

KC
11366
v. 740

ZERO STARS
REDUCTION TO APPNT
PLACE

Reduction to apparent place.

Star	g23415	glegni	glepni	glepni	glepni
Date	Nov. 13	Nov. 23	Nov. 13	Nov. 23	Nov.
δ					Nov. 10 Nov. 20 Nov. 30
δ					570 45
δ					11 29
δ					336 6
δ					38 55
$\delta + a$					347 35
$\delta + a$					15 1
$\log \sin$					2000
$\log \sin$					2828
$\log \sin$					9.9272
$\log \sin$					9.9272
$\log \sin(\delta + a)$					9.3325
$\log \sin(\delta + a)$					1.1087
$\log \sin(\delta + a)$					9.9888
$\log \sin(\delta + a)$					9.9133
$\log \sin(\delta + a)$					1.2850
$\log \sin(\delta + a)$					9.9849
$\log \sin$					5.105-
$\log \sin$					2294
$\log \sin$					- 348
$\log \sin$					+ 9.58
$\log \sin$					2804
$\log \sin$					1.93
$\log \sin$					2224 2088
$\log \sin$					24 22.81
$\log \sin$					+ 986
$\log \sin$					16.11
$\log \sin$					2.84
$\log \sin$					2.894
$\log \sin$					5445 944
$\log \sin$					45 294

Star	42.3415		9.49pm		13.70pm		30.60pm		20.60pm		
Date	Nov. 13/40	Nov. 23	Nov. 18	Nov. 23	Nov. 23	Nov. 23	Nov. 15	Nov. 25	Nov. 20	Nov. 30	
α	21 ^m 28 ^s		21 25		21 36		22 ^m 34 ^s				
δ	59 28		45 59		56 55		1 2 54.5				
δ	11 28		11 28		11 28	11 18	11 27				
α	317 15		321 15		324 00	324 00	338 31				
δ	35 57		35 57		35 57	26 13	34 06				
$\delta + \alpha$	328 43		332 43		335 28	335 18	349 58				
$\delta + \alpha$	353 12		357 12		359 57	350 13	12 37				
$\log \tan \delta$	2293		4149		0768		2911				
$\log \sin \delta$	2941		1581		2629		3415				
$\log \cos \delta$	9.8352		9.8568		9.9232		9.9495				
$\log \cos \delta$	9.7059		9.8419		9.7371		9.6585				
$\log \sin (B+a)$	9.7154		9.6613		9.6143	9.6210	9.2404				
" δ	1.0161		1.0161		1.0161	1.0414	1.0208				
" $\cos (B+a)$	9.9318		9.9458		9.9589	9.9583	9.9833				
$\log \sin (B+a)$	9.0733		5.6889		6.9409	9.2302	9.3393				
" δ	1.2969		1.2969		1.3969	1.3028	1.2951				
" $\cos (B+a)$	9.9969		9.9995		10.0000	9.9936	9.9894				
$\log i$	7030		7030		7030	5854	6842				
$\delta + R$	2234		2234		2234	2425	2359				
I	-5.12		-4.93		-5.14	-5.49	-3.59				
II	-4.61		-1.39		-1.03	-6.25	+9.53				
$(a' - a)'$	+8.61		+16.02		+17.17	1301	29.55				
$(a' - a)''$	0.59		1.07		1.145	861	19.4				
a	21 8 29.58		21 24 39.10		21 38 55.70	2 2234	2.65				
a'	21 8 30.17		21 24 40.17		21 38 02.02	22 34 4.62					
			(24)		34 55.71	34 56.57	(49)				
I	+58.9		+52.2		+9.44	+599	+108.3				
II	+16.94		19.23		16.60	16.58	+19.26				
III	+2.56		3.51		2.76	2.10	2.20				
$P' - S$	2837		2656		2880	2867	29.79				
δ	59 27 57.0		45 58 05.20		56 54 57.50	22 62.54	82.19				
δ'	59 27 37.1		45 58 32.2		56 54 34.5	62 55.020					
					54 24.5	54 34.37					

