

KG  
11366  
v. 388

Circle Readings, 1876  $\frac{1}{2}$  H.  
Fundamental stars for Jones.  
from  $0^h 2^m$  to  $18^h 32^m$ .

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177  
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	<sup>h</sup>	<sup>m</sup>	<sup>s</sup>	<sup>°</sup>	<sup>'</sup>	<sup>"</sup>
Andromedae	0	1	56	+28	24	1
β Cassiop.	0	2	31	+58	27	36
γ Pegasi	0	6	48	+14	29	18
Gr. 29	0	9	10	+76	15	21
i Beti	0	13	4	-9	31	2
κ Cassiop.	0	25	54	+63	14	30
κ Draconis	12	28	8	+70	28	38
ζ Cassiop.	0	30	1	+53	12	30
α Cassiop.	0	33	25	+55	51	5
β Beti	0	37	18	-18	40	24
η Cassiop.	0	41	26	+57	9	30
γ Cassiop.	0	49	11	+60	2	21
ε Piscium	0	56	27	+7	13	0
β Andromedae	1	2	44	+34	57	26
θ Cassiop.	1	3	28	+54	29	
γ Piscium	1	7	11	+6	54	53
Polaris (A)	11	12	59	+88	38	34
δ Cassiop.	1	17	39	+59	35	5
Gr. 2001	13	22	57	+73	3	27
η Piscium	1	24	48	+14	42	2
40 Cassiop.	1	28	34	+72	24	5
51 Andr. = ν Persei	1	30	20	+47	59	38
Gr. 2029	13	34	11	+71	52	43
ν Piscium	1	34	56	+4	51	15
ο Piscium	1	38	48	+8	31	39
ε Cassiop.	1	45	25	+63	3	11
β Arietis	1	47	44	+20	11	46

see next page before this

	<sup>h</sup>	<sup>m</sup>	<sup>s</sup>	<sup>0</sup>	<sup>'</sup>	<sup>"</sup>
27 Eridani	3	41	28	-23	36	57
ζ Persei	3	46	17	+31	30	37
ζ Ursae Min	15	48	33	+78	10	41
ε Persei	3	49	28	+39	38	47
γ' Eridani	3	52	12	-13	51	55
Gr. 750	3	57	58	+85	13	20
o' Eridani	4	5	46	-7	9	57
γ Tauri	4	12	41	+15	19	26
δ Tauri	4	15	44	+17	14	51
η Ursae Min.	16	21	11	+76	2	32
α Tauri (4)	4	28	45	+16	15	22
Gr. 848	4	32	3	+75	42	33
4 Camelop.	4	37	36	+56	31	56
9 Camelop.	4	41	38	+66	7	37
i Aurigae	4	48	51	+37	57	57
ε Aurigae	4	53	0	+43	38	9
10 Camelop.	4	52	18	+60	15	23
ζ Aurigae	4	53	45	+40	53	27
η Aurigae	4	57	45	+41	3	47
ε Ursae Min 2/16	16	58	51	+82	14	22
λ Eridani	5	3	10	-8	54	58
α Aurigae (4)	5	7	27	+45	52	5
β Orionis (4)	5	8	32	-8	20	53
τ Orionis	5	11	32	-6	58	53
β Tauri (4)	5	18	23	+28	29	57
Gr. 966	5	23	1	+74	57	22
δ Orionis	5	25	37	-0	23	38

See preceding page after this

	<sup>n</sup>	<sup>m</sup>	<sup>s</sup>	<sup>o</sup>	<sup>i</sup>	<sup>"</sup>
100 Cassiop.	1	52	48	+71	48	54
$\gamma$ Andromedae	1	56	14	+41	43	43
$\alpha$ Arietis	2	0	8	+22	53	13
$\delta$ Persei	2	5	18	+50	29	1
$\gamma$ Ursae Min.	14	9	23	+78	8	5
$\alpha$ Beti	2	13	2	-3	32	47
$\epsilon$ Cassiop.	2	18	47	+66	50	18
$\xi^2$ beti	2	21	31	+7	53	54
$\beta$ H. Cassiop.	2	26	11	+73	16	9
$\nu$ Arietis	2	31	43	+21	25	10
$\delta$ beti	2	33	5	-11	13	43
$\theta$ Persei	2	35	40	+48	41	53
$\eta$ Persei	2	41	35	+55	22	30
$\tau$ Persei	2	45	24	+52	14	56
$\beta$ Ursae Min.	14	51	5	+74	39	58
$\alpha$ beti (4)	2	55	45	+3	35	52
$\beta$ Persei	3	0	2	+40	28	20
$\delta$ H. Cephei	3	4	32	+77	16	19
$\gamma$ Arietis	3	7	43	+20	34	48
$\alpha$ Persei	3	15	24	+49	24	51
$\gamma$ Ursae Min.	15	20	57	+73	16	44
$\epsilon$ Tauri	3	23	58	+12	30	24
$\epsilon$ Eridani	3	27	2	-9	52	58
Gr. 716	3	31	19	+62	48	32
$\delta$ Persei	3	34	2	+47	23	8
$\delta$ Eridani	3	37	16	-9	48	24
$\eta$ Tauri	3	40	3	+23	43	0

	$h$	$m$	$s$	$^{\circ}$	$'$	$''$
$\epsilon$ Orionis	5	29	52	-1	17	2
$\sigma$ Orionis	5	32	28	-2	40	27
$\alpha$ Columbae	5	35	7	-34	8	30
$\zeta$ Leporis	5	41	17	-14	52	14
$\psi$ Draconis	17	44	10	+72	12	34
$\alpha$ Orionis (4) 5	48	24	+7	22	53	
$\beta$ Aurigae	5	50	22	+44	55	55
35 Draconis	17	55	3	+76	58	40
36 Camelopard.	6	0	16	+65	44	21
22 H. Camelopard.	6	5	4	+69	21	35
2 Lynx	6	8	36	+59	3	10
$\delta$ Ursae Min. (4) 18	12	39	+86	36	27	
$\beta$ Canis Maj.	6	17	12	-17	53	42
$\phi$ Draconis	18	22	33	+71	16	14
8 Lynx	6	26	16	+61	35	16
$\gamma$ Geminor.	6	30	29	+16	30	13
$\epsilon$ Geminor.	6	36	14	+25	15	10
$\alpha$ Canis Maj. (4) 6	39	38	-16	32	46	
51 Cephei (4) 6	41	16	+87	14	3	
$\theta$ Geminor.	6	44	33	+34	6	35
$\epsilon$ Can. Maj.	6	53	43	-28	48	12
$\zeta$ Geminor.	6	56	42	+20	45	6
25 H. Camelopard.						
$\delta$ Canis Maj.	7	3	19	-26	11	44
64 Aurigae	7	9	21	+41	6	11
$\delta$ Geminor.	7	12	39	+22	12	38
$i$ Geminor.	7	17	58	+28	2	40

	<i>h</i>	<i>m</i>	<i>s</i>	<i>°</i>	<i>'</i>	<i>"</i>
$\rho$ Geminor.	7	<del>36</del> 21	<del>37</del> 41	+32	9	<del>38</del> 51
$\alpha$ Geminor. (4)	7	26	37	+32	9	38
Gr. 2900	19	29	13	+79	21	2
$\alpha$ Canis Min.	17	32	45	+5	32	37
$\beta$ Geminor	7	37	40	+28	19	34
	7	45	3			
Gr. 1374	7	45	11	+74	14	52
$\gamma$ Ursae Min.	19	49	18	+88	55	52
$\iota$ Havis = $\rho$ Augus.	8	2	13	-23	56	42
$\beta$ Cancri	8	9	44	+9	34	9
$\kappa$ Cephei	20	13	4	+77	20	2
31 Lyncis	8	14	16	+43	35	13
$\sigma$ Ursae Maj.	8	19	52	+61	8	0
Gr. 1446	8	25	46	+74	3	48
$\gamma$ Draconis	20	33	8	+74	31	32
$\delta$ Cancri	8	37	35	+18	36	44
$\epsilon$ Hydrae	8	40	9	+6	52	34
$\zeta$ Ursae Maj.	8	43	5	+62	25	41
$\iota$ Ursae Maj.	8	50	38	+48	31	50
$\chi$ Ursae Maj.	8	55	5	+47	38	56
$\sigma^2$ Ursae Maj.	8	59	22	+67	38	22
$\theta$ Hydrae	9	7	52	+2	50	25
38 Lyncis	9	11	4	+37	19	49
1 $\kappa$ Draconis	9	19	5	+81	52	34
23 $\delta$ Ursae Maj.	9	21	39	+63	36	23
$\alpha$ Hydrae (4)	9	21	27	-8	7	5
$\theta$ Ursae Maj.	9	24	29	+52	14	43
$\beta$ Cephei	21	27	2	+70	0	43

	$\ell$	$m$	$\delta$	$\alpha$	$\gamma$	$\eta$
Gr. 1564	9	31	31+69	48	16	
$\alpha$ Leonis	9	34	29+10	27	35	
$\epsilon$ Leonis	9	38	45+24	20	55	
11 Cephei	$\frac{5}{21}$	40	5+70	44	9	
$\nu$ Ursae Maj.	9	42	5+59	37	30	
$\mu$ Leonis	9	45	39+26	35	40	
19 Leonis Min. Gr. 1586	9	47	10+73	28	20	
19 Leonis Min.	9	50	1+41	38	59	
$\pi$ Leonis	9	53	36+8	38	34	
$\alpha$ Leonis (4)	10	1	43+12	34	38	
$\lambda$ Hydrae	10	4	29-11	44	11	
24 Cephei	22	7	24+71	43	32	
$\lambda$ Ursae Maj.	10	9	33+43	32	14	
$\mu$ Ursae Maj.	10	14	53+42	7	38	
$\mu$ Hydrae	10	20	2-16	11	53	
9 R. Draconis	10	24	25+76	21	20	
37 Ursae Maj.	10	27	6+57	43	31	
31 Cephei	22	32	41+73	59	40	
42 Leonis	10	38	55+31	20	23	
$\nu$ Librae	10	43	27-15	32	30	
46 Leonis Min.	10	46	19+34	53	18	
Br. 1508	10	49	54+78	26	20	
$\beta$ Ursae Maj.	10	54	17+57	3	6	
$\alpha$ Ursae Maj.	10	56	0+62	25	30	
$\kappa$ Leonis	10	58	34+8	0	40	
$\psi$ Ursae Maj.	11	2	38+45	10	33	
$\delta$ Leonis	11	7	27+21	12	29	

	<i>h</i>	<i>m</i>	<i>s</i>	<i>o</i>	<i>i</i>	<i>"</i>
$\delta$ Hydrae et Crat.	11	13	5-14	6	15	
$\gamma$ Hydrae et Crat.	11	18	28-16	49	46	
$\lambda$ Draconis	11	23	58+70	1	14	
$\nu$ Leonis	11	30	33-0	8	2	
$\gamma$ Cephei	23	34	14+76	56	5	
$\chi$ Ursaе Maj.	11	39	27+48	28	20	
$\beta$ Leonis (4)	11	42	41+15	16	14	
$\beta$ Virginis	11	44	11+2	28	8	
$\gamma$ Ursaе Maj.	11	47	15+54	23	22	
$\circ$ Virginis	11	58	50+9	25	38	
Gr. 1852	11	58	52+77	36	16	
$\delta$ Draconis	12	6	19+78	18	39	
$\delta$ Ursaе Maj.	12	9	14+57	48	37	
$\eta$ Virginis	12	13	31+0	1	41	
B. A. C. 4150 =						
$\delta$ Ursaе Min.	12	13	5+87	24	30	
$\delta$ Ursaе Min. = B.A.C. 4165	12	14	26+88	40	12	
$\delta$ Corvi	12	23	24-15	49	5	
$\kappa$ Draconis	12	28	8+70	28	38	
$\gamma$ Virginis	12	35	20-0	45	50	
$\delta$ Cassiope.	0	37	26+74	18	14	
$\delta$ Ursaе Maj.	12	48	31+56	38	18	
$\delta$ Canis. Ven. Coll.	12	50	11+38	59	38	
$\epsilon$ Virginis	12	55	57+11	37	53	
$\delta$ Cephei	1	1	33+79	0	26	
$\delta$ Virginis	13	3	29-4	52	52	
$\delta$ Comae	13	6	2+28	30	45	

57 Virginis	13	9	13-19	16	35
Polaris (4)	1	12	59+88	38	34
2 Virginis (4)					
ζ Ursae Maj.	13	18	53+28	30	45
Gr. 2001	13	22	57+73	2	27
ζ Virginis	13	28	19+0	2	38
Gr. 2029	13	34	11+71	52	43
η Ursae Maj.	13	42	37+49	56	16
η Bootis	13	48	44+19	1	30
50 Cassiope	1	52	48+71	48	54
τ Virginis	13	55	17+2	9	0
2 Draconis	14	1	0+64	58	25
κ Virginis	14	6	14-9	41	27
4 Ursae Min.	14	9	22+78	8	5
2 Bootis (4)	14	9	58+19	50	3
ι Bootis	14	11	44+51	56	39
θ Bootis	14	20	56+52	25	44
5 Ursae Min.	14	27	49+76	15	4
γ Bootis	14				
π Bootis	14	34	51+16	57	18
109 Virginis	14	39	56+2	25	15
24 & 2 Librae	14	43	58-15	31	14
Gr. 2164	14	48	16+59	48	10
3 Ursae Min.	14	51	5+74	39	58
β Bootis	14	57	14+40	58	4
ν Librae	14	59	39-15	46	9
48 H. Cephei	3	4	32+77	16	19

Continued on page 306





Andromedae  $\delta^h 1^m 56^s + 28^\circ 24'$ , "

1876 Div. Stars. E. R. L. N. Div. Stars. E. R. L. N.

May 3	0	1	10.5	10.6	23.6	25.6
	A <sub>-1</sub>	2, 3 + A <sub>-2</sub>				
21	0	0	9.3	4.7	21.5	27.0
24	0	4	51.3	45.4	5.7	11.3
25	0	1	7.6	0.0	19.1	26.3
29	0	0	7.6	0.0	18.4	26.8
30	0	0	3.1	56.9	18.0	26.2
31	0	0	1.4	55.9	17.2	25.9

morning

Nov. 4	0	1	3.6	4.7	7.2	54.7	0	2	19.6	24.1	24.4	116
12	0	1	31.7	35.2	35.8	21.0						
13	0	Res. A <sub>+2</sub>	5.9	5.4	5.9	52.5						
Dec. 4	0	Lost A <sub>+2</sub>	8.4	12.1	7.2	51.1						
5	0	A <sub>+2</sub> + A <sub>+1</sub>	7.9	13.1	7.9	51.4						
6	0	1	3.6	9.4	3.9	48.0						
13	0	Lost A <sub>+1</sub>	1.9	9.4	1.2	43.2						
19	0	1	20.0	27.4	19.6	3.8						
23	0	Lost 1 <sup>st</sup> 2 wires	6.1	12.5	5.5	46.9						
24	0	1	7.4	12.2	4.8	47.7						
27	0	1	12.7	19.4	12.5	55.2	0	2	16.6	21.5	14.3	8.3
Jan 2	0	2?	7.3	13.5	6.5	47.9	midn - fall					
4	0	1	12.9	18.9	12.8	52.2	0	2	20.6	27.3	18.8	1.8



Blair's  $0^h 2^m 31^s + 58^\circ 27' 36''$

12/10													
Nov 12	55	3	438	466	471	296							
13	55	3	34.9	37.9	37.8	20.9	55	4	11.7	14.5	13.2	56.8	
Dec 13	55	3	30.6	48.8	31.9	10.3	55	4	19.8	27.1	19.7	1.5	
19	55	3	436	50.1	428	226							
23	55	3	44.5	50.0	43.4	20.9	55	4	15.9	21.4	14.2	55.3	
24	55	3	47.1	52.6	45.4	24.8							

no more

7 Regasi  $0^h 6^m 48^s + 14' 29''$   
1876

Nov. 4	55	0	37.4	35.5	37.7	29.5	55	1	46.8	45.8	47.3	40.3
12	55	0	44.9	43.4	43.1	33.8	55	1	50.9	50.7	49.5	41.2
13	55	0	37.1	37.1	36.9	26.6	55	1	54.2	54.3	52.8	44.6
Dec. 4	55	0	34.9	37.0	32.0	18.8	55	1	38.2	39.3	33.9	22.3
6	55	0	37.0	38.2	32.1	20.2	55	1	37.3	40.6	33.6	22.0
13	55	0	43.1	47.0	38.8	23.1	55	1	53.3	55.8	47.3	36.0
19	55	0	34.2	37.9	30.1	15.5	55	1	34.0	35.6	39.5	18.2
23	55	0	36.4	40.1	32.4	16.7	55	1	53.3	54.9	47.7	34.7
24	55	0	36.1	38.9	31.9	15.7	55	1	51.8	54.5	46.7	32.3
27	55	0	32.8	36.6	28.6	15.9	55	1	47.7	48.8	42.8	30.8
Jan. 2	55	0	43.9	48.2	40.4	22.7	55	1	39.2	41.8	34.2	22.2
4	55	0	41.3	43.9	37.7	18.4	55	1	57.1	58.8	51.6	38.4



Gr. 29 0<sup>h</sup> 9<sup>m</sup> 10<sup>s</sup> +76° 15' 2"

1876

~~E. P. L. No.~~

E. P. L. No.

Nov. 12	10	1	12.4	16.4	14.3	53.4	10	1	20.4	24.7	21.9	5.1
Dec. 6	10	1	15.9	21.9	14.9	53.2	10	1	25.6	82.2	23.9	5.1
	lost 1 <sup>st</sup> 2 wires											
23	10	1	14.9	23.6	13.8							
27	10	1	14.8	18.7	10.0	47.3	10	1	31.3	38.3	29.4	10.4
	lost 1 <sup>st</sup> wire											
Jan. 2	10	1	18.1	25.8	16.3	51.6	10	1	45.0	40.6	31.8	11.5
	lost 1 <sup>st</sup> 3 wires											
4	10	1	21.4	28.5	19.9	54.1						

ae. proj. 1

1876

Dec. 13 55.0 35.4 35.5 30.1 15.1

lost last wire

23	5.5	0.1	6.6	5.9	0.8	44.2	55	1	86.1	35.4	30.6	18.5
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Jan, 2	55	31.6	31.0	27.2	10.5
--------	----	------	------	------	------

A 24 Zoll

5-tes Miß 12 13 5 92 80

18.76

Nov. 12 30 4 57.9 3.1 4.3 43.8

13 35 0 7.4 11.7 12.1 54.0 35 0 1.4 6.5 7.1 45.8  
5 med. white

5 md. white

Dec:27	30	4.55.4	3.2	56.8	33.6
--------	----	--------	-----	------	------

lost  $1\frac{1}{4}$  & lost more

Jan. 4 <sup>lost 1st & last wire</sup> 36 0 4.2 12.9 6.3 42.9 30 4 <sup>lost 1st & last wire</sup> 56.1 4.1 55.5 31.6

lost 1<sup>st</sup> & last wire

6 Miss Mrs B 12 4<sup>26</sup> 9140

Nov. 12 50 0 .34.6 39.2 38.9 20.0 50 0 29.8 34.2 35.3 15.8

last 3 wires

13 | 50 0 35.2 40.5 40.9 20.8 50 0 32.5 36.9 37.1 17.8

Cast 4 wires

Dec. 27 50 0 30.3 39.3 33.7 10.2 50 0 29.0 37.1 30.4 8.0

least 4 wires

Jan. 2 5.0 0 329 41.9 34.1 9.9 00 0 299 376 304 102

4th wire & fall.

4 50 0 33.1 40.6 33.2 6.6 50 0 30.3 37.2 30.3 8.7

Lat 4 wires

1876phase pro

$\kappa$  bars.  $0^h 25^m 54^s + 62^{\circ} 14' 30''$

								S	E	F	G	$\gamma_6$	
1876	Jan. 10	5	4	52.6	58.2	56.5	43.9	10	0	45.2	50.2	49.8	39.1
85	Nov. 13	10	1	37.9	40.3	40.4	20.9	10	1	55.9	58.8	59.5	39.7
	Dec. 6	10	1	34.5	39.3	34.1	13.3	10	1	54.4	59.6	54.1	34.5
	13	10	1	19.0	26.1	18.1	55.3	10	1	53.3	59.8	53.2	33.7
1877	Jan. 2	10	1	27.4	33.2	27.1	5.0	10	2	7.6	10.6	4.6	45.2
	4	10	1	14.9	20.2	14.1	47.9	10	2	7.2	11.3	5.2	43.6

*K* Draconis <sup>h</sup> 12 28 <sup>m</sup> 170 28 <sup>s</sup> 38 <sup>0</sup> 109 31

3 bas.  $0^h 30^m 1^s + 53^{\circ} 12' 30''$

1876

Dec. 6	10	3	10.3	16.2	11.4	50.9	10	3	55.9	61.8	55.4	37.6
13	10	3	10.3	17.5	10.4	49.6	10	3	54.0	1.2	52.9	36.0
Jan. 2	10	3	5.4	11.1	5.0	43.1	10	4	2.6	8.8	0.8	43.4
4	10	3	19.7	25.1	18.6	56.4	10	3	54.4	0.3	57.4	35.3

bars. 0° 33' 25" + 55' 51" 6"

1876	1	2	3	4	5	6	1	2	3	4	5	6
Jan. 10	30	3	2.9	9.5	7.1	56.3	30	3	50.9	55.7	53.8	45.3
Dec. 6	30	4	35.9	40.9	35.9	15.4	35	0	22.5	27.3	22.9	3.8
13	30	4	27.2	33.9	26.8	4.9	35	0	23.7	31.4	24.7	5.3
Jan. 2	30	4	32.1	38.3	31.9	9.7	35	0	13.6	18.8	12.4	54.6
4	30	4	37.4	43.0	36.5	14.9	35	0	36.8	40.8	36.4	15.2

B. coli 0 3' 1" - 1' 40" 2"

	1876	11	E	T	G	76	
53	Jan 3	0	3	18.2	19.4	18.2	—
3.8	Dec 6	0	4	7.4	7.3	2.3	52.1
5.3	10	0	4	9.2	9.1	3.2	49.9
54.6	13	0	4	31.0	31.4	25.7	13.9
152	Jan 2	0	4	17.0	18.2	11.5	58.9
	4	0	4	58.4	59.1	54.1	89.1
				mid m	fold		

mid m. full

	E	R	G	76	
0	<del>4</del> 3.6	2.7	1.2	26	
5	0	12.4	12.9	7.9	58.2
5	0	8.1	7.4	0.8	48.0
5	0	29.9	30.7	25.0	16.8
5	0	20.8	21.6	15.2	8.7

class 0 41 26 +57 9 30

1876

E R G W

Jan 10	10	4	50.8	55.6	55.4	43.8
Dec 6	15	1	39.7	44.9	40.1	19.6
10	15	1	54.5	58.4	53.1	29.8
13	15	1	21.1	27.8	21.1	59.2
19	15	1	30.1	35.9	30.4	8.8
Jan 2	15	1	31.4	36.3	30.5	10.2

reg. A<sub>+</sub>1

no more

E R G W

15	0	48.1	53.6	51.7	42.8
15	2	22.2	26.2	21.0	3.4
15	2	32.9	36.2	31.2	8.1
15	2	20.0	26.3	18.0	0.4
15	2	23.0	27.3	20.5	1.3
15	2	12.2	16.6	9.0	51.0

1877

Jan 13	5	3	15.9	17.1	19.9	18.9
--------	---	---	------	------	------	------

of Cass  $0^{\text{h}} 49^{\text{m}} 11^{\text{s}} +60^{\circ} 2' 21''$

1876

Dec. 6	20	3	53.7	57.8	53.6	30.8	20	4	12.2	16.5	10.8	51.6
10	20	3	43.2	46.9	40.9	18.8	224R					
Jan. 2	20	3	22.8	29.8	21.6	59.6	20	4	10.5	16.1	8.3	49.8
4	20	3	21.5	28.9	20.3	7.8	20	4	58.8	3.8	57.4	36.0

Piscium <sup>h m s</sup> 0 56 27 + <sup>D I "</sup> 7 13 0

1876

Dec. 6	10	1	47.5	50.0	45.0	33.1	10	2	45.6	47.6	41.3	32.2	D
10	10	1	47.1	50.4	43.9	29.4	10	3	0.3	2.0	55.6	40.9	
13	10	1	53.2	57.6	50.4	37.7	10	2	53.0	56.8	48.7	39.2	
Jan. 2	10	2	0.6	4.8	57.9	44.7	10	2	52.4	55.7	48.2	37.7	fo
4	10	2	0.1	4.2	58.9	42.8	10	2	56.4	58.9	51.8	40.4	

2 false strokes after wires

get next ~~###~~

27

P Androm. 1<sup>h</sup> 2<sup>m</sup> 44<sup>s</sup> + 34<sup>s</sup> 57<sup>s</sup> 26<sup>s</sup>

1876

Dec. 6 25 3 31.9 36.8 30.9 13.4

mod. wires fold

10 25 3 6.2 11.8 3.9 44.3

13 25 2 52.5 58.1 50.0 30.5

Jan 2 25 2 55.9 1.1 52.4 31.2

4 25 3 14.0 19.1 10.9 49.9 25 3 55.0 58.7 51.2 34.0

1877

Jan. 13 15 4 23.7 24.1 29.9 28.1 20 0 30.4 32.4 35.7 35.7

14 20 0 1.8 4.5 9.3 10.4 20 0 41.9 43.2 49.3 48.3  
lost 1<sup>st</sup> 2 wires

28

2 bars,  $1^h 3^m 28^s + 5^h 4^m 29^s$ 

1876

Dec. 6	55	2	7.2	12.4	7.4	47.1	55	2	40.9	46.3	39.3	22.1	Do
	A 24 g. ell.												
10	55	2	3.0	6.2	0.2	39.2							
13	55	1	51.9	59.4	52.1	30.0	55	2	21.4	28.8	20.0	2.9	
23	55	2	17.1	24.9	17.9	55.9	55	2	43.8	50.2	43.2	25.2	
	A												
Jan. 2	55	1	55.5	2.1	55.9	32.3	55	2	29.9	35.3	28.1	10.0	

$\beta$  Piscium <sup>h m s</sup> <sup>h m s</sup>  
 1 7 11 + 6 54 53

1876

1	Dec 6	30	0	8.1	11.2	5.2	54.2	30	1	15.3	18.1	11.7	2.6
	10	30	0	4.3	7.6	1.0	45.0	30	1	12.6	14.7	9.2	56.2
	13	30	0	30.9	34.7	26.9	17.2	NOTE					
2	23	30	0	27.9	33.2	26.4	8.4	pr. #					
0	24	25	4	51.5	56.1	48.4	33.4	" "					

1877

Jan 13 20 1 32.9 37.5 43.7 36.7

14 20 1 35.9 42.1 47.4 42.1 20 2 25.8 32.2 38.1 33.0

Polaris. 4 m 5 0 1 11											
1 12 59 +88 38 34											
1876 E R G W E R G W											
Jan 10	45	1	43.7	52.2	48.6	38.0	45	1	50.2	58.7	43.8
11	45	1	26.5	33.1	31.5	25.4	45	1	40.9	47.2	39.7
13	45	1	47.0	51.8	54.2	49.3	45	1	28.2	33.0	30.0
May 3	45	2	13.5	15.3	17.1	23.7	45	2	45.1	49.7	50.0
16	45	2	18.7	20.5	34.5	34.1	45	2	45.1	49.7	50.0
24	43.7	8.4	A-1	A-2	A-3	A-4	43.7	8.4	A-1	A-2	A-3
25	45	2	29.2	25.7	42.2	45.2	45	2	34.6	30.8	46.8
29	45	2	18.8	13.1	31.3	34.2	45	2	31.9	28.7	47.3
30	45	2	14.1	11.4	30.0	33.1	45	2	31.9	28.7	47.3
31	45	1	48.8	44.7	4.2	7.3	45	1	48.8	44.7	4.2
Dec. 5	45	3	9.9	19.0	11.1	50.1	45	3	12.8	21.6	14.0
6	45	3	10.4	12.9	10.8	49.8	45	3	11.4	18.9	10.8
10	6	obs. for 8									
13	5	"	"	"	"	"					
14	4	"	"	lost 1st wire							
19	5	"	"	"	"	"					
23	6	obs. for 8 p.m.									
24	6	obs. for 8 p.m.									
27	6	obs. for 5 by Mrs R									
Jan. 2	8	obs. for 5 p.m.									
4	10	obs. for 5 p.m.									
1877											
Jan 13	6	obs. for 5 p.m.									
14	6	obs. for 5 p.m.									

