

KG
11365
48

A. 48

Meridian Circle
1864 Jan 11⁶ -
1864 March 3.^d
Sold by T. Groom & Co., Stationers, India Building, 82 State St., Boston.

KG 11365.48

A 48

	$\log A'$	$\log B$	$\log C$	$\log D$	$\log E$	$\log F$	$\log G$	$\log H$	$\log I$
Jan 11	9.8256	0.7549	0.8296	1.2804	0.7521	0.0283	79.3	0.760	5.75
" 21	9.8050	0.7485	0.9886	1.2443	0.6768	0.6167	49.0	0.799	5.56
" 31	9.7855	0.7395	1.0939	1.1854	0.6816	0.8404	24.0	0.880	4.53
Feb. 10	9.7673	0.7292	1.1672	1.1040	0.9869	0.9699	5.9	0.972	2.99
" 20	9.7506	0.7209	1.2177	0.9869	0.7579	1.0511	353.1	1.054	1.00
Mar 1	9.7353	0.7180	1.2506	0.8072	0.8918	1.1010	360.4	1.127	
" 11	9.7289	0.7136	1.2686	0.6695	0.8918	1.1268	329.8	1.190	
" 21	9.7070	0.7175	1.2730	0.7699	1.0335	1.1314	321.4	1.238	
" 31	9.6922	0.7266	1.2643	0.6114	1.1448	1.1156	313.1	1.252	

	43 Caphtt 85° 31'	214 Cam B 85° 27'
Jan 11	57.4	30.7
" 21	57.3	30.6
" 31	56.2	31.1
Feb 10	54.7	32.3
" 20		
Mar 1		
" 11		
" 21		
" 31		

	Intervals for Carlov	Time
2	+ 7.40	+ 1.97
"	+ 3.94	+ 3.48
"	- 0.29	- 0.26
"	- 3.77	- 3.13
"	- 8.00	- 7.06

KG 11365.48



With respect to the small star near Procyon I have employed
(from March 3 '64) Auwers notation. They come then in the order b, Procyon, c, a.

	n	c		
Jan 11.12	+0.291	+0.343		
14	+0.239	+0.343	9.378	9.537
16	+0.247	-0.329	9.3927	9.5172
21-27	+0.210	-0.329	9.3222	
Feb 4.5 ^a	+0.181	-0.329	9.2577	
5 ^b -13	+0.223	+0.015	9.348	8.176
13	+0.266	-0.015	9.567	9.4249
18	+0.363	-0.015	9.155	9.7599
19	+0.506	-0.015	9.050	9.7042
23	+0.415	-0.015	9.244	9.6180
24-March	+0.314	-0.015		9.4969

		Jan 14	16	21-27	Feb. 4.5 ^a	5 ^b -13	13	18	19	23	24-March
		W.	W.	W.	W.	C	C	C	C	C	
+45	0.724	-0.218	-1.265	-0.284	+0.202	+0.245	+0.342	+0.465	+0.394	+0.293	
10	0.648	0.222	0.242	0.278	0.167	0.203	0.284	0.405	0.328	0.243	
30	0.533	0.237	0.259	0.276	0.142	0.137	0.293	0.275	0.223	0.164	
20	0.452	0.260	0.274	0.284	0.065	0.080	0.116	0.168	0.135	0.098	
+10	0.390	0.291	0.297	0.302	+0.024	-0.32	-0.049	0.073	0.057	0.039	
0	0.347	0.329	0.329	0.329	-0.015	-0.015	-0.015	-0.015	-0.015	-0.015	
-10	0.306	0.377	0.371	0.366	0.054	0.162	0.079	0.105	0.089	0.071	
20	0.274	0.440	0.426	0.416	0.097	0.112	0.158	0.200	0.167	0.130	
30	0.257	0.520	0.501	0.464	0.146	0.171	0.227	0.309	0.252	0.198	
40	+0.248	-0.638	-0.616	-0.582	0.206	0.243	0.324	0.445	0.368	0.283	

50

1864 Jan 11th ME cont

mult. proj.

745

50 Lep. H	96 mch p. 100	4' Brown m.	4' Brown folly	at vision
4 34 40.4	33.6	10.8	12.0	57.5
35 2.5	41.9	22.9	24.5	0.7
24.3	50.6	32.2	34.1	4.3
41.4	57.6	43.4	44.2	7.1
36 6.0	6.8	54.3	56.3	11.1
114.6	190.5	163.6	171.1	80.7
4 35 22.92	4 40 50.10	5 44 32.72	5 44 34.22	5 48 41.14
				47 50.97

1864, Paull^m 20 E. cont.

FMS

ξ Bracm. η	1 Geminorum	7 Geminorum	40 Bracm. η	41 Bracm. η
1.3	59.7	48.6		
17.9	3.4	52.3	3.9	10.0
22.9	7.2	56.1	19.5	26.1
29.4	10.3	57.2	40.7	46.5
35.5	14.3	3.4	57.0	5.8
117.0	94.9	219.6		

5 51 2340 5 56 6.98 6 6 55.92 6 10 610

Pinnis

~~Sp. v. m.~~ right

<i>Styriacum</i> sp	<i>v. Germianum</i>	23 land H ₂	57 Germ H ₂	Wagen (2) v 1185
6 14 14.7	2.1	40.6	6 34 0.7	- 11.7
15 14.9	5.4	59.4	35 6.5	15.7
16 6.2	9.2	19.2	36 19.6	19.7
17 5.7	12.2	35.6	37 18.1	22.7
18 4.3	16.4	55.7		
49.8	45.3	210.5		
6 16 9.96	6 21 9.06	6 23 18.10	6 36 16.48	6 29
18 15 44.80			36 18.07	

Mk Errors

<i>Styriacum</i> 0.38	+13.01	0.56	-12.98	+0.3	1 st 6 th -13.085 (2.4.4)
<i>Plati</i> 0.30	13.16	112	13.05	+11	
<i>v. Citi</i> 0.36	13.20	236	13.23	-0.3	
<i>Plati</i> 0.36	13.35	255	13.27	+0.8	
<i>S. Anietis</i> 0.47	13.37	34	13.29	+0.8	Rate - 0.107
<i>7 Tauri</i> 0.51	13.41	339	13.37	+0.4	
<i>v. Cidani</i> 0.28	13.28	352	13.40	-1.2	
<i>0th Cidani</i> 0.31	13.45	45	13.43	+0.2	
<i>v. Tauri</i> 0.45	13.41	428	13.48	-0.7	4 23 -13.440 (3F)
<i>v. Oroni</i> 0.39	13.56	548	13.66	-1.0	

13.320 3.16

Pro R +0.159
 Jolly - +0.109
 +0.134

87 14 39.2 4. 13.1805

19.14 2 18.44
 13 15.39 1 8.89
 C 14.24 5.26
 17.05 1 1.05

1864 Jan 12th MWC

+ Caping on end

13 Gpm H	Brady 75	Polaris	4 Gm	216, Camille
		1 4 55.7	23.0	
		7 13.0	16.6	1 19 55.9
0 50 59.5	0 54 14.3	9 36.2	30.0	20 30.1
51 34.6	59.9	11 29.6	32.9	21 14.8
52 24.1	57 0.9	14 4.7	36.8	21 57.5
		139.2	149.3	156.3
0 50 56.51		1 9 27.84	1 17 29.86	1 20 33.42
0 50 49.18		36.83	14.49	13 20 9.59

85° 31' 46" S. 1.10852

85° 27' 51" 1.10138

A 125.63
 B +42.86
 C 56.30 -3.20
 D 56.03 38.57
 E 57.21 36.89

A 33.07 = 84.43
 B 32.64 -42.16
 C 33.24 +3.14
 D 34.72 +38.82

Add 6th this date ? 711.

upl. ref

Famine Sheet

Stamm	Gravim	for 750	for 729	of Endani
33.0	45.6	—	—	2 21.8
57.9	49.2	—	2.?	21.8 25.3
5.4	52.9	17.2	50.9	25.5 29.0
22.7	55.7	50.7	6.8	28.3 31.7
39.5	59.7	36.8	29.8	32.1 35.6
152.5	263.1			443.4
3 49 6.50	3 57 52.62	3 55 15.03	4 3	4 6 25.2428.68
	42.87	3 55 11.83		5 15.53

85° 11.69 1.07692

C 14.23 -2.72
 D 14.86 -35.86
 E 16.01 -80.79

B 26.17 +3.37
 C 25 -0.25
 D 27 3.03
 E 28 6.82

1864 Jan 12th M 2.

+ Lapinaga

21.0

29.9

39.1

46.1

56.1

192.2

/ 16 38.44

Clock Error

Alti	1 17	+0.30	+15.67	-15.70	+0.03
+ Endane	3 52	0.28	16.03	16.00	-0.03
O'Endani	4 5	0.31	16.02	16.02	0.00
	3 5		15.907		
Pro Rate			+0.109		
Toll	---		+0.122		
			+0.116		

