at 7h.00					
-3..19.45					
-.01					
7..36..30.66					

1856. March 27th. Transit Circle. Ill. West
−24 2d Catalogue.
15 Argus
observer J. F. F. 455
a 1st Cat. star.

7..59..40.5	8..4..0.3	8.09..7.5	8..12..48.9	8..16..0.9	8..42..52.0
54.1	15.5	21.3	2.7 38	14.4	5.8
8.6	31.0	35.6	17.1 4.6	28.9	20.1
21.8	45.5	48.8	29.9 2.8	41.9	33.2
35.4	00.7	2.7	43.9 4.0	55.7	47.0
49.2	15.7	16.3	57.8 3.9	9.4	0.8
8.01..2.3	5.30.1	10.29.6	14.10.7 2.9	17.22.7	44.14.1
211.9	138.8	161.8	211.0	173.9	173.0
151.9	318.8	341.8		293.9	233.0
8..00..21.70	8..04..45.54	8..09..48.83	8..12..30.14	8..16..41.99	8..43..83.29
	−.48				
	−.07				
	−.11				
	8..04..44.88				
−3..20.00	8..01..25.32	−3..20.00	−3..20.00	−3..20.00	−3..20.00
−.02	+ 8..19.56	−.02	−.02	−.03	−.03
7..57..01.68		8..06..28.81	8..09..10.12	8..13..21.96	8..40..13.26
	−3..19.45				Pr. Nt. &c. −0.92
	−.02				Cor for chr. Var. −9.24
	8..01..25.41				8..40..03.10
					AR 1853.0

Rate + $0^s.3$

used in red. Cat. Stars a −.16 b −16 c −01

1856. March 29th Transit Circle. Lamp. East.

2 Catalogue

+28 observer J. F. F.

				β Geminorum	
1st wire lost	7..27..30	7..29..29.0	7..34..15.8	7..39..5.1	7..44..14.5
7..22..45.3	16.1	42.6	29.2	20.5	lost
59.1	29.9	56.2	42.8	36.2	lost
12.9	43.5	9.9	56.6	57.5	lost
26.1	56.9	23.2	9.8	6.7	45 8.2
40.8	11.1	37.5	24.0	23.0	22.7
54.3	28.22.8	30.57.1	35.37.8	40..38.4	46..36.3
				181.4	
				361.4	
				7..39..51.63	
				+13	
				−18	
				−01	
				7..39..51.31	
				7..36..30.70	
				+3..20.61	

1.23
1.00
.56

1856. March. 29th Transit Circle. Ill. East.
2d Catalogue

			−24			
lost.			15 Argus			
7..48..19.0	7..52..32.6	7..59.41.9	8..04..1.9	8..9..9.0	8..12..50.5	8
32.7	45.8	55.0	16.4	22.2	3.9	
46.3	59.4	8.8	31.3	36.0	17.5	
59.7	13.2	22.7	46.3	49.9	31.0	
13.9	26.7	35.7	0.9	3.1	44.3	
49..27.4	40.9	50.3	16.6	17.1	58.8	
	53.54.4	8..00..3.8	5.31.3	10..31.0	14.12.4	
			144.7			
			324.7			
			8..04..46.39			
			~~8..07~~ −46			
			−07			
			−01			
			8..04..45.85			
			8..01..25.29			
			+3..20.56			

March 29th – Tr. Circle – Illn. East –
2d Catalogue —— Observer J. F. F.

8..16..2.1	8..21..2.1	8..23..57.0	8..26..52.0	8..29..59.9	8..36..32.0
15.4	15.8	4.1	5.7	12.9	45.3
29.3	29.4	18.0	19.2	26.7	59.2
42.9	42.9	31.8	33.0	40.2	12.9
56.2	56.1	44.9	46.1	53.9	26.2
10.6	10.7	59.3	0.5	7.9	40.7
17..24.3	22..24.2	25..12.9	28..145	31..21.5	37..54.2

1856. March. 29th - Transit Circle, Illumination East
2d Catalogue observer J. F. F

ε Hydrae					last ✱.
8 .. 41 .. 49.9	8 .. 44 .. 51.3	8 .. 51 .. 12.9	8 .. 54 .. 50.2	8 .. 59 .. 56.0	9 .. 30 .. 08.2
2 3.0	4.8	25.9	3.8	9.1	21.7
2 16.9	18.3	39.9	17.2	22.9	35.2
2 30.9	32.2	53.3	31.0	36.7	48.9
2 44.1	45.5	6.9	44.4	49.9	2.2
2 58.7	59.8	21.0	58.7	4.2	16.6
43 . 12.4	46 .. 13.3	52 .. 34.8	57 . 12.3	9 . 01 . 18.0	31 .. 30.2
21.59					
8. 42. 30.85					

March 29 – Transit Circle – Illumination East
Z-Catalogue Observer J. F. F.

				α Hydrae	
9 .. 2 .. 38.9	9 .. 11 .. 57.6	9 .. lost	9 .. 19 .. 9.9	9 .. 23 .. 11.8	9 .. 25 .. 57.0
52.3	10.9	14 .. 59.1	23.0	3 25.0	4.3
6.2	24.6	12.8	36.8	3 38.9	18.0
19.9	38.4	26.8	50.7	3 52.9	31.8
33.0	57.3	39.9	3.9	4 6.2	44.9
47.6	5.9	54.3	18.2	4 20.7	59.3
04 .. 1.1	13 .. 19.5	16 .. 8.0	20 .. 31.9	24 .. 34.3	27 .. 13.0
				189 8 189 369 8 9 .. 23 .. 52.83	

1856. March $\frac{30}{31}^{st}$ Tr. Circle – Ill^{m} East.

observer. W. C. B.

+10..15	+8..29	
γ Aquilæ	α Aquilæ.	Moon. 2 Limb
19..42..04.7	19..46..25.70	20..41..18.5
18.0	38.90	1 33.1
32.1	52.80	1 48.8
45.9	6.70	2 4.4
59.8	20.10	2 19.5
14.1	34.60	2 35.5
43..28.0	47..48.30	42..57.1
20 2.6	227.1	2109
322.6	47.1	180
19..42..46.09	19..47..6.73	309
c − .01	−.01	20..42..4.41
a − .26	−.27	
b −.15	−.15	
19..42..45.67	19..47..6.30	
19..39..24.70	19..43..45.30	
+ 3..20.97	+ 3..21.00	
+ 3..21.00		
+ 3..20.98		

a − 0.42
b − 0.14
c + 0.03

1856 – April 1st   Tr. Circle – Illm East –

observer – W C. B

Capella	β Tauri	δ Orionis	ε Orionis	μ Geminorum	Sirius
	+28	00			
1st wire lost 5..07..44.4	5..18..45.9	5..26..19.20	1st wire lost	6..15..57.9	6..40..26.9
4.3	1.0	32.50	5..30..48.1	6 6.3	0 40.8 14.9
23.9	16.5	46.10	1.7	6 21.0	0 55.0 14.2
42.9	32.2	00.00	15.2	6 36.0	1 9.3 14.3
3.2	47.3	13.20	28.6	6 50.3	1 23.1 13.8
09..22.9	3.5	27.50	42.9	17 5.8	1 38.2 15.1
	20..19.0	27..41.10	31..56.6	17..20.7	41..52.3 14.1
	165.4	179.6		1920	245.6
	225.4	219.6		60	180
	82.20	5..26..59.94		2520	65.6
	−12	−29		6..16..36.00	6..41..9.37
	−17	−10			
	+03	+03			
	5..19..31.94	5..26..59.58			
	5..17..11.24	5..24..38.92			
	+3..20.70	+3..20.66			

1856. April 2^d. Transit Circle — Lamp East

Observer W. C. B

+45.51	+28.29	−0.24	−1.34	+7.22
Capilla	β Tauri	δ Orionis	ε Orionis	α Orionis
5..08..24.9	5..19..45.9	5..27..19.0	5..31..34.5	5..50..2.2
44.0	00.6	32.2	47.7	15.7
3.7	16.5	45.9	1.3	29.4
23.2	31.9	59.7	15.0	43.3
42.3	46.9	12.9	28.2	56.7
2.9	3.1	27.2	42.8	11.0
10.22.6	21.18.7	28.40.9	32..56.2	51.24.9
163.6	163.6	2378	2257	183.2
5.09..23.37	60 223.6	180 417.8	180 105.7	120 303.2
+ .19	5.20..31.94	5.27..59.69	5.32..15.13	5.50.43.31
+ .05	+ .15	+ .13	+ .13	+ .13
− .19	− 14	− 31	− .32	− 27
5.09.23..42	− 17	− 07	− 07	− 09
6.02.92	20.31.68	27.59.44	32.14.87	5.50.43.08
3.20.50	17.11.22	24.38.90	28.54.28	47.22.54
	3.20.46	3.20.54	3.20.59	3.20.54

3.20.8

a -35
b -12
c +06

1856. April 5. Transit Circle - Illumination East

Observer W. C. B.

	-01°	+07°
δ Orionis	ε Orionis	α Orionis
5.. 27.. 20.65	5.. 31.. 36.0	5.. 50.. 03.9
33.65	49.2	17.0
47.50	2.9	30.9
1.15	16.6	45.0
14.50	30.0	58.3
28.80	44.3	12.7
5.. 28.. 42.30	5.. 32.. 57.8	5.. 51.. 26.5
188.55	236.8	194.3
-180	-120	+120
8.55	116.8	314.3
5.. 28.. 1.22	5.. 32.. 16.69	5.. 50.. 44.90
~~-24~~	-24	-22
~~-09~~	-09	-09
	+06	+06
	5.. 32.. 16.42	5.. 50.. 44.65
	5.. 28.. 54.23	5.. 47.. 22.49
	+3.. 22.19	+3.. 22.16

Error of S. C. at $9^h..30^m$ $+3^m..22^s.24$

1856 – April 5th. Tr. Circle Ill.–East
1st Catalogue. stars – Observer. J. F. T.

+24..26

h (492)	ε Leonis 1st wire cort.	501	506	508	509
9..37..43.9	9..40..34.0	9..45..32.9	9..48..46.2	9..52..44.8	9..56..37.2
57.1	48.9	46.1	59.3	58.1	50.3
10.7	3.9	59.8	13.2	11.8	4.1
24.7	18.6	13.5	26.8	25.7	17.9
37.8	34.2	26.7	40.1	38.8	30.9
52.0	49.3	41.0	54.5	53.1	45.2
39..5.8		46..54.6	50..8.1	54..6.8	57..58.8
232.0	188.90	274.6	248.2	239.1	244.4
172.0	44.68	94.6	188.2	179.1	124.4
9..38..24.57	144.22	9..46..13.51	9..49..26.89	9..53..25.59	9..57..17.77
a −.24	6) 24.22				
b −.09	9..41..04.04				
c +.06	−.12				
δt −3..22.24	−.13				
sum −3..22.51	+.06	−3..22.51	−3..22.51	−3..22.51	−3..22.51
rate 00	9..41..03.85	−.01	−.01	−.01	−.01
9..35..02.06	9..37..41.60	9..42..50.99	9..46..04.37	9..50..03.07	9..53..55.25
Ab. &c. −1.06	+3..22.25	−1.09	−1.10	−1.12	−1.13
Cor. for chr. Var. −9.23	3..22.23	−9.23	−9.21	−9.23	−9.21
9..34..51.77	+3..22.24	9..42..40.67	9..45..54.06	9..49..52.22	9..53..44.91
AR 1853.0	at $9^h..30^m$				
	−3..22.24				
	00				
	9..37..41.61				

Final Corr. by Cat. Stars $+0^s.05$

10.04075
1.60938
1.65013
44.68

used in red. Cat - Stars { -.85 / -.12 / +.06 }

Rate $+0^{s}.6$

+13	Companion prec.ⁿ				(519)
α Leonis	10 . 03 .. 14.3	513	514	516	~~520~~
10 .. 03 .. 23.9	10 .. 03 .. 28.0	10 .. 10 .. 9.7	10 .. 16 .. 43.0	10 .. 20 .. 7.4	19 .. 25 .. 38.8
37.7	41.9	22.9	56.2	20.8	52.1
51.5	56.1	36.4	9.9	34.2	5.8
5.6	9.6	50.2	23.8	48.2	19.7
19.3	24.4	3.7	37.0	1.2	32.8
34.0	04 .. 38.2	18.0	51.3	15.7	47.1
4 .. 47.9		11 .. 31.5	18 .. 5.0	21 .. 29.6	27 .. 0.8
219.9		172.4	226.2	157.2	197.1
39.9		382.4	166.2	337.2	137.1
10 .. 04 .. 05.70		10 .. 10 .. 50.34	10 .. 17 .. 23.74	10 .. 20 .. 48.17	10 .. 26 .. 19.~~87~~ .59
-17					
-11					
+.06					
10 .. 04 .. 05.48					
10 .. 00 .. 43.24		-3 .. 22.51	-3 .. 22.51	-3 .. 22.51	-3 .. 22.51
+3 .. 22.24		-.02	-.02	-.02	-.02
		10 .. 07 .. 27.81	10 .. 14 .. 01.21	10 .. 17 .. 25.64	10 .. 22 .. 57.06
-3 .. 22.24		-1.19	-1.21	-1.22	-1.24
-.01		-9.23	-9.23	-9.21	-9.22
10 .. 00 .. 43.23		10 .. 07 .. 17.39	10 .. 13 .. 50.77	10 .. 17 .. 15.21	10 .. 22 .. 46.60
~~+.1~~					

April 5th.