Starr,  $h_{17}^m 39^s + 59^{\circ} 35' 5''$

1876			E	F	G	H				E	F	G	H
Jan. 11	45	3	57.9	0.4	0.9	54.6	50	0	0.0	0.2	0.0	58.3	
Dec 13	50	1	<del>19.5</del>	25.3	16.9	58.8							
14	50	1	19.4	25.1	17.8	54.6							
	A4+5+A-												
23	50	0	52.7	57.9	51.9	30.9	50	1	35.7	40.7	33.6	14.6	
24	50	0	48.9	54.4	46.7	25.4	50	1	29.6	33.7	26.7	6.7	
27	50	1	12.0	16.9	10.6	50.8							

R

1877

Jan 13	40	2	18.4	16.4	21.2	(31.0)	40	3	10.0	6.8	11.9	11.7	
14	40	2	15.2	15.1	19.0	18.9	40	3	9.6	7.2	12.3	11.5	

M41 #

h m s . " . "

Gr. 2001 13 22 57 +73 2 27 106 58

1876

E

R

G

26

E

R

G

26

Jan. 11	25	3	53.0	59.8	57.7	51.2	25	3	8.1	14.0	10.2	5.6
Dec. 23	30	0	44.4	53.4	46.4	21.8						
24	30	0	38.8	48.1	41.4	15.6						
27	30	0	33.1	41.9	33.6	11.2						

Jan. 13	20	2	6.6	4.7	7.1	6.9						
14	20	2	13.9	12.1	13.4	13.9						

$\alpha$  Piscium  $1^h 24^m 48^s + 14^s 42^s 2''$

1876

Dec. 14	40	3	7.9	10.3	1.9	46.6	40	3	59.9	2.4	54.3	42.1
23	40	2	59.1	1.4	54.4	37.8	40	3	38.9	42.0	34.5	17.4
24	40	2	54.9	56.9	50.1	32.1	40	3	51.1	53.0	44.6	31.4
27	40	2	59.6	2.2	55.9	37.9	40	4	1.9	3.9	56.8	45.3

1877

Jan 13	30	4	34.2	34.1	41.8	35.6	35 0	30.6	84.3	41.6	38.0
14	30	4	24.2	28.8	36.4	29.1	35 0	24.3	28.7	35.9	31.2

1876 ~~1876~~ base.  $1^h 28^m 34^s + 72^\circ 24' 5''$

1876			E	T	L	U			E	R	Q	W
Jan. 11	0	0	25.0	29.8	27.6	21.1	0	1	0.3	3.4	0.0	56.4
Dec. 14	0	2	8.9	15.9	6.2	43.4						
24	0	1	59.2	4.6	56.4	318	0	2	11.9	19.4	9.1	47.3
27	0	1	46.4	53.2	44.8	23.3	0	2	30.1	37.7	28.1	7.7

1877

Jan. 13	50	3	32.1	29.9	35.4	34.9						
14	50	3	30.2	30.0	44.2	33.6						

57 Androm = 2 Persae  $1^h 30^m 20^s + 47^{\circ} 59' 38''$

1876

Dec. 14	25	0	50.0	55.8	48.8	29.4	25	1	47.2	53.1	45.9	39.4
24	25	0	51.6	57.5	51.1	30.3	25	1	47.5	51.3	45.6	27.3
27	25	1	37.0	42.6	36.5	16.3	25	2	8.0	12.8	6.5	49.4

A<sub>7,8,9,4</sub>A<sub>-1</sub>

1877

Jan 13	15	2	21.9	20.1	25.6	28.4	15	3	22.2	20.7	26.2	25.3
14	15	2	23.1	24.1	29.4	27.2	15	3	23.2	21.2	27.3	25.7

h m s ° ' ''  
 2029 13 34 11 + 41 52 43 108° 07'

1876

Dec. 5	20	1	10.8	19.6	13.6	51.8	20	0	41.2	49.2	41.3	22.2
24	20	1	1.6	11.2	2.8	36.0						
27	20	0	54.2	5.3	57.7	34.8						

1877

Jan 14	10	2	53.7	51.1	53.0	52.2	10	2	17.5	14.4	17.3	17.2
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♂ *Pisium* <sup>h m s</sup> 1 34 56 + 4 51 15

1876

2	Dec. 14	30	3	38.2	43.0	35.7	21.6	30	4	41.3	46.2	37.2	28.7
	24	30	3	48.1	52.3	44.9	31.1						
	27	30	3	42.5	47.4	38.9	26.2						

-	Jan 13	25	0	27.4	33.4	38.9	35.9	25	1	22.3	27.2	32.0	30.7
---	--------	----	---	------	------	------	------	----	---	------	------	------	------

38

Piscium 138 48 +8 3139

1876

Dec. 5	50	3	7.9	10.5	5.6	52.1	50	4	15.7	19.0	11.0	1.3	2
14	50	3	10.1	14.8	7.1	54.1	50	4	13.1	17.1	8.3	58.0	
24	50	3	4.9	9.5	2.9	48.6	50	4	14.8	18.6	10.5	58.2	
27	50	3	16.8	21.1	13.4	1.1	50	4	9.7	12.8	5.6	55.3	

1877

Jan 14 40 4 38.4 42.7 49.9 46.1 45 0 40.8 50.4 58.1 54.8

E. Cass. <sup>h m s u ' "</sup>  
1 45 25 + 6 3 3 11

1876

13	Dec 5	20	3	5.4	9.9	4.9	44.6	2.0	3	27.5	31.9	27.1	6.2
80	14	20	2	33.1	39.3	32.2	10.4						
582	24	20	2	35.9	41.0	34.9	10.2	20	3	13.6	19.8	12.3	52.0
553	27	20	2	37.8	43.1	36.7	14.8						

4.8

$\beta$  Arietis  $1^h 47^m 44^s + 20^\circ 11' 46''$

1876

Dec. 5	10	3	43.1	47.2	41.5	25.7	10	4	27.3	30.6	24.2	10.8
14	10	3	22.1	27.9	18.9	4.9	10	4	16.3	20.8	12.4	59.7
19	10	3	22.0	27.8	17.9	1.6	10	4	18.2	21.6	14.1	1.0
27	10	3	29.0	33.3	26.5	11.2	10	4	17.1	21.3	13.2	0.5

50 base /  $h^{\circ} 52' 48'' + 71^{\circ} 48' 54''$ 

1876

28	Dec. 5	35	2	0.1	61	59.1	37.0	35	2	20.5	25.9	18.4	57.5
27	14	35	2	11.3	19.0	10.6	46.0	35	2	47.1	58.2	44.5	25.9
0	19	35	1	48.1	54.4	45.7	23.0	35	2	5.0	15.5	5.4	42.9
5	27	35	1	45.4	53.9	43.1	22.4	35	1	57.0	4.4	56.4	34.0

4 obs. for inclination

Androm.  $h m s''$   $^{\circ}$   $'$   $''$   
 156 14 +41 43 43

1876pba

	1876	$\epsilon$	$\delta$	$\alpha$	$\beta$		$\epsilon$	$\delta$	$\alpha$	$\beta$		
Jan. 10	40	0	3.0	9.5	7.0	—	40	1	25.9	32.4	29.3	22.5
Dec. 5	40	2	17.0	22.5	16.4	58.1	40	2	55.4	60.3	54.0	36.7
14	40	1	48.1	53.6	45.6	26.1	40	2	39.6	45.0	36.5	21.3
19	40	2	19.1	23.8	14.9	56.4	40	2	58.0	2.1	56.3	36.0
27	40	1	58.4	5.1	56.6	37.2	40	2	37.3	43.3	35.8	19.2

Orion 20 0 P +22 52 13

E P G 76

E P G 76

45 0 5.1 15.6 7.7

1876 45 1 23.2 32.8 23.1 24.6

Jan. 10 30 1 19.4 26.0 23.6 15.5 30 2 30.3 35.2 31.5 29.0

11 30 1 22.1 25.1 25.1 25.0 30 2 38.2 39.6 39.6 41.8

12 30 1 34.8 35.8 36.9 39.0 30 2 36.5 38.8 39.1 41.8

13 30 1 19.0 20.8 24.1 23.8 30 2 27.9 29.9 32.2 32.2

Dec. 5 30 3 17.4 23.2 16.1 0.8 30 4 7.2 12.7 5.2 51.3

14 30 2 50.1 55.9 47.3 31.5 30 4 4.6 11.2 1.9 49.6

19 30 2 52.9 59.1 49.9 32.3 30 4 9.0 14.6 5.6 50.6

24 30 2 51.5 58.1 49.2 33.2 30 4 7.6 13.2 4.9 50.5

27 30 2 55.9 0.9 54.1 37.6 30 3 55.1 59.6 51.9 38.2

H7

Jan 27 20 4 54.8 58.4 6.4 2.2

R

Persei <sup>h m s</sup> 25 18 +50 29 "

1876			"	R	G	B			"	R	G	B
Jan. 13	55	0	7.2	10.3	16.5	9.6	55	1	57.5	59.3	64.1	60.0
Dec. 6	55	1	25.1	30.9	27.5	8.0	55	2	26.2	30.9	25.9	7.6
19	55	1	39.9	46.4	40.1	19.1	55	2	27.0	32.6	26.3	7.3
24	55	1	31.9	39.1	34.0	11.9	55	2	30.6	36.7	31.3	11.5
27	55	2	2.6	10.1	4.4	42.4	55	2	35.4	41.1	35.3	16.7

*4 Mrae Min*  $14^{\circ} 9' 23'' + 78^{\circ} 8' 5'' - 10^{\circ} 5' 2''$

1876	E D C Ne						E F G M					
Jan. 13	30	4	14.7	19.8	23.1	14.5	30	3	52.9	57.3	59.2	53.7
Dec. 6	35	0	52.8	59.2	55.5	30.8	35	0	34.8	41.3	36.8	14.3
19	35	0	52.6	0.4	53.6	27.8	35	0	36.8	44.3	38.3	16.0
24	35	0	45.5	53.3	46.1	21.8	35	0	37.7	44.7	38.8	15.7
27	35	0	59.5	9.2	3.3	38.2	35	0	33.7	42.4	36.6	14.4

l<sup>h</sup> m s. ° ' " ex.  
 13 2 - 3 32 47

1876

Dec. 6	55	2	15.9	16.8	12.9	59.7						
19	55	2	37.6	40.2	32.8	18.2	55	3	40.7	42.8	36.1	26.1
24	55	2	38.1	40.8	34.9	18.4	55	3	31.4	32.7	26.8	13.8
27	55	2	50.9	52.3	46.2	33.3	55	3	47.8	49.4	42.0	32.3

lost A<sub>+</sub>?

bars 2<sup>h</sup> 4<sup>m</sup> 47<sup>s</sup> 46<sup>s</sup> 50<sup>s</sup> 1<sup>s</sup> 1<sup>s</sup>

1876ph

1876				R	ly	76		R	G	76		
Jan. 12	30	3	53.5	57.8	57.3	52.9	30	4	43.2	47.7	46.2	40.2
13	30	3	57.9	2.1	1.6	56.2	30	4	45.2	48.1	49.2	44.4
Dec. 6	35	0	32.1	38.6	31.9	12.5	35	1	16.8	23.2	15.2	56.7
23	35	0	41.0	48.2	39.9	15.5	35	1	14.0	22.2	12.2	52.6
24	35	0	45.1	53.1	44.4	22.4	35	1	16.0	22.2	13.8	53.7
27	35	0	47.1	56.0	46.2	24.6	35	1	17.2	23.7	15.1	55.9

no more

48

 $2^{\text{h}} 21^{\text{m}} 31^{\text{s}} + 7^{\circ} 53' 54''$ 

1876

 $\Sigma \quad R \quad G \quad B$ 

 Jan. 12 32 2 4.9 6.8 7.1 11.6  
 mod. w. + foll.

Dec. 6 30 1 22.9 26.7 22.2 10.2 30 2 8.3 10.6 4.7 54.3

23 30 1 4.9 9.1 2.8 45.4 30 2 2.5 7.2 0.0 47.7

24 30 0 57.6 3.2 56.5 40.2 30 1 53.3 56.3 48.7 36.9

27 30 1 4.9 8.3 2.1 48.0 30 1 57.2 59.7 53.8 43.2

Jan. 2 30 1 23.0 27.3 20.0 4.2 30 2 18.7 21.3 14.4 2.8

no more

3676 Can. 2<sup>h</sup> 26<sup>m</sup> 11<sup>s</sup> 42<sup>u</sup> 16<sup>u</sup> 9<sup>u</sup>

1876

1876	1	1	11	E	R	Ca	No	1	1	2	R	Ca	No
Jan. 12	5	3	6.4	9.3	9.1	5.1	5	3	56.1	60.2	56.3	54.9	
13	5	3	32.4	36.0	36.9	30.6	5	4	13.2	15.4	15.0	10.8	
20	5	3	12.2	20.8	19.5	12.6	5	3	41.1	48.8	46.6	40.6	
Dec 23	5	4	46.3	52.8	42.7	19.6	10	0	5.2	12.2	9.6	40.6	
24	10	0	13.6	21.1	12.2	50.2	10	0	32.6	38.8	30.3	10.3	
27	5	4	31.6	39.1	29.2	7.0	5	2	49.9	57.9	48.2	25.8	
Jan. 2	5	4	32.1	40.2	30.0	6.8	5	4	46.1	54.4	44.0	21.6	
no more													

Prick 2 <sup>h m s d i</sup> 31 43 + 21 25 10

Get meat #

1876

1876	Σ	P	Q	N	1	2	P	Q	N		
Jan. 12	55	3	28.9	30.9	30.7	31.7	55.4	40.4	40.2	41.1	43.7
13	55	3	22.9	23.8	26.6	27.0	55.4	30.2	31.0	32.7	34.3
20	55	3	21.4	26.7	25.4	25.6	55.4	22.5	27.7	26.2	26.7
Dec. 23	55	4	53.4	59.9	50.1	33.3					
24	55	4	50.9	57.6	47.7	31.2					
27	55	4	53.9	58.9	49.9	34.7					

no more

Stet <sup>W m s u i "</sup>  
2 88 5-0 12 43

1876

Dec 19	35	2	29.3	31.8	24.0	7.9	35	3	24.3	25.2	16.8	5.3
23	35	2	31.7	35.1	29.1	12.6	35	3	47.8	48.2	40.7	30.0
24	35	2	22.9	25.2	18.9	1.7	35	3	47.0	48.0	41.3	27.7
27	35	2	32.9	34.6	28.8	14.7	35	3	47.8	48.6	41.6	31.6
Jan 2	35	2	31.9	34.0	26.9	10.4	35	3	34.3	34.8	28.4	14.6

52

Persei 2<sup>h</sup> 35<sup>m</sup> 40<sup>s</sup> + 4<sup>s</sup> 41<sup>s</sup> 53<sup>s</sup>

1876			E	R	G	B			E	R	G	B
Jan. 20	40	1	46.1	53.0	53.7	49.7	40	2	51.6	57.6	58.2	53.5
Dec. 19	40	3	48.8	54.6	47.9	25.5	40	4	38.8	44.0	36.8	18.4
23	40	4	8.5	14.2	6.9	47.2	40	4	40.6	46.9	39.1	21.7
24	40	4	16.6	22.7	16.5	54.7	40	4	37.6	43.4	37.4	17.4
27	40	4	16.7	23.4	15.9	55.2	40	4	47.4	53.3	45.5	28.3

$\alpha$  Persei  $0^{\circ}4'35'' + 55^{\circ}22'30''$

1876			$\alpha$	$\rho$	$\zeta$	$\eta$			$\epsilon$	$\rho$	$\zeta$	$\eta$
Jan. 12	0	1	31.7	34.2	36.9	34.4	0	2	19.3	21.1	23.8	21.2
Dec. 19	0	3	22.1	29.3	20.8	0.9	0	4	4.0	9.6	3.3	43.6
23	0	3	14.0	20.7	13.3	52.4	0	4	5.6	12.0	4.3	45.2
24	0	3	16.7	22.5	16.1	53.8	0	4	3.6	9.2	2.7	42.5
27	0	3	11.5	18.9	10.9	51.4	0	4	5.7	11.4	4.6	46.9

1877  
Jan. 14 55 0 2.6 1.9 9.8 8.9

54

↑ Persei  $2^h 45^m 24^s + 02^{\circ} 14' 56''$

1876

Dec. 12	10	1	17.0	22.4	20.0	58.8						
19	10	1	6.9	12.9	6.3	45.5	10	1	40.5	46.2	39.2	21.6
23	10	0	50.7	52.4	50.5	29.5	10	1	35.4	41.3	34.4	16.9
24	10	0	43.6	50.7	43.2	21.6	10	1	35.2	41.5	34.4	24.6
27	10	0	36.8	45.0	38.2	16.9	10	1	39.6	45.8	39.1	22.0

Plutae Min,  $h^m$   $s'$   $s''$   $+74$   $39$   $58$   $105^{\circ} 20'$

1876

Dec. 12	5	3	9.8	19.0	14.9	50.8	5	2	45.1	54.1	49.4	25.5
19	5	3	34.8	45.1	34.7	10.5	5	2	55.6	8.7	56.3	34.7
23	5	3	47.7	57.1	47.4	24.2	5	3	24.4	33.2	25.5	0.4
<del>24</del>	5	3	37.1	48.5	38.8	15.0	5	3	23.1	32.4	24.4	59.6
27	5	3	46.4	53.9	46.5	22.5	5	3	20.2	29.5	20.0	56.9

ag. proj. 1.1  
 elberti,  $2^{155} 45^5 + 3^{55} 30^5 52$

1876. "E R G N" , , "E R G N"

Time	Temp	Wind	Wind Dir	Wind Spd	Wind Dir	Wind Spd	Wind Dir	Wind Spd	Wind Dir	Wind Spd	Wind Dir	Wind Spd
Jan. 10	45	2	16.3	20.4	18.8	18.2	45	3	35.6	38.2	34.9	34.9
11	45	2	30.1	31.8	33.8	36.1	45	3	26.2	27.3	27.0	31.3
12	45	2	37.5	38.8	41.2	43.1	45	3	34.2	35.2	35.6	41.2
13	45	2	17.2	18.5	21.4	24.2	45	3	30.0	31.9	32.8	36.3
20	45	2	35.9	41.5	40.0	43.0	45	3	25.5	32.2	28.9	33.3
Feb. 16	45	2	16.1	22.0	24.0	26.4	45	3	27.5	31.8	32.8	35.9

Dec.	12	45	4	56.4	58.2	53.6	42.6						
	13	45	4	10.4	13.9	6.8	54.4	50	0	18.9	22.3	14.4	6.5
(let)	19	45	1/3	57.0	41.2	81.5	39.4	50	11.0	11.0	14.1	6.9	52.7
	23	45	3	56.2	0.1	51.5	38.2	50	0	9.4	11.9	6.4	56.3
	24	45	3	55.1	58.7	49.7	35.0	50	0	11.7	13.7	8.7	54.0
	27	45	3	59.0	3.5	56.1	42.5	50	0	11.4	15.2	7.8	56.1

1877

Jan 21	40	1	8.1	13.6	25.4	18.2	40	1	50.2	55.4	7.4	59.3
23	40	0	25.3	31.8	43.1	35.3	40	1	44.3	49.3	1.3	52.2
24	40	0	23.1	27.3	41.6	33.0						

$\alpha$  Cent <sup>km</sup> 255-45 +3 36

9

3

2

3

3

59

65

52.7

76.3

54.0

56.1

59.3

52.2

58

Persei h m s o . ''  
3 0 2 +40 28 20

1876ph

1876	1	1	E <sub>11</sub>	F	G	H	E	F	G	H		
Jan 1	55	0	56.5	0.2	58.7	58.2	55	1	52.1	54.2	52.7	
Feb. 16	55	0	25.3	32.3	33.9	31.2	55	1	46.1	51.5	50.8	
Dec. 12	55	2	14.6	20.0	14.9	54.6	55	3	11.8	16.2	12.4	52.3
13	55	2	12.1	18.1	10.8	52.1	55	3	7.1	12.3	4.2	48.2
23	55	2	9.9	16.4	7.7	48.0	55	3	4.8	10.4	2.3	47.4
27	55	2	17.1	22.2	15.1	56.4	55	3	12.3	18.2	9.8	53.8
Jan 1877	55	2	4.9	9.2	2.8	39.8	55	2	58.8	4.2	56.2	7.3

no more

1876 Cephei  $h^m s + 77^{\circ} 16' 19''$

59

1876			E	R	G	No			E	R	G	No
Jan 11	5	3	11.2	15.5	14.1	<del>55</del>	5	3	53.4	58.3	53.4	52.8
26	5	3	32.6	36.8	35.5	30.8	5	3	49.7	52.7	51.8	45.8
27	5	3	32.1	37.7	39.1	32.5	5	3	58.7	4.3	63.6	58.5
Dec 12	10	0	12.0	18.8	12.2	49.7	10	0	39.0	45.6	39.6	16.9
13	5	4	58.2	6.6	55.5	32.9	10	0	37.2	44.6	34.3	12.9
19	5	4	40.3	47.8	36.3	13.2	10	0	8.2	15.2	4.9	39.0
27	5	4	48.9	56.9	45.4	23.5	10	0	5.1	14.6	5.1	43.7

no more

60

5 Arietis <sup>h m s</sup> 37 43 + 20 34 48

1876			Z	R	L <sub>2</sub>	W			Z	R	L <sub>2</sub>	W
Jan. 26	45	3	39.3	38.7	40.6	41.1	45	4	43.8	43.5	45.2	45.1
Dec. 12	50	0	38.8	42.1	37.1	22.8	50	1	32.1	33.9	30.5	14.2
19	50	0	38.0	43.3	35.6	18.9	50	1	48.7	51.1	44.3	30.3
23	50	0	24.9	28.9	21.6	4.3	50	1	37.0	40.3	33.6	19.1
27	50	0	39.4	45.2	36.9	21.8						

$\alpha$  Persei <sup>h m s</sup> 3 15 24 +49° 24' 51"

2

1876		$\epsilon$	$\zeta$	$\eta$	$\theta$		$\epsilon$	$\zeta$	$\eta$	$\theta$		
Jan. 10	55	4	2.0	7.3	7.1	54.5	0	0	9.9	14.9	15.1	6.2
11	55	4	9.9	14.4	16.5	10.5	0	0	0.0	4.3	3.2	3.9
26	55	4	5.6	7.4	9.7	4.4	55	4	57.7	59.8	1.8	56.3
27	55	4	12.0	14.8	19.5	13.8	55	4	56.1	59.1	2.0	57.3
31	55	4	5.5	8.7	13.2	7.3	55	4	57.3	59.5	2.4	59.2
Dec. 12	0	0	56.2	2.0	58.9	37.0	0	1	46.6	51.1	47.6	28.6

no more

62  
 of Hysae Min <sup>n m s</sup> 15 20 57  
 Alt. <sup>n m s</sup> 3 20 24 + 9 17 42 + 72 16 44 107° 43'

1876			$\Sigma$	$P$	$Q$	$T_0$			$\Sigma$	$P$	$Q$	$T_0$
Jan. 10	40	3	10.0	18.8	17.9	34	40	2	39.0	47.8	44.9	34.9
11	40	3	36.7	44.6	43.6	37.1	40	3	0.7	7.4	5.8	1.3
26	40	3	14.7	22.3	22.9	14.5	40	2	47.3	53.2	52.9	46.5
27	40	3	29.1	38.2	40.4	32.1	40	3	2.5	10.7	12.4	6.7
Dec. 12	45	0	7.2	16.9	11.9	48.1	40	4	51.7	0.3	55.0	35.7
1877 Jan. 12	45	0	17.0	27.1	18.3	52.5	40	4	50.0	57.6	49.1	27.2

no more

f. Lauri  $3^h 23^m 58^s + 12^h 30^m 24^s$

ed.

1876	1	1	11	E	R	G	76	1	1	2	5	2	76
Jan 10	50	3	230	25.1	22.8	18.2	50	4	20.7	23.0	19.5	18.6	
	11	50	2	55.1	58.0	58.9	59.8	50	4	20.9	23.3	23.0	26.3
	26	50	4	8.5	8.5	9.1	10.9	30	4	14.8	15.1	14.8	17.1
Dec 12	55	0	8.1	11.4	6.9	52.6	55	0	57.2	58.2	54.1	40.5	
1877													
Jan 2	50	4	52.1	56.7	46.9	30.9	55	0	45.8	48.8	40.6	26.6	

Orudani 3<sup>h</sup> 27<sup>m</sup> 2<sup>s</sup> - 9<sup>s</sup> 52<sup>s</sup> 58<sup>s</sup>

1876			E	R	G	76			E	R	G	76
Jan. 10	15	0	53.8	51.2	52.4	—	15	2	14.8	11.3	12.3	11.9
26	15	0	45.7	41.1	47.0	45.9	15	2	0.3	56.4	58.9	61.1
27	15	1	33.7	30.0	35.8	36.5	15	2	8.3	4.7	8.1	13.0
31	15	0	46.1	41.9	49.0	50.1	15	2	3.9	0.1	4.3	7.4
Dec. 12	15	3	8.1	5.4	3.5	49.6	15	3	54.0	49.7	47.7	34.9
1877 Jan. 2	15	2	40.6	40.1	34.8	18.3	15	3	30.3	28.0	23.0	8.3
no more												

$G. 716$  <sup>W m s</sup> 3 31 19 + 62 48 32

1876				$\Sigma$	$P$	$Q$	$\eta$				$\Sigma$	$P$	$Q$	$\eta$
Jan. 10	35	0	32.9	37.9	37.2	24.8		35	1	30.4	35.3	34.2	25.8	
26	35	0	40.1	42.8	46.2	39.2		35	1	26.7	29.3	31.4	24.6	
31	35	0	33.1	37.4	41.4	33.9		35	1	19.8	22.3	24.8	20.3	
Dec 12	35	2	37.2	43.1	38.5	15.8		35	3	15.4	19.1	16.1	55.2	
1877														
Jan. 2	35	2	34.0	39.0	32.6	8.6		35	3	19.8	25.1	16.7	58.7	
4	35	2	27.3	33.9	26.4	1.9		35	3	20.6	25.8	18.1	57.0	

no more

Persei  $3^h 34^m 2^s + 47^{\circ} 23' 8''$

1876			$\Sigma$	$P$	$Q$	$R_0$			$\Sigma$	$P$	$Q$	$R$
Jan. 10	0	0	59.8	3.6	3.2	55.2	0	1	58.8	3.3	1.2	55.4
26	0	1	22.6	25.3	27.3	21.5	0	1	51.7	52.5	55.4	51.3
31	0	0	49.9	52.9	55.8	52.1	0	1	36.1	38.6	41.2	39.1
Dec. 12	0	2	59.3	4.1	58.9	38.2	0	3	32.1	35.1	31.6	12.1
1877 Jan. 2	0	2	45.6	51.1	43.7	22.6	0	3	27.2	31.5	24.9	6.6
4	0	2	53.2	58.9	52.0	29.7	0	3	46.8	50.6	42.8	24.6

no more

$\int$  Eridani  $h \sim s$   $u \sim v$   $-(10' 10' \text{ ex.})$

1876			$E$	$R$	$S$	$G$			$E$	$R$	$S$	$G$
Jan. 26	30	4	19.0	15.1	19.4	171	35	0	26.3	22.4	26.6	26.2
31	30	4	4.5	1.4	5.8	9.2	35	0	8.1	5.5	10.0	12.8
Dec. 12	35	1	21.4	18.8	15.2	59.2	35	2	7.1	4.0	2.5	47.4
<sup>1877</sup> Jan. 2	35	1	31.5	31.1	25.8	8.2						
4	35	1	8.0	7.8	3.1	440	35	2	11.1	9.8	4.2	49.0

68

Luni  $3^h 40^m 3^s +23^{\circ} 43' 0''$ 

1876

	1	2	3	4	5	6
Jan 10	40	0	54.0	0.4	58.4	55.2
11	40	0	38.9	42.1	44.9	44.2
Dec. 12	40	2	26.9	32.9	26.6	10.1
Jan. 2	40	2	38.5	35.2	28.5	9.2
4	40	2	37.7	44.0	35.4	16.6

~~Sept 11~~ ~~Pian~~  
 Aeternate  
 with next star

	1	2	3	4	5	6
40 2	0.2	5.4	2.5	0.2		
40 1	47.4	51.5	52.3	53.6		

27 Prudomi 3 41 28 -2 3 36 57

1876 1 119 T G 76

Jan. 31	55	4	18.5	17.3	21.7	24.1	0	0	33.7	21.7	25.3	31.2
Dec. 12	0	0	56.9	55.4	51.9	39.1	0	2	1.8	59.4	58.1	46.9
Jan. 1877	0	0	55.8	55.1	50.1	35.6	0	2	3.3	8.6	7.5	45.3
4	0	0	48.7	50.4	45.3	26.3	0	2	10.3	11.4	6.3	52.8

5 Persei <sup>h m s</sup> 3 46 17 +31° 30' 37"

Q

1876			$\Sigma$	$T$	$Q$	$N$				$\Sigma$	$T$	$Q$	$N$
Jan. 10	50	3	12.2	16.8	16.3	6.1	50	4	4.5	7.8	5.3	2.3	
Jan. 11	50	3	21.8	25.8	26.8	24.3	50	4	3.0	6.1	5.2	5.2	
31	50	3	6.0	7.2	12.1	8.1	50	4	1.3	3.2	6.3	4.4	
Dec. 12	50	4	48.6	54.1	48.5	30.4							
Jan. 1877	50	4	51.9	58.3	50.4	31.9							
4	50	4	51.4	57.1	48.6	29.9							

1877

Jan 14 45 1 35.3 37.9 46.2 44.3

next

2

3 Urwae Min <sup>h m s</sup> 15-48 33 +78 10 41 101 49

1876	1	1	11.8	R	G	B	1	1	2	R	G	B
Jan. 11	35	1	47.7	55.5	56.0	45.9	35	1	21.2	27.8	28.2	20.7
31	35	1	36.1	41.6	45.9	36.6	35	1	21.2	26.7	30.0	23.2
Dec. 12	35	3	47.2	55.3	52.4	26.2						
Jan. 2	35	3	41.4	50.1	44.4	18.1						
4	35	3	39.4	48.2	42.8	15.2						

1877  
Jan 14 30 0 20.1 16.9 22.4 20.4

Persei <sup>h m s.      ° ' "</sup>  
 3 4 9 28 + 3 9 38 47

2

1876

Jan. 10	45	0	9.8	14.6	12.9	—	45	1	25.2	29.4	27.3	230
Dec. 12	45	2	3.1	9.5	3.2	44.2	45	3	2.8	7.8	1.1	42.9
Jan. 1877	45	2	1.2	7.5	59.6	36.7	45	3	0.7	7.2	58.2	41.7
4	45	1	55.9	2.7	53.0	29.2	45	2	59.4	4.8	56.5	37.2

1877

Jan. 14	35	3	35.5	35.3	45.0	41.9
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J' Eridani 3° 52' 12" -13 51 55" km s<sup>-1</sup>

1876			"E	"Z	"G	"H			"E	"F	"G	"H	
Jan. 11	10	4	38.1	36.6	40.2	45.5	15	0	55.8	54.3	57.4	3.6	
	31	10	4	42.0	40.4	43.1	47.4	15	0	34.3	32.4	37.2	40.6
DEC 12	15	1	49.0	48.1	44.4	31.8	15	2	25.6	23.6	19.9	9.8	
1877													
Jan. 2	15	1	32.3	33.9	28.2	14.3	15	2	33.3	33.6	26.6	15.7	
	4	15	2	4.1	5.6	13	45.4						

1877													
Jan. 13	5	2	47.8	53.9	3.4	55.9	5	4	6.8	12.1	20.0	14.7	
14	5	2	45.9	51.7	1.5	53.1	5	3	39.4	44.5	53.9	47.6	

74

21.750 3<sup>h</sup> 57<sup>m</sup> 58<sup>s</sup> +85° 13' 20"

1876				11 <sup>h</sup> 9 <sup>m</sup> R	12 <sup>h</sup> 2 <sup>m</sup> 10 <sup>s</sup>	10 <sup>h</sup> 2 <sup>m</sup> 10 <sup>s</sup>	10 <sup>h</sup> 2 <sup>m</sup> 10 <sup>s</sup>	10 <sup>h</sup> 2 <sup>m</sup> 10 <sup>s</sup>	10 <sup>h</sup> 2 <sup>m</sup> 10 <sup>s</sup>	10 <sup>h</sup> 2 <sup>m</sup> 10 <sup>s</sup>	10 <sup>h</sup> 2 <sup>m</sup> 10 <sup>s</sup>	10 <sup>h</sup> 2 <sup>m</sup> 10 <sup>s</sup>	10 <sup>h</sup> 2 <sup>m</sup> 10 <sup>s</sup>
Jan 10	10	1	26.5	35.6	32.3	19.8	10	2	1.6	8.2	4.2	58.0	
11	10	1	42.0	49.2	48.9	41.8	10	2	5.2	11.6	8.6	5.2	
12	10	1	29.8	35.5	35.0	30.7	10	2	0.3	4.4	2.3	1.4	
1877													
Jan 2	10	3	36.6	45.1	36.9	12.9	10	3	52.2	59.4	48.8	28.3	
4	10	3	38.1	44.7	35.6	11.8	10	3	51.1	56.8	48.7	26.8	

1877													
Jan 13	5	0	5.1	3.0	7.9	9.8	5	0	33.8	29.7	34.3	37.0	
14	5	0	3.9	2.9	7.9	9.1	5	0	22.1	21.1	25.1	26.5	

o' Eridani <sup>h m s</sup> 4 5 46 - 7 9 57

1876				E	R	G	W					E	R	G	W
Jan 11	30	3	53.0	51.5	55.0	56.9		30	4	4.0	2.2	5.0	7.1		
12	30	3	6.0	2.3	5.8	7.3		30	4	7.6	4.2	6.3	9.5		
20	30	2	49.6	49.5	51.3	51.1		30	3	54.6	55.1	55.3	55.7		
1877 Jan 4	30	4	50.3	51.2	46.1	28.7		35	0	57.2	57.2	52.3	36.8		

