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KG
11366
v.378

General Catalogue
Circle Readings - Explanatory Remarks
B4 1871-2

Polar Catalogue
Circle Readings - Explanatory Remarks
A1 1872-3

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First Part

General Catalogue

Observations

Circle Readings

B4

1871-2

Second Part

Polar Star Observations

Observations – Circle Readings

Chronograph Record.

A1

1872-3

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10.1086/apjs.1982..

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B.Ab 3121
9 2 28
−25 20

1872	Mai	1.	40	1	32.9	15.6				
		2	40	1	27.9	11.9				
		17								

Mali
9 4 30
−29 00

1872	Apr.	1	10	1	27.0	8.0	10	0	38.8	20.0
		2	10	1	4.0	45.0				
		6	10	1	41.6	26.3	0		38.5	24.1
		17	10	1	29.1	14.9				
		21	10	1	37.5	29.7				

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θ Hydrae								
9 7 42	1872	Apr. 1	30	1	48.0	25.2	1	9.0 47.0
+2 5 2		2	30	1	57.0	28.2	1	1.9 40.1
		6	30	1	26.8	9.4		
		17	30	1	56.1	38.9		
		21	30	1	46.3	36.2		
		23	30	1	19.5	4.4		
		29	30	1	57.2	44.7		

38 Lyncis	1872	Apr. 1	0	3	4.8	37.0	foll. star.
9 10 49		2	0	3	8.0	42.0	
+37 22		6	0	3	2.2	42.5	
		17	0	3	9.0	48.0	
		21	0	3	2.0	48.4	
		23	0	2	29.5	10.7	
		29	0	2	47.5	31.6	

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8 Cancri
9 11 39
+18 16

1872 Apr. 1 5 3 22,3 0.7
2 5 3 16.7 54.8
6 5- 3 5.7 48.2
17 5 3 37,5 22.4
23 5- 3 25.0 14.7

2 nights

α Lyncis
9 13 14
+34 57

1872 Apr. 1 25 2 33.7 18.4
2 25 2 11.8 47.1
6 25- 1 53,1 32.5
21 25- 2 9,3 55.4
23 25- 2 28,0 10.3

2 nights

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h Mali

9 15 50

−25 24

			dm					
2	1872	6	45	1	46.9	34.8		
		19	45	1	57.8	49.9	1 55.3	47.1
		21	45	1	53.6	48.2		
		29	45	1	8.8	59.2	a? 6.2	

1 Proc

9 18 32

+81 54

1872	Mar 28	30	1	~~1.1~~	27.4	2nd S			
	Apr. 1	30	1	6.4	31.7	30	0	22.6	−11.7
	2	30	1	4.7	30.7	30	0	29.2	55.9
	6	30	0	55.3	26.8	0		29.0	2.2
	19	30	0	53.8	26.9	0		37.0	10.0
	21	30	0	53.1	31.4	M 82,			
	29	30	0	57.5	27.0	Cal-a			

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a Hydrae
1872 9 24 18
−8 05

Mar 28 25 3 25.2 7.9 mg.
Apr 2 25 3 23.1 5.5
0 0 39.8
6 25 3 22.0 9.2 c?
14 25 4 9.9 0.1 3 11.0 0.0
21 25 4 1.0 6.38
29 25 3 34.5 25.7

1872 24 Ins My
9 23 00
+7 0 24

Mar 28	0	0	28.1	−2.0	Cor a			
Apr. 1	0	0	39.8	6.7	0	0	0.7	−30.8
2	0	0	9.9	43.2	lost obs.			
6	0	0	9.4	45.0	55	4	46.8	15.9
17	0	0	43.2	17.6	0		21.4	54.2
19	0	0	31.9	8.0	4		59.0	36.1
21	0	0	26.8	5.7				
25	0	0	11.2	5.08	0	0	57.9	37.0
29	0	0	−0.2	40.6	a b c			

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B C
B Eph. H.
1872 27 h.
110 01

mar 28	25	0	25.0	−10.0	25	0	57.5	23.0
Ap. 1	25	0	29.1	−7.2		0.4	24.6	
2	25	1	10.8	4 36.0	25.0	51.8	16.3	
6	25	0	26.9	58.2	rej 15 s		m 52.	
17	25	0	14.9	47.0	0	37.7	10.4	
19	25	0	14.7	48.9	0	0.9	33.9	
21	25	0	24.7	1.8				
29	25	0	16.6	−8.2				

42 Lyncis
1872 9 30 20
+40 50

mar 28	30	4	20.5	55.3				
April	30	4	30.8	3.9				
2	30	4	18.3	53.0				
6	30	4	43.1	21.8	4	7.4	46.3	
17	30	4	57.5	36.3				
19	35	0	3.2	41.9 [41]	4	10.0	51.6	
21	30	4	57.7	42.8				

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ε Hydrae

1872 9 33 20

−0 33

Mar 28	55	1	44.1	25.7				
Apr. 1	55	1	53.0	32.1				
2	55	1	40.9	21.7	1	0.5	40.5	
6	55	1	41.0	26.0	~~3~~	~~5~~	~~3.5~~	
17	55	1	45.3	31.0				
18	55	1	27.1	14.5				
~~19~~	~~55~~	~~1~~	~~53.4~~	~~36.9~~				
29	55	1	47?	36.9				

1872 ~~10 29~~

o Leonis

9 34 18

+10 29

Apr. 1	50	4	49.7	27.4				
6	50	4	42.2	26.0	3	53.5	36.2	
17	50	4	56.2	39.8				
18	50	4	36.6	21.1				
19	50	4	49.8	35.0	3	59.9	46.0	

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4 Leonis								
9 36 45								
+14 37								
April 1	45	1	58.5	37.1	1	9.5	40.4	
2	45	1	56.0	35.1	1	6.6	45.0	
6	45	1	24.5	7.0				
17	45	1	58.5	43.3				
18	45	1	0.8	45.5	1	29.3	14.0	
19	45	1	3.1	49.1	1	13.1	1.0	
21	45	1	57.1	48.1				
29	45	1	54.9	48.0				
17 Leonis								
9 38 33								
+24 23								
Mars	0	1	41.5	16.6	1			
April 1	0	1	36.9	10.9				
2	0	1	46.1	20.5	0	53.4	27.3	
6	0	1	41.2	20.2	0	5-1.8	31.0	
17	0	1	46.9	25.9				
18	0	1	51.3	30.4				
21	0	1	28.3	15.1				
29	0	1	32.8	15.9				

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1872phae.proj.1382.

1872 2.11 b eph.
9 40 a
109 18

Mar 28	5	4	2,1	27.5	
Apr. 1	5	4	4,8	29,6	
~~17~~	~~5~~	~~3~~	~~52.0~~	~~23.3~~	
18	5	3	47.1	20.1	
~~19~~	~~5~~	~~3~~	~~47.9~~		
21	5	4	0,6	38,6	
29	5	4	2,0	37,4	

1872 a Aux May
9 41 49
+89 40

Mar 24	40	4	65.9	37.0	~~4~~	~~1~~	~~9.5~~
Apr. 1	45	0	8.7	~~4~~ 37.9			
2	45	0	31.1	1.3	40	4	58.8
6	45	0	34.6	8.5	4	4	4.2
	~~4~~	~~1~~	~~54.9~~				

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ζ Mrz. Maj. 1872	Mrz	40	8	41.1	11.8	e ~ ©	
9 43 20					3		
+54 41	18	40	4	15.1	52.4	3 32.6	8.7
	21	40	4	13.7	54.9	(ch.?)	
	29	40	4	12.4	52.2		

μ Leo 1872	Mrz	45	1	57.3	30.1	1	15.2 55.9
9 45 28	2	45	1	59.0	32.9	1	15.8 50.5
+26 38	6	45	1	56.0	34.6		
	17	45	2	3.1	43.8		
	18	45	2	1.7	42.0		
	29	45	2	2.6	46.0		

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1872phae.proj.1382.

Gr. 1146
9 9648
+73 29

17	April	50	4	31.5	5.9.2			
	6	50	4	46.5	21.0	4	27.1	1.1
	17	50	4	50.1	25.2	4	32.0	7.8
	18	50	4	52.0	27.1	4	27.0	1.8
	19	50	4	54.1	27.0	4	33.8	7.9
	21	50	4	31,5	12.4			
	26	55	0	1.4	45.9			
	27	55	0	0.0	41.7			

B.A.C. 3898 17½
9 4938
+933

17½	Apr.	1	50	0	49.1	26.3	0	3.6 41.3
		2	50	0	49.5	26.3	50	0 5.6 48.2
		6	50	0	51.0	33.0	45	4 44.6 27.5
		17	50	0	54.1	38.9		
		18	50	0	47.9	42.0		
		19	45	1	4.5	51.9		
		26	50	0	11.9	4.2		

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1872phae.proj.1382.

79 Draco 1872
9 51 18
106 55 -

Apr 17	30	0	4.2	34.3	
18	30	0	2.1	32.1	
21	30	0	44.7	21.9	
29	30	1	21.9	5 5.5	Corr -4 mins
30	30	0	57.5	30.6	

π Leonis 1872
9 58 27
~~+8~~ 41 ?
+8 41

Apr 21	40	3	41.7	34.0			
23	40	3	47.2	32.9	3	7.1 (2)	52.1
26	40	3	52.2	44.5			
27	40	3	46.0	37.4			
29	40	3	47.2	35.1			
30	40	3	51.1	42.1			

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1872phae.proj.1382.

1872 B.A.C. 3428
9 56 18
−12 40

Apr.	17	0	2	49.3	37.0
	18	0	3	21.2	10.8
	19	0	3	33.1	23.3
	21	0	3	25.2	20.2
	23	0	3	30.0	19.1
	26	0	3	31.0	32.4
	27	0	3	25.1	23.0
	29	0	8	05.0	26.7
	30	0	3	20.9	14.9

1872 Oz Hoyden
9 58 50
−12 25

Apr.	17	45	4	12.3	59.8
	18	45	4	16.0	55.8
	23	45	4	13.9	2.8
	27	45	4	17.1	13.1
	29	45	4	17.1	10.2
	30	45	4	16.9	10.9

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ℏ Leonis
10 0 22
+17 24

1872 Apr.	17	0	0	13.7	4 58.0
	18	0	0	16.9	4 1.5
	23	0	0	6.5	4 51.9
	26	0	0	21.1	14.9
	27	0	0	14.9	0 6.1
	29	55	4	42.7	21.0
	30	0	0	16.0	6.5

a Leonis
10 1 34
+12 37

Apr.	17	45	2	44.3	28.8
	18	45	2	44.8	28.9
	23	45	2	30.5	16.1
	25	45	2	45.9	33.9
	26	45	2	50.1	42.2
	27	45	2	45.5	38.3
	29	45	2	18.2	5.8
	30	45	2	49.6	38.9

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1877 λ Hydrae
10 4 19
−11 41

Apr 18	5	0	34.6	23.5	lost a			
23	5	0	57.8	46.1	0	23.1	11.1	
25	5	0	57.9	49.2				
26	5	1	6.8	3.0	0	13.0	9.4	
27	5	0	58.9	54.1	0	1.0	4 55.7	
~~30~~	5	0	58.1	50.8				

1877 2 32 Mrs May'
λ 19 8 40
+65 46

get. md. gr. only

Apr. 18	35	4	23.2	(31 5.70	~~get. md.~~
21	35	4	14.1	55.0	
22	35	4	23.5	3.9	
23	35	4	14.1	50.1	
25	35	4	24.0	3.6	
27	35	4	19.1	2.8	
29	35	4	13.0	57.1	3 52.7 31.2
30	35	4	20.0	59.9	

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λ Ursæ Majoris 1872

10 09 22
+43 34

Apr. 16	50	0	3.9	50.0	0
22	50	0	1.7	46.4	
23	50	0	2.5	42.8	
25	50	0	5.2	49.1	
30	50	0	20.2	0 4.8	

22 Septantis

10 11 15 1872

−7 25

Apr. 18	45	2	56.3	44.7	Coat. a
21	45	3	37.3	29.1	
23	45	3	38.0	26.0	
25	45	3	37.1	28.2	
27	45	3	38.9	32.1	
29	45	2	53.7	43.4	
30	45	3	31.0	22.1	

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γ Leonis
1872 10 12 56
+20 30