1864 Jan 14th 2d East

next page

+

2 Androm	1 Pegasi	5 Laphrogian	4 Laphrogian	43 Capri
35.9	28.9	35.2	—	—
39.5	32.4	40.7	—	0 50 20.1
43.7	36.1	46.6	53.8	57 5.7
46.9	38.9	51.2	59.3	49.3
50.9	42.9	57.6	7.0	52 30.1
216.9	179.2	231.3		
0 1 43.38	0 6 35.84	0 29 46.26	0 48	0 57 2.85
1 22.46	14.84			50 48.60

Dec Jan 12th

B	2.96
C	2.50
D	2.73
E	3.21

1864 Jan 14^m cont. M East
 2 Pm β Andromedae when f. r. p.

Polaris			γ Capricorn			214 Cassiopeia			γ Perseus		
1	5	2.7			270.	291	1	20	12.7		
	7	19.7			35.7	324		21	1.2		31.6
	9	44.3			44.8	360		21	36.1		35.3
	12	34.1			52.1	388		22	20.8		38.1
	14	8.8			2.1	426		23	3.2		42.1
		109.8			161.7	178.9			74.0		
1	9	33.96	1	17	44.04	1	18	35.78	1	21	38.80
	9	35.00						14.46	13	20	10.18
										25	35.04
										24	13.74

β Perseus			β Andromedae		
		8.6			21.7
		12.1			28.7
		15.6			30.0
		18.3			33.5
		22.1			38.1
		76.7			149.0
0	56	15.34	1	2	29.80
	55	54.17			

35.05
 .04
 34.99
35.10
 43.45
 -0.26
 3.11
 7.00

Lubh 3^m

Heat fag

	Ch	Arctis	Blomin	Orion	Urae ann sp
	0.3	46.1	5.8		
6	3.9	50.0	[9.5]		
3	7.6	53.6	12.9		6 ¹⁶ 13.2
1	10.5	56.5	15.8		20 ¹⁷ 14.0
1	14.5	0.7	20.1		24 ¹⁸ 11.7
	36.8	206.9	64.1		
04	1 37 7.36	2. 0 53.38	6 3 12.82		6 ¹⁶ 17.98
74		1 59 32.26			18 ¹⁵ 45.01

8 86°36'11" 1.22731

A 12.87 - 52.83

B 17.66 - 56.34

C ~~17.90~~ 4.20

D ~~17.90~~ 50.70

E 154.23

1864 Jan 14 cont. *WZ*

23 Camelopard A	1 Geminorum	51 Capricorn A	Star in majoris	50 Draconis
6 22 25 50.6	8.5		26.5	
20 26 9.5	12.0	6 35 18.2	29.8	52.5
29.2	15.8	36 31.7	33.7	2.3
44.4	18.6	37 31.4	36.6	16.6
24 27 5.1	22.6		40.5	30.1
138.8	77.5		167.1	
6 23 26 27.76	6 30 15.50	6 36 27.69 17.96	6 39 33.42 11.57	6 51

 $\delta 87^{\circ} 14' 40'' 12.2$ 1.31508

B 27.63 + 1 9.43
 C 26.52 - 5.18
 D 28.91 - 1 2.49

next page

δ Gemini	25 Camel #	δ Gemini	δ Gemini	RT	Q
19.8	7 1 56.3		17.3		50.3
23.4	2 22.6	58.87	20.8		59.2
27.1	49.9	41.1	24.2		7.0
30.0	3 12.6	44.2	27.6		17.0
34.1	40.5	48.0	31.9		26.9
134.4	181.9		122.3		162.4
6 56 26.88	7. 2 48.38	7 10	7 12 24.46	7 17	8.48
	30.25		2.57		

Sept. 1918

748

7 Cammington

59.6
3.6
7.7
10.9
15.3
97.1

Progress

stat 35.5
36.2
42.1

Pollux

162
20.2
24.1
27.4

rept. last st.

156 lam B
7 43 [20.5]

7 19 742

7 32 35.24
32 13.28

7 37 23.90
1. 2.14

α Androm	0	1	0.52	21.44	21.40	+04	✓	$\sqrt{0.42}$ 21.420(3)
γ Pegasi	0	6	0.41	21.41	21.41	00	✓	
ϵ Pegasi	0	56	0.38	21.55	21.52	+03		
δ Ceti	1	18	0.31	21.63	21.54	+09		
γ Piscium	1	24	0.41	21.71	21.58	+13		Rate 0.117
δ Arieti	2	0	0.47	21.59	21.65	-06	✓	
α Cammington	6	39	0.29	22.14	22.23	-09	✓	$\sqrt{1.11}$
δ Gemma	7	12	0.47	22.36	22.30	+06	✓	716 -22.250(3)
Pegasi	7	32	0.37	22.23	22.34	-11	✓	Series - 08
Pollux	7	37	0.52	22.28	22.35	-07	✓	Progen - 02

3 28 + 21.834
Rec R₁ 0.122

23.80 7.60
99 3.79
32 -0.28
99 -3.41
7.68

35.25 +3.35
25 -0.25
18 2.02
30 6.80

No change in Rate

1864 Jan 16. ^W N. Vert.

mat. log

α Capricorn	β Ceti	δ Paurim	Br. 74	Ellipse mag. 74
5.2	7.1	57.5	—	18.2
11.9	11.1	3.4	—	24.3
16.6	13.9	6.2	0 42 57.6	31.1
23.1	17.8	9.7	43 21.2	35.9
29.1	21.3	13.1	48.1	42.9
35.9	27.2	19.9		151.4
0 33 17.18	0 37 14.24	0 42 6.38		0 48 30.28
	36 40.23			

Lee Jan 9 for intensity

A	53.46
B	54.01
C	<u>53.55</u>
	53.67

1864 Jan 16th M.W. Lind.

α Andromedae	43 Eph H	ϵ Picium	β Andromedae	Polaris
33.2		15.1	28.3	1 5 26.0
38.0	0 50 38.9	19.0	33.0	8 3.6
41.4	51 14.7	21.8	36.2	9 55.5
45.7	52 0.6	25.5	40.7	42 18.3
50.2	52 42.7	28.8	44.7	14 36.4
208.7		110.2	182.9	141.8
0 49 41.74	0 51 17.50	0 56 22.04	1 2 36.58	1 10 4.36
	50 48.09	55 54.15		1 9 53.35

Nov Jan 12

A	16.87
B	17.74
C	17.90
D	17.67

next page

	4 <i>Agrion</i>	2 <i>Coli</i>	214 <i>Camelop</i>	40 <i>Blacorn</i>	41 <i>Blacorn</i>
0	34.2	35.6	1 19 12.9	—	—
6	44.2	39.4	—	—	—
5	51.2	42.2	20 40.2	—	39.4
3	0.6	45.8	21 13.9	48.8	55.2
4	9.5	49.2	22 2.7	10.1	17.3
8	139.7	212.2	124.3		
36	16 17 51.94	1 17 56 42.44	1 20 36.86	6 11	6 11
35		1 17 14.43	13 20 10.72		

1864 Jan 16th M.W. Lind.

<i>Stellaria minor</i>	23 <i>Camelopard</i> H	1 <i>Geminorum</i>	5 <i>Alphid</i> H	2 <i>Camini</i> ang
6 16 16.9	6 23 59.5	15.5	6 35 26.3	33.4
17 16.3	24 20.5	19.3	36 44.9	37.3
18 3.0	35.8	22.2	37 42.0	40.2
19 7.5	56.8	26.0	38 56.6	43.9
	25 14.9	29.5		47.3
	187.5	112.5		202.1
6 17 12.72	6 24 37.50	6 31 22.50	6 37 47.21	6 40 40.42
18 15 45.34		29 53.86	36 17.77	39 11.57

$\delta 56^{\circ}36'10''$ 122729

A 13.24 + 5.624
 C 12.10 - 4.20
 D 12.30 50.70
 E 13.26 1 54.24

$\delta 87^{\circ}14'40''$ 131812

A 219.07
 B 47.16 - 1 9.44
 C 47.18 + 5.18
 D 47.39 1 2.49
 E 47.10 2 20.30

next page

<i>β Ceti</i>	0 37	-0.43	+27.58	-27.58	.00	✓	
<i>ε Pictoris</i>	0 56	0.30	27.59	27.62	-03	✓	0 ^h 55 ^m 32.377 (3.14)
<i>δ Ceti</i>	1 17	0.37	27.64	27.67	-03	✓	- 0.137
<i>γ Geminorum</i>	6 30	0.27	28.37	28.36	+01	✓	6 34 31.600 (17.144)
<i>Sirius</i>	6 39	0.42	28.43	-28.38	+05	✓	
	3 12		+27.922				
<i>Procyon</i>			.128				
<i>Gold</i>			.135				
			.132				