α Androm	13	λ Andr.				Dec. 3077	α Cephei
Nov. 15	" 25	Dec 5	15	Nov. 13	Nov 23	Dec 3	Dec 14
22 56							23 7 1.885
4138							56 24 239
11 24	11 15						10 14
344 00	344 00						6 20
34 06	24 18						10 14
355 27	355 15						6 20
18 06	8 18						
9.9488							
.1265							
9.8224							
9.8736							
8.8994	8.9181						
1.0208	1.0465					1.0846	1.0946
9.9886	9.9985						
9.4923	9.1594						
1.2981	1.3038					1.3101	1.3101
9.9750	9.9954						
.6842	.5556					9910	.9910
235.9	25.04					2808	2808
-1.44	-82						
+8.26	+389						
3111	2811						
204	1.804						
2255 58.62	5662						
55 58.89	58.43						
-26	(51)						
40.86	+11.09						
+12.54	+13.23						
+3.61	3.58						
+26.61	2790						
2661							
41 37 3929	3929						
41 38 59	7.2						
+0.8	(6.0)						

Star	4601	x And.	Q Cas
Date			Nov. 16/10
δ			23 47 53.895
h			56 46 33.62
a			11 26
h_0			356 58
$h+a$			33 01
$h+a$			8 24
$h+a$			29 59
$\log \tan \delta$			1836
$\log \tan a$			9.612
$\log \tan h$			9.9224
$\log \tan a$			9.7388
$\log \sin(h+a)$			9.1646
$\log \cos(h+a)$			1.0236
			9.9953
$\log \sin(h+a)$			9.6987
$\log \cos(h+a)$			1.2958
			9.9876
$\log \sin a$			.6724
$\log \cos a$			23.75
$\log \sin h$			2.35
$\log \cos h$			18.15
$\log(a'-a)''$			44.25
$\log(a'-a)''$			2.950
a'			53.85
a'			23 47 56.895
I			10.44
II			14.41
III			2.58
IV			2.743
V			46 33.62
V			56 47 1.05

Kars

22 And.

X Cass.

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 0 2 15235
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 33 01

12 10

33 45

2115
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 9.7189

9.3238
 1.0236
 9.9901

9.7447
 1.2888
 9.9198

6724

2350
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 4254
 3.169
 15285
 0 2 18404
 (51)

+1032
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 25 5677
 08 26 2369

Nov. 10 Nov. 21 Nov. 30 Dec 10

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29 7

17 57

17 50

45 23

35 35

45 23

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.3315

99468

9.6685

9.4888

9.4861

1.0287

1.0337

9.9783

9.9780

9.8524

9.7148

1.2950

1.3011

9.8465

9.9102

7305

6256

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371

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37.71

0.25 41.65

25 41.92

.23

+8.71

8029

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1.97

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2665

62 12 50.38

50.38

62 13 14.81

218

62 13 17.03

Star	X-Coord	gleam			o leam,		
Date	Dec 20	Nov 10	Nov 20	Nov 30	Dec 18	Dec 26	Nov. 15
S		53 11					0 37 2936 47 33 3030
L		11 29	11 22		9 55	9 10	11 27
a		7 16	7 16				9 22
No		38 45	29 7		2 36	358 8	33 59
							355 8
l+a		18 45	18 38				20.49
N+a		46 01	36 23				43 21
							4 30
log tang S		.1255					0387
bc S		2220					1707
sin S		9.8034					9.8680
cos S		9.7776					9.8293
log sin(G+a)		9.5071	9.5044				9.5540
l		1.0087	1.0337		1.1044	1.1231	1.0211
cos(G+a)		9.9763	9.9766				9.9702
log sin(N+a)		9.8571	9.7732				9.8366
" h		1.2950	1.3011		1.3105	1.3103	1.2982
" cos(N+a)		9.8410	9.9058				9.8616
log c		9805.	.6256		9.6060	9.8768	.6830
							9.8768
f+E		2294	2431		2875	3009	+2361
I		438	4.61				+ 4.11
II		2329	1979				20.21
(a-q)		5701	48.71				4753
(a-a')		340	3.23				3.195
a		029 44.46	44.46				29.356
a'		029 47.86	47.71				0 37 32.551
			15				
I		946	1024				940
II		1097	1289				10.66
III		822	2.53				8.25
IV		2385					2371
S		2385	2566				34 2030
S		5310 5081	5081				47 34 2030
S'		53 11 1466	53 11 1647				(34 44.0)
			1.81				47 34 44.0