Apr. 14	50	4	12.0	53.1				for *
22	50	4	9.1	55.2	3	25.1	12.5	for *
23	50	4	8.2	50.4				
25	50	4	8.9	54.9				
26	50	4	14.9	14.2				
27	50	4	8.3	58.8				
29	50	4	17.0	3.9				
30	50	4	8.1	55.2				

ψ Aur. Maj
2 10 14 49
+42 10

Apr. 18	15	0	15.0	4 56.1	10	4	35.5	16.0
21	15	0	10.0	4 56.1	10	4	13.0	30.1
22	15	0	13.1	4 59.8	4		30.5	16.1
23	15	0	8.1	4 49.0				
25	15	0	11.1	4 54.9	4		28.8	13.7
26	15	0	10.5	4 0.1	4		17.9	6.9
27	15	0	10.1	4 56.1	4		27.1	16.2
29	15	0	13.1	58.9				
30	15	0	8.1	53.9	4		24.7	10.8

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γ Antliae

10 18 00

−28 59

Apr.	21	20	1	22.8	14.9
	22	20	1	24.0	15.2
	23	20	1	11.3	58.5
	~~25~~	~~20~~	~~1~~	~~8.2~~	
	26	20	1	30.6	24.0
	27	20	1	17.9	12.3
	29	20	1	17.3	7.9
	30	20	1	16.0	8.2

187.31 deg. min

10 20 25

+87 22

(quick for next #)

Apr.	18	0	1	59.6	38.4
	21	0	1	46.1	41.9
	22	0	1	58.9	44.4
	23	0	1	52.5	32.8
	25	0	R	1.8	44.1
	26	0	R	0.8	48.1
	27	0	1	54.1	42.2
	29	0	1	50.6	33.0
	30	0	1	58.9	41.5

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47

α Antliae
10 21 15
−30 24

M2

Apr. 23	45	0	15.1	4 3.9			
27	45	0	16.9	10.2	had gr. & gobs.		
29	45	0	46.3	35.9	0	3.7	4 53.8
30	45	0	15.1	5.1	Gl @ vga,		

9 Draconis
10 24 06
+76 24

1872

Apr. 17	0	2	6.0	39.3			
18	0	2	4.2	37.4	0	1 29.0	0 2.2
19	0	2	4.0	39.0	0	1 33.1	9.2
22	0	2	3.1	42.8	0	1 31.9	11.3
23	0	2	10.2	43.4	0	1 49.1	23.2
24	0	1	26.1	1.9			
25	0	1	37.9	14.6			
26	0	1	55.3	36.9			
27	0	1	58.9	40.1			
30	0	2	1.0	38.8	1	29.9	7.9

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R Leonis
10 26 05
+9 59

1872

Apr. 17	25	0	22.7	7.0			
18	25	0	25.2	12.7	0		
19	25	0	23.0	9.1	4	25.9	12.1
22	25	0	24.9	14.1	4	30.0	19.1
23	25	0	26.0	11.0			
24	25	0	23.0	10.3			
25	25	0	23.1	10.9			
26	20	4	39.1	30.9	8 foll.		
27	25	0	23.6	16.1			
30	25	0	21.0	9.3			

48 Leo.
10 28 09
+7 38

1872

Apr 17	45	1	4.0	47.5			
18	45	1	30.8	14.6	0	45.1	28.6
19	45	1	33.8	18.9			
22	45	1	28.1	16.8	0	46.9	51.8
23	45	1	28.7	13.1			
24	45	1	29.5	17.4			
25	45	1	29.8	16.1			
26	45	1	34.0	28.1			
27	45	1	29.0	20.1			
30	45	0	57.1	43.8			

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43 226 B C Eph
10 30 00
104 27

1872

Apr. 17	55	~~3~~	1.5	36.0			
~~18~~ 19	55	~~4~~	3.0	39.4	4	18.8	54.9
21	55	4	18.9	57.6	a	g	g
22	55	3	58.9	39.4			
23	55	3	52.9	26.2			
26	55	3	47.5	28.1	8 fold. 1 at T. gr.		
27	55	3	45.1	26.0			

Hydrae
10 32 18
-16 12

1872

Apr. 17	35	0	4.5	4 51.5			
16	35	0	7.8	56.0	lost C_2		
21 ~~19~~	30	4	51.5	43.1			
22	35	0	13.9	4 7.4			
23	35	0	9.3	4 58.5			
24	35	0	10.9	4 1.1	4	16.8	5.8
25	35	0	8.1	4 0.5			
26	35	0	13.1	8.6	4	23.0	17.1
27	35	0	6.9	3.2	4	21.9	17.1

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10

B Ab. 3665
11 36 03
+46 54

1872

Apr. 17	30	1	22.5	0.5	0	33.0	4	10.9
18	30	1	17.2	53.1	0	38.8		16.8
19	30	1	22.1	1.4	0	33.1		14.4
21	30	1	14.8	58.0	0	47.9		31.0
22	30	1	14.5	56.8	0	43.1		24.3
23	30	1	16.1	53.9				
24	30	1	15.9	56.1	0	43.0		23.5
~~25~~	~~30~~	~~1~~	~~37~~					
26	30	1	15.1	1.2	0	27.9		13.1
27	30	1	15.5	0.9	0	31.1		16.2

1st w. l.g.

42 Lev.
10 38 47
+31 23

1872

Apr. 17	0	2	10.6	49.1			
18	0	2	15.5	56.1			
19	0	2	20.9	1.9	1	32.0	14.8
21	0	2	14.3	59.9	1	28.0	14.7
22	0	2	11.0	55.6	1	22.1	7.8
23	0	2	12.3	53.0	~~0~~	~~43~~	
24	0	2	15.2	58.9			
25	0	2	17.3	0.1			
26	0	2	17.7	4.9			
27	0	2	8.9	56.1	lost 1st wire		

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b Hydræ 1872

10 40 33
−16 36

Apr. 17	55	4	38.2	26.1				
18	55	4	41.3	29.7				
19	55	4	47.1	36.9	4	54.1		44.9
21	55	4	40.3	34.8	3	3.1		57.7
22	55	4	38.8	31.9				
24	55	4	46.6	36.9	~~4~~	~~8.1~~		
25	55	4	40.1	31.9				
26	55	4	49.2	42.3				
27	55	4	41.9	38.3				

1872

ν Leonis
10 42 33
+11 18

Apr. 17	5	4	58.4	43.0				
18	5	4	57.1	41.9	4	20.7		4.7
19	10	0	2.4	4 48.6		0.9		46.9
21	5	4	57.4	48.0				
22	10	0	1.0	51.7	4	12.7		9.1
24	10	0	55.8	4 43.2	4	8.1		55.3
25	5	4	56.5	45.1				
26	10	0	2.0	54.9				
27	5	4	57.8	49.1				

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70 37 ι Cephei
10 45 23
+74 30
114 30

1872

Apr. 16 55 3 9.2 40.9 last-obs'd

21	55	2	55.3	30.4
22	55	2	51.9	30.8
23	55	2	52.1	24.2
24	55	2	33.1	8.1
26	55	2	27.1	5.8
27	55	2	35.1	13.5

ω Ursæ Maj
10 46 39
+43 54

1872

Apr. 17	30	1	34.5	13.4			
18	30	1	9.8	46.7			
19	30	1	34.4	16.1	0	43.9	24.1
22	30	1	34.5	18.0	0	42.8	25.9
23	30	1	36.1	14.1	0	52.9	30.9
24	30	1	34.4	15.2			
25	30	1	33.3	16.1			
26	30	1	31.7	18.2			
27	30	1	31.9	18.2			

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35

CW 2
54 Leo
10 48 42
+25 27

Apr. 17	55	2	38.9	19.1				
18	55	2	41.1	22.1		per *		
19	55	2	42.5	23.1	1	42.9	25.2	
23	55	2	38.1	20.2				
24	55	2	19.0	3.0				
26	55	2	40.0	30.0				
27	55	2	35.0	23.9				

BA 62755
10 50 44
−36 26

1872

Apr. 17	45	1	11.3	56.0				
21 ~~19~~	45	1	20.5	10.8	0	34.6	26.4	
22	45	1	7.9	59.5	0			
23	45	1	13.0	0.2	0	44.8	30.9	
24	45	1	17.2	5.3	0	24.1	12.9	
26	45	1	32.8	25.6	0	43.2	35.4	
27	45	1	19.1	11.3	0	31.0	23.9	

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33

α Bootis
10 55 3 30
+17 36

1872

Apr. 17	55	4	20.0	8.4				
18	55	4	15.9	7.6				
19	55	4	24.0	12.9	3	22.0	11.2	
21	55	4	15.5	9.7	3	51.4	44.9	
22	55	4	21.3	14.5				
23	55	4	22.8	11.2				
24	55	4	19.9	10.8				
26	55	4	28.0	28.0				
27	55	4	21.9	17.1				

α Ursæ Maj.
10 55 50
+62 28

1872

Apr. 17	55	2	37.5	12.8	2	10.1	45.8
18	55	2	36.7	11.5	2	13.4	48.7
19	55	2	36.8	16.0	1	53.9	31.0
21	55	2	19.6	1.2	1	50.1	32.1
22	55	2	34.0	15.1	1	53.5	35.0
23	55	2	36.1	14.3	1	58.1	33.2
24	55	2	34.4	13.2	2	9.7	47.2
25	55	2	19.1	59.1			
26	55	2	31.2	14.1			
27	55	2	33.2	17.1			

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1872phae.proj.1382.

31

X Leonis
10 58 26
~~+8 30~~ ??
+8 07

1872

Apr. 17								
18	20	1	37.2	21.6				
~~19~~								
22	20	1	35.9	25.0				
23	20	1	34.1	19.0				
24	20	1	31.9	18.9				
25	20	1	38.1	26.5				
26	20	1	36.1	27.9				
27	20	1	32.9	23.5				

P 3 Leonis
11 0 28
+2 40

1872

Apr. 17	40	4	13.4	56.9				
18	40	4	18.0	1.0				
19	40	4	13.2	59.3	3	9.0	53.9	
21	40	3	49.1	39.9	3	25.9	15.5	
22	40	4	4.1	53.2	3	14.0	5.0	
23	40	4	8.0	52.4	3	20.1	4.8	
24	40	4	4.1	51.4				
25	40	3	5.0	53.0				
26	40	4 (Rain)	7.9	59.9				
27	40	3	4.5	55.1				

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1872phae.proj.1382.

29 ψ Ursæ Maj
11 2 30
+45 13

1872

Apr. 17	10	2	19.6	58.5	1	31.9	13.4
18	10	2	16.0	59.0	1	45.1	23.7
19	10	2	15.0	56.9	1	34.8	14.8
21	10	2	17.1	2.9	1	36.8	20.9
22	10	2	16.3	1.0	1	31.3	16.0
23	10	2	18.1	57.5	1	43.1	21.9
24	10	2	15.2	57.8	1	30.1	12.8
25	10	2	16.2	59.5	1	43.5	27.1
26	10	2	15.3	3.9	1	34.0	22.1
27	10	2	11.6	58.9	1	28.0	14.8

β Coronæ
11 5 20
−22 06

1872

Apr. 17	~~25~~	~~4~~	~~37.8~~	~~25.1~~			
18	25	4	38.8	27.0			
19	25	4	41.3	31.8	3	46.2	35.8
21	25	4	33.7	28.9	3	55.3	50.2
22	25	4	34.0	27.2			
23	25	4	35.6	25.9			
24	25	4	42.0	34.9			
25	25	4	39.1	31.2			
27	25	4	36.9	33.9			

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27 S Leo
11 7 30
+21 15

1872

~~Apr. 17~~	~~5~~	~~4~~	~~57.4~~	~~39.8~~				
18	10	0	2.8	43.3				
19	10	0	4.8	46.1	4	12.6	57.1	
21	10	0	2.0	48.8	3	4.0	50.3	
22	5	4	56.0	42.5	4	3.8	49.7	
23	~~10~~	~~4~~	~~0.2~~	40.1				
24	10	0	3.7	47.5				
25	~~10~~	~~4~~	59.0	44.9				
26	10	0	0.6	53.3				
27	~~10~~	~~4~~	58.9	46.2				
May 17	5	4	16.8	4.0				

n Leonis
10 9 12
+14 02

1872

~~Apr. 17~~	~~20~~	~~3~~	~~5.7~~	~~49.2~~			
18	20	3	4.2	48.1			
19	20	3	7.1	53.0	2	17.0	4.0
21	20	3	1.0	57.3			
22	20	3	1.5	57.1			
23	20	2	37.8	22.1	b &		
24	20	2	0.9	49.2			
25	20	2	53.9	41.9			
26	20	2	3.2	56.5			
27	20	3 even	1.5	52.9			