1877															
Jan 13	25	1	6.0	9.2	18.9	10.9		25	2	0.7	2.3	12.9	6.8		
14	25	1	9.9	12.9	22.9	17.0		25	2	2.8	4.9	15.0	9.2		

76

Jan 4 <sup>h m s</sup> 12 41 + 15 19 26

1876			E	R	G	U			E	R	G	U
Jan 10	0	4	12.1	12.6	10.9	9.3	5	0	25.2	26.2	23.8	25.1
11	0	4	29.9	31.8	31.1	32.9	0	4	55.6	55.7	55.1	57.2
12	0	4	10.3	8.2	18.2	13.8	5	0	21.7	21.9	20.7	27.1
20	0	4	1.0	4.7	3.0	4.0	5	0	3.8	7.2	4.0	5.6
Feb. 7	0	4	12.2	13.6	15.2	17.9	5	0	6.5	8.5	7.9	12.9
Mar 7	5	5	6.5	6.9	11.7	16.0						

no more

1877

Jan 13	55	2	27.1	31.1	38.5	32.5	55	3	19.8	22.7	29.7	25.3
14	55	2	27.5	30.9	39.9	34.1	55	3	23.5	27.2	35.2	30.7

1876 Jani <sup>N m s'</sup> 4 15 44 +17 <sup>N m s'</sup> 14 51

1876													
Jan	10	5	3	40.4	39.6	39.6	38.0	10	0	8.0	8.3	6.4	5.1
	11	5	3	53.7	53.5	54.8	56.4	5	4	46.2	44.3	44.9	48.0
	20	5	3	41.7	44.5	43.8	44.4	5	4	48.1	49.9	49.2	49.4

1877													
Jan	13	0	2	5.1	9.2	18.4	11.9	0	2	53.3	55.8	4.2	1.7
	14	0	2	2.9	6.6	14.9	10.3	0	3	0.8	2.9	12.3	8.2

78

2 Musae Min.  $16^h 21^m 11^s + 76^o 2' 3''$  ~~0x~~ 103 58

1876		$\theta$	$\phi$	$\psi$	$\chi$		$\theta$	$\phi$	$\psi$	$\chi$
Jan. 11	25 3	43.4	51.2	51.2	43.3	25 3	24.7	31.8	30.1	25.8
	lost A.1									
12	25 3	59.4	4.9	5.2	0.1	25 3	22.7	28.3	27.2	24.0
20	25 4	0.2	10.6	8.1	0.3	25 3	36.8	46.7	44.6	37.4
Feb. 20	25 3	48.9	59.0	58.8	50.8	25 3	27.2	36.6	37.3	30.8
22	25 3	36.5	44.8	57.6	39.0	25 3	22.5	30.7	30.9	25.6

1877

Jan 13	20 2	23.2	23.1	26.8	26.5	25 2	4.1	0.3	4.9	8.0
14	20 2	12.6	12.1	16.1	16.4	20 2	1.8	58.9	3.9	6.3
	lost 1 <sup>st</sup> 3 sources									

2 Jani km s 0 1 10  
4 2 2 40 +16 15 2 2

1876			E	F	G	H							
Jan. 10	5	3	10.1	9.1	9.9	9.9	5	4	21.6	20.6	19.8	20.1	
11	5	3	19.3	18.8	21.1	23.8	5	4	24.9	23.8	23.8	27.8	
12	5	3	33.3	31.8	34.1	38.1	5	4	23.2	21.0	22.2	27.6	
20	5	3	13.9	16.6	17.0	17.4	5	4	23.0	25.2	24.8	26.1	
26	5	3	24.4	22.3	24.5	26.3	5	4	27.8	26.3	26.6	29.5	
31	5	3	9.4	8.7	11.4	13.4	5	4	12.6	11.3	12.6	16.2	
Feb. 2	5	3	12.1	10.7	10.7	12.2	5	4	10.7	10.0	9.4	11.6	
7	5	3	43.1	45.0	46.4	49.7	5	4	30.4	31.9	31.1	35.6	
8	5	3	10.3	12.4	13.2	18.1	5	4	2.5	3.2	3.2	8.6	
20	5	3	4.9	7.2	7.7	11.8	5	4	2.3	3.7	4.6	8.1	
21	5	3	11.9	11.9	14.2	18.1							
22	5	3	16.0	15.7	19.4	21.5	5	4	19.7	20.0	21.9	26.2	
23	5	3	15.1	15.0	17.2	19.6							
Mar 4	5	3	10.2	7.8	12.6	16.8							
Aug. 10	5	4	52.7	45.7	43.4	42.2							
12	10	0	39.8	33.3	32.9	29.5							

78

2 Musae Min.  $16^{\circ} 21' 11'' + 76^{\circ} 2' 32''$  ~~02~~ 103 58

1876		$\theta$	$\phi$	$\psi$	$\chi$		$\theta$	$\phi$	$\psi$	$\chi$
Jan. 11	25 3	43.4	51.2	51.2	43.3	25 3	24.7	31.8	30.1	25.8
	lost A.1									
12	25 3	59.4	4.9	5.2	0.1	25 3	22.7	28.3	27.2	24.0
20	25 4	0.2	10.6	8.1	0.3	25 3	36.8	46.7	44.6	37.4
Feb. 20	25 3	48.9	59.0	58.8	50.8	25 3	27.2	36.6	37.3	30.8
22	25 3	36.5	44.8	57.6	39.0	25 3	22.5	30.7	30.9	25.6

1877

Jan 13	20 2	23.2	23.1	26.8	26.5	25 2	4.1	0.3	4.9	8.0
14	20 2	12.6	12.1	16.1	16.4	20 2	1.8	58.9	3.9	6.3
	lost 1 $\frac{1}{2}$ sources									

21 Jan 1876 km 8 0 1 10  
4 2 2 40 +16 15 2 2

	1876		E	F	G	H		E	F	G	H
Jan. 10	5	3	10.1	9.1	9.9	9.9	5 4	21.6	20.6	19.8	20.1
11	5	3	19.3	18.8	21.1	23.8	5 4	24.9	23.8	23.8	27.8
12	5	3	33.3	31.8	34.1	38.1	5 4	23.2	21.0	22.2	27.6
20	5	3	13.9	16.6	17.0	17.4	5 4	23.0	25.2	24.8	26.1
26	5	3	24.4	22.3	24.5	26.3	5 4	27.8	26.3	26.6	29.5
31	5	3	9.4	8.7	11.4	13.4	5 4	12.6	11.3	12.6	16.2
Feb. 2	5	3	12.1	10.7	10.7	12.2	5 4	10.7	10.0	9.4	11.6
7	5	3	43.1	45.0	46.4	49.7	5 4	30.4	31.9	31.1	35.6
8	5	3	10.3	12.4	13.2	18.1	5 4	2.5	3.2	3.2	8.6
20	5	3	4.9	7.2	7.7	11.8	5 4	2.3	3.7	4.6	8.1
21	5	3	11.9	11.9	14.2	18.1					
22	5	3	16.0	15.7	19.4	21.5	5 4	19.7	20.0	21.9	26.2
23	5	3	15.1	15.0	17.2	19.6					
Mar 4	5	3	10.2	7.8	12.6	16.8					
Aug. 10	5	4	52.7	45.7	43.4	42.2					
12	10	0	39.8	33.3	32.9	29.5					

+2

4 Camcops <sup>4 m s</sup> + 3736 + 563156

1876			8	3	4	16				8	3	4	16
Jan. 10	50	2	34.6	38.2	37.9	28.9	50	3	34.8	37.7	36.1	30.8	
12	50	2	22.0	24.5	26.9	23.8	50	3	8.2	11.0	10.7	9.3	
20	50	2	16.8	23.2	23.1	18.6	50	3	11.4	17.3	16.3	11.7	
Feb. 2	50	2	30.4	34.3	36.0	29.4	50	3	8.6	11.3	11.6	6.9	
8	50	2	12.8	17.2	18.9	15.5	50	2	52.1	55.7	56.6	53.7	
17	50	2	12.9	17.8	20.9	16.2	50	2	46.9	50.2	54.5	50.0	

no more

9 Camelopard 44138 +66 4 3"

1876			G	F	G	H <sub>0</sub>				G	F	G	H <sub>0</sub>
Jan 20	15	1	45.7	54.7	52.5	46.4	15	2	26.7	35.6	32.2	26.2	
Feb. 2	15	1	51.2	56.8	56.1	48.8	15	2	24.3	29.8	28.6	21.2	
8	15	1	37.8	42.8	42.4	37.9	15	2	24.6	31.7	29.9	27.2	
17	15	1	39.7	46.2	48.8	41.6	15	2	20.7	26.8	28.3	22.7	
23	15	1	44.0	49.5	51.1	44.6	15	2	32.4	35.4	36.8	32.2	
lost A+1													

14

Arigae <sup>h v s.</sup> 4 48.57 + 32.57 57 ex.

1876			E	F	G	H				E	F	G	H
Feb. 2	25	0	51.9	54.8	56.8	51.9	25	1	49.1	50.7	51.3	49.7	
8	25	0	48.9	51.7	53.5	52.9	25	1	50.6	54.9	54.5	55.1	
16	25	0	50.8	56.2	58.2	56.5	25	1	52.4	58.1	58.4	57.3	
17	25	1	28.5	33.0	36.3	34.8	25	2	03	4.6	6.8	5.2	
23	25	0	51.8	56.1	59.6	57.7	25	1	44.0	46.4	49.6	48.9	
Mar 14	25	0	5-20	54.5	58.3	59.7							
			no more										

A.

 $\epsilon$  Aurigae  $h m s. ^{\circ} ' ''$   
 $4530+4328$ 

Alternate with next two stars

1876

Jan. 20	45	0	46.4	50.8	50.9	46.9	45	1	36.4	41.5	40.4
Feb. 20	45	0	49.6	53.8	55.2	52.1					
Feb. 16	45	0	51.5	56.4	58.2	54.2					
Mar. 14	45	0	59.5	0.5	4.8	3.7					

86

10 Camelo 4<sup>h</sup> 52<sup>m</sup> 18<sup>s</sup> +60° 15' 23"

1876			E	F	G	H
Feb. 2	5	3	50.1	53.0	54.7	47.0
17	5	3	46.9	51.6	55.4	47.6
23	5	4	2.4	5.2	9.9	3.9

D

3 Aurigae  $4^{\circ} 53' 45'' + 40^{\circ} 58' 27''$ 

1876			$\odot$	$\oplus$	$\ominus$	$\oplus$		$\odot$	$\oplus$	$\ominus$	$\oplus$
Feb. 2	30'	0'	29.9	32.4	36.2	31.1	30' 1'	30.7	32.7	34.3	31.2
8	30	0	53.2	58.1	58.5	56.9	30 1	23.7	28.2	28.6	27.7
17	30	0	30.4	35.6	38.5	35.5	30 1	22.3	26.2	30.0	26.4
23	30	0	36.9	39.5	44.6	40.8	30 1	23.6	25.7	29.6	27.2

88

h Aurigae 4<sup>h</sup> 45<sup>m</sup> +41° 3' 4"

1876		E	F	G	H		E	F	G	H
Jan. 20	20' 0"	13.9	20.5	20.8	16.3	20' 1' 3.2"	9.1	8.1	5.0	
31	20' 0"	49.1	50.7	55.9	50.9					
Feb. 2	20' 0"	18.0	21.2	24.8	17.8					
8	20' 0"	8.3	13.8	15.9	11.5					
17	20' 0"	9.5	14.5	17.9	14.0					
Mar 14	20' 0"	9.8	—	16.3	—					
		no more								

2 hrs min 16 59 82 15 97 45

1876		E	F	G	H		E	F	G	H
Feb. 2	40' 0"	16.9	20.2	24.2	14.9	40' 0"	5.5	9.1	10.3	3.9
8	40' 0"	0.5	7.4	8.5	3.5	35' 4"	55.2	0.7	0.2	55.7
17	40' 0"	7.4	13.1	17.4	10.4	35' 4"	54.7	61.3	61.9	56.1
23	40' 0"	19.7	24.0	28.5	21.7	40' 0"	7.4	11.0	15.2	10.1
Mar 7	35' 4"	45.3	60.5	58.7	64.5					
May 14	35' 4"	40.8	42.7	47.4	4.3					
Date?	30' 5"	28.8	37.2	36.0						

15-4

29

 $\lambda$  Eridani  $5^{\circ} 3' 10'' - 2^{\circ} 54' 48''$ 

1876			$\epsilon$	$\zeta$	$\eta$	$\theta$			$\epsilon$	$\zeta$	$\eta$	$\theta$
Feb. 2	15	2	55.4	50.9	54.8	54.1	15	3	55.3	49.9	53.6	53.3
8	15	3	0.9	57.7	0.9	4.5	15	4	0.7	58.2	1.1	5.2
17	15	3	1.9	59.1	4.2	4.7	15	4	8.0	5.0	9.8	11.0
23	15	3	1.9	57.5	2.8	3.9	15	4	15.7	11.8	16.9	18.5

$\text{Mean } \epsilon = 2$   
 $\text{Mean } \zeta = 10.2$

90

Curique 5 <sup>h</sup> 7 <sup>m</sup> 27 <sup>s</sup> + 45° 52' 5"											
1876			E	F	G	H		E	F	G	H
Jan. 20	30	1	53.1	0.4	59.6	54.7					
26	30	1	57.0	59.2	0.9	57.3					
31	30	1	53.8	57.4	59.9	54.1	30	3	5.3	7.8	10.8 64
Feb. 2	30	2	0.6	4.1	6.5	59.3					
8	30	1	49.4	55.0	56.1	52.2					
17	30	1	52.3	58.4	0.4	56.1					
20	30	1	50.8	58.8	58.7	53.5					
21	30	2	5.9	10.5	13.8	10.4					
22	30	1	54.3	0.7	2.1	57.3					
23	30	1	57.6	2.3	6.3						
Mar 7	30	2	9.7	15.6	19.6	20.2					
14	30	2	41.8	44.3	47.8	46.6					
22											
Aug. 9	30	4	29.4	26.5	26.1	16.7					
10	30	4	16.5	13.4	12.3	3.0					
12			A.R.								
15	30	4	39.8	35.2	36.3	26.4					
	lost 1 <sup>st</sup> 3 wires										
21			A.R.								
26	30	4	23.8	22.1	21.6	13.8					
28	30	3	44.8	43.0	42.4	34.3					
1877											
Jan. 20	25	0	31.0	32.2	46.1	40.6					
23	25	0	27.4	26.5	40.1	31.6					

$\beta$  Orionis  $h m s$   $s 3 2 - s 20 5 - 3$

1876		$\delta$	$\alpha$	$\theta$	$\phi$		$\delta$	$\alpha$	$\theta$	$\phi$		
Jan 20	40	4	12.1	12.0	13.8	<del>14.8</del>	45	0	19.4	19.2	20.7	21.3
26	—	—	—	—	—	—	45	0	18.6	14.2	17.4	19.1
Feb. 2	40	4	16.3	14.2	12.9	14.9	40	4	16.3	14.2		
8	<sup>lost 1<sup>st</sup> 3 miles</sup> 40	4	10.0	7.5	9.6	13.2	45	0	15.2	11.7	15.2	18.3
17	40	4	31.4	31.4	33.9	33.3	45	0	19.8	18.4	23.2	24.0
20	<sup>A14C</sup> 40	4	14.2	14.3	17.0	17.2	45	0	14.3	13.3	16.9	18.1
21	40	4	20.1	18.2	23.4	24.2	45	0	14.0	11.3	17.3	19.1
22	40	4	10.2	9.8	13.0	13.9	45	0	17.7	15.0	20.2	20.2
23	40	3	52.1	49.7	54.4	54.8	40	4	61.8	58.4	61.4	63.4
March	A.R. lost 1234 +2											

Aug. 12	45	1	28.7	18.3	20.2	16.7
21	45	1	39.0	30.6	31.8	27.0

1877

Jan. 20	35	3	4.0	9.1	25.3	10.4
23	35	2	53.7	56.3	13.1	59.4

Orionis 5<sup>h</sup> 11<sup>m</sup> 32<sup>s</sup> - 6° 58' 53"

			<i>Q</i>	<i>P</i>	<i>G</i>	<i>W</i>			<i>Q</i>	<i>P</i>	<i>G</i>	<i>W</i>
Feb, 2	20	2	2.1	1.4	3.9	4.5	20	3	15.6	11.9	15.2	16.1
8	20	2	13.1	12.8	15.6	15.4	20	3	13.1	10.4	12.5	16.1
23	20	1	54.6	53.7	57.6	58.6	20	3	3.0	2.1	4.9	7.8
March 7	20	2	0.2	56.1	5.2	11.8	20	3	2.1	57.1	7.1	18.2
14	20	2	90	<del>11.8</del>	12.0	—						

$\beta$  Tauri  $5^h 18^m 23^s +28^\circ 29' 57''$

1876			E	F	G	H			E	F	G	H
Jan. 20	50	4	21.5	29.1	28.0	28.0	55	0	14.5	19.6	20.4	19.2
26	50	4	14.0	16.5	20.2	18.0	55	0	15.4	18.7	21.3	19.7
27	50	4	9.5	14.9	17.8	13.7	55	0	13.7	18.6	20.8	17.7
Feb. 2	50	4	18.9	22.2	24.2	19.9	50	4	59.2	60.1	60.7	59.4
8	50	3	39.5	44.7	45.9	45.9	50	4	58.9	63.1	63.2	65.6
16	50	4	34.2	40.5	43.1	41.2	50	4	60.6	65.2	66.0	66.1
17	50	3	50.5	56.4	59.2	56.9	50	4	49.8	53.2	55.2	54.2
23	50	3	44.8	48.5	52.4	50.1	55	0	5.6	10.3	14.7	12.1
Mar. 5	50	4	39.1	47.1	48.8	49.1	Cont A - ✓					
7	50	3	48.0	52.5	1.8	2.1	50	4	39.0	41.2	50.2	50.6
14	50	4	54.0	57.2	1.2	1.9	Mid wire fail					
Aug. 9	55	1	52.8	49.3	48.7	44.5						
12	55	0	35.7	32.7	33.2	27.5						
15	55	1	6.3	1.9	2.9	58.3						
21	55	0	34.6	34.3	34.2	28.1						
26	55	0	47.6	44.4	44.3	40.7						
28	55	0	44.8	42.7	44.4	37.7						
Sept. 4	55	0	44.8	41.5	40.3	38.7						

3 Tauri <sup>L</sup> 5 <sup>m</sup> 18 <sup>s</sup> 23 +28° 29' 57"

1877

Jan 20	45	2	17.6	21.6	33.1	28.9	45	3	10.7	14.8	35.7	219
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Gw. 22

95

Gr. 966  $\frac{h}{5}$   $\frac{m}{23}$   $\frac{s}{1}$   $\frac{o}{+74}$   $\frac{i}{57}$   $\frac{n}{22}$ 

1876				$\frac{h}{5}$	$\frac{m}{23}$	$\frac{s}{1}$	$\frac{o}{+74}$	$\frac{i}{57}$	$\frac{n}{22}$								
Jan 26	25	2	20.5	23.7	26.8	18.4				25	2	54.3	56.6	57.0	51.3		
Feb. 16	25	2	31.4	37.4	37.8	31.4											
23	25	2	22.2	28.4	30.6	23.7				25	3	8.1	11.6	14.1	12.7		
Mar 14	25	2	56.9	0.0	60.9	56.7				25	3	18.9	22.2	23.8	21.0		
long 1st 3w																	

Orionis  $5^{\text{h}} 25^{\text{m}} 37^{\text{s}} - 0^{\circ} 23' 38''$

1876				E	R	ls	76					R	Q	76
Jan. 27	45	1	55.8	57.4	59.3	61.2		45	2	51.4	51.7	53.3	56.3	
Feb. 16	45	1	54.6	57.3	59.7	61.4		45	2	51.8	53.3	55.3	58.0	
	21	45	2	5.7	6.3	9.7	13.2	45	3	10.6	10.8	14.2	15.6	
	22	45	2	15.1	16.3	18.7	21.5	45	3	17.2	16.5	19.8	23.2	
March 19	45	1	59.8	57.4	3.4	10.2		45	2	56.6	53.6	59.3	6.8	
	22	45	1	57.2	57.2	1.3	8.0							

no more

$\epsilon$  Orionis  $5^h 29^m 50^s - 1^\circ 17' 2''$

1876phase

	1876	$\epsilon$	$\epsilon_{11}$	$R$	$S$	$T_6$	$\epsilon$	$\epsilon$	$R$	$S$	$T_6$
3 Jan. 26	40	0	21.4	20.9	25.2	26.4	40	1	24.7	23.7	26.0
27	40	0	15.0	15.4	19.6	21.3	40	1	22.6	21.7	25.0
Feb. 16	40	0	14.0	26.2	28.7	29.6	40	1	15.7	17.5	20.4
20	40	0	22.0	25.4	25.9	27.2	40	1	6.9	7.8	9.8
21	40	0	25.1	25.6	29.7	32.3	40	1	26.3	26.3	29.5
22	40	0	27.9	28.7	32.2	33.9	40	1	34.1	33.6	37.2
lost A 1, 2, 3, 4 no more											

Orionis  $5^h 32^m 28^s - 2^{\circ} 40' 27''$ 

1876pha

			$\epsilon$	$\zeta$	$\eta$	$\theta$		$\epsilon$	$\zeta$	$\eta$	$\theta$	
1876												
Feb. 16	0	3	38.4	40.7	43.4	44.6	0	4	38.7	40.0	42.2	44.7
20	0	3	50.4	53.8	53.4	57.1	0	4	59.0	58.6	60.8	64.4
Mar 14	0	4	4.1	2.6	6.4	12.0						
19	0	3	41.9	39.9	47.4	52.6						
22												

$\alpha$  Columbae  $5^h 35^m 7^s - 34^\circ 8' 30''$

1876			$\epsilon$	$\zeta$	$\eta$		$\epsilon$	$\zeta$	$\eta$	$\theta$		
Jan 27	25	3	57.9	59.3	2.6	4.1	25	4	58.3	58.4	1.9	66.1
Feb 20	25	3	23.0	26.2	28.9	29.5	25	4	63.6	65.2	68.6	71.2

Leporis 5<sup>h</sup> 41<sup>m</sup> 17<sup>s</sup> - 14<sup>s</sup> 52<sup>s</sup> 14<sup>s</sup>

1876

Σ R ly 76 . . . E R 2 40

Jan. 27	15	0	<del>1.3</del>	<del>1.4</del>	4.1	5.8	15	1	<del>16.2</del>	<del>16.7</del>	18.8	22.8
Feb. 22	15	0	0.4	59.5	3.5	7.4	15	1	22.2	21.6	23.9	28.8
29	10	4	55.6	53.7	58.0	4.1	15	1	20.9	18.2	22.7	28.5
March 19	15	0	7.3	6.1	12.2	19.6	15	1	13.2	10.2	17.2	23.9

$\gamma$  Draconis  $17^h 44^m 10^s + 72.12 34$  107 48

.1876

	1	1	11.8	R	G 26	1	1	11.8	R	G 26	1	1	11.8
Feb. 20	35	4	5.0	14.9	15.4	7.0	35	3	49.0	54.2	57.2	50.2	
	<i>lost 1st two wires</i>												
22	35	3	5.4	4	3.1	3.3	57.2	35	3	43.1	50.8	51.6	45.7
	<i>first 4 wires blunder</i>												
29	35	4	4.0	11.2	13.9	9.8	35	3	47.4	54.9	57.1	53.2	
	<i>false stroke before 1st wire</i>												
9 March 6	35	4	4.8	16.7	20.2	12.6	35	3	47.1	57.3	59.8	58.7	

Orionis <sup>h</sup> 5 <sup>m</sup> 48 <sup>s</sup> 24 + <sup>°</sup> 7 <sup>'</sup> 22 <sup>"</sup> 53

1876			E	F	G	H			E	F	G	H
Jan 27	0	1	3.0	7.2	9.4	11.4	0	1	47.2	50.9	52.7	54.8
Feb. 17	0	0	29.0	33.1	35.9	38.1	0	1	48.4	50.2	54.1	56.2
20	0	0	40.7	45.2	46.9	47.5	0	1	48.1	52.0	52.4	55.2
22	0	0	56.0	0.4	2.9	4.9	0	1	59.7	61.9	64.2	67.2
29	0	0	29.9	32.4	35.3	38.2						
March 15	0	1	10.7	12.8	16.9	16.3						
19	0	0	31.9	33.4	38.5	43.3						
27	0	0	43.6	42.6	52.0	59.3						
April 20	0	0	35.6	35.3	45.4	51.5						
Aug. 9	0	2	12.7	8.7	6.8	4.6						
15	0	2	15.8	10.4	10.2	8.4						
26	0	2	42.8	38.3	38.3	36.0						
Sept. 4	0	2	14.1	10.7	9.8	9.2						

$\alpha$  Orionis <sup>h</sup>5 <sup>m</sup>48 <sup>s</sup>24 +7° 22' 53"

3 Aurigae <sup>h</sup> 5 <sup>m</sup> 50 <sup>s</sup> 22 +44° 55' 55"

1876

Feb. 29	25	3	9.9	13.2	16.8	13.0	25	4	4.1	7.2	9.9	8.2
March 6	25	3	9.4	13.6	17.1	15.2	25	4	2.6	5.9	8.4	8.7
19	25	3	9.7	12.5	18.4	16.2	25	4	4.7	6.3	11.2	10.2

35 Draconis <sup>h</sup> 17 <sup>m</sup> 55 <sup>s</sup> 3 + <sup>s</sup> 76 <sup>s</sup> 58 <sup>"</sup> 40 <sup>0</sup> 103 <sup>1</sup> 01

1876

Feb. 20	25	0	1.4	11.8	13.6	<sup>4</sup> 2.7	20	4	42.7	51.3	51.8	44.6
22	20	4	47.2	55.7	52.6	49.4	20	4	31.5	39.1	41.3	34.4
29	20	4	50.0	57.1	60.1	53.3	20	4	37.8	44.1	47.5	41.3
March 6	20	4	40.9	50.2	54.8	47.5	20	4	18.7	27.2	30.8	24.3
7	20	4	57.6	59.7	8.1	0.9	20	4	36.3	43.6	52.7	45.7
19	25	0	3.6	9.9	16.8	10.6	20	4	43.8	49.7	53.9	49.0

mid. wire + foll.  
649 wires

26 Camelop.  $6^h 0^m 16^s + 65' 44'' 21''$

1876

Feb 22	40	0	21.8	26.3	28.3	213	40	0	52.0	55.7	57.8	515	
29	40	0	6.5	11.6	14.0	9.9	40	0	55.4	58.2	60.2	572	
March 6	40	0	0.9	5.9	7.9	4.3	40	0	46.0	49.2	53.3	48.8	9m
7	40	0	10.9	14.3	22.2	18.1	40	0	54.3	58.3	53.9	1.3	
19	35	4	57.9	2.0	4.4	2.4	40	1	7.6	10.2	14.0	11.3	
	21m												

22 H. Camelop.  $\overset{h}{6} \overset{m}{5} \overset{s}{4} + 6 \overset{o}{9} \overset{i}{2} \overset{s}{5}$

1876

575	Feb. 22	<del>45</del>	<del>3</del>	<del>13.2</del>	<del>19.7</del>	<del>20.9</del>	<del>13.1</del>	<del>45.</del>	<del>3</del>	<del>40.3</del>	<del>45.6</del>	<del>45.7</del>	<del>40.3</del>
572	29	0	3	10.5	16.1	18.2	13.0	0	3	37.6	41.8	42.3	40.0
488	March 6	0	3	4.9	11.4	13.4	10.1	0	3	55.3	60.8	57.9	59.2
13	7	0	3	13.0	18.1	25.2	20.4	0	3	35.4	39.8	45.4	42.7
113	19	0	2	45.8	49.6	53.9	50.6	0	3	51.2	55.4	58.7	55.7

lost 2<sup>nd</sup> wire

21 wires

*Lyncis* <sup>h m s</sup> 6 8 36 +59° 3' 10"

1876

Feb. 22	20	1	26.9	30.5	33.2	29.1	20	2	2.1	5.3	7.3	4.1	
29	20	1	10.1	12.8	16.4	13.8	20	1	5.6	53.8	57.2	55.0	ste
March 6	20	1	21.2	24.9	28.4	27.9	20	2	4.3	6.6	10.3	84	Ma
7	20	1	9.2	10.2	19.2	17.6							
19	20	1	6.8	8.6	14.8	12.9							

$\delta$  Ursae Min.  $18^h 12^m 39^s + 86^\circ 36' 27''$  93 24

1876

Feb.	22	0	2	6.4	13.1	15.4	8.8	0	2	3.7	7.7	10.5	5.3	
50	29	0	2	12.1	13.9	18.9	23.8	16.9	0	2	8.4	12.7	10.4	12.3
84	March 7	0	2	18.6	22.8	32.1	26.6	0	2	11.4	16.9	26.0	20.7	
	? 13	0	2	12.2	18.5	24.8	18.9	0	1	49.9	55.1	60.0	55.0	
	19	0	2	21.9	25.4	30.4	26.0	0	2	11.1	14.3	21.1	15.6	
	20	0	2	11.4	15.7	16.9	22.7	0	1	51.2	56.3	6.3	1.8	

Ursae Min. <sup>h</sup> <sup>m</sup> <sup>s</sup> <sup>°</sup> <sup>'</sup> <sup>"</sup>  
18 13 39 +86 36 27

B. Can. Maj.  $6^{\text{h}} 17^{\text{m}} 12^{\text{s}} - 17^{\circ} 53' 42''$

1876

Feb 29	15	1	20.5	19.8	24.2	30.0	15.2	17.6	15.4	20.0	17.3
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~~73 30~~

(Draconis <sup>h m s</sup> 18 22 33 + 71 16 74  
18 23 17 + 72 40 40

107° 20'

~~Feb 22 35 1 5 7 1 2 3 10 2~~

March 6	5	2	12.2	23.4	26.1	19.2	5	1	57.2	7.4	9.4	4.2
	sure											
17	5	2	25.9	34.9	40.5	35.1	5	1	58.2	6.0	11.3	6.7
Apr. 2	5	2	0.3	8.3	16.7	16.5						
	last 1st m											

8 Lyncis <sup>h</sup> 6 <sup>m</sup> 26 <sup>s</sup> 16 + <sup>°</sup> 61 <sup>'</sup> 35 <sup>"</sup> 16

1876

Feb. 22	45	4	12.0	17.1	19.9	13.5	50	0	2.5	5.7	9.7	3.7
29	45	4	7.9	10.2	15.0	10.1	50	0	17.9	20.5	24.9	21.0
March 6	45	4	34.8	39.2	44.0	40.5	50	0	8.7	11.7	17.7	12.9
7	45	4	21.2	24.6	32.9	29.4	50	0	2.3	3.7	11.7	9.3

Geminor.  $6^h 30^m 29^s + 16^0 30' 13''$

1876

Feb. 22	50	3	47.6	46.7	50.4	51.9	50	4	57.2	55.8	57.9	60.3
(29 <sup>p</sup> )	50	3	27.0	35.6	38.9	40.7	50	4	56.0	53.3	56.1	60.8
March 6	50	3	34.9	33.9	37.2	43.4						
7	50	3	52.8	55.3	2.9	9.1	50	4	57.9	53.5	1.3	8.4
April 2	50	3	27.5	26.1	34.8	40.8						