α Persei				γ Cass.				δ Persei			
Nov. 19/1800	29	Dec 8	19	Nov. 17	Dec 27	Dec 7	Dec 17	Nov. 24	Dec 7	Dec 17	
2 35 20				0 48 52.832				1 30 13.95			
48° 51'				60 0 42.50				47 58 6/1			
14 23				11 25				11 11			
38 115				12 13				22 30			
30 05				32 02				22 23			
53 08				23 38				33 41			
68 50				44 15				44 58			
.0585				2384				54 50			
1817				30 15				17 42			
9.8768				9.9376				9.8708			
9.8182				9.6887				9.8259			
9.9031				9.6030				9.7440			
1.0312				1.0262				1.0516			
9.7781				9.9620				9.9202			
9.9657				9.8437				9.8480			
9.4421				1.2994				1.3047			
13006				9.8581				9.8504			
9.5576											
.6350				.6614				.5229			
2417				2 2.88				2585			
584				7.34				693			
28.33				27.64				21.26			
62.34				5409				53.54			
4.156				3.839				3.569			
2 35 19.846				48 52.832				1.385			
2 35 24.092				0 48 56.771				1 30 4.964			
645				973				937			
543				12.36				1661			
286				2.30				1.23			
1474				24.39				22.21			
48 40 35.26				60 0 42.50				47 58 6/1			
48 40 50.00				60 1 5.19				47 58 28.2			

