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M. 33 (marked June 4, 1877)

M 33

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Chronometers

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List of Stars in Am. Eph. for 1865 not in Harv. Coll. Working List

				mg.	Interferes with	Arg	G.	Paris
	21 Cassiopeiae	0 36 47	+15° 45'.1	6	β Ceti none below			
	38 ———	1 21 14	20 25.9	5	[214 Cam B ~~sp~~ both below]			
	48 Cephei H.	3 3 19	12 46.0	6	δ Arietis [none below]			
	3 Ursae maj. H.	7 59 20	21 8.0	5	[ζ Argus] ρ Ursae min			
	24 ———	9 22 29	19 34.8	5				
	32 ———	10 8 12	24 13.2	5	[h Ursae maj. above + W]			
	9 Draconis H.	10 23 32	13 35.6	5.4	σ Aquarii below			
	λ Draconis	11 23 21	19 55.5	3.4	[202 Camel B]			
	4 ——— H.	12 5 50	11 38.0	5	[γ Pegasi + E] above			
	χ ———	12 27 42	19 28.1		[β Coroi +]			
×	32 Camel Coll	12 48 10	5 51.2	5.4	[γ Cassiop]			
×	5 Ursae min	14 27 51	13 42.3	4	[Gr. 527 +]			
	Gr 2320	16 5 58	21 50.0	5	o' Eridani below			
	15 Draconis	16 28 16	20 56.4	5	α Tauri below. τ Scorpii?			
	ω ———	17 37 45	21 10.8	4	β Ophiuchi? Arg 415			
	δ ———	19 12 31	22 34.6	3	[β' Sagitt] δ Geminor below			
	τ ———	19 18 8	16 53.6	5	γ Canis δ Aquilae			
	ε Draconis	19 48 37	20 4.6	4	[β Aquilae above]			
	χ Cephei	20 13 23	12 41.8	4.5	[G. 1418]			
	~~[illegible]~~	~~20 30 34~~	~~17 55.5~~					
	Arg. 480	20 53 36	9 57.4	6	[76 Draconis]			
	11 Cephei	21 39 56	19 18.6	5	δ Capricorni			
×	79 Draconis	21 51 11	16 56.2	6				
	226 Cephei B	22 29 54	14 28.2	5.6	193 Camel B			
	1 Cephei	22 44 53	24 30.6	4				
	o	23 13 6	22 37.6	6.5	[δ Crateris below]			
	Gr 4163	23 48 18	16 20.6	5				
×	o Piscium	1 38 16	+8 28.6	4	τ Ceti			P
×	65 Ceti	2 5 51	+8 12.7	4.5	[20 Ursae B sp +]			
×	ζ Arietis	3 7 9	+20 32.5	4.5				
×	11 Orionis	4 56 51	+15 12.8	5				
×	φ Geminorum	7 45 14	+27 6.7	5				
	o Virginis	11 58 20	+9 29.0	4				P
×	β Bootis	14 56 52	+40 55.5	3				P
	ε Coronae	15 52 0	+27 16.2	4	δ Scorpii			
	τ Herculis	16 15 41	+46 38.2	3.4	γ Herculis			
	d ———	16 56 37	+33 45.9	5				
	b Ophiuchi	17 18 8	−24 2.9	5	64 Camel B sp.			
×	γ² Sagittarii	17 57 8	−30 25.3	3.4	~~Sagitt~~			
×	1 Aquilae	18 27 52	−8 20.1	4.5		430		
×	d Sagittarii	19 9 44	−19 11.4	5				
	κ Aquilae	19 29 38	−7 19.5	5				P
×	τ ———	19 57 33	+6 54.0	6.5				
	π Capri	20 19 35	−18 39.1	5				
	ε Delphini	20 26 46	+10 50.8	4	[A Cephei]		G	
	μ Aquarii	20 45 22	−9 29.3	5.4	6 Ursae maj sp			P
	ν Cygni	20 52 8	+40 38.9	4	76 Draconis			
×	1 Pegasi	21 15 51	+19 13.7	4.5		488		
	ξ Aquarii	21 30 34	−8 27.5	5.4	Gr 1564 sp		G	
+	μ Capri	21 45 56	−14 11.1	5		502		
	π Aquarii	22 18 23	+0 41.6	5.4				
	λ ———	22 45 34	−8 17.8	4	1 Cephei		G	P

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Stars of Large P.M. (over 0″48 Mädler) not in working list
1865.0

69	79 Ceti	2 28 34	−4° 8′.9	α Ceti ε Piscium γ Ceti α Ceti γ Eridani	
92	10 Tauri	3 30 0	−0 1.4	γ α Ceti γ Eridani α Tauri	[b Camel H]
	27 Eridani	3 41 3	−23 38.7	α Ceti γ Eridani ε Leporis α Leporis β Orionis	
Paris	40 Eridani	4 9 3	−7 51.9	α Ceti γ Eridani α Tauri ε Leporis β Orionis α Leporis	
	δ Leporis	5 45 31	−20 53.5		[ψ Draconis]
Paris	20 Crateris	11 27 44	−32 5.7		
Paris	61 Virginis	13 11 21	−17 33.4	[Polaris Sp]	
Paris	49 Librae	15 52 45	−16 8.0	δ Scorpii	
	18 Scorpii	16 8 17	−8 0.6		
	12 Ophiuchi	16 29 16	−2 2.1	ζ Ophiuchi	
Paris	36 ——	17 6 48	−26 23.8		
Paris	30 Scorpii	17 7 41	−26 20.5		
	54 Piscium	0 32 21	+20 31.3		
	107 ——	1 35 10	19 36.7		
	104 m Tauri	4 59 28	18 27.7	ε Leporis	
	55 2 Cancri	8 44 33	28 50.7		
	π Cancri	9 4 44	15 32.4		
	39 Leonis	10 9 39	23 47.0	[δ Ursae]	
Paris	83 ——	11 19 55	3 44.9		
	33 Virginis	12 39 31	10 17.7		
	70 ——	13 21 50	14 30.1		
	5 Serpentis	15 12 25	2 16.7		
Paris	316 Aquilae	19 18 32	11 43.5	δ Aquilae	
	3 Cygni	19 19 51	24 38.2		
	15 Sagittae	19 58 2	16 42.4		
	6 Pegasi	22 45 34	9 7.1		
	85 ——	23 55 7	+26 22.0		
Paris	β Cassiopeiae	0 3 0	+58 31.1	[α Andromedae] ζ Cowi	
Paris	4 ——	0 40 42	57 4.6		
Paris	μ ——	0 59 18	54 15.4		
	δ Triangulis	2 8 50	33 36.3		
Paris	λ Aurigae	5 9 22	39 58.3		
	16 Unaemaj	8 51 35	42 18.9		
	11 Leonis	9 27 33	36 19.8		
	20 ——	9 53 13	32 35.2	π Leonis	
Paris	ζ Ursae	11 10 59	32 17.4		
	8 Cancri	12 27 19	42 5.5	[β Cowi]	
	X Herculis	15 48 0	42 49.8	[ζ Ursae]	
	ρ Coronae	15 55 53	33 42.8		
Paris	72 Herculis	17 15 37	32 38.8		
Paris	τ Cygni	21 9 24	37 28.3		
	3077 Bo.	23 6 46	32 44.3	[δ Leonis]	
	3158 —	23 36 32	37 45.7		
	X Draconis	18 23 29	+72 40.4		
Paris	6 ——	19 32 37	−69 25.8	[Procyon Cygni]	

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More Stars of Large Pull

				Johns
				m
Gr. 518	Pi	1 37 59	+63° 11' 1	5.6
1159	"	6 23 8	79 42.1	5.8
		8 42 21	71 28.2	
		9 5 12	53 16.0	7.3 & 7.9 Dpl
		10 3 6	50 8.3	6.5
		10 19 43	49 30.5	6.5
		12 53 59	69 30.2	8.3
		13 21 23	63 57.3	6.6
		13 55 24	79 38.1	7.9

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List of Stars not 10 times observed up to 1864 inclusive

	α Phoenicis	0	19
	ε Arietis	2	51
	12 Eridani	3	6
	ε ——	3	26
	δ ——	3	37
Nant. Alm	η Tauri	3	39
	γ ——	4	12
	δ ——	4	15
	64 ——	4	16
Nant. Alm	ε ——	4	20
	53 Eridani	4	32
	μ ——	4	39
Nant. Alm	ι Aurigae	4	48
	ι Tauri	4	55
Nant. Alm	ε Leporis	5	0
Fund	α Aurigae	5	6
	τ Orionis		
Fund	β Tauri		
	β Leporis		
Nant. Alm	α ——		
	α Columbae		
	κ Orionis		
	α Aurigae		
	ι Geminorum		
Nant. Alm	γ Orionis		
	η Geminorum		
	α Columbae		
Nant. Alm	μ Geminorum		
	β Canis maj		
	ε Geminorum	6	35
	δ Canis maj	7	3
	κ Geminorum	7	10
	η Canis	7	19
	ξ Argus	7	43
	ζ ——		
	ι ——		
	δ Canis	8	37

It will be allowable to think to use any of ~~the~~ the Catalogue stars south of +45° 50' and north of −40° as time stars, excepting that the accompanying list must be observed 10 times before the reduction is made to be used.

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δ // δ

Stars not in Bradley
not yet discussed

α Phoenicis — Sensible P.M. Lat. Confirmed by 2 Washington observations
6 Camel H.
Gr. 779
50 Cepheus H.
9 Canulopardali
74 Camel B
α Columbae — P.M. not large
K ——— — Doubtful: no old authority
23 Camel H.
VII. 67
ζ Argus — No P.M.
Gr. 1418 — ~~" "~~ P.M. sensible
~~XX. 267 — [illegible]~~
λ Argus — " "
Gr. 1564
~~[illegible]~~
1 Centauri — P.M. Lat.
Camel. (219 B) = XIII 263
XIV. 217
XVI. 182.
ζ' Scorpii — not in Johns
ζ ——— — ———
β' Sagittarii — No P.M. β'
β ———
46 Cepheus B
XXIII 192 [δ Sculptoris] — No P.M.

α Columbae — δ Sculpt.

Greek
Paris 1860 — -0.10 — -0.04
~~[illegible]~~

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Stars observed in May and June 1865.

			M. East.				M. West.					June						
R	α Corvi					May	23	24	25	26								
	207 Camel B	+	May 10	13	15	18	23	24	25									
	21 H Cancri	p 25					23	24	25	26				2				
R	12 Comae						23	24	25	26			1	2			7	
R	13 —						23	24	25	26			1	2			7	
	14 —						23	24	25	26			1	2	↓			
	16 —							24					1	2				
	17 —						23	24	25	26	30		1	2				
	4 Draconis	+						24	25	26	30		1	2			7	
	5 H Cancri	p 25					23	24	25	26	30		1	2				
	24 Comae							24	25	26	30		1	2				
	ρ Virginis	4271					23		25	26	30			2				
4287R	60 B Cancri	p 26	4287				23	24	25	26	30			2				
	η Cassiopeiae	+						24	25	26	30			2		6		
	30 Comae						23	24	25		30		1	2		6	7	8
R.	31 —						23	24	25		30		1	2		6	7	8
R.	32 Camel H	+	[1864 May 23 . May 31]					24			30		1	2		6		
R.	14 Cancri						23				30		1		3			8
R.	19 H Ursae	+							25	26					3			
	4 Virginis						23		25	26				2	3			
	o —						23		25	26				2	3			
R.	17 H Cancri	p 26					23		25	26				2	3			
R.	25 —						23		25	26		31		2	3	5		
	1 K Bootis	p 27	4559						25	26		31		2	3	5		
	i Centauri								25			31 2w		2	3 3w	5		
	21 H Cancri		p 27				23		25	26		31		2	3	5		
	ω Cassiopeiae	+							25	26				2	3	5	~~finished~~	
	i Draconis	+								26				2	3	5		
	A Cassiopeiae	+								26				2	3	5		
	14 ω 58 ~~76~~ 37	+	whence?							26					3	5		
	42 H Virginis									26			1		3	5		
	A Bootis		p 28						25	26			1		3	5		
4797R	18 H —		p 28						25	26			1		3			
R	ρ —								25	26			1			5		
R.	ψ —								25?	26?			1		3			
R.	π —								25	26			1			5		
R.	ξ —								25?	26				2				
	Gr. 580	+							25	26				2	3			
	40 Bootis									26								
	ω —								25	26								
	223 Camel B	+							25	26	30				3			
	109 Virginis								25	26			1					
	48 Cephei H	+													3			

+ 32 Camel H. obs'd also 1863 Dec. 23

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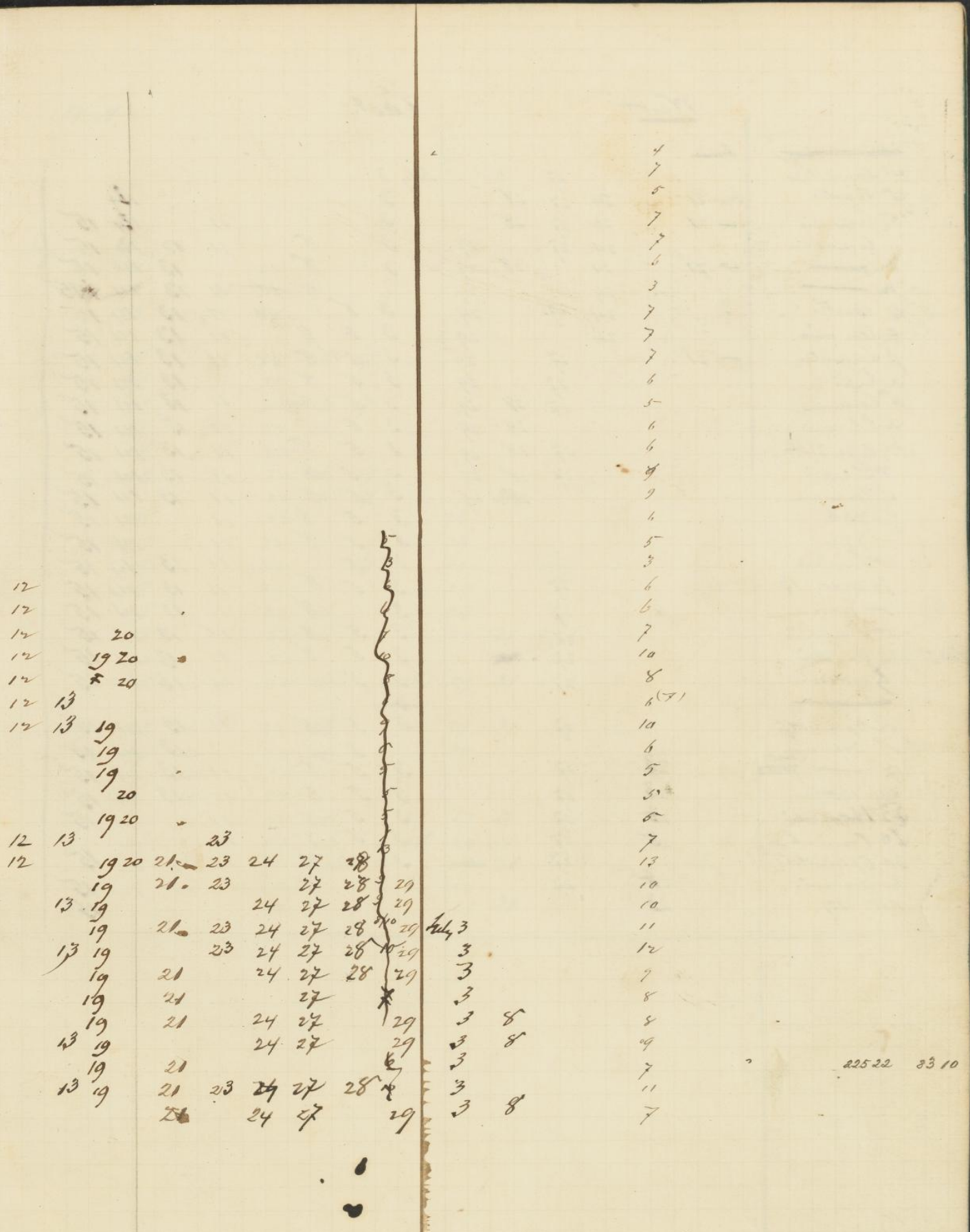

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	West					East						
~~16 Cephei Hp~~	1											
1 Camel Hop				27		July 3						
R. 5 Bootis	June 24		24	27	28							
5 Serpentis	— 21		24	27	28							
η Coronæ			24	27		29						
α ——	— 21		24		28	29						
μ ——			24			29						
R. ϱ Bootis			24	27?		29						
ε Herculis			24			29						
β Serpentis	— 21			27		29						
α Lupi				27		29						
δ Coronæ				27	28	29						
α Librae					28	29						
59 Cephei H				27	28	29						
π Serpentis				27	28	29						
ε Coronæ					28	29						
Gr 766												
— 777												
ν Serpentis												
52 Draco B				27								
ι Coronæ				27								
σ Serpentis				27								
An 1678 η Herculis				27								
~~5~~ Coronæ				27								
~~Librae~~												
~~ε Ophiuchi~~				27								
An 1678 A Draconis												
17 ——		23		27								
Vel. 199		23		27								
~~53 Herculis~~		23		27								
29 Camel.		23		27								
30 Ophiuchi				27								
ν Draconis		23		27								
Rdt. 1377		23										

	East												
July	3												
	3											14	
	3						11				14	15	
	3			8			11		13		14	15	
	3			8					13		14	15	
				8			11		13		~~14~~	~~15~~	
	3	5			10		11		13		14	15	
	3	5		8			11		13		14	15	
	3	5		8		10	11		13		14	15	
	3	5		8					13		14	15	
	3	5		8			11		13		14	15	
	3	5					11		13		14	15	
	3	5		8			11		13		14	15	
	3	5		8			11		13		14	15	
	3	5		8			11				14	15	
	3	5		8			11				14	15	
	3	5					11		13		14	15	
	3	5		8			11		13		14	15	
	3			8			11		13		14	15	
	3	5		8			11		13		14	15	
	3	5		8			11		13		14	15	
	3	5					11		13		14	15	
	3												
	3	5		8			11		13		14	15	
		5							13		14	15	
	3	5		8			11		13		14	15	
	3	5		8			11		13		14	15	
	3	5		8			11				14	15	
	3	5		8			11				14		
	3			8			11				14	15	
				8			11				14	15	
												15	

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West.

July 17 18
17 18 22
17 18 20 21 22
17 18 20 22
17 20 234 5 +77 53
17 18 22 26 27
17 18 22
17 18 22 26 27
17 18 22 26
17 18 22
17 18 22 26 27
17 22 26 27 31
17 18 22 29
17 18 22 29
17 18 22 27 29 Aug 2
17 18 22 29
18 22 26 29
17 18 22 26 29 31 Aug 1 2
17 18 22 23 52 +76 17
17 18 22 26 28 29 31 " 1 2
17 18 20 22 26 28 29 31 " 1 2
17 18 20 22 26 28 29
17 20 22
17 20 22 249 24 77 45
17 22 26 28 29 31 " 1 2
17 22 26 28 29 31
17 20 22 26 ~~29~~ 31 " 1 2 12
17 20 22 29
17 22 29 31

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West.

μ Draconis	July		18	20	22		26	27		29	31	Aug 1	2				
77 Ursae B +			18	20	22		26	27?			31						
271 Herculis B	July	17	18	20		24	26	27		29	31		2	4			
ζ Herculis		17	18	20	22	24	26	27		29	31	" 1	2				
λ ——		17		20	22	24	26	27	28	29	31	" 1	2				
~~Gr 2~~																	
Gr 2456 +		17	18	20	22	24	26	27	28	29	31						
ι Herculis		17	18		22		26	27	28	29	31	Aug		4		12	
ω Draconis +		17	18		22	24	26		28	29	31						
γ Ophiuchi	July				22		26		28	29	31	"		4		12	
Gr 1030 +			18		22	24	26		28								
f Herculis					22	24								4		12	
θ ——		17			22				28	29	31	Aug 2		4	8	12	
35 Draconis +					22	24			28		31		2				
γ Sagittarii		?			22	24			28	29	31		2	4	8	12	
δ Herculis		17			22	24			28	29	31		2	4	8	12	
Gr 2517		17			22	24			28		31		2	4	8	12	
A Herculis		17			22	24			28		31		2	4	8	12	
η Sagittarii		17							28		31		2	4	8		
36 Draconis +		17			22	24			28		31						
24 Ursae min +		17			22	24	26	27	28					4			
χ Draconis	An 15-8																
42 Draconis +		17			22	24	26	27	28		31		2				
3 H Scuti		17			22		26	27	28		31		2	4		9	12
45 Draconis +								27			31		2	4		9	12
24 Camel H sp +								27	28				2	4			12
ν' Sagitt		(~~17~~)						27	28		31		2	4		9	12
ν² Sagitt		(17)						27	28		31		2	4		9	12
α Draconis +		17				24		27	28				2	4		9	12
18 B Aquilae						24		27	28				2			9	12
γ Lyrae						24			28		31		2	4			12
16 ——		17				24			28		31		2	4		9	12
18 Aquilae		17				24			28		31		2			9	12
ι Lyrae		17				24			28		31		2	4		9	12
η ——		17				24			28		31		2	4		9	12
δ Draconis +		17												4			
59 —— +		17				24			28					4		9	
ε																	
ε Draconis +						24			28		31		2	4			
π —— +													Aug	4		9	12
ι Cygni						24			28		31		2	4	8	9	
Gr 2900 +						24			28		31		2	4	8	9	12
28 Camel H sp +						24			28		31		2	4	8	9	12
VII. 187 sp +									28		31		2	4		9	12

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East.

West.

25'

						Aug	28									
							28									
							28									
							28					Sept 6				
14		19			25			~~29~~								
								29			Sept. 5					
14		19			25							Sept 6				
14																
								29	31		Sept. 5	6				
14											Sept. 5	6				
14																
14																
				24	25			29	31	+						
						Aug	26	~~29~~	31	Sept 2	4	5	6 +			
							26	29	31	+						Sept. 21
										Sept. 2	4	5	6		16	23. 25. 26. 27. 29)
							26	29		+						
							26	29		Sept. 2		5	6		16	26
							26	29	31	Sept. 2						
	18						26	29	31	Sept.	4					
14		19	23	24	25		28									
14		19	23	24	25		28									
							26	29		+						
14			23				26	29		+						
14			23	24	25'											
14			23	24	25'											
14			23	24	25'											
14	18															
14	18															W.
14	18						28			Sept.	4	5	6	(also Oct. 11th)		Oct. 30
14											4	5	6	11 12		
							26	28			4		6	11 12		
14	18						26	28			4	5	6			
14			23				26			Sept. 2						
							26				4					
							26			Sept. 2	4					
							26			Sept. 2	4		6			

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nasaphaer.proj ... 0000

Meridian Circle East. | West

XIX. 414	Sept.	5	6		9				Sept. 14	—	16 3	19									26
XIX. 420											18	19									26
XX. 6 [XIX 420 alia + XX. 8 sometimes both]			6		9		12			15 2m	16	19									26
XX. 29		5	6		9		12			15	16	19			23	25	26				
Ann 1578 ε Lephei	Sept. 2	5	6	7		11	12	13		15		19			23	25					
23 H Aquilae			6	7		11	12		14	15		19			23	25					
π Capricorni		5	6	7		11	12		14	15	16	19		20	23	25	26				
XX. 174		5	6	7		11	12			15				20	23	25	26				
E Delphini			6	7		11	12	13	14	15		19		20	23	25	26				
R Sct. 4894				7		11	12	13	14	15		19		20	23	25					
I Aquarii				7		11	12	13	14	15		19		20	23	25					
226 13 Cygni				7		11	12	13	14	15		19		20	[illegible]		26				
23 G Pegasi —								13	14					20	23	25	26				
Ann 1578 λ —									14	15		19		20	23	25	26				
Rdt. 2218 Sp						11		13	14	15		19		20	23	25	26				
03 ord XX. 376	311°55' + 3°55'					11		13		15				[illegible]	[illegible]	25	26				
Argelander 480	[Dec 1862 oct 8: other days:°]					11		13	14	15		19		20	23	25	26				
6 Equulei 13	[illegible]					11	12	13	14	15		19		20	23	25	26				
6' XXI. 1						11	12	13	14	15		19		20	23		26				
114 13 Capricorni	316 33 − 18 0					11						19					26				
4 Piscium austr.	317 3 − 32 50					11	12	13		15		19					26				
11 13 Cygni	318 15 + 21 21							13?	14	15											
226 13 Cygni	318 39 + 31 56					11	12	13	14	15		19					26				
✓ XXI. 1 [illegible]	(11834 2536)																				
70 Cygni	320 13 + 36 25					11			14	15											
26 13 Cygni	320 51 + 11 26					11				15											
✓ 17 13 Cephei						11		13		15											
7 326 Aquarii	322 20 − 1 6					X1		13		15											
1 Pisc. austr.	323 01 − 33 45					11		13		15		19					26				
A —	324 35 − 31 38					11		13		15		19					26				
388 13 Cygni	325 25 + 38 13					11				15		19					26				
+40° 4648	325 47 + 40 24					11		13		15		19					26				
XXI. 320	326 27 − 5 1					11		13		15		19					26				
17 Cygni	327 17 + 11 19							13		15		19					26				
4 Pisc. austr.	327 54 − 29 13					11		13		15		19					26				
✓ 911 Mayeri						11		13		15		19					26				
32 Aquarii	329 8 − 1 41					11		13		15		19			[illegible]	25	26				
11 Pisc. austr.	329 45 − 33 46					11		13		15		19					26				
7' XXI. 321	330 30 − 4 40					11		13		15		19					26				
XXII. 19	331 11 − 25 58					11		13		15							26				
1 H Lacertae	331 45 + 38 55					11		13		15		19					26				
B.Z. 2942						11		13				19									
XXII. 81						11	12					19									
Ann 1578 3 Lacertae						11						19									
+39° 4841						11						19									
32 H Cephei						11						19									
Gr 3804						[illegible]						19									
22 13 Cephei																					
E Pisc. austr.							12														
XXII. 195																					
13 Lacertae																					
69 Aquarii																					
Ann 1578 1 Cephei																					
[illegible]																					
36 H Cephei																					

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~~331~~

East. West.

		Oct.	3	6 zw	9												30	
			3	6	9												30	
27	29									11							30	
27	29		3	6														
27				6														
27	29		3	6						+							30	Nov 1.
27		30	3	6														
27 zw																		
27					9													
27	29			6	9													
27																		
	29	30	3	6														
27																		
27																		
27	29	30		6	9		10	11										
27	29	30		6														
27	29	30	3	6	9					13							30	
27	29	30	3				10											
		30	3				10	11		13 (also Nov. 17)			20				(Nov 11 Nov. 14 Nov 16)	
27	29	30	3	6	9				12									
27	29			6				11		13				23		25		
27	29	30	3	6				11	12									
27	29	30	3	6	9			11	12									
27	29	30	3	6														
27	29	30	3	6														
27	29	30	3	6		9												
27		30	3	6		9												
27		30	3	6		9												
27		30	3		7	9	10	11										
27		Oct.	3	6	7	9												
27		30	3	6	7													
27		30	3	6	7													
27		30	3	6	7													
27				6	7	9								23				
27				6		9								23		25	30	
27				6	7									23		25		
27				6		9								23		25	30	Nov. 1
	29			6	7									23	24	25	30	
	29				7			11	12					23	24	25	30	
	29					9		11		13				23		25	30	Nov. 9
27	29					9		11	12					23	24		30	(E Dec 1)
27	29							11	12	13	also Dec 1			23	24			Nov 1
									12	13				23	24			1 9
27	29					9		11	12	13				23	24			E Dec 1
27	29					9		11	12	13	also Dec 1			23	24			Nov 9
27	29				7	9		11	12	13				23	24		30	
27	29				7	9		11	12	13				23	24	25		1
			3		7	9			12	13		17	20	23		25	30	
	~~29~~																	
	29	30	3					11		13	16	17		23	24	25		

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	East		West.			East.						West.	
+20°5278	Sept. 11	13		27		Oct. 6		12	13			23	24
XXIII 4	14	13	25	27	29	6	11	12					24
314 B Aquarii	11	13	25	27	29	6		12	13			23	24
+23°4712.	11	13			29	6		12	13			23	24
XXIII 36		13	25		29	6	11	12	13			23	24
o Cephei		13	25		29	6		12	13	16		23	24
+35°5012		13			29	6	11			16	20		24
XXIII 71		13	25		29			12	13	16	20		24
XXIII 82		13	25		29				13	16	20	23	24
λ Aurigæ		13	25			6			13	16		23	
347 B Aquarii		13			29	6				16	17 20	23	24
XXIII 133					29								24
XXIII 153		13	25		29				13	16			24
3681 B Aquarii		13	25		29	6			13	16			24
G79 Mayer		13	25		29	6			13	16			24
G81 Mayer		13			29	6			13	16			24
XXIII 203		13	25		29	6			13	16	20		24
Gr 1163.		13	25		29	6			13	16	20		
Br. 3187		13	25		29	6	7		13	16			24
Gr. 1845.		13	25		29	6				16	20		
Gr. 1850			25			6	7				20		24
207 Lamb B	AR	13			29	6			13	16		23	
~~β Aquarii~~ c. 19	0 8 11	13			29				13	16		23	
o. 38	0 11 23	13		27					13	16		23	
ι Sculptoris 0.50	14 43	13		27	29 30				13	16		23	
0. 56	16 12			27	29				13	16		23	
AZ 326	18 25			27					13	16		23	
0. 91	23 36			27					13	16			
0. 100	25 16			27	29				13	16		23	
0. 109	26 59			27	29					16		23	
0. 122	29 11			27	29				13	16		23	
0. 131	30 32			27	29				13	16		23	
0. 142	32 54			27	29				13	16		23	
0. 152	35 25											23	
AZ. 681	37 9			27						16		23	
0. 174	38 55			27					13	16		23	
η Cassiopeiæ 1878	40 58			27	29				13	16		23	
AZ 799	43 15			27	29				13	16		23	
0. 218	44 30			27						16		23	
32 Lamb H.	12h			27	29 30				13	16		23	24
0. 242	50 50			27	29				13	16		23	
0. 250	52 6				29 30				13	16		23	
0. 258	54 26			27	30				13	16		23	
0. 265	55 58			27	29 30				13	16		23	
AZ 1092	58 50			27	29 30				13	16		23	

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East

25	Nov 1										
25											
	1										
25											
25	1										
25	1										
25.	1	11	14								
25		11									
25		11	14								
25		11	14				Dec. 22				
25		11	14								
		11	14	16	17	Dec. 21		23			
		11	14			Dec. 21		23	29		
		11	14			Dec. 21					
		11	~~14~~			Dec. 21		23	29		
		11									
		11				Dec. 21	22	23			
		11									
	1	11				Dec.	22				
	1	11					~~22~~				
	1	11				Dec. 21	22	23			
	1	11					22	23		Jan 4	
30										Jan 4	
		11	14		Dec 1	5				Jan 4	
			14		Dec 1	5			29	Jan 4	
30		11	14		Dec 1						
30		11	14		Dec 1	5			29		
			~~14~~		Dec 1	5			29		
	1		14		Dec 1				29		
	1		14		Dec 1	5			29	Jan 4	
	1		14		Dec 1				29	Jan 4	
	1		14		Dec 1				29	Jan 4	
	1		14		Dec 1				29	Jan 4	
	1		14		Dec 1				29	Jan 4	
	1		14		Dec 1					Jan 4	
										Jan 4	
			14		Dec 1					Jan 4	
			14		Dec 1					Jan 4	
	Jan 1		14		Dec 1						
25	Nov 1		14		Dec 1				29		
25	— 1		14		Dec 1						
25			14		Dec 1				29		
25					Dec 1				29		
25	1		14								
25			14		Dec 1						
25	1		14								

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Index of Stars obs^d for the U.S. Lake Survey 1863

Rü 7011 July 24 Aug 3 4

BAC 6651 June 5 Spt 22

A Lyrae July 24 Aug 4 Spt 22

4 Cygni June 5 K Cygni Aug 4

12 Cygni July 24

Ll 37486 June 5 July 29 Aug 3 1 Cygni July 29 Aug 4

Ag 1752 July 24 29 Aug 3 Aug 4

XIX. 263 June 5 23 July 29 Aug 4

RC 4507 June 5 ~~23~~ Aug 3 Aug 12

Rü 7985 June 5 July 29 Aug 3 Aug 4

Gr 2933 July 29 Aug 3 Aug 4 ~~Ll~~

37753

L 38094 June 23 July 29 Aug 4 20 Cygni Aug 3.

38154 July 29

Gr 2984 June 23

P

Br 2618 June 23 Aug 12

XX 257 Aug 14 Aug 18

Gr 3215 June 23 July 29 Aug 12

Gr 3220 July 29 Aug 3 Aug 4

Gr 3243 June 23 Aug 3 Aug 4

XX 401 June 23 Aug 3.

RC 5132 June 23 July 29 Aug 4

Ll 41684 July 29 Aug 4

~~DM~~ 46.3586? July 29?

45 3591 July 29 8 Cygni Aug 4 [Br 2807 Aug 12]

50 3382 July 29 Aug 12 Spt 5 Spt 7

2128 45°10' June 23 28

79 Cygni June 28 Aug 12 Spt 5

Rü 9430 June 28 Gr 3523 Aug 4

Aug 12 Gr 3554 Aug 4 ~~Aug 12~~ Spt 4 Spt 7

Gr 3644 June 28? July 29 Aug 12

2151 62°37' June 30 July 22 29 Aug 12

OA 23902 June 30 July 21 22 Aug 12

Heplin J July 21 Aug 12 Spt 22

Gr 3779 June 30

L 43886 22 Aug 12 Spt 4

Gr 3786 June 30

9 Lacertae June 30 July 21 22 Aug 12 Spt 22

OA 24769 June 30

L 44750 July 21 22 Aug 12

Rü 6227 Spt 2 Spt 4 Spt 5

6264 Spt 2 Spt 4 Spt 5

Gr 2521 Spt 2 Spt 4 Spt 5

2533 Spt 4 Spt 5

Rü 7176 Aug 31 Spt 2 Spt 5

L 3109 Spt 5

" 7219 Aug 31 Spt 2 Spt 5 Spt 7

" 7276 Aug 31 Spt 2 Spt 5 Spt 7

L 36568 Aug 31 Spt 2 Spt 5 Spt 7

Rü 7592 Aug 31 Spt 7 Spt 14

Br 2460 Spt 2 Spt 5 Spt 7

Rü 7588 Spt 5 Spt 15 Spt 22

20 Cygni Spt 22

BAC 6930 Spt 22

Gr 2946 Spt 2 Spt 5 Spt 7

Gr 2961 Spt 2 Spt 7

RC 4554 Spt 5 Spt 7

DM 40°4093 Spt 7

AÖ 20494 Spt 5 Spt 23

BAC 7105 Spt 5

RC 4871 Spt 5 Spt 7 Spt 14

6 Cygni Spt 5

~~Ll 42153 Spt 4~~

Gr 3533 Aug 12

Ll 42153 Aug 4 Spt 4 BAC 7530 Spt 4

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XXII. 292	July 21 22		
2 Cassiop	22		
Rü 11033	July 21 22		1862 Dec 20
Br 3084	22		
Rü 11126	July 21 11125/22	Aug 12	
Rü 11262		Aug 6 (Aug 30 1w)	1862 Dec 20.
Ai 2105	July 21	Aug 6	
L 45976	July 22		Arg 21 4694 Aug 10
L 46203	July 21 22		
Rü 11796	22	1863 Jan 1 Jan 2 Jan 3	Rü 11498 1863 Jan 1. Jan 2
4 Andro.	July 21	Aug 6 Aug 30	Rü 11672 1863 Jan 2
9 Cassio	July 21 22	Aug 6	
XXIII. 171	. . . .	Aug 6	1862 Dec 20
Rü 11637		Aug 6 Aug 10 Aug 30	
L 47105		Aug 6 Aug 10	
Rü 11881		Aug 30 Jan 3.	
BAC 92		Aug 6 Aug 10 Aug 30	
Rü 210		Aug 6 1863 Jan 1 Jan 2 Jan 3. Jan 5 Ll 613 Spt. 9 28 Jan 3	
BAC 382		Aug 6 Aug 30 Spt 9	
L 620		Aug 30 Jan 2.	
BAC 120		Aug 10 Spt 9 Jan 3	
Ll 1633		Aug 10 Aug 30 Spt 9 Jan 2??	
Rü 399		Aug 10 Aug 30 Spt 9	
Rü 422		Aug 10 Aug 30	1862 Dec 20
AZ 1849		Aug 30	
BAC 630		Aug 30?	
BAC 647		Aug 30	
10 Aiietis		Spt 9 Spt 10 16	
BAC 637		Spt 9 16	
11 Aiietis		Spt 9	
2 Triang.		Spt 16	

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Experimental Reductions

207 Camelp B = BAC 4106 (G.S. in Ur. Nova) Gr. 1858

AR from RC	12h 4m 52s.11	Gin ce	8.32717n	m = 46".06373	1.66336
PD.	7° 32' 20".8	tg δ	0.87828	n = 20.05326	1.30218
Decl	82° 27 39.2	cos ce	9.99990n	log m/n	0.36118
		sec δ	0.88206	n/15 1.33688	0.12609
		sin α tg δ	9.20545n		
		m/n + sin α tg δ	0.32973		
		log a	0.45582	Prec. 2s.8564	
		" b	9.70209n		
		" c	9.70587n		
		" d.	8.03314n		

May 10.13.15.18.23.24.25.

