1877phae.proj.1394R

KG
11366
v. 390

Zone
Fundamental Stars
Circle Readings
From $0^h\ 2^m$ to $20^h\ 10^m$
1877 A1

Charles W. Sever, University Bookstore, Cambridge.

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x 75
mdd

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β Cassiop. 0h 2m 31s +58° 27′ 36″

1877	E	Fl	G	A			E	Fl	G	A
Oct 23	55- 4	41.5-	62.9	26.1	49.5-	0 0	11.0	22.0	16.9	18.9
27	53- 4	37.4	48.4	38.9	43.2	53- 4	54.9	5.1	55.8	59.9
28	53- 4	33.5-	44.8	35.9	41.7	0 0	1.0	11.4	5-5-	10.1
30	55- 4	24.5-	45.1	39.7	43.1	55- 4	58.9	9.3	3.2	8.0
Nov 7	55- 4	39.4	49.9	40.2	46.1	0 0	2.8	12.9	6.1	9.4
Dec 9	55- 4	36.9	45.6	33.8	39.0	0 0	4.8	14.3	4.1	7.8

no more

γ2. 29 0h 9m 10s +76° 15′ 21″

1877	E	Fl	G	A			E	Fl	G	A
Oct 23	10 2	0.9	11.9	4.1	11.3	10 2	18.0	28.4	21.6	27.1
27	10 2	3.2	12.9	3.6	11.1	10 2	15.4	24.9	16.2	21.9
28	10 1	57.1	7.4	58.7	7.4	10 2	18.1	28.6	20.8	28.8
30	10 2	6.9	17.0	11.5-	20.1	✕				
Nov 4	10 2	23.2	34.0	25.5-	33.8	10 2	30.9	40.9	32.4	39.9
Dec 15	10 2	1.1	12.2	0.5-	8.4	10 2	10.2	20.9	9.1	18.4

no more

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Ceti	h 0	m 13	s 4	− 9°	′ 31	″ 2							
1877				E	H	G	A		E − H − G − A				
Oct 23	55	1	6.8	23.1	21.2	18.4							
30	55	1	3.1	19.1	18.9	16.1							
Dec 1	55	1	21.8	36.9	36.4	29.3	55	2	14.8	29.5	24.4	21.5	
17	55	1	15.5	32.8	27.1	26.0	55	2	7.5	24.1	19.4	18.2	
20	55	1	14.2	27.0	26.5	23.2	55	2	13.6	27.4	26.9	23.2	

5 Ursae Min.	h 12	m 13	s 5	+ 92°	′ 50								
1877				E									
Oct 27	35	1	0.9	12.1	59.7	41.9							
	nubes 8,7,6,5,4												
Nov 4	35	0	54.5	4.8	54.	58.8							
Dec 9	35	0	lost 1st 3 wires 49.1	57.1	45.0	49.2	35	0	45.2	54.0	41.4	45.0	
	4th wire a little				1 stroke for 2nd &								
"													
" 12	35	0	46.5	56.4	44.5	47.9	35	0	42.5	52.9	40.1	43.9	
	lost 1st 3 wires												
" 15	35	0	40.2	54.0	39.5	42.5							
16	35	0	56.5	7.1	56.4	0.5	35	0	52.4	2.4	52.8	56.9	
	The first 5 wires												

No more

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1877phae.proj.1394R

6 Ursae Min. B $12^h\ 14^m\ 26^s$ $+91^\circ\ 40'$

1877		E	− Z1	− G	Δt			E	Z1	G1	Δt
Oct	23	5-0	1	32.1	42.4	32.9	37.9	5-0	1	29.8	39.4	30.9	34.7
	27	50	1	37.4	46.2	35.2	40.9	50	1	34.4	44.7	34.0	37.8
	30	50	1	32.5-	41.5-	33.9	39.4	50	1	29.1	38.9	32.1	36.8
Nov	4	5-0	1	33.1	43.5-	33.1	39.9	5-0	1	30.0	40.6	30.2	36.0
Dec.	15	5-0	1	21.8	32.2	19.4	24.8	50	1	20.1	31.0	18.9	23.4
	16	5-0	1	22.8	33.1	23.5-	28.2	50	1	21.4	30.7	19.9	25.1

The last 4 wires
2 strokes for +2
The last 3 wires
The last 3 wires
The last 3 wires
Last 1st 3 wires
No more

κ Cass. $0^h\ 25^m\ 54^s$ $+62^\circ\ 14'\ 30''$

1877		E	Z1	G	Δt			E	Z1	G1	Δt
Oct	23	10	2	7.5-	17.1	10.4	16.1	10	2	43.1	53.4	46.9	5-2.0
	27	10	2	8.5-	18.5-	9.1	15.4	10	2	28.4	38.1	28.9	32.9
	30	10	2	11.1	21.1	16.6	20.1	10	2	53.4	3.1	57.6	3.2
Dec	6	~~10~~	~~2~~	~~13.8~~	~~23.5~~	~~16.1~~	~~20.8~~						
	13	10	2	38.2	47.6	38.2	42.7	10	3	10.8	20.9	10.6	15.2
	20	10	2	15.0	24.6	18.3	21.8						
	27	10	2	11.8	22.1	13.5	19.5-						

Last 1st 3 wires
Last last 2 wires
No more

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	h	m	s	°	′	″
ζ Cass.	0	30	1	+53	12	30

1877	E_0	$-Z_1$	$-G_1$	H_1			E	Z_1	G_1	H_1
Oct 27	10′ 4	2″.7	13″.4	3″.9	8″.6	10′ 4	43″.6	53″.2	45″.0	48″.8
30	10 3	10.2	57.8	4.9	8.4	10 4	44.2	53.1	48.8	52.1
Dec 6	~~10 4~~	~~8.9~~	~~17.1~~	~~8.0~~	~~12.6~~	~~10 4~~	~~43.7~~	~~54.5~~	~~46.9~~	~~50.8~~
13	10 4	14.1	26.2	15.2	19.4					
	lost 1st wire									
18	10 3	54.8	6.4	55.5	59.1					
20	10 4	5.5	15.6	8.1	12.1	10 4	44.2	53.2	48.1	50.8
26	10 4	17.8	27.6	19.5	23.1	10 4	51.8	1.9	52.0	56.1
	lost 1st 2 wires									

No more

	h	m	s	°	′	″
α Cass.	0	33	25	+55	51	5

1877										
Oct 27	35′ 0	29.4	42.0	31.1	36.0	35′ 1	10.1	21.7	13.0	15.7
30	35′ 0	23.9	35.9	30.8	34.9	35′ 1	2.3	13.0	7.5	11.6
Nov 6	35′ 0	30.7	43.1	32.6	37.6	35′ 1	8.6	20.1	9.1	14.4
7	35′ 0	27.4	38.2	30.8	35.7	35′ 1	5.5	15.4	7.9	12.9
13	35′ 0	~~30.1~~ 40.6		31.9	36.8	35′ 1	7.4	18.1	9.7	14.1
14	35′ 0	29.9	41.3	32.3	37.9	35′ 1	23.9	35.9	26.2	31.6

No more

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1877phae.proj.1394R

β Ceti $0^h\ 37^m\ 18^s - 18^\circ\ 40'\ 24''$

1877		E − Z	− G	H			E	Z	G	H
Oct 30	5	0	14.9	36.1	31.6	30.0	5	0	53.7	13.7	9.9	7.8
Nov 1	0	4	53.7	13.1	3.6	1.3						
12	5	0	9.6	28.6	20.2	19.4						
13	5	0	21.6	40.2	32.1	32.2						
17	5	0	28.0	47.5	41.0	41.1	5	1	24.4	43.1	36.0	36.3
18	5	0	14.7	34.7	26.6	25.0	5	1	9.4	28.4	19.9	18.6

No more

η Cass. $0^h\ 41^m\ 26^s + 57^\circ\ 9'\ 30''$

1877												
Jan. 13	5	3	15.9	17.1	19.9	18.9						
Oct 30	15	2	24.5	36.2	31.0	33.8	15	2	54.9	5.7	0.4	4.6
Nov 1	15	2	36.5	44.7	34.2	38.5	15	3	17.7	27.1	16.9	20.1
2	15	2	34.0	42.9	30.6	34.3	15	3	10.1	19.1	8.7	10.6
3	15	2	57.6	0.7	50.1	53.0						
9	15	2	52.9	3.1	51.2	56.6	15	3	20.9	31.7	19.9	24.9

Lost 12t wire

Lost 10t wire

No more

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1877phae.proj.1394R

γ Cass. h 0 m 49 s 11 +60° 2′ 31″

1877											
			δ	H	G	H		Ε	Η	G	H
Oct 30	20	4	14.6	25.1	19.8	23.2	20	4	57.8	7.0	6.6	5.1
Dec 1	20	4	16.5	27.3	15.2	20.1	20	4	48.2	57.1	44.9	49.8
2	20	4	26.4	34.1	24.0	24.9	20	4	37.6	45.1	31.9	36.2
3	20	4	21.5	29.2	17.8	21.1	20	4	52.9	1.1	48.8	53.1
9	~~20~~	4	17.1	26.4	15.0	19.0	20	4	53.5	4.1	52.8	56.8
17	20	4	8.8	19.0	9.8	14.4	20	4	52.9	3.2	53.8	58.4

Rej the 4th stroke of 2nd δ if there is one

no more

ε Piscium h 0 m 56 s 27 +7° 13′ 0″

1877											
Oct 30	10	2	36.5	55.2	50.4	49.1	10	3	28.9	47.1	42.8	41.4
Dec 1	10	2	36.2	52.0	43.1	42.2						
2	10	2	38.3	54.6	42.0	41.9						
15	10	2	43.9	1.2	50.9	52.9	10	3	37.2	54.1	44.1	44.8
16	10	2	27.9	44.9	37.4	39.1	10	3	50.2	7.6	59.9	1.2
31	10	2	44.2	0.2	50.4	49.1	10	3	40.7	56.5	45.8	44.7

no more

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1877phae.proj.1394R

β Androm $1^h\ 2^m\ 44^s\ +34^\circ\ 57'\ 26''$

1877			E	F	G	H			E	F	G	H
Jan. 13	15	4	23.7	24.1	29.9	28.1	20	0	30.4	32.4	35.7	35.2
14	20	0	1.8	4.5	9.3	10.4	20	0	41.9	43.2	49.3	48.3
	lost 1st wire											
Oct 30	25⁻	3	42.1	53.7	50.6	54.1						
Nov. 6	25⁻	4	36.5⁻	50.8	39.5⁻	46.4						
	lost 1st 3 wires											
Dec 13	25⁻	3	50.8	3.1	52.5⁻	57.4						
20	25	3	48.8	1.1	53.5⁻	57.4						
					No more							

θ Cass. $1^h\ 3^m\ 28^s\ +54^\circ\ 29'$

1877			E	F	G	H			E	F	G	H
Oct 30	55⁻	3	8.9	20.8	14.6	18.2	55⁻	3	21.9	33.7	26.2	30.0
Nov. 7	55⁻	2	37.8	48.9	40.0	44.6	55⁻	3	8.8	20.1	11.0	16.9
Dec 12	55⁻	3	5.4	15.2	3.3	8.6	55⁻	3	37.8	48.2	37.6	42.3
17	55⁻	2	35.9	47.0	39.7	41.2	55⁻	3	15.3	28.0	18.5⁻	21.4
	* 5⁻ wires											
18	55⁻	2	34.8	53.9	35.8	38.9	55⁻	3	17.9	29.1	18.9	21.3
20	55⁻	2	49.6	0.4	52.8	56.3						
	lost A+1											
					No more							

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1877phae.proj.1394R

χ^1 Piscium	$1^h\ 7^m\ 11^s$	$+6^\circ\ 54'\ 53''$										
1877			E	F1	G	H6		E	F	G	H6	
Jan 13	20	1	32.9	37.5	43.7	36.7	~~20~~	~~1~~	~~35.9~~	~~42.1~~	~~47.6~~	
14	20	1	35.9	42.1	47.4	42.1	20	2	25.8	32.2	38.1	33.0
Nov 6	30	0	56.9	1513	5.9	7.7	30	2	8.6	26.9	17.1	17.3
7	30	0.	53.9	11.8	3.4	5.2	30	1	52.4	12.4	3.7	4.7
Dec 31	30	1	6.0	22.9	10.6	10.1						

δ Cass.	$1^h\ 17^m\ 39^s$	$+59^\circ\ 35'\ 5''$										
1877												
Jan 13	40	2	18.4	16.4	21.2	(31.0)	40	3	10.0	6.8	11.5	11.7
14	40	2	15.2	15.1	19.0	18.9	40	3	9.6	7.2	12.3	11.5
Nov 6	50	1	41.9	52.1	42.7	47.4	50	2	18.3	28.4	17.9	21.7
7	50	1	38.1	48.4	40.6	44.5	50	2	25.9	36.8	27.0	31.9
Dec 26	50	1	39.3	48.3	40.1	43.2	50	2	17.3	27.2	17.9	21.2
27	50	1	44.2	54.4	47.5	49.6	50	2	12.8	24.0	14.5	18.2

no more

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1877phae.proj.1394R

Gr. 2001 $13^h\ 22^m\ 57^s$ $+73^\circ\ 2'\ 27''$ $106^\circ\ 58'$

1877			E	F	G	H	E − F	G − H			
Jan	13	20 2	6.6	4.7	7.1	6.9					
	14	20 2	13.9	12.1	13.4	13.9					
Nov	14	20 4	47.3	59.8	45.1	53.4	20 4	14.3	26.1	11.0	20.0

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

1877											
Jan	13	30 4	30.2	34.1	41.8	35.6	35 0	30.6	34.3	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
Nov	3	40 4	20.9	38.2	33.1	32.9	40 4	49.5	6.9	0.8	0.5
	14	40 3	46.1	3.4	54.4	56.5	40 4	51.6	9.2	5.9.1	2.0
Dec	13	40 4	1.7	16.8	7.4	9.4	45 0	0.1	15.6	6.8	7.9
	15	40 3	46.4	2.6	51.7	54.1	40 4	53.8	10.3	59.5	3.4

No more

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1877phae.proj.1394R

40 b ass. $1^h\ 28^m\ 34^s\ +72^\circ\ 24'\ 5''$

1877

			ε		H		G		R			
Jan 13	50	3	32.1	29.9	35.4	34.9						
14	50	3	30.2	30.0	44.2	33.6						
Nov 14	0	3	8.2	17.8	9.1	17.9	0	3	30.1	41.1	30.6	37.8
Dec 13	0	2	44.7	53.0	43.1	50.2	0	3	4.7	13.4	1.6	14.2
15	0	3	11.2	21.1	10.4	18.8	0	3	26.5	37.1	24.6	33.1
20	0	2	54.0	2.8	54.8	0.8	0	3	23.2	33.1	25.2	31.2

more

51 Andromedæ Persei $1^h\ 30^m\ 20^s\ +47^\circ\ 59'\ 38''$

1877

			ε		H		G		R			
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
Nov 14	25	1	54.9	[illegible]	57.9	3.1	25	2	35.4	48.0	38.5	44.1
Dec 12	25	2	25.1	35.9	23.9	29.9	25	2	43.1	53.7	42.4	47.2
			first let- wire									
13	25	1	53.1	4.1	54.2	57.9	25	2	36.0	46.4	35.3	40.3
20	25	1	54.3	4.4	57.7	0.9	25	2	31.5	42.1	34.5	38.9
25	25	1	46.1	56.2	~~46.8~~	~~50.3~~	25	2	38.6	48.5	38.4	42.9

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1877phae.proj.1394R

Gr. 2029 $13^h\ 34^m\ 11^s\ +71^\circ\ 52'\ 43''\ \ 108^\circ\ j$

1877			ℰ	A	G	K			ℰ	A	G	K
Jan. 14	10	2	53.7	51.1	53.0	52.2	10	2	17.5	14.4	17.3	17.2
Nov. 14	20	2	7.6	18.4	5.2	12.9						
Dec 12	20	1	41.9	51.1	36.7	43.2	20	1	26.2	35.7	21.0	27.9
			Lost 1st 2 wires									
13	20	2	8.4	18.9	4.7	11.1	20	1	43.8	54.4	41.9	46.9

ν Piscium $1^h\ 34^m\ 56^s\ +4^\circ\ 51'\ 15''$

1877												
Jan 13	25	0	27.4	33.4	38.9	35.9	25	1	22.3	27.2	32.0	30.7
Nov. 14	30	4	36.3	56.0	45.6	48.1	35	0	30.0	49.5	39.5	42.3
Dec 26	30	4	31.9	48.2	38.9	39.9						
27	30	4	22.7	41.4	31.4	33.1						
31	30	4	26.9	44.4	29.5	31.5	35	0	21.1	38.2	25.2	26.6

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1877phae.proj.1394R

o Piscium $1^h\ 38^m\ 48^s\ +8^\circ\ 31'\ 39''$

1877	E	F	G	H	E	F	G	H
Jan 14	40 4	38.4	42.7	49.9	46.1	45 0	45.8	50.4	58.1	54.6
Nov. 14	50 4	10.8	28.2	18.7	21.9	55 0	7.8	25.1	17.5	17.9
Dec. 15	50 4	7.4	23.1	12.2	16.0	55 0	12.2	29.1	18.6	21.4
16	50 4	12.6	29.9	20.7	23.2	55 0	18.8	35.9	28.4	29.3
17	50 4	2.8	19.1	9.6	12.0	55 0	6.2	23.7	15.1	16.9
20	60 3	59.6	16.3	7.9	9.4	50 4	58.7	15.1	5.1	8.0

In more

ε Cass. $1^h\ 45^m\ 25^s\ +63^\circ\ 3'\ 11''$

1877										
Nov. 14	20 3	50.0	0.2	50.1	58.5	20 4	27.1	37.0	27.7	36.0
Dec. 15	20 3	38.1	47.1	36.8	33.8	20 4	12.9	22.6	11.5	19.6
16	20 3	1st-2nd min 53.2	2.9	53.8	0.5	20 4	24.9	35.1	25.5	32.6
17	20 3	42.1	52.9	43.9	50.6	20 4	10.1	21.4	12.1	18.0
20	20 3	34.2	43.1	34.3	41.4	20 3	48.2	57.0	48.9	54.3
25	20 3	30.8	39.1	29.9	35.1	20 4	6.8	15.1	4.6	11.8

In more

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1877phae.proj.1394R

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

1877			Ⓔ	ℋ	Ⓖ	ℍ		Ⓔ	ℋ	Ⓖ	ℍ
Nov 14	10	4	17.1	33.9	24.0	28.3	15⁻ 0	12.7	30.1	21.1	23.5⁻
Dec 12	10	4	15.1	30.8	18.1	22.5⁻					
13	10	4	14.5⁻	29.4	19.2	22.9					
15⁻	10	4	16.6	32.1	21.4	26.1	15⁻ 0	32.2	48.0	38.6	41.4
25⁻	10	4	13.0	27.8	17.9	21.4					
26	10	4	12.2	26.3	16.5⁻	18.9	15⁻ 0	7.9	21.5⁻	13.1	14.8

Rej 2nd & mar 3rd

In more

50 Cass. $1^h\ 52^m\ 48^s + 71^\circ\ 48'\ 54''$

1877											
Nov 14	35⁻	3	9.4	20.0	8.5	18.1	35⁻ 3	22.5⁻	34.0	22.7	31.1
Dec 2	35⁻	3	6.3	12.2	5 8.9	4.9	35⁻ 3	19.8	27.2	13.9	19.5⁻
Dec 12	35⁻	3	4.2	13.3	0.1	8.9	35⁻ 3	16.1	25.3	13.4	20.2
13	35⁻	2	5 7.4	6.7	55 5⁻	1.9	35⁻ 3	9.4	19.1	6.8	14.9
15⁻	35⁻	3	16.6	27.9	16.9	24.1	35⁻ 3	39.8	52.1	37.4	46.7
20	35⁻	3	9.9	19.8	10.9	16.1	35⁻ 3	19.9	30.4	20.1	27.0

In more

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1877phae.proj.1394R

γ Androm. $1^h\ 56^m\ 14^s\ +41^\circ\ 43'\ 43''$

1877		E	F	G	H		Eo	Fi	G	H	
Jan 30	30	2	15.2	18.8	29.4	24.2	R				
Nov 14	40	3	19.8	34.9	25.1	30.2	40	3	41.6	54.3	45.9	67.5
Dec 2	40	2	41.2	50.9	39.7	41.8	40	3	17.9	28.8	16.8	19.9
15	40	2	48.7	1.1	5.2	56.9	40	3	28.9	41.2	31.4	36.9
16	40	2	37.8	50.1	43.3	46.2	40	3	33.2	45.9	37.8	42.3
17	40	2	44.1	56.8	49.4	53.9	40	3	31.8	44.2	36.9	41.6

No more

6 Persei $2^h\ 5^m\ 18^s\ +50^\circ\ 29'\ 1''$

1877 Jan 23	45	3	23.3	21.2	32.6	25.3	R					
Jan 30	45	3	12.8	15.3	24.8	20.4	R					
Nov. 3	55	2	32.5	44.1	37.1	41.8	55	3	16.1	27.3	20.5	24.2
13	55	2	40.9	51.9	40.8	47.1	55	3	21.0	33.0	22.1	27.2
14	55	2	52.8	3.2	54.5	57.9	55	3	31.5	42.4	32.9	38.8
Dec 26	55	2	38.2	46.8	38.5	44.5						

No more

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1877phae.proj.1394R

4 Ursae Min. $14^h\ 9^m\ 23^s$ $+78^\circ\ 8'\ 5''$ $+101^\circ\ 52'$

1877
Sanso 25 2 14.4 17.2 22.5 20.6 R

1877

Nov	14	35	1	6 8.1	10.1	58.3	6.0	35	1	42.6	54.9	43.7	50.8
Dec	12	35	1	6 6.1	6.4	56.6	58.3	35	1	41.9	52.5	36.9	43.0
	13	35	2	6.1	15.1	2.1	9.1	35	1	49.2	59.9	45.9	57.9

o Ceti $2^h\ 13^m\ 2^s$ $-3^\circ\ 32'\ 47''$

1877

Sanso 45 4 2.8 9.7 21.8 13.6 R

Nov	3	55	3	5.9	24.1	18.9	17.0	55	4	6.4	24.6	20.4	18.1
	14	55	3	16.1	34.2	26.9	28.5	55	4	28.8	46.5	38.5	40.7
Dec	12	55	3	13.1	31.1	20.5	21.4	55	4	13.0	30.8	20.0	20.5
	13	55	3	4.9	6.2	56.4	57.9	55	4	32.4	49.9	40.5	41.7
	26	55	3	21.2	38.0	30.4	31.1	55	4	11.1	27.9	19.8	19.9

In more

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1877phae.proj.1394R

ζ Cass.	$2^h\ 18^m\ 47^s$	$+66°\ 50'\ 18''$											
1877			E	F	G	H			E	Z	H	Θ	
Jan 28 1877	20	2	6.5	2.6	12.7	8.6	R						
Nov 3	35	2	15.4	25.3	18.1	24.1	35	2	27.7	37.9	28.8	34.0	
13	35	1	40.7	49.9	38.7	46.3	35	1	53.9	3.4	52.9	57.9	
14	35	1	46.3	56.3	46.5	54.9	35	2	25.2	36.8	25.9	34.2	
Dec 9	35	2	2.6	10.9	57.4	4.5	35	2	26.2	34.2	22.5	28.8	
31	35	1	34.4	42.4	27.8	35.2	35	1	46.1	54.2	40.5	47.7	
							No more						

ζ^2 Ceti	$2^h\ 21^m\ 31^s$	$+7°\ 53'\ 54''$											
1877													
Jan 23 1877	20	2	30.3	38.4	51.0	40.7	R						
Nov 14	30	1	54.6	11.4	3.3	5.1	30	2	49.1	7.4	58.1	0.2	
Dec 3	30	1	53.9	9.6	57.5	58.2	30	2	53.9	8.9	57.1	58.1	
~~13~~	30	2	46.5	1.3	57.3	53.6	30	3	12.9	28.1	17.5	20.9	
26	30	1	55.9	12.1	2.7	3.8							
27	30	1	50.0	6.4	58.0	58.5							
							No more						

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1877phae.proj.1394R

36 H. Cass. $2^h\ 26^m\ 11^s$ +72° 16′ 9″

1877			E	F	G	H						
Jan 28 1877	0	1	42.3	37.8	49.9	45.7	R					
Feb 3	0	1	12.3	14.2	25.7	19.9	0	1	59.1	59.7	9.8	7.3
	use the last 8 obs. 2nd											
Nov 14	10	1	11.9	21.9	12.9	20.2	10	1	33.1	43.0	33.9	41.1
Dec 3	10	0	59.9	9.9	57.8	2.4	10	1	27.3	34.9	23.4	28.9
9	10	0	53.6	1.8	50.5	55.1	10	1	8.3	17.2	6.1	10.1
16	10	1	27.8	36.3	28.1	33.6	10	1	42.2	51.8	43.5	48.1
	Last 12 obs.											