Star	ϕ Persi	η Cass	γ Cass	γ And.	
Dab	Dec. 27/1770	Dec 18	Dec 26	Dec 10	Dec 13
a	1 35 31.557	0 41 14.550	0 45 52.832	1 53 55.630	
s	50 1 56.7	57 7 31.21	60 0 42.80	41 41 15.21	
β	11 11	9 55	10 32	9 45	10 32
α	23 53	10 19	12 13	2 13	28 59
γ	22 23	2 36	355 8	0 44	10 15
δ					28 59
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6 Penn		1 Penn		0 Penn		2 Penn		7 Penn		C Penn	
DEC 10	DEC 13	DEC 10	DEC 10	DEC 13	DEC 10	DEC 13	DEC 10	DEC 13	DEC 10	DEC 13	
2 4 58.297		1 30 13.95	2 35 19.16		2 41 13.85		2 45 31.96		3 59 13.40		
50 27 36.23		47 58 6.11	47 40 35.26		55 24 13.58		52 13 40.98		47 21 44.39		
10 32 10 19	10 32 10 19	10 32 10 32	10 32 10 19	10 32 10 19	10 32 10 19	10 32 10 19	10 32 10 19	10 32 10 19	10 32 10 19	10 32 10 19	
31 14 81 14	22 33 38 50	38 50 38 50	40 18 40 18	40 18 40 18	41 28 41 28	41 23 41 23	69 48 69 48	59 48 59 48	59 48 59 48	59 48 59 48	
10 15 7 17	10 15 7 17	10 15 7 17	10 15 7 17	10 15 7 17	10 15 7 17	10 15 7 17	10 15 7 17	10 15 7 17	10 15 7 17	10 15 7 17	
41 46 41 33	33 05 49 22	49 09 50 50	50 38 51 55	51 42 70 20	70 07 70 07	70 07 70 07	70 07 70 07	70 07 70 07	70 07 70 07	70 07 70 07	
41 29 38 31	32 48 49 05	46 07 50 33	47 35 51 38	48 40 70 03	67 05 67 05	67 05 67 05	67 05 67 05	67 05 67 05	67 05 67 05	67 05 67 05	
0834	0450	0560	1604	1108	0359	1682	28067	9.5308			
1962	1742	1843	2452	2129	1682	28067	9.5308				
9.8843	9.8408	9.8757	9.9152	9.7848	9.7841	9.7841	9.7841	9.7841	9.7841	9.7841	
9.8038	9.8258	9.8197	9.8024	9.8025	9.7901	9.7922	9.5241	9.5316	9.5316	9.5316	
9.8235	9.8217	9.7371	9.8802	9.8788	9.8895	9.8881	9.8960	9.8947	9.8989	9.8983	
1.0847	1.0921	1.0847	1.0921	1.0847	1.0921	1.0847	1.0921	1.0847	1.0847	1.0847	
9.8727	9.8741	9.9232	9.8737	9.8150	9.8024	9.8025	9.7901	9.7922	9.5241	9.5316	
9.8211	9.7943	9.7371	9.8783	9.8578	9.8877	9.8602	9.8963	9.8755	9.9731	9.9642	
1.3053	1.3099	1.3053	1.3093	1.3099	1.3093	1.3098	1.3093	1.3099	1.3093	1.3094	
9.8746	9.8934	9.9232	9.8762	9.8408	9.8030	9.8250	9.7929	9.8198	9.5330	9.5904	
1901	0499	1901	1901	0499	1901	0499	1901	0499	1901	0499	
2742	2791	2742	2742	2791	2742	2791	2742	2791	2742	2791	
981	994	936	1050	1064	1364	1388	1234	1252	1243	1268	
21.22	19.97	16.63	23.33	22.29	27.68	26.50	26.09	25.02	28.29	27.75	
58.45	55.82	51.41	61.25	60.84	68.74	68.24	65.85	65.45	68.44	68.88	
380	385	343	4.08	4.06	4.58	4.55	4.39	4.36	4.54	4.56	
2 4 58.30	58.30 130	139 2 35	19.92 35	19.92 2 41	13.81	13.07	245 320	8.20	8.59 13.4	13.04	
2 5 22.0	2.15 130	482 2 35	14.00 2 35	23.98 2 41	18.39	18.36	2 45 7.87	7.56	3.59 18.38	18.40	
									(37)		
966	925	1018	992	809	768	765	750	766	909	982	
11.78	12.32	12.68	10.03	10.63	10.65	11.33	10.00	10.66	512	5.85	
99	71	1.04	1.02	1.74	1.88	1.64	0.90	1.69	1.05	1.26	
21.83	22.28	23.90	28.87	19.46	19.21	19.82	18.45	19.01	1026	11.48	
50 27 36.23	50 27 36.23	47 58 6.11	47 40 35.26	35.26	55.20 12.58	13.58	52.13 40.58	40.58	47 21 44.39	44.39	
50 27 58.1	50 27 58.1	50 27 58.1	50 27 58.1	50 27 58.1	50 27 58.1	50 27 58.1	50 27 58.1	50 27 58.1	50 27 58.1	50 27 58.1	
(877)	(877)	(877)	(877)	(877)	(877)	(877)	(877)	(877)	(877)	(877)	

