

KG
11366
v. 687

Instrumental Constants
1875
Depending on the new
Pulkowa Places.

The apparent places of the following stars have been taken from the American ephemeris. These places are therefore to be reduced to the *heliocentric* system of the New Pulkowa places.

The following are the required corrections to the A.A. places.
For 1874 and 1875

	α	δ	$P-P'$	P'	V.A.	$P'-V.A.$
α Ursae Min	$1^h 12^m 38.675$	$+05985$		39.256	39.372	-.116
1874	$\delta + 88^\circ 38' 15.10$	-0.29		14.81	14.76	+0.05
1875	$1^h 12^m 59.433$	$+608$		60.041	60.165	-.124
	$88^\circ 38' 34.16$	-0.31		33.85	33.81	+0.04
β Ursae Min	$6^h 39^m 45.353$	-269		145.084	144.183	+0.901
1874	$\delta + 87^\circ 14' 7.07$	$+118$		8.25	8.04	+0.21
1875	$6^h 39^m 15.628$	-269		15.359	14.430	+0.929
	$87^\circ 14' 3.42$	$+1.21$		4.63	4.43	+0.20
γ Ursae Min	$16^h 59^m 57.156$	$+037$		57.193	57.285	-.092
1874	$\delta + 82^\circ 14' 27.55$	$+44$		27.99	28.05	-.06
1875	$16^h 58^m 50.776$	$+034$		50.810	50.907	-.097
	$82^\circ 14' 22.257$	$+46$		22.91	22.77	-.06
δ Ursae Min	$12^h 58^m 7.19$	-039		58.680	58.735	-.055
1874	$\delta + 86^\circ 36' 25.785$	$+78$		26.56	26.24	+0.32
1875	$12^h 58^m 39.305$	-042		39.263	39.317	-.054
	$86^\circ 36' 26.92$	$+80$		27.72	27.41	+0.31
ϵ Ursae Min	$19^h 49^m 18.555$	$+1657$		17.28	18.244	-.946
1874	$\delta + 88^\circ 55' 42.90$	-45		42.23	41.66	+0.59
1875	$19^h 49^m 18.506$	$+16813$		16.813	17.789	-.976
	$88^\circ 55' 51.97$	-48		51.49	50.90	+0.59

1875	Jan 5	h = -0.12	n = +13	k = -0.21	1875	Jan 5			
Star	RA	S	tang	T-RA P-P (P-P)	Star	RA	S	tang	T-RA P-P (P-P)
2.7 +0.5 2 43 44	+0.50 0.7	-21.63 +.06	21.69 +.06	-0.01 21.63	21.64 3 31 363	+1.95 0 =	-21.62 +.11	21.73	
2.8 0.4 2 45 45	+1.29	-21.64 +.11	21.75 +.17	.01 21.58	.59 3 37 364	+2.56	-21.79 +.11	21.96	
2.9 +0.3 2 56 47	+0.6	-21.50 +.02	21.52 +.01	-0.01 21.51	.52 3 46 365	+1.78	-21.83 +.01	21.84	
3.4 -0.2 3 24 55	+2.2	-21.65 +.02	21.63 +.03	+0.00 21.60	.60				
3.4 0.2 3 27 56	-.17	-21.55 +.03	21.58 = .02	.00 21.60	.60				
3.6 0.4 3 34 57	+1.09	-21.65 +.08	21.73 +.14	.01 21.59	.58				
3.52 3.7 -0.5 3 40 61	+1.44	-21.58 +.04	21.62 +.06	+0.01 21.56	.55				
3.71									
2.9 +.06 2 21.52		3.5 +1.95 -21.73 +.00	-21.73 20	+0.00 -21.73					
3.4 +.22 .63		3.6 +2.89 21.96 +.00	-21.96	+0.01 -21.95					
3.4 -.17 .58		3.8 +1.78 21.84 +.01	-21.83	+0.01 -21.82					
3.7 +.44 .62									
3.3 +.14 -21.69									
2.5 +.19 .45		0 = +1.81 -0.14 n = +0.8							
2.7 +1.29 -21.75		+2.75 -37 +.13							
3.6 +1.09 .73		+1.64 -24 +.15							
3.7 +1.19 -21.74			+1.20						
1875 Jan 9	h = -0.18	n = +17	h = -0.05						
1.9 1.9 56 +.032	+0.89 0 =	-21.84 +.11	21.95 +.15 n =	-24.80	1.53 31	+3.05 0 =	-24.74 +.15	21.89	
2.0 0 -0.533	+1.42	-21.89 +.02	21.91 +.07 n =	84	2 5 350	+2.24	-25.09 +.11	25.20	
1.15				-24.820					
2.0 +.42 -21.91		1.9 +3.05 -24.89							
		2.1 +2.24 -25.20							
1.9 +.89 -24.95		0 = +2.63 +0.02 n =	+0.17						
n = +.9		+1.82 -0.29	+1.6	+1.60					
				+2.45					
		0 = +2.16 +0.06 n =	-0.03						
		+1.35 -0.25	+1.8	+1.80					
				+2.45					
1875 Jan 10	h = -0.06	n = +21	h = -0.00	h = -0.07	25.358				
2.4 +0.6 2 22 37	+0.14 0 =	-25.35 +.06	-25.41 +.03	+0.00 25.38	25.38 2 19 36	+2.33 0 =	-25.62 +.25	-25.87	
2.6 0.4 2 38 39	-.02	-25.44 +.01	25.43 +.00	.00 25.43	.43 2 26 38	+3.13	-25.75 +.25	-26.00	
2.6 0.4 2 36 40	+1.14	-25.54 +.08	25.62 +.24	.00 25.38	.38				
2.6 0.4 2 37 41	+0.5	-25.29 +.01	25.30 +.01	.00 25.29	.29				
2.7 0.3 2 43 44	+0.50	-25.41 +.06	25.47 +.10	.00 25.37	.37				
2.62 2.8 +0.2 2 45 45	+1.29	-25.46 +.11	25.57 +.27	.00 25.30	.30				
4.2 -1.2 4 13 70	+0.27	-25.40 +.02	25.42 +.06	+0.01 25.36	.35				
4.3 -1.3 4 16 71	+0.32	-25.42 +.03	25.45 +.07	+0.01 25.38	.37				
4.25 4.7 4 5 366	-.13	-25.54 +.00	25.54 - .03	.15 25.57	.57				
3.02				25.570					
2.4 +0.14 -25.41		2.3 +2.33 -25.87		-25.874	25.359				
2.5 .00 .43		2.4 +3.13 -26.00		.361					
2.6 +.05 .30									
4.2 +.27 .42		0 = +2.22 -0.14 n =	+0.20						
4.3 +.32 .45		+3.02 -0.57	+1.9						
4.1 -1.3 .52			+1.95						
3.4 +.18 -25.74		0 = +1.11 -0.27 n =	+0.24						
3.5 +.16 -25.40		+1.91 -0.40	+0.21						
2.6 +1.14 -25.62			+2.25						
2.8 +1.29 .64									
2.7 +1.22 -25.60									
n = +1.61									

$$3 = +60+80 \quad +40+60 \quad +20+40 \quad +0+20 \quad +0-20 \quad -20-40 \quad -40-60 \quad -60-80 \quad -80-100$$

RA Linzeos R_1-R_2 $P-P$ $R-R$ R_1-R_2 R_1 R_2

L	m					
1	43	+27.96+2	14.5 + 0.4	+14.9	+1.0	+15.9
2	45	-17.98	15.6 + 0.7	16.3	-0.7	15.6
2	56	+63.77	12.8 + 0.8	13.6	+2.0	16.6
3	24	+50.86	14.1 - 0.1	14.0	+1.6	15.6
3	27	+79.61	13.9 + 0.0	13.9	+2.5	16.4
3	32	-09.00	15.2 + 0.6	15.8	-0.4	15.4
3	40	+32.94	15.1 + 0.2	15.3	+1.1	16.4
					15.84	15.84

RA Linzeos

L	m	
3	31	-35.93
3	37	-48.87
3	46	-31.95

R_1-R_2 $P-P$ R_1-R_2 R_1 R_2

	"				
+ 2	17.4	+ 0.4	+ 17.8	- 12	+ 16.6
	17.5	+ 0.5	+ 17.7	- 1.6	16.1
	18.0	- 0.1	+ 17.9	- 1.1	16.8

16.50/16.50

L	m									
7	3	588	+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80
		450	+63+13.6	+50+14.0	+27+14.9	+1.0	+15.9	-17+14.3	-35+17.8	-48+17.7
		1038	+79+13.9	+32+15.3	+1.0	+15.9	-17+14.3	-35+17.8	-48+17.7	-60-80

L	m									
+2	134	16.25	16.1	15.8	16.3	15.4	17.5	17.0	17.0	17.0
	07	16.25	16.1	15.8	16.3	15.4	17.5	17.0	17.0	17.0

L	m									
1	56	+01.00	+2	14.7 + 0.1	+14.8	+0.1	+14.9	1.53	-49.87	+2 23.82
2	0	+33.94		14.2 + 0.0	14.2	+12	15.4	2 5	-40.92	+2 23.82
		128								

L	m									
2	22	+57.82	+2	12.4 + 0.2	+12.6	+1.8	+14.4	2 19	-41.91	+2 16.0 + 0.8
2	33	+68.73		12.5 - 0.2	12.3	+2.1	14.4	2 28	-50.86	+2 16.0 + 0.8
2	36									
2	37	+64.76		11.7 + 0.2	11.9	+2.0	13.2	14.23	14.88	+2 16.0 + 0.8
2	43	+27.96		15.6 + 0.4	16.3	+1.0	17.3		16.90	+2 16.0 + 0.8
2	45	-17.98		14.8 + 0.7	15.5	-0.6	17.9			+2 16.0 + 0.8
4	13	+76.88		16.5 - 0.6	15.9	+1.5	17.4			+2 16.0 + 0.8
4	16									+2 16.0 + 0.8
4	5	+76.64		11.9 + 0.7	12.6	+2.4	15.0			+2 16.0 + 0.8

L	m									
7	532	+68	+12.3	+57	+12.6	+27	+16.3	-17	+16.5	-41
2	170	+64	11.9	+14.6	+15.9			-50	17.9	-50
	702	+76	15.9					91	147	91
		12	4.2	103	85			-115	17.3	-115
		+66	12.1	+51	+14.2	+27	+16.3	-17	+16.5	-17
			+23		+1.8		+1.0	-07		-07
		2	14.4	2	16.0	1	17.3	1	17.8	1
		8	8.8		12.0		7.3		7.8	
			+1.5	-0.1	-1.9		-1.9		-1.9	

16.90 = 20m

1875 Jan 11 h = -035 -027 n = n# + 32 c = 0.00 L = -0.03										1875 Jan 11 h = -035 -027 n = n# + 32 c = 0.00 L = -0.03									
Star	RA	S	long.	T-RA	P-P	T-RA	P-P	T-RA	P-P	Star	RA	S	long.	T-RA	P-P	T-RA	P-P	T-RA	P-P
4.2	40.4	4	13	70	+0.27	0 = -26.20	+0.2	26.22	+0.4	26.120	4	32	369	+3.93	0 = -27.24	+1.7	27.11	+1.7	27.11
4.25	43.40	3	16	71	+0.32	-26.18	+0.3	26.21	+0.4	-01-26.13	26.14	4	59	235	-7.33	-24.01	+1.7	27.11	+1.7
4.6	00	4	35	370	+0.42	-26.25	+0.2	26.27	+0.4	-01-26.11	.12	4	42	76	+2.26	-26.48	+2.2	26.60	+2.2
4.6	00	4	38	371	+1.51	-26.57	+0.1	26.56	+0.4	+00-26.14	.14								
4.8	-02	4	49	79	+0.65	-26.33	+0.3	26.36	+0.4	+00-26.08	.08								
4.72	4.9	03	4	56	372	+0.39	-26.31	26.32	+0.0	+01-26.15	.14								
4.57										+01-26.19	.18								
4.2	+27	-	26.22							26.140									
4.3	+32	.21								-26.133									
4.6	+42	.27								5.0	-7.33	-26.44	+0.2	-26.02	+0.1	-26.03			
4.9	+39	.31																	
4.5	+35	-26.25																	
4.6	+151	-26.56																	
4.8	+0.65	.36																	
4.7	+1.08	-26.46																	
n = +29.02																			
1875 Jan 12 h = -028 -031 n = n# + 20 c = -0.8										1875 Jan 12 h = -028 -031 n = n# + 20 c = -0.8									
2.5	+0.1	2	32	385	+0.80	0 = -27.20	-0.2	27.18	+0.8	2	19	36	+2.33	-27.32	+2.5	-27.57			
2.6	0.0	2	36	40	+1.14	-27.26	+0.8	27.34	+2.3										
2.6	0.0	2	37	41	+0.05	-27.02	+0.1	27.03	+0.1										
2.57																			
2.5	+39	-27.18																	
2.6	+0.5	-27.03																	
3.5	+22	-27.10																	
2.6	+1.14	-27.34																	
n = +26																			
1875 Jan 14 h = -036 -050 n = n# + 20 c = -0.8 L = -0.49										1875 Jan 14 h = -036 -050 n = n# + 20 c = -0.8 L = -0.49									
2.6	+1.8	2	37	41	+0.05	-27.00	+0.1	27.00	+0.1	2.6	19	36	+2.33	-27.32	+2.5	-27.57			
2.7	1.7	2	43	44	+1.50	-28.71	+0.6	28.77	+1.0										
2.70	2.8	1.8	2	45	45	+1.29	-28.63	+1.1	28.68										
4.6	-0.2	4	35	370	+0.42	-28.54	+0.2	28.56	+0.8										
4.6	0.2	4	38	371	+1.51	-29.04	+0.2	29.02	+0.3										
4.7	0.3	4	39	75	+0.6	-28.98	+0.8	28.90	+0.1										
4.8	0.4	4	40	79	+0.65	-28.91	+0.3	28.94	+0.3										
4.9	0.5	4	53	81	+0.95	-28.84	+0.9	28.95	+0.9										
4.9	0.5	4	56	372	+0.39	-28.88	+0.1	28.87	+0.8										
5.0	0.6	5	3	85	+0.16	-28.81	+0.5	28.76	+0.3										
5.1	0.7	5	5	374	+0.78	-29.06	+0.2	29.00	+0.6										
5.1	0.7	5	7	86	+1.03	-28.99	+0.2	28.97	+0.2										
5.2	0.8	5	9	87	+1.15	-28.77	+0.2	28.75	+0.3										
4.89	4.9	0.5	4	52	80	+1.75	-29.02	-29.15	+0.2										
4.47																			
2.6	+0.5	-28.70																	
4.6	+1.2	-28.80																	
4.6	-0.6	.90																	
4.9	+3.9	.57																	
5.0	-1.6	.76																	
5.2	-1.5	.75																	
4.5	+0.8	-28.81																	
n = +19																			
1875 Jan 14 h = -036 -050 n = n# + 20 c = -0.8 L = -0.49										1875 Jan 14 h = -036 -050 n = n# + 20 c = -0.8 L = -0.49									
4.5	+3.93	-29.17	+0.8	29.17						4.8	-3.65	-28.27	-0.6	-28.33	-0.6	-28.33			
4.7	+2.26	-29.12	+0.1	29.11	+0.0	-29.12				14.0	-7.33	-28.05	+0.2	-28.03	+0.1	-28.04			
0 = +3.85	-0.36	n = +0.9								0 = -373	+0.48	n = +13	n ⁴						
+2.18	-3.0	+1.14	n ₂							-7.41	+7.8	+1.12							
			+1.15																
0 = +279	-1.6	n = +0.6	n ₃							0 = -479	+6.8	n = +14	n ³						
+1.12	-1.1	+1.0								-8.87	+7.108	+1.12							
		+0.80								4		+1.30							

$$z = +60+80 \quad +40+60 \quad +20+40 \quad +0+20 \quad +0-20 \quad -20-40 \quad -40-60 \quad -60-80 \quad -80-100$$

R_A	$\sin z$	R_y	R_x	$P-P_0$	P_0-P_1	P_1-P_2	P_2-P_3	P_3-P_4	P_4-P_5	R_A	$\sin z$	R_y	R_x	$P-P_0$	P_0-P_1	P_1-P_2	P_2-P_3	P_3-P_4	P_4-P_5
4	13	+46.88	+2	17.0	-0.6	+16.4	+1.5	+17.9		4	32	-55.83	+2	17.0	+0.1	+20.4	-1.8	+18.6	
4	16			+0.0						4	59	-182.56		16.8	+0.6	17.4	+1.2	18.6	
4	35	+34.94		16.8	+0.6	17.4	+1.2	18.6		4	42	-140.91		20.8	+0.5	21.3	-0.8	20.5	
4	38	-24.97		17.3	+0.0	17.3	+0.6	17.9						17.3	+0.0	17.3	+0.6	17.9	
4	49	+16.99			+0.0			18.72											
4	56							18.72											

$$+46 +16.4 +34 +17.4 +16 +17.3 \quad -24 +21.3 -55 +20.4 \quad -82 +19.7$$

$$4 \quad 888$$

$$2 \quad 70$$

$$158$$

$$+46 +16.4 +34 +17.4 +16 +17.3 \quad -24 +21.3 -47 +18.9 \quad -82 +19.7$$

$$+2 \quad 18.23$$

$$18.26$$

$$17.65$$

$$+46 +16.4 +34 +17.4 +16 +17.3 \quad -24 +21.3 -47 +18.9 \quad -82 +19.7$$

$$2 \quad 32 +36.93 +2 \quad 15.0 \quad +0.8 +15.4 +1.2 +16.6 \quad 2 \quad 19 -101.91 + \quad +2 \quad 15.8 +0.8 +16.6 -1.4 +15.2$$

$$2 \quad 36 \quad - \quad +0.4 \quad +0.2 +2.1 +2.0 \quad 15.35 \quad 15.35$$

$$2 \quad 37 +64.76 \quad 11.9 \quad +0.2 +2.1 +2.0 \quad 15.35 \quad 15.35$$

$$2 \quad 40 \quad +16.4 +12.1 \quad +36 +15.4 \quad -41 +16.6$$

$$+2 \quad 15.90 \quad 1 \quad 14.3 \quad +1.3 \quad 16.7 \quad +0.2$$

$$+2 \quad 15.90 \quad 3 \quad +1.3 \quad -0.8$$

$$2 \quad 37 +64.76 -16 \quad 1.0 \quad +0.8 +15.4 +1.2 +16.6 \quad 14 \quad 51 \quad -15 \quad -1.0$$

$$2 \quad 43 +27.96 \quad 8.5 \quad +0.4 \quad 8.9 +5.1 +10 \quad 7.1 \quad 4 \quad 32 -55 \quad 37 +0.1 +32 -18 \quad 5.0$$

$$2 \quad 45 -17.98 \quad 8.3 \quad +0.4 \quad 9.0 +7.6 +0.6 \quad 8.2 \quad 16 \quad 59 -82.56 \quad 15.17 +0.5 +15.17 -26 \quad 12.9$$

$$4 \quad 35 +34.94 \quad 8.0 \quad +0.6 \quad 8.6 +7.4 +1.2 \quad 6.2 \quad 4 \quad 42 -140.91 \quad 4.5 -0.3 +4.5 -1.3 -8.1$$

$$4 \quad 38 -24.97 \quad 5.9 \quad +0.5 \quad 6.4 +5.4 +0.8 \quad 6.2 \quad 4 \quad 42 -140.91$$

$$4 \quad 39 +72.69 \quad 9.6 \quad +0.3 \quad 9.9 +9.3 +2.2 \quad 7.1$$

$$4 \quad 49 +16.99 \quad 8.4 \quad +0.3 \quad 8.4 +8.4 +0.6 \quad 7.8$$

$$4 \quad 53 -102.100 \quad 7.1 \quad -0.1 \quad 7.0 +7.2 +0.0 \quad 7.2$$

$$4 \quad 56 +36.93 \quad 8.0 \quad +0.0 \quad 8.0 +8.0 +1.2 \quad 6.8$$

$$5 \quad 3 +78.62 \quad 9.0 \quad +1.1 \quad 10.1 +7.9 +2.5 \quad 5.4$$

$$5 \quad 5 +107.100 \quad 6.8 \quad -0.1 \quad 6.7 +6.9 +0.4 \quad 6.5$$

$$5 \quad 7 \quad - \quad +0.1$$

$$5 \quad 9 +77.63 \quad 10.3 \quad +0.6 \quad 10.9 +9.7 +2.5 \quad 7.2$$

$$4 \quad 52 \quad - \quad +0.2 \quad 6.73 \quad 6.73$$

$$12 \quad 6876 +64 \quad 7.0 \quad +2.7 \quad 7.2 +7.2 -1.7 \quad 7.4 \quad -24 +6.4$$

$$7 \quad 10 +72 \quad 9.8 \quad +3.4 \quad 7.4 +6.6 +0.7 \quad 6.6 \quad -0.2 \quad 7.8 \quad -40 \quad 4.8$$

$$786 +77 \quad 11 \quad 3.83 \quad +8.6 \quad 8.0 \quad 0.7 \quad 23.5 \quad 3 \quad 15.3 \quad 19 \quad 41.60 \quad 6.4 \quad 10.2$$

$$+73 +40.6 \quad +32 \quad 8.5 \quad +11 \quad -7.6 \quad -0.9 \quad +5.0 \quad -32 \quad -5.6$$