No more

ν Arietis $2^h\ 31^m\ 43^s$ +21° 25′ 10″

1877												
Jan 28 1877	50	1	36.4	39.4	49.0	43.7	R					
Feb 3	50	1	32.4	39.9	49.2	45.1						
Nov 14	0	0	50.1	6.9	56.5	0.6	0	1	52.8	9.9	59.2	5.0
Dec 3	0	0	59.1	13.2	58.9	3.8	0	1	57.1	4.4	57.8	53.9
9	0	0	54.6	9.4	56.3	59.1						
20	0	1	5.8	20.4	11.1	15.1	0	1	52.4	7.2	57.8	2.1

No more

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1877phae.proj.1394R

S. Ceti 2h 33m 5s −0° 12′ 43″

1877			E	F	G	H			E	F	G	H
	′	′	″	″	″	″	′	′	″	″	″	″
Feb. 3	25	4	14.0	22.1	34.5	28.2	30	0	17.3	15.2	38.6	27.4
6	25	4	26.1	35.4	47.1	40.7	30	0	10.0	18.2	31.8	22.3
	lost 1st wire, some confusion in the mid wires											
Nov 14	35	4	4.9	22.6	13.7	16.5	35	4	33.5	57.4	43.6	45.0
	lost 4											
Dec 3	35	3	37.9	54.1	43.9	43.6	35	4	27.1	41.9	31.2	31.9
9	35	3	17.1	33.3	21.9	23.5	35	4	17.9	34.9	23.1	24.9
26	35	3	47.9	4.3	56.8	56.3	35	4	37.1	54.1	44.9	46.8
	Lost 1st wire											

No more

α Persei 2h 35m 40s +48° 41′ 53″

1877												
	′	′	″	″	″	″	′	′	″	″	″	″
Jan. 23	35	0	13.4	11.8	25.0	18.6	35	1	10.1	7.2	19.1	14.4
Feb. 3	35	0	21.8	25.0	36.3	31.0	35	1	6.8	10.9	21.3	16.1
6	35	0	26.9	30.7	41.6	35.8	35	1	5.5	9.2	18.5	13.9
Nov 3	40	4	42.1	53.1	46.9	49.9	45	0	39.1	50.6	43.2	47.4
13	40	4	46.3	57.4	45.9	51.9	45	0	29.9	40.8	30.9	34.6
Dec 3	40	4	49.7	59.5	46.5	50.4	45	0	30.8	39.4	27.5	30.6

No more

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1877phae.proj.1394R

η Persei $2^h\ 41^m\ 35^s\ +55^\circ\ 22'\ 30''$

1877			E	F	G	H			E	F	G	H.
	'	'	"	"	"	"	'	'	"	"	"	"
Jan. 23	50	4	51.1	48.6	0.2	53.5	55	0	23.2	25.4	37.7	31.3
Feb. 3	50	4	57.0	53.6	3.2	0.7	55	0	36.1	38.8	49.7	45.6
6	50	4	44.8	48.4	58.0	54.4	55	0	29.7	32.8	43.3	38.2
Jan 14	55	0	2.6	1.9	9.8	8.9						
Nov 3	0	4	12.7	24.5	16.8	21.1	5	0	−5 9.7 (0.3)	11.4	3.8	7.4
13	0	4	17.9	29.1	18.9	23.1	0	4	39.0	50.4	38.8	44.4

No more

τ Persei $2^h\ 45^m\ 24^s\ +52^\circ\ 14'\ 56''$

1877												
	'	'	"	"	"	"	'	'	"	"	"	"
~~Jan. 23~~	~~50~~	~~4~~	~~51.1~~	~~48.6~~	~~0.2~~							
Jan 23	0	2	15.3	15.1	28.2	21.6	0	2	7.3	6.7	16.9	12.6
Feb. 3	0	2	4.8	9.1	20.2	14.8	0	2	7.6	10.4	20.3	17.4
6	0	2	22.7	27.8	38.4	31.5	0	2	4.8	6.8	18.6	13.7
Nov 3	10	1	53.9	6.5	59.2	1.9	10	2	36.4	48.4	21.9	45.)
13	10	1	44.2	56.4	47.6	51.0	10	2	13.9	25.9	14.9	20.5
Dec 9	10	1	49.5	59.5	48.5	52.5	10	2	32.9	44.0	31.8	35.9

No more

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1877phae.proj.1394R

β Ursae Min. $14^h\ 51^m\ 5^s$ $+74^\circ\ 39'\ 58''$ 105 20

1877		E	F	G	H		E	F	G	H
	′	′	″	″	″	″	′	′	″	″	″	″
Jan. 23	55	4	34.2	33.0	39.4	35.5	55	4	16.9	14.3	21.8	18.8
Feb. 3	55	4	50.1	53.8	0.1	58.7	55	4	35.8	38.6	44.7	43.4
6	55	4	32.4	36.5	43.1	40.9	55	4	9.0	11.7	18.0	16.6
Nov 13	5	4	34.8	45.1	28.7	35.9	5	4	7.0	17.8	2.2	10.1
Dec 9	5	4	35.1	46.9	27.4	36.8	5	4	13.5	23.1	5.8	12.7
27	5	4	6.3	18.0	4.5	11.4	5	3	50.2	3.0	49.9	56.2

β Persei $3^h\ 0^m\ 5^s$ $+40^\circ\ 2'\ 20''$

1877		E	F	G	H		E	F	G	H
	′	′	″	″	″	″	′	′	″	″	″	″
Jan. 20	45	3	32.0	33.8	48.8	44.1	45	4	36.6	37.4	52.3	46.7
21	45	3	39.7	41.9	56.4	48.5	45	4	34.7	36.3	49.8	44.6
23	45	3	45.0	46.0	58.9	50.1	45	4	34.4	33.8	48.0	41.3
~~24~~	~~45~~	~~3~~	~~44.1~~	~~42.5~~	~~58.9~~	~~50.5~~	~~45~~	~~4~~	~~41.0~~	~~38.9~~	~~54.9~~	~~47.9~~
~~30~~	~~45~~	~~4~~	~~2.6~~	~~8.0~~	~~18.2~~	~~10.4~~	~~3~~					
Feb. 3	45	3	39.4	43.6	55.9	52.4	45	4	30.9	34.6	46.7	44.3
4	45	3	57.8	3.2	13.9	10.6	45	4	38.7	43.2	54.2	51.8
10	45	3	33.9	39.2	49.1	43.5	21 wires					

no more

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1877phae.proj.1394R

48 H. Cephei $3^h\ 4^m\ 32^s$ +77° 16′ 9″

1877			E	F	G	H			E	F	G	H
Jan. 20	0	1	17.0	16.5	27.2	27.8	0	1	37.1	35.9	46.5	47.4
~~21~~	~~0~~	~~1~~	~~22.9~~	~~23.1~~	Ch. failed	~~31.5~~	~~0~~	~~1~~	~~46.7~~	~~45.0~~	~~57.9~~	~~56.6~~
Feb. 3	0	1	22.9	25.0	33.7	35.9	0	1	34.4	36.5	45.0	47.0
4	0	1	52.1	54.4	2.3	5.4	0	2	2.8	4.6	12.2	16.3
6	0	1	52.0	54.0	2.9	3.9	0	1	56.2	0.3	8.3	10.3
10	0	1	34.9	39.1	45.9	45.1	0	2	0.4	36	10.8	10.9
Dec 27	10	1	5.8	15.8	~~no more~~	13.0	10	1	16.1	27.7	17.1	25.0

No more

ζ Arietis $3^h\ 7^m\ 43^s$ +20° 34′ 48″

1877													
Jan. 20	40	1	59.5	4.3	17.1	12.1	40	3	1.6	4.8	16.8	12.3
~~21~~	~~40~~	~~1~~	~~57.5~~	~~1.1~~	Ch. failed	~~8.1~~	40	2	~~56.2~~	~~59.3~~	10.9	5.8
23	40	2	0.1	2.2	13.3	6.0	40	2	58.5	0.4	11.1	5.3
30	40	1	51.6	59.6	7.2	1.1	40	2	53.8	0.9	8.5	3.5
Feb. 3	40	2	0.5	6.9	17.0	15.5	40	3	0.6	6.7	16.8	16.1
4	40	1	55.2	2.6	11.3	9.6	40	2	50.8	57.2	7.4	5.4
Dec 17	50	1	14.6	30.4	21.9	24.6	50	2	23.1	39.7	30.7	34.0

$\Delta+1$ $\Delta-1$ 2 3

No more

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1877phae.proj.1394R

			ε	ζ	η						
Dec 25	0	2	11.2	21.1	10.4	14.2	0	2	~~57.~~	0.9	49.8	53.9

2 Persei h 3 m 15 s 24 +49° 24′ 51″

1877			ε	ζ	η						
	′	′	″	″	″	″			ε ″	ζ ″	η ″	″
~~Jan. 21~~	~~50~~	~~2~~	~~38.6~~	~~38.9~~	~~52.8~~	~~46.7~~	~~50~~	~~3~~	~~20.3~~	~~20.4~~	~~33.8~~	~~5.8~~
~~24~~	~~50~~	~~2~~	~~56.0~~	~~52.6~~	~~6.4~~	~~6.7~~						
Feb. 4	50	2	29.8	33.0	41.8	41.5	50	3	4.3	8.1	16.8	16.3
~~8~~	~~50~~	~~2~~	~~23.3~~	~~27.1~~	~~36.8~~	~~29.8~~	~~50~~	~~3~~	~~2.7~~	~~4.3~~	~~14.0~~	~~7.6~~
10	50		19.8	22.3	32.6	28.7	50	3	29.8	33.8	42.4	39.2
Dec 8	0	2	11.4	23.1	13.1	15.2						
16	0	2	33.8	44.8	35.1	40.8	0	3	7.9	19.3	9.8	13.9
17	0	2	2.3	13.2	4.4	7.8	0	2	43.2	54.2	45.8	49.5
20	0	1	50.8	0.9	51.6	53.7	0	2	45.7	56.1	47.0	52.3

γ Ursae Min. h 15 m 20 s 57 +72° 16′ 44″ 107° 43′

1877			ε	ζ	η						
	′	′	″	″	″	″	′	′	″	″	″	″
Feb. 4	35	1	38.4	42.1	47.2	49.1	35	1	11.3	13.7	20.2	20.4
8	35	1	33.4	37.1	41.9	37.1	35	1	11.7	13.2	19.7	14.8
10	35	1	47.5	51.4	58.0	55.0	35	1	7.1	10.3	14.9	14.6
Dec 8	45	1	23.1	34.2	21.3	26.4						
16	45	1	14.9	25.0	14.0	19.5	45	1	6.5	18.0	5.5	10.6
17	45	1	2.2	13.6	1.9	6.1	45	0	48.9	1.1	49.4	54.8

no more

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1877phae.proj.1394R

f Tauri $3^h\ 23^m\ 58^s\ +12^\circ\ 30'\ 24''$

1877			E	F	G	H			E	F	G	H
			Ch failed									
~~Jan. 21~~	~~45~~	~~2~~	~~3.4~~	~~7.8~~	~~23.1~~	~~15.7~~	~~45~~	~~2~~	~~33.7~~	~~37.1~~	~~52.6~~	~~44.3~~
Feb. 4	45	1	34.1	42.8	55.0	49.1	45	2	11.9	20.0	31.9	26.3
8	45	1	9.4	17.9	30.1	18.2	45	2	10.8	18.9	30.9	20.0
10	45	1	34.8	43.4	56.7	46.6	45	2	19.4	28.2	39.3	30.3
Dec 8	55	0	38.7	54.9	46.9	47.4	55	1	33.1	48.9	40.8	41.2
16	55	0	41.3	58.2	50.0	49.8	55	1	34.5	51.3	44.4	44.0
20	53	0	36.9	52.8	45.3	45.8	55	1	46.8	2.7	54.9	55.8

No more

ε Eridani $3^h\ 27^m\ 2^s\ -9^\circ\ 52'\ 58''$

1877												
Feb. 4	5	4	4.1	11.7	26.0	19.6	5	4	56.3	4.6	17.6	11.8
8	5	4	54.9	3.7	11.8	6.0						
10	5	3	56.2	5.1	20.0	10.2	5	4	51.7	0.3	14.2	5.4
13	5	3	59.2	8.2	22.6	9.9	10	0	2.6	11.0	26.7	12.0
Dec 8	15	3	37.3	54.2	46.9	46.3	15	4	43.5	59.7	54.4	51.4
16	15	3	24.0	39.1	34.4	32.9	15	4	17.1	34.0	28.5	26.5

No more

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1877phae.proj.1394R

Gr. 716 $3^h\ 31^m\ 19^s + 62^\circ\ 48'\ 32''$

1877	′	′	E″	F″	G″	H″	′	′	E″	F″	G″	H″
Feb. 4	25	3	49.2	51.1	2.1	2.7	25	4	42.0	43.2	53.5	54.4
8	25	4	3.4	6.3	16.2	11.1	25	4	35.7	37.7	47.8	42.7
10	25	4	3.3	6.4	16.3	13.2	25	4	37.3	39.9	49.3	46.9
13	25	4	4.4	4.6	15.1	10.0	25	4	47.7	48.4	58.7	53.9
Dec 1	35	3	50.9	58.2	47.1	49.8	35	4	20.4	29.1	15.5	20.4
8	35	3	35.2	45.3	35.1	40.9	35	4	11.4	22.1	10.8	17.8

No more

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

1877	′	′	″	″	″	″	′	′	″	″	″	″
Feb. 4	50	4	25.6	29.1	38.2	38.5	50	4	56.2	58.8	8.5	9.2
8	50	4	lost 1st wire 16.9	20.8	30.5	23.2	50	4	57.4	1.6	9.7	3.7
10	50	4	6.4	11.2	20.8	16.1	50	4	55.6	59.1	8.1	5.1
Dec. 1	0	3	41.9	51.1	38.3	42.5	0	4	28.1	37.1	24.4	27.8
8	0	3	50.0	1.1	52.1	54.1	0	4	30.1	41.5	31.1	34.9
13	0	4	23.6	34.4	23.8	29.1	0	4	46.9	57.2	47.2	51.9

24 poor

No more

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1877phae.proj.1394R

δ Eridani $3^h\ 37^m\ 16^s - 9°\ 48'\ 24''$ (−10 10) ex.

1877		E	H	G	K		E	H	G	K
Feb. 8		25⁻ 3	8.1	17.5	30.0⁻	14.6	Lost A_{+1}			
	10	25⁻ 3	4.3	12.9	28.1	17.1	25⁻ 3	39.8	48.0	2.4	52.1
	13	lost A_{+1} 25	2	44.8	52.4	8.1	53.9	25⁻ 3	35.6	42.6	58.0	44.7
		lost some of the 1st wires										
Dec.	1	35⁻ 1	37.9	51.5⁻	44.8	39.4	35⁻ 2	36.3	49.6	41.4	37.3
	8	35⁻ 1	47.6	2.9	56.9	55.0	35⁻ 2	47.6	4.1	56.9	55.4
	27	35⁻ 1	40.1	56.5⁻	51.2	49.6	35⁻ 2	41.6	58.6	53.1	52.0
					no more						

η Tauri $3^h\ 40^m\ 3^s + 23°\ 43'\ 0''$ One reading

1877		′	′	″	″	″	″	″	″	″	″	″
Feb.	4	30	4	28.0	34.9	42.7	40.9	ch fdilld 35	0	3.9	10.6	20.3	14.4
	8	lost A_{+1} 30	3	53.1	1.2	9.7	2.1						
	10	30	3	2.6	10.3	19.3	14.6						
	13	30	4	10.2	17.0	26.5	17.2						
Dec.	1	40	3	32.5⁻	44.1	31.4	32.2						
	8	40	3	35.2	50.1	37.8	42.8						
	26	40	3	38.8	52.2	41.4	45.1						
	27				no more								
	27	40	3	19.8	24.8	23.2	28.1	40	4	16.6	32.1	20.3	24.3

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1877phae.proj.1394R

27 Eridani $3^h\ 41^m\ 28^s\ -23^\circ\ 36'\ 57''$

1877		E	F	G	H		E	F	G	H
Feb. 8	50′ 2	28.1″	39.2″	51.2″	39.1″	50′ 3	35.6″	46.1″	57.3″	45.9
10	~~50′ 2~~	28.1	39.3	51.8	42.8	50 3	23.2	34.3	45.7	37.8
13	50 2	28.1	38.7	52.0	38.8	50 3	40.5	50.0	1.8	49.6
Dec. 8	0 1	45.8	4.3	56.1	55.4	0 2	45.0	3.9	53.3	54.2
26	0 1	48.0	6.2	58.0	56.8	0 2	47.9	6.2	56.9	57.3
27	0 2	12.1	32.1	23.7	23.8	0 2	57.1	~~16.7~~ 16.7	7.7	8.9

In more

ζ Persei $3^h\ 46^m\ 17^s\ +31^\circ\ 30'\ 37''$

1877	′	′	″	″	″	″	′	′	″	″
Jan. 14	45	1	35.3	37.9	46.2	44.3				
Feb. 4	45	2	19.8	20.7	26.3	28.6 R				
8	45 Ref 15° S	1	24.5	31.1	42.2	33.0	45	2	11.1	17.6	28.9	18.6
13	45	1	26.7	33.8	42.6	34.8	45	2	23.7	29.8	40.4	30.2
Dec. 1	55	1	2.6	14.5	21.2	4.2	55	1	52.8	4.7	8.3	53.7
26	55	0	56.2	9.2	59.6	3.9						
				In more								
27	55	0	44.4	59.8	51.5	53.3	55	1	48.1	3.4	53.1	57.1

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1877phae.proj.1394R

ζ Ursae Min. h 15 m 48 s 33 +78° 10′ 41″ +101° 49′ one reading

		E	F	G	H	E	F	G	H
1877		′ ′ ″	″	″	″		″	″	″
~~Dec 14~~		~~25 4 53.1~~	~~56.2~~	~~1.9~~	~~58.2~~	ch failed	~~25 4 42.9~~	~~44.5~~	~~51.4~~	~~47.8~~
Jan. 4		lost 1st wire								
	8	25 4 57.7	0.2	6.4	2.3					
Jan 14		30 0 20.1	16.9	22.4	20.4	Ch. failed				
Nov 28		35 4	40.9	51.0	42.9	46.5				
Dec 1		35 4	45.6	53.7	35.9	41.4	35 4	34.6	42.4	26.1	31.2
	26	lost 1st 3 wires 35 4	47.2	57.3	43.5	48.6	35 4	31.8	42.6	26.9	32.9
	27	35 4	37.9	49.3	34.1	41.9	35 4	26.8	39.3	26.2	31.2
					In more						

ε Persei h m s 3, 49, 28″ +39° 38′ 47″.1 ″ R ′ ″ ″ ″

Feb. 4		35 4	9.3	12.7	25.1	12.4	R				
	8	35 3	32.4	38.6	50.9	42.9	35 4	34.3	81.3	41.3	35.2
	13	35 3	48.9	52.8	4.5	36.6	35 4	25.8	30.6	41.2	35.2
1877		lost A, 1									
Jan 14		35 3	35.5	35.3	45.0	41.9					
Nov 28		45 3	2.8	14.6	11.4	13.0	45 3	44.9	58.9	54.2	56.5
Dec 26		45 3	12.1	22.4	13.8	17.5	45 3	56.2	7.9	57.6	2.9
					In more						
	27	45 3	2.2	16.4	7.5	11.1	45 3	46.8	59.9	49.4	54.2

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1877phae.proj.1394R

'Eridani		h 3	m 52	s 12	− 13°	51′	55″						
1877													
Feb 4	5′	3′	4.″6	14.″7	27.″3	16.″2	R.			E	F	G	H
5		5	2	49.9	58.8	12.1	1.8	5	3	49.4	59.6	11.8	1.4
13		5	2	49.8	0.1	12.9	58.9	5	3	50.7	0.0	12.2	0.2
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
Dec 26		15	2	31.6	49.9	41.5	38.6	15	3	16.1	33.0	24.3	22.1

m more

Gr. 750		h 3	m 57	s 58	+ 85°	13′	20″						
1877		T,	+	E	F	G	H						
Feb. 4	0′	4′	48.″4	48.″8	57.″4	57.″3	R.						
5		0	4	59.6	1.3	8.0	5.1	5	0	17.4	19.6	27.7	25.1
11		0	4	45.6	48.0	56.5	55.4	5	0	0.0	2.7	10.3	10.4
13		5	0	2.9	5.1	12.4	7.5	5	0	20.2	20.7	28.8	24.3
22		5	0	19.4	20.0	30.4	35.3	5	0	20.8	25.5	36.9	41.5
Jan 13		5	0	5.1	3.0	7.9	9.8	5	0	33.8	29.7	34.3	37.0

rej. strike of 2″ more

no more

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1877phae.proj.1394R

o' Eridani $4^h\ 5^m\ 46^s - 7^\circ\ 9'\ 5''.7$

1877

	E	F	G	H	E	F	G	H
~~Jan. 13~~ ~~Jan. 14~~	′ ′ ″	″	″	″	′ ′	″	″	″
Jan. 30	25 1 10.1	18.2	29.5	19.1	25 2	5.6	13.3	24.7	15.2
Feb. 5	25 1 11.0	18.8	32.9	21.7	25 2	3.0	10.5	24.8	13.8
11	25 1 5.3	12.9	28.9	20.9	25 2	5.8	12.6	28.7	20.1
13	25 1 17.0	25.1	38.6	25.0	25 2	17.9	24.8	38.1	26.2
14	25 1 16.0	24.7	38.5	26.3	25 2	1.8	9.3	24.4	12.4
20	25 1 4.5	12.2	26.9	20.2	25 2	7.2	14.3	28.7	22.7

no more

Jan 13+14 to be omitted for o' Eridani

γ Tauri $4^h\ 12^m\ 41^s + 15^\circ\ 19'\ 26''$

1877

~~Jan. 13~~ ~~Jan. 14~~

Jan. 30	′ 55	′ 2	″ 46.4	″ 54.3	″ 35	″ 53.1	′ 55	′ 3	″ 35.5	″ 42.7	″ 51.4	″ 43.7
Feb. 3	55	2	lost 1st " 2 wires 30.4	38.7	49.5	43.8	55	3	25.6	33.1	44.0	38.2
6	55	2	lost 1st " 2 wires 46.7	54.5	5.9	0.2	55	3	28.6	35.7	47.3	40.6
11	55	2	16.8	24.4	36.9	30.6	55	3	18.8	26.3	38.8	32.7
13	55	2	33.7	41.5	52.9	42.3	55	3	20.9	28.0	39.4	29.3
22	55	2	26.1	31.8	47.5	51.4	55	3	48.0	52.8	8.8	12.3

no more

Jan 13+14 to be omitted for γ Tauri

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1877phae.proj.1394R

ζ Tauri $4^h\ 15^m\ 44^s\ +17^\circ\ 14'\ 51''$

1877		E	F	G	H		E	F	G	H
		′ ″	″	″	″	′ ″	″	″	″	″
Jan.	13	lost 2nd wire 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
	20	0 2	11.4	16.1	32.3	23.5	0 3	10.2	15.3	29.2	21.6
	23	0 1	56.1	58.9	12.0	3.8	0 2	58.4	0.2	12.4	4.9
	30	0 lost 1st 20 wire 2	23.6	32.8	41.3	31.7	0 3	15.3	23.3	32.1	24.7
Feb.	3	0 2	4.1	12.1	24.5	16.2	0 2	56.8	4.3	15.1	9.7

no more

η Ursae Min. $16^h\ 21^m\ 11^s\ +76^\circ\ 2'\ 32''\ \ 103^\circ\ 58'$

1877												
Jan.	13	20 2	23.2	23.1	26.8	26.5	20 2	4.1	0.3	4.9	8.0
	14	20 2 lost 1st 3 wires	12.6	12.1	16.1	16.4	20 2	1.8	58.9	3.9	6.3
	20	20 2	1.6	1.5	10.6	9.1	20 1	52.0	51.5	0.3	59.1
	23	20 2	36.3	33.7	42.3	36.6	20 2	16.6	13.8	21.8	17.8
	30	20 1	55.8	59.6	4.5	1.2	20 1	44.1	47.2	51.7	50.1
Feb.	3	last 4 wires 20 2 seeing bad	39.4	43.4	50.2	49.7	20 2	22.4	26.1	33.9	33.0

no more

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1877phae.proj.1394R

Gr. 848 $4^h\ 32^m\ 3^s$ $+75°\ 42'\ 33''$

1877			E	F	G	H			E	F	G	H
~~Jan. 13~~			"	"	"	"			"	"	"	"
~~14~~												
	20	35 0	32.1	31.8	44.1	41.7	35 1	1.2	59.4	11.1	11.3
Feb.	6	35 0	39.5	41.5	51.5	49.8	35 0	59.7	1.7	9.8	9.4
	8	35 0	39.3	41.8	51.0	47.7	R				
	11	35 0	49.1	51.8	2.2	1.7	35 0	59.0	1.8	10.9	10.7