Star	Peru	Peru	Peru	Peru	Peru	Peru	Peru	Peru	Peru	Peru	Peru
Date	Dec 18	Dec 22	Dec 18	Dec 22	Dec 14	Dec 10	Dec 13	Dec 10	Dec 13	Dec 10	Dec 10
a	2 55 23.744	2 59 43.052	3 18 33.628	23 31 48.931	5 46 42.33	4 37 11.000	4 37 11.000	4 37 11.000	4 37 11.000	4 37 11.000	4 37 11.000
b	52 59 41.94	40 27 42 59 29 41.9	42 32 54.86	6 43 29.29	56 31 20.95	56 31 20.95	56 31 20.95	56 31 20.95	56 31 20.95	56 31 20.95	56 31 20.95
c	9 55	9 33	9 55	9 33	10 14	10 32	10 19	10 32	10 19	10 32	10 32
d	4 3 51	44 56	49 36	49 36	352 56	56 31	56 31	69 18	69 18	72 58	72 58
e	2 36	258 52	2 36	258 52	6 20	10 05	7 17	10 05	7 17	10 05	10 05
f	53 46	54 29	59 31	59 09	383 10	67 03	66 50	79 50	79 37	83 30	83 30
g	46 27	43 48	52 12	48 28	359 16	66 36	63 48	79 23	76 35	83 03	83 03
h	1229	9.9307	2296	9.9628	2512	1795	2429	2429	2429	2429	2429
i	2205	1186	2993	1327	3106	2583	3843	3843	3843	3843	3843
j	9.7023	9.8121	9.9352	9.8307	9.9406	9.9212	9.9380	9.9380	9.9380	9.9380	9.9380
k	9.7794	9.8814	9.7057	9.8673	9.6894	9.7417	9.6957	9.6957	9.6957	9.6957	9.6957
l	9.9067	9.9106	9.9354	9.9337	9.9642	9.9635	9.9917	9.9917	9.9917	9.9917	9.9917
m	1.1044	1.1139	1.1044	1.1139	1.0946	1.0847	1.0924	1.0847	1.0924	1.0847	1.0847
n	9.7716	9.7641	9.7052	9.7099	9.9993	9.5910	9.5948	9.2868	9.2868	9.2868	9.2868
o	9.8602	9.8402	9.8777	9.8742	9.9627	9.9529	9.9925	9.9880	9.9880	9.9880	9.9880
p	1.3105	1.3106	1.3105	1.3106	1.3101	1.3093	1.3099	1.3093	1.3099	1.3093	1.3093
q	9.8882	9.8884	9.7874	9.8215	9.5989	9.6450	9.2654	9.2654	9.2654	9.2654	9.2654
r	9.6060	9.2428	9.6060	9.2428	9.9910	1.901	0.499	1.901	0.499	1.901	0.499
s	2870	2942	2470	2942	2608	2742	2791	2742	2791	2742	2742
t	1361	9.02	1860	1860	1860	1996	2027	1808	1838	2113	2113
u	2462	1860	2187	3014	0.35	3525	3740	3692	3599	4078	4078
v	6698	5704	7916	7849	2836	8568	8563	7691	8112	8228	8933
w	440	3.803	5.277	5.232	1.891	5.708	5.708	6.088	5.445	5.451	5.552
x	2 55 23.744	2 59 43.052	3 18 33.628	23 31 48.931	5 46 42.33	4 37 11.000	4 37 11.000	4 37 11.000	4 37 11.000	4 37 11.000	4 37 11.000
y	2 58 28.21	2 59 46.85	3 18 38.90	38.86	23 31 48.93	346 994	994 4 37 16.09	16.48	4 51 57.80	57.80	57.80
z	7.02	7.05	6.45	6.67	12.43	4.74	4.86	2.15	2.23	1.38	1.38
aa	11.25	4.58	10.79	11.68	13.51	7.06	7.18	3.13	3.90	2.14	2.14
ab	24	13	21	09	72	76	55	80	62	77	77
ac	19.01	17.00	17.45	18.26	26.96	12.56	13.27	6.10	6.80	4.29	4.29
ad	52 58	41.47	40 27 59 29 41.9	41 42 32 54.86	60 43 29.29	29.29	56 31 20.95	20.95	20.95	20.95	20.95
ae	53 00	00.5	40 27 264 55 29 21.6	22.4	42 33 21.8	60 43 41.8	42.6	56 31 20.95	20.95	20.95	20.95