1st Cat.

(523) ~~524~~	526 ~~527~~	531 ~~533~~	(533) ~~535~~	(537) ~~540~~ [illegible]
10..36..31.3	10..41..26.9	10..52..29.8	10..56..24.5	10..58..57.5
44.7	40.3	42.8	37.9	10.9
58.6	54.0	56.8	57.3	24.8
12.1	7.9	10.2	5.0	38.1
25.3	20.9	23.6	18.3	51.7
39.9	35.2	38.6	32.7	5.9
53.4	42..48.9	53..57.7	57..46.3	11..00..19.4
265.3	234.1	252.9	216.0	208.8
85.3	54.1	72.9	36.0	268.3
10..37..12.19	10..42..07.73	10..53..10.41	10..57..05.14	10..59..38.33
−3..22.51	−3..22.51	−3..22.51	−3..22.51	−3..22.51
−.03	−.03	−.03	−.04	−.04
10..33..49.65	10..38..45.19	10..49..47.87	10..53..42.59	10..56..15.78
Or. Al. Ar. −1.28	−1.30	−1.34	−1.36	−1.37
Cor. for ch. Va. −9.22	−9.23	−9.22	−9.29	−9.22
10..33..39.15	10..38..34.66	10..49..37.31	10..53..31.94	10..56..05.19
AR 1853.0				

1856. April 7th Tr. Circle.

used in red. of Cat. Stars
a −33
b −10
c +08

Obs: W. C. B.

+46	+28	−01	+07	
α Aurigæ	β Tauri	ε Orionis	α Orionis	
5..8..28.2	5..19..49.0	5..31..37.9	5..50..5.7	
47.3	4.1	57.0	19.0	
7.0	19.7	4.8	32.9	
26.9	35.1	18.5	46.7	
45.8	50.3	31.8	59.9	
6.2	6.7	46.0	14.4	
10..25.9	21..22.1	32..59.7	51..28.2	
187.3	187.0	249.7	206.8	
	+60	−120	+120	
5 .09..26.76	247.0	129.7	326.8	
+03	5..20.. 35.29	5.. 32..18.53	5.. 50..46.69	
−14	−10	−23	−20	1.92
+11	−12	−07	−08	1.87
5..09..26.76	+09	+08	+08	4) 3.79
5..06..02.43	5..20..35.16	5..32..18.31	5..50..46.49	.99
+3..23.93	5..17..11.14	5..28..54.20	5..47..22.46	
	+3..24.02	+3..24.11	+3..24.03	

1856. April 7th. Tr Circle
2d Catalogue – observer J.F.F.

				α Leonis	
9 .. 38 .. 58.9	9 .. 48 .. 24.2	9 .. 52 .. 38.4	9 .. 59 .. 0.2	10 .. 3. 23.7	10 .. 10. 21.6
12.1	37.6	51.7	13.7	3 39.3	34.9
25.8	51.1	5.3	27.2	3 53.3	48.7
39.6	4.9	19.0	41.0	4 7.4	2.2
52.8	18.2	32.2	54.2	4 21.0	15.5
7.2	32.6	46.6	8.4	4 35.8	29.9
40 . 20.8	49 . 46.1	54 .. 0.2	10 .. 00 .. 22.3	4 .. 49.8	11 .. 43.4
				2303	
				180	
				503	
				10 04 .. 7.19	

Rate + $0^{s}.6$

April 7th

2d Catalogue

J. F. F.

10..14..11.2	10..20..17.4	10..23..52.8	10.33..37.9	10..37..43.0	10..40..50.3
24.4	30.7	6.0	57.1	56.3	3.5
38.2	44.3	19.8	4.8	10.0	17.2
52.0	58.1	53.5	18.6	23.9	30.9
5.2	11.2	46.8	31.7	37.0	44.2
19.6	25.8	1.2	46.2	57.2	58.6
15.33.3	21..39.6	25..14.9	34..54.8	39..4.9	42.12.1

1856. April 7th T. Circle
2° Cat. Observer Jo. F.

					δ Hyd. et Cat.
10..45..5.7	10..47..34.6	10..51..2.8	11..01..23.6	11..08..8.1	11..14..52.3
19.0	47.9	16.0	36.8	21.2	5 5.9
32.8	1.9	29.8	50.5	35.0	5 20.1
46.2	15.2	43.4	4.1	48.8	5 34.3
59.6	28.5	56.8	17.7	2.0	5 48.0
14.0	43.0	11.0	31.9	16.4	16 2.7
46.27.8	48..56.7	52..24.7	2..45.5	9..29.9	16.16.7
					180.0
					60
					240.0
					11..15..34.29

April 7

2d. Cat

Observer. J. F. F.

		1st wire lost	
11.. 21.. 25.0	11.. 21.. 58.7	11.. 24.. 22.3	11.. 28.. 45.9
38.3	11.8	36.1	59.0
52.0	25.4	49.9	12.9
5.7	39.2	3.1	26.4
18.9	52.4	17.5	39.8
33.3	6.9	31.2	54.1
22.. 47.1	23.. 20.5		30.. 7.8

a −32
b −10
c +09

1856. April 8th Tr Circle — Ill. East

S.C. obs.

		−1	×7
α Aurigae	β Tauri	ε Orionis	α Orionis
5.. 8.. 28.4	lost	5.. 31.. 37.95	5.. 50.. 5.7
8 47.5	lost	52.00	19.0
9 7.2	5. 20.. 19.75	49.0	32.8
9 27.0	35.25	18.40	46.7
9 46.0	50.30	31.60	00.1
10 6.5	6.70	46.10	14.7
10.. 26.1	5. 21. 22.20	5. 32. 59.80	5. 51.. 28.2
1887		249.75	147.2
5. 09.. 26.96		129.75	327.2
		5.. 32.. 18.54	5.. 50.. 46.74
		5.. 28.. 54.19	5.. 47.. 22.45
		3.. 24.35	3. 24.29

1856. April. 9th Tr Circle – Illumination East

Observer H Safford

β Tauri	α Tauri	☽'s 1st Limb	
5..19..48.8	4..30..20.9	5..26..26.1	3
0 3.65	0 34.7	6 41.4	15.3
0 19.6	0 48.8	6 57.4	16.0
0 35.0	1 3.1	7 13.0	15.6
0 50.1	1 16.9	7 28.9	15.9
1 6.5	1 31.85	7 45.6	16.7
27 .21.9	31 ..46.1	28 .. 1.25	15.6
1855	2023	2136	
60	180	120	
2455	223	[illegible]36	
5..20..37.00	4 ..31..3.19	5 ..27.13.37	
		6	

1856. April 10th – Tr. Circle. Illn East
observer. T. H. S.

μ Geminorum	Moon. 1st Limb	ε Geminorum	Sirius	γ Geminorum lost –
6..17..55.20	6..29..34.80	6..38..43.80	6..42..29.80	
8 9.25	9 50.20	8 58.15	2 43.50	6..59..29.10
8 24.10	30 6.15	9 13.30	2 57.95	43.70
8 38.90	0 22.15	9 28.50	3 12.30	58.15
8 53.40	0 37.80	9 43.00	3 26.05	12.50
9 8.95	0 54.60	9 59.00	3 41.15	27.80
19..23.60	31 .10.50	40..14.05	43..55.30	7.00..42.20
2132	2162	2598	26605	
60	-60	60	180	
2732	1562	1998	86	
6 .18..39.03	6 .30..22.31	6 .39..28.54	6 .43..12.20	

April 10 -

observer W. C. B.

δ Geminorum lost.	β. Geminorum	Procyon	β Geminorum
~~7 .. 12 .. [illegible] 35~~	7 .. 29 .. 1.0	7 .. 34 .. 29.50	7 .. 39 .. 8.20
14 .. 26.00	9 16.35	4 42.70	9 23.50
40.95	9 32.70	4 56.40	9 38.90
55.70	9 48.90	5 10.15	9 54.60
9.95	30 4.50	5 23.50	40 9.50
25.35	30 21.75	5 38.00	0 26.00
15 . 40.30	30 . 37.75	35 .. 57.75	40 .. 41.40
	16295	252.0	2021
	180	18	180
	3429	720	3821
	7 .. 29 .. 48.99	7 .. 35 .. 1.29	7 . 39 .. 54.59

1856. April 11th – Tr. Circle Ill. East.

Observer W G B.

Capella	β Tauri	δ Orionis	ε Orionis	α Orionis –
5.. 08.. 28.20	5.. 19.. 48.80	5.. 27. 22.10	5.. 31.. 37.60	5.. 50.. 05.70
47.00	3.70	35.20	50.70	18.70
6.75	19.30	49.00	4.40	32.60
26.40	34.90	2.90	18.25	46.20
45.60	50.00	16.00	31.35	59.80
6.05	6.40	30.30	45.80	14.15
10.. 25.60	21. 22.00	28 .43.90	32.. 59.40	51.. 27.90
185 60	185.10	199 40	247.50	205.05
5.. 9.. 26.51.	60	−180	−120	+120
+ 5	245.10	19.40	127 50	325.05
	20 .. 35.01	,28 . 02.77	32.. 18.21	46.44
	−16	−23	−25	−23
5.09.26.56	5.20.34.85	28 02.54	32.. 17.96	50 .46.21
6.02.76	11.09	24 .. 38 78	28.. 54.15	47 .22.41
3 .23.80	3 .23.76	3 .23.76	.23.81	3 .. 23.80

1856. April 11 Tr. Circle. Ill^{n} East.
Observer. J. H. S.

ε Geminorum	Sirius.	ζ Geminorum	δ Geminorum	☽'s 1st Limb	Procyon
6.. 37..43.40	6..41..29.80	6.. 58.. 14.85	7.. 14.. 11.55	7.. 28.. 23.70	7.. 34.. 29.25
7 58.15	1 43.35	8 28.80	4 26.00	8 38.80	4 42.70
8 13.15	1 57.85	8 43.30	4 40.70	8 54.70	4 56.30
8 28.40	2 12.20	8 58.15	4 55.45	9 10.40	5 10.15
8 42.95	2 26.00	9 12.30	5 9.80	9 25.70	5 23.30
8 58.90	2 40.85	9 27.80	5 25.20	9 42.20	5 37.90
39..14.00	42..35.15	59.42.25	15.40.10	29.57.85	35.51.50
25895	26520	22745	20880	25335	25110
60	180	180	180	180	180
19895	8520	40745	38880	7335	7110
6 . 38 . 28.42	6 42 . 12.17	6 . 58 . 58.21	7 . 14 . 55.56	7 .. 9 . 10.48	7 .. 35 . 10.16
					β Geminorum
					7.. 39.. 8.10
					9 23.10
					9 38.80
					9 54.35
					10 9.45
					10 25.70
					.40.41.20
					20070
					180
					38070
					7 09 . 54.39

1856. April 13th – Tr. Circle – Illumination East

Observer. P. S. C.

strong wind bad observation

very high wind.

good vision

Capella	β. Tauri	α Orionis	ζ Geminorum	δ Geminorum	θ Cancri
5.. 08..27.80	5..19..48.90	5..50..5.60	6.. 58..14.80	7..14..11.60	8..26..4.90
48.00	3.90	18.90	8 28.90	4 26.00	6 18.80
6.80	19.45	32.70	8 43.50	4 40.80	6 33.15
26.60	35.00	46.40	8 58.20	4 55.50	6 47.70
45.40	49.85	00.00	9 12.30	5 9.90	7 1.80
6.40	6.70	14.20	9 27.70	5 25.25	7 16.90
10..25.65	21 .22.40	51 .28.00	59 .42.25	15 .40.15	27.31.15
18565	18620	145.80	22765	20915	15440
..26.52	60	180	180	180	180
5	246.20	325.80	40765	38915	33440
5 ..09..26.57	..35.17	46.54	6 ..58..58.24	7 ..14..55.59	8.26..47.77
6.. 2.73	– 16	– 23			
E.C. + 3 .23.84	20..35.01	50..46.31			
	11.06	47.22.38			
	+ 23.95	+3..23.93			

April 13th Tr Circle

Observer – P. S. C.

during these observations →

γ Cancri	ξ Cancri	83 Cancri.	☽'s 1st Limb.	Centre Cone of Eratosthenes.	λ Leonis
8 .. 37 .. 37.95	9 .. 03 .. 45.45	9 .. 13 .. 38.80	9 .. 16 .. 52.00	1st Lost.	9 .. 26 .. 10.80
7 52.15	3 59.80	3 52.70	7 6.45	9 .. 18 .. 37.00	6 25.10
8 6.95	4 14.70	4 7.00	7 21.55	52.00	6 40.10
8 21.85	4 29.50	4 21.50	7 36.80	7.10	6 55.10
8 36.15	4 43.95	4 35.35	7 57.05	21.65	7 9.70
8 57.35	4 59.45	4 50.50	8 6.80	37.20	7 25.25
39 .. 6.25	05 . 14.15	15 .. 4.80	18 . 21.80	19 . 52.10	27 . 40.20
21265	26700	21065	19648		20625
60	60	60	60		180
15265	20700	150.65	25645		38625
8 38 . 21.81	9 .. 4 .. 29.5	9 . 14 .. 21.52	9 .. 17 . 36.64		9 . 26 .. 55.18

1856. April 13th - Tr. Circle Ill^{n} East.

Observer. P. S. C.