~~no more~~

Alec 8 45° 0. 50.7 0.8 49.4 55.7 45° 1 1.9 11.4 59.8 6.9
the last 3 wires

50 H. Cephei $4^h\ 37^m\ 2^s$ $+80°\ 5'$ alternate with next star

1877												
		'	'	"	"	"	"	'	'	"	"	"	"
Jan.	20	15	4	26.2	25.8	32.3	34.5	15	4	47.8	46.2	54.2	55.9
Feb.	6	15	4	21.3	23.5	29.8	34.4	15	4	51.2	53.1	58.7	2.0
	10	15	4	38.1	41.8	46.3	47.2	15	4	53.8	56.2	0.9	3.2
	22	15	4	48.9	53.1	2.6	12.1	20	0	0.8	4.6	14.8	23.8

A-1

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1877phae.proj.1394R

4 Camelop.	h 4	m 37	s 36	+ 56°	31′	56″									
1877				E	A	g	H			E	F	G	H		
	′	′		″	″	″	″			″	″	″	″		
Jan. 30	45	0	38.9	42.3	50.7	44.0	45	1	30.2	32.6	40.3	34.6			
Feb. 8	45	0	36.5	39.9	50.4	42.5	45	1	11.3	14.1	24.1	17.6			
11	45	0	33.2	37.0	48.3	42.8	45	1	24.4	26.7	38.2	33.7			
22	45	0	36.1	40.8	56.0	7.2									
Mec 8	55	0	24.1	36.4	25.2	29.7	55	1	11.7	20.9	9.9	16.1			

9 Camelop.	h 4	m 41	s 38	+ 66°	′ 7	″ 37									
1877	′	′	″	″	″	″	′	′	″	″	″	″			
Jan. 20	10	0	6.9	4.9	19.0	16.5	10	0	45.7	42.3	56.3	53.3			
30	10	0	4.8	6.6	15.2	11.1	10	0	51.1	51.3	59.3	57.2			
Feb. 5	10	0	31.2	31.9	42.9	39.8	10	0	54.8	55.2	4.8	2.7			
22	10	0	25.4	28.2	42.0	46.2	10	0	46.2	47.3	2.4	8.7			
29	5	4	45.1	52.8	2.5	12.2	10	0	9.6	17.3	28.1	39.3			
Mec 8	15	4	57.7	6.9	54.0	1.7	20	0	30.9	38.8	29.6	35.1			

No more

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1877phae.proj.1394R

ι Aurigae $4^h\ 48^m\ 51^s\ +32°\ 57'\ 57''$

1877	′	″	E	F	G	Ho	′	″	E	F	G	Ho
Jan. 20	15	4	15.9	18.7	32.9	28.0	20	0	11.3	14.2	29.0	23.7
~~21~~	~~15~~	~~4~~	~~17.4~~	~~ch. failed 18.9~~	~~33.6~~	~~28.9~~	~~20~~	~~0~~	~~7.9~~	~~9.3~~	~~26.1~~	~~19.6~~
30	15	4	8.4	13.1	22.9	16.9	20	0	7.8	13.0	23.7	16.6
Feb. 5	15	4	18.4	24.1	36.5	29.4	20	0	8.9	13.6	26.6	19.8
14	15	4	21.5	27.8	38.3	27.9	20	0	15.7	20.5	33.7	26.6
15	15	4	19.2	24.9	37.8	33.6	20	0	9.9	15.6	29.3	23.6
				~~And more~~								
Dec 29	25	3	57.2	9.0	58.2	3.7	25	4	46.6	0.7	51.0	53.2
					No more							

ε Aurigae $4^h\ 53^m\ 0^s\ +43°\ 38'\ 9''$ next star first. One reading

1877	′	″	″	″	″	″	
3 Jan. 20	35	4	7.9	9.5	23.8	19.6	
2 21	~~35~~	~~4~~	~~14.0~~	~~13.6~~	~~29.5~~	~~24.4~~	Ch. failed
7 Feb. 5	35	4	45.9	47.7	59.6	56.7	
15	35 lost 1st wire	4	47.9	51.6	4.1	0.9	
3 29	35 lost 1st wire	4	43.0	51.6	3.3	12.8	
	lost A_{+1}						
Dec 29	45	4	7.8	20.2	11.1	13.8	45 4 47.7 21 50.3 55.1

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1877phae.proj.1394R

10 Camelop. $4^h\ 52^m\ 18^s$ $+60°\ 15'\ 23''$ One reading

1877			E	F	G	H
Jan. 30	0	2	29.9	31.6	38.8	32.1
Feb. 5	0	2	15.1	17.1	27.9	20.7
15	0	2	9.6	11.9	24.1	20.1
29	0	2	23.1	31.6	42.5	49.6

ζ Aurigae $4^h\ 53^m\ 45^s$ $+40°\ 53'\ 27''$

1877												
	′	′	″	″	″	″	′	′	″	″	″	″
Jan. 20	20	4	31.3	33.5	46.9	42.5	25	0	2.3	3.4	18.0	13.3
	lost 1st wire											
30	20	4	1.8	7.8	14.7	—	20	4	56.4	59.8	8.3	5.3
Feb. 15	20	4	38.8	44.7	57.1	52.9	25	0	5.1	9.9	23.6	18.4
	lost A_{+1}											

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1877phae.proj.1394R

η Aurigae $4^h\ 57^m\ 45^s$ $+41°\ 3'\ 47''$ one reading

1877			E	F	G	H	E	F	G	H
Jan. 20	10	3	37.8	38.9	54.4	49.0				
30	10	3	37.9	42.8	52.4	46.1				
Feb. 5	10	3	29.4	33.7	45.3	41.0				
15	10	3	36.6	41.9	54.9	50.5				
21	10	3	37.5	42.6	54.9	51.9				
29	10	3	27.0	37.6	49.9	57.7	10 4	27.5	27.6	50.3	59.3

no more

~~λ Eridani $5^h\ 3^m\ 10^s$ $-8°\ 54'\ 48''$~~ ~~follo. star faint~~

1877											
~~Jan. 20~~	~~10~~	~~1~~	~~30.5~~	~~36.0~~	~~53.5~~	~~43.9~~	~~10~~	~~2~~	~~30.0~~	~~34.9~~	~~51.8~~	~~42.1~~

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1877phae.proj.1394R

ε Ursae Min. $16^h\ 59^m$ $+82^\circ\ 15'$ $97^\circ\ 45'$

1877	′	″	E	F	G	H	′	″	E	F	G	H
Jan. 20	30	3	28.6	37.2	36.0	—	30	3	18.8	18.4	28.0	25.6
23	30	3	52.6	49.1	58.9	53.4	30	3	39.7	36.7	44.7	39.9
30	30	3	29.7	34.5	37.9	33.2	30	3	25.8	26.8	32.7	29.8
Feb. 15	30	3	26.4	30.6	37.9	35.0						
21	30	3	27.2	35.1	42.6	40.4	30	3	18.2	22.7	31.2	30.3
22	30	3	36.8	40.6	50.4	55.9	30	3	27.8	30.3	40.2	48.2

~~Jan. 20~~ the last 3 wires

last 4 wires

2nd. wire + foll.

no more

λ Eridani $5^h\ 3^m\ 10^s$ $-8^\circ\ 54'\ 48''$

1877	′	′	″	″	″	″	′	′	″	″	″	″
Jan. 20	10	1	30.5	36.0	53.5	43.9	10	2	30.0	34.9	51.8	42.1
30	10	1	11.1	19.1	31.8	20.4	10	2	12.1	19.3	31.5	22.2
Feb. 14	10	1	22.9	31.8	47.3	33.4	10	2	7.9	15.8	31.1	18.4
15	10	1	16.9	25.8	41.7	33.1	10	2	26.3	34.2	50.6	42.3
21	10	1	23.5	31.4	47.6	40.9	10	2	15.2	22.8	37.7	32.8
22	10	1	20.1	26.4	46.4	46.7	10	2	17.8	23.6	43.6	45.2

no more

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1877phae.proj.1394R

τ Orionis $5^h\ 11^m\ 32^s - 6^\circ\ 58'\ 53''$

1877			E	F	G	H			E	F	G	H
	′	′	″	″	″	″	′	′	″	″	″	″
Jan. 20	15	0	30.1	36.5	54.1	43.0	15	1	25.0	31.7	47.6	36.7
Feb. 15	15	0	11.9	20.1	35.0	27.9	15	1	11.6	20.8	34.8	27.7
21	15	0	26.8	34.9	49.5	43.1	15	1	29.7	37.6	52.4	47.5

Gr. 966 $5^h\ 23^m\ 1^s + 74^\circ\ 57'\ 22''$

1877												
	′	′	″	″	″	″	′	′	″	″	″	″
Feb. 4	20	1	0.5	1.2	11.1	9.6	20	1	22.5	22.5	33.2	31.2
8	20	0	52.4	52.9	3.0	58.9	20	1	17.8	18.4	27.9	23.7
20	20	0	46.4	46.7	59.7	2.5						
21	20	0	50.4	54.2	6.1	6.6						
27	20	0	31.6	40.1	50.6	57.6	20	0	57.1	58.5	9.0	16.7
Dec 29	30	0	22.1	32.9	21.6	27.9	30	0	42.3	52.9	41.2	48.8

No more

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1877phae.proj.1394R

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

1877	E	F	G	H	E	F	G	H
Feb. 4	40′ 0″ 44.5	53.1	6.5	56.9	40′ 1′	22.3	31.2	42.8	34.7
8	40 0 25.8	35.9	47.8	36.6	40 1	18.2	27.6	38.3	29.3
20	40 0 15.0	24.3	36.9	32.8					
21	40 0 14.2	24.3	36.9	33.5	40 1	13.7	22.3	35.4	32.3
27	40 0 55.8	11.1	24.4	25.8					
Dec 29	45 4 54.1	11.3	1.3	2.2	50 1	9.6	26.5	17.9	19.1

Δ 4 5 ∝ 4 −1

lost 1st 2 wires

No more

ε Orionis $5^h\ 29^m\ 52^s - 1^\circ\ 17'\ 2''$

1877												
Feb. 4	30′	3′	49.0″	56.9	10.5	1.8	30′	4′	40.6″	48.3	0.7	53.3
8	30	3	38.9	48.4	59.8	47.5	30	4	42.7	51.4	3.3	53.2
21	30	3	47.5	57.1	6.5	4.2	30	4	45.2	53.9	5.3	2.9
27	30	3	36.1	51.0	3.5	4.1	30	4	32.7	46.8	0.2	2.7
Dec 29	40	3	38.7	56.4	47.4	48.0	40	4	31.7	49.5	38.8	39.5

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1877phae.proj.1394R

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

1877			E	F	G	Hb			E	F	G	Hb
Feb. 4	55′	2′	0.9	9.0	21.4	11.3	55′	3′	9.0	17.1	28.7	20.4
8	55	2	6.4	15.4	16.9	55.8	55	3	4.8	13.6	24.7	14.5
21	55	2	15.9	26.2	37.4	32.9	55	3	11.7	20.3	32.2	29.3
27	55	1	56.9	11.5	25.0	24.9	55	2	57.2	12.3	25.2	26.2
Mec 29	5	1	47.0	5.0	55.9	55.8	5	2	47.7	6.8	56.8	57.4

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

1877												
Feb. 4	20′	2′	26.8″	38.6″	47.9″	39.4″	20′	3′	8.6″	19.1″	28.9″	19.9″
21	20	2	59.6	9.4	20.0	16.4	20	3	33.3	43.7	54.4	51.5
27	20	2	40.9	57.9	7.9	9.8	20	3	6.4	22.9	33.5	35.5
March 4	20	2	9.8	27.1	38.4	47.1	20	3	0.2	15.8	28.5	38.1
Mec 29	30	1	50.2	9.0	58.1	57.8	30	2	43.0	2.1	50.2	51.4

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1877phae.proj.1394R

χ Leporis	5^h	41^m	17^s	-14°	$52'$	$14''$						
1877			E	F	G	H			E	F	G	H
Feb. 4	5	3	23.6	35.2	46.7	36.0	5	4	15.1	26.2	36.2	28.4
6	5	3	40.1	51.3	2.9	54.0	5	4	24.2	36.3	45.7	38.7
Mec 29	15	2	58.2	18.1	7.1	5.8	15	3	48.8	8.9	57.6	56.9

γ Draconis	17^h	44^m	10^s	$+72^\circ$	$12'$	$34''$		107	48			
1877												
Feb. 4	30	2	43.9	45.5	52.1	49.1	30	2	32.1	34.2	39.5	37.6
6	30	2	42.4	44.2	51.2	47.8	30	2	25.5	27.6	33.6	31.8
March 4	30	3	4.8	13.1	21.9	33.6	30	2	32.2	40.7	49.5	3.9
Mec 29	40	2	52.2	4.6	49.6	54.7	40	2	29.8	42.0	26.6	32.1

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1877phae.proj.1394R

β Aurigae $5^h\ 50^m\ 22^s$ $+44^\circ\ 55'\ 55''$

1877	'	'	ε	Fe	G	Hb	'	'	ε	Fe	G	Hb
Feb. 4	20	1	42.1	45.6	57.0	52.5	20	2	37.4	40.5	52.0	47.8
6	20	1	41.6	45.1	57.1	53.3	20	2	32.0	36.2	46.3	43.5
11	20	1	38.6	42.4	55.0	49.2	20	2	35.8	39.4	51.5	46.8
15	20	2	14.0	18.8	30.5	28.4	20	2	41.7	45.2	58.0	55.7
	lost 1st wire											
27	20	2	3.5	13.8	24.1	30.9	20	2	53.7	3.2	13.4	21.6
28	lost 1st wire											
	20	1	50.0	0.3	10.4	17.9	20	2	27.9	37.9	48.8	56.7
	false obs. pn											

no more

35 Draconis $17^h\ 55^m\ 3^s$ $+76^\circ\ 58'\ 40''$ $103^\circ\ 1'$

1877	'	'	ε	Fe	G	Hb	'	'	ε	Fe	G	Hb
Feb. 3	15	4	3.1	5.5	10.2	10.9	15	3	23.1	25.6	30.7	31.3
6	15	3	55.4	57.2	3.7	4.1	15	3	43.9	46.5	52.5	52.2
11	15	3	29.7	32.4	38.8	36.4	15	3	16.8	20.2	27.8	24.7
15	15	3	32.9	36.4	43.4	43.7	15	3	7.2	10.2	17.3	18.2
21	15	4	11.4	15.5	22.9	24.2	15	4	56.4	0.4	7.1	8.6
27	15	3	36.9	45.1	52.9	58.6	15	3	14.6	23.8	30.3	37.3

no more

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1877phae.proj.1394R

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

1877			E	F	G	H			E	F	G	H
	'	'	"	"	"	"	'	'	"	"	"	"
Feb. 3	30	3	53.4	53.2	2.2	2.4	30	4	31.2	31.2	40.3	41.6
6	30	3	46.5	48.2	58.0	57.0	30	4	16.3	17.1	25.6	25.6
11	30	3	39.6	39.9	51.1	47.1	30	4	32.3	32.1	43.1	41.3
15	30	3	39.1	40.9	52.2	51.9	30	4	15.6	16.3	27.8	27.4
20	30	3	46.2	45.8	56.7	59.8			R Rej A_{+1}			
March 6	30	3	39.2	46.4	57.9	11.7	30	4	16.3	22.8	34.2	51.5

no more

22 H. Camelop. $6^h\ 5^m\ 4^s\ +69^\circ\ 21'\ 35''$

1877												
	'	'	"	"	"	"	'	'	"	"	"	"
Feb. 1	55	1	26.3	27.5	36.5	33.8						
3	55	1	28.1	29.4	38.2	39.5	55	2	9.6	10.7	20.0	21.0
6	55	1	54.1	55.8	5.8	5.0	55	2	13.2	14.1	24.3	23.7
11	55	1	31.9	33.2	45.0	42.2	55	2	10.8	11.8	23.0	20.6
15	55	1	31.1	32.4	43.1	43.5	55	2	9.8	11.8	23.7	23.6
27	55	1	35.5	42.5	54.1	0.5	55	2	3.1	8.8	20.2	27.8

no more

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1877phae.proj.1394R

2 Lyncis $6^h\ 8^m\ 36^s\ +59^\circ\ 3'\ 10''$

1877			ξ	η	ζ	θ		ξ	η	ζ	θ
Feb. 3	10	4	58.9	1.2	10.6	9.8	15	0	47.9	49.1	59.7	57.2
15	10	4	40.2	42.1	54.8	52.4	15	0	32.6	36.2	47.1	44.8
21	10	4	45.1	46.4	56.9	57.7	false stroke fills. 8					
27	10	4	33.7	41.6	52.8	59.1	rej. A_{+1}					
28	10	4	36.6	45.2	55.0	3.2						
29	10	4	36.8	44.6	56.2	5.8						

rej. 2nd 8 + 32nd 8

no more

β Can. Maj. $6^h\ 17^m\ 12^s\ -17^\circ\ 53'\ 42''$

1877												
Feb. 11	5	4	44.2	56.6	6.2	1.2	10	0	0.9	12.7	25.7	14.9
14	5	4	39.4	51.2	2.1	50.3	10	0	49.8	1.6	14.1	1.0
15	5	4	38.4	50.1	1.9	56.8	10	0	45.4	56.3	9.7	3.9
20	5	4	41.8	51.8	8.2	59.3	R					
28	10	0	6.0	23.6	36.1	38.7						
29	5	4	47.9	5.7	17.1	23.0						

no more

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1877phae.proj.1394R

χ Draconis $18^h\ 23^m\ 17^s$ $+72^\circ\ 4'\ 40''$ $107^\circ\ 2'$

1877			E	F	G	H			E	F	G	H
Feb. 11	0	0	51.4	53.4	0.1	55.7	0	0	39.4	42.1	49.3	46.0
20	0	1	5.3	7.1	13.5	15.6	R.					
28	0	1	24.8	34.0	39.8	48.2	0	1	7.6	17.4	24.4	31.4
29	0	1	33.4	42.1	50.6	59.8	0	1	14.6	23.8	31.1	41.2
March 4	0	1	32.8	41.2	48.8	4.9	0	1	14.9	23.2	31.1	45.1
6	0	1	39.4	48.0	55.3	9.5	0	1	18.9	28.4	35.8	48.9

no more

8 Lyncis $6^h\ 26^m\ 16^s$ $+61^\circ\ 35'\ 16''$

1877												
Feb. 11	40	2	55.7	57.5	8.6	5.0	40	3	40.3	41.7	51.6	50.6
14	40	2	46.1	47.9	59.3	52.2	40	3	32.2	33.2	43.6	38.8
15	40	2	43.1	45.3	57.1	55.4	40	3	10.1	11.3	23.3	22.5
20	40	2	47.3	46.8	57.6	58.3	R					
27	40	3	1.6	9.3	19.5	21.0	40	3	36.8	43.7	54.0	2.7
28	40	2	56.4	7.2	16.4	26.2	40	3	25.6	32.7	42.9	53.3

no more

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1877phae.proj.1394R

γ Geminor $6^h\ 30^m\ 29^s$ $+16°\ 30'\ 13''$

1877		E	F	G	H		E	F	G	H
	′	″	″	″	″	′	″	″	″	″
Feb. 11	45	1 53.2	1.5	14.2	5.9	45	2 51.9	58.8	11.6	4.2
14	45	2 1.9	8.9	22.1	11.5	45	2 4.8	11.7	25.2	13.8
15	45	1 58.1	6.5	19.5	14.1	45	3 1.7	8.9	22.7	16.3
20	45	2 15.0	21.7	34.6	30.6			2 faces	fole.	
27	45	2 1.7	14.9	28.9	29.9	45	2 51.8	4.1	7.3	19.9
28	45	2 1.4	15.4	27.8	31.9					

no more

ε Geminor $6^h\ 36^m\ 14^s$ $+25°\ 15'\ 10''$

1875										
	′	″	″	″	″	′	″	″	″	″
Feb. 11	0	2 26.9	34.9	45.2	39.1	0	3 16.2	23.3	33.9	30.0
14	0	2 19.6	27.0	36.9	28.4	0	3 6.1	6.6	17.7	10.7
15	0	2 14.2	21.5	33.0	29.1	0	3 14.7	21.3	32.8	30.7
20	0	2 29.0	30.3	46.2	46.4					
27	0	2 18.4	30.8	42.8	47.3	0	3 9.7	22.0	32.0	39.6
28	0	2 7.4	20.6	30.9	36.2	0	3 9.6	22.3	32.8	41.2

no more

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1877phae.proj.1394R

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

1877	E	F	G	H	E	F	G	H
Feb. 20	0 3 20.5	32.5	42.2	37.8	0 4	29.3	41.1	51.0	46.9
21	0 3 23.9	35.1	44.2	44.3	0 4	32.8	44.3	54.1	55.1
26	0 3 2.4	20.9	30.4	33.1	0 4	3.4	20.6	32.2	36.6
29	0 3 21.0	40.1	49.8	56.9	0 4	11.8	29.2	39.2	48.4
March 11	~~0 3 23.9~~	42.1	53.4	5.0	0 4	18.3	36.2	46.1	0.6

ζ Geminor $6^h\ 56^m\ 42^s + 20^\circ\ 46'\ 6''$

1877										
Feb. 20	30 2	19.8	27.1	36.9	33.9	30 3	19.1	25.2	35.3	35.4
21	30 2	20.0	27.4	36.9	38.6	30 3	20.4	27.3	35.8	40.8
27	30 2	18.9	32.7	41.9	47.2	30 3	11.2	44.3	34.4	39.8
March 11	30 2	29.5	43.0	54.8	8.5	30 3	17.7	31.3	41.4	59.6
15	30 2	18.1	33.4	43.5	0.0	30 3	27.0	39.5	50.3	8.5
20	30 2	17.6	31.4	41.4	57.8	30 3	13.2	24.8	35.8	53.6

no more

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1877phae.proj.1394R

25 H. Camelop. $7^h\ 4^m\ 40^s$ $+82^\circ\ 39'$

1877			E	F	G	H			E	F	G	H
	'	'	"	"	"	"	'	'	"	"	"	"
Feb. 20	40	0	12.7	14.9	22.1	25.7	40	0	33.3	35.4	42.3	46.7
21	40	0	12.3	15.8	23.3	29.1	40	0	32.5	35.3	41.6	49.9
27	40	0	10.9	20.9	27.8	38.3	40	0	24.5	33.4	39.3	52.3
March 11	40	0	7.9	17.9	25.6	47.8	40	0	26.3	35.8	42.7	6.3
24	40	0	0.5	9.7	19.7	45.8	40	0	18.2	26.7	36.4	3.2

