

KG
11365
40

A.40

Meridian Circle.

1862 August 11th to
1862 September 25th

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

KG 11365.40

KG 11365.40



1862 Aug 11th 24. West

145.

<i>S Hercules</i>			<i>E Uvae ursae</i>			<i>Q Hercules</i>			<i>Ti Hercules</i>			<i>Leo apelinus</i>		
18.4	16	59	45.0			40.6			31.7			4.0		
22.6	17	0	12.0			44.4			36.2			7.9		
25.9		9	32.9			47.1			39.7			10.9		
30.2		1	0.0			51.0			44.2			14.9		
34.0		1	24.8			54.4			48.5			18.4		
131.1			54.7			237.5			200.3			56.0		
16	55	26.22	17	0	34.94	17	8	47.50	17	10	40.06	17	13	11.20
				0	12.30		8	24.76						

continued on next page.

α Opticini			β Bticorni			γ Opticini			δ Urtae majori		
17	17	21.5	17	17	33.3	17	28	57.2	14	15	19.0
17	18	0.3	17	18	39.3	17	28	54.4	16	16	19.4
17	18	44.8	17	18	43.7	17	28	57.7	17	17	5.9
17	19	16.3	17	19	49.8	17	28	1.5	18	18	8.1
17	20	0.2	17	20	55.2	17	28	5.1	19	19	5.3
17	20	83.1	17	20	221.3	17	28	170.3	20	20	56.7
17	18	40.62	17	27	44.26	17	28	58.06	16	17	11.34
17	18	18.36	17	27	[21.55]	17	28	35.28	16	16	48.80

86° 36' 25.2"

6a Augustth M.W. continued

215

1862pnae

T Lepini Marelli sp.			β Lyrae		σ Sagittarii		θ Serpenti pr.			δ Serpenti fall.				
16	32	50.5		17.4		2.8		41.8			43.3			
	33	59.8		21.6		6.9		45.6			46.9			
	35	17.0		25.0		9.9		48.2			49.7			
	36	14.7		29.5		14.0		51.9			53.3			
	37	30.0		33.4		17.8		55.2			56.6			
		172.0		126.9		51.4		242.5			249.8			
18	35	10.40		2										
			18	45	25.38	18	47	10.28	18	49	48.50	18	49	49.96
	34	48.43		2.57										

nick ray

1862phae.pr

♂ Aquilae			♂ Sagittarii			♂ Aquilae			25 Caml. 11 sp.			4 Mm min Base sp.			
3		41.3			45.3			24.0	19	1	23.7	19	6	42.3	
7		45.1			47.3			27.8		1	50.3		9	59.4	
7		48.0			52.2			30.6		2	16.7		13	31.4	
3		51.9			56.0			34.3		2	40.2		16	12.6	
6		55.3			59.4			37.4		3	9.0		19	47.4	
8		241.6			262.6			154.5			141.9			193.1	
6	18	53	46.32	146	56	52.52	148	59	30.90	7	2	16.38	19	13	14.62
								7.85		1	53.66		12	53.76	

562 Aug 11th M. West continued.

45.

β Lygii m.	β Lygii Comae foll.	κ Sagittarii	α pr. β Lygii	β Lygii
28.3	30.6	38.9	30.0	0.3
32.5	34.4	43.0	35.8	6.1
35.7	37.4	46.0	39.9	10.4
39.9	42.2	50.2	45.7	16.0
43.6	45.9	53.8	50.4	21.1
180.0	191.3	221.9	202.2	53.9
19 25 36.10	19 25 38.26	19 28 46.38 23.27	19 32 110.44	19 33 10.78

next page

γ Aquilae	156 Camel. B sp.	β Vulvae	Comet sp.	1401.2 mi. Bader.
2.2	42 40.4	52.5	58 9.7	
5.9	43 14.8	56.2	30.9	
8.6	43 52.8	59.1	55.6	20 2 19.5
12.4	44 21.3	2.7	59 12.7	5 33.2
18.8	44 58.4	6.0	35.7	8 25.7
44.9	107.7	176.5	144.6	
19 30 8.98	19 43 49.54	19 44 59.30	19 58 52.92	20 2 35.63
39 65.97	43 26.48	48 36.22		20 2 11.42

3011.24

194.58 mi 9.6020
1.15062

80° 11.2' p. to 0.7852
hr. 0.7909

88° 54' 1" to 1.7168
hr. 1.7169

A. 57.26 +41.56 2 35.1 -5 50.6
B. 57.91 +21.01 36.4 -2 58.8
C. 53.82 -1.78 38.4 + 15.9
D. 53.41 -19.29
E. 52.19 -41.57

1862 Aug 11 M.W. continued.

9 Capricorni				74 Stricornis				2 Cygni				7 Cephei				32 Vulpeculae			
			20.0								56.6				61.7				0.3
			23.9	20	37		26.7	1.7 [1.0]			1.0				49.3				4.4
			26.8				43.7				4.2				55.1				2.5
			30.7		38		6.5				8.7				2.8				11.6
			34.2				26.9				12.4				2.5				15.5
			135.6								83.3				158.4				39.3
20	21	27.12		20	37		45.66	20	41		4.66	20	43		54.66	20	49		7.86
		3.85			37		22.25									48			44.76

309 21																			
203 38							9.6030												
							1.3513												
50 36 37.0	5						0.7816	33 27											
	30						0.7874												
A	46.66						-41.24	4.74											-8.06
B	70						-20.80	4.63											-4.02
C	57						+1.87	4.57											+0.37
D	69						+18.97	4.71											+3.71
E								4.65											+8.05

* foll. 32 Vulp.	61 ygmi pr.	61 ygmi foll.	1 Draconi Nov. sp.
28.1	wires touched	wires touched.	16 41.2
32.1			17 5.6
35.2	9.6	11.2	32.0
39.3	14.3	15.9	50.7
43.2	18.6	20.2	18 16.6
177.9			146.1

20. 49 35.58	21	1 10.81	21 1 11.61	21 17 29.22
		[0 47.69 medium]		9 17 6.42

17 8	-12	+22.62	-22.63	-01	✓
17 28	-12	22.66	22.66	00	✓
18 45	-08	22.73	22.81	-08	
18 59	-12	22.93	22.92	+01	✓
19 28	-24	22.87	22.89	-02	
19 40	-12	22.89	22.91	-02	✓
19 49	-14	22.94	22.93	+01	✓
20 21	-21	23.06	22.99	+07	
20 49	-09	23.05	23.04	-03	
21 1	-07	23.05	23.06	-01	
19 21		22.876			
		+ .120			
		+ .106			
		<u>.113</u>			

10.05	-	8.55	11.65
9.99	-	4.71	11.59
9.99	+	0.39	<u>11.59</u>

62-hy 26

x Optimisti

2.8

2.6

10.3

14.2

18.2

52.7

10.74

35.22

~~35.40~~ $17.29 + 35.52$

1862 Aug 20

1862

2 Boethi

91 Aphni H sp.

11A Herouli

B Lyrae

on Sagitt.

1.6	18	33	17.9	24.6	39.3	24.8
5.5		34	27.6	28.5	43.6	29.8
8.3		35	44.1	31.5	46.9	32.0
12.3		36	41.1	35.5	57.3	36.0
15.8		37	57.2	39.0	55.4	39.7
43.5			189.9	159.1	236.5	161.3

14	10	8.70	18	35	37.58	18	40	21.82	18	45	47.30	18	47	32.26
	9	24.29		34	52.44 50.68						2.45			

1862 Aug 20th continued MW

45.

1862phae.

L. M. n. B. sp.			1 Aquilae			156 Camel B. sp.			β Aquilae			1 Draconis sp.		
19	7	20.4		24.1	19	43	3.1		14.4	21	17	4.0		
	10	29.2		27.9		43	37.9		18.1			28.0		
	14	2.8		30.5		44	15.6		20.9			54.3		
	16	46.5		34.4		44	44.6		24.6		18	14.1		
	20	16.6		37.7		45	22.6		27.9			37.9		
		115.9		154.6			123.9		105.9			140.3		
19	13	47.18	19	40	30.92	19	44	12.76	19	49	21.14	21	17	52.06
	43	12.19		39	45.93		43	27.77		48	36.19		17	6.62
	12	57.96												

119 Cephei B

21 24 20.9

24 53.7

25 79.8

25 52.7

21 26 23.3

170.4

21 25 22.08

24 36.40

α Bootis	-11	44.30	14 9	44.32	-02	✓
β Lyrae	-08	44.77	18 45	44.78	-01	
γ Aquila	-12	44.86	18 59	44.80	+06	
δ —	-13	44.86	19 40	44.87	-01	✓
β —	-14	44.85	19 49	44.89	-04	✓
		+ 44.728	18 14			
Rad		+ 0.097				
		+ 0.103				
		0.100				

1862 Aug. 21st P.W.

45.

7.20. maj at end.

UTRO minor	sp	α Virginis	Chronometer	Hydrogen	α Bootis
13			38.0	48.6	4.0
8	4.5		40.8	52.6	7.8
10	33.0		44.6	55.5	10.8
12	26.1		48.4	59.4	14.8
14	57.1		51.8	2.9	18.3
			224.6	219.0	53.7

13	10	21.05	13	14	44.92	13	48	55.80	14	10	11.14
	9	34.63		17	56.01			9.07		9	24.28

66. Chro

13 27 44.75	13 27 45.
49.72	50.
54.74	55.
59.90	60.

13 27 34.7	13 27 35.
39.73	40.
44.7	45.
49.8	50.

Chro. corr

13 27 53	- 0.52
37 42	0.27

These were made with
the chronograph; but the
precise moment is not
uncertain

88 34 29.25 1.6042
2 for 1.6044

A

B 10 21.0 +2 16.8

C 20.8 F 12.2

D 21.5 2 4.6

E 20.9 4 30.2

Examined the wires

not rep.

ϵ Hercolis	ϵ Ursa minoris	η Aquarii	α Hercolis	γ Hercolis
42.7	17 0 7.3	12.3	4.8	55.9
46.9	0 34.6	16.0	8.5	0.4
50.0	0 54.4	18.4	11.4	3.8
54.4	1 22.3	22.7	15.2	8.4
58.3	1 47.3	26.0	18.7	12.6
252.3	165.9	90.8	58.6	81.1
16 55 50.46	17 0 54.18	17 3 19.16	17 9 11.72	17 11 4.22
	17 0 10.60		8 24.61	

362 Aug 21. MW.

2115.