May Jan 21st M W

436 Apian H	Pncium	44 Apian H	Andromeda	Polaris
0 50 59	31.4	1 0 50.3	44.6	1 5 42.0
54.6	35.2	1 9.7	49.1	8 17.2
51 29.1	38.0	24.2	52.6	10 8.9
52 15.9	41.7	43.2	57.1	12 34.4
58.1	45.0	2 0.5	1.1	12 48.5
163.6	191.3	127.9	206.5	151.0
0 51 32.72	0 56 38.26	1 1 25.58	1 2 52.90	1 10 18.20
50 46.92	55 54.09			9 29.50

next page
+ pro X Chi section

	ψ Aphrogya	θ Chi	Paral	24 Canal 10 γ	η Pincim	χ Chi
0	50.3	51.8	1	19.29.8	50.7	32.7
2	0.1	55.7		144.06	54.7	36.6
9	7.3	58.4	20	56.7	57.6	39.3
4	16.5	2.1	21	33.0	1.4	43.1
5	25.5	5.5		144.06	4.8	46.7
0	99.7	173.5			169.2	198.4
20	1 17 7.94	1 17 58.20	1 20 53.99	1 24 57.84	1 43 39.68	
50		14.37	11.99	13.65		

21.2

21.0

26.0

1 43

S 85° 27' 50" E
 sec
 Dec 12

A 54.23

C 53.56

B 54.18

1864 Jan 21st M. W. tent.

1864phase

219 Cornhill Bn			50 Lafayette			a Pincini			d Arctis			d Racomi		
1	46	3.9		18.7	per	fall	39.5		8.9		10.4			
		34.2		30.7					13.2		18.4			
47	4.6			39.2	—	46.0		16.1		26.6				
		28.9		50.6				49.4		19.8	33.1			
48	2.2			1.6	—	52.9		23.8		42.5				
		73.8		140.8				51.8		131.0				
												Medium		
1	47	2.76	1	52	40.16	1	55	46.19	2	0	16.36	2	1	26.20
									1	59	32.16			

next page
S. L. L. L.
L. L. L.

<i>Persei</i>	<i>o Tauri</i>	<i>323 Aphel 13</i>	<i>e Cridani</i>	<i>o Persei</i>
14.2	9.1	3 21 37.5	10.5	52.1
19.8	12.8	22 33.9	14.3	57.7
24.1	15.7	23 17.1	17.2	1.6
29.5	19.4	24 9.8	20.7	7.0
34.7	22.7	25 0.4	24.2	11.9
121.3	79.7	98.7	86.9	130.3
3 15 24.26	3 18 15.94	3 23 19.74	3 27 17.38	3 34 2.06
3 14 40.30		22 35.44		

1864 Jan 21 U.W. ant

445

5 Unacmmi sp, Budawi

62 km mi Ber

for 479

of Eidami

5.9	20.2	23.1	45.3	53.1
21.8	24.2	52.9	8.1	57.0
38.8	27.0	23.2	25.0	59.7
52.9	30.7	47.0	46.9	3.3
11.3	34.2	19.8	7.2	6.7
130.7	136.3	166.0	132.5	179.8

3	49	38.14	3	52	27.26	3	58	21.20	4	4	26.50	4	5	59.96
				51	42.76		57	36.89					5	15.44

fuis

8 Eridani

23.2

27.1

29.9

33.6

37.0

150.8

3 37 30.16

Eridani

0 56 -0.31 +43.85 43.83 +03

Aletti

1 17 -0.30 43.97 43.87 +10

 η Eridani

1 24 -0.29 43.90 43.89 +01

 α Eridani

2 0 -0.27 43.93 43.96 -03

 γ Eridani

3 52 -0.39 44.11 44.19 -08

 δ Eridani

4 5 -0.36 44.18 44.21 -03

2 16 +43.992

Pro Rate
Jolly.

0.135

0.109

0.122

1864 Jan 25th M West.

ord: a

1864pha

XIV 217 sp	η Eridani	β Ursa m ^{tr} sp.	β Persei	δ Antares	4 pm
40.2	7	36.5	35.3	7.9	40.9
47.1		40.4	47.9	12.9	44.8
53.9		43.2	1.5	16.6	47.9
59.4		47.0	11.7	21.0	51.7
7.1		50.4	26.5	25.7	55.0
207.7		217.5	122.9	84.1	240.3
2 48 53.54	2 50 43.50	2 52 05.8	3 0 16.82	3 4 18.06	
				3 53.12	

2 Perce. Mont

next page

1864 phase	4 pm	5 Eidani	5 Eidani	57 Un m 13 sp	ε Eidani	Glennap H
9		44.8	3.3	3 20 4.8	21.2	1.6
8		48.6	7.1	21 30.3	25.0	14.8
9		51.3	10.0	23 0.5	27.7	20.8
7		55.1	13.6	24 12.1	31.4	28.8
0		58.4	27.0	25 47.7	34.8	35.9
3		258.2	51.0	95.4	140.1	106.9
6	3	9 51.64	3 10.10 10.20	3 22 55.08	3 27 28.02	3 31 21.38
2				22 3.86		

1864 Jan 28th (continued)

W5

Drawings	1 Gemini	2 Orion	3 Gemini	40 Orion
51.6	41.6	39.0	30.4	20.4
57.6	45.7	43.0	36.5	39.8
4.2	48.7	45.9	37.6	0.0
9.2	52.6	49.6	41.5	15.6
16.3	56.2	52.9	45.0	37.8
108.9	244.8	230.4	189.0	113.6
5 52 3.78	5 56 48.96	6 0 46.08	6 7 39.80	6 10 58.72
		5 59 50.90		

head page

	41 Orionis	8 Moni sp	1 Gemmaeum	23 Camelopard H	1 Gemmaeum
4	26.7	—	43.8	25.3	41.8
8	45.9	6 15 42.4	47.9	46.9	45.9
0	5.8	16 42.7	50.8	3.2	48.8
6	22.2	17 29.3	54.7	22.8	52.6
8	44.2	18 34.5	58.2	11.2	56.0
6	144.9		255.4	139.4	245.5
22	6 11 4.96	6 16 39.03 18 15 46.38	6 21 51.08	6 24 3.38	6 30 49.02 29 53.86

56366.2 1.22719

B 38.73 56.33
 C 38.50 - 4.20
 D 38.61 50.69
 E 40.28 154.22

1864 Jan 25th W West.

from

57 Lepus 14

Not very good
Lirius

& Persei

6 34 53.2

— 1

24.6

36 12.6

4.0

30.5

37 9.4

6.7

34.7

38 25.0

10.3

40.2

39 33.0

13.7

45.4

133.2

175.4

6 37 14.64

6 40 6.91

3 15 35.08

36 16.93

39 11.55

S Arctis	3 4	-0.28	54.66	54.58	+08
r Orionis	6 0	0.28	54.90	54.90	00
r Gemma	6 30	0.28	54.88	54.95	-07
Lirius	6 39	-0.41	54.95	54.97	-02
	5 33		54.848		
Per Raa			0.109		
Joly "			0.106		
			0.108		

6.73 - 6.97

82 - 3.48

96 + 0.26

713 + 3.13

+ 4.06

1864 Jan 27th W. West

next page

J.H.S.

 α Andromedae γ Pegasi δ Capricorni α Capricorni β Ceti

14.3

7.2

13.6

36.9

38.7

15.6

11.3

20.1

43.6

42.8

21.6

14.1

24.6

46.5

45.7

25.7

17.8

30.5

54.9

49.5

29.7

21.3

36.3

6.7

53.0

109.9

71.7

125.1

184.6

229.7

0 2 21.98
1 22.29

0 7 14.34
6 14.71

0 30 25.02

0 33 48.92
32 49.52

0 32 45.94
36 46.10

1864 Jan 27th MW cont

JHS.

δ Pictoris	γ Andromedae	40 Capri H	β Andromedae	δ Lacert
	4.8		59.9	1 5 53.5
35.3	9.6	0 51 7.6	4.6	8 27.5
38.0	13.1	43.8	8.0	10 18.3
41.7	17.7	52 29.9	12.3	12 44.4
45.0	21.9	53 12.4	16.4	14 59.9
	67.1		101.2	203.6
0 42	0 50 13.42	0 51 46.74 50 45.22	1 3 8.24	1 10 26.72 9 20.95

Wed Jan 12.