10	0.1600	0.6158n	0.7826	9.2310
13	0.1667	0.6193n	0.7546	9.2482
15	0.1713	0.6216n	0.7342	9.2587
18	0.1781	0.6249n	0.7008	9.2730
23	0.1897	0.6300n	0.6360	9.2936
24	0.1921	0.6310n	0.6214	9.2972
25	0.1944	0.6320n	0.6062	9.3007

				Subtract	T	dt+m	n tg δ	c sec δ	App	1865.0
+1.445	−4.128	+6.061	+0.170	+3.548	43.86	9.22	+0.20	+2.32	55.60	52.05
1.468	4.162	5.683	0.177	3.166	45.93	6.83	+0.20	+2.32	55.28	52.11
1.484	4.184	5.423	0.181	2.904	46.70	5.51	+0.20	+2.32	54.73	51.83
1.507	4.216	5.021	0.187	2.499	48.94	3.21	+0.20	+2.32	54.67	52.17
1.548	4.266	4.325	0.197	1.804	56.80	−0.61	−0.06	−2.62	53.51	51.71
1.556	4.276	4.182	0.198	1.660	58.00	−1.78	−0.06	−2.62	53.54	51.88
1.565	−4.285	4.038	0.200	1.518	59.12	−2.96	−0.06	−2.62	53.48	51.96

Mean 51s.96

The star was also observed below pole

PE of 1 obs ± 0s.119 by sums
± 0.110 s sqs.

PE red. to equator ± 0s.015

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Experimental Reductions continued

4 Draconis

May 24 25 26 30 June 27

AR 1865.0 (RC)	12h 24m 10.86s	sin α	9.02249n
PD "	20 3 3.7	tg δ	0.43774
Decl.	69 56 56.3	cos α	9.99758n
		sec δ	0.46489
		sin α tg δ	9.46023n
		m/n +	0.30289
		log a	0.42898 2.685
		" b	9.25923n
		" c	9.28638n
		" d	8.31129n

May 24	0.1653	0.1881n	0.2019	9.5754
25	0.1676	0.1891n	0.1867	9.5789
26	0.1699	0.1900n	0.1708	9.5822
30	0.1793	0.1934n	0.0994	9.5941
June 1	0.1840	0.1950n	0.0580	9.5992
2	0.1864	0.1957n	0.0355	9.6015
7	0.1982	0.1991n	9.8992	9.6112

				Subtract	T	dt + m	n tg δ	c sec δ		
+1.463	−1.542	+1.592	+0.376	+1.889	15.10	−1.80	−0.02	−1.00	12.28	10.39
1.471	1.545	1.537	0.379	1.842	16.40	−2.96	−0.02	−1.00	12.42	10.58
1.479	1.549	1.482	0.382	1.794	—	—				
1.511	1.561	1.257	0.392	1.599	21.02	−7.79	+0.12	−1.00	12.35	10.75
1.528	1.567	1.143	0.397	1.501	22.80	−9.34	+0.12	−1.00	12.58	11.08
1.536	1.569	1.085	0.399	1.451	23.26	−10.15	+0.12	−1.00	12.23	10.78
+1.579	−1.581	0.793	+0.408	+1.199	27.18	−14.16	+0.12	−1.00	−12.14	10.94
				Verified					Mean	10.75

PE 1 obs ±0.167

to Eq ±0.057

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5 H Camm = ×11.122 = 4233 B+C

AR from 286	12 26 59.81	sin α	9.07017n
Decl.	33 59 39.5	tg δ	9.82889
		cos α	9.99698n
		sec δ	0.08140
		sin α tg δ	8.89906n
		$\frac{du}{u}$ +	0.34593
		log a	0.47202 +2.9650
		" b	8.64978n
		" c	8.90229n
		" d	7.97548n

May 23	0.2059	9.5777n	9.8324	9.2360
24				
25				
26	0.2129	9.5806n	9.7867	9.2464
30	0.2223	9.5840n	9.7153	9.2583
June 1				
2	0.2294	9.5863n	9.6514	9.2657

					Subtract	s	dt+cos δ	u tg δ + c sec δ	App	Mean
May 23	1.607	−0.378	+0.680	+0.172	+2.081	2.78	−0.62	−0.42	1.74	59.66
24					2.067	3.96	−1.80		1.74	59.67
25					2.054	5.10	−2.96		1.72	59.67
26	1.633	−0.381	+0.662	+0.176	2.040	6.00	−3.85		1.73	59.69
30	1.668	−0.384	+0.519	+0.181	1.984	9.92	−7.79	−0.39	1.74	59.76
June 1					1.956	11.52	−9.34		1.79	59.83
2	1.696	−0.386	+0.448	+0.184	+1.942	12.26	−10.15		1.72	59.78
										59.72

PE 1 obs. ±.052

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24 Comae Eq.

St. (VJS)	12 28 21.46	Ener. 1865.0	3.0137
Decl.	19° 7' 14"	Mn	+.003

May 24 25 26 30 June 1 2

sin α	9.09138n
tg δ	9.53994
cos α	9.99665n
Coef δ	0.02465
	8.63132n
~~log a~~	0.35302 2.
log a	0.47911 3.0138
" b	8.36050n
" c	8.84521n
" δ	7.93994n

May 24	0.2154	9.2804n	9.7607	9.2040						
25										
26	0.2200	9.2913n	9.7296	9.2108						
30	0.2294	9.2947n	9.6582	9.2227						
June 1										
2	0.2365	9.2970n	9.5943	9.2301	Subtract					
						dt + m	dt δ + chord	dt δ	Adpt.	Mean
	+1.644	-0.195	+0.576	+0.160	+2.183	25.78	-1.80	-0.37	23.61	21.43
					2.173	26.92	-2.96		23.59	21.42
	1.660	-0.196	0.536	0.163	2.163	27.80	-3.85		23.58	21.42
	1.696	-0.197	0.455	0.167	2.121	31.78	-7.79	-0.35	23.64	21.52
					2.100	33.30	-9.34		23.61	21.51
	1.724	-0.198	0.393	0.170	2.089	33.96	-10.15		23.46	21.37
										21.445

Diff (2-1)

+1.40

1.38
1.50
1.42
1.36

Pg
1 ch ±.143

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Circumpolar Stars in the old list
1862–63

Working List of Instr. Stars		
4 Ursae min B	89° 1'	
h —— min	88 54	
Polaris	88 35	
6 Ursae min B	88 27	
57 —— B	87 45	
51 Cephei H	87 15	
5 Ursae min B	87 11	
5 Ursae min	86 36	
39 Cephei H	86 34	
20 Ursae min B	86 24	
323 Cephei B	86 13	
309 Cephei B	85 57	
43 Cephei H	85 32	Gr 1418 85 32 ✓
214 Camel B	85 28	
Gr. 750	85 12	
64 Camel B	85 7	
156 —— B	84 26	
119 Cephei B	83 41	Camel 219 B 83 26 ✓
62 Ursae min B	83 21	
30 Camel H	83 15	Br. 74 82 58 ✓
25 —— H	82 40	
34 Cephei H	82 26	
E Ursae minoris	82 15	76 Drac 82 1 ✓
1 Draconis H	81 55	
202 Camel B	81 52	Br. 48 81 45 ✓ 193 Camel B 81° 8' ✓
Gr 527	80 52	50 Cephei H 80 58 ✓
74 Draconis	80 37	
		Gr. 779 80 29 ✓
		41 Drac. 79 59 ✓
		23 Camel H 79 42 ✓
		XVI. 182 79 15 ✓
		44 Cephei H 78 57 ✓
		ζ Ursae 78 13
		γ Cephei 76 52
		Rb 6202 76 51 ✓
		50 Drac. 75 16 ✓
		74 Camel B 74 57 ✓
		β Ursae 74 43
		γ —— 72 19
		36 Cass H 72 13 ✓
		φ' Drac 72 13 ✓
		46 Cephei B 72 4 ✓
		50 Cassi. 71 42 ✓
		β Cephei 69 58
		Gr 1564 69 51 ✓
		VII. 67 68 44 ✓
		σ Ursae 67 41 ✓
		φ Cassiop 67 25 ✓
		1 —— 66 47
		9 Camelp. 66 6 ✓
		δ Ursae 65 36 ✓
		6 —— 65 7 ✓
		α Drac. 65 2
		~~6 La~~

Old list
continued

6 Camel H	62° 46' ✓
α Cephei	62 32 ✓
α Ursae min	62 29
ε Cephei	62 0
η Draconis	61 49
η Cephei	61 19 ✓
o Ursae	61 10 ✓
γ Cassiop	59 58 ✓
XIV. 217	59 51 ✓
υ Ursae	59 41 ——
θ Draconis	58 56 ✓
ζ Cephei	57 32 ——
β Ursae min	57 7
ξ Draconis	56 54 ✓
ε Ursae min	56 43
γ ——	54 27

ζ Cephei ?
υ Ursae ?

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a Andromedæ — 2.

A.R. $0^h\ 1^m\ 13^s$. An.var $+3^s.1$ N.P.D. $61°\ 40'.7$ An.var. $-0'.33$.

III. E.

1862	Sept 23.	−10	
	Nov 3		
	Dec 18	+03	
1863	Jan 2		
	July 20		
	— 22	+01	
	Sept 24	−05	
	Dec 26	−03	
1864	Jan 9	+04	
	— 14	+04	
	Sept 26	−02	−010 8
	Nov 10	+01	
	— 14	−02	
	— 19	+03	
	— 24	+03	
	— 30	+05	
	Dec 5	−08	
	— 8	−10	−011 15

III. W.

1862	Sept. 29	−04	
1863	Jan 13	+07	
	— 17	−05	
	July 16		
	Nov 3	+03	
	4	+11	
1864	Jan 27	+10	
	Feb 4		
	Sept 30		
	Oct. 17	−13	
	— 25	−09	
	— 26 ?	−05	
	Nov 4	+04	
	Dec 20	+04	
	— 30	−05	
1865	Jan 11	+12	
	— 14		
	— 20	−02	+002 15
			−004 30
			±045 1ch

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1862phae.proj...280w

γ Pegasi B.7. 3.2.

R $0^h\ 6^m\ 5^s$ An. var. $+3^s.1$ N. P. D $75.^\circ\ 35.'4$ An. var. $-0'.33$

III. E.	1862 Sept 23	−02		
	Nov 3			
	— 10	−09		
	Dec 28	−02		
	— 29	+04		
	1863 Jan 11			
	— 2			
	July 20			
	— 22	+02		
	Aug 30			
	Sept 24	+02		
	— 30	−06		
	Dec 26	−05		
	1864 Jan 6	−01		
	— 9	+01		
	— 14	−14		
	Sept. 30	00		
	Nov. 14	+08	−017	13
	— 19	−06		
	— 23	−16		
	— 29	+06		
	— 30	−07		
	Dec 3	+11		
	— 8	−02		
	~~1865~~	00	−022	21
III. W.	1862 Sept. 29	−08		
	1863 Jan 3	−03		
	— 17	.00		
	Aug 6			
	— 10	+07		
	Nov 3	−04		
	1864 Jan 27	.00		
	Oct. 7	−14		
	— 11	−06		
	— 17	−08		
	— 25	−09		
	— 26	−16		
	Nov 4	−12		
	Dec 20	+17		
	— 30	−07		
	1865 Jan 11	−07		
	— 16	+06		
	— 18	00		
		−05	−040	18
			−036	30
			±.050	

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1862phae.proj..280W

5 Ursae minoris 13

Arg.

BAC 4150 — 6.

Tr. 0h 12m 47s An.var. +2s.0 N.P.D. −2° 47′.5 An.var. −0′.33.

III. E.

1862 Dec 28
— 29 ✓
1863 July 20
— 22
Aug 30
Sept 28 ✓
— 29
— 30 ✓
Oct 22 ✓
Dec 26 ✓
1864 Sept. 30 ✓
Nov 30 Am

III. W.

1863 Aug 6 ✓
— 10 ✓
Nov 2 ✓
— 3 ✓
— 4 ✓
— 26 ✓
— 30 ✓
1864 Oct. 17 ✓
Dec 20
— 30

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1862phae.proj..280w

6 Ursae minoris B

Ay.

BAC 4165 — 6.

Tr. 0h. 14m. 21s. An. var. −0s.2 N. P. D. −1° 31'.8 An. var. −0'.33.

III. E.	1862	Sept. 23	✓
		Nov. 10	✓
		Dec 11	
		— 28	✓
		— 29	✓
	1863	Jan 12	
		July 22	
		Oct 22	
		Dec. 26	✓
	1864	Jan 9	D'Lw ✓
		Nov 29	2.W
III. W.	1863	Jan 3	✓
		— 5	✓
		Nov 2	✓
		— 3	✓
		— 30	✓
	1864	Oct. 7	✓
		Dec 30	2W

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1862phae.proj..280W

1

Cadet J.

a Phœnisis + — (2)

Æ $0^h\ 19^m\ 24^s$ An. var. $+3^s\ 0$ N. P. D $133°\ 3'.6$ An. var. $-0'.33$

Ill. E.

1 1862 Spt - 23.
2 Nov 10
5 1864 Nov 14
6 — 19
7 — 30
8 Dec 8

Ill. W.

3 1864 Oct 7
4 — 17

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1862phae.proj..280w

12 Ceti. — (6)

N.A.

AR. 0h 22m 57s An. var. +3s.1 N.P.D. 94° 43'.5 An. var. −0'33

Ill. E.	1862 Nov 3			Red. by Wolfer	
	— 10	+05.	3 stars only		
	Dec 28	−03.		−04	−.04.
	1863 Sept 24	−09.		−11	−.11.
	— 30	−03.		−06	−.06.
	Dec 26	−04.		−02	−.02.
	1864 Jan 9	00.		+03	+.05.
	Sept 30	+06.		+08	+.10.
	Nov 19	−11.		−09	−.09.
	Nov. 14	00.			.00.
	— 16	+01.			+.04.
	— 19	+10.			+.10.
	— 23	−01.			+.05.
	— 30	+05.			
		+02.	−001 14		+.08.
					+.008 (12)

September	−.068	4
October	+.010	2
November	+002	10
December	−042	5
January	+060	1

Ill. W.	1863 Oct 29	+05.		+01	+.01.
	Nov. 2	−04.			
	— 4	−07.		−02	−09.
	— 30				
	1864 Oct. 7	−03.		−02	−.02.
	— 17	+03.		+08	+04.
	Nov 4	−04.		−05	−.05.
	Dec 20	−21.		−28	−26.
	— 30	−09			−11
		+12.	−031 9		+15.
			−013 23		−.041 (8)
			±047 10		±.068 10

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1862phae.proj..280W

+ ζ Cassiopeæ — 4.

Æ. $0^h\ 29^m\ 15^s$ An. var. $+3^s.3$ N.P.D. $36°.52'.1$ An. var. $-0^s.33$

III. E.	1	1862 Nov 3
	2	— 10
	3	Dec 8
	5	1864 Jan 14
	7	Nov. 10
	8	— 16
	9	— 23
	10	— 25
	11	— 29
	12	— 30
	13	Dec 5
III. W.	4	1863 Nov. 2
	6	1864 Jan 27
	14	Dec 20
	15	1865 Jan 3
	16	— 15
	17	— 20

Bradley 48. Ag. + 6.

Æ. $0^h\ 29^m\ 26^s$ An. var. $+4^s.2$ N.P.D. $8°\ 16'.5$ An. var. $-0^s.33$

1863	Dec. 26	2	W W 1863 Nov. 26
1864	Jan 6	3	— 30
	— 9	1	Nov. 4
	Sept 30		1864 Oct 17
	Dec 8		

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1862phae.proj..280W

B.J.

a Cassiopeæ — var.

R. $0^h\ 32^m\ 38^s$ An. var. $+3^s.4$ N.P.D. $34^\circ\ 13'.5$ An. var. $-0'.33$

Ill. E.

1862 ~~Aug 24~~
Nov 3
— 10
~~Dec 10~~

1863 Jan 29 1
~~Feb~~ Dec. 26
1864 Jan 6
— 9
Sept 30
Nov 16
— 29
— 30

Ill. W.

1863 Jan 3
Sept. 9
Nov 12
— 4
— 26
— 30
1864 Jan 16
— 27
Feb 5
Dec 30
1865 Jan 14
— 20

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1862phae.proj..280W

Aug 17 N.A.

β Ceti — 2.

R. 0h 36m 37s An. var. +3s.0 N.P.D. 108° 45.'0 An. var. -0.'33

III. E.

1862 Nov 10	+04	1
Dec 8	+04	1
— 16	+14	9
1863 Sept 30	+07	2
Oct 26	+10	5
1864 Jan 9	+02	3
Sept 30	00	5
Nov. 10	00	5
Nov 14	+14	9
Nov 16	+04	1
" 23	+11	6
" 28	−08	13
" 29	2nt	
" 30	00	5
Dec 5	+13	8
	+051	15

III. W.

1863 Jan 5	−03	
Nov 17	+08	
1864 Jan 16	00	
— 27	+03	
Oct. 17	+03	
Dec 30	+08	
1865 Jan 3		
— 15	+15	
— 16	+11	
— 25		
	+050	9
	±.045	105

Sept Oct	+033	3
Nov	+031	8
Dec	+098	5
Jan	+042	8

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1862phae.proj..280w

δ Piscium + — 4.5.

Æ. 0h 41m 28s An. var. +3s.1 N.P.D. 83° 10'.3 An. var. -0'33

Ill. E.

1	1862 Nov 10	
2	Dec 8	
3	— 10	
4	— 16	
6	1863 Jan 9	
9	1864 Sept 30	~~3~~ 3w
14	Nov. 10	
15	— 16	
16	— 23	
17	— 25	
18	— 29	
19	— 30	
20	Dec 5	Some wires bad?

Ill. W

5	1863 Jan 5
7	1864 Jan 16
8	— 27
10	Oct. 11
11	— 17
12	— 26
13	Nov 1
21	Dec 14
22	— 30
23	1865 Jan 16
24	— 18

6.

(Binding 74) +

Æ. 0h 42m 6s An. var. +5s.0 N.P.D. +7° 2'.9 An var. -0'.33

1	1862 Dec 8	4	1863 Oct 29
2	— 10	5	Nov 2
3	1863 Sept 30	6	— 26
7	Dec 26	11	1864 Jan 16
8	1864 Jan 6	24	Nov 1 3w
10	— 9 Dec		
23	Sept. 30 3w.		

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1862phae.proj..280W

γ Cassiopeæ + — 2.

R 0h 48m 20s An. var +3s.5 N.P.D. 30° 2′.2 An. var. −0′.33.

III. E. 1 1862 Dec 8.
1 — 10
1 1864 Jan 14

III. W. 3 1863 Jan 3
— 5
1864 Jan 6
Feb 9
1864 Feb 6
14 Dec 30

ε Ursæ Majoris 2. c. du T.

An. var. +2s.7 N.P.D. −33° 17′.1 An. var. −0′.33

III. W. 1863 Nov 26
— 30
Dec 2
1864 Jan 16
1865 Jan 16

R. 0h 47m 54s

III. E.

1862 Dec 29
1863 Dec 30
1864 Jan 6
— 9
— 11
Nov 29
— 30

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1862phae.proj...280W

Ar

μ Andromedæ + — 4.

Æ. 0h. 49m. 3s. An. var. +3s.3 N.P.D. 52°. 15'.3 An. var. −0'.33.

III. E.

3	1864	Jan 6
4		— 9
5		— 11
8		Sept 30
12		Nov. 10.
13		— 16
14		— 23
15		— 25

III. W.

1	1863	Nov 3
2		— 4
6	1864	Jan 16
7		— 27
9		Oct. 17
10		— 26
11		Nov 1
16		Dec 20
17	1865	Jan 18
18		— 20

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43 Cephei H.

BAC 262 — 4.5

Tr. 0h. 50m. 24s. An.var. +6s.8 N.P.D. 4° 29'.4 An.var. −0'.32

Ill. E.

1862 Nov 10
Dec. 8 *
— 10
— 16
— 29
1863 Jan 1
Sept 28
Dec. 26
1864 Jan 6
— 9
— 11
— 12
— 14
Nov. 10.
(— 23)
— 30

Ill. W.

1863 Jan 3
— 5
— 17
Oct 29
Nov 2
— 26
— 30
Dec 7
— 10
— 23
1864 Jan 16
— 21
— 27
Oct. 17
— 26
Nov 1
Dec 20
— 30
1865 Jan 12

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1862phae.proj.: 280w

N.A.

ε Piscium. — 4

R. 0h 55m 44s An. var. +3s.1 N.P.D. 82° 51′.5 An. var. −0′.33

III. E.

1862 Dec 8		+02.
— 10		+05.
— 16		+05.
1863 Sept 28		−02.
30		+01.
Dec. 26		00.
1864 Jan 6		−08.
— 9		−02.
[— 10]		
— 11		+03.
— 14		+03.
Nov 16		−10 AM
— 23		−07.
— 29		00.
— 30		−03 −009 14

14 Cephei H.# 6.5

R 1h 0m 23s An. var. 4.s9 N.P.D. 111° 4′.1 An var. +0.32

III. W.

1863 Jan 19		+03.
Sept 9		
Nov 3		−10.
~~Dec 4~~		−03.
~~Dec 9~~		−08.
— 10		−03.
— 15		−09.
— 21		−01.
— 23		+09.
1864 Jan 16		−01.
— 21		−03.
Oct 17		+03.
— 17 D		−13.
Nov 1		−02.
~~Dec 2~~		−09.
~~Dec 26~~		+11.
— 30		+25.
1865 Jan 3		
— 12		+04.
— 16		+02.
— 18		+16. −010 21

Jan	+021	10	±043 10 obs
~~Sept~~ Oct	−056	5	
Nov	−052	8	
Dec	+012	12	

III. E.

1863 Jan 19
Nov 30
Dec 9
— 15
— 21
— 23
1864 Jan 21

1862 Dec 8
— 10
1863 Sept 28
Dec. 26
1864 Jan 9
— 11

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Aug 28

+

β Andromedæ. C. des T. — 2.3.

R. 1h 1m 57s An.var. +3s.3 N.P.D. 55° 7'.0 An.var. −0.32.

III. E.

1	1862	Dec 8.
2		— 10
3	1863	Jan 1
4		— 2
11		Dec 26
12	1864	Jan 6
13		— 9
14		— 10
15		— 11
16		— 14
21		Nov. 30

III. W.

5	1864	Jan 3
6		— 17
7		Aug 10
8		Sept 9
9		Nov 30
10		Dec 23
17	1864	Jan 16
18		— 21
19		— 27
20		Feb. 5
22		Dec 20
23	1865	Jan 11
24		— 16
25		— 18

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1862phae.proj. 280W

Then data read a thorough revision.

α Ursæ Minoris. — 2.

Tr: 1h 8m 23s An. var. +18.9 N. P. D. 1° 25.9 An. var −0.32.

Ill. E.

1862 Mch 24		1864 Feb 6	2w.	
— 26		— 9	D Tr	
— 28		— 10		
Apr 7	D. Tr.	— 11		
— 25	D. Tr.	— 12		
(May 11)		— 14		
(May 13)		Feb 18	1 wire	
(May 14)		— 23		
(May 15)		Mch 3		
Nov 10	D Tr	Apr 7		
Dec 8.		— 8		
[— 10	D Tr	— 14	1 w	
— 16		— 21.22	3 trans	
— 24	1 wire	Nov 10		
— 27	1 wire	— 14	D Tr	
— 29		— 16	D Tr	
1863 Jan 2		— 30		
May 26	D Tr.	1865 Mch 27		
— 27		— 30		
Aug 30		Apr 3		
Dec 26				
— 29				
— 30	1 wire			
1864 Jan 1				
1				

Ill. W. 1863 Oct 29, Dec 15, 1864 Jan 16, 21, — 27, Oct. 10, 1865 Jan 12, 16

Ill. W.

1862 May 7	D Tr	1863 May 23	1864 Dec 14	
1863 Jan 3		26	D Tr Dec 20	
— 5		30	1865 Jan 5	
— 19		Dec 7	— 12	
Feb 16		9	— 6	
— 18		10	— 8	
— 23		15	— 20	
March 2		21	— 5	
" 9		23	— 3	
" 12		1864 Jan 16	Mar 29	
" 26		— 21		
Apr 6		— 27		
" 9		Feb 5		
" 20	D Tr	— 8		
" 21	D Tr	— 10		
" 26		— 11		
" 30	D Tr	— 12		
May 15		May 5	3 Tr.	
Aug 6		— 9	D Tr	
— 10		Oct. 7	D Tr	
Sept 9	D Tr.	— 10	D Tr	
Oct 28	D Tr	— 14		
— 29		— 17	D Tr	
Nov 2		— 25	D Tr	
3		— 26	D Tr	
4		Nov 1	D Tr	
		— 2	D Tr	

Ill. E. 1863 Dec 26, 1865 Jan 6

Ill. E. + Cassiopeæ

N. P. D. + 22° 35'.8 An. var. −0'.32

An. var. +44'.1

R. 1h 16m 9s

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1862phae.proj..280W

N.A.

θ Ceti — 3.

Æ. 1h 17m 5s An. var. +3s.0 N.P.D. 98° 54'.1 An. var. −0'.31

III. E.	1862 Dec 10	+.01		.
	— 16	−.01		.
	1863 Dec 26	+.12		.
	— 29	−.02		.
	1864 [Jan 1]			
	Jan 6	+.01		.
	— 9	+.07		.
	[— 10]			
	— 11	+.11		.
	— 12	+.03		.
	— 14	+.09		.
	Nov 16	+.10		.
	— 23	+.07		.
	— 30	+.09		.
	Dec 8	+.07		.
			+057 13	
III. W.	1863 Jan 3	−.04		.
	Sept 9			
	Oct 28			
	Nov 4	+.15		.
	— 26	+.11		.
	Dec 23	+.03		.
	1864 Jan 16	−.03		.
	— 21	+.10		.
	— 27	+.10		.
	Oct. 26	+.06		.
	Nov 1	+.10		.
	— 2	−.01		.
	Dec 14	−.01		.
	Dec 20	+.04		.
	1865 Jan 18	+ [illegible]	+050 13	.
				±040 10 obs
	Oct Nov	+084 8		
	Dec	+029 8		
	Jan	+047 10		

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1862phae.proj..280W

214 Camelop. B.

BAC 4498 — 7.

Tr. 1h 20m 24s An. var -2s.7 N.P.D. -4°.31'.2 An. var. -0'.31

Ill. E.

1862 Dec 10
— 24
1863 Jan 1
— 2
Dec 26
— 29
— 30
1864 Jan 1
— 6
— 9
— 10
— 11
— 12
— 14
Nov 11
— 14
— 16
— 23
— 25 Am
— 30 Am

Ill. W.

1863 Jan 3
Apr 6
Sept 9
Oct 28
29
Nov 3
4
23
26
30
Dec 9
— 15
— 21
23
1864 Jan 16
— 21
Oct. 17
Dec 14
1865 Jan 12

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1862phae.proj..280W

N. A.

η Piscium — 4.3.

R. 1h 24m 6s An. var. +3s.2 N.P.D. 75° 22'.3 An. var. -0'.31

III. E.	1862 Dec 10	-.02	.	
	— 16	+.01	.	
	1863 Dec. 26	-.01	.	
	— 29	+.06	.	
	— 30	-.10	.	
	1864 Jan 1			
	— 6	+.07	.	
	— 9	-.06	.	
	— 14	+.13	.	
	Nov 11	00	.	
	— 14	+.10	.	
	— 16	+.04	.	
	— 25	3n		
	— 29	+.04	.	
	— 30	+.13	.	
	Dec 8	-.05	.	+.026 14
III. W.	1863 Nov 3			
	— 4	+.02	.	
	Dec 23	+.11	.	
	1864 Jan 21	+.01	.	
	— 27	-.05	.	
	Feb. 5			
	Oct. 10	-.02	.	
	— 17	-.11	.	
	Dec 19	+.01	.	
	Dec 14	+.04	.	
	— 20	+.04	.	
	1865 (Jan 16)			
	— 18	+.03	.	+.018 10
				T.018 24
	Oct. Nov	+.025 8		±.043 10 by
	Dec	+.011 10		
	Jan	+.022 6		

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1862phae.proj...280W

8 ✓ +

~~x~~ Persei. — 4.3.

Æ. 1h 29m 29s An. var. +3s.6 N. P. D. 42° 4'.7 An. var. -0'.31

III. E.

1 1862 Dec 8
2 — 10
3 — 16
4 1863 Jan 1
8 Dec 29
9 1864 ~~Jan~~ 16
13 Nov 11 nov - 1
14 — 16
15 — 23
16 — 25
17 — 30
18 Dec 8
22 1865 Jan 27

III. W.

~~1863 J~~
5 1863 Oct 28
6 Dec 9
7 Dec 23
10 1864 Jan 27
11 Oct 10
12 Nov 1.
17 Dec 14 ? 2w
20 — 20
21 1865 Jan 20

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N.A.

ν Piscium. – 5.4

	h.	m.	s.						
R.	1	34	12	An. var.	+3.1	N.P.D.	85° 13′.1	An. var.	−0.31

Ill. E.

1862 Dec	8	+.03	
	10	−.04	
	27	00	
1864 Jan	9	+.09	
Nov	11	+.03	Nov. −2
	14	+.10	
	16	+.17	
	25	+.05	
	30	00	
Dec	6	+.04	+.047 10

Ill. W.

1863 Oct	28	+.10	
Dec	9	+.05	
1864 Jan	27	+.04	
Oct	10	+.02	
Dec	20	00	
1865 Jan	3	−.11	
	11	[	
	16	]	
	19	00	+.016 6
	24	00	+.014 9

Oct Nov.	+.017 7	
Dec	+.017 7	
Jan	+.002 5	

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τ Ceti. — 3.4.

R. 1h 37m 37s An. var. +2.8 N. P. D. 106° 40′.2 An. var. −0′.32

Ill. E.

1	1862	Dec 8
2		— 10
3		— 16
8	1863	Dec 29
9		— 30
10	1864	Jan 14
13		Nov 11 Nov 2
14		— 14
15		— 25
16		Dec 8

Ill. W.

4	1863	Oct 28
5		Nov 3
6		— 4
7		Dec 23
11	1864	Jan 27
12		Oct 10
17	1865	Jan 3
18		— 11
19		— 16
20		— 18

o Piscium inserted here by assistant.

An. var. N. P. D. +81° 29′.0 An. var. −0′.31

R. 1h 38m 3s.

Ill. W.

Ill. E.

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This thm has a companion — 11s 8 — 64" probably physically connected.
See obs. Dec 8 & 10th 1862 16 —
and Argelander DLX

x Ceti — 5.4 +

AR. 1h 42m 45s An. var. -2s.9 N.P.D. 101° 22'.5 An. var. -0'.30.

III. E.

1 1862 Dec 8
2 — 10
3 — 16
9 1863 Dec 29
10 — 30
15 1864 Nov 11 Nov. -1
16 — 14
17 — 25
18 — 30
19 Dec 8
23 1865 Jan 28

III. W.

4 1863 Oct 28
5 Nov 3
6 — 4
7 Dec 21
8 — 23
11 1864 Jan 21
12 — 27
13 Oct 10
14 Nov 1
20 Dec 14
21 1865 Jan 3
22 — 11

Camelop. 219 B. 6. +

AR. 1h 46m 29s An. var. 2s.1 N.P.D. -6° 33'.1 An. var. -0'.30

III. E. 1863 Dec 29
— 30
1864 Nov 28 Nov. -1 PM

III. W. 1863 Oct 28
Nov 4
Dec 21
— 23
1864 Jan 21
— 27
1865 Jan 12

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1862phae.proj..280W

β Arietis. — 3.2

N.A.

AR. 1h 46m 58s An. var. +3s.3 N.P.D. 69° 52'.4 An. var. −0'.30

Ill. E.	1862 Dec 8	−.08
	16	−.10
	− 27	+.03
	1863 Dec 29	+.02
	1864 Mch 3	+.20
	Nov 11	Nov 12
	− 14	−.12
	− 19	+.07
	− 30	−.02
	Dec 8	+.02
	1865 Jan 26	+.04
	27	+.03
	Feb. 11	

Ill. W.	1863 Feb 16	−.03
	− 23	+.13
	Nov 3	−.01
	Dec 23	−.05
	1864 Jan 27	+.04
	Feb. 5	
	− 10	−.12
	Oct 10	−.11
	Dec 20	−.07
	1865 [Jan 11]	
	− 20	+.11
	− 24	−.04
	− 25	+.20

Oct. Nov	−.052 6
Dec	−.039 7
Jan Feb Mar	+.059 9

50 Cassiopeæ. 4.+

AR. 1h 51m 38s. An. var. 5s.0 N.P.D. +18° 18'.8 An. var. −0'.30

Ill. E. 1863 Dec 29
3 − 30
4 1864 Jan 6
20 Nov 19
23 1865 Jan 21 3w

Ill. W. 1863 Oct 28 ~~1864 Jan 6~~
5 1864 Jan 27
6 − 27
18 Oct 10
19 Nov 1
21 1865 Jan 16
22 − 18

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There is some uncertainty foll.
about the point observed, a Piscium + — 3.4

R. 1h 54m 54s An. var. +3s.1 N.P.D. 87° 54'.5 An. var. -0'.29

III. E.
1 1862 Dec 10
4 1863 Dec 29
5 — 30
10 1864 Nov 14
11 — 16
12 — 19
13 — 23
14 — 25 foll
15 — 30
16 Dec 8

III. W.
2 1863 Nov 4
3 Dec 23
6 1864 Jan 21
7 — 27
8 Oct 10
9 Nov 1
17 Dec 14
18 — 20
19 1865 Jan 12
20 — 16
21 — 18

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This star comes at the altitude of the reversing apparatus over the telescope, so that its image is disfigured

γ Andromedæ + 2.3.

Æ. 1h. 55m. 23s. An. var. +3s.6 N.P.D. 48° 20' 1°. 55'. 23 An. var. − 0'.29

Ill. E.

1	1862 Dec 8	
2	— 16	
3	— 27	
9	1864 Feb 19	
10	Nov 11	
14	1865 Jan 26	
15	— 27	
16	— 30	
17	Feb. 2	
18	— 9	
19	— 11	
20	— 14	
21	— 21	3rd

Ill. W.

4	1863 Feb 16
5	— 23
6	Dec 21
7	1864 Feb 5
8	— 12
11	1865 Jan 20
12	— 24
13	— 25

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a Arietis — 2.

Æ. 1h 59m 21s An. var. +3s.4 N. P. D. 67° 11'.8 An. var. -0'.29.

III. E.	1862 Dec 8	-.01	1865 Feb 21st -01	Oct. -035 2
	— 10	-.12	24	Nov. -044 10
	— 16	-.06	25	Dec. -051 14
	1863 [Jan 30]	-.03	27	Jan -034 13
	Dec 29	-.03		Lb.
	— 30	-.03	+18 (10)	
	1864 Jan 5	-.02		
	— 9	-.10		
	— 14			
	Feb 23	+.16		
	Mch 3	+.12		
	Nov 10	+05		
	— 11	+11		
	— 14	-09		
	— 16	+02		
	— 19	-04		
	— 23	-16	-43 10	
	— 25	00		
	— 30	1m		
	Dec 8	-06		
	1865 Jan 26	-.01		
	— 27	-10		
	— 28	-06		
	— 30	-02		
	Feb 2	-10		
	— 9	+08		
	— 14	.00	-020 25	
III. W.	[1863 Feb 10]			
	[" 18]			
	Nov 3	-.11		
	— 4	-.10		
	— 30			
	Dec 9	-.03		
	— 15	-.01		
	— 21	-.10		
	— 23	.00		
	1864 Jan 21	-.03		
	Feb. 5			
	— 12	-05		
	Oct 10	+05		
	Nov 1	-08		
	Dec 9	-22		
	Dec 14	-05		
	— 20	+03		
	— 30	-13		
	1865 Jan 3	-17	2m	
	— 12	-04		
	(— 16)			
	— 18	-02		
	— 20	+13		
	— 24	-01		
	— 25	+01	-052 21	
			-035 46	

a Draconis s.70 c.d.w.s. 3.4

Tr. 2h 0m 38s An. var. +1.6 N. P. D. -24° 57'.5 An. var. -0'.29

III. E. 1863 Dec 30 1864 Jan 9 Nov 10 — 11

III. W. 1863 Jan 30 Dec 21 — 22 — 23 1864 Jan 21 Nov 1

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1862phae.proj..280W

20 Urs min Bode

Anonyma — 7.