110 ophiurhi

42 ophiurhi [4]

64 Cauchp. B sp.

Period Ends

Period begins

35.3

16.4

17

17

49.8

17

27

57.4

12.8

20.3

18

28.2

28

3.2

16.4

35.3

23.5

19

11.6

7.6

19.2

39.2

27.6

19

44.6

13.7

22.9

42.7

31.3

20

26.7

19.3

26.2

119.1

160.9

101.2

97.5

17 13 35.18

17 14 23.82

17 19 8.18

17 28 8.24

17 59 19.50

13 36.33

18 21.15

(27 21.26)

Butler

+ 0.17

47.48

next page

A further corr. of 5.004 to be applied to this date

μ Sagittarii	δ Virae minoris			σ Alpha Tau sp.	Limit min to sp.			6 Vulpeculae						
15.0	14	15	21.8.	18	33	26.6				41.2				
16.9		16	24.3		34	35.5	19	10	49.0	45.1				
21.8		17	20.4	Wires interfere.				14	27.2	48.1				
25.8		18	23.8	idem (34 36.4)			17	5.9		52.3				
29.4		19	19.4		39	7.4				55.9				
110.9			130.1							242.6				
50														
14	6	22.18	18	17	26.02	14	35	46.73	19	14	7.17	19	23	48.52
	5	35.137		16	40.37		34	52.91		19	13	3.37		
Ant. low		+0.02			+5.86			-7.20			-20.15			+0.23
Chr.		+47.17			[+46.51]			[+46.62]			[+43.65]			

88636 27.4 1.2271 25714005 1.3172 89 04495 1.7620
 1.2279 1.3177 1.7616
 A 464 $+2$ 19.8
 B 460 -1 10.5 14 6.1 -3 17.1
 C 9.5 $-$ 17.7
 D 5.9 -3 0.0
 E 478 -2 19.6

1862 Aug 21. MW. continued

1865.

β Lygni pr.			β Lygni fol.			γ Aquilae			β Aquilae			γ Sagittae		
	52.3			54.6			26.3			16.5			21.1	
	56.6			58.6			30.0			20.4			25.1	
	59.7			1.9			32.8			23.0			28.0	
	3.9			6.1			36.6			26.8			31.9	
	7.6			9.8			39.8			30.1			35.4	
	160.1			131.0			165.5			116.8			141.0	
19	26	0.02	19	26	2.20	19	40	33.10	19	49	23.36	19	53	28.30
							39	45.93		58	36.18			
Antl.		+0.25			+0.15			+0.15			+0.13			+0.20
Clon								+47.32			+47.31			

Previous period

fine

Mr. May 13	W	W Capricorn	W Capricorn	7 Mr May
19	56	44.2	44.7	8.7
	59	53.4	48.6	12.5
20	2	18.4	57.4	18.4
	5	30.8	53.3	19.1
	8	21.6	58.6	22.4
	170.8	256.6	78.1	?
20	2	34.16	20 10 57.22	13 42 54.05
	2	5.19	10 4.36	[42 7.29]
		+16.09	+0.06	
Ch		[+47.05]	+47.42	+47.39

Clock - Error before change in c

May	13	18	-18	+46.73	-46.65
Booki	13	48	-11	46.62	46.70
—	14	9	-11	46.75	46.74
Nov.	17	8	-12	46.99	47.05
	14	36		+46.772	

After change

μ Sagitt	18	6	.00	+47.15	47.15
μ April	19	40	.14	47.31	47.31
B —	19	49	.13	47.31	47.32
α Capri	20	10	.14	47.40	47.36
α —	20	10	.14	47.37	47.36

8 88 56 50 4 1.772
to 1.773

14 36 + 46.772 4
19 33 47.308 5
17 24 47.070
Rate 0.103

Clock - Error

N. Star

S. Star

19 40	+ 47.32	18 6	+ 47.17
19 49	47.31	20 10	47.42
19 44	+ 47.315	20 10	47.39
19 29	+ 47.327	2	
19 35	+ 47.322	3	
	2.458	5	
	2.455		
	2.467		
	0.103		

Proc. Rate daily
Joh. —
Daily Rate
Hourly "

gaining

8 20.01719
A 54.04 -10.46
B 54.12 -5.28
C 53.98 +0.48

562 Aug 24 PA W

Chin minor

56.3

59.9

2.7

4.5

9.8

135.2

33

3.04

32

1.81

C. Error

732

+56.35

1862 Aug 29th Sat

7 Ursae maj.			4 Bootis		8 Ursae min.		57 Cephei H.			110 Herodias	
		2.6			18	13	50.4				46.4
		8.1		27.1		14	51.2				50.3
		12.5		30.0		15	39.5	18	36	15.1	53.3
		18.3		33.9		16	41.0		35	13.5	57.2
		23.4		37.4		17	36.2		36	29.9	0.6
		61.9					218.3				207.8
13	41	12.98	14	8	30.31	18	15	113.66	48	34	9.40
	42	7.12		9	24.16		16	42.53	6	34	56.37
dist. to		+0.45			+0.20			+5.83			-7.16
Ch. of		[-53.68]			-53.15			-53.04			-52.13

0.0202

A 30.24 - 7.16
 B 29 - 3.61
 C 32 + 0.32
 D 37 + 3.29

S
 8 87 14 29.05 1.3171
 S 1.7176

A
 B
 C 8.8 0.4019
 D 6.4 1.8087
 E 10.3 2.1448

1862 Aug 29. M.W.

Plyrae

1.9
5.2
8.6
12.0
16.9
64.6

18 44 8.92
115 2.34
+0.29
-53.10

Clock - Correction

C. Error

14 9	+ 53.65	- 53.65
18 45	+ 53.06	- 53.06
16 27	+ 53.855	

Pres. Rate	- 2.467	gaining
for "	- 2.26	"
Mean	- 2.364	
Hourly	- 0.0985	

1862 Sep 2 M.V.

<i>B. Gaconis</i>			<i>Ophioclin</i>			<i>25. Lumbert sp.</i>			<i>a. Spinae</i>			<i>S. Aquilae</i>		
		25.4			43.6	19	0	23.9			32.9			45.4
		30.9			47.4			49.0			36.7			49.0
		35.2			50.2		1	16.3			39.5			51.9
		41.7			53.9			39.9			42.2			55.4
		47.5			57.4		2	8.6			46.8			58.9
		161.2			252.5			139.7			89.9			265.6
17	26	36.24	17	27	50.50	19	1	15.94	19	10	39.82	19	17	52.12
	[27]	20.87		28	34.95		1	57.30		11	24.00		18	36.26
<i>Inst. Lr</i>		+0.49			+0.16			-2.69			+0.46			+0.12
<i>Chr</i>		[-44.14]			-44.29			[-44.05]			-44.02			-44.02

662 Spt 2. contin MW

6 Vulpecula	R. Tex 150 mps 6 vnlp	4 Lygmi	4 Aquila	156 lam Bsp
7.6			54.9	19 41 40.6
13.7		58.2	58.4	42 15.1
16.7	30.5	2.6	1.3	42 51.5
20.7	34.6	8.3	5.1	43 22.0
24.4	38.2	13.5	Circuit?	44 0.3
19 22 55.1				129.5
19 22 17.02	19 22 30.84	19 32 3.02	19 38 1.64	19 42 49.90
2nd 10.23	+0.23	+0.4	39 45.82	43 30.09
+0.23	+0.23	+0.45	+0.15	-3.54
			-44.03	(-43.73)
				Radium Atom

8 49" 54'

sa. 0.1910

0.0070

A	3.05	-10.45		
B	0.2	-5.27	1.66	-3.44
C	2.97	+0.47	.64	+0.31
D	3.01	+4.81	.53	+3.14
E			.73	+6.83

d' Capricorni	2 ^e Capricorni
13.3	37.4
17.2	41.0
20.0	44.0
23.8	47.8
27.3	51.2
101.6	221.4

20	g	20.32	20	g	44.28
	vo	4.29		10	28.21
		+ 0.06			+ 0.06
		- 43.91			- 43.82

2. Clock - Error

	17 29	+ 15	- 44.30	+ 44.22	708	17 29	+ 44.29	20 10	+ 43.91	17 27	[- 44.19]
2 Aphinchi	17 29	+ 15	- 44.30	+ 44.22	708	17 29	+ 44.29	20 10	+ 43.91	17 27	[- 44.19]
2 April	19 11	+ 15	- 44.03	+ 44.02	- 01	19 11	+ 44.02	10	+ 43.87	19 11	+ 44.02
5 —	19 18	+ 11	- 44.03	+ 44.03	00	19 11	+ 44.02	10	+ 43.87	19 11	+ 44.02
8 —	19 40	+ 14	- 44.04	+ 44.00	- 04	19 40	+ 44.03	20 10	+ 43.890	19 20	- 44.037
2 Capricorn	20 10	+ 04	- 43.93	+ 43.96	+ 03	20 10	+ 43.96	20 10	+ 43.890	Rate	+ 0.098
2 Capricorn	20 10	+ 04	- 43.93	+ 43.96	+ 03	20 10	+ 43.96	20 10	+ 43.890	Mean 19 25	+ 44.023
										Rate per	- 2.26
										" foll.	- 2.44
										Mean	- 2.35
										Hourly	- 0.098

862 Sept 4th M.W.

45.