[illegible]

[illegible]

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$$y = +60+80 \quad +40+60 \quad +20+40 \quad +0+20 \quad +0-20 \quad -20-40 \quad -40-60 \quad -60-80 \quad -80-100$$

RA Linzenz

3 15 -12.99 + 0.17
3 34 -09.100 + 1.09
3 54 +50.86 + 0.2
4 6 +76.64 - 0.23
4 13 +46.88 + 0.27
4 22 -19.98 + 1.36
3 0 +03.100

 $R_1 - R_2$
 $P = P_1 + (P_2 - P_1) \frac{R_1}{R_2}$

14.1 + 0.7 - 8.4 - 0.4 - 8.8
7.8 + 0.6 7.2 - 0.3 7.5
10.3 + 0.3 10.0 + 1.6 8.4
12.0 + 0.7 11.3 + 2.4 8.9
8.9 - 0.6 9.5 + 1.5 8.0
7.9 + 0.9 7.0 - 0.7 7.7
7.6 - 0.1 7.7 + 0.7 7.5
8.11 8.11

RA Linzenz

3 3 -56.82
3 31 -35.93

 $R_1 - R_2$
 $P = P_1 + (P_2 - P_1) \frac{R_1}{R_2}$

11 + 0.4
5.5 + 0.4 - 5.1 - 1.2 - 6.3
-6.30 6.30

7 1477
30
1507

+76 -11.3 +50 -10.0
+46 9.5
96 195
+76 -11.3 +48 -9.7
+26 2 +1.7
8.7 8.0
2.0
+8 +8

-12 -8.4 -35 -5.1
-09 7.2
-19 7.7
40 233
-1.3 -7.8 -35 -5.1
3 -5.1 -1.3
8.3 6.4
3.9 -1.6
+1.4 -1.5

8.00
-16
8.00
7.77

2 56 +63.77
2 57 +0.7 1.00
3 0 +0.3 1.00
3 15 -12.99
4 38 -24.97
4 35 +32.94

13.8 + 0.8 13.8 + 0.2 - 11.0
9.0 - 0.2 9.2 + 0.4 8.8
8.7 - 0.1 8.8 + 0.2 8.6
9.7 + 0.7 9.2 - 0.4 9.6
8.4 + 0.5 7.9 - 0.8 8.7
10.2 + 0.6 9.6 + 1.2 8.4
8.82 8.82

2 50
14 51 -89.45
3 5 -56.82

-16 + 1.5 6.1
5.1 + 0.7 5.8 - 2.9 9.0
6.1 + 0.4 5.4 - 1.8 - 7.2

5 310
30
330

+63 +13.8
+2.2
1.6
0.8

+34 -9.6 + 0.7 - 9.2 - 12 - 9.2 - 2.4 - 7.9 - 5.6 - 5.4
+0.3 8.8
+34 -9.6 + 0.5 - 9.0 - 12 - 9.2 - 2.4 - 7.9 - 5.6 - 5.4
+1.2 +.2 -.5 +.9 -2.0
8.42 8.81 9.71 8.81 7.41
4 1.6 1.7 .8 -.6
-.2 +.2 +1.1 +.2 -1.2

-89 -5.0 -5.0
-89 -5.0

-16 8.65
8.05
7.16

3 15 -12.99 + 0.17
3 18 +56.82 + 0.15
4 56 +36.93 + 0.23
5 5 +0.7 1.00
5 7 +0.6 1.00
5 9 +7.7 0.3
5 29 +68.73 - 0.21
5 30 +69.72 - 0.22
5 32 +71.70 - 0.23
5 36 -13.99 + 1.12

11.8 + 0.7 11.1 - 0.4 - 11.5
13.4 + 0.5 12.9 + 1.8 11.1
10.9 + 0.0 10.9 + 1.3 9.6
8.7 - 0.1 8.8 + 0.4 8.4
10.4 + 0.1 10.3 - 0.2 10.5
11.9 + 0.6 11.3 + 2.5 8.8
12.9 + 0.7 12.2 + 2.2 10.0
12.7 + 0.5 12.2 + 2.2 10.0
11.5 - 0.2 11.7 + 2.2 9.5
10.2 9.6 + 0.9 9.3 - 0.5 9.8
10.09 9.92

16 59 -82.56
5 2 -60.80

-16 11.4 + 0.5 11.9 - 2.6 9.9
10.8 + 0.6 10.2 - 1.9 - 12.1

70

+77 -11.3 +56 -12.9 +36 -10.9 +0.7 -8.8 -12 -11.1
+68 12.2 -10.6 10.3
+71 11.7 -1.3 9.3
+69 12.2
285 74
+71 -11.8 +56 -12.9 +36 -10.9 +0.7 -8.8 -10 -10.2
+24 +2.0 +1.3 +.3 -.4
4 9.4 10.9 9.6 8.53 10.6
10 1.9 .6 -.5 1.8
-3.4 +1.8 +.8 -1.4 +1.0
-.2 3 0.8

84
-16 9.63
10.29

-60 -10.2 -82 -6.9
-60 -10.2 -82 -6.9

12.0 12.10
12.10

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1875

Jan. 30
W.A.R.

$$h = -0.48$$
$$u = A + 25e = -.06, h = -.073$$

1875

Jan 30
Mare

Has

Ra

10

0.

Page 8

see

77-1

1

2

RA
01 p

Star

Ra

5

1

ing

72

29

p'

72

р

10

	L	m		S		S		L	m		S		S
24	6	2	22	37	+ 0.14 1.01	-46.29	+0.16	-46.35	+ 10	-06	-12	-46.38	46.50
25	15	2	32	355	+ 1.39 1.08	-46.40	-02	-46.38	+ 03	06	-11	-46.31	.45
26	14	2	36	40	+ 1.14 1.52	-46.42	+08	-46.50	+ 28	04	-10	-46.31	.41
27	13	2	43	44	+ 1.52 1.12	-46.30	+06	-46.36	+ 13	07	-09	-46.30	.39
260	28	12	2	45	+ 1.29 1.63	-46.40	+01	-46.35	+ 32	10	-09	-46.29	.38
	40	00	4	0	+ 1.05 1.48	-46.45	+06	-46.51	+ 27	04	-00	-46.33	.33
	41	-01	4	6	- 1.3 1.01	-46.46	+00	-46.46	- 03	06	+01	-46.55	.54
	50	10	5	3	+ 1.6 1.01	-46.54	-05	-46.49	- 04	06	+07	-46.59	.52
	51	11	5	7	+ 1.03 1.43	-46.65	-02	-46.63	+ 26	04	+08	-46.46	.38
	52	12	5	9	- 1.5 1.01	-46.50	-02	-46.48	- 04	06	+09	-46.58	.49
	52	12	5	12	- 1.2 1.00	-46.46	-07	-46.39	- 03	06	+07	-46.48	.39
	53	13	5	18	+ 1.14 1.14	-46.51	+00	-46.51	+ 14	07	+09	-46.44	.35
4.58	57	-1.1	5	5	+ 1.79 1.27	-46.62	+00	-46.62	+ 20	-08	+08	-46.50	.42

[illegible]

1875

Feb. 12

$$h = -0.48$$
$$n = +.28 \quad e = -.06 \quad h = -.044$$

48,600

12.202		-245		18.620		18.620	
39.4.2	3 52 66	+ 0.21 1.02	- 48.64 + 0.00 18.64	+ 0.6	- 0.6 05 18.64	- 48.69	15 23 92
40.1.1	4 1.0 69	+ 1.09 1.48	- 48.67 + 0.06 48.73	+ 31	0.9 - 0.5 18.51	56	+ 3.72
41.1.10	4 6 3.66	- 1.93 1.01	- 48.85 + 0.02 48.83	- 0.4	0.6 - 0.4 18.65	52	- 4.78
53.0.2	5 18 90	+ 5.4 1.14	- 48.70 + 0.00 48.70	+ 15	0.7 + 0.1 18.62	60	- 4.15 + 2.8 - 4.746
55.4	5 30 97	- 0.2 1.00	- 48.60 - 0.05 48.55	- 0.1	0.6 0.2 18.62	60	
55.4	5 32 99	- 0.5 1.00	- 48.54 + 0.01 48.55	- 0.1	0.6 0.2 18.62	60	
56.5	5 36 97	+ 1.18 1.58	- 48.51 + 0.07 48.58	+ 33	0.9 0.2 18.64	62	
58.7	5 48 102	+ 1.3 1.01	- 48.70 - 0.02 48.68	+ 0.4	0.6 0.3 18.70	64	
59.3	5 28 93	- 0.1 1.00	- 48.56 - 0.08 48.78	+ 0.0	0.6 0.1 18.64	64	
5.54	5 42 01	+ 8.1 1.29	- 48.70 + 0.06 48.78	+ 23	- 0.8 + 0.3 18.63	60	
5.08							

3.9 + 2.1 = 48.64	15.4 + 3.72 = 49.38 ²	$\frac{I}{-0.8 - 49.39}$	$\frac{II}{-0.9 - 49.40}$	$\frac{III}{-11.647}$	$\frac{IV}{48.648}$	$\frac{V}{15.8 - 4.78 - 4.746 - 0.6 - 4.752}$	$\frac{VI}{-0.7 - 4.753}$
4.1 - 1.3 = 48.55							
5.5 - 0.2 = 48.55							
5.5 - 0.5 = 48.55	0 = 3.70 - 0.76 n = +28			0 = 4.50 + 1.11 n = +23			
5.8 + 1.3 = 48.68							
5.4 - 0.1 = 48.78	0 = 2.82 - 0.63 n = +22			0 = 5.68 + 1.24 n = +22			
5.0 + 0.2 = 48.63							

[illegible]
$$u = \frac{1}{16} - \frac{1}{16}$$

1875phae.proj.1

1875	Feb 2	h = -0.00	n = +2.24	e = .00	h = +0.40	1875	Feb 2	h = -0.00	n = +2.24	e = .00	h = +0.40
Star	RA	S	tang.	T.Ra	P.P.P.	Star	RA	S	tang.	T.Ra	P.P.P.
46.10.2	4 38	371	+1.51	-50.09	5	49.77	8 2	5 2	373	+5.19	0 = -52.76 + .22 -50.96
49.1	4 52	372	+30	-49.89	5	49.79	9 2	5 23	92	+3.72	-52.71 + .01 -50.70
50.2	5 3	85	-16	-49.79	5	49.79	15.48	217	-4.78	0 = -45.24 + .28 -45.52	
51.3	5 5	374	+70	-49.54	5	49.78	16 59	235	-7.33	-45.25 + .03 -45.28	
51.3	5 7	86	+1.03	-50.09	5	49.80	17 59	235	-7.33	-45.25 + .03 -45.28	
52.4	5 9	87	-15	-49.77	5	49.79	18 59	235	-7.33	-45.25 + .03 -45.28	
52.4	5 12	88	-12	-49.79	5	49.75	19 59	235	-7.33	-45.25 + .03 -45.28	
53.5	5 18	90	+54	-49.94	5	49.81	20 59	235	-7.33	-45.25 + .03 -45.28	
54.6	5 24	93	-21	-49.88	5	49.80	21 59	235	-7.33	-45.25 + .03 -45.28	
513	5.5-7	5 30	97	-49.86	5	49.81	22 59	235	-7.33	-45.25 + .03 -45.28	
513	5.13	5 46	365	-49.85	5	49.81	23 59	235	-7.33	-45.25 + .03 -45.28	
39.9	3 53	66	+21	-49.97	5	49.92	24 59	235	-7.33	-45.25 + .03 -45.28	
40.8	3 59	69	+1.09	-50.16	5	49.96	25 59	235	-7.33	-45.25 + .03 -45.28	
41.7	4 6	366	-163	-49.69	5	49.72	26 59	235	-7.33	-45.25 + .03 -45.28	
43.5	4 13	70	+27	-49.61	5	49.63	27 59	235	-7.33	-45.25 + .03 -45.28	
43.5	4 16	71	+32	-49.77	5	49.80	28 59	235	-7.33	-45.25 + .03 -45.28	
43.5	4 22	368	+1.36	-49.81	5	49.84	29 59	235	-7.33	-45.25 + .03 -45.28	
418	4.6+2	4 35	370	-49.86	5	49.88	30 59	235	-7.33	-45.25 + .03 -45.28	
4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18
5.2-12	-49.72	4.6	+1.51	-50.09	5	5.0	+5.19	-50.96	+0.0	-50.96	5
5.4-11	-49.80	5.7	+1.03	-50.09	5	5.4	+3.72	-50.70	+0.0	-50.70	5
5.5-12	-49.81	3.8	+1.78	-49.96	5	5.5	+3.72	-50.70	+0.0	-50.70	5
4.1-13	-49.69	4.0	+1.09	-50.22	5	4.1	+5.26	-1.19	+2.3	0 = +3.61 - 0.88	n = +2.3
5.0-17	-49.76	4.5	+1.35	-50.07	5	5.0	+2.37	-0.58	+2.4	+2.37 - 0.58	n = +2.4
1875	Feb 4	h = -0.43	n = +2.26	e = .00	h = -0.49	1875	Feb 4	h = -0.43	n = +2.26	e = .00	h = -0.49
41.1	4 4	6	+366	-0.13	0 = +8.34 + .00 +8.34	8.330	16 59	235	-7.33	0 = -49.98 + .03 -50.01	
42.1	4 4	13	70	+27	+8.33 + .00 +8.33	8.338	17 59	235	-7.33	+8.15 + .22 + 6.93	
42.1	4 4	16	71	+32	+8.25 + .03 +8.28	8.30	17 44	484	-3.12	+9.26 + .10 + 9.16	
50.0	5 3	85	-16	+8.29	-0.05 +8.34	8.30	30				
51.1	5 5	374	+70	+8.05	+0.00 +8.05	8.26	26				
51.1	5 7	86	+1.03	+8.03	-0.02 +8.05	8.32	32				
52.2	5 9	87	-15	+8.33	-0.02 +8.35	8.31	32				
53.5	5 18	90	+54	+8.20	-0.02 +8.22	8.25	29				
53.5	5 24	93	+1.00	+7.90	-0.05 +7.95	8.21	25				
4.1	-13	+8.34	5.1	+1.03	+8.05	5.2	+5.19	+6.93	+0.2		
4.2+27	+8.31	5.8	+1.00	+7.95	5.3	+5.19	+6.93	+0.2			
4.3+32	+8.22	3.5	+1.01	+8.00	5.4	+5.19	+6.93	+0.2			
5.1-16	+8.34				5.5	+5.19	+6.93	+0.2			
5.2-15	+8.35				5.6	+5.19	+6.93	+0.2			
5.8+13	+8.22				5.7	+5.19	+6.93	+0.2			
4.8+10	+8.30				5.8	+5.19	+6.93	+0.2			
n = +31 -0.3					5.9	+5.19	+6.93	+0.2			
1875	Feb 8	h = -0.00	n = +3.32	e = .00	h = -0.00	1875	Feb 8	h = -0.00	n = +3.32	e = .00	h = -0.00
30.3	3 10	50	+85	0 = +3.64 + .05 +3.59	27	-02 + 3.86	3.84	2 5	360	+4.42	0 = +2.12 + .00 +2.12
32.1	3 15	52	+1.17	+3.14	-0.02 +3.16	27	-01 + 3.83	3.82	3 31	363	+1.95 + 3.41 + .11 +3.80
33.0	3 18	53	+1.15	+3.72	+0.01 +3.71	27	00 + 3.76	3.76			
34.1	3 24	55	+1.22	+3.71	-0.02 +3.73	27	+00 + 3.80	3.81			
35.2	3 27	56	+1.17	+3.88	+0.03 +3.85	27	+01 + 3.80	3.81			
36.3	3 34	57	+1.09	+3.53	+0.08 +3.61	27	+02 + 3.80	3.82			
333						3808					
38+15+371						3808					
3.4+22+373						3810					
3.4-17+385											
3.4-07+376											
3.2+1.17+3.46											
3.6+1.09+3.45											
3.4+1.13+3.45											
n = +29											
0 = +4.35 - 1.66											
+1.88 - 0.45											
0 = +3.29 - 1.35											
+0.82 - 0.14											

1875pha

1875

Feb. 9

h = -060

-068

n = +32 @ = .00

L = -148

1875

Feb. 9

h = -060

-068

n = +32 @ = .00

L = -148

Star

RA

S

long.

T.Ra

P.P.

T.Ra

P.P.

Star

RA

S

long.

T.Ra

P.P.

T.Ra

P.P.