A 4657 - 1 25.53
 B 4704 - 42.86
 C 4700 + 3.10
 B 4637 + 38.57

M.L. page

γ Capricorn	δ Alt.	γ Piscium	δ Persi.	γ Piscium
5.6	—	6.2	30.5	15.3
15.8	11.1	10.1	36.3	19.1
22.8	14.0	13.1	40.4	22.0
32.1	17.6	16.8	45.7	25.6
40.8	21.0	20.2	50.7	28.9
117.1		66.4	203.6	110.9
1 17 23.62	1 18 14.21	1 25 13.28	1 30 40.72	1 35 22.18
	17 14.29	24 13.36		22.24

14.23 - 6.77
 22 - 3.38
 25 + 0.25
 24 + 3.04
 + 6.85

1869 Jan 27th J.W. cont.

246,

Ceti

X Ceti

219 Camel Bp

p. Arctis

(Ad 2⁵)

50 Capripaym

38.6	46.2	1 46 18.8	59.9	31.8
42.5	<u>50.0</u> 49.0	48.3	3.8	43.9
45.5	52.8	47 19.8	6.2	52.6
49.2	56.5	—	10.4	4.1
52.7	59.9	—	14.0	15.0
228.5	264.4		74.8	147.4
1 38 45.70	1 43 <u>53.08</u> 52.88		1 48 6.96 47 9.13	1 52 53.48

Ad 2⁵?

next page

δ Pictoris	μ	δ Leo m 13 sp	ϵ Eridani	δ Camelopardis	δ Persi
52.6	—	—	—	11.4	7.7
—	56.2	—	—	19.8	13.2
59.3	—	3 23 7.6	32.8	28.7	17.2
—	2.9	24 16.2	36.4	33.6	22.5
6.1	—	25 53.2	39.8	40.8	27.4
				131.3	58.0
1 55 59.54		3 23 1.54 15 22 5.00	3 27	3 31 26.26	3 34 17.60

87° 44' 63" ⁴⁸⁷ 140560

B +129.79
C 127 -6.38
D 184 1 16.30
E 177 2 57.93

1864 Jan 27th MW cont

ϵ Eridani	\times prec η Tauri	η Tauri	δ Persei	δ Ursae min sp
36.7	3 40 10.6	16.4	29.5	21.5
42.6	14.8	23.0	33.9	36.1
45.5	17.9	[?]	37.2	55.3
49.0	22.0	29.8	41.3	8.6
52.0	[?]	33.5	45.2	27.7
227.8			187.1	151.2
3 37 45.56		3 40 26.20 39 24.22	3 46 37.42	3 49 54.24

26.20 - 7.30
 25 - 3.55
 + 0.27
 28 3.28
 09 7.29

	γ Sridani	62 Urs mi B or	δ 779	α Sridani	γ Tawzi
1.5	35.8	3 57 39.7	0.6	8.7	58.3
1.1	39.7	58 8.9	23.3	12.5	2.2
5.3	42.5	39.9	39.8	15.5	5.1
8.6	46.2	59 3.5	1.4	19.0	8.9
7.7	49.7	35.9	21.9	22.2	12.3
1.2	213.9	127.9	87.0	77.9	86.8
4.24	3 52 42.78	3 58 37.58	L1 4 21.40	L1 6 15.58	L1 13 5.36
	57 42.67	15 57 37.95		5 15.37	

1864 Jan 27th W.W. Grant.

145

2 Ursae min sp	✓ Gemmorum	23 Canabop H	51 Cephei H	2 Cassio major
6 14 52.2	48.8	30.4	6 34 58.1	
15 48.3	52.9	57.6	36 16.2	8.7
16 49.8	55.8	6.9	37 13.1	11.6
17 36.1	59.6	27.4	38 28.7	15.3
18 39.4	3.1	45.9	39 38.4	18.7
225.8	220.2	162.2	1 154.5	
6 16 45.16	6 21 56.04	6 24 8.44	6 37 18.90	6 40 11.81
18 15 46.89			36 16.54	39 11.54

A 11.72 +6.98
 B 11.82 +3.48
 C 11.86 -0.26
 D 11.83 -3.73

best copy

3 or two from notebook

	κ Lani major	50 Draconis sp	ϵ Lani major	* foll ϵ Lani	δ Geminorum
	40.6	12.7	—	39.4	58.1
7	45.1	25.8	—	43.7	2.1
6	48.3	39.9	—	47.0	[5.2]
3	52.4	50.8	23.6	51.0	8.9
7	56.5	5.8	27.4	54.8	12.5
	242.9	135.0		235.9	
51	6 45 48.58	6 51 39.10	6 54 19.84	6 54 47.18	6 57
54			53 19.28		

A 17.78 - 7.62
 B 19.89 - 3.71

1864 Jan 27th MW. cont.

48.

Law major	25 Camelopard H	1 Geminorum	1 Geminorum	* pro 1 Law m.
32.0	7 2 37.8	124	55.8	2 25.2
36.0	7 3 7.6	16.3	59.7	19.7
39.0	29.0	19.5	2.7	32.8
42.7	56.7	23.2	6.7	—
46.2	4 22.9	26.6	10.2	—
195.9	154.0	98.0	105.1	—
58 39.18	7 3 30.80	7 11 19.60	7 13 3.02	7 19
57 36.72	2 30.07		12 2.63	

γ Canis major	Castor	Procyon	Pollux
38.1	49.9	6.9	54.9
42.4	—	10.7	59.3
45.7	57.7	13.7	2.4
49.7	—	17.2	6.4
53.5	6.0	20.5	10.2
229.4	—	69.0	183.2

γ 19 45.88	γ 26 58.10	γ 33 13.80	γ 38 2.64
γ 25 57.71	γ 32 13.45	γ 37 2.24	

A	56.10	56.06
B	57.99	58.35
C	57.90	

α Andromedae	0 1	-0.26	59.43	59.33	+10	\checkmark	$0^h 4^m - 59.385$
β Regulus	0 6	-0.29	59.34	59.34	.00	\checkmark	
β Ceti	0 37	-0.42	59.42	59.39	+03		
δ —	1 17	-0.36	59.56	59.46	+10		
γ Rigel	1 24	-0.29	59.43	59.46	-05		
ν —	1 35	-0.31	59.53	59.50	+03		
β Antares	1 47	-0.27	59.56	59.52	+04		
γ Fawcett	3 39	-0.27	59.71	59.60	-09		
γ Eridani	3 52	-0.39	59.72	59.78	-06		
δ Eridani	4 5	-0.36	59.85	59.76	+09		
δ Alani maj	6 39	-0.41	59.86	60.04	-18	\checkmark	
ϵ —	6 53	-0.49	60.07	60.07	.00		
ν —	6 58	-0.41	60.05	60.08	-03		
δ Glomion	7 12	-0.27	60.12	60.10	+02		
Castor	7 26	-0.26	60.13	60.13	.00		
Procyon	7 32	-0.31	60.04	60.14	-10	\checkmark	$7^h 16^m - 1 0.047$
Pollux	7 37	-0.26	60.14	60.15	-01	\checkmark	Sirius -08 Procyon -02
	4 2		59.762				
Pending Rate			0.106				
Following			0.110				
			0.108				

Rate -0.092,

1864 Feb 4 M Wed

1864

Polaris	η Pictoris	α Antares
1 3 43.1	27.2	—
5 33.9	31.1	—
7 59.3	32.0	52.3
10 16.1	37.7	[56.2]
	51.2	[0.8]
	171.2	

1 5 44.27	1 20 34.24	1 55-
9 17.85	24 13.48	

η Pictoris -0.29 -3 39.54

+ H₂ 14.8

3 58° 35' 27" 8.34016

A 44.23 -4 31.87

B 43.55 -2 15.75

C 44.03 +10.13

D 45.27 +2 2.17

~~Polaris~~ 1864 Feb 5th 24 West

775.