<i>Ursa minor</i>	α Heratn	<i>P Sagittarii</i>	<i>g. serpenti</i>	<i>S Ursa minor</i>
16 59 33	37.9	11 27.1	27.8	
16 19 24.5	41.6	31.3	31.6	18 15 2.4
16 17 57.5	44.5	34.5	34.3	15 49.6
17 0 15.9	48.3	38.8	38.0	16 57.1
	57.8	42.6	41.3	17 47.7
	224.1	174.3	173.0	
16 59 26.32	17 7 44.82	18 11 34.86	18 13 34.60	18 15 54.32
17 0 8.08	8 24.37			16 40.03
Int. l. +2.57	+0.18	-0.01	+0.10	+5.90
Chm. obj. [-39.19]	-39.37			[-39.41]
Chm. +39.38	+39.34	+39.24	+39.23	+39.23

821546 5 0.8669
14 0.8709

A 25.9 -40.0
B 26.7 -25.2
C 26.8 +2.3
D 26.7 +23.0

8636 29.5 1.2272
14 1.2271

53.9 -113.8
53.8 -57.3
54.8 +5.2
54.8 +52.4

continued on next page

51 Cephei H. sp.	β Lyrae	σ Sagittarii	δ Serp. pr.	δ Serp. foll.
18 32 8.7	14.5	0.3	39.3	40.6
33 17.1	19.0	4.4	42.9	44.4
	22.3	7.5	45.8	47.2
35 31.7	26.8	11.6	49.5	50.9
36 47.2	30.6	15.4	52.6	54.1
	113.2	39.2	230.1	237.2
18/ 34 27.78	18 44 22.64	18 46 7.64	18 48 46.02	18 48 47.64
0 34 59.52	45 2.19			
-7.24	+0.29	0.00	+0.13	+0.13
[-38.98]	-39.26			
+39.20	+39.18	+39.18	+39.18	+39.18

8/14 38.15 131710
 10. 131760

A 28.5 +139.8

13 27.6 +70.5

c

5 27.7 - 64.4

2 27.7 -139.5

1862 Sept 4 M H continued

V see below

C. Agrippinae			G. Agrippinae			25 lamelop Hsp			H. lam. min. B			6 Valproula		
38.7			42.6			19	0	28.4	19	13	18.7		14.6	
42.4			46.8				0	55.1					18.5	
48.4			49.8				1	23.2	19	13	18.7		21.5	
49.2			53.6				1	45.3		16	0.0		25.6	
52.6			57.2				2	13.7	19	32.8			29.3	
228.3			250.0					168.7					109.5	
18	52	48.66	18	55	50.00	19	1	21.14	19	13	1.37	19	22	21.90
			54	7.46			1	57.69		13	19.82			
East m.		+ 0.14		+ 0.02				- 2.72			- 20.26			+ 0.23
Chm. obs.								[- 39.27]			[- 38.72]			
Ch		+ 39.17		+ 39.17				+ 39.16			+ 39.14			+ 39.12

5 Aquila

21.5

25.8

18 58 28.0

31.8

35.2

141.6

18 58 28.32

x 105° 29'

353° 6'

- 5° 9'

174° 35' 31"

- 3° 0'

82 39 32.1 5 0.8900 ~ 8 5 59 0.102 1.7637 ~
 for 0.8975 ~ " " 1.7638 ~

A

B

C

1.0

-

17.7

D

0.2

-

2 59.8

E

2.3

-

6 29.9

Continued on next page.

β Lygini pr.	β Lygini sup.	α Lygini	γ Lygini	15 Capri. Beta
28.9	28.0	36.4	59.6	19 41 45.6
29.9	32.0	40.6	3.4	42 20.0
33.1	35.2	43.7	6.1	42 58.0
37.2	39.4	47.8	10.8	43 27.3
40.9	33.2	51.4	13.4	44 3.4
167.0	177.8	219.9	92.5	156.3
19 24 33.40	19 24 35.56	19 28 43.98	19 39 6.50	19 42 56.86
		28 23.09	45.79	43 30.64
+ 0.25	+ 0.25	0.00	+ 0.15	- 3.58
		- 39.11	- 39.14	[- 39.36]
+ 39.12	+ 39.12	+ 39.11	+ 39.10	+ 39.29

L 115° 53'

B 30

+ 7.0

8 80, 26, 14.6, 15

1.0115

or

1.0135

61 Sept 4. MW continued

MS.

3/4 inch	Normal min B.	61 Sept pr.	61 Sept foll.	3/4 inch
58.1	58 14.8	59.1	0.5	20.8
53.7	19 58 14.8	3.6	5.2	25.1
56.4	20 0 37.7	7.3	8.7	28.2
0.21	3 49.9	12.0	13.5	32.4
3.6	6 44.3	16.1	17.6	36.3
164.0		48.1	48.5	142.8
19 47 58.80	20 0 53.95	21 ^{med.} 9 8.36	diff 0 + 1.48	21 6 28.58
48 36.06	1 53.30	47.62		7 7.84
Inter. +0.13	+18.32	+0.33		+0.46
Ch ob -39.13	[-41.13]	48.93		39.02
Ch +39.09	+39.06	+38.97		+38.96

88 54 1.6 1.777
 1.778

A 58.9 -55.4
 B 53.7 -25.2
 C 53.6 +15.9
 D 56.6 +24.8

γ Brachium H. sp	119 Ceph. B.	β Ceph. major ang.	β Ceph. pr.	γ Capricorn
21 15 43.2	21 22 52.4			45.2
16 7.1	23 26.0	7.3		49.0
32.8	57.2	15.4	12.9	57.9
52.7	24 26.4	26.0	23.7	55.8
17 19.3	55.1	35.9	33.3	57.2
155.1	209.1			261.1
21 16 31.02	21 23 52.82	21 26 16.25	21 26 13.75	21 31 52.22
17 7.83	24 35.37	26 56.40		
-2.47	+3.16	+0.74	+0.74	+0.04
[-39.28]	[-38.39]	[-39.41]		
+38.94	+38.93	+38.92	+38.93	+38.92

179 17	221 9		
26 54	+22.4	208 46	-23.8
21 55 28.94	0.8680	21 40 44.2	0.9555
in 0.8524			0.9582
		19 57 8	0.4380
		10	0.4652
		A-19.64	16.26
		B-9.90	10
		C+0.89	29
		X+9.04	34
			13.66
			.80
			.79

62 Apr 4th MW continued

E Pegasi		P Capricorni		16 Pegasi		2 Aquarii		8 Aquarii	
	42.9		44.0		8.7		0.4		51.7
	46.6		47.8		18.7		4.1		55.5
	49.3		[50.9]		11.9		6.8		58.3
	53.1		54.6		15.5		10.5		2.0
	56.5		58.0		19.5		13.9		5.3
	249.0		255.3				35.7		172.8
21	36 49.80	21	38 51.02	21	46 12.12	21	58 7.14	22	8 18.56
	37 28.78				46 57.29		46.15		9 37.50
Dist.	+ 0.15		+ 0.04		+ 0.23		+ 0.10		+ 0.07
	81 - 38.83				- 38.94		- 38.91		- 38.87
Cl.	+ 36.91		+ 38.91		+ 36.89		+ 36.84		+ 38.86

	10.98	0.0186	12.06	0.0437
	57.06	-7.02	15	-7.44
	[57.22]	-3.54	13	-3.45
Dist. note in note-book	11.02	+ 0.32	13	+ 0.33
	11.02	+ 3.26	13	+ 3.43
	11.02	+ 7.02		

ζ Camelopardis	δ Aquarii	ζ Regentis	η Pegasi	ξ Pegasi
22 12 18.9	39.3	53.5	49.8	6.4
47.3	43.1	57.1	56.0	10.2
13 18.8	45.9	59.9	57.2	13.1
42.4	49.6	37	1.4	16.7
14 12.9	53.0	7.1	5.2	20.2
141.3	231.3	181.2	167.6	66.6
22 13 16.26	22 22 46.26	22 36 0.24	22 35 57.52	22 39 13.32
13 52.38		39.17		
-2.96	+0.06	+0.15	+0.26	+0.16
[-39.08]		2-28.69		
+34.85	+38.64	+38.82	+38.81	+38.82

153 28
 ξ 5 ± 2.5

83 15 58 to 09270_m
 " 09300_m

1862phae:proj.:405

fair

Cepheus N.			α Pictis austrini			β Pegasi			α Pegasi			δ Aquila em		
22	46	32.5			19.5			10.0			11.8			21.4
	47	0.2			23.6			13.7			15.4			25.1
	47	20.9			26.8			16.3			18.6			28.0
	47	49.6			31.2			20.1			22.2			31.7
	48	14.9			35.0			23.5			25.6			35.2
		114.1			136.1			83.6			92.6			141.4
22	47	23.62	22	49	27.22	22	50	16.72	22	58	18.72	18	18	16.28
	48	4.89		50	5.95						57.74		19	7.59
Int. loc		+2.64			-0.02			-0.12			+0.18			+0.17
Corr.		[-38.63]			-38.75						-38.84			-39.01
Cl		+38.80			+38.79			+38.78			+38.78			+39.16

$2 \frac{1}{2} 0.1'$
 229.36
 81
 $82.25.31.6$
 0.8763
 0.8801

Clock Error obs.

North Star

South Star

Deviation

<i>Monulci</i>	17 8 +16	-39.39	39.37	-02	✓	19.20 - 19.11	L.Herr -03	L. Lajis .00
<i>B. Zyrac</i>	18 55 .28	39.27	39.22	+05		21 59 36.91	P.Hy -08	L. Hynd -03
<i>S. Jap. Halii</i>	18 59 +16	39.12	39.12	+00		22 11 38.63	S.H. +15	
<i>S. Jap. Halii</i>	19 28 5.02	39.13	39.14	+01			V.H. -04	B - -01
<i>S. Jap. Halii</i>	19 40 .14	39.15	39.13	-02	✓	22 20 38.75	B - -04	L. B.H. +04
<i>B. —</i>	19 49 .18	39.15	39.44	-04	✓	1.32 - 38.910	G.H. +04	
<i>61 Cygni</i>	21 1 32	38.94	38.99	+05			S - -06	
<i>S. —</i>	21 2 .25	39.03	38.98	-05			S.H. +08	
<i>E. Pegasi</i>	21 38 .14	38.84	38.94	+10			M - -05	
<i>16 —</i>	21 47 .22	38.95	38.92	-03			S - +13	
<i>x. Apianii</i>	21 59 .09	38.92	38.90	-02	✓		L. Peg -01	
<i>A. —</i>	22 10 .06	38.88	38.88	.00			J. Rost. -03	
<i>S. Pegasi</i>	22 35 +14	38.79	38.84	+05			-04	
<i>S. Pircanor</i>	22 50 -04	38.74	38.82	+08	✓		-04	
<i>S. Pegasi</i>	22 58 +16	38.86	38.87	+01	✓		-06	
	20 48	39.05				-2.44	-03	
	17 0	39.06				-2.185	+04	
	18 0					2.312	-02	
	19 0					-0.96	+04	
	20 0						-07	
	21 0							
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	100 0							

62 Sept. 8th M.S.

745.