4.6+4

4 35

370

+0.42

0 = +2.32

+0.2

+2.30

+13

2.375

2.40

4 35

235

-7.33

0 = +4.80

+0.75

+4.77

90

4.6

4 4 38

371

+1.57

+1.90

-.02

+1.92

+48

0.3

2.40

37

5 2

373

+5.19

+0.91

+2.22

0.69

4.7

3 4 39

75

-.06

+2.29

-.08

+2.37

-.02

0.2

2.35

33

4 42

76

+2.26

+1.93

+2.17

92

4.8

2 4 49

79

+1.65

+2.14

+0.23

+2.11

+21

-0.1

2.32

31

5.0+0

5 3

85

-.16

+2.38

-.05

+2.43

-.05

0.0

2.38

38

5.1

1 5 5

374

+1.79

+2.04

+0.07

+2.04

+25

+0.1

2.29

30

5.1

1 5 7

86

+1.03

+2.02

-.02

+2.04

+33

0.1

2.37

38

5.2

2 5 9

87

-.15

+2.29

-.02

+2.31

-.05

0.1

2.26

27

5.2

2 5 10

88

-.12

+2.31

-.02

+2.38

-.04

0.1

2.34

35

5.1.5

53E-3

5 18

90

+1.54

+2.04

+0.22

+2.04

+17

4 +0.2

+2.21

23

4.9.16

5.0

5.0+5.19+0.69+0.0

+0.70

4.7+2.26+1.72

-0.1

+1.71

2.308

+2.335

2.332

17.0

-7.33

+4.77

+0.1

+4.78

+4.90

-13

4.6+4.2+2.30

4.6-0.6+2.37

5.0-1.6+2.43

5.2-1.5+2.31

5.2-1.2+2.38

4.9-0.1+2.36

0 = +5.20 -1.66

n = +32

+2.27

-0.65

+0.29

+3.05

0 = +4.19 -1.33

n = +32

+1.26

-0.32

+2.5

+2.85

0 = -7.32 +2.42

n = +33.5

+13

0 = -8.33 +2.75

n = +33.5

+13

4.6+1.51+1.92

4.8+.65+2.11

5.1+.79+2.04

5.1+1.03+2.04

4.9+1.00+2.03

1875

Feb. 10

h = -057

-068

n = +28 @ = .00

1875

Feb. 10

h = -057

-068

n = +28 @ = .00

2.9+2.2

2 56

47

+0.06

0 = +0.99

+0.02

+0.97

+0.2

-0.1

0.99

0.98

14 51

198

-3.65

0 = +2.06

+1.10

+1.96

2.9+2.2

2 57

49

+0.09

+0.99

+0.02

0.75

+22

-0.1

0.97

0.96

15 21

203

-3.13

+1.65

-1.17

+1.82

3.0+1.3

3 00

50

+1.85

+0.72

+0.05

0.67

+24

-0.1

0.91

0.90

3.2-1.3

3 15

52

+1.17

+0.64

-.02

0.66

+33

+0.1

0.99

1.00

3.3-2.3

3 18

53

+1.15

+0.95

+0.01

0.94

+04

+0.1

0.98

0.99

3.06

0.968

+0.968

0.966

14.8

-3.65

+1.96

-0.2

+1.94

-0.1

+1.95

3.3+1.8+.94

3.1+1.0+.85

2.9+.79+0.75

3.0+.72+.67

3.2+1.17+.66

3.0+.40+.69

0 = -3.75 +0.99

n = +2.6

-3.23

+0.88

+2.7

+2.65

0 = -4.55 +1.26

n = +2.8

-4.03

+1.15

+2.8

+2.80

1875

Feb. 13

h = -050

-068

n = +31 @ = .00

L = -065

1875

Feb. 13

h = -050

-068

n = +31 @ = .00

L = -065

3.4+1.8

3 24

55

+0.22

0 = -3.10

-.02

-2.98

+07

-12

-2.91

3.03

5 23

92

+3.72

0 = -4.15

+0.01

-4.14

3.5+1.7

3 27

56

-.17

-2.84

+0.03

2.87

-.05

-11

2.92

3.03

17 44

484

-3.12

-2.08

+1.10

2.18

3.50

3.6+1.6

3 30

57

+1.09

-3.14

+0.08

3.22

+34

-10

2.88

2.98

6 5

383

+2.66

-3.66

+1.10

3.76

5.5-3.5

5 30

97

-.02

-3.05

-.05

3.00

-.01

+0.2

3.01

2.99

15 21

203

-3.13

-2.10

-1.17

-1.93

5.5-3.5

5 32

99

-.05

-3.02

+0.01

3.03

-.02

+0.2

3.05

3.03

5.6-4.5

5 36

377

+1.18

-3.28

+0.07

3.35

+37

+0.3

2.98

2.95

5.8-4.5

5 48

102

+1.13

-3.08

-.02

3.06

+24

+0.4

3.02

2.98

5.8-6.5

5 50

103

+1.00

-3.36

-.05

3.31

+31

+0.4

3.03

2.96

6.0-8.6

6 0

382

+1.26

-3.21

-.02

3.19

+08

+0.5

3.11

3.06

6.1-9.6

6 7

105

+1.41

-3.25

+0.01

3.26

+13

+0.6

3.13

3.07

5.7

5 26

93

-.01

-3.16

-.08

3.08

-.02

+0.1

3.08

3.07

5.7

5 5 42

101

+1.81

-3.22

+0.01

3.26

+25

+0.3

-3.03

3.00

5.16

3.016

3.012

17.7

-3.12

-2.18

+0.4

-2.14

+0.3

-2.15

3.4+2.2-2.98

3.6+1.0-3.22

5.4+3.72-4.15+0.2

-4.12

+0.1

+1.43

15.3

-3.13

-1.82

+0.9

-2.02

-1.0

-2.03

3.4-1.7-2.87

5.6+1.8-3.35

6.1+2.66-3.76+0.5

-3.71

+0.5

-3.71

0 = +3.67 -1.39

n = +3.8

+2.61

-0.68

+2.6

+3.20

0 = -3.17 +0.89

n = +2.8

-3.18

+7.07

+3.00

5.5-0.2-3.00

5.8+1.0-3.31

5.7+1.51-3.28

5.8+1.3-3.06

5.2+1.02-3.29

0 = +2.70 -1.14

n = +4.2

+1.64

-0.42

+2.6

+3.40

0 = -4.16 +1.14

n = +2.8

+1.15

+1.26

+3.30

+2.90

6.4-0.1-3.06

5.0+0.5-3.03

0 = -4.16 +1.14

n = +2.8

+1.15

+1.26

+3.30

+2.90

12

2

$$\frac{1}{2} = +60+80. +40+60 +20+40 +0+20 +0+20 -20-40 -40-60 -60-80 -80-100$$

RA sin z cos z

R_g-R_h P₁-P₂ P₁+P₂ R_g-R_h R_g R_h

RA sin z cos z

R_g-R_h P₁-P₂ P₁+P₂ R_g-R_h R_g R_h

h m

h m

h m

h m

4 35 +31.94

-16 11.9 +0.6 -11.3 +12 -10.1

16 59 -82.56

-16 2.8 +0.5 -2.4 -2.4 -5.3

4 38 -24.97

8.1 +0.5 7.6 -0.8 8.4

5 2 -60.80

4.8 +0.6 6.3 -1.4 -5.2

4 39 +72.69

12.1 +0.3 11.8 +2.3 9.5

4 42 -40.91

6.7 -0.3 7.0 -1.3 8.3

4 40 +16.99

9.7 -0.2 9.7 +0.6 9.1

5 3

- - +1.1 - -

5 5 +0.100

9.8 -0.1 9.9 +0.3 9.6

5 7 -0.100

8.5 +0.1 8.4 -0.2 8.6

5 9 +77.63

11.0 -0.6 11.6 +2.5 9.1

5 12 +76.64

12.0 -0.8 12.0 +2.5 9.5

5 18 +24.97

11.7 +1.1 10.6 +0.9 9.7

9.29

8.25 8.45

+72 -11.8

+34 -11.3 +1.6 -9.7 -0.6 -8.4 -2.4 -7.6 -4.0 -7.0 -6.0 -6.3 -8.2 -2.3

+74 11.6

+24 10.6 +0.7 9.9

+76 12.0

15 54

58 19 3 16

+75 -18.8

+29 -10.9 +1.1 -9.8 -0.6 -8.4 -2.4 -7.6 -4.0 -7.0 -6.0 -6.3 -8.2 -2.3

+25

+1.0 +1.1 -1.2

-16 8.83

2 9.9

9.12

+8

9.28

+3

(11)K

+8

+7.2

+3

+7.4

+3

+7.6

+3

15 54

58 19 3 16

+75 -18.8

+29 -10.9 +1.1 -9.8 -0.6 -8.4 -2.4 -7.6 -4.0 -7.0 -6.0 -6.3 -8.2 -2.3

+25

+1.0 +1.1 -1.2

-16 8.83

2 9.9

9.12

+8

9.28

+3

(11)K

+8

+7.2

+3

+7.4

+3

+7.6

+3

15 54

58 19 3 16

+75 -18.8

+29 -10.9 +1.1 -9.8 -0.6 -8.4 -2.4 -7.6 -4.0 -7.0 -6.0 -6.3 -8.2 -2.3

+25

+1.0 +1.1 -1.2

-16 8.83

2 9.9

9.12

+8

9.28

+3

(11)K

+8

+7.2

+3

+7.4

+3

+7.6

+3

15 54

58 19 3 16

+75 -18.8

+29 -10.9 +1.1 -9.8 -0.6 -8.4 -2.4 -7.6 -4.0 -7.0 -6.0 -6.3 -8.2 -2.3

+25

+1.0 +1.1 -1.2

-16 8.83

2 9.9

9.12

+8

9.28

+3

(11)K

+8

+7.2

+3

+7.4

+3

+7.6

+3

15 54

58 19 3 16

+75 -18.8

+29 -10.9 +1.1 -9.8 -0.6 -8.4 -2.4 -7.6 -4.0 -7.0 -6.0 -6.3 -8.2 -2.3

+25

+1.0 +1.1 -1.2

-16 8.83

2 9.9

9.12

+8

9.28

+3

(11)K

+8

+7.2

+3

1875phae.proj.16

1875	Feb 15	h = -046 -058	n = -0.30	c = +1.12	L = -0.34	1875	Feb 15	h = -046 -058	n = -0.30	c = +1.12	L = -0.34							
RA	S	long. acc.	T.R.A	P.P.	T.P.P.	RA	S	long. acc.	T.R.A	P.P.	T.P.P.							
4.6 +5.4 35	370	+0.42 1.09	-1.14	+0.2	-4.16	+2.03	5.2	373	+5.19	0 = -5.99	+22 -6.21							
4.6 +5.4 38	371	+1.51 1.81	-1.57	-0.2	-4.55	+2.03	5.23	92	+3.72	-5.85	+0.4 5.84							
4.6 +5.4 40	79	+1.65 1.09	-4.30	+0.3	-4.33	+2.0	4.42	76	+2.26	-4.55	+3.7 4.76							
5.0 +1.5 3	85	+1.6 1.01	-4.16	-0.5	-4.11	+2.0	17.44	484	-3.12	-2.52	+10 2.62							
5.3 -2.5 18	90	+5.24 1.14	-4.34	+0.7	-4.34	+1.6	4.04	403										
5.5 -4.5 30	90	+1.2 1.00	-4.13	-0.3	-4.10	+0.4	4.00	4.00										
5.8 -7.5 48	102	+1.3 1.01	-4.25	-0.2	-4.23	+0.4	4.03	4.03										
4.6 +5.4 39	75	+0.6 1.00	-4.15	-0.6	-4.10	-0.2	4.03	4.03										
5.4 -3.5 26	93	+0.1 1.00	-4.33	-0.8	-4.25	+0.0	4.11	4.11										
5.5 -6.5 42	102	+5.1 1.29	-4.41	+0.6	-4.47	+2.4	4.05	4.05										
5.13																		
4.6 +4.2 -4.16		5.0 +5.19 -6.21 +0.0	-6.21	+0.0	-6.21	4.016												
5.0 -16 -4.11		5.4 +3.72 -5.85 +0.1	-5.83	+0.2	-5.82	17.7	-3.12 -2.62 +0.3	-2.59	+0.3	-2.59								
5.6 -12 -4.10		4.7 +2.26 -4.76	-0.2 -4.78	-0.1	-4.77													
5.8 +13 -4.23																		
4.6 -0.6 -4.10		0 = +5.16 -2.05	n = +4.0				0 = -3.15 +1.57	n = +4.0										
5.4 -0.1 -4.25		+3.69 -1.67	+4.05															
5.7 +0.3 -4.16		+2.23 -0.62	+4.25															
4.6 +1.57 -4.55		0 = +4.20 -1.76	n = +4.2				0 = -4.11 +1.86	n = +4.5										
4.8 +.65 -4.33		+2.73 -1.37	+5.0															
5.7 +.81 -4.47		+1.27 -0.32	+5.25															
5.0 +.99 -4.45	n = +30		+4.60															
1875	Feb 15	h = -051 -064	n = -0.35	c = +3.1	c = .00	1875	Feb 15	h = -051 -064	n = -0.35	c = +3.1	c = .00							
6.1 +3.6 7	105	+0.41	0 = -5.35	+0.1	-5.36	+1.3	5.22	-0.2	-5.23	+5.25	6.0 381	+2.22	0 = -5.85	+12 -5.97				
6.1 -3.6 45	112	+1.68	-5.36	+0.8	-5.64	+2.1	5.28	+0.2	-5.13	4.1	18.13	256	-16.83	-0.4				
6.20									-5.330	5.330	6.5	383	+2.66	-5.81	+7.0 5.91			
6.1 +4.1 -5.36		6.0 +2.22 -5.97	-0.1 -5.98	-0.1	-6.01	16.2	16.83	+0.1	-16.82									
6.7 +.65 -5.64		6.7 +20.69 -12.95	+0.3 -12.92	+0.0	-12.95													
6.4 +5.4 -5.50		6.1 +2.66 -5.91	+0.0 -5.91	-0.3	-5.94													
		0 = +1.81 -1.62	n = +2.34				0 = -17.21 -11.46	n =										
		+20.28 -7.56	+2.7															
		+2.25 -0.55	+2.24															
		0 = +1.54 -0.33	n = +2.24				0 = -17.51 -11.22	n =										
		+20.01 -7.31	+2.7															
		+1.98 -0.27	+1.5															
1875	Feb 16	h = -048 -059	n = +35	c = +4.20	6.555	6.555	6.555	c = .00	L = -0.34	1875	Feb 16	h = -048 -059	n = +35	c = +4.20	6.555	6.555	c = .00	L = -0.34
5.7 +3.3 42	101	+1.81	-6.50	+0.6	-6.86	+2.8	-0.2	-6.58	-6.60	6.5	383	+2.66	0 = -7.19	+10 -7.29				
5.8 +2.5 48	102	+1.13	-6.61	-0.2	-6.59	+0.5	-0.1	-6.54	.55	18.13	256	-16.83	-0.83	-0.3 0.798				
5.8 +2.5 50	103	+1.00	-6.94	-0.5	-6.89	+3.5	-0.1	-6.54	.55	6.25	387	+5.50	-8.50	+0.7 8.57				
5.9 +1.5 51	104	+1.76	-6.81	+0.2	-6.83	+2.7	-0.1	-6.56	.57	6.41	111	+20.66	-12.05	-11.78 12.88				
6.0 0 -6.0	382	+1.26	-6.67	-0.2	-6.65	+0.9	0.0	-6.56	.56	17.44	484	-3.12	-4.92	+10 5.02				
6.1 -1.6 7	105	+1.41	-6.63	+0.1	-6.64	+1.4	+0.1	-6.50	.49									
6.20	6.30	+1.30	-6.68	+0.2	-6.70	+1.1	+0.2	-6.50	.57									
5.97	6.22	+1.37					6.5	6.550										
								-6.553	6.556									
5.8 +1.3 -6.59		6.1 +2.66 -7.29	+0.0 -7.29	+0.1	-7.28	16.2	16.83	-0.7	+0.8	-6.78	+0.2	-0.8 7.77						
6.0 +2.6 -6.65		6.4 +5.50 -8.57	+0.1 -8.56	+0.3	-8.54	17.6	-3.12 -5.02	-0.2 -5.04										
6.1 +4.1 -6.64		6.7 +20.69 -11.48	+0.3 -11.75	+0.4	-11.74													
6.5 +3.0 -6.70																		
6.6 +2.8 -6.65		0 = +2.38 -0.64	n = +2.27				0 = -17.11 +5.87	n = +2.34										
5.7 +.81 -6.66		+5.22 -1.91	+3.9				-3.40 +1.61	+4.7										
5.8 +1.00 -6.69		+20.11 -5.10	+2.5															
5.8 +.76 -6.63		-1.20	+3.1															
5.8 +.56 -6.66																		
n = +36 +0.2		0 = +1.80 -0.42	n = +2.3				0 = -17.69 +6.09	n = +3.4										
		+4.64 -1.68	+3.6				-3.95 +1.63	+4.4										
		+19.83 -1.88	+2.5															
		-1.20	+3.1															
			+3.00															

$$15 = +60+80 \quad +40+60 \quad +20+40 \quad +0+20 \quad +0-20 \quad -20-40 \quad -40-60 \quad -60-80 \quad -80-100$$

R.A. linear

R_gR_h

P-L

P_g-P_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_h

R.A. linear

R_gR_h

P-L

P_g-P_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_h

R.A. linear

R_gR_h

P-L

P_g-P_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_h

R.A. linear

R_gR_h

P-L

P_g-P_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_h

R.A. linear

R_gR_h

P-L

P_g-P_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_h

R.A. linear

R_gR_h

P-L

P_g-P_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_h

R.A. linear

R_gR_h

P-L

P_g-P_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_h

R.A. linear

R_gR_h

P-L

P_g-P_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_h

R.A. linear

R_gR_h

P-L

P_g-P_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_h

R.A. linear

R_gR_h

P-L

P_g-P_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_h

R.A. linear

R_gR_h

P-L

P_g-P_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_h

R.A. linear

R_gR_h

P-L

P_g-P_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_h

R.A. linear

R_gR_h

P-L

P_g-P_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_hR_gR_h

R.A. linear

R_gR_h

P-L

P_g-P_h

1875 Feb. 17 h = -047 $\alpha = +33$ $\epsilon = 0$
 wave

Star	RA	δ	Tang.	T. RA	P. P. (P. P.)	T. RA	P. P. (P. P.)
65 +1 6 30	107	+0.30	0 = -7.67	+0.2	-7.69 +10	-7.58 -01	-7.60
67 -1 6 45	112	+0.68	-7.71	+0.8	7.79 +23	56 +01	55
6.60					-4.575	7.575	
6.5 +30 -7.69			6.4 +5.50 -9.37	+0.0	-9.37	-01 -9.38	16.2 -16.83 -1.07
68 +65 -7.79			6.7 +20.69 -12.74	+0.1	-12.74	+0.0 -12.75	-01 -1.50
6.6 +49 -7.74							-02 -1.51
			0 = +5.20 -1.68	$n = +32$			
			+20.39 -5.05	+25			
			-1.20	+315			
			0 = +4.82 -1.59	$n = +33$			
			+20.01 -1.96	+25			
			-1.20	+320			