δ Andromedae Alapitajan

γ Capripigae

β Andromedae

Polaris

next page

η Pictoris
at 100

37.6

0.2

41.7

23.4

1

1

9.4

42.0

7.0

49.4

28.2

3

46.0

45.2

11.8

55.0

31.5

5

36.6

49.4

18.1

1.9

35.8

8

2.9

53.1

24.1

8.4

39.8

10

17.2

227.3

61.2

156.4

158.7

112.1

23 57

45.46

0

29

12.24

0

44

55.28

0

58

31.74

1

5

46.42

0

1

22.19

7

17.04

1864 Feb 5th M West amt.

HS

β Arietis	γ Andromedae	α Arietis	ξ^2 Ceti	36 Capri #
25.1	49.3	47.8	13.2	13.5
29.2	51.6	51.9	17.0	25.8
32.1	56.2	55.0	19.7	34.6
35.9	3.0	58.5	23.3	36.5
39.5	7.3	2.4	26.7	57.7
161.8	172.4	215.6	49.9	178.1
1 43 32.36	1 51 58.48	1 55 55.12	2 17 19.98	2 21 35.62
47 8.92		59 31.93	20 58.99	

next page

pr 527	57 un in B of	ϵ Eridani	6 Comae Ber	δ Persi
8.1		49.1	33.8	30.4
32.5	3 17 13.3	53.0	42.0	36.1
49.7	18 45.4	55.7	46.0	40.0
11.9	19 55.6	59.3	56.0	46.5
33.4	21 28.6	2.6	3.3	50.3
135.6		219.7	183.1	202.3
2 24 51.12	3 18 38.28	3 22 55.94	3 26 48.62	3 29 40.46
28 29.77	15 22 9.58			

δ Lacus Jan 27

B	38.09
C	39.07
D	39.29
E	<u>36.67</u>

1864 Feb 5th cont. M.W. L.

Eridani			η Tauri			Zeta star			θ Draconis		
5 th Perseus			5 th Perseus			Gr 266					
1.8		52.4			41.8	3	52	33.2			30.9
5.6		56.9			48.9		53	6.4			37.5
8.4		0.4			48.9			30.0			44.6
12.1		4.3			52.8		54	1.9			49.5
15.5		8.2			56.5			31.6			56.9
43.4		126.9			245.9			103.1			219.4
3	33	8.68	3	42	0.38	3	35	49.18	3	53	32.62
					39			26.09			43.88

Final
not final

β Orionis	ϵ Orionis	51 Capricornus	α Canis majoris	η Perseus
18.4	37.4	6 30 13.4	27.7	29.8
22.3	41.1	31 31.2	31.7	33.8
25.1	43.9	32 27.8	34.5	36.6
26.7	47.6	33 42.4	38.2	40.3
32.0	50.9	34 52.6	41.8	43.6
126.5	220.9	167.4	173.9	184.1
5 4 25.30	5 25 44.18	6 32 33.48	6 35 34.78	1 20 36.82
8 2.09	29 20.85	36 14.88	39 11.48	24 13.44

The observations of Feb 5th must

be divided into groups and examined

The change seems to have taken place between

β and α Aquiles but this is not

Certain

α Canis	3.34	-0.02	3.32	3.32
η Perseus	3.34	-0.02	3.32	3.32
β Orionis	3.34	-0.02	3.32	3.32
ϵ Orionis	3.34	-0.02	3.32	3.32
α Canis	3.34	-0.02	3.32	3.32

of 1 4

3 36.92

2 13

3 36.88

3 10

3 36.84

3 10

+ 0.108

July

+ 0.103

+ 0.102

1864 Feb 8 24 West.

145

Polaris	ϵ Capricorn	ζ Ceti	36 Capricorn	γ 527	37
1 4 2.4	9.2	20.7	20.3	16.2	
6 35.4	18.8	24.5	32.8	40.4	
8 27.1	26.0	27.2	41.7	58.0	
10 52.4	34.6	30.9	53.7	20.7	
13 8.6	53.3	34.2	4.8	41.3	
125.9	131.9	137.5	152.3	176.6	
1 8 37.18	2 17 26.38	2 20 27.50	2 24 42.46	2 27 59.32	
9 14.46		20 56.95		28 29.34	

fin

51 Druan Lp

-18.6

~~2 Cami ang~~

Elam angin

51 Uplu H.

Elam ang

2	33	19.0	[]			42.5
4	34	38.9	39.3	58.5		46.8
0	35	34.7	42.1	13.2		50.0
7	36	50.3	45.9	23.6		56.2
3	38	0.4	49.5	38.7		57.9
6		143.3				251.4
32	6	35	40.66	6	38	42.43
4		36	14.22		39	11.46
				6	50	
				6	52	50.28
					53	19.18

5 Ceti	+0.02	29.63	2 21	+29.57	+08
Elam ang	-0.08	29.11	6 39	29.05	-06
E	-0.14	29.04	6 53	29.02	-02

29.193 518

Per R. +0.103

Jelly +0.105

0.106

Elam ang

42.92

42.92

42.36

42.43

1864 Feb 10^m 2nd West

14.5

Polaris	β Aurigae	δ Aurigae	γ Eridani	β Monocerotis
1 4 4.8	44 37.2	28.3	17.2	19.3
6 35.5	111.0	32.8	20.8	31.6
8 26.7	144.1	36.0	23.7	45.5
10 53.2	158.1	39.8	27.2	55.8
18 10.8	51.7	130.8	30.6	10.2
133.0	222.1	180.7	119.5	162.4
1 8 38.60	1 46 44.42	2 41 36.14	2 49 23.90	2 50 44.48
9 12.79	47 8.93			

rest pap

	α Cent	β Persi	δ Arctis	12 Eridani	+ pro ζ Eridani
3	40.7	48.3	21.2	46.6	25.5
6	44.5	53.1	25.2	51.0	29.3
5	47.3	51.8	28.5	54.2	32.0
8	50.7	1.7	32.1	58.4	35.5
2	54.2	6.1	35.6	2.2	39.0
4	237.4	166.0	143.1	212.4	161.3
48	2 54 47.48 55 11.58	2 58 57.20	3 3 28.62 52.87	3 5 54.48	3 8 32.26

1864 Feb 10th St West

WAS

S Eridani

 α Persei σ Tauri γ Ursa minor

74214

323 Cephei

43.9

5.0

0.2

12.1

47.7

10.5

4.0

23.1

50.5

14.9

6.8

36.8

54.0

20.5

10.3

43.5

57.3

25.7

14.0

56.3

253.4

76.6

35.3

169.8

Min ?

3 21 57.1

3 8 50.68 3 14 15.32 3 17 7.06 3 20 33.96

1864 Feb 11th 2nd West

Polaris

1 6 40.8
 8 31.5
 11 1.1
 13 14.5

1 8
 43.14
 9 12.05

Clock Errors Feb 10.

β Arietis	47	+0.06	-24.45	-24.33	-12
α Uli	255	0.00	24.10	24.21	+11
δ Arietis	34	+0.06	24.19	24.19	00
	235		-24.247		
Per R			+0.109		
John			0.106		
			0.108		

42.63

45.35

41.63

42.97

1864 Feb 12th M. West

Polaris	Andromeda	α Andromeda	ξ Ceti	δ Andromeda
1 4 5.5	6.5	5.0	30.9	33.5
6 42.6	11.8	9.2	34.8	37.9
8 32.5	15.2	12.2	37.6	41.0
10 58.4	20.1	16.1	41.1	45.1
13 13.8	24.5	19.8	44.6	48.7
152.8	76.1	62.3	169.0	206.2
1 8 42.56	1 55 15.62	1 59 12.46	2 20 37.80	2 41 41.24
9 11.36		51.82	56.89	

head page

	δ Leta	β Persi	δ Mier	12 Eridani	5 Eridani
5	45.7	53.8	26.4	51.9	48.9
1	49.5	58.3	30.4	56.2	52.8
0	52.2	1.9	32.4	59.4	55.6
1	55.9	6.7	37.1	5.5	59.2
2	59.2	11.0	40.7	7.3	2.5
2	262.5	131.7	165.0	178.3	219.0
24	2 54 52.50 55 11.55	2 59 2.34	3 3 33.60 52.83	3 5 59.66	3 8 55.80

1864 Feb 12^m 24 W.A.

5 Tauri			1 Ursae m. sp.			2 Tauri			53 Eridani			XVI 1820p		
5.3			17.3			42.9			32.8.			42.9		
9.1			28.1			46.9			36.7			42.9	1	8
11.9			39.7			49.7			39.6			21.3		9
15.5			49.0			53.5			43.3			16.7		
18.9			1.5			56.8			46.7			37.1		
60.7			135.6			249.8			199.1					
3	17	12.14	3	20	39.12	4	27	49.96	4	31	39.82			
							28	9.05						

50 hphm 16

4 10 30.7
 18.1
 11 10.8
 32.5

α Arietis	2 0	+0.08	-19.28	+19.23	-05	✓
ξ^c Ceti	2 21	+0.02	19.07	19.19	+12	
α —	2 55	0.00	19.05	19.13	+08	✓
δ Arietis	3 4	+0.06	19.17	19.11	-06	✗
α Tauri	4 25	+0.05	19.04	18.96	-08	✓
	2 58		-19.122			
Per R	0.106					
Jolly	0.110					
	0.108					

1864 Feb 13th

M. West

East.

Polaris

α Persei

σ Tauri

323 Ceph B

Clamnet

1	4	7.9		12.3				53.9
	6	43.3		17.5				1.1
	8	35.1		23.0				9.1
	11	0.7		27.1	14.7			14.9
	13	14.5		33.1	17.4	3	22	52.2
					21.3		23	47.8
		101.5		113.0				23.3
								102.3

1	8	44.30	3	14	22.60	3	17	14.42	3	24	6.98	3	30	846	3
	9	10.73			39.74					3	22	27.62			

886° 12' 54" W 1.18044

0 6.69 -45.97
 2 7.26 -1 42.94

1864 Feb 15th in East

next page

Le note 2012 in v. 1.