α Ophiurini	ϵ Herculis	ϵ Ursae minoris	α Herculis	γ Ophiurini pr.
33.8	24.6		46.8	55.3
37.1	28.5		50.2	58.4
41.1	33.0	16 59 38.6	54.2	2.2
43.8	36.1	16 59 59.2	56.9	4.9
47.8	40.4	17 0 25.4	1.7	8.7
203.3	162.6		208.8	129.5
16 50 40.66	16 53 32.52	16 59 36.20	17 7 58.76	17 58 1.90
57 11.19		17 0 7.38	8 24.30	
Cor. int.	-0.09	+0.65	-0.07	-0.12
Cl ob.	-30.62	-30.53	-30.61	
Cl	+30.57	+30.56	+30.56	+30.47
Dev.	-0.05	+0.03	-0.05	
App. RR	16 52 3.08			17 58 32.25

$82^{\circ}15'46''$ 1/4 0.8669
 sec 0.8709
 0.3263
 9178

C 36.3 -2.32
 L 36.2 22.96
 E 36.1 42.33

Continued on next page.

μ Sagittarii	δ Sagittarii	δ Ursa minor	δ Sagittarii	δ Lepentini pr.
57.3	36.1	18 14 12.5	9.9	48.1
0.8	39.9	15 8.6	12.8	51.6
4.9	44.2	16 11.1	17.0	55.3
7.9	47.4	16 87.5	20.2	58.1
11.8	51.7	17 59.5	24.3	1.3
82.7	219.3	149.2	83.6	214.8
18 5 4.54	18 11 43.86	18 16 28.54	18 46 16.72	18 48 57.96
5 34.78		16 38.43		
-0.22	-0.27	+1.52	-0.25	-0.11
-30.46		[-30.07]		
+30.46	+30.44	+30.44	+30.39	+30.38
0.00		+0.37		
-	18 12 14.03		18 46 46.86	18 49 25.23

1.2272 86 36 29.9 $\frac{1}{4}$
 1.2280 der

1862 Sept 8. M.E. continued

YMS.

4 Serpens p. coll.	2 Aquilae	3 Capricorni	0 Cephei	Br 2 M. 2. M. & Del
49.7	47.8	26.7	34.0	
53.1	51.2	30.2	41.2	11.2
56.8	55.2	34.0	49.1	15.0
59.5	57.9	37.0	55.2	17.9
3.1	1.7	40.9	2.7	21.8
222.2	213.8	166.8	182.2	
18 48 56.44	18 52 54.76	20 20 33.76	20 26 48.44	20 32 14.75
-0.11	-0.07	21 3.75		
		-0.10	+0.16	-0.14
+30.38	+30.38	-30.19		
		+30.63	+30.22	+30.21
18 49 26.71	18 53 25.07	+0.04		
		20 27 18.60		

continued on next page

2 Delphinii	74 Arcturus	Elypsus	γ Cephei	61 Cygni spec.
40.5	20 36 8.6	3.1	47.8	8.2
43.9	36 29.2	7.2	56.7	12.4
47.8	36 57.5	11.5	2.4	
50.7	37 8.0	14.9	8.1	
56.5	37 31.3	19.3	15.8	25.3
237.4	128.9	56.0	128.8	
				<u>Mean</u>
20 32 47.48	20 36 49.78	20 39 11.20	20 42 17.6	21 0 17.49
	20 37 20.12			0 47.59
- 0.07	+ 0.54	+ 0.04	+ 0.13	+ 0.07
	[-29.85]			- 30.09
+ 30.21	+ 30.20	+ 30.20	+ 30.19	+ 30.16
	+ 0.35			+ 0.07
20 33 17.69		20 39 41.39	20 42 32.08	

ϵ Cephei	16.51	- 0.9	- 30.62	+ 30.59	- 0.3
ϵ Heri.	17.8	- 0.6	30.60	30.56	- 0.4
α Sagitt	18.6	- 1.2	30.46	30.46	- 0.3
ρ Capri	20.21	- 2.0	30.49	30.23	+ 0.1
61 Cygni	21.0	+ 0.1	- 30.09	30.17	+ 0.7

18 41	- 30.404
0.096	
0.109	
1.102	

5 0.7617
 20 0.7675

Mean

A	17.49	+ 8.54
B	17.51	+ 4.31
C		
D		
E	17.46	- 8.54

162 Sept 8. M.E. combined.

MS.

61 Cygnus foll.

9.7
14.0

26.7

4 0 18.23

Clock - Error.

~~16 41 - 30.62
 17 8 - 30.61
 21 0 - 30.19~~
~~18 20 - 30.44
 18 42 - 30.394~~

Mean

~~3.848
 93.1
 0.9305
 1.8669
 8.9616~~

4-8

8-9

~~Presumptive hr 0.0415
 Following 0.1082
 Adopted 0.100~~

Clock - Correction

~~17 0 + 30.564
 30 30.544
 18 0 30.464
 30 30.444
 19 0 30.364
 30 30.344
 20 0 30.264
 30 30.244
 21 0 30.164~~

Clock - Error Sept. 9

~~17 8 - 27.94
 5 17 14 - 27.94~~
~~17 11 - 27.950~~

0.108

2.438

0.3670

~~Rate Gaining 1.3518
 0.1084 - 9.1352~~

0.104

0.106 hours

~~17 0 - 27.964
 30 27.911~~

1862 Sept. 9. H.E.

ϵ Herab			ϵ Mrae minor			+ Herab			η Herab			42(P) Ophiur		
	27.3			48.9			69.5			60.4			1.0	
	31.0			13.6			52.8			44.4			4.6	
	35.4			41.1			56.7			47.5			9.0	
	38.6			1.3			59.7			52.5			11.8	
	43.0			29.1			3.3			57.1			15.8	
	175.3			174.0			222.0			243.5			42.2	
16	53	35.06	16	59	38.80	17	7	56.40	17	9	46.70	17	13	8.44
			17	0	7.21		8	24.28					13	36.14
Cor. ind	+ 0.12			+ 0.65			- 0.07			+ 0.07			- 0.24	
Obs				[- 27.76]			- 27.95						- 27.94	
C. Ann	+ 27.97			+ 27.96			+ 27.95			+ 27.95			+ 27.94	
Dev.				+ 0.20			0.00						0.00	
AR	16	54	3.01						17	10	16.66			

45

405
62 Sept 10. Th. 8

255 =

1. 474

82 15 54.9 5 0.8669
100 0.8708

net 0.8708

88 3/4 35.9 1.607m
8 1.607m

No. 1. 5049m

$\Delta \quad 29.1 - 4 \quad 30.7$

13 30.7 - 2 16.5

C 27.0 + 12.0

$\Delta 26.1 + 26.4$

Continued on next page

II Horarii		60 α Ophiuchi		β Ophiuchi		δ Ursa min Bore		ϵ Capricorni						
	42.7		2.4		10.4				32.2					
	46.9		5.9		13.9				35.9					
	51.6		9.7		17.5	20	1	29.2	39.5					
	55.1		12.5		20.3		3	54.3	42.2					
	59.7		16.3		24.0		7	4.0	46.1					
	256.0		46.8		86.1				195.9					
17	9	51.20	17	28	9.36	17	36	17.22	20	1	13.07	20	9	39.18
				28	34.60					1	47.51		10	4.21
		+ 0.06			- 0.06			- 0.10			+ 8.51			- 0.19
					- 25.50						[- 25.93]			- 25.34

300 27

186 52

2.066

0.7514

2 88.56 11.14

1.7178

1.7179

C 1 13.6 -15.6

B 12.7 -29.4

E 12.9 -55.1

for Sept 10 M 9 continued

Capricorn			32 vesperatae			61 Gyr pr.			61 Gyr full			3 Lepus		
		56.2			11.9			13.4			14.8			56.7
		59.7			15.8			17.7			19.0			38.7
		2.2			19.9			22.1			23.6			42.8
		6.4			23.1			25.7			27.3			46.2
		10.0			27.2			30.3			31.7			50.4
		135.5			97.9			109.2			116.4			217.0
20	10	3.10	20	48	19.58	21	0	med. 22.86	21	0	27.28	21	6	42.60
	10	28.14		48	44.63			47.57					7	7.70
Int'l.		-0.19			+0.07			+0.07						+0.02
Ch ab		-25.23						-24.94						-25.08

Continued on next page

1 Boocani. H. sp	119 Cepus B	β Cepus	γ Capricorn	Gr 1575 sp	DS-2346
21 15 56.4			59.4		22.7
16 22.7		26 21.1	3.0		32.2
42.2	24 11.0	31.7	6.8		39.1
17 7.8	36.9	40.0	9.6		47.7
32.2	25 9.8	50.4	13.5		56.3
161.7			92.3		198.0
21 16 44.26	21 24 8.60	21 26 30.90	21 32 6.66	21 34 39.64	
9 17 8.37	24 31.77	56.24			
-1.14	+1.56	+0.43	-0.22		-0.34
[-25.25]	[-24.67]	[-24.91]			

139 17 25 32 9.635 221 9 207 24 9.663

881557.05 0.8480 834046.05 0.9556 69 177 0.438
 140 0.8524 140 0.9582 0.4651

β +9.89 30.99
 C 8.30 -2.70 C -0.87 .52
 15 .84 -26.06 D 9.02 .98
 E .66 -61.14 E 19.61 .79

1362 Sept 10 M.E.

945

2 Pegasi

8 Capricorn

♂ Mrae ^{-35° 18'} major sp.