Feb 18 h = -049 $\alpha = +20$ $\epsilon = 0.0$ $\delta = -054$
 wave

Star	RA	δ	Tang.	T. RA	P. P. (P. P.)	T. RA	P. P. (P. P.)
4.9 4.8 4 35	370	+0.42	0 = -8.70	+0.2	-8.81 +08	-04 -8.73	8.81
4.7 7 4 39	75	-0.06	-8.76	-0.8	8.68 -01	04 8.69	73
4.8 6 4 49	79	+0.65	-8.74	+0.3	8.77 +13	03 8.64	67
4.9 5 4 53	81	+0.95	-8.84	+0.9	8.96 +19	03 8.77	80
4.9 5 4 54	82	+0.87	-8.82	+0.5	8.87 +17	03 8.70	73
4.8 5.1 3 5 5	874	+0.76	-8.99	+0.2	8.99 +16	02 8.83	85
5.1 3 5 7	86	+1.03	-9.02	-0.2	9.00 +21	02 8.79	81
5.2 +2 5 9	87	-0.15	-8.70	-0.2	8.68 -03	-01 8.71	72
6.8 1.4 6 46	894	+0.64	-9.10	+0.2	9.12 +33	+0.8 8.79	71
6.7 1.5 6 57	113	+0.38	-8.97	+0.1	8.98 +08	0.8 8.90	82
6.7 4 52 8.0		+0.75	-9.38	-0.2	9.31 +03		88
6.14 6.7 -13 6 45 112		+0.68	-8.86	+0.8	8.94 +14	+0.7 -8.80	73
5.43						8.82 -8.798	8.762
4.6 -0.6 -8.68			4.7 +2.26 -9.18	-0.4	-9.22	-0.3 -9.21	
5.2 -1.5 -8.68			6.7 +20.69 -12.74	+0.5	-12.10	+0.7 -12.08	
6.9 +3.8 -8.98							
5.6 +0.6 -8.78							
4.8 +6.5 -8.87			0 = +2.20 -0.14	$n = +20$			
4.9 +9.5 -8.96			+20.63 -3.32	+16			
4.9 +8.7 -8.87				+180			
5.1 +7.9 -8.89			0 = +1.27 -0.26	$n = +20$			
5.1 +1.03 -9.00			+19.70 -3.13	+16			
6.8 +1.64 -9.12				+180			
5.3 +9.9 -8.78				$n = +18 +0.1$			

Feb. 22 h = -048 $\alpha = +04$ $\epsilon = 0.0$ $\delta = -059$
 wave

Star	RA	δ	Tang.	T. RA	P. P. (P. P.)	T. RA	P. P. (P. P.)
6.10 6.1 +9 6 7	105	+0.41	0 = -13.16	+0.1	-13.17 +02	-05 -13.15	13.20
7.2 -2 7 11	114	+0.30	-13.30	-0.1	13.29 +01	+01 13.28	27
7.2 -2 7 13	115	+0.41	-13.29	-0.1	13.28 +02	+01 13.26	25
7.3 -3 7 18	117	+0.53	-13.33	-0.3	13.30 +02	+02 13.28	26
7.25 7.3 -3 7 20	118	+0.15	-13.29	+0.0	13.29 +01	+02 -13.28	26
7.02						13.275	
6.1 +4.1 -13.17			6.0 +2.22 -13.30	-0.4	-13.34	-0.0 -13.36	13.248
7.2 +3.0 -13.29			6.1 +2.66 -13.18	-0.4	-13.22	-0.5 -13.23	16.2 -16.83 -1.07
7.3 +1.5 -13.29							18.2 -16.83 11.95
6.9 +2.9 -13.25							11.58
7.3 +5.3 -13.20			0 = +1.93 -0.09	$n = +05$			
			+2.37 +0.3	-0.1			
				+0.20			
			0 = +1.69 -0.06	$n = +04$			
			+2.13 +0.03	-0.3			
				+0.05			

1875 Feb. 17 h = -047 $\alpha = +33$ $\epsilon = 0$
 wave

Star	RA	δ	Tang.	T. RA	P. P. (P. P.)	T. RA	P. P. (P. P.)
18 13 256			-16.83	0 = -1.53	-0.4 -1.088		
6 25 387			+5.50	-9.30	+0.7 -9.37		
6 41 111			+20.69	-13.02	+0.2 -12.75		
					+0.3 -13.95		
16.2 -16.83 -1.07			-01 -1.50				
0 = -17.13 +6.19			$n = +36$				
0 = -17.51 +6.28			$n = +36$				

Feb. 22 h = -048 $\alpha = +04$ $\epsilon = 0.0$ $\delta = -059$
 wave

Star	RA	δ	Tang.	T. RA	P. P. (P. P.)	T. RA	P. P. (P. P.)
4.9 4.8 4 35	370	+0.42	0 = -8.70	+0.2	-8.81 +08	-04 -8.73	8.81
4.7 7 4 39	75	-0.06	-8.76	-0.8	8.68 -01	04 8.69	73
4.8 6 4 49	79	+0.65	-8.74	+0.3	8.77 +13	03 8.64	67
4.9 5 4 53	81	+0.95	-8.84	+0.9	8.96 +19	03 8.77	80
4.9 5 4 54	82	+0.87	-8.82	+0.5	8.87 +17	03 8.70	73
4.8 5.1 3 5 5	874	+0.76	-8.99	+0.2	8.99 +16	02 8.83	85
5.1 3 5 7	86	+1.03	-9.02	-0.2	9.00 +21	02 8.79	81
5.2 +2 5 9	87	-0.15	-8.70	-0.2	8.68 -03	-01 8.71	72
6.8 1.4 6 46	894	+0.64	-9.10	+0.2	9.12 +33	+0.8 8.79	71
6.7 1.5 6 57	113	+0.38	-8.97	+0.1	8.98 +08	0.8 8.90	82
6.7 4 52 8.0		+0.75	-9.38	-0.2	9.31 +03		88
6.14 6.7 -13 6 45 112		+0.68	-8.86	+0.8	8.94 +14	+0.7 -8.80	73
5.43						8.82 -8.798	8.762
4.6 -0.6 -8.68			4.7 +2.26 -9.18	-0.4	-9.22	-0.3 -9.21	
5.2 -1.5 -8.68			6.7 +20.69 -12.74	+0.5	-12.10	+0.7 -12.08	
6.9 +3.8 -8.98							
5.6 +0.6 -8.78							
4.8 +6.5 -8.87			0 = +2.20 -0.14	$n = +20$			
4.9 +9.5 -8.96			+20.63 -3.32	+16			
4.9 +8.7 -8.87				+180			
5.1 +7.9 -8.89			0 = +1.27 -0.26	$n = +20$			
5.1 +1.03 -9.00			+19.70 -3.13	+16			
6.8 +1.64 -9.12				+180			
5.3 +9.9 -8.78				$n = +18 +0.1$			

$\lambda =$

+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100
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RA linear

6	30	+144.89
6	45	+144.99

 $R_1 - R_2$ $P_1 - P_2$ $R_1 - R_2$ $P_1 - P_2$ $R_1 - R_2$ $P_1 - P_2$

-16	11.3	+0.4	-10.9	+15	-9.4
	10.0	+0.2	9.8	+05	9.3

RA linear

18	13	-78.62
6	25	-61.79
6	41	-71.70

 $R_1 - R_2$ $P_1 - P_2$ $R_1 - R_2$ $P_1 - P_2$ $R_1 - R_2$ $P_1 - P_2$

-16	8.5	+0.3	-78.62	+25	-10.7
	9.8	+0.5	8.9	-20	10.9
	7.5	+0.8	2.63	-23	9.6

+144 -10.9

+14 -9.8

-78 -7.7

-61 -8.9

-71 -6.3

40 22.9

-70 -7.6

-23

3 9.9

+2

-16 1012

+144 -10.9

+14 -9.8

+1.4

+1.4

1 9.5

1 9.4

5 5

4 4

+0.2

-0.3

4 35 +34.94

-16 10.2 +0.6 -9.6 +12 -8.4

4 42 -110.91

6 41 -71.70

-16

7.1

-2.3

-7.4

-1.3

-5.7

6.3

4 39 +72.69

11.1 +0.3 10.8 +24 8.4

4 49 +16.99

8.3 -0.0 8.3 +0.6 7.7

4 53 -102.100

8.6 -0.1 8.7 +0.6 8.7

4 54 +0.1100

8.5 +0.1 8.4 +0.1 8.3

5 5 +0.7100

9.6 -0.1 9.7 +0.3 9.4

5 7 -06.100

8.8 +0.1 8.7 -0.2 8.9

5 9 +77.63

9.8 +0.6 9.2 +2.5 6.7

6 46 -28.96

8.0 +1.1 6.9 -0.9 7.8

6 57 +37.93

9.5 +0.2 9.3 +1.8 8.0

4 52 -31.95

9.1 +0.2 8.9 +0.5 8.4

6 45 +14.99

8.22 8.22

8.50 8.50

+7.2 -10.8

+7.7 9.2

+3.4 -9.6 +16 -8.3

+3.7 9.3 +0.1 8.4

+0.7 9.7

+1.4 8.9

-0.2 -8.7

-0.6 8.7

-3.1 -6.9

-2.8 -6.9

-4.0 -7.4

-7.1 -5.0

9 00

+7.4 -10.0

+2.5

11 9 38 353

+3.5 -9.4 +0.9 -8.8

+1.2 +3

8.24 8.5

8 14 59

-0.4 -8.7

-1.1

-2.9 -6.9

-4.0 -7.4

-7.1 -5.0

-16 8.24

7.3

-8.7

-7.3

-1.3

-2.3

-1.9

6 7 +34.94

-16 10.3 +0.2 -10.1 +12 -8.9

6 0 -60.91

6 5 -45.89

18 13 -78.62

-16

9.3

+1.5

-7.8

-1.3

-9.1

7 11 +43.90

9.8 +0.2 9.6 +1.5 8.1

7 13 +35.93

10.1 +0.2 9.9 +1.3 8.6

7 18 +25.97

9.8 -0.3 10.1 +0.8 9.3

7 20 +56.82

11.2 +0.3 10.9 +1.8 9.1

8.80 8.80

9.38 9.35

+4.3 -9.6

+5.6 10.9

+2.5 10.1

9.9 20.5

+4.9 -10.2

+1.6 +1.0

+3.4 -10.1

+3.5 9.9

+2.5 10.1

4 01

-10.0

+1.0

-10 -7.8

-1.5 8.1

-7.8

16.3 15.9

-5.4 -7.9

+1.4

5 23

100 700

70 99

670 799

-16 9.01

8.96

9.00

2 8.63

-0.8 9.0

-4 +0

3 9.3

0.9

+1.3

1875	Feb. 24	h = -0.43	n = -0.07	e = .00	h = -0.66	1875	Feb. 24	h = -0.43	n = -0.07	e = .00	h = -0.66				
Star	RA	δ	Tang.	T-RA	P-P	T-RA	P-P	Star	RA	δ	Tang.	T-RA	P-P	T-RA	P-P
54	4.0	5 26	93	-0.01	0 = -15.40	-0.08	-15.32	54	4.0	5 26	93	-0.01	0 = -15.40	-0.08	-15.32
55	9	5 30	97	-0.02	-15.36	-0.05	-15.31	55	9	5 30	97	-0.02	-15.36	-0.05	-15.31
55	9	5 32	99	-0.05	-15.37	-0.01	-15.38	55	9	5 32	99	-0.05	-15.37	-0.01	-15.38
56	5	5 32	377	+1.18	-15.27	-0.07	-15.34	56	5	5 32	377	+1.18	-15.27	-0.07	-15.34
58	6	5 48	102	+1.13	-15.43	-0.02	-15.41	58	6	5 48	102	+1.13	-15.43	-0.02	-15.41
58	6	5 51	103	+1.00	-15.41	-0.05	-15.36	58	6	5 51	103	+1.00	-15.41	-0.05	-15.36
59	5	5 51	104	+1.76	-15.43	-0.02	-15.45	59	5	5 51	104	+1.76	-15.43	-0.02	-15.45
60	4	6 0	382	+1.26	-15.45	-0.02	-15.47	60	4	6 0	382	+1.26	-15.45	-0.02	-15.47
573	61	3 4	7	+1.41	-15.43	-0.01	-15.44	573	61	3 4	7	+1.41	-15.43	-0.01	-15.44
71	7	9	396	+1.87	-15.58	-0.01	-15.57	71	7	9	396	+1.87	-15.58	-0.01	-15.57
72	8	11	114	+1.30	-15.51	-0.01	-15.50	72	8	11	114	+1.30	-15.51	-0.01	-15.50
72	8	13	115	+1.41	-15.50	-0.01	-15.49	72	8	13	115	+1.41	-15.50	-0.01	-15.49
73	9	18	117	+1.53	-15.49	-0.03	-15.46	73	9	18	117	+1.53	-15.49	-0.03	-15.46
73	9	20	118	+1.15	-15.48	-0.01	-15.48	73	9	20	118	+1.15	-15.48	-0.01	-15.48
73	9	21	398	+1.62	-15.43	-0.04	-15.47	73	9	21	398	+1.62	-15.43	-0.04	-15.47
729	76	12	37	+1.54	-15.45	-0.01	-15.46	729	76	12	37	+1.54	-15.45	-0.01	-15.46
641	44	7	27	+1.63	-15.49	-0.01	-15.49	641	44	7	27	+1.63	-15.49	-0.01	-15.49
5.5-01-15.32	5.6+1.18	5.4+3.72	-15.62	-0.03	-15.63	-0.03	-15.63	5.5-01-15.32	5.6+1.18	5.4+3.72	-15.62	-0.03	-15.63	-0.03	-15.63
5.6-02-15.31	5.8+1.00	6.1+2.66	-15.28	+0.00	-15.28	+0.00	-15.28	5.6-02-15.31	5.8+1.00	6.1+2.66	-15.28	+0.00	-15.28	+0.00	-15.28
5.6-05-15.38	6.4+5.50	-15.31	+0.02	-15.29	+0.01	-15.30		5.6-05-15.38	6.4+5.50	-15.31	+0.02	-15.29	+0.01	-15.30	
5.8+13-15.41								5.8+13-15.41							
6.0+26-15.47								6.0+26-15.47							
7.3+15-15.48								7.3+15-15.48							
6.0+08-15.37								6.0+08-15.37							
5.6+1.18-15.34								5.6+1.18-15.34							
5.8+1.00-15.36								5.8+1.00-15.36							
5.8+1.76-15.45								5.8+1.76-15.45							
7.2+1.87-15.57								7.2+1.87-15.57							
6.1+1.95-15.43								6.1+1.95-15.43							
1875	Feb. 24	h = -0.44	n = -0.80	e = .00	h = -0.67	1875	Feb. 24	h = -0.44	n = -0.80	e = .00	h = -0.67				
Star	RA	δ	Tang.	T-RA	P-P	T-RA	P-P	Star	RA	δ	Tang.	T-RA	P-P	T-RA	P-P
51	14	5 5	374	+0.79	0 = -19.35	+0.00	-19.35	51	14	5 5	374	+0.79	0 = -19.35	+0.00	-19.35
51	14	5 7	86	+1.03	-19.31	-0.02	-19.29	51	14	5 7	86	+1.03	-19.31	-0.02	-19.29
51	14	5 9	87	-1.15	-19.02	-0.02	-19.00	51	14	5 9	87	-1.15	-19.02	-0.02	-19.00
51	14	5 16	394	+1.64	-19.61	-0.02	-19.63	51	14	5 16	394	+1.64	-19.61	-0.02	-19.63
69	4	6 57	113	+1.38	-19.36	-0.01	-19.37	69	4	6 57	113	+1.38	-19.36	-0.01	-19.37
71	6	9	396	+1.87	-19.38	-0.01	-19.37	71	6	9	396	+1.87	-19.38	-0.01	-19.37
72	7	11	114	+1.30	-19.36	-0.01	-19.35	72	7	11	114	+1.30	-19.36	-0.01	-19.35
72	7	13	115	+1.41	-19.31	-0.01	-19.30	72	7	13	115	+1.41	-19.31	-0.01	-19.30
700	65	3 6	45	+1.68	-19.35	-0.08	-19.43	700	65	3 6	45	+1.68	-19.35	-0.08	-19.43
6.49								6.49							
5.1-16-19.00	5.1+1.79	-19.35						5.1-16-19.00	5.1+1.79	-19.35					
6.9+1.88	-19.37	5.1+1.03	-19.29					6.9+1.88	-19.37	5.1+1.03	-19.29				
7.2+3.0	-19.35	6.8+1.64	-19.63					7.2+3.0	-19.35	6.8+1.64	-19.63				
7.2+4.1	-19.30	7.2+1.87	-19.37					7.2+4.1	-19.30	7.2+1.87	-19.37				
6.6+2.4	-19.23	6.7+1.68	-19.43					6.6+2.4	-19.23	6.7+1.68	-19.43				
6.2+1.00	-19.41							6.2+1.00	-19.41						
n = +21	+0.3							n = +21	+0.3						
1875	Feb. 24	h = -0.49	n = -0.65	e = .00	h = -0.65	1875	Feb. 24	h = -0.49	n = -0.65	e = .00	h = -0.65				
Star	RA	δ	Tang.	T-RA	P-P	T-RA	P-P	Star	RA	δ	Tang.	T-RA	P-P	T-RA	P-P
74	17	7 27	119	+0.63	0 = -23.57	+0.02	-23.59	74	17	7 27	119	+0.63	0 = -23.57	+0.02	-23.59
76	17	7 37	122	+1.54	-24.19	-0.01	-24.20	76	17	7 37	122	+1.54	-24.19	-0.01	-24.20
7.05								7.05							
7.4+0.63	-23.89							7.4+0.63	-23.89						
7.6+0.37	-24.20							7.6+0.37	-24.20						
7.6+1.58	-24.04							7.6+1.58	-24.04						
6.7+2.069	-25.55							6.7+2.069	-25.55						
0 = +2.01	-1.55	n = +0.8						0 = +2.01	-1.55	n = +0.8					
18.2	-16.83	-20.65	-0.06	-20.71				18.2	-16.83	-20.65	-0.06	-20.71			
0 = -17.41	+3.33	n = +1.9						0 = -17.41	+3.33	n = +1.9					