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ε Ursæ Majoris

11 11 22
+32 16

1872

Apr. 17	5	3	26.5	8.0	2	56.7	36.9
18	5	3	44.7	24.9	2	59.7	40.2
19	5	3	47.0	26.9	2	56.0	37.9
21	5	3	42.1	29.0			
22	5	3	38.9	24.7			
23	5	3	45.2	26.4			
24	5	3	45.0	29.8			
25	5	3	40.9	26.5			
26	5	3	42.9	31.5			
27	5	3	41.1	29.5			

ζ Cratis

11 12 55
−14 04

get the next

1872

Apr. 21	25	2	40.9	35.3
22	25	2	39.2	31.5
~~24~~ 23	25	2	39.1	30.1
26	25	2	12.1	37.1
29	25	1	57.8	50.1
May 20	25	1	55.9	52.6

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23

o Cephei × 1872

11 13 16
11 2 37

Apr. 21	50	1	8.2	44.9	a, & b,	
22	50	0	5 5.1	32.8	a, b, c,	
24	50	0	54.9	29.5	a a, b, e,	
25	50	0	20.1	4 57.1		
27	50	0	20.5	4 59.1		

o Leonis 1872

11 14 3.4
+6 45

Apr. 23	35	4	23.5	7.9			
25	35	4	23.1	11.5			
26	35	4	22.1	15.2	3	36.5	30.8
27	35	3	35.0	28.8			

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1872phae.proj.1382.

λ Crateris
11 17 06
−18 03

1872

Apr	21	25	1	9.8	2.7
	22	25	1	47.2	40.2
	23	25	1	54.0	42.1
	24	25	1	51.2	42.0
	25	25	1	49.0	40.7
	26	25	1	56.9	52.8
	27	25	1	52.8	47.7

η Crateris
11 18 11
−16 56

1872

Apr.	21	20	1	11.3	5.2
	22	20	1	11.9	3.5
	23	20	1	12.8	0.3
	24	20	1	11.1	1.6
	25	20	1	12.1	3.9
	26	20	1	16.5	12.1
	27	20	1	13.1	8.1
May	20	20	0	16.1	14.0

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1872phae.proj.1382.

14 20

τ Leonis Australis ?
11 21 20
+8 35

(B)

Apr. 21	45	4	22.1	13.1	3	39.5	28.7
22	45	4	29.9	17.9			
23	45	4	26.0	9.9			
24	45	4	25.9	12.9			
25	45	4	28.3	16.8			
26	45	4	30.1	20.8	3	13.9	37.2
27	45	4	28.0	20.1			

λ Draconis
11 23 48
+70 54

(B)

Apr. 21	20	1	0.0	39.6	1	19.1	59.8
22	20	1	0.2	41.3			
24	20	1	58.2	37.7	1	35.9	14.9
25	20	1	58.1	37.7			
26	20	1	56.1	41.4	1	13.9	58.5
29	20	1	57.8	38.3	1	38.7	20.0

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1872phae.proj.1382.

B.A.C. 3928
11 26 41
−31 08

1872

Apr. 21	25	4	50.0	42.5
24	25	4	48.9	38.8
25	25	4	48.1	35.2
26	25	4	55.5	49.0
27	25	4	44.1	37.1
29	25	4	43.2	38.5

B.A.C. 3934
11 28 15
−32 08

1872

Apr. 21	25	4	48.7	40.5
	~~30 0~~			
25	25	4	50.1	39.9
26	25	4	55.7	46.9
~~27~~	~~25~~	~~4~~	~~44.1~~	
27	25	4	45.0	38.1
29	25	4	44.7	34.7

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15

91 Leo.
11 30 21
−0 16

1872								
Apr. 21	30	0	6.5	4 58.1				
24	30	0	1.3	49.8	4	16.7	6.2	
25	30	0	5.0	56.0				
26	30	0	6.1	4 0.3				
27	30	0	4.0	4 57.8				
29	30	0	3.8	4 5 4.9				
May 20	25	4	7.9	1.1				

γ Capricorni
11 34 ∞
(103 00)
(103 3)

1872								
Apr. 21	20	0	8.1	4 46.1				
22	15	4	48.5	26.7	lost last 3 revs. Obsn. bad			
24	20	0	1.9	4 39.2				
25	15	4	49.1	25.1				
26	15	4	42.8	23.9	20	0	9.0	4 50.9
27	15	4	49.9	29.7	20	0	29.9	5.3
29	20	0	11.9	41.2				
May 20	15	4	10.6	53.4	20	4	27.7	10.2

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B.A.C. 3973
11 36 52
+42 27

1872

Apr. 20	55	2	49.5	36.2	1	0.5	48.0	lost a_2
25	55	2	42.3	27.0				
26	55	2	47.1	37.2	55	2	7.4	54.9
27	55	2	47.1	35.9		1	1.9	49.1
29	55	2	47.8	34.1	2		21.8	8.1

1872

X Mer Maj
11 39 19
+48 31

Apr. 20	50	4	35.8	17.5	3		52.1	34.0
24	50	4	32.1	12.4	3		49.2	28.4
25	50	4	34.1	14.1				
26	50	4	30.1	(4) 15.2	3		47.1	31.9
27	50	3	56.1	41.2				
May 22	50	3	45.2	30.2				

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1872phae.proj.1382.

12

β Leo.
11 42 3.3
+15 19

1872

Apr. 20	5	0	6.0	56.2	0	17.9	7.8	
24	5	0	1.2	47.5				
25	5	(none)	5.9	0.5	3.1			
26	5	1	7.1	°59.9				
27	5	1	7.1	58.0				
May 1 ~~730~~	0	4	31.9	22.9				
20	5	0	21.1	14.6				
May 22	5	0	21.3	13.3				

1872

β Virginis
11 44 m
+2 30

Apr 20	50	3	35.9	24.1	50	2	50.2	38.5
~~24~~	~~50~~	~~3~~	~~2.2~~					
25	50	3	55.0	42.4				
26	50	3	24.1	16.9				
27	50	3	55.9	46.2				
30	50	3	26.9	12.0				
May 22	50	2	35.1	26.3				

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1872phae.proj.1382.

J Des May
11 47 08
+54 26

1872

Apr.	20	55	4	13.6	57.0			
	24	55	4	36.5	16.1			
	25	55	4	17.2	58.1			
	26	55	4	33.8	18.5			
	27	55	4	34.1	20.0			
	30	55	4	36.1	16.9	4	10.9	57.9 d?
May	20	55	3	26.0	12.1			
	22	55	4	44.9	30.5			

1872

Gr. 4163
11 48 30
106 19
(15)

Apr.	20	5	2	1.2	38.0	2	last 6.3 C_2	53.8
	24	5	2	9.1	43.8			
	25	5	2	6.1	41.5			
	26	5	1	57.2	37.2			
	27	5	2	3.9	42.1			
May	22	5	1	43.9	24.3	Cont-3 m.		

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B.A.C. 4037
11 50 31
−32 35 ?
−32 32

1872

Apr. 20

26	55	1	29.0	22.9	
27	55	1	37.8	31.1	

1872

b Virginis
11 53 24
+4 23

Apr. 20	0	1	7.5	55.7	0	26.0	13.7
24	0	0	2.2	46.1			
25	0	0	56.9	43.5			
26	0	1	3.9	53.9			
27	0	1	4.5	53.9			

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67 Ursæ Maj.
11 55 39
+43 48

1872

Apr.	20	35	3	29.9	15.2	2	40.7	25.1
	24	30	4	51.5	30.9	4	16.9	57.9 a?
	25	35	3	27.9	12.4			
	26	35	3	28.9	15.1			
	27	35	3	28.1	15.0			
	30	35	3	29.2	12.2			
May	17	30	1	18.1	4.1	W2 X		
	22	35	2	43.0	31.1			

1872

o Virginis
11 58 44
+9 28

Apr.	20	55	1	31.5	20.8	0	56.4	45.1
	25	55	1	47.7	24.8			
	26	55	1	37.1	28.0			
	27	55	1	36.9	26.9			
May	17	55	0	57.1	47.2			
	22	55	0	51.1	43.2			

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α Corvi

12 1 36

−23 59

1872

Apr.	20	20	2	40.4	33.1	1	59.7	51.6
	25	20	2	41.9	33.5			
	26	20	2	44.9	39.9			
	27	20	2	39.8	34.4			
	30	20	2	35.7	26.9			

1872

ε Corvi

12 3 20

−21 53

Apr.	20	15	1	26.2	20.9
	25	15	1	21.4	13.1
	26	15	1	29.1	24.9
	30	15	1	26.1	18.2

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4 Draconis

12 5 59

+78 21

1872

Apr 20	0	4	42.4	19.7	55	4	18.0	53.2
24	0	4	24.9	3 58 6				
25	0	4	50.9	26.8		4	9.1	45.0
26	0	4	11.1	20.0		4	14.2	54.8
30	0	4	49.9	24.9		4	12.8	47.1
May 22	0	3	18.0	1.2				

C & C

End May 22 1872

End of Obs.

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Beginning of Polar Catalogue — Pt.

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Polaris 1872 June 13

13 12

91 24

Berwyn

June 11-1872

June 18	5	1	5.8	53.1	1	9.9	57.0	
July 8								
8								
24.4								
1873 June 2	0	0	18.7	32.0				

3 4 5 6 7
a₂ 4₂ c₂
A R.

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α Virginis 1872

13 18 24

— 10 29

~~13 18 49~~

13 18 30

-10 29 51

June 11	55	1	26.0	25.3	
1823 May 29	50	0	52.0	61.9	New o for sheet
31	50	0	51.4	57.1	
June 1	50	0	54.0	0.9	
2	50	0	48.0	55.0	
5	50	0	50.0	56.2	
9	50	0	47.9	55.2	
11	50	0	48.9	56.8	
12	50	0	42.1	49.7	
15	50	0	47.2	54.9	
17	50	0	47.0	55.9	

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B.A.C. 852

13 19 49
+ 85 40?

1873
May 31 55 2 11.7 23,2 lost A1

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1872phae.proj.1382.

69 Her. Zero. Mean 1872

13 23 40
+ 60 37

1323 47
+60 96

1873

June 18	50	1	39.1	25.8	1	2.8	57.9
May 29	45	0	56.0	9.9	2 false Strokes after 8		
31	45	1	4.2	15.2			
June 2	45	0	54.3	6.1	rej. 2, double stroke.		
5	45	0	54.2	6.8			
10	45	0	50.7	3.3			
11	45	0	47.7	62.3			
12	45	0	~~56.2~~	10.0			
15	45	0	49.5	3.8			
17	45	0	51.1	5.2			

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1872phae.proj.1382.

3 Virginia

13 28 07

+ 0 04

13 28 13

+0 3 15

Get next ✱

1872

June 18	20	3	27.4	26.0

1873

May 31	15	3	1.1	7.4
June 2	15	3	14.1	21.9
5	15	3	11.1	19.1
10	15	2	7.6	7.9
12	15	3	1.2	9.8

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1872phae.proj.1382.

40 Cass.
13 28 15
10 37
10

1 28 25
+72 23 28

1873
June 11 45 1 30.3 46.9
15 45 1 29.0 45.0
17 45 1 37.9 53.1

13 28 20
+10 37
40 Cass.

1873

1 28 25
+72 23 28

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1872phae.proj.1382.

17 Can. Ven.

(5) 13 29 06 [illegible]
+ 37 51

13 29 ?
+37 50 1

1873

June 11	30	1	33.8	45.9	9 W
15	30	1	34.0	46.5	" "
16	30	1	38.0	49.2	
17	30	1	19.7	31.7	lost d, Md. gr.