16 Pegasi

Gr 1594 sp -37° 31'

57.1

58.2

7.1

19.0

44.8

0.5

1.7

13.6

22.6

51.7

4.2

5.6

16.5

26.6

57.1

7.1

8.4

24.8

29.7

3.6

10.6

12.2

30.6

33.9

10.0

79.5

86.1

94.6

121.8

167.2

21 37 3.90
 137 28.77
 -0.08
 -24.95

21 39 5.22
 -0.22

21 42 18.92
 -0.19

21 46 26.36
 46 51.27
 0.00
 -24.91

21 49 57.44
 -0.22

1862 Sept III M. East.

1862phae. P

for 1601.3p ^{-35°26'}	2 Aquarii	1 Pegasi	5 Cephei	8 Aquarii
50.4	14.8	7.3	31.1	6.0
56.9	18.0	11.0	37.4	9.1
1.8	21.7	15.0	44.2	13.1
8.0	26.4	18.0	49.5	16.0
13.4	28.2	22.1	56.4	19.8
170.5	107.1	77.4	218.6	64.4
21 55 2.10	21 58 21.42	22 0 14.68	22 5 43.72	22 9 12.88
	58 46.14			37.50
- 0.19	- 0.13	0.00	+ 0.22	- 0.17
	- 24.85			- 24.79

1862 Sept 10 M.E. continued

MS

30 lamul H sp			Gr 3756 PD + 16° 13'			Gr 3777 PD + 27° 23'			D. Aquarii			γ Aquarii		
22	12	32.0						35.2		53.4			48.7	
	13	1.4		16	7.1			42.5		56.8			52.1	
	13	26.4			21.0			50.7		0.6			55.9	
	13	56.7			32.5			56.7		3.4			58.7	
	14	25.6			47.3			4.3		7.2			2.2	
		142.5						189.4		121.4			217.1	
22	13	28.50	22	16	20.17	22	20	49.88	22	23	0.28	22	27	55.52
10	13	52.76											28	20.31
		-1.37			+0.63			+0.28		-0.18				-0.13
		[-25.63]												-24.87

153 28		334 11	
39 63	9.805	220 26	9.812u
	1.483	75.42 0.8	1.490u
53 15 27 5	0.9269u	5	0.5977
- 1u	0.9299u	u	0.6073

B	20.82	+ 13.72
C	19.79	+ 1.21
D	99	12.57
E	20.04	27.22

Continued on next page.

Gr 3842 PD+2029		η Pegasi		ξ Pegasi		Gr 3904 PD+22 10		Coma, Gr. 3904 - Dec 5880	
7	2.0		3.9		20.8	42	41.4	4	41.9
1	11.8		8.0		24.1		54.7		51.0
7	22.0		12.0		27.9		0.0		0.4
7	30.0		15.2		34.8		7.3		7.8
2	40.6		19.4		34.4		16.6		17.4
8	106.4		55.5		138.0		110.6		118.5
22	31 21.28	22	36 11.70	22	39 27.60	22	43 59.12	22	40 59.70
31									
3	+0.41		+0.02		-0.07		+0.38		+0.38
2									

1862 Sept 10 M East. continued

34 Cephei 14.

2 Pict. austrini

22	46	117.5	33.3
	47	13.6	37.6
	47	40.3	41.9
	48	2.2	45.0
	48	30.0	49.3
		133.6	202.6

22	47	38.72	22	47	41.52
	48	4.76		50	5.98
Int. Cor		+1.22			-0.31
		[-24.82]			-24.67

14 9	-25.75	20 10	-25.34
17 8	-25.52	20 10	-25.23
17 29	-25.50	21 59	-24.85
21 0	-24.94	22 10	-24.79
21 7	-25.08	22 28	-24.67
21 37	-24.95	22 50	-24.67
21 42	-24.91		
19 11	-25.243	21 38	-24.958
Mean 20 19	-25.181		

α Bootes	-.04	-25.76	14 9	+25.75	+0.01	✓
α Hercules	-.07	25.59	17 8	25.46	-.13	✓
α Cygnus	-.08	25.52	17 29	25.43	-.09	✓
δ Capri	-.20	25.23	20 10	25.35	-.12	✓
δ Cygnus	-.20	25.24	20 10	25.15	-.09	✓
δ Cygnus	+.04	25.06	20 49	25.08	+0.02	
δ Cygnus	+.04	24.92	21 0	25.06	+0.02	
δ Cygnus	0.0	25.10	21 7	25.05	-.05	
δ Cygnus	-.09	24.96	21 37	25.00	+.04	
16	-.02	24.93	21 47	24.98	+.05	
δ Aquarii	-.14	24.86	21 59	24.96	+.10	✓
δ Cygnus	-.17	24.79	22 10	24.93	+.14	
δ Cygnus	-.13	24.92	22 28	24.91	+.01	
δ Pict. austr.	-.01	-24.77	22 50	24.87	+.10	✓
		-25.127	20 21			

Pr. Rate 0.104
 Foll. — 0.097
 0.1087

312 1
 228 16 " 9.8732
 55.6 1.551
 22 25 39.0 5 0.8764
 22 0.8612

1862 Sept 16. M.E.

Plan	$\frac{1}{p}$ (vol)	η Optimum	α Hermin	π Hermin	42(H) optimum
13	5 1.0	1.6	54.2	45.1	5.9
	7 25.6	5.2	57.6	49.2	9.6
	9 15.0	8.8	1.6	53.9	13.6
	11 43.6	11.9	6.3	57.4	16.6
	13 58.9	15.6	8.0	2.0	20.6
	144.1	43.1	125.3	207.6	66.3
13	9 28.82	17 2 8.62	17 8 1.14	17 9 53.52	17 13 13.26
	9 46.38		9 24.25		13 36.10

α Hro. -23.18
 23.14
 22.76
 22.70

1862 Sept 10 M East. continued

Zulephus 14.

2 Pidda australis

22	46	47.5	33.8
	47	13.6	37.6
	47	40.3	41.9
	48	2.2	45.0
	118	30.0	49.3
		133.6	2026

22	47	38.72	22	47	41.52
	48	4.76		50	8.98
Int. Co		+1.22			-0.31
		[-24.82]			-24.67

14 9	-25.75	20 10	-25.34
17 8	-25.52	20 10	-25.23
17 29	-25.50	21 59	-24.85
21 0	-24.94	22 10	-24.79
21 7	-25.08	22 28	-24.87
21 37	-24.95	22 50	-24.67
21 47	-24.91		
19 11	-25.243	21 38	-24.958
Mean 20 19	-25.141		

α Bootis	-.04	25.76	14 9	+25.75	F01	✓
α Herminio	-.07	25.59	17 8	25.46	-.13	✓
α Opusichis	-.08	25.52	17 29	25.43	-.09	✓
2 Capri	-.20	25.23	20 10	25.15	-.08	✓
2 Capri	-.20	25.24	20 10	25.15	-.09	✓
61 Cygni	+.04	24.92	21 0	25.06	+.09	
3	0.0	25.10	21 7	25.05	-.05	
ε Cygni	-.09	24.96	21 38	25.00	+.04	
16	-.02	24.93	21 47	24.98	-.05	
2 Aquarii	-.14	24.86	21 59	24.96	+.10	✓
θ	-.17	24.79	22 10	24.93	+.14	
η	-.13	24.92	22 28	24.91	-.01	
α Pict. austr.	-.31	24.77	22 50	24.87	+.10	✓
		-25.127	20 21			

Pr. Rate
Foll. —0.104
0.097
0.1007

1862 Sept 18. M.E.

Polaris	Lp	not used	η Optimus	α Hercules	π Hercules	42/H Optimus					
13	5	1.0	1.6	54.2	45.1	5.9					
	7	25.6	5.2	57.6	46.2	9.6					
	9	15.0	8.8	1.6	53.9	13.6					
	11	43.6	11.9	6.3	57.4	16.6					
	13	58.9	15.6	8.0	2.0	20.6					
		144.1	63.1	125.3	207.6	66.3					
13	9	28.82	17	2	8.62	17	9	53.52	17	13	13.26
	9	46.38		17	8	24.25		9		13	36.10

α Hrc. -23.18
 23.10
 22.76
 22.70

862 Spt 11 cont.

2415

4 (3) Ophiuchi			β Draconi			γ Ophiuchi			γ Draconi			γ Ophiuchi		
		30.9			46.3			4.9			52.1		2.6	26
		34.1			51.4			8.3			57.6			5.9
		38.1			57.8			12.0			3.3			9.7
		41.0			2.3			14.9			2.8			12.9
		45.1			8.3			18.7			13.7			16.1
		188.6			166.5			58.8			124.5			46.7
17	17	37.72	17	26	57.30	17	28	11.76	17	53	2.90	17	58	9.24
				27	[20.56]		28	34.78		[53	26.07]			

147 Lyg. Hare	147 Lyg. Hare	49 Camelopard sp	147 Lyg. Hare	156 Camelopard 13
57.0	13.8	30.9	16.0	
57.6	19.0	22.7	19.5	42 38.0
0.7	26.8	36.6	23.2	43 8.5
3.7	29.2	45.7	26.1	43 46.3
7.9	34.8	52.7	29.8	
124.9	121.7	188.8	114.6	
19 28 0.98	19 32 26.94	19 33 37.76	19 39 22.92	19 43 10.93
28 22.99			39 45.70	43 32.06

2 mer 0 Lyg. Hare

19 31 42.4

48.6

54.4

58.7

6.4

62 Sept 11 mt

52 <i>Chauliopa</i> sp.			<i>B. spinosa</i>			<i>γ lagittae</i>			<i>L. M. min</i> B			<i>α. laproni</i>		
44.4			6.4			11.0	19	55	27.1			34.7		
49.8			9.8			14.5		58	22.4			38.1		
55.5			13.5			18.4	20	1	38.0			42.0		
2.0			16.3			21.4		3	59.4			44.8		
8.0			20.0			25.3						48.6		
159.7			66.0			90.6						208.2		
19	44	55.94	19	48	13.20	19	52	18.12	20	1	19.52	20	9	41.64
	45			48	35.98					1	46.72		10	6.20

258 56 10.8 5 1.7179
 10. 1.7180

A 18.3 +5 51.2
 B 19.4 +2 57.0
 C 22.4 - 15.6
 D 18.0 -2 41.4

α Capricorni

58.7

2.1

6.0

8.8

12.5

86.1

20 10 5.62
10 18.12

<i>α Herculis</i>	17 8	-07	-23.18	+23.10	-08	✓
<i>β Sphinctri</i>	17 14	-27	23.11	23.09	-02	
<i>α —</i>	17 29	-08	23.10	23.07	-03	✓
<i>α Sagittarii</i>	19 28	-27	22.88	22.88	00	
<i>γ Aquilae</i>	19 40	-09	22.87	22.87	00	✓
<i>β —</i>	19 49	-11	22.89	22.87	-02	✓
<i>α Capricorni</i>	20 10	-20	22.76	22.82	+06	✓
<i>α Capricorni</i>	20 10	-20	22.70	22.82	+12	✓
<i>Pro R</i>	18 54		-22.936			
			+0.097			
			0.091			
			0.094			

462 Sept 15th M. E.

45.