1875	Arch. 8	$h = -0.46$	$n = +.02$	$c = -.02$	$h = -.054$	1875	Arch. 8				
Star	Ra	δ	Time	T.R.R.	P.P.P.	Star	Ra	δ	Time	T.R.R.	P.P.P.
67.8	6	30	103	+1.00	0 = -28.77	28.707	6	5	383	+2.66	0 = -28.66
58.47	5	50	103	+0.26	-28.77	28.70	6	5	383	+2.66	0 = -28.66
60.15	6	0	382	+0.41	-28.70	28.70	18	13	256	-16.83	-28.71
61.14	6	7	105	+0.30	-28.66	28.70	6	41	111	+20.69	-28.55
65.40	6	30	107	+1.64	-28.51	28.65	20	13	502	-4.45	-28.68
632	6	46	394	+1.14	-28.80	28.54	8	26	410	+3.50	-29.02
82.7	5	10	123	+0.34	-28.84	28.80					
86.11	8	38	126	+0.12	-28.85	28.83					
87.12	8	40	128	+0.16	-28.78	28.84					
88.13	8	47	412	+0.11	-28.89	28.86					
88.13	8	49	129	+1.13	-28.77	28.80					
8.67	8	51	130	+0.68	-28.69	28.77					
7.49	6	45	112			28.833					
						28.770					
6.0 + 2.6	-28.64	6.1 + 2.6	-28.76	-0.7	-28.83	18.2	-16.83	-28.73	-0.7	-28.82	-0.04
6.5 + 3.0	-28.66	6.7 + 2.0	-28.58	-0.4	-27.62	20.2	-4.45	-28.62	+0.3	-28.59	+0.05
5.2 + 1.7	-28.80	8.4 + 3.5	-28.93	+0.4	-28.89						
5.7 + 1.2	-28.84										
5.8 + 1.1	-28.86										
7.6 + 1.7	-28.80	0 = +2.17	-0.03	n = +0.1		0 = -17.02	+0.05	n = +0.0			
5.8 + 1.0	-28.72	+2.50	+1.18	+0.0		-4.64	+0.18	+0.04			
6.8 + 1.6	-28.83	+3.31	-0.09	+0.03				+0.020			
8.8 + 1.1	-28.82	0 = +1.40	-0.02	n = +0.1		0 = -18.09	+0.07	n = +0.0			
7.1 + 1.2	-28.77	+2.43	+1.19	+0.0		-5.71	+0.22	+0.04			
1875	Arch. 11	$h = -0.42$	$n = +.04$	$h = -.050$							
50	6	30	107	+0.30	104	31.50	+0.02	31.82	+0.1	+0.6	31.75
6.65	6	46	394	+1.64	192	31.74	+0.02	31.76	+0.7	12	31.57
82.2	8	10	123	+1.10	101	31.87	+0.02	31.87	+0.1	06	31.80
84.0	8	25	409	+0.38	107	31.97	+0.02	31.97	+0.2	06	31.85
86.2	8	38	126	+0.34	106	31.05	-0.02	31.95	+0.1	06	31.88
87.3	8	40	128	+0.12	100	31.89	-0.01	31.88	+0.0	06	31.82
88.4	8	47	412	+0.60	117	31.89	+0.10	31.99	+0.0	07	31.92
88.4	8	51	130	+1.13	157	31.86	+0.02	31.94	+0.05	09	31.80
8.63	8	53	133	+1.10	149	31.85	+0.15	32.02	+0.04	09	31.80
8.34	6	45	112	+0.68	121	31.53	+0.08	32.61	+0.03	07	31.76
						31.76		31.68			
6.5 + 3.0	-31.82	6.7 + 2.0	-31.69	-0.5	-30.64	20.2	-4.45	-31.50	+0.2	-31.48	-0.04
5.2 + 1.7	-31.87	8.3 + 1.8	-31.90	+0.2	-31.88	7.8	-53.29	-26.00	+0.00	-26.00	
5.7 + 1.2	-31.88	8.4 + 3.5	-32.17	+0.2	-32.15						
7.8 + 2.0	-31.86										
6.8 + 1.6	-31.76	0 = +2.04	+1.28	n = +0.09	+0.6	0 = -4.65	+0.38	n = +0.08			
8.8 + 1.1	-31.94	+1.61	-0.04	+0.1	+0.1	-53.49	+5.86	+0.09			
8.9 + 1.0	-32.02	+3.30	-0.31	+0.09	+0.9			+0.085			
8.2 + 1.29	-31.91										
		0 = +1.55	+1.23	n = +0.08	+0.0	0 = -5.59	+0.39	n = +0.07			
		+0.67	-0.05	+0.05	+0.2	-54.13	+5.97	+0.09			
		+2.36	-0.28	+0.35	+1.2			+0.080			

[illegible]

[illegible]

$\lambda =$ +60+80 +40+60 +20+40 +0+20 +0-20 -20-40 -40-60 -60-80 -80-100

1875

Mich 17
war

1875

Mich 17

Star

RA Lin 2000

 $R_1 - R_2$
 $R_1 - R_2$
 $R_1 - R_2$
 $R_1 - R_2$
 $R_1 - R_2$
 $R_1 - R_2$

RA Lin 2000

 $R_1 - R_2$
 $R_1 - R_2$
 $R_1 - R_2$
 $R_1 - R_2$
 $R_1 - R_2$
 $R_1 - R_2$

6 7 +34.94

-16 5.2 +0.2 -8.0 +1.2 -6.8

18 13 -78.62

-16 2.3 +0.2 -5.5 -2.6 -5.2

7 27 +18.98

7.2 -0.3 7.5 +0.6 6.9

6 41 -71.70

-16 3.9 +0.2 -3.7 -2.5 6.2

8 37 +24.97

9.5 +0.4 9.1 +0.8 8.8

7 45 -53.84

-16 5.1 +0.6 -1.5 -1.8 6.3

8 20 +54.84

10.3 +0.2 10.1 +1.8 8.3

8 4 -55.83

-16 6.2 +1.4 -1.8 -1.9 6.7

8 20 -32.94

7.8 +1.5 6.3 -1.1 7.4

20 13 -87.50

2.6 +0.5 2.1 -2.9 6.10

8 20 -32.94

7.8 +1.5 6.3 -1.1 7.4

8 26 -53.84

6.2 +0.9 -5.3 -1.8 7.1

8 20 -32.94

7.8 +1.5 6.3 -1.1 7.4

7 49 -75.66

8.1 +0.8 8.1 -2.6 7.0

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6 5 -45.89

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1875	Mar 22	h = -0.55	n = +0.7	e = +0.05	k = -0.114	1875	Mar 22	h = -0.55	n = +0.7	e = +0.05	k = -0.114
Star	Ra	δ	Tang. μ	T-Ra	P ₁ P ₂	Star	Ra	δ	Tang. μ	T-Ra	P ₁ P ₂
5.90	58+1.7 5 50	103	+1.00+444	-43.36	-0.54331 + 07	43.257	6 5	383	+2.66 0 = -	43.39 +.10	43.39
	58+1.7 5 51	104	+ .76 1.26	-43.38	+0.243.10 + .05	43.17	15 13	256	-16.53	-42.01	-0.844976
	61+1.4 6 7	105	+ .41 1.08	-43.38	+0.0143.39 + .03	43.31	7 18	114	+2.57	-43.88	+0.843.968
	71+4 7 9	390	+ .87 1.32	-43.68	-0.0143.67 + .06	43.54	7 45	401	+3.55	-43.65	+0.3744.02
	72+3 7 11	114	+ .80 1.04	-43.48	-0.0143.47 + .02	43.10	8 50	415	+2.43	-43.75	+0.1443.89
	72+3 7 13	115	+ .41 1.08	-43.49	-0.0143.48 + .03	43.40	6 22	387	+3.50	-43.63	+0.0743.70
	73+2 7 20	118	+ .15 1.01	-43.51	+0.0043.51 + .01	43.15					
	76-1 7 37	122	+ .54 1.14	-43.56	+0.0143.57 + .04	43.17					
	88-1.3 8 47	412	+ .60 1.17	-43.56	+0.1143.67 + .04	43.57					
	88-1.3 8 49	129	+ .11 1.00	-43.66	-0.0343.63 + .01	43.57					
	89-1.4 8 51	130	+ 1.13 1.51	-43.61	+0.0543.66 + .08	43.50					
7.98	89-1.4 8 55	133	+ 1.10 1.49	-43.53	+0.1743.70 + .08	43.55					
7.46											
	6.1+4.1 -43.39		6.1+4.66 -43.49	-0.08	-43.57		18.2	-16.83	-41.97	-0.07	-42.04
	7.2+3.0 -43.47		7.3+2.57 -43.98	-0.02	-43.98						
	7.3+1.5 -43.51		7.6+3.55 -44.02	+0.01	-44.02						
	8.8+1.6 -43.68		9.0+2.13 -43.89	+0.08	-43.81						
	7.4+2.4 -43.50		6.4+5.50 -43.70	-0.06	-43.77						
	5.8+1.00 -43.31		0 = +2.42 -0.06	n = +0.2	0 = +1.75 + 0.00	n = +0.0	0 = -17.07 + 14.6	n = +0.8	0 = -17.74 + 15.3	n = +0.9	-16
	5.8+7.6 -43.40		+2.33 -0.47	+20	+1.66 -0.11	+25					
	7.2+8.7 -43.62		+3.31 -0.51	+22.15	+2.61 -0.45	+17					
	8.8+6.0 -43.67										
	8.8+1.13 -43.66		+2.19 -0.31	+14	+1.52 -0.21	+16					
	8.9+1.10 -43.70		+5.26 -0.27	+0.5	+4.59 -0.20	+04					
	7.6+7.1 -43.57			+1.12		+12.4					
	7.6+7.2 -43.55										
	n = +1.0 -0.1										
1875	Mar 23	h = -0.50	n = +0.7	e = -0.15							
	71+9 7 9	396	+0.87 0 =	-44.96	-0.0744.95	+0.05	-44.89	-44.90			
	72+8 7 11	114	+ .30	-44.89	-0.0144.88	+0.2 -0.1	.86	.87			
	72+8 7 13	115	+ .41 1.04	-44.85	-0.0144.94	+0.0 -0.1	.91	.92			
	73+7 7 18	117	+ .53	-44.97	-0.0344.94	+0.4 -0.1	.90	.91			
	73+7 7 20	118	+ .15	-44.80	+0.0044.80	+0.1 -0.1	.89	.90			
	73+7 7 21	398	+ .62	-44.91	+0.0144.95	+0.4 -0.1	.91	.92			
7.29	76+4 7 37	122	+ .54	-44.91	+0.0144.92	+0.4 -0.1	.88	.89			
	91-1.1 8 47	412	+ .05	-44.90	-0.0244.90	+0.1 +0.2	.89	.87			
	92-1.2 8 11	135	+ .76	-44.89	+0.1145.00	+0.5 +0.2	.95	.93			
	92-1.2 8 12	417	+ .33	-44.90	-0.0344.89	+0.2 +0.2	.87	.85			
9.20	93-1.3 8 21	138	- .14	-44.92	+0.0744.93	-0.1 +0.2	.94	.92			
7.98											
	7.2+3.0 -44.88		7.3+4.02	+0.7	+0.8	-44.899					
	7.2+4.1 -44.94										
	7.3+1.5 -44.80		0 = +6.87	n =							
	9.1+0.5 -44.90										
	9.3-1.4 -44.93		0 = +6.27	n =							
	8.0+1.5 -44.89										
	7.2+8.7 -44.95										
	7.3+8.2 -44.92										
	7.2+7.6 -45.00										
	7.9+7.5 -44.97										
	n = +1.3										
1875	Mar 31	h = -0.52	n = -0.2	e = 0.0							
	8.4+5 8 25	409	+ 0.88	+ 16.12	+0.10	16.12	-0.1	-0.4	+ 16.11	16.07	8 25 410 + 3.50 + 16.02 -0.09 + 16.11
	8.7+2 8 40	128	+ .12	+ 16.00	-0.10	16.11	-0.0	-0.1	16.11	.10	21 27 308 - 2.75 + 15.83 + 0.09 15.74
	8.8-1 8 51	130	+ 1.13	+ 16.17	+0.05	16.12	-0.3	+0.1	16.09	.10	9 32 420 + 2.72 + 16.29 + 0.29 16.00
	9.6-7 9 34	141	+ .19	+ 16.01	+0.05	15.98	-0.1	+0.5	+15.97	.02	
8.88											
	8.4+3.8 +16.12		8.4+3.50 +16.11	-0.03	+16.08		-0.2	+16.09			
	8.7+1.2 +16.11		9.5+2.72 +16.00	+0.03	+16.03		+0.4	+16.01			
	9.6+1.9 +15.98		0 = +3.27 +0.01	n = +0.0							
	8.9+2.3 +16.07		+2.49 -0.04	+0.2	+0.10						
	8.8+1.13 +16.12		0 = +2.37 -0.03	n = +0.1							
n = +0.5											
	8.4+3.50 +16.11		9.5+2.72 +16.00	+0.03	+16.03		-0.2	+16.09			
	9.6+1.9 +15.98		0 = +3.27 +0.01	n = +0.0							
	8.9+2.3 +16.07		+2.49 -0.04	+0.2	+0.10						
	8.8+1.13 +16.12		0 = +2.37 -0.03	n = +0.1							
n = +0.5											

$\lambda =$ +60+80 +40+60 +20+40 +0+20 +0-20 -20-40 -40-60 -60-80 -80-100

1875
Mch 22
wave

Star

R.A. in hours

R.R.

P.P. (P.P.)

R.R.

1875
Mch 22
wave

Star

R.A. in hours

R.R.

P.P. (P.P.)

R.R.

P.P. (P.P.)

2 m

5 50

5 51 +0.9100

6 7 +3.4.94

7 2 +0.2100

7 11 +4.3.90

7 13 +3.5.93

7 20 +5.6.82

7 37 +2.4.97

8 47 +2.0.98

8 49 +5.9.80

8 51 +1.1.99

8 53 -0.9100

-16

7.7 +0.4 -7.3 +0.4

7.1 +0.2 6.9 +1.2

5.0 -0.6 5.4 +0.1

7.8 +0.2 7.6 +1.5

7.5 +0.2 7.3 +1.2

9.2 +0.3 8.9 +1.8

8.9 +0.4 8.5 +0.8

8.1 +0.2 7.9 +0.6

9.0 +0.8 8.2 +2.0

7.3 +0.8 6.5 -0.4

7.1 +1.2 5.9 -0.3

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7 11 +4.3.90

7 13 +3.5.93

7 18 +2.5.97

7 20 +5.6.82

7 21 +1.8.98

7 37 +2.4.97

8 47 +2.0.98

8 49 +5.9.80

8 51 +1.1.99

8 53 +7.7.63

-16

8.1 -0.4 -8.5

9.0 +0.2 8.8

8.2 +0.2 8.0

8.9 -0.3 9.2

9.1 +0.3 9.4

8.7 +0.7 4.0

8.0 +0.4 7.6

9.1 +0.4 8.7

6.0 -0.9 +6.9

-16 8.0 +0.2 7.9

9.3 0.3 +0.8 9.1

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+1.1

+6.4 -8.7 +4.3 -8.8 +3.5 -8.0 +0.2 -8.5

+7.7 9.1 +5.6 9.4 +2.5 9.2 +0.9 6.9

+4.1 7.9 +2.4 7.6

141 178 140 261 84 248 +1 152

+7.0 -5.9 +4.7 -8.7 +2.5 -8.3 +0.5 -7.7

+2.2 +1.4 +.8 +.2

2 6.7 3 7.3 3 7.5 2 7.5

-6 7.0 7.2 +.2

-16 7.28
7.13

1875 Mar 31

8 25 +3.7.93

8 40 +5.8.81

8 51 +1.1.99

9 34 +5.3.84

-16

9.8 +0.4 -9.4

11.0 -0.2 11.2

8.8 +0.8 8.0

9.9 +0.3 9.6

+1.3

-8.1

+1.9

9.3

-0.4

8.4

+1.8

7.8

8.40 +4.0

8 25

21 27 -92.38

9 32 -46.88

-16

2.0 +1.2 -2.8 -2.9

7.8 +0.9 6.9 -1.5

6.1

5.4

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200

+5.8 -11.2 +3.7 -9.4

+5.3 9.6

11 2.08

+5.5 -10.4 +3.7 -9.4

+1.6 +1.1

2 8.81 8.3

-11 -8.0

-11 -8.0

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-11 -8.0

-16 8.50
8.40

1875	March 25	h = -0.50	n = +0.07	e = +0.04	h = -0.064	1875	March 25	h = -0.50	n = +0.07	e = +0.04	h = -0.064
Star	RA	δ	tan μ	μ	μ	Star	RA	δ	tan μ	μ	μ
7.3	1.1	20	118	+0.15	+0.01	47.50	+0.02	47.50	+0.01	+0.02	47.42
7.4	1.0	21	398	+0.62	1.18	47.49	+0.04	47.53	+0.04	08.06	47.41
7.43	1.0	37	122	+0.54	1.14	47.56	+0.01	47.57	+0.04	08.05	47.45
8.9	1.0	55	133	+0.10	1.49	47.48	+0.17	47.65	+0.08	10.03	47.47
9.2	1.0	11	135	+0.76	1.26	47.53	+0.11	47.64	+0.05	09.05	47.50
9.2	1.0	12	417	+0.33	1.05	47.68	+0.11	47.67	+0.02	07.05	47.58
9.10	1.0	8	134	+0.05	1.00	47.66	+0.00	47.66	+0.00	+0.07	47.59
8.39											47.535
											47.489
7.3	1.15	47.50		7.3	+2.57	47.50	-0.07	47.91			
9.2	1.33	47.67		7.6	+3.55	47.94	-0.05	47.99			
9.1	1.05	47.66		9.0	+2.43	47.87	+0.03	47.84			
8.5	1.18	47.67									
7.3	1.62	47.53		0 = +2.39	-0.30	n = +1.13					
8.9	1.10	47.65		+3.37	-0.38	+1.11					
9.2	1.76	47.64		+2.25	-0.23	+1.10					
8.5	1.63	47.64									
9.0	1.43	47.64		0 = +1.74	-0.30	n = +1.17					
n = 0.00				+2.72	-0.38	+1.14					
				+1.60	-0.23	+1.14					
1875	March 27	h = -0.50	n = -0.06	e = 0.00	h = -0.074	50.020					
7.6	0.9	7	37	+0.54	1.04	49.90	+0.01	49.91	-0.03	-0.07	49.94
8.23	8.4	1	25	+0.38	1.07	50.03	+0.02	50.03	-0.02	-0.01	50.05
8.6	1	8	38	+0.34	1.06	50.05	+0.02	50.05	-0.02	+0.01	50.07
8.7	2	8	40	+0.12	1.00	50.03	+0.01	50.02	-0.01	+0.01	50.03
8.8	3	8	47	+0.60	1.17	49.94	+0.10	50.04	-0.04	+0.02	50.08
8.8	3	8	49	+0.11	1.60	50.09	+0.03	50.06	-0.01	+0.02	50.07
8.77	8.48										50.060
8.4	1.38	50.03		7.6	+3.53	49.80	-0.06	49.85			50.043
8.6	1.34	50.05									50.040
8.7	1.12	50.02									50.043
8.8	1.11	50.06		0 = +3.31	+0.19	n = -0.06					50.043
8.6	1.24	50.04									50.043
8.8	1.60	50.04		0 = +2.95	+0.18	n = -0.06					50.043
n = +0.00	-0.03										50.043
1875	March 28	h = -0.47	n = -0.06	e = 0.00	h = -0.061	51.110					
7.6	0.9	7	37	+0.54	0 = -51.03	+0.01	51.04	-0.03	-0.05	51.07	51.12
8.00	8.4	1	25	+0.38	51.03	+0.02	51.13	-0.02	-0.01	51.15	51.16
8.6	1	8	38	+0.34	51.19	+0.02	51.19	-0.02	+0.07	51.21	51.20
8.7	2	8	40	+0.12	51.20	+0.01	51.19	-0.01	+0.01	51.20	51.19
8.8	3	8	49	+0.11	51.14	+0.03	51.11	-0.01	+0.02	51.12	51.10
8.9	4	8	51	+0.13	51.05	+0.05	51.10	-0.07	+0.02	51.17	51.15
8.76	8.8	3	47	+0.60	50.94	+0.10	51.04	-0.04	+0.02	51.08	51.06
8.56											51.156
7.6	0.54	51.04		8.4	+3.50	51.00	+0.00	50.90			51.143
8.6	1.34	51.19									51.140
8.7	1.12	51.19									51.140
8.8	1.11	51.11									51.140
8.4	1.28	51.13		0 = +3.22	+0.23	n = -0.07					51.140
8.8	1.13	51.10									51.140
8.8	1.60	51.04		0 = +2.64	+0.15	n = -0.06					51.140
8.8	1.60	51.04									51.140
n = +0.10	-0.04										51.140