ε Leonis	α Leonis.	γ¹ Leonis
9 .. 40 .. 20.9	10 .. 3 .. 25.60	10 .. 14 .. 43.80
0 35.45	3 39.05	4 57.95
0 50.50	3 53.20	5 12.30
1 5.50	4 7.20	5 27.05
1 20.05	4 20.95	5 41.40
1 35.90	4 35.75	5 56.60
41 .. 50.80	4 . 49.35	16 .. 11.05
21910	23110	25015
180	180	60
3910	5110	19015
9 .. 1 .. 5.59	10 .. 4 .. 7.30	10 .. 5 .. 27.16

1856. April $\frac{17}{18}$ Z. Circle Illr. East.

Observer. W. C. B.

α Cassiopeæ	Polaris			
0.. 34.. 31.2	0.. 42.. 15.9	0.. 42.. 15.9		
54.9	50.. 47.3			
19.2	50.. 56.0	50.. 54.7	−$\overset{5}{1}$.3	8.. 38.8
43.7	51.. 00.8			
6.9	59.. 49.7			
32.8	59 53.7	59.. 52.3	−1.4	8.. 57.6
35.. 56.9	59 58.1			
	1.. 08.. 51.5			
	8. 58.0	1.. 08.. 57.0	−1.0	9.. 04.7
	9.. 1.6			
	27.. 27.0			
	17.. 33.2	17.. 32.8	−0.4	8.. 35.8
	17.. 38.1			
	26.. 53.0			
	27.. 6.3	27.. 04.1	−2.2	9. 32.3
	27.. 12.9			
	35.. 53.9			
	36,.00.1	35.. 59.7	−0.4	8. 55.6
	36.. 5.0			
		1.. 08.. 56.64		

1856. April 25 — Tr. Circle

Illumination East — Observer W. C. B

α Tauri.	Capella	β Tauri.	ε Orionis	α Orionis	α Can. Maj.
4 .. 26 .. 56.00	— lost	5 .. 16 .. 23.95	lost	5 .. 46 .. 40.65	6 .. 39 .. 4.75
9.80	— lost	39.00	lost	54.00	18.45
23.95	— lost	54.70	5 .. 28 . 38.80	7.80	32.85
38.35	— lost	10.15	53.35	21.40	47.60
52.10	5 .. 6 .. 20.80	25.20	6.60	34.90	1.00
7.15	41.25	41.60	21.00	49.40	15.90
28 .. 21.30	7 .. 00.90	17 .. 57.15	29 . 34.60	48 . 3.20	39 . 30.10

W. C. B. observer

ε Can. maj.	Procyon.	β Geminorum
6.. 52.. 10.80	7.. 31.. 4.45	7.. 35. 43.30
25.80	17.70	58.30
41.40	31.40	13.80
57.15	45.20	29.60
12.15	58.60	44.60
28.60	13.00	00.90
53 . 44.25	32 . 26.70	37 . 16.40

1856. April 25th. F. Circle, 2. Catalogue Stars.
Illumination West. Observer. S.C.

+13 α Leonis.			1st wire lost		Duplex. 8th mag. – pos. n.f comp. n.f. 12" – mag. 12.
10 .. 00 .. 00.45	10 .. 06 .. 56.30	10 .. 10 .. 46.00	10 . 17 .. 5.80	10 .. 20. lost	10 .. 30 . 12.40
14.35	10.00	59.50	20.10	lost	26.00
29.05	24.25	14.00	33.25	lost	40.60
42.75	37.30	27.25	47.05	21 .. 08.80	53.90
56.80	51.15	41.00	0.90	22.35	7.60
10.80	5.00	54.40	14.05	36.20	21.20
01 .. 24.25	8 .. 18.75	12 . 7.90	~~27~~	21 . 49.20	31 . 34.40

178.45
298.45
10 .. 00 .. 42.64
– .13
– .10
– .10
10 .. 00 .. 42.31
10 .. 00 .. 43.03
– 0.72

used in red. Cat. Stars { a -.27, b -.11, c -.10 }

Illumination West. Observer S.C.

Stranger star brighter than preceding, Unk. Reading - 310°.19′±				Stranger. 8th mag.	
10.. 31.. 53.10	10.. 34.. 17.90	10.. 37.. 24.95	10.. 41.. 40.25	10.. 42.. 03.0	lost
7.00	31.30	38.60	54.05	16.7	10.. 44.. 23.00
21.50	45.80	53.00	8.30	31.05	37.40
34.60	58.90	6.15	21.60	44.15	50.50
48.40	12.75	19.70	35.30	58.10	4.25
2.00	26.35	33.70	49.00	11.65	18.10
33.15.40	35.. 39.75	46.80	43.. 2.25	43.. 24.90	45.. 30.15

1856. April 25th. Tr Circle 2d Catalogue

Illumination West. observer S.C.

	not seen by J. F. F. Apl 7th 11th mag.			Not obs. by J. F. F.	δ Hyd. et Crat.
10 .. 47 .. 37.35	10 .. 53 .. 41.30	10 .. 57 .. 58.20	11 .. 4 .. 42.65	11 .. 4 .. 48.38	lost
51.00	55.10	11.90	56.30	2.00	lost
5.40	9.75	26.20	11.00	16.25	lost
18.75	23.60	39.40	24.05	29.75	lost
32.30	36.90	53.15	37.70	43.25	lost
46.05	50.35	07.00	51.30	57.00	11 .. 12 .. 37.70
48 . 59.30	55 .. 03.75	59 . 20.15	6 . 4.40	6 .. 10.30	12 . 57.25

1856. April. 25th -

Tr. Circle
Illumination West.

Observer - S. C.

		Stranger- 7/8 mag.		Lost
11 .. 17 .. 59.95	11 .. 18 .. 33.20	lost	lost	
13.30	46.85	lost.	lost	
27.80	1.20	11 .. 19 .. 58.50 ?	lost	
41.00	14.65	11.80	lost	
54.80	28.10	25.60	lost	
8.25	42.00	39.10	lost	
19 .. 21.50	19 .55.20	20 .52.30	11 .. 22 .. 05.7	

1856 April 25th Tr. Circle — ~~1st~~ 2nd Catalogue
Illumination West. Observer J.C.

		+15 β Leonis			1st win lost
11.. 32.. 21.00	11.. 37.. 4.10	11.. 41.. 1.15	11.. 45.. 47.85	11.. 57.. 1.15	11.. 54.. 32.25
34.50	17.70	15.25	1.60	15.00	46.80
48.90	32.15	30.20	15.95	29.20	00.00
2.10	45.10	43.85	29.00	42.45	13.70
16.00	58.95	58.05	42.95	56.30	27.30
29.75	12.85	12.30	56.70	9.95	40.60
33 . 42.80	38 .26.00	26.00	47 .. 9.80	16 .23.00	5
		186.80			
		306.80			
		11.. 41.. 43.83			
		−.13			
		−.10			
		−.10			
		11.. 41.. 43.50			
		11.. 41.. 44.27			
		− 0.77			

April 25th Tr Circle.
Illumination West. Observer J.C.

Bad seeing

11..59..58.0			Mars. 1st L	Mars. 2d Limb	β Corvi
11.80	12..3..23.0	12..8..55.90	12..21..00.30	12..21..01.20	12..26..5.95
26.15	36.70	9.80	13.95	15.00	20.80
39.25	57.20	24.05	28.30	29.60	36.30
53.00	4.30	37.05	41.70	42.50	50.50
6.75	18.00	57.00	55.35	56.25	5.50
12.01.20.00	31.75	4.80	9.00	9.95	20.40
	4.44.95	10.18.00	22.22.20	22.23.30	27..34.65

856. April. 26t Tr. Circle. 1&2 Catalogue stars, & stranger stars.
Illumination West. Observer - S. C.

£13

	α Leonis, comes	α Leonis.	513		514
9..35..27.15	9..59..44.25	9..59..54.05	10..6..39.60	lost	10..13..13.00
40.90	58..35	0 8.05	53.25	10..11..43.00	26.70
55.20	13.15	0 22.75	lost	57.25	41.15
8.50	26.70	0 36.30	20.70	10.50	54.30
22.05	40.75	0 50.50	34.60	24.25	8.05
36.00	54.75	1 4.35	48.25	38.00	21.90
36: 49.00	8.25	1 .18.00	8 1.60	12..57.05	14 ..35.00
238.80	246.20	194.00	198.00	224.05	200.10
58.80	186.20	254.00	13.19	41.15	380.10
9..36..08.40	10..00..26.60	10..00..36.29	184.81	182.90	10..13..54.30
		-.12	6)124.81	6) 62.90	
		-.10	10..07..20.80	10..12..10.48	
		-.10			
		10..00..35.97			
		10..00..43.02			

Errors used in red Cat. Stars { a −0.25, b −0.11, c −0.10 }

1856. April 26th.

Catalogue stars.

Observer J. C.

not on cat.					
~~6th mag. 312°.24'~~	516				527
~~lost~~	10..16.37.60	10..30.6.05	~~10..32..15.00~~	10.34..11.30	lost
~~lost~~	57.10	19.60	lost	25.00	lost
~~10..15..47.20~~	5.40	34.15	10..32..15.00	39.30	lost
~~00.40~~	18.65	47.25	28.20	52.40	10.38..38.30
~~14.05~~	32.50	1.00	42.05	6.30	51.95
~~lost~~	46.15	14.80	55.90	20.00	5.70
~~lost~~	17.59.40	31.27.95	33.8.80	35..33.10	39.18.90
~~61.65~~	250.80	150.80	149.95	187.40	114.85
	130.80	330.80	68.71	367.40	81.90
	10..17..18.69	10..30..47.26	81.24	10..34..52.49	32.95
			5) 141.24		4) 152.95
			10..32..28.25		10..38..38.24

Observations of this date are not reliable since the clock stopped without running down ~~and~~ its losing rate thereby rapidly increasing.

1856. April. 26th Tr. Circle Catalogue stars.
Ill. West Observer. J. C.

		8/9 mag. Strangers	8/9 mag. Strangers		four first wires lost
10..41..34.00	10..41..56.70	~~11..17..29.00~~	~~11..17..32.75~~	11..19..24.00	11..21..32.30
47.70	10.25	~~42.70~~	~~46.60~~	37.65	45.95
2.05	24.65	~~56.30~~	~~1.00~~	51.90	59.05
15.10	37.90	~~10.30~~	~~14.15~~	5.25	
29.00	51.60	~~23.90~~	~~27.90~~	18.90	
42.60	5.20	~~37.80~~	~~41.70~~	32.60	
55.90	43.18.60	~~18.57.05~~	~~18.55.00~~	20..45.90	
226.35	204.90	~~257.05~~	~~219.10~~	216.20	137.30
106.35	264.90			36.20	81.87
10..42..15.19	10..42..37.84			11..20..05.17	3) 55.43
					11..21..18.48

Cat Star

11.. 25.. 13.80
27.35
41.90
55.00
8.75
22.40
35.70

204.90
384.90
11.. 25.. 54.99

Clock stopped immediately after (3^{hrs}) the last observation. The pallets were found to be quite dry of oil.