Tr. 2h 4m 20s An.var. -8s.0 N.P.D. -3° 34'.6 An.ver. -0'.29

III. E.	1862 Dec 8	√
	— 16	√
	1863 Dec 29	√
	— 30	√
	1864 Jan 5	
	— 9	√
	Nov 19	All
III. W.	1863 Sept. 9	√
	Oct. 28	√
	Nov 3	√
	— 4	√
	— 30	√
	Dec 9	√
	— 21	√
	— 22	
	— 23	√
	1864 Dec 20	√
	— 30	

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1862phae.proj..280W

67 Ceti. N.A. ~~C dist J.~~ — 6.

R. 2h 10m 3s An.var. +3s.0 N.P.D. 97° 3'.9 An.var. -0'.28

III. E	1862 ~~Dec 10~~	+.09		
	1863 Dec 29	+.04		
	1864 Jan 9	+.20		
	Nov 10	+05		050
	— 11	+10		
	— 14	+04		073
	— 16	+08		095
	— 23	+12		
	— 25	+24		
	— 30	+11		168
	~~Dec 8~~	+20		234
	1865 Jan 27	+19		
			+.128 12	
			±.036 10	
III. W.	Dec 9	01		
	1864 Dec 14	00		
	— 20	+02	+.017 3	
	— 30	-03		
	1865 Jan 11	+09		
	— 16	+12		
	— 18	+01		
	— 24	+16		
	— 25	+31	+.063 9	
			+.097 21	

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Sometimes when o Ceti is faint the star following has been taken instead.

o Ceti. + C. des T. var.

Æ. 2h 12m 20s An. var +3s.0 N.P.D. 93° 36'.6 An. var. −0'.28

III. E.

1	1862 Dec 10		
2	— 16	very faint	
6	1863 Dec 29	rather f.	
7	— 30		
8	1864 Jan 9	quite f.	
9	Nov 10	very faint	
10	— 11		
11	— 30	2nd	
18	1865 Jan 27		
19	— 28		
20	— 30		

III. W.

3	1863 Nov 4	
4	[Dec 16]	
5	— 20	faint
12	1865 Jan 11	
13	— 12	
14	— 16	
15	— 18	
16	— 24	
17	— 25	

ι Cassiopeæ C. des T. 4. +

Æ. 2h 17m 40s An. var. +4s.8 N.P.D. +23° 13'.5 An. var. −0'.28

III. E.

9	1863 Dec 29
10	— 30
11	1864 Jan 9
25	Nov 11
26	— 16 AM
27	— 19
28	— 23
29	— 25
30	— 30

III. W.

1	1863 Feb 2.
2	— 10
3	— 16
5	Nov 4
6	Dec 16
7	— 22
8	— 23
12	1864 Feb. 8

1862phae.proj..280W

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1862phae.proj..280W

ξ^2 Ceti. N.A. — 4.

Æ. 2h 20m 46s An. var. +3s.2 N.P.D. 82° 9'.9 An. var. −0.27

Ill. E.	1862 Dec 10.	+.07
	— 16	−.05
	1863 Dec 30	+.06
	1864 Jan 5	+.08
	— 9	.00
	Nov 10	−.03
	— 11	−.16
	— 16	−.07
	— 19	+.11
	— 23	+.04
	— 25	.00
	— 30	−.02
	1865 Jan 26	+.10

Ill. W.	1863 Nov 4	
	Dec 22	
	— 23	+.07
	1864 Feb 5	
	— 8	+.08
	— 29	+.12
	Dec 14	−.07
	— 20	+.06
	— 30	−.03
	1865 Jan 18	−.02
	Nov.	−.019 7
	Dec	+.026 7
	Jan. Feb.	+.060 6

36 Cassiopeæ H. 6.5 +

Æ. 2h 24m 54s An. var. +5s.5 N.P.D. +17° 47'.6 An. var. −0.27

Ill. E.	1863 Dec 29	
	7 — 30	
	8/1864 Jan 9	
	22 Nov 16	
	23 — 19	
	24 — 23	
	25 — 30	

Ill. W.	1863 Nov 4	
	3 Dec 9	
	4 — 22	
	5 — 23	
	9/1864 Feb 5	
	10 — 8	

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1862phae.proj..280w

Gr 527.

BAC 784. — 6.

Tr. h. 2 m. 28 s. 0 An. var. +8.s 1 N. P. D. +9° 8.'7 An. var. -0.'27.

Ill. E.

1862 Dec 10 ✓
— 16 ✓
— 20
1863 Dec 29 ✓
— 30 ✓
1864 Jan 5 —
— 9 ✓
Nov 16 Am
— 19 Am
— 30 ✓ Am

Ill. W.

1863 [Jan 30]
~~Feb 27~~ ✓
Apl. 9 ✓
Nov 4 ✓
~~Dec~~ 9 ✓
Nov 30 ✓
Dec 21 ✓
— 22
— 23 ✓
1864 Feb. 5 ✓
— 8
1865 Jan 24

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1862phae.proj..280W

ε Ceti. + — 5.4

AR. 2h 32m 51s An. var. +2s.9 N. P. D. 102° 27'.8 An. var. -0'.26.

III. E.

1 1862 Dec 10.
3 1863 Dec 29
4 1864 Jan 9
5 — 11
6 Nov 10
7 — 16
8 — 19
9 — 23
10 — 25
11 — 30
19 1865 Jan 26
20 — 28
21 — 30
22 Feb. 2
~~0~~ a

III. W.

2 1863 Feb. 2
12 1864 Dec 14
13 — 30
14 1865 Jan 12
15 — 13
16 — 16
17 — 18
18 — 24
—

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γ Ceti M.A. — 3.4.

26. AR. 2h. 36m. 6s. An. var. +3s.1 N.P.D. 87°. 21'.1 An. var. -0'.26

Ill. E.	1862 Dec 10	-.01.		
	1863 Dec 29	+.01.		
	1864 Jan 9	+.02.		
	— 11	-.03.		
	Feb. 19	-.04.		
	Nov 10	+08.		
	— 19			
	— 23	00.		
	— 25	-01.		
	— 30	-03.		
	1865 Jan 26	+06.		
	— 28	+08.		
	— 30	+11.		
	Feb. 9	+16.		
	— 11	+19.	+042	14
Ill. W.	1863 Feb 2.	+.05.		
	16	+.09.		
	Dec 22			
	1864 Dec 14	-04.		
	— 30	-07.		
	1865 Jan 12	+03.		
	— 13	+17.		
	— 16	+06.		
	— 18	-11.		
	— 24	+05.	+026	9
			+036	23
			±.053	

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41 Arietis + C. des T. 4.

R. h. 2 m. 41 s. 49 An. var +3.s5 N.P.D. 63° 18.'9 An. var. -0.'25

III. E.
1 1862 Dec 10
2 — 20
8 1863 Dec 29
9 1864 Jan 9
10 — 11
13 Nov 19
14 — 23
15 — 25
16 — 30

III. W.
3 1863 Feb 2
4 — 16
5 Dec 15
6 — 21
7 — 22
11 1864 Feb. 10
12 — 12
17 Dec 14
18 — 30
19 1865 Jan 13
20 — 16
21 — 18

6.

R 2h 47m 56s An. var. -1.s5 N.P.D. -30° 8.'5 An. var.-0.'25

III. E. 1862 Dec 29
1864 Jan 9
— Nov 19
— 23
— 25
— 30

III. W. 1863 Dec 15
— 21
— 22
1864 Jan 25
Dec 20

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η Eridani. — 3.

R. 2h 49m 38s An. var. +2s.9 N. P. D. 99° 27'.2 An. var. -0'.24.

III. E.

1 1862 Dec 10
2 — 16
3 1863 Dec 29
4 1864 Jan 9
5 — 31
8 Nov 16
9 — 19
10 — 23
11 — 25
12 — 30

III. W.

6 1864 Jan 25
7 Feb 10
13 Dec 14
14 — 20
15 — 30
16 1865 Jan 12
17 — 13
18 — 16
19 — 18
20 — 24

β Ursæ minoris S.P. 2.

Tr. 2h 51m 9s An. var. -0s.3 N. P. D. -15° 16'.6 An. var. -0.25

III. W. 1863 Feb 2.
" 15
" 23
Mar 23
Dec 15
— 21
— 22
1864 Jan 25
Feb 10
Dec 20

III. E. 1863 Dec 29
1864 Jan 9
1865 Feb 12
— 24
— 24

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ε Arietis — 4.5

R 2h 51m 16s An.var. +3s.4 N.P.D. 69° 13'.1 An.var. −0".25

III. E.

1862 Dec 10
— 16
1864 Jan 11
Nov 16
— 19
— 25
— 30
1865 Jan 28
Feb. 9

III. W.

1864 Dec 14
1865 Jan 12
— 18
— 20
— 24

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α Ceti. — 2.3

	h.	m.	s.			
R.	2	55	1	An. var. +3ˢ.1	N.P.D. 86° 27′.5	An. var. -0′.24

III. E.	1862 Dec 10	-.03
	— 20	+.06
	1864 Jan 5	-.06
	— 9	+.02
	— 11	+.08
	Feb. 23	+.03
	Mch 3	-.03
	Nov 16	-.01
	— 19	-.01
	— 23	
	— 30	-.01
	1865 Jan 27	+.09
	— 28	
	Feb. 9	
	— 11	
	— 13	
	— 14	
	— 25	

III. W.	1863 Feb 2.	+.07
	" 7	+.23
	" 16	+.05
	" 23	-.01
	Nov 23	
	Dec 15	-.02
	— 21	+.03
	1864 Feb 10	+.10
	— 12	+.08.
	~~Dec~~ 14	-.02
	— 20	+.04
	— 30	-.08
	1865 Jan 12	+.03
	— 13	+.03
	— 16	+.18
	— 20	
	— 24	

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β Persei. C. des T. — var.

Æ. 2h 59m 8s An. var. +3s.9 N. P. D. 49° 34'.9 An. var. -0'.24

Ill. E.

1863 Dec 29
1864 Jan 5
— 9
— 11
Nov 16
— 19
— 23
— 30
1865 Jan 27
— 28

Ill. W.

1863 Feb 16 bright
1864 Jan 25
Feb 10
— 12
1865 Jan 12
— 13
— 16
— 18
— 20
— 24

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N.A.

δ Arietis. — 4.5.

	h.	m.	s.					
R.	3	3	41	An. var. +3.4	N. P. D.	70°	48′.1	An. var. −0′.23

Ill. E.

1862 Dec 20	−.20
1864 Jan 9	−.04
— 11	+.08
Nov 16	
— 19	
— 30	+.02
1865 Jan 27	+.04
— 28	
Feb. 9	
— 11	
— 14	

Ill. W.

1863 Feb 16	−.05
1864 Jan 25	+.08
~~Feb 10~~	.00
— 12	−.06
~~Dec 30~~	−.13
1865 Jan 12	−.01
— 13	+.11
— 16	+.08
— 18	+.12
— 20?	
— 24	

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12 α Eridani. — 3.4.

R. 3h 6m 10s An.var. +2s.6 N.P.D. 119° 32′.2 An.var. -0′.24

Ill. E.

1864 Jan 9
— 11
Nov 16
— 19
1865 Jan 22
Feb. 9
— 13
— 14

Ill. W.

1864 Feb 10
— 12
1865 Jan 12
— 16
— 18
— 20
— 24

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ζ Eridani. — 4.5

AR $3^h\ 9^m\ 5^s$ An. var. +2.9 N. P. D. 99° 20'.3 An. var. -0'.23

Ill. E.

1862 Dec 16
1863 Dec 29
1864 Jan 5
— 9
— 11
Nov 16
— 19
— 23
— 25
— 30
1865 Jan 27

Ill. W.

1863 Nov 23
1864 Jan 25
Feb 10
— 12
1865 Jan 12
— 13
— 16
— 18
— 20
— 24

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1862phae.proj..280W

a Persei. B.7. — 2.

Æ 3h. 14m. 25s. An. var. +4s.2 N. P. D. 40° 38'.2 An. var. −0'.22

Ill. E.

1862 Dec 16
— 20
1863 Dec 29
1864 Jan 5
— 11
Feb 13
[Nov 16]
Nov 19
— 25
1865 Jan 27
Feb 13
— 14
— 24
— 25
— 27

Ill. W.

1863 Jan 5
Nov 23
Dec 21
1864 Jan 21
— 25
Feb 10
Dec 20
— 30
1865 Jan 16
— 18
— 20

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1862phae.proj..280w

☉ Tauri. This has been called ☉ a good deal.

Æ. 3h. 17m. 20s. An. var. +3s.2 N. P. D. 81° 27'.8 An. var. −4'.3

Ill. E.
1862 Dec 16
1864 Jan 5
— 9
— 11
Feb 13
Nov. 16
— 19
— 23
— 25

Ill. W.
1863 Jan 5
Nov 23
1864 Jan 21
Feb 10
— 12
Dec 20
— 30
1865 Jan 4
— 11
— 12
— 16
— 18

♃ Ursæ minoris. 3.

Æ. 3h. 20m. 59s An. var. −0s.1 N. P. D. −17° 40'.3 An. var. −0'.21

Ill. E. 1864 Nov. 23
— 25
1865 Jan 27

Ill. W. 1864 Feb. 10
— 12
Dec 20

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1862phae.proj..280W

~~Tr. 57 nov min B sp~~
323 Cephei B

BAC 1061 — 6.

Tr. 3h 21m 18s An. var + 18s.6 N. P. D. 3° 48'.0 An. var. - 0'.22

Ill. E.

~~1862 Dec 20~~
1863 Dec 26 √
— 29 √
1864 Jan 5 √
— 9
Feb 13
Nov 19

Ill. W.

1863 Jan 5 √
Feb 16 √
— 17
Dec 15 √
— 16
— 21 √
1864 Jan 21 √

57 Nov min B sp.
Ill W 1863 Feb 10
" 16 √
Nov 23 √
Dec 15 √
— 21 √
1864 Jan 25 √
— 27 √
Feb. 5
1865 Jan 4
20

1862 Dec 20
1863 Dec 29 √
1864 Jan 5
" — 9 √ AM
Nov 16
1865 Jan 27 + AM
Feb. 9
— 14

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1862phae.proj...280w

ε Eridani. — 3.

	h.	m.	s.					
R	3	26	23	Am. var. +2.8	N. P. D.	99° 55.9	Am. var. −0.21

Ill. E.

1863 Dec 26
1864 Jan 11
Nov. 16
— 23
— 25
1865 Jan 27
Feb 9
— 13
— 14

Ill. W.

1864 Jan 21.
— 27
Feb 5
Dec 30
1865 Jan 4
— 11
— 12
— 16
— 18
— 20
— 25

ε Eridani. — 3.

R. 3h 30m 8s Am. var. +5.1 N.P.D. +27° 14′.3 Am. var. −0′.21

Ill. E. 1863 Dec 26
1864 Feb 13
Nov 23
1865 Feb 14

Ill. W. 1863 Dec 13
— 21.
1864 Jan 25
— 27
Feb 5

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1862phae.proj..280W

8 Persei. G. dis T. — 3.

	h.	m.	s.					
R.	3	33	3	An. var + 4.2	N. P. D.	42°	39'.6	An. var. -0'.20

Ill. E.

1863 Dec 26
1864 Jan 11
Nov 23
— 25
1865 Jan 27
Feb. 13
— 14
— 21
— 25
— 27

Ill. W.

1863 Jan 5
Nov 23
Dec 21
1864 Jan 21
— 27
Feb. 5
1865 Jan 11
— 16
— 19
— 20

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1862phae.proj...280W

8 Eridani. — 3.

R. 3h 36m 36s An. var + 2.9 N. P. D. 100° 14'.2 An. var. 0'.21

Ill. E.

1864 Jan 11
Nov 23
1865 Jan. 27 2 wires
Feb. 13
— 14
— 21
— 25

Ill. W.

1863 Jan 5
1864 Jan 27
Feb. 5
1865 Jan 4
— 11
— 12
— 16
— 18
— 20
— 24
— 25

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1862phae.proj..280W

η Tauri. — 3.

AR. 3h 39m 14s An. var. +3s.6 N. P. D. 66° 19'.7 An. var. −0'.19

III. E.

1862	Dec 11	+.09
1863	Dec 26	−.01
1864	Jan 11	+.04
	Nov 23	−.04
	— 26	
1865	Jan 27	+.03
	Feb. 1	
	— 2	
	— 14	

III. W.

1863	Jan 5	+.04
	Feb 14	+.01
	Nov 23	
	Dec 21	−.10
1864	Jan 27	−.09
	Feb. 5	
1865	Jan 4	
	[— 12]	
	— 16	
	— 18	
	— 20	
	— 24	
	— 25.	

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1862phae.proj...280W

ζ Persei. 3.

R. 3h 45m 24s An. var. +3s.8 N. P. D. 58° 32'.0 An. var. -0'.19

Ill. E.
1862 Dec 11
1863 Dec 26
1864 Jan 5
— 11
Nov 23
1865 Jan 27
Feb. 1
— 2
— 17

Ill. W.
1863 Jan 5
Feb. 14
" 16
Nov 23
1864 Jan 27
1865 Jan 24
— 11
— 12
— 18
— 20
— 25

ζ Ursæ minoris 4.5

R. 3h 49m 6s An. var. -2s.3 N. P. D. -11° 46'.8 An. var. 0'.18

Ill. E. 1860 Dec 26
— 29
— 30
1864 Jan 11
— 12
Nov 25
1865 Jan 27
Feb. 14

Ill. W. 1863 Jan 19
Feb 14
" 16
Nov 23
Dec 15
— 21
1864 Jan 21
— 24
1865 Jan 20
— 25

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γ Eridani — 3.

N.A.

	h.	m.	s.						
R.	3	51	33	An. var.	+2.8	N. P. D.	103° 54′.5	An. var.	-0′.18

Ill. E.

1862 Dec 11.	+.03
1863 Dec 26	-.06
— 29	+.03
— 30	+.07
1864 Jan 11	-.12
— 12	-.03
Feb 18	+.02
Nov 23	-.18
— 25	-.12
1865 Jan 27	+.14.
— 30	+.11.
Feb 1	+.04.
	-.005 (12)

Ill. W.

1862. ~~Feb 7~~	
1863 Jan 5	+.06.
— 19	+.01.
Feb 14	+.01.
— 16	+.02.
~~Nov 23~~	
Dec 15	-.04.
— 21	-.03.
1864 Jan 27	-.08.
— 27	-.06.
1865 Jan 5	+.16.
— [12]	+.14.
— 15	-.02.
— 18	-.01.
— 20	+.10.
— 24	+.05.
— 25	+.08.
	+.026 (15)
	+.012 (27)
	=.055 10by

Nov	-.145	2
Dec	.000	6
Jan	+.036	16
Feb	+.012	4

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1862phae.proj... 280W

62 hrs min B

BAC 5352 — 6.

R $3^h\ 58^m\ 19^s$ An.var. $-6^s.9$ N.P.D. $6°\ 38'\ 3$ An.var. $-0'.17$.

Ill. E.

1862 Dec 11 ✓
1863 Dec 26 ✓
— 29 ✓
— 30 ✓
1864 Jan 11 ✓
Feb. 18
1865 Jan 30

Gr. 779 — 6.

R. $4^h\ 3^m\ 3^s$ An.var. $+10^s.1$ N.P.D. $+9°\ 31'.0$ An.var. $-0'.16$

1863 Dec 29
— 30
1864 Jan 11
— 12
1865 Feb 2

Jan 19 1865
Feb. 14
Dec 15
1864 Jan 21
— 27

Ill. W

1863 Jan 5 ✓
— 19
Feb. 14
— 16 ✓
— 17
Dec 15 ✓
— 21 ✓
1864 Jan 21 ✓
— 27 ✓
1865 Jan 18
— 25

θ Draconis 4.3

R. $3^h\ 59^m\ 18^s$ An.var. $+1^s.1$ N.P.D. $-31°\ 3'.8$ An.var. $-0'.6$

1863 Jan 19
1864 Feb 13
— 14

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1862phae.proj..280w

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1862phae.proj..280W

Gr 750

BAC. 1235 — 6.7

Tr. 3h. 55m. 4s. An.var. +16.7 N. P. D. 4° 49'.1 An.var. -0'.18

III. E.	1862 Dec 11	√
	1863 Dec 26	√
	— 29	√
	— 30	√
	1864 Jan 11	√
	— 12	√
	Feb 18	
	Nov 25	√ Am
	1865 Jan 27	

III. W.	1863 Jan 5	√
	— 19	
	Feb. 14	
	— 16	√
	— 17	
	Nov 23	√
	Dec 15	√
	— 21	√
	1865 Jan 4	
	— 11	
	— 20	

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1862phae.proj..280W

o' Eridani. — 4.5.

R. 4 15 15 An. var. +2.9 N. P. D. 97° 12'.2 An. var. −0'.16

III. E.	1863 Dec 29	+.04
	1864 Jan 11	+.02
	— 12	.00
	Feb 18	+.12
	1865 Jan 26	
	— 27	
	— 30	
	Feb 1	

III. W.	1862 ~~Feb. 5~~ Feb. 7	
	" ~~Feb. 7~~	
	1864 Jan 8	+.05
	— 19	+.09
	Feb 16	−.03
	Dec 15	−.04
	1864 Jan 21	−.03
	— 27	+.09.
	1865 Jan 4	
	— 12	
	— 13	
	— 16	
	— 18	
	— 24	
	— 25	

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1862phae.proj..280W

γ Tauri C. des T. 4.

Æ. 4h 11m 53s An. var. + 3s.4 N. P. D. 74° 42'.7 An. var. -0'.15.

Ill. E.

1862 Dec 11
1864 Jan 11
1865 Jan 26
— 27
— 30
Feb. 1
— 2
— 9
— 14
— 24
— 25

Ill. W.

~~1862. Feb. 7~~
1863 Jan 5
— 19
Dec 15
1865 Jan 10
— 12
— 13
— 16
— 20
— 25

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1862phae.proj..280W

8 Tauri. -- 4.

AR. 4h 14m 55s An.var. +3s.5 N.P.D. 72° 47'.2 An.var. -0'.15

Ill. E.

1863 Dec 29
1864 Jan 11
1865 Jan 26
— 27
— 30
Feb. 1
— 2
— 9
— 11

Ill. W.

1863 Jan 5
— 19
Dec 15
1865 Jan 4
— 11
— 12
— 13
— 16
— 20
— 24
— 25

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1862phae.proj...280W

64 Tauri .. 6.

R. 4h 16m 5s An. var. +3s.5 N. P. D. 72° 52'.9 An. var. -0'.15

III. E.

1862 Dec 11
1863 Dec 29
1864 Jan 11
1865 Jan 26
— 27
— 30
Feb. 1
— 2
— 9
— 11

III. W.

1862. ~~Feb. 7~~
1863 Jan 5
— 19
Dec 15
1865 Jan 4
— 11
— 12
— 13
— 16
— 20
— 24
— 25

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1862phae.proj..280w

ε Tauri. — 4.3.

R. 4 h. 20 m. 30 s. An. var. +3.5 N. P. D. 71° 7'.9 An. var. -0'.14

III. E.

1862 Dec 11 +.10
1864 Feb 18
1865 Jan 26
— 27
Feb 1
— 2
— 9
— 11
— 25

III. W.

1862. Feb. 5
Feb. 7
1863 Jan 5 —.09
— 19 —.01
Dec 13
1865 Jan 5
— 11
— 12
— 13
— 16
— 20
— 24

η Draconis Sp. 3.2.

Tr. 4 h. 22 m. 7 s. An. var. +0.8 N.P.D. −28° 10'.2 An. var. −0'.14

III. E. 1863 Dec 29
1864 Jan 11
Feb 18
1865 Jan 26
— 27
— 30
Feb 1
— 9
— 11
— 25

III. W. 1865 Jan 19
Dec 13
1865 Jan 12
— 20
— 24
— 25

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1862phae.proj...280W

α Tauri

AR. 4h 27m 57s An. var. +3s.4 N. P. D. 73° 46′ 4 An. var. −0′.13

Ill. E.

1862	March 28	+.01
	Dec 11	.00
1863	Dec 26	−.12
	" 29	−.02
1864	Jan 11	−.07
	Feb 18	+.10
	March 14	
1865	Jan 26	
	" 27	
	" 28	
	" 30	
	Feb. 1	
	" 2	
	[" 9]	
	" 11	
	" 13	
	" 25	
	March 13	
	[" 16]	
	" 17	
	" 20	

Ill. W.

1862	Feb. 5	
"	Feb. 7	
"	Apr 4	+.11
	Oct 5	−.08
1863	Jan 5	−.02
	Feb 19	−.03
	Dec 15	−.05
	" 21	+.10
1865	Jan 5	
	" 11	
	" 12	
	" 13	
	" 16	
	" 18	
	" 20	
	" 24	
	" 25	
	Apr 3	

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1862phae.proj..280W

53 Eridani — 4.

AR. 4h 31m 49s An. var. +2s.7 N.P.D. 104° 34'.7 An. var. −0'.12

III. E.

1863 Dec 29
1864 Jan 11
" Feb 18
1865 Jan 26
— 27
— 30
Feb. 1
— 2
— 9
— 11
— 13

III. W.

1862. Feb. 5
" Feb. 7
Oct 5
1863 Jan 19
1865 Jan 5
— 11
— 13
— 16
— 18
— 20
— 24

— XVI 182. sp — 6.

AR. 4h 33m 33s An. var. −3s.5 N.P.D. +10° 44'.6 An. var. −0'.12

III. W.

III. E. 1863 Dec 26
— 29
1864 Jan 11
Feb 18
1865 Jan 26
Feb 1
— 2
[— 11]
— 13
— 25

50 Epsilon H

III. E. 1863 Dec 26
— 29
1864 Jan 11
" Feb 18
1865 Jan 26
Feb 1
— 2
[— 11]
— 13
— 25

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1862phae.proj - 280w

μ Eridani — 4.3.

R. 4h 38m 33s An. var. +3s.0 N.P.D. 93° 30'.7 An. var. −0'.12

III. E.

1863 Dec 26
1865 Jan 25
— 27
— 30
Feb. 1
— 2
— 9
— 11
— 13
— 27

III. W.

1862. Feb. 5
Feb. 7
Oct 5
1863 Jan 19
1865 Jan 5
— 11
— 13
— 16
— 18
— 20

9 Camelop. 4

R. 4h 40m 15s An. var. +5s.9 N.P.D. +23° 54'.0 An. var. −0'.12

Tu. E. 1863 Dec 26
1864 Jan 11
1865 Jan 25
Feb 3
— 11
— 25

Tu. W. 1863 Jan 19
1865 Jan 13

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1862phae.proj..280W

ι Aurigæ N.A. — 3.

AR. h. 4 m. 47 s. 57 An.var. +3.9 N. P. D. 57° 3'.5 An.var. −0'.10

Ill. E.

~~1861 Dec 29.~~
1862 Mch 28 +.09
1865 Jan 26
— 27
— 28
— 30
Feb. 1
— 2
— 3
[— 9]
— 11
— 13
— 14
— 21
— 25
— 27

Ill. W.

1862. Feb. 5
" Feb. 7
Oct. 5. +.14
1865 Jan 5.
(— 11)
— 13.
— 16.
— 18.
— 20.
— 24.

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1862phae.proj..280W

ι Tauri -- 5.

AR 4h 54m 47s An. var. +3s.6 N. P. D. 68° 36'.7 An. var. − 0'.09

Ill. E.

1864 Feb 19
" 29
1865 Jan 26
— 27
— 28
— 30
Feb 1
— 2
— 3
— 9
~~— 11~~

Ill. W.

1862 Feb 5
" Feb. 7
Oct. 5
1863 Jan 19
1865 Jan 2
— 5
— 11
— 13
— 16
— 18
— 20
— 24
— 25

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1862phae.proj..280W

ε Leporis. — 4.3.

N.A.

AR. 4h 59m 35s An. var. +2s.5 N.P.D. 112° 33'.6 An. var. -0'.09

Ill. E.	1865 Jan 26	+.06		
	— 27	+.14		
	— 28	+.22		
	— 30	+.19		
	Feb. 1	+.13		
	— 2	+.04		
	— 3	+.18		
	— 9	+.21		
	— 13	+.20		
	— 14	+.12	149	
	— 25	+.22		
	— 27	+.13	153	12
Ill. W.	1865 Jan 2	-.14		
	— 4	+.11		
	— 11	+.05		
	— 16	+.28		
	— 18	+.21		
	— 20	+.05		
	— 24	+.02		
	— 25	+.09	084	8
			+.126 (20 obs)	

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1862phae.proj : 280w

ε Ursæ Minoris. 4.5.

Tr. 5h 0m 21s An.var. -6s.4 N.P.D. -7° 44'.4 An.var. -0.09

III. E.

~~1861 Dec 20.~~
1862 Dec 29 ✓
1865 Feb 18
[29]
March 12
1865 Feb. 21 ✓
March 6th

III. W.

1862. Feb 5
" Feb 7
Oct 5 ✓
1863 Jan 19
— 31
March 2 ✓
— 9

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1862phae.proj..280W

α Aurigæ 1.

AR. 5h 6m 26s An. var. +4s.4 N. P. D. 44° 8′. 9 An. var. −0′.07

Ill. E.	~~1862 Dec 20~~		
	1863 Dec 29	+.06	
	1864 Feb 18	−.09	
	[29]		
	March 12	−.01	
	1865 Jan 26		
	— 27		
	— 28		
	— 30		
	Feb. 1		
	— 2		
	— 3		
	— 9		
	— 11		
	— 13		
	— 14		
	— 21		
	— 24		
	— 27		
	March 6		
	— 13		
	[— 16]		
	— 17		
	— 20		
	— 27		
Ill. W.	1862 Feb. 5		
	~~Feb 7~~		
	Oct 5	−.19	
	1863 Jan 19	−.09	
	— 31		
	March 2	+.08	
	— 9	−.08	
	1864 [July 13]		
	1865 Jan 2		
	— 4		
	— 11		
	— 13		
	— 16		
	— 18		
	— 20		
	— 24		
	— 25		
	Apr 3		
	— 13		
	— 17		
	— 19		

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1862phae.proj..280W

β Orionis B.J. 1.

AR. 5h 7m 52s An. var. + 2s.9 N. P. D. 98° 21'.9 An. var. − 0'.08.

Ill. E.	~~1861 Dec 20~~		1865 Mch 20
	1862 Mch 24	−.05	27
	— 28	+.03	
	1863 Dec 29	+.01	
	1864 Feb 18	−.08	
	— [19]	−.02	
	Mch 12	2w −.05	
	1865 Jan 26		
	— 27		
	~~— 28~~		
	— 30		
	Feb. 1		
	— 2		
	— 3		
	— 9		
	— 11		
	— 13		
	— 14		
	— 21		
	— 22		
	— 24		
	— 27		
	Mch 6		
	— 13		
	— 16		
	— 17		
Ill. W.	1862. Feb. 5		
	" Feb. 7		
	Oct 5	−.14	
	1863 Feb 2	−.03	
	Mch 2	+.12	
	— 9	−.10	
	1864 ~~Feb 5~~		
	[July 13]		
	1865 Jan 7		
	— 5		
	— 11		
	— 13		
	— 16		
	— 18		
	— 20		
	— 24		
	— 25		
	Apr 3		
	— 13		
	— 17		
	— 19		
	— 24		

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1862phae.proj..280W

τ Orionis. _4.

Æ. 5h 10m 52s An.var. + 2s.9 N. P. D. 96° 59'.9 An.var. -0'.07.

Ill. E.

~~1861 Dec 20~~ 4
1863 Dec 29
1864 Feb 18
Mch 12
1865 Jan 26
— 27
— 30
Feb. 1
— 3
— 9
— 11
— 13
— 14

Ill. W.

1862 Feb. 5
" Feb. 7
" Oct 5
1863 Jan. 31
Mch 2
— 9
1865 Jan 2
— 4
— 11
— 16
— 18
— 20

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1862phae.proj..280W

β Tauri. B.J. – 2.

AR. 5h. 17m. 31s. An. var. +3s.8 N.P.D. 61° 30'.8 An. var. -0'06.

III. E.	~~1861 Dec 20~~	
	1862 Mch 24	–.01
	— 26	+.03
	— 28	+.07
	1863 Dec 29	–.02
	1864 Mch 12	+.05
	1865 Jan 26	
	— 27	
	— 28	
	Feb. 1	
	— 3	
	— 9	
	— 11	
	— 13	
	— 14	
	— 24	
	— 27	
	Mch 13	
	— 16	
	— 17	
	— 20	
	— 27	
III. W.	1865 Jan 2	
	— 5	
	— 16	
	— 18	
	— 20	
	— 25	
	Apr 3	
	— 13	
	— 17	
	— 24	

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1862phae.proj..280W

by Camelop B

BAC 1662 – 6.

Tr. 5h 17m 50s An. var. +18s.4 N.P.D. 4° 53′.2 An. var. -0′.06.

Ill. E.

1863 Dec 29 ✓
1864 Mch 3
1865 Feb. 1
— 9
[— 11]
[— 13]
— 24
Mch 6 ✓

Ill. W.

1862 Feb 5
" Feb 7
Oct 5
1863 Jan 19
Feb 2 ✓
– 23 ?
Mch 2 ✓
— 9
Dec 15 ✓
1865 Jan 2
— 5

74 Camelop. B. – 6.7.

R. A. 5h 21m 14s An. var. +8s.0 N.P.D. +15° 3′.4 An. var. -0′.06

Ill. W.

Ill. E. 1863 Dec 29
1865 Mch 3
– 7

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1862phae.proj...280W

β Leporis — 3.4.

AR 5h 22m 18s An. var. 2s.6 N.P.D. 110° 52′.3 An. var. -0′.05.

III. E.

~~1864 Dec 20.~~
1864 ~~Feb~~ 17
1865 Jan 27
— 28
— 30
Feb. 1
— 3
— 9
— 11
— 14
— 24
— 27
Mch 13

III. W.

~~1862 Feb 5~~
" ~~Feb 7~~
~~Feb 8~~ —
1865 ~~Jan 4~~
— 14
— 16
— 18
— 20
— 25

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1862phae.proj..280w

δ Orionis — 2.

N.A.

A.R. 5h 24m 55s An.var. +3.1 N.P.D. 90° 24′.3 An.var. -0′.05

Ill. E.

~~1861 Dec. 20~~	
1862 Feb 24	−.03
— 26	00
1863 Jan 29	+05
~~1863 Feb 3~~	−01
— 9	+03
— 12	−.04
Feb. 19	
1865 Jan 27	
— 28	
— 30	
Feb. 1	
— 3	
— 13	
Mch 6	

Ill. W.

1862. Feb. 5	
" Feb. 7	
" Mch 5	−.02
1863 Feb. 2	−01
Mch 9	−01
Dec 15	−02
1865 Jan 2	
— 4	
— 11	
— 16	
— 18	
— 20	
— 25	

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1862phae.proj..280W

a Leporis. M.A. – 3.

R. 5h 26m 36s An.var. 2s.6 N.P.D. 107° 55'.5 An.var. -0.05

Ill. E.

1862	Mch 24	+01
16	— 26	+04
	— 28	+03
1863	Dec 29	−02
1864	Mch 3	−12
	— 12	+02
1865	Jan 27	
	— 28	
	— 30	
	Feb 1	
	— 3	
	— 13	
	Mch 6	

Ill. W.

1862	Feb 5	
	Feb 7	
1863	Feb 2	+02
	Mch 9	−02
	Dec 5	−12
1865	Jan 2	
	— 11	
	— 16	
	— 18	
	— 20	
	— 25	

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1862phae.proj..280W

ε Orionis N.A. — 2.

Æ 5h. 29m. 10s. An.var. 3s. 0 N.P.D. 91° 17'.6 An.var. -0'.05

Ill. E.	1862 Mch 24	+01
	— 26	+03
	— 28	+08
	1863 Dec 29	−09
	1864 Mch 3	−05
	— 12	+06
	1865 Jan 27	
	— 28	
	— 30	
	Feb 1	
	(2)	
	— 3	
	— 13	
	Mch 6	
Ill. W.	1862 Feb. 5	
	" Feb. 7	
	Oct 5	+06
	1863 Feb 2	−05
	— 23	−02
	Dec 15	−02
	1864 Feb. 5	
	1865 Jan 2	
	— 5	
	— 11	
	— 16	
	— 18	
	— 20	
	— 25	

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1862phae.proj..280W

a Columbæ N.A. ... 2.

Æ 5h. 34m. 37s. An.var. 2s.2 N.P.D. 124° 9'.1 An.var -0'.04

Ill. E.

~~1861 Dec. 20.~~
1862 Mch 24
1864 Aug 3
1865 Jan 27
— 30
Feb 1
— 2
— 9
— 11
— 13
— 14
— 21

Ill. W.

1862. ~~Feb.~~ 5
" ~~Feb.~~ 7
" Oct 5
1863 Feb 20
— 23
1865 Jan 2
— 5
— 16
— 18
— 20
— 25

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1862phae.proj..280W

κ Orionis. — 3.2.

Æ 5h. 41m. 10s. An.var. 2s. 8 N.P.D. 99°. 43'. 4 An.var. -0'.03

Ill. E.

1861 Dec 20
1865 Jan 27
— 30
Feb 1
— 2
— 11
— 13
— 14
— [22]
— 24
Mch 18

Ill. W.

1862 Feb. 5
" Feb. 7
" Oct 5
1863 Feb. 2
— 23
1865 Jan 2
— 4
— 11
— 16
— 20
— 25

ψ Draconis. 4.5.

Æ. 5h. 44m. 26s An.var. -1s.1 N.P.D. -17° 47'.0 An.var. -0.03

Ill. E. 1864 Jan 11
1865 Feb. 2
— 9
[— 11]
— 13
— 22
— 24

Ill. W. 1863 Feb 2.
— 20
— 23

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1862phae.proj..280W

α Orionis N.A. — var.