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Gr. 20 29
13 34 06
+ 71 54
B 34 8
+71 53 20

1872

June 19	30	4	26.3	14.9	vij	h c (M. 42' 2 bad)
1872 May 31	25	3	41.5	48.1		
June 11	25	3	50.5	1.8	a 3, 4, 5, 6, 7	
12	25	3	54.0	6.1		
15	25	3	51.7	3.6		
16	25	3	52.8	5.1		
17	25	3	53.7	4.9		

B 34 08
+ 93 41

13 34 08
85 39 21

1873

June 11	40	0	47.0	62.2	a 5, 4, 3, 2, 1.
12	40	0	50.0	40	8 mag. a 3, 2 (1?)
15	40	0	51.9	6.5	3, 2, 1 + a, 8. mag.
17	40	0	52.1	8.1	a 3, 2, 1. — 1

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η Ursa. Maj.

13 42 29
+ 49 57
1342 32
+49 56 52

1872

June 9	30	0	43.0	31.8

1873

June 2	25	0	11.9	24.9
5	25	0	6.7	19.2
10	25	0	4.9	16.9
11	25	0	3.3	17.7
12	25	0	4.8	18.3
15	25	0	6.0	19.0
16	25	0	5.9	20.3
17	25	0	8.0	20.9

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Gr 2063

1823

13 43 49
+ 83 27 ?

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1872phae.proj.1382.

η Bootis

13 48 34
+ 19 03

13 48 38
+19 2 ?

1872

June 19	25	0	6.9	63.7	
27	25	0	8.9	~~72.9~~	

1~~872~~31 A.R. J.H.M.

June 2	15	4	36.9	44.5	J.H.M.
June 11	15	4	35.9	44.0	
12	15	4	35.0	43.3	
15	15	4	28.0	37.9	
16	15	4	30.1	41.0	
17	15	4	33.9	43.8	

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1872phae.proj.1382.

Sch, 813

13 50 22
+ 79 38

13 50 22
+79 38 22

1872

June 19	50	0	36.1	22.3	0	19.0	5.9
	L						
~~1872~~ June 31	40	4	57.9	7.4			
June 11	45	0	1.8	15.1			
15	40	4	53.1	6.0			
16	45	0	56.2	10.6			
17	45	0	1.1	14.5			

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1872phae_proj_1382.

T Virginis

13 55 07
+ 2 10
13 55 11
+2 9 35

1872

~~June 19 15 1 1 1 56.2 52.9 1 lost at (anomalous?)~~
27 15 2 16.0 13.7

1873

May 31 10 1 39.0 46.4
June 15 10 1 42.2 51.8

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1872phae.proj:1382.

α Draco.

14 0 57
+ 65 00
14 0 57
+64 59 00

1872

June 19	25	3	52.9	41.5	3	24.1	12.8
27	25	3	52.5	48.3			

1873

A. R. J. F. M.

May 31				
June 11	20	3	4.0	16.2
12	20	3	9.2	21.5
15	20	3	6.0	18.4
16	20	2	59.4	11.8
17	20	3	2.1	13.9

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1872phae.proj.1382.

d Bootis

14 04 33
+ 25 43
14 4 36
+25 41 39

1872

June 19 — HR

19	45	0	41.1	34.3	4	39.1	31.9
27	45	0	36.8	31.5			

1873

May 31	40	0	4.3	13.5	
June 12	40	0	6.1	16.9	
15	40	0	8.1	20.0	

1873

June 12 | 80 | 1 | 11.9 | 26.0 | $a\ 2.1 + a_{-1}$

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1872phae.proj.1382.

4 Hrs Min

14 9 23
+ 78 9

14 9 23
+78 8 39

1872

June 13					H R.
	19	15	4	34.1	21.9 Ind. gr.

1873

June 11	10	3	46.1	59.1	
12	10	3	44.1	57.9	
15	10	3	42.6	55.0	
16	10	3	47.2	1.1	
~~1~~	~~10~~	~~3~~	41.3		
17	10	3	~~45.8~~	58.7	
25	10	3	41.0	54.3	
	~~10~~	~~3~~	34.5		
26	10	3	20.8	35.1	lost 1, 2
	~~10~~	~~3~~	32.		
~~30~~	~~10~~	~~3~~	~~27.9~~	~~48.9~~	
July 1	10	3	20.7	36.2	

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1872phae.proj 1382.

i Bootis

14 11 37
+ 51 57
14 11 40
+51 57 13

1872 June 13 HR

19	30	0	36.8	25.9	25	4	45.1	36.0

1873

June 11	20	4	45.9	58.8	
12	20	4	44.1	57.4	
15	20	4	43.8	57.0	
16	20	4	50.4	4.7	
17	20	4	49.0	2.2	
25	20	4	44.5	57.2	
26	20	4	50.2	5.0	
30	20	4	42.0	57.6	
July 6	20	4	28.1	45.3	

i Bars

14 18 28
+ 11
2 18 38
+66 49 46

1872 June 13 HR

19	10	4	12.1	56.9	lower set of wires

1873

June 5	10	3	37.9	54.8	
11	10	3	45.1	62.7	
15	10	3	43.8	0.2	
16	10	3	41.3	1.1	lost Q8
17	10	3	30.0	47.0	
25	10	3	34.5	52.2	
26	10	3	32.0	50.7	
30	10	3	27.9	46.9	

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1872phae.proj.1382.

θ Bootis

14 20 47

+52 27

14 20 52

+52 26 18

1872 June 13

19	0	1	27.0	18.8	0	37.2	27.9
1873 June 5	55	0	43.5	56.8			
10	55	0	43.0	56.1			
10	55	0	41.5	54.4	Ref. A-1		
15	55	0	40.2	53.4			
16	55	0	44.1	58.8			
25	55	0	43.9	57.2			
		4	~~50.2~~	~~5.0~~			
26	55	0	40.5	54.0			
29	55	0	44.1	0.2			
30	~~55~~	0	47.0	4.0	55	0	~~55.9~~ 13.0 =41
July 6	55	0	39.7	56.7			

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1872phae.proj.1382.

36 H. Cass.

14 25 49
107 45
2 26 00
+72 15-3

1872					
June 19	40	4	36.3	21.9	rej. 1st two outside wires
1873					
June 5	35	3	0.0	14.2	
9	35	3	49.2	3.3	
15	35	3	50.3	5.9	
25	35	3	42.0	57.6	rej. 2_1
26	35	3	52.8	9.1	
29	35	3	48.5	5.5	
30	35	3	44.9	2.6	

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5 Hrs. Min

14 27 50
+ 7 6 16
14 27 49
+16 ~ 36

1872 June 13 C.R.

19	10	2	32.8	19.9	1	48.1	35.0	
1873 May 31	5	1	46.8	55.9				
June 5	5	1	52.0	2.3				
9	5	1	47.8	57.0				
10	5	1	41.1	50.8				
15	5	1	42.1	53.1				
16	5	1	43.4	54.9				
25	5	1	39.7	50.7				
26	5	1	41.9	52.9				
29	5	1	49.5	2.1				
30	5	1	32.3	46.1	5	1	18.8	32.9
July 6	5	1	43.1	58.0				

1873

June 5	40	0	43.0	59.7
15	40	0	46.4	4.0
25	40	0	49.3	7.2
26	40	0	46.0	64.2

Gpsr
14 23 50
1 1 2 43

mert #
2 33 56
+6 7 16 58

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1872phae.proj 1382.

33 Bootis

14 34 04
+ 44 58
14 39 ?
+44 5? 13

1872 ~~June 13~~					
July 1	30	0	20.1	14.0	
1873					
	~~25~~	2	~~25.5~~		
June 9	20	4	12.8	22.4	9 W. Lonta. 1.
29	20	4	36.1	52.1	
~~30~~	~~20~~	4	47.2	1.9	
July 6	20	4	40.9	55.1	

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4 Virginis 2p

14 36 18
— 5 06

14 36 22
— 5 6 17

1872

June	11	30	3	10.3	6.3
	13		H R		

1873

June	5?	25	2	25.5	36.1
	9	26	2	27.0	32.9
	10	25	2	25.6	36.9
	11	25	2	31.1	39.1
	17		H R.		
	25	25	2	29.0	38.1
	26	25	2	25.1	35.5
	29	25	2	26.1	36.9
July	6	25	2	25.2	35.9
	7	25	1	54.1	3.9

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1872phae.proj.1382.

Sch. 853

14 38 30
+ 80 11

14 38 30
80 12 26

1872

June 11	15	0	34.1	17.2	0	18.4	4	2.9
13	X		lost a b	1	2	@		
July 1	15	0	17.3	4.2				

1873 June 5	5	4	46.3	58.2	lost 1st 3 wires	
9	5	4	44.1	56.1	5nd wires	
10	5	4	37.3	48.9		
11	5	4	47.8	0.2	lost 1st wire	
17	5	4	46.1	59.8	lost A 1	
25	5	4	39.9	52.8	5, 6, 7, & 9.	
26	5	4	35.0	47.9	lost 1st wire	
29	5	4	28.7	44.2	lost 1. 2	
July 6	5	4	29.9	45.9	md. w. & foll.	

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1872phae.proj:1382.

a_2 Librae

14 4 3 47
— 15 30

14 4 3 57
15 30 44

1872

June 11	55	2	13.5	12.0	
30	55	2	8.1	10.5	
July 1					

1873

May 31	50	1	16.5	26.9	
June 5	50	1	22.1	30.1	
9	45	3	41.3	48.8	a' Librae
10	50	1	25.0	32.1	lost a_{+1}
25	50	1	34.5	44.1	
26	50	1	24.0	33.0	
29	50	1	22.9	34.1	
30	50	1	37.1	49.1	50 0 30.0 41.1
July 6	50	1	31.1	42.8	
7	50	1	32.9	43.0	
10	50	1	19.7	30.4	$84A_{+1}$ 3 coincide

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1872phae.proj.1382.

$\odot_2$ .2164
14 48 11

+ 59 49

14 48 1.3

+59 48 39

9

1872

June 11	35	4	12.1	59.1	
13			R*		
30	30	3	48.0	40.4	
July 1	30	4	6.3	52.2	
11	35	4	13.8	8.2	

1873 June 9	30	3	25.0	36.6	
11	30	3	20.0	33.4	
17	30	3	28.0	41.0	
24	30	3	27.1	41.4	rej. 3
30	30	3	30.1	45.1	
July 5	30	3	25.9	41.3	
6	30	3	30.9	46.9	g.w. rej. A+1
7	30	3	24.0	38.6	
10	30	3	13.9	28.2	
13	30	3	18.7	31.6	

9 1872

June 13 AR

30 20 3 34.3 24.0 lost 1,2

July 8 AR. lost 1st m.

1873

June 9	15	2	52.9	6.2	5 md. Wires lost 9+8
11	15	2	52.3	8.6	lost 1st Wire
17	15	2	43.0	58.9	
July 5	15	2	47.7	2.7	
6	15	2	42.2	1.2	
10	15	2	48.8	5.8	obs. not very good
16	15	2	47.2	4.5	lost 9+8

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11

B Hrs. Min. s

14 51 06
+ 74 41

14 57 6
TT 40 27

1872

June 11	45	2	40.9	26.1	2	14.1	59.9	
13			H.P.	rej.	alone			
30	45	2	25.8	17.5				
Aug 1	45	2	36.0	26.7				
7	45	2	27.2	17.2				
11	45	2	37.5	29.0	rej. strokes after the 3 strokes of 8			
July 24	45	2	28.5	19.4				

1873

May 31	40	1	57.7	3.3				
June 9	40	1	51.8	0.8				
11	40	1	50.1	3.0	lost 2			
17	40	1	52.3	4.1				
30	40	2	4.0	19.0	1	27.8	43.0	
July 5	40	1	45.9	0.1				
6	40	1	51.9	7.9				
7	40	1	43.9	56.5				
10	40	1	44.9	57.2				
13	40	1	47.9	59.9				

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9

2	h.	m.	s.
14	55	35	✓
+	66	26	
14	55	34	
+	66	26	20

1872					
June 11	0	1	51.9	36.9	
13	~~X~~	~~2~~			
30	0	1	47	−0.3	
	~~0~~	~~1~~	~~33.9~~	~~23.2~~	
July 6	0	1	36.7	26.1	
7	0	1	36.8	26.2	
9	0	1	7.9	57.2	mid wire fail
11	0	1	37.1	28.1	
1873 June 9	5	0	54.9	4.6	
	55	0	53.9	6.8	
	55	0	50.8	6.0	5 W.
July 6	50	0	57.5	12.9	
	55	0	49.0	3.0	last
10	55	0	52.9	5.3	
13					

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B Bootis

14 57 07
+ 40 53

14 57 10
+40 53 33

1872

June 11	30	4	9.9	59.1	
13			A R		
30	30	3	62.7	58.0	
~~July 1~~	~~30~~	~~3~~	~~58.0~~	~~24.8~~	~~lost 1.2~~
6	30	4	5.2	59.4	
7	30	4	3.7	-1.8	
9	30	3	24.2	22.8	
11	30	3	0.18	56.0	
14	30	4	57.4	0.3	
24	A R.				