1856. April $\frac{27}{28}$. F. Circle,
Observer W C B. Ill. west.

α Cygni +45°
20..36..10.70
29.90
50.05
8.75
28.05
47.25
20..38..5.85
180.55
126
7/60.
20..37..08.57
− 08
+ 02
− 20
20.37.08.31
36.31.41
E@ + 36.90.

1856. April 29th. – Tr. Circle.
Illr. West.

Observer. W. C. B.

−16.31	+ 32°.12	+5.35	+28.22
Sirius.	α² Geminorum	Procyon.	β Geminorum
6 .. 38 .. 41.10	7 .. 25 .. 12.00	7 .. 31 .. 40.70	7 .. 36 .. 19.65
55.25	28.00	54.30	34.95
10.25	45.20	8.75	51.25
24.15	00.75	22.00	6.30
38.35	17.00	35.80	22.00
39 .. 53.80	33.15	49.70	37.50
40 .. 6.50	48.85	33 .. 02.85	37 .. 52.65
169.40	4195	15410	4430
6 .. 39 .. 24.20	7 .. 26 .. 00.60	7 .. 32 .. 22.01	7 .. 37 .. 06.33
− .10	− 12	− .10	− 11
− .25	− 06	− 17	− 08
− .07	− 16	− 10	− 17
6 .. 39 .. 23.88	7 .. 26 .. 00.26	7 .. 32 .. 21.64	7 .. 37 .. 05.97
38 .. 47.96	25 .. 24.58	31 .. 45.77	36 .. 30.18
35.92	35.68	35.87	35.79

1856. May 1st. Tr. Circle.
Illumination West, Observer. W. C. B.

Capella	Sirius	α² Geminorum	Procyon
5 .. 5 .. 40.50	* 6 .. 38 .. 41.80	7 .. 25 .. 13.00	7 .. 31 .. 41.60
60.15	56.00	29.00	55.25
20.40	11.10	45.95	9.80
39.55	24.85	1.75	22.90
59.00	39.20	17.85	36.80
18.80	53.30	34.00	50.50
7 .. 38.15	40 .. 7.25	26 .. 49.65	33 .. 3.70
216.55	233.50	191.20	220 55
+60	−60	−180	−60
276.55	173.50	11.20	160.55
5 .06 .. 39.51	6 .. 39 .. 24.79	7 .. 26.01.60	7 .32 .. 22.93
− .26	− .42	− 34	− 37
5 06 .39.25	6 .39 .. 24.37	7 .26.01.26	7 .. 32 .. 22.56
6 02.52	38 .. 47.94	25.24.56	31.45.75
36.73	36.43	36.70	36.81

39.35
36.75
5) 2.60
.52

* Shutter half closed

-14
-17
-11

1856. May 5/6 Tr. Circle
Illumination West

Observer W. C. B.

	+28	+46
α Cygni	α Andromedæ	Capella
20.. 36.. 13.25	0.. 0.. 49.10	5.. 5. 42.95
32.50	4.85	2.75
52.80	21.10	23.40
11.20	36.00	42.15
30.70	57.80	2.00
50.00	7.10	21.40
38 . 8.65	2 .22.30	7 ..40.40
	19 2,25	175,05
	252.25	295.05
	0.. 01.. 36.04	5.. 06.. 42.15
	+.04	+.01
	-.19	-.24
	-.12	-.16
	0.. 01.. 35.69	5.. 06.. 41.76
	0.. 00.. 56.84	5.. 06.. 02.50
	+39.35	+39.26
		45
		77
		+39.35

Error of S.C. + 39^s.52 at 12^h 00^m

1856. May 6th Tr. Circle 1st Catalogue

Lamp West Observer J. F. F.

+15

β Leonis.	(564)		(566) ~~568~~	568 ~~571~~	573 ~~578~~
11.. 41.. 41.10	11.. 54.. 5.00	11.. 54.. 5.40	11.. 59.. 49.20	12.. 2.. 3.95	12.. 11.. 17.45
55.35	18.75	19.05	3.00	17.60	31.20
10.25	33.20	33.60	17.30	32.00	45.70
24.00	46.45	46.85	30.70	45.10	58.75
38.30	00.05	00.40	44.20	58.90	12.50
52.50	13.90	14.20	58.05	12.70	26.25
43.. 6.20	55.. 27.00	55.. 27.35	12 .01 .. 11.70	3 . 25.90	12 .. 39.70
227.70	144.35	146.85	213.65	196.15	231.55
167.70	324.35	326.85		316.15	411.55
11.. 42.. 23.96	11.. 54.. 46.34	11.. 54.. 46.69	12.. 00 .. 30.52	12.. 02.. 45.16	12.. 11.. 58.79
−.06	a −.08				
−.15	b −.12				
−.11	c −.11				
11.. 42.. 23.64	δt −39.52				
11.. 41.. 44.19	sum −39.83	sum −39.83	−39.83	−39.83	−39.83
+39.45	11.. 54.. 06.$\overset{00}{51}$	rate 00	00	00	00
		11.. 54.. 06.86	11.. 59.. 50.69	12.. 02.. 05.33	12.. 11.. 18.96
+39.46	Pr. Ab. &c. −1.40	−1.40	−1.43	−1.44	−1.48
+39.58	Corr. for Che. Var. −9.21	−9.21	−9.27	−9.21	−9.21
+ 39.52 at 12h 00	11.. 53.. 55.90	11.. 53.. 56.25	11.. 59.. 39.99	12.. 01.. 54.68	12.. 11.. 08.27
	AR 1853.0				
−39.52					
+.01					
11.. 41.. 44.13					

Final Corr. by Cat. Stars −0^s.04

used in red. Cat. Stars { a − 0.13 b −.0.17 c −0.11

Rate + 0.^{s}5

1856. May 6th. Tr. Circle 1st Catalogue

Lamp West

Observer J. F. F.

578 ~~580~~	(580) ~~582~~	584	585 ~~587~~	594 ~~596~~	598 ~~600~~
12..14..15.90	12..18..19.10	12..25..37.50	12..29..00.70	12..43..21.15	12..48..16.95
29.60	32.75	57.00	14.25	35.00	30.65
43.85	47.15	5.65	28.70	49.40	44.95
56.90	00.35	26..18.70	41.80	2.75	58.10
10.90	14.20	32.60	55.65	16.30	11.95
24.70	27.90	45.95	9.40	30.10	25.70
15.37.80	19.41.00	26..59.40	30.22.65	44.43.15	49..38.85
219.65	182.45	250.80	173.15	197.85	227.15
399.65	2.45	130.80	293.15	17.85	207.15
12..14..57.09	12..19..00.35	12..26..18.69	12..29..41.88	12..44..02.55	12..48..58.16
−39.83	−39.83	−39.83	−39.83	−39.83	−39.83
00	−.01	−.01	−.01	−.02	−.02
12..14..17.26	12..18..20.51	12..25..38.85	12..29..02.04	12..43..22.70	12..48..18.31
−1.49	−1.50	−1.53	−1.55	−1.59	−1.61
−9.21	−9.21	−9.21	−9.21	−9.21	−9.20
12..14..06.56	12..18..09.80	12..25..28.11	12..28..51.28	12..43..11.90	12..48..07.50

1856. May. 6th. T. Circle 1st Catalogue

Ill.n West Observer J. F. F.

(601) ~~608~~	609 ~~610~~	−10 α Virginis.	(615) ~~616~~	(616) ~~617~~
12..55..26.40	13..15. 6.70	13..17..36.45	13..20..53.95	13..26..56.25
40.10	20.45	50.10	7.60	10.00
54.40	34.80	4.95	21.90	24.20
7.70	48.00	18.20	35.10	37.70
21.40	1.90	32.15	48.95	57.40
35.15	15.35	46.20	2.55	5.05
56.48.35	16.28.80	18.59.55	22.15.70	28..18.40
238.50	156.00	247.60	185.75	208.00
53.50	336.00	127.60	245.75	263.00
12..56..07.64	13..15..48.00	13..18..18.29	13..21..35.11	13..27..37.57
	~~−.10~~	−.10		
	~~−.11~~	−.11		
	~~−.11~~	−.11		
	~~13..15..47.68~~	13..18..17.91		
sum −39.83	~~13..~~ −39.83	13..17..38.30	−39.83	−39.83
rate −.02	−.03	+39.61	−.03	−.03
12..55..27.79	13..15..08.14	−39.52	13..20..55.25	13..26..57.71
Or. M. &c. −1.63	−1.70	−.03	−1.72	−1.74
Cor. for ch. ra. −9.21	−9.21	13..17..38.86	−9.25	−9.19
12..55..16.95	13..14..57.23	~~13..1~~	13..20..44.28	13..26..46.78

AR 1853.0

a −16
b −15
c −13

1856 May. 12th   F Circle
Illumination West   observer W. C. B.

	+6	+28
α² Geminorum	Procyon	β Geminorum
~	7 .. 31 .. 46.90	7 .. 36 .. 25.60
~	00.50	41.10
~	14.90	57.60
~	28.25	12.50
~	41.85	28.10
7 .. 26 .. 39.10	55.80	43.70
54.85	33 .. 9.00	58.70
	197.20	267.30
	7	−180
		87.30
	7 .. 32 .. 28.17	7 .. 37 .. 12.47
	−.10	−.05
	−12	−.17
	−13	−.15
	7 .. 32 .. 27.82	7 .. 37 .. 12.10
Corr. dt.	7 .. 31 .. 45.78	7 .. 36 .. 30.02
	+42.04	+42.08

+42.06
+39.35
6) 2.71
.45

1856. May 12th Tr. Circle – Illumination West

observer. W C B.

ε Leonis	η Leonis	☽'s 1st Limb.	χ Leonis.	[illegible]is	γ Leonis
9..37..38.2	9..59..28.8	lost–	10..33..11.5	10..33..17.7	10..12..01.1
7 53.3	9 ..43.0	lost–	23.7	4 6.0	1 15.9
8 9.1	9 58.1	lost	37.1	10.34..19.7	31.3
8 23.7	10 0 12.0	lost	44.7	Lost	lost
8 38.8	0 26.5	lost	.57.7	Lost	lost
8 53.7	0 40.8	lost	6.0	Lost	lost
39 .8.2	10..00..54.8	10..33..11.5	34.19.7	Lost	lost
2250	2640				
60	180				
1650	840				
9.38.23.57	10..0..12.00				

-17
-11
+13

1856. May. 14th Tr. Circle - Illumination East

observer. W.C.B

	+21	-14			
α Leonis	δ Leonis	δ Hydræ	ε Leonis	ε² Compn. s.f.	β Virginis
10..0..43.70	11..6..26.95	11..12..10.15	11..20..34.95	11..20..36.00	11..43..14.95
0 57.20	41.10	23.90	48.20	0 49.10	28.10
1 11.25	55.85	38.10	2.00	1 2.95	41.90
1 25.30	10.75	52.15	15.75	1 16.70	55.70
1 38.90	24.85	5.85	29.00	1 30.00	8.80
1 53.70	40.30	20.75	43.40	1 44.30	23.25
2..7.70	7..54.90	34.80	21..56.90	21..57.95	44.37.00
23775	254.70	185.70	230.20	23700	209.70
60	74.70	365.70	110.20	120 1170	180
17775	11..07..10.67	11..12..52.24	11..21..15.74	11..21..16.71	389.70
10..1..25.39	-.07	-.15			11..43..55.67
	-.11	-.06			
	+.13	+.13			
	11..07..10.62	11..12..52.16	~~11..9~~		
	11..06..28.06	11..12..09.59			
	+42.56	+42.57			

1856. May - 14th. Tr. Circle. illumination East - obsr. W. C. B.

☽s 1st Limb	Mösting No. 1	Mösting No. 2	η Virginis
11.. 59.. 33.20	11.. 59.. 52.85	53.25	12.. 12.. 35.90
46.50	6.20	6.85	49.00
00.60	20.20	20.70	2.75
14.50	34.15	34.75	16.40
28.05	47.65	48.20	29.85
42.80	2.15	2.75	44.10
56.85	16.00	16.70	13.. 57.70
222.50	179.20	183.20	235.70
120	60	60	120
102.50	239.20	243.20	115.70
14.64	12.00.34.17	12.00.34.74	12.13.16.53

Rate $+ 0^s.3$ Ist Catalogue Stars. used in red. Cat Stars { a −17 / b 00 / c +15

1856 May 15th J. Circle Error of E. C. at $11^h.00$ − +42.92

+12..40 Illumination East. Observer J.F.F.