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

1877							
	'	'	"	"	"	"	
Feb. 20	25	2	18.4	29.8	41.0	35.4	
21	25	2	22.1	33.6	44.9	43.2	
27	25	3	1.4	19.8	31.6	32.5	lost A_{+1}
March 11	25	2	54.5	11.4	24.4	35.6	last wire of $A + A_{-1}$
24	25	2	13.6	30.0	43.6	0.7	

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1877phae.proj.1394R

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

1877	E	F	G	H	E	F	G	H
Feb. 20	10′ 1′ 33.0	37.9	50.0	47.3	10′ 2′	32.8	37.0	49.1	48.6
21	10 1 37.3	43.0	54.9	56.5	10 2	28.3	32.7	44.6	48.6
27	10 1 38.6	48.8	2.3	7.7	10 2	27.3	37.2	50.3	56.9
March 4	10 1 32.8	43.9	58.0	11.4	10 2	24.8	35.6	48.7	2.8
6	10 1 36.7	50.3	1.4	13.9	10 2	29.9	39.8	52.7	7.0
11	10 1 41.1	51.8	4.8	22.1	10 2	30.7	39.7	52.3	11.1

no more

δ Geminor $7^h\ 12^m\ 39^s$ $+22^\circ\ 12'\ 38''$

1877										
Feb. 21	0′ 4′	56.1	3″3	11.0	16.4	5′ 1′	0.0	8.8	13.2	17.3
27	0 4	55.9	10.0	19.0	25.7	5 0	44.7	57.3	5.7	12.8
28	0 4	43.7	57.7	5.3	14.9	5 0	44.3	57.5	5.8	14.8
March 1	0 4	53.3	7.4	14.8	27.1	5 0	56.5	9.2	17.8	31.2
4	0 4	49.5	3.6	12.1	27.3	5 0	59.7	12.7	21.4	37.4
6	0 4	53.2	6.0	13.4	28.9	5 0	54.7	7.3	16.2	30.3

no more

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1877phae.proj.1394R

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

1877			E	F	G	H			E	F	G	H
Feb. 27	15	0	0".6	12".9	23".4	27".1	15	0	55".4	7".1	17".0	22".5
28	10	4	49.9	1.8	10.0	18.7	15	0	59.1	10.2	20.3	27.3
March 1	10	4	54.5	12.9	21.8	34.3	15	0	51.5	2.7	12.7	24.6
4	10	4	50.6	1.9	11.6	27.1	15	0	51.3	3.2	14.3	28.8
6	10	4	55.5	7.1	14.6	29.7	15	0	50.8	2.4	14.0	25.7
11	15	0	19.6	31.6	42.7	59.2	15	0	4.7	15.4	26.2	44.6

lost pt " wire

no more

ρ Geminor $7^h\ 21^m\ 4^s + 32^\circ\ 1'\ 51''$

1877												
Feb. 27	15'	0	51".1	2".8	14".4	18".7	15'	1	54".3	3".9	16".7	22.5
March 1	15	1	11.4	24.2	37.0	45.8	15	1	44.9	56.1	8.6	19.8
11	15	1	1.5	13.2	26.8	42.0	15	1	44.2	44.3	7.2	25.3
24	15	0	50.4	0.3	15.6	36.0						

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1877phae.proj.1394R

Gr. 2900 — α 19h 29m 13s, δ +79° 21′ 2″, λ 100° 39′

1877

	E	F	G	H	E	F	G	H
Feb. 26	40 0 51.7	1.1	6.9	15.7	40 0 34.1	42.5	48.7	58.2
March 1	lost 1st & 3 others 40 0 52.2	0.4	7.2	21.2	40 0 39.2	46.5	53.9	8.7
4	lost 1st & 3 others 40 0 58.3	6.9	13.5	30.7	40 0 41.2	49.4	57.4	14.3

Gr. 1374 — α 7h 45m 11s, δ +74° 14′ 52″

1877

March 11	0′ 3′ 46.4″	53.3″	4.2″	22.6″		
15	A 1.2.3.4.5+A 0 3 51.8	58.3	8.9	29.7	A 1, 2, 3, 4, 5 + A_{+1}	
20	0 3 22.8	35.5	46.8	5.1	A_{+1} + A (2, 3 4 5	
24	0 3 53.3	0.1	12.4	36.9		

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1877phae.proj.1394R

Pi. VII. 187 $4^h\ 45^m\ 3^s$ $+79°\ 49'$

1877										
	'	'	e	f	g	h	'	'	e	f	g	h
March 11	30	0	16.8	25.1	33.3	55.5	30	0	25.6	33.8	40.6	6.3
15	30	0	A 7, 8, 9 + A 17-2	26.4	33.8	57.1	A 7, 8, 9 + A -1					
20	30	0	14.9	23.3	32.7	53.4	A 8 + 9 + A -1					

27 Lyncis $7^h\ 59^m\ 3^s$ $+51°\ 51'\ 53''$

1877												
	'	'	"	"	"	"	'	'	"	"	"	"
March 11	25	1	32.8	41.6	54.4	12.4	25	2	4.2	12.8	24.6	43.7
March 15	25	1	17.4	26.9	37.8	57.4	25	1	58.1	7.2	16.8	37.6
20	25	1	51.5	59.9	10.8	31.1	25	2	22.2	30.2	41.2	2.9
24	25	1	30.8	38.9	53.1	15.9	25	2	8.5	16.6	30.3	54.7

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1877phae.proj.1394R

ι Navis = ρ Argus $8^h\ 2^m\ 13^s - 23^\circ\ 56'\ 42''$

1877		E	F	G	H		E	F	G	H
March	11	10′ 2	35.1″	52.3″	5.7″	18.3″	10′ 3	28.2″	45.6″	57.9″	12.3″
	15	10 2	36.9	54.4	6.0	20.2	10 3	29.1	46.0	57.8	13.6
	20	10 2	25.7	43.1	57.4	11.4	10 3	81.5	47.9	1.2	17.5
April	9	10 2	38.3	53.9	53.6	56.1	10 3	40.8	56.2	55.2	0.2

β Cancri $8^h\ 9^m\ 44^s + 9^\circ\ 34'\ 9''$

1877												
March	11	40′ 3	9.6″	25.1″	36.4″	52.1″	40′ 4	14.1″	27.8″	38.4″	55.6
	15	40 3	20.9	35.8	45.7	1.9	40 4	34.7	48.4	59.0	17.2
	20	40 3	14.1	false stroke after A 28.1	39.5	57.4	40 4	33.8	46.8	58.8	17.7
	24	40 3	15.1	29.7	41.8	3.1					
April	9 #	40 3	4.7	17.3	16.5	20.4	40 4	38.5	51.0	46.2	57.1

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1877phae.proj.1394R

κ Cephei $20^h\ 13^m\ 4^s$ $+77°\ 20'\ 2''$ $102°\ 40'$

1877			8	7	6	5	
March 11	40	0	22.7	32.1	39.4	0.1	
20	40	0	11.4	20.0	28.8	51.2	lost 1st 3 wires
April 9	40	0	14.7	23.3	16.9	26.5	

31 Lyncis $8^h\ 14^m\ 16^s$ $+43°\ 35'\ 13''$

1877												
March 11	40	2	47.5	57.1	8.7	27.9	40	3	45.7	55.3	57.3	28.4
15	40	2	49.6	59.1	11.6	30.6	40	3	40.8	49.2	1.8	21.4
20	40	2	49.6	59.6	11.6	32.1	40	3	53.4	1.3	13.4	36.2
April 9	40	2	47.5	56.8	54.8	2.9	40	4	4.0	12.9	11.6	18.3

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1877phae.proj.1394R

Gr. 1418 — h 8 m 18 s 33 +85° 29′

1877		E	A	G	K							
March 11	45′	4	49.1	56.1	4.4	24.8	A 1, 2, 3, 4, 5					
15	45	4	47.7	55.7	3.3	25.1	A 1, 2, 3, 4, 5					
20	45	4	48.4	55.2	4.6	27.9	A 1, 2, 3, 4, 5					
April 9	45	4	48.7	55.6	50.0	0.7	A 1, 2, 3, 4, 5					
12	45 rej. 1st	4 8	56.5	14.1	12.1	24.0	5-0	0	1.9	20.1	17.6	28.3

o Ursae Maj. h 8 m 19 s 52 +61° 8′ 0″

1877												
March 11	10′	0	40.4	48.1	0.1	18.9	10′	1	17.8	25.2	36.3	56.6
15	10	0	39.1	46.9	58.9	16.7	10	1	9.5	16.2	27.5	47.7
20	10	0	34.2	41.8	54.8	13.5	10	1	13.1	19.4	31.6	52.7
April 9	lost A	+1	35.9	43.3	41.3	49.4	rej. 2nd 8					
15	10	0	7.3	24.6	24.7	34.4	not R.					

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1877phae.proj.1394R

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

1877			ξ	η	ζ	ℏ		ξ	η	ζ	ℏ
March 15	15′	0′	3″.0	11″.6	21″.8	41″.1	15′	0′	30″.3	36″.9	47″.2	8″.3
20	10	4	50.6	56.2	7.2	30.6	15	0	23.6	30.2	41.3	3.2
24	10	4	49.6	56.8	7.5	34.2	15	0	26.2	33.2	45.6	9.4
April 9	10	4	26.5	33.3	29.5	39.5	15	1	0.1	6.5	4.0	12.8
12	10	4	35.8	53.4	51.0	0.7	15	0	17.3	36.1	35.7	44.0
15	15	0	10.0	26.1	27.4	37.1						

no more

73 Draconis $20^h\ 33^m\ 8^s$ $+74^\circ\ 31'\ 32''$ $105^\circ\ 28'$

1877												
March 15	50′	2′	9″.3	17″.8	23″.8	46″.5	50′	1′	55″.3	2″.1	8″.9	33″.5
20	50	2	12.9	20.9	27.9	51.3	50	1	50.2	59.0	4.8	28.2
24	50	1	58.5	8.0	15.4	40.3	50	1	44.9	53.2	0.8	27.1
April 9	50	2	18.7	26.9	20.6	29.9	50	1	30.9	44.5	38.6	47.2
12	50	2	32.3	51.0	47.3	57.0	50	0	57.8	17.9	13.0	22.4
15	50	2	12.0	31.5	27.1	37.9	50	1	0.1	18.9	15.5	25.6

no more

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1877phae.proj.1394R

δ Cancri $8^h\ 37^m\ 35^s\ +18^\circ\ 36'\ 44''$

1877		E	F	G	K		E	F	G	K
March 20	40	0	53.9	7.2	20.6	37.4	40	2	13.8	26.2	38.4	57.9
24	40	1	0.7	14.3	28.9	47.0	40	1	56.6	9.3	24.4	43.9
April 9 ✻	40	0	44.6	57.9	58.4	1.2	40	2	14.7	28.0	26.3	30.9
12	40	1	16.7	40.8	42.1	45.3	rej. 27m 8s					
15 ✻	40	0	31.9	54.4	55.6	3.3	40	2	4.5	27.2	27.3	34.8

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

1877												
March 20	25	0	3.5	18.9	30.9	48.2	25	1	12.3	26.7	38.9	55.6
24	25	0	0.5	16.2	30.0	48.7	25	1	7.8	21.4	35.0	54.9
April 9 ✻	20	4	39.9	55.1	51.7	56.1	25	1	13.0	28.0	25.9	30.1
15 ✻	20	4	30.2	54.4	54.0	0.3	25	1	3.0	26.4	27.0	34.5

am 8 mag. Comp. pr. below.

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1877phae.proj.1394R

5 Ursae Maj. $8^h\ 43^m\ 5^s\ +62^\circ\ 25'\ 41''$

1877		E	F	G	H	E	F	G	H
March 20	50'	3'	8.5"	14.9	26.5	49.2	50'	3'	29.7	36.2	47.3	11.3
24	50	2	48.6	55.8	8.7	33.1	50	3	36.1	42.2	55.5	22.0
April 9	50	2	28.3	35.4	33.4	41.0	50	4	0.1	7.5	4.5	12.1
~~11~~ 12	50	2	20.4	28.8	38.3	46.7	50	3	45.7	4.1	2.9	11.4
15	50	2	15.5	32.8	33.5	43.2	50	3	45.0	1.9	0.6	12.4

rej. $3\frac{2}{4}$ struck for $1\frac{2}{4}$ s

Rod. 2218 $8^h\ 49^m\ 2^s\ +84^\circ\ 40'$

1877												
March 20	35'	3'	29.4"	38.1	43.9	8.4						
24	35	3	17.2	44.8	53.4	19.8						
April 9	35	3	21.7	29.4	23.6	33.1						
12	35	3	13.4	32.5	27.2	37.9						
15	35	3	22.1	40.5	35.9	47.8						
16	35	3	20.1	37.3	34.2	44.9	35	3	37.0	53.9	50.8	1.7

no more

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1877phae.proj.1394R

ν Ursae Maj. 8h 50m 38s +48° 31′ 50″

1877	E	F	G	H	E	F	G	H
March 20	45′ 1″	57.9	5.9	16.5	36.2	45′ 2″	27.0	33.6	44.3	5.7
24	45′ 1″	57.9	5.8	18.4	41.1	45′ 2″	27.8	35.7	48.5	12.9
31	lost A+1′ 45	40.0	46.2	46.7	55.0	45′ 2″	12.7	20.0	18.4	27.6
April 9	45′ 2″	7.7	16.1	13.5	19.7	45′ 2″	26.7	35.6	30.5	38.2
12	45′ 1″	50.6	10.1	9.7	15.4	45′ 2″	22.1	42.3	41.9	47.9
15	lost A+1′ 45 lost A+1	51.5	9.6	9.4	17.9	45′ 2″	16.4	35.0	33.8	42.4

no more

χ Ursae Maj. 8h 55m 5s +47° 38′ 56″

1877											
March 24	35′ 4′	19.9″	29.9″	41.0″	15.2″	40′ 0′	2.8″	10.4″	25.3″	46.3″
31	35′ 4′	35.0″	43.9″	41.6″	49.8″	40′ 0′	9.3″	17.2″	17.3″	25.6″
April 3	40′ 0′	4.6″	13.2″	12.8″	20.5″					
9	35′ 4′	30.0″	38.1″	36.1″	41.3″	40′ 0′	12.0″	20.4″	18.8″	25.6″
✕ 12	35′ 3′	48.4″	8.8″	6.9″	13.8″	40′ 0′	19.2″	29.4″	39.5″	44.9″
✕ 15 #	35′ 3′	56.4″	43.8″	14.4″	22.9″	40′ 0′	14.6″	33.5″	33.9″	42.8″

no more

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1877phae.proj.1394R

σ^2 Ursae Maj. $8^h\ 59^m\ 22^s$ $+67^\circ\ 38'\ 22''$

1877			E	F	G	H			E	F	G	H
	'	'	"	"	"	"	'	'	"	"	"	"
March 24	40	0	0.2	7.9	19.8	46.3	40	0	15.9	23.5	35.4	2.1
31	40	0	19.7	27.0	25.0	36.9	40	0	50.2	55.5	54.5	7.3
April 3	40	0	28.7	36.0	34.4	45.5	40	0	49.6	55.3	53.7	5.8
✱12	~~35~~	0	~~39.7~~	58.1	55.4	5.8	40	1	16.0	33.8	32.7	43.2
~~15~~	~~40~~	0	~~10.1~~	~~26.9~~	~~26.4~~	~~39.2~~	Ch. failed					
16	40	0	4.6	19.8	20.2	33.0	40	0	46.6	1.9	2.4	15.8

~~no more~~

θ Hydrae $9^h\ 7^m\ 52^s$ $+2^\circ\ 50'\ 25''$

1877												
	'	'	"	"	"	"	'	'	"	"	"	"
March 24	25	1	59.4	15.4	27.1	48.0	25	2	57.9	12.8	25.2	46.6
April 3	25	2	2.2	16.9	15.3	20.7	25	2	58.8	12.2	10.7	17.2
✱12	25	1	32.9	59.6	57.8	2.6	25	3	7.7	33.5	31.2	36.6
✱15	25	1	39.4	2.9	2.1	10.5	25	3	5.4	29.6	28.7	35.3
✱16	25	1	39.6	1.3	2.4	11.6	25	3	7.6	30.3	29.4	38.3

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1877phae.proj.1394R

38 Lyncis h 9 m 11 s 4 +37° 19' 49"

1877			ε	ζ	η	θ			ε	ζ	η	θ	
March 24	55	4	3.9	14.5	27.9	51.9	55	4	34.8	44.8	57.8	22.5	A
April 3	55	4	0.7	11.0	9.4	18.2	55	4	34.1	44.4	42.3	51.0	
	mean S & R.A.												
9	55	3	9.8	20.5	18.4	24.6	55	4	14.1	25.7	22.1	29.2	
	8.0 comp. ph. below												
12	55	3	15.3	38.1	37.5	44.9	55	4	23.4	45.4	44.9	52.0	
	poll. #												
15	55	3	11.9	33.1	33.2	41.9	55	4	18.6	39.9	39.5	48.9	
# 16	55	2	52.0	10.8	12.1	22.9	55	4	22.8	41.1	42.5	52.9	

no more

1 Hb. Draconis h 9 m 19 s 5 +81° 52' 34"

1877													
April 3	25	1	43.1	51.1	46.0	57.9	25	2	0.6	7.2	1.8	18.7	A
9	25	1	39.6	47.2	43.3	52.8							
16	25	1	22.9	38.2	35.9	51.2							
23	25	1	18.7	35.0	34.9	49.4							
26	35	1	37.9	45.0	46.8	30.8							

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1877phae.proj.1394R

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

1877	'	E	F	G	H	'	'	E	F	G	H
		"	"	"	"			"	"	"	"
Apr. 3	40	2	49.4	54.8	53.2	3.4	40	3	7.1	13.2	11.4	21.8
=26	50	2	11.5	21.4	21.5	3.6	50	3	8.1	14.5	17.9	0.4

Φ Ursae Maj. $9^h\ 24^m\ 29^s\ +52^\circ\ 14'\ 43''$

1877	'	'	"	"	"	"	'	'	"	"	"	"
April 3	0	3	52.6	2.1	59.4	6.4	0	4	23.8	32.2	30.2	39.2
9	0	4	22.6	33.0	29.5	35.1	0	4	40.4	50.2	47.9	53.0
12	0	3	15.4	36.9	35.7	42.6	0	4	41.5	2.2	0.4	7.3
15	0	4	11.9	30.7	29.9	38.0						
* 16	0	3	8.9	26.1	26.6	35.8	0	4	40.9	58.6	58.0	9.1
22	0	3	50.5	9.1	10.5	19.8	0	4	22.9	42.2	42.3	50.6

Rather strong wisps 1st ~~2nd~~ ~~3rd~~

$\Delta 2$ ~ faint.

ref. A_{+2}

lost 1st wire

no more

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1877phae.proj.1394R

β Cephei 21h 27m 2s +70° 0' 43" 109° 59'

1877		E	F	G	H		E	F	G	H
April 3	20 1	37.4	45.7	40.3	46.4	20 1	24.8	31.6	25.2	33.4
	lost 1st 3 wires									
22	" 1	13.8	31.3	27.6	38.1	20 0	43.2	1.8	58.4	8.8
= 23	Rej 1st F 20 1	47.9	4.2	3.6	45.5	20 0	58.7	15.1	14.6	26.2
~~25~~	~~one~~	~~1 1.6~~	~~10.0~~	~~15.5~~	~~39.6~~	~~10~~	~~0 33.1~~	~~44.4~~	~~47.3~~	~~12.1~~
26	lost last 3 wires 30 2	9.6	17.0	17.0	55.4	30 1	13.9	21.2	21.6	0.7

Gr. 1564 9h 31m 31s +69° 48' 16"

1877		E								
April 3	30 0	34.5	41.1	41.2	45.4	30 1	4.2	9.4	8.3	15.8
~~12 #~~	~~30 0 1.5~~	~~19.8~~	~~19.9~~	ch failed	~~26.3~~	~~30 1 19.0~~	~~38.0~~	~~39.4~~	~~45.7~~	
15	30 0	10.1	27.4	27.2	36.9					
16	30 0	10.8	25.7	26.4	38.5					
22	30 0	13.1	28.3	31.1	41.5					
23	30 0	4.5	18.4	22.8	34.7					

No more

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1877phae.proj.1394R

o Leonis $9^h\ 34^m\ 29^s\ +10°\ 27'\ 35''$

1877	′	′	E	F	G	H	′	′	E	F	G	H
April 3	50	0	23.5	37.2	35.8	39.7	50	1	16.3	28.8	27.2	32.2
~~25~~	~~35~~	~~4~~	~~36.6~~	~~48.0~~	~~57.9~~	~~21.8~~						
26	0	0	13.3	25.4	33.1	9.0						

ε Leonis $9^h\ 38^m\ 45^s\ +24°\ 20'\ 55''$ one reading

1877	′	′	″	″	″	″	′	′	″	″	″	″
April 3	55	2	7.9	19.6	17.0	22.9	55	3	2.3	12.8	10.6	15.7
15	55	1	55.2	16.1	15.7	24.7						
16	55	1	46.4	6.3	6.0	16.6						
22	55	1	39.9	1.2	1.2	10.2						
23	55	1	56.6	14.8	17.1	28.2						
26	5	2	13.6	24.4	28.9	6.9						

no more

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1877phae.proj.1394R

ζ Cephei	h 21	m 40	s 5	+ 70°	′ 44	″ 9		109°	′ 16				
1877			E		H	G							
Apr. 15	0	4	45.4		3.1	57.2	6.9						
	md. true + Kl.												
22	0	4	59.1		16.4	12.8	—						
23	0	4	55.7		11.1	10.1	22.1	0	4	28.1	42.9	42.2	54.4
26	15	0	8.2		15.0	16.8	56.1	10	4	48.7	55.8	53.9	37.1

ν Ursae Maj.	h 9	m 42	s 5	+ 59°	′ 37	″ 30							
1877	′	′	″	″	″	″	′	′	″	″	″	″	
April 3	40	1	3.9	12.2	10.4	15.0	40	1	41.8	48.3	47.2	51.9	
	false stroke after A1												
15	40	1	4.8	22.8	22.3	31.0							
26	50	1	50.9	58.2	2.0	41.8	50	2	33.4	31.9	34.8	15.5	
	A4+5+A_1												

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1877phae.proj.1394R

μ Leonis $9^h\ 45^m\ 39^s\ +26^\circ\ 35'\ 40''$

1877			ℰ	𝒜	𝒢	ℋ					
April 3	40	2	39.2	41.3	39.7	44.3					
12	40	2	16.4	40.4	39.4	45.2					
15	40	2	15.5	37.1	36.8	45.7					
16	40	2	14.4	34.1	34.3	44.8					
22	40	1	56.5	17.7	18.1	27.6					
23	40	2	10.6	28.9	30.9	43.3	rej. short atmk. of 1st S				
				no more							

Gr. 1586 $9^h\ 47^m\ 10^s\ +73^\circ\ 28'\ 20''$

1877												
April 3	50	0	38.2	45.6	44.6	49.4	50	1	9.1	16.1	14.5	21.1
12	50	0	34.8	52.8	52.0	69.9	50	1	1.8	19.9	18.1	26.7
15	50	0	27.4	43.3	43.4	53.9	50	0	52.9	9.4	9.6	19.9
16	50	0	26.9	41.4	42.1	53.9	50	0	55.4	9.9	10.9	23.0
22	50	0	25.3	41.7	43.0	55.1	50	0	52.9	9.6	9.7	21.0
	~~5~~	~~0~~	~~1.9~~	~~18.9~~	~~16.2~~							
= 23	50	0	27.4	41.0	44.2	57.0	50	1	6.7	20.1	22.7	36.8
					no more							

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1877phae.proj.1394R

	h	m	s	°	′	″
9 Leonis Min.	9	50	1	+41	38	59

1877

	E	A	G	h
May 3	50 0	159	26.6	31.2 10.8

mdn ~ fore

	h	m	s	°	′	″
π Leonis	9	53	36	+8	38	34

1877

April 16	35	4	17.9	39.8	41.5	48.7	40	0	20.8	43.0	45.1	51.8
22*	35	3	48.6	11.9	13.4	19.6	40	0	12.9	37.4	38.9	46.0
23=	35	3	59.8	19.6	22.0	31.3	40	0	0.1	20.4	23.9	33.0
26=	45	4	22.5	36.4	40.8	16.7	50	0	20.1	32.2	38.1	12.9
May 3=	45	4	18.9	34.4	36.3	13.5	50	0	18.7	33.1	36.4	14.1