1873

June 9	25	3	23.1	33.1			
11	25	3	21.9	33.0			
17	25	3	23.9	36.0			
30	25	2	15.1	30.1	2	34.0	49.0
July 5	25	3	22.9	29.1	lost A 1+2 9. Wires		
6	25	3	20.0	36.0			
7	25	3	18.0	31.0			
10	25	3	20.9	34.5			
13	25	3	23.1	36.0			

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1872phae.proj.1382.

γ Bootis

14 58 56
+ 27 27
14 59 0
+27 26 38

1872

June 11	0	0	55.4	45.0
13	~~R~~			
27	0	0	48.2	42.2
~~July 1~~	0	0	49.0	43.7
6	0	0	48.2	44.1
7	0	0	41.4	35.9
9	0	0	46.0	40.3
11	0	0	42.1	38.7

1873 June 9	55	0	3.7	13.0	
30	55	0	4.0	18.9	
July 6	55	0	-3.1	8.1	83 + 3A + 1 coincide
7	55	0	3.3	16.0	
10	55	0	2.0	15.1	
13	55	0	2.0	14.9	56.9

β 960 Ins Min (P B)

15 02 39
95 3 3
3 2 28
+64 27 47

1873

June 9	45	4	49.1	0.7
30	45	4	48.0	64.2
July 7	45	4	43.9	57.9
10	45	4	44.2	59.0

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1872phae.proj.1382.

48 Ll Cephei

15 04 09
10 2 45
3 4 17
+77 15 57

1872 ~~Aug 13~~ ~~H.R.~~

July 6 40 4 31.1 19.0
7 H.R. Rej' struck spurious
9 40 4 ~~26.7~~ Rej' S

1873 June 30	35	4	5.0	23.1	lost 1 at 3 W'a	
July 7	35	3	50.9	6.6	lost 9, 8, 7, 7	
10	35	3	48.1	6.0		
13	35	3	48.7	5.0	lost 9	

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Gr. ~~2196~~ ~~2212~~ 2213
15 04 14
+ 84 25
15 04 14
84 26 28

R.

1872 June 13	A	K	Middle		
27	0	1	27.7	13.2	
30	0	1	37.6	26.3	
July 1	0	1	41.2	29.8	
6	0	1	25.9	13.2	lost first two wires
7	0	1	25.5	13.6	Cont " " "
9	0	1	24.1	11.6	
11	0	1	36.9	24.5	
1873 June 30	55	0	40.2	56.9	A9+A
July 7	55	0	40.0	55.7	last 4 wires
10	55	0	45.2	5.1	

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3 Serpentis

15 08 57
+ 5 25

15 8 57
+5 24 44

1872

June	11	0	2	21.6	16.0
	13			✱R.	
July	1			✱R.	
	6	0	2	18.7	18.0
	7	0	1	58.0	57.4
	9	0	2	20.2	19.6
	11	0	2	17.7	17.5
	14			✱R.	

false break after a

1873

June	11	55	1	40.1	50.9
	17	55	1	38.2	48.7
	30	55	1	40.9	54.1
July	7	55	1	39.1	57.2
	13	55	1	37.5	48.1

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1872phae.proj.1382.

δ Bootis

15 10 19
+ 33 48

15 10 23
+33 47 23

1872					
					4
June	11	40	0	15.2	7.9
	27	40	0	6.4	0.2
July	1	35	4	23.5	21.2
	7	40	0	16.5	12.9
	9	40	0	1.8	0.0
	11	35	4	33.9	29.7
	14	30	4	33.6	29.5
1873					
June	11	30	4	31.3	43.3
	17	30	4	24.0	36.7
	30	30	4	23.9	37.9
July	7	30	4	25.0	37.5
	13	30	4	28.6	41.1

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1872phae.proj.1382.

11

1 Hr. 26 m. Min.

15 13 08
+ 67 50

15 13 11
+67 49 46

1872

June 11	35	3	26.0	12.1	2	40.7	26.1	
13	~~K.R.~~							
21			Rej					
30	35	2	44.7	35.3				
July 1	35	3	16.0	6.7				
6	~~35~~	~~3~~	~~18.7~~	~~9.9~~				
7	35	3	12.9	2.3	35	2	32.2	22.9
9	35	3	24.1	15.8				
14	35	3	11.7	1.9				

1873

June 11	30	2	32.0	45.8	
17	30	2	30.0	43.1	
30	30	2	35.9	51.9	rej. A_{+1}
July 6	30	2	35.2	51.0	
7	30	2	24.1	38.8	
9	30	2	24.2	39.7	
12	30	2	31.5	44.6	rej. A_{+1}

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1872phae.proj.1382.

D.H.51 40 26 hrs. Min.
15 19 26
+87 43

Obs. next star.
15 19 01
+87 43 13

1872

June 11	45	0	16.0	0.9				
~~13~~	Mid 4 5 26 ~~Mid 5 m~~							
30	Mid 5 m.							
~~July 6~~	~~45~~	~~0~~	~~15.7~~	~~4.6~~				
7	45	0	22.0	11.3	0	15.3	4.1	
9	Rej readings for 3 Mid wires				✓	H. Rong.		

1873

June 11	35	4	~~299~~	~~44.1~~	Ind 5 wires
17	35	4	35.0	49.9	lost 4 9
July 7	35	4	17.5	52.9	5, md. wires
10	35	4	27.0	41.1	5 md. wires
13	35	4	26.0	40.3	lost 1

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1872phae.proj.1382.

1872 June 13			Rej. a.b.c.		
27	20	0	5-39	42.8	
30			H.R.		Last 3 Cu
July 9	10	1	1.7	53.7	rej. 3 outside Wires
11			H.R. only.		
~~13~~	~~10~~	~~0~~	~~28.3~~	~~26.6~~	~~the last 2 of med. gr~~
14	10	0	52.5	40.3	and $a_2 b_2 c_2$
23	10	0	19.0	8.9	
24	10	0	46.3	36.0	
1873 July 7	5	0	1.0	11.9	
10	5	0	58.0	9.4	
~~5~~	~~4~~	~~0~~	~~12.6~~		
12	5	0	9.3	21.3	
21			H.R.		Rej S

1872 June 13			H.R.		
27	40	3	5.5	52.7	
July 7	40	2	42.1	31.3	
9	40	2	41.9	32.9	
11	40	2	39.5	25.8	
~~13~~	~~40~~	~~2~~	~~45.0~~	~~33.9~~	~~Only part of Two wires~~
14	40	2	38.0	26.9	
1873 July 7	35	1	57.7	11.1	
10	35	1	55.1	10.5	
12	35	1	54.2	9.2	
~~13~~	~~35~~	~~4~~	~~26.0~~	~~40.3~~	
13	35	1	53.9	8.8	

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1872phae.proj.1382

V, Birtis

15 26 18

+ 41 16

15 26 22

+41 16 2

1872

June 11	10	1	39.1	29.1	0	51.5	41.9
July 6	10	1	37.1	32.1	0	47.0	42.9
7	10	1	32.1	26.9	0	46.2	40.2
9	10	1	21.8	18.9			
11	10	1	21.4	16.9			
14	16	1	5 7.5	5 2.7	Rij Sangsing		
15	10	1	35.1	31.7			
1873 July 3	5	0	53.8	6.9			
7	5	0	12.6	25.0	lost A +1, 1		
9	0	1	56.2	9.1	9. Wires		
10	5	0	36.8	49.7			
13	5	0	39.0	50.5			
15	5	0	55.0	9.4			
21			AR.				

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1872phae.proj.1382.

α Coronae
15 29 12
+ 27 09

15 29 19
+27 8 37

1872

June 11	15	3	55.3	46.5	3	9.1	59.0
July 7	15	3	55.1	48.8			
9	15	3	50.0	44.7			
11	15	3	53.2	48.3			
13	15	3	53.2	47.3			
14	15	3	37.9	31.6			
15	15	3	45.9	41.9			
23	15	3	57.6	53.1			

rej 1st min

1873

July 3	10	3	4.9	19.9
6	10	3	9.9	25.2
7	10	3	12.7	25.9
9	10	3	5.7	19.8
10	10	3	5.9	19.1
12	10	3	12.5	25.4
13	10	3	7.9	21.0
15	10	3	10.1	25.1

~~1873~~

Gr 7h
3 31 02
11 12

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1972phec.proj.1302.

φ Bootis 1.

15 33 13
+ 40 46

15 33 16
+40 46 6

1872					
June 11	40	1		41.1	33.1
July 11	40	1		31.4	26.3
13	40	1		29.1	23.1
14	40	1		34.1	30.2
15	40	1		28.2	25.1
1873					
June 29	35	0	54.3		9.1
July 3	35	0	53.2		9.0
6	35	0	31.9		46.9
7	35	0	26.9		0.1
9	35	0	43.9		58.5
10	35	0	52.1		5.8
12	35	0	50.7		3.9
13	35	0	55.2		7.0
15	35	0	47.9		3.1
21					

false breakaway

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1872phae.proj.1382.

15 Zero Min

15 35 25
+ 77 46
15 35 14
+ 77 46 19

1872.

June	11	40	2	7.1	51.0
	27	40	2	2,2	49.0
	30	40	1	30,7	19.6
July	6	40	2	2,1	50.9
	7	40	2	9.1	58.0
	9	40	2	59.3	55.0
	11	40	1	44.5	32.2
	13	40	1	56.1	44.9
	14	40	1	53.9	43.6
	15	40	1	56.5	46.6

1873

June	29	35	1	7.0	20.9
July	3	35	1	11.2	26.9
	7	35	1	10.1	22.0
	9	35	1	0.0	12.8
	12	35	1	9.2	22.1
	13	35	1	2.0	13.0
	15	35	1	9.4	24.4
	21			H R,	
	22	35	1	1.1	14.8

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1872phae.proj.1382.

5-16 Camel ✓

15 36 52

10 9 04

3 26 59

+10 56 15

1872					
June	11	25	0	42.9	25.0
	27	25	0	32.8	18.7
	30	25	~~10~~ 0	57.1	45.2
July	6	25	0	29.8	17.9
	11	25	0	47.0	35.9
	15	25	0	24.1	13.1
1873					
June	29	15	4	57.7	5.4
July	6	15	4	35.0	52.1
	7	15	4	43.9	59.9
	9	15	4	37.9	56.0
	12	15	4	40.1	56.1
	13	15	4	49.2	5.1
	15	15	4	35.9	54.7
	21			~~AR~~	
	22	15	4	34.8	53.9

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1872phae.proj.1382.

α Serpentis

15 37 53
+ 6 50
15 ~~37 25~~
35 01
+6 49 36

1872

June 11	35	2	43.1	38.2
~~27~~	~~25~~	~~3~~	~~4.0~~	
July 14	35	2	25.1	25.1
15	35	2	20.7	21.1

1873

June 29	30	1	52.5	49
July 3	30	1	51.1	4.0
.	~~30~~	~~2~~	~~24.1~~	~~35.0~~
July 6	30	1	46.8	58.9
7	30	1	44.8	56.6
9	30	1	46.4	57.8
12	30	1	43.2	53.9
13	30	1	42.7	53.0
15	30	1	52.0	4.8
21	A.R.			
22	30	1	47.4	57.9

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1872phae.proj.1382.