R. 5h. 47m. 38s. An. var. 3s. 2 N. P. D. 82° 37′.3 An. var. -0′.02

III. E.

~~1861 Dec 20~~
1862 Mch 26 −04
— 28 −04
Sept 17 +03
1864 Jan 11 −10
~~Feb 18~~ −07
~~Mch 19~~ +10
1865 Jan 27
— 30
Feb 1
— 7
— 9
— 11
— 13
— 14
— 21
— 22
Mch. 20
— 27
— 28

III. W.

1862 Feb. 5
~~Feb 7.5~~
" Sept 7.5 −11
1863 Feb 2 +03
— 20 −03
— 23 −12
1865 Jan 2
— 5
— 11
— 16
— 20
— 24
— 25
Apr 3
— 4
— 13
— 14
— 17
— 19
— 24
— 25
— 26

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1862phae.proj..280W

θ Aurigæ — 3.

Æ. 5h 50m 15s An. var. 4s.1 N. P. D. 52° 48'.1 An. var. -0'.01

Ill. E.

1862 Mch 26
— 28
Spt 17
1864 March 19
1865 Jan 27
— 30
Feb 1
— 9
— 11
— 14
— 21
— [22]
— 24
Mch 18

Ill. W.

1862 Feb. 5
" Feb. 7
1863 Feb. 2
1865 Jan 2
— 4
— 11
— 16
— 20
— 25

ζ Draconis s.p. 3.4. (for 1862 see "above pole")

Tr. 5h 51m 8s An. var. -1s.0 N.P.D. -33° 6'.3 An. var. -0'.01

Ill. E. 1862 Oct 5
1864 Jan 11
Feb 18
15

Ill. W. 1863 Feb 20
— 23
1865 Jan 25

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1862phae.proj...280w

1 Geminorum. — 5

R $5^h\ 55^m.40^s$ An var. $3^s.6$ N. P D $66°\ 44'.0$ An. var $-0'.01$

Ill. E.

~~1861 Dec 20~~
1862 Sept 17
1864 Jan 11
~~Feb. 23~~
1865 Jan 27
— 30
~~Feb 1~~
— 2
— 3
— 9
— 11
— 14
— 21
— [22]
— 24
Mch 6
— 18

Ill. W.

~~1862. Feb. 5~~
" ~~Feb 7~~
" Oct 5
1863 Feb 20
1864 ~~Jan 25~~
1865 Jan 2
— 11
— 16
— 20
— 25

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1862phae.proj..280W

N.A.

ν Orionis. — 5.4

R $5^h\ 59^m\ 38^s$ An. var $3^s.4$ N.P.D. $75^\circ\ 13'.1$ An. var. $-0'.00$

Ill. E.

~~1861 Dec 20.~~
1861 Sept 17 −.05
1863 Dec 29 .00
1864 Jan 14
Feb. 18
23 −.04
1865 Jan 30
Feb 1
— 2
— 3
— 9
— 11
— 13
— 14
24
March 6

Ill. W.

1862 Feb 7
Oct 5 −.13
1863 Feb 20 .00
1864 Jan 25 .00
1865 Jan 2
— 11 [ ]
— 20
— 24
— 25

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1862phae.proj..280W

η Geminorum .. 3.4.

Æ 6h 6m 29s An. var. 3s.6 N. P. D. 67° 27'.4 An. var. +0'.01.

III. E.

~~1861 Dec 20~~
1862 Mch 26
— 28
Sept 17
1864 Jan 11
1865 Jan 27
— 28
— 30
Feb 1
— 2
— 3
— 11
— 13
— 14

III. W.

1862 Feb. 5
~~Oct 5~~
1863 Feb 2.
— 20
1864 Jan 25
1865 Jan 2
— 11
— 20

41 Draconis 6. (also 40 Draconis)

Æ. 6h 10m 32s An. var. −4s.5 N. P. D. −10° 1'.2 An. var. +0'.02

III. E. 1863 Dec 29
1864 Jan 11
Feb 26 not very good
1865 Feb. [11]
— 21
— 24
Mch 6
— 18

III. W. 1863 Feb 23
1864 Jan 16
— Jan 25
1865 Jan 2

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1862phae.proj..280W

κ Columbæ — 4½

Æ 6h. 11m. 37s. An.var. 2s.1 N.P.D. 125° 5'.8 An.var. 0'.02

Ill. E.

1865 Jan 27
— 30
Feb 1
— 2
— 9
— 13
— 21
— 24
Mar 6
— 13
— 18

Ill. W.

1862. Feb. 5
" Feb. 7
Oct 5
1865 Jan 11
— 16
— 20
— 25

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1862phae.proj..280W

μ Geminorum N.F. – 3.

AR. 6h 14m 33s An. var. 3s.6 N.P.D. 67° 25'.1 An. var. 0'.02

III. E.	1862 Sept. 17	+.01
	1865 Jan 27	
	— 28	
	Feb 1	
	— 11	
	— 13	
	— 14	
	— 21	
	— 24	
	Mch 6	–
	— 13	3w
	— 28	
III. W.	1865 Jan 2	
	— 11	
	— 16	
	— 20	
	— 24	
	— 25	
	Apr 3	
	— 4	–
	— 14	

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1862phae.proj..280W

β Canis Majoris. — 3.2.

AR 6h 16m 35s An.var. 2s.6 N.P.D. 107° 53′.4 An.var. 0′.02

Ill. E.

1865 Jan 28
Feb. 9
— 11
— 13
— 14
— 21 2w
— 24
March 6
— 13
— 18
— 27
— 28

Ill. W.

1865 Jan 2
— 11
— 20
Apr 3
— 4
— 14
— 17
— 19
— 24
— 25

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1862phae.proj..280W

δ Ursæ Minoris. — 4:5.

Tr: 6h 17m 11s An. var. 19s.4 N. P. D. 3° 23'.9 An. var. +0'.03

Ill. E.

1862 ~~Feb 25~~
Mch 26
— 28
~~Sept 17~~
1863 ~~Oct~~ 29
1864 Jan 11
— 14
~~Feb 18~~
— 26
March 19
— 24
1865 Jan 27
~~Feb 1~~ 2 n
— 9 4 w
— 22
Mch 6 2 n
— 13 3 w
— 16 4 n
— 20

Ill. W.

1862. ~~Feb. 5~~
" ~~Feb. 7~~
Oct 5
Oct 7
1863 Feb 2
" 20
" 23
March 2
" 5
1864 Jan 16
" 25
" 27
1865 Jan 16 ?
— 20
— 25

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1862phae.proj..280W

ν Geminorum. 5.4

R. 6h 20m 42s An.var. 3s.6 N.P.D. 69° 42′.2 An.var. 0′.03

III. E.

1862 Nov 26
1864 Jan 11
Feb. 26
Mar. 19
— 24
1865 Jan 27
— 30
Feb. 1
— 9
— 13
— 14
— 21
Mar 18

III. W.

1862. Feb 5-
Oct. 5
1863 Feb 12
1864 Jan 25
" 27
1865 Jan 11
— 16
— 25

23 Camelop. H. 5.6

R 6h 22m 27s An. var. +10s.4 N.P.D. +10° 17′.7 An. var. +0′.04

III. E. 1863 Dec 29
1864 Jan 11
— 14
Feb 15
— 26
Mar 19
— 21

III. W. 1863 Feb 12
" Mar 21
" " 5
1864 Jan 16
" " 25-
" " 27
1865 Jan 2
—11

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1862phae.proj..280w

N.A.

γ Geminorum – 2.3

R. 6h 29m 40s An. var. 3s.5 N. P. D. 73° 29'.1 An. var. 0'.04

Ill. E.

~~1862 Feb 26~~	
Mch 28	
Sept 17	
— 21	
1864 Jan 14	
Feb 26	+.12
Mar 9	+.05
— 19	+.07
— 24	.00
1865 Jan 27	
Feb. 3	
— 13	
— [21]	
— 24	
— 25	
Mch. 4	
— 6	
— 13	
[— 20]	

Ill. W.

1862. Feb. 5	
" Feb. 7	
Oct 5	−.18
— 7	−.10
1863 Feb 2	−.04
Mch 5	−.10
1864 Jan 16	+.01
— 25	−.07
— 27	
1865 Jan 11	
— 16	
— 25	

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1862phae.proj..280W

51 (Her.) Cephei. — 5.

Tr. 6h 34m 8s An. var. 30s.4 N. P. D. 2° 45′.1 An. var. 0′.05

Ill. E.

1862 Mch 26
— 28
Sept 17 faint rejected?
1863 Jan 11
— 14
Feb 18 twice
— 26
Mch 9
— 21
— 19
1865 Jan 27
Feb. 11
[— 13]
— 24
Mch 6 3rd
— 13
— 18 2nd)

Ill. W.

1862 Oct. 5.
— X
1863 Feb 12.
— 16
" 20
" 21
" 23
Mch 2
" 5
" 11
1864 Jan 16
— 25
— 27
Feb 5
— 8
1865 Jan 2
— 11
— 16
— 25

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1862phae.proj.. 280W

ε Geminorum. 34

AR. 6h 35m 23s An. var. 3s.7 N.P.D. 64° 44′.1 An. var. 0′.05

Ill. E.

1862 Sept 21
1865 Jan 27
Feb. 12
— 9
— 13
— 14.
— 21
— 24
— 25
March 4
— 6
— 13
— 16 16th only for time
— 20

Ill. W.

1862 Feb. 5
Feb. 7
1865 Jan 25
Apr 4
— 13
— 14
— 17
— 19

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1862phae.proj..280W

1862 Sept 26 -.07

α Canis Majoris. — 1.

AR 6h 39m 1s An. var. 2s.6 N.P.D. 106° 31'.7 An. var. 0'.07

Ill. E.

~~1862 Feb 5~~		
1862 Sept 4	−.04	1865 May 17
Sept 11	+.03	
1863 Dec 29	−.11	
1864 Jan 14	−.09	
Feb 26	−.07	
Mar 9	−.02	
— 19	−.09	
— 24	−.06	
1865 Jan 27	−.12	
— 30	−.13	
Feb 1	−.09	
— 2	−.04	
— 9	−.08	
— 14	−.11	
[— 21]	−.01	
— 24	−.09	
— 25	−.10	
~~March 4~~	−.08	
— 6		
— 13		
— 17		
— 18		
— 25		

Ill. W.

1862 ~~Feb 5~~		
" ~~Oct~~		
" Oct. 5	+.20	1865 May
— 7	−.05	
1863 Feb 26	−.02	
Mar 11	−.06	
Apr 9	−.03	
— 20	+.01	
— 22		
1864 Jan 16	+.05	
— 25	−.02	
— 27	−.18	
Feb. 5		
— 8	−.06	
1865 Jan 11	−.08	
— 16	−.12	
— 24	+.06	
— 25	−.16	
Apr 3		
— 13		
— 14		
— 17		
— 19		
— 24		
— 25		
— 26		

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1862phae.proj..280w

~~13~~ κ Canis Majoris. — 4.

	h.	m.	s.						
Æ	6	44	39	An. var.	2.s 2	N. P. D.	122°	21′.1	An. var. 0′.06.

Ill. E.

1862 Mch 11
1864 March 21
— 24
1865 Feb. 1
— 21
— 24
— 25
Mch 4.
— 6
— 13

Ill. W.

1862. ~~Feb.~~ Feb. 5
" ~~Feb.~~ 7
" at 5
— 7
1863 Feb 2.
— 21
Mch 2
" 5
" 11
1864 Jan 27
1865 Jan 2
— 11

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1862phae.proj..280W

θ Canis Majoris. 4.5

R 6h 47m 44s An.var. 2.s 8 N.P.D. 101° 52'.0 An.var. 0'.07

III. E.

1862 Feb 25
1864 Feb 26
Mar 9
— 21
— 24.
1865 Feb. 21
24
Mar 4
— 6
— 13
— 18
— 25

+.01
−.02
−.02
+.09
−.02
−.1

3rd

III. W.

1862. Feb. 5
" Feb. 7
" Oct 5
— 7
1863 Feb 21
Mch 2
" 5
" 11
1865 Jan 11

50 Draconis - 6.

R. 6h 50m 52s Am.var. −1.s9 N.P.D. −14° 43'.9 Am.var. +0'.07

IV. E. 1864 Feb 26
Mar 9
— 21
— 24
1865 Feb. 25
Mar 4

IV. W. 1863 Feb 21
Mch 2
" 5
1864 Jan 27

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1862phae.proj...280W

ε Canis Majoris ~~W.J.~~ N.A. 2.1.

AR. 6h. 53m. 10s. An. var. 2s.4 N. P. D. 118° 47'.0 An. var. 0'.08

Ill. E.

1862 Feb 25	
Mch 11	− 06
— 24	+ 01
1864 Feb 26	+ 01
Mch 3	− 13
— 7	− 02
— 24	− 02
— 21	+ 09
~~— 27~~	− 02
1865 Jan 30	
Feb. 1	
— 2	
— 14	
[— 21]	
— 24	
Mar 4	
— 6	

Ill. W.

1862. Feb. 5	
" Feb. 7	
Oct 5	+ 03
— 7	− 11
1863 Mch 2	− 02
" 5	− 08
" 11	− 05
1864 Jan 27	2.00 × foley obs'd
1865 Jan 11	

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1862phae.proj..280W

ζ Geminorum — 4.

A $6^h\ 55^m\ 52^s$ An. var. $3^s.6$ N. P. D. $69^\circ\ 13'.8$ An. var. $0'.08$

Ill. E.

1862 Feb 25
Mch 11
— 24
1864 Jan 14
Feb 26
— 25
Mch 3
— 3
— 24
1865 Jan 30
Feb. 1
— 2 —

Ill. W.

1862. Feb 7
Oct 5
— 7
1863 Feb 21
Mch 2
" 5
" 11
1864 Jan 27
1865 Jan 11.
— 16 —

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1862phae.proj...280W

N.A.

γ Canis Majoris. — 4.5.

α 6h 57m 28s An. var. 2s.7 N. P. D. 105° 25'.9 An. var. 0'.08.

III. E.

1862	Feb 25	
	Mch 24	−02
1864	Feb 25	−06
	— 26	00
	Mch 3	−11
	— 9	00
	— 14	−10
1865	Jan 30	
	Feb. 1	
	— 2	
	— 9	
	— 21	
	— 24	
	— 25	
	Mch 4	
	— 6	
	— 13	
	— 27	
	— 28	

III. W.

1862.	~~Feb 5~~	
	~~Oct 5~~	
	Oct 7	−04
1863	Feb 23	+02
	[Mch 2]	
	Mch 3	+12
	~~——~~	
1864	Jan 27	−03
1865	Mch 6	

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1862phae.proj..280W

25 Lamb 14 BAC 2326 — 5.

Tr. 7h. 1m. 36s. An. var. 1s.31 N. P. D. 7° 20'.0 An. var. 0'.09

Ill. E.

1862 Mch 11
24
1864 Jan 14 ✓
Feb 25 3
Mch 3
— [21] ✓
— 25
— 27
— 28

Ill. W.

1862. Feb. 5
" Feb. 7
Oct 7 ✓
1863 Feb 20 ✓
" 21 ✓
" 23? ✓
Mch 2 ✓
" 5 ✓
" 11 ✓

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1862phae.proj..280W

8 Canis Majoris — 2.

Æ 7h. 2m. 45s. An. var. 2s.4 N. P. D. 116° 10'.5 An. var. 0'.09

Ill. E.
1864 Feb 26
Mch 9
1865 Jan 30
Feb. 2
— 21
— 24
— 25
Mch 13

Ill. W.
1862 Oct 5
1863 Feb 23
1865 Jan 16
Apr 5
— 13
— 24
— 25

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1862phae.proj..280W

λ Geminorum. — 4.3.

R. 7h 10m 5s An.var. 3s.5 N.P.D. 73° 12'.7 An.var 0'.10

Ill. E.

1862 Mch 24
1864 Jan 14
Feb 26
— 25
Mch 3
— 19
— 21
1865 Jan 30
Feb. 1
— 21
— 24
Mch 4
— 6
— 13
— 27
— 28

Ill. W.

1862. ~~Feb.5~~
" ~~Feb.7~~
Oct 5
1864 ~~Jan 27~~
1865 ~~Jan~~ 16
Apr 3
— 5

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1862phae.proj : 280W

BAC 2320 - 7.

Tr. 7h. 11m. 27s. An. var. 77s.1 N. P. D. 0° 58' 8 An. var. 0'.10

III. E.

1863 Sept 23
1864 March 9
— ~~24~~
1863 Feb. 24
Mch 6
— 27
— 28

III. W.

1863 Feb. 7 ✓
— 21 ✓
Mch 2 ✓
" 5 ✓
" 9 ✓
" 11
1865 Jan 16
✓

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1862phae.proj..280W

8 Geminorum. M.A. 3.4.

R. 7h 11m 49s An. var. 3s.6 N.P.D. 67° 45′ 9 An. var. 0′.10

III. E.

1862	Feb 11	+08
	24	−16
1864	Jan 14	+06
	Feb 25	+12
	— 26	−02
	Mch 3	— not found
	24	−09
1865	Feb. 1	
	— 2	
	— 21	
	Mch 4	
	— 6	
	— 13	
	— 28	

III. W.

1862.	Feb. 5	
	Feb. 7	
	Oct 5	+04
	— 7	−01
1863	Feb 10	+03
1864	Jan 27	+02
1865	Apr. 3	
	— 5	
	— 13	

vii. 67 — 6.

R. 7h 16m 23s An. var. +6s.8 N.P.D. +21° 15′.4 An. var. +0′.11

III. E. 1864 Jan 14
Feb 25
— 26
Mch 3
— 24
1865 Feb. 21

III. W. 1865 Apr 5

1862phae.proj..280W

* prec. sometimes ofs

η Canis Majoris. — 3.2.

AR 7h. 18m. 36s. An. var. 2s. 4 N. P. D. 119 2.1 An. var. 0'.11

III. E.

1862 Mch 11
1864 Jan 14
Feb 26
Mch 3
— 19 21
— 24
1865 Jan 30
Feb 1
— 2
— 21
— 24
Mch 4
~~— 26~~
— 27

III. W.

1862 Feb 5, one wied only
" ~~Feb 7~~
Oct 7
1864 Jan 27
1865 Apr 5

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1862phae.proj..280W

a Geminorum. B.J. — 2.1

AR. 7h 25m 43s An. var. 3s.8 N.P.D. 57° 48'.6 An. var. 0'.12

			Diff. of Components
III. E.	1862 Feb 25		
	Mch 11	+11	
	— 24	+13	.392
	May 14	−06	
	1864 Feb. 23	+10	.325
	— 24	+02	.440
	Mch 3	+12	.42
	— 9	+09	.292
	— 19	+.22	
	— 21	+.07	
	— 24	+.10	.433
	1865 Jan 30	+.03	.40
	Feb. 1	+.03	.48
	— 2	+.18	.467
	— 21	+.06	.61
	— 24	+.12	.40
	Mch 4	+.11	.43
	— 13	+.02	.42
	[— 25]	+.12	.45
	— 27	~~+.03~~ +.03	.50
	— 28	+.02	.40
	May 10		
	— 15		
	— 17		
III. W.	1862. Feb. 5		
	" Feb. 7		
	Oct 5		.242
	7	+08	.492
	1863 Feb 21		.375
	Mch 2	−08	.34
	" 9	+04	.425
	" 11	+06	.475
	1864 Jan 27	00	.21
	[May 2]		.35
	1865 Jan 16	[−20]	.52
	Apr 3		.467
	— 13	+.03	
	— 17		
	— 19		
	— 24		
	— 25		
	— 26		
	May 26		

Thiele An
L11. (353:)
−0s.3893 for 64.0
Variation yearly about −.0004

By obs of 1862, 1863, 1864 the diff. of AR of the two Stars is 0s.372 (14 obs)
PE by sums ±0.060 (1 obs
±0.016 (14 obs.)

12 obs of 1865 +0s.462 (12) up to Apr 3 inclusive
PE of 1 ±0s.040
12 ±0.012

T.H.S. Dec. 19th 1875

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1862phae.proj - 280W

α Canis Minoris — 1.

R. 7h 32m 2s An. var. 3s.1 N.P.D. 84° 25'.3 An. var. 0'.15

III. E.	1862 ~~Feb 25~~		
	Mch 24	−02	1863 May 17
	— 28	−07	
	May 14	−11	
	1864 Jan 14	−11	
	~~Feb~~ 23	−10	
	~~Mch~~ 24	−02	
	~~—~~ 25	00	
	— 26	00	
	Mch 3	00	
	— 9	−05	
	— 24	−07	
	Apr 21	−05	
	1865 Jan 30		
	Feb. 1		
	— 2		
	— 14		
	— 21		
	— 24		
	Mch 4		
	— 6		
	— 13		
	— 17		
	— 27		
	— 28		
	May 10		
	— 15		
III. W.	1862. ~~Feb. 5~~		
	" ~~Feb. 7.~~		
	" ~~Oct 5~~		
	— 7	+14	
	1863 Feb 16	−09	
	~~Mch 2~~	−05	
	Mch 9	+01	
	— 11	00	
	1864 Jan 17	−10	
	1865 ~~Jan 16~~		
	Apr 3		
	— 5		
	— 13		
	— 17		
	— 19		
	— 24		
	— 25		
	— 26		
	May 26		

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β. Geminorum .. 1.2.

R. 7h 36m 52s An. var. 3s.7 N. P. D. 61° 38′ 5 An. var. 0′.14

III. E.

1862 Feb. 25.
Mch. 11 +01
— 26 +08
— 28 −11
May 14 −14
1864 Jan 14 −07
Feb 23 −10
— 24 00
— 25 00
Mch 2 +01
— 7 +08
— 13 +04
— 19 +09
— 24 −15
Apr 27 00
1865 Jan 30
Feb 1
— 2
— 14
— 21
— 24
Mch 6
— 13
— 17
— 27
— 28
May 13
— 15

1865 May 17

III. W.

1862. Feb. 5
" Feb. 7
" Oct 5 +05
— 7 +03
1863 Feb 7 −12
— 21
Mch 2
" 9 −03
" 11 +15
1863 Jan 27 −01
May 27
— 3 −14
1865 Jan 16
Apr 3
— 5
— 17
— 18
— 19
— 24
— 25
— 26
May 26

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156 Camelop. B.

BAC 2585 — 6.

Tr. 7h. 43m. 9s. An. var. 15s.5 N. P. D. 5°. 33'. 2 An. var. 0'.15

III. E.	1862 Mch 11	
	— 28	✓
	1863 Oct 23	✓
	1864 Mch 3	✓
	— 7	
III. W.	1863 Feb 7	
	— 21	✓
	Mch 2	✓
	— 9	✓

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c. m. T.

ξ Argus. — 4.3.

AR. 7h 43m 27s An. var. 2.s5 N. P. D. 114° 30′.8 An. var. 0′.14

Ill. E.

1864 Feb 18
Mch 19
— 21
1865 Feb. 21 2w.
— 24
Mch 4
— 6
— 17
— 27
— 28

3 wires not very good

Ill. W.

1865 Apr 3
— 5
— 24

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1862phae.proj..280w

δ Cancri — χ Geminorum N.A. — 5.

R. $7^{h}\ 54^{m}\ 59^{s}$ Ann. var. $3^{s}.7$ N. P. D. $61^{\circ}\ 49'.2$ Ann. var. $0'.16$

III. E.	1862 Feb 25		
	Mch 11	+04	
	1864 Feb. 23	−05	
	— 25	−05	
	Mch 26	+06	
	Mch 3	−04	
	— 7	+05	
	— 19	+23	Mr. Rogers 1st night of observing
	— 21	+04	
	— 24	+04	
	Apr 7	+08	
	1865 Feb. 24		
	Mar 17		
	— 27		
	— 28		
III. W.	1863 Feb. 7	−03	
	1865 Apr 3		
	— 5		
	— 13		

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Correct Cir Reading
~~[illegible]~~ ~~Dec~~ in Working List

ζ Argus. — 2½

AR.	7h 58m 42s	An. var.	2s.1	N. P. D.	129° 36'.8 (verified)	An. var. 0'.17

Ill. E. 1864 Feb 18
— 26
March 24
1865 Feb. 21

Ill. ~~E~~ N 1865 Apr 5

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1862phae.proj..280W

1 Navi

15 Argus. N. A. — 3.

AR 8h 1m 48s An. var. 2s.6 N. P. D. 113° 54'.3 An. var. 0'.17

III. E.

1862 Feb 25
1862 March 19 +16
— 21 +06
— 24 +04
1865 Feb 21
— 24
March 28

III. W.

1863 Feb 7 +01
1865 April 3
— 4
— 5
— 13

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1862phae.proj..280W

2 Ursæ Minoris. -- 6.7.

Tr: 8h 2m 58s An.var. -56.6 N.P.D. −1° 6′.4 An.var. 0′.17

Ill. E.

1862 Mch 28
Sept 22
23
24
28
Oct 23
1864 Feb. 26
Mch 3
1865 Feb 24
[Mch 4]
[— 17]
— 18

Ill. W.

1862 Apr 4
1863 Feb 2
— 21
Mch 2
" 5
" 9
" 11
" 27
Apr 1
Oct 28
— 29
1865 Apr 3

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β Canori. 4 dus T. 4.3.

R. 8h 8m 59s An. var. 3s.3 N.P.D. 80° 23'.3 An. var. 0'.18.

III. E.

1862 March 28
1864 Feb 26
March 3
— 7
— 21
Apr 7
1865 Feb. 24
March 6
— 17
— 27

III. W.

1862 Apr 4
1863 Feb 7
March 11
Apr 1
1865 Apr 3
— 4
— 5
— 13
— 24
— 25

Gr. 1418. 7.5

R. 8h 12m 51s An. var. +17s.1 N.P.D. +4° 26'.9 An. var. +0'.19.

III. E. 1864 Feb 26
March 3
— [illegible]
— [21]
1865 March 4
— 17

III. W. 1863 March 5
" 11
April 1
+ 5

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1862phae.proj..280W

♯ Ursæ Majoris. 3.4

AR. 8h. 18m. 41s. An. var. 5s. 1 N. P. D. 28° 49'.3 An. var. 0'.19.

III. E.

1862 Mch 11
— 28
Apr 7
1864 Feb 26
Mch 7
— 19
— 21
Apr 7
— 8

III. W.

1862 Apr 4
Oct 7 sp
1863 Feb 7
Mch 11
Apr 1

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1862phae.proj...280w

A Ursæ Majoris. — 5.

AR. 8h 22m 6s An.var. 5s.5 N.P.D. 24° 23′.1 An.var. 0′.19

III. E.

1862 March 27
April 7
1864 Feb 26
March 12
— 19
— 21
April 7
— 8

III. W.

1862 March 29
April 4
Oct. 7 sp
1863 Dec 7
Mar 5
" 11
" 30
April 1

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1862phae.proj..280W

7 Cancri. — 6.

N.A.

R. 8h 24m 40s An.var. 3s.5 N.P.D. 69° 5'.4 An.var. 0'.20

III. E.

1862 March 27	+07	
Apr 4	+07	
1864 Feb 26	−10	
March 7	−05	
— 19	−03	
— 21	——	not yet reduced
Apr 7	−05	
8	−05	
1865 Feb 26.24		
March 6		
— 17		
— 27		

R. 8h 30m 35s An.var.−0.s2 N.P.D. −17° 56'.4 An.var.+0.20

III. E. 1864 Feb 26
March 7
1865 March 17
— 27

IV.W. 1865 March 11
1865 Apr 3
— 4
— 5

III. W.

1862 March 27	+14
Apr 4	+07
1863 March 5	+07
— 11	−05
1865 Apr 3	
— 4	
— 5	
— 8	
— 17	

8 Cephei. — 4

R. 8h 27m 15s. An.var. +1'.0 N.P.D. −27° 28'.3 An.var.+0'.20

IV E. 1864 Feb 26
March 7
Apr 7
1865 March 17

IV. W. 1865 March 11
— 30
Apr 1
1865 Apr 3
— 4
— 5

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1862phae.proj..280w

δ Cancri. — 4.

R. $8^h\ 36^m\ 47^s$ An.var. 3.4 N.P.D. $71^\circ\ 20'.3$ An.var. 0'.21

III. E.

1862 March 27
1864 Feb 26
March 19
Apr 7
— 9
1865 Mar 6
— 10
— 17
[— 25]
— 27

III. W.

1863 Feb 7
1865 Apr 4
— 5
— 8
— 13
— 17

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1862phae.proj..280W

74 Draconis. — 6.

	h.	m.	s.						
Tr.	8	37	20	An. var.	-3.2	N.P.D.	9°	23'.9	An. var. 0'.21

III. E.

1862 Apr. 7 ✓
1863 Oct 1 ✓
1864 Mch 3
— 7
— 12
— 24 ✓
Apr. 15

III. W.

1862 Mch 29
Apr 4
1863 Feb 7
Mch 2 ✓
— 11 ✓
Apr 1
— ~~4~~
— 9 ✓
May 19

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ε Hydræ. N.A. — 3.4.

R. 8h 39m 25s An.var. 3s.2 N.P.D. 83° 4'.4 An.var. 0'.21

III. E.

1862 Apr. 7	+02
1864 Feb 26	not yet reduced
Mch 3	+02
— 7	+04
— 12	−03
— 24	+02
Apr 8	−04
— 9	−12
— 15	−08
— 21	−04
1865 Mch 4	
— 6	
— 10	
— 17	
— 27	

III. W.

1862 Apr. 5	+13
1865 Mch 2	+02
Apr 1	−04
— 9	−03
1864 May 3	+09

---

6 Ursæ majoris. 6

R. 8h 44m 40s An.var+5s.2 N.P.D. +24° 52'.1 An.var.+0'.22

III. E. 1864 Feb 26
Mch 2
— 12
— 24
Apr 15
— 9
1865 Mch 10

III. W. 1865 Feb 27
Mch 2
" 9
" 30
Apr 9

γ Cephei 4.3.

R. 8h 42m 28s An.var +0s.2 N.P.D. −28° 42'.0 An.var.+0'.20

III. E. 1864 Feb 26
Mch 7
— 24
Apr 2
— 9
1865 Mch 10

III. W. 1865 Feb 27
Mch 9
— 11
Apr 1

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1862phae.proj..280W

ι Ursæ Majoris N.A. 3.

AR. 8h 49m 40s An.var. 4s.1 N.P.D. 41° 24'.9 An.var. 0'.23

Ill. E.

1862 Mch 28
Apr 7
1864 Mch 12
— 17 not good
— 19
— 21
Apr 7
— 27
— 9
1865 Mch 4
— 10
— 17
— 25
— 27

Ill. W.

1862 Apr 4
1863 Feb 7
Mch 2
" 30
Apr 1
— 9
— 20
1864 May 3
1865 Apr 3
— 4
— 5

76 Draconis 6

AR. 8h 52m 23s An.var. −3s.9 N.P.D. −7° 59'.2 An.var. +0'.23

Ill. E. 1864 Feb. 26
Mch 7
" 12
Apr 15
— 9 N.A.R.

Ill. W. 1863 Feb 7
Mch 2
" 9
" 11
" 30
Apr 1
" 6
" 20

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1862phae.proj..280w

6² Ursæ Majoris. — 5.

AR. 8h. 58m. 7s. An. var. 5s. 4 N. P. D. 22° 18'. 3 An. var. 0'. 24

Ill. E.

1862 Apr 7
~~Sep 25 sp.~~
1864 Feb 26
Mch 7
— 12
— 24 w.t.R
Mch 17
— 19
— 21
~~Apr 27~~

Ill. W.

1862 Mch 29
Apr 4
~~Oct 7 sp.~~
1863 Feb 7
Mch 2
" 30
Apr 1
" 9
" 20

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1862phae.proj..280W

κ Cancri. — 5.

AR. 9h 0m 13s An. var. 3. 3 N. P. D. 78° 46′ 5 An. var. 0′.24

III. E.

1862 Nov 28
Apr. 7
1864 March 7
— 17
— 24 WAR
Apr 2
— 9
— 10
1865 March 6
— 10
— 17
— 27

III. W.

1862 Nov 29
Apr 4
1863 Feb 7
March 2
" 30
Apr 1
" 9
" 20
1865 Apr 3

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1862phae.proj..280W

λ Argus. — (3.)

AR 9h 2m 53s An.var. 2s.2 N.P.D. 132° 52′ 4 An.var. 0′.24

Ill. E.

1862 Mch 28
1864 March 12
— 14
— 24 WAR
Apr 7
~~— 16~~
1865 Mch 6
— 10
— 17
— 23
— 27
— 28

Ill. W.

1862 Mch 29
Apr 4
1863 Feb 7
Apr 1
" 9
1865 Apr 3
— 13
— 14
— 17

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1862phae.proj..280W

0 Hydræ. — 4.

R. 9h 7m 8s An.var. 3.1 N.P.D. 87° 6′.1 An.var. 0′.25

III. E.

1862 Apr. 7
1864 Mch 7
— 14
— 24 W.A.R.
— 17 W.A.R.
— 19 W.A.R.
— 21 " " "
Apr 7
— 27
— 16
1865 Mch 6
— 10
— 17
— 27
— 28

III. W.

1862 Mch 29
Apr 4
1865 Feb 7
Apr 19
1865 Apr 3
— 5
— 13
— 14

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/ Draconis Hev. was afterward introduced. See ad finem

83 Cancri. W.A. 6.

Æ. 9h 11m 13s An. var. 3s.4 N.P.D. 71° 42'.5 An. var. 0'.25.

Ill. E.	1862 Apr. 7	+01
	1864 [illegible]	
	— 12	+00
	— 16	~~[illegible]~~
	— 17	~~[illegible]~~ only [illegible]
	— 19	+05
	— 21	+05
	— 24	~~[illegible]~~
	1865 Mch 6	
	— 10	
	— 17	
	— 23	
	— 25	
	— 27	

Ill. W.	1862 Apr 4	−04
	1863 Feb 7	+01
	Mch 9	+04
	Apr 1	+07
	" 9	−13
	" 21	−02
	" 22	+02
	1865 Apr 17	
	— 19	

a Cephei. 3.2.

Æ. 9h 15m 16s An. var. +1s.4 N.P.D. −28° 0'.2 An. var. +0.25

Ill. E. 1862 Apr 7, 1864 Mch 12, ~~16~~ ~~[illegible]~~, Apr 15, −22, 27, 1865 Mch 17

Ill. W. 1863 Feb 7, Mch 2, Apr 20, " 22, 1865 Apr 5

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α Hydræ. — 2.

	h.	m.	s.							
Ac.	9	20	45	An. var.	3.0	N. P. D.	98°	3′. 5	An. var.	0′.26

III. E.	1862 Mch 27	−09
	— 29	−06
	Apr 7	+10
	— 19	+03
	— 26	−09
	1863 Mch 7	−12
	— 17	−08
	— 19	−03
	— 29	00
	Apr 9	+06
	— 15	00
	— 16	−04
	— 22	−03
	— 27	
	1865 Mch 6	
	— 17	
	— 23	
	— 25	
	— 27	
	— 28	
	Illegible 15	

III. W.	1862 Mch. 29	−03
	Apr. 4	−08
	1863 Feb 25	
	Mch 2	−08
	— 11	−07
	— 22	
	— 30	
	Apr 1	−03
	— 2	−06
	— 21	+01
	— 22	−03
	1865 Apr 3	
	— 5	
	— 13	
	— 14	
	— 17	
	— 19	
	— 25	
	— 26	

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δ Ursæ Majoris. — 3.

N.A.

	h.	m.	s.						
R.	9	23	32	An. var	4.0	N.P.D.	37°	41'.5	An. var. 0'.27

Ill. E.

1862 Nov 27
1864 Mch 7
— 19 ⟨ 21 N.A.R.
— 24
Apr 15
Apr 7
— 9
— 16
June 2
1865 Mch 17

Ill. W.

1862 Nov 29
Apr 4
1865 Apr 14
— 17
— 19
— 25
— 26

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1862phae.proj..280W

Pig Cephei B

BAC 7484. — 7.

Tr. 9h 24m 33s An.var. −4s.4 N.P.D. −6° 20′.1 An.var. 0′.26.

Ill. E.

1862 Mch 28 ✓
Apr. 7 ✓
— 19 ✓
— 25 ✓
1864 Mch 12
— [14]
Apr 15 2w
— 22
1865 Mch 25 ✓
— 27
— 28

~~[illegible]~~ (E 453) — 6. Gr 1564

Ar. 9h 30m 17s An.var. +5s.3 N.P.D. +20° 8′.0 An.var. +0′.26

Ill. E. 1864 Mch 12 (wire only)
" 14
" 21
" 24? W.A.R.
Apr 7
Apr 15
— 27
— 9
1865 Mch 10
— 17

Ill. W.

Examine gear

1863 Feb 7
— 25
Mch 2 ✓
— 9 ✓
— 11 ✓
— 27
— 30
Apr 9 ✓
— 22 ✓
1865 Apr 13
— 18

β Cephei 3.

Ar. 9h 26m 51s An.var. +0s.8 N.P.D. −20° 3′.0 An.var. +0′.26

Ill. E. 1864 Mch 7
— 12
— 14 2w
— 24 W.A.R.
Apr 7
Apr 15
— 27
— 9
— 16
~~1865 Mch 10~~
Mch 17

Ill. W. 1863 Feb 7
" Mch 9
1865 Apr 13
— 17
— 25

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1902phae.proj..280w

o Leonis 4.3.

	h.	m.	s.					
R.	9	33	44	An.var.	3.s2	N.P.D.	79° 28'.6	An.var. 0'.27

Ill. E.