W.C.B.	Cat. Star.	Cat = Star	Cat. Star.	Cat. Star	Cat. Star
α Leonis	(557) ~~559~~	558 ~~560~~	(561) ~~563~~	562 ~~564~~	(564)
10..0..43.90	11..29..37.85	11..33..36.90	11..41..44.20	11..47.42.10	lost
57.25	57.10	49.90	57.40	55.30	lost
11.40	4.90	3.75	11.00	9.00	lost
25.50	18.70	17.45	24.85	22.95	11..54..49.45
39.10	31.90	30.70	38.00	36.10	2.95
53.80	46.15	45.00	52.50	50.30	17.20
..2.7.90	30.59.85	34.58.80	43.6.15	49..4.05	.55..30.95
238.85	250.45	242.50	234.10	219.80	100.55
178.85	130.45	122.50	174.10	159.80	82.03
10..01..25.55	11..30..18.64	11..34..17.50	11..42..24.87	11..48..22.63	18.52
a −.09 ~~+.15~~	a −.11				4) 198.52
b +.00	b 00				11..54..49.63
c +.15	c +.15				
10..01..25.61	δt −42.92				
10..00..42.79	sum −42.88	−42.88	−42.88	−42.88	−42.88
W.C.B. +42.82	rate −.01	−.01	−.01	−.01	−.01
+42.83	11..29..35.75	11..33..34.61	11..41..41.98	11..47..39.94	11..54..06.74
+43.01	Or. Abr. &c. −1.22	−1.24	−1.28	−1.31	−1.34
+42.92	Cor. for ch. Var. −9.22	+9.21	−9.22	−9.21	−9.21
−42.92	11..29..25.31	11..33..24.16	11..41..31.48	11..47..29.42	11..53..56.19
+.01	AR 1853.0				
10..00..42.70					

Final Corr. by Cat. Stars +0.03

~~R~~ ~~P~~ 1st Cat. Stars

1856. May. 15th.
F. Circle.
Ill. East.
+ 2..42
-22..36
observer J. F. F.

☽ star
moon star.
Cat. Star

10 Virginis 1st wire lost	η Virginis	578	β Corvi.	☽'s 1st Limb	Mysum
12..2..35.20	12..12..36.0	lost	12..26..49.95	12..42..32.00	12..42..48.10
49.20	49.20	lost	4.15	45.40	1..50
2.90	3.00	lost	19.30	59.70	15.70
16.00	16.80	12..15..00.00	34.00	13.70	29.55
30.50	29.95	13.20	48.45	27.10	43.00
44.15	44.20	27.50	4.00	41.75	57.70
	57.95	15.41.20	28..18.70	..55.80	11.75
177.95	237.10	81.90	178.55	275.45	207.30
40.68	117.10	82.03	238.55	95.45	
137.27	12..13..16.73	59.87	12..27..34.08	12..43..13.64	12..43..29.61
6) 17.27	~~82.00~~	4) 239.87	-.17		
12..03..2.88	.73	12..14..59.96	+.00		
			+.16		
			12..27..34.07		
		- 42.88	12..26..51.04		
		-.02	+ 43.03		
		12..14..17.06	- 42.92		
		Or. M. Pr. - 1.44	-.02		
		Cor for Ang Var. - 9.21	12..26..51.13		
		12..14..06.41			
		AR 1853.0			

0.00048
1.60895
1.60943
40.68

1856. May. 15th.

Tr. Circle
Illumination East.

Observer J. F. F.

Ensign A	ψ Virginis	θ Virginis	
12..42..49.00	12..46..55.15	13..2..33.70	13.25
2.50	8.70	46.95	13.75
16.65	22.75	00.70	13.50
30.55	36.35	14.20	13.40
44.10	49.90	27.60	14.35
58.75	4.40	41.95	13.80
12.75	..18.10	55.75	
214.30	195.35	220.85	
	255.35	100.85	
12..43..30.61	12..47..36.48	13..03..14.41	

1856. May. 16th Tr. Circle 2d Catalogue.
Illumination East Observer. J.F.F.

		β Leonis			
11..33..4.70	11..37..47.90	11..41..44.90	11..46..31.80	11..51..45.20	11..55..2.80
18.00	1.00	58.60	45.00	58.25	15.90
31.75	14.85	12.90	58.70	12.05	29.70
45.25	28.60	27.15	12.45	25.85	43.30
58.70	41.90	41.00	25.70	39.00	56.55
13.00	56.15	55.80	40.00	53.30	10.95
34..26.65	39.9.95	43.9.95	47.53.80	53..7.00	56.24.45
		250.30			
		190.30			
		11..42..27.19			
		11..41..44.11			
		+43.08			
		+43.18			
		+43.13			

1856 May 16th 2d Cat. Stars J.F.F.,
Ill. East −22..35
bad Ill.

12 . 0 .. 42.00			B Corvi. 1st wire lost		
55.20	12 .. 4 .. 7.00	12 .. 19 .. 40.10	12 .. 27 .. 4.45	12 .. 31 .. 14.70	12 .. 34 .. 46.15
8.90	20.20	53.25	19.15	28.00	59.20
22.75	34.00	7.05	34.15	41.75	13.00
35.90	47.75	20.75	48.60	55.35	26.90
50.25	00.90	34.00	4.10	8.70	39.95
3.95	15.40	48.35	18.95	22.95	54.25
	5 . 29.00	11 .. 2.00		32 .. 36.70	36 . 8.00

129.40
44.06
~~249.40~~
~~12 .. 27 ..~~ 85.34
(6) 205.34
12 .. 27 .. 34.22
12 .. 26 .. 51.03
+43.19

10.03465
1.60938
1.64403
44.06

1856.. May 16th F. Circle. 2d Catalogue
Illumination East.
Observer, J. F. F.

-13
+02
+.06

May 20/21 W. C. B. obs.

				+28	+14
				α Andromedae	γ Pegasi
12.. 37.. 7.75	12.. 42.. 28.15	12..45..48.95		0.. 0.. 54.45	0.. 5.. 57.30
20.85	41.30	2.25		9.40	4.85
34.60	55.00	15.95		25.00	19.00
48.20	8.90	29.75		40.55	33.20
1.65	22.00	lost		55.40	47.00
16.00	36.40	lost		11.95	1.75
38.29.60	43.50.10	lost		0..02..27.30	0..07..15.60
				224.05	172.70
				284.05	232.70
				0..01..40.58	0..06..33.24
				-.03	-.06
				+.02	+.02
				+.07	+.06
				0..01..40.64	0..06..33.26
				0..00..56.78	0..05..49.36
				+43.86	+43.90

44.10
43.84
.22

Error of E. C. at 12h..00m +43s.77 Rate +0s.2 used in red Cat. Stars { a −.13, b +.02, c +.04

1856. May – 26th Tr. Circle 2d Catalogue

Illumination East. Observer J. F. F.

1st Catalogue.	2 Catalogue				
(580)					
lost –	12..21..37.90	12..45..49.80	Lost	12..54..46.10	12..57..28.20
12..18..36.85	51.10	3.00	Lost.	59.30	41.35
50.50	4.90	16.50	12..57..58.15	13.10	55.20
4.10	18.60	30.45	11.90	26.85	8.95
17.60	31.90	43.90	25.00	40.15	23.20
31.95	46.10	58.00	39.50	52.40	36.65
19..45.45	22..59.90	47..11.90	52.95	56..8.10	58..50.20
18 6.45					
40.68					
14 5.77					
6) 25.77					
12..19..04.29					
a −.08					
b +.01					
c +.04					
δt −43.77					
sum −43.80					
rate 00					
12..18..20.49					
Pr. M. Tr. −1.42					
Cor. for the Var. −9.21					
12..18..09.86					
M. 1853.0					

1856. May 21st Tr. Circle 2d Catalogue
Illumination East. Observer–J. F. F.

		−10..24			
		α Virginis			
13..00..4.05	13..10 Lost	Lost	13..22..32.00	13..26..13.95	Lost
17.10	Lost	Lost	45.10	27.00	13..31..29.20
30.75	13..10..3.00	Lost	58.95	40.90	43.05
44.30	16.80	Lost	3.42 12.60	54.55	56.95
57.80	30.15	13..18..35.60	4.6 25.85	7.90	9.95
12.10	44.40	50.20	3.8 40.10	22.25	24.60
25.85	.58.20	19..4.00	23.53.95	27.35.90	32.38.20

89.80
83.~~70~~ 27
3) 66.53
18..18..22.18
−.10
+.01
+.04
13..18..22.13
13..17..38.29
+43.84

+43.83
+43.71

+43.77
at 12h..00

−43.77
−.01
13..17..38.35

10..00719
1.91328
1.92047
83.27

1856 May. 21st Tr. Circle 2d Catalogue
Illumination East. Observer J.H.F.

13.. 35.. 5.70	13.. 53.. 34.95	Lost	14.. 6.. 26.55	14.. 12. 25.20	14.. 15.. 58.85
18.90	48.00	Lost	39.75	38.60	12.00
32.75	1.70	Lost	53.50	52.20	25.80
46.40	15.45	14.. 0.. 19.70	7.15	5.95	39.40
59.70	28.75	33.00	20.35	19.00	52.85
14.10	43.15	47.20	34.90	33.30	7.00
36. 27.65	Lost	Lost	7. 48.70	13.. 47.20	20.75

1856. May-21st. Tr. Circle. 2d Catalogue.
Illumination East. Observer J. F. F.

		+3 B.A.C. 4878.	a −8.7107	b −8.6294	
14..18..41.25	14..20..35.40	14..39..3.25	d −0.9560	𝔅 −1.2526	~~+1.2~~
54.60	48.50	16.70	+9.6667	+9.8820	~~+3.083~~
8.40	2.10	30.40	+0.0464	+.0762	~~.286~~
22.05	15.95	44.15	c +0.4819	d −7.3553	~~+1.171~~
35.30	29.05	57.30	e +9.3746	D −0.9130	~~+1.2 12~~
49.75	43.60	11.80	+9.8565	+8.2683	
20 . 3.25	21 . 57.25	40 . 25.25	+.0719	+.0018	+3.033
		188.85	14..38..40.240		6
		308.85	Or.	+18.198 ~~+19.369~~	+18.198
		14..39..44.12	Prof. Mot.	−0.026	~~+1.171~~
		−.08	other corr.	+1.963	~~+19.369~~
		+.02	~~14..39..01.546~~		
		+.04	14..39..00.975		+.0464
		14..39..44.10			+0.762
		14..39..00.37 ~~59.78~~			+0.719
		~~+44.32~~			+0.018
		+43.73			+1.963
		−43.77			
		−.02			
		14..39..00.31			

1856. May ~~21~~/22

1856 May 26/27 - Illm East

Observer. W C B.

	+6	−0.12 +0.01 +0.02 28		
α² Geminorum	Procyon	β Geminorum	ζ Pegasi	α Pegasi
Lost	7.. 31..49.00	7.. 36.. 27.80	22.. 34.. 21.20	22.. 57.. 39.00
Lost	2.15	42.90	35.00	52.80
Lost	16.00	58.30	48.80	07.00
7.. 26.. 08.20	29.70	14.00	2.80	21.00
23.85	42.95	29.10	16.00	34.70
41.00	57.60	45.40	30.75	49.65
57.00	33.. 11.25	37.01.00	35.. 44.70	59.. 3.75
	208.65	218.50	199.25	207 90
		98.50	−180	60
	7.. 32.. 29.81	7.. 37.. 14.07	19.25	147.90
	−.07	−.03	35.. 2.75	22.58..21.13
	+.01	+.01	+09	+8
	+.02	+.02	22.35.02.84	22.58.21.21
	7..32..29.77	7..37..14.07	34..17.44	.57.35.86
Corr. Ck	7..31..45.70	7..36..29.94	+45.40	+45.35
	+44.07	+44.13		

1856. May. 29. Tr. Circle.
Illumination East
29th–30th WCB
Observer P. J. C.

α Hydræ	β Leonis.	γ Urs. Maj.	α Pegasi	α Pegasi	Polaris. P. S. C.
9 .. 19 .. 35.70	11 .. 41 .. 47.70	11 .. 45 .. 57.95	23 .. 57 .. 28.70	Lost	0 .. 40 .. 00.70
48.95	7.30	14.90	Qu. 40.00	Lost	4.75
2.70	15.60	38.50	53.30	Lost	11.15
16.65	29.70	2.05		23 .. 58 .. 21.75	
30.00	43.40	24.90		35.40	0 .. 48 .. 40.35
44.40	58.30	49.70		50.15	45.90
20 . 58.10	43 . 12.50	48 . 13.05		23 .. 59 .. 4.35	54.15
					0 .. 57 .. 41.30
					46.80
					53.80
					1 .. 06 .. 39.30
					45.00
					52.90
					1 .. 15 .. 19.20
					23.40
					30.00
					1 .. 24 .. 41.30
					49.60
					57.20
					Last wire lost

My 30 a −.13
b +.07
c +.02

1856. May 30th & 31st Tr. Circle

Illumination East.