β Serpentis

15 40 16
+ 15 49
15 40 20
+15 4 9 14

1872					
June	27	35	3	40	23
July	14	35	2	58.7	57.9
	15	35	3	1.1	1.1
1873					
June	26	30	2	25.3	33.5
	29	30	2	18.2	27.9
July	3	30	2	24.1	35.0
	6	30	2	22.0	31.1
	7	30	2	25.8	34.0
	9	30	2	24.6	32.7
	12	30	2	20.9	28.9
	~~13~~	~~30~~	~~1~~	~~42.7~~	~~53.0~~
	13	30	2	24.9	31.2
	15	30	2	24.0	34.5
	21	30	2	18.0	25.2
	22	30	2	25.0	33.2

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1872phae.proj.1382.

u Serpentis

15 42 53
— 3 02

15 43 00
−3.2 2.3

1872

June	27	25	4	20.7	19.8
July	6	25	3	25.3	16.5
	9	25	3	~~30.8~~	

1873

June	25	20	3	33.9	42.4
	26	20	3	40.3	48.9
	29	20	3	37.1	49.2
July	3	20	3	42.6	54.8
	6	20	3	45.0	55.9
	7	20	3	37.9	48.1
	9	20	3	34.0	44.1
	12	20	3	42.3	52.1
	13	20	3	37.2	45.2
	15	20	3	38.7	51.2
	20	20	3	39.7	48.9
	21	20	3	44.2	53.3
	22	20	3	39.8	49.2

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1872phae.proj.1382.

12 Ν Draconis
12 ~~Rev. Delphini~~

15 44 42
+ 6 3 00

15 44 42
+6259 33

1872

June 19	25	3	32.1	20.9	3	10.6	59.0
27	25	2	57.1	46.8	2.5	← @	
30	25	3	24.0	13.0			
July 7	25	3	32.2	23.5			
9	25	3	30.8	22.8			
11	25	3	25.1	16.8			
July 6	25	3	25.3	16.5			
~~14~~	25	3	20.0	12.0			
15	25	3	21.2	14.4			

1873

June 25	20	2	37.5	49.9	lost A 2
26	20	2	42.5	56.9	
29	20	2	36.0	52.2	rej group # #1
July 3	20	2	39.5	56.1	lost 2
6	20	2	26.0	51.0	
7	20	2	41.8	55.0	
9	20	2	37.0	51.0	lost 2
12	20	2	32.1	45.1	
13	20	2	44.0	56.9	
15	20	2	42.0	58.3	
20	20	2	38.1	46.1	
21	20	2	36.9	51.1	
22	20	2	42.9	57.2	

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1872phae.proj.1382.

(16) Obs. Min.

15 48 38
+ 78 11

15 48 38
+78 11 2

1872

June 19	15	2	18.9	41.1	2	4.1	50.9
27	15	2	0.6	47.0			
July 3	15	2	8.8	58.2			
7	15	2	12.9	1.8			
9	15	2	16.8	5.0			
11	15	2	13.1	3.1			
~~13~~	~~15~~	~~2~~	~~14.2~~	~~2.3~~			
14	15	2	6.2	55.1			
15	15	2	11.9	1.9			

1873

June 25	10	1	27.8	40.1	
26	10	1	25.9	38.5	
29			A.R.		rej a.r.
July 3	10	1	26.0	41.6	
6	10	1	24.7	40.0	
7	10	1	27.8	41.0	
9	10	1	27.9	41.9	rej. double stroke after s
12	10	1	24.0	36.0	
13	10	1	30.3	42.9	
15	10	1	21.9	37.0	
20	10	1	30.9	43.2	
21	10	1	20.4	33.2	
22	10	1	21.7	35.3	

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1872phae.proj.1382.

ζ Serpentis.

15 50 33
+ 16 04
15 50 35
+16 9 40

1872					
June 27	20	2	45.0	42.9	
July 3	20	2	36.8	36.6	
11	15	2 pure	36.2	36.7	
13	20	2	33.8	32.1	
14	20	2	39.0	37.2	
15	20	2	42.0	42.9	
1873					
June 29	15	1	51.9	2.0	
July 3	15	1	59.8	10.0	
7	15	2	4.5	11.4	
9	15	1	2.1	11.0	
12	15	1	57.1	5.1	
13	15	1	58.3	6.1	
15	15	1 pure	0.6	10.8	
20	15	1	59.0	6.2	
21	15	1	57.9	5.1	
22	15	1	53.0	1.9	

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1872phae.proj.1382.

ε Coronae

15 52 18

+ 27 15

15 52 20

+27 14 49

1872						
June	27	10	1	55.2	48.9	
July	3	10	2 pair	41.9	38.5	false break after a, all the wires by mistake
	11	10	2	36.2	35.0	
	~~13~~	~~10~~	~~2~~	~~39.0~~	~~32.9~~	
	14	10	2	41.0	36.1	
	15	10	2	40.8	37.1	
	29		H.R			
1873						
June	29	5	2?	1.9	16.9	
July	3	5	1	54.9	10.0	
	7	5	1	52.2	5.6	
	12	5	1 pair	0.2	19.5	
	13	5	1	55.1	7.9	
	15	5	1	51.8	6.7	
	20	5	1	0.8	12.3	
	21	5	1	51.9	4.6	
	22	5	1	54.0	6.2	

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Gr. 2296
15 54 45
+ 55 07
15 54 47
+ 55 6 22

1872

~~June~~	~~19~~	~~20~~	~~1~~	~~23.5~~	~~13.0~~
July	3	20	1	21.5	14.8
	15	20	1	16.2	11.2

1873

June	29	15	0	37.9	51.1
July	3	15	0	28.1	34.3
	12	15	0	39.8	52.8
	13	15	0	30.9	43.2
	15	15	0	35.9	50.3
	20	15	0	37.0	49.3
	21	15	0	24.7	38.0
	22	15	0	30.7	44.2

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1872phae.proj.1382.

P.O.

Gr. 750

15 5 50

94 47

B 57 24

+85 13 00

1872 June	30	40	1	41.2	31.1	
July	3	40	1	23.8	14.4	
	6	40	1	37.1	25.9	
	7	40	1	28.1	17.8	lost 1st wire
	9	40	1	25.0	14.5	
	15	40	1	21.0	11.1	
	16	40	1	13.8	64.8	
1873 July	3	35	0	36.1	53.9	lost last wire
	12	35	0	34.9	49.1	
	15	35	0	29.9	47.8	
	20	35	0	29.8	44.9	
	21	35	0	30.8	46.1	
	22	35	0	29.0	46.1	

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ϕ Draco.
15 59 28
+ 58 54
15 59 31
+58 54 17

1872
June 29 | 30 | 8 | 42.2 | 32.2
July 1 | 30 | 8 | 25.3 | 16.8
3 | 30 | 3 | 42.8 | 34.0
11 | 30 | 8 | 34.9 | 27.1
13 | 30 | 3 | 37.8 | 31.0
14 | 30 | 3 | 43.5 | 34.9
16 | 30 | 3 | 39.2 | 32.4 | rej. 3 outside wires

1873
July 3 | 25 | 2 | 48.1 | 3.2
12 | 25 | 2 | 53.2 | 5.9
15 | 25 | 2 | 49.2 | 4.1
20 | 25 | 2 | 54.2 | 6.9
21 | 25 | 2 | 48.0 | 1.0
22 | 25 | 2 | 46.1 | 0.2
24 | 25 | 2 | 43.0 | 59.4

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1872phae.proj.1382.

φ Herculis

16 04 45

+ 4 5 16?

16 4 46

+45 - 16 8

1872 July 1 ~~HR~~

15	10	1	28.1	23.1	
16	10	1	39.3	34.2	
22	10	1	27.0	22.2	~~0 — 42.1~~
28	10	1	40.6	33.0	
29		~~HR~~			

1873

June 25	5	0	46.5	0.9	lost ★ +1°.1.
July 3	5	0	34.5	10.0	
12	5	0	52.5	4.9	
15	5	0	51.1	6.4	
20	5	0	56.0	8.1	
21	5	0	50.0	2.1	
22	5	0	53.8	6.0	
23	5	0	48.9	5.1	
24	5	0	51.8	6.7	

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1872phae.prof.1382.

Gr. 2320

16 6 00
+ 68 9

16 8 5 9
+68 8 91

1872 July	1	15	4	14.0	38
	3	15	4	29.9	21.1
	15	15	4	11.6	3.7
	16	15	4	15.2	6.6
	28	15	4	10.3	−0.7
1873 June	25	10	3	33.0	46.9
July	3	10	3	29.0	45.3
	12	10	3	27.1	40.4
	15	10	3	26.4	43.8
	20	10	3	22.1	36.0
	21	10	3	24.0	37.9
	22	10	3	21.9	36.1
	23	10	3	25.3	41.6
	24	10	3	26.0	42.8

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δ Ophiuchi

16 07 38
− 3 24
16 7 42
−3 21 56

1872

July 3	45	3	8.0	10.0	lost 1st in two wires.
15	45	3	47.2	48.9	
24	45	3	49.0	57.3	
29			H.R.		

1873

June 25	40	3	7.9	16.8
July 3	40	3	5.0	16.3
	~~40~~	~~3~~	~~0.5~~	
6	40	3	9.7	20.8
9	40	3	9.2	19.0
12	40	3	7.9	16.9
15	40	3	9.0	20.0
20	40	3	10.9	20.0
21	40	~~3~~ 2 pure	0.5	8.9
	~~40~~	~~3~~ pure	~~2.1~~	
22	40	3	5.1	14.1
23	40	3	7.9	17.9
24	40	3	4.9	16.1
30	40	3	5.5	16.9

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1872phae.proj.1382

ε Ophiuchi

16 11 31
— 4 23 ?
16 11 36
−4 22 52

1872 July

	15	45	4	42.1	44.5
	22	45	4	40.3	43.1
	24	45	4	31.1	33.1
	28	45	4	44.0	45.0
	29			✕R.	
1873	July 3	40	3	0.5	13.1
	July 6	40	3	0.0	10.9
	9	40	3	57.2	8.0
	12	40	3	3.1	12.9
	15	40	4 Sure	6.4	17.7
	20	40	3 Sure	16.9	28.0
	21	40	3	2.1	11.9
	23	40	3	7.9	17.9
	23	40	3	3.4	13.8
	24	40	3	36.4	47.9
	30	40	4	8.9	19.9

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1872phae.proj.1382.

19 Hours. Min. s

16 14 32
+ 76 12

16 14 28
+76 11 46

1872 July	1	15	1	70	56.0			
	3	15	1	31.9	22.9	1	18.8	8.9
	15	15	1	23.1	14.9			
	16	15	1	23.9	15.7			
	24	15	1	23.2	16.0			
	26	15	1	13.3	34.2			
	29		~~1~~					
1873 July	6	10	0	38.9	52.4			
	9	10	0	43.9	57.9			
	12	10	0	49.0	0.1	rej. A+1		
	15	10	0	36.1	49.9			
	20	10	0	38.0	51.1			
	21	10	0	42.8	55.2			
	22	10	0	36.6	50.0			
	24	10	0	41.7	55.8			
	30	10	0	30.1	46.0			
Aug.	4	10	0	30.9	45.9			

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1872phae.proj.1382.

γ Herculis

16 16 15
+ 19 27
16 16 19
+19 27 10

1873 July	1	0	0	16.6	16.1
	3	0	0	14.9	14.1
	15	0	0	15.2	14.9
1873 July	12	50	4	31.9	42.5
	15	50	4	29.2	42.5
	20	50	4	32.0	41.7
	21	50	4	28.3	39.8
	22	50	4	30.5	40.9
	24	50	4	29.3	42.9
	30	50	4	33.8	45.9
Aug.	4	50	4	29.7	44.1

γ Her 2.8
16 15 40
+19 27 45

16 15 43
+72 15 03

1872 July	3	40	4	10.3	59.1
	11	40	4	31.8	21.4
	14	40	4	25.0	14.8
	15	40	4	5.2	54.8
	16	40	4	15.2	6.2
	22	40	4	9.8	58.0
	24	40	4	8.4	57.9
	28	40	4	5.1	54.0
~~Aug.~~	~~1~~	~~40~~	~~4~~	~~12.5~~	~~0.0~~
1873 July	12	35	3	21.2	35.3
	15	35	3	5.1	22.6
	20	35	3	18.9	29.4
	22	35	3	13.8	30.1
	23	35	3	10.1	35.0
	24	35	3	6.3	24.0
	30	35	3	5.1	24.7
Aug	4	35	3	23.0	41.1

lost wires 1.2.3.7.8

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1872phae.proj.1382.