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1877phae.proj.1394R

22

λ Hydrae 10h 4m 29s −11° 44′ 11″

1877	E	F	G	H	E	F	G	H
Apr. 26 =	10 1 30.8	46.0	53.5	27.4	10 2	36.5	53.1	1.1	34.0
May 3 =	10 1 32.1	46.8	54.3	29.1	10 2	32.6	47.1	53.1	28.9

24 Cephei 22h 7m 24s +71° 43′ 32″ 108° 16′

1877											
April 12	0	4	24.7	43.6	38.1	45.9	0	3	55.2	13.2	8.5	16.0
15	0	4	30.4	48.0	43.4	52.1	0	4	5.0	22.4	18.1	27.2
✻ 22	5	0	1.9	18.9	16.2	25.5	0	3	33.4	50.9	47.6	56.8
26	10	4	18.3	24.8	25.1	6.8	last 3 wires					

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1877phae.proj.1394R

λ Ursae Maj. 10h 9m 33s +43° 32′ 14″

1877	E	F	G	Fb	E	F	G	Fb
April 16 ✻	45 0	39.5	56.9	58.9	7.9	46 2	10.9	29.2	30.4	40.3
22	45 1	15.8	35.3	38.1	47.0	45 1	48.9	7.5	10.6	19.1
23 =	45 1	4.6	20.9	24.4	35.8	45 1	50.3	6.2	10.9	21.0
26 =	55 1	11.4	19.3	25.2	4.5	55 2	12.7	21.1	25.5	5.3
May 3	55 1	37.6	47.0	51.1	31.6	55 2	11.9	22.2	26.0	7.8
	lost A_{+1}	Perhaps lost-1st w 2 1st								

μ Ursae Maj. 10h 14m 53s +42° 7′ 38″

1877											
Apr. 12 ✻	10	0	13.9	36.2	36.6	41.6	10	1	49.4	11.0	11.7	16.4
15 #	10	0	14.9	35.1	36.5	44.4	10	1	48.5	7.4	9.0	17.8
16 #	10	0	15.4	33.4	36.2	44.8	10	1	49.5	6.6	9.1	18.0
22 #	10	0	15.0	34.4	37.4	46.7	10	1	46.9	6.1	9.1	17.4
23 =	10	0	28.6	45.1	50.1	0.9	10	1	25.2	41.4	46.2	56.8
26	20	1	24.3	33.4	40.5	17.8	20	1	59.2	8.8	14.1	51.9
	lost A_{+1}				no more							

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1877phae.proj.1394R

μ Hydrae $10^h\ 20^m\ 2^s\ -16°\ 11'\ 53''$

1877			E	F	G	H		E	F	G	H
Apr. 15	✱	25 3	43.2	9.7	10.9	13.8	25 4	37.9	3.9	4.4	9.0
23		25 3	45.1	7.1	11.0	18.0					
26	=	35 4	6.6	22.9	27.0	1.6	rej. 2nd				
May 3	=	35 4	1.9	18.2	21.7	55.7	40 0	3.7	21.4	24.6	1.2

9 H. Draconis $10^h\ 24^m\ 25^s\ +76°\ 21'\ 20''$

1877											
Apr. 12	55 2	24.1	43.5	41.6	50.1	55 2	47.5	5.9	3.6	13.2
15	55 2	39.9	56.4	55.1	7.8	55 3	4.7	22.0	19.8	31.9
26	5 2	31.9	38.1	42.5	24.9					
May 3	5 2	43.0	50.2	52.1	35.8	5 3	4.7	12.8	14.3	57.8
5	5 3	11.8	20.6	22.1	5.4	5 3	21.2	30.4	30.5	15.0
	lost 1st wire									

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1877phae.proj.1394R

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

1877			E	H	G	K			E	F	G	H
Apr 9 #	35	0	3.8	12.8	11.8	17.0	35	1	15.9	24.7	22.3	28.3
12 #	30	4	37.2	55.7	54.8	59.9	35	1	6.2	26.4	24.5	30.4
15 #	30	4	42.1	0.2	59.8	6.8	35	1	3.4	21.6	21.8	29.3
26	45	0	48.7	53.4	0.8	37.1	45	1	26.6	32.9	39.1	16.2
May 3 =	45	0	7.1	14.6	19.2	57.9	45	1	8.1	16.4	19.2	58.5
5	45	0	29.5	36.9	41.9	22.1	45	0	54.8	3.1	6.9	45.2

A4+5+A-1

no more

Bz. 1458 $10^h\ 31^m\ 4^s\ +81^\circ\ 5'$

1877						
April 9	10	4	43.6	50.2	43.2	55.4
12	10	4	22.8	41.3	35.7	46.3
15	10	4	24.6	41.4	36.3	50.6
16	10	4	17.1	31.8	27.5	43.9
22	10	4	15.4	32.4	28.0	44.9
23	10	4	14.5	29.9	26.5	44.8

no more

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1877phae.proj.1394R

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

1877			E	F	G	H			E	F	G	H
April 9	20	0	31,8	39,7	33,8	42,8	20	0	15,1	23,1	18,2	25,3
12	20	0	27,5	46,4	42,5	52,1	20	0	5,4	24,4	19,6	29,9
15	20	0	24,1	42,0	38,0	48,2	20	0	5,2	23,4	18,8	29,3
16	20	0	26,2	42,9	38,9	50,4	20	0	3,4	18,8	15,3	28,2
22	20	0	18,5	35,6	32,9	44,6	rej. 2nd		8			
23	20	0	18,2	33,6	32,2	46,8	20	0	1,2	16,4	15,3	28,3

no more

42 Leonis $10^h\ 38^m\ 55^s$ $+31°\ 20'\ 23''$

1877												
Apr. 9	✱55	2	42,6	[25,4]	51,3	56,9	55	4	11,4	23,8	20,6	24,6
15	55	2	21,0	43,1	43,5	51,1	55	3	52,7	12,4	12,5	21,5
22✱	55	2	24,6	45,1	45,8	54,9	55	3	48,1	9,3	10,5	19,8
23=	55	2	38,6	56,4	58,5	10,8	55	3	38,5	56,0	57,1	9,9
26	5	3	7,2	18,1	22,1	2,1	5	3	56,1	7,1	10,1	50,0
May 3	5	3	20,5	33,1	34,8	16,8	5	3	56,5	8,1	10,3	57,4

no more

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1877phae.proj.1394R

ν Librae	h 10	m 43	s 27	− 15°	32′	30″						
1877			ℰ	ℱ	𝒢	ℋ			ℰ	ℱ	𝒢	ℋ
Apr. 9 #	45	4	15.6	23.1	30.4	29.9	50	0	39.5	57.1	55.2	54.7
May 5	55	4	40.1	57.2	59.1	36.1						
6	55	4	33.9	50.6	54.6	30.7	Lost 1st wire					
12	55	4	37.8	53.8	58.6	35.6						
13	55	4	36.1	51.9	56.4							

46 Leonis Min.	h 10	m 46	s 19	+ 34°	53′	18″						
1877												
Apr. 9	20	4	52.5	3.0	0.2	4.9	25	1	22.1	33.9	32.1	38.2
22	20	4	50.8	10.9	12.4	21.6	25	0	45.5	5.5	7.5	17.1
23	25	0	3.9	20.9	24.1	36.6	25	0	59.3	16.2	18.9	30.5
May 6	35	0	36.2	48.2	53.8	33.5	35	1	12.1	24.6	28.1	8.4
13	35	0	5.9	17.2	22.9	3.2	rej. 2nd δ					

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1877phae.proj.1394R

Br. 1508 $10^h\ 49^m\ 54^s$ $+78°\ 26'\ 20''$

1877			E	F	G	H			E	F	G	H
Apr. 22	50	2	41.1	58.0	55.8	11.1	50	3	10.9	28.4	25.5	40.3
23	50	2	51.4	6.1	4.9	22.1	50	3	8.0	22.9	22.0	38.8
	~~50~~	~~2~~	~~52.1~~									
May 6	0	3	20.3	29.1	29.1	14.9	0	3	38.1	46.1	47.5	31.8
13 =	0	2	43.1	53.4	54.9	39.4	0	3	41.4	49.9	50.1	35.9

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

1877												dd
Apr. 22	15	0	15.3	33.2	34.9	43.1	15	1	11.4	28.8	29.9	40.1
23	15	0	33.5	47.2	50.4	0.9	15	1	12.8	28.1	29.9	40.9
May 6 =	25	0	33.8	41.8	46.9	27.4	25	1	35.1	44.1	47.4	27.9
13 =	25	0	34.5	41.4	47.9	26.9	25	1	31.8	39.8	44.9	26.0

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1877phae.proj.1394R

2 Ursae Maj. $10^h\ 56^m\ 0^s\ +62°\ 25'\ 30''$

1877	′	′	$\mathcal{E}_{II}$	$\mathcal{F}_{II}$	$\mathcal{G}_{II}$	$\mathcal{H}_{II}$	′	′	$\mathcal{E}_{II}$	$\mathcal{F}_{II}$	$\mathcal{G}_{II}$	$\mathcal{H}_{II}$
Apr. 22	50	3	38.4	54.4	55.1	6.8	50	4	10.5	27.0	26.5	39.5
23	50	3	22.1	35.9	38.1	5.13	50	4	5.6	19.4	20.4	35.5
May 5 =	0	3	21.1	28.1	31.1	13.9	0	4	16.7	23.1	26.1	9.2
7	0	3	36.5	43.9	47.9	27.9	0	4	11.1	19.1	21.8	29
13	lost last wire											
	0	3	31.3	38.1	42.4	24.1	0	4	8.1	15.2	18.9	1.4

χ Leonis $10^h\ 58^m\ 34^s\ +8°\ 0'\ 40''$

Apr 22	15	2	19.8	42.3	44.6	49.8						
# 23	15	2	3.1	23.7	25.9	35.2	15	3	15.1	35.4	38.8	49.8
May 7	25	2	28.4	42.8	46.5	22.9	25	3	19.1	34.4	37.4	14.8

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1877phae.proj.1394R

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

1877			ℰ	𝓕	𝒢	ℋ			ℰ	𝓕	𝒢	ℋ
Apr. 22 #	5	2	26.5	46.4	47.4	57.1	5	4	0.1	18.9	19.3	29.8
23 =	5	2	40.4	56.6	58.9	11.1	5	3	40.4	55.3	58.2	10.8
May 7	15	3	10.8	20.2	24.1	3.6	15	3	53.7	1.9	5.9	46.5
13	15	2	57.5	6.6	12.1	51.9	15	3	56.7	7.7	12.1	52.2
16	15	3	43.1	52.1	59.1	37.9	15	4	1.1	10.1	16.1	56.0

lost Pt. 2 wires

ζ Leonis $11^h\ 7^m\ 27^s$ $+21^\circ\ 12'\ 29''$

1877												
Apr. 22 #	5	0	8.5	31.5	31.3	41.6	5	1	44.4	6.4	7.1	15.7
23 =	5	0	26.8	46.1	47.7	59.6	5	1	27.6	47.0	47.9	0.9
26 =	15	0	46.9	58.0	2.4	40.1	15	1	47.6	59.4	2.1	41.1
May 3	15	0	47.2	59.9	1.9	41.1	15	1	39.9	54.2	54.6	34.9
7 =	15	0	46.1	59.1	1.5	40.9	15	1	52.8	5.7	7.8	47.1
12 =	15	0	42.9	55.4	59.3	39.2	15	1	43.5	56.3	59.4	39.3

no more

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1877phae.proj.1394R

ζ Hydrae et Crat. $11^h\ 13^m\ 5^s - 14^\circ\ 6'\ 15''$

1877			E	F	G	H			E	F	G	H
Apr 26	30	3	52.0	66	13.1	45.4	30	4	44.5	59.5	5.9	39.8
May 12	30	3	30.7	46.2	52.1	28.2	30	4	23.6	38.7	45.5	21.1
13 =	30	3	27.1	41.0	47.4	24.3	30	4	29.9	44.3	51.4	28.4
~~14~~	~~30~~	~~3~~	~~32.1~~	~~45.9~~	~~52.1~~	~~29.1~~						
16	30	3	7.5	22.1	29.9	6.8	30	4	26.0	42.9	49.9	26.9

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

1877												
May 7 =	25	1	58.6	14.9	19.0	55.8	25	2	59.9	16.4	20.1	57.1
13 =	25	2	1.8	15.9	22.1	59.9	25	3	2.9	17.9	22.6	0.1
14	25	1	58.4	13.2	19.4	56.4	25	3	5.5	21.1	26.9	3.6
16	25	2	30.6	46.8	52.3	29.3	25	3	16.9	33.3	40.6	16.4

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1877phae.proj.1394R

202 β Camel. 11h 23m 1s +81° 49′

1877	′	′	E	F	G	H	
May 13	40	0	58.9	7.2	10.3	56.0	Last 3 wires
14	40	0	33.4	43.1	44.8	30.0	~~1st 5 wires~~ Lost last 2 wires

λ Draconis 11h 23m 58s +70° 1′ 14″

1877												
Apr 26	25	3	7.5	13.8	17.9	59.1	25	3	27.6	34.1	38.5	19.5
May 3	25	3	9.2	17.2	19.1	1.4	25	3	29.2	37.1	38.8	22.0
14	25	3	9.6	18.7	21.4	4.1	25	3	26.1	35.2	39.8	21.9

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1877phae.proj.1394R

ρ Leonis	h 11	m 30	s 33	− 0°	′ 8	″ 2						
1877				E	F	G	H		E	F	G	H
Apr. 26			A.R.					rej. δ				
May 3 =	35	0	53.8	7.5	13.2	49.6	35	1	55.0	8.9	13.9	50.9
6 =	35	0	51.1	4.5	11.4	47.8	35	1	49.9	4.1	9.9	46.4
7 =	35	0	51.6	5.9	12.1	47.7	35	1	51.3	5.7	10.9	47.7
14.	35	1	0.5	13.0	20.9	58.5	35	1	45.6	59.2	7.5	44.9
28	35	0	52.8	6.9	16.1	55.3	35	2	10.9	26.5	33.9	14.0

no more

γ Cephei	h 23	m 34	s 14	+ 76°	′ 56	″ 5		10 3°	′ 4			
1877												
Apr. 26	25	1	59.3	6.9	7.9	48.8	25	1	43.9	51.3	51.5	33.5
May 3 =	25	2	9.1	17.9	16.9	59.3	25	1	19.1	27.5	27.4	9.1
6	25	2	1.3	9.9	10.1	53.1	25	1	39.8	48.5	48.9	31.0
28	25	1	41.1	55.1	58.4	42.9	25	1	2.9	38.0	41.1	26.2
29	25	1	36.8	49.3	52.1	37.5	25	1	30.1	42.3	46.6	30.2
30	25	1	54.8	Lost 1st 2 wires 7.1	8.8	53.3	25	1	30.4	41.1	42.7	28.1

no more

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1877phae.proj.1394R

χ Ursae Maj. $11^h\ 39^m\ 27^s$ +48° 28′ 20″

1877			E	F	G	H			E	F	G	H
Apr. 26	0	0	26.6	~~32.0~~ 39.3	14.1		0	1	22.1	28.4	34.0	12.8
May 3 =	0	0	20.7	29.0	32.6	12.8	0	1	18.6	27.1	29.9	10.9
6 =	0	0	19.4	27.1	32.2	10.5	0	1	25.4	28.1	31.9	12.4
7 =	0	0	23.6	32.2	37.0	16.8	0	1	18.1	27.4	30.9	11.1
14	0	0	20.5	28.0	34.5	12.5	0	1	11.3	18.9	24.8	4.9
28	0	0	32.1	41.1	50.2	32.2	0	1	11.7	22.2	29.1	11.6

No more

β Virginis $11^h\ 44^m\ 11^s$ +2° 28′ 8″

1877												
Apr. 26	0	0	13.5	26.7	32.2	55.6						
May 3	0	0	4.7	19.8	23.1	1.1	0	1	12.4	27.9	30.1	9.5
6	0	0	3.6	17.9	22.4	0.5						
7	0	0	9.4	23.1	27.3	6.9	0	1	7.9	24.0	26.4	4.0
13	55	4	53.7	8.1	11.4	50.9						
28	0	0	3.45	4.99	56.4	39.6						

& 1.2 effect

No more

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1977ahae.proj.1394R

1 Ursae Maj.	h 11	m 47	s 15	+ 54°	23′	22″						
1877				E	F	G	H					
May 3	5	0	41.4	49.2	52.5	33.1						
6 =	5	0	29.5	37.9	42.8	23.1	5	1	19.4	28.0	31.9	12.6
7 =	5	0	23.9	32.1	35.9	16.3	5	1	11.9	21.2	23.9	4.1
14 =	5	0	20.4	26.9	33.8	12.6	5	1	18.2	25.8	31.3	10.5
28	5	0	28.0	38.5	46.7	28.5	5	1	11.2	23.5	29.1	12.9
29	5	0	32.4	42.4	50.5	33.8	5	1	6.3	18.1	25.5	8.5

no more

o Virginis	h 11	m 58	s 50	+ 9°	25′	38″
1877						
May 3	0	2	4.5	49.0	51.9	29.1
5	0	2	21.2	36.2	38.5	15.0
6	0	2	24.6	40.1	43.3	19.8
7	0	2	28.5	42.9	46.6	23.1
28	0	2	23.9	39.2	45.1	26.5

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1877phae.proj.1394R

Gr. 1852 $11^h\ 58^m\ 52^s$ $+77^\circ\ 36'\ 16''$

1877		E	F	G	H		E	F	G	H
May 3	50	3	38.1	45.8	45.9	31.1	50	3	54.9	2.1	1.4	47.9
6	50	3	34.7	44.2	45.0	29.2	50	3	49.4	57.9	58.6	44.0
12	50	3	3.8	12.4	12.5	57.9	50	3	35.6	43.1	44.9	30.4
14	50	3	37.9	46.1	46.9	32.6	50	3	48.9	57.1	57.6	43.9
28	50	3	30.9	42.0	44.9	33.1	50	3	49.1	0.2	3.1	51.0
29	50	3	3.7	14.1	16.9	5.0	50	3	28.9	39.6	43.7	31.8

no more

4 H. Draconis $12^h\ 6^m\ 19^s$ $+78^\circ\ 18'\ 39''$

1877												
May 3	10	0	45.1	53.0	53.0	48.3	10	1	12.6	21.3	21.4	6.2
5	10	0	56.9	4.4	4.8	50.6	10	1	16.9	25.6	24.7	10.9
6	10	0	50.6	0.2	1.1	44.7	10	1	18.9	27.9	28.8	13.8
7	10	0	56.3	4.6	4.9	50.5	10	1	16.0	24.7	23.6	10.1
12	10	0	55.5	2.9	4.9	48.5	10	1	13.9	21.9	22.9	8.1
14	10	0	48.2	55.9	57.3	43.8	10	1	9.9	17.9	19.2	5.2

no more

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1877phae.proj.1394R

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

1877			E	H	G	K			E	H	G	K
May 3 =	45	0	13.8	21.2	25.3	5.0	45	1	14.5	22.9	25.2	5.9
5 =	45	0	17.8	25.1	28.9	8.1	45	1	8.0	15.9	19.1	0.2
6	45	0	44.5	51.8	56.5	37.3	45	1	5.1	12.4	17.3	56.9
7	45	0	26.3	33.7	38.3	18.2	45	1	7.4	15.1	19.9	58.5
12	45	0	48.9	54.9	0.5	41.9	45	1	5.9	11.9	18.0	59.0
13	45	0	33.9	39.4	46.3	25.0	45	1	1.8	8.1	13.9	54.3

No more

η Virginis $12^h\ 13^m\ 31^s\ +0^\circ\ 1'\ 41''$

1877												
May 3 =	25	1	13.1	28.5	31.4	9.2	25	2	13.4	27.2	31.0	8.6
5 =	25	1	12.2	27.5	31.5	9.3	25	2	12.8	28.1	31.6	8.9
30	25	1	22.6	38.4	46.5	26.7						
June 2	25	1	12.3	30.7	39.5	18.4						

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1877phae.proj.1394R

5 Ursae Min. = B.A.C. 4150 $12^h\ 13^m\ 5^s\ +87^\circ\ 24'\ 30''$ (87° 10')

1877			E	F	G	H			E	F	G	H
May 6	20	2	0.1	9.1	10.4	52.8	20	2	13.7	22.0	23.8	5.9
12	~~20~~	~~2~~	~~10.5~~	~~18.1~~	~~19.5~~	~~2.9~~						
	rej. md. wire, two strokes 1 long + 1 short											
28	20	1	54.9	6.4	10.5	54.6						
	A 1. 2. 3. 4 + 5											
29	20	1	49.6	0.0	4.4	49.3	20	1	51.7	1.8	6.7	51.2
	A 1. 2. 3. 4 + 5											
30	20	2	4.8	15.3	10.6	4.2						
June 2	20	2	7.9	21.1	24.2	9.1	20	2	16.0	25.9	33.2	17.8
	A 8 + 9 + A_1											

~~To md. wire inclusive~~

Last 4 wires

6 Ursae Min. = B.A.C. 4165 $12^h\ 14^m\ 26^s\ +88^\circ\ 40'\ 12''$ (88° 20')

1877												
May 6	5	1	36.1	43.9	44.9	27.8	5	1	36.5	44.5	45.9	27.7
	md. wire + foll.											
12	~~5~~	~~1~~	~~31.9~~	~~40.6~~	~~41.9~~	~~25.3~~	5	1	~~33.4~~	~~39.4~~	~~41.5~~	~~25.5~~
	md. wire + foll.											
13	5	1	24.7	32.0	35.1	17.9						
	3 md. wires											
28	5	1	23.1	32.4	36.4	22.6	5	1	26.2	36.3	40.0	26.8
	lost 1st 2 wires											
29	5	1	19.0	28.5	34.1	19.4	5	1	23.7	33.2	38.2	23.6
	lost 1st 2 wires											
30	5	1	22.8	33.0	36.8	21.8	5	1	26.4	38.0	41.9	26.5
	md. wire + foll.											
31	5	1	22.8	34.4	37.9	22.9	5	1	27.1	38.0	42.0	26.5
	md. wire + foll.											

The last, sure

no more

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1877phae.proj.1394R

S Corvi h 12 m 23 s 24 − 15° 49′ 5″

1877	E	F	G	H	E	F	G	H
May 6 =	15 1 27.6	44.4	48.5	23.8	15 2 22.4	38.5	42.4	17.4
12 =	~~15 1 21.8 37.9 44.5 19.5~~				15 2 21.9	38.2	44.7	20.1
13	15 1 35.3	49.7	55.5	33.5	N.R.			
29	15 1 27.5	44.9	54.9	34.3	15 2 16.8	35.6	44.1	22.9
31	15 1 25.4	44.4	53.1	30.4	15 2 25.9	44.6	52.2	30.5
~~June 2~~	~~15 1 43.9 3.0 12.5 49.2~~				~~15 2 29.4 48.6 56.9 34.0~~			

h 12 m 27 s 29 + 33° 56′

1877					
May 6	30	2	11.9	23.2	27.2 7.0
12	~~30~~	~~2~~	~~14.5~~	~~25.2~~	~~30.1 11.2~~
13	A.R.				
16	30	2	18.9	31.1	38.8 16.4
28	30	2	13.1	24.5	31.4 15.9
29	30	2	8.9	20.3	29.5 12.7
30	30	2	9.2	21.4	28.1 11.3

no more

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1877phae.proj.1394R

κ Draconis h 12 m 28 s 8 +70° 28' 38"

1877			ξ	η	ζ	ν			ξ	η	ζ	ν
May	6	0 ′	0 ″ 54.6	1.3	6.3	47.8	0 ′	1 ″	34.1	41.9	45.4	27.8
	12	~~0 1 6.1~~		~~13.4~~	~~17.9~~	~~0.9~~	0	1	15.8	22.2	27.9	9.8
	13	0 0	59.1	6.5	11.7	54.3						
	16	0 1	2.0	8.6	16.9	57.1	0	1	12.8	22.6	30.2	10.9
	28	0 0	59.4	8.8	15.5	0.9						
	29	0 0	51.2	0.1	9.1	53.6						
	31	0 0	24.6	35.0	43.2	25.8	0	1	6.9	17.4	23.4	7.9

md. wires foll.

no more

γ Virginis h 12 m 35 s 20 − 0° 45' 50"

1877

	~~10 4 1.1~~		~~15.0~~	~~19.1~~	~~57.6~~							
May	13	10 4	34.5	46.6	51.8	30.4						
	30	10 3	32.9	49.1	55.3	35.4						
	31	10 3	49.0	5.8	11.9	52.4	10	4	41.4	56.8	3.9	45.4
June	2	10 3	52.4	10.9	17.1	57.1	10	4	35.9	53.1	59.9	38.9
	4	10 3	38.7	55.9	3.5	40.8	10	4	43.6	59.9	7.8	45.4

Both 3rd S pr.