$\epsilon$  Geminor.  $6^h 36^m 14^s + 25^\circ 15' 10''$

1876.			$\odot$	$\gamma$	$\theta$	$\theta_6$		$\odot$	$\gamma$	$\theta$	$\theta_6$	
Feb.	17	5	4	0.1	5.1	7.2	49 10	0	5.2	8.8	12.2	10.3
	20	5	3	45.9	51.3	52.6	50.5 5	4	52.5	57.7	57.3	57.2
	22	5	3	53.2	58.4	0.6	58.5 18	0	6.1	10.7	12.8	12.1
March	5	5	B	42.1	45.1	47.3	49.0 5	4	34.3	37.4	39.5	41.3
	13	5	3	48.9	52.8	58.5	58.5 5	4	52.4	56.2	60.7	61.8
Apr	2	5	4	40.2	42.1	50.9	54.1					
m w & full												
no mne												

~~516~~ <sup>h</sup> ~~ephei~~ <sup>m</sup> ~~6~~ <sup>s</sup> ~~41~~ <sup>°</sup> ~~16~~ <sup>'</sup> ~~14~~ <sup>"</sup> ~~3~~  
 Canis Maj. <sup>h</sup> ~~6~~ <sup>m</sup> ~~39~~ <sup>s</sup> ~~38~~ <sup>°</sup> ~~16~~ <sup>'</sup> ~~33~~ <sup>"</sup> ~~46~~

1876

Feb. 17	55	1	9.1	8.9	14.5	16.7
20	55	0	33.4	34.4	35.5	—
22	55	0	28.9	29.4	33.8	37.2
29	55	0	30.8	29.0	33.8	40.5
March 5	55	0	39.3	37.6	42.4	49.9
13	55	0	31.6	30.4	34.9	43.6
Apr. 2	55	0	26.4	23.2	35.5	—
Aug. 27	55	2	9.6	2.4	2.9	4.6
28	55	2	14.4	7.3	8.3	8.4
29	55	2	11.3	3.8	4.7	7.0
30	55	2	11.4	3.8	5.3	5.9
Sept. 2	55	2	6.6	58.2	59.7	59.9
3	55	2	6.9	59.1	0.8	2.3

51 Cephei  $6^{\text{h}} 41^{\text{m}} 16^{\text{s}} + 87^{\circ} 14' 3''$   
 $\alpha$  Caris Maj.  $6^{\text{h}} 39^{\text{m}} 38^{\text{s}} - 16^{\circ} 32' 46''$

10-1

51 Cephei <sup>h m s</sup> 6 41 16 +87° 14' 3"

1876

Feb. 17	10	1	21.6	28.9	30.5	23.2	10	1	29.8	37.4	39.2	31.5
	rej. 2nd stroke for S											
20	10	1	24.2	32.5	35.0	25.1	10	1	36.2	44.3	44.6	38.3
22	10	1	21.0	28.3	29.7	23.7	10	1	29.9	36.7	37.5	32.1
29	10	1	21.2	27.3	30.2	23.7	10	1	34.8	39.8	41.7	39.3
March 5	10	1	22.4	30.4	31.7	26.6	10	1	29.4	36.2	37.2	32.1
6	10	1	43.4	50.5	52.7	<del>51.1</del>	10	1	45.1	53.8	55.1	49.9
	probably the last wires PA-2											
7	10	1	44.2	49.7	57.2	51.6	10	1	47.2	53.2	59.2	55.8
	A 2, 3, 4, 5											
13	10	1	19.5	20.6	30.4	25.1	10	1	25.2	31.8	34.9	28.7
	lost 1st wire											
14	10	1	43.5	48.1	52.0	46.4						
	A 2, 3											
18	10	1	48.5	53.3	56.4	53.4	10	1	55.4	1.0	3.4	58.5
	A 2, 3, 4, 5											
Apr. 2	10	1	19.6	26.3	35.3	30.8	10	1	27.6	33.4	42.4	36.5
	lost 1st wire											

Oct. 2 5 obs. for S. lost 1st wire  
 3 9 obs. for S A 849  
 9 13 obs. for S  
 10 14 obs. for S

Morning

51 Cephei <sup>h m s</sup> 6 41 16 +87° 14' 3"

*O. Seminor* <sup>h</sup> <sup>m</sup> <sup>s</sup> <sup>°</sup> <sup>'</sup> <sup>"</sup>  
~~6 44 33 + 34 6 35~~

$\epsilon$  Canis Maj.  $6^h 53^m 43^s - 28^\circ 48' 12''$

1876

✓

F

g

H

E

A

g

H

Feb. 17	5	4	48.5	49.8	54.7	57.5	10	0	48.6	51.2	54.8	58.2
20	5	4	36.8	39.6	41.9	45.4	10	0	39.4	41.9	44.2	47.7
22	5	4	44.2	46.2	50.3	53.3	10	0	54.8	56.7	60.6	65.1
March 5	5	4	46.1	47.1	52.2	57.3	10	0	43.2	44.9	48.8	55.2
14	5	4	41.3	40.4	45.3	50.4	10	0	3.5	3.4	8.4	15.5

1876phae.proj.1392F  
 122  
 z Geminor. <sup>h m s</sup> 6 56 42 +20° 45' 6"

1876	E	F	G	H	E	F	G	H	
Feb. 17	35 3 57.8	0.8	2.8	1.0	40 0	2.4	3.7	5.9	6.2
20	35 3 43.8	47.3	48.5	47.4	40 4	2.3	5.9	6.3	6.6
22	35 4 28.7	32.2	33.2	33.1	40 0	15.3	18.0	20.2	20.5
March 5	35 3 55.2	57.2	58.8	0.6	35 4	58.3	59.3	61.2	64.1
14	35 4 26.0	26.9	30.9	32.1	40 0	9.8	10.5	15.3	17.2
18	35 4 58.8	58.1	1.2	2.8	40 0	15.5	16.6	20.9	21.5

lost 2 waves

no more

Nepht #

25 H. camelop. <sup>h m s</sup> 7 4 40 8 2 35

1876

$\Sigma$   $P$   $Q$   $R$   $S$   $T$   $U$   $V$   $W$   $X$   $Y$   $Z$

Feb. 22	45	1	32.8	42.6	43.3	36.8	45	1	52.3	61.2	60.0	56.2
29	45	1	30.4	38.9	39.0	34.4	45	1	50.3	57.6	57.8	54.8
March 5	45	1	21.2	32.6	31.4	28.4	45	1	40.0	50.4	49.1	44.4
6	45	1	31.8	42.9	42.5	37.4	45	1	49.2	59.8	59.2	54.7
7	45	1	26.8	44.6	39.6	6.0	45	1	40.2	49.1	52.7	49.8

124

8 Canis Maj.  $7^h 3^m 19^s - 26^\circ 11' 44''$

1876

E

N

S

W

E

N

S

W

Feb 20	30	3	40.5	44.1	47.2	47.0	30	4	41.4	43.0	44.1	48.2
March 13	30	3	52.1	52.2	57.7	3.9	30	4	38.3	37.8	42.3	49.2
14	30	3	41.0	40.5	44.4	49.7	30	4	39.8	37.4	42.3	48.6
15	30	3	43.5	40.5	48.5	55.4	30	4	38.0	36.1	41.8	50.7
18	30	3	35.9	8.1	40.9	47.8	30	4	31.8	31.4	35.2	41.2

64 Aurigae  $7^h 9^m 21^s + 41^\circ 6' 11''$

			E	F	G	H				E	F	G	H
Feb. 20	15	2	59.3	5.3	6.2	1.4	15	4	7.2	12.7	13.5	9.9	
29	15	3	1.1	2.8	6.3	6.1	15	4	1.0	2.8	5.8	5.1	
March 5	15	3	14.8	20.1	22.2	19.8	15	4	10.5	14.1	16.2	13.7	
6	15	3	17.3	22.0	24.9	23.9	15	4	7.3	12.2	14.4	14.1	
7	15	3	4.9	7.4	15.9	15.1	15	3	53.1	55.2	2.3	2.6	
13	15	3	2.0	5.6	9.9	7.2	15	3	53.6	57.3	0.7	58.2	
			no more										

8 Geminor. <sup>h</sup> 7 <sup>m</sup> 12 <sup>s</sup> 39 + 22 12 38

1876p.187

1876			E	F	G	H			E	F	G	H	
Feb. 20	12	10	1	25.3	30.2	31.0	29.8	10	2	30.6	35.3	35.2	35.4
	29	10	1	21.1	23.6	27.7	28.6	10	2	19.8	21.6	24.9	26.2
March	5	10	1	47.1	49.8	52.8	55.1	10	2	41.7	44.0	46.8	48.3
	6	10	1	lost 1 <sup>st</sup> wire 36.3	38.8	41.8	46.6	10	2	41.7	43.8	47.9	51.3
	7	10	1	34.9	35.4	44.1	47.0	10	2	32.5	31.3	38.6	43.4
	15	10	1	20.4	22.2	28.2	28.9	10	2	21.2	21.3	26.3	27.5
					no more								

no. more

i Geminor.  $7^h 17^m 58^s + 28^\circ 2' 40''$

1876			E	F	G	H		E	F	G	H
Feb. 29	20	1	24.4	27.2	30.3	31.8	20 2	19.8	20.6	24.1	26.3
March 5	20	1	32.2	37.0	38.5	41.1	20 2	27.2	29.7	31.7	34.6
6	20	1	21.3	25.1	28.9	31.9	20 1	21.8	25.4		
7	20	1	34.3	36.1	44.6	46.8	20 2	21.9	21.7	29.7	34.2
15	20	1	20.8	23.8	27.8	30.7	20 2	24.2	24.7	30.2	33.5

Geminor.  $7^h 21^m 4^s +32^\circ 1' 5''$

1876

E

F

G

H

E

F

G

H

Feb. 29	20	2	15.4	18.2	22.0	21.2	20	3	10.2	14.6	18.7	17.2	
March 5	20	2	18.3	22.4	24.7	25.4	20	3	15.0	18.7	20.7	20.6	Ma
6	20	2	26.7	31.5	34.1	35.6	20	3	23.1	28.5	30.7	33.2	Ma
7	20	2	37.4	39.1	47.2	47.7	20	3	13.4	15.0	22.3	23.9	
15	20	2	46.6	47.8	54.1	52.5	20	3	25.3	26.0	30.8	31.3	
21	20	2	50.9	56.5	59.2	1.2	20	3	34.2	37.2	41.2	44.3	

no more

$\alpha$  Geminor.  $h^m s + 32^{\circ} 9' 38''$

1876

Feb. 29	10	4	46.1	48.9	52.4	52.2	15	0	41.3	43.9	47.6	46.2
<i>rej. 1st 2 wires</i>												
March 5	15	0	51.1	53.9	57.9	57.8	15	0	51.4	53.9	57.9	57.8
March 6	10	4	27.2	32.6	34.9	36.8	15	0	45.1	49.7	53.9	54.1
<i>1 stroke for each s</i>												
7	10	4	22.4	24.9	31.9	32.8	15	0	41.2	42.3	51.6	52.8
<i>1 stroke for each s</i>												
15	10	4	42.9	44.1	49.5	49.7	15	0	41.8	43.4	49.3	47.8
<i>reg. order 1 stroke for each s</i>												
18	10	4	49.1	54.3	57.8	54.8	15	0	34.8	39.8	43.9	40.8
<i>mean R.A. 22.3 Rej. Observed 22.6</i>												
21	10	4	22.3	27.6	29.4	32.6	15	0	24.5	28.9	32.8	35.6
<i>mean R.A. 1 stroke for each s</i>												
Aug. 22	15	1	36.6	35.1	35.1	29.3	15	2	38.4	37.1	36.2	30.4
<i>lost 1st wire</i>												
Sept. 2	15	2	15.9	13.5	12.4	6.6						
<i>rej. 1st 2</i>												
3	15	1	25.2	23.1	22.9	17.9						
4	15	2	45.3	43.2	42.2	38.2						
<i>rej. 1st 2</i>												
Oct. 2	15	1	36.2	39.1	37.0	29.3						
3	<i>A.R. A-1, 4A-2</i>											
9	15	1	33.9	38.2	35.1	23.8						
10	15	1	27.0	31.8	28.3	19.1						
15	15	1	33.3	39.9	33.3	20.4						

h m s + ° ' " 100 39

1876 E F G H

March 6	45	2	6.2	15.2	18.4	12.4	45	1	55.8	4.7	7.6	3.4
	last 3 wires											
7	45	2	10.8	16.8	25.1	19.7	45	2	0.0	5.8	13.9	8.8
15	45	2	11.1	15.1	22.4	16.2	45	1	52.8	57.2	2.0	57.2
	last 4 wires											
21	45	1	55.9	5.6	11.2	4.9	45	1	46.9	54.9	59.9	55.0
	last 4 wires											

$\alpha$  Canis Min.  $7^h 32^m 45^s + 5^\circ 32' 37''$

1876		8	7	6	16		8	7	6	16		
Feb. 29	50	1	4.9	5.3	9.8	12.5	50	2	12.6	13.1	17.1	20.6
March 5	50	1	2.1	4.2	6.1	12.4	50	2	15.6	16.7	20.2	24.4
6	50	1	6.0	6.7	9.6	17.8	50	2	23.1	23.8	27.2	34.2
7	50	1	8.4	5.8	13.9	18.9	50	2	20.3	18.8	26.8	34.2
13	50	0	57.4	58.8	2.8	6.2	50	2	23.2	23.8	28.5	33.4
14	50	1	3.5	4.5	9.1	13.9	50	2	22.9	26.9	30.8	35.3
15	50	1	8.2	7.6	13.2	18.0	50	2	21.6	19.7	25.9	32.0
18	50	0	59.9	2.8	5.8	7.3	50	2	19.2	20.6	24.2	27.7
19	50	1	3.0	3.5	8.3	14.3	50	2	21.0	20.6	25.9	31.2
21	50	1	6.5	7.4	12.4	20.6	50	2	16.8	17.7	23.5	29.3
Apr. 2	50	1	3.1	3.2	12.1	18.7	50	2	16.2	15.6	24.9	30.6
11	50	2	1.6	59.2	7.6	14.9						
Aug. 22	50	2	46.1	43.9	42.9	42.9	50	3	59.7	55.8	56.3	56.6
24	50	2	39.9	35.1	35.9	36.5	50	3	59.9	55.1	56.9	55.6
27	50	2	45.1	41.9	41.0	40.1	50	4	7.6	3.7	3.3	2.6
28	50	2	55.4	52.1	52.9	50.5	50	3	57.6	53.6	54.7	53.2
29	50	2	46.3	43.6	43.3	41.5						
30	50	3	0.1	56.6	57.7	54.8						
31	50	2	49.1	45.2	44.1	43.5	50	3	3.1	58.6	58.2	57.8
Sept. 2	50	4	3.0	56.3	59.0	57.6						
3	50	2	49.9	47.0	46.5	46.0						
4	50	2	47.6	43.9	43.2	43.5	50	4	6.4	2.5	2.2	1.8
Oct. 2	50	2	46.0	45.4	44.9	42.2						
9	50	2	44.6	46.2	43.3	38.0						
15	50	3	51.3	55.3	49.4	40.6						
18	50	3	19.8	24.2	18.2	10.0	Lost A					

Geminor. <sup>h m s</sup> 7 37 40 +28° 19' 34"

1876		E	F	G	H		I	R	Q	U	
Feb. 29	0	4	28.9	31.8	35.0	353	5	0	43.0	44.1	49.3 49.8
March 5	0	4	44.0	48.3	50.0	49.9	5	0	46.7	49.2	53.3 53.6
6	0	4	30.2	35.8	37.0	39.4	5	0	47.2	51.9	54.8 57.7
7	0	4	41.1	42.4	50.1	51.7	5	0	37.3	39.6	48.4 51.1
13	0	4	29.0	33.2	36.0	36.4	5	0	41.1	43.2	48.7 49.0
14	0	4	27.1	29.2	33.2	33.6	5	0	32.3	34.8	39.8 40.2
15	0	4	27.8	29.3	33.9	35.1	5	0	45.3	46.4	52.2 52.6
18	0	4	23.9	29.6	32.0	30.6	5	0	39.9	44.3	49.2 48.2
19	0	4	33.1	35.2	39.4	41.2	5	0	50.8	52.7	57.8 0.3
Apr. 21	0	4	58.1	1.4	8.7	10.2	5	0	48.7	50.6	60.7 62.2
10	0	4	25.1	28.5	34.9	35.4	5	0	41.2	43.7	52.4 53.7
11	0	4	28.1	29.6	37.8	40.2					

Aug. 22	5	1	18.3	17.3	17.7	12.8	5	2	36.7	35.2	34.8 30.6
24	5	1	14.1	12.9	13.9	9.0					
26	5	1	49.6	47.1	46.6	42.6					
28	5	1	21.1	19.5	19.6	15.0	5	2	44.1	42.6	41.6 37.5
29	5	1	20.3	18.1	18.2	13.6					
30	5	1	20.7	20.2	20.0	14.9	5	2	32.5	32.0	31.9 25.8
31	5	1	16.4	14.8	13.6	9.9	5	2	38.3	36.3	35.3 30.6
Sept. 3	5	1	18.4	17.3	16.5	12.1	5	2	43.6	42.2	40.8 37.1
4	5	1	17.4	16.6	14.9	10.8	5	2	24.7	22.8	21.6 17.6
Oct. 2	5	2	39.2	41.6	39.5	33.7					
3	5	1	27.5	30.6	29.1	22.9					
10	5	1	32.1	36.5	33.3	34.4					
18	5	0	59.1	4.6	59.2	47.8					

Lost A-2

Gr. 1374  $7^{\text{h}} 45^{\text{m}} 11^{\text{s}} + 74^{\circ} 14' 52''$ 

1876

March 14 10 0 14.8 16.9 20.7 15.8

15 10 0 13.4 16.3 20.0 15.6

18 10 0 14.3 19.4 22.1 16.4

19 10 0 14.3 12.0 21.4 16.7

Apr. 2 10 0 4.0 7.9 15.4 10.9

P. VII 187  $7^{\text{h}} 45^{\text{m}} 3^{\text{s}} + 79^{\circ} 49'$ 

Feb 29 35 1 19.9 26.6 26.8 23.4

March 5 35 1 33.1 42.3 40.9 37.2

6 <sup>cont-4 w</sup> 35 0 58.6 9.3 8.5 6.1

A+24 A+1

7 35 1 24.4 33.2 36.9 34.2 35 1 36.4 41.3

13 35 1 23.0 30.1 31.9 26.5

De.

Ursae Min.  $19^h 49^m 18^s + 88^\circ 55' 53''$  91 4

876

E. P. G. No

E. P. G. No

Feb. 29	20	1	44.3	49.2	52.7	48.2	20	1	43.0	47.8	50.8	45.8	18
	mid wire + full.												
March 5	20	1	36.6	44.4	46.6	40.4	20	0	36.7	43.2	44.6	39.5	
	mid wire + full.												
6	20	1	38.8	48.2	51.1	46.5	20	1	35.9	44.8	47.9	43.2	
	lost 1st 2 w												
7	20	1	36.5	43.1	59.9	45.5	20	1	34.2	39.8	47.0	43.2	
	A 6, 7, 8, 9 A+1, 2, 3												
13	20	1	42.4	48.4	52.8	47.1	20	1	38.9	—	50.1	—	
	A 4, 5, 6												
14	20	1	41.7	46.6	51.3	45.7							Ap
	wires 4, 5, 6												
15	20	1	42.4	47.5	52.0	47.4	20	1	39.1	48.4	48.7	44.1	
	lost 1st 3 wires												
18	20	1	44.0	50.7	54.9	47.8							
	3, 4, 5												
30	20	1	28.9	35.4	41.8	38.9	20	1	25.1	32.5	37.8	36.4	
	A+1												
Apr. 2	20	1	36.6	42.2	51.0	44.7							
	wires 4, 5, 6												

Oct. 18 12 obs for 8 A 1, 3, 5, 7, 9  
 29 23 obs for 8 Lost A 9 + A 11

~~Evening~~  
 Morning

27 Lyncis  $7^{\text{h}} 59^{\text{m}} 3^{\text{s}} + 51^{\circ} 51' 53''$

1876

E R G W

March 6 30 2 31.2 37.0 40.9 38.2

7 30 2 30.6 34.2 42.4 41.4 30 3 29.0 30.7 39.3 37.6

13 30 2 58.7 1.8 7.4 3.3 30 3 29.3 33.9 38.7 34.8

lost 1st wire

14 30 3 20.6 23.1 29.2 25.0 30 3 49.2 51.2 57.9 52.8

2nd full

30 30 2 33.1 37.1 46.3 42.6 30 3 54.6 56.3 5.3 3.9

Apr. 2 30 2 35.6 38.5 48.9 44.8 30 3 28.6 30.5 40.4 37.8

no more

havis-p Argus <sup>h m s</sup> 8 2 13 - 23 56 43

			E	F	G	H			E	F	G	H
March 6	15	4	8.3	6.2	10.9	19.1	20	0	7.3	6.7	10.9	17.8
7	15	4	8.5	5.8	15.0	22.1	20	0	10.1	6.3	15.7	22.7
14	15	4	10.8	8.9	12.9	18.1	20	0	2.8	0.3	5.7	12.7
15	15	4	3.7	5.6	5.1	11.6	20	0	14.3	10.0	17.3	23.2
19	15	4	12.0	10.1	16.1	22.3	20	0	18.5	17.6	21.5	29.7
30	15	4	30.5	28.4	36.3	43.1	20	0	21.3	19.6	28.1	25.2

*False stroke after last wire*  
*lost 1st wire*  
*no more*

$\beta$  Cancri  $8^{\text{h}} 9^{\text{m}} 44^{\text{s}} + 9^{\circ} 34'$

12/16

Mar 6 50 0 9.4 11.5 15.0 18.5 10 1 4.0 5.5 8.9 13.0

15 45 4 47.9 46.4 50.6 54.8 50 1 4.5 2.2 7.3 13.2

21 45 4 51.0 52.1 56.0 17 50 0 43.2 44.8 48.6 54.3

Apr 9 45 4 42.1 44.8 49.1 54.3 50 0 51.1 52.3 56.6 3.4

Cephei <sup>h</sup> 20 <sup>m</sup> 13 <sup>s</sup> 4 + 17° 20' 2" 10240

1876

March 15 45 1 34.1 38.0 45.9 39.3

15 1 59.9 1.4 6.2

21 45 1 33.4 43.1 49.4 43.4

30 45 1 35.7 41.2 51.0 44.7

Apr. 6 45 1 17.5 24.7 35.7 28.8

9 45 1 32.7 39.9 48.6 39.3 45 1 17.6 24.2 31.6 24.8

31 Lyncis  $8^{\circ} 14' 16'' + 43^{\circ} 35' 13''$

1876

March 15	45	4	8.7	10.4	14.9	12.9	50	0	8.6	8.6	13.8	12.3
19	45	4	43.7	42.3	47.4	45.7	50	0	24.6	26.7	30.7	30.1
21	45	4	30.0	34.4	38.2	36.9	50	0	21.8	25.6	29.9	28.3
30	45	4	4.1	6.8	13.1	11.9	50	0	3.3	5.4	11.3	11.2
closed double. mean R.A. + 8, lost 1 <sup>st</sup> wire												
Apr. 2	45	4	19.9	22.7	29.8	27.8	50	0	7.6	8.9	18.4	16.8
6	45	4	16.0	18.2	26.9		50	0	25.4	27.6	34.6	35.2
No more.												

Q. II 147

h 1418  $8^{\circ} 18' 33'' + 85^{\circ} 29''$

1876

March 13	55	0	57.2	3.0	6.4	0.1	55	1	16.4	23.6	27.1	20.1
14	55	1	6.1	10.4	14.6	10.1	55	1	19.9	25.6	28.8	24.0
15	55	1	11.9	16.8	20.8	16.1						
19	55	1	15.6	19.9	24.5	20.3						
21	55	1	0.8	8.9	11.4	8.4						
30	55	1	0.9	7.5	14.5	9.4	55	1	13.8	20.6	26.8	21.7
Apr. 9	55	1	4.4	10.8	16.9	10.2	55	1	11.4	18.2	23.2	18.2
lost last wire												
no more												

Ursae Maj.  $8^h 19^m 52^s +61^\circ 8' 0''$

1876

		$\epsilon$	$\rho$	$q$	$\eta$	$\Sigma$	$R$	$Q$	$M$	
March 15	15	58.9	1.1	59	2.4	15.2	30.8	31.4	37.2	33.8
	19	59.9	1.4	6.2	5.3					
	21	57.6	1.7	6.3	3.9	15	2	35.2	39.3	44.3
Apr. 9	15	11.5	14.0	22.3	17.6	15	2	34.8	36.3	45.3

Gr. 1446  $8^{\text{h}} 25^{\text{m}} 46^{\text{s}} + 74^{\circ} 3' 48''$

1876		E	N	S	W		E	N	S	W
March 13	20 1	23.8	28.0	30.9	25.4	20 1	50.4	54.1	55.1	50.6
14	20 1	20.1	22.8	26.4	22.1	20 1	46.0	48.7	51.6	46.8
21	20 0	58.7	3.6	6.3	3.4	20 1	38.3	42.6	45.3	42.8
30	20 1	20.4	24.8	30.2	27.1	20 1	47.2	49.1	56.8	52.3
Apr. 2	20 0	58.6	3.2	11.2	6.8	20 1	55.2	58.9	5.9	2.7
6	20 1	6.9	9.6	17.2	13.6	20 1	36.3	40.0	47.6	42.5

no more

13 Draconis 20 33 8<sup>s</sup> + 14° 31' 32"

105 28

1876

March 13	55	2	9.4	15.1	20.1	11.8	55	2	50.9	57.5	59.2	53.3	n
14	55	3	28.6	34.4	37.8	32.5	55	3	10.9	16.1	20.2	13.2	
19	55	3	28.9	33.8	37.0	33.0	55	3	12.2	16.6	20.7	15.7	
21	55	3	47.6	56.1	59.5	53.9	55	3	18.1	26.1	29.9	24.8	
30	55	3	6.8	13.4	20.8	14.5	55	2	52.4	57.5	4.3	58.2	
Apr. 2	55	3	10.3	16.9	25.1	18.0	55	2	49.5	54.2	4.2	57.8	A
Corr - 1st 2 n				no more									

$\delta$  Cancri  $8^{\text{h}} 37^{\text{m}} 35^{\text{s}} + 18^{\circ} 36' 44''$

1876

E

F

G

H

33	March 13	45	2	59.6	56.8	0.6	2.8	45	3	32.2	30.4	33.9	36.3
3.2	14	45	2	25.0	24.2	28.9	31.3	45	3	17.3	16.2	21.1	23.3
7	19	45	2	21.9	21.3	26.5	30.2	45	3	19.3	17.5	22.8	26.1
8	21	45	2	29.7	30.3	35.4	39.9	45	3	28.6	27.7	32.2	37.2
2	30	45	2	34.1	33.6	42.1	44.3	45	3	24.6	22.8	31.2	34.6
8	Apr. 2	42	2	26.8	25.0	35.9	39.7	45	3	15.5	13.3	35.8	27.2

no more

$\epsilon$  Hydrae  $8^h 40^m 9^s + 6^\circ 52' 34''$

1876

March 13	30	1	44.8	46.4	51.1	51.8	30	2	41.7	42.3	45.6	50.2	
14	30	1	25.5	27.4	31.2	34.9	30	2	41.1	41.3	44.8	48.6	
19	30	1	25.1	25.5	31.1	35.9	30	2	23.3	22.6	27.8	33.9	
Apr 2	30	1	54.9	56.1	4.1	11.4	30	2	30.3	31.2	40.6	46.7	
6	30	1	16.7	17.5	25.9	32.7	30	2	18.2	19.2	26.3	34.1	
9	30	1	13.6	15.3	22.6	27.2	30	2	27.8	28.2	34.6	40.8	

no more

5 Unsee Maj.  $\frac{1}{8}$   $\frac{1}{43}$   $\frac{5}{5} + 62$   $\frac{25}{25}$   $\frac{41}{41}$   
1876

March 13	55	4	18.5	21.8	25.3	20.6	55	4	44.3	46.7	50.3	47.3
14	55	4	21.2	23.1	27.5	23.3	0	0	0.9	3.1	8.4	2.4
19	55	4	15.7	17.2	22.8	19.2	0	0	1.4	2.1	8.3	5.8
30	55	3	50.6	53.5	1.2	57.4	55	4	53.2	54.7	62.8	59.2
9	55	4	33.0	36.3	44.8	39.8	0	0	16.1	18.4	27.8	22.7

Rod. 2315 & 49 2 \* 14 40

Get next #

1876

March 19	40	4	44.4	48.6	52.6	46.3	45	0	6.8	12.1	16.8	11.3
20	40	4	48.4	55.9	59.9	55.9						
Apr. 2	40	4	35.9	42.4	49.4	43.5	40	4	47.7	55.7	1.4	56.5
6	40	4	46.9	54.2	59.8	53.9	40	4	55.7	62.8	8.3	4.5
10	40	4	42.9	48.9	54.2	47.9	40	4	55.4			
11	40	4	34.5	41.1	47.7	42.2	40	4	51.6	57.1	3.3	57.8

Ursae Maj.  $8^h 50^m 38^s + 48^{\circ} 31' 50''$

876  $\begin{matrix} E & F & G & H \end{matrix}$

March 30	50	3	5.5	7.0	15.7	13.3	50	3	36.3	37.3	46.8	44.1	Inc
Apr. 2	50	3	15.7	18.2	28.2	25.9	50	3	44.9	45.6	56.8	54.2	Ap
9	50	2	28.4	29.7	38.4	34.5	50	3	35.6	37.7	45.8	41.6	
10	50	3	11.5	14.0	22.1	19.6	50	3	53.4	54.8	61.9	60.7	
11	50	3	20.5	22.4	31.1	29.0	50	3	58.7	59.1	7.4	7.2	
20	50	2	41.5	42.2	54.3	52.6	50	3	22.7	22.7	32.4	32.7	

X Ursae Maj.  $8^h 55^m 5^s + 49^\circ 38' 56''$

1876

E R G No

E R G No

March 29 45 0 46.1 47.8 58.4 55.8

Apr. 2 45 0 46.5 49.9 58.1 56.1 45 1 29.8 31.3 42.5 41.4

6 45 0 41.2 42.9 53.2 50.8 45 1 29.6 29.8 39.6 40.3

9 45 0 35.0 36.2 46.5 42.6 45 1 30.1 29.4 38.8 36.7

10 45 0 40.4 42.7 51.0 49.4 45 1 35.1 35.6 44.8 42.2

11 45 0 46.0 46.2 55.8 54.0 45 1 43.9 43.7 53.2 52.2

no more

20 Ursae Maj.  $8^h 59^m 22^s + 67^\circ 38' 22''$   
1876 E F

[illegible]