1862 March 27
April 7
— 19
— 25
1863 March 7
— 14
— 21
— 171
April 7
— 22
— 9
— 16
1865 March 10
— 17
— 27
— 28

Ill. W.

1862 March 29
April 4
1863 Feb 7
— 25
April 9
1865 April 3
~~— 17~~

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1862phae.proj..280W

N.A.

ε Leonis. — 3.

		h.	m.	s.						
R.	9	37	58		An.var.	3.s 4	N.P.D.	65°	35′.3	An.var. 0′.27
III. E.	1862 March 27			−03						
	1862 Apr. 7			−04						
	— 19			−05						
	— 25			+02						
	1862 June 24			+01						
	— 19			−15						
	— 21			−01						
	Apr 2			+01						
	Apr 9			−09						
	— 21			−01						
	— 15			−06						
	— 16			−13						
	— 21									
	1865 Mch 10									
	— 17									
	— 27									
	— 28									
III. W.	1862 Mch 29			+02						
	Apr 4			−03						
	1863 Feb 25									
	Apr 9			+05						
	1865 Apr 3									
	— 5									
	— 8									
	May 24									

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1862phae.proj..280W

v Ursæ Majoris. – 4.3.

Æ. 9h 41m.5s An. var. 4s.4 N.P.D. 30° 18'.6 An. var. 0'.28

Ill. E.

1862 Apr. 7
1864 Mch 14
Apr 15 2w
— 27
— 9
— 16
1865 Mch 10 3w

Ill. W.

1862 Mch 29
Apr 4
~~Apr 7~~
1863 Mch 9

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1862phae.proj..280W

μ Leonis. C. des T. 4.

Æ. 9h 44m 51s An. var. 3s.4 N.P.D. 63° 20'.4 An. var. 0'.28

Ill. E.

1862 Mch 27
1864 Feb 26
Mch 14
— 19
— 21
Apr 7
— 9
— 16
1865 Mch 10
— 17
— 23
— 27
— 28

Ill. W.

1862 Mch 29
Apr 4
1865 Apr 5
— 8
— 11
— 13
— 14
May 24

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1862phae.proj.. 280w

π Leonis. N.A. 5.

	h.	m.	s.					
R.	9	52	53	An.var.	3.2	N.P.D.	81° 17′.4	An.var. 0′.28.

III. E.

1862 Apr. 25		
1866 Febr 26		not reduced yet
March 14	+02	
— 19	−10	
— 21	−02	
Apr 8	+05	
— 9	−03	
— 10	+07	
1865 March 4		
— 10		
— 17		
— 23		
— 25		
— 27		
— 28		

III. W.

1862 Sept 29	00
Apr 4	−02
"	
1865 Apr 5	
— 8	
— 11	
— 13	
— 14	

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α Leonis. B.7. 1.2

	h.	m.	s.							
R.	10	0	58		An. var.	3.2	N. P. D.	77°	21′	3	An. var.	0′29

III. E	1862 Apr. 25	−02	
	Sept 21		
	1864 March 14	−03	
	Apr 8	−01	
	14	−09	
	16	+06	
	24	+01	
	May 30	+05	
	1865 March 4		
	— 10		
	— 17		
	— 23		
	— 25		
	— 27		
	— 28		
	May 3		
	— 10		
	— 15		

III. W.	1862 March 29	−04	
	Apr 4	−04	
	— 12	+01	
	— 16	+02	
	— 18	−03	
	May 23	−01	
	Oct. 3	+13	
	1863 Apr 9	+09	
	16		
	1864 May 4	−08	
	— 5	−05	
	— 6	+02	
	— 23	+02	
	1865 Apr 3		
	— 5		
	— 8		
	[— 11]		
	— 12		
	— 13		
	— 17		
	— 24		
	— 25		
	— 26		
	May 24		
	— 25		
	June 6		
	— 8		
	— 10		

L 9 / B

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1862phae.proj...280w

λ Hydræ. — 4

R. 10h 3m 49s An. var. 2.9 N. P. D. 101° 40′.1 An. var. 0′.29

Ill. E.

1862 Apr. 7
— 25
1864 March 14
— 19
Apr. 24
— 9
— 16
1865 March 4
— 10
— 17
— 23
— 27

Ill. W.

1862 March 29
Apr. 4
— 12
— 16
— 18
1863 May 2
1864 May 3
— 4
— 5
— 6

ζ Cephei Ptolem. 4.3

R. 10h 6m 2s An. var. +2s.1 N. P. D. 32° 29′.0 An. var. +0.29

Ill. W.

1862 April 7
1863 April 18
1864 May 3
1865 April 13
— 17
— 18
— 24
— 25

Ill. E. 1865 March 10
— 27
— 28

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1862phae.proj..280W

λ Ursæ Majoris. — 34.

R. 10h 8m 42s An.var. 3.7 N.P.D. 46° 23′.6 An.var. 0′.30

III. E.

1862 Apr 7
— 25
1864 Apr 9
1865 Apr 10
— 17
— 25
— 27
— 28

III. W.

1862 Apr 4
— 12
— 16
— 18
1863 Apr 9
18
May 2
1864 May 3 2w.
— 4
— 5 2w
— 6
1865 Apr 5
— 8

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N.A.

γ Leonis. – 2.

Æ. 10h 12m 18s An.var. 3s.3 N.P.D. 69° 27′4 An.var. 0′.30

III. E.	1862 Apr 7	−04
	— 19	+02
	Sept 21	
	1864 Mch 19	−11
	Apr 16	—
	1865 Mch 10	
	— 17	
	— 23	
	— 25	
	— 27	
	May 10	
III. W.	1862 Oct. 5	−01
	— 7	00
	1863 Apr 18	
	May 2	
	1864 May 3	−03
	— 4	−01
	— 5	—
	— 6	+05
	1865 Apr 5	
	— 8	
	— 12	
	— 13	
	— 17	
	— 18	
	— 19	
	Jun 6	
	8	
	13	

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30 Camelop. Hev.

BAC. 3528. — 5.

Tr: h. 10 m. 13 s. 46 An.var. s. 8.1 N.P.D. 6° 44'.3 An.var. 0'.30

III. E.

1862 March 27
April 7 ✓
— 19
— 25 ✓
1865 [March 10]
[— 17]
— 26 ✓
— 27
May 10

III. W.

1862 March 29
April 4
— 12
— 16
— 18
1863 March 6
— 9 ✓
May 2
1862 May 3 ✓
— 5 ✓
— 6 ✓
1865 April 3 ✓
— 5 ✓
[— 11]
[— 12]
— 13
— 17
— 24 ✓
— 25 ✓
— 26

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μ Hydræ. — 4.

AR 10h 19m 22s An.var. 2.9 N.P.D. 106° 7'.7 An.var. 0'.30

III. E.

1862 March 27
Apr. 25
1864 Apr 9
1865 ~~March 10~~
— 23
— 27 2w

III. W.

1862 March 29
Apr. 4
— 12
— 16
— 18
1863 March 6
Apr 7
1864 May 13
— 16
1865 Apr 3
— 5
— 8
— 13
— 17
— 18
— 19 3w

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1862phae.proj..280W

ρ Leonis. — 4.

N.A.

AR. 10h 25m 30s An. var. 3s.2 N.P.D. 79° 58'.8 An. var. 0'.31

Ill. E.	1862 Mch 27	+06
	Apr 25	00
	1864 Apr 16	−10
	1865 Mch 10	
	— 23	
	— 25	
	— 27	

Ill. W.	1862 Mch 29	+02
	Apr 4	−03
	— 12	00
	— 16	+01
	— 18	−08
	1863 Mch 6	+05
	Apr 9	+03
	1864 May 3	00
	— 6	−01
	1865 Apr 3	
	— 5	
	— 8	
	[— 11]	
	— 13	

123 Cambridge Bodies = Br. 1458.

Ill W 1
1863 March 6
Apr 9
1864 Apr 30
May 3
— 6
1865 Apr 5
[— 12
— 17
— 24
— 25

Ill E
1865 Mch 10
— 25
— 27
Apr.

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1862phae.proj..280w

l Leonis. N.A. — 5.

R. 10h 41m 57s An.var. 3s.2 N.P.D 78° 43'.2 An.var. 0'.32

III. E.

1862 Apr. 7		−08
— 19		+08
— 26		+03
~~— 30~~		~~00~~
1864 Apr 9		00
— 16		+01
1865 Mch 10		
— 27		

III. W.

1862 Mch 29		−02
Apr 4		+03
— 12		−05
— 16		+05
— 18		+05
Apr 30		+08
May 7		−09
1863 Mch 6		+14
— 9		+14
Apr 9		+03
1864 Apr 30		+01
May 6		00
1865 Apr 5		
— 8		
— 12		

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1862phae.proj..280W

34 Cephei 14.

BAC. 7990. — 5.

Tr. 10h 47m 55s An.rar. 0s.0 N.P.D. −7° 35′.0 An.rar. 0′.32

III. E.

1862 Apr. 7
— 26
1864 Apr 9
1865 March 10 — ✓
— 25
— 27
May 3

III. W.

1862 Dec. 29
Apr 4
— 12
— 16 ✓
— 18
May 7 ✓
1862 Dec. 16
— 9
— 11
May 9 ✓
1864 Apr 30 ✓
May 6 ✓
— 10 ✓
1865 Apr 5 ✓
— 13
— 17 ✓
— 24
— 25 ✓

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1862phae.proj..280w

β Ursæ Majoris. C. des T. — 2.3.

32. Æ. 10h. 53m. 26s. An. var. 3s.7 N. P. D. 32° 52'.4 An. var. 0'.32

Ill. E.

1862 Apr 7
— 19
— 25
— 26
Sept 23 sp
Dec 11 sp
1863 May 19
1864 Apr 9
— 16

Ill. W.

1862 Mch 29
Apr 4
— 12
— 16
— 18
— 30
May 7
Oct. 5 sp
— 19
1863 Mch 6
May 9
1864 Apr 30

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1862phae.proj..280W

a Ursæ Majoris. — 2.

AR. 10h 55m 8s An. var. 3s.8 N. P. D. 27° 30'.0 An. var. 0'.32

Ill. E.

1862 Apr. 7
— 26
Sept 21
— 23 sp.
Dec 11 sp
1863 May 19
1864 Apr 9
— 16
1865 March 10
— 27
1865 ~~April 3~~

Ill. W.

1862 March 29
Apr 21
— 12
— 16
— 18
— 30
May 7
Oct. 5 sp.
— 19
— 30 sp.
1863 March 6
May 9
1864 Apr 30
1865 April 3
— 5
— 8

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x Leonis. N.A. — 5.

AR 10h 57m 51s An.var. 3.1 N.P.D. 81° 54'.8 An.var. 0'.32

III. E.	1862 Mch 26	+01
	Apr 7	+04
	— 24	+04
	— 25	+01
	— 26	00
	1863 May 19	+06
	1864 Apr 9	+03
	— 16	+07
	1865 Mch 10	
	— 27	
	~~Apr~~ 23	
	~~—~~ 10	

III. W.	1862 Mch 29	+02
	Apr 4	+05
	— 12	+07
	— 16	00
	— 18	+05
	May 7	+01
	1863 Mch 9	00
	May 9	
	1864 Apr 30	— 01
	May 6	+04
	May 19	+10
	1865 Apr 3	
	— 5	
	— 8	
	— 12	
	— 13	

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1862phae.proj..280W

ψ Ursæ Majoris. — 3.

AR 11h 1m 50s An.var. 3.s4 N.P.D. 44° 44'.9 An.var. 0'.32

III. E.

1862 Mch 26
Apr. 19
— 26
1863 May 19
1864 Apr 16
1865 Mar 25
— 27

III. W.

1862 Mch 29
Apr 14
— 12
— 16
— 30
May 9
1864 Apr 30
May 19
1865 Apr 3
— 5
— 8
— 13
— 14
— 17
— 8

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δ Leonis. — 2.3.

N.A.

	h.	m.	s.					
Ac.	11	6	43	An. var.	3.2	N. P. D.	68° 42′. 9	An. var. 0′.33.

III. E.

1862 March	26	−06
Apr.	19	−01
—	25	−07
—	26	−09
1863 May	19	−13
1865 March	25	
—	27	
May	3	

III. W.

1862 March	29	−09
Apr.	4	−14
—	30	−08
May	7	−09
Oct.	5	
—	[19]	
1863 March	6	−06
1864 May	6	+01
June	7	−12
—	13	+01
1865 Apr.	3	
—	5	
—	8	
—	12	
—	13	

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1862phae.proj..280W

N.A.

δ Crateris. — 3.4.

AR. 11h 12m 24s An.var. 3s.0 N. P. D 104° 1'.6 An.var. 0'.32

III. E.

1862	March 26	+02
	Apr 7	−01
	— 25	+02
	— 26	+04
	May 15	−05
1864	Apr 16	−11
	— 22	+01
1865	March 25	

III. W.

1862	Apr. 12	−07
	— 16	+02
	— 30	+01
	May 7	+04
1862	March 26	−05
1864	May 6	+07
	— 19	+01
~~1865~~	~~Apr 5~~	
1865	Apr 8	
	— 12	
	— 13	
	— 14	
	— 17	

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1862phae.proj...280W

γ Crateris. — 4.

AR. 11h 17m 56s An.var. 3.0 N.P.D. 106° 55′.2 An.var. 0′.33

III. E.

1862 Sept 26
Apr. 7
— 26
May 15
Oct 28
1864 Apr 22
— 16
1865 Mar 25

III. W.

1862 Sept 29
Apr. 12
— 16
— 30
May 7
1864 May 6
— 19
1865 Apr 5
— 8
— 12 Zw.
— 13
— 14
— 17

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1862phae.proj..280W

τ Leonis. — 5.

R. 11h 20m 47s An. var. 3s.1 N. P. D. 86° 22'.7 An. var. 0'.33.

III. E.

1862 Apr. 7
1864 Apr 22
— 16
1865 May 3
— 13
— 15

III. W.

1862 Apr. 12
— 16
1864 May 19
1865 Apr 3
— 8
— 13
— 14
— 17
— 18
— 19
— 24
May 25

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1862phae.proj..280W

202 Camelop B.

BAC. 3906. — 6.

Tr. 11h 21m 56s An. var 4s.6 N. P. D. 8° 6'.5 An. var. 0'.33

III. E.	1862 Mch 26	✓
	Apr. 7	✓
	May 15	
	Dec 28	D.Tr. ✓✓
	1863 May 19	
	1864 Mch 16	
	Apr 16	
	1865 Mar 25	✓
	May 13	
III. W.	1862 Mch 29	
	Apr 30	✓
	May 7	✓
	1863 Mch 6	
	May 9	✓
	1864 May 6	✓
	— 19	WAR
	Apr 8	

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1862phae.proj..280W

39 Cephei Herschii

BAC 8213. — 6.

Tr. 11h 27m 50s An.var. 0.s1 N.P.D. −3° 27′.6 An.var. 0′.33

III. E.

1862	Mch 26	✓	+.032
	Apr 7	✓	−.046
	26		−.136 +x
	May 15		+.012 +x
	Sept 28	D Zds	
1863	May 19		
1864	Apr 21		
	Apr 22	✓	+.072
	Mch 16		
1865	Mar 25	✓	

D N. Pol
" "

III. W.

1862	Mch 29		
	Apr 12		
	16	✓	+.121 +x
	30	✓	−.006 +x
	May 7	✓	−.004
1863	Mch 6		
	9		+.010 −x
	Apr 9	✓	+.059
1864	May 2	✓	+.002
18	18		
	19	mark	
1865	Apr 3	✓	
	5		
	13	✓	
	17	✓	
	19		
	25		
	May 25	✓	

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ν Leonis. N.A. 5.4

R. 11h 29m 50s An.var. 3s.1 N.P.D. 90° 3'.4 An.var. 0'.33

Ill. E

1864 Apr 22 −09
1865 May 3
— 10
— 13
— 15
— 18

Ill. W.

1864 ~~May 19~~
1865 Apr 3
— 5
— 13
— 14
— 17
— 18
— 24
— 25
May 25

γ Cephei. 3.4.

R. 11h 33m 40s An. var: +2s.4 N.P.D. −13° 8'.6 An. var. +0'.33.

Iu. E. 1864 Apr 21
— 22
1865 May 10
+ 13

Iu. W. 1863 March.
May 9
— 18
— 19
1864 Apr 8.
1865 Apr 13
— 14
— 17
— 24.
— 25.
May 25

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χ Ursæ Majoris. — 4.

R. 11h 38m 42s An.var. 3s.2 N.P.D. 41° 27′.0 An.var. 0′.33.

Ill. E.

1862 March 26
April 26
May 15
" 28
1863 April 21
" 22
May 23
1865 March 25

Ill. W.

1862 March 29
April 16
" 30
May 2
1863 March 16
1864 May 8
" 19
1865 April 5
" 6
" 13
" 17
" 18
" 19

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β Leonis. — 2.

R.A. 11h 41m 58s An.var. 3.s1 N.P.D. 74° 30′.0 An.var. 0′.33

III. E.

1862	March 26	−03
	Apr. 7	+03
	— 24	+02
	May 15	+02
	Dec. 28	
1864	March 24	−01
	Apr 22	+01
	May 23	−03
1865	March 25	
	May 10	
	— 15	
	— 18	

III. W.

1862	March 29	−01
	Apr 12	+03
	— 16	−01
	— 30	−05
	May 7	−03
	(all in)	
1863	August 6	−06
	Apr 9	−04
	May 18	−06
	— 19	−02
	June 7	−04
	— 13	00
1865	Apr 5	
	— 8	
	— 13	
	— 14	
	— 17	
	— 18	
	— 19	
	— 24	
	— 25	
	May 23	
	— 24	
	— 25	
	— 26	

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β Virginis. — 3.4.

Æ. 11h 43m 27s An. var. 3s.1 N. P. D. 87° 25'.8 An. var. 0'.34

Ill. E.	1862 Mch 26	+05
	Apr 7	+05
	— 24	+01
	— 26	+04
	May 15	−05
	Dec 28	
	1863 May (23)	—
	1864 March 24	+08
	[Apr 21]	—
	— 22	+06
	May 23	+02
	— 27	+01
	1865 Mch 25	
	May 3	
	— 10	
	— 13	
	— 15	
	— 18	
Ill. W.	1862 Mch 29	+03
	Apr 16	+03
	— 30	+03
	May 7	+08
	1863 Mch 6	−03
	Apr 9	+05
	1864 Apr 30	−01
	May 6	+07
	— 19	+02
	1865 Apr 5	
	— 14	
	— 17	
	— 18	
	— 19	
	— 24	
	— 25	
	May 23	
	— 24	
	— 25	
	— 26	

6202 Radcliffe 6.7

Æ. 11h 45m 19s An. var. +2s.7 N. P. D. −13° 10'.2 An. var. +0'.33

Ill. E. 1864 Apr 21
— 22
1865 May 10
— 13

Ill. W. 1863 Mch 6
1864 Apr 30
May 9
— 18
— 19 not very good
1865 Apr 8
— 17
— 18
— 24
— 25

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1862phae.proj..280W

γ Ursæ Majoris. B.7. — 2.3.

AR 11h. 46m. 30s. An.var. 3s.2 N.P.D. 35° 31'.9 An.var. 0'.33.

III. E.

1862 Mch 26
Apr. 7
— 26
May 15
Sept 23 sp
1863 May 23
1864 Apr 21
— 22 2w
May 27
— 29
1865 May 3
— 15

III. W.

1862 Mch 29
Apr. 12
— 16
— 30
May 7
Oct 14
1864 Apr 30
May 6 2w.
— 18 4w not vis pro
1865 Apr 24
— 25
May 23
— 25

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1862phae.proj..280W

BAC 8336. – 7.

Tx: 11h 53m 4s An.var. 2s.5 N.P.D. −4° 4′ 3 An.var. 0′33

III. E.

1862 Mch 26 ✓
Apr. 7 ✓
May 15
— 28 ✓
1863 May 23
1864 Jan 8 Wire
Mch 24
Apr 21 ✓
May 22 ✓ W.H.R

III. W.

1862 Mch 29
Apr. 22
— 29
— 30 ✓
1863 Mch 6
Apr 9 ✓
1864 Apr 30
May 9 W.H.R
— 16 W.H.R
1865 Apr 13

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1862phae.proj..280W

π Virginis. — 4.5.

AR 11h 53m 45s An.var. 3.s1 N.P.D. 82° 36′.6 An.var. 0′.34

Ill. E.

1862 Apr. 26
1864 May 23
— 27
— 29
1865 May 3
— 10
— 13
— 15

Ill. W.

1862 May 7
1864 May 6
— 19
1865 Apr 13
— 14
— 17
— 18
— 24
May 23
— 25
— 26

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1862phae.proj..280W

N.A.

ε Corvi. — 3.

R. 12h 2m 59s An.var. 3s.1 N.P.D. 111° 50'.7 An.var. 0'.33.

III. E.

1862	March 26	+01
1862	Dec 10	
	" 28	
1864	Apr 22	−01
	May 22	−04
	— 23	+04
	— 29	+13
1865	May 3	
	— 13	
	— 15	

III. W.

1862	Apr 30	+06
	May 7	+06
	— 17	−06
	— 23	+04
1863	March 6	
1864	Apr 30	−01
	May 09	−09
	— 14	−06
1865	Apr. 8	
	— 13	
	— 17	
	— 18	
	— 24	
	— 25	
	May 23	
	— 26	

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1862phae.proj..280w

γ Corvi. — 2.

R. 12h 8m 40s An. var. 3s.1 N. P. D. 106° 46′.2 An. var. 0′.33.

III. E.

1862 Apr 7.
— 25
Dec 10
1864 Jan 6
~~March~~ 24
Apr 21
May 22
— 23
— 29

III. W.

1862 March 29
Apr. 30
May 23
1863 March 6
1864 Apr 29
— 30
May 9
— 14
— 19
1865 Apr. 18
— 13

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1862phae.proj..280W

BAC 4150. _ 6.

Tr. 12h 12m 47s An.var. 2s.0 N.P.D. 2° 47'.5 An.var. 0'.33

Ill. E.

1862 March 26 ✓
April 7 ✓
— 25 ✓
— 28 ✓
1864 March 24
April 21
May 27 ✓

Ill. W.

1862 Apr 16 ✓
May 17 ✓
1863 March 6
Apr 9 ✓
1864 — 29 ✓
— 30
May 9 ✓

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1862phae.proj..280w

N.A.

η Virginis. — 3.4.

R. 12h 12m 48s An.var. 3s.1 N.P.D. 89° 53′.7 An.var. 0′.33

III. E

1862 Apr 24 −08
— 26 +03
1864 May 22 −07
— 23 +01
— 29 −01
1865 May 13
— 13
— 15
— 18

III. W.

1862 Apr 29 −04
— 30 +05
1864 May 18 +03
— 19 −04
1865 Apr 13 30 not yet reduced
— 14
— 17
— 18
— 24
May 23
— 25
June 2
— [illegible]

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1862phae.proj..280W

Cursae minoris B.

BAC 4165. – 6.

Tr. 12h 14m 21s An. var. –0s.2 N.P.D. 1° 31'.8 An. var. 0'.33

III. E.	1862 Mch 26	✓
	Apr 7	✓
	May 15	
	Dec 10	✓
	— 28	✓
	1863 Jan 8	✓
	Apr 22	✓
	May 22	✓ n. ar.
	— 29	R
III. W.	1862 Apr. 29	✓
	May 7	✓
	— 23	✓
	1863 Mch 6	
	1864 May 6	✓
	— 14	

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1862phae.proj..280W

Comae ✓ Berenices

15 γ Coronæ Borealis. — 4.5.

AR 12h 20m 0s An. var 3s.0 N. P. D. 60° 57′.5 An. var. 0′.33

III. E.

1862 Apr 26
May 14
May 15
Dec 10
— 28.
1864 May 22
— 27
— 28
1865 May 3
— 15

III. W.

1862 Apr. 29
— 30
May 23
1864 Apr 29
— 30
May 9
1865 Apr 13
— 14
— 17
— 18
— 24

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1862phae.proj..280W

δ Corvi. to des T. 2.3.

	h.	m.	s.						
R.	12	22	41	An. var.	3.s	1	N. P. D.	105° 44′.5	An. var. 0′.34

III. E.

~~1861 May 19.~~
1862 March 26.
Apr. 25
— 26
May 15
Dec 10
— 28
1864 Jan 8.
Apr 22 3w
May 22
— 23
— 27 2w
— 28

III. W.

1862 Apr. 16
— 29
— 30
May 7
— 23
1864 Apr 29
— 30
May 9
— 14
June 7

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1862phae.proj..280W

η Corvi. — 5.

R. 12h 24m 55s An.var. 3s.1 N.P.D. 105° 24'.5 An.var. 0'.33

Ill. E.

1862 March 26
Apr. 25
Dec 10
— 28
1863 Jan 8
Apr 21
— 22
May 22
— 23
— 27
— 29

Ill. W.

1862 Apr. 16
— 29
— 30
May 7
— 17
— 23
1863 Apr 29
— 30
May 9
— 18
1865 Apr 4

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1862phae.proj..280W

β Corvi. — 2.3.

N.A.

AR. 12h 27m 5s An. var. 3s.1 N.P.D. 112° 37'.7 An. var. 0'.33

Ill. E.	1862 Mch 26	+06
	Dec 10	
	— 28	
	1864 Apr 21	—
	— 22	−06
	May 22	00
	— 23	+05
	— 27	+05
	Jun 2	+07
	1865 May 3	
	— 10	
	— 15	

a Cassiopeæ. B.7.

AR. 12h 32m 38s An. var. +3s.4 N.P.D. −34° 13'.5 An. var. 0'.33

Ill. E. 1862 Apr 7 — Dec 10 — 1864 Apr 21 — 22 — May 22 — 28 — 29

Ill. W. 1864 Apr 30 — May 4 — 6 — 9 — 18

Ill. W.	1862 Apr. 30	+01
	May 7	+01
	— 17	−04
	— 23	−04
	1864 Apr 29	−06
	— 30	−01
	May 4	00
	— 7	+02
	— 18	+09
	Jun 10	
	1865 Apr 4	
	— 24	

a Cassiopeæ 6

AR. 12h 29m 26s An. var. +4.2 N.P.D. −8° 16'.5 An. var. +0.33

Ill. E. 1864 Jun 8 6 — Apr 22 8 — May 22 15 — 23 16 — 27 17 — 28 18 — 29 19 — Jun 2 20

Ill. W. 1864 Apr 29 9 — 30 10 — May 4 11 — 6 12 — 9 13 — 18? 14

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1862phae.proj..280W

γ Virginis. — 3.2.

N.A.

AR. 12h 34m 37s An. var. 3s.0 N.P.D. 90° 41'.2 An. var. 0'.33

III. E.	1862 Mch 26	+07
	Apr 7	00
	— 24	−04
	— 25	+04
	— 26	
	May 14	+02
	Dec 10	
	1864 June 8	
	[Jan 10]	
	Apr 21	+02
	— 22	
	May 22	
	— 23	−01
	— 28	+07
	— 29	−09
	June 2	−09
	— 4	−04
	1865 May 18	

III. W.	1862 Apr. 16	+03
	— 29	+01
	— 30	−03
	May 17	00
	1864 Apr 29	+07
	— 30	prec.
	May 3	−03
	— 4	+15
	— 6	−10
	— 9	foll
	— 18	
	1865 Apr 13	prec
	~~— 17~~	
	June 1	

— — — — — — 6

AR. 12h 42m 6s An. var. +5s.0 N.P.D. −7° 2'.9 An. var. +0.33

III. Eq	1864 Jan 8	
12	Apr 21	
13	— 22	
18	~~May~~ 22	
19	23	
20	— 28	
21	— 29	
22	June 4	

14	III. W.	1864 Apr 29
15		May 4
16		— 9
17		— 18

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1862phae.proj..280W

ε Ursæ Majoris. C. des T. 2.

AR. 12h 47m 54s An. var 2s.7 N. P. D. 33° 17'.1 An. var. 0'.33

Ill. E.

1862 Mch 26
Apr. 7
— 26
Dec 28
1863 Jan 8
May 29

Ill. W.

1862 Apr 16.
May 17
1864 Apr 30
May 6
— 9

γ Cassiopeæ. 2

AR. 12h 48m 20s An. var. +3s.5 N.P.D. −30° 2'.2 An. var. +0'.33

9 Ill. E. 1864 Apr 22
May 28
13

10 Ill. W. 1864 Apr 29
May 3
— 4
1865 Apr 17
— 18
11
12

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1862phae.proj..280w

8 Virginis. — 3.

	h.	m.	s.					
R.	12	48	36	An.var.	3.0	N.P.D.	85° 50′ 8	An.var. 0.33.

III. E.

1864 May 23
— 29
— 31
Jun 4
1865 May 3
— 10
— 15

III. W.

1864 Apr 30.
May 16
— 19
Jun 2.
— [9]
— 10
— 13
— 14
— 17
1865 Apr 13
— 14
— 24
May 25
June 20

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1862phae.proj..280W

12 Canum. Venat. a. — 3.

N. A.

R. 12h 49m 31s An. var. 2s.8 N. P. D. 50° 55′ 8 An. var. 0′.33.

III. E.

1862 Apr. 24
— 26
May 14
1864 May 22
— 23
— 28
— 29
— 31
June 2
— 4.

3 N.

III. W.

1862 Apr. 16
1863 Apr. 29
May 3
— 4
— 6
— 18
— 19
June [illegible]
— [9]
— 10
— 13
— 14
— 17
1865 Apr. 13
— 24

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1862phae.proj..280w

BAC 262. — 4.5.

Ir. 12h 50m 24s An.var. 6.8 N.P.D. −4° 29′.4 An.var. 0′.33

Ill. E.

1862 Nov 26
Apr. 7
— 25
[Dec 10 Strans.]
Dec 28
1863 Jan 1
1864 Jan 8
Apr 21
— 22
May 22
— 23
— 29 3w.
— 31 3w
Jun 2
— 4 2w
1865 May 18 4w.

Ill. W.

1862 Apr 29
— 30
May 7
— 17
— 23
1863 Apr 13
1864 — 29 3w
May 3 2w
— 4 3w
— 6 3w
— 10 3w
— 19 3w
Jun 5 1w
— 10 3w
— 14 3w
May 23
— 25
— 26
— 30
Jun 1

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1862phae.proj..280W

ε Virginis. — 3.2.

R. 12h 55m 16s An. var. 3.s0 N. P. D. 78° 17'.5 An. var. 0'.32

Ill. E.

1864 June 6
1862 March 26
Apr. 25
— 26
May 14
Dec 10
— 28
1863 [June 1]
1864 Jan 3
Apr 21
— 22
May 22
— 23
— 28
June 2

Ill. W.

1862 Apr. 16
— 30
May 17
— 23
1863 Apr 13
— 29
— 30
May 3
— 6
— 9
June 8
— 13
— 14
— 17
1865 June 1
— 7

2 wires

44 Cephei H. 6.5

R. 13h 0m 23.s An. var. +4.s9 N. P. D. −11° 4'.1 An. var. +0.32

Ill. E. 1863 Apr 8
Apr 21
— 22
May 23
— 28
— 29
June 12

Ill. W. 1863 April 3
1864 Apr 29
May 3
— 4
— 10
— 18
— 19

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1862phae.proj..280w

N. A.

θ Virginis. — 4.5

AR 13h 2m 45s An.var. 3.'1 N.P.D. 94° 47.'8 An.var. 0.'32

III. E.

~~1862 8~~
~~1864 June 5~~
1862 Dec 28
1864 Jan 4
Apr 21
— 22
May 28
— 29
— 31
~~June 2~~

III. W.

1862 May 17 +.05
1863
1864 Apr 29
May 3
— 4
— 6
— 9
— 18
— 19
Jan 2
— 8
— 10
— 13
— 14
— 17
1864 May 26
June 1
— 2
— 3
— [illegible]
— 8

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1862phae.proj..280W

Coronæ / Berenices

43 β Coronæ. Borealis. — 4.

R. 13h 5m 23s An.var. 2s.8 N.P.D. 61° 25′.0 An.var. 0′.31

Ill. E.

1864 May 29
1865 May 3

Ill. W.

1862 May 17
1864 June 8
— 10
— 13
— 14
— 17
1865 Apr 13
— 14
— 17
— 24
June 1

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1862phae.proj..280w

a Ursæ Minoris. – 2.

Tr. 13h 8m 23s An. var. 18s.9 N. P. D. – 1°25'.9 An. var. 0'.32

III. E.

~~1861 June 5~~
1862 Mch 26
Apr. 7
— 24
— 25
— 26
May 14
Jun 16
July 18
Spt. 10
— 11
— 22
— 23
— 27
— 29
Nov 2
— 10
[Dec 10 Dble Tr]
— 28
1863 May 25 Dble Tr
June 1
— 4
— 6
— 16
Aug 4

1863 Aug 19
— 24
Sept 19
— 21
1864 Jan 8
Apr 21
— 22
May 22
— 23
— 27
— 28
— 29
— 31
June 2
— 4 D Tr
~~— 28~~ "
— 29
July 3
— 7
— 8
1865 May 3
— 10
— 15

III. W.

1862 Apr. 16
— 29
— 30
May 7
— 17
— 23
~~July 18~~
Aug 21
Sept 29
Oct 5
1863 Apr 9
13
20 D Tr.
21 D Tr
23
May 31 D Tr
May 9
Spt 9/10 D Tr.
Nov 26 D Tr
— 29
Dec 5
1864 Apr 29 D Tr.
— 30 Lw.
May 3
— 4 3 Tr
— 5 Lw
— 6

1864 May 10 D Tr. 1
18
19
June 7
— 8
— 9
— 10
— 13
— 14
— 16 Lw
— 17
— 23
— 27
July 12
— 14
— 15
— 19
Oct. 7 Lw
1865 Apr 13 D Tr
— 14
— 24 D Tr
— 25
Mt Hopp May 23 } ct 23 sp
— 24 }
— 25
— 26
— 30 Lw

1865 May 31
June 1
— 2
— 3
— 5
— 19
— ~~20~~
— ~~21~~

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1862phae.proj..280W

l Centauri. – 3.

R. 13h 12m 48s An.var. 3s.3 N.P.D. 125° 58′.7 An.var. 0′.32

Ill. E.
1864 May 29
1864 — 31
1865 May 3
— 10
— 15

Ill. W.
1862 May 17
1864 June 19
— 13
— 14
1865 May 25
— 30

l Centauri. 3

R 13h 16m 9s. An.var. +4s.1 N.P.D. −22° 35′.8 An.var. +0′.32

Ill. W. 1864 Apr 29
May 3
— 9
— 18
June 8
— 13
— 14

Ill. E. 1863 May 25.
1864 May 27
— 28
— 29
— 31
June 2

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1862phae.proj..280w

a Virginis. — 1.

AR 13h 17m 53s An.var. 3.2 N.P.D. 100° 26′1 An.var. 0.32

III. E.

1862 March 26
Apr. 24
— 25
— 26
May 14
June 16
— 17
July 18
Oct 10.
— 28
1863 May 25
1864 Jan 8
Apr 21
— 22
May 27
— 28
— 29
— 31
June 28
— 29
July 3
— 7
— 8

1864 July 26
1865 May 3
— 15
July 14
— 22
— 24
— 27
— 31

III. W.

1862 Apr 16.
— 29
— 30
May 17
— 23
Aug 21
1863 Apr 9
May 9
1864 Apr 29
May 3
— 6
— 9
— 18
— 19
June 8
— 10
— 13
— 14
— 17
— 18
— 23
— 27
July 12
— 14

1865 Apr 13
— 14
— 24
— 25
May 24
— 25
— [26]
— [31]
June 1
— 3
— 5
— 6
— [7]
— 18
— 19
— 20
— 23
— 24
— 29
— 29

4 wires.

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1862phae.proj..280W

BAC 4498. — 7.

Tr. 13h 20m 24s An.var. −2.s7 N.P.D. 4° 31′.2 An.var. 0′.31

III. E.

~~1861 June 5~~
1862 March 26
April 25
May 14
~~June~~ 28
1863 June 4
— 6
— 11
1864 Apr 21
May 27
— 29 3w.
— 31
June 2 2w

III. W.

1862 Apr 16
— 29
May 17
— 23
1863 Apr 9
May 1
— 7
1864 Apr 29
May 3
— 4
— 18.
~~June 8~~
— 10
— 13 3w Saint Paul
1865 Apr 17
May 23
— 24
— 26
— 30
— 31 3w
June 2
— 3

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1862phae.proj..280W

N. A.

ζ Virginis. — 3.4.

R. 13h 27m 37s An.var. 3.s1 N.P.D. 89° 53′.2 An.var. 0.31

III. E.

~~1857 June 5~~
1862 Apr. 24 +03
May 14 +02
June 16 00
— 17 +07
~~Dec 28~~
[1863 June 11]
1864 May 28 +02
— 31 −05

III. W.

1862 Apr 16. + 03
— 29 00
May 17 00
— 23 − 01
1864 Apr 29. +12
May 3 + 02
— 5. +05
— 9 −02
— 16 −06
June 10 +11
— 13 +01
— 16 −01
— 17 −11
— 23 +03
July 15 +05
1865 [May 31]

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1862phae.proj..280W

B.7.