1 stroke each, & 2nd S pr. # foll. # 2nd S pr.

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1877phae.proj.1394R

21 Cassiopeae $0^h\ 37^m\ 26^s + 74^\circ\ 18'\ 14''$ $105^\circ\ 42'$

1877			ε	ζ	η	θ		ε	ζ	η	θ
May 12	45	4	5.1	13.1	13.3	56.1	45	3	53.6	2.6	1.1	44.5
16	45	4	34.8	44.1	47.3	26.5	45	4	9.7	18.3	20.9	1.6
29	45	3	52.5	4.1	5.0	50.6	45	3	32.9	45.5	47.2	32.8
30	45 A_{+1}	4	21.0	32.1	33.1	18.7	45	3	58.9	10.4	10.7	55.3
31	45	3	45.6	57.9	58.0	43.8	45	3	39.2	48.3	55.4	36.8
June 2	45 A_{+1}	3	53.1	5.8	7.8	53.4	45	3	35.3	47.2	49.6	34.8

$12^h\ 43^m\ 12^s + 61^\circ\ 0'$

1877											
May 12	25	4	5.7	12.4	17.0	58.4	25	4	34.7	40.9	45.6	26.8
13	25	3	59.6	50	10.2	52.3	N.R.					
30	25	3	54.8	3.4	10.4	51.9	25	4	41.5	50.6	54.9	38.8
31	25	4	0.5	11.0	16.8	58.9	25	4	23.2	33.0	39.9	22.4
June 2	25	4	1.4	11.2	18.2	1.6	25	4	27.9	38.8	46.5	28.9
4	25	4	22.5	33.1	39.9	21.2	25	4	40.9	51.1	56.7	38.9

no more

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1877phae.proj.1394R

2 Ursae Maj. $12^h\ 48^m\ 31^s\ +56^\circ\ 38'\ 18''$

1877			E	F	G	H	E	F	G	H
May 12	~~50~~	~~0~~	34.6	41.2	46.8	27.7				
13	50	0	29.2	35.9	41.3	22.1	N.R.			
28	50	0	34.1	43.1	50.2	33.9	50 1	9.1	18.1	25.2	7.9
29	50	0	26.3	36.1	42.8	26.8	50 1	15.9	26.2	31.1	15.7
June 4	50	0	25.6	35.2	44.9	25.8	50 1	24.8	34.1	44.7	23.8

12 Canum Ven. foll. $12^h\ 50^m\ 11^s\ +38^\circ\ 59'\ 38''$

1877											
May 12 =	25	3	57.5	6.7	12.1	53.2	25 4	57.5	7.1	11.4	52.4
13	25	4	~~50.9~~	~~56.8~~ 2.7	5.4	47.5	N.R.	~~56.7~~			
28	25	4	3.8	15.2	21.1	5.0					
29	25	3	49.4	2.3	8.2	53.1	~~25 4 35.9~~				
June 4	25	4	39.5	50.5	57.9	40.3	Perhaps false stroke after last wire				

Last-Aug

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1877phae.proj.1394R

Virginis $12^h\ 55^m\ 57^s\ +11^\circ\ 37'\ 53''$ 2 extra pages left in the book

1877			ε	ζ	η	θ	ε	ζ	η	θ
May	12	50	0	9.5	23.2	28.2	6.1				
	13	50	0	23.9	36.4	42.3	20.8				
	16	50	0	18.5	30.6	40.4	15.7	A4+5+A−1			
	31	50	0	9.0	26.1	33.7	13.8				
June	4	50	0	10.3	26.2	35.1	12.3				

1877 $12^h\ 56^m\ 54^s\ +64^\circ\ 1'$

1877

May	12	10	2	25.6	31.7	35.8	19.6	10	2	53.1	58.2	1.5	46.2
	16	10	2	32.1	42.0	49.5	31.9	10	3	4.6	10.7	17.3	59.8
	29	10	1	59.9	7.2	12.7	0.7	10	2	24.9	32.9	38.6	25.9
	31	10	2	31.5	41.4	45.3	31.1	10	2	53.8	2.5	7.7	54.7
June	4	10	2	30.3	40.1	47.1	30.2						

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1877phae.proj.1394R

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

1877			E	F	G	H			E	F	G	H
May	12	30	1	17.1	23.9	24.5	6.9					
	13	30	1	32.7	38.4	42.4	22.9	30	1	10.6	17.4	19.1	1.4
	16	30	1	26.9	32.8	37.8	18.3	false stroke after S					
	31	30	1	22.1	33.5	35.4	19.2	30	0	54.0	3.8	7.5	51.1

θ Virginis $13^h\ 3^m\ 29^s$ $-4°\ 52'\ 15''$ one reading

1877												
May	12 =	15	4	57.9	9.6	17.9	53.2	20	1	4.1	15.3	22.4	55.6
	13 =	20	0	1.3	13.8	21.5	58.9	20	1	2.6	15.2	22.1	59.9
	31	20	0	7.9	23.3	33.9	11.2	20	0	58.5	15.1	24.1	2.9

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1877phae.proj.1394R

$h\ 13\ m\ 4\ s\ 25\ +57^\circ\ 30'$

1877		E	F	G	H		E	F	G	H
		'	'	'	'	'	"	"	"	"
May 28	55	4	3.6	12.8	19.0	1.9	0	0	0.2	9.5	16.9	5.99

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

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1877phae.proj.1394R

57 Virginis ~~13h 9m 13s — 19° 16' 35"~~

Get ζ Virginis instead of this

ζ Vesae Maj. 13h 18m 53s +55° 30' 45"

1877

~~May~~ June 17 50 4 11.7 22.1 33.1 10.1 50 4 57.2 7.7 17.5 54.9

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1877phae.proj.1394R

	h	m	s	°	′	″
Ursae Majoris 2001	13	22	57	+73	2	27

1877			E	F	G	H			E	F	G	H
	′	′	″	″	″	″	′	′	″	″	″	″
May 31	25	1	52.8	4.4	9.8	54.7	25	2	28.8	40.3	43.7	29.1
June 17	25	2	4.9	15.2	25.5	2.4	25	2	19.8	30.4	41.5	18.9
19	25	1	49.4	1.1	11.6	48.4	25	2	13.1	25.9	34.3	11.9

	h	m	s	°	′	″
ζ Virginis	13	28	19	+0	2	38

1877												
May 31	25	0	10.6	29.2	37.8	16.4	25	1	12.3	31.3	39.6	16.2
June 4	25	0	9.7	27.1	36.3	12.0	25	1	14.9	32.1	41.5	18.6
17	25	0	37.7	52.8	5.1	39.0	25	1	29.8	46.2	59.9	32.2
18	25	0	20.0	35.8	49.9	22.8	25	1	24.1	39.1	52.2	25.9
19	25	0	4.8	23.1	35.8	8.3	25	1	20.5	38.8	51.8	24.7
20	25	0	13.6	29.3	43.9	16.6	25	1	3.4	18.5	32.4	4.9

no more

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1877phae.proj.1394R

Gr. 2029 13h 34m 11s +71° 52′ 43″

			E	F	G	H			E	F	G	H
1877												
May	28	35′	1′ 22.1″	32.1″	38.9″	22.9″	35′	1′	52.9″	2.3″	6.8″	53.3″
	29	35	1 28.3	38.6	44.3	31.0	35	2	1.4	11.6	15.4	2.1
	30	35	1 40.3	51.9	56.1	40.6	35	1	58.6	9.2	13.0	58.2
June	2	35	1 40.0	52.0	57.1	41.3	35	2	0.9	12.3	17.7	3.1
	4	35	1 55.1	5.9	12.5	55.9	35	2	6.9	17.6	24.2	56.9
	17	35	1 37.9	48.1	58.6	36.3	35	1	55.9	6.4	17.1	54.4

no more

~~η Ursae Maj. 13h 42m 37s +49° 36′ 16″~~

1′ 13 40 37 +81 32

1877											
May	28	55′	1 53.1	6.9	14.1	56.5					
	29	55	2 3.9	17.7	23.9	6.5					
June	2	55	1 55.7	10.4	17.4	59.9	55	2	43.6	57.2	4.5	46.7
	4	55	1 42.9	57.9	4.3	45.8	55	2	51.7	5.9	13.6	53.9
	17	55	1 46.5	1.5	13.5	48.1						
	18	55	1 43.0	57.2	8.9	43.4						

no more

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1877phae.proj.1394R

η Ursae Maj. 13h 42m 37° +49° 56′ 16″

η Bootis ~~13h 48m 44s +19° 1′ 30″~~

1877			E	ζ	η			E	ζ	η	
	′	′	″	″	″	″	′	′	″	″	″	″
May 28	30	2	23.3	33.1	40.5	23.1	30	3	11.1	20.1	26.3	9.9
29	30	2	21.7	31.4	37.8	21.9	30	3	14.0	24.4	30.3	12.9
June 17	30	2	56.1	0.6	13.5	47.9	30	3	17.9	28.9	41.1	15.9
18	30	2	25.5	35.0	47.3	22.7	30	3	15.3	25.3	36.9	11.9
19	30	2	21.5	35.1	44.5	19.3	30	3	4.8	17.1	26.4	2.5
20	30	2	39.2	49.6	2.2	37.0	30	3	19.7	30.3	42.5	17.1

Argrong

no more

50 Cassiop. ~~1h 52m 48s +71° 48′ 54″ 108° 11′~~

η Bootis ~~13h 48m 44s +19° 1′ 30″~~

1877												
May 29	25	1	41.2	56.1	3.1	44.3	25	2	35.6	51.1	56.4	38.8
30	25	1	38.4	54.1	1.9	41.4	25	2	36.2	52.1	59.1	39.6
June 2	25	1	39.8	55.4	3.5	44.1	25	2	35.0	50.8	58.4	38.6
4	25	1	53.6	10.1	18.1	56.1	25	2	46.9	3.1	11.4	49.2
17	25	1	36.0	51.5	5.1	34.9	25	2	49.1	5.1	17.1	48.9
18	25	1	51.5	6.0	16.1	51.4	25	2	38.6	49.8	2.0	35.8

no more

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1877phae.proj.1394R

Alternate with next star

50 Cassiopeia h 1 m 52 s 48 ° +71 ′ 48 ″ 54 +108 ° 11 ′

~~τ Virginis h 13 m 55 s 17 ° +2 ′ 9 ″ 0~~

1877			E	H	G	K	E	H	G	K
May 28	15	4	31.7	41.6	43.6	27.4	15 4	7.7	17.2	18.5	4.0
June 17	20	0	32.1	43.5	52.4	27.5					
18	20	0	3.2	11.4	21.3	57.1	15 4	51.1	1.0	6.9	44.0
20	15	4	49.1	59.2	5.4	42.9	15 4	33.4	43.2	50.4	27.0
24	last 4 wires 15	4	46.2	58.6	5.1	42.9	15 4	31.2	43.4	49.1	27.6
25	A+1 20	0	7.6	20.8	29.2	5.9	15 4	37.8	51.8	58.4	35.9

no more

~~α Draconis h 14 m 1 s 0 ° +64 ′ 38 ″ 25~~

13 52 59 +65 58

1877						
June 4	30	0	51.0	0.1	9.6	51.8
19	30	1	23.3	33.9	46.8	21.7

last 4 wires

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1877phae.proj.1394R

τ Virginis h 13 m 55 17 +2 9 0

~~κ Virginis~~ h 14 m 6 14 −9 41 27

1877			E	F	G	H			E	F	G	H
May	28	15 3	43.9	59.7	6.4	47.7	15 4		43.5	59.1	3.9	46.6
June	19	15 3	53.1	10.8	21.2	55.6	20 0		14.8	31.6	44.8	18.9
	20	15 3	58.1	12.4	23.1	58.9	20 0		11.6	27.9	41.2	14.8
	27	15 3	47.3	5.9	17.5	51.4	15 4		59.1	17.2	28.6	3.9

~~4 Ursae Min.~~ h 14 m 9 22 +78 8 5

14 0 54 +31 27 Get next star alternately with this

1877						
June	17	0 1	20.5	35.0	47.1	20.1
	18	0 1	23.0	36.1	48.1	23.4
	19	0 2	20.4	36.8	48.3	22.9

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1877phae.proj.1394R

α Draconis 14h 1m 0s +64° 58′ 25″

~~ι Bootis 14h 11m 44s +51° 56′ 39″~~

1877			E	F1	G	H			E	F	G	H
May 28	30	0	33.9	42.4	49.9	34.0	30	1	22.0	30.1	36.8	22.1
30	30	0	45.8	54.7	0.9	45.3	30	1	10.8	20.1	24.9	11.6
June 2	30	0	44.9	54.4	2.2	46.9	30	1	9.9	18.9	25.4	11.9
20	30	0	22.2	30.5	43.1	20.1	30	1	6.3	14.1	25.4	3.9
25	30	0	56.4	8.9	20.1	57.5	30	1	22.4	34.2	45.2	24.3
27	30	0	44.0	55.5	6.9	45.9	30	1	12.9	24.9	35.6	14.6

no more

K Virginis 14h 6m 14° − 9° 41′ 27″

~~θ Bootis 14h 20m 56s +52° 25′ 44″~~

1877 ~~14 19 1 +61 32~~

May 28	5	3	56.6	10.6	21.1	59.8	5	4	62.8	8.1	17.0	55.2
June 2	5	3	55.9	12.6	22.3	0.5	5	4	52.4	7.3	17.9	54.7
18	5	4	3.3	16.8	32.7	3.9	5	4	55.0	10.1	24.0	55.4
19	5	4	16.6	32.9	46.7	15.9	10	0	12.2	20.9	45.5	13.1
20	5	4	31.6	45.1	0.9	32.3						
24	5	3	54.2	10.9	25.7	56.9	5	4	56.4	12.3	25.9	57.9

no more

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~~γ Bootis~~ ~~h 14 m 26 + 38° 52'~~

~~5 Ursae Min.~~ ~~h 14 m 27 s 49 + 76° 15' 4"~~

4 Ursae Min. h 14 m 9 s 22 +78° 8' 5"

1877	'	"	E	H	G	h	
June 2	20	1	16.0	26.9	32.5	18.6	Lost last wire
20	20	1	30.4	41.2	48.6	30.2	
24	20	1	24.4	37.2	45.9	26.1	
25	20	1	21.4	35.5	45.3	25.3	
27	20	1	18.4	31.8	42.4	21.4	

~~γ Bootis~~ ~~h 14 m 26 + 38° 52'~~

~~5 Ursae Min.~~ ~~h 14 m 27 s 49 + 76° 15' 4"~~

ζ Bootis h 14 m 11 s 44 +51° 36' 39"

1877	'	'	"	"	"	"	'	'	"	"	"	"
June 2	30	1	53.1	5 0	13.5	54.3	30	2	54.3	6.1	14.9	56.1
	false stroke + rattle after 12.5 s											
20	30	1	55.0	4.7	17.4	53.2	30	2	32.7	41.6	53.3	29.1
25	30	2	31.9	45.2	56.5	31.9	30	2	49.4	1.4	12.1	48.4
27	30	2	3.1	15.8	28.9	4.7	30	2	50.7	4.2	17.4	52.9
July 4	30	2	41.1	52.1	6.1	38.1	30	3	14.0	24.1	37.8	38.1
	last 4 wires											

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1877phae.proj.1394R

Plate 2 pages ahead comes after this ~~alternate~~ alternate with this

	h	m	°	′	″	°	′
Cassiop.	2	18	47	+66	50	18″	113 10
~~Cassiop.~~	~~14~~	~~30~~	~~58~~	~~+65~~	~~57~~		

1877			ε		ζ	η			ε		ζ	η
June 2	20	2	27.9	40.2	41.7	22.0	20	2	10.9	23.2	24.4	5.1
24	20	2	28.1	40.9	45.9	21.2	20	1	39.2	52.4	57.0	31.9

θ Bootis	h	m	s	°	′	″						
	14	20	56	+52	25	44						
1877												
June 2	0	2	52.9	5.9	13.1	54.9	0	3	51.6	3.6	10.7	52.1
4	0	2	51.1	3.8	11.7	51.1	0	3	40.3	52.1	58.9	39.1
5 N. 14	0	3	6.9	19.3	30.3	5.7	0	3	43.4	54.2	6.4	42.1
20	0	2	53.9	3.8	15.6	51.1	0	3	44.8	55.0	6.9	42.5
25	0	2	46.4	1.0	13.1	46.9	0	3	30.2	43.1	56.0	30.2
27	0	2	55.1	7.8	19.8	55.9	0	3	40.8	54.4	6.4	41.9

no more

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1877phae.proj.1394R

alternate with star bottom of next page.

36 H. Cassiop $2^h\ 26^m\ 11^s$ $+72°\ 16'\ 9''$ $107°\ 44'$

1877			&	H	G	h
June 18	45	2	15.3	24.2	32.1	9.3
19	45	2	13.8	25.1	34.6	11.1

5 Ursae Min. $14^h\ 27^m\ 49^s$ $+76°\ 15'\ 4''$ One reading

1877												
June 17	10	4	36.0	44.6	54.5	33.1						
18	10	4	17.3	26.2	34.9	15.0	10	4	35.6	43.9	52.1	32.1
19	10	4	12.5	23.9	32.8	12.0	10	4	42.5	54.1	3.1	43.1
20	10	4	34.0	42.6	49.5	31.6	10	4	46.9	55.6	3.0	44.8
	lost 12th wire											
24	10	4	28.1	36.5	47.7	27.2						
	lost 12th wire											
25	10	4	38.6	48.9	57.6	39.7	10	4	49.5	1.1	10.1	50.1
	lost last 2 wires											

no more

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One reading

$14^h\ 19^m\ 1^\circ\ +61^\circ\ 32'$ Next star two pages back of this

1877			E	F	G	H	
June 4	55	2	19.0	28.5	37.9	18.7	
20	55	1	34.9	43.2	54.1	31.5	rej. A_{+1}
25	55	1	53.4	6.1	18.2	53.9	

$14^h\ 26^m\ 30^\circ\ +38^\circ\ 52'$ ~~50~~ ~~One reading~~ 9

γ Bootis

1877											
June 20	35	1	59.4	11.9	22.8	0.1					
24	35	2	5.8	18.9	29.7	6.9					
25	35	1	59.0	14.2	25.2	2.2	False shot stroke among 1st S's				
27	35	2	5.0	20.5	31.0	8.0	35	2	48.0	3.9	14.6	52.1
July 4	35	2	35.0	46.3	58.8	52.6	lost A_{+1}					

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1877phae.proj.1394R

	h	m	°	′								
	14	30	58	+65	57							
1877			ε	F_1	G	H			ε	F	G	H_δ
June 20	30	2	28.9	35.7	48.9	24.9	30	3	8.5	15.7	27.1	6.3

	h	m	°	′	″								
π′ Bootis	14	34	51	+16	57	18							
1877													
June 14	30	0	56.4	10.2	25.8	57.4	30	1	52.3	7.9	19.5	54.1
	pr #	π 2	follo, about 2 seconds									
17	30	0	48.6	3.8	18.2	49.5	30	1	54.6	8.7	22.1	55.0
	pr #											
18	30	0	58.9	11.9	26.9	58.3	30	1	54.4	8.4	21.1	53.9
19	30	0	42.2	57.2	12.9	44.1	30	1	55.1	11.1	24.0	56.4
20	30	1	2.9	16.2	30.4	2.9	30	1	48.1	3.1	16.1	49.1
24	30	0	41.7	56.1	11.4	44.2	30	1	44.2	0.1	14.4	46.9

no more

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1877phae.proj.1394R

h m s
14 38 56 +61° 48′

1877			E	H	G	Hc						
June 17	40	1	23.1	24.3	46.1	20.8						
18	40	1	21.6	31.2	43.0	19.1						
19	40	0	59.5	9.9	21.9	57.7						
20	40	1	8.6	17.6	29.1	6.0						
24	40	1	7.4	18.1	29.9	6.1						
July 4	40	1	53.4	2.7	14.7	47.1	40	2	7.2	15.1	28.1	1.7

no more

109 Virginis h m s 14 39 56 +2° 25′ 15″

1877

June 14	0	3	9.7	26.8	37.8	12.5	0	3	50.4	6.8	18.1	51.8
	lost A+											
17	0	2	39.2	55.3	5.3	39.8	rej. 2nd					
18	0	2	57.1	12.2	22.9	57.9						
19	0	2	39.8	57.1	10.1	41.6						
20	0	2	29.4	44.6	55.8	29.9						
24	0	2	31.9	49.1	0.9	34.6						

No More.