Observer J. F. F. & W. C. B.

30th −10 J. F. F.	31st W. C. B.	W. C. B.	W. C. B.
α Virginis	α Urs. Maj:	δ Leonis	δ Hyd. et Crat.
13..17..42.70	Lost	11..6..30.00	11..12..13.20
56.20	Lost	44.20	27.65
10.15	Lost	59.00	41.10
24.05	Lost	13.60	55.05
37.55	11..56..4.50	27.90	8.90
52.05	35.70	43.15	23.80
19..6.10	11..57.5.10	7..57.90	13..37.80

228.80
168.80
13..18..24.~~26~~
.11
−.10
+.04
+.02
13..18..24.07
13..17..38.25
+45.82

Error of S. C. at $13^{h}.00$ by J.F.F. $+45^{s}.83$ rate $-0^{s}.2$ used in red Cat. Stars { a −13 / b +09 / c +02 }

1856. May. 31. F. Circle 1 & 2 Catalogue
Illumination East. Observer J.F.F. G.P.B.

J.F.F. 2d Cat.	J.F.F. α Virginis $\bar{-10}$	G.P.B. 1st Cat. 621 ~~622~~	G.P.B. 2d Cat. 1st wire lost	G.P.B. 1st Cat 622	G.P.B. 2d Cat.
~~13..12..~~ 1st wire wrong	13..17..42.80	13..37..48.00	13..39..26.70	13 Lost	Lost
38.10	56.10	1.05	40.45	Lost	13..44..9.40
52.10	10.15	14.90	54.05	13..42..55.70	23.10
5.85	24.05	28.70	7.45	9.80	36.80
18.95	37.60	42.00	21.95	22.45	50.10
33.45	52.10	56.35	40..35.70	36.95	4.45
13.47.00	19..6.00	39.10.00		43..50.70	45.18.00
	228.80	201.00		176.60	141.85
	168.80			68.14	
	13..18..24.11	13..38..28.71		~~13..43~~ 107.46	
	−.10	a −.08		57 47.46	
	+.05	b +.06		13..43..09.49	
	+.02	c +.02			
	13..18..24.08	$\delta t^{S.O.D.}$ −46.00			
	13..17..38.25	sum(S.O.D.) −46.00		−46.00	
	+45.83	rate −.02		−.01	
	+45.78	13..37..42.69		13..42..23.48	
	+45.88	Ar. Ab. &c. −1.74		−1.76	
	+45.83	Cor for Var. −9.21		−9.21	
		13..37..31.74		13..42..12.51	
	−45.83	AR 1853.0		AR 1853.0	
	00				
	13..17..38,25				

1856. May. 31.

Tr. Circle
Illumination East

G.P.B. 1st Cat	J.F.F. 1st Cat	J.F.F. 1st Cat.	J.F.F. 2d Cat.	J.F.F. 2d Cat	J.F.F. +20
624 ~~625~~	(628)	632			α Bootis.
13..48..54.40	13..52..27.05	13..55..19.95	13..59..41.00	14..03..34.70	14..9..9.90
7.65	40.30	33.10	54.05	48.00	24.15
21.15	53.95	46.95	7.95	1.60	38.85
34.95	7.80	00.60	21.80	15.25	53.30
48.15	20.90	13.85	34.70	28.70	7.45
2.40	35.15	28.20	49.10	43.00	22.70
50..16.10	53..48.95	56..41.90	14..01..2.90	4..56.60	14.10.37.10
184.80	284.10	184.55			193.45
244.80	54.10	2.55			373.45
13..49..34.97	13..53..07.73	13..56..00.65			14..09..53.35
	a −.08				−.05
	b +.06				+.09
	c +.02				+.02
	$\delta t^{(J.F.F.)}$ −45.83				14..09..53.41
−46.00	sum$^{(J.F.F.)}$ −45.83	−45.83			14..09..07.64
−.01	rate + .01	+.01			+45.77
13..48..48.96	13..52..21.91	13..55..14.83			−45.83
−1.78	−1.80	−1.81			+.01
−9.20	−9.19	−9.19			14..09..07.59
13..48..37.98	13..52..10.92	13..55..03.83			
AR 1853.0	AR 1853.0	AR 1853.0			

Final Corr. for J.F.F. Bz Cat. Stars −0.03

Final Corr. for G.P.B. Bz Cat. Stars 0.0

1856. May. 31st

Tr. Circle

Illumination East.

Observer J. F. F.

J. F. F. 1 Cat.	J. F. F. 2^d Cat.	J. F. F. 2 Cat.	J. F. F. 2^d Cat	J. F. F. 1^d Cat.	J. F. F. 1st Cat
658				α^2 ~~Libræ.~~ ~~670!!~~	661 ~~677~~
14. 18..47.10	14. 31.. 3.00	14. 34..31.60	14..38..17.40	14..43..32.80	14..46..56.30
00.55	16.25	44.70	30.60	46.00	9.60
14.00	30.15	58.55	44.30	00.00	23.25
27.90	43.90	12.05	57.90	13.60	36.90
41.00	56.90	25.30	11.30	26.85	50.10
55.15	11.45	39.90	25.70	41.20	4.70
20 . 9.15	32..25.05	35..53.40	39..39.25	44.54.90	48..18.20
194.85				215.35	199.05
				95.36	259.05
14..19..27.84				14..44..13.62	14..47..37.01
				(Not a Cat. Star obsd. Ill. West)	
sum −45.83				−45.83	−45.83
rate +.01				+.01	+.01
14..18..42.02				14..43..27.80	14..46..51.19
Pr. M. R. −1.90				−1.99	−2.00
Cor. for the Var. −9.21				−9.20	−9.18
14..18..30.91				14..43..18.61	14..46..40.01
AR 1853.0				AR 1853.0	AR 1853.0

1856. May. 31st

F. Circle

Illumination East

observer:

−8.51

J.F.F. 2d Cat.	J.F.F. 2 Cat	J.F.F. 2 Cat.	J.F.F. 1st Cat.	J.F.F. 1st Cat.	J.F.F. −9°
			694	696-7	B Libræ
Lost	14..53..2.15	14..56..9.95	15..03..31.90	15..7..07.60	Lost.
14..48..33.10	15.70	23.05	45.10	20.75	Lost.
46.80	29.30	36.90	58.90	34.40	15..09..49.75
00.70	43.15	50.70	12.50	48.00	3.70
13.80	56.20	3.95	25.80	1.20	16.90
28.35	10.75	18.30	40.05	15.70	31.60
34..42.00	54..24.25	57..31.90	4..53.85	8..29.25	10..45.30
			268.10	156.90	147.25
			88.10	336.90	68.96
			15..04..12.59	15..07..48.13	78.~~39~~ 29
					18.29
					15..10..03.66
					−.10
					+.05
			−45.83	−45.83	+.02
			+.01	+.01	15..10..03.63
			15..03..26.77	15..07..02.31	15..09..17.77
			−2.04	−2.05	+45.86
			−9.18	−9.17	
			15..03..15.55	15..06..51.09	−45.83
			AR 1853.0	AR 1853.0	+.01
					15..09..17.81

10.00520

68.14 1.83340

1.83860

68.96

Error of S. C. at $15^{h}.30^{m}$ by G. P. B. $+46^{s}.00$ rate $-0^{s}.2$

1856. May. 31st F. Circle 2d Catalogue

Illumination East. Observer J. F. A.

...					G. P. B +7 α Serpentis
15 . 13 . 49.25	15 . 17 .. 50.70	15 . 21 .. 20.15	15 . 24 .. 30.70	15 .. 33 .. 11.00	15 . 37 .. 17.70
2.75	3.85	33.40	43.95	24.30	31.00
16.50	17.50	47.10	57.80	38.00	44.90
30.05	31.15	0.95	11.40	57.80	58.70
43.50	44.45	14.15	24.80	4.95	12.00
57.80	58.90	28.55	39.00	19.45	26.50
15 .. 11.45	19 .. 12.60	22 .. 42.25	25 .. 52.80	34 . 32.95	38 .. 40.30
					231.10
					411.10
					15 .. 37 .. 58.73
					−.08
					+.07
					+.02
					15 .. 37 .. 58.74
					15 .. 37 .. 12.74
					+ 46.00
					+ 45.96
					+46.03
					+46.00
					−46.00
					15 .. 37 . 12.74

1856. May 31st. Tr. Circle — 1 & 2 Catalogue

Illumination East

J.F.F. 2 Cat	J.F.F. 2 Cat	J.P.B. 1st Cat 727 ~~723~~	G.P.B. 1st Cat 733 ~~729~~	G.P.B. 1st Cat. 736 ~~732~~	G.P.B. 1st Cat (742) ~~738~~
15..40.16.05	15.45..44.40	15..50..25.80	15..53..31.00	15..57.17.00	16..4..45.75
29.40	57.45	38.85	44.20	30.10	59.00
43.15	11.10	52.50	58.00	43.90	12.60
56.95	25.00	6.30	11.80	57.75	26.45
10.15	38.15	19.65	25.00	11.00	39.58
24.80	52.70	33.95	39.30	25.00	53.90
41.38.20	46..6.20	51..47.35	54..53.00	58..38.95	6.07.70
		224.60	262.20	228.70	244.95
		44.60	82.20	403.70	184.95
		15..51..06.37	15..54 ~~37.4~~ 11.74	15..57..57.67	16..05..26.42
		a −.08			
		b +.06			
		c +.02			
		δt (G.O.M.) −46.00			
		(G.O.M.) sum −46.00	−46.00	−46.00	−46.00
		rate 00	00	00	00
		15..50..20.37	15..53..25.74	15..57..11.67	16..04..40.42
		Pr. etc. &c. −2.14	−2.15	−2.16	−2.16
		Cor for the Var. −9.19	−9.16	−9.15	−9.20
		15..50..09.04	15..53..14.43	15..57..00.36	16..04..29.06
		AR 1853.0	AR 1853.0	AR 1853.0	AR 1853.0

Final Corr. for G.P.B. by Cat. Stars 0.0

1856. May. 31st. Tr. Circle 1st Catalogue.

Illumination East.

G.P.B. 1 Cat ~~738(?)~~	G.P.B. 1 Cat. (748) ~~744~~	G.P.B. 1 Cat (755)	G.P.B −26 α Scorpii	G.P.B. 1 Cat 770 ~~765~~	G.P.B. 1st Cat. 774 ~~769~~
16.. 4..54.75	16. 7..40.50	16..15..0.10	16. 20,38.05	16..24..34.95	16. 29..53.70
8.00	53.80	13.30	52.95	48.15	7.00
21.80	7.35	27.00	8.05	1.95	20.85
35.40	21.10	40.75	23.60	15.60	34.40
48.80	34.45	54.00	38.00	28.95	47.65
3.00	48.70	8.20	54.15	43.15	2.00
16.75	9..2.25	16..21.95	22..9.30	25..56.95	31..15.70
188.50	208.15	165.30	224.10	229.70	181.30
248.50	148.15	285.30	164.10	109.70	241.30
16..05..35.50	16..08..~~29.74~~	16..15..40.76	16..21..23.44	16..25..15.67	16..30..34.47
(Not a Cat. Star	21.16		−.13		
ie bod. Ill. West)			+.04		
			+.02		
			16..21..23.37		
sum −46.00	−46.00	−46.00	16..20..37.42	−46.00	−46.00
rate 00	+.01	+.01	+45.95	+.01	+.01
16..04..49.50	16..07..35.17	16..14..54.77	−46.00	16..24..29.68	16..~~29~~29..48.48
Pr. Ab. &c. −2.16	−2.17	−2.17	+.01	−2.18	−2.18
Cor. for An. Var. −9.20	−9.20	−9.16	16..20..37.38	−9.19	−9.18
16..04..38.14	16..07..23.80	16..14..43.44		16..24..18.31	16..29..37.12
AR 1853.0					

May. 31st Tr. Circle 1st Catalogue
Illumination East observer G.P.B.