ω Herculis

16 19 30
+ 14 20
16 19 33
+14 19 39

1872 July 1	5	2	28.3	28.3	
3	5	2	35.2	35.1	
15	5	2	22.0	21.8	
22	5	1	52.2	53.2	lost 1/2 of wire
24	5	1	53.1	53.9	Mild Analogy of fuel
25	5	2	22.9	20.0	
28	5	2	25.0	25.0	
1873 July 6	0	1	52.9	3.5	
12	0	1	38.0	47.1	lost 1
15	0	1	46.0	56.9	
20	0	1	49.7	58.9	
22	0	1	30.6	39.9	
23	0	1	19.8	30.3	
24	0	1	49.2	0.9	
30	0	1	51.1	2.8	

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1872phae.proj.1382.

Gr 2343

16 21 40

+ 55 30

16 21 39
55 29 39

Get next star

1872 July 1	55	3	15.4	8.1		
3	55	3	15.9	8.5	rej. a, b, c	Wed. 9 W
15	55	3	12.0	5.0		
16	55	3	14.4	7.2		
1873 July 6	50	2	25.0	39.2		
9	50	2	28.0	43.0		
12	50	2	26.9	39.9		
20	50	2	28.1	41.9		
22	40	3	39.0	52.1	#?	

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1872phae.proj.1382.

η Draco. ✓

16 22 16

+ 61 48

h_2 = 16 22 16 R.A.
+61 4' 8" 8"

1872 June	30	30	4	30.8	22.0	
July	3	35	4	42.0	33.8	
	15	35	4	37.2	29.0	
	16	35	4	26.8	18.9	
	24	35	3	2.3	55.9	
	23		A.R. only			
	25	35	4	38.1	29.0	
	27	35	4	36.8	27.8	false break folls.
	28	35	4	31.0	20.3	lost 1 of 11 two Wires
	29	A.R.				
~~Aug 1~~	~~35~~	~~4~~	~~34.9~~	~~19.7~~	~~rej. 2 on 11 Wire~~	
Aug 4		A.R.				
5		A.R.				
1873						
July 12	30	3	36.0	49.9		
20	30	3	34.9	48.4	lost 1 of 3 wires	
23	30	3	56.8	12.9		
24	30	3	59.9	15.7		
30	30	3	58.0	14.1		
Aug. 4	3	4	7.2	23.9		

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1872phae.proj.1382.

β Herculis

16 24 41

+ 21 46

16 24 46

+21 46 S

1872 July	1	40	1	22,0	17,3
	3	40	1	24,2	19,0
	15	~~35~~	1	18,7	14,4
	22	40	1	14,8	12,1
	24	40	1	20,0	15,7
	25	40	1	27,2	22,0
	27	40	0	1,9	56,9
	28	40	1	23,9	18,3
	29			✱R.	
Aug	4			✱R.	
1873 July	12	35	0	41,2	52,8
	20	35	0	35,0	45,2
	22	35	0	40,2	52,8
	23	35	0	39,9	53,8
	24	35	0	34,1	48,8
	~~26~~	~~35~~	~~0~~	~~38,0~~	~~51,2~~
	~~30~~	~~35~~	~~0~~	~~29,2~~	~~16,0~~
	30	35	0	5,1	18,0
Aug	4	35	0	35,0	49,0

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1872phae.proj.1382.

A Draco.

16 28 20
+ 69 03

16 28 14
+69 2 34

1873 July	1	25	0	32.4	22.8
	3	25	0	37.9	27.9
	7	25	0	35.5	25.3
	9	25	0	26.8	27.1
		40	4	25.0	14.6
	15	25	0	35.0	26.9
	23	25	0	35.7	25.8
	24	25	0	28.9	21.1
	25	25	0	32.0	22.4
	27	25	0	34.7	25.7
	28	25	0	30.6	21.2
			HR.		
Aug.	1	25	0	32.8	22.7
	5	25	0	33.1	22.7
1873 July	12	15	4	40.6	54.3
	22	15	4	34.9	48.8
	23	15	4	50.3	6.1
	24	15	4	49.9	6.0
	26	15	4	35.9	54.4
Aug.	4	15	4	37.0	52.9

rej. A_{+1} 1, 2

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1872phae.proj.1382.

o Herculis

16 30 00

+42 42

16 30 01

+42 42 0

1872					
July	3	45	0	44.9	39.1
	15	45	0	42.3	37.8
	25	45	0	54.5	35.9
1873 July	12	40	0	1.7	13.8
	23	40	0	58.0	12.9
	24	35	4	51.6	5.2
Aug.	4	40	0	56.4	10.2

false stroke after A.1

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1872phae.proj.1382.

Gr. 848 ✓

16 31 38

10 4 18

4 31 47

+15 42 18

1872					
July	3	10	1	16.7	5.9
	15	10	1	12.0	61.1
	~~23~~	10	1	34.0	22.0
	27	10	1	19.9	9.1
	28	10	1	12.8	1.1
Aug.	1	10	1	30.0	17.7
	5	10	1	13.0	1.0
1873					
July	20	5	0	23.9	40.0
	~~23~~	~~5~~	~~0~~	~~19.0~~	~~38.0~~
	24	5	0	19.9	39.0
Aug.	4	5	0	20.8	39.4

lost 1st & Three Wires.

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1872phae.proj.1382.

G₂ .2372

16 32 48

+ 79 15

16 32 48

+78 13 46

1872 July	1	10	4	00	42.7	
	3	10	4	16.1	4.7	
	7	10	4	26.1	13.6	
	9	10	4	41.0	29.2	
	15	10	4	14.2	3.1	
	25	10	3	55.3	44.10	
	27	10	3	56.1	44.1	
	28	10	4	13.1	1.9	rej 1 at 1.8
	29		H R			
Aug.	1	10	4	11.1	57.6	
	4		H R.			
	5	10	4	9.8	56.0	
1873 July	20	5	3	18.9	32.8	
	~~23~~	5	3	16.1	34.0	
	24	5	3	16.3	32.1	
Aug.	4	5	3	18.0	34.0	

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1872phae.proj.1382.

Gr 2373. ✓

16 36 14
+ 77 42

16 36 8
+ 77 41 52

1872 July	1	45	1	10.2	−1.6	~~#7~~
	3	45	1	41.9	30.0	
	11	45	1	37.2	26.8	
	13	45	1	27.9	17.0	
	15	45	1	31.2	21.1	
	16	45	1	29.1	19.9	
	22	45	1	30.0	20.2	
	23	45	1	29.5	17.9	
	24	45	1	23.1	13.1	
	25	45	1	29.3	17.8	2nd W ~~& foll~~ rej. pr. W Obs. ~~Aug~~. hazy
	27	45	1	36.1	24.2	only 3 first breaks for δ first 1/2 wire
	28	45	1	32.2	20.8	
	29		A.R.			
Aug.	1	45	1	25.1	12.8	
	5	45	1	26.1	13.8	
1873						
July	20	40	0	34.0	45.0	
	23	40	0	37.3	41.0	
	24	40	0	31.7	45.1	
	30	40	0	21.9	36.2	
Aug.	4	40	0	36.7	51.4	
	5	40	0	24.7	36.9	
	6	40	0	36.4	50.2	
	9	40	0	12.4	26.2	

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1872phae.proj.1382.

η Herculis

16 38 30
+ 39 10
16 38 33
+39 9 54

1872 July	1	15	2	51.3	47.8	
	3	15	2	54.1	49.3	false break after a
	15	15	2	49.0	45.9	
	22	15	2	45.0	40.7	
	23	15	1	57.1	51.6	Ind. gr
	25	15	2	49.7	43.9	
	27	15	2	48.1	43.0	
	28	15	2	45.2	39.1	
	29	15	2	27.1	22.3	
	Aug. 1	15	2	43.6	37.5	extra Wire after 1
	4	15	2	35.9	29.0	
	5	15	2	42.9	35.1	
	6	15	2	38.9	32.1	
	7	15	2	46.8	42.1	
	10	15	2	40.9	35.7	
1873 July	20	10	2	4.0	14.8	
	23	10	1	49.0	3.0	
	24	10	1	59.9	15.0	
	26	10	1	58.0	12.8	
Aug.	4	10	2	1.9	15.9	
	6	10	1	54.1	8.8	
	9	10	1	55.5	9.9	

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1872phae.proj.1382.

Gr. 2377
16 42 51
+ 57 01
+16 42 53
+57 01 34

1872

July	3	25	2	29.0	21.5
	15	25	2	26.2	19.4
	~~15~~	0			
	20	25	2	23.5	15.1
	~~23~~	25	2	23.0	14.9
	28	25	2	24.2	16.2
Aug.	1	25	2	24.7	15.1
	4	25	2	18.8	10.0
	5	25	2	19.0	9.9
	6	25	2	27.2	19.1
	7	25	2	17.7	11.8
	10	25	2	20.0	13.0

1873 July	20	20	1	27.0	40.0	
	23	20	1	35.6	50.2	
	24	20	1	32.8	47.9	
	26	20	1	23.7	39.2	
Aug.	4	20	1	36.0	52.0	
	~~6~~	~~20~~	~~1~~	29.1	43.1	
	9	20	1	27.7	42.8	
	11	20	1	24.5	38.3	rej. A +1

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1872phae.proj 1382.

49 Herculis. 1872

16 46 12
+ 15 11?
(+ 15 17).

16 46 18
+15 11 20

July	15?	15	0	56.1	53.0
	25	15	0	48.5	46.1
	28	15	0	58.2	57.1
Aug.	1	15	0	57.5	55.9
	5	15	0	56.1	54.0
	6	15	0	54.7	53.0
	7	15	0	56.4	56.4
	18	15	0	58.0	57.1

1873

July	20	10	0	12,8	20,0
	23	10	0	15.5	24.4
	24	10	0	11.8	21.8
	26	10	0	10.3	26.1
Aug.	4	10	0	14.9	25.1
	6	5	4	39.9	~~49.3~~ A. 2, 3, 4, 5
	9	10	0	13.8	23.4
	11	10	0	11.5	20.1
	12	5	4	51.0	59.8 m.d.gr.

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1872phae.proj.1382.

Gr. 2891

16 48 43
+ 77 44

16 4+ 42

+7743 34

1872

June	30	40	4	16.8	5.3
~~July~~	~~1~~	~~40~~	~~4~~	~~17.8~~	~~6.0~~
July	3	40	4	33.1	22.4
	6	40	4	45.9	34.9
	7	40	4	29.3	19.6
	9	40	4	38.8	28.1
	11	40	4	34.5	23.1
	14	40	4	34.2	23.8
	15	40	4	33.2	22.9 ref. 3 outside strokes
	16	40	4	26.4	16.3
	22	40	4	27.0	17.0
	23	40	4	41.1	29.1 md. & foll. wire
	25	40	4	32.9	22.1
	28	40	4	36.1	24.5
Aug.	1	40	4	36.3	22.8 ref. stroke before breaks
	4	40	4	30.0	17.5
	5	40	4	32.1	20.0
	6	40	4	33.2	21.0
	7	45	4	32.1	21.8

1873 July	20	35	3	38.3	50.2
	23	35	3	28.8	41.9 ref. 1st 8
	24	35	3	34.0	48.1
	26	35	3	38.7	52.2 ref. Q 41
Aug.	4	35	3	37.8	51.0
	6	35	3	34.8	48.6
	9	35	3	20.0	34.9
	11	35	3	40.5	53.0
	12	35	3	33.2	46.1

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1872phae.proj.1382.

K Okhinichi 1872

16 51 36

+ 9 34

16 51 39

+9 34 27

July	16	50	2	44.2	44.1
	22	50	2	~~24.8~~	24.0
	~~24~~	~~50~~	~~2~~	~~44.7~~	~~44.1~~
	25	50	2	45.0	43.0
	27	50	2	39.9	38.1
	28	50	2	46.0	45.0
Aug	1	50	2	40.9	38.8
	4	50	2	36.0	34.1
	5	50	2	11.3	44.1
	6	50	2	42.5	40.8
	7	50	2	44.8	45.0
	10	50	2	44.8	44.9

1873 July	23	45	2	9.8	16.8	
	24	45	2	5.0	16.7	
	26	45	2	8.1	21.3	
Aug.	4	45	1	56.8	8.8	
	6	45	2	0.2	11.0	new o for sheet.
	9	45	2	7.0	18.2	
	11	45	1	59.9	9.9	
	12	45	1	50.0	0.8	

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1872phae.proj.1382.