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1877phae.proj.1394R

G.C. 2164	14	48	16	+59	48	10						
1877			E	F1	G	H		E	F	G	H	
June 14	40	0	41.1	51.3	3.5	38.6	40	1	26.9	38.2	49.4	25.3
17	40	0	36.8	46.4	58.1	34.4	perhaps lost A_{+1}					
19	40	0	37.1	47.9	1.4	35.9	ref. A_{+1}					
20	40	1	6.4	16.0	27.1	4.9	40	1	37.9	46.5	57.5	35.1
24	40	0	37.0	49.0	0.6	36.9	40	1	24.1	35.8	48.2	24.4
25	40	0	35.9	47.4	0.9	36.2	40	1	6.2	17.9	30.3	6.7

no more

β Ursae Min.	14	51	5	+74	39	58						
1877												
June 20	45	4	24.2	32.9	41.1	20.9	45	4	44.1	52.4	1.6	40.9
24	45	4	9.3	19.8	29.9	8.6						
25	45	4	10.1	22.1	32.5	10.1	45	4	38.8	49.1	59.1	38.2
27	45	4	31.6	43.2	53.1	32.7	45	4	39.5	50.9	0.5	40.1

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1877phae.proj.1394R

β Bootis $14^h\ 57^m\ 14^s\ +40°\ 53'\ 4''$

1877		E	F	G	H	
June 14	35 ' 1	11.1	23.6	35.3	11.3	md wire & fell.
17	35 0	42.0	53.8	6.2	43.1	
18	35 0	22.5	34.4	47.7	22.3	
19	35 0	21.2	35.0	48.4	22.1	
24	35 0	49.8	3.1	17.2	52.1	lost 1st wire. Rej. 2nd S
27	35 0	17.9	32.9	46.9	21.5	35 1 10.9 25.2 38.8 13.5

no more

ν Librae $14^h\ 59^m\ 39^s\ -15°\ 46'\ 9''$

1877											
June 19	10 3	30.7	49.1	1.4	32.8	10 4	26.0	45.1	56.7	28.1
24	10 3	37.5	55.8	8.8	39.8	10 4	30.6	50.8	1.5	39.9
25	10 3	14.0	34.8	46.9	19.8	10 4	19.9	38.5	51.2	~~22.8~~ ?
27	10 3	7.6	27.4	40.0	11.9	10 4	29.6	48.6	1.6	33.2
July 4	10 3	28.9	46.8	0.1	28.9	10 4	15.0	33.2	46.1	14.4

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1877phae.proj.1394R

48 Hc Cephei	h 3	m 4	s 32	° +77	′ 16	″ 19	° 102	′ 44					
1877			E	F	G	H			E	F	G	H	
June 14	45	2	8.9	21.4	28.1	6.2	45	1	41.9	54.4	1.0	36.8	
17	45	1	59.6	11.3	18.9	56.2	45	1	50.0	1.4	9.6	46.1	
18	45	1	57.9	8.7	15.1	51.6	45	1	46.1	56.2	3.4	41.5	
19	45	2	7.4	18.6	26.5	3.9	45	1	44.2	56.4	4.4	41.9	
24	45	1	53.9	7.9	14.5	53.1	45	1	41.9	54.3	2.9	40.3	
27	45	1	46.9	0.3	9.9	46.8	45	1	19.7	33.4	42.1	18.4	

hej. 2:d 8. Hae 3:d no more

β Librae	h 15	m 10	s 17	° − 8	′ 55	″ 13							
1877													
June 14	20	2	3.1	19.3	34.6	6.0	20	3	49.6	6.3	19.4	52.8	
18	20	2	51.2	6.2	20.0	52.8	20	3	39.8	54.8	8.3	40.1	
19	20	2	49.9	5.7	21.6	51.2	20	3	32.6	48.1	3.8	34.1	
24	20	2	31.6	48.4	2.1	33.8	20	3	33.9	50.4	5.6	36.8	
27	20	2	29.5	46.5	3.1	34.1	20	3	27.5	43.5	0.9	31.4	
July 4	20	2	35.7	49.9	5.6	33.7	20	3	33.6	46.4	3.9	32.3	

no more

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1877phae.proj.1394R

1 H. Ursae Min. $15^h\ 13^m\ 13^s$ $+67^\circ\ 49'\ 18''$

1877	′	″	E	F	G	H	′	″	E	F	G	H
June 14	35	4	46.4	45.9	4.3	45.1	40	0	13.6	23.8	34.7	12.9
17	35	4	46.5	56.2	6.2	44.9	40	0	15.1	24.7	35.9	13.1
18	35	4	53.5	1.2	10.6	50.1	40	0	15.8	24.2	35.1	13.9
19	35	4	44.7	54.1	3.7	43.2	40	0	13.9	23.9	35.9	13.7
24	35	4	39.1	48.5	58.9	39.4						
27	35	4	39.7	50.4	58.1	40.8	40	0	10.9	23.0	34.1	13.9

lost wire 8

no more

$15^h\ 20^m\ 34^s$ $+63^\circ\ 48'$

One reading
Alternate with next star

1877												
June 14	40	1	31.5	40.4	52.0	29.6	40	2	16.3	25.3	36.6	16.1
27	40	1	39.9	51.8	3.4	41.2	40	2	8.9	18.9	30.4	9.6

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1877phae.proj.1394R

1877

July 4 Ursae Min. 15h 20m 57s +72° 16' 44"
July 4 10 2 5.6 2.9 13.1 6.9

15h 25m 27s +62° 42'

1877

June 14	45	1 34.7	44.0	54.6	34.3
17	45	1 15.4	24.7	37.0	13.2
18	45	1 35.2	42.9	54.6	32.9
27	45	1 26.4	36.6	38.9	27.7

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1877phae.proj.1394R

ν' Bootis	h 15	m 26	s 26	+ 41°	15′	37″								
1877			E	F	G	H			E	F	G	H		
June 14	10	3	39.4	52.1	2.8	39.9	10	3	54.9	5.2	17.6	54.9		
	lost 1st wire													
17	10	2	52.1	4.6	17.1	51.8	10	3	36.8	50.5	2.8	37.7		
18	10	2	55.0	4.4	17.2	53.6	10	3	42.8	54.4	6.9	41.5		
27	10	2	56.2	8.9	20.1	56.9	10	3	43.9	58.1	10.1	46.9		

φ Bootis	h 15	m 33	s 20	+ 40°	45′	42″	one reading 22
1877							
June 14	40	2	59.3	11.9	23.2	59.4	
17	40	2	43.3	54.2	6.1	40.8	
24	40	2	34.1	48.0	0.1	35.1	
July 4	40	3	0.7	9.5	24.2	56.0	ZPK
25	40	2	43.1	52.1	52.3	49.4	lost 1st 2 wires

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1877phae.proj.1394R

α Ursae Min. $15^h\ 35^m\ 9^s\ +77^\circ\ 45'\ 64''$

1877			E	F1	G	H			E	F	G	H
June 14	40	3	26.1	36.3	43.9	25.1	40	3	52.1	2.0	9.0	49.5
17	40	3	26.8	36.3	44.6	25.4	40	3	41.1	45.9	57.6	39.0
24	40	3	23.9	36.0	44.0	25.7	40	3	44.2	55.1	2.9	44.9
(27?)	40	3	41.9	52.1	0.0	42.9						
July 24	40 rej. 1st 8	3	0.1	7.3	4.7	6.3	40	3	18.9	26.2	23.1	25.9

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

1877												
June 17	35	4	18.8	33.1	45.1	18.0	40	0	15.4	32.0	44.6	16.6
24	35	4	3.9	18.1	31.1	4.4	40	0	0.1	16.9	30.4	2.7
27	35	4	35.7	51.1	4.1	38.1	40	0	15.1	32.8	46.2	19.1
July 25	35	3	42.8	53.8	55.1	49.9	35	4	57.1	7.4	8.9	3.2

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1877phae.proj.1394R

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

1877			E	F	G	H		E	F	G	H
June	24	30	0	12.9	30.5	46.0	16.0	30 1	6.5	25.2	39.2	10.4
July	24	25	4	50.6	3.4	4.9	58.5	30 1	3.1	15.3	17.9	12.8
	25	25	4	56.5	10.1	10.2	5.1	30 0	56.9	10.6	12.4	7.2

ζ Ursae Min. $15^h\ 48^m\ 34^s\ +78^\circ\ 10'\ 41''$

1877												
July	24	15	3	4.7	12.8	9.6	12.1	15 3	29.1	37.3	34.1	37.0
	25	15	3	25.2	34.1	31.9	34.1	15 3	35.1	43.9	41.1	44.1

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1877phae.proj.1394R

ζ Scorpii	h	m	s	°	′	″
1877	15	52	57	−22	15	49

			E	F	G	H			E	F	G	H
July 24	40	2	4.4	18.9	21.1	13.8	40	2	55.1	9.1	11.1	3.9
25	40	1	58.1	12.1	15.2	7.9	40	3	0.9	15.7	17.2	10.9
Aug. 8	40	1	59.7	13.9	16.9	9.5	40	3	15.4	28.6	30.9	23.9

β Scorpii	h	m	s	°	′	″
1877	15	58	10	−19	27	41

July 24	50	4	38.9	53.4	54.3	46.9
25	lost 1st 2 wires 50	3	51.6	7.3	7.1	1.2

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1877phae.proj.1394R

θ Draconis $15^h\ 59^m\ 33^s\ +58^\circ\ 53'\ 58''$

1877			E	F	G	H			E	F	G	H
July	24	30	4	30.9	38.2	38.6	35.8					
	25	30	4	13.7	21.1	21.1	18.9					
Aug.	1	30	4	20.2	29.1	28.2	28.1	30	4	46.6	54.9	53.8	54.1
	8	30	4	14.9	22.2	22.1	20.9	30	4	46.4	53.2	53.2	50.9

lost 2nd wire

φ Herculis $16^h\ 4^m\ 50^s\ +45^\circ\ 15'\ 49''$

1877												
Aug.	1	10	2	2.4	11.7	11.9	10.9	10	3	1.9	11.6	11.8	10.8
	8	10	2	6.9	15.6	16.2	14.0	10	2	55.1	4.1	3.7	2.8

some extra wires

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1877cbae.proj.1394R

ζ Ophiuchi $16^h\ 7^m\ 48^s\ -3^\circ\ 22'\ 15''$

1877			E	F	G	H			E	F	G	H
July 24	45	4	8.0	21.4	21.8	16.4	50	0	8.7	22.1	24.6	17.9
25	45	4	23.1	37.7	38.1	32.1	50	0	8.7	22.1	24.5	18.4
Aug. 1	45	4	18.8	34.1	34.1	30.2						
8	45	4	17.2	31.2	31.9	26.3	50	0	27.4	41.5	43.8	38.1

ε Ophiuchi $16^h\ 11^m\ 42^s\ -4^\circ\ 23'\ 10''$

1877												
July 24	50	0	10.4	23.1	25.8	18.3	50	1	15.0	28.5	30.9	24.2
25	50	0	4.1	17.9	20.4	13.4	50	1	6.3	19.9	21.9	16.0
Aug 1	50	0	8.3	22.1	24.1	19.2	50	1	19.3	34.8	36.4	31.1
16	50	0	26.2	38.0	42.8	35.9	50	1	25.6	37.1	41.4	35.0

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1877phae.proj.1394R

K = 19? Ursae Min. 16h 14m 22s +76° 9′ 5″

1877			E	F1	G	H			E	F	G	H
July 24	15	2	20.3	27.6	26.1	26.8	15	2	37.4	43.7	44.0	43.6
25	15	2	11.9	18.9	18.9	19.8	15	2	34.9	42.8	43.1	41.8
Aug. 6	15	2	13.1	20.2	19.4	20.3	15	2	28.5	36.6	33.7	33.9
8	15	2	39.6	47.2	46.5	47.9						

η Draconis 16h 22m 8s +61° 47′ 5″ 2

1877												
July 26	40	0	42.5	50.2	51.6	49.0	40	1	13.9	20.9	21.2	~~18.9~~
Aug. 1	40	0	59	8.1	7.7	6.1	~~40 0 58.5~~		~~4.8~~	~~3.9~~	~~2.6~~	
	md wire v foll.											
6	40	0	58.5	4.8	3.9	2.6	40	1	14.2	20.8	20.7	19.8
	lost F1. 2 wires											
8	40	0	47.1	53.2	54.5	53.9						
	lost F1. 2 wires											
16	40	0	5-19	58.0	0.2	57.4						
	Aq. foil											

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1877cbae.proj.1394R

ρ Herculis	h 16	m 24	s 51	+ 21°	45′	49″									
1877				E	F	G	H			E	F	G	H.		
Aug. 1	40	1	44.0	56.9	54.9	54.5	40	2	33.9	46.4	43.8	43.8			
6	40	1	39.2	50.4	49.1	46.8									
16	40	1	33.8	44.9	45.7	43.8	40	2	40.4	51.1	50.6	48.9			

A Draconis	h 16	m 28	s 14	+ 69°	2′	18″	
1877							
July 26	25	1	4.1	10.4	10.6	9.9	
Aug. 1	25	1	9.1	17.1	17.5	17.1	
6	25	1	5.4	11.9	11.8	10.6	
8	25	1	10.7	15.5	16.8	16.9	
16	25	0	54.9	0.5	2.4	2.5	False stroke follo. 1st G

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1877phae.proj.1394R

σ Herculis $16^h\ 30^m\ 4^s$ $+42^\circ\ 41'\ 45''$

1877			E	F	G	H			E	F	G	H
July 26	45	1	45.7	14.6	17.2	13.8	45	1	52.7	3.1	3.2	1.2
Aug. 1	45	0	52.8	2.2	4.4	1.1						
6	45	1	5.1	13.6	14.5	11.9	45	1	55.0	3.2	3.9	1.4
8	45	0	58.9	7.8	8.9	6.8	45	1	50.6	59.2	0.3	58.8
	lost A5											
16	45	0	56.1	3.7	6.5	3.4	45	1	44.2	50.9	55.3	51.9

Gr. 848 $4^h\ 32^m\ 3^s$ $+75^\circ\ 42'\ 33''$ $104^\circ\ 18'$

1877												
Aug. 6	10	2	28.3	37.6	33.2	—	10	2	12.9	22.3	18.4	17.3

perhaps lost last stroke of 1st 8

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1877phae.proj.1394R

20 H. Cephei		h 4	m 37	s 2	+80°	51′	99°	9′						
1877					E.	F.	G.	H.			E.	F.	G.	H.
July	24	25	3		27.4	35.9	31.8	31.2	25	3	17.2	25.5	20.9	20.4
	25	25	3		20.9	30.1	26.2	25.6	25	3	12.1	21.4	17.4	16.9
Aug.	6	25	3		31.5	40.3	35.1	34.6						
	8	25	3		30.7	38.9	35.0	34.8	lost wires 1, 2, 6 & 7					
	16	25	3		26.6	33.9	31.5	30.9						

η Herculis		h 16	m 38	s 37	+39°	9′	4″							
1877														
Aug.	1	15	2	58.1	7.9	8.1	6.2	15	2	52.5	3.1	2.1	2.1	
	6	15	2	54.9	4.2	3.9	2.1	15	3	54.9	4.1	3.2	2.3	
	8	15	3	11.9	21.6	21.1	20.8	15	4	2.1	11.3	10.8	10.2	
	12	15	2	56.9	5.4	6.1	4.5	15	3	52.6	1.2	1.9	59.4	
	16	15	3	3.1	11.3	13.0	10.8	15	3	3.1	49.5	48.2	49.1	

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1877phae.proj.1394R

Gr. 2377 $16^h\ 42^m\ 56^s\ +57^\circ\ 0'\ 20''$

1877			E	F	G	H			E	F	G	H
July 24	25	2	34.9	41.8	42.9	39.1	25	3	16.4	23.2	24.1	20.9
25	25	2	41.5	49.7	50.5	46.7	25	3	14.4	22.2	22.9	20.2
26	25	2	33.7	42.1	41.6	39.7	25	3	19.9	27.9	27.9	25.5
Aug. 6	25	2	26.9	34.1	33.4	31.1	25	3	24.3	31.2	29.2	28.2
7	25	2	35.6	44.4	44.1	42.1	25	3	24.9	33.2	31.1	29.9
8	25	2	38.6	45.2	45.4	44.3	25	3	20.5	28.3	27.4	27.2

lost A 2' false stroke afterwires

no more

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

1877												
July 24	50	3	0.4	12.8	12.0	7.8	50	3	40.8	52.1	53.5	48.9
25	50	3	3.8	16.2	16.4	11.9	50	3	49.8	2.5	1.1	57.8
26	50	2	46.9	59.5	58.9	56.3	50	3	44.6	57.2	56.9	53.9
Aug. 7	50	2	46.4	58.4	57.8	54.4	50	4	9.6	21.9	20.7	18.5
8	50	2	54.2	6.3	4.9	2.8	50	3	57.7	8.8	7.8	5.5
11	50	2	56.0	7.6	8.7	4.8	50	3	50.0	2.1	2.2	58.7

no more

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1877phae.proj.1394R

ε Herculis 16h 55m 30s +31° 6′ 42″

1877

			E	F	G	H			E	F	G	H
July 24	20	0	56.1	6.9	5.4	4.6	20	1	50.2	0.9	59.5	57.8
25	20	0	43.9	54.2	54.6	51.8	20	1	40.9	51.4	52.1	49.8
26	20	0	42.1	53.9	53.8	52.3	20	1	40.4	52.9	50.8	50.6
Aug. 6	20	0	57.1	8.1	6.7	5.8	20	2	5.0	16.2	15.4	13.1
7	20	0	51.1	2.1	0.8	59.9	20	2	5.5	16.8	15.6	13.0
8	20	0	47.1	58.1	56.5	55.9	20	1	41.9	53.1	51.9	50.4

no more

19 H. Camelop. 5h 1m 59s +79° 4′ 54″ 100° 55′

1877

July 26	30	4	54.9	2.4	58.9	58.1	30	4	26.8	34.2	30.4	30.1
Aug. 7	30	4	46.4	54.2	49.4	50.9	30	4	46.8	25.1	20.0	21.6
8	30	4	43.6	50.5	46.1	46.4						
12	30	4	28.9	36.1	34.9	34.7	lost 1st wire. Rej. 1st & 8					
16	30	4	24.7	31.2	27.2	28.0						

Rej 5 pr. the R d'wns.

ε Ursæ Min. 16 59 +82 15

1877

July 26	10	4	35.1	44.0	39.6	43.1
Aug. 7	10	4	21.9	31.4	25.8	29.9
8	10	4	18.9	26.9	22.1	25.6
11	10	3	53.5	1.9	57.3	0.1
12	10	4	11.1	19.1	15.9	18.2
16	10	4	17.8	23.6	21.2	24.7

July 26	10	4	4.1	12.3	8.7	11.5
Aug. 7	10	4	19.8	27.7	24.5	26.3

no more

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1877phae.proj.1394R

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

1877			E	F	G	H			F	G	H
July 24	20	4	29.3	43.9	45.8	37.9	25	0	36.5	51.5	53.2	45.7
25	20	4	32.0	47.2	47.4	41.1	25	0	32.5	48.2	49.6	40.7
Aug. 8	20	4	34.5	49.8	49.9	44.2	25	0	42.2	58.1	58.4	51.9
16	20	4	21.6	36.6	37.5	31.2	25	0	23.1	38.2	46.1	33.9
22	20	4	29.1	42.1	46.6	38.9	25	0	29.1	43.1	47.1	38.7

44 Ophiuchi $17^h\ 18^m\ 44^s - 24^\circ\ 3'\ 27''$

1877												
July 24	25	4	12.4	27.9	27.6	21.1	30	0	9.5	24.9	26.5	19.3
25	25	4	0.1	15.2	15.5	9.1	25	4	59.4	14.0	14.4	7.5
29	25	4	3.8	20.6	20.7	15.5	30	0	2.6	19.9	21.4	15.2
Aug. 8	25	4	12.7	28.2	27.8	22.2	30	0	20.2	36.6	37.7	30.5
12	25	4	7.0	22.3	22.9	17.3	30	0	5.8	21.4	23.6	16.4
16	25	4	4.8	18.9	20.4	14.2	30	0	3.2	17.9	20.3	13.9

no more

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1877phae.proj.1394R

Gr. 966 — h 5 m 23 s 1 +74° 57′ 22″ 105° 3′

1877		E	F	G	H			E	F	G	H
July 24	25	2	32.5	41.1	36.2	36.1	25	2	7.9	15.4	11.5	10.6
25	25	2	16.9	25.5	20.9	21.9	25	2	7.2	15.2	12.0	11.7
29	25	2	35.2	44.9	41.6	41.9	25	2	6.8	16.4	12.4	13.4
(Aug. 8?)	25	2	26.4	33.9	29.5	30.6	25	2	5.4	13.4	8.9	9.6
11	25	2	6.2	15.2	11.4	10.5	25	1	54.1	3.1	58.7	59.4
	lost pt. 3 wires											
16	25	2	18.6	26.5	24.4	23.4	25	2	1.8	8.6	6.3	6.3

no more

β Draconis — h 17 m 27 s 37 +52° 23′ 40″

1877						
July 24	0	4	1.1	8.8	9.7	5.9
25	0	4	8.8	16.3	16.6	15.0
29	0	4	6.4	16.0	15.2	14.5
Aug. 6	0	3	54.5	3.2	1.4	59.8
7	0	4	1.1	9.5	8.3	8.3
8	0	4	2.7	10.9	9.6	9.8

no more

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1877phae.proj.1394R

ζ Draconis 17h 32m 28s +68° 12′ 52″

1877			ε	ζ	η	θ			ε	ζ	η	θ
July	24	15 0	21.5	27.0	27.3	29.1	15	0	55.8	1.1	0.9	2.0
	29	15 0	26.8	24.4	33.2	36.1	15	0	47.6	54.1	54.4	57.2
Aug.	7	15 0	10.4	17.1	16.5	18.3	15	0	46.4	52.4	52.3	54.4
	8	15 0	14.6	19.7	19.5	21.6	15	0	45.5	50.7	50.6	52.4
	11	15 0	10.1	16.3	16.9	17.8	15	0	45.2	51.1	51.1	53.1
	14	15 0	16.6	21.4	24.2	25.9	15	0	43.3	47.8	50.4	52.0

no more

ι Herculis 17h 35m 56s +46° 4′ 24″

1877							
July	24	20 3	13.1	21.5	21.8	18.9	~~15.0~~
	29	20 3	14.5	24.6	24.1	23.2	
Aug.	7	20 3	8.8	16.7	16.9	15.6	5 wires
	8	20 4	13.5	21.3	20.4	19.9	
	14	20 3	5.5	11.9	14.4	12.2	
	16	20 3	9.4	16.2	17.9	15.1	20 3 47.2 5 3.8 5 6.0 5 2.8

no more

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1877phae.proj.1394R

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

1877

	E	F	G	Gb	E	F	G	Gb
July 24	35 4 15.2	20.3	19.4	20.4	35 4 51.0	56.4	54.9	57.0
29	35 4 13.6	21.0	19.8	22.8	35 4 43.9	50.5	49.6	52.2
Aug. 6	35 4 45.2 lost 1st 4 last wires	50.8	59.4	49.9	40 0 9.8	15.8	15.3	15.0
7	35 4 21.4	28.2	26.1	29.3	35 4 45.4	52.3	51.1	53.2
11	35 4 15.8	22.3	21.9	23.4	35 4 48.0	53.8	53.1	54.6
16	35 4 19.5	24.5	25.6	25.3	35 4 37.5	42.4	42.6	43.9

no more

γ Ophiuchi $17^h\ 41^m\ 37^s\ +2^\circ\ 45'\ 21''$

1877

July 24	40 1 30.5	44.1	43.6	40.1	40 2 42.9	55.9	55.9	57.9
Aug. ~~29~~ 6	40 1 28.5	42.2	40.8	37.8	40 2 36.4 perhaps disturbed setting for this 2nd reading	49.9	48.5	45.4
7	40 1 22.2	36.1	34.2	32.8	40 2 28.2	42.2	40.1	38.8
8	40 1 15.6	28.5	27.5	24.4	40 2 36.9	50.1	48.8	46.0
11	40 1 26.3	40.3	39.5	36.6	40 2 31.5	44.1	44.3	41.6
14	40 1 23.4	36.0	37.8	33.4	40 2 36.9	48.7	50.7	47.3

no more

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1877phae.proj.1394R

ψ^1 Draconis $17^h\ 44^m\ 10^s$ $+72°\ 12'\ 34''$

1877		E	F	G	H		E	F	G	H
July 29	15 0	26.5	33.5	33.7	34.1	15 0	50.1	56.8	56.5	58.2
Aug. 6	15 1	5.1	12.0	11.5	10.9	Last 3 wires. Pr. #				
8	15 0	55.0	1.4	0.2	1.2	15 1	16.9	22.5	21.8	23.0
11	15 0	58.7	5.3.	5.2	5.6	15 1	14.1	20.9	21.3	21.2

θ Herculis $17^h\ 51^m\ 56^s$ $+37°\ 15'\ 51''$ Mer. - #1 N.P.