Pyramid	1' Eridani	for 750	62 km in Bp	1' Eridani
39.1	32.4	3 53 [37.0]		
43.0	38.7		5 57 17.0	
46.8	39.8		39.8	12.2
49.8	42.1	55 34.4	9.9	18.1
54.0	46.2	56 19.0	39.2	18.9
232.7	196.2			
3 36 46.54	3 57 39.24	3 54 56.36	3 57 41.96	4 5 12.03
	42.31	3 55 3.79	15 57 41.91	5 15.02

55°11'77 1.07705 83°20'55 0.92612

A [51.03] + 19.83	A 41.49 - 57.71	6.74
-	B 41.09 - 28.81	3.37
-	C 41.95 + 2.15	0.25
B 18.53 - 35.87	D 42.93 + 28.93	3.03
E 58.18 - 120.82		6.82
		11.95
		12.07
		12.08

Sept 10th M East

δ Tauri	γ Draconis	+ Dec 0° 41'	δ Tauri	+ Dec 0° 45'
32.2	—	15.8	58.7	4.9
35.8	—	19.0	2.3	8.3
39.5	5.9	22.4	5.8	11.9
42.3	13.4	25.3	8.6	14.6
46.4	20.4	29.2	12.8	18.6
196.2		111.7	89.2	58.3
4 20 39.24	4 22	4 25 22.34	4 28 58.4	4 30 11.66
42.48			8.96	

22.48

36

15

30

43

11.58

11.64

11.65

11.68

11.83

head page

55 Eridani	XVI. 182 sp	50 Lepus H	+ Dec 1° 52'	Elonamini sp
4.9	48.5		20.9	30
5.3	51.9	41.8	24.1	32.8
9	55.7	54	27.7	56.2
16	58.4	22.9	30.5	19.5
86	2.4	47.1	36.5	24.4
3	216.9		137.7	153.9
66	4 31 55.38	4 33	4 42 27.54	4 59 54.78
			16 59	54.93

27.58

44

45

50

73

1864 Feb 18th in East

<i>Argus</i>	β Minin	α Orionis	α Minin	ξ Draconis
28.5	52.0	51.9	40.8	55.0
33.0	55.4	55.5	44.2	1.8
38.2	59.2	59.0	47.9	7.2
42.2	1.9	1.9	50.6	13.5
47.9	5.7	5.8	54.5	19.6
189.8	174.2	174.1	238.0	97.1
5 6 37.96	5 7 58.84	5 10 58.82	5 47 47.60	5 51 74.2
41.46	8 1.90		50.69	

ⁱⁿ
 Feb 18 Clock Errors

γ Eridani	3 52	-0.10	-3.17	+3.19	+0.02
δ —	4 5	-0.06	3.05	3.17	+12
ϵ Tauri	4 21	+0.10	3.14	3.14	.00
κ —	4 28	+0.09	3.03	3.73	+10
λ Aurigae	5 7	+0.35	3.15	3.06	-0.09
β Orionis	5 8	-0.07	3.13	3.05	-0.08
α —	5 48	+0.04	3.05	2.98	-0.07
	4 41		-3.103		
Acc R			.110		
July			.102		

1864 Feb 19th M East

Polair	Andromeda	Chi	Tauri	Ononis
	24.6	88	52.4	54.9
	29.1	12.0	55.9	58.1
	34.1	15.8	59.8	1.9
1 13 21.3	37.7	18.7	2.4	4.4
	42.9	22.5	8.6	8.3
	168.4	77.8	177.1	127.6
4 8 46.18	1 55 33.68	2 36 15.56	4 54 59.42	5 8 1.52
9 6.96		16.32		1.88

8 58 55.25" 1.64 03

2 4 35.12

Star for comet

next page

γ Orionis	δ Orionis	Arcturus (A) v. 721	Polaris v. 175	α Orionis
33.3	58.3		16.2	43.5 57.0
36.4	1.7	20.7	19.5	46.8 5.8
40.1	5.3	24.1	22.9	50.5 4.5
42.8	7.9	27.0	25.7	53.9 7.5
46.6	11.9	30.9	29.7	57.1 11.7
199.2	85.1		114.0	257.8 84.5
5 17 39.84	5 25 5.02	5 29	5 32 22.80	5 47 50.36
	5.44			50.67

1864 Feb 19th M East945
25 Lunar H

7	1	32.0
		56.3
	2	26.2
		47.9
	3	17.7
		187.1
7	2	26.42
		28.45

γ Ceti
 β Orionis
 δ —
 α —

P.
to.
July

236	+0.01	-0.75	+0.71	-0.4
58	-0.09	-0.45	0.43	-0.2
525	-0.02	-0.44	0.41	-0.4
548	+0.05	-0.26	+0.36	+1.0
444		-0.475		
		+0.109		
		0.118		
		0.113		

1864 Feb 23rd M East

Polaris	Antar	Alt	Geminorum	Orionis
1 6 28.6	35.7	15.3	57.0	54.5
6 43.0	38.5	18.7	0.8	58.0
9 9.1	42.4	22.3	4.5	1.8
10 56.2	45.3	25.0	7.5	4.4
13 35.7	49.7	26.9	11.7	8.5
17 26.4	21.0	110.2	81.5	129.2
1 8 58.48				
1 8 57.58	1 59 42.20	2 55 22.04	5 56 4.30	6 0 1.44
9 4.03	59 31.66	11.38		5 59 50.61

1864 Feb 23rd W East Ant

79.5

40 Draconis

41 Draconis

8 Urae minoris

23 Camelopardalis

51 Alpha 74

3.5
18.5
39.1
58.3

47.1
9.1
25.3
55.4
4.6
131.5

6 14 15.4
15 21.1
16 6.7
17 [6.3]
18 4.6

37.5
56.7
16.9
31.7
53.6
198.4

6 33 54.1
* 35 9.4

6 10

6 10 26.30

6 16 11.02
18 15 53.51

6 23 15.28

6 36 13.31
9.57

+ This is a false
break and is 34.91
See nth. book and
sheet.

66°36' 1" 2 1.22694

57°45'50" 2 1.31655

A 14.87 + 152.73
B [10.01] + [56.29]
C 10.90 + 4.20
D 11.76 + 50.68
E 9.53 + 154.13

A 2 17.21
B 7 50.57
1 9.51

rest of page

Castro m		Prayon		Palkup		E. Kaps		X Gammurum	
0.4		17.7		5.2				15.7	
	4.8	21.0		9.2				19.5	
8.7		24.5		13.2		48.2		23.7	
	12.2	27.2		16.3		50.9		26.7	
16.4		31.2		20.8		58.5		31.1	
		121.6		64.7				126.7	
7 26 8.53		7 32 24.32		7 37 12.94		7 43		7 55 27.34	
25 57.58		13.34		2.13				12.66	

8.30 8.74

8.41 8.65

8.50

8.37 8.65

Σ Ayns

53.3

57.7

2.4

5.9

11.0

130.3

7 59 206

Feb 23

α Anketis	2 0	+0.16	+10.70	-10.56	+ .16
α Leli	2 55	+0.07	10.67	10.64	+ .03
γ Orionis	6 0	+0.09	10.92	10.96	- .04
Castor	7 26	+0.25	11.20	11.10	+ .10
Pollux	7 32	+0.03	11.01	11.11	- .10
β Geminorum	7 37	-0.21	11.02	11.12	- .10
	7 55	+0.21	<u>11.11</u>	<u>11.16</u>	- .05
	5 55		+ 10.947		
Pro R	0.118				
Soly	<u>0.089</u>				
	0.104				

1864 Feb 24th M East

Castor	Procyon	Pollux	# 156	Lat	Long
19.8	19.8	7.6	7	43	11.9
23.2	23.2	11.4			15.2
26.8	26.8	15.5	44		23.4
29.5	29.5	18.5			27.1
33.3	33.3	23.0	45		30.7
102.6		76.0			162.3

7 26 10.62	7 32 26.52	7 37 15.20	7 44 20.46
25 57.57	13.33	2.13	10.86

Feb 24

Castor	7 26	+0.15	13.23	-13.21	+0.2
Procyon	7 32	0.01	13.20	13.22	-0.2
Pollux	7 37	0.15	13.22	13.22	.00
	7 32		13.217		
Procyon			0.089		
Pollux			0.092		
			0.093		