G.P.B 1st Cat. 779 ~~774~~	(784) ~~779~~	(785) ~~780~~	787 ~~782~~	790 ~~785~~	799 ~~794~~
16..34..8.10	16..42..6.00	16..45..51.15	16..53..7.40	16..56..26.40	17..02..29.95
21.20	19.10	4.30	20.70	39.80	43.05
35.05	32.95	18.00	34.20	53.55	56.95
48.95	46.70	31.85	48.05	7.15	10.70
2.10	59.85	44.95	1.15	20.30	23.95
16.55	14.15	59.30	15.60	34.80	38.20
35..30.10	43..28.00	47..13.05	54..29.20	17..48.40	3..51.95
162.05	206.75	222.60	156.30	230.40	254.75
342.05	326.75		336.30	50.40	74.75
16..34..48.87	16..42..46.~~79~~ .68	16..46..31.80	16..53..48.04	16..57..07.20	17..03..10.68
		Large prop. Motion			
-46.00	-46.00	-46.00	-46.00	-46.00	-46.00
+.01	+.01	+.01	+.01	+.01	+.01
16..34..02.88	16..42..00.69	16..45..45.81	16..53..02.05	16..56..21.21	17..02..24.69
-2.18	-2.18	-2.19	-2.19	-2.19	-2.19
-9.16	-9.20	-9.01	-9.17	-9.21	-9.16
16..33..51.54	16..41..49.31	16..45..34.61	16..52..50.69	16..56..09.81	17..02..13.34

1856 May 31st Z. Circle 1st Catalogue.
Illumination East. Observer G. P. B.

(802) ~~797~~	+15 α Herculis	806 ~~801~~	(809) ~~804~~	(816) ~~810~~	819 ~~813~~
17..5..40.60	17..8..10.85	17..15..50.15	17.19.19.30	17.24..42.85	17.27..31.20
53.80	24.75	3.20	32.70	56.00	44.30
7.70	38.75	17.00	46.45	9.85	58.00
21.10	52.95	30.75	00.15	23.55	11.90
34.60	6.65	44.00	13.45	36.80	25.00
48.90	21.50	58.15	27.80	51.10	39.35
7..2.55	9..35.70	17.12.00	20..41.40	26..4.90	28..53.05
209.25	191.15	215.25	181.25	225.05	262.80
149.25	371.15		1.25	165.05	82.80
17..06..21.32	17..08..53.02	17..16..30.75	17..20.. ~~0.16~~ 0.18	17..25..23.58	17..28..11.83
	−.06				
	+.08				
	+.02				
	17..08..53.06				
sum −46.00	17..08..07.05	−46.00	−46.00	−46.00	−46.00
rate +.01	+46.01	+.01	+.02	+.02	+.02
17..05..35.33	−46.00	17..15..44.76	17..19..14.20	17..24..37.60	17..27..25.85
Pr. Nt. &c. −2.18	+.01	−2.17	−2.17	−2.17	−2.16
Cor. for the Date −9.17	17..08..07.07	−9.15	−9.15	−9.22	−9.20
17..05..23.98	≠	17..15..33.44	17..19..02.88	17..24..26.21	17..29..14.49
M 1853.0					

Error of S.C. at 17h..30m by O.S.C. + 46s.01   rate −0s.2

1856. May. 31st   Tr. Circle   Illumination East.   1 Catalogue   Observer - P. S. C.

|| O.S.C.

	822 ~~816~~	824 ~~818~~	827 ~~821~~	830 ~~824~~	839 ~~832~~	843 ~~836~~
	17..32..43.95	17..36..56.10	17..42..10.10	17..45..36.80	Lost	17..58..12.30
	57.90	9.80	23.45	49.95	Lost	25.45
	11.65	23.05	37.10	lost	17..53..27.55	39.65
	25.40	36.90	50.95	lost	21.30	53.00
	38.40	50.20	4.30	lost	54.80	6.75
	..52.85	4.60	18.65	lost	9.05	21.05
	34.06.65	38.18.05	43..32.20	lost	22.50	59..34.40
	236.80	198.70	176.75	~~17..45..~~86.75	155.20	192.60
	176.80	258.70	356.75	68.14	68.14	372.60
	17..33..25.26	17..37..~~39.81~~ 36.96	17..42..50.96	154.89 2) 34.89	87.06 5) 207.06	17..58..53.23
a	−.08					
b	+.06			17..46..17.44	17..53..41.41	
c	+.02					
δt	−46.01					
sum (O.S.C.)	−46.01	−46.01	−46.01	−46.01	−46.01	−46.01
rate (O.S.C.)	00	00	00	00	00	00
	17..32..39.25	17..36..50.95	17..42..04.95	17..45..31.43	17..52..55.40	17..58..07.22
	−2.16	−2.15	−2.14	−2.14	−2.13	−2.12
	−9.16	−9.18	−9.18	−9.21	−9.20	−9.15
	17..32..27.93	17..36..39.62	17..41..53.63	17..45..20.08	17..52..44.07	17..57..55.95

Final Corr. for O.S.C. by Cat. Stars +0.05

1856. May. 31st Tr. Circle. 1st Catalogue

Illumination East Observer. P.S.C.

(846 ~~838~~)	-21	(861 ~~850~~)	(867 ~~856~~)	(871 ~~857~~)	(879 ~~865~~)
1st 2 wires lost	μ Sagittarii				lost
18..2..43.70	18..5..13.70	18..9..52.90	18..16..14.00	18..19..58.00	18..23..36.25
57.30	28.00	6.20	27.10	11.00	18..23..50.0
10.70	42.70	20.05	41.00	24.75	3.40
24.90	57.25	33.70	54.75	38.40	16.90
3..38.60	11.70	47.00	7.95	51.85	31.00
	27.00	1.25	22.25	6.10	24..44.75
	6..41.65	11..14.95	17..36.10	21..19.70	
175.20	222.00	176.05	203.15	209.80	182.30
68.14	402.00	236.05	383.15	269.80	40.68
107.06	18..05..57.43	18..10..33.72	18..16..54.74	18..20..38.54	141.62
5) 287.06	-.12				6) 21.62
18..02..57.41	+.04				18..24..03.60
	+.02				
	18..05..57.37				
sum -46.01	18..05..11.40	-46.01	-46.01	-46.01	-46.01
rate 00	+45.97	+.01	+.01	+.01	+.01
18..02..11.40	+46.04	18..09..47.72	18..16..08.74	18..19..52.54	18..23..17.60
Pr. Ab. &c. -2.11	+46.01	-2.10	-2.09	-2.08	-2.07
Cor. for An. Var. -9.19	-46.01	-9.14	-9.19	-9.22	-9.19
18..02..00.10	00	18..09..36.48	18..15..57.46	18..19..41.24	18..23..06.34
AR 1853.0	18..05..11.36				

1856 May. 31 I

Tr. Circle.
Illumination East.

1st Catalogue
Observer - J.C.

(880)	(882) ~~866~~	(888) ~~873~~		~~875~~	+33 β Lyrae.
~~18.. [illegible]~~	18.. 29.. 56.90	18. 34.. 13.10	18. 37. 19.45	~~18. 41.. 31.35~~	18. 44.. 44.70
18 .. 23.. 41.20	9.95	26.30	32.45	~~47.55~~	06.80
54.75	23.95	39.90	46.20	~~4.20~~	17.10
8.20	37.75	53.70	59.80	~~20.40~~	33.70
22.05	50.90	7.00	13.15	~~35.95~~	49.25
35.35	5.35	21.30	27.55	~~53.45~~	6.50
.49.60	31 .. 18.95	35.10	38.41.20	~~6 09.75~~	46..22.90
3.20	203.75	196.40	239.80	~~202.65~~	175.25
214.35	263.75	376.40	419.80	~~142.65~~	235.25
154.35	18.. 30.. 37.68	18.. 34.. 53.77	18.. 37.. 59.97	~~18.. 42.. 20.38~~	18.. 45.. 33.61
18.. 24.. 22.05					-.03
			(not a Cat. Star)		+.11
					+.02
					18.. 45.. 33.71
-46.01	-46.01	-46.01	-46.01	~~-46.01~~	18.. 44.. 47.69
+.01	+.01	+.01	+.01	~~+.01~~	+46.02
18.. 23.. 36.05	18.. 29.. 51.68	18.. 34.. 07.77	18.. 37.. 13.97	~~18.. 41.. 34.38~~	-46.01
-2.07	-2.06	-2.05	-2.04		+.01
-9.19	-9.15	-9.18	~~18.. 37..~~ -9.20		18.. 44.. 47.71
18.. 23.. 24.79	18.. 29.. 40.47	18.. 33.. 56.54	18.. 37.. 02.73		

1856. May 31st Tr. Circle 1st Catalogue

Illumination East Observer J.C.

Compʳⁿ β. Lyræ.	(895) ~~879~~	(900) ~~883~~	904 ~~887~~	909 ~~892~~	926 ~~909~~
18 .. 44 .. 46.80	lost	18 .. 56 .. 5.70	18 .. 59 .. 55.45	19 .. 2 .. 54.85	19 .. 13 . 43.10
2.80	lost	18.95	8.85	7.90	56.15
19.10	lost	32.65	22.40	21.70	10.10
37.70	lost	46.30	36.05	35.20	23.95
57.30	lost.	59.70	49.30	48.70	37.05
8.65	18 . 48 . 50.85	14.00	3.70	2.90	57.40
25.00	49 .. 4.65	57 . 27.60	19 . 01 . 17.40	4 .. 16.40	15 .. 5.00
	~~7~~ 55.50	204.90	193.15	187.65	226.75
	68.71	324.90	253.15	247.65	166.75
	2) 46.79	18 .. 56 .. ~~29.27~~ 46.41	19 .. 00 .. 36.16	19 .. 03 .. 35.38	19 .. 14 .. 23.82
	18 .. 48 .. 23.39				
Sum	−46.01	−46.01	−46.01	−46.01	−46.01
rate	+.01	+.01	+.01	+.01	+.01
	18 .. 47 .. 37.39	18 .. 56 .. 00.41	18 .. 59 .. 50.16	19 .. 02 .. 49.38	19 .. 13 .. 37.82
Pr. ab. &c.	−2.01	~~−1.96~~ −1.98	−1.97	−1.96	−1.92
Cor for ch. Var.	−9.15	−9.19	−9.18	−9.16	−9.17
AR 1853.0	18 .. 47 .. 26.23	18 .. 55 .. 49.24	18 .. 59 .. 39.01	19 .. 02 . 38.26	19 .. 13 .. 26.73

a −.13
b +.10
c +.03

1856. June 2.

Tr. Circle.
Illumination East
+23

Observer – J. F. F.

J.F.F.

Polaris
Lost
Lost
0‥57‥43.25
46.95
51.25

1‥06‥38.15
43.00
50.70

5th wire lost
1‥24‥44.70
48.80
53.00

1‥33‥40.80
45.20
49.90

α Arietis
1‥59‥5.00
19.00
33.90
48.70
3.00
18.~~78~~80
2‥00‥33.60
162.00
342.00
1‥59‥48.86
−.05
+.10
+.09
1‥59‥48.94
1‥59‥3.46
+45.48

1856. June 2d — Fr Circle — 2d Catalogue
Illumination West — Observer. J.F.F.

β Corvi					
Lost	Lost	12..42..29.95	12..51..32.05	12..54..47.20	12..57..29.00
Lost	12..37..22.80	43.40	45.80	00.60	42.85
Lost	37.10	57.85	59.90	15.00	57.15
12..27..36.55	50.55	11.10	13.10	28.35	10.45
51.30	4.10	24.75	27.00	41.95	24.00
6.20	17.90	38.40	40.60	55.75	37.75
20.65	38..31.00	43..51.60	52..53.95	56..9.00	58..51.00

used in red Cat. Stars { a −13
b +10
c −08

1856. June 2d Tr. Circle
Illumination West

2d Catalogue
observer - J. F. F.

	WCB	J. F. F.
		α Virginis −10
Lost	13.. 9.. 37.00	13.. 17.. 41.80
Lost	50.30	55.75
Lost	5.95	10.25
13.. 1.. 45.95	18.10	23.70
59.55	31.95	37.80
13.20	45.80	51.55
26.55	10.. 59.00	19.. 4.85
		225.70
		165.70
		13.. 18.. 23.67
		−.10
		+.06
		−.08
		13.. 18.. 23.55
		13.. 17.. 38.24
		45.31

Error of S. C. at 15^h.30^m +45.38 Rate $-0.^{s}2$

1856. June 2^d S. Circle 1st Catalogue

Illumination West Observer G. P. B.