*Hydrae*  $9^h 7^m 52^s + 2^h 50^m 25^s$

1876			$\delta$	$\mu$	$\theta$	$\kappa$			$\delta$	$\mu$	$\theta$	$\kappa$
March 21	30	3	23.4	25.1	29.6	36.5	30	4	35.0	36.2	39.7	45.9
30	30	3	45.0	45.2	54.3	59.1	30	4	35.5	35.0	43.3	47.4
April 2	30	3	25.3	24.5	33.6	37.7	30	4	23.7	23.7	32.1	37.8
6	30	3	20.3	21.2	29.1	35.4	30	4	20.8	20.3	28.2	34.1
9	30	3	23.0	22.9	30.5	33.8	30	4	36.9	35.2	42.2	45.6
10	30	3	27.6	27.5	34.5	39.0						

no more

1876 Lyncis <sup>h</sup> 9 <sup>m</sup> 11 <sup>s</sup> 4 +37° 19' 49"

			E	A	g	H <sub>b</sub>		E	A	g	H <sub>b</sub>
March 21	5	0	11.0	16.3	20.1	20.5	1	0.8	5.5	7.4	9.2
Apr. 2	0	4	52.1	55.4	2.9	1.6					
9	5	0	1.3	4.7	17.3	9.4	5	0	58.1	58.8	6.3
10	0	4	38.0	41.8	47.7	47.0					
20	0	4	57.6	59.8	7.7	8.2	5	0	56.3	56.8	7.2

1876  
 1876 Draconia  $9^{\text{h}} 19^{\text{m}} 5^{\text{s}} + 81^{\circ} 52' 34''$

1876													
March	29	30	2	49.9	58.2	4.0	58.8	30	3	1.0	9.9	6.1	11.4
	30	30	3	1.0	8.7	13.8	10.3	30	3	13.1	20.5	23.3	20.8
Apr.	9	30	2	32.8	40.5	44.9	38.6	30	2	4.9.9	58.2	0.9	57.1
	10	30	2	38.1	47.6	51.0	47.0						
	11	30	2	29.1	38.1	42.6	38.2						

Hydrae <sup>h</sup> 9 <sup>m</sup> 21 <sup>s</sup> 27 - 8° 7' 5"

576

Mon 29	30	0	36.4	31.1	43.4	46.5	30	1	49.9	42.7	55.3	59.5
Apr. 2	30	0	39.1	34.8	44.9	49.2	30	1	54.7	49.0	59.8	3.4
6	30	0	37.0	32.8	42.9	47.6	30	1	46.5	43.3	52.7	56.8
9	30	0	28.2	24.3	32.9	34.9						
10	30	2	<del>54.2</del>	<del>49.0</del>	<del>56.8</del>	<del>30.6</del>	30	2	7.2	1.8	10.1	14.7
11	30	1	<del>11.5</del>	5.5	16.5	20.9	30	2	3.5	57.9	8.0	13.2

Oct. 26	30	3	31.0	25.6	30.5	23.0						
	A <sub>2,3,4</sub> A <sub>1,2,3,4,5</sub> A <sub>1,4</sub> A <sub>1,4</sub>											
29	30	2	0.4	56.3	57.3	45.8						
	ref. 1st 8											

$\alpha$  Hydrae  $9^{\text{h}} 21^{\text{m}} 27^{\text{s}} - 8^{\circ} 7' 5''$  23

1876

March 29	5	4	58.6	0.7	10.5	8.3	10	0	52.2	54.3	5.3	2.7
----------	---	---	------	-----	------	-----	----	---	------	------	-----	-----

54

23 Ursa Maj.  $9^h 21^m 39^s +63^\circ 36' 23''$

1876

Apr. 9 | 45 4 11.4 12.2 199 14.5 45 4 44.1 44.3 52.8 47.5 |

$A_1$  2-3 and  $A_2$

⊙ Ursa Maj.  $9^{\text{h}} 24^{\text{m}} 29^{\text{s}} + 52^{\circ} 14' 43''$

1876

March 29	5	4	58.6	0.7	10.5	8.3	10	0	52.2	54.3	5.3	2.7	
30	21 wires	0	0.1	2.7	11.0	7.5	10	1	7.0	7.8	18.9	15.3	
Apr. 2	10	0	14.1	17.6	27.9	25.5							
6	lost A <sub>+</sub>	10	0	14.4	19.0	27.9	25.6						
9	lost 1 <sup>st</sup> wire	10	0	30.3	34.3	42.1	38.2	10	1	2.3	3.3	13.8	9.7

3 Cephei <sup>h</sup> 21 <sup>m</sup> 27 <sup>s</sup> 3 +70° 0' 43" 109° 59'

March 30	25	2	39.9	16.0	54.5	48.0	25	2	18.2	24.5	32.8	26.9
Apr. 9	<sup>A+</sup> 25	2	58.1	3.5	11.9	5.4	25	2	26.2	32.4	38.4	32.9
Apr 10	25	2	57.0	3.3	10.4	4.9	25	2	32.3	39.1	45.9	40.6
Apr 11	<sup>low</sup> 25 <sup>1st 2 wings</sup> 3	3	2.9	9.2	18.4	12.7	25	2	36.7	43.6	52.7	46.3

Gr. 1564 <sup>h m s</sup> 9 31 31 + 69° 48' 16"

1876                      8        7        9        16

March 29	35	2	30.7	34.2	41.7	38.4	35	2	27.4	31.4	38.3	35.8
	rej 2 <sup>nd</sup> 48, use the 3 <sup>rd</sup>											
30	35	2	2.5	6.0	12.3	8.1	35	2	28.7	31.3	37.4	34.5
Apr. 9	35	2	15.9	19.8	24.6	21.8						
	md. wire + fol.											
11	35	2	0.1	1.7	7.5	5.4						

Leonis <sup>h</sup> 9 <sup>m</sup> 34 <sup>s</sup> 29 + 10° 27' 35"

576

March 29 55 1 25.6 24.5 34.0 38.9 55 2 27.7 25.7 35.3 40.4

30 55 1 35.7 34.7 43.8 46.7 55 2 37.7 35.4 44.7 47.3

Apr 2 55 2 27.8 28.1 34.1 41.8

6 <sup>cont - 1st - 4 or 5 in</sup> 55 1 31.9 30.9 39.3 44.3 55 2 28.3 28.1 35.7 40.3

9 55 1 33.9 34.5 40.6 45.5

May 1 55 1 49.1 47.1 57.7 3.8 55 2 25.3 23.1 32.7 38.7

no more

$\epsilon$  Leonis  $9^{\text{h}} 38^{\text{m}} 45^{\text{s}} + 24^{\circ} 20' 55''$

1876

March 29	0	3	19.6	23.2	33.9	34.5	0	4	13.0	14.6	24.2	26.2
30	0	3	9.5	12.9	21.1	21.6						
Apr. 2	0	3	19.3	34.0	32.4	33.2						
9	0	3	14.4	18.9	24.2	25.2						
10	0	3	13.4	11.4	23.1	23.1	0	4	30.6	32.2	38.9	41.7
11	0	3	19.9	22.1	31.2	33.1	0	4	26.4	28.4	35.5	39.5

no more

160

1876phae 21<sup>h</sup> 40<sup>m</sup> 5<sup>s</sup> +70° 44' 9" 109 16

1876

March 30 10 1 27.1 33.7 43.0 36.1 10 1 0.3 6.1 13.9 8.3

Apr. 2 10 1 23.8 32.0 43.0 36.7

6 10 1 32.7 40.4 50.5 43.7

9 10 1 17.0 24.4 30.0 24.7

May 1 10 1 23.1 28.8 40.4 34.7 10 1 9.3 14.3 25.4 21.2

v. Ursa Maj.  $9^h 42^m 05^s + 59^\circ 37' 30''$

1876

March 29	45	2	51.0	52.9	2.9	9.1	45	3	12.5	13.2	24.3	19.7
	(lost 1 <sup>st</sup> 2 w 2)											
Apr. 2	45	2	17.5	20.5	30.8	27.2	45	3	5.2	6.6	16.3	13.7
6	45	2	7.5	10.9	20.6	17.1	45	3	0.3	3.3	10.9	16.9
	21 wt											
9	45	2	23.7	27.5	33.7	31.1	45	3	3.4	5.3	11.8	9.1
	lost 2 <sup>nd</sup> wire											
May 1	45	2	1.9	2.5	13.9	11.3	45	3	20.3	21.1	32.2	29.3
	last 4 wires											

One body

Leonis 9<sup>h</sup> 45<sup>m</sup> 39<sup>s</sup> +26° 35' 40"

76

March 29	45	3	43.1	45.7	54.6	56.8	45	4	39.6	41.4	50.3	57.2
30	45	3	39.6	42.0	50.3	50.0	45	4	48.2	50.0	57.2	57.7
Apr 2	45	3	41.9	45.4	54.0	54.6						
6	45	3	47.0	50.2	57.5	0.2	45	4	48.2	49.7	53.7	60.7
9	45	3	37.9	41.1	46.9	46.9						
10	45	3	52.8	55.5	1.2	2.0						

no more

Go.

18

Ma

Apr

May

Gr. 1586 <sup>h m s</sup> 9 47 10 + 73° 28' 20"

1876

2	March 30	55	2	20.6	21.7	29.2	25.2						
7	Apr. 2	55	1	59.1	2.8	8.9	15.7	55	2	29.5	32.7	39.2	36.6
	9	55	2	1.5	5.2	8.2	5.4	55	2	23.7	27.2	30.2	27.8
7	10	55	1	59.5	2.6	6.9	2.9						
	11	55	1	44.5	47.9	54.1	48.8						
	May 1	55	2	2.4	5.4	13.7	9.8	55	2	25.9	27.2	35.0	33.8

164

19 Leonis Min. <sup>h</sup> 9 <sup>m</sup> 50 <sup>s</sup> 1 +41° 38' 59"

1876

March 29	45	0	35.0	37.1	46.9	44.9						
30	45	0	49.5	51.9	59.9	58.6	45	1	43.0	44.7	53.2	57.0
Apr. 2	45	1	1.1	4.4	14.0	12.8	45	1	36.8	38.9	47.9	45.8
6	45	0	25.5	29.5	37.4	35.7	45	1	32.4	33.7	42.4	41.3
9	45	0	55.7	58.7	5.1	1.8	45	1	46.7	48.2	54.9	52.8
20	45	0	35.1	36.4	47.2	44.5	45	1	31.5	32.1	44.3	41.0

no more

$\pi$  Leonis  $9^h 53^m 36^s + 8^\circ 38' 34''$

1876

March 29	45	0	(25.0)	27.7	38.8	43.9	45	1	22.7	22.0	31.7	36.9
70 30	45	0	24.3	25.0	33.9	39.2	45	1	52.9	50.6	60.2	65.2
8 Apr. 2	45	0	24.3	24.0	34.9	40.1	45	1	23.7	23.6	33.2	37.6
1.3 6	45	0	25.2	26.2	34.4	41.6	45	1	38.4	38.6	47.2	51.8
2.8 9	45	0	23.5	24.6	31.7	36.0	45	1	37.6	37.5	45.1	49.7
11.0 20	45	0	45.2	42.8	54.6	60.0	45	1	46.1	42.2	53.2	58.9

no more

Leonis  $10^{\circ} 1' 43'' + 12^{\circ} 34' 38''$

1876

March 29	45	4	27.8	28.9	35.5	41.0							
	$A_{+2}$	$A_{+1}$	$A_{+1/2}$	$A_{-1}$	$A_{-2}$								
30	45	4	22.1	23.2	29.7	32.6	50	0	40.7	39.7	48.4	50.8	
Apr. 2	45	4	20.5	22.1	30.6	33.9	50	0	40.1	39.3	48.7	51.4	
6	45	4	21.9	24.4	30.4	34.8	50	0	43.2	43.3	50.6	55.3	
9	45	4	28.4	30.2	34.2	37.8	50	0	47.3	47.3	53.2	57.4	
10	45	4	28.7	30.2	33.9	39.6	50	0	52.3	52.4	58.2	63.1	
11	45	4	31.1	32.3	38.3	43.6	50	0	47.7	46.4	54.1	59.4	
20	45	4	34.3	33.1	40.7	45.1							
May 1	45	4	34.8	34.7	44.0	47.2	50	0	46.3	45.7	55.3	59.9	
Oct. 17	50	2	41.3	44.6	37.7	28.2							
	$A_{+2}$	$A_{+1}$	$A_{+1/2}$	$A_{-1}$	$A_{-2}$								
18	50	2	32	7.3	59.3	48.8							
24	50	1	21.5	23.0	21.3	13.7							
26	50	1	24.7	25.2	26.6	18.2							
28	50	1	46.7	46.6	45.3	35.4							
	$A_{+2}$	$A_{+1}$	$A_{+1/2}$	$A_{-1}$	$A_{-2}$								
31	50	2	20.5	32.2	31.0	20.4							
Nov. 5	50	2	34.8	36.2	34.7	25.0							

$\alpha$  Leonis  $10^h 1^m 43^s + 12^\circ 34' 38''$

0.8

14

53

57.4

68.1

59.4

79

168

Hydrae <sup>h</sup>10 <sup>m</sup>4 <sup>s</sup>29 - <sup>°</sup>11 <sup>'</sup>44 <sup>''</sup>11

876

Apr. 10	5	2	58.7	55.1	2.4	5.2	5	4	4.2	0.6	6.6	12.6
11	5	2	52.9	46.9	56.2	4.8	5	4	2.8	57.2	6.2	13.7
May 1	5	2	56.4	50.5	2.6	8.6	5	3	47.1	41.0	52.7	59.3

24 Cephei  $32^h 7^m 24^s + 71^\circ 43' 32''$  108 16

1876

Apr. 6	10	0	56.2	4.1	11.1	7.4	10	0	20.0	27.4	34.1	30.0
10	10	0	48.3	56.4	1.5	56.6	10	0	24.2	33.2	35.8	34.0
May 1	10	0	42.1	43.2	53.9	49.1						

Ursae Maj. 10													
		<sup>h</sup>	<sup>m</sup>	<sup>s</sup>	<sup>°</sup>	<sup>'</sup>	<sup>''</sup>						
876		E	F	G	H			E	F	G	H		
Apr. 6	50	2	36.4	38.2	46.5	46.2	50	3	24.5	27.1	33.3	333	Ap
10	50	3	6.1	8.2	14.1	11.9	50	3	39.2	40.6	46.6	452	May

$\mu$  Ursae Maj.  $10^h 14^m 53^s + 42^\circ 7' 38''$

1876 phase

U. Versae May. 10 14 33 + 42 / 38

1876			$\epsilon$	$\eta$	$\zeta$	$\delta$		$\epsilon$	$\eta$	$\zeta$	$\delta$		
33	Apr. 10	15	1	58.8	2.5	6.8	7.2	15	3	3.4	5.0	10.7	10.5
52	11	15	1	58.9	0.8	8.7	7.7	15	2	56.3	58.7	4.9	3.1
	May 1	15	1	53.0	54.3	2.6	3.0	15	2	56.1	56.9	5.2	6.2

Hydrae <sup>h</sup> 10 <sup>m</sup> 20 <sup>s</sup> 2-16 <sup>°</sup> 11 <sup>"</sup> 53

576 E H G H E H G H

May 1 35 0 25.1 21.2 33.2 40.4 35 1 21.4 17.2 29.2 37.8

9 Hb. Draconis <sup>h</sup> 10 <sup>m</sup> 24 25 + 76° 21' 20"

1876                      E      F      G      H                      E      F      G      H

Apr. 10    0    3    54.1    0.1    2.6    57.7    0    4    42.9    48.7    51.4    47.1

May 1      0    4    17.4    20.8    28.1    23.8    0    4    31.3    35.3    41.7    38.7

3 Ursae Maj.  $10^h 27^m 6^s + 57^\circ 43' 31''$

1876  
May 1 40 1 35.2 37.5 48.2 46.5 40 2 15.3 16.8 26.7 25.6

Br 1458  $10^h 31^m 4^s + 51^\circ 5'$   
1876  
May 1 20 0 56.0 3.5 9.0 6.7

31 Cephei  $22^h 32^m 41^s + 72^\circ 59' 40''$  107 D

1876 E F G H E F G H

May 1 25 1 48.9 55.5 3.6 59.9 25 1 29.8 34.3 44.8 39.3

176

2 Leonis <sup>h</sup> 10 <sup>m</sup> 38 <sup>s</sup> 55 + <sup>°</sup> 31 <sup>'</sup> 20 <sup>"</sup> 23

			E	A	G	H		E	F	G	H
May 1	0	4	18.8	19.5	29.3	31.2	5 0	17.4	18.8	29.9	31.1
16	0	4	20.0	18.2	35.1	37.9	5 0	9.3	5.3	24.0	27.0

V Libae <sup>h</sup>10 <sup>m</sup>43 <sup>s</sup>27 - 15° 32' 30"

1876

78

6 Leonis Min.  $h^m s + 34^{\circ} 53' 18''$

			E	F	G	H			E	F	G	H
May 16	30	1	37.8	35.5	51.4	53.9	30	2	16.7	12.7	29.2	32.2
21	30	<del>52.6</del>	<del>52.6</del>	45.9	45	11.5						
24	30	1	46.0	38.3	0.4	3.0	30	2	25.5	15.9	36.6	41.1

Br. 1508 <sup>h</sup> 10 <sup>m</sup> 49 <sup>s</sup> 54 + <sup>°</sup> 78 <sup>'</sup> 26 <sup>"</sup> 20

180

3 Ursae Maj.  $10^h 54^m 17^s + 57^\circ 3' 6''$ 

876

May 16	20	2	48.2	38.0	55.1	55.1
	ref. A	-1 + 2	8			
21	20	1	55.2	48.3	7.9	11.2
24	20	1	54.6	47.9	10.5	11.1
25	20	2	10.0	2.4	21.1	25.6

$\Delta$  Ursae Maj.  $10^h 56^m 0^s + 62^\circ 25' 30''$  next # Quick

1876 E F E F G H

May 1	55	4	52.6	52.5	3.9	0.9						
16	55	4	53.4	51.3	7.5	5.9	0	0	25.3	22.0	38.4	39.8
21	55	4	33.8	28.8	48.8	48.5	55	1	37.1	31.6		
24	55	4	37.1	31.6	53.6	52.1	0	0	7.4	2.3	25.4	23.4
25	55	<sup>2</sup> wires 4	46.2	37.8	57.5	0.3	0	0	30.7	22.0	40.8	43.8

Oct. 15 A.R. A A 1, 2, 3, 4, 5 A 1, 1, 2, 3 A 1, 2, 3 - 5, 6, 7, 8  
 17 A.R. <sup>+1</sup> <sup>+2</sup> rej. 3<sup>rd</sup> stroke for 2<sup>nd</sup> S

1820

Leonis <sup>h</sup> 10 <sup>m</sup> 58 <sup>s</sup> 34 + <sup>o</sup> 8 <sup>'</sup> 0 <sup>"</sup> 40

876

E F G H

E

F

G

H

May 21	20	3	43.7	35.3	54.5	3.9	20	4	54.6	45.1	55.9	14.2
24	20	3	38.6	29.5	50.7	0.2	20	4	54.6	43.3	5.0	13.9

$\gamma$  Ursae Maj.  $11^h 2^m 38^s + 45^\circ 10' 33''$

			E	F	G	H		E	F	G	H
1876											
May 16	10	4	12.0	7.9	25.7	28.8	15 0	12.4	8.2	26.2	28.7
21 <sup>st</sup>	10	4	14.4	7.6	28.4	28.1	15 0	1.4	54.6	15.8	17.7
	Comp. same A.R. 3 sec. below										
23	10	4	22.4	17.3	35.0	36.9	15 0	19.7	12.7	33.4	35.0
24	10	4	19.7	15.4	36.6	37.6	15 0	17.8	11.3	35.0	35.3
25	10	4	33.2	25.3	43.8	47.6	15 0	15.3	6.7	25.2	32.1

1876phae.pr

$\delta$ Leonis <sup>h</sup> 11 <sup>m</sup> 7 <sup>s</sup> 27 + <sup>h</sup> 21 <sup>m</sup> 12 <sup>s</sup> 29												
876			E	F	G	H			E	F	G	H
May 1	10	2	4.9	4.3	14.6	16.9	10	3	6.7	5.5	15.1	19.2
16	10	1	54.6	49.9	6.9	13.9	10	2	57.6	51.3	9.2	15.9
21	10	2	4.9	56.1	16.1	22.1	10	3	2.8	52.3	12.2	19.1
23	10	2	13.8	5.4	24.4	29.6	10	3	4.0	54.8	14.3	19.8
24	10	2	10.4	2.8	25.4	30.4	10	3	23.2	14.1	35.4	40.8
25	10	2	9.7	59.3	19.3	27.2	10	3	8.2	56.6	16.4	25.5

no more

8 Hydrae et brat. <sup>h</sup> 11 <sup>m</sup> 13 <sup>s</sup> 5-14 <sup>'</sup> 6 <sup>"</sup> 15

1876			E	F	G	H				E	F	G	H
May 1	30	0	1.4	57.7	9.4	16.4	30	0	52.2	42.2	2.3	14.3	
16	25	4	47.9	36.7	56.8	8.0	30	0	52.2	42.2	2.3	14.3	
21	25	4	47.6	35.8	57.4	7.7	30	1	1.2	47.2	9.9	23.2	
23	25	4	59.0	47.3	8.3	17.4	30	1	4.4	51.6	13.0	23.8	
24	30	1	0.2	48.1	12.6	20.4							
25	30	0	59.9	44.8	4.9	19.1	30	1	18.7	1.7	23.6	39.2	
no more													

Prob. wrong !!

Hydrae et Crat.  $11^{\text{h}} 18^{\text{m}} 28^{\text{s}} - 16^{\circ} 49' 46''$

	E	F	G	H		E	F	G	H			
May 1	20	3	54.1	49.5	2.1	8.9						
16	20	3	14.5	3.0	24.3	34.1	20	4	38.3	26.1	47.2	57.3
21	20	3	32.5	17.8	40.7	49.7	20	4	33.1	17.7	40.8	50.8
23	20	3	27.8	16.2	37.6	46.6						
24	20	3	40.6	26.5	51.2	1.5	20	4	50.5	36.0	59.1	10.6
25	20	3	39.3	23.3	43.7	57.4	20	4	46.6	30.5	51.4	4.6

lost 1<sup>st</sup> wire  
no more

202 Camel B 11 23 1 + 21 49

	35	1	55.4	57.8	11.4	11.4
May 16	A	1, 2, 3, 4, 5, 6				
21	35	1	49.1	49.3	6.9	5.8
23	35	1	59.3	59.2	14.6	14.4
24	35	2	9.5	11.4	30.4	28.4
	lost 1 <sup>st</sup> three wires					

$\lambda$  Draconis  $11^h 23^m 58^s + 70^\circ 1' 14''$

	1876			E	F	G	H			E	F	G	H
May 16	20	4	25.3	22.8	38.3	37.6	20	4	51.9	49.2	3.4	43	
17	20	4	17.7	16.5	31.5	31.2	20	4	42.4	40.3	54.3	54.7	
21	20	4	34.9	31.1	49.2	49.4	20	4	47.7	42.3	0.3	0.4	
23	20	4	23.3	24.2	40.9	40.3	20	4	51.3	45.5	2.8	3.4	
25	20	4	31.4	26.5	43.5	45.4	20	4	49.2	40.2	56.1	61.1	

88

Leonis 11 <sup>h</sup> 30 <sup>m</sup> 33 - <sup>s</sup> 0' 8" 2"

1876ph

576		E	7	4	16		E	7	4	16	
May 1	30	2	22.8	20.0	30.7 <sup>35.0</sup>	30	3	15.3	12.1	22.9	27.4
16	30	2	26.5	11.5	30.2 37.6	30	3	38.6	9.6	27.8	35.2
17	30	2	13.0	5.6	24.4 32.7	30	3	17.4	8.7	27.7	35.7
21	30	2	17.9	5.4	27.4 35.4	30	3	20.1	5.3	26.9	35.7
23	30	2	17.8	5.9	26.9 33.2	30	3	18.8	8.7	28.7	35.7
24	30	2	8.5	56.4	20.7 28.0	30	3	15.3	4.1	27.0	35.1

no more

$\gamma$  Cephei  $23^h 34^m 14^s + 7^{\circ} 56' 5'' 103^{\circ} 04'$

1876	E	F	G	H	E	F	G	H				
May 16	20	2	53.5	54.1	12.7	8.7	20	2	35.9	42.9	2.1	58.4
17	20	3	6.2	7.5	25.4	22.1	20	2	50.7	51.8	8.2	6.9
21	20	3	2.1	59.8	21.0	17.7	20	2	49.1	47.2	7.3	5.2
23	20	3	7.9	6.2	25.9	22.1	20	2	55.9	53.2	13.3	9.7
24	20	2	59.7	59.4	23.3	17.7	20	2	52.6	50.2	14.0	10.6
25	20	3	33.9	30.5	50.5	49.4	20	3	4.7	0.5	20.4	20.2
no more												

90

Ursae Maj. 11 <sup>h</sup> 39 <sup>m</sup> 27 <sup>s</sup> +48° 28' 20"

516			E	F	G	H			E	F	G	H
May 16	55	1	54.4	50.1	8.8	10.6	55	2	39.6	33.2	53.2	53.5
17	55	1	45.1	41.7	1.8	1.1	55	2	28.6	23.6	48.6	44.3
21	55	1	34.0	27.6	49.4	49.5	55	2	21.5	13.2	34.4	37.2
23	55	1	39.7	33.7	53.9	53.8	55	2	29.1	21.0	42.3	43.0
24	55	1	38.6	32.8	55.8	56.3	55	2	34.3	27.5	51.7	51.6
<del>25</del>	<del>55</del>	<del>1</del>	<del>41.8</del>	<del>32.9</del>	<del>53.7</del>	<del>57.7</del>	<del>55</del>	<del>2</del>	<del>19.3</del>	<del>8.3</del>	<del>30.2</del>	<del>35.5</del>
30	55	1	40.2	31.3	53.4	58.2	55	2	31.2	22.2	43.5	49.1

no more

$\beta$  Leonis  $11^h 42^m 41^s + 15^\circ 16' 14''$

one reading

1876 E F G H E F G H

May 16 5 3 21.2 13.3 30.8 38.6

17 5 3 7.9 1.1 12.7 24.6

21 5 3 14.1 3.4 23.4 31.7

23 5 3 8.4 59.1 17.9 24.5

24 5 3 10.9 0.7 22.8 30.2 5 4 5.7 53.3 16.4 24.9

~~25 5 3 17.5 4.6 23.4 34.5~~

30 5 3 30.4 18.2 38.1 50.7

~~no more~~

31 5  $\frac{4}{\text{lost } A+2}$  17.6 3.9 34.6 38.0

Oct 17  $\frac{1}{A 8.9} \frac{0}{A -1} \frac{58.2}{+A} 0.8 55.2 44.3$

29 10 0  $\frac{5.0}{-2} 7.2 5.5 53.7 10 1 22.5 22.8 27.9 10.8$

Nov. 12 10 1 4.4 3.8 2.0 52.6

$\beta$  Leonis  $h^m s + ^\circ ' ''$   
11 42 41 + 15 16 14

5°

$\beta$  Virginis  $11^h 44^m 11^s + 2^d 28' 8''$

676	E	H	G	H	E	H	G	H				
May 16	55	1	18.6	13.7	30.8	38.2	55	2	23.7	15.3	33.8	41.6
17	55	0	59.2	53.0	10.7	19.9	55	1	58.3	51.4	9.8	18.6
21	55	1	11.1	1.4	22.2	30.5	55	2	14.9	3.3	23.8	34.6
23	55	1	10.4	2.2	21.4	28.7	55	2	11.1	1.3	21.8	27.0
25	55	1	10.9	58.5	17.7	29.5	55	2	36.8	23.6	41.8	53.2
30	55	1	46.1	34.9	56.3	8.7						

false stroke before the 1st wire

194

Ursae Maj.  $11^{\circ} 47' 15'' + 54^{\circ} 23' 22''$

			$\epsilon$	$\eta$	$\theta$	$\iota$		$\epsilon$	$\eta$	$\theta$	$\iota$
May 16	0	1	44.6	40.6	59.2	59.7	0 2	31.4	26.6	46.8	46.4
17	0	1	40.4	38.2	54.8	55.2	0 2	17.7	14.3	31.8	33.3
21	0	1	40.0	33.3	54.9	56.3	0 2	18.4	12.1	32.5	33.9
23	0	1	52.4	46.3	7.1	6.6	0 2	31.1	26.1	46.1	45.6
24	0	1	48.9	42.4	5.6	5.8	0 2	31.0	23.7	47.4	47.5
<del>25</del>	<del>0</del>	<del>1</del>	<del>47.4</del>	<del>40.1</del>	<del>58.8</del>	<del>33</del>	<del>0 2</del>	<del>47.7</del>	<del>39.3</del>	<del>2.2</del>	<del>3.4</del>
30	0	1	52.6	44.6	5.4	10.0	0 2	44.6	36.1	57.5	2.2

no more

o Virginis <sup>h</sup> 11 <sup>m</sup> 58 <sup>s</sup> 50 + 9° 25' 38"

one reading, next # <sup>very</sup> Quick

1876 E H G H E H G H

May 1	55	3	48.1	46.2	56.9	1.6	55	4	36.8	33.6	44.2	49.3
16	55	3	35.9	28.3	46.4	54.1	55	4	43.8	35.0	52.5	60.6
23	55	3	48.1	38.2	57.7	4.9	55	4	46.6	37.1	55.9	3.7
25	55	3	56.2	45.1	2.8	13.4	55	4	56.4	43.3	1.9	11.8
30	55	3	59.5	46.9	8.0	20.6	0	0	4.2	51.9	15.0	25.1
31	55	3	6.9	53.1	16.1	28.2	<sup>sure</sup> 0	0	2.3	47.7	13.2	27.2

~~no more~~





98

1852	h	m	s	°	'	"							
	11	58	52	+77	36	16							
876			E	F	G	H			E	F	G	H	
May 17	45	4	31.0	30.8	44.2	43.5	45	4	47.3	46.4	0.2	0.2	
21	45	4	19.8	14.9	31.1	31.4	45	4	36.4	31.6	48.1	48.3	
24	45	4	11.5	6.8	26.4	25.4	45	4	43.6	39.6	58.8	58.4	
	21 wires												

[illegible]

200

Ursae Maj.  $12^h 9^m 14^s + 57^\circ 43' 37''$ 

876			E	F	G	H			E	F	G	H
May 1	40	1	46.1	47.2	58.2	56.6	40	2	24.7	25.6	35.3	35.2
16	40	1	35.5	31.9	50.0	50.5	40	2	17.0	12.9	30.0	31.7
17	40	1	46.6	42.7	1.6	3.3	40	2	21.5	15.7	34.2	35.3
23	40	1	36.6	31.4	0.8	51.5	40	2	20.6	13.8	34.1	34.1
25	40	1	54.5	46.6	5.0	9.5	40	2	23.6	16.2	33.9	39.0
30	40	1	41.4	33.8	54.7	59.1						

no more

 $2^h 10^m 13^s + 33^\circ 36'$ 

May 30 35 4 43.9 34.8 54.8 2.8

$\eta$  Virginia  $12^h 13^m 31^s + 0^{\circ} 1' 41''$

Get next # first

1876  $\epsilon$   $\eta$   $\theta$   $\kappa$

$\epsilon$   $\eta$   $\theta$   $\kappa$

May 1	20	2	38.6	35.9	47.1	51.2	20	3	28.2	25.1	35.3	40.6
16	20	2	34.7	26.4	45.4	52.0	20	3	26.2	17.7	35.6	43.0

12 14 03 + 27 19

Ursae Min = B.A.C. 4150 <sup>h</sup> 12 <sup>m</sup> 13 <sup>s</sup> 5 + 87° 24' 30" <sup>87° 10'</sup>

576 E F G H

May 17 15 3 18.5 17.8 33.4 31.6  
 first 5 wires  
 25 15 3 20.1 15.4 33.5 33.7  
 first 6 wires  
 30 15 3 26.4 21.4 40.1 42.0  
 Run - 5 wires.