1877										
July 24	10 1	26.9	35.4	36.4	35.0	10 2	21.6	31.2	31.1	34.9
29	10 1	56.3	7.2	6.4	7.7	Lost 4 1<2				
Aug. 11	10 1	50.1	58.9	59.0	59.2	lost 1st F. wire				
23	10 1	55.7	H.4	5.8	H.6					
28	10 1	16.4	25.0	26.9	25.5	10.2	9.1	17.9	19.6	17.1

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1877phae.proj.1394R

Star on pr. page after this

ξ Draconis	$17^h\ 51^m\ 22^s$	$+56^\circ\ 53'\ 34''$								
1877		E	F	G	H					
July 29	30 4	11.6	19.3	19.1	18.1					
Aug. 8	30 4	48.0	55.2	53.6	52.2					
11	30 4	11.9	18.4	19.1	17.2					
23	30 4	10.7	16.2	18.4	14.8					
30	30 4	15.9	21.5	23.8	19.6	30 4	56.4	2.2	3.4	0.0

γ Draconis	$17^h\ 53^m\ 42^s$	$+51^\circ\ 30'\ 15''$								
1877										
July 29	55 2	22.0	30.2	30.2	29.9	55 3	19.1	28.1	26.7	26.9
Aug. 6	55 2	21.4	29.6	28.3	26.7	55 3	3.9	11.4	10.9	9.8
8	55 2	25.3	33.5	32.6	31.8	55 3	5.6	13.6	12.6	11.4
~~11~~	~~55 2~~	~~18.1~~	~~26.6~~	~~26.2~~	~~24.9~~					
23	55 2	13.6	20.1	22.5	19.3	55 2	57.1	58.1	59.1	57.1
28	55 2	56.6	2.6	4.4	2.3	55 3	18.9	25.1	27.0	23.9
30	55 2	12.3	19.2	20.0	17.2	55 2	46.2	58.5	55.1	57.5

Lost A+1

No more

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1877phae.proj.1394R

35 Draconis 17h 55m 3s +76° 58′ 40″

1877			E	F	G	H			E	F	G	H
July 29	30	0	5.4	13.0	10.9	14.9						
Aug. 6	30	0	0.4	7.7	4.9	6.3	30	0	20.1	27.2	24.8	27.1
	lost 4 of 2 wires											
8	30	0	6.9	13.1	10.8	13.1						
11	25	4	46.5	53.6	51.5	54.1	30	0	5.2	12.7	10.8	13.4
23	25	4	46.9	52.2	52.8	53.5	30	0	0.1	5.7	6.5	7.5

γ² Sagittarii 17h 57m 47s −30° 25′ 24″

1877												
July 29	50	0	7.8	22.9	22.2	18.2						
Aug. 8	50	0	4.1	18.7	18.2	13.7	50	1	2.1	16.8	15.7	11.1
11	50	0	7.1	22.1	22.2	17.2	50	1	7.2	23.1	21.8	17.2
14	50	0	3.8	16.2	19.3	12.9	50	1	0.5	13.5	15.7	10.5
23	50	0	10.4	23.8	26.4	20.6	50	1	3.0	16.2	17.9	12.6

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1877phae.proj.1394R

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

1877		E	F	G	H		E	F	G	H
July 29	50 4	47.9	1.2	0.0	59.1	Lost A+1				
Aug. 6	50 4	19.6	32.1	30.7	26.6					
	false 8 pr.									
8	50 4	2.8	14.1	14.0	10.2	50 4	59.1	11.3	11.3	7.0
11	50 4	3.6	15.2	15.8	11.8	55 0	12.5	25.1	26.0	22.5
23	50 3	53.6	4.9	6.1	2.4	50 4	56.0	6.2	8.7	4.3
28	50 4	7.5	18.5	19.9	16.3					

no more

μ Sagittarii $18^h\ 6^m\ 17^s\ -21^\circ\ 5'\ 21''$

1877										
Aug. 8	30 1	5.3	19.9	21.1	15.0	30 2	2.7	17.8	18.7	11.2
11	30 0	58.4	13.6	15.8	8.9	30 1	59.5	14.5	16.7	10.2
23	30 0	51.9	6.4	10.1	2.8	30 2	3.0	17.1	20.5	13.0
Sept 12	30 1	0.7	16.1	18.2	12.9	30 1	5.0	5.8	6.7	3.6

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1877phae.proj.1394R

41 Draconis $18^h\ 9^m\ 30^s$ $+79^\circ\ 59'\ 0''$

1877			E	F.	G	H	
Aug. 11	25	4	35.5	42.8	38.2	43.9	pr.#
23	25	4	40.2	46.4	44.7	41.5	foll. star
Sept. 12	25	4	26.5	35.5	30.3	34.3	reg. order.

109 Herculis $18^h\ 18^m\ 22^s$ $+21^\circ\ 42'\ 51''$

1877												
Aug. 6	40	4	15.0	27.2	23.1	22.9	45	0	2.9	13.6	12.2	9.9
11	40	4	11.2	22.4	19.8	19.4	45	0	6.3	18.2	16.8	15.6
23	40	4	16.4	27.8	26.1	24.7	45	0	7.5	17.4	19.4	16.2
Sept 11	40	4	42.7	54.1	57.8	51.4						

5 wires

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1877phae.proj.1394R

κ Draconis $18^h\ 23^m\ 18^s\ +72^\circ\ 40'\ 41''$

1877		E	F	G	H		E	F	G	H
Aug.	6	45 2	39.4	45.6	45.4	44.7	45 3	4.1	10.2	8.3	10.8
	11	45 2	25.9	32.2	31.6	32.1	45 2	55.6	1.5	0.5	1.6
	12	45 2	36.8	42.1	43.5	43.2	45 3	2.9	8.3	8.3	8.8
	22	45 2	34.0	39.2	40.4	39.0	45 2	52.3	57.2	57.8	57.4
	28	45 2	17.7	22.5	24.2	22.9	45 2	27.4	33.2	34.5	32.4
	30	45 2	16.1	22.1	22.7	22.6	45 2	28.9	35.3	36.8	34.8

no more

l Aquilae $18^h\ 28^m\ 24^s\ -8^\circ\ 19'\ 45''$

1877										
Aug.	6	45 1	8.5	20.2	23.5	15.7	45 2	12.9	25.5	28.3	20.4
	11	45 1	1.6	13.9	18.4	11.7	45 2	13.8	26.1	29.8	23.1
	12	45 0	58.0	9.5	15.0	5.6	45 2	2.1	13.3	18.4	10.2
	27	45 1	32.4	43.1	49.2	41.4	45 2	13.4	23.8	29.5	22.4
	28	45 0	57.7	8.2	15.5	6.0	45 2	8.4	19.9	25.1	16.2
	30	45 0	57.5	9.3	15.1	5.6	45 1	53.7	6.9	12.4	2.9

no more

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1877phae.proj.1394R

c Draconis $18^h\ 40^m\ 12^s + 55^\circ\ 24'\ 47''$

1877		E		F	G	K		C		H	G	H
Aug	23	0 2	51.5	57.6	59.4	56.8	0 3	18.5	24.9	25.9	24.1	
	28	0 3	7.6	13.5	16.1	13.5	0 3	20.4	27.2	28.6	26.9	
	30	0 2	39.2	45.3	47.8	44.9	0 3	31.6	27.9	38.5	36.9	
Sept	11	0 2	49.9	57.9	57.1	56.9	0 3	17.1	25.0	24.5	23.9	
	12	0 3	9.0	15.7	15.2	14.7	0 3	21.9	39.3	38.9	39.6	
	13	0 2	34.9	41.5	41.4	38.6	0 3	15.0	21.9	22.1	18.6	

Bgm. 151° for 151° 4 double strokes

Lost

lost A+1

no more

B Lyrae $18^h\ 45^m\ 28^s + 33^\circ\ 13'\ 7''$

1877												
Aug.	11	10 4	1.9	11.0	12.6	11.0	10 4	54.3	4.2	4.4	3.4	
	12	10 3	59.9	8.1	9.1	7.1	15 0	5.0	14.4	16.9	15.1	
	16	10 3	49.6	57.1	0.1	57.6	10 4	39.9	47.8	49.9	48.1	
	22	10 3	58.0	6.2	8.6	6.1	10.4	56.1	4.1	6.0	2.9	
	23	10 3	51.3	59.1	1.7	59.5	10 4	39.9	46.9	51.1	47.7	
	27	10 3	59.9	8.1	11.0	8.0	10 4	53.6	1.1	4.1	1.4	

no more

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1877phae.proj.1394R

τ Sagittarii $18^h\ 47^m\ 31^s\ -26^\circ\ 26'\ 58''$

1877		E	F	G	H		E	F	G	H
Aug	23	50 1	5-8.5	13.2	15.9	8.5	50 2	55.1	8.3	11.7	4.9
	27	50.1	56.5	11.2	15.1	6.7					
	28	50 1	57.2	11.4	14.4	7.9	50 2	40.1	53.7	56.4	49.9
	30	50 1	48.6	4.1	5.4	58.2					
Sept	13	50 1	57.6	11.4	13.1	6.9	50 2	49.5	4.5	5.8	59.4
	15	50 1	53.8	7.9	10.9	4.4	50 2	48.0	59.4	0.6	03.1

No more

o Draconis seq. $18^h\ 49^m\ 21^s\ +59^\circ\ 14'\ 9''$

One reading

1877										
Aug.	12	10 3	15.9	27.4	28.8	26.8				
	23	10 3	38.1	43.4	45.9	42.2	10 4	3.2	7.9	10.9	8.2
Sept	12	10 3	17.4	24.4	25.4	22.8				
	13	10 3	23.6	30.4	30.3	26.9				
	15	10 3	22.2	28.5	28.3	25.9				
	16	10 3	21.7	28.4	29.9	28.9				

rej. A +1/2

Rej. A +1

No more

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1877phae.proj.1394R

Star after this first
Alternate with star on fold page

48 Draconis 18h 54m +57° 38′

1877		E	F	G	H		E	F	G	H
Aug. 16	45˙ 3	31.1	36.5˙	38.5	36.7	45˙ 3	50.9	56.3	57.0	56.8
22	45˙ 3	22.9	29.2	30.1	27.2	45˙ 4	17.5˙	23.6	24.5˙	22.2
30	45˙ 3	33.9	40.1	41.1	38.2	45˙ 4	0.4	6.8	6.7	5.1
Sept˙ 12	45˙ 3	26.8	32.5˙	33.2	32.1	45˙ 3	57.7	4.1	2.9	2.6
15˙	45˙ 3	19.0	25.1	26.5˙	23.9	45˙ 4	21.4	27.1	26.9	26.2
16	45˙ 3	22.5˙	27.8	28.9	28.3	45˙ 3	58.3	4.1	4.8	4.2

no more

50 Draconis 18h 50m 24s + 75° 17′ 6″

1877									
Aug. 12	10 1 8.2	13.6	14.4	14.0	10 1	26.4	32.8	32.5˙	33.2
Sept˙ 11	10 1 13.8	21.1	18.7	19.7	10 1	30.9	37.5˙	36.4	36.9
12	last 2 wires 10 1 2.7	10.0	8.9	10.3	10 1	16.7	23.7	22.9	24.5˙
13	10 1 1.6	7.4	7.4	5.5˙	10 1	15.3	21.1	21.1	19.5˙
15˙	10 0 57.7	4.8	4.9	4.7	10 1	19.7	25.1	25.4	25.6
16	10 0 59.9	4.9	5.6	6.9	10 1	20.5˙	26.3	27.5˙	28.9

no more

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γ Lyrae	h 18	m 54	s 16	+32°	31′	9″							
1877			E	H	G	K			E	H	G	K	
Aug. 23	55	0	44.3	52.8	56.3	52.8	55	1	48.9	56.9	0.2	57.1	
27	55	0	44.1	52.4	55.7	52.9	55	1	43.9	52.5	56.8	53.0	
28	55	0	53.3	1.5	4.7	1.3	53	1	44.2	51.0	53.9	51.6	
Sept 11	55	0	50.7	0.1	0.9	57.9	55	1	30.1	39.4	40.1	38.6	
13	55	0	53.1	1.4	3.0	58.3	55	1	34.9	43.0	46.7	41.1	
18	55	0	47.4	56.4	58.1	54.2	55	1	41.6	52.2	52.0	48.7	

No more

3 Draconis	h 18	m 55	s 55	+71°	7′	47″							
1877													
Aug. 12	20	0	17.9	24.8	24.5	24.4	20	0	43.6	49.8	50.1	51.0	
23	20	0	16.2	22.2	23.8	23.1	20	0	42.1	47.3	49.9	49.4	
27	20	0	27.1	32.9	34.3	34.0	20	0	42.0	46.4	49.2	48.9	
28	20	0	21.8	27.2	28.9	28.2	20	0	37.4	42.6	44.8	44.0	
30	20	0	16.9	23.1	24.5	23.4	20	0	33.8	39.9	40.2	39.7	
Sept 11	20	0	5.8	13.2	12.7	12.6	20	0	29.0	35.9	35.1	36.0	

no more

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49 Draconis $18^h\ 58^m$ $+55^\circ\ 27'$

1877

			E	F	G	H					
Aug	23	55	3	27.9	34.4	35.2	32.9	Rej. 2nd	δ		
	27	55	4	13.5	18.9	19.9	18.8				
	30	55	3	32.1	38.7	38.8	37.8	55	4	11.8	18.7	18.8	17.2
Sept.	11	55	3	34.3	42.1	39.9	40.8	55	4	14.0	20.6	19.4	19.9
	12	55	3	33.6	39.6	39.5	39.1	55	3	58.1	4.3	2.7	3.9
	13	55	3	32.1	38.3	38.5	35.9	55	3	48.6	55.0	54.4	50.2

no more

λ Aquilae $18^h\ 59^m\ 37^s$ $-5^\circ\ 4'\ 6''$

1877

Aug	23	30	0	12.0	22.9	27.1	21.8	30	1	12.9	24.2	28.3	22.1
	28	30	0	14.9	26.3	31.1	24.3	30	1	15.9	28.2	31.9	25.4
Sept.	15	30	0	13.9	26.9	30.2	23.9						
	16	30	0	19.9	32.2	36.1	31.1	30	1	14.3	26.2	29.2	24.5
	18	30	0	18.8	31.1	34.0	26.9	30	1	14.0	26.9	28.0	22.3
	19	30	0	14.0	28.8	29.1	23.1	30	1	25.3	39.7	40.2	34.2

no more

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1877phae.proj.1394R

51 Draconis $19^h\ 2^m\ 7^s\ +53^\circ\ 12'\ 8''$

1877

		ε	ζ	η	κ
Aug	23	15⁻ 0 1.0	7.4	9.5⁻	7.2
	28	15⁻ 0 7.6	14.4	17.6	13.5⁻
Sept.	13	10 4 53.9	0.8	0.5⁻	56.9
	15	15⁻ 0 1.7	9.1	10.1	7.8
	16	false stroke in A 15⁻ 0 12.3	19.9	22.0	20.0
	19	10 4 56.5⁻	5.0	15⁻ 2.1	15⁻ 0 50.9

		15⁻ 0 41.9	48.9	50.4	45.6
		57.2	57.4	57.8	

no more

ι Lyrae $19^h\ 2^m\ 50^s\ +35^\circ\ 54'\ 18''$

1877

Aug	28	30 3 6.5⁻	15.0	17.6	15.7	30 3	50.2	58.8	0.4	0.0
Sept	11	lost 1st 2 wires 30 3 13.6	21.9	21.5⁻	21.5⁻	30 3	43.3	52.1	57.8	57.7
	12	lost A+1 30 3 9.9	18.2	19.1	19.1	30 3	48.8	57.7	57.7	57.8
	16	lost A+1 false obs. pr. 30 3 23.3	33.4	34.4	35.0	30 3	46.2	54.2	58.6	58.8
	18	30 2 44.9	53.9	54.6	52.9	30 3	26.4	35.3⁻	36.1	35.0
	22	30 2 46.4	56.7	58.8	55.4	30 3	30.9	41.7	38.6	40.9

no more

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1877phae.proj.1394R

53 Draconis $19^h\ 9^m\ 18^s$ $+56°\ 38'\ 48''$

1877			E	H	G	K		E	H	G	K
Aug 30	45	3	31.8	37.8	39.5	36.6	45.4	16.6	22.2	24.4	19.7
Sept. 11	45	3	39.7	46.7	46.4	45.1	45.4	9.5	16.3	15.3	15.4
" 12	45	3	31.1	37.9	37.0	36.3	45.4	10.5	17.2	16.8	16.5
18	45	3	38.4	44.8	44.5	41.9					
19	45	3	43.0	51.1	48.9	48.8	45	4	21.5	29.8	25.6	26.8
22	45	3	36.6	38.4	33.9	33.9	45	4	16.1	23.5	20.4	20.2

no more

d Sagittarii $19^h\ 10^m\ 19^s$ $-19°\ 10'\ 21''$

1877											
Sept 13	35	0	53.9	8.4	10.2	2.8	35	1	36.1	50.1	52.8	43.9
15	35	0	52.3	6.9	9.9	3.0	35	1	43.7	58.1	59.9	53.1
16	35	0	52.9	7.1	10.0	3.9	35	1	51.2	57.1	7.4	1.6
18	35	0	56.5	12.1	13.8	4.9	35	1	48.6	3.4	4.5	57.0
22	35	0	49.1	6.2	4.2	0.1	35	1	49.2	6.6	3.1	59.1

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1877phae.proj.1394R

S Draconis 19h 12m 31s +67° 26' 29"

1877

		E.	F.	G.	H.		E.	F.	G.	H.
Sept. 12	0 1	6.9	12.6	11.9	11.7	0 1	40.1	46.0	46.2	46.8
13	0 1	1.6	8.5-	8.7	8.1	0 1	15.1	22.1	20.8	19.5-
15-	0 1	12.3	18.5-	18.1	19.2	0 1	41.7	47.2	47.5-	47.5-
16	0 1	13.7	19.3	20.2	20.8	0 1	35.2	40.8	41.3	42.5-
18	0 1	16.0	24.5-	23.4	23.6	0 1	44.9	50.1	52.7	50.2
19	0 0	57.8	4.9	1.5-	4.5-	0 1	16.3	23.4	21.1	23.8

no more

α Cygni 19h 14m 13s +53° 8' 18"

1877

		E	F.	G.	H					
Sept 15-	15- 3	57.4	3.2	3.1	1.5-					
16	15- 3	58.2	4.0	4.5-	3.9					
18	15- 4	4.3	11.5-	10.5-	8.9					
19	15- 3	48.7	57.1	53.3	54.8					
22	15- 4	20.6	30.1	25.2	26.6	15- 4	57.8	0.8	33.9	58.4
23	15- 4 level- A+1	35.8	43.4	41.1	41.5-	15- 4	52.0	1.3	6.8	57.9

no more

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1877phae.proj.1394R

π Draconis $19^h\ 20^m$ $+65^\circ\ 25'$

1877		E	H	G.	H	E.	H.	G.	H.
Aug. 22	55 4	18.1	22.2	22.8	23.9	55 4	46.8	51.0	50.4	51.6
27	55 4	18.6	25.3	23.4	25.2	55 4	44.9	49.4	49.9	51 4
28	55 4	1.5	6.1	5.2	6.6	55 4	21.6	26.2	25.7	27.2
30	55 4	3.7	10.3	9.6	10.4	55 4	19.2	24.2	24.2	24.9
Sept. 11	55 3	59.6	5.2	1.6	5.6	55 4	19.1	25.8	22.9	25.9
19	55 4	4.4	11.5	6.8	11.1	55 4	40.5	46.2	43.5	46.9

no more

δ Aquilae $19^h\ 19^m\ 12^s$ $+2^\circ\ 52'\ 2''$

1877										
Sept 12	30 4	16.4	29.4	27.4	26.6	35 0	4.8	19.4	18.2	16.1
13	30 4	28.4	40.9	39.8	37.3	35 0	14.6	28.4	28.0	25.1
15	30 4	12.7	23.4	23.3	19.9	35 0	11.9	25.1	25.0	21.3
16	30 4	16.7	31.1	30.7	26.7	35 0	10.0	22.9	23.7	20.5
18	30 4	12.8	26.2	24.6	21.1	35 0	12.9	27.2	26.6	21.5
22	30 4	26.8	42.2	36.4	36.2	35 0	12.8	27.9	23.9	22.8

no more

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1877phae.proj.1394R

	h	m	s	°	′	″				
ζ Cygni	19	26	33	+51	27	50				
1877							E	F	G	H
Sept 13	53	4	18.0	26.1	26.4	23.6				
15	53	4	15.1	22.1	22.5	21.6				
16	53	4	16.3	23.6	25.3	23.2				
18	53	4	15.7	22.1	21.8	19.0				
19	53	4	12.2	20.9	18.9	19.1				
22	53	4	16.1	25.0	19.8	21.8				
				no more						

	h	m	s	°	′	″								
κ Aquilae	19	30	10	−7	18	11								
1877							E	F	G	H				
Sept 22	40.	4	27.6	41.5	39.8	36.1	45.	0	13.3	28.4	27.5	23.1		
23	40	4	20.1	33.8	33.9	30.0	45	0	14.7	27.1	29.1	23.9		
24	40	4	9.6	22.8	24.2	18.5	45	0	9.5	21.7	25.7	18.9		
26	40	4	5.9	21.7	28.9	16.7	40	4	59.9	14.9	17.6	9.7		

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1877phae.proj.1394R

θ Cygni $19^h\ 33^m\ 5^s\ +49^\circ\ 55'\ 55''$

1877		E	H	G	H		E	F	G	H
Aug 16	30	1	39.0	44.4	46.1	44.9	30	2	12.0	17.8	19.1	17.7
22	30	1	14.7	20.2	22.3	19.8	30	2	5.2	11.8	13.0	10.1
Sept. 23	30	1	false strokes after 57 lost 59									
	30	1	50.9	38.9	36.9	57.1						
26	30	lost A+1	4.1	15.6	16.4	12.4	30	1	5.2	4.0	3.1	0.9

c Cygni pr. $19^h\ 38^m\ 30^s\ +50^\circ\ 14'\ 16''$

1877							
Aug. 16	10	3	29.7	36.4	36.7	34.9	fold. star
22	10	3	17.3	23.1	24.2	21.6	both #'s 2nd & pr.
Sept. 23	10	3	16.9	22.8	24.1	21.9	2nd & pr., Both #'s
Sept. 26	10	2	56.6	7.3	6.6	4.5	
	10	3	39.3	49.1	48.1	46.0	
27	10	3	9.1	19.8	17.9	16.2	
	10	3	49.1	0.9	57.5	57.3	
Oct. 27	10	3 lost A+1	24.1	35.8	28.1	31.6	
	10	3	55.5	5.9	58.1	2.3	

no more

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1877hae.proj.1394R

20 Cygni	h 19	m 47	s 30	+52°	40′	37″					
1877				E	F1	G	H				
Aug 16	45	1	47.5	54.9	56.4	54.4					
23	45	1	59.0	6.3	7.7	4.8					
Oct 30	45	1	54.7	7.9	2.9	5.2	45 2	34.4	46.4	42.7	45.1

2 H. Cephei
1877

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1877phae_proj_1394R

τ Aquilae $19^h\ 58^m\ 2^s\ +6^\circ\ 55'\ 37''$

1877			E	A	G	K			E	A	G	K
Aug. 22	30	0	42.1	55.0	53.9	51.8	30	1	49.9	3.1	3.4	58.7
Oct 18	30	0	44.4	2.9	59.5	56.9	30	1	30.1	48.8	47.1	44.0
28	30	0	31.6	49.5	44.6	43.8	30	1	28.9	43.1	26.9	37.4
30	30	0	32.2	50.4	48.6	46.1	30	1	32.1	50.4	47.9	46.1
Nov 1	30	0	32.8	51.2	48.3	47.0	30	1	30.1	49.1	44.5	43.8
4	30	0	54.8	13.8	8.3	7.3	30	1	52.8	10.5	4.2	5.8

~~66 Draconis $20^h\ 3^m\ 35^s\ +81^\circ\ 37'\ 58''$~~

1877

Oct. 7.

Reject

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1877phae.proj.1394R

Gr. 1408 — h m s 20 3 47 +76° 8' 3"

1877

	8	E	F	G	H		E	F	G	H
Sept. 18	15	4	57.5	3.9	1.1	2.2	20	0	17.3	23.7	22.6	23.4
27	15	4	52.4	3.1	58.4	0.0	20	0	14.9	24.1	21.9	24.1
~~30~~	~~20~~	~~0~~	~~6.9~~	~~17.1~~	~~15.5~~	~~16.0~~	~~20~~	~~0~~	~~22.1~~	~~32.1~~	~~31.2~~	~~33.8~~
	Lost											
Oct 28	15	4	57.5	8.8	59.3	5.2	20	0	12.4	23.6	16.6	22.7
30	20	0	19.9	31.4	26.8	33.4	20	0	26.9	38.2	33.5	40.1
Nov. 4	15	A-1 4	53.4	7.2	57.5	7.5	20	0	13.9	26.9	19.6	26.1

2 33 Cygni — h m s 20 10 30 +56° 11' 8"

1877

~~Oct 15~~	~~15~~	~~0~~	~~41.9~~	~~53.9~~	~~57.0~~	~~57.1~~	~~15~~	~~1~~	~~38.4~~	~~45.9~~	~~43.6~~	~~44.6~~
Oct. 18	15	1	8.1	20.2	17.1	17.9						
27	15	1	10.9									
28	15	0	57.9	8.2	1.9	6.1	15	1	29.3	40.4	33.4	37.8
30	15	1	6.6	18.1	14.1	17.2	15	1	35.3	45.9	41.9	46.0
Nov 1	15	0	52.7	3.9	59.1	2.1						
4	15	1	24.9	38.1	31.8	26.2	15	1	47.3	0.2	52.8	57.1
			Lost 1st 2 wires									

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