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1875phae.proj.16

1875	Mch 29	h = -0.50 -0.50	n = -0.02	e = 0.00	k = -0.090	1875	Mch 29	h = -0.50 -0.50	n = -0.02	e = 0.00	k = -0.090							
Star	Ra	Dec	h	n	e	k	Star	Ra	Dec	h	n	e	k					
69+13	6 57	113	+1.64	0	-52.31	+0.72	52.33	48	8 4	406	+4.05	0	-52.42	-1.16	52.24			
71+11	7 9	396	+1.38	-52.15	+0.11	52.16	-01	52.17	52.29	9 32	420	+2.72	-52.09	+2.29	52.38			
72+10	7 11	114	+1.87	-52.20	-0.21	52.19	-02	52.21	.31	21 40	516	-2.86	-52.58	-0.41	52.54			
7.10	72+10	7 13	+1.14	-52.22	-0.11	52.21	-01	52.22	.31	8 4	406	+4.05	0	-52.42	-1.16	52.24		
82+0	8 10	123	+1.17	-52.29	+0.21	52.29	-00	52.29	.29	9 32	420	+2.72	-52.09	+2.29	52.38			
86-4	8 38	126	+1.34	-52.32	-0.11	52.31	-01	52.32	.28	21 40	516	-2.86	-52.58	-0.41	52.54			
87-5	8 40	128	+1.12	-52.34	-0.01	52.33	-00	52.33	.29	8 4	406	+4.05	0	-52.42	-1.16	52.24		
88-6	8 47	141	+1.60	-52.26	+0.10	52.36	-01	52.27	.32	9 32	420	+2.72	-52.09	+2.29	52.38			
88-6	8 49	129	+1.11	-52.37	-0.03	52.34	-00	52.34	.29	21 40	516	-2.86	-52.58	-0.41	52.54			
96-14	9 34	141	+1.12	-52.39	+0.03	52.42	-00	52.42	.29	8 4	406	+4.05	0	-52.42	-1.16	52.24		
97-15	9 39	142	+1.15	-52.41	+0.03	52.44	-01	52.45	.31	9 32	420	+2.72	-52.09	+2.29	52.38			
825	9 42	143	+1.70	-52.10	+0.04	52.14	-03	52.17	+0.42	21 40	516	-2.86	-52.58	-0.41	52.54			
69+38	-52.16	8.1	+4.05	-52.24	+0.2	-52.22	+0.1	-52.23	21.7	-2.86	-52.54	+1.0	-52.44	+0.9	-52.45			
72+30	-52.21	9.5	+2.72	-52.38	+0.8	-52.30	+0.8	-52.30	21.7	-2.86	-52.54	+1.0	-52.44	+0.9	-52.45			
72+41	-52.17	0 = +3.80	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01	0 = -3.11	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01			
82+17	-52.29	0 = +3.80	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01	0 = -3.11	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01			
87+12	-52.33	0 = +3.80	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01	0 = -3.11	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01			
88+11	-52.34	0 = +3.80	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01	0 = -3.11	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01			
78+25	-52.25	0 = +3.80	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01	0 = -3.11	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01			
6.8+164	-52.33	0 = +2.65	-0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01	0 = -4.26	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01			
72+87	-52.19	0 = +2.65	-0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01	0 = -4.26	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01			
77+170	-52.14	0 = +2.65	-0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01	0 = -4.26	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01			
78+144	-52.26	0 = +2.65	-0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01	0 = -4.26	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01			
70+126	-52.26	0 = +2.65	-0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01	0 = -4.26	+0.01	h = -0.01	-0.01	-0.01	-0.01	-0.01			
1875	Mch 30	h = -0.52	n = -0.02	e = 0.00	k = -	1875	Mch 30	h = -0.52	n = -0.02	e = 0.00	k = -							
820	82+11	8 10	123	+1.17	0	-53.55	+0.0	53.55	-01	-06	-53.56	53.62	7 49	406	-53.29	-53.22	91	54.31
88+3	8 49	129	+1.11	-53.66	-0.03	53.63	-00	53.63	.66	8 4	406	+4.05	0	-53.03	-1.18	53.85	84	53.53
96-3	9 39	142	+1.15	-53.64	+0.03	53.67	-01	53.68	.66	20 13	502	-4.45	-53.60	+1.14	53.74	18	53.85	
98-5	9 46	144	+1.50	-53.56	+0.08	53.64	-02	53.66	.63	21 40	516	-2.86	-53.06	-0.41	54.02	14	54.02	
99-6	9 54	423	+1.15	-53.60	+0.01	53.61	-00	53.61	.58	9 47	421	+3.36	-53.23	+1.17	53.40	17	53.40	
956	97-4	9 42	143	+1.70	-53.59	+0.04	53.58	-05	53.63	+0.57	8 4	284	+2.58					
933																		
8.2+17	-53.55	8.1	+4.05	-53.65	-0.3	-53.58	-0.7	-53.92	-53.62	7.8	53.29	-53.53	-0.6	-53.59	-10	-53.63	6	
8.8+11	-53.63	9.8	+3.36	-53.40	+0.4	-53.36	+0.1	-53.39	20.2	-4.45	-53.74	-0.4	-53.78	-0.8	-53.82	3		
9.9+15	-53.61	21.7	-2.86	-54.02	+0.4	-53.98			21.7	-2.86	-54.02	+0.4	-53.98	+0.0	-54.02			
7.0+14	-53.60																	
9.7+170	-53.58	0 = +3.91	-0.28	h = +0.7	+3.22	+0.24	-0.7	+0.0	0 = -3.63	+0.01	h = +0.0	-4.39	-0.18	-0.4	-13	-0.60	16	
n = +0.01 -0.03		0 = +2.35	-0.34	h = +1.14	+1.66	+0.19	-1.1		0 = -54.99	-0.01	h = -0.02	-6.15	-0.24	-0.4	-10	0.53		
[for March 31 see Mch 23]																		
1875	Apr 5	h = -0.53	n = -0.13	e = 0.15	k = -0.074	1875	Apr 5	h = -0.53	n = -0.13	e = 0.15	k = -0.074							
82+0.8	8 10	123	+0.17	0	-53.32	+0.0	53.48	-02	-06	+3.46	3.40	21 27	308	-2.75	0	+3.04	+0.9	+2.95
84+6	8 25	409	+0.58	+3.49	+0.0	3.49	-05	-04	3.47	.40	9 32	420	+2.72	6	+3.91	+2.9	+3.62	
86+4	8 38	128	+0.34	+3.45	-0.1	3.46	-04	-03	3.42	.39								
87+3	8 40	128	+0.12	+3.50	-0.1	3.51	-01	-02	3.50	.48								
854	88+2	8 51	130	+1.13	+3.63	+0.05	3.58	-04	-01	3.44	.43							
96-6	9 34	141	+0.19	+3.26	+0.03	3.23	-02		3.21	.25								
97-7	9 39	142	+0.45	+3.42	+0.03	3.39	-05	+0.4	3.34	.35								
970	98-8	9 46	144	+0.50	+3.63	+0.04	3.59	-04	+0.6	3.33	.39							
898																		
8.2+17	+3.46	9.5	+2.72	+3.62	+0.2	+3.64	+0.1	+3.63	+3.420	21.5	-2.75	+2.95	+0.2	+2.97	+0.1	+2.96	9	
8.6+34	+3.46																	
8.7+12	+3.51	0 = +2.52	+0.22	h = -0.9					0 = -2.95	-0.47	h = -1.5						1	
8.6+19	+3.23	0 = +1.31	+0.25	h = -0.1					0 = -4.16	-0.62	h = -1.5							
8.7+22	+3.12																	
5+21	+3.46																	
8.8+13	+3.58																	
9.7+170	+3.59																	
9.2+141	+3.58																	
92 = +13 -0.1																		

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[illegible]

$\eta =$	+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100		
1875	Apr. 5					1875	Apr. 5				
Star	RA Linx cosz	$R_1 - R_2$	$P_1 - P_2$	$R_1 - R_2$	$P_1 - P_2$	$R_1 - R_2$	$P_1 - P_2$	$R_1 - R_2$	$P_1 - P_2$	$R_1 - R_2$	$P_1 - P_2$
	h^m										
	10 10 -02.100	-16 9.9	+1.0	-8.9	-0.1	-9.0	9 40 -92.89	-16 2.9	+0.8	-2.1	-2.9
	10 15 +00.00	8.8	+0.5	8.3	+0.0	8.3	10 24 -56.82	7.4	+0.7	6.7	-1.8
	10 21 +09.100	8.5	+0.4	8.1	+0.4	7.7					
	10 26 +54.84	10.2	+0.5	9.7	+1.7	8.0					
4	100					8.25 8.45					8.50 8.50
1	50										
	150										
		+5.4	-9.7								
				+0.0	-8.3	-0.2	-8.9				
				+0.9	8.1						
				9	4						
		+5.4	-9.7								
				+0.4	-8.2	-0.2	-8.9				
				+1.6							
-16	832	1	8.1	2	8.1	9.0					
	8.30	5	-1.2		-2	+1.7					
1875	Apr. 7										
	Wave										
	8 25 +37.93	-16 8.9	+0.4	-8.5	+1.2	-7.3	8 59 -113.90	-16 6.1	+0.8	-5.3	-1.4
	9 8 +64.76	10.7	+0.4	10.3	+2.0	8.3	9 23 -47.88	8.8	+0.2	5.6	-1.5
	9 11 +09.100	8.4	-0.9	9.3	+0.3	9.0	21 27 -92.38	2.6	+1.2	3.8	-1.4
	9 12 +41.91	8.7	+0.1	8.6	+1.3	4.2	9 32 -16.88	7.5	+1.0	6.5	-1.4
	9 13 +13.99	8.4	+0.3	8.1	+0.4	7.7	9 40 -92.89	3.9	+0.8	4.1	-3.0
	9 21 +77.63	9.7	+0.2	9.5	+2.5	7.0					
	9 24 +53.84	10.6	+0.3	10.3	+1.7	8.6					
	9 39 +31.95	9.1	+0.5	8.6	+1.0	7.6					
	9 46 +27.96	8.6	+0.0	8.6	+0.9	7.7					
	9 42 -30.95	8.9	+1.9	7.0	-1.0	8.0					
						7.91	7.91				7.23 7.23
9	819										
3	69	+6.4	-10.3	+4.1	-5.6	+3.7	-8.5	+0.9	-9.3		
	888	+7.7	9.5	+5.3	10.3	+8.1	8.6	+1.3	8.1		
						+2.7	8.6				
	1 198					5	17	22	17.4		
		+7.0	-9.9	+4.7	-7.9	+3.2	-8.6	+1.1	-8.7		
		+2.1	6.3	+1.6		+1.0		+1.2			
-16	778	2	7.8	2.1	8.8	3	7.6	2	8.5		
	7.74	12	+0	+6.0	-1.2	+1.7					
1875	Apr. 10										
	Wave										
	8 25 +37.93	-16 8.8	+0.4	-7.7	+1.2	-6.5	8 59 -113.90	-16 7.1	+0.8	-6.6	-1.4
	8 38 +40.91	8.5	+0.6	7.9	+1.3	6.6	9 23 -47.88	7.1	+0.2	6.9	-1.5
	8 51 -11.99	9.2	+0.8	8.4	-0.4	8.8	10 24 -56.82	7.0	+0.7	6.3	-1.8
	9 8 +64.76	10.1	+0.4	9.7	+2.0	7.7					
	9 11 +09.100	7.8	-0.9	8.7	+0.3	8.4					
	9 12 +41.91	7.9	+0.1	7.8	+1.3	6.5					
	9 13 +13.99	8.6	+0.3	8.3	+0.4	7.7					
	9 21 +77.63	9.5	+0.2	9.3	+2.5	6.8					
	10 15 +00.00	8.2	+0.5	8.7	+0.0	7.7					
	10 21 +09.100	8.5	+0.4	8.1	+0.3	7.8					
	10 26 +54.84	10.2	+0.5	9.7	+1.7	8.0					
						8.52	8.43				8.17 8.17
		+6.4	-9.7	+4.0	-7.9	+3.7	-7.7	+0.9	-8.7	-1.1	-8.4
		+7.7	9.3	+4.1	7.8	+1.3	8.3				
				+5.4	7.7	+0.0	7.7				
						+0.9	8.1				
11	572										
3	851	141	10	135	254	31	8				
	9823										
		+7.0	-9.5	+4.5	-8.5	+3.7	-7.7	+0.8	-8.2	-1.1	-8.4
		+2.2		+1.3		+1.1		+1.2		-1.3	
-16	7.30	2	7.3	13	7.2	6.6	4	8.0	8.7		
	7.66	X44	-1.4	-1.5	-1.1	+3	+1.0				

[illegible]

$\delta =$	+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100
1875	Apr. 11					1875	Apr. 11		
Star	RA	int. corr.		$R_0 - R_1$	$P_1 - P_2$	$R_0 - R_1$	Star	RA	int. corr.
	2 m			$R_0 - R_1$	$P_1 - P_2$	$R_0 - R_1$		2 m	
	9 11 +0.09.100			-16 9.2. -0.5 -10.1 +0.3		-9.8		8 59 -143.90	
	9 13 +13.99			8.7. +0.3 8.4 +0.4		8.0		9 23 -147.88	
	9 21 +77.63			11.0. +0.2 10.8 +2.4		8.4		9 32 -146.88	
	9 30 +31.95			8.3. +0.5 7.8 +1.0		6.8		9 40 -92.39	
	9 42 -30.95			7.7. +2.0 5.7 -1.0		6.7		9 49	
						7.48 7.45			
	+77 -10.8			+31 -7.8 +0.9 -10.1		-1.30 -5.7		-143 -14.1	
				+13 8.4		-1.47 5.1		-146 6.0	
				2 185		16 152			
	+77 -10.8			+31 -7.8 +1.1 -9.2		-1.30 -5.7		-145 -5.1	
	+77 -10.8			+31 -7.8 +1.1 -9.2		-1.30 -5.7		-145 -5.1	
	+2.2			+9		-1.9		-1.3	
	5.6			6.92 8.9		6.63 6.4		6.4	
	8 +1.2			-5 +1.5		-1.8 -1.0		-1.0	
1875	Apr. 14								
	9 11 +0.09.100			-16 9.6. -0.9 -8.5 +0.3		-8.1		8 59 -143.90	
	9 12 +41.91			8.2 +0.4 +0.1 8.1 +1.3		6.8		9 23 -149.88	
	9 13 +13.99			8.4. +0.3 8.1 +0.4		7.7		10 24 -156.82	
	9 21 +77.63			9.3. +0.2 9.1 +2.4		6.7		10 34 -146.88	
	10 15 +00.00			7.5. +0.5 7.0 +1.0		7.0		9 19	
	10 21 +09.100			7.9. +0.4 7.5 +0.3		7.2			
	10 26 +52.84			10.1. +0.5 9.6 +1.6		8.0			
	10 30 +19.98			9.3. +1.1 8.2 +0.6		7.6			
	10 43 +52.85			9.3. +0.4 8.9 +1.6		7.3			
						7.38 7.38			
	+77 -9.1 +4.1 -8.1			+0.9 -8.5		-143.90 -5.9		-147 5.4	
	+52 9.6			+13 8.1		-156 6.0		-146 5.6	
	+52 8.9			+10 7.0					
				+0.9 7.5					
				+19 8.2					
	+77 -9.1 +4.9 -8.9			+10 -7.9		-48 -5.7			
	+2.2 +1.4			+1.3		-1.3			
	6.9 3 7.5			5 7.6		4 7.0			
	13 -.4 +.2			+1.3		-1.3			
1875	Apr. 15								
	8 53 +09.100			-16 9.1. +1.2 -7.9 -0.3		-8.2		9 23 -147.88	
	9 11 +09.100			8.8. -0.9 9.7 +0.3		9.4		10 24 -156.82	
	9 12 +41.91			8.3 +0.5 +0.1 8.2 +1.3		6.9			
	9 13 +13.99			8.2. +0.3 7.9 +0.4		7.5			
	9 21 +77.63			9.6. +0.2 9.4 +2.4		7.0			
	10 15 +00.00			7.6. +0.5 7.1 +0.0		7.1			
	10 21 +09.100			9.1. +0.4 8.7 +0.3		8.4			
						7.79 7.79			
	+77 -9.4 +4.1 -8.2			+0.9 -9.7 -0.9 -7.9		-147 -5.5		-146 5.3	
	+2.2			+13 7.6					
				+10 7.1					
				+0.9 8.7					
				31 33.4		103 8			
	+77 -9.4 +4.1 -8.2			+0.8 -8.3 -0.9 -7.9		-51 -5.4			
	+2.2 +1.1			+1.2		-1.4			
	7.2 1 9.3			4 8.1 1 8.1		2 6.8			
	9 -.4 2.5			+1.5 +1.5		-1.8			

$\lambda =$ +60+80 +40+60 +20+40 +0+20 +0-20 -20-40 -40-60 -60-80 -80-100

1875 Apr. 19
Wave

Star

RA Dist. cm

h m
10 1 +42.90
10 2 +50.86
10 10 -02.100

R_g D_{eff}

$P = P + (P^2/P)$
-16' 8.6" +0.1-8.5 +12
9.5 +0.2 9.3 +1.5
8.8 +1.0 7.8 -0.1

1875 Apr. 19
Wave

Star

RA Dist. cm

h m
-7.3
7.8
7.9

R_g D_{eff}

$P = P + (P^2/P)$
-16' 6.1" +0.2-5.9 -14 -7.3

7.67 7.67

+42 -8.5
+50 9.3
92 17.8

-02 -7.8

+46 -8.9
+1.3
7.6
-1.1

-02 -7.8
-1.0
7.8
+1.1

-16 7.67
7.67

9 13 +13.99
9 21 +77.63
11 3 -05.100
11 7 +36.93
11 12 +17.98

-16' 8.8" +0.3-8.5 +0.4 -8.1
8.1 +0.2 7.9 +2.3 5.6
8.5 +1.1 7.4 -0.2 7.6
9.2 +0.4 8.5 +1.1 7.4
7.7 -0.3 8.0 +0.5 7.0
7.24 7.24

9 19
9 23 -47.88

-16' 6.1" +0.2-5.9 -14 -7.3

7.30 7.30

5 120
1 30
- 150

+77 -7.9

+36 -8.5 +1.3 -8.5 -0.5 -7.4
+1.7 8.0
10 5

-47 -5.9

-16 7.25
7.25

+77 -7.9
+36 -8.5 +1.5 -8.2 -0.5 -7.4
+1.0 +1.4 -1.3
7.52 7.8 7.5
+1.3 +1.6 +1.0

+36 -8.5 +1.5 -8.2 -0.5 -7.4
+1.0 +1.4 -1.3
7.52 7.8 7.5
+1.3 +1.6 +1.0

-47 -5.9
-1.3
7.2
+1.0

9 39 +31.95
9 46 +24.96
10 39 +19.98
10 43 +52.85
10 58 +56.82
11 3 -05.100
11 7 +36.93
11 12 +17.98