ε Herculis

16 55 21

+ 31 07

16 55 26

+31 6 53

1872

Aug 1	20	0	46,0	41,1	
3	20	0	45,7	41.5	
11	20	0	43,9	39.9	
14	20	0	40,8	36,8	
23	20	0	43,2	36,9	

1873

July 23	? 15	4	49.8	3.9	
24	10	4	48.9	4.2	
26	15	0	58.9	15.0	
Aug. 4	15	0	55 0	11.2	
6	10	4	49.0	4.0	
9	10	4	43.1	58.8	
11	10	4	27.2	41.0	lost At, 1,2.
12	10	4	53.3	7.2	

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1872phae.proj.1382.

ε Ursa. Min. 1872

16 59 16
+ 82 15
16 59 4
82 14 33

Jan 30	10	3	29.6	18.6	Ch. failed
Aug 1	10	4	3.0	51.3	
3	10	3	46.0	34.8	
6	10	3	49.0	38.8	
7	10	3	53.2	41.9	
9	10	3	54.2	43.0	
11	10	4	4.8	52.9	
14	10	3	44.1	33.0	
16	10	3	3.1	53.1	
20	10	3	49.3	38.3	15 Wires 10 3 28.9 17.8
22	10	3	47.0	37.2	
23	10	3	48.8	36.1	
24	10	3	49.0	38.9	
25	10	3	53.2	41.5	
27	10	3	57.6	45.8	
28	10	3	50.3	38.2	
29	10	3	49.0	38.3	
Aug. 1	10	3	52.1	39.9	
4	10	3	43.2	30.2	lost last 3 Wires Last Wire Obsd. dbt.
5	10	3	46.2	35.9	
6	10.3		46.2	35.0	
7	10	3	53.3	38.0	
8	10	3	31.3	21.3	
10	A.R.				Wires q, b, c, ?c 2

1873

July 23	5	3	6.1	22.8	
24	5	3	3.8	20.3	
26	5	3	9.7	27.1	
Aug. 4	5	3	2.5	20.6	
6	5	3	3.8	20.8	
9	5	3	1.8	18.8	
10	5	3	3.1	9.1	
11	5	3	1.5	16.6	lost 1st wire
12	5	2	34.9	50.8	lost 1st 2 Wires

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19 H Camel ✓ 1872 July 9 30 3 36.8 24.2
17 01 30 11 30 8 31.1 18.6
10 0 56 14 30 3 31.8 21.8
5 1 40 " 25 30 3 29.9 18.2
7 7 4 43 25 30 3 30.9 18.1
29 30 3 26.0 14.9 Obs.? Clouds lost last V.
Aug. 1 30 3 29.1 17.6
8 30 3 28.7 16.9

1873
July 24 25 2 29.8 46.0
26 25 2 25.9 44.0 break after 8
Aug. 4 25 2 26.3 45.7
6 25 2 33.2 50.9
9 25 2 32.5 50.9
10 25 2 27.0 44.1
11 25 2 34.6 50.8
12 25 2 39.1 55.2

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Gm 24 15

17 3 37

+ 40 41

17 3 38

+40 41 00

et W.

1872

July	6	45	1	33.1	25.2
	11	45	1	48	42.8
	14	45	1	51.1	46.7
	20	45	1	7.8	2.1
	25	45	1	44.2	39.5
	28	45	1	44.9	39.0
	29	45	1	11.8	27.6
Aug.	6	45	1	41.9	37.0
	7	45	1	41.1	37.0
	8	45	1	37.9	32.9
	10	45	1	10.2	35.0

1873 July	24	40	0	54.3	8.5
	26	40	0	58.0	13.8
Aug.	4	40	0	54.0	9.4
	6	40	0	48.8	3.3
	9	40	0	47.7	2.5
	11	40	0	55.1	8.0
	12	40	0	51.0	4.6

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α Herculis 1872

17 08 46
+ 14 32
17 8 51
+14 32 13

June	30	55	0	12.2	10.0
July	6	55	0	4.4	5.1
	7	55	0	12.9	13.0
	9	55	0	9.2	9.2
	11	55	0	11.7	11.5
	14	55	0	3.0	3.8
	20	50	4	38.9	38.9
	22			#.R.	
	25	55	0	10.2	8.8
	28	50	0	5.9	4.8
	29	55	0	7.0	7.8
Aug	1	55	0	#48.9	4 46.0
	5	55	0	6.1	4 4.1
	6	55	0	4.9	5.7
	7	55	0	12.1	12.9
	8	55	0	2.9	3.1
	10	55	0	4.8	4.7

1873 July	26	45	4	23.9	34.3
Aug.	4	45	4	24.6	35.9
	10	45	4	19.9	30.1
	11	45	4	22.2	30.9
	12	45	4	21.0	30.8

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Π Herculis	1872 June	30	3	0	29,6	23.2
17 10 34	July	6	30	0	3,7	29,9
+ 36 57		7	25	4	6,2,2	5,7,0
17 10 38		9	30	0	3,3,9	29,2
+36 57 13		11	30	0	3,3,5	27,9
		20	30	0	5,.8	0,9
		25	30	0	31,0	25.8
		28	30	0	32,1	26,0
		29	30	0	25,7	21,1
		30	25	4	53.8	49,9
	Aug.	6	30	0	26,0	20,4
		7	80	0	17,3	15,0
		8	30	0	26,0	22,1
		10	30	0	18,8	15,5
1873	July	26		20	4 42.9	57.8
	Aug.	4		20	4 37.9	52,8
		6		20	4 37,1	50.5
		10		20	4 36.0	49,1
		12		20	4 41,3	54.5

fadenstiftspur a.

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1872phae.proj.1382.

Gr. 24 37
17 18 12
+ 71 57

11 18 9
+71 55 05

1873 June 30 ~~30 0 25.6 2.3~~
30 2 55.2 45.2
July 6 30 2 58.5 48.0
7 30 2 58.5 48.3
9 30 2 50.0 41.0
11. 30 2 57.8 47.9
16 30 2 44.0 35.1
24 30 2 16.7 6.8
25 25 127 175

1873
July 24 25 1 53.0 7.0
26 25 1 55.4 9.1
Aug. 4 25 2 0.9 14.1
6 25 1 50.0 3.4
10 25 1 40.2 52.8
12 25 1 39.2 52.1

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1662 Lus Min P.B.
Gr. 966

17 22 29
+ 10 5 03
5 22 45
+ 4 5 16

1872 June	30	25	1	10.3	−1.9
July	6	25	1	16.5	4.8
	7	25	1	21.0	8.0
	9	25	1	20.7	10.9
	11	25	1	14.8	2.8
	16	25	1	15.2	5.0
	20	25	1	19.8	9.1
	24	25	1	49.0	38.5
	25	25	1	23.2	12.3
	27	25	1	20.0	8.2
	28	25	1	12.4	1.9
	29	25	1	12.4	1.9
Aug.	4	25	1	13.0	0.4
	6	25	1	12.0	1.1
	7	25	1	23.1	13.2
	8	25	1	17.9	8.2
1873 July	24	20	0	20.8	37.8
	26	20	0	2.0	18.0
Aug.	4	20	0	21.9	39.1
	6	20	0	12.8	28.7
	10	20	0	18.6	34.6
	12	20	0	19.3	33.0

Obs.? Clouds,

clouds

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1872

B Draco.

17 27 35
+ 52 24
17 27 39
+52 23 46

(α Ursæ Min.
+12 40)

June 30	0	4	17.1	9.5				
July 6								
7	0	4	11.2	2.3				
9	0	4	18.2	11.8				
11	0	4	16.3	8.9				
16	0	4	14.2	8.8				
20	0	4	10.9	2.9				
24	0	4	9.5	2.9	0	3	14.3	8.9
25	0	3	54.2	47.5				
27	0	4	11.4	3.0				
28	0	4	5.0	58.0				
29	0	4	11.1	3.3				
Aug 1	0	3	53.8	46.7				
4	0	4	9.1	1.1				
6	0	4	10.8	3.2				
7	0	4	12.0	5.7				
8	0	4	5.1	59.7				
10	0	3 2nd	4.1	3 57.9				

1873 July 24	55	3	13.8	29.7	
26	55	3	15.2	30.9	
30	55	3	18.6	34.9	
Aug. 4	55	2	41.9	59.2	
5	55	3	7.8	21.9	
6	55	3	14.2	26.9	
12	55	3	10.7	25.2	rej. A +1

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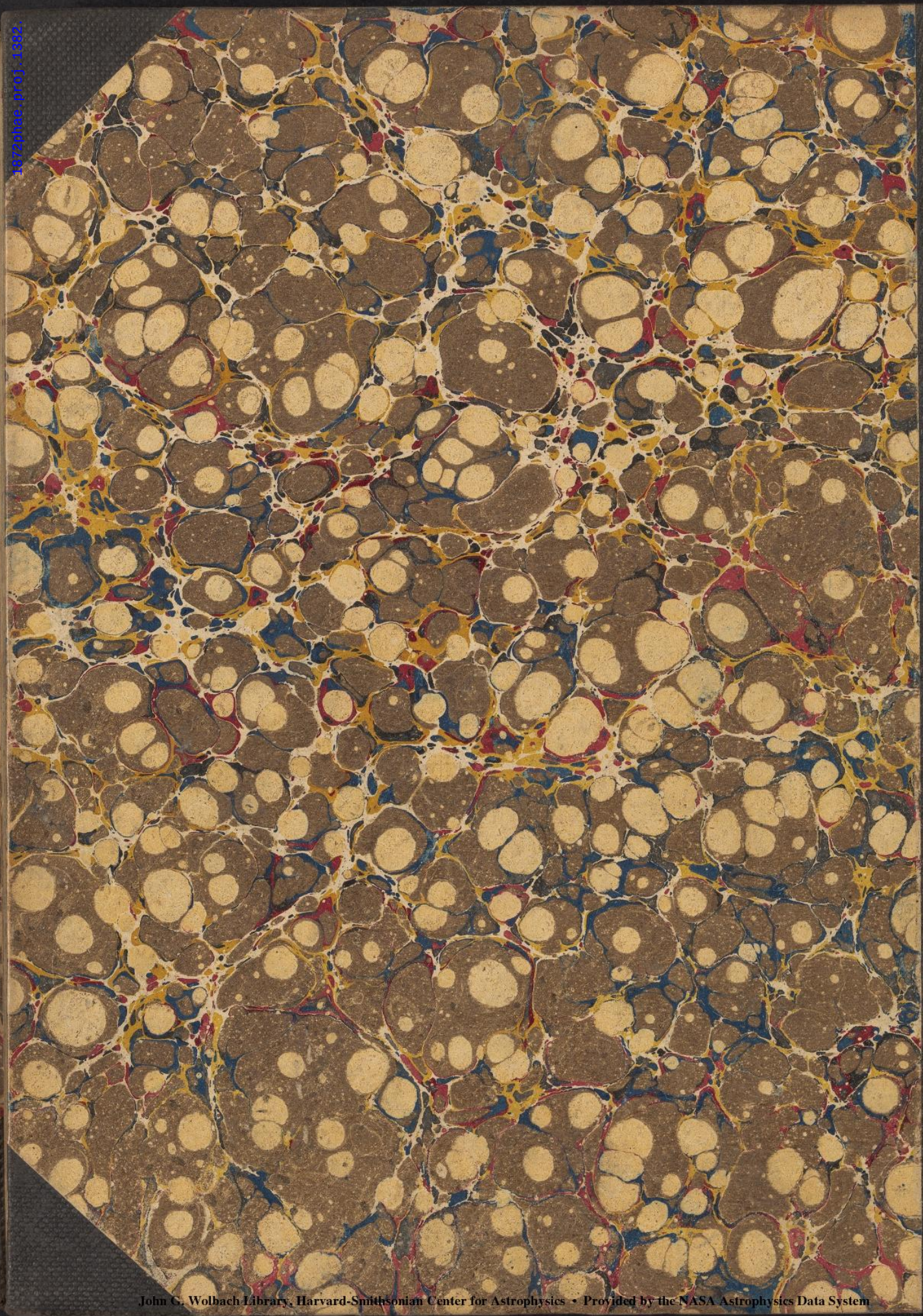
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