η Ursæ Majoris. — 2.

h. m. s.
AR 13 42 3 An.var. 2.4 N.P.D. 39° 59'.5 An.var. 0'.30

III. E.

~~1861 June 6~~
1862 May 14
June 16
— 17
1863 Apr 22
1864 May 27
— 28
— 29
June 12
— 29 Apr
1865 May 3
— 15

III. W.

1862 May 7 2 wires
— 17 3 —
— 23
Aug 21 3 —
— 29
1864 Apr 29
May 3
— 9
— 19
June 7 2 w
— 8 2 w
— 16
— 23

Camelop. 219 B. 6

AR. 13h 46m 29s An.var. -2s.1 N.P.D. +6° 33'.1 An.var. +0'.30.

III. E. 1863 June 2. III. W. 1864 Apr 29
1864 June 6 May 3
— 8 — 4
May 27 — 9
— 29 — 19
June 12
— 29
— 15

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1862phae.proj..280w

η Bootis. — 3.

N.A.

AR. 13h 48m 4s An.var. 2s.9 N.P.D. 70° 54′2 An.var. 0′.30.

Ill. E.

~~1861 June 5~~
1862 May 14
28
June 16
17
1864 Jan 8
May 27
— 29
[June 29]
July 4
1865 May 3
— 15

Ill. W.

1862 May 7 1 wire
— 17
— 23
Aug 21
1864 Apr 29
May 9
— 18
— 19
June 8
— 16
— 23. 2 W.

50 Cassiopeæ. 4

AR. 13h 51m 38s. An.var. +5s.0 N.P.D. −18° 18′.8 An.var. +0′.30

Ill. E. 12 1864 May 27
13 — 28
14 — 29

Ill. W. 7 1864 Apr 29
8 May 3
9 — 4
10 — 9
10 — 18
11 — 19
15 June 7
16 — 8
17 — 16

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1862phae.proj..280W

N.A.

τ Virginis. — 4.

R. 13h 54m 35s An.var. 3.0 N.P.D. 87° 46′.9 An.var. 0′.29

Ill. E.

~~1861 June 5~~
1862 May 14
18
June 16
17
1864 May 27
29.
June 2
1865 May 3
15.

Ill. W.

1862 May 7
17
23
1864 May 29
May 3
9
June 7
6
18
23
1865 May 24
June 12
28

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1862phae.proj..280w

θ Centauri. Gdes T. 3.

Æ. 13h 58m 30s An. var. 3s.5 N.P.D. 125° 41'.1 An. var. 0'.30

III. E.

~~1861 June 5~~
1862 May 14
28
June 16
17
1864 May 27 2w
— 29
— 31 4w
1865 May 3
— 15

III. W.

1862 May 7
— 17
1864 Apr 29
May 3
— 9
— 18
— 19
June 7
1865 May 25
June 2
— 3
— 5
— 12
— 13

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1862phae.proj..280W

a Draconis. — C. des T. 3.4.

AR. 14h 0m 38s An. var. 1.s6 N.P.D. 24° 57'.5 An. var. 0'.29

Ill. E.

~~1861 June 5~~
1862 May 14
28
June 16
17
1863 June 2
1864 May 27
— 28
— 29

Ill. W.

1862 May 17
1864 Apr 29
May 13
— 19
— 18
— 19
June 7

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1862phae.proj..280W

20 Ursae minoris B.

Anonymæ. – 7. Radcliffe 3,57

Tr. 14h. 4m. 20s. An. var. –8s.0 N.P.D. 3° 34'.6 An. var. 0'.29

III. E.

~~1861 June 5~~
1862 May 14 ✓
June 16
— 17
1863 May 19
— 23
June 2
1864 May 27 ✓
— 28 R
— 29 ✓ R
— 31 ✓
1865 May 3 ✓

III. W.

1862 May 17 ✓
" 23 ✓
1864 Apr 29 ✓
May 3 ✓
June 7 ✓
— 16
— 18 A.M.
— 21 ✓

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1862phae.proj..280W

a Bootis. — 1

R. 14h 9m 19s An. var. 2.″7 N.P.D. 70° 5′.5 An. var. 0′.32

Ill. E.

~~1861 June 5~~
1862 May 14
18
June 16
— 17
Sept. 10
1863 May 23
June 2
Apr 22
1864 May 22
— 27
— 28
— 29
June 2
[— 29]
July 4
— 26
1865 May 3
— 15
— 18

Ill. W.

1862 May 23
Aug 6
20
21
29
1864 May 3
— 5
— 9
— 18
— 19
June 10
— 16
— 14 Am
— 23
— 24
1865 May 23
— 24
— 25
— 26
June 1
— 2
— 3
— 5
— 12
13
19
23

1865 June 27
29

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1862phae.proj..280w

λ Virginis. — 5.4.

Æ. 14h 11m 36s An. var. 3s.2 N.P.D. 102° 43'.8 An. var. 0'.28

Ill. E.

~~1861 June 5~~
1862 May 14
— 28
June 16
— 17
1863 May 23
1864 Mars 22
— 27
— 28
— 29
June 2
— 29

Ill. W.

1862 May 17
— 23
1864 May 3
— 18
— 19
June 7
— 16
~~— 17~~
— 18 AM
— 21
— 23
— 24

ι Cassiopeæ s.p. — 4.

l. des T.

Tr. 14h 17m 40s An. var. +4s.8 N.P.D. −23° 13'.5 An. var. +0'.28

Ill. E. 4/1863 May 23
17 1864 May 22
18 — 27
19 — 28
20 — 29

Ill. W. 13/1863 Apr 29
14 May 3
15 — 5 (Rw)
16 — 19
21 June 7
22 — 8
23 — 18 AM
24 — 21

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1862phae.proj..280W

θ Bootis. — 4.3.

AR 14h 20m 28s An. var. 2s.0 N.P.D. 37° 30'.3 An. var. 0'.28.

Ill. E.

~~1861 June 5~~
1862 May 28
June 16
17
1863 May 23
1864 Apr 21
May 22
— 28
— 29
— 31
June 2
— 6
July 4
— 8

Ill. W.

1862 May 17
— 23
1864 May 3
— 5
— 19
June 7
— 8
— 17
— 21
— 22
— 23
— 24
— 27

36 Cassiopeæ H. — 6-5

AR. 14h 24m 54s An. var. +5s.5 N.P.D. −17° 47'.6 An. var. +0'.27

Ill. E. 1863 May 23
1864 Apr 21
16 May 22
17 — 27
18 — 28 Sw
19 — 29
20 — 31
21 June 6

Ill. W. 1864 Apr 29
13 May 3
14 — 5
15 — 19 Sw

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1862phae.proj..280w

ρ Bootis. — 4.3.

N.A.

R. 14h 25m 50s An. var. 2.6 N.P.D. 59° 1'.0 An. var. 0'.27

III. E.

~~1861 May 16~~
~~2nd 5~~
1862 May 14
28
June 16
— 17
1864 Apr 21 3W
May 28
— 29. 1W
June 2
— 29
— 30
July 4
— 5
— 8
— 9
1865 May 13

III. W.

1864 May 19
June 16
— 17
— 18 A.W.
— 21
— 22
— 23
— 24
— 27
1865 June 5
— 6

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BAC 784. — 6.

Tr: 14h 28m 0s An.var. 8s.1 N.P.D. −9° 8′.7 An.var. 0′.27

Ill. E.

1862 May 14 ✓
— 26
June 16
— 17
1863 May 23
1864 Apr 21 ✓✓
May 27 ✓
— 28
— 31 ✓✓
June 2 ✓✓
— 6

Ill. W.

1862 May 17 ✓✓
— 23 ✓✓
1864 Apr 29 ✓✓
May 3 ✓✓
— 5 ✓✓
— 10 ✓✓
— 19 ✓✓
June 7 ✓ IW
— 22
— 27

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1862phae.proj...280w

6 Bootis. — 5.4.

R. 14h 28m 38s An. var. 2.s6 N. P. D. 59° 39′.0 An. var. 0′.26

III. E.

~~1864 June 5.~~
1864 June 29
— 30
~~July 4~~
~~— 5~~
~~— 8~~
1865 May 3
— 15

III. W.

1864 June 13
— 16
— 17
— 21
— 24
1865 May 25
— 30
June 1
— 3
— 5
— 13
— 19
— 23
— 24
July 3

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E Booth's N.A. at end of book. To be inserted

μ Virginis. — 4.

	h.	m.	s.						
AR.	14	35	45	An. var.	3.s 2	N. P. D.	95°	3′ 1	An. var. 0′.27

Ill. E.

~~1861 June 5.~~
1862 May 14
" 28
June 16
" 17
1864 Apr 21
May 27
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— 29
— 31
June 2
— 29
— 30
July 4
— 5
— 8

Ill. W.

1862 May 17
" 23
1864 Apr 29
May 3
— 5
— 18
— 19
June 7
— 8 25
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— 18 Alle
— 21
— 22
— 27

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1862phae.proj..280w

B.7

1 a Libræ. — 2.3.

AR. 14h 43m 4s An.var. 3s.3 N.P.D. 105° 25'.3 An.var. 0'.25

III. E.

~~1861 June 5~~
1862 May 14 3 wires
June 17
1864 Apr 21 4 w.
May 22
— 27 4 w
— 28
— 29
— 31
June 4 4 w
— 28 4 w
— 29 4 w
— 30 4 w
July 4
— 5
1865 May 15

III. W.

1862 May 17 3 wires
— 23 4 —
1864 Apr 29 4 —
May 3 4 —
— 5 4 —
— 10 4 —
— 18 4 —
— 19 3 —
June 7 4
— 10 4 —
— 13 4 —
— 14 5 —
— 16 3 —
— 18 4 w
— 21 4 w
— 24 4 w
1865 May 25
— 26
— 30
June 1
— 2
— 3
— 13
— 19
— 23
— 24

1865 June 27
28
29

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1862phae.proj..280W

2 a Libræ. B. 7. — 2.3.

Æ. 14h 43m 15s An. var. 3s.3 N. P. D. 105° 27'.9 An. var. 0'.25

Ill. E.

~~1861 June 5~~		
1862 May 14		
June 7		
1863 June 3		
1864 Apr 21	4 wires	
May 22	—	
— 27	—	
— 28	3 —	
— 29	3 —	
— 31		
June 4	4 —	
— 28	3 —	
— 29	4 —	
— 30	4 w	
July 4	3 —	
— 5	3 —	
— 8	4	
— 9		
1865 May 15		
— 18		

Ill. W.

1862 May 17	3 w	1865 June 23
23	4 —	— 24
1864 Apr 29	4 —	— 27
May 3	4 —	— 28
— 5	4 —	— 29
— 10	4	
— 18	4 —	
— 19	1 —	
June 7	3 —	
— 10	4 —	
— 13	4 —	
— 14		
— 16		
— 17		
— 18	Am	
— 21	4 w	
— 22		
— 24		
July 12		
1865 May 25		
— 26		
— 30		
June 1		
— 2		
— 3		
— 13		

P. XV. 217 - - - - - - 6.

Æ. 14h 47m 56s An. var. +1s.5 N. P. D. +30° 8'.5 An. var. +0'.25

Ill. E. 1864 Apr 21
May 27
— 29 1 w
— 31 3 w
June 2 4 w
— 4
— 6
— 28

Ill. W. 1864 Apr 29
May 3 2 w
— 10
— 18
June 7
— 13
— 14
— 18
— 22
— 27

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1862phae.proj...280w

β Ursæ Minoris. B.J. 2

R. 14h 51m 9s An.var. 0s.3 N.P.D. 15° 16′.6 An.var. 0′.25

III. E.

~~1861 June 8~~
1862 May 14
June 17
Nov 3
Dec 10
1863 June 27
1864 Apr 21
May 22
— 29
June 6
— 28
July 3
— 5
— 7

III. W.

1862 May 17 3w.
20.
Aug. 6
1864 May 3 2w
— 10
— 18
June 7
— 13
— 14
— 22
— 24
July 12

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1862phae.proj..280W

{ 20 Librae. — 3.4.
{ γ Scorpii.

AR 14h 55m 57s An. var. 3.5 N.P.D. 114° 44'.0 An. var. 0'.24

Ill. E.

1862 May 14
June 17
1864 Apr 21.
May 22
— 27
— 29
July 3
— 4/5
— 8

Ill. W.

1862 May 23
1864 Apr 29
May 3
— 10
June 7
— 8.
— 22
— 24.
July 15
1865 May 25

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1862phae.proj...280W

M.T.

ψ Bootis. — 4.5.

R. 14h 58m 29s An.var. 2.6 N.P.D. 62° 30′.5 An.var. 0′.24

III. E.

~~1861 May 16~~
~~June 5~~
1862 May 14
June 17
1863 Jan 22
1864 Apr 21
May 22
— 28
— 29
June 4
— 6
— 28
July 3
— 4
— ~~8~~
— ~~9~~

III. W.

1862 May 13
1864 Apr. 29
May 3
— 10
— 18
June 7
— 8
— 14
— 17
— 18
— 22
— 24
July 12
1865 May 25

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1862phae.proj..280W

c Bootis. – 5.4.

AR. 15h 1m 12s An. var. 2s.6 N.P.D. 64° 35'.2 An. var. 5'.4

Ill. E.

~~1861 May 16~~
~~June 5~~
1862 May 14
1864 May 28
— 29
— 31
June 6
— 28 2W.
— 29
July 3
— 4
— 5
— 8

Ill. W.

1864 Apr 29
May 3
— 10
— 18
— 19
June 7
— 8
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— 14
— 22
— 24
July 12
— 14

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1862phae.proj..280W

N.A.

β Libræ. + 2.

Æ. 15h 9m 32s An. var. 3s.2 N.P.D. 98° 52'.1 An. var. 0'.23

III. E.

~~1861 May 16.~~
" ~~June 5~~
1862 May 14
June 16
1863 (June 4)
July 22
1864 Apr 21
May 22
— 27
— 28
— 29
— 31
June 2
— 4
— 6
— 28
— 29
— 30
July 3
— 8
— 9

III. W.

1862 May 23
1864 Apr 29
May 3
— 10
— 19
June 8
— 13
— 14
— 17
— 18 Alle
— 22
— 24
— 27
July 12
— 14
— 15
1865 June 12

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1862phae.proj..280W

μ Bootis. — 4.3.

AR. 15h 19m 14s An. var. 2.s3 N. P. D. 52° 8′.0 An. var. 0′.21

III. E.

1862 May 14
June 19
1864 Apr 21
May 22
— 29.
— 31.
June 2
— 4.
— 28
— 30.

III. W.

1864 Apr 29
May 10
— 19
June 6 2rr
— 17
— 24.
July 14
1865 June 12
— 24
— 27
— 28

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1862phae.proj..280w

γ Ursæ Minoris. C. des T. 3.

AR 15 h. 20 m. 59 s. An. var. -0.s1 N.P.D 17° 40′.3 An. var. 0′.21

Ill. E.

~~1864 May 16~~
1864 May 22
— 28
— 29
July 3
— 4

Ill. W.

1864 June 22
— 24
— 27
July 20 2W.
1865 June 12

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1862phae.proj..280W

323 Cephei B

BAC. 1061. _ 6.

Tr. 15h 21m 18s. An. var. 18s.6 N.P.D. -3° 48'.0 An. var. 0'.22

Ill. E.	1863	June 2	
		— 4	✓
		— 27	
		July 20	
	1864	May 22	✓ W.A.R.
		— 28	3W. R
		— 29	✓ 3W R
		— 31	✓
		June 2	✓
		— 6	
		July 9	✓
Ill. W.	1862	May 23	✓
	~~1864~~	~~Apr 29~~	✓
		May 10	✓
		— 19	✓
		June 8	✓
		July 12	✓
		— 14	✓
	1865	June 29	

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1862phae.proj..280w

57 Num min B.

BAC 5140. – 7.

Tr. 15h 23m 39s Am.var. –23.s4 N.P.D. 2° 14′.4 Am.var. 0′.21

III. E.

1862 May 14 ✓
June 16
1863 Jan 2
— 27
1864 Apr 21 ✓
May 22 ✓ R
June 4 ✓
— 28 ✓
— 29
July 3 ✓
— 4
— 5 ✓
— 8 ✓

III. W.

1862 May 23 ✓
1863 Feb 20 ✓
1864 Jan 7 ✓
— 8 Inv.
— 13 ✓
— 14 ✓
— 16
— 17
— 21 ✓
— 27
July 15

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1862phae.proj..280W

37 Libræ. — 5.

R. 15h 26m 35s An. var. 3.s3 N. P. D. 99° 35′.1 An. var. 0′.21

III. E.

1861 May 16
June 5
— 17
1863 July 20
1864 May 27
— 29
— 31
June 2
— 6
— 28
— 29
July 3
— 4
— 5
— 8
— 9

III. W.

1862 July 18
1864 May 19 2w
June 7 2w
— 13
— 14
— 16
— 17
— 21
— 24
— 27
July 12
— 13
— 14

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1862phae.proj..280W

a Coronæ Borealis. – 2.

B.J.

AR. 15h 28m 48s An. var. 2s.5 N.P.D. 62° 48′ 9 An. var. 0′21.

III. E.

~~1861 May 16~~
~~June 5~~
1862 May 14
June 16
— 17
July 18
— 22
1863 Jan 2
1864 May 22
— 27
— 29
— 31
June 2
— 4 2w
— 28
— 30
July 4
— 5
— 8
— 9
— 22
— 26
1865 May 18

III. W.

1862 May 23
~~July 18~~
July 3
1863 Feb 20
1864 Apr 29
May 10
— 19
June 7
— 8
— 13
— 14
— 16
— 17
— 18
— 21
— 22
— 24
— 27
July 12
— 13
— 14
— 15
1865 May 30
June 3
— 6
— 12
— 13

1865 June 24
— 28
— 29

6 Cancelled H. Ps. - - - 6.

AR. 15h 30m 8s An. var. 5s.1 N.P.D. −27° 14′.3 An. var. +0′.21

III. E. 1864 May 22
— 27
— 31
June 6 3w.
— 28
— 29
July 3

III. W. 1864 May 19
June 7
— 8
— 13
— 16
— 17
— 18
— 21
— 27
July 12

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1862phae.proj..280W

ι Serpentis. — 5.4

R. 15h 35m 21s An.var. 2.s7 N.P.D. 69° 52′ 8 An.var. 0′.20

III. E.

~~1861 June 5~~
1862 May 14
June 16
17
1863 July 20
1864 May 22
23
June 4
— 6
— 28
— 29
— 30
July 3

III. W.

1862 May 23
~~July 18~~
July 3
1864 May 19
~~June 17~~
— 18
— 13
— 14
— 17
— 18
— 21
— 22
— 24
— 27
July 13

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1862phae..proj..280W

a Serpentis. — 2.3.

R. 15h 37m 25s An. var. 3.s0 N.P.D. 83° 8'.1 An. var. 0'.19

III. E.

~~1862 June 6~~
1862 May 14
" 16
" 17
July 18
" 22
1863 July 20
1864 May 23
" 27
" 29
June 2
" 4
" 6 3w
" 28
" 29
" 30
July 3
" 4
" 5
" ~~8~~
" 9
" 22
" 26
Aug 1
" 5

1863 May 18.

III. W.

1862 May 23 1
~~July 18~~
July 3
1863 July 20
Aug
1864 May 19
June 7
" 8
" 14
" 16
" 17
" 18
" 21
" 22
" 24
" 27
July 12
" 13
" 14
" 15
1865 June 3.
" 6
" 12
" 13
" 21
" 24
" 27
" 28

1865 June 29

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1862phae.proj..280W

λ Serpentis. — 4.5.

R.A. 15h 39m 42s An.var. 2s.9 N.P.D. 82° 12'.5 An.var 0'.19

III. E.

~~1861 June 5~~
1862 May 14
June 16
" 17
July 14
— 22
1864 May ~~22~~
— 27
June 2
— 4
— 6
— 24
— 29
July 3
— 22

III. W.

1862 May 23
May 3
1863 Feb 20
1864 May 19
June 8
— 13.
— 14
— 16
— 17
— 21
— 22
— 24
July 20

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1862phae.proj..280w

μ Serpentis. – 3.4

R. 15h 42m 22s An. var. 3s.1 N.P.D. 93° 0′.1 An. var. 0′.19

III. E.

1862 May 14
July 18
" 22
1863 July 2
1864 May 22
June 4
— 6
— 28
— 29
— 30
July 3
— 8
— 9
— 22
Aug 1
— 5

III. W.

1862 May 23
1863 Feb 20
1864 May 19
June 8
— 13
— 16
— 17
— 21
— 22
— 24
July 13
— 20

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1862phae.proj..280W

ε Serpentis. C. des T. — 3.4.

AR. 15h 43m 53s An. var. 3.s0 N.P.D. 85° 7'.1 An. var. 3'.4

Ill. E.

~~1861 June 5~~
1862 May 14
June 16
July 18
— 22
1864 May 22
— 27
— 31
June 2
— 4
— 6
— 28
— 29
— 30
July 3
— 22

Ill. W.

1862 May 23
July 3
1863 Feb 20
1864 May 19
June 8
— 13
— 14
— 16
— 17
— 21
— 22
— 24
July 20

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1862phae.proj..280w

γ Serpentis. — 4.3.

R. 15h 50m 2s An. var. 2s.8 N.P.D. 73° 52′.9 An. var. 0′.20

III. E.

1862 June 16
1864 May 22
June 4
— 28
— 29
— 30
July 3
— 8
— 9
— 27
— 26
Aug 1

III. W.

1862 May 23
1864 June 8
— 13
— 14
— 16
— 17
— 18
— 21
— 22
July 13
— 14

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See also „~~sub polo~~" at 3h 49m W.

N.A.

ζ Ursæ Minoris. – 4.5.

R. 15h 49m 6s An. var. 2.s3 N. P. D. 11° 46′. 8 An. var. 0′.18

III. E.

~~1861 May 16~~
1863 July 20
— 22
1864 Apr 24
May 27
— 31
June 2
— 30
July 3
— 4
— 22
— 26

III. W.

1862 July 3
1863 July 20
1864 May 19
June 18.
— 10
— 18.
— 22
July 20

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1862phae.proj..280W

δ Scorpii. — 2.3.

AR 15h 52m.7s An. var. 3s.5 N.P.D. 112° 13'.4 An. var. 0'.18

III. E.

1862 June 16
1864 May 22
— 27
— 31
June 28
July 4
— 5
— 8
— 9
— 22
— 26

III. W.

1864 May 19
June 8
June 10
— 13
— 14
— 16
— 17
July 12
— 13
— 14
— 16
— 20

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1862phae.proj..280W

Gr 750 sp BAC 1235. — 6.7.

Tr. 15h 54m 4s An. var. 16.7s N.P.D. −4° 49'.1 An. var. 0'.18

III. E.

1862 July 22
1863 July 11
— 20
— 22
1864 Apr 21 ✓
May 22 ✓ w.A.B
— 27 ✓
— 31 ✓ 3w
June 2 ✓
— 4 ✓
[— 30]
July 5 ✓ w.A.B
— 8
— 9 ✓
— 22 3w

III. W.

1863 Feb 20 ✓
1864 May 19 ✓
June 7 ✓ 3w
— 10 ✓ 3w
— 13 ✓
— 14 ✓
— 16 3w
— 17
— 18
— 21 ✓
— 22
July 12 ✓
— 13 ✓
— 16 R

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1862phae.proj...280W

N.A.

β Scorpii. — 2.

R. 15h 57m 22s An.var. 3s.5 N.P.D. 109° 25′.3 An.var. 0′.17

Ill. E.

1862 June 16
July 14
1863 May 22
— 23
June 28
— 29
— 30
July 4
— 9
— 22
Aug 5

Ill. W.

1862 July 3
Aug 1.
1863 June 8
— 13
— 14
— 16.
— 17
— 18
— 21
— 22
July 13
— 14
— 16.

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1862phae.proj..280W

62 Ursae min. B BAC 5352. – 6.

Tr. 15h 58m 19s An. var. +6s.9 N.P.D. 6° 38'.3 An. var. 0'.17

III. E.

1862 July 22
1863 July 11
— 20
— 22
1864 Apr 21 ✓
May 27 ✓ 2w.
— 31 ✓
June 2 ✓
— 4 ✓
July 8

III. W.

1862 May 23 ✓
1863 Feb 20 ✓
1864 May 19 ✓
June 7 ✓
— 10 ✓
— 13 ✓
July 12 ✓
1

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1862phae.proj..280W

θ Draconis. – 4.3.

AR. 15h 59m 18s An. var. 1s.1 N.P.D. 31° 3'.8 An. var. 0'.16.

III. E.

1862 July 18
1864 June 6
— 28
— 30
July 4 3w
— 9
— 22

III. W.

~~1862 July 3~~
1864 June 13
— 14
— 16
— 17
— 18
July 14

Gr 779 G — — — — — — 6

AR. 16h 3m 3s An. var. +0s.1 N.P.D. −9° 31'.0 An. var. +0'.16

III. E. 1863 July 20
1864 Apr 21
May 22
— 27
— 31
June 2
— 30
July 26

III. W. 1863 Feb 20
1864 June 8
— June 10
— June 13
— June 14
— June 16
— " 18
— " 21
— " 24 Am. [illegible]
— July 16

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1862phae.proj..280W

N.A.

δ Ophiuchi. — 3.

R. 16h 7m 4s An. var. 3s.1 N.P.D. 93° 20′.0 An. var. 0′.16

Ill. E.

1862 July 19
22
Sept 16
1863 July 11
— 20
1864 May 22
June 6
— 30
July 3
— 4
— 8
— 9
— 22
— 26
Aug 5

Ill. W.

1862 May 23
~~July 3~~
1863 Feb 20
1864 June 7
— 8
— 13
— 14
— 16
— 17
— 18
— 21
— 22
— 24
July 12
— 13
— 14

D.

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1862phae.proj..280W

ε Ophiuchi. — 3.4.

AR. 16h. 10m. 58s. An. var. 3s.2 N.P.D. 94° 20'.1 ? An. var. 0'.15

Ill. E.

~~1861 May~~ 21
1862 July 18
— 22
~~Sept~~ 16
1863 July 22
1864 May 22
— 27
— 31
~~June~~ 30
July 3
— 4
— ~~8~~
— 9

Ill. W.

1862 May 23.
~~July 3~~
Aug. 1
1864 June 7
— 8
— 13
— 14
— 16
— 17
— 21 3w
— 22
— 24
July 12
— 13
— 14
— 16
— 20

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1862phae.proj..280W

γ Herculis. — 3.

R. 16h 15m 47s An. var. 2".6 N.P.D. 70° 30'.1 An. var. 0'.15

III. E.

~~1861 May 27~~
1862 July 18
— 22
Sept 16
1863 June 27
1864 May 22
— 27
— 31
June 30
July 3
— 4
— 8

III. W.

~~[illegible]~~
1862 Aug 1.
1864 June 8
— 13
— 14
— 16
— 17
— 21
— 24
July 12
— 15
— 16 3N

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1862phae.proj...280w

B. J.

a Scorpii. – 1.2.

R. $16^h\ 20^m\ 53^s$ An.var. $3^s.7$ N. P. D. $116^\circ\ 7'.2$ An.var. $0'.14$.

III. E.

~~1861~~	~~May 21~~	
1862	June 16	+09
	July 18	−09
	" 22	−03
	Sept 16	+07
1863	July 11	+05
	" 22	−10
1864	May 22	+21
	" 31	+02
	June 30	+05
	July 3	−08
	" 4	+07
	" 8	+10
	" 26	−02
	~~Aug~~	
	Aug 1	+07
	" 5	+05
	" 8	00
	Sept 10	+01

+030

III. W.

1862	May 23	−03
	July 3	−06
1864	June 7	+05
	" 8	+11
	" 10	A.M.C.
	" 13	−01
	" 14	+01
	" 16	+19
	" 17	+14
	" 21	+08
	" 24	00
	July 12	+04
	" 13	+06
	" 14	+01
	" 15	+05
	" 19	
	Sept 6	+06
	" 7	−01
1865	June 29	

T046

±047 105

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1862phae.proj..280W

N.A. Le ab. 4h 22m

η Draconis. — 3. 2.

AR. 16h 22m. 7s An. var. 0s. 8 N. P. D. 28° 10'. 2 An. var. 0'.14

III. E.

1863 July 22 1w.
~~1864 May 22~~
1864 May 31
June 30
July 3
— 9
— 26
— 27
Aug 5
— 8

III. W.

1864 June 7
— 8
— 10
— 13 3w
— 14
— 16
— 17
— 21
— 24
July 12 2w
— 13
— 14
— 19

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1862phae.proj..280w

β Herculis. – 2.3.

Æ. 16h 24m 15s An. var. 2s.6 N.P.D. 68° 12'.3 An. var. 0'.14.

III. E.

~~1861 May 21~~
1862 July 18
Sept 16
1863 June 27
July 11
— 22
~~1864 May 22~~
1864 May 31
July 3
— 4
— 8
27
Aug 8

III. W.

~~1862 July 3~~
1862 Aug 1.
1864 June 8
— 10. A.M.
— 13
— 14
— 16
— 17
— 21
— 24
July 12
— 14
— 16
— 18
— 19

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1862phae.proj..280W

τ Scorpii – 3.4.

R. 16h 27m 14s An. var. 3.s 7 N. P. D. 117° 55′. 4 An. var. 0′.13

III. E

~~1861 Aug 21~~
1862 July 18
1863 Jan 27
~~July 22~~
1864 ~~Aug~~ 31
~~July~~ 3
— 4
— ~~8~~
— ~~9~~
~~Aug~~ 1

III. W.

~~1862 July 3~~
1862 ~~Aug~~ 1.
1864 June 8
— 10 A.M.
— 13.
— 14
— 16
— 17
— 21
— 24
July 12
— 14
— 18
— 19

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1862phae.proj..280W

ζ Ophiuchi. — 3.2.

R. 16h 29m 31s An. var. 3s.3 N.P.D. 100° 16′.9 An. var. 0′.13

III. E.

1862 July 18
Sept 16
1863 June 27
July 21
~~1864 May 22~~
1864 May 31
July 3
— 4
— 8
— 26
27
Aug 1
— 8

III. W.

~~1862 July 2~~
1862 Aug 1.
1864 June 8
— 10
— 13
— 14
— 16
— 17
— 21
— 22
— 24
July 14
— 14
— 16
— 18
— 19

R. 16h 33m 33s An. var. −3s.5 N.P.D. +10° 44′.6 An. var 0′.12

III. E. 1863 July 22.
1864 May 31
July 3
— 4
— 8

III. W. 1864 June 8
— 10
— 13
— 14
— 16
— 21
— 24
July 14

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1862phae.proj..280W

N.A.

ζ Herculis. — 3.2.

R. 16h 36m 3s An. var. 2.s3 N.P.D. 58° 8'.6 An. var. 0'.11

III. E.

1862	July 14		+09
	~~Sept 16~~		−01
1863	July 11		−02
1864	~~May 12~~		+07
	~~July 9.~~		
	— 4		+06.
	— ~~7~~ 6		+07.
	— (10) 23		+02.
	— 26	3w	−03
	— 30.		00
	May 8.		00

III. W.

1862	July 3.		+05
	Aug 1.		
1864	Jan 8		+03
	— 10	2w	
	— 17		−05
	— 21		+06
	— 22		−03
	July 14		00
	— ~~16~~ 18	2w	−09
	— 20		−03
	Sept. 6		−03
	7		−03
			~~+030~~
			+034 1dy

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1862phae.proj . . 280W

η Herculis. — 3.

R. 16h 38m 8s An. var. 2.1 N.P.D. 50° 48'.7 An. var. 0.12

III. E.

~~1861 May 21~~
1862 July 18
~~Sept~~ 16
1863 July 11
— 22
1864 May 27
~~July~~ 4
— 10
— 23
Aug 8

III. W.

~~1862 July 2~~
1862 Aug. 1
1864 June 8
— 14
— 16
— 17
— 21
— 22
— 24
July 12
— 13
— 14
— 18
— 19

9 Camelop. — 4

R. 16h 40m 15s An. var. +5.9 N.P.D. −23° 54'.0 An. var. +0.12

IU. E. 1864 July 3
— 10
Aug 5

IU. W. 1864 June 8
— 10 Aug
— 14
— 16
July 18
— 19

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1862phae.proj..280W

ε Scorpii. C. des T. — 3.

AR. 16h 41m 10s An. var. 3s.9 N. P. D. 124° 2'.3 An. var. 0'.12

III. E.

~~1861 May 21~~
1862 July 18
1864 May 22
" — 31
July 4
— 27 faint
— 30
Aug 1
1865 July 3
— 5
— 8
— 14

III. W.

~~1862 July 3~~ Tw
1864 June 10
— 14
— 17
— 21
— 24
July 12
— 13
— 14 Tw.
— 15
— ~~16~~
1865 June 23
— 27
July 3

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1862phae.proj.. 280W

5' Scorpii. — (4½)

R. 16h 44m 12s An.var: 4.2 N.P.D. 132° 7'.6 An.var: 0.11

III. E.

~~1861 Aug 21~~
1862 July 18
1864 July 3
— 4
1865 July 3
— 5
— 13
— 14
— 15
— 17

III. W.

1862 Aug 6.
1864 June 10
— 14.
— 21
July 12
— 15
— 16
1865 June 23
— 27
~~July 13~~
July 18
— 22
— 26.
— 28

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1862phae.proj..280W

ζ^2 Scorpii. (3.)

R. 16h 44m 49s An.var. 4.2 N.P.D. 132° 7'.2 An.var. 0'.11

III. E.

~~1861 Aug 21~~
1862 July 18.
1864 May 22
July 3
— 4
— 30
1865 July 3
— 5
— 11
— 14

III. W.

1862 Aug 6.
1864 June 10th Am
— 14
— 17
— 21
July 12
— 13
— 14
— 15
— 16
1865 June 23
— 27
~~July 3~~

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1862phae.proj . . 280w

N.A.

κ Ophiuchi. – 3.4.

A.R. 16h 51m 5s An.var. 2s.8 N.P.D. 80° 24'.3 An.var. 0'.10

III. E.

~~1861 May 21~~

1862	July 18	−04
	Sept. 8	−03
	— 16	−10
	— 14	+03
	— 25	−01
1863	July 11	−01
	— 22	+11
	Aug 24	+03
~~1864~~	~~July 23~~	~~+04~~
1864	July 4	−03
	— 22	
	— 23	+01
	— 27	

III. W.

1862	Aug 1.	
	6	−08
1864	June 14	+01
	— 17	−01
	— 18	−02
	— 22	+05
	— 24	+01
	July (10)	
	— 12	−01
	— 14	00
	— 16	−09
	— 18	
	— 19	

±032 obs

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1862phae.proj..280W

ε Herculis. C. des T. 3.4.

R. 16h 54m 58s An.var. 2.s3 N.P.D. 58° 52′.0 An.var. 0′.09

III. E.

~~1861 May 21~~
1862 July 18
Sept. 8
— 9
— 16
— 18
— 25
1863 July 11
~~1864 May 2~~
1864 July 22
— 23
Aug 8

III. W.

1862 Aug 1.
6
11
21
1864 June 14
— 16
— 17
— 22
— 24
July 10
— 12
— 13
— 16
— 18
— 19

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1862phae.proj..280w

ε Ursæ Minoris. — 4.5.

R. 17h 0m 21s An.var. -6.s4 N.P.D. 7° 44′.4 An.var. 0′.09

III. E.	1862	July 18	
		Sept. 8	
		— 9	
		— 10	
		— 16	
		— 17	
		— 18	
		~~— 23~~	Lost by cirrus
		— 25	√ S51
	1863	July 11	
		— 22	
		— 30	No time this day (v 31st)
		Aug 3	√ S51
		— 24	√ S51
	1864	July 3	√ S51
		— 4	
		— 22	
		— 30	
		Aug 6	√ S51
	1865	July 3	
III. W.	1862	Aug 6	√ S51
		11	√ S51
		21	√ S51
		Sept 4	√ S51
		Oct 18	√ S51
	1863	Aug 10	√ S51
	1864	June 10	× S51 etc.
		— 14	√
		— 16	
		— 17	3 w
		— 22	
		— 24	4 w
		July 10	
		— 12	× R
		— 13.	√ P S51
		— 14	× P S51
		— 18	
		— 19	R
		~~18~~	

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1862phae.proj..280W

77 Ophiuchi. — 2.3.

R. 17h 2m 25s An. var. 3.s4 N. P. D. 105° 33′.0 An. var. 0′.08

III. E.

1862 Sept. 10.
— 11
— 16
— 17
— 116
— 25
1863 July 11
Aug 3
1864 July 3
— 4
— 30
Sept. 16

III. W.

1862 Aug 21
1863 Aug 10
1864 June 10 A.M.
— 14
— 16
— 17
July 10
— 12
— 13
— 14
— 15
— 16
— 18
— 19

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1862phae.proj..280W

a Herculis. B. J. var.