-16' 8.0" +0.5-7.5 +1.0 -6.5
8.0 +0.2 8.0 +0.8 7.2
8.6 +1.1 7.5 +0.5 7.0
9.0 +0.4 8.6 +1.5 7.1
10.1 +1.0 9.4 +1.6 7.8
9.3 +1.4 8.2 -0.2 8.4
9.8 +0.4 9.1 +1.1 8.0
8.2 -0.3 8.5 +1.5 8.0
7.50 7.50

9 32 -14.88
9 47 -52.85
10 50 -59.82
22 45
10 56 -34.94

-16' 8.0" +1.0-6.0 -13 -7.3
5.3 +0.6 4.7 -1.5 6.2
6.5 +0.4 5.8 -1.7 7.0
+1.0
6.7 +1.0 5.7 -1.0 6.7

6.92 6.92

8 400
4 368
368

+52 -8.6 +3.1 -7.5 +1.9 -7.5 -0.5 -8.2 -3.4 -5.7 -4.6 -6.0
+56 9.4 +2.7 8.0 +1.7 8.5
+36 9.1
8 180 4 246 16 0

-52 -4.7
-5.9 5.8
7 165

+54 -9.0 +3.8 -8.2 +1.8 -8.0 -0.5 -8.2 -3.4 -5.7 -5.2 -5.5
+1.5 +.9 +.5 -1.1 -1.0 -1.4
2 7.53 7.3 2 7.5 8.3 6.7 3 6.9
12 +.2 +1.0 +1.2 +1.0 -1.6 -1.4

-16 7.30
7.31

1875 Apr 22
Wave $h = -0.06$
 $n = +0.1$ $c = 0.0$ $h = 0.00$

Star	RA	δ	tang. δ	T.R.A.	P.P.	T.R.A. (P.P.)
9.70	9.6	+1.0	9.39	142	+0.45	0 = -0.83 +0.23 -0.86 +0.0
	9.8	+0.9	46	144	+0.50	-0.77 +0.08 0.85 +0.0
	10.6	+0.10	39	431	+0.61	-0.28 -0.03 0.85 +0.0
	10.7	-1.10	43	432	+0.20	-0.55 +0.22 0.87 +0.0
	11.0	-4.10	58	434	+0.14	-0.83 +0.01 0.84 +0.0
	11.1	-5.11	3	155	+1.01	-0.74 +0.02 0.83 +0.0
	11.1	-5.11	7	156	+0.39	-0.89 +0.02 0.93 +0.0
10.95	11.2	-6.11	12	158	+0.63	-0.71 +0.13 0.84 +0.0
10.64						-0.83

9.6 +0.45 -0.86	9.5 +2.72 -0.91	-0.01 -0.92	-0.01 -0.92
9.8 +0.50 -0.85	9.8 +3.36 -0.88	+0.00 -0.88	-0.01 -0.89
10.7 +0.20 -0.87	10.8 +4.87 -0.94	+0.00 -0.94	+0.00 -0.94
11.0 +0.14 -0.84	10.9 +1.91 -0.86	+0.00 -0.86	+0.00 -0.86
11.1 +0.39 -0.93			
11.4 +0.34 -0.87			
11.0 +0.01 -0.83			
11.2 +0.63 -0.84			
11.1 +0.82 -0.84			

1875 Apr 24
Wave $h = +0.00$
 $n = -0.16$ $c = 0.00$ $h = -0.008$

Star	RA	δ	tang. δ	T.R.A.	P.P.	T.R.A. (P.P.)
9.80	9.3	+1.1	9.21	138	-0.14	0 = -0.99 +0.01 -1.01 +0.2
	9.9	+0.9	54	423	+0.15	-0.92 +0.01 0.93 -0.2
	10.0	+4.10	1	145	+0.31	-0.86 +0.08 0.94 -0.5
	10.0	+4.10	2	146	+0.22	-0.84 +0.01 0.85 -0.4
	11.1	-7.11	7	156	+0.39	-0.87 +0.04 0.91 -0.6
	11.2	-8.11	15	160	+0.12	-0.91 +0.03 0.94 -0.2
11.17	11.2	-8.11	12	158	+0.63	-0.73 +0.13 0.86 -0.10
10.39						-0.96

9.3 -0.14 -1.00	9.8 +3.36 -0.40		
9.9 +0.15 -0.93			
10.6 +0.22 -0.85			
11.2 +0.82 -0.84			
11.1 +0.09 -0.93			
11.2 +0.63 -0.86			
9 = 4.13			

1875 Apr 25
Wave $h = 0.00$
 $n = -0.16$ $c = 0.00$ $h = -0.024$

Star	RA	δ	tang. δ	T.R.A.	P.P.	T.R.A. (P.P.)
9.88	9.7	+0.7	9.42	143	+1.70	0 = -0.60 +0.24 -0.64 -0.27
	9.8	+0.6	46	144	+0.50	-0.74 +0.08 0.82 -0.8
	9.9	+0.5	54	423	+0.15	-0.82 +0.01 0.83 -0.2
	10.0	+4.10	1	145	+0.31	-0.77 +0.08 0.85 -0.5
	10.0	+4.10	2	146	+0.22	-0.75 +0.01 0.76 -0.4
	11.1	-7.11	7	156	+0.39	-0.83 +0.04 0.87 -0.6
	11.2	-8.11	15	160	+0.12	-0.87 +0.03 0.90 -0.2
11.17	11.2	-8.11	12	158	+0.63	-0.63 +0.13 0.76 -0.10
10.36						-0.91

9.8 +0.15 -0.83	9.8 +3.36 -0.27		
10.0 +0.31 -0.85	11.2 +2.15 -0.59		
10.0 +0.22 -0.76			
11.2 +0.12 -0.90			
10.3 +0.20 -0.84			
9.7 +1.70 -0.64			
11.2 +0.63 -0.76			
10.4 +0.76 -0.70			
9 = 4.15			

1875 Apr 22
Wave $h = 0.00$
 $n = +0.1$ $c = 0.00$ $h = 0.00$

Star	RA	δ	tang. δ	T.R.A.	P.P.	T.R.A. (P.P.)
9.70	9.6	+1.0	9.39	142	+0.45	0 = -0.83 +0.23 -0.86 +0.0
	9.8	+0.9	46	144	+0.50	-0.77 +0.08 0.85 +0.0
	10.6	+0.10	39	431	+0.61	-0.28 -0.03 0.85 +0.0
	10.7	-1.10	43	432	+0.20	-0.55 +0.22 0.87 +0.0
	11.0	-4.10	58	434	+0.14	-0.83 +0.01 0.84 +0.0
	11.1	-5.11	3	155	+1.01	-0.74 +0.02 0.83 +0.0
	11.1	-5.11	7	156	+0.39	-0.89 +0.02 0.93 +0.0
10.95	11.2	-6.11	12	158	+0.63	-0.71 +0.13 0.84 +0.0
10.64						-0.83

9.6 +0.45 -0.86	9.5 +2.72 -0.91	-0.01 -0.92	-0.01 -0.92
9.8 +0.50 -0.85	9.8 +3.36 -0.88	+0.00 -0.88	-0.01 -0.89
10.7 +0.20 -0.87	10.8 +4.87 -0.94	+0.00 -0.94	+0.00 -0.94
11.0 +0.14 -0.84	10.9 +1.91 -0.86	+0.00 -0.86	+0.00 -0.86
11.1 +0.39 -0.93			
11.4 +0.34 -0.87			
11.0 +0.01 -0.83			
11.2 +0.63 -0.84			
11.1 +0.82 -0.84			

1875 Apr 24
Wave $h = +0.00$
 $n = -0.16$ $c = 0.00$ $h = -0.008$

Star	RA	δ	tang. δ	T.R.A.	P.P.	T.R.A. (P.P.)
9.80	9.3	+1.1	9.21	138	-0.14	0 = -0.99 +0.01 -1.01 +0.2
	9.9	+0.9	54	423	+0.15	-0.92 +0.01 0.93 -0.2
	10.0	+4.10	1	145	+0.31	-0.86 +0.08 0.94 -0.5
	10.0	+4.10	2	146	+0.22	-0.84 +0.01 0.85 -0.4
	11.1	-7.11	7	156	+0.39	-0.87 +0.04 0.91 -0.6
	11.2	-8.11	15	160	+0.12	-0.91 +0.03 0.94 -0.2
11.17	11.2	-8.11	12	158	+0.63	-0.73 +0.13 0.86 -0.10
10.39						-0.96

9.3 -0.14 -1.00	9.8 +3.36 -0.40		
9.9 +0.15 -0.93			
10.6 +0.22 -0.85			
11.2 +0.82 -0.84			
11.1 +0.09 -0.93			
11.2 +0.63 -0.86			
9 = 4.13			

1875 Apr 25
Wave $h = 0.00$
 $n = -0.16$ $c = 0.00$ $h = -0.024$

Star	RA	δ	tang. δ	T.R.A.	P.P.	T.R.A. (P.P.)
9.88	9.7	+0.7	9.42	143	+1.70	0 = -0.60 +0.24 -0.64 -0.27
	9.8	+0.6	46	144	+0.50	-0.74 +0.08 0.82 -0.8
	9.9	+0.5	54	423	+0.15	-0.82 +0.01 0.83 -0.2
	10.0	+4.10	1	145	+0.31	-0.77 +0.08 0.85 -0.5
	10.0	+4.10	2	146	+0.22	-0.75 +0.01 0.76 -0.4
	11.1	-7.11	7	156	+0.39	-0.83 +0.04 0.87 -0.6
	11.2	-8.11	15	160	+0.12	-0.87 +0.03 0.90 -0.2
11.17	11.2	-8.11	12	158	+0.63	-0.63 +0.13 0.76 -0.10
10.36						-0.91

9.8 +0.15 -0.83	9.8 +3.36 -0.27		
10.0 +0.31 -0.85	11.2 +2.15 -0.59		
10.0 +0.22 -0.76			
11.2 +0.12 -0.90			
10.3 +0.20 -0.84			
9.7 +1.70 -0.64			
11.2 +0.63 -0.76			
10.4 +0.76 -0.70			
9 = 4.15			

$\lambda =$ 160+80 140+60 +20+40 +0+20 +0-20 -20-40 -40-60 -60-80 -80-100
 1875 Apr 22 1875 Apr 22
 wave wave

Mar	RA	Dec	Corr	Reg	Rf	P	P	Reg	Rf	P	P	Reg	Rf	P	P	Reg	Rf	P	P
	h m																		
	9 39			-16	1"		+0.52					9 32	-16	1"		-1.1			
	9 46	+27.96			8.7	+0.0	8.7+0.8	-7.9				9 40	-92.39		8.7	+1.0	-7.7	-1.3	-9.0
	10 39	+19.98			8.9	+1.1	7.8+0.5	7.3				9 47	-52.85		6.1	+0.8	3.5	-26	7.5
	10 43	+52.85			9.8	+0.6	9.4+1.5	7.9				10 50	-59.80		6.7	+0.6	6.1	-15	7.6
	10 58	+56.82			10.4	+1.0	9.4+1.6	7.8											
	11 3	-05.100			9.6	+0.1	9.5-0.2	9.7											
	11 7	+36.93			9.4	+0.7	8.7+1.1	7.6				10 56	-34.94		7.5	+1.0	6.5	-10	7.5
	11 12	+17.98			8.9	-0.3	8.7+0.5	8.2											
								8.06											7.82 7.82

7 7.42
 4 328
 1070

+ +.52 -9.4 +27 -8.7 +19 -7.8 -0.5 -9.5 -34 -65 -1.6 -7.7
 +.56 -9.4 +36 -8.7 +17 -8.7
 8 3 16 5
 +.54 -9.4 +31 -8.7 +18 -8.2 -0.5 -9.5 -34 -65 -5.2 -6.4
 +1.5 +.9 +.5 -1.0 -1.4
 2 7.92 7.82 7.71 9.61 7.53 7.8
 11 +.0 -1.1 -1.2 +1.7 -1.4 -1.7

-16 7.94
 7.97
 1875

Apr. 24
Wave

9 21	+77.63	-16	8.7	+0.2	-8.5	+2.2	-6.3	9 47	-52.85	-16	11.1	+0.6	-3.5	-15	-50
9 52	+55.83		8.9	+0.2	9.7	+1.6	8.1								
10 1	+42.90		9.5	+0.1	7.4	+1.2	6.2								
10 2	+50.86		9.0	+0.2	8.8	+1.5	7.3								
11 7	+36.93		8.6	+0.7	7.9	+1.1	6.8								
11 15	+58.81		11.5	+0.1	11.4	+1.7	9.7								
11 12	+17.98		9.6	-0.3	7.9	+0.5	7.4								

+.77 -8.5 +.55 -9.7 +36 -7.9 +17 -7.9
 +.42 7.4
 +.50 8.8
 +.88 11.4
 5 373

4 880
 1 80
 880

-16 7.16
 7.10

+.77 -8.5 +.51 -9.3 +36 -7.9 +17 -7.9
 +.21 +1.4 +1.0 +.4
 1 6.4 4 7.91 6.91 7.5
 -.8 +.7 -.3 +.3

-52 -3.5
 -1.4
 4.9
 -2.3

1875 Apr. 25
Wave

9 42	-30.95	-16	8.2	+2.0	-6.2	-9.9	-7.1	9 40	-92.39	-16	11.4	+0.8	+0.8	-26	7.8
9 46	+27.96		8.7	+0.0	8.7	+0.8	7.9	9 47	-52.85		5.7	+0.6	+0.6	5.1	-15
9 52	+55.83		9.1	+0.2	8.9	+1.6	7.3	11 15	-38.92		6.5	+0.8	+0.8	6.3	7.1
10 1	+42.90		6.9	+0.1	6.8	+1.2	5.6								
10 2	+50.86		9.4	+0.2	9.2	+1.4	7.8								
11 7	+36.93		8.8	+0.7	8.1	+1.0	7.1								
11 15	+58.81		9.9	+0.1	9.8	+1.6	8.2								
11 12	+17.98		8.4	-0.3	8.7	+0.5	8.2								

8 320
 2 80
 320

+.55 -8.9 +27 -8.7 +17 -8.7
 +.42 6.8 +36 -8.1
 +.50 9.2
 +.58 9.8
 5 347 63 8

-30 -6.2 -52 -5.1
 -38 6.3

8 5

-16 7.32
 7.32

+.51 -8.7 +31 -8.4 +17 -8.7
 +1.4 +.9 +.4
 4 7.32 7.51 8.3
 10 +.0 +.2 +1.0

-34 -6.2 -52 -5.1
 -.9 -1.4
 2 7.1 6.5
 -.2 -.8

1875 Apr. 26
Hare

$h = -0.03 - 0.06$ $n = -0.09$ $C = 0$

Star	Ra	δ	tanp.	T-Ra	P-P	T-Ra	P-P
10.2+3	10	10	147	+0.95	0	-0.84	+0.08
10.6+1	10	89	431	+0.61	-0.96	-0.03	0.93
10.7-2	10	43	432	+0.20	-0.94	+0.02	0.96
10.50							

10.7+2.0 -0.96

10.6+2.70 -0.74

10.8+4.87 -0.56

10.2+9.5 -0.92

10.6+6.1 -0.93

10.4+7.8 -0.92

$n = -0.06$

$0 = +2.50 + 0.22$ $n = -0.09$

$+4.67 + 0.20$ -0.09

$0 = +1.92 + 0.18$ $n = -0.09$

$+4.09 + 0.36$ -0.09

1875 Apr. 27
Hare

$h = +0.02$ $n = -0.19$ $C = 0.00$ $L = -0.18$

Star	Ra	δ	tanp.	T-Ra	P-P	T-Ra	P-P
9.7+0.8	9	42	143	+1.70	0	-0.67	+0.04
9.8+7	9	46	144	+0.50	-0.85	+0.08	0.93
9.9+6	9	54	423	+0.15	-1.80	+0.01	1.01
10.0+5	10	1	145	+0.31	-0.94	+0.08	1.02
10.1+5	10	2	146	+0.22	-0.94	+0.01	0.95
10.2+3	10	10	147	+0.95	-0.94	+0.08	0.82
11.5-1.0	11	31	438	-0.00	-0.98	+0.03	1.01
11.6-1.1	11	39	163	+1.13	-0.84	+0.02	0.86
11.7-1.2	11	43	164	+0.27	-1.02	+0.02	1.04

9.9+1.5 -1.01

10.0+3.1 -1.02

10.0+2.2 -0.95

11.5+0.0 -1.01

11.7+2.7 -1.04

10.6+1.4 -1.01

9.7+1.70 -0.71

10.2+9.5 -0.82

11.6+1.13 -0.86

10.5+1.26 -0.80

$n = -0.20$

9.8+3.36 -0.41

11.4+2.75 -0.49

11.6+2.40 -0.76

$0 = +3.17 + 0.60$ $n = -0.19$

$+2.56 + 0.52$ -0.20

$+2.21 + 0.25$ -0.11

$0 = +2.10 + 0.39$ $n = -0.19$

$+1.49 + 0.31$ -0.21

$+1.14 + 0.04$ -0.04

1875 May 3
Hare

$h = +0.02$ $n = -0.23$ $C = 0.00$ $L = -0.17$

Star	Ra	δ	tanp.	T-Ra	P-P	T-Ra	P-P
9.9+1.1	9	54	423	+0.15	0	-0.70	+0.01
10.0+1.0	10	1	145	+0.31	-0.66	+0.08	0.74
10.1+0.0	10	2	146	+0.22	-0.66	+0.01	0.69
11.5-5	11	31	438	+0.00	-0.78	+0.03	0.81
11.6-6	11	39	163	+1.13	-0.61	+0.02	0.63
11.7-7	11	43	164	+0.27	-0.71	+0.02	0.73
11.7-7	11	44	165	+0.04	-0.70	+0.04	0.74
11.66	11	47	166	+1.40	-0.62	+0.02	0.62

9.9+1.5 -0.71

10.0+2.2 -0.69

11.5+0.0 -0.81

11.7+0.4 -0.74

10.8+1.4 -0.74

11.6+1.13 -0.63

11.8+1.40 -0.60

11.7+2.26 -0.51

$n = -0.19$

11.4+2.75 +5.94 -0.06

11.6+2.40 -0.35

$0 = +2.65 + 0.68$ $n = -0.26$

$+2.30 + 0.39$ -0.17

$0 = +1.49 + 0.45$ $n = -0.30$

$+1.14 + 0.16$ -0.14

1875 Apr. 26
Hare

Star	Ra	δ	tanp.	T-Ra	P-P	T-Ra	P-P
10.1	10	34	429	+2.70	0	-0.94	-0.17
0.98	10	52	433	+4.87	-0.79	-0.23	0.86

0.990

-0.990

10.27

Star	Ra	δ	tanp.	T-Ra	P-P	T-Ra	P-P
9.40	9	40	516	-2.86	0	-1.71	-0.04
4.21	9	47	421	+3.36	-0.24	+0.17	0.41
162	11	24	162	+2.75	-0.36	+0.13	0.44
334	23	34	334	-4.31	-1.76	+0.13	1.89
439	11	35	439	+2.40	-0.72	+0.04	0.76