+7 α Serpentis		724 ~~720~~	725 ~~721~~	727 ~~723~~	733 ~~729~~	736 ~~732~~
15. 37. 16.85		15. 41.. 43.90	Lost	Lost	15. 53. 30.00	15. 57.. 15.80
30.60		58.40	Lost	Lost	43.50	29.65
44.95		12.80	15.. 46. 53.90	15.. 50.. 52.60	57.90	44.00
58.05		25.95	6.95	5.80	11.00	57.00
12.00		39.65	20.80	19.70	25.00	10.85
25.95		53.45	34.50	33.20	38.70	24.45
38.. 39.25		43.. 6.00	47.. 47.60	51. 46.60	54. 51.85	58.. 37.95
227.65		240.15	163.75	157.90	257.95	219.70
407.65		180.15	68 ~~43~~.75	68.71	77.95	399.70
15.. 37.. 58.24		15.. 42.. 25.74	95.04	69.19	15.. 54.. 11.14	15.. 57.. 57.10
−.08	a	−.08	5) 35.06	5) 29.19		
+.08	b	+.07	15.. 47.. 07.01	15.. 51.. 05.84		
−.08	c	−.08				
15.. 37.. 58.16	δt	−45.33				
15.. 37. 12.75	sum	−45.42	−45.42	−45.42	−45.42	−45.42
+45.41	rate	00	00	00	00	00
+45.25		15.. 41.. 40.82	15.. 46.. 21.59	15.. 50.. 20.42	15.. 53.. 25.72	15.. 57.. 11.68
+45.33	Ar. Ab. Pa.	−2.14	−2.15	−2.15	−2.16	−2.17
	Corr. for the Var.	−9.17	−9.17	−9.19	−9.16	−9.15
−45.33		15.. 41.. 29.01	15.. 46.. 10.27	15.. 50.. 09.08	15.. 53.. 14.40	15.. 57.. 00.36
00						
15.. 37.. 12.83						

Final Corr. by Cat. Stars 0.0

used in red. Cat. Stars { a −.13
b +.10
c −.08 }

1856 June 2d. Tr. Circle 1st Catalogue

Illumination West

Observer J. S. C.

(742) ~~736~~		re-obsd. ~~744~~ (748)	(755)	−26 α Scorpii	re-obsd. ~~765~~
16. Lost	16..4..53.75	16..8.34.40	16..14..59.00	16..20..37.00	Lost
~~4..56.60~~	7.35	48.00	12.55	52.20	Lost
16..05..12.60	28.95	1.25	26.90	8.05	Lost
25.90	34.95	First four	40.15	22.90	Lost
39.65	48.80	wires lost.	53.95	38.10	Lost
53.20	2.25		7.70	53.50	Lost.
6.50	15.60		16.21.00	22..8.20	16..25..55.70
137.85 ~~194.45~~	184.85	83.65	221.25	219.95	
64.71 ~~47.15~~	244.55	81.~~90~~87	281.25	159.95	
69.14 ~~6) 153.30~~	16..05..34.92	1.78	16..15..40.18	16..21..22.85	
5)129.14		3)61.78		−.13	
16..05..~~25.88~~ 25.83	(Not a Cat. Star Obsd Ill. East)	16..08..20.59		+.04	
				−.08	
				16..21..22.68	
−45.42	−45.42	−45.42	−45.42	16..20..37.44	−4
00	00	+.01	+.01	+ 45.24	
16..04..40.41	16..04..49.52	16..07..35.18	16..14..54.77		
−2.17	−2.17	−2.18	−2.18	−45.33	
−9.20	−9.20	−9.20	−9.16	+.01	
16..04..29.04	16..04..38.15	16..07..23.80	16..14..43.43	16..20..37.36	

1856. June 2d - Tr Circle. 1st Catalogue

Illumination West

Observer L.S.C.

June 3d - Clock Stars - Ill. west W.C.B.

-13 a
+10 b
-08 c

774 ~~769~~	779 ~~774~~	765	re-obsd. 785	α Leonis +13
16..29..52.90	16.34..7.10	16..45..50.00	Lost	10..00..45.60
6.50	20.75?	3.70	Lost	59.70
20.90	35.00	18.05	Lost	14.30
34.00	48.25	31.00	Lost	27.90
47.60	2.00	44.90	Lost	42.00
1.45	15.85	58.60	16..57.34.10	55.95
31.14.55	35..29.00	47..12.00	Lost.	10..02..9.65
177.90	157.95	21825		255.10
237.90	337.95			195.10
16..30..33.99	16..34..48.28	16..46..31.18		10..01..27.87
				-.06
-				+.09
				-.08
				10..01..27.82
sum -45.42	-45.42	-45.42		10..00..42.59
rate +.01	+.01	+.01		+45.23
16..29..48.58	16..34..02.87	16..45..45.77		
Pr. M.&c. -2.20	-2.20	-2.21		
Cor. for the Var. -9.18	-9.16	-9.01		
16..29..37.20	16..33..51.51	16..45..34.55		
AR 1853.0				

1856 June 9th

T. Circle
Illumination West

Observer W. C. B.

June 9/10h Ill West. W.C.B.

Moon's Ist Limb	β Leonis +15.23	γ Ursæ Maj. +5.4 30	Companion	of 12 Can. Venat. +39.6	α Andromedæ +28.18
11h 58m. 30s.15	11 .. 41m 46s.30	lost	12 49 9.90	12 49 11.00	0. 0m. 55.70
44.30	42 0.45	46. 13.80	9 27.30	28.40	11. 10
59.00	15.25	38.45	9 46.00	47.15	27.35
59m. 12.75	28.95	47 1.20	50 3.00	50 4.15	42.40
26.75	43.25	24.80	0 20.65	21.85	58.00
41.00	57.50	48.40	0 38.15	39.35	1. 13.70
59 54.80	43 11.15	48 11.15	50 55.15	50 56.40	1 28.70
	202.85		20015	208.30	236.95
	11 .. 42 .. 28.98		180	−180	+60
	− 23		2015	28.30	296.95
	11 .. 42 .. 28.75		12 .. 50 .. 2.88	12 .. 50 .. 04.04	0 .. 01 .. 42.42
	41 . 43.88			−15	−15
	+44.87			50 . 03.89	0 . 01 . 42.27
				49 . 19.00	0 . 57.45
				+44.89	+44.82

1856. June 11th

Illumination West

W.C.B	W.C.4	S.L.		
α Leonis	β Leonis	D's 1st Limb	γ Virginis	δ Virginis
10.. 00.. 44.80	11.. 41.. 45.70	12.. 25.. 75.50	12. 34.. 26.55	12.. 48.. 25.70
0 58.90	2 07.90	5 29.50	4 40.25	8 39.30
1 13.50	2 14.70	5 44.05	4 54.65	8 54.00
1 27.20	2 28.35	5 57.45	5 7.70	9 7.00
1 41.25	2 42.70	6 11.50	5 21.40	9 20.75
1 55.20	2 57.00	6 25.30	5 35.30	9 34.60
10 . 02 . 08.75	43 .. 10.60	26 .. 39.05	25 .. 48.35	49 .. 47.75
2496	15995	22235	23420	22915
60	11 . 42 . 28.56	180	180	180 10
184.96		40235	5420	4915
10 . 01 . 27.09		12 . 25 . 57.48	12 . 35 . 07.74	12 . 49 . 7.02

1856 - June $\frac{11}{12}$

W.C.B. 2 wires first

S.C. 5 wires last.

Illumination West

Polaris.	Mean
0.. 39.. 56.9	
49 2.8	0.. 40.. 02.97
40 9.2	
0.. 48.. 57.8	
9 3.6	0.. 49.. 03.20
8.2	
0.. 58.. 19.70	
24.75	0.. 58.. 25.62
32.40	
1.. 06.. 57.00	
3.80	1.. 07.. 3.93
11.00	
1.. 15.. 54.75	
16.. 4.25	1.. 16.. 02.93
16.. 9.80	
1.. 24.. 56.00	
5 2.70	1.. 25.. 02.48
5 8.75	
1.. 33.. 36.90	
44.95	1.. 33.. 44.58
51.90	

1856. June 12th

Illumination West

WCB	J.C.		WCB	..	..
α Leonis.	α Urs. maj.	δ Leonis.	☽'s 1st Limb	Mperr'	Δ
10 .. 00 .. 44.80	10 .. 54 .. 5. 50	11 .. 6 .. 42. 60	Lost	Lost	Lost
0 58.70	4 34. 60	58. 00	Lost	Lost	Lost
1 13.40	5 6.00	12. 10	Lost	Lost	Lost
1 27.00	5 34.60	25.90	Lost	Lost	Lost
1 41.05	6 4.40	46.70	Lost	Lost	Lost
1 55.15	6 34.00	55.90	13 . 09 .. 44.95	Lost	Lost
2 .. 8.75	57 .. 3.05	one wire lost ?	58.40	13 .. 10 .. 29.15	13 .. 10 .. 30.7
24885	12215				
−60	120				
18885	24215				
10 .. 1 .. 26.98	10 .. 55 .. 34.59	11 .. 7 ..	13 .. 9 ..		

1856 - June 12

WCB	J		June 13th West P.S.C.
Spica			α Leonis
13 .. 17 .. 40.70			10 .. 44 . 44.80
7 54.70	14 –		59.00
8 9.20	14.5		13.55
8 22.65	13.4		27.10
8 36.75	14.1		41.10
9 50.65	13.9	?	55.15
19 .. 4.10	13.5		2 .. 8.70
21875			
60			
15475			
22.12			

1856. June 15th.

Illumination west. Observer - P. S. C.

89 virginis	Arcturus.	ε Boötis	$\overset{8}{\alpha}{}^{1}$ Libræ	α^{2} Libræ.	20 Libræ
13.. 42.. 07.00	14.. 09.. 09.00	14.. 38.. 42.80	14.. 42.. 48.30	14.. 42.. 59.60	14.. 55.. 41.00
21.10	23.40	58.20	2.30	13.90	56.00
36.30	38.85	14.25	17.35	28.70	11.95
49.90	52.80	29.00	31.00	42.40	26.30
4.55	7.30	44.70	45.15	56.70	41.55
18.85	21.90	00.25	59.25	10.90	56.60
43 .32.60	10 ..36.15	40 ..15.05	13.10	24.40	57..11.15

1856. June 15th

Illumination West

Observer. P. S. C.

μ' Libræ	ι Libræ	β Libræ	α Cor. Bor.	Spot β Gassendi	A Gassendi
14.58..40.50	15.. 4.. 5.00	15.-9.. 21.30	15..28..36.60	15..34. 09.80	Lost
54.75	19.30	35.10	52.00	24.95	15..34..25.95
9.60	34.75	49.75	8.20	41.05	42.10
23.15	48.70	3.10	23.00	55.90	56.75
37.70	3.20	17.00	38.50	11.00	12.00
51.90	17.75	30.90	53.90	26.30	27.15
15..00..5.50	15.05..31.60	10..44.30	30..08.60	35.40.80	35..41.85

1856. June. 15th.

Illumination West - Observer P. J. C.

Damoiseau	λ Libræ	β^1 Scorpii 19	β^2 Scorpii 19
15.. 33.. 34.50	15.. 57.. 52.65	15. 57. 8.20	15. 57. 8.70
49.75	7.25	22.80	23.10
5.80	23.00	37.90	38.30
26.30	37.05	51.80	52.25
35.75	52.00	6.60	6.90
57.90	6.75	21.00	21.60!
35.. 5.30	53.. 26.80	35.00	35.30

1856 June 15/16 Illumination West. Observer WCB.

+28.18 α Andromedae	+14.23 γ Pegasi	Polaris	
0° 0m 56s.30	0 5. 53.05	0h .40m .02s.95	
11. 80	6 7.10	8.00	0.. 40.. 07.85
28.. 05	6 22.05	12.60	
42. 90	6 35.70		
58. 70	6 49.90	00.80	
1 14.15	7 4.00	49.. 5.85	49 ..05.62
1 29.20	7 17.60	10.20	
241.00	189.40	.	
60	60	.	
/301.00	249.40	Lost .	
0 . 01 ..43.00	35.63	.	
_15	17		
0 .01 ..42.85	0 .06 ..35.46	3.15	
0.. 57.66	5 ..50.19	1 ..07 .09.10	1.. 07.. 08.77
+45.19	+45.27	14.15	
		3.00	
		15.. 08.15	15 .08.43
		14.15	
		1.30	
		25 .. 5.60	25.. 05.67
		10.10	
		44.30	
		1 .33 48.10	33.. 48.00
		51.60	
		1&7. ----	1.. 06.. 57.93
		2&6 ----	1.. 07.. 05.64

1856. June $\frac{16}{17}$

Illumination West

observer W. C. B.

Polaris	Mean	
0.. 40.. 5.40		
9.10	0..40..09.75	
14.75		
49.. 2.00		
6.70	0..49..06.66	
11.30		
58..27.05		
32.40	0.. 58.. 32.28	
37.40		
1.. 07..04.50		
8.50	1..07..08.93	
13.80		
15..59.65		
6.15	1.. 16.. 06.10	
12.50		
24..58.30		
6.70	1.. 25.. 06.50	
14.50		
33.. 38.80		
45.00	1.. 33.. 44.57	
1 .. 33..49.90		
mean	1..06.. 59.25	1..07..07.82
	1..07..08.93	1..07.. 08.93
	-07.68	1.11
1&7	1..06..57.16	
2&6	1.. 07..06.58	
3&5	1..06..49.19	