L Hermin			II Hermin			422 Ophionin			P Browni			d Ophionin		
	3.4			54.1			15.0			55.4			14.0	
	6.8			58.3			18.8			0.9			17.4	
	10.5			3.0			27.7			6.8			21.2	
	19.6			6.4		inc piles				11.4			24.0	
	17.3			11.0						17.4			22.8	
	51.6			132.8						91.9			184.4	
17	8	10.32	17	10	2.56	17	13	22.44	17	23	6.38	17	28	1088
	8	24.17					13	36.93		27	[20.44]			34.71

δ
 ϵ
 $m = 0.0622$

$A \quad 21.41 \quad + 7.41$
 $B \quad .53 \quad + 3.73$
 $C \quad .37 \quad - 0.33$

fmi

α Herc -13.92
 α Ophiuchi -13.91
17 16 -13.915

α Ophiuchi -13.88
-13.92 17 13.2

462 Sept 16, 21.2

45

 α Ophiuchi

57.5

 ϵ Ophiuchi

48.9

 η Herculis

33.4

 ζ Scorpis

41.5

 β Herculis

0.5

54.8

37.1

40.3

4.2

58.4

52.8

40.9

49.4

8.2

1.2

55.5

46.0

52.4

11.1

4.9

59.2

47.8

51.6

15.1

170.8

203.2

245.2

39.1

16 6 58.16
7 9.84

16 10 52.50

16 15 40.64

16 20 49.04
21 0.57

16 7.82

 δ

4

Ser. 00 12

A

52.64

+6.74

C

.50

-0.30

D

.40

3.10

E

.46

-6.74

Continued on next page

ζ Ophiuchi	ζ Heruli	η Heruli	κ Ophiuchi	ϵ Heruli
16.5	47.4	51.1	47.2	43.4
21.9	51.3	55.5	55.9	47.2
25.8	55.3	0.2	59.6	51.4
28.3	58.9	3.8	2.4	54.7
32.0	5.2	8.5	6.0	59.0
126.5	216.5	119.1		255.7
16° 28.30	16 35 53.30	16 36 59.82	16 50 59.27	16 54 51.14
	36 7.11		57 11.14	

S

a 0.0061

B 59.36 +3.46
 C 36 -0.30
 D 27 -3.13
 E 18 -6.62

1862 Apr 16 M.E. continued

<i>Weta minoris</i>			η Ophiuchi			α Herculis			π Herculis			δ Ophiuchi		
16	59	2.9			12.9			8.4			56.3			
	59	27.4			16.4			8.8			0.5		flint	
	59	55.1			20.2			12.6			5.2			
17	0	16.0			23.1			16.3			2.5		27.8	
	0	42.5			26.9			19.4			13.2		31.9	
		143.9			99.5			62.5			83.7			
16	59	52.78	17	2	19.90	17	8	12.50	17	10	4.74	17	13	26.43
17	0	5.91						24.16					13	36.00

had

0.0428

δ 24.39 146
 ϵ 24.58 742

continued on next page

Di. VIII 242.

* Joth & Serp.

β Draconis	δ Aquarii	θ Serp. pr	θ Serp. post	
57.4	16.0	6.9	8.3	31.7
2.8	19.5	19.3	11.7	35.0
5.8	23.3	13.9	15.4	38.8
13.4	26.2	16.7	18.1	41.4
19.4	29.9	20.3	21.7	48.2
101.8	114.9	68.1	75.2	192.1

17	27	8.36	17	28	22.98	18	49	13.62	18	49	15.04	18	49	58.62
		[20.37]			36.70									

62 Apr 10 M.E. continued

W.S.

C. Aquila

0 Sagittarii

Sagittarii

25 Canis Majoris

4200 mi. B. sp.

6.3

10.4

49.1

19

0

57.3

9.8

14.0

52.5

1

25.4

19

10

29.2

13.7

14.0

56.3

1

46.8

13

12

1

16.5

21.0

59.1

2

15.9

16

44.9

20.3

25.0

2.9

2

41.5

66.6

86.4

219.9

185.9

18 53

13.32

18 56

17.48

18 58

58.98

19

1

49.18

19

13

28.77

59

7.40

1

59.84

7

13

35.20

358° 56' 12" 9.0900
a.p.s.m.D 59 0 42.5 1.7634
a. 1.7634B - 28.4 - 3 16.5
C 29.5 + 17.4
D 18.4 + 2 59.2

continued on next page

	<i>Vulpecula</i>	<i>Plyni</i>	<i>Plyni anns</i>	<i>L. Sagittaria</i>	<i>Plyni</i>
	42.2	53.1	58.7	4.5	25.1
	46.0	57.4	59.5	Clouds	30.3
	49.9	1.5	3.1	12.1	35.9
	53.0	6.5	6.8	Clouds	40.2
	56.9	8.6	11.0	19.4	46.0
	245.0	128.6	136.6		177.5
19	22 49.60	19 25 1.12	19 25 3.72	19 24 11.89 28 22.73	19 32 35.50

D. m. 0.0634

A 11.93 + 7.43

C 11.77 - 9.32

E 11.92 - 7.43

562 April M.S. continued

α Aquila	56 Canis Major 3p	γ Aquila	11m m. 10
27.4	42 15.0	22.3	
30.8	42 51.1	25.8	20 1 39.3
34.5	43 21.3	29.8	4 13.8
37.4	43 58.6	32.9	7 12.5
41.1	44 34.2	36.5	
171.2	180.2	147.3	
19 39 34.24	19 43 26.04	19 52 29.46	20 24.47
39 45.63	19 43 33.19		1 41.66

Clock Errors

δ Opheimski	16 7 - .15	- 11.83	+ 11.83	- .00
α Scorpi	10 21 - .27	11.74	11.81	+ .07
ζ Hercules	16 36 + .01	11.80	11.79	- .01
κ Opheimski	16 51 - .09	11.86	11.76	- .10
α Hercules	17 8 - .07	11.73	11.74	+ .01
α Opheimski	17 29 - .07	11.79	11.71	- .08
ζ Aquila	18 59 - .07	11.49	11.57	+ .08
Called not very good; excl. γ Aquila	19 28 - .27	11.77		
γ Aquila	19 40 - .09	11.48	- 11.51	+ .03

17 24	- 11.715		
115 53	+ 0.092		
24	0.088	301 25	
0 25	0.090	186 57	8.936m
			0.596m

δ 58 56 11.7 5 1.7174
 14 1.7180

~~A 0.23 - 5 51.2~~

~~B - 2.670~~

C 23.7 + 15.6

~~D 22.4 - 2.674~~

E 21.3 - 5 51.2

1862 Sept 17th M.E.

Continued on next page

Eclipses min faint			40 Ophiuchi		2 Hercules		21 Hercules		42 Ophiuchi		
16	59	4.5		19.1		7.6		58.5		19.3	
		30.1		18.4		10.9		2.6		27.0	
		57.6		22.3		14.7		7.3	Too faint		
0		17.4		25.2		17.7		10.7			
		44.7		29.1		21.6		15.4			
		154.3		110.1		72.6		94.5			
16	59	54.86	17	2	22.02	17	8	14.52	17	10	6.90
17	0	5.72					8	26.14		13	26.73
										13	35.99

+7.42
+3.76

1862 Sept 17th

Add 4 minutes

2 Ophiuchi

57 Alpha Hsp.

2 Orion

2 Aurigae

1 Gemini Orion

18.1	14	28	39.3	30.4	6.1	32.0
21.8	+4"	29	55.2	33.9	10.2	35.7
25.5		30	53.1	37.5	14.6	39.6
28.4		32	9.5	40.1	18.2	42.6
32.0		33	20.6	43.9	22.8	46.5
120.8			177.7	185.8	71.9	186.4

25.16	18	30	59.54	5	47	77.16	5	50	14.99	5	95	39.28
34.68	6	35	6.07		47	45.51						

γ Orion	γ Geminorum	δ Koi min sp.	γ Geminorum	δ Ant. Capricorn
frank in base - c.	20.8	6 14 36.8	32.4	6 32 57.2
33.2	24.4	15 38.7	35.9	33 54.8
36.9	28.3	16 26.7	39.6	for faint 58.5
39.9	31.4	17 24.6	42.7	proper 1.5
43.6	35.3	18 22.8	46.4	total 5.4
	140.2	149.6	197.0	171.4
		Examine wire.		
5 58 36.66	6 6 28.04	6 16 29.92	6 29 39.40	6 38 58.28
5 59 15.12		18 16 36.48	29 47.77	39 6.44

α Herculis	17 8	-07	-9.69		
α Ophiuchi	17 29	-07	9.59		17 18 -9.64
α Orion	5 48	-10	8.45	+8.48	+03
γ —	6 0	-06	8.52	8.47	
γ Gemin	6 30	-06	8.43	8.42	Ante
α Antares	6 39	-22	8.38	8.41	+13
	6 14		8.445		+092

and 0.0146

B 3670 +3.50
C 59 -0.31
X 70 -3.20
Z 65 -1.95

1862 Sept 18 ME.

745.