AR. 17h 8m 19s An. var. 2s.7 N. P. D. 75° 26'.9 An. var. 0'.07

III. E.	~~1861 May 21~~		
	1862 July 22	+01	
	Sept. 8	−04	
	— 9	~~−13~~	
	— 10	−13	
	— 11	−08	
	— 15	+01	
	— 16		
	— 17		
	— 18	+01	
	— 24	−10	
	— 25	−10	
	1863 July 11		
	Aug 3		
	— 24		
	1864 July 3		
	— 6	−11	
	— 23	−04	
	— 30	−08	
	Aug 1	−04	
	— 8	−06	
	Sept 10	−02	
	— 16	−10	
		−058 15	
III. W.	1862 Aug 6.		−09
	11		−01
	21		−06
	Sept 4		−02
	Oct 16		
	1864 June 10	A.m.	
	— 14		−05
	— 16		+04
	— 21		−08
	— 22		−07
	July 12		−10
	— 13		−05
	~~— 14~~		
	— 15		−03
	— 16		−15
	— 18	2W	−09
	— 20		−10
	1865 Jan 23		
			−061 14
			±.032 1 obs

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1862phae.proj..280W

1865.0 17 10 20.866 +36° 57' 47."69

π Herculis. — 3.4.

R. 17h 10m 15s An.var. 2.s 1 N.P.D. 53° 1' 9 An.var. 0.'09

III. E

1862 ~~Sept~~ 9
— 10
— 11
— 15
— 16
— 17
— 18
— 23
— 25
1864 July 3
— 4
— 30

III. W.

1862 Aug 6.
11
21
Oct 6
1863 Aug 10
1864 June 10 A.M.
— 14
— 16
— 21
— 22 3r.
July 12
— 16
— 19

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1862phae.proj. . 280W

40 ζ Ophiuchi. — 5.

	h.	m.	s.					
AR	17	12	41	An.var.	3.s.6	N. P. D.	110° 57′ 6	An.var. 0′.07

III. E.

~~1861 May 29~~
1862 July 22
1863 Aug 3
1864 July 4
— 28
~~Aug 1~~ ~~1865~~
1865 July 10
15

III. W.

1862 Aug 6
11
21
1864 June 16
— 21
July 13
— 14
— 15
— 16
— 18
— 20
1865 June 23
July 17
— 18
— 26

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1862phae.proj..280W

N.A.

42 θ Ophiuchi. 3.4.

R. 17h 13m 9s An. var: 3.s 7 N. P. D. 114° 51′.4 An. var: 0′.07

III. E.

1862	Sept.	9	
	—	11	
	—	15	
	—	16	faint
	—	17	faint
	—	18	
	—	23	
1864	July	3	+05
	—	4	+03
	—	22	−01
	—	28	+03

III. W.

1862	Aug	6.	
		21	
	Oct	6	
1863	Aug	10	
1864	June	10	+05
	—	16	+06
	—	21	+14
	July	13.	−03
	—	14	00
	—	15	−04
	—	16	+02
	—	18	+05
	—	20	+05
			−01

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1662phae.proj . . 280W

Cy Camelop B

BAC 1662. – 6.

Tr. h. 17 m. 17 s. 50 An.var: 18.s 4 N.P.D. −4° 53′.2 An.var: 0.06

III. E.

~~1861 May 24~~ ~~1861 May 23~~
1862 July 22
1863 June 17
July 11
Aug 3
— 14
— 22
— 24 ✓
1864 July 3 ✓
— 4
— 30
1865 July 5

III. W.

1862 Aug 6.
11
21 ✓
1863 Aug 10
1864 June 10 ✓
— 14 ✓
— 16
— 21 ✓
— 24
July 12 ✓R
— 13 ✓
— 14 ✓
— 16
— 18
— 19 R
— 20
1865 June 23

74 Camelopardalis B. – 6.7

A 17h.21m.14s. An.var.+8.0 N.P.D. −15° 3′.4 An.var.+0′.06

III. W.

~~1863 Aug 14~~
1864 June 21
1865 June 23
— July 17
— 18
— 20
— 31

III. E. 1863 Aug 3
— 14
1865 July 5
— 14
— 15

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1862phae.proj..280W

N. A.

β Draconis. — 3.2.

AR. 17h 27m 18s An.var: 1.s4 N. P. D. 37° 35′ 7 An.var: 0′.05

III. E.

1862 Sept. 11
— 15
— 16
— 18
— 23.
— 25
1863 June 17
July 31
Aug 22
— 24
1864 July 3
— 23
Sept 16
— 17

1861 May 29

III. W.

1862 Aug 6.
— 11
— 21
Sept 2
— 29
Oct 6
— 7.
— 16
— 18
1864 June 14.
— 21
— 22
July 12
— 18
Oct. 7
1865 June 23

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a Ophiuchi. — 2.

B. J.

AR. 17h 28m 29s An. var. 2.8s N.P.D. 77° 20′ 1 An. var. 0′.05

III. E.	~~1861 May 23~~	
	1862 July 22	
	Sept. 10	
	— 11	
	— 15	
	— 16	
	— 17	
	— 23	
	— 25	
	[1863 Jan 17]	
	July 17	
	— 31	
	Aug 3	
	22	
	24	
	Sept 2	
	1864 July 3	−01
	— 4	00
	— 22	+02
	— 23	−04
	— 28	−01
	— 29	+04
	— 30	−01
	Aug 8	−04
	Sept 16	−08
	— 17	
	— 22	
III. W.	1862 July 26	
	Aug 6	
	— 11	
	Sept. 2	
	— 29	
	Oct 6	
	— 7	
	— 16	
	— 18	
	1863 Aug 10	
	12	
	1864 Jan 14	−06
	— 21	00
	— 22	~~+06~~
	July 12	−06
	— 13	+05
	— 14	+02
	— 15	−02
	— 16	−08
	— 18	+01
	— 20	+11
	Oct. 7	+09
	— 8	
	1865 Jan 23	

±.029 1 d

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1862phae.proj..280W

β Ophiuchi. C. des T. 3.

AR. 17h 36m 36s An. var. 3.s0 N.P.D. 85° 22'.3 An. var. 0'03.

III. E.

1862 Sept 10
— 18
— 23
— 25
1863 Aug 15
— 22
— 24
Sept 2
1864 July 3
— 22
— 28
Sept 16

III. W.

1862 July 26
Sept 29
Oct 18
1863 Aug 10
1864 June 14
— 16
— 21
— 22
July 12
— 13
— 16
— 18
— 19
~~Oct 7~~

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N.A.

μ Herculis. — 3.4.

Æ. 17h 41m 1s An. var. 2.s3 N.P.D. 62° 11'.7 An. var. 0'.04

III. E.

1862	Sept 18	−05
	25	−05
1863	Aug 3	−02
	15	−10
	24	−08
	Sept 30	−06
1864	July 23	+01
	28	+03
	Aug 8	−06
	Sept 16	−11
	17	
	22	

−049 10

III. W.

1862	July 26	−01
	Sept. 29	+04
	Oct. 18	−01
1863	Aug 10	
	12	−04
1864	June 14	−01
	16	
	21	−03
	22	+02
	July 13	−06
	16	2N −02
	18	00
	19	−03
	Oct. 17	−01

−013 12
−031
±.030 10

ψ' Draconis — 4.5

Æ. 17h 44m 26s An. var. −1s.1 N.P.D. +17° 47'.0 An. var. +0.03

III. E. 1863 Aug 3
14
18
22
24
Sept 2
10th July 3
23
28
Aug 8
Sept 16 (3N)
17

III. W. 1863 Aug 10
12
1864 June 14
16
21
July 12
13
16
18
19

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1862phae.proj..280W

ξ Draconis. – 3.4

AR. 17 h. 51 m. 8 s. An.var. 1.0 N.P.D. 33° 6′.3 An.var. 0′.01

III. E.

1862 Sept 23 1861 May 23
1863 Aug 3
14
15
18
22
1864 July 3
Sept 17

III. W.

1862 July 26
Sept 29
Oct 7 sp.
— 16
1863 Aug 10
12
1864 June 14
— 21
— 22 2w
July 16
— 18
— 19

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1862phae.proj..280W

B. J.

γ Draconis. – 2:3:

AR 17h 53m 23s An. var. 1s.4 N. P. D. 38° 29'.6 An. var. 0'.01

III. E.

1862 Spt. 11
— 23
~~1863~~ Aug 3
14 1 wire
15
18
Spt. 4
— 28
— 30
1864 July 3
— 23
— 30
Aug 8
Sept 16
— 17
— 22

III. W.

1862 July 26
Sept. 29
Oct 7
— 16
— 18
1863 Aug 12
1864 June 14
— 22
July 12
— 13
— 16
— 18
— 19
Oct 7

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1862phae.proj..280W

dupl. praec.

70 Ophiuchi. — 4.5.

R. 17h 58m 26s An. var. 3.0 N. P. D. 87° 27'. 9 An. var. 0'.02

III. E.

1862 Sept. 4
— 11
— 23
1863 July 24
Aug 3
— 15
— 18
— 22
— 24
1864 July 3
— 23
Aug 8
Sept 10
— 22

III. W.

1862 July 26
Aug 21
1863 July 12
1864 June 14
— 21
July 12
— 13
— 14
— 15
— 16
— 18
— 19

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1862phae.proj..280W

N. A.

μ Sagittarii. – 4.

AR. 18h 5m 27s An. var. 3s.6 N. P. D. 111° 5'.5 An. var. –0s.01

III. E.	1862 Sept. 8	–03.	
	— 23	–09.	
	— 25	+09.	
	1863 July 24		
	Aug 3	–06.	
	— 14	+08.	
	— 18	+05.	
	1864 July 3	+02.	
	— 28	+09.	
	— 30	+02.	
	Sept 10	+08.	
		(025) 10	

III. W.	1862 July 26	–03.	
	Aug 6	+03.	
	21	00.	
	1863 Aug 12	+01.	
	1864 Jun 14	+11.	
	— 21	+14.	
	— 23	+11.	
	July 12	+01.	
	— 13	+10.	
	— 14	+02.	
	— 15	–03	
	— 16	+11.	
	— 18	+08.	
	— 19	00	
	— 20	00	
		+044 (15)	
		+036	
		±045 10b	

41 Draconis – 6

AR. 18h 10m 32s An. var. –4s.5 N. P. D. +10° 1'.2 An. var. –0'.02

III. E. 1863 July 24
1864 July 3
— 5
— 28
— 30
Aug 8

III. W. 1864 Jun 14
— 21
— 23
July 12
— 13
— 14
— 16
— 18
— 19
⊕

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1862phae.proj..280W

Bright

δ Sagittarii. — 3.4

R.A. 18h 12m 6s An.var. 3s.8 N.P.D. 119° 53′.0 An.var. −0′.02

III. E.

1862 Sept 8
— 23
1863 Aug 3
1864 July 5
— 26
— 28
Sept 3
Sept 16
— 27

III. W.

1862 July 26
July 6.
Sept. 4
1864 June 23
July 12
— 13
— 16
— 18
— 19
Sept 9
Oct. 3

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η Serpentis. — 3.

α. 18h 14m 7s An.var. 3s.1 N.P.D. 92° 55′.9 An.var. −0′.01

III. E.

1864 July 3
— 23
— 26
— 28
— 30
Aug 1
— 8
Sept 10
— 16
— 22
— 27

III. W.

1862 Aug 6
Sept 4
— 29
1864 July 12
— 18
— 19
— 20
Sept. 9
Oct. 5

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1862phae.proj..280W

δ Ursæ Minoris. — 4.5.

Tr: $18^h\ 17^m\ 11^s$ An.var. $-19^s.4$ N.P.D. $3°\ 23'\ 9$ An.var. $-0'.03$

III. E.

1862 Sept. 9
— 18
— 23
— 25
1863 July 23
— 24
— 28
— 31
Aug 3
— 15
— 16
— 19
— 24
Sept. 5
1864 June 29 2W
July 3
— 5
[— 23 3W]
[— 28]
[— 30]
[Aug 1]
[— 9]
[Sept 16]
[— 17]
[— 22]

III. W.

1862 July 26
July 6.
" 11
" 21
" 29.
Sept. 4
— 29
Oct. 18
1863 Aug 4
— 10
— 12
Sept 10
1864 June 14
— 21
— 22
— 23
July 12 3W
— 13
— 14
— 15
— 16
— 18
— 19
— 20
[Sept 6]

1864 Sept 27 23
Oct 5
Stop

23 Camelop. H. — 5.6

R. $18^h\ 22^m\ 27^s$ An. var. $+10^s.4$ N.P.D. $-10°\ 17'.7$ An. var. $-0'.04$

IU.E. 1863 July 23
— 29
— 31
Aug 3
— 15
— 17
— 24
Sept. 5
— 30
1864 June 28
July 3

IU.W. 1863 Aug 10
12
Sept 10
1864 June 14
— 21
— 23
July 5
July 17

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1862phae.proj..280W

B. J.

a Lyræ. — 1.

AR. 18h 32m 14s An. var. 2s.0 N. P. D. 51° 20′ 6 An. var. 0′.05

III. E.	1862	Sept 25	−05
	1863	July 24	
		— 29	−12
	1864	June 28	+02
		July 3	−05
		— 5	+03
		— 23	+04
		— 26	+01
		— 28	+03
		— 30	00
		Aug 1	+03
		— 8	+06
		Sept 2	−17
		— 10	+05
		— 17	−01
		— 26	+03
		— 27	+03
		Nov. 16	−14
		— 19	−01

III. W.	1862	Oct 8	00
		— 18	−04
	~~1864~~	~~June 24~~	−06
		— 23	−01
		July 13	+06
		Sept 6	−05
		— 9	−06
		Oct. 5	−13
		— 7	−03
		— 17	−03
		— 19	−10
		— 25	−03
		— 26	−05

−076 18 = 010
−041 13 = 011
−026 31
± 040 1 obj

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1862phae.proj..280W

51 Hev. Cephei. — 5.

Tr. $18^h\ 34^m\ 8^s$ An.var. $30^s.4$ N.P.D. $-2°\ 45'.1$ An.var. 0'.05

III. E.	1862 July 18	1863 [July 28] 2
	Sept 17	[July 30]
	— 25	[Aug 8]
	1863 July 23	(Sept 25)
	— 29	Sept 17
	— 31	[— 26
	Aug 3	Oct 5]
	— 15	
	— 17	
	— 19	
	— 24	
	Sept. 2	
	— 5	
	— 14	
	— 15	
	— 21	
	— 22	
	— 23	
	— 28	
	— 30	
	Oct 1	
	1864 June 28	
	July 3	
	— 5	
	— 9	
	[— 23]	
III. W.	1862 July 26.	
	Aug 6.	
	. 11	
	. 20	
	. 21	
	. 29	
	Sept 4	
	Oct 8	
	1863 Aug 4	
	— 10	
	— 12	
	Sept 10	
	1864 June 21	
	— 23	
	July 13	
	— 14	
	— 15	
	[Sept 6]	
	Oct 7	

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1862phae.proj..280W

110 Herculis. _ 4.

'05 Æ. 18h 39m 41s An. var. 2s.6 N.P.D. 69° 35'.0 An. var. -0'.05

III. E.

1862 Spt 25
1863 July 29
— 31
Aug 17
— 19
1864 July 3
— 5
— 9
— 28
Aug 1
— 8
Sept. 2
— 10
— 26

III. W.

1862 Aug 20
29
Oct 8
— 18
1863 Spt 10
1864 June 21
July 13
— 14
Sept 6
— 9

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1862phae.proj..280W

N.A.

β Lyræ – var.

AR. 18h 44m 57s An. var. 2s.2 N.P.D. 56° 47'.8 An. var. −0'.06

III. E.	1863 July	23	−04.
	—	31	−04.
	Aug	15	−02.
	—	17	−05.
	Sept.	12	−04.
	—	5	00.
	—	15	−05.
	—	21	
	—	23	−06.
	(Oct	1)	
	1864 July	3	+11.
	—	5	00.
	—	9	00.
	—	26	+09.
	Sept.	26	−09.
III. W.	1862 July	26	+06.
	Aug	11	−08.
	Aug	20	−01.
		29	
	Sept.	4	+05.
	Oct.	8	+05.
	—	16	−03.
	1863 Aug	17	−14.
	June	14	+05.
	1864 June	21	−10.
	July	13	−05.
	Sept	6	+08.
	Oct.	5	−11.
	—	17	−02.
	—	19	−07.
	—	25	−03.
			−019
			±042 10 by

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1862phae.proj..280w

σ Sagittarii — 2.3

AR. 18h 46m 39s An. var. 3.7 N.P.D. 116° 27'.9 An. var. -0'.07

III. E.

1862 Sept. 8
1863 July 23
— 31
Aug 15
— 17
Sept. 5
1864 July 3
— 5
— 9
— 26
— 28
Aug 1
Sept. 26

III. W.

1862 July 26.
Aug 11.
— 20
Sept. 4
Oct 8
— 14
1863 Sept. 10
1864 July 13
— 14
Sept 6
Oct 5
— 17

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Duplicate Obj. Both.

θ Serpentis. — 4.3.

AR. 18h 49m 18s An. var. 3s.0 N.P.D. 85° 58'.4 An. var. -0'.07

III. E. 1862 Sept. 8 2 3
— 16
1863 July 31
Aug 15
— 19
Sept. 5
— 15
1864 July 3
— 5
— 9
— 26

III. W. 1862 July 26.
Aug 6.
11
20
Sept. 4
Oct. 8
— 18
1863 Sept. 10
1864 July 13
— 14
Sept 6

50 Draconis — 6.

AR. 18h 50m 52s An. var. -1s.9 N.P.D. +14° 43'.9 An. var. -0'.07

III. E. 1863 July 23
— 31
Aug 15
— 19
Sept. 5
1864 July 3
— 5
— 26
— 28

III. W. 1863 Sept 10
1864 Sept 6
Oct 5
— 7

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ε Aquilæ. — 4.

Ar. $18^h\ 53^m\ 19^s$ An. var. 2.7 N. P. D. 75° 7'.1 An. var. -0'.07

III. E.

1862 Sept. 8
— 16
1863 July 23
— 31
Aug 15
— 19
Sept. 5
1864 July 5
— 9
— 26
— 28
Aug 6

III. W.

1862 July 26.
Aug. 6.
11
Sept 4
Oct 9
— 18
1863 Sept 10
1864 July 12
— 13
— 14
Sept 6
Oct 5

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Sagittarii. – 4.

AR. 18h 56m 21s An. var. 3s.6 N.P.D. 111° 56'.5 An. var. -0'.08

III. E.

~~1861 Aug 29~~
1862 Sept 16
1864 July 3
~~— 9~~
— 26
— 28
Sept. 2
— 10
— 17
— 26

III. W.

1862 July 26
Aug 6.
" 11
" 20
Sept 4
Oct. 8
1864 July 13
— 14
— 20
Sept 6
Oct. 5
— 7

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1862phae.proj..280w

N. A.

ζ Aquilæ. – 3.

Æ. 18h 59m 1s An. var. 2s.8 N. P. D. 76° 20'.4 An. var. –0'.08

III. E.

~~1861 May 29~~

1862	Sept	16	+08
1863	July	23	+12
	—	31	+11
	Aug	14	+01
	—	15	+12
	—	17	–09
	—	22	+01
	—	24	+05
	Sept.	5	+04
	—	15	+03
	—	23	+04
1864	July	3	+09
	—	5	+02
	—	9	+12
	—	26	+07
	Aug	8	
	Sept.	2	+03
	—	17	+05
	—	26	–04
	—	27	+05
	Nov	16	+15
	—	19	+06

III. W.

1862	July	26	+07
	Aug	6	+09
	"	11	+01
	"	20	+06
	Sept.	4	+04
	Oct.	8	+05
1863	Aug	12	–02
	~~Sept~~	~~10~~	
	~~Sept~~	~~14~~	+04
1864	July	12	
	—	13	+04
	—	14	+04
	July	15	+11
	~~Sept~~	~~6~~	00
	—	9	+09
	Oct.	5	00
	—	7	+06
	—	17	+03
	—	19	+04
	—	25	+05
	—	26	+06
	Nov	3	+12

1862 +057 7
63 +039 12
64 +056 22
+051 41

± ~~030~~ ~~1 obj~~ (19)
± 031 1 obj

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1862phae.proj..280W

π Sagittarii. — 3

AR. 19h 1m 30s An. var. 3.6. N.P.D. 111° 14′.4 An. var. -0′.09

III. E.

1863 May 14
— 15
Sept 23
1864 July 3
— 5
— 9
— 26
— 28
Sept. 2
— 10

III. W.

1863 May 12
1864 July 13
— 14
— 20
Sept 6
— 9
Oct. 5
— 7
— 25

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25 Camel H. 8p. BAC 2326. _ 5.

Tr. 19h 1m 36s An.var. 13s.1 N.P.D. −7° 20′.0 An.var. −0′.09.

III. E.

1862 Sept 16.
1863 July 23 ✓
" 29
" 31 ✓
Aug 17
" 22
" 24 ✓
Sept 10
" 21
" 22
1864 Aug 8 ✓

III. W.

1862 July 26. ✓
Aug. 6. ✓
" 11 ✓
" 20
Sept. 2
" 4 ✓
Oct. 8
1863 Sept 10 ✓
1864 Oct. 7 ✓
— 12 ✓

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1862phae.proj..280W

N.N.

ω Aquilæ. — 6.5.

AR. 19h 11m 18s An.var. 2s.8 N.P.D. 78° 39′.1 An.var. -0′.10

III. E.

1861	Aug	23
1862		
1863	Aug	27 +07
1864	July	5 00
		9 +02
		26 +05
	Sept	2 +07
		10 −01
		17 +02
		27 00

III. W.

1862	July	26 −03.
	Aug	6. +07
	Sept.	2 −01
1864	July	16 +09.
	Sept	6 +12
		9 +04
		+04
	Oct.	5 −02
		7 +09
		17 +02
		19 +02
		21 +03

±036 165

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1862phae.proj...280w

4 Vest min Bsp. BAC 2320. — 7.

Tr. $19^h\ 11^m\ 27^s$ An. var. 7.71 N. P. D. $-0°58'.8$ An. var. $-0'.10$

III. E.

1862 Sept 16.
1863 May 27
June 5
July 23 ✓
— 28
— 29
Aug 3 ✓
— 14
— 22 Iw.
Sept 14
— 15
— 21
1864 Sept 17 ✓3w

III. W.

1862 July 26 ✓
Aug 11 ✓
— 20
— 21 ✓
~~Sept 4~~ ✓
1863 Aug 12 ✓
Sept 10 ✓

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1862phae.proj..280W

β' Sagittarii. (3½)

R. 19h 12m 38s An.var. 4s.3 N.P.D. 134° 43'.0 An.var. -0'.10

III. E.
1864 Sept. 2
— 10
— 17
1865 Aug 26

III. W.
1862 Aug 6.
1864 July 14
Oct. 7
1865 Aug 2
— 12
— 15
— 23
— 24
— 25

VII 67 — 6.

R. 19h 16m 23s An.var. +6s.3 N.P.D. 121° 15'.4 An.var. -0'.11

IV.W. 1864 July 14
Sept 6
— 9
Oct. 7
1865 July 24
— 28
Aug 2

IV.E. 1864 Sept 10
Sept. 14
1865
— 5
— 6

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1862phae.proj...280w

β^2 Sagittarii. (4)

R. $19^h\ 13^m\ 9^s$ An.var. $4^s.3$ N.P.D. $135°\ 3'.5$ An.var. $-0'.10$

III. E. 1864 Sept 10 2w
17 4o
1865 Aug 26 4o

III. W. 1862 Aug 6.
1865 Aug 23
24

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1862phae.proj..280W

N.A.

δ Aquilæ. – 3.4.

AR 19h 18m 29s An.var. 3s.0 N.P.D. 87° 9′.6 An.var. –0′.11

III. E.

1863 July	23	–08
Aug	17	+19
1863 Aug	5	–04
—	9	–02
—	26	+02
Sept.	2	–01
—	10	+05
Nov	16	+02
—	19	+01

III. W.

1862 July	26	–02. Cyan
Sept.	2	+00.
Oct	18	–01
1864 July	12	+03
—	13	+03
—	14	+10.
—	16	+13.
—	18	–02
—	19.	–02
Sept	6	+02
—	9	+13.
Oct	7.	+08.
—	19	+00
—	21	+04
—	26	+15
Nov	3	+08.
		+053

+037 (26)

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1862phae.proj...280w

6 a Vulpeculæ. – 4.5.

AR. 19h 22m.55s An.var. 2s.5 N.P.D. 65° 36'.8 An.var. -0'.12

III. E.

~~+ K 61 May 23~~
1862 Sept 16
Nov 4
1863 July 31
Aug 14
— 19
1864 June 6
July 26
Sept 2

III. W.

1862 July 26
Aug 21
~~Sept 2~~
— 4
Oct 16
1864 July 12
— 16
— 18
— 19
~~Sept 16~~
— 9 2W
Oct 7
— 19

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triplex pr.

β Cygni. C. des T. — 3.

AR. 19h 25m 7s An. var. 2s.4 N. P. D. 62° 19'.8 An. var. −0'.12

III. E.

1862 Sept 16
Nov 4
1863 July 31
Aug 14
— 19
Sept. 21
— 23
1864 July 26
Aug 8
Sept. 2
Nov 16
181

III. W.

1862 July 26
Aug 11.
— 21
Sept. 4
Oct. 18
1864 July 12
— 16
— 19
Sept 16
— 9 3w
~~Oct 19~~
Oct 25
1865 July 26

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N. A.

h Sagittarii. — 5.4.

AR. 19h 28m 15s An.var. 3.s7 N.P.D. 115° 11′.2 An.var. −0′.12

III. E.

~~1861 May 29~~

1862	July 18	−02.
	Sept. 11	00.
	16	+03.
1863	Aug 14	+05.
	19	+09.
1864	June 6	−01.
	July 5	+03.
	9	+01.
	26	+15.
	Aug 8	reject
	Sept. 2	+11.
	17	−02.
	27	00.

+035 (1)

III. W.

1862	July 26	
	Aug 11	−02.
	Sept. 4	+01.
	Oct 14	
1864	July 16	+16.
	19	−01.
	20	+14.
	Sept 6	−01.
	Oct 19	+02.
	21	+11.
	25	+07.
	26	+01.

+048 (6)

Mean +041

±043 10 obs

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* precedes.

θ Cygni. – 5.4.

Æ. 19h 32m 43s An. var. 1s.6 N.P.D. 40° 6'.0 An. var. – 0'.13

III. E.

1862 Sept. 11
— 16
1863 July 29
Aug 14
— 19
Sept. 2
— 5
— 22
1864 June 6
July 26

III. W.

1862 July 26
Aug 11
Sept 2
1863 Aug 4
Sept 7
1864 July 16
— 18
— 19
Sept 6
Oct 7

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1862phae.proj..280W

γ Aquilæ. B.J. – 3.

Æ. 19h 39m 39s An. var. 2s.9 N.P.D. 79° 43′ 4 An. var. –0′.14

III. E.

1862	July 18	.00.
	Sept. 11	00.
	— 16	+03.
1863	Nov 3	
	Aug 14	+01.
	— 17	–03.
	— 19	–03.
	Sept. 5	–04.
1864	June 6	2n 00.
	July 5	–02.
	— 26	–02.
	— 28	–07.
	— 29	–02.
	Aug 8	–04.
	Sept. 2	–03.
	— 16	–01.
	— 17	–08.
	— 27	+04.
	Nov 16	–04.
	— 22	–09
	— 25	+02
		+11

–015 21

III. W.

1862	July 18	0
	26	–03.
	Aug 11	–02.
	" 20	–01.
	" 21	00.
	Sept 2	–04.
	— 4	–02.
1864	July 14	–12.
	July 18	–04
	Sept 6	–03.
	~~Oct. 7~~	–01.
	— 19	00
	— 21	+01
	— 25	–03
	— 26	+04

–021 14

~~–028~~ –017 35

~~±019~~

±.027 10b

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1862phae.proj..280W

156 Camel. B. BAC 2585. – 6.

AR. 19h 43m 9s An. var. 15s.5 N.P.D. –5° 33'.2 An. var. –0'.15

III. E.

1862 Spt. 11
— 16
1863 Aug 14
— 17
— 19 ✓
Sp. 21 ✓
1864 June 6
Spt 16 ✓ 2w
— 17 ✓
✓

III. W.

1862 Aug 11 ✓
— 20
Sept 2.
— 4 ✓
1863 Aug 12 ✓
1864 Sept 6 ✓
Oct 17 ✓
— 19
— 21 ✓
— 25
— 26 ✓
~~Nov 3~~

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1862phae.proj..280w

α Aquilæ. — 1.2.

B. J.

AR. 19h 44m. 0s. An. var. 2s.9 N. P. D. 81° 29'.8 An. var. 0'.15

III. E.

1862 July 18	−02	✓
1862 Nov 13	−02	✓
1863 July 31	+04	✓
Sept 22	−17	✓
— 23	−05	✓
1864 July 26	−06	✓
— 29	−09	✓
Aug 1	−03	✓
Sept. 2	+01	✓
— 27	−10	✓
Nov. 19	−03	✓
— 22	−03	✓
— 25	00	✓
Dec 8	−02	✓

III. W.

1862 July 26	+03	✓
~~Aug 21~~		
Oct 18	+07	✓
1864 July 20	−12	✓
Sept 9	−13	✓
~~Oct 7~~	~~−04~~	✓
Nov 2	−11	✓
— 3	−11	✓

−047

~~[illegible]~~

±045 10 G

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1862phae.proj..280W

β Aquilæ. B.7. – 4.

AR. 19h 48m 29s An. var. 3s.0 N.P.D. 83° 56′ 3 An. var. –0′.14

III. E.

	July 18	+07
1862	Sept. 11	–02
	Nov 13	–01
1863	July 31	–08
	Aug 14	–06
	— 17	–05
	— 18	+04
	— 19	–03
	Sept 21	
1864	June 6	
	July 26	00
	— 29	+02
	Aug 7	–04
	Aug 8	–06
	Sept. 2	–07
	— 16	–08
	— 17	–03
	— 27	+03
	Nov 19	+03
	— 25	+06

–023 16

III. W.

	July 26	+01
1862	Aug 11	+01
	" 20	–04
	" 21	–01
	Sept. 4	–04
	Oct. 18	+07
1863	Aug 12	–02
1864	July 18	–07
	Sept 6	–08
	— 9	–08
	Oct 7	+04
	— 17	–[illegible]
	— 19	+01
	— 21	–02
	— 25	–12
	— 26	–02
	Nov 2	+09
	— 3	–03

–018 39

±034 1 obj

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1862phae.proj..280w

γ Sagittæ. – 4.3.

AR. 19h 52m 34s An. var. 2s.7 N.P.D. 70° 53'.3 ? An. var. –0'.16

III. E.

1862 Spt. 11
— 16
1863 Aug 17
— 18
1864 July 26
Aug 8
Sept. 2
— 16
Nov 19

III. W.

1862 Aug 21.
1864 July 18
Sept 6
— 9
Oct. 21

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λ Ursæ Minoris. – 6.7

Tr. $20^h\ 2^m\ 58^s$ An.var $-56^s.6$ N.P.D. $1^\circ\ 6'.4$ An.var. $0'.17$

III. E.

1862 Sept. 10 ✓
— 11 ✓
— 16
1863 Jan 5
Aug 3
— 14
— 17
— 19 ✓
Sept 6
— 15
— 21 ✓
1864 June 6 ✓
[Aug 29]
[Sept 2]
Sept 13

III. W.

1862 Aug 11.
— 21 ✓
Sept 4
— 29 ✓
Oct 7
— 18
1863 Sept. 7
1864 July 14
Sept 6
— 9 ✓
Oct. 19 &c
— 21
— 25
— 26 ✓
Nov. 2 ✓
— 3

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1962phaeo.proj..280w

9 Aquilæ. – 5.

R. 20h 7m 51s An.var: 2.s8 N.P.D. 75° 13′.4 An.var: −0′.18

III. E.

1863 Aug 14
— 17
Sept 28
1864 June 6
— 29
July 8
Sept. 2
— 16

III. W.

1862 Oct 7
— 8
1863 Oct 29
1864 Sept 6
— 9
Oct 15
— 19
— 21
— 25
— 26
Nov 1
— 2
— 3

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1862phae.proj..280W

B.J.

1a Capricorni. — 3.4.

AR. 20h. 9m. 56s. An.var. 3s.3 N.P.D. 102° 56'.1 An.var. -0.18

III. E.	1862	Spt. 10	-08.
		— 11	+06.
		Nov 13	+04.
	1863	Aug 3	-08.
		— 14	-04.
		18	+04
		Spt. 15	-02.
		23	-14.
		28	-05.
	1864	June 6	+03.
		July 26	-06.
		July 28	-10.
		— 29	-02.
		Aug 1	+10.
		Aug 8	-02.
		Sept. 2	-02.
		— 16	
III. W.	1862	Aug 21	+04.
		Sept 2	+03.
		— 29	+02.
		Oct. 7	-09.
		— 18	-07.
	1863	Aug 4	
		12	-05.
		Oct 28	-07.
		29	+07.
		Nov 3	
		4	
	1864	Sept 6	-09.
		Oct 5	+07.
		— 19	+08
		— 21	-02
		— 25	-03
		— 26	+01
		Nov 1	-08
		— 2	+01
		— 3	00.
			-016 (26)
			±047

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1862phae.proj..280W

B.J.

2 a Capricorni

AR. 20h 10m 20s An. var. 3s.3 N.P.D. 102° 58'.4 An. var. -0'.18

III. E.	1862 July 18	-04
	Sept. 10	-09
	— 11	+12
	1863 Aug 3	-12
	— 14	-04
	— 17	+01
	— 18	+02
	— 19	-03
	Sept 15	00
	— 22	-11
	— 23	-04
	— 26	+04
	1864 July 28	+08
	— 29	-09
	Aug 1	+03
	Aug 8	-03
	Sept. 2	+07
	— 16	+08
		+07
		-004 19

G. 1418 - - - - 7.5

AR. 20h 12m 51s An. var. +17s.1 N.P.D. -4° 26'.9 An. var. -0'.19

III. W. 1863 Oct 28
— 29
1864 Oct. 25
— 26
Nov. 2
— 3 3rd

III. W.	1862 Aug 21	+01
	Sept 2.	+07
	— 29	+04
	Oct 7	00
	— 18	-08
	1863 Aug 4	
	12	+01
	Oct 28	00
	29	+02
	Nov 3	
	4	
	1864 Sept 6	-08
	— 9	-01
	Oct. 5	+07
	— 21	00
	— 25	+05
	— 26	-03
	Nov 1	+06
	— 2	+05
	— 3	00
		±.043
		+011 17

III. E. 1863 July 29
Aug 14
Sept 15
— 24
— 28
1864 June 6
Sept 16

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1862phae.proj..280W

γ Cygni. C. des T. — 3.2.

Æ. 20h. 17m. 14s. An. var. 2s.2 N. P. D. 50° 11'.2 An. var. −0'.19

III. E.

1863 June 23
Sept. 2
1864 Oct 23
18 dates
1865 Oct. 9

1W

Also on other dates
Ex accum

III. W.

1862 Sept 29
Oct 4
1863 Sept. 7
1864 Sept 6
— 9
Oct 5
~~Nov 1~~
— 3
1865 Oct 30
Nov. 1

a Ursæ. s. p. — 3.4

Tr. 20h. 18m. 41s. An. var. +5s.1 N. P. D. −28° 49'.3 An. var. −0'.19

III. E. 1864 June 6
Sept 16
1865 Oct. 9

III. W. 1864 Sept 6
Oct. 5
— 25
— 26
Nov 1
— 2

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For some dates in this year (1862) it is probable that the assumed AR is .02 too large.

ρ Capricorni. – 5. N.A.

AR. 20h 20m 56s An.var. 3s.4 N.P.D. 108° 16'.2 An.var. –0'.19

III. E.

1862	July 18	+09
	Sept 8	+01
	— 25	–01
1863	Aug 14	+01
	— 18	+04
	Sept 24	–05
	— 28	–02
	Oct 1	
1864	Aug 8	+11
	Sept 16	+06
	Nov 10	+05
		+029 10

III. W.

1862	Aug 11	+07
	~~Sept 25~~	
	Sept 29	+06
	Oct 8	–09
1864	Sept 6	+12
	Oct 5	+13
	— 10	+16
	— 25	+12
	— 26	+09
	Nov 1	+11
	— 2	+07
	3	+10
		+085 11
		+088 21
		±.044 10

A. – Ursæ. S.p. – 5.

Tr. 20h 22m 6s An.var. +5s.5 N.P.D. –24° 33'.1 An.var. –0'.19

III. E. 1863 (Oct 1)
1864 Sept 12
Nov 10
1865 Oct. 9

III. W. 1864 Sept 6
Oct 5
– 10
– 25
– 26
Nov 1
– 2
– 3

1862phae.proj..280w

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θ Cephei. — 4.

R. 20h 27m 15s An.var. 1.s0 N.P.D. 27° 28′ 3 An.var. −0′.20

III. E.
1862 Sept. 8
25
1863 Aug 14
16
Sept 28
1864 June 6

III. W.
1862 Oct. 7
16
1863 Nov 4
1864 Sept 6
Oct. 5
— 10

46 Cephei 13 - - - 6.

R. 20h 30m 35s An.var. −0.s2 N.P.D. +17° 56′.4 An.var. −0′.20

III. E. 1863 July 18
1864 June 6
Sept 15 2nd
— 16
Nov 10

III. W. 1864 Sept 6
Oct. 5
— 10
— 25
Aug 1
— 3
— 4

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1862phae.proj...280w

Preceding Star sometimes also obs.

a Delphini C. des T. 4.3.