Comae			Orion			Aurig			Paviny		
Dec 10	Dec 13	Dec 10	Dec 13	Dec 22	Dec 13	Dec 22	Dec 22	Dec 22	Dec 22	Dec 22	Dec 22
4 21 44.68		3 30 53.748	3 21 25.88		5 35 49.604		5 42 28.674	5 46 49.411	5 49 59.649		
53 37 29.00		62 47 30.86	47 32 37.25		49 45 56.18		35 6 27.25	54 16 14.88	44 55 50.62		
10 32	10 19	10 32	9 55	9 33	9 55	9 33	9 23	9 33	9 33		
65 26	65 26	52 43	50 21	50 21	83 54	83 54	85 37	87 12	87 30		
10 05	7 17	10 05	2 36	358 52	2 36	358 52	358 52	358 52	358 52		
75 58	75 45	63 15	60 16	59 54	93 52	93 30	95 10	96 45	97 03		
75 31	72 43	62 48	52 57	49 13	86 33	82 49	84 29	86 04	86 22		
1326		2891	0384		0.0726		9.9099	1420	9.9990		
2268		3400	1707		1898		1101	2336	1500		
9.9008		9.9481	9.8680		9.8828		9.7998	9.9099	9.8480		
9.7732		9.6600	9.8293		9.8102		9.8899	9.7664	9.8500		
9.9868	9.9864	9.9808	9.9384	9.9363	9.9890	9.9992	9.9882	9.9870	9.9864		
1.0847	1.0921	1.0847	1.1044	1.1139	1.1044	1.1139	1.1139	1.1139	1.1139		1.1139
9.3847	9.3912	9.6533	9.6955	9.7044	8.8289	8.7857	8.9545	9.0701	9.0890		
9.9860	9.9799	9.9491	9.9021	9.8792	9.9892	9.9966	9.9980	9.9990	9.9991		
1.3053	1.3099	1.3053	1.3105	1.3106	1.3105	1.3106	1.3106	1.3106	1.3106		
9.3981	9.4729	9.6600	9.7800	9.8150	8.7799	9.0971	8.9829	8.8363	8.8019		
1901	0499	1901	9.6060	9.2428	9.6060	9.2428	9.2428	9.2428	9.2428		
2742	2791	2742	2845	2942	2845	2845	2845	2845	2845		
1600	1626	2112	1200	1224	1500	1533	1052	1584	1280		
3329	3286	3968	2417	2294	3159	3141	2602	3483	2882		
76.91	77.03	8821	6499	64.63	75.34	75.49	65.49	81.62	80.44		
5.104	5.136	5.181	4.333	4.308	5.023	5.033	4.365	5.441	4.696		
4 21 44.68	44.648	3030	53.748	321 25.038	25.038	49.604	542 28.674	548 49.411	549 59.649		
4 21 49.76	49.78	3039.63	21 29.423	21 29.405	35 54.89	54.84	542 33.145	548 54.85	549 50.434		
							(15)				
295	304	544	631	658	- .858	- .754	- .1171	- .1528	- .1521		
9.10	9.88	8.29	9.09	9.86	.94	+ 1.95	1.29	1.14	.90		
92	64	41	29	- .12	+ .26	- .11	- .10	- .10	- .10		
797	8.54	1447	15.67	1632	+ .034	+ .105	- .006	1.449	- .81		
5837 29.00	29.00	62.47	20.86	47.32	37.35	49.45	54.16	44.85	50.62		
5837 27.0	37.6	62.47	45.34	47.32	53.7	49.45	54.16	44.85	49.8		
					(4.5 56.61)		(27.3)	(14.7)	(4.7)		