6

18

M

6 Ursae Min = B.A.C. 4165  $\begin{matrix} L & m & s \\ 12 & 14 & 26 \end{matrix}$   $+88^{\circ} 40' 13''$   $88^{\circ} 20'$

~~(J.E. 22)~~

1876			E	H	G	H <sub>6</sub>			E	H	G	H <sub>6</sub>
May 25	0	2	47.1	42.2	0.1	1.8	<del>0</del>	<del>2</del>	<del>50.6</del>	<del>45.1</del>	<del>58.3</del>	<del>1.1</del>
	mid wire fold											
30	0	2	51.8	47.6	5.4	8.6	0	2	56.0	51.4	8.6	11.5
	lost 1st 3 wires											
31	P	2	52.8	47.8	9.6	12.5	0	2	58.2	52.1	13.4	18.0
	lost 1st wire											

1876

$18^{\circ} 47' +66^{\circ} 50' 18''$

Covv 12<sup>m</sup> 23<sup>s</sup> 24<sup>s</sup> - 15<sup>s</sup> 49<sup>s</sup> 5<sup>s</sup>

1876			E	F	G	H		E	F	G	H
May 16	10	3	28.5	18.5	36.2	48.3	10.3	54.6	43.2	1.8	13.4
17	10	2	40.8	30.5	49.5	59.7	10.3	46.4	35.3	54.6	5.2
23	10	2	50.3	38.4	58.2	9.4	10.3	55.0	43.2	2.8	14.3
24	10	2	50.1	37.4	1.4	12.8	10.3	48.9	34.7	58.8	10.0
<del>25</del>	<del>10</del>	<del>2</del>	<del>59.7</del>	<del>43.5</del>	<del>2.7</del>	<del>16.9</del>	<del>10.3</del>	<del>58.8</del>	<del>42.4</del>	<del>1.4</del>	<del>16.8</del>
30	10	2	56.6	41.3	4.0	18.4	10.3	59.6	44.9	6.8	22.8
31	10	2	58.6	43.6	8.6	24.2	10.3	48.3	31.8	56.8	13.5

no more

12 27.29 26 + 33 31 56 9

1876			E	F	G	H		E	F	G	H	
May 30	25	3	50.4	40.6	0.6	8.5						
31	25	3	38.2	29.4	51.9	57.9						
June 1	<del>25</del>	<del>3</del>	<del>43.8</del>	<del>42.9</del>	<del>48.4</del>	<del>43.6</del>	25	4	47.7	46.2	50.0	48.2
7	25	3	45.7	41.6	50.8	45.9	25	4	46.8	42.6	51.1	45.7

K Draconis  $12^h 28^m 8^s + 70^\circ 28' 38''$

1876

May 16

1876

E

F

G

H

E

F

G

H

May 16	55	1	50.8	49.4	3.8	3.0	55	2	23.8	21.7	35.2	36.1
17	55	1	49.4	47.4	1.9	2.3	55	2	24.7	22.5	37.3	36.4
23	55	1	58.1	53.1	10.3	9.6	55	2	28.4	24.3	40.8	39.7
24	55	1	40.0	35.5	55.7	53.8	55	2	25.4	22.2	41.1	41.1
25	<del>55</del>	<del>1</del>	<del>41.8</del>	<del>35.1</del>	<del>51.2</del>	<del>53.6</del>	<del>55</del>	<del>2</del>	<del>25.8</del>	<del>18.5</del>	<del>34.7</del>	<del>38.4</del>
30	55	1	25.5	21.4	35.1	38.6	55	2	49.7	43.1	59.3	4.1
31	55	(2)	32.5	27.1	47.5	50.5	55	2	59.7	51.5	10.5	16.2

21 wires  
21 wires  
(wire)  
rep. 1<sup>st</sup> wire lost 1<sup>st</sup> three

no more

Virginia <sup>h</sup> 12 <sup>m</sup> 35 <sup>s</sup> 20 - 0 45 50 one reading

76 <sup>E</sup> <sup>F</sup> <sup>G</sup> <sup>H</sup> <sup>E</sup> <sup>F</sup> <sup>G</sup> <sup>H</sup>

May 16 10 0 51.0 42.3 61.1 9.7 10 1 26.9 17.3 36.2 43.4

mean S + R.A.

17 10 0 14.6 6.3 25.4 33.4

25 10 0 14.4 0.5 20.6 32.4  
1 stroke for each S 2<sup>nd</sup> S pr. mean R.A.

30 10 0 9.9 55.5 19.4 31.4

31 10 0 11.7 58.4 23.6 35.4  
1 stroke for each S 2<sup>nd</sup> S pr. mean R.A.

June 1 10 0 31.5 26.8 32.6 35.6

Do.

no more

21 Cassio.  $\delta$   $37^m 26^s + 74^\circ 18' 14''$   $105^\circ 42'$

1876  $\epsilon$   $\zeta$   $\eta$   $\theta$   $\epsilon$   $\zeta$   $\eta$   $\theta$

May 25	45	0	38.8	34.3	52.1	51.6	45	0	24.1	20.9	36.1	38.6
30	45	0	51.9	47.3	6.2	7.5	45	0	27.2	22.2	41.2	42.3
31	45	0	45.0	40.8	3.6	4.7	45	0	23.4	18.7	40.2	41.8
June 1	45	0	39.7	44.4	50.2	38.3	45	0	13.2	17.6	22.7	18.9

12 43 12  $+61^\circ 0'$

1876  $\epsilon$   $\zeta$   $\eta$   $\theta$   $\epsilon$   $\zeta$   $\eta$   $\theta$

May 30	25	0	29.6	19.8	41.7	46.3	25	1	2.4	51.6	13.2	17.3
31	25	0	18.1	7.9	32.3	36.6	25	0	53.0	43.2	7.3	12.7
June 1	25	0	39.3	41.2	48.1	37.2	25	1	0.4	59.5	6.5	58.2
7	25	0	22.6	18.5	29.7	20.2	25	1	10.1	5.8	17.0	9.1

lost  $A_1$ , 34 all of the wires of the  $A_2$  or 3

208

Get one continuing

Ursae Maj.  $12^h 48^m 31^s + 5^{\circ} 38' 18''$

1876 E F G H E F G H

May 16 45 2 30.2 27.4 44.7 44.7 452 53.7 48.3 5.6 6.8

25 last 5 wires (45 and 41) 5.9  
45 1 50.6 43.1 1.8

30 45 2 7.9 59.4 19.4 24.6

31 45 1 51.8 42.4 6.3 11.4

June 1 45 1 55.9 56.7 3.4 54.8

13 45 2 26.8 32.4 35.4 32.4  
9w Lot 2 in 2. Stokes

1876pnae:pr

12 Canis Ven. foll.  $12^{\text{h}} 50^{\text{m}} 11^{\text{s}} + 38^{\circ} 59' 38''$

1876

			E	F	G	H		E	F	G	H	
May 31	25	0	28.2	20.7	42.7	50.1	25	1	20.6	13.2	33.4	42.6
June 1	<sup>foll #</sup> 25	0	28.5	30.9	34.8	28.3	25	1	23.9	25.2	28.7	25.0
7	25	1	20.6	20.1	28.0	22.4						
			lost three wires									
13	25	0	34.6	40.0	42.9	42.5						

Virginis <sup>h</sup> 12 <sup>m</sup> 55 <sup>s</sup> 57 +11° 37' 53"

one reading

1876 E H G H E H G H

May 16 45 1 45.4 40.7 55.7 3.2 45 2 46.3 39.8 54.7 2.6

31 45 1 51.6 40.5 1.9 13.2

~~June 1 45 1 40.6 39.4 43.4 41.9~~

~~7 45 1 54.3 49.1 58.4 57.8~~

13 45 1 49.0 50.4 53.1 55.5

12 56 54 +64 17

May 31 5 3 52.4 44.2 4.9 8.9 5 4 26.1 17.7 38.7 42.7

~~June 1 5 3 49.8 50.8 55.1 45.2 5 4 29.1 30.3 34.9 25.7~~

~~7 5 3 54.9 52.6 0.6 51.4 5 4 23.9 21.7 31.8 26.9~~

13 5 3 49.8 53.9 56.4 51.0 5 4 24.8 29.4 32.5 26.3

44 H. Cephei  $1^h 1^m 33^s +79^\circ 0' 26''$   $101^\circ 0'$

One reading

1876 E A G H E A G H

May 16	25	2	21.0	20.5	38.2	34.6	25	2	12.4	11.2	28.3	25.4
June 1	25	2	34.1	37.3	44.4	32.8	25	2	23.1	26.6	32.3	22.2
7	25	2	36.9	37.4	48.6	36.7						
13	25	2	30.3	36.8	44.1	34.4						

lost 1<sup>st</sup> two wires

212

Virginis <sup>h</sup> 13 <sup>m</sup> 3 <sup>s</sup> 29 - 4° 52' 15"

one reading

1876

May 31	15	1	38.6	26.3	49.9	1.7
June 7	15	1	35.0	25.1	40.1	36.8
		fol. #				
13	15	1	37.9	43.0	42.6	45.5
14	15	2	4.3	2.2	7.4	11.2

13° 4' 20" + 57 30

May 31	55	1	54	58.3	21.2	25.6
June 1	55	1	12.0	13.5	18.5	10.2
7	55	0	51.6	51.7	58.8	50.1

43 Comae  $13^h 6^m 2^s +28^\circ 30' 45''$

1876 E F G H E F G H

May 16 50 4 4.3 1.4 17.8 22.1 55 0 12.2 8.2 25.3 29.8

23 50 4 22.4 18.2 35.8 39.9

24 50 4 23.0 14.5 35.8 41.5 55 0 15.9 10.0 32.7 36.4

31 50 4 49.9 40.1 2.2 11.6

June 7 <sup>mid wire + foll.</sup> 50 4 17.7 14.2 23.7 19.7 55 0 37.7 35.1 45.6 40.8

13 50 4 14.3 15.2 19.9 19.2 55 0 4.5 12.3 12.9 10.4

14 50 4 11.4 12.2 16.8 17.6 55 0 7.3 8.7 15.0 13.7

no more

214

7 Virginis <sup>h m s</sup> 13 9 13 -19 16 35 one reading  
 76 E R 9 16

May 16 40 0 91 59.9 19.7 296

31 40 0 14.5 59.7 25.0 40.4

~~June 7 40 0 29.5 20.2 33.5 35.9~~

13 40 0 29.9 27.8 34.3 39.2

Polaris  $h^m s + 88^{\circ} 38' 34'' 91 \quad 22$

			E	F	G	H			E	F	G	H
1876												
Jan	10	5 0	6.7	12.7	12.7	5.7	5 0	3.4	9.1	8.6	1.3	
		$A_1 + A_2$										
Jan	11	5 0	36.3	41.8	42.0	36.3	5 0	19.0	24.9	24.2	19.6	
Mar	13	5 0	31.0	35.0	36.3	32.3	5 0	13.0	17.2	20.0	14.4	
May	16	5 0	3.6	4.4	20.4	18.2	0 4	58.2	57.6	15.3	11.7	
		lost 1 <sup>st</sup> two wires										
	21	5 0	4.9	0.8	21.7	19.7	0 4	59.4	54.7	14.4	12.3	
	23	5 0	10.7	9.5	28.2	25.4	5 0	3.8	2.1	21.7	18.3	
	24	5 0	7.9	4.6	27.0	23.8	5 0	2.7	0.4	22.9	19.6	
	25	0 4	52.7	47.7	5.5	6.6						
		$A_1 + 3$										
	30	5 0	9.9	5.4	25.0	27.3	5 0	7.5	2.7	21.4	24.3	
		the last three wires										
	31	5 0	12.0	7.2	29.8	33.1	5 0	8.2	3.2	25.8	29.1	
		lost 1 <sup>st</sup> two wires										
June	1	5 0	21.1	26.9	31.5	21.3	5 0	13.6	17.2	21.7	11.2	
	5	5 0	8.9	12.7	18.7	7.0	5 0	1.6	6.2	11.4	0.4	
		$A_1 + A_2 + 3$										
	7	5 0	18.7	18.9	28.4	19.5	5 0	13.0	14.3	23.2	12.8	
		lost 1 <sup>st</sup> wire										
	13	5 0	13.7	21.6	27.2	18.4	5 0	10.1	17.9	22.4	16.3	
		lost 1 <sup>st</sup> wire										
	14	5 0	15.0	23.5	28.7	21.2	5 0	13.1	20.1	25.4	18.3	
		lost 1 <sup>st</sup> wire										
	15	5 0	2.9	10.6	16.4	6.9	5 0	59.4	5.5	11.4	2.4	
		$A_1$ , & 2 <sup>nd</sup> comes between 1 <sup>st</sup> & 2 <sup>nd</sup> w.										
July	13	5 0	10.0	13.7	17.8	10.4	5 0	7.2	10.6	14.9	12.8	
		$A_1$										
	17	lost 1 <sup>st</sup> 3 w.										
	19	5 0	37.1	34.5	46.0	35.8						
	26	5 0	39.5	40.5	41.1	31.1						
		$A_1$										
Sept	3	$A_2$ 54-3 500s for										
Oct.	18	45 obs for S										
	24	$A_1$ , 1 $A_1$ $A_1$ 1, 2, 3 110s for S										
	28	10 obs for S										
	31	33 obs for S $A_2$ for RA. $A_1 + A_2$										
Nov.	1	8 obs for S										

Morning

2/16

Polaris  $1^h 12^m 59^s + 88^\circ 38' 34''$ 

876

Nov. 12 5 obs for 8 Last 4 wires

2 Virginis  $h^m s - 10^{\circ} 30' 29''$

1876  $\begin{matrix} E & H & G & R \end{matrix}$   $\begin{matrix} E & H & G & R \end{matrix}$

Jan. 10	50	3	49.3	46.0	49.0	48.8							
11	50	3	53.0	49.9	53.4	54.2							
May 16	50	4	15.7	7.0	25.9	32.4	55	0	35.6	24.2	43.4	50.0	
21	50	4	33.5	20.5	41.9	49.3	55	0	44.5	29.4	51.9	0.4	
23	50	4	15.3	3.9	24.1	31.1	55	0	49.5	36.9	57.6	4.2	
24	50	4	23.6	9.9	32.5	41.4	55	0	46.3	31.6	55.7	4.1	
25	50	4	26.4	11.1	31.1	41.6							
30	50	4	28.9	14.4	36.4	46.2	55	0	53.6	37.6	58.2	11.3	
31	50	4	25.7	11.2	35.5	47.9	55	0	49.3	35.3	59.2	10.9	
June 1	50	4	36.3	30.5	37.4	35.6	55	0	52.4	45.6	54.1	53.9	
5	50	4	40.1	34.1	41.4	39.5							
7	50	4	34.3	24.7	36.8	35.8	55	1	5.2	3.9	7.3	6.0	
13	50	4	38.8	34.7	42.6	44.2	55	0	51.8	48.8	56.4	58.5	
14	50	4	40.0	35.5	43.0	45.6	55	1	8.7	4.6	10.7	13.2	
15	55	0	14.5	9.8	16.9	18.4							
July 17	50	4	59.5	44.4	58.5	58.2							
19	55	0	37.7	34.5	46.6	55.7							
	50	4	53.2	38.1	52.7	52.8							

Virginis  $13^h 18^m 37^s - 10^\circ 30' 29''$

z Ursa Maj. <sup>h</sup> 13 <sup>m</sup> 18 <sup>s</sup> 53 +28° 30' 45"  
1876

2001  $h^m s + 13^{\circ} 2' 27''$

			$E$	$F$	$G$	$H$			$E$	$F$	$G$	$H$
May 23	20	3	4.0	0.1	16.4	15.4	20	3	40.0	36.3	51.8	51.2
24	20	2	59.4	53.3	12.4	22.5	20	3	27.1	22.1	41.5	40.3
June 1	20	3	21.6	23.5	25.8	17.8	20	3	50.8	52.4	53.9	47.2
7	20	3	20.7	21.4	25.7	17.8						
13	20	3	14.5	19.4	21.9	14.9	20	3	47.7	52.4	55.1	49.3
14	20	3	30.5	35.4	38.5	30.9	20	3	50.2	52.8	53.8	49.0
15	20	3	26.8	31.2	32.3	26.4	20	3	50.8	52.9	54.0	49.1

no more

3 Virginis  $13^h 28^m 19^s +0^\circ 2' 38''$

1876

E

F

G

H

E

F

G

H

May 23	20	1	37.2	28.3	47.2	52.8	20	2	55.9	44.2	2.9	10.8
24	20	1	46.2	33.8	57.8	5.4	20	2	54.9	41.6	4.7	12.7
June 7	20	1	50.1	41.4	52.6	51.9						
13	20	1	49.0	47.3	54.4	56.3						
14	20	1	57.9	56.6	3.4	5.4	20	2	50.2	47.4	53.0	56.1
15	20	2	4.2	1.4	9.0	10.9	20	3	10.4	8.7	14.3	17.8

no more

222

		h m s			+71° 52' 43"										
								E F G H				E F G H			
1876															
May 23		30	3	12.9	9.6	26.4	24.2	30	3	31.3	26.8	43.8	41.3		
June 7		30	3	16.1	15.4	22.0	14.5	30	3	34.9	34.2	42.1	31.6		
13		30	3	21.6	26.4	29.3	22.8	30	3	38.6	43.1	45.6	38.3		
14		30	3	28.4	33.1	36.0	28.3	30	3	42.5	46.3	47.7	42.0		
15		30	3	18.3	22.4	24.2	18.2	30	3	35.6	39.8	42.3	37.3		

		h m s			+31° 32'										
								E F G H				E F G H			
1876															
June 7		50	3	25.4	20.7	30.7	26.2								
13		50	3	32.6	35.4	40.4	36.4								
15		50	3	39.7	40.9	45.6	43.8	50	4	41.4	40.3	45.9	45.1		

$\eta$  Ursae Maj.  $13^h 42^m 37^s + 49^\circ 56' 16''$

	1876		E	F	G	H		E	F	G	H
3	May 23	25 3	49.0 (44.6)	4.4	3.2	25 4	41.5	33.1	56.1	54.7	
6	25	25 3	54.9	48.3	7.3	10.6	25 4	40.6	33.2	51.6	55.9
3	30	25 4	3.2	56.4	17.3	21.2	25 4	49.3	48.7	1.8	7.7
0	June 7	25 4	7.7	59.9	10.6	0.6	30 0	3.1	0.6	11.9	3.6
13	13	25 4	0.8	3.4	8.6	3.2	25 4	57.3	58.2	4.6	59.6
	14	25 4	9.2	11.6	17.1	11.0	25 4	52	52.8	58.0	55.2

no more

γ Bootis  $13^h 48^m 44^s +19^\circ 1' 30''$

876				E	F	G	H			E	F	G	H
May 23	20	3	18.7	10.4	29.4	33.5	20	4	10.0	1.3	20.0	26.2	
25	20	3	24.7	13.5	30.9	37.4	20	4	14.3	2.3	21.1	28.8	
30	20	3	15.9	5.2	25.1	34.7	20	4	17.4	7.6	25.6	35.7	
June 7	20	3	39.5	33.4	41.9	39.5							
13	20	3	20.5	19.4	23.8	24.8	20	4	23.6	23.2	26.4	26.9	
14	20	3	20.4	19.8	23.9	23.7	20	4	20.0	17.8	22.1	23.4	

no more

50 Cassiop.  $1^h 52^m 48^s + 71^{\circ} 48' 54''$   $108^{\circ} 12'$

1876

E

F

G

H

E

F

G

H

2 May 25 15 1 49.9 47.4 32 4.6 15 1 22.8 20.4 36.6 36.4

8 Jan 13 15 1 39.7 47.8 506 426

7 15 15 1 47.2 54.7 576 51.3

9  
4

13 52 59 + 65 58

E

F

G

H

May 30 25 2 17.5 11.6 28.9 33.5

Jan 13 25 3 9.9 14.6 16.4 10.6

June 14 25 2 30.0 35.5 37.7 29.6  
rej. 22.8

Virginia  $13^h 55^m 17^s + 2^\circ 9' 0''$

1876			E	F	G	H		E	F	G	H
May 25	15	0	46.2	36.4	53.6	3.9	15 1	27.6	17.1	33.2	45.0
30	15	0	18.4	9.7	28.4	40.2	15 1	19.2	10.7	30.3	41.2
June 7	15	0	29.2	25.0	34.6	33.8	15 1	30.8	25.9	34.5	33.4
		new gear for sheet									
13	15	1	32.5	32.6	37.8	40.6					
14	15	1	47.3	47.7	51.6	54.8	15 1	44.2	45.0	47.4	51.3
15	15	0	26.9	28.3	32.7	36.0	15 1	39.6	39.3	43.4	45.6
no more											

14 0 54 + 31 27

1876			E	F	G	H		E	F	G	H
June 13	55	3	3.4	6.5	12.3	8.8	55 4	3.6	6.4	11.8	8.4
14	55	3	12.5	15.7	20.7	18.3	55 4	17.8	18.8	22.9	21.8
15	55	3	20.0	23.5	27.6	25.4	55 4	4.2	4.6	9.7	8.3

$\alpha$  Draconis  $14^h 10^m 5^s +64^\circ 58' 25''$

1876		E				F				G			
May 30		25	2	20.2	13.1	30.4	34.4	25	2	47.4	397	58.0	2.0
June 7		25	2	24.9	22.3	30.4	21.2	25	2	55.3	53.4	1.4	52.1

Virginis  $14^h 6^m 14^s - 9^\circ 41' 27''$

		E	H	G	H	E	H	G	H
May 30	5 0	40.6	25.2	47.6	58.3	5 1	52.3	36.4	58.8
<del>June 7</del>	<del>5 0</del>	<del>35.2</del>	<del>24.1</del>	<del>35.6</del>	<del>32.6</del>				
13	5 0	55.8	50.6	57.4	0.4				
14	5 0	51.8	46.8	53.2	54.9				
15	5 0	47.1	41.4	47.8	48.6				

4 Ursa Min.  $14^h 9^m 22^s +78^\circ 8' 5''$

1876

June 7	15	2	52.2	51.8	57.2	49.1
	$A \pm 1$	$+A$	$1, 2, 3, 4$			
13	15	2	38.6	45.6	47.3	40.9
	$A \pm 1$	$+A$	$1, 2, 3, 4$			
15	15	3	1.5	8.6	10.6	2.5

one reading

$\alpha$  Bootis  $14^h 9^m 58^s + 19^\circ 50' 3''$   
 1876

E F G H E F G H

Jan. 10	35	0	37.9	37.9	38.2	39.6				
	24	1 <sup>st</sup> 8								
11	30	4	55.5	55.2	54.3	54.8				
13	30	4	21.3	20.7	24.1	25.4				
18	30	4	22.4	27.7	24.9	29.3				
19	35	0	25.6	30.1	30.2	29.8				
		A. A-1 + A-2								
20	30	4	22.1	25.6	24.8	24.3				
24	35	4	23.3	25.4	25.3	25.2				
27	35	0	16.9	17.9	21.4	22.6				

May 30 30 4 49.9 40.7 0.4 9.0 35 1 2.4 53.1 12.9 22.4

June 7 35 0 6.4 0.0 9.8 8.1 8.5 1 14.8 9.0 17.7 14.9

13 35 0 3.9 5.8 11.2 10.0

14 30 4 49.5 48.4 52.2 52.3 35 1 12.0 11.8 15.8 16.8

15 30 4 55.1 52.9 56.7 57.1

July 13 35 0 56.8 52.1 56.9 60.3

25 35 0 12.4 8.0 9.7 8.0

Sept 3

Oct. 31 35 1 19.2 20.2 21.4 11.2 35 2 37.0 37.4 38.4 28.5

Nov 12 35 1 21.0 23.5 22.8 11.5 35 2 47.3 48.4 47.5 34.8

$\alpha$  Bootis <sup>h m s</sup> 14 9 58 + <sup>° ' "</sup> 19 50 3

1876 Bootis  $h^m s +51^{\circ} 56' 39''$

June 13 25 3 45.4 46.5 51.7 47.1 25 4 32.7 35.3 41.5 35.9

i Case. 2 18 47 +66 50 18  $113^{\circ} 10'$

1876

Morning	12	15	4	61	9.3	13.8	8.7					
	20	15	4	75	—	16.6	—	15	3	29.6	37.2	38.3 318
	24	15	4	8.2	13.3	16.1	9.7	15	3	178	23.8	26.1 19.2
	25	15	4	10.2	15.7	19.7	12.6	15	3	0.0	4.3	7.2 1.1
	27	15	4	34	9.3	14.0	6.7	15	3	46	10.6	15.5 9.1
June	7	15	4	1.4	0.8	11.4	0.6					
?	13	15	4	50.8	56.1	2.8	55.4					

$\theta$  Bootis  $14^h 20^m 56^s + 52^\circ 25' 44''$

1876		E	F	G	H			E	F	G	H
June 7	55	4	34.2	32.1	40.6	31.8	0 0	10.3	7.5	17.2	8.2
13	55	4	33.5	44.4	40.8	36.4	0 0	30.6	32.4	38.9	34.6
14	55	4	23.2	24.8	28.9	25.4	0 0	30.4	30.7	36.2	32.6
July 13	8	0	38.4	30.8	44.3	36.7					
	Regist										

Over  
before  $\theta$  Bootis

36 H. Cass.  $2^h 26^m 11^s + 72^\circ 16' 9''$

1876

Jan 12	40	4	24.2	30.1	29.0	25.6	40	3	29.2	35.2	34.0	30.4
Mar 20	40	4	7.3	18.4	6.3	6.3	40	3	15.6	26.3	24.3	17.3
Apr 25	40	4	1.5	8.7	7.2	10.0	40	3	22.7	30.0	29.8	22.7
June 13	40	3	59.2	5.8	9.4	2.8						

S'tar on opposite page first

5 Ursae Min.  $h^m s +76^{\circ} 15' 4''$ 1876  $\begin{matrix} E & F & G & H \end{matrix}$ June 13  $\begin{matrix} 5 & 1 & 29.9 & 33.9 & 36.3 & 29.5 \end{matrix}$ 14  $\begin{matrix} 8.0 \text{ mag} \\ 10 & 10 & 11.7 & 15.4 & 17.3 & 11.6 \end{matrix}$ July 13  $\begin{matrix} 10 & 1 & 19.5 & 16.0 & 24.1 & 14.6 & 10 & 1 & 45.7 & 42.1 & 50.6 & 40.9 \end{matrix}$ 

14 19 01 +61 32

1876  $\begin{matrix} E & F & G \end{matrix}$ June 13  $\begin{matrix} 50 & 3 & 20.0 & 22.7 & 28.0 & 21.1 \end{matrix}$

$\gamma$  Bootis 14 26 <sup>0 1</sup> +3852

1876 E F G H

June 14 30 3 39.5 43.1 45.5 43.5 3.5

July 12 SR

14 30 sent 65-57

1876 E F G H E F G H

June 13 25 4 3.9 8.3 10.6 4.2 25 4 46.6 49.8 52.1 47.5

14 25 3 58.2 1.7 3.6 57.4 25 4 26.3 29.7 31.2 25.6

$\gamma$  Bootis  $h$   $m$   $s$   $+16$   $57$   $18$   $q$   $R$   $E$   $F$   $G$   $H$   
 June 13 25 2 25.4 23.1 26.9 27.9 25 3 50.6 48.0 51.8 54.6  
 1 stroke for each  $\delta$ , 2<sup>nd</sup>  $\delta$  pr.  
 14 25 2 34.4 32.1 35.6 36.8 25 3 43.2 40.1 44.0 46.2  
 pr. # brightest, 2<sup>nd</sup>  $\delta$  pr.

14 38 56 +61 48  
1876

June 13 35 3 0.7 27 8.7 2.2  
 Rain Combsanum M. above  $\Delta a = 2''$   $\Delta v = 2''$

June 14 35 2 57.4 58.6 3.4 56.7

109 Virginis  $14^h 39^m 56^s + 2^\circ 25' 15''$ 

	E	F	G	H		E	F	G	H
--	---	---	---	---	--	---	---	---	---

2	Jun 13	55	4	27.8	26.6	13.3	12.6	0	0	39.4	40.8	45.5	46.2
	14	55	4	19.7	18.8	22.8	26.2	0	0	29.3	30.9	33.2	37.1
	July 12	55	4	30.5	26.7	31.2	35.4	0	0	42.6	39.3	44.1	47.8
	13	55	4	29.7	21.8	32.6	32.3	0	0	31.0	21.2	32.1	32.7

$\alpha^2$  Librae  $14^h 43^m 58^s - 15^\circ 31' 14''$

$\alpha + \alpha^2 \text{ Librae } 14^{\text{h}} 43^{\text{m}} 58^{\text{s}} - 15^{\circ} 31' 14''$ 

1876

E F G H

Jan Morning	12	50 22	4	14.2	10.0	127	18.6
	13	50 22	4	16.4	12.9	16.8	21.7
	19	50	4	22.8	26.0	26.1	30.6
	20	50	4	41.1	41.3	42.6	46.8
	24	50	4	14.4	12.8	14.1	18.8
	25	50	4	18.3	17.2	18.1	22.6

E F G H

June	13	55	0	9.9	6.7	13.0	16.8	55	1	26.5	<del>24.6</del>	<del>0.2</del>	
	14	55	0	58.9	56.1	0.5	5.6	55	1	19.8	14.4	18.9	25.3
	15	lost A+1 55	2	43.5	39.9	43.7	49.3						
July	12	55	1	25.6	21.4	27.3	29.7						
	13	lost 1st 2 wires 55	0	26.3	14.7	27.4	29.2	55	1	41.3	27.9	41.3	43.4
	19	2 wire 55	0	33.4	21.4	34.3	35.2	55	1	42.4	29.6	42.2	44.0

240

Gr. 2164 <sup>h</sup> 14 <sup>m</sup> 48 <sup>s</sup> 16 +59 48 10

1876

E

F

G

H

E

F

G

H

July 13 35 2 19.1 14.9 26.4 16.9 35 3 18.7 13.1 24.9 14.9

B Ursa Minor. 14 51 5 + 74 39 58.