π Ophiuchi			ϵ Herculis			ϵ Urae minoris			η Ophiuchi			α Herculis		
56.8			47.4			16	59	7.3	2	20.6			9.7	
0.1			57.4				59	31.6	3	24.4			13.2	
4.0			55.6				59	59.3	4	27.3			17.1	
6.8			55.9			17	0	20.0	1	17.1			19.9	
10.4			3.0				0	47.1	5	31.2			23.7	
75.1			216.3					165.3		120.6			83.6	
16	51	3.62	16	54	55.26	16	59	57.06	17	2	24.12	17	8	16.72
		11.01				17	0	5.53						24.12

continued on next page

Ti Heronlin			L2 Ophiurhi front			β Draconis			β Ophiurhi			μ Heronlin		
	0.5			21.4			1.6			28.5			51.0	
	1.7			25.2			7.2			31.7			54.8	
	9.4			29.1			13.2			35.5			58.9	
	12.9			32.2			17.8			38.2			2.0	
	17.5			36.2			23.8			42.0			6.2	
	45.0			144.1			63.6			175.9			172.9	
17	10	9.00	17	13	28.82	17	24	12.72	17	36	35.18	17	40	58.58
					35.97			[26.30]					41	6.05

1862 Sept 18 M.E.

Phryae minoris

14 30.8

15 27.0

16 30.2

17 16.3

18 17.5

121.8

18 16 24.36

16 34.25

α Ophiuchi	16 51	-09	-7.68	+7.51	+03
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α Hercules	17 8	-07	7.47	7.48	+01
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μ —	17 41	+01	-7.48	7.43	-05
---------	-------	-----	-------	------	-----

	17 13		-7.477		
--	-------	--	--------	--	--

Pro R			+0.090		
-------	--	--	--------	--	--

1862 Spt 24. M 2

Continued on next pg -

M5

Orion Chro. 236	Y Geminorum	E Geminorum	α Carin major	δ Leonis
30.3	44.0	25.9	2.8	0.7
31.2	47.6	29.5	6.4	4.1
37.7	51.3	33.6	10.0	7.9
40.5	54.0	36.9	13.0	10.7
44.4	57.9	40.7	16.4	14.5
187.1	254.8	166.6	49.0	37.9
5 59 37.42	6 28 50.96	6 34 33.32	6 38 9.80	10 0 7.58
45.12	29 47.90		39 6.56	1 3.46

1862 Sept 24¹ from M E.

WHS

y Rivi pr

y Rivi pr

26.4
 ↓ 28.3
 ↓ 31.3
 ↓ 35.2

9.7
 ↓ 16.7
 ↓ 22.7
 ↓ 30.6

10 11 28.00 10 54 16.04
 12 23.94 [55 12.11]

El ran down between pt. 18 and pt. 21.

y Rivi	-.06	57.00	639
Sivius	-.22	56.98	639
el Rivi	-.08	55.96	10.1
y Rivi	-.04	55.98	10.12

Some error has arisen from starting clock.

A 28.02 3.12 16.04
 C 27.95 -0.32 16.05
 B 28.00 -3.20 16.01
 E 28.02 -7.18 16.05

1861 Apr 22 M.S.

Polaris sp. (3)			γ Herculis			γ Herculis		
			3.9			7.7		
13'	7	3.7	7.9			12.0		
	8	53.0	12.1			16.7		
	11	19.9	15.6			20.3		
			19.8			25.0		
			59.3			51.7		
13 ₁	9	5.50	16	35	11.86	16	37	16.74
	9	50.86		36	6.98			

16 36 +11 -55.11

δ 58° 44' 10.05" δ 61° 57'

dec. 1.1052

B 33 -2 16.6

C 5.0 + 12.0

D 8.2 +2 4.5

62 Sept. 23. M.E.

Polaris Sp. (Hm 3)			d. Hercules			A. Aurula			A. Ophiuchi			β Bracconi		
13	4	32.9			24.3			15.3			38.1			16.3
cl.					27.9			19.4			39.7			21.8
	8	49.2			31.8			24.1			43.9			28.0
	11	20.9			34.6			27.5			46.9			32.4
	13	34.4			38.3			32.0			50.9			38.4
					156.9			116.3			217.5			136.9
13	9	3.20	17	7	31.38	17	9	23.66	17	12	43.50	17	26	27.98
1	9	51.15		8	24.02					13	35.88		27	[20.13]

886° 34' 10.3" 1.6052
 dir 1.6052

A 35 + 4 30.9
 B 4.3 + 2 16.6
 C 1.2 + 12.0

3.0 + 4 30.9

Continued on next page

δ Ophiuchi	β Ophiuchi	ζ Draconis	γ Draconis	η Ophiuchi pr.
35.1	43.2		22.0	32.7
36.5	46.4		27.6	36.1
42.3	50.2		37.6	39.9
45.2	53.0	22.4	37.9	42.6
48.9	56.6	29.2	42.7	46.3
210.0	249.4		164.8	197.6
17.27 42.00	17 35 49.88	17 50 16.82	17 52 32.96	17 57 37.52
28 34.56			53 [25.66]	

 δ
 ζ

16.74
16.89

1862 Apr 28 M^W and.

45.

μ Sagittarii	δ Sagittarii	δ Musae minoris	1 Deneb/H. sp	γ 34.67
34.9	13.7	18 13 43.8	21 15 30.9	12.2
38.4	17.5	14 39.8	15 56.2	18.0
42.4	21.8	15 43.9	16 15.4	24.0
45.5	25.0	16 29.3	16 42.6	28.5
49.5	29.2	17 32.0	17 6.4	34.5
210.7	107.2	186.8	157.5	117.2
18 4 42.14	18 11 21.44	18 15 37.76	21 16 18.30	21 21 23.44
5 34.50		16 32.18	9 17 9.91	

$139 \cdot 17$
 $22 \cdot 19$
 $+164 \cdot 1.2162$
 $81 \cdot 56 \cdot 30.95 \cdot 1.2272$
 $200 \cdot 1.2280$
 $81 \cdot 55 \cdot 22.85 \cdot 0.8480$
 $200 \cdot 0.8523$

continued on next page

119 Ceph. B	β Cephei	γ Capricorni	Gr 3528 XX	Gr 3536 XX
21 22 39.0	53.3	32.0		
23 9.9	\downarrow 4	35.5		
23 43.1	4.0	39.4	42.1	52.9
24 8.5	12.2	42.3	48.2	57.9
24 41.6	29.8	46.1	55.9	4.3
142.1		195.3		
21 23 40.42	21 26 31.7	21 31 39.06	21 32 41.63	21 33 52.20
24 33.19	26 55.82			

$\frac{27}{321} 8$
 $306 10 9.6121w$
 $-1.87 1.2488w$
 $53 40 57.35 0.9552$
 $54 0.9583$

$5 61.4014 5 0.1684 5 56.517 5 0.1852$
 $w. 0.3238x$ $w. 0.2613$

$\beta 3.19$
 $C 3.10$
 $N 3.18$
 $E 3.18$

$C 41.42 -0.63 C 52.35 -0.55$
 $D 69 -0.51 N 14 -5.66$
 $E 73 -14.17 E -01 -12.29$

62 Sept 23 M.E. continued

745

2 Pegasi

2 Capricorni

12 Cephei

5 2612

5 2613

29.8

30.8

47.8

52.7

33.2

34.3

55.1

0.4

36.9

38.2

3.0

7.9

39.8

41.0

38.8

8.8

13.3

43.4

44.9

46.0

16.7

21.6

183.1

189.2

121.4

95.9

21 36 36.62
37 26.69

21 38 37.84

21 42 32.57

21 49 2.28

21 49 7.18

21

2 60° 2' 9" 0.2394
for 0.3017B 3264 - 6.17
C 3257 - 13.47

Continued on next page

1862phae.proj....468

by 3660			16 Pygmi in plateau & Aquarii			1 Pygmi			5 Cephei		
2.7	17.2		51.7			47.4		40.0	3.7		
2.4	30.2		55.5			50.8		43.7	10.0		
2.9	44.2		59.5			54.4		47.8	16.7		
3	54.2		2.4			52.2		50.9	21.9		
6	7.9		6.6			0.8		54.9	28.7		
9	153.7		175.7			210.6		237.3	31.0		
21	55	42.74	27	45	59.14	21	57	54.12	21	59	47.46
				46	51.18		58	46.08	22	5	16.20

1862 Sept 23 Mt. Continued

45.

♂ Aquarii			30 Camelopardalis			♂ Aquarii			♂ Pygmi			η Pygmi		
	38.4	22	12	5.3			26.3			40.4			36.7	
	42.2		12	36.2			29.9			43.9			40.6	
	45.9		12	59.0			32.4			47.6			44.9	
	48.6		13	31.4			36.2			50.4			48.0	
	52.3		14	0.1			40.0			54.1			52.3	
	227.8			132.0			165.8			236.4			222.5	
22	8 45.56	22	13	2.40		22	22 33.16		22	33 47.28		22	35 44.50	
	9 37.46	10	13	53.85						34 37.17			φ	

153° 28'

36 30

9.7746

+25.8

1.4111

83 14 59.1 5 0.9268

or 0.9298

continued on next page

ζ Pyari	34 Cephei H.	α Triang. austrini	β Ursa majoris sp.	α Ursa majoris sp.
53.6	22 46 20.4	6.4		5.8
58.9	46 48.8	10.2		13.8
0.7	47 14.1	14.5	38.4	19.8
3.5	47 35.0	17.7	48.7	27.9
7.3	48 2.4	21.9	51.6	34.5
122.0	117.7	70.7		101.8
22 39 0.40	22 47 11.54 48 4.24	22 49 14.14 50 5.98	22 52 39.21	22 54 21.36 10 55 [12.13]

$342^{\circ} 1$
 $225^{\circ} 3$ 9.8499
 $- 30^{\circ} 6$ 1.4816
 $82^{\circ} 25'$ 42.85 0.8764
 $\sin 0.8802$

A	39.22 44.20	A	19.95
B	39.46 44.20	B	20.56
C	<u>38.95</u>	C	20.45
		D	20.47
		E	<u>20.35</u>

1862 Sept 23 M & continued

W.S.