New Stars for 1870

Star a 1875

Star	a 1875	day	Red. 1870	Red. 1871	a 1875	day	Red. 1870	Red. 1871	Star	a 1875	day	Red. 1870	Red. 1871	Star	a 1875	day	Red. 1870	Red. 1871
1875pha	21	35	5.000	1.8589	9.299	21	34	5.5701	56	55	26.48	16.157	1	20.78	56	54	05.70	
20 bph	22	1	12.356	1.8137	9.068	22	1	3.310	62	10	33.15	17.449	1	27.24	62	9	5.95	
3 bph	22	6	31.091	2.0729	10.3625	12.4354	6	20.486	57	35	7.52	17.632		28.18	57	33	39.36	
3 Lacet.	22	18	38.798	2.3483	11.741		18	27.057	51	36	11.48	17.925		29.62	51	34	41.86	
1875pha	24	31.937	2.2142	11.0712		24	20.866		57	46	32.08	18.311		31.56	57	45	0.52	
7 Lacet.	26	8.523	2.4580	12.2908		25	56.233		49	38	24.24	18.378		31.89	49	37	32.35	
30 bph	34	13.211	2.1124	10.562		34	02.649		62	56	5.32	18.626		33.13	62	54	32.19	
13 Lacet	38	31.149	2.6637	13.318		38	17.831		41	9	49.91	18.818		34.04	41	8	15.37	
0 And.	56	10.357	2.7460	13.7302		55	56.620		41	39	15.55	19.251		36.25	41	37	38.80	
1 bph	45	14.019	2.1162	10.581		45	3.938		65	32	34.67	18.856		34.28	65	31	00.38	
62 3077	23	7	16.178	2.5587	14.293	23	7	1.885	56	28	41.34	19.790		38.95	56	27	2.39	
4 Cass	19	17.526	2.6365	13.182		19	4.344		61	35	47.89	19.723		38.61	61	34	9.26	
7 And.	31	2.7106	2.9157	14.5785		31	12.528		45	46	50.62	19.443		37.21	45	45	13.41	
1 And.	32	0.537	2.9212	14.6068		32	4.5781		42	34	34.50	19.929		39.64	42	32	54.86	
x And.	34	15.229	2.9312	14.656		34	0.573		43	38	31.48	19.936		39.68	43	36	51.80	
Q Cass	48	8.715	2.9685	14.817		23	47	50.898	56	48	13.70	20.016		40.08	56	46	33.62	
β Cass	2	31.054	3.1636	15.818		0	2	15.236	58	27	36.03	19.817		39.25	58	25	56.78	
22 And.	3	49.522	3.0957	15.478		3	34.344		45	22	35.31	20.051		40.25	45	20	65.06	
x Cass	25	54.478	3.3576	16.788		29	37.710		62	14	29.46	19.939		39.69	62	12	50.27	
3 Cass	30	0.980	3.3085	16.542		39	44.478		63	12	30.21	19.864		39.32	63	10	50.89	
α Cass	33	25.465	3.3626	16.813		33	8.632		55	51	4.52	19.784		38.93	55	49	25.89	
0 Cass	37	45.916	3.3120	16.560		37	29.256		47	35	59.20	19.780		38.90	47	34	20.30	
η Cass	41	32.804	3.5803	17.901		41	14.850		57	9	7.43	19.244		36.22	57	7	31.21	
β 82	43	9.322	3.5702	16.857		42	57.471		63	33	58.48	19.675		38.36	63	32	20.12	
γ Cass	49	10.674	3.5685	17.842		48	52.832		60	2	20.65	19.577		37.85	60	0	42.80	
1 Cass	17	39.298	3.8656	19.328		1	14	19.970	59	35	5.05	18.878		39.37	59	33	30.66	
η Persi	30	19.623	3.6486	18.228		30	1.395		47	59	38.12	18.403		32.01	47	58	6.11	
φ Persi	35	50.177	3.7241	18.620		35	31.557		50	3	28.23	18.308		31.52	50	2	56.71	
ε Cass	45	25.232	4.2412	21.206		45	41.26		63	3	11.40	17.961		29.80	63	1	41.60	
2 And.	56	13.881	3.6503	18.251		1	55	55.630	41	43	43.37	17.485		27.92	41	41	15.95	
6 Persi	5	18.037	3.9460	19.740		2	4	58.297	50	29	1.03	16.860		24.80	50	27	36.23	
θ Persi	35	40.207	4.0883	20.296		35	19.916		48	41	62.80	15.508		17.54	48	40	35.26	
η Persi	41	35.407	4.3272	21.636		41	13.815		55	22	24.99	15.283		16.91	55	21	13.58	
φ Persi	45	24.239	4.2086	21.043		45	3.196		62	19	56.20	15.045		15.22	62	13	40.98	
γ Persi	55	40.263	4.3038	21.519		55	23.744		63	0	62.64	14.435		12.17	62	59	41.47	
β Persi	3	00.2433	3.8763	19.381		2	57	43.052	40	28	20.38	14.193		10.96	40	27	9.42	

This row has been recomputed and explained.