1876			E	F	G	H				E	F	G	H
Jan. 24	45	1	10.4	14.7	13.8	13.4	45	1	52.3	56.6	55.6	48.2	
25	45	1	40.8	45.1	44.7	38.0							
July 12	45	1	18.8	22.2	23.8	17.2	45	1	31.7	34.3	36.0	30.0	
13	45	1	12.2	9.4	18.7	8.0	45	1	33.5	28.8	38.8	26.6	
17	45	1	0.4	58.2	7.8	56.7	45	1	25.0	21.8	30.4	20.3	
19	45	0	55.4	50.3	59.6	50.0	45	1	32.8	27.5	37.2	27.6	
no more													

Bootes  $14^h 57^m 14^s +40^\circ 53' 4''$

876			$\epsilon$	$\eta$	$\theta$	$\kappa$		$\epsilon$	$\eta$	$\theta$	$\kappa$	187
July 12	30	2	38.4	39.7	43.1	40.1	30 3	14.9	15.2	21.2	16.6	July
13	30	2	9.1	5.9	16.1	9.0	30 2	59.8	54.2	5.8	59.1	
17	30	2	6.1	2.8	13.2	5.1	30 2	49.6	44.2	54.1	47.8	
19	30	2	11.4	5.9	16.9	10.7	30 3	12.3	5.7	17.4	10.6	
26	30	2	36.3	34.5	35.2	27.9	30 3	34.0	31.5	32.5	26.2	

$\gamma$  Librae  $14^h 59^m 39^s - 15^\circ 46' 9''$

	1876		E	F	G	H			E	F	G	H
July 13	10	0	34.5	23.4	36.7	39.4						
17	10	0	29.0	17.3	29.6	31.6	10	1	43.9	32.2	44.2	46.1

		$h^m$		$s$	$+T^{\circ}$			$102$		$44$			
		$E$	$F$	$G$	$H$	$I$	$J$	$K$	$L$	$M$	$N$	$O$	$P$
Jan	27	40	3	53.9	60.8	63.2	55.5	40	3	7.2	13.6	17.0	9.6
July	13	40	3	53.8	52.6	5.5	51.4	40	3	33.4	31.1	43.6	30.7
	17	40	3	49.5	46.7	58.9	46.7	40	3	27.6	23.8	37.2	24.3

$\beta$  Librae  $15^{\text{h}} 10^{\text{m}} 17^{\text{s}} - 8^{\circ} 55' 13''$

1876 E F G H E F G H

July 12	15	4	47.4	39.7	46.2	46.8	20	0	42.2	35.1	42.1	44.3
13	15	4	56.1	42.5	55.2	53.6	20	0	56.1	41.6	55.7	55.6
17	15	4	36.4	23.2	36.3	32.8	20	0	43.9	39.5	43.4	41.7
19	15	4	34.1	19.1	33.0	31.2						
26	15	4	56.2	46.5	49.1	47.5	20	1	18.9	10.4	13.3	11.0

346

H. Ursaee Min.  $15^{\text{h}} 13^{\text{m}} 13^{\text{s}} + 6^{\circ} 49' 18''$ 

1876			E	H	G	H <sub>0</sub>			E	H	G	H <sub>0</sub>	
July 12	35	1	40.4	44.5	47.9	40.1	35	2	7.5	9.8	13.3	6.8	
13	35	1	36.6	34.0	43.8	32.7	35	2	9.6	6.2	16.6	6.4	
17	35	1	43.7	41.0	50.1	40.2	35	2	9.6	5.6	15.0	6.1	July
24	35	1	49.9	49.7	50.8	41.1	35	2	19.0	18.7	18.2	9.8	

15 20 34 +6 3 48

$\gamma$  Ursae Min.  $15^h 20^m 57^s + 72^\circ 16' 44''$

	1876		E	F	G	H		E	F	G	H
8	Jan. 27	5 3	49.7	53.8	54.0	48.0	5 4	50.3	53.7	53.9	48.7
4	Feb. 15	5 4	45.7	51.9	51.2	45.5					
1	July 12	5 4	12.0	12.4	15.6	8.8	5 4	49.3	48.9	51.3	46.6
8	13	5 4	13.2	10.4	18.6	9.4	5 4	44.5	39.4	48.2	37.9
	17	5 4	19.5	15.4	23.4	13.2	5 4	49.6	44.0	51.3	42.6
	19	5 4	9.8	5.8	13.9	3.5	5 4	45.3	40.4	47.9	38.9

no more

$25 27 + 62 42$   
1876

July 12	40	3	20.7	20.8	25.8	18.4
13	40	3	2.4	57.5	9.3	58.4
17	40	3	18.8	8.8	19.8	10.5

222

248

' Bootis  $15^h 26^m 26^s +41^\circ 15' 37''$ 

1876

E

F

G

H

E

F

G

H

July 12	5	4	55.6	53.4	58.3	54.7	10	1	6.6	3.4	10.3	6.3
13	5	4	48.9	42.8	52.4	47.2	10	0	35.2	29.0	40.3	33.2
17	5	4	49.2	42.3	52.4	45.8						
19	5	4	45.8	39.3	48.8	41.9	10	0	38.4	30.7	42.5	35.0
26	10	0	0.1	57.2	58.7	52.1	10	1	25.7	23.6	25.9	18.8

$\alpha$  Coronae  $15^{\circ} 29' 24'' + 27^{\circ} 8' 12''$

1876 E F G H E F G H

Jan. 10	15	1	15.4	18.9	20.4	19.6				
11	15	2	36.4	37.8	36.9	36.3				
12	15	1	14.7	17.2	18.8	19.1				
13	15	1	19.8	21.7	24.9	24.1				
24	15	1	47.8	49.6	52.2	51.3				
25	15	1	26.7	30.2	30.5	28.1				
27	15	1	16.6	22.3	23.3	24.2				

July 12	15	2	9.6	9.7	14.4	12.4	15	3	3.2	2.3	6.1	7.0
13	15	1	48.0	42.8	53.4	48.5	15	3	9.2	2.3	13.8	9.8
17	15	1	44.2	38.5	49.1	45.4	15	3	9.6	4.9	14.3	10.6
19	15	1	45.7	40.2	49.4	46.4	15	3	3.7	5.1	6.3	4.4
26	15	2	5.7	4.2	3.4	59.6	15	3	37.7	35.8	34.9	31.9

Sept 3

*boronae* <sup>h</sup>15 <sup>m</sup>29 <sup>s</sup>24 +27° 8' 12"

next # 22.

 $\phi$  Bootis  $15^h 33^m 20^s +40^\circ 45' 42''$ 

1876		E	F	G	H			E	F	G	H
July 12	35	4	44.1	43.2	47.6	41.2	40 0	34.1	32.8	37.8	34.3
13	35	4	29.7	24.9	34.4	26.6	40 0	32.4	26.0	37.4	28.6
17	35	4	34.8	30.6	40.7	32.3	40 0	22.0	15.7	25.1	18.9
19	35	4	35.0	29.6	39.7	31.5	40 0	33.1	25.7	37.4	30.0
24	35	4	36.3	34.0	34.6	27.6					
26	<del>40</del>	0	<del>12.3</del>	<del>10.8</del>	<del>10.9</del>	<del>5.0</del>					

~~no more~~

Ursae Min.  $15^h 35^m 9^s + 17^\circ 45' 54''$

1876  
uly 12 40 0 35.4 47.9 41.3 32.9

miss 8 & 9  
13 40 0 40.9 38.0 25.6 35.5

17 40 0 34.6 31.6 39.5 29.2

lost 1<sup>st</sup> three wires  
19 40 0 33.7 30.4 38.9 27.2 40 0 48.0 44.9 51.5 42.4

lost 1<sup>st</sup> 2 wires  
24 40 0 ~~31.3~~ 31.7 30.7 20.1 40 0 53.4 53.1 51.5 42.9

26 ~~40 0 53.4 54.0 51.3 41.6~~ rej. 2<sup>nd</sup> S

~~NO MORE~~

$\alpha$  Serpentis  $15^h 38^m 7^s + 6^\circ 49' 13''$

1876			E	F	G	H			E	F	G	H
Jan. 10	30	4	43.8	43.1	43.6	46.8						
12	35	0	54.5	56.1	58.1	2.2						
25	30	$4A-1, 4A-2$	45.8	47.2	46.7	48.8						
July 12	35	0	27.5	25.1	31.4	34.4	35	1	43.8	41.3	46.8	50.2
13	35	0	30.6	22.8	34.5	34.6	35	1	49.4	41.1	51.8	51.4
17	35	0	27.7	21.1	31.8	30.4	35	1	49.8	41.2	51.8	51.7
19	35	$rej. 27.8$	34.8	27.2	38.3	37.4						
24	35	0	56.0	50.9	52.6	55.5						
26	35	0	<del>39.8</del>	<del>37.2</del>	<del>38.5</del>	<del>37.6</del>						
Aug. 1	35	1	10.1	5.3	6.6	6.7						
Sept 3	35	1	44.1	39.4	40.6	41.3						

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Serpentis  $15^{\text{h}} 38^{\text{m}} 7^{\text{s}} + 6^{\circ} 49' 13''$

22

 $\beta$  Serpentis  $15^h 40^m 25^s + 15^\circ 48' 51''$ 

1876		E	F	G	H		E	F	G	H		
July 12	35	1	27.8	23.6	28.1	28.4	35	2	12.4	6.7	11.1	12.9
13	35	1	50.2	39.8	50.9	49.6	35	2	26.3	16.6	26.2	24.9
			lost 1st two wires									
17	35	1	35.6	26.2	37.1	33.6	35	2	33.2	22.1	31.9	31.2
			lost 1st three wires									
24	35	1	17.8	12.2	12.6	13.2	35	2	25.7	20.5	20.1	20.8
26	35	1	14.2	8.9	9.1	7.2	35	2	21.1	21.9	21.9	20.8
Aug. 1	35	1	32.2	26.8	26.8	25.9						
			False star open 1st									

*Serpentis*  $15^h 43^m 6^s - 3^\circ 2' 46''$

			E	H	G	H		E	H	G	H
July 12	25	2	28.6	23.7	28.9	30.9	25 3	24.7	19.2	24.1	27.8
13	25	2	23.1	12.5	24.1	23.8	25 3	20.7	9.8	20.9	21.2
19	25	2	18.5	8.5	19.3	18.3	25 3	24.5	14.9	23.9	24.0
<del>26</del>	<del>25</del>	<del>2</del>	<del>38.7</del>	<del>33.7</del>	<del>34.4</del>	<del>33.3</del>	<del>25 4</del>	<del>3.2</del>	<del>57.1</del>	<del>57.4</del>	<del>58.0</del>
Aug. 1	25	2	38.6	32.6	33.7	32.8	25 3	51.9	45.3	45.9	46.1

3 Ursa Min.  $h^m s + \circ^{\circ} 10' 4''$

		E	H	G	H		E	F	G	H
1876										
July 12	15 0 20.0	23.9	26.7	19.0	15 0 50.4	53.1	54.8	49.8		
13	15 0 34.2	33.4	41.7	29.6	15 0 53.4	51.3	59.0	50.0		
17	15 0 31.2	30.3	36.5	26.3	15 0 56.3	53.2	59.9	52.6		
19	15 0 37.0	34.9	41.6	31.5	15 0 55.3	52.5	58.4	50.1		
24	15 0 2.9	3.5	2.8	55.2	15 1 35.4	36.1	33.8	25.6		
<i>false stroke after H</i>										
<del>26</del>	<del>15 0 52.0</del>	<del>53.8</del>	<del>51.4</del>	<del>44.0</del>	<del>15 1 42.7</del>					
Aug. 1	15 0 52.4	54.9	51.4	42.7	15 1 30.2	32.5	28.9	20.4		
no more										

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Scorpii <sup>h</sup> 15 <sup>m</sup> 52 <sup>s</sup> 57 - 22 15 49

1876

1876		E	H	G	H			E	H	G	H	
July 12	35	4	45.9	41.3	47.6	51.3	40	0	47.7	41.4	47.1	50.7
13	35	4	27.7	15.9	28.2	28.8	40	0	35.3	23.3	35.7	36.8
19	35	4	59.5	47.7	0.4	59.8	40	0	48.4	36.8	49.1	48.7
24	35	4	23.1	36.4	18.7	18.5	40	0	57.2	50.2	52.9	53.7
26	35	4	38.8	32.7	34.2	35.5	40	1	6.1	59.7	1.7	0.5
Aug. 1	35	4	30.7	24.1	26.3	25.0	40	1	8.1	0.9	3.6	2.4
No more.												

No more.

B' Scorpio  $h^m s - 19^{\circ} 27' 41''$

1876	E	F	G	H					
July 12	50	1	22.4	16.3	22.1	25.9			
13	50	1	24.1	12.4	24.5	25.4	(rej. 2 <sup>nd</sup> S)		
19	50	1	33.6	22.1	34.6	35.1	{Comp. pr of above.}		
22	50	1	46.1	35.1	46.2	52.8			
24	50	1	27.4	19.4	21.3	21.9	0.7	51.4	52.9 56.4
26	50	1	37.4	29.4	32.2	31.6			

no more

260

 $\delta$  Draconis  $15^{\text{h}} 59^{\text{m}} 33^{\text{s}} +58^{\circ} 53' 58''$ 

1876ph

876	E	F	G	H	E	F	G	H				
July 12	30	1	32.9	33.8	39.2	33.1	30	2	22.2	20.3	24.6	21.1
13	30	1	51.4	46.4	58.6	47.9	30	2	25.8	22.1	33.9	24.7
17	30	1	51.4	45.1	55.9	47.4	30	2	11.9	12.4	22.9	15.0
19	30	1	42.3	37.2	47.6	38.3	30	2	22.5	15.7	25.8	17.8
22	30	1	37.3	33.4	42.2	32.5	30	2	20.8	16.1	23.3	14.7
24	30	2	19.9	17.5	18.6	11.4	30	3	3.7	1.3	1.8	54.5
26	30	1	57.5	55.6	57.1	48.4	30	3	14.1	11.5	12.9	3.1

md. wire & foll.

no more

$\phi$  Hercules  $16^h 4^m 50^s +45^\circ 15' 49''$

	1876	E	F	G	H		E	F	G	H		
July 13	5	4	49.6	43.6	53.8	45.7	10	0	25.2	16.6	29.6	20.1
19	5	4	32.0	26.4	36.5	29.2	10	0	27.0	19.6	29.5	22.3
22	5	4	39.6	34.2	42.0	33.8	10	0	31.2	24.9	33.9	26.7
24	5	4	20.8	18.7	19.2	11.5	10	0	55.6	52.4	53.4	48.6
26	5	4	37.0	35.5	35.9	27.4	10	1	6.9	6.4	6.6	59.7
Aug. 1	5	4	31.9	31.5	30.3	23.7	10	1	5.9	5.1	4.4	56.4
			Key $\times + 2$ no more									

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Ophiuchi  $16^{\circ} 7' 48'' - 3^{\circ} 22' 15''$ 

1876	E	F	G	H	E	F	G	H		
July 12	45 1	46.0	42.2	47.5	48.9	45 2	38.9	33.6	39.3	42.2
17	45 1	53.0	43.8	54.4	51.6	45 2	54.9	44.8	53.9	55.9
19	45 1	43.7	33.8	44.6	44.3	45 2	43.8	34.2	42.6	42.9
22	45 1	41.8	33.7	42.2	41.8	45 2	55.6	44.8	53.3	53.9
24	45 1	31.8	27.1	28.6	26.9	45 3	13.1	7.3	8.1	7.5
26	45 1	48.2	42.1	43.4	42.0	45 3	15.8	11.4	12.4	11.5
Aug. 1	45 1	58.1	52.4	53.1	51.5	45 3	18.0	12.1	13.1	12.9

No more.

$\epsilon$  Ophiuchi  $16^{\circ} 11' 42'' - 4^{\circ} 23' 10''$

1876		E	F	G	H		E	F	G	H		
July 12	45	2	33.5	30.3	34.4	35.2	45	3	31.1	36.2	30.6	33.8
13	45	2	29.1	19.4	30.4	29.5	45	3	37.6	26.7	39.1	37.8
17	45	2	30.2	21.5	31.8	30.4	45	3	39.1	29.3	40.2	39.2
19	45	2	42.4	32.4	43.0	42.0	45	3	35.0	24.1	34.7	33.8
22	45	2	41.5	33.2	41.9	41.1	45	3	34.1	23.9	33.3	33.2
24	45	2	38.2	32.4	32.8	33.4	45	4	49	58.7	59.6	58.6
26	45	2	42.8	37.4	38.2	36.6	45	4	64	0.5	1.7	0.2

no more

264

$\delta = 19^\circ$  Ursae Min.  $l^m s + 76^\circ 9' 51''$

				$l$	$m$	$s$							
876				E	H	G	H		E	H	G	H	
July 12	10	4	39.2	41.3	43.4	34.7	10	4	59.0	58.2	61.7	55.2	
17	10	4	46.2	43.2	50.3	38.6	15	0	9.3	4.3	10.9	2.0	
19	10	4	44.5	41.3	48.4	37.4	15	0	4.4	59.7	6.4	58.2	
22	10	4	47.8	45.2	50.5	40.6	15	0	9.4	6.2	12.8	2.3	
24	10	4	48.1	46.6	45.7	37.6	15	0	46.3	45.3	44.6	36.0	
25	15	0	19.5	18.8	18.1	8.8	15	0	49.6	47.5	46.8	38.0	
26	15	0	3.9	2.9	3.4	54.6	15	0	3.52	3.8	3.87	25.3	

no more

$\alpha$  Scorpii  $16^{\circ} 21' 45'' - 26^{\circ} 9' 9''$

1876

Jan. 12	30	1	1.4	2.7	6.5	8.2	30	2	25.0	24.9	26.1	32.1
19	30	1	10.2	13.6	14.2	19.8						
20	30	1	12.8	4.1	4.9	9.8						
24	30	1	52.0	50.6	55.1	57.8						
25	30	1	4.6	4.2	6.1	8.7						
Feb. 15	30	1	20.6	22.3	26.0	30.3						
16	30	0	55.6	57.0	58.7	63.5						
20	30	1	3.2	5.5	7.4	8.7						
July 12	30	2	12.3	9.5	14.8	16.8						
17	30	2	15.2	7.4	18.8	19.4						
19	30	2	13.0	3.2	14.9	14.4						
22	30	2	48.4	41.4	52.0	53.4						
24	30	2	17.2	11.4	12.9	15.4						
25	30	2	31.5	25.1	27.2	28.1						
26	30	2	24.2	19.6	20.9	20.6	30	3	59.4	54.1	56.1	56.3
Aug. 1	30	2	28.6	23.7	23.9	24.4						
2	30	2	24.0	18.1	20.4	19.9	30	3	59.6	52.2	54.4	55.1
3	30	2	33.2	25.5	28.9	30.6	30	3	40.5	34.2	36.7	39.1
5	30	2	33.6		27.8		30	3	47.4	40.0	40.6	44.0
6	30	3	16.6	9.5	11.8	14.1						
8												
9												

266

Scorpii 16 21 45 - 26 9 9

576

E

F

G

H

E

F

G

H

25.3 24.9 24.6 23.3 22.7 35 4 0.8 59.1 53 594  
 A-1+2

$\eta$  Draconis  $16^{\circ} 22' 18'' + 61^{\circ} 47' 51''$

1876	A	E	F	G	H	E	F	G	H
July 12	35 <sup>42</sup> 3	24.9	24.6	30.3	22.1	35	4	0.8	59.1
July 13	35 2	46.2	41.6	52.1	41.4	35	4	36.2	30.2
	15 wire								
17	35 3	44.6	38.4	49.3	40.3	" full moon in great cone, brown in north ice			
19	35 3	24.0	16.5	27.9	18.6	Saw comp. 25" full moon in great cone, brown in north ice			
22	35 3	19.4	14.1	23.5	13.5				
24	35 3	36.2	34.2	35.5	26.6				
25	35 3	19.4	46.7	48.5	38.8				
	A-1	No more. saw comp again							

Aug. 1 Saw the companion plainly. Bright twilight -  
 6 " " " " 1.5 m. E. in set -  
 9 " " " " " Before sunset -

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*B. Herculis* <sup>h m s</sup> 16 24 51 +21 45 49

	876		E	F	G	H		E	F	G	H	
July 19	35	4	11.8	5.8	14.8	10.8	40 0	23.2	15.6	25.9	23.0	
22	35	4	12.9	7.3	14.5	10.6	40 0	18.9	12.9	26.9	17.2	
24	35	3	59.8	56.7	56.9	54.0	40 0	36.4	33.7	33.9	31.6	
25	35	4	39.4	36.6	35.5	33.2	40 0	46.2	43.4	43.3	40.6	
26	35	4	13.8	11.8	11.4	7.7	40 0	50.0	47.8	47.9	43.5	
Aug. 1	35	4	29.6	26.4	26.1	21.8	40 0	59.1	55.7	55.9	51.4	
			R-dese Clark put Mercedes car - no more.									

Raise clock for Mercedes car - ✓  
No more.

*A. Draconis*  $h^m s +69^{\circ} 2' 18''$

2

1876		E	F	G	H	E	F	G	H
July 17	20 3	32.2	29.6	37.7	27.5	20 4	2.2	58.8	6.7 58.2
19	20 3	48.9	45.8	53.5	45.3	20 4	13.4	9.7	16.7 8.0
22	20 3	52.9	49.8	55.0	46.3				
24	20 3	43.8	43.4	42.6	34.6				
25	20 4	1.8	0.8	1.1	53.3				
26	20 3	49.1	48.6	48.5	39.1				
No more.									

270

22

Herculis 16 30 4 +42 41 45

1876

E F G H

E F G H

July 17 40 4 12.7 7.1 15.4 8.3 40 4 49.8 42.7 49.9 46.2

22 40 4 20.5 14.7 21.7 14.4

24 40 3 26.6 22.9 23.9 17.4

25 40 3 50.9 47.4 46.8 40.6

26 40 3 32.9 30.8 30.9 24.4 rej. 2<sup>nd</sup> S

Aug. 2 40 3 40.9 39.8 39.9 31.2 40 4 59.9 56.9 57.1 50.2

no more

Gr. 848  $h^m s + 75^{\circ} 42' 33''$   $104^{\circ} 18'$

1876	E	F	G	H	E	F	G	H		
<del>July 19</del>	<del>10 0</del>	<del>7.2</del>	<del>6.0</del>	<del>14.9</del>	<del>4.2</del>	<del>5.4</del>	<del>54.5</del>	<del>51.0</del>	<del>60.0</del>	<del>49.8</del>
24	setting 4" different from preceding night									
25	10 0	32.3	34.2	34.1	24.4	10 0	13.6	15.1	15.6	5.6
26	10 0	29.2	30.6	31.9	18.8	10 0	14	96	99	58.4
Aug. 1	10 0	40.9	42.7	42.8	31.6	10 0	15.1	16.8	16.9	6.1
2	10 0	25.9	28.2	30.4	18.6	10 0	12.8	15.0	16.9	14.8
3	10 0	43.3	45.2	45.9	34.7	10 0	14.1	16.4	16.9	15.6
5	10 0	24.1	26.2	28.2	16.7	10 0	2.9	5.5	5.9	54.5

lost 1st 2 wires

no more

2

50 H. Cephei  $h^m s + 80^{\circ} 51'$   $99^{\circ} 09'$

1876											
Feb. 29	25 0	13.0	14.8	19.1	13.6	25 0	45.2	47.8	51.2	47.0	
July 17	25 1	4.7	1.1	10.7	0.9						
19	25 0	57.4	52.4	1.5	53.4	25 0	46.6	43.5	51.8	41.6	
24	25 1	44.0	43.6	44.4	35.4	25 1	10.6	9.4	10.3	1.7	
25	25 1	48.2	47.3	48.1	—	25 1	24.7	23.3	25.8	14.2	
26	25 1	24.2	23.6	26.5	15.4						

no more

272

Herculis  $16^{\circ} 38' 37'' + 39^{\circ} 9' 40''$

1876

			E	F	G	H			E	F	G	H
July 17	15	0	34.3	29.2	38.4	30.8	15	1	33.2	27.8	35.7	30.9
24	15	0	25.8	24.1	24.5	17.5	15	1	54.8	52.5	53.1	47.8
25	15	0	56.5	54.4	54.9	46.7	15	1	49.9	47.9	47.4	41.8
26	15	0	40.0	39.4	39.3	32.5	15	2	11.4	10.3	9.6	3.0
Aug. 1	15	0	45.0	43.8	43.2	36.0	15	2	6.4	5.8	5.1	58.5
2	15	0	40.0	39.9	39.2	33.5	15	2	5.1	5.1	4.9	57.1

no more

Gr. 2377 <sup>h m s</sup> 16 42 56 +57° 0' 20"											
1876		E	F	G	H		E	F	G	H	
July 17	20	4	59.3	53.2	2.9	54.5	25	0	52.2	47.3	57.1
24	20	4	54.8	52.0	52.6	46.0	25	1	21.4	187	199
26	25	0	13.3	12.4	13.9	6.5	25	1	48.8	46.1	47.6
Aug. 1	25	0	5.1	3.6	4.5	57.2	25	1	38.1	36.4	36.9
2	25	0	23.7	22.6	24.9	15.7	25	1	38.1	36.3	37.8
3	25	0	19.0	17.2	18.1	12.6	25	1	17.1	15.0	15.7
No more											

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Ophiuchi  $h^m s + ^\circ ' ''$   
 16 51 45 + 9 34 15

76													
July 22	50	0	33.7	26.4	35.3	31.7	50	1	51.9	43.5	51.4	50.6	
24	50	0	20.4	15.5	16.5	16.5	50	1	53.4	48.9	47.4	49.2	
26	50	0	34.8	31.8	31.9	30.7	50	1	54.1	52.6	53.1	52.6	
Aug. 2	50	0	40.5	35.4	36.1	34.9	50	2	2.4	56.9	57.9	57.4	
3	50	0	54.1	47.7	49.4	49.8	50	2	2.7	57.2	58.4	58.0	
5	50	0	57.1	51.4	52.5	52.6	50	2	1.9	55.3	57.0	56.6	

no more

$\epsilon$  Herculis  $16^{\text{h}} 55^{\text{m}} 30^{\text{s}} + 31^{\circ} 6' 43''$

1876	E	F	G	H	E	F	G	H
July 17 15 3 32.1 26.3 36.5 29.6 15 4 26.1 20.7 30.1 25.4								
22 15 3 18.0 13.6 21.7 16.6 15 4 19.9 14.7 20.0 17.8								
24 15 3 9.7 6.4 6.6 2.8 15 4 36.9 33.8 34.9 26.4								
26 15 3 32.2 30.7 32.1 24.9 15 4 45.6 43.2 43.1 36.7								
Aug. 2 15 3 41.0 38.1 38.0 33.4 15 4 52.1 49.1 49.8 44.1								
3 15 3 33.0 30.6 31.4 26.8 15 4 48.0 43.8 43.8 40.7								

no more

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Ursae Min.  $^{\text{h}}$   $^{\text{m}}$   $^{\text{s}}$   $^{\circ}$   $'$   $''$   
16 58 51 +82 14 22

$\epsilon$  Ursae Min.  $16^h 58^m 51^s + 82^\circ 14' 22''$

1876

Feb. 16	10	1	48.2	45.8	55.9	50.2							
19	10	1	42.4	52.4	52.2	46.6	10	2	11.8	21.7	21.2	15.6	
20	10	2	3.8	11.7	11.4	7.2	10	2	25.4	32.3	32.2	27.8	
July 17	10	1	56.8	56.1	2.2	52.8	10	2	6.6	5.5	11.7	3.7	
19	10	1	51.6	51.5	57.9	48.6	10	2	11.6	11.7	17.4	9.8	
22	10	1	57.2	57.2	1.9	53.4	10	2	16.3	16.3	20.7	12.8	
24	10	1	53.4	56.2	54.6	46.4	10	2	18.7	21.6	19.1	11.5	
26	10	2	16.8	20.5	17.8	8.6	10	2	35.0	38.2	36.1	26.1	
Aug. 1	10	2	16.1	19.4	16.3	6.5	10	2	36.8	39.9	36.5	27.4	
2	10	2	22.2	25.9	24.4	14.0	10	2	33.0	36.1	33.5	23.9	
3	10	2	13.5	17.0	13.6	5.5	10	2	34.9	38.3	35.0	25.7	
5	10	2	10.9	14.5	11.7	1.4	10	2	34.0	36.8	34.0	25.0	
6	10	2	46.9	48.4	46.1	35.5	10	3	8.9	10.4	8.1	58.6	
8	10	2	52.2	53.2	49.7	38.9	10	3	6.4	7.5	4.9	52.9	
9	10	2	42.4	43.4	40.8	29.6	10	2	58.7	59.5	58.1	47.0	
10	10	2	39.9	41.7	38.1	29.7	10	3	7.1	8.8	5.7	53.3	
12	10	3	9.9	11.4	8.7	58.1	10	3	20.3	21.9	18.8	9.8	
13	10	2	42.5	43.9	41.1	31.1	10	2	59.8	1.5	59.6	49.7	
21	10	2	55.0	57.4	55.8	44.1	f. f. m. obsd						

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1876 photo. pro

H. Camelopard. $5^h 01^m 59^s + 79^\circ 4' 54''$ $100^\circ 55'$												
1876		E	F	G	H		E	F	G	H		
July 17	30	2	17.8	14.7	23.7	13.6	30	2	6.4	3.3	8.1	2.1
24	30	2	25.2	24.8	25.9	15.6	30	2	3.7	3.5	4.8	54.6
26	30	2	47.1	48.0	48.6	38.7	30	2	24.2	25.2	26.0	16.1
Aug. 1	30	2	52.1	52.5	53.1	42.1	30	2	30.7	31.3	32.6	20.6
2	30	2	41.7	41.9	42.9	31.7	30	2	24.9	25.1	26.9	15.6
6	30	3	1.1	59.1	1.5	50.3	30	2	48.0	46.1	47.2	36.1

no more

$\alpha$  Hercules  $17^h 8^m 57^s +14^\circ 3' 2''$

1876

Jan. 19	50	2	4.1	7.1	5.2	8.2								
Feb. 16	50	2	9.8	8.8	11.7	14.1								
19	50	2	15.3	16.4	19.5	21.3								
20	50	2	21.1	21.3	23.6	27.3								
22	50	2	9.7	8.7	11.1	14.1								
29	50	3	21.6	19.3	22.7	25.7								
July 17	50	2	41.6	32.8	42.2	40.6								
19	50	2	43.2	34.5	43.9	41.5	50	4	0.4	50.9	59.9	58.2		
22	50	2	38.3	29.6	38.2	34.3	50	2	39.3					
24	50	2	30.9	26.7	26.5	24.4	50	4	10.6	5.5	5.9	4.0		
26	50	2	45.6	41.2	40.9	38.3	50	4	22.5	18.2	17.3	15.9		
Aug. 1	50	2	51.4	45.6	45.8	43.9	50	4	23.1	18.2	16.8	15.4		
2	50	2	53.9	47.8	47.9	46.4	50	4	19.1	13.3	12.8	11.5		
3	50	2	54.5	48.4	48.1	46.5	50	4	20.7	15.2	14.7	12.7		
5	50	2	56.5	50.0	49.7	48.5	50	4	19.8	13.7	12.2	11.9		
6	50	3	29.2	22.1	21.1	18.4	50	4	57.2	49.7	49.4	47.5		
8	50	3	34.4	27.0	26.9	23.4	55	0	1.1	53.4	55.1	52.1		
9	50	3	32.0	24.9	24.9	21.6	50	4	52.9	48.2	45.1	42.1		
10	50	3	30.8	23.9	23.1	20.8	50	4	55.3	48.1	47.5	45.1		
12	50	3	31.6	23.9	25.2	22.1	50	4	57.0	48.3	49.9	46.9		
13			A.R.											
15	50	3	36.8	29.1	30.5	27.9	50	4	50.8	43.1	43.6	40.9		
21	50	3	30.1	25.9	26.1	24.9	50	4	55.7	50.4	49.4	47.8		
22	50	3	39.7	34.7	34.5	31.5	55	0	6.3	1.3	2.4	0.0		
23	50	3	37.1	31.9	32.1	28.9	50	4	57.4	52.2	52.2	50.7		
24	5		A.R.											
28	50	3	43.9	38.7	38.1	37.1								