 β Pegasi γ Pegasi γ Trium δ Aquarii κ Trium

57.7	58.8	6.6	48.7	57.4
0.5	2.2	10.0	52.3	0.9
4.0	6.1	13.7	56.3	6.4
6.9	8.9	16.4	59.7	7.7
10.5	12.8	20.0	3.2	10.9
19.0	88.8	66.7	219.8	80.9

22	56	3.80	22	57	57.6	23	9	13.94	23	14	55.96	23	19	4.18
				57	57.78		10	5.24					19	56.04

Continued on next page

202 Canopus Bsp	39 Ceph H.	1 Ceph	1 Ceph maj sp.	309 Ceph B3
23 20 15.2	25 26.0	4.0	31.0	23 49 59.8
20 40.3	26 20.9	43.9	37.2	50 47.5
20 59.8	27 23.1	59.8	42.0	51 40.2
21 26.0	28 9.8	12.0	48.3	52 18.5
21 57.2	29 9.2	27.8	54.4	53 9.7
182.5	89.0	172.5	212.9	175.7
23 21 2.50	23 27 17.40	23 32 58.50	23 45 42.58	23 52 35.14
11 21 54.07	28 11.35	—	11 46 34.64	53 28.57

170 29
 53 21 9.9003
 + 34.8 1.5420
 81 52 46.4 0.8456
 dr. 0.8500

352 3
 235 5 9.9136
 - 35.5 1.5503
 86 33 9.8 1.2201
 dr. 1.2209

358 22
 241 24 9.9435
 - 38.0 1.5802
 85 56 39.0 1.1493
 dr. 1.1504

1862 Sept 23 ME. continued

Fini

2 Ahi	2 Andromeda	γ Pegasi	6 Wrasse min Bsp	2 Phocinus
45.9	20.6	13.8	8 34.6	31.6
49.4	24.4	17.2	10 49.1	36.2
53.3	28.6	21.1	12 31.6	41.1
56.2	31.9	23.9	14 54.2	44.9
59.9	36.0	27.7	16 54.1	49.9
264.7	141.5	103.7	220.6	203.7
23 55 52.94	0 0 28.36	0 5 20.74	0 12 44.12	0 14 40.74
	0 1 21.34	6 12.62	12 13 31.00	

183° 23' 9.9621
 166° 25' 1.5488
 39.7
 88° 27' 33.5" 1.5703
 av. 1.5705

1862 Jan 24 M.S.

Polaris

13 4 34.5
 7 1.7
 vid. m. tab. 8 [59.8]
 11 26.4
 13 38.4

13 9 6.72
 9 53.01

				Dw. latn		
				N	S	
α Aurulis	17 8	-07	52.71	52.61	-10	✓
β Ophiuchi	17 14	-27	52.65	52.60	-05	
α —	17 29	-08	52.64	52.58	-06	✓
μ Sagittarii	18 5	-25	52.61	52.52	-09	
ϵ Pegasi	21 37	-09	52.16	52.18	+02	
16 —	21 47	-02	52.06	52.16	+10	
δ Aquarii	21 59	-14	52.10	52.14	+04	✓
θ —	22 10	-17	52.07	52.12	+05	
ζ Pegasi	22 35	-09	51.96	52.08	+12	
δ Pic. austr.	22 50	-31	52.15	52.06	-09	✓
κ Pegasi	22 58	-07	52.09	52.04	-05	✓
γ Picionis	23 10	-12	52.02	52.02	00	
κ —	23 20	-13	51.99	52.01	+02	
α Androm.	0 1	00	52.04	51.94	-10	✓
η Pegasi	0 6	-07	51.95	51.93	-02	✓
	21 14		52.213			

Pro Rate
 Jolly

0.105
 0.090
 -0.098

A 75-4 30.9
 B 78-2 16.6

C 62+2 4.5
 E 54+4 30.9

1862 Jan 25 M 2

145.

Optimization			2 Harmonic			9 Harmonic			17 Optimization			2 Harmonic		
Subtract 1	16.9		Subtract 1	9.5	16	58	25.2		Subtract 1	33.4			28.8	
	20.2			11.4		58	50.4			40.8			32.0	
	24.1			15.8		59	19.1			44.3			36.0	
	26.8			18.9	16	59	38.7			47.6			39.0	
	30.6			23.2	17	11	5.4			51.3			42.8	
Error in range														
118.6			76.8			137.8			221.8			178.6		
-5			-5			-5			-5			-5		
16	50	22.72	16	54	14.36	16	59	14.56	17	1	43.36	17	7	39.72
	51	10.89				17	0	64.34				17	8	23.96

Continued on next page

γ Herulis			β Herulis			α Ophiuchi			β Ophiuchi			μ Herulis		
		19.6			20.6			39.6						10.0
		23.9			26.1			42.9			50.8			13.9
		28.5			32.1			46.8			56.6			18.1
		32.0			36.5			49.7			57.5			21.0
		36.5			42.8			53.3			1.2			25.3
		140.5			158.1			232.3						88.3
17	9	28.10	17	26	31.62	17	27	46.46	17	35	54.34	17	49	17.66
				27	[20.06]		28	24.52					41	15.89

1862 Sept. 25. continued

<i>u Sagittarii</i>	<i>δ Mac minor</i>	<i>α Cygni</i>	<i>57 Cephei</i>	<i>110 Heruli</i>
39.3	14 13 47.2	21.5		57.0
43.1	14 43.4	28.8	18 33 20.5	54.6
47.1	15 47.1	30.6	34 18.4	58.6
50.1	16 32.5	34.1	35 35.7	1.6
53.9	17 35.2	38.3	36 45.6	5.5
233.4	205.4	150.7		171.3
18 4 46.68	16 15 41.08	18 31 30.14	18 34 25.15	18 38 58.26
5 34.47	16 31.40	32 18.32	35 10.13	

δ 57 14 21.5 1.51702
 δ 1.51752
 δ 34 26.0 - 219.6
 δ 15.3 - 110.4
 δ 24.6 + 6.2
 δ 16.7 + 14.2

continued on next page

<i>g Capricorni</i>	<i>gr 3241</i>	<i>L Delphinii</i>	<i>L Cygni</i>	<i>74 Draconis</i>
8.6	26.7			
12.3	37.5			
16.3	49.7	20.0	59.1	
19.1	58.9	32.7	5.2	49.2
22.9	10.3	36.6	8.5	11.1
79.2	182.5			
20 20 15.84	20 29 48.50	20 32 29.60	20 35 58.85	20 36 30.06
21 3.54			36 46.95	37 18.41

309.20

191.53

9.7142

0.9442

5036.50.6 5 0.7877

4 0.7876

29.69

.59

.03

58.68

.55

17.03

70.25

29.55

18.95

41.24

162 Sept 25 continued

α Cygni	γ Cephei	32 Vulpeculae	+ for 32 V.	Jy 6 1879
45.2		48.8	46.5	20 51 18.2
49.3	36.2	52.9	20.3	57.4
53.7	46.0	57.0	24.7	58.8
57.1	50.0	0.0	27.6	42 15.5
1.4	57.3	4.1	31.9	36.6
206.7		162.4	121.0	167.0
20 39 53.24	20 41 43.37	20 47 56.56	20 48 24.20	20 57 57.40
		48 44.63		

43.26

38

56

29

δ^2 Vortanij sp.	61 Cygni prae	61 Cygni foll	α Cephei +	1 Braum Th sp.
10.3	50.4	51.9	18.2	35.1
20.0	56.5	56.1	28.3	1.2
27.2	59.4	0.7	33.1	20.6
37.1	2.8	4.3	39.1	47.7
45.8	7.4	8.8	47.0	11.3
140.4	174.5	121.8	162.7	114.3
kw:	56.90 pr. 21 0	0.36 foll	37	
20 57 28.08	20 59 54.63	21 0 0.76	21 14 32.54	21 16 22.86
	21 0 47.35		15 20.54	17 10.04

α Cephei	16 51 -09	-48.26 +48.25 -01
α Heri	17 8 -07	48.33 48.23 -10 ✓
α Cygni	17 29 -01	48.13 48.19 +06 ✓
α Hypothet	17 41 -01	48.22 48.17 -05
α Spik	18 6 -25	48.04 48.13 -09
α Cygni	18 32 +04	48.14 48.09 +05 ✓
α Cygni	20 21 -23	47.73 47.92 -01
α Cygni	20 37 +09	48.07 47.89 -12 ✓
32 Cygni	20 49 -01	47.88 47.87 -01
61 Cygni	21 1 +04	47.68 47.85 +17
	18 51	-48.062
Proat R		0.090
Folly		0.101
		0.096

	μ Hercules	μ Sagitt	μ Lyrae	β Lyrae	ζ Lyrae	α Lyrae	δ Lyrae	ϵ Lyrae	ζ Lyrae	η Lyrae	θ Lyrae	ι Lyrae	κ Lyrae	λ Lyrae
1862 July 18														
26	-.01	-.03		+.06	+.07	-.03	-.18		-.03	+.03	+.01			-.04 +.09
Aug 6		+.03			+.09	+.07	+.17							
11				-.08	+.01	-.02		-.02	-.02		+.01			+.07
20				-.01	+.06				-.01		-.04			
21		.10							.00		-.01	+.04	+.01	
Sept. 2						-.01	.00		-.04			+.03	+.07	
4				+.05	+.04				+.01	-.02		-.04		
8		-.03												+.01
10												-.08	-.09	
11									.00	.00		-.02	+.06	+.12
16					+.08					+.03				
18	-.05													
23		-.09												
25	-.05	+.09	-.05											-.01
29	+.04											+.02	+.04	
Oct 7												-.09	.00	+.06
8			.00	+.05	+.05							-.07	-.08	-.09
18	-.01	-.04	-.03				-.01	+.03		+.07	+.07			
Nov 13										-.02	-.01	+.04	.00	

α Cygni 32 Aug. 61 Cygni 36 Cygni P Cygni 8 Cygni 16 Cyg.

-03 -01

+05 -05 ~~+1~~ +10 -03

+07

+02 +09 -05 +04 +05

+02 +10

+12 -01 +17

-02 -02 +04 -06

00 +06 +07 -03

+14 +08 +12 -09

-03 00

$$\begin{array}{r} +.010 \\ - .003 \\ \hline \end{array}$$

+010	-005	-046
-060	-050	-070
-007	-006	
+010	+046	
+049	+006	
+031	-005	
+022	+010	
+020	+027	
+020	-002	
+022	-023	
+064	+001	
<hr/>		
+018		

+009 12 day obs
 .001 11 night