10.90

10.44

10.81

10.25

10.90

10.40

10.84

1864 Feb 25th 2nd East

Geminorum			Cassiopeia			25 Land 14			Aurum			8 Geminorum		
13.1			47.1			7	1	48.3	27.6			10.4		
16.7			50.7				2	14.8	31.1			14.4		
20.7			54.2				2	42.5	34.9			18.1		
20.5			57.0						37.7			21.2		
27.6			1.0						41.7			25.4		
101.6			210.0						173.0			89.9		
6	56	20.32	6	57	54.00	7	2	40.72	7	10	34.60	7	12	17.98
					38.46			27.69						2.45

82°39'50" 62. 0.89366

A 40.66 +52.36

B 40.94 +26.14

C 40.55 -1.95

Condensed up

mi 67	Procyon	Polaris	156 Cam 13	X Guinorum
43.1	22.1	9.9	7 43 12.5	20.2
52.5	25.6	13.7	58.2	24.0
2.5	29.0	17.8	44 25.4	28.1
9.7	31.8	20.9	53.7	31.3
20.4	35.8	25.3	45 33.2	35.6
128.2	144.3	87.6	175.0	139.2
7 17 1.64	7 32 26.86	7 37 17.52	7 44 23.00	7 55 27.84
	13.32	2.11	10.70	12.45

1. Lavis	6.58	-10	+15.44	-15.50	-06
2. Guin	7.12	+11	15.64	15.52	+12
Procyon	7.32	+01	15.55	15.55	.00
Polaris	7.37	+15	15.56	15.56	.00
X Guinorum	7.55	+15	15.54	15.59	-05
	7.27		15.546		
Pro R			0.097		
Tally -			0.102		
			0.100		

1864 Feb. 26th M East

448

40 Draconis (bnd)	41 Draconis	42 Draconis	43 Geminorum	23 Lambda
				45.2
		6 15 29.1	9.7	3.3
		16 14.4	13.9	24.0
	6 10 58.4	17 14.1	16.4	09.3
6 11 54	11 12.2	18 11.0	20.5	0.1
				111.9
		6 17 17.61	6 21	6 23 22.34
		18 15 54.56		

36° 36' 0" 75 1.22692

A 18.27
 B 17.61
 C 18.60
 D 19.76

γ Geminae	Aug + 1° 1431	Aug + 1° 1443	57 Cephei H	Sirius
4.5	49.8	48.5	6 34 1.4	
7.9	53.0	51.9	35 11.8	25.7
11.8	56.5	55.5	36 26.4	29.4
14.5	59.3	58.2	37 22.1	32.2
18.7	3.0	1.8	38 43.4	36.4
57.4	221.6	215.9	105.1	
6 30 11.48	6 30 56.32	6 31 55.18	6 36 21.02	6 39 29.18
29 53.54			8.45	11.22

56.48

56.34

56.35

56.30

56.23

55.18

55.24

55.25

55.20

55.03

29.18

.14

.07

34

July 26th In East cont

88

<i>Plan. major</i>	<i>50. D. major</i>	<i>Plan. major</i>	<i>5. Gemm. major</i>	<i>Plan. major</i>
5.6	33.4	29.5	15.7	49.5
9.0	49.0	33.2	19.2	53.1
12.7	59.3	37.4	23.1	56.7
15.4	13.5	40.4	26.1	59.6
19.5	26.6	44.8	30.1	3.6
62.2	183.8	185.3	114.2	222.5

6	48	12.44	6	51	0.76	6	53	37.06	6	56	22.84	6	57	56.50
								18.92						38.45

next page

Hy + 2° 1550

Orbicularis

Hy + 0° 1854

Hy + 1° 1743

Hy + 1° 1749

33.2

4.6

25.8

11.0

36.3

8.2

28.4

14.4

46.1

40.1

12.2

32.6

18.0

49.8

42.6

15.3

35.1

20.8

52.2

46.6

19.5

39.1

24.6

56.0

49.8

59.8

161.4

86.4

6 59 39.76

7 3 11.96

7 6 32.28

7 8 17.76

7 8 49.36

49.44

55

20

23

Then the next one is the same as the first one but with the same results

<i>Uminorum</i>	<i>+ pro S. Gauri</i>	<i>S. Gauri</i>	<i>vii 67</i>	<i>Star per Gauri</i>
29.9	29.4	13.1	45.5	46.5
33.4	32.8	16.7	51.8	50.6
37.2	36.9	20.6	4.7	53.5
40.1	39.8	23.5	12.3	
44.0	43.9	27.8	22.8	
184.6	182.8	101.7	140.1	
7 10 36.92	7 11 36.56	7 12 20.34 2.44	7 17 4.02	7 18

2nd star 46.5
3rd star 50.6
4th star 53.5

Transferred to the following pages

next page

η Lacus. $\alpha\gamma$	Aug + 2° 1625	Aug + 1° 1833	Castor	α Anon
			m. full	
55.7	0.9		—	
59.5	4.1		—	
3.6	7.6		—	15.2
6.7	10.4		—	18.3
11.1	14.2		23.4	21.6
136.6	37.2			
7 19 3.32	7 24 7.44		7 26	7 27

Feb 26^m

γ Luminous	6 30	+0.08	+18.02	17.90	+12
Serius	6 39	-0.11	17.85	17.92	-0.07
Elanis	6 53	-0.19	17.95	17.94	+0.01
γ —	6 58	-0.10	17.95	17.95	+0.00
δ Luminous	7 12	+0.05	17.95	17.97	-0.02
Pegusa	7 32	+0.02	18.01	18.01	+0.00
Altair		+0.15	18.11		
\times Luminous	7 55	+0.15	18.11	18.06	+0.05
η Cassi	8 25	+0.10	18.00	18.10	+0.10
γ 15			+17.90		
Procy			0.102		
Golf			0.107		
			0.104		

14.95

15.30

14.93

Feb 26th 1864 East

of previous pages

+ pro d'Geminorum d'Geminorum

vii 67

the price of Cassin

η Carinae

Arg + 2° 1685

Arg + 1° 1833

Caster m.

+ prev Arg + 2° 1703
Arg faint (ob. best)

864 No 26ⁿ East out

MS

Aug + 20 1708

Aug + 20 1720

+ prec

Prayer

Prayer

+ 1000

Aug 10 1959 Colow

Alma an Bp

41.0

51.3

0.3

24.7

7 50 32.7

44.3

54.9

3.5

27.9

47.9

56.5

7.2

31.5

50.7

1.1

9.8

34.3

8 2 22.1

54.5

4.9

13.6

38.1

5 18.7

24.4

156.5

7 28 47.68

7 30 58.20

7 32 6.88

7 32 31.30

7 59 28.02

12.01

13.31

19 58 58.26

1 47.69
 11 64
 1 65
 1 69
 2 73

56.29

58.24

58.25

58.09

58.13

30.1

33.6

36.9

39.7

43.5

183.8

8 58.54 32.50 1.7171

A 30.15 - 5.4855

B 28.08 - 2.9402

C 25.78 - 5.9286

7 50 36.76

* 100 x Gemini below

not fig

γ Gemmorum	5 Ays	β Cancri	γ 1418	δ Kneumj
22.8		22.1	8 14 21.9	4.2
26.6	4.8	25.3	15 7.0	11.0
30.7	9.5	29.1	54.2	19.0
32.7	13.0	31.9	16 28.1	24.2
38.2	17.9	35.8	17 17.9	32.3
152.0		144.2	132.1	90.7
7 55 30.40	7 59	28.94	8 15 50.42	8 19 18.14
12.44				

+ 100 x Gemini

43.7
47.7
51.7
54.9
57.2
257.5

7 55 57.50

1864 Feb 26th In East cont

175

Almae major

 η lauri

Stephen M

XX 257 sp

Planum

29.2

4.0

20.4

28.8

10.7

37.8

7.6

28.6

41.2

14.3

46.2

11.3

34.5

50.2

18.1

53.0

14.1

42.7

1.6

21.1

2.6

18.4

49.1

12.4

25.2

168.8

55.4

175.3

134.2

89.4

8 22 45.76

8 25 11.08

8 27 35.06

8 30 57.64

8 32 17.88

24 53.08

mpt day

Aug + 2^o 20 57

24 July

7 April

O K on margin

76 Dec 1891

1864 Feb 26th East^{mt.}

7145

Ag ?

n Lewis

T Lewis

1864 Feb 27^m SE East715
Polaris11 9.2
13 45.71 9 8.91
1 9 1.77 δ 88° 35' 23" 0 8.39112 Δ 7.14 2 2.06
 Σ 16.68 4 35.32

1864 Feb 29th 10 East

1795

1 Jumi

		<i>etnae nimica</i>	<i>Capella</i>	<i>Rigel</i>
18.3	4	59 3.3	56.9	20.6
21.9	5	0 2.9	1.7	23.9
25.7			6.9	27.6
28.6			10.7	30.3
32.9		1 13.9	16.4	34.3
127.4			92.6	136.7