Herculis  $h^m s + 14^o 32' 4''$

ξ Ophiuchi  $17^h 13^m 31^s - 20^\circ 57' 47''$

1876

Jan 24	20	2	4.6	57.6	59.4	59.2	20	3	3 24	26.2	38.0	26.9
Feb 26	20	2	12.9	6.8	8.5	6.4	20	3	415	35.8	36.4	35.1
Aug. 2	20	2	16.0	8.9	10.3	9.7	20	3	37.9	30.5	32.4	31.3
3	20	2	18.7	15.5	13.9	14.1	20	3	36.5	29.8	30.9	29.3
5	20	2	32.0	23.9	26.8	26.1	20	3	39.4	31.2	32.2	31.7
8	20	3	1.1	50.8	54.1	50.9	20	4	29.7	19.8	22.9	20.8

no more

4 Ophiuchi <sup>h</sup> 17 <sup>m</sup> 18 <sup>s</sup> 44 -24° 3' 27"

1876

July 24	25	1	39.8	32.8	34.1	34.6	25	3	16.2	9.1	10.4	11.5
26	25	1	47.1	41.0	41.7	40.4	25	3	14.0	7.5	8.4	9.7
Aug. 2	25	1	59.8	51.6	54.1	55.3	25	3	15.4	7.9	9.1	9.6
3	25	1	57.0	49.1	51.8	52.1	25	2	6.8	58.0	59.1	1.3
5	25	2	16.2	8.3	9.7	11.9	25	3	22.2	13.9	13.2	17.2
6	25	2	30.0	20.2	22.9	23.3	25	3	45.9	35.6	37.8	37.6

no more

Gr. 966  $h m s$   $5^h 23^m 01^s + 74^\circ 57' 22''$   $105^\circ 03'$

1876

July 24	25	0	8.8	9.4	9.9	0.9	25	4	43.1	43.7	43.9	3	46
26	25	0	32.8	35.1	35.2	22.9	20	4	49.3	51.0	50.5	40	44
Aug. 3	25	0	27.3	28.6	28.8	17.5	25	0	5.8	6.4	6.6	55.6	
5	25	0	32.9	35.6	34.6	24.3	25	0	3.2	3.2	3.9	57.3	
6	25	0	52.4	52.1	53.9	42.4	25	0	5.1	4.8	5.9	55.0	
8	25	0	53.2	53.4	54.9	42.2	25	0	28.7	28.9	29.9	18.2	

no more

$\beta$  Draconis  $17^{\text{h}} 27^{\text{m}} 37^{\text{s}} + 52^{\circ} 23' 40''$

516 E F G H

July 24 0 2 25.2 21.9 25.2 16.1

26 0 1 53.7 51.3 54.4 45.3

Aug. 2 0 1 42.6 41.0 42.8 34.0

~~3 0 2 2.1 59.1 1.1 52.9~~

5 0 1 57.1 55.2 56.9 49.3

6 0 2 12.4 8.9 9.8 3.0

8 0 2 22.9 20.1 21.4 11.5

3 false strokes after 8  
no more

$\alpha$  Ophiuchi  $17^h 29^m 7^s + 12^\circ 39' 10''$

1876	E	F	G	H	E	F	G	H
Feb. 15	40	4	55.3	58.7	57.2	60.8		
19	45	0	41.1	45.5	46.8	47.5		
22	45	1	10.7	11.6	13.6	15.9		
<i>lost some wires after A+2</i>								
March 4	45	0	1.5	3.1	4.7	7.2		
6	45	0	2.1	6.5	4.5	11.4		
July 22	45	0	22.9	17.4	23.8	23.6	45	1 46.1 40.3 45.8 46.1
24	45	0	34.8	32.2	31.1	29.4	45	2 4.5 0.5 0.6 58.8
25	45	0	48.1	43.7	43.8	43.5		
<i>lost by J.F.M.</i>								
26	45	0	37.5	34.6	34.1	31.4	45	2 12.7 10.8 9.2 6.9
Aug. 1	45	0	56.8	52.5	52.2	49.4	45	2 19.9 16.4 13.6 11.8
2	45	0	47.8	44.3	43.4	41.9	45	2 10.1 7.1 5.9 4.0
3	45	0	51.8	47.4	46.9	46.0	45	2 11.7 7.5 6.4 5.3
5	45	1	8.1	4.1	4.1	1.9	45	2 17.8 14.1 11.2 11.7
<i>lost 1st wire</i>								
6	45	1	13.1	8.1	7.4	5.6	45	2 51.8 46.1 44.8 43.5
8	45	1	18.2	13.5	12.1	11.1	45	2 49.9 44.3 43.9 40.7
9	45	1	23.0	17.9	16.1	14.6	45	2 58.3 51.5 51.8 45.5
10	45	1	20.7	16.1	14.7	11.5	45	2 49.9 44.4 43.1 41.1
12	45	1	22.1	17.7	16.9	14.1	45	2 49.9 43.9 43.1 40.9
13	45	1	18.5	12.4	12.2	10.1	45	2 52.1 45.9 44.9 41.7
15	45	1	18.1	13.1	12.1	11.2	45	2 50.9 44.7 44.3 42.9
21	45	1	21.1	18.8	17.0	14.3	45	2 43.6 39.8 37.9 35.6
22	45	1	40.6	37.2	37.0	33.1	45	2 42.4 39.0 37.2 35.5
23	45	1	22.6	18.8	18.9	16.4		
26	45	1	24.7	18.7	18.9	16.5	45	2 48.3 43.1 41.9 39.8
28	45	1	30.9	26.1	26.9	21.9	45	2 42.6 39.4 37.9 35.6
29	45	1	29.9	26.5	27.4	23.7	45	2 45.9 42.5 41.0 40.3

Ophiuchi  $17^h 29^m 7^s +12^\circ 39' 10''$

f Draconis <sup>h m s</sup> 17 32 28 +68 12 52

1876

Aug. 3	10	3	24.6	25.1	24.4	15.2	10	3	53.7	53.2	51.8	43.2
5	10	3	22.4	22.9	21.3	12.4	10	3	54.6	54.3	51.9	43.7
6	10	3	43.7	42.6	41.1	32.2	10	4	33.8	33.1	31.5	23.1
8	10	4	0.1	58.5	58.8	47.6	10	4	31.9	31.6	30.2	19.7
9	10	3	47.9	46.5	45.1	35.0	10	4	19.1	17.8	16.1	6.7
10	10	3	43.7	43.1	41.1	31.7	10	4	22.9	21.2	19.4	9.8
12	10	3	46.9	45.7	44.9	34.9	10	4	19.4	18.4	17.5	17.4

no more

288

Herculis 17 35 56 +46 4 24

676

Aug. 3 ~~20 1 3.1 1.1 1.1 54.3~~5 20 1 5.6 27 2.5 55.1 rej. 2<sup>nd</sup> 8

6 20 1 23.4 19.4 19.5 13.2 20 2 55.6 50.9 51.8 44.6

8 20 1 27.0 23.1 24.1 16.2 20 2 55.1 50.9 51.9 43.9

9 20 <sup>rej A</sup> 1 33.7 28.9 29.9 21.4 20 2 47.1 43.4 ~~44.0~~ 36.1

10 20 1 33.2 29.1 29.1 21.1 20 2 39.4 35.2 35.5 27.1

12 20 1 28.9 25.5 25.9 17.4 20 2 45.1 41.1 41.8 32.4

no more

$\omega$  Draconis  $17^h 37^m 41^s +68^\circ 48' 55''$

1876

Aug. 5	35	2	14.9	15.1	12.1	4.6	35	2	43.2	44.1	41.8	34.2
15	35	2	33.1	32.5	31.9	23.1	35	3	18.1	17.5	16.5	7.5
21	35	2	36.7	37.8	35.9	24.9	35	3	17.4	19.2	16.3	7.8
22	35	2	35.4	37.5	36.5	25.0	35	3	16.7	19.5	18.3	9.2
23	35	2	46.1	46.7	45.4	35.4	35	3	15.0	16.4	14.9	6.1
28	35	2	38.9	40.5	39.9	29.4	35	3	17.7	19.4	17.7	9.9

no more

290

Ophiuchi  $\begin{matrix} h & m & s \\ 17 & 41 & 37 \end{matrix} + 2 \begin{matrix} h & m & s \\ 45 & 21 \end{matrix}$

576

Aug. 5	35	4	27.1	21.8	21.9	21.6	40	0	51.7	45.4	45.2	44.5
15	35	4	58.2	51.9	52.9	50.5	40	1	14.9	8.1	9.1	7.8
21	40	0	5.9	60.5	60.8	59.0	40	1	15.6	11.2	10.4	9.6
22	40	0	1.5	56.1	58.6	57.6	40	1	26.6	21.8	23.2	21.9
23	40	0	3.1	57.5	59.6	57.1	40	1	26.4	21.3	22.2	21.1
28	35	4	58.6	53.1	53.7	52.7	40	1	22.1	17.2	17.4	17.2

no more

$\psi$  Draconis  $17^{\text{h}} 44^{\text{m}} 10^{\text{s}} +72^{\circ} 12' 34''$

Aug. 5	10	4	6.7	5.1	3.0	52.8						
12	10	4	16.0	13.2	11.4	2.1	10	4	45.6	42.2	41.1	29.6
13	10	4	6.4	3.6	2.0	53.1	10	4	27.3	24.2	23.1	13.7
15	10	4	33.2	30.4	30.6	19.5	10	4	51.1	46.8	46.5	35.0
21	10	4	27.1	26.2	23.9	13.9	15	0	0.0	59.1	57.7	47.2
22	10	4	25.1	24.9	25.0	13.1	10	4	48.2	47.3	46.2	36.6

no more

292

h m s o i "

Herculis 17 51 56 +37 16-57

876

Aug. 9	5	4	51.1	47.7	45.9	39.5	10	0	49.1	46.4	44.5	37.2
10	5	4	50.9	46.9	45.1	37.9	10	0	51.3	48.0	46.6	40.9
12	5	4	50.9	46.4	45.1	38.4						
28	5	4	54.1	52.2	51.1	44.6						
29	5	4	52.9	51.9	50.9	45.0						
30	5	4	57.5	56.2	55.5	48.7	10	1	2.6	1.3	1.3	55.3

no more

§ Draconis  $17^{\text{h}} 54^{\text{m}} 22^{\text{s}}$   $+56^{\circ} 53' 34''$

1876

72	Aug. 3	30	2	32.9	29.9	30.1	22.9	30	3	7.3	4.8	5.8	57.3
09	13	30	2	5.2	0.5	1.9	53.1	30	3	39.4	35.2	36.4	27.6
	21	30	3	3.1	1.1	1.9	52.1						
	23	30	2	43.9	41.5	42.1	33.0	30	3	37.5	35.3	35.3	26.8
	Sept. 2	30	2	33.1	30.1	31.2	22.0	30	3	27.5	24.0	24.4	16.2
3	3	30	3	7.5	7.5	8.4	59.1	30	2	52.3	50.3	51.5	42.2

294

Draconis <sup>h m s</sup> 17 53 42 +51° 30' 15"

876

Aug. 3	<del>55</del>	<del>0</del>	<del>42.9</del>	<del>41.8</del>	<del>42.1</del>	<del>35.5</del>	<del>55</del>	<del>rej' 2<sup>nd</sup></del>	<del>8</del>				
6	55	0	38.1	35.8	37.4	27.9							
15	55	0	41.1	37.9	40.4	31.7							
21	55	0	47.9	47.2	48.1	38.7							
22	55	0	50.1	48.9	52.1	44.1							
23	55	1	3.5	2.1	3.9	55.1	55	1	53.1	51.5	54.3	45.0	
28	55	0	54.1	52.2	56.0	45.9	55	1	50.7	49.6	51.7	42.4	
29	55	1	4.5	3.4	6.9	57.1	55	2	6.9	5.5	7.9	59.0	

no more

35 Draconis  $h^m s + \frac{o}{16} 58' 40''$

1876

March 19 20 2 20.2 22.3 26.3 24.2 20 3 11.9 14.7 17.4 15.4  
 Aug. 3 <sup>sure</sup> 25 3 8.9 7.8 5.1 55.8 rej. 2<sup>nd</sup> 8  
 12 <sup>last 1<sup>st</sup> saved</sup> 25 3 13.9 11.9 8.4 58.9  
 15 25 3 21.9 20.2 18.1 6.9 25 3 42.7 39.2 38.7 27.9  
 21 25 3 32.1 32.8 29.9 19.2  
 26 25 3 28.1 27.6 26.8 15.0 25 3 44.0 43.2 41.1 36.4

No more

<sup>h</sup> <sup>m</sup> <sup>s</sup>  
<sup>2</sup> Sagittarii 17 57 47 -30° 25' 24"

576

Aug. 3	45	3	26.5	20.5	21.9	22.0	45	4	16.3	11.3	11.2	12.0
5	45	3	8.4	2.3	3.3	3.9	45	4	18.3	12.5	12.3	14.9
<del>22</del>	<del>45</del>	<del>3</del>	<del>34.3</del>									
29	45	3	40.9	35.2	37.8	37.0	45	4	50.3	43.8	45.7	47.7
30	45	3	42.9	36.3	38.8	39.9	45	4	47.2	49.7	47.8	44.4
Sept. 2	45	3	58.5	51.9	53.9	53.6	50	0	4.9	59.6	0.0	0.1
3	45	3	39.1	33.8	35.2	33.4	45	4	51.4	45.5	46.3	47.5

no more

72 Ophiuchi  $18^{\text{h}} 1^{\text{m}} 25^{\text{s}} + 9^{\circ} 32' 51''$

1876

Aug. 3	50	2	0.3	54.9	55.6	54.9	50	3	9.6	3.3	4.1	4.1
5	50	2	0.5	54.5	54.9	53.9	50	3	14.4	8.9	8.2	7.8
9	50	2	35.1	28.4	28.9	26.9						
29	50	2	33.1	27.7	29.9	28.1						
30	50	2	38.1	33.0	34.1	32.0						
Sept. 2	50	2	49.9	43.6	44.4	41.7	50	3	56.9	50.2	50.6	50.0

no more

298

1876 Sagittarii  $18^{\circ} 6' 17'' - 21^{\circ} 5' 21''$

Aug. 3	25	4	2.5	54.6	56.5	55.5	30	0	6.3	59.2	1.6	0.0
5	25	4	7.7	59.2	1.5	0.7	30	0	18.0	10.5	12.0	13.3
12	25	4	36.1	27.4	30.5	27.1						
13	25	4	43.6	33.9	36.0	34.0						
Sept. 2	25	4	45.3	37.1	38.9	36.1	30	0	53.9	46.3	48.3	47.2
3	25	4	42.1	34.9	36.5	34.1	30	1	3.7	55.3	58.8	57.2

no more

1876

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Ursae Min. <sup>h</sup> <sup>m</sup> <sup>s</sup> <sup>°</sup> <sup>'</sup> <sup>"</sup>  
18 12 39 +86 36 27

41 Draconis  $18^{\text{h}} 9^{\text{m}} 30^{\text{s}} + 19^{\circ} 59' 0''$

1876

Aug. 5 25 2 25.7 28.9 24.9 15.9  
 Sept. 2 <sup>coll. #</sup> 25 3 0.0 1.1 57.9 48.9  
 3 25 2 59.1 1.9 59.5 49.3

~~5 25 3 0.3 2.9 59.1 48.9~~ (2<sup>nd</sup> # follo. in the double stroke)  
 6 25 3 3.0 6.2 3.5 4.0 both #'s, reg. order, 1 stroke for 2<sup>nd</sup>  $\delta_{\gamma}$

89 Hercules  $18^{\circ} 18' 22'' + 21^{\circ} 42' 51''$

876

Aug. 3	40	2	17.9	15.6	14.4	10.7	40	3	41.5	39.4	37.4	34.2
6	40	2	36.2	31.5	31.9	27.4	40	4	0.8	54.9	55.4	52.2
8	40	2	35.2	30.8	30.3	25.1	40	4	2.2	58.1	57.2	53.1
9	40	2	53.1	48.1	47.7	42.2	40	4	1.9	56.6	56.2	51.7
10	40	2	44.1	39.6	38.4	34.2	40	4	6.9	1.5	0.3	56.7
Sept. 2	40	2	54.9	50.1	49.9	45.1	40	3	59.2	58.1	53.8	50.2
no more												

X Draconis  $18^{\circ}23'18'' + 72^{\circ}40'41''$

1876

March 29 40.0 51.2 54.2 60.3 57.7

Aug. 3 <sup>ref. 1<sup>st</sup> 8</sup> 45 0 40.1 39.4 37.1 28.1 45 1 2.6 1.8 59.7 51.1  
 6 45 1 5.6 3.4 2.4 52.9 45 1 35.9 34.2 32.4 22.8  
 8 45 0 49.6 46.5 45.4 35.1 45 1 50.5 47.5 45.7 36.0  
 10 45 1 2.5 0.0 58.1 47.4 45 1 32.5 30.3 27.9 18.1  
 12 45 1 3.3 0.9 59.3 49.9 45 1 29.5 27.1 24.9 15.1

no more

Aquilae <sup>h m s</sup> 18 28 24 - 8° 19' 45"

1876

Aug. 3	40	4	2.1	52.6	54.4	52.2	45	0	20.6	11.7	13.8	11.6
6	40	4	31.4	20.4	22.8	20.4	45	0	52.9	41.6	43.4	42.9
8	40	4	43.2	32.0	33.9	30.8	45	1	9.1	57.9	0.6	56.9
9	40	4	50.6	39.1	40.3	37.2	45	1	8.9	57.6	59.9	55.8
10	40	4	43.0	31.8	33.5	29.1	45	1	6.5	56.1	58.9	54.2
12	40	4	41.6	30.3	32.2	27.9	45	0	59.0	47.2	49.6	46.9

no more

$\Delta$  Lyrae  $18^{\circ} 32' 42'' + 38^{\circ} 40' 6''$

1876

Feb 2	40	4	30.2	33.4	34.1	35.5							
7	45	0	1.8	8.4	6.1	6.3							
19	40	4	30.2	36.7	35.9	34.9							
20	40	4	28.0	33.2	36.9	33.9	45	0	43.2	46.6	50.2	47.1	
22	40	4	32.6	35.1	36.3	35.5							
March 4	45	0	24.8	28.8	29.6	28.9							
A+2, 12, 3, 4 begin again with A3, last last													
6	45	0	25.5	31.7	33.4	33.0							
13	40	4	53.1	36.2	38.6	39.3							
14	40	4	29.7	30.7	33.9	34.6							
19	45	0	12.8	16.4	20.1	22.1							
22	40	4	27.2	32.3	32.4	35.0							
27	40	4	21.2	24.9	29.7	30.9							
29	40	4	44.1	47.2	54.4	54.0							
lost 1st wire													
Apr. 10	40	4	30.6	33.7	36.8	38.2							
Aug. 3	45	0	16.6	9.6	8.0	1.7	45	1	24.1	22.7	20.3	15.2	
6	45	0	32.2	30.5	30.0	23.1	45	2	2.9	1.1	59.9	54.0	
8	45	0	52.9	50.5	48.6	39.9	45	1	59.9	57.0	58.2	47.4	
9	45	0	35.1	32.7	30.6	23.6	45	1	54.5	<del>51.8</del>	50.1	43.4	
10	45	0	34.2	32.2	29.9	23.0	45	2	41	7.4	59.4	53.1	
12	45	0	48.5	44.9	43.5	37.0	45	2	3.6	0.9	59.5	53.1	
13	45	0	35.7	32.8	32.2	25.1	45	1	58.2	55.5	54.1	48.4	
21	45	0	40.1	39.7	37.5	29.1	45	1	54.7	54.3	52.3	45.2	
23	45	0	52.1	50.4	49.9	42.5	45	1	53.6	52.7	51.1	45.5	
26	45	0	57.2	54.5	54.5	45.7	45	1	55.3	53.3	52.8	46.8	
28	45	0	37.1	35.9	35.4	28.0	45	1	58.9	57.8	57.0	51.2	
29	45	0	45.9	45.0	44.9	37.1	45	1	59.0	58.0	57.5	51.2	

See next book

	$h$	$m$	$s$	$^{\circ}$	$'$	$''$
<i>Librae</i>	15	10	17	-8	55	13
$\theta$ Ursa Min.	15	13	13+67		49	18
$\gamma$ Ursa Min.	15	20	57+72		16	44
$\nu'$ Bootis	15	26	26+41		15	37
$\alpha$ Coronae (4)	15	29	24+27		8	12
$\phi$ Bootis	15	33	20+40		45	42
$\theta$ Ursa Min.	15	35	9+77		45	54
$\alpha$ Serpentina (4)	15	38	7+6		49	13
$\beta$ Serpentina	15	40	25+15		48	51
$\mu$ Serpentina	15	43	6-3		2	46
$\zeta$ Ursa Min.	15	48	34+78		10	41
$\delta$ Scorpii	15	52	57-22		15	49
$\theta$ Draconis	15	59	33+58		53	58
$\beta'$ Scorpii	15	58	10-19		27	41
$\phi$ Herculis	16	4	50+45		15	49
$\delta$ Ophiuchi	16	7	48-3		22	15
$\epsilon$ Ophiuchi	16	11	42-4		23	10
$\kappa=19?$ Ursa Min.	16	14	22+76		9	51
$\alpha$ Scorpii (4)	16	21	45-26		9	9
$\eta$ Draconis	16	22	18+61		47	51
$\beta$ Herculis	16	24	51+21		45	49
$\lambda$ Draconis	16	28	14+69		21	18
$\sigma$ Herculis	16	30	4+42		41	45
Gr. 848	4	32	3+75		42	33
$\eta$ Herculis	16	38	57+39		9	40
Gr. 2377	16	42	56+57		0	20
$\kappa$ Ophiuchi	16	51	45+9		34	15

$\epsilon$ Hercules	16	<sup>m</sup> 55	$30+31$	6	42
$\epsilon$ Ursae Min (2)	16	58	$51+82$	14	22
19 H. Camelopi	5	1	$59+79$	4	54
$\alpha$ Hercules (7)	17	8	$57+14$	32	4
$\xi$ Ophiuchi	17	13	$31-20$	57	47
44 Ophiuchi	17	18	$44-24$	3	27
Gr. 966	5	23	$1+74$	57	22
$\beta$ Draconis	17	27	$37+52$	23	40
$\alpha$ Ophiuchi (4)	17	29	$7+12$	39	10
$f$ Draconis	17	32	$28+68$	12	52
$i$ Hercules	17	35	$56+46$	4	24
$\omega$ Draconis	17	37	$41+68$	48	53
$\gamma$ Ophiuchi	17	41	$37+2$	45	21
$\gamma'$ Draconis	17	44	$10+72$	12	34
$\theta$ Hercules	17	51	$56+37$	15	51
$\xi$ Draconis	17	52	$22+56$	53	34
$\gamma$ Draconis	17	53	$42+51$	30	15
35 Draconis	17	55	$3+76$	58	40
$\gamma^2$ Sagittarii	17	57	$47-30$	25	24
72 Ophiuchi	18	1	$25+9$	32	51
$\mu$ Sagittarii	18	6	$17-21$	5	21
41 Draconis	18	9	$30+79$	59	0
18 Ursa Min <sup>(14)</sup>	18	12	$39+86$	36	27
109 Hercules	18	18	$22+21$	42	51
$\chi$ Draconis	18	23	$18+72$	40	41
1 Aquilae	18	28	$24-8$	19	45
$\alpha$ Lyrae (4)	18	32	$42+38$	40	6

$\alpha$ Draconis	18	40	12+55	24	47
51 Cephei (4)	6	41	16+87	14	3
$\beta$ Lyrae	18	45	28+33	13	7
$\gamma$ Sagittarii	18	47	31-26	26	58
$\delta$ Draconis seq.	18	49	21+59	14	9
48 Draconis	18	54			
50 Draconis	18	50	24+75	17	6
$\gamma$ Lyrae	18	54	16+32	31	9
33 Draconis	18	55	55+71	7	47
49 Draconis	18	58			
$\lambda$ Aquilae	18	59	37-5	4	6
51 Draconis	19	2	7+53	12	8
$\epsilon$ Lyrae	19	2	50+35	54	18
53 Draconis	19	9	18+56	38	54
$\delta$ Sagittarii	19	10	19-19	10	21
$\delta$ Draconis	19	12	31+67	26	29
$\kappa$ Cygni	19	14	13+53	8	18
$\pi$ Draconis					
$\delta$ Aquilae	19	19	12+2	52	2
$\iota$ Cygni	19	26	33+51	27	50
$\kappa$ Aquilae	19	30	10-7	18	11
$\theta$ Cygni	19	33	5+49	55	55
$\epsilon$ Cygni	19	38	30+50	14	16
$\gamma$ Aquilae (4)	19	40	19+10	18	36
$\delta$ Aquilae (4)	19	44	41+8	32	23
20 Cygni	19	47	30+52	40	37
$\beta$ Aquilae (4)	19	49	10+6	5	46
$\lambda$ Ursaes Minor	19	49	18+88	55	62

2 H. Cephei					
$\tau$ Aquilae	19	58	2+6	55	37
66 Draconis	20	3	35+31	37	58
Gr. 1408	20	3	47+76	8	3
33 Cygni	20	10	30+56	11	8
$\alpha$ & $\delta$ Capricorni <sup>u)</sup>	20	11	7-12	55	50
$\kappa$ Cephei	20	13	4+77	20	2
$\gamma$ Cygni	20	17	45+39	51	27
$\omega$ Cygni	20	23	12+48	58	8
$\epsilon$ Delphini	20	27	14+10	52	46
$\beta$ Delphini	20	31	41+14	9	41
$\alpha$ Delphini	20	33	50+15	28	20
$\alpha$ Cygni	19/20	37	10+44	50	4
$\epsilon$ Cygni	20	41	9+33	30	11
$\eta$ Cephei	20	42	45+61	21	13
$\mu$ Aquarii	20	45	55-9	27	3
76 Draconis	20	51	31+82	3	59
$\xi$ Cygni	21	0	23+43	25	47
77 Draconis	21	7	58+77	37	7
$\zeta$ Cygni	21	7	37+29	42	55
$\sigma$ Cygni	21	12	32+38	52	19
$\alpha$ Cephei	21	15	36+62	3	22
$\delta$ Boote Maj.	9	23	24+77	22	40
$\beta$ Cephei	21	27	2+70	0	43
B.A. 7510-123 Cephei	21	28	28+80	0	29
$\delta$ Capricorni	21	33	9-17	33	30
10 Cephei					

		<i>h</i>	<i>m</i>	<i>s</i>	<i>0</i>	<i>1</i>	<i>"</i>
$\epsilon$ Cygni	21	42	11	+48	43	53	
$\mu$ Capricorni	21	46	29	-14	8	19	
$\mu$ Cephei	21	48					
$\alpha$ Pegasi	21	55	0	+12	31	19	
$\alpha$ Aquarii	4 21	59	22	-0	55	35	
$\theta$ Pegasi	22	3	54	+5	35	1	
$\zeta$ Cephei	22	6	31	+57	35	7	
$\alpha$ Cephei	22	7		+71	43		
$\epsilon$ Cephei	22	10	23	+56	25	14	
$\gamma$ Aquarii	22	15	12	-2	0	59	
$\beta$ Lacertae	22	18	39	+51	36	11	
$\delta$ Cephei	22	24	32	+57	46	32	
$\eta$ Draconis	10	24	25	+76	21	20	
$\gamma$ Lacertae	22	26	9	+49	38	24	
$\alpha$ Cephei	22	30	4	+75	34	56	
$\beta$ Cephei	22	32		+73	39		
$\eta$ Pegasi	22	37	9	+29	34	5	
$\lambda$ Pegasi	22	40	31	+22	54	30	
$\iota$ Cephei	22	45	14	+65	32	35	
$\alpha$ Piscis	(4) 22	50	44	-30	17	2	
$\alpha$ Andromedae	22	56	10	+41	39	16	
$\alpha$ Pegasi (4)	22	58	32	+14	32	0	
$\pi$ Cephei	23	3	56	+74	42	42	
Br. 3077	23	7	16	+56	28	41	
$\gamma$ Piscium	23	10	41	+2	35	59	
$\tau$ Pegasi	23	14	27	+23	3	23	
$\nu$ Pegasi	23	19	9	+22	42	58	

$\theta$  Piscium

$\lambda$  Draconis 11 23 58+70 1 14

72 Pegasi

$\lambda$  Andromedae 23 31 27+45 46 51

$\gamma$  Cephei 23 34 31+4 56 56

41 ~~H.  $\theta$  Cephei~~ 23 48 57+67 6 44

$\phi$  Pegasi 23 46 8+18 25 34

$\omega$  Piscium 23 52 54+6 10 16

30 Piscium 23 55 31-6 42 31

Gr. 1852 11 58 52+77 36 16







22  
22  
59

Pi 211.29	12 10 13	33 35.6
B7 1711	14 3	27 19.0
Pi x 11 122	27 29	33 51.3
G 1930	43 12	61 0.1
Pi x 11. 255	56 54	64 16.9
- x 111. 8	13 4 25	57 29.8
- x 111. 195	40 37	31 31.6
- x 111 273	52 59	65 58.3
B7 1934	14 0 54	31 26.9
G 2107	19 1	61 32
- 2132	30 58	65 57
- 2146	38 56	61 48
Bab 5091	15 20 34	63 48
21. 110	25 27	62 42
- 136	29 11	64 38
- 212	49 4	20 41
xvi. 69	16 13 52	66 41.2
G 2370	35 40	63 19
(xvi. 310	17 1 28	48 58.6
86 Heis Hervey	16 57 11	25 41

# Stars needing observation

	Mag.	n	m	S	
50 Cephei H.	5.5	4	37	2	80° 56.9
<del>46 L 377</del>	<del>5.5</del>	<del>5</del>	<del>37</del>	<del>2</del>	<del>80° 56.9</del>
25 Camel H.	5 5.6	7	4	40	82 38.8
B. VII. 187	5 5.6	7	45	3	79 49.1
Gr. 1418	7.5	8	18	33	85 29.4
RC 2218	6. 6.	8	49	2	84 40.8
Br. 1458	7.0	10	31	4	81 4.7
202 Camel B	6 5.6	11	23	1	81 48.9

# Stars for comparison with Antares

		1876		1875.0		✓	
No. of days		2		+ 65		+ 2.0	
+8° 8.8	9.1	4	50	17.4	+8	24.3	
8 854	8.5		57	41.3	8	15.9	
7 802	8.6		58	53.0	7	53.8	
7 819	7.6	5	2	7.7	7	54.4	
7 837	7.8	5	10	4.6	7	56.4	
8 914	8.7		10	2.0	8	8.0	
8 959	8.1		18	39.0	8	7.2	
8 962	8.5		18	47.7	8	0.9	
8 982	8.0		22	53.9	8	+11.1	

		18750.0		✓	
		h m s			
9.1	4	54	22	+8	26
8.5		58	46	8	18
8.8	5	0	0	7	55
7.6		3	13	8	1
7.8		11	10	7	54
8.7		11	8	8	9
8.1		19	45	8	18
8.5		19	53	8	2
8.0	5	23	54	8	17

would like about  
3 hrs of each star

1876phae.wood.1392F