AR. 20h 33m. 11s. An. var. 2s.8 N. P. D. 74° 34'.5 An. var. -0'.21

III. E.

1862 Sept. 8
— 25
1863 Aug 18
~~1864 Jun 6~~
1864 Aug 8
Sept 15
— 16
Nov 10
1865 Oct. 9

III. W.

1862 Sept 29
Oct 7
— 8
1864 Sept 6
Oct 5
— 25
Nov 1
— 2
— 3
1865 Oct 24

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1862phae.proj..280W

B.J.

a Cygni .. 21.

R. $20^h\ 36^m\ 42^s$ An. var. $2^s.0$ N.P.D. $45^\circ\ 12'.9$ An. var. $-0'.21$

III. E.

1862 Sept 25	−12.	
1863 July 18	−09.	
Sept. 2	−04.	
— 14		
— 22	+10.	
— 23	+07.	
— 28	−01.	
1864 June 6		
July 29	+02.	
Aug 7	00.	
Nov 10	−05.	
Dec 8	+01.	
~~— 20~~		−013 10

III. W.

1862 Sept 29	−02.	
Oct. 12	00.	
— 18	+04.	
1863 Aug 12		
Sept. 7		
Nov 14		
Dec 1	00.	
1864 Oct. 10	+06.	
— 25	−06.	
Nov 1	−03.	
— 3	−04.	
— 4	−02.	
Dec 20	+09.	−009 10
		±036 10

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1862phae.proj..280W

74 ~~Orionis~~ Draconis – 6.

Tr. 20h. 37m. 20s. An.var. –3s.2 N.P.D. 9° 23'. 9 An.var. –0'.21

III. E.	1862 Sept. 8		✓
	— 25		
	1863 June 5		
	July 29		
	Aug 14		
	Sept. 5		✓
	— 17		
	— 21		
	1864 June 6	1w	
	Sept 15	3N	✓
	— 16		✓
III. W.	1862 Aug 11		✓
	Sept 29		
	Oct. 7		
	— 8		
	1864 Sept 6		✓
	— 9		✓
	Oct 5		✓
	— 7		✓

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1862phae.proj..280W

2 Cygni. — 3.2.

AR. 20h 40m 35s An.var. 2s.4 N.P.D. 56° 32'.9 An.var. -0'.22

III. E.

1862 Sept. 8
— 25
1863 Jan 5
May 14
Sept 14
— 17
— 28
1864 June 6
Sept 15
— 16

III. W.

1862 Aug 11.
Sept 29
Oct 7
— 16
1863 Nov 4
19
Dec 1
1864 Sept 6
Oct. 7
— 10

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1862phae.proj...280w

7 Cephei. — 4.3.

R. $20^h\ 42^m\ 28^s$ An.var. $1^s.2$ N.P.D. $28°\ 42'.0$ An.var. $-0'.23$

III. E.

1862 Sept. 8
— 25
1863 Aug 14
— 18
Sept 17
— 23
1864 June 6
Sept 15
— 16

III. W.

1862 Aug 11.
Sept 29
Oct. 2
— 8
1863 Nov 19
Dec 1
1864 Sept 6

6 Ursæ majoris. — 6.

R. $20^h\ 111^m\ 40^s$ An.var. $+5^s.2$ N.P.D. $-24°\ 52'.1$ An.var. $-0'.22$.

III. W. 1863 Nov 19
1864 Sept 6
Oct. 10
Nov 1

III. E. Sept 24 1862.
Nov 14 " 63
Dec 17 "
June 6 1864
Sept 15 "
— 16 "
Nov 10 "

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1862phae.proj..280w

N.A.

32 Vulpeculæ. — 5.6.

R. 20h 48m 38s An.var. 2s.6 N.P.D. 62° 28'.1 An.var. -0'.22

III. E.	1862 Sept. 10	+02.				
	25	-01.				
	Nov 4	~~02~~				
	1863 June 5	-07.				
	23	00.				
	Aug 14	-03.				
	16	-13.				
	Sept. 15	+05.				
	17	+01.				
	23	+15.				
	28	-02.				
1864 May 1	1864 ~~June 10~~	-02.				
	Aug 8	-03.				
	Sept 16	-08.				
	30	-01.				
			-012	14		
III. W.	1862 Aug 11.	-03.				
	Sept 29	-02.				
	Oct 4	+06.				
	18	+08.				
	1863 May 12	+01.				
	Nov 14					
	19	-04.				
	1864 Sept 5	-04.				
	Oct. 7	-10.				
	10	-06.				
	Nov 3	-02.	-016	10		
			-014	24		
			±036	10		

76 Draconis — 6.

A. 20h 52m 23s An. var. -3s.9 N.P.D. +7° 59'.2 An. var. -0'.23.

IU.E. 1863 June 5
Aug 14
16
Sept 5
1864 Sept 23
1864 June 6 2n
Sept 16

IU.W. 1863 Nov 19
1864 Sept 16
Oct. 7
Nov 3

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1862phae.proj..280W

— Observed a good deal in 1865 —

Supp. obs both

N. A.

61 Cygni. — 5.6.

Æ. 21h 0m 40s An. var. 2s.7 N.P.D. 51° 55'.9 An. var. -0'.29.

III. E.	1862 Spt 8	+07.	
	10	+09.	
	25	+17.	
	Nov 4	+06.	
	1863 Jun 5	00.	
	— 23	+09.	
	July 29	+09.	
	Aug 3	+21.	
	— 14	+07.	
	— 18	+04.	
	Sept 2	+11.	
	— 23	+13.	
	— 28	+01.	
	— 30	+06.	
		114 14	
+088 13	~~1864 Jun 6~~		
	1864 July 29	+05.	
	— 30	00.	
	Sept 10	+11.	
	— 15		
	— 16	+05.	
	— 30	+16.	
	Nov 10	00.	
	— 11	+03.	
	— 19	+06.	
		96 8	
		.073 22	
III. W.	1862 Aug 11.	-01.	
	Spt 6	+05.	
	— 29	+04.	
	Oct 7	+07.	
	— 8	+12.	
	1863 Aug 12	+15.	
	Nov 4		
+069 7	19	+06.	
	1864 Sept 6	+02.	
	Oct 7	+06.	
	— 10	+01.	
	— 17	+07.	
	Nov 1	+03.	
	— 3	-06.	
		+047 13	
		+063 35	
		±036 106	

$\underline{\theta^2}$ Ursæ majoris. Sp. 5.

Tr. 20h 58m 7s An. var. +5s.4 N.P.D. -22° 18'.3 An. var. -0'.24

III. E. 1862 Spt 25, 1863 Aug 14, Sept 30, 1864 Jun 6 25, Sept 10, — 16

III. W. 1862 Oct 7, 1863 Nov 19, 1864 Oct 7, — 10, Nov 3

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ζ Cygni. — 3.

N. A.

R. 21h 7m 1s An. var. 2.s5 N. P. D. 60° 20′. 5 An. var. -0′.24

		4	−	
III. E.	1862	Sept. 10	−05.	
		— 25		
		Nov 4	+06.	
	1863	Jan 5	+07.	
		May 14	−06.	
		Sept. 4		
		— 17	−04.	
		— 23	+09.	
		— 28	00.	
		~~Jan 6~~		
	1864	July 28	+08.	
		May 1	+06.	
		Sept 10	+12.	
		— 16	−07.	
		— 17	−04.	
		Nov 11	−06.	
		Dec 8	−11.	+0014 14
III. W.	1862	Sept. 4	−05.	
		— 29	−06.	
		Oct 5	−03.	
		— 16	−09.	
	1863	Nov 14		
		— 19	−02.	
	1864	Sept 6	−06.	
		Oct 7	+10.	
		— 10	−01.	
		— 17	−06.	−031 9
				−010 23
				± 048

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a Cephei — 3.2.

R. 21h 15m 16s An.var. 1.s4 N.P.D. 28° 0′ 2 An.var. -0′.25

III. E.

1862 ~~Apl 7 ep~~
1862 Sept 25
1863 June 29
~~May 18~~
~~Sept. 17~~
— 23 +
— 28 +
1864 June 6
~~May 1~~
~~Sept 10~~
— 15
— 16
— 17

III. W.

1862 Sept 29 +
1863 May 12
Nov 4 +
— 19
~~Dec 1~~
1864 Oct. 10

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β Aquarii. – 3.

R. 21h 24m 14s An.var: 3s.2 N.P.D. 96° 10′.8 An.var: -0′.26

III. E.	1862 Nov 4	-20.	
	1863 Sept 17	+02.	
	— 28	-11.	
	~~1864 Nov 6~~		
	1864 Sept 15.		
	— 16	+06.	
	— 17	2 Neg.	
	Nov 10	-01.	
	— 11	+07.	
	— 25	-05.	
	— 29	+04.	
	Dec. 8	+13.	-006 9
	~~1865 Nov 14~~		
III. W.	1863 Dec 10	+06.	
	1864 Sept 6	-02.	
	— 7	-05.	
	Oct. 7	+09.	
	— 10	+06.	
	Oct 17	+17.	
	Nov 3	-63.	
	Dec 20	+22	+062 8
	1865 Nov 14		+026 17
			±065 1 obs

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119 Cephei B BAC 7484. - 7

Tr. 21h 24m 33s An. var. -4s.4 N. P. D. 6° 20'.1 An. var. -0'.26.

III. E.

1862 Spt. 10.
— 23 ✓
1863 Jun 23
July 29
Aug 14
— 16
Spt. 4
— 5 ✓
— 17
1864 Aug 1 ✓
Nov 16 ✓

III. W.

1862 Aug 20.
Spt. 4 ✓
— 29
1863 Spt. 17
Nov 19
— 25

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B.J.

β Cephei. — 3.

AR. 21h 26m 51s An. var. 0s.8 N.P.D. 20° 3'.0 An. var. −0'.26

III. E.

1862 Spt. 10
— 23
Nov 4
1863 Aug 18
Spt. 17
1864 June 6
Sept 10
~~— 16~~
— 17
Dec 8

III. W.

1862 Spt. 4
1863 Nov 19
— 25
Dec 1
1864 Sept 6
— 7
Oct 7
— 10

Sp 1564 2p . . . . . 6.

AR. 21h 30m 17s An. var. +5s.3 N.P.D. −20° 8'.0 An. var. −0'.26

III. E. 1863 Spt 17
1864 Spt 16
Nov 16

III. W. 1863 Nov 25
Dec 1
1864 Oct 7
— 10

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1862phae.proj..280W

Lee Ar 1578

γ Capricorni. – 4.3.

Æ. 21h 32m 23s An.var. 3s.3 N.P.D. 107° 17'.3 An.var. -0'.27

Ill. E.

1862 Spt. 10
— 23
Nov 4
1863 Spt. 17
1864 June 6
Sept 10
— 16
— 17
Nov 10
— 16
— 27
1865 Oct 6

Ill. W.

1862 Spt 4
1863 Nov 25
Dec 1
1864 Sept. 7
Oct. 7
— 10
— 17
1865 Sept 30.
Oct. 3

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1862phae.proj..280W

N.A.

ε Pegasi. — 23.

AR. 21h 37m 22s An. var. 3s.0 N.P.D. 80° 45'.6 An. var. −0'.27

III. E.	1862 Spt. 10	+.04	
	— 23	+.02	
	1863 Jan 23	−.09	
	Spt. 17	+.04	
	1864 Sept 10	−.10	
	— 16	−.05	
	— 17	+.03	
	Nov 10	~~−.08~~	
	— 11	~~−.13~~	−036 9
	1865 Oct. 10		
	11		
	12		
III. W.	1862 Spt. 4	+.10	
	Oct 7	−.03	
	1863 Nov 25	+.01	
	Dec 1	−.03	
	1864 Sept 6	+.17	
	— 7	−.06	
	Oct. 7	−.07	
	— 10	−.05	
	— 17	.00	+004 9
			−016 18
			~~±030~~
		±050	10 by

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1862phae.proj..280W

δ Capricorni. — 3.

Ider. 5. ? omitted in Hawkinsforms of that Kern

Æ. 21h 39m 22s An. var. 3s.3 N.P.D. 105° 45'.4 An. var. −0'.27

Ill. E.
1862 Spt. 10
— 23
1864 Sept 10
— 16
— 17
Nov. 27
Dec 1
— 8
1865 Oct. 11

Ill. W.
1862 Spt. 4
1863 Nov 25
Dec 1
1864 Sept 7
Oct. 7
— 10
— 17

υ Ursæ majoris. s.p.

Tr. 21h 41m 5s An. var. +4s.4 N.P.D. −30° 18'.6 An. var. −0'.28

Ill. E. 1864 Sept 10
— 16 3m
— 17
Nov 27

Ill. W. 1862 Oct 7
1863 Nov 25
1864 Sept 7
— Oct. 7
— Oct. 10
— Oct 17

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1862phae.proj..280W

N.A.

16 Pegasi. – 5.6.

R. 21h 46m 44s An. var. 2s.7 N.P.D. 64° 43'.7 An. var. -0'.28

III. E.	1862	Sept. 10	+.05	
		— 23	+.10	
		Nov 4	+12	
	[1863	June 29]		
		July 29	.00	
		Oct 19	−.08	
	1864	Sept 18	−06	
		~~Sept~~ 16	+02	
		— 29		
		Nov 10	Hat	
		— 11	~~+08~~	
		— 30	+06	
		Dec 8	−05	
				+01h 11

III. W.	1862	Sept. 4	−.03	
		Oct. 7	.00	
	1863	Aug 12	+.07	
		Nov 3	+.12	
		— 25	+.01	
		Dec 7	+.03	
	1864	Oct. 7	+ 08	
			− 08	
		— 10	−01	
		— 11	−07	
		— 17	+09	
		Dec 9	2w −09	+010 12
	1865	Jan 4		
				+012 23
				±050 10h

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1862phae.proj..280w

a Aquarii. B.7. – 3.

Æ. 21h 58m 39s An. var. 3s.1 N.P.D. 90° 59'.6 An. var. 0'.29.

III. E.	1862 Spt. 10	+10.		
	— 23	+04.		
	Nov 3			
	— 4	00.		
	~~Dec 10~~	−05.		
	1863 July 29	+02.		
	Sept. 29	00.		
	~~Dec 7~~			
	1864 Sept 10	−02.		
	— 16	00.		
	— 17	+02.		
	— 26	−14.		
	— 29	−08.		
	Nov 10			
	Nov 11	+02.		
	— 14	+03.		
	— 16	−17.		
	— 25	−07.		
	— 29	−04.		
	— 30	−03.		
	Dec 1	−01.		
	— 8	+01.		
			−018	19
III. W.	1862 Spt. 4	−02.		
	Oct 7	−10.		
	1863 Nov 2	−04.		
	— 3	+10.		
	— 25	−02.		
	Dec 7			
	Sept 7	+06.		
	1864 Oct. 7	−04.		
	— 10	−01.		
	— 11	+02.		
	— 17	+20.		
	Dec 9	−02.	+012	11
			−007	30
		±.042	10 obs	

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1862phae.proj..280w

4 Pegasi – 4

R. 22h 0m 33s An. var. 2.s 8 N.P.D. 65° 19′.9 An. var. −0′.29

III. E.

1862 Sept. 10
— 23
Nov 4
Dec 14
1863 Sept. 4
1864 Sept 10
— 16
— 17
— 26
— 29
— 30 2w
Nov 11
— 16
— 27
— 30
Dec 1

III. W.

1862 Oct. 7
1863 Nov 25
Dec 7
1864 Oct. 7
— 11
— 17
Dec 9

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1862phae.proj..280w

ζ Cephei. C. des T. — 4.3.

AR. 22h 6m 2s . An. var. 2s.1 N. P. D. 32° 29'.0 An. var. −0'.29

Ill. E.	1862 ~~Apr 7 3p~~
	Sept 10
	— 23
	~~Dec 11~~
	1863 Jun 29
	— 30
	July 22
	Sept. 4
	1864 Sept 10
	Nov 10
	— 11
	— 30
	Dec 8
Ill. W.	1863 Nov. 2
	— 3
	— 25
	Dec 7

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1862phae.proj..280W

N.A

O Aquarii. – 4.5.

R. 22h 9m 30s An. var. 3.2 N.P.D. 98° 28'. 4 An. var. -0'.30

Ill. E.

1862 Sept. 10	+14	
— 23	+05	
Nov 3		
Dec 14	-08	
1864 Sept 10	-02	
— 16	+14	
— 17	+06	
— 30	+06	
Nov 10	+08	not good
— 11	+06	
— 25	±02	
— 29	-02	
— 30	+04	
Dec 1	-05	
— 6	+02	.026 14

Ill. W.

1862 Sept 4/3	00	
1863 Nov 3	+02	
	+03	
Dec 7		
1864 Oct. 11	+07	.030 4
1865 Oct. 23.		
Nov. 9		

+027 18
±041 10b1

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1862phae.proj..280w

To Camel H Sp.

BAC 3528. – 5.

Tr. 22h 13m 46s An. var. 8s.1 N.P.D. – 6° 44'.3 An. var. – 0'.30

Ill. E.

1862 Spt. 10
— 23
Nov 3
Dec 11
1863 Sept 29
1864 Sept 16 ✓
— 17 ✓
— 30 ✓

Ill. W.

1862 Spt. 4
Oct 5
1863 Nov 3 ✓
[Dec 2]
Dec 7 ✓
— 10 ✓
1864 Oct 7 ✓
— 11 ✓
1865

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1862phae.proj..280W

γ Aquarii. C. des T. 4.3.

R. 22h 14m 29s An. var. 3s.1 N.P.D. 92° 5'.2 An. var. −0'.30

III. E.

1863 Oct 22
1864 Sept 10
— 26
Nov 10
— 11
— 14
— 30
Dec 1
— 8
1865 Oct 6

III. W.

1864 Oct. 17
Dec 9
1865 Sept 11
— 19
Oct. 23
— 25
— 30
Nov. 1
9

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1862phae.proj.: 280w

σ Aquarii. — 5.4

R. $22^h\ 23^m\ 17^s$ Am. var. $3^s.2$ N. P. D. $101^\circ\ 23'.3$ Am. var. $-0'.31$

Ill. E.

1862 Sept. 10
— 23
Nov 3
— 4
Dec 11
1863 Oct 22
1864 Sept 10
— 16
— 26
— 27
— 30
Nov 10
— 11
— 14
— 30

Ill. W.

1862 Sept. 4
Oct 30
1864 Oct. 7
— 11
— 17
Dec 9

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1862phae.proj..280W

η Aquarii. – 4.3.

N.A.

AR. 22h 28m 13s An. var. 3s.1 N.P.D. 90° 50'.0 An. var. -0'.31

Ill. E.	1862 Sept 10	-01		
	Nov 3			
	~~Dec 11~~	+02		
	1863 Sept 29	+02		
	~~1863~~ Oct 22	-11		
	1864 Sept 10	+02		
	— 16	+07		
	— 17	-15		
	— 26 (2w)	-03		
	— 27	+05		
	— 30	+03		
	Nov 10	+07		
	— 14	+07		
	— 30	-01		
	1865 ~~Oct 6~~ Dec	+03		
	~~Dec 1~~		+005	13
	Oct 12			
	— 13			
	Dec 1			
Ill. W.	1862 Oct. 30	+09		
	1864 Oct. 11			
	~~Dec~~ Dec 9	+06	+075	2
	1865 Oct. 23			
	— 24			
	Nov. 9			
	— 16			
			+014 /15/	
			±045 /1 obj/	

Camelop Bode 3p
MW 1863 Nov 3
Dec 9

19 3
1864 Sept 10 4w
— 16 4w
— 17 Lw
Nov 11 4m
— 14

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1862phae.proj...280W

N. A.

ζ Pegasi. – 3.4.

R. 22h 34m 32s Am. var. 3s.0 N.P.D. 79° 53′.6 Am. var. 0′.31

III. E.	1862 Sept 23	+12	
	Nov 3		
	— 4	−01	
	Dec 11		
	1863 Jan 13	+04	
	1864 Sept 10	+03	
	— 16	−06	
	— 17	−01	
	— 26	+06	
	— 27	+02	
	— 30	+05	
	Nov 10		Am
	— 11	+05	Am
	— 14	+06	
	— 30	−02	
	Dec 1	+05	+029 13

III. W.	1862 Sept 4	+05	
	1863 Dec 15	+11	
	— 23	+03	
	1864 Oct 7	00	
	— 11	+13	
	— 26	+03	
	Dec 9	+13	+069 7
			+043 20
			±033 10b7

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1862phae.proj..280W

η Pegasi. — 3.

R. $22^h\ 36^m\ 29^s$ An. var. $2^s.8$ N. P. D. $60^\circ\ 30'\ 3$ An. var. $-0'.31$

III. E.

~~1861 Dec 20.~~
1862 Sept 10
— 27
Nov 3
— 4
~~Dec 18~~
1863 Jan 1
1864 Sept 10
— 16
— 17
— 26
— 27
Nov 10
— 11
— 30
~~Dec 8~~

III. W.

1862 Sept. 4
Oct. 30
1863 Nov 3
Dec 15
— 23
1864 Oct. 7
— 11
— 17
— 21
— 26

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1862phae.proj..280w

ξ Pegasi. – 5.4

R. 22h 39m 45s An.var. 3.0 N.P.D 78° 32′.3 An.var. -0′.31

Ill. E.

1862 Apl 10
— 23
Nov 3
Dec 10
1864 Sept 10
— 16
— 17
— 26
— 27
— 30
Nov. 14
— 30
Dec 8

Ill. W.

1862 Sept 4
1863 Dec 15
1864 [illegible]
— 11
— 17
— 21
— 26
Nov 4
Dec 9

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1862phae.proj..280W

S Aquarii. 3.

R. 22h 47m 16s An.var. 3s.2 N.P.D. 106° 33'.5 An.var. -0'.32

Ill. E.

1862 Nov 3
1863 Sept. 17
— 24
— 28
1864 Sept 26
— 30
Nov 10
— 14
— 29
— 30
Dec 1
— 8
1865 Sept. 17
13
Oct. 6
— 12

Ill. W.

1864 Oct 11
— 17
— 21
— 25
Nov 4
1865 Sept. 29
Oct. 13

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1862phae.proj..280W

Zy Cephei H

BAC 7990. – 5.

Tr. 22h 47m 55s An.var. 0.0 N.P.D. 7 35.0 An.var. –0.'32.

Ill. E.

1862 Spt. 23
Nov 4
Dec 15
— 20
1863 Jan 1 ✓
June 30
July 20
— 22
Spt. 17
— 22
— 23
— 28 ✓
— 29
Oct 28
1864 Sept 10 ✓
— 16 ✓
— 27 ✓
— 30 3w
Nov 11 ✓ Am

Ill. W.

1862 Spt. 4 ✓
~~Oct 30~~
1863 Apr 12 ✓
Dec 9 ✓
— 10 ✓
— 15 ✓
— 21 ✓
— 23 ✓
1864 Oct 17 3w
Dec 9 [ ]

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1862phae.proj..280W

B. 7.

a Piscis Austr. – 1.2.

AR. 22h 49m 58s An. var. 3s.3 N.P.D. 120° 21'.5 An. var. –0'.32

Ill. E.	~~1861 Dec 20~~		
	1862 Sept 10	+10	
	— 23	–09	
	Nov 4	+04	
	Dec 11	+02	
	— 17	+09	
	1863 Jan		
	Sept 22	+06	
	— 24	+12	
	— 28	+01	
	— 29	+02	
	Oct 22	–07	
	1864 Sept 16	–06	
	1864 Sept 16	+03	
	— 26	+15	
	— 27	+05	
	— 30	–02	
	Nov 10	–08	+038(16)
	— 11	+04	
	— 14	–04	
	— 22	+08	
	— 29	+06	
	— 30	–14	
	Dec 1	–02	
	— 8	–07	+017 24
Ill. W.	1862 Sept 4	+05	
	Oct 30	+05	
	1863 Oct 28	–04	
	Dec 10	+03	
	— 15	+11	
	— 23	–11	
	1864 Oct 7	+11	
	— 11	+13	
	— 17	+19	
	— 21	+02	
	— 25	+05	
	— ~~26~~		
	Nov 4	+13	+060 (12)
	Dec 9	–07	+055 13
	— 30	+08	
	Jan 11	[illegible]	
		[illegible]	+042 39
	[illegible]	+045 13	
	[illegible]	[illegible]	
	[illegible]	[illegible]	
	[illegible]	[illegible]	
	[illegible]	[illegible]	

β Ursæ majoris – 2.3 (β des T.)

AR. 22h 53m 26s – An. var. +3s.7 N.P.D. –32° 52'.4 An. var. 0'.32

Ill. E. 1863 Sept 17 1w.
30
1864 Sept 10
–16
–24 3w 1w

Ill. W. 1863 Nov 25
Dec 9
– 23
1864 Oct 7
– 25
– 26

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1862phae.proj..280W

Pisium

β ~~Pegasi~~. – 2.3.

AR. 22h 56m 48s An. var. 3.s1 N.P.D. 86° 55'.7 An. var. -0'.32

Ill. E.

1862 Spt 23
~~Dec 20~~
1863 Jan 1
Sept 30
1864 Spt 10
— 26
— 27
— 30
Nov 30
Dec 8

Ill. W.

1862 Spt. 4
Oct 30
1863 Oct 28
Nov 26
Dec 15
— 23
1864 Oct 7
— 11
— 17
— 21
— 25
— 26

α Ursæ majoris. – 2. B.7.

AR. 22h 55m 8s An. var. +3.s8 N.P.D. -27° 30'.0 An. var. -0'.32

Ill. E. (See also above pole)

1863 Jan 1
Spt. 17
30
1864 Spt 10
— 16
— 26
— 27
— 30
Nov 10
— 11

Ill. W. 1863 Nov 26
Dec 9
— 15
— 23
1864 Oct. 7
— 17
— 25
— 26

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1862phae.proj..280W

B. J.

a Pegasi. – 2.

Æ. 22h 57m 50s An. var. 3s.0 N. P. D. 75° 32'.5 An. var. –0'.32

III. E.	1862 Spt 23	–05.
	Nov 4	–06.
	Dec 11	–10.
	— 12	–12.
	— 29	–06.
	1863 Jan 1	
	[Jan 30]	
	Spt 17	–04.
	— 29	+09.
	— 30	+01.
	1864 Spt 10	–10.
	— 16	–02.
	— 17	–04.
	— 26	–09.
	— 27	–03.
	— 30	–11.
	Nov 10	+04
	— 11	~~+09~~
	— 14	–02
	— 19	–06
	— 22	–07.
	— 30	–11
	Dec 1	+01.
	— 8	–05.
	~~Dec~~	

III. W.	1862 Spt. 4	–05.
	Oct. 30	–13.
	1863 Jan 17	–04.
	Oct 28	–11.
	Nov 20	
	Dec 9	
	— 15	+03.
	— 23	–05.
	1864 Oct. 7	–11.
	— 11	–06.
	— 17	–09.
	— 21	–12.
	— 25	+04.
	— 26	–14.
	Nov 4	+01.
	Dec 9	–07.
	— 30	+18
	1865 Jan 11	+32
		–.053 mod
		±.040 1 obs

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1862phae.proj..280W

N. A.

γ Piscium. - 4.

AR. 23h 9m 58s An. var. 3.s1 N. P. D. 87° 28'.6 An. var. -0'.33

III. E.	1862 Sept. 23	00.	
	Dec 29	+03.	
	1863 Sept 22	00.	
	— 24	+04.	
	— 28	+09.	
	— 29	+06.	
	— 30	+07.	
	Oct 22	+12.	
	1864 Jan 9	-02.	
	Sept 16	+04.	
	— 17	+07.	
	— 26	+04.	
	Nov 10	+09.	AM
	— 11	+13.	AM
			+054 14±013
III. W.	1862 Oct 30.	-01.	
	1863 Oct 29	-16.	
	Nov 26	-12.	
	Dec 23	-04.	
	1864 Oct 21	-02.	
	— 25	+08.	
	— 26	-01.	
	Nov 4	+06.	-028 8±017
			+025 22
			±047 Pg 10 by

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1862phae.proj..280W

6'.

8' Aquarii. – 5.4.

AR. 23h 15m 40s An.var. 3s.2 N.P.D. 110° 51'.5 An.var. –0'.33

Ill. E.

1862 Sept 23.
1863 Jan 1
Dec. 26
1864 Sept 16
— 17
— 30
Nov 10
— 11
— 14
— 29
Dec 8

Ill. W

1862 Oct 30
1863 Nov 26
Dec 23
1864 Oct 10
— 21
— 26
Nov 4
Dec. 9

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1862phae.proj...280w

N.A.

κ Piscium. — 5.4

R. 23h 19m 48s An. var. 3s.1 N.P.D. 89° 30′.3 An. var. −0′.33

III. E.	1862	Sept 23	+02	
		Oct 28	+13	
	1863	Sept 22	+04	
		— 23	−05	
		— 30	−05	
		Oct 22	+06	
		Dec. 26	+02	
	1864	Sept. 16	+11	
		— 17	+06	
		— 26	00	
		Nov 19	+08	
		— 29	−05	
		Dec 1	+04	+024 13
III. W.	1862	Oct. 30		
	1863	Nov 26	+01	
		Dec 23	−02	
	1864	Oct 10	+02	
		— 21	−03	
		— 25	+03	
		— 26	+05	
		Nov 4	−01	+007 7
	1865	Oct. 3		

+018 1m 20
±030

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1862phae.proj..280W

2a2 Camel B sp.

BAC 3906. – 6.

Tr. 23h 21m 56s An. var. 4s.6 N.P.D. −8° 6'.5 An. var. −0'.33

III. E.	1862 Sept. 23		
	Dec 28		
	— 29	✓	
	1863 Sept 30		
	Dec. 26	✓	
	1864 Sept 16	✓	
	— 17	✓	
	— 26	✓	
	Nov 10	✓	~~Am~~
	— 11	✓	Am
	— 14		
	— 19		Am
	Dec 1		
III. W.	Oct 29	✓	
	1863 Nov 2	✓	
	— 3	✓	
	— 4	✓	
	Dec 10	✓	
	— 21	✓	
	— 23	✓	
	1864 Nov 4		
	Dec. 9		

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1862phae_proj_280w

Δx and +.013 by obs. (24) up to middle of 1864 This is indep't of Polarity

39 Cephei H.

BAC 8213. – 6.

Tr. 23h 27m 50s An. var. 0s.1 N.P.D. 3° 27'.6 An. var. –0'.33.

				Δx and δ
III. E.	1862 Sept 23			+033 – x
	Dec 28	✓	–	+015 dble colum } 3
	— 29	✓	–	+020 " "
	1863 Jan 1	✓		
	Sept 30	✓		+050 dble Pol
	Dec. 26	✓	–	–030 + x
	1864 Sept 16	✓		
	— 17	✓		
	— 26			
	— 30			
	Nov 10	✓		
	— 11	Am		
	— 14			
	— 19	Am		
III. W.	1862 Sept 29			+.126 – x
	1863 Aug 12			
	Nov 2	✓		–041 + x
	— 3	✓	–	–033 Dl Pol
	— 4	✓	–	+015 "
	— 23	✓	–	–026 "
	Dec 21	✓		–084 + x
	— 23	✓		+019 + x
	1864 Oct 10	✓		
	— 11			
	Nov 4			~~+029½ – x~~ +019
	Dec 30			~~–034 + x~~ +014
				~~+022 6~~ }
				~~+008 7~~

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1862phae.proj..280W

N.A.

1 Piscium. — 4.5.

AR. 23h 32m 49s Am. var. 3s.1 N.P.D. 85° 7′ 6 Am. var. −0′.32

III. E.

1862	Nov 3	
1863	Sept 22	+07
	— 28	−05
1864	Jan 9	−04
	Sept 16	−02
	— 17	+05
	— 26	+06
	— 30	−09
	Nov 10	−02
	— 11	00
	— 14	−10
	— 19	−08
	— 29	00
	Dec 1	−05

−021 13

III. W.

1862	Sept. 29	+05
1864	Oct 10	+07
	— 11	−16
	Nov 4	−06
	Dec 20	−01
	— 30	+05

± 045

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1862phae.proj : 280w

γ Cephei. — 3.4.

R. 23h 33m 40s An. var. 2s.4 N.P.D. 13° 8′.6 An. var. -0′.33

Ill. E.

~~1861 Dec 29.~~
1862 ~~Sept 23~~
Dec 28
— 29
1863 Jan 2
July 22
~~Sept~~ 30
Dec. 26
— 30
1864 Jan (2)

Ill. W.

1862 Sept. 29
1863 Jan 5
— 17
Nov 3
— 4
Dec 21

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1862phae.proj..280W

P. XVIII 192. [δ Sculptoris]

Piscis Aust. – 4.5.

AR. 23h 41m 41s An. var. 3.1s N.P.D. 118° 53'.9 An. var. –0'.33

Ill. E.

~~1861 Dec 20~~
~~— 28~~
1863 Dec. 26
1864 Sept 26
— 30
Nov. 10
— 11
— 14
— 19
— 29
— 30
Dec 1

γ Ursæ majoris 2.3 B.7.
AR. 23h 46m 30s An. var. + 3.2s N.P.D. – 35° 31'.9 An. var. – 0'.33
Ill. E.
Ill. W.
See also above pole for early obs. v. p.
1863 Nov. 20
Dec. 30
1862 Dec. 29
1863 ~~Dec 26~~
~~Nov 30~~
1864 Nov 11
— 19

Ill. W.

1863 Nov 23
1864 Oct 11
— 17
Nov 4
Dec 20
— 30

Radol. 6202 6.7
AR. 23h 45m 19s An. var. + 2.7s N.P.D. + 13° 10'.2 An. var. – 0'.33
Ill. E. 1864 Sept. 30
Ill. W. 1864 Oct 17
Dec 20

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1862phae.proj...280W

ω Piscium. — 4.

M.A.

AR. 23h 52m 11s An. var. 3.s1 N.P.D. 83° 54.' 4 An. var. −0.'33

III. E.

~~1861 Dec 20.~~	
1863 Sept 28	+14
1863 Jan 6	.00
— 9	−04
Nov 10	−05
— 11	−04 Am
— 14	−18
— 19	00
— 30	+02
Dec 5	−03
— 8	−02
	−018 11

III. W.

Oct. 18 1862	−14
1863 Nov 2	+08
1864 Oct 11	−01
— 17	−08
Nov 4	+01
Dec 19	+01
Dec 20	−18
— 30	+08
	−029 8
	−028 18
	±050 1 obs

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1862phae.proj..280W

BAC 8336. – 7.

Tr. 23h 53m 4s An. var. 2.s5 N.P.D. 4° 4′.3 An. var. −0′.33

III. E.

1862 Sept 23 ✓
Nov 3
Dec 20 ✓
— 28 ✓
1863 Feb. 26
— 30
1864 (Jan 2)

III. W.

1862 Sept 29 ✓
— Oct 18
1863 Nov 4 ✓
Nov. 23 ✓
1864 Oct 17 3N ✓

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1862phae.proj - 280W

2 Ceti. C. des T. 4.5.

R. 23h 56m 37s An.var. 3.s1 N.P.D. 108° 6'. 6 An.var. -0'.33

III. E.

~~1861 Dec 2.~~
1862 Sept. 23
Dec 28
1863 Dec. 26
1864 Jan 6
— 9
Sept 30
Nov 10
— 14
— 19
Dec 5
— 8

III. W.

1863 Nov. 2
1864 Oct 11
— 17
— 25
Nov 4

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1 Draconis Her.

M E.

1862 Apr 19
— 25
Spt 10 sp.
— 23 sp.
— 25 sp. ✓
Nov 4
1863 Jan 23 sp
— 29 sp
July 29 sp
Aug 14 sp
— 18 sp
Spt 4 sp
— 5 sp ✓
— 17 sp
1864 Mch 12
— 16 — 19
Apr 15
— 22
7-9-16-
Jun 6 sp
Spt 10 sp ✓
— 16 sp ✓
Nov 10 sp ✓

1864 Apr 11 ✓
1865 Mch 4
— 6
— 25 ✓
— 27
— 28
~~Ap~~

M W.

1862 Aug 11 sp. ✓
20 sp.
Spt 4 sp. ✓
Oct 7 sp
— 8 sp
1863 Feb 7
— 25
Mch 2
— 9
— 11
— 30
Apr 1
— 9
— 20
— 22
Aug 12 sp. ✓
Spt. 7 sp
Nov 19 sp
— 25 sp
[Dec 1 sp]
1864 Sept 7 sp
Oct. 7 sp ✓
— 10 sp ✓
— 17 sp ✓
Nov 3 sp
1865 Apr 3 ✓
— 13 ✓
— 14 ✓
— 17 ✓

1865 Apr 25 ✓
— 26

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N. A.

E Boetti (foll)

M. E.
~~1862~~

1862 May 28
Dec 10
1863 June 3
1864 May 27
— 28
— 29
— 31
June 2
— 4
— 6
— 28
— 29
July 4
— 7

M. W

1862 May 23
Aug 6.
1864 Apr 29
May 5
— 10 ~~[illegible]~~ Comp. [illegible]
— 18
— 19
June 8
— 14
— 21
— 22
— 24
[— 27]
1865 May 30
June 5

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Circumpolar-Stars J.J.C. 1879 = Aeq. 480 =

M.E.	1862 Sept. 25				
M.W.	1862 Oct. 8				

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