4	55	25.48	5	0	24.67	5	7	6.52	5	8	27.34
			16	59	56.69		6	41.19		8	1.70

Feb 29th*Capella**Rigel*

5	7	+0.30	25.63
5	8	-0.06	25.58
5	8		25.605

282°10'33 0.87020

A 24.32 +49.58

Q 25.18 +22.28

Z 24.50 +50.20

1565 Mch 3rd M L

2145

Solain

 β Arctis α Arctis ϵ Ctr δ Camel 12

1	4	53.1		33.8		56.9			5	18	8.1
	7	4.2		37.4		0.2		40.2			27.0
	9	30.2		41.2		4.0		43.8		19	26.7
	11	18.6		44.1		4.0		48.5		20	1.2
	13	58.8		48.3		11.2		59.4			47.0
		164.9		206.8		76.9					132.0

1	19	20.98	1	47	40.96	2	0	3.78	2	55	43.55	5	19	26.40
	8	59.49			8.64		59	31.54			11.24		18	51.65

1352
 55
 49
 12

6.70
 3.34
 0.25
 3.01
 6.78

1864 March 3 M.E.
2745

1864 photo

Orion		Leporis		Orion		Lolumbae		SB Draconis					
	3.0		11.0		46.3		9.5						
	34.6		14.5		49.7		13.6		5.7				
	38.0		18.2		53.2		17.9		14.7				
	40.8		21.1		56.0		21.2		28.7				
	44.7		25.3		59.8		25.8		41.8				
	189.1		90.1		265.0		88.0						
5	25	37.82	5	27	18.02	5	29	13.00	5	35	17.60	6	51
		5.23		26	45.43			20.44					

<i>Clavis major</i>	<i>§ Geminorum</i>	<i>Clavis major</i>	<i>25 tamulph</i>	<i>Ag + 0° 1871</i>
44.1	30.4	4.1	4.9	50.1
47.7	33.9	7.7	31.0	53.4
51.9	37.6	11.2	59.3	57.0
54.9	40.6	14.1	21.0	59.7
59.5	46.7	18.3	57.2	3.4
256.1	187.2	55.4	186.4	223.6
6 53 51.62	6 56 37.44	6 58 16.08	7 2 57.28	7 8 51.72
18.81		57 38.35	26.85	

La belus

V

γ minimum	δ minimum	vii 67	η Canis major?	Aug + 1° 1841
44.5		0.4	57.1	44.4
48.0		9.4	1.0	48.0
51.7		19.4	8.3	51.7
54.6		26.9	8.1	54.6
58.8		37.3	12.6	58.2
257.6		73.4	84.1	257.1
γ 10 51.52		γ 17 18.68	γ 19 6.82	γ 20 51.42

 η Canis major?

10.2	51.48
12.1	34
16.2	55
21.3	30
<u>25.8</u>	<u>43</u>
89.6	

 γ 19 17.92

$\Delta\gamma + 1^{\circ}1813$	$\Delta\gamma + 1^{\circ}1821$	$\Delta\gamma + 1^{\circ}1821$	$\Delta\gamma + 1^{\circ}1821$	$\Delta\gamma + 1^{\circ}1821$	$\Delta\gamma + 0^{\circ}1997$	$\Delta\gamma + 0^{\circ}1998$
31.7	32.5	22.1	—	—	7.8	—
34.9	35.7	—	26.6	—	10.8	24.6
38.6	39.3	30.2	—	—	14.4	28.5
41.3	42.0	—	33.8	—	17.1	30.9
45.3	45.8	38.0	—	—	21.1	34.7
191.8	195.3	—	—	—	71.2	—
7 21 38.36	7 22 39.06	7 26 30.14	7 28 14.24	7 28 28.00	—	—
—	—	25 57.45	—	—	—	—

38.38	39.18	30.00	14.48	—
24	04	30.54	14	27.94
35	05	29.91	15	26.25
30	00	30.25	10	27.90
53	03	30.00	33	27.93
—	—	29.97	30.39	—

Jan 6.		Jan 8.		30 th May 1861		May + 1 st 1865	
pro Prayon	Prayon	* full Prayon	* full Prayon	* full Prayon	* full Prayon	* full Prayon	* full Prayon
14.9	39.3	1.5	21.8	15.8			
18.1	42.7	4.9	25.3	19.1			
21.8	46.3	8.3	29.1	22.7			
24.5	48.9	11.1	31.5	25.5			
28.3	52.9	15.2	35.6	29.3			
107.6	230.1	41.0	143.3	112.4			
7 32 21.52	7 32 46.02 13.23	7 33 8.20	7 33 28.46	7 36 22.48			

Polaris	Arg + 101906	156 Camel R	Arg + 201827	Arg + 101959
27.1	1.5	7 43 31.0	54.8	44.8
30.9	4.7	44 5.7	58.5	46.2
35.0	8.1	44 42.3	1.9	51.7
38.0	10.9	45 9.2	4.4	54.5
42.4	14.8	" 50.2	8.5	58.3
173.4	40.0	138.4	128.1	257.5
7 37 34.08 2.02	7 41 50.0	7 44 39.68 9.75	7 50 1.62	7 50 51.50

(appears to be the repetition)

Aug + 2°1833	Aug + 0°2147?	Aug + 0°2155	Xygenium	Aluminum D ₂
46.0	56.1	55.6	37.5	
49.5	59.2	58.8	41.3	7 57 16.8
53.0	2.9	2.5	45.2	59 38.5
55.6	5.6	5.1	48.4	
59.5	9.6	8.9	52.5	8 5 36.5
263.6	133.4	130.9	224.9	
7 51 52.72	7 53 2.64	7 54 2.18	7 55 44.98	7 59 50.31
			12.24	19 59 0.27

$$88^{\circ}54'16'' \quad 1.71694$$

A - 5 48.39
 C + 12.98
 D + 2 36.55

48.11
 51.68
 54.35

planets	Aug +102055	Aug +102056	Jan 1418	74 Draconis sp
36.9			8 14 38.8	8 36 57.4
40.2	43.5	6.1	15 21.2	37 21.3
43.8	46.8	9.7	16 6.6	38.0
46.6	49.5	12.4	43.0	35 0.0
50.6	53.3	16.4	17 32.5	20.7
218.1			142.1	137.4
8 9 43.62	8 10 46.60	8 11 9.48	8 16 4.42	8 37 39.48
				20 37 3.95

Clock Cross. Mich 3

β Antri	1 47	+0.10	+32.42	-32.22	+0.20	
α —	2 0	0.12	32.36	32.24	+0.12	\downarrow
α Ceti	2 55	0.00	32.31	32.34	-0.03	\downarrow
ρ Orion	5 25	-0.02	32.57	32.58	-0.01	
α Lepori	5 27	-0.12	32.47	32.59	-0.12	
ϵ Orion	5 29	-0.02	32.54	32.59	-0.05	
ϵ Cami	6 53	-0.19	32.60	32.73	-0.13	
γ Cami	6 58	-0.10	32.63	32.74	-0.11	
γ Casti	7 26	+0.18	32.91	32.79	+0.12	\downarrow
ρ Cygn	7 32	+0.01	32.80	32.80	0.00	\downarrow
ρ Antae	7 37	+0.15	32.81	32.80	+0.01	\downarrow
χ Geminorum	7 55	+0.15	32.79	32.83	-0.04	
ϵ Hydrae	8 40	+0.02	+32.93	32.91	+0.02	

2^h 28^m 27.665 (2)7^h 32^m 27.180 (3)

	5 50	+32.626	
		+0.095	
		+0.166	0.100
β	46.84	49.44	
ϵ	55	45	
ρ	50	40	
ϵ	53	13	

1864 Feb 3 24.9 inch

1945

Hydra

30

6.3

10.1

12.8

16.7

18.9

8 40 9.78

39 36.87

1843 Nov 23

Variations of Novastars

00 +.01 -.01

	6766	6766	6766	6766	6766	6766	6766	6766	6766	6766	6766	6766	6766
1863 Dec 15				-02				-04	-04	+07	-05		
21				+03			-10	-03			+10		
23		+07											
26							-01	-06			-12		
29	+04		+01					+03	+04		-02		+06
30		+06						+07					
1864 Jan 2		+08		-06									
9	+20	,00	+02	+02	-09								
11			-03	+08	+08	+04	-12	+02			-07		
12							-03	.00					
16													
21							-08	-03					
25					+08								
27						-09	-06	+09					
Feb 8		+08											
10				+10									
12		+12		+08	-06						-08		
18								+02	+12	.00	+10		-09
19			-04										
23				+03									
26													
March 3				-03									
9													
12													-07
19													
21													