Sta	a1875	da + u Red. 1870	Red 1871	a1870	a1871	S1870	da + u Red. 1870	Red 1871	S1870	S1871
i Perseu	3 0	3.264	4.292x	21.460	259	4.1804	49 8 257	14.140	1 1070	99 6 51.81
u Persei	15	24.448	4.2497	21.248	3	15 3200	49 24 50.69	13.145	5.72	49 23 44.97
2 R. Cam.	18	57.632	4.8009	24.004	18	33.628	59 30 9.11	12.988	4.94	59 29 4.17
d Perseu	21	46.073	4.1970	20.985	21	25.088	47 33 41.27	12.784	3.92	47 32 38.35
g. 716	31	19.446	5.1396	25.698	30	53.748	62 48 31.82	12.117	1 0.96	62 47 30.86
S Persei	34	1.848	4.2392	21.196	33	40.652	47 23 7.96	11.883	59.41	47 22 8.55
2 Persei	36	42.424	4.0509	20.254	36	22.170	42 10 52.80	11.736	58.68	42 9 53.12
3 R. Cam.	46	29.541	5.0617	28.308	46	4.233	60 44 24.54	11.050	55.25	60 43 29.29
C Persei	59	35.495	4.3310	21.655	3	59 13.840	47 22 34.52	10.026	50.13	47 21 44.39
1 Cam. p. 422	82	8.271	4.7247	23.623	9	21 44.648	53 38 10.56	8.312	41.56	53 37 29.00
4 Cam.	37	35.854	4.9708	24.854	37	11.000	56 31 55.55	6.920	34.60	56 31 20.95
10 Cam.	4	52.18401	5.3109	26.555	51	51.846	60 15 22.61	5.852	29.26	60 14 53.35
2 Aurig	53	0.023	4.2906	12.453	52	47.570	43 38 9.13	5.790	28.97	43 37 40.16
3 Aurig	53	44.543	4.1813	20.906	53	23.637	40 53 27.21	5.726	28.63	40 52 58.58
4 Aurig	57	40.59	4.1966	20.983	4	57 24.076	41 3 9.46	5.346	26.73	41 3 20.43
u Aurig	507	27.452	4.4231	22.116	5	07 5.336	40 52 5.26	4.156	20.78	40 51 44.48
1 Cam.	18	21.940	5.6444	28.222	17	53.718	62 57 33.22	3.639	18.17	62 57 15.05
2 Aurig	36	13.011	4.6414	23.207	35	49.804	49 46 65.70	2.065	10.32	49 45 56.18
3 Aurig	42	47.338	4.1538	20.789	42	28.769	39 6 35.57	1.565	7.82	39 6 27.25
4 Aurig	49	14.092	4.7363	24.681	48	45.911	54 16 19.07	+8.38	4.98	54 16 14.88
5 Aurig	50	21.658	4.4019	22.00	49	57.649	44 53 5.88	+8.53	+4.26	44 55 50.62
2 Lynce	6 8	35.735	5.3033	26.518	6	8 9.282	59 3 9.99	-7.20	+3.60	59 3 13.59
3 Aurig	15	16.113	5.6266	28.133	14	47.980	49 20 54.93	-1.336	+6.68	49 21 16.1
8 Lynce	26	15.666	5.4972	27.486	25	46.180	61 35 15.77	-2.542	+12.71	61 35 28.42
4 Aurig	37	43.656	4.3327	21.663	37	21.993	43 41 5.77	-3.097	+15.48	43 42 12.65
15 Lynce	46	26.834	5.2164	26.082	46	0.752	58 34 59.52	-4.169	+20.85	58 35 20.37
64 Aurig	7 9	20.564	4.1845	20.522	8	59.642	41 6 19.83	-5.946	+29.73	41 6 40.56
18 Lynce	12	39.583	4.9199	24.600	12	14.983	55 30 49.73	-6.294	+31.47	55 31 21.70
24 Lynce	32	25.745	5.1125	25.558	31	59.627	58 59 59.54	-7.927	+39.63	59 0 39.77
26 Lynce	45	36.055					47 53 9.75			
53 Camel	57	1.078					60 39 48.05			
27 Lynce	7	59 2.658					51 51 52.53			
31 Lynce	8. 14	16.367					43 35 12.89			
1450	19	51.766					61 7 59.70			
24	24	46.904					38 26 33.61			

Star	a	b	d_{true}	Red. 1871	a	b	d_{true}
β 1460	8	30	0.991				
γ 1460	8	50	38.427				
δ 1460	8	52	31.059				
ϵ 1501	8	54	50.209				
ζ 1501	8	55	48.444				

Star	a	b	d_{true}	Red. 1871	a	b	d_{true}
η 1501	8	50	50.59				
θ 1501	8	31	50.05				
ι 1501	8	16	33.51				
κ 1501	8	46	29.52				
λ 1501	8	38	55.72				



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