1.037

9.7-2.86 -1.67

23.6-4.31 -1.89

$0 = -3.05 - 0.66$ $n = -0.22$

$-4.19 - 0.88$ -0.20

$0 = -1.12 - 0.87$ $n = -0.21$

$-5.57 - 1.09$ -0.20

0.763

Star	Ra	δ	tanp.	T-Ra	P-P	T-Ra	P-P
11.24	11	24	162	+2.75	0	+0.07	+0.13
334	23	34	334	-4.31	-1.75	+0.13	1.88
439	11	35	439	+2.40	-0.31	+0.04	0.35

0.782

23.6-4.31 -1.88

$0 = -4.41 - 1.14$ $n = -0.26$

$0 = -5.57 - 1.37$ $n = -0.25$

$H =$		+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100
1875		Apr 26					1875	Apr 26		
Star		R.A. in zcos	tang. R_{γ} R_{δ}		$P-P+(P-P)$		R_{γ} R_{δ}	Star		R.A. in zcos
		h m					h m			h m
		10 10 -02.100					10 34 -46.88			10 34 -46.88
		10 39 +19.98					10 50 -59.80			10 50 -59.80
		10 43 +52.85								
			-16' 42" +1.0 -9.2 -0.1				-9.3			-16' 6.0" +0.7 -5.3 -1.3
			8.8 +1.1 7.7 +0.5				7.2			7.1 +0.7 6.4 -1.7
			9.2 +0.4 8.8 +1.5				7.3			
							7.93			7.35 7.35
3 279										
2 70										
349										
			+52 -8.8				-46 -5.3			
							-59 6.4			
							105 117			
			+52 -8.8				-52 -5.8			
			+1.4				-1.4			
-16 7.7			1.5 7.4				2 7.2			
770			1.5 -1.4				-1.6			

1875 May 4 wave $h = +.006$ $n = -.24$ $c = .00$

Star	RA	S	tang. sec. S	π RA	$P-P$	$\frac{P-RA}{(P-P)}$
10.6 +.2 10 39	431	+ 2.61	0 = -0.59	-03	-0.56	-15
10.7 +.1 10 43	432	+ .20	-0.68	+02	.70	-05
11.2 -4 11 12	158	+ .63	-0.43	+13	.56	-15
10.83						
$\pm II$						
10.6 +.61 -0.56			10.6 + 2.70 -0.07			
10.7 +.20 - .70						
10.6 +.40 - .63						
			0 = +2.30 +0.56	$n = -.24$		
11.2 +.63 -0.56						
$n = +.80$			0 = +2.07 +0.49	-24		

1875 May 4 wave

Star	RA	S	tang. sec. S	π RA	$P-P$	$\frac{P-RA}{(P-P)}$
10.6 +.2 10 39	429	+ 2.70	0 = -2.24	-17	-0.07	
10.7 +.1 10 43	429	+ .75				
11.2 -4 11 12	168	+ .71				
10.83						
$\pm II$						
10.6 +.61 -0.56			10.6 + 2.70 -0.07			
10.7 +.20 - .70						
10.6 +.40 - .63						
			0 = +2.30 +0.56	$n = -.24$		
11.2 +.63 -0.56						
$n = +.80$			0 = +2.07 +0.49	-24		

1875 May 5 wave $h = -.003$ $n = -.37$ $c = -.20$ $L = -.002$

Star	RA	S	tang. sec. S	π RA	$P-P$	$\frac{P-RA}{(P-P)}$
10.6 +.09 10 39	431	+ 0.61	1.17 = -0.22	-03	-0.19	-23
10.7 +.18 10 43	432	+ .20	1.02 = -0.33	+02	0.35	-07
11.2 -3 11 15	160	+ .12	1.00 = -0.34	+13	0.37	-04
11.7 -2 11 43	164	+ .27	1.03 = -0.28	+02	0.30	-10
11.7 -2 11 44	165	+ .04	1.00 = -0.35	+04	0.39	-01
11.8 -3 11 47	166	+ 1.10	1.72 = 0.17	-02	0.19	-52
12.0 -5 11 59	167	+ .17	1.01 = -0.39	+02	0.41	-06
11.88 12.2 -7 12 14	170	+ .00	1.00 = -0.37	+04	0.41	-00
11.49						
$\pm II$						
10.7 +.20 -0.35			10.6 + 2.70 +0.49			
11.2 +.12 - .37			11.2 + 2.15 +0.63			
11.7 +.27 - .30			12.1 + 4.84 + 2.15			
11.7 +.04 - .39						
12.0 +.14 - .41						
12.2 +.60 - .41			0 = +2.57 +1.36	$n = -.53$		
11.6 +.73 - .37			+2.02 +1.00	-50		
			+4.71 +2.55	-94		
10.6 +.61 -0.19						
11.8 +.60 + .19			0 = +1.70 +1.18	$n = -.69$		
11.2 +1.00 - .70			+1.15 +0.82	-58		
$n = +.42$			+3.84 +2.37	-57		

1875 May 12 wave $h = -.006$ $n = -.32$ $c = .00$

Star	RA	S	tang. sec. S	π RA	$P-P$	$\frac{P-RA}{(P-P)}$
12.2 +.4 12 14	170	+ 0.00	0 = -1.46	+04	-1.50	-00
12.6 0 12 35	172	- .01	-1.47	+01	1.48	+00
12.8 -2 12 49	173	+ 1.52	-0.94	+01	0.93	-49
12.8 -2 12 50	175	+ .81	-1.16	+06	1.22	-30
12.60						
$\pm II$						
12.2 +.00 -1.50			12.1 + 4.84 + 0.11			
12.6 -01 -1.48			12.5 + 2.82 - .55			
12.4 -00 -1.49						
12.8 +1.52 -0.93			0 = +4.84 +1.60	$n = -.33$		
12.8 +.81 -1.22			+2.82 +0.94	-33		
12.8 +1.16 -1.07						
$n = +.36$			0 = +3.68 +1.18	$n = -.32$		
			+1.66 +0.52	-31		

$\lambda =$	+60+80	+10+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100
1875 May 4 Warr						1875 May 4 Warr			
Star	R.A. linear		R_{λ} R_{λ} R_{λ} R_{λ} R_{λ} R_{λ} R_{λ} R_{λ} R_{λ} R_{λ}				R.A. linear		R_{λ} R_{λ} R_{λ} R_{λ} R_{λ} R_{λ} R_{λ} R_{λ} R_{λ} R_{λ}
	λ m						λ m		
	10 39 +19.98		-16 10.0 +1.1 -8.9 +0.5		-8.4		10 34 -116.88		-16 7.2 +0.7 -6.5 -1.2 -7.7
	10 43 +52.85		9.3 +0.1 8.9 +1.4		7.5				
	11 12 +17.98		8.7 -0.3 9.0 +0.4		8.6				
					8.17	8.17			7.70 7.70
3 358									
1 70									
421									
	+52 -8.9		+1.9 -8.9				-1.16 -6.5		
			+1.4 -9.0						
			7.6 179						
	+52 -8.9		+1.8 -8.9				-1.46 -6.5		
	+1.4		+1.4				-1.2		
-16 8.05			7.5				7.7		
7.05			-1.5				-1.3		
1875 May 5 Warr									
	10 39 +19.98		-16 9.3 +1.1 -8.2 +0.5		-7.7		10 34 -116.88		-16 6.6 +0.7 -5.9 -1.2 -7.1
	10 43		-1 +0.1 -				11 15 -38.92		6.8 +0.8 5.8 -1.0 6.8
	11 15 +58.81		9.3 +0.1 9.2 +1.5		7.7		12 6 -59.80		5.8 +0.4 5.4 -1.5 6.9
	11 43 +45.89		8.4 +0.0 8.4 +1.2		7.2				
	11 44 +64.76		9.3 +0.1 8.9 +1.7		7.2				
	11 47 +21.98		7.6 +0.5 7.1 -0.6		7.7				
	11 59 +54.85		8.5 +0.3 8.2 +1.4		6.8				
	12 14 +67.74		7.4 -0.2 7.6 +1.8		5.8				
					7.16	7.16			6.93 6.93
7 3									
11.2									
7.9									
9.1									
	+6.4 -8.9 +5.8 -9.2		+1.9 -8.2		-1.21 -7.1 -1.46 -5.9				
	+6.7 7.6 +4.5 8.4				-1.38 5.8 -5.9 5.4				
	+5.4 8.2								
	11 5 7 18				5.9 12.9 10.5 13				
	+6.5 -8.2 +5.2 -8.6		+1.9 -8.2		-1.29 -6.4 -1.52 -5.6				
	+1.7 +1.4		+1.5		-1.8 -1.4				
-16 7.07			7.7		2 7.22 7.0				
7.07			+1.6		+1.1 -1.1				
7.07									
	12 14 +67.74		-16 6.4 -0.2 -6.6 +1.6		-5.0		12 6 -59.80		-16 4.8 +0.1 -1.4 -1.4 -5.8
	12 35 +68.73		7.8 +0.4 7.1 +1.6		5.5		12 28 -74.88		5.4 +0.8 4.6 -1.2 5.8
	12 49 -25.97		7.0 +0.8 6.2 -0.7		6.9				
	12 50 +06.100		7.1 +0.3 -6.8 +0.2		6.6				
					6.07 6.00				5.80 5.80
4 400									
2 160									
560									
	+6.7 -6.6		+0.6 -6.8		-1.25 -6.2 -1.59 -1.44				
	+6.8 7.1				-1.17 4.6				
	15 13.7				6 10				
	+6.7 -6.8		+0.6 -6.8		-1.25 -6.2 -1.53 -1.45				
	+1.6		+1.1		-1.6 -1.3				
-16 5.92			6.7		1 6.8 2 5.8				
5.93			+1.8		+1.9 -1.1				

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1875	May 13	h = -005	m = -32	e = 00	h = -020	1875	May 13	h = -005	m = -32	e = 00	h = -020		
Star	RA	δ	Tang	T-Ra	P.P.	Star	RA	δ	Tang	T-Ra	P.P.		
	h m						h m						
11.7	+4 11 43	164	+0.27	0 = -1.50	+0.02 -1.52 - .09	11.7	+4 11 43	164	+0.27	0 = -1.50	+0.02 -1.52 - .09		
11.7	+4 11 44	165	+0.24	-1.50	+0.04 -1.54 - .01	11.7	+4 11 44	165	+0.24	-1.50	+0.04 -1.54 - .01		
11.7	+3 11 47	166	+1.10	-1.21	-0.02 -1.19 - .45	11.7	+3 11 47	166	+1.10	-1.21	-0.02 -1.19 - .45		
12.2	-1 12 14	170	+0.00	-1.51	+0.04 -1.55 - .00	12.2	-1 12 14	170	+0.00	-1.51	+0.04 -1.55 - .00		
12.6	-5 12 35	172	-0.01	-1.64	+0.01 -1.70 + .00	12.6	-5 12 35	172	-0.01	-1.64	+0.01 -1.70 + .00		
12.57	-8 12 56	176	+0.21	-1.49	+0.04 -1.53 - .07	12.57	-8 12 56	176	+0.21	-1.49	+0.04 -1.53 - .07		
12.15						12.15							
11.7	+0.27	-1.52				11.7	+0.27	-1.52					
11.7	+0.04	-1.54				11.7	+0.04	-1.54					
12.2	+0.00	-1.55				12.2	+0.00	-1.55					
12.6	-0.01	-1.70				12.6	-0.01	-1.70					
12.9	+2.1	-1.53				12.9	+2.1	-1.53					
12.2	+1.0	-1.57				12.2	+1.0	-1.57					
11.8	+4.40	-1.19				11.8	+4.40	-1.19					
n = 2.29						n = 2.29							
1875	May 17	h = -005	m = -32	e = 00	h = -032	1875	May 17	h = -005	m = -32	e = 00	h = -032		
Star	RA	δ	Tang	T-Ra	P.P.	Star	RA	δ	Tang	T-Ra	P.P.		
	h m						h m						
10.7	+12 10 43	432	+0.20	0 = -1.50	+0.02 -1.52 - .06	10.7	+12 10 43	432	+0.20	0 = -1.50	+0.02 -1.52 - .06		
11.0	+9 10 53	434	+0.14	-1.90	+0.01 -1.91 - .04	11.0	+9 10 53	434	+0.14	-1.90	+0.01 -1.91 - .04		
11.1	+8 11 3	155	+1.01	-1.47	+0.09 -1.56 - .32	11.1	+8 11 3	155	+1.01	-1.47	+0.09 -1.56 - .32		
11.7	+2 11 43	164	+0.27	-1.56	+0.02 -1.58 - .09	11.7	+2 11 43	164	+0.27	-1.56	+0.02 -1.58 - .09		
11.7	+2 11 44	165	+0.24	-1.57	+0.04 -1.61 - .01	11.7	+2 11 44	165	+0.24	-1.57	+0.04 -1.61 - .01		
11.31	-1.8	11 47	166	+1.40	-1.54	-0.02 -1.52 - .45	11.31	-1.8	11 47	166	+1.40	-1.54	-0.02 -1.52 - .45
12.6	-7 12 35	172	-0.01	-1.97	+0.01 -1.98 + .00	12.6	-7 12 35	172	-0.01	-1.97	+0.01 -1.98 + .00		
12.8	-9 12 49	173	+0.52	-1.45	-0.01 -1.47 - .49	12.8	-9 12 49	173	+0.52	-1.45	-0.01 -1.47 - .49		
12.9	-1.0 12 56	176	+0.21	-1.54	+0.04 -1.58 - .07	12.9	-1.0 12 56	176	+0.21	-1.54	+0.04 -1.58 - .07		
12.82	13.0	13 3	449	-0.09	-2.01	-0.01 -2.00 + .03	12.82	13.0	13 3	449	-0.09	-2.01	-0.01 -2.00 + .03
11.86	11 12	155	+0.63	-1.52	+0.13 -1.65 - .22	11.86	11 12	155	+0.63	-1.52	+0.13 -1.65 - .22		
10.7	+12.0	-1.82				10.7	+12.0	-1.82					
11.0	+1.4	-1.91				11.0	+1.4	-1.91					
11.7	+2.7	-1.58				11.7	+2.7	-1.58					
11.7	+0.4	-1.91				11.7	+0.4	-1.91					
12.6	-0.01	-1.98				12.6	-0.01	-1.98					
13.0	-0.9	-2.00				13.0	-0.9	-2.00					
11.8	+0.9	-1.92				11.8	+0.9	-1.92					
11.0	+1.01	-1.56				11.0	+1.01	-1.56					
11.8	+1.40	-1.52				11.8	+1.40	-1.52					
12.8	+1.52	-1.47				12.8	+1.52	-1.47					
11.9	+1.31	-1.52				11.9	+1.31	-1.52					
n = 2.33						n = 2.33							
1875	May 22	h = -005	m = -43	e = 00	h = -029	1875	May 22	h = -005	m = -43	e = 00	h = -029		
Star	RA	δ	Tang	T-Ra	P.P.	Star	RA	δ	Tang	T-Ra	P.P.		
	h m						h m						
11.7	+10 11 44	165	+0.04	0 = -2.33	+0.01 -2.37 - .02	11.7	+10 11 44	165	+0.04	0 = -2.33	+0.01 -2.37 - .02		
12.15	-12.6	12 35	172	-0.01	-2.54	+0.01 -2.55 + .00	12.15	-12.6	12 35	172	-0.01	-2.54	+0.01 -2.55 + .00
12.8	-7 12 49	173	+1.52	-1.81	-0.01 -1.80 - .68	12.8	-7 12 49	173	+1.52	-1.81	-0.01 -1.80 - .68		
12.8	-1 12 52	175	+0.81	-2.13	+0.06 -2.19 - .35	12.8	-1 12 52	175	+0.81	-2.13	+0.06 -2.19 - .35		
12.9	-2 12 56	176	+0.21	-2.36	+0.01 -2.40 - .09	12.9	-2 12 56	176	+0.21	-2.36	+0.01 -2.40 - .09		
13.0	-3 13 3	449	-0.09	-2.48	-0.01 -2.47 + .04	13.0	-3 13 3	449	-0.09	-2.48	-0.01 -2.47 + .04		
12.92	13.1	13 6	177	+0.54	-2.31	+0.01 -2.32 - .23	12.92	13.1	13 6	177	+0.54	-2.31	+0.01 -2.32 - .23
12.70						12.70							
11.7	+0.4	-2.37				11.7	+0.4	-2.37					
12.6	-0.01	-2.55				12.6	-0.01	-2.55					
12.9	+2.1	-2.40				12.9	+2.1	-2.40					
13.0	-0.9	-2.47				13.0	-0.9	-2.47					
12.3	+0.4	-2.45				12.3	+0.4	-2.45					
12.8	+1.52	-2.50				12.8	+1.52	-2.50					
12.8	+0.81	-2.19				12.8	+0.81	-2.19					
12.8	+1.6	-2.42				12.8	+1.6	-2.42					
n = 2.41						n = 2.41							

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1875 May 23 wave

1875 May 23 wave

1875 May 26 wave

1875 May 27 wave

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M _g =	+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100					
1875	May 23	Mar				1875	May 23	Mar						
Star	R.A.	Dec	Reg.	R.H.	P.P.	Reg.	R.H.	P.P.	Reg.	R.H.	P.P.	Reg.	R.H.	P.P.
	h m						h m							
	11 39	-11.99	-16	5.1	+0.9-4.2-02	-4.9	23 34	-87.49	-16	0.6	+0.3-4.3-18	2.7 ✓		
	11 44	+64.76		6.4	+0.4 6.0 +1.5	4.5	11 35	-42.90		4.0	+0.7 3.3 -0.9	4.2		
	11 47	-21.98		4.9	+0.5 4.4 -0.4	4.8	12 28	-47.88		4.4	+0.8 3.6 -1.1	4.9		
	12 56	+51.76		6.5	-0.1 6.6 +1.3	5.3	13 12	-75.66		4.0	-0.3 -4.1 -0.7	5.8		
	13 3	+73.68		7.5	+0.9 6.6 +1.7	4.9								
	13 6	+24.97		4.6	-0.6 5.2 +0.6	4.6								
						4.75	4.75						4.55-4.90	
6	450	+64 -60 +51 -6.6 +24 -5.2				-11 -1.2 -2.1 -4.4 -4.2 -3.3 -7.5								
3	270	+73 6.6				-1.7 3.8								
	720	137 6				9 9								
		+6.8 -6.3 +5.1 -6.6 +2.4 -5.2				-11 -4.2 -2.1 -4.4 -4.4 -3.4 -7.5								
-16	4.71	+1.6 +1.2 +.6				-1.2 -.5 -1.1								
	4.80	28 4.71 5.4 4.6				4.4 4.9 4.5								
		+0 +.7 -.1				-3 +.2 -2								
1875	May 26	Mar												
	11 31	+64.74	-16	3.8	+0.5-3.3+1.6	-1.7	23 34	-87.49	-16	0.6	+0.3-4.3-18	-18 ✓		
	11 39	-11.99		4.0	+0.9 3.1 -0.2	2.3	12 28	-47.88		2.3	+0.8 1.5 -1.0	-2.5		
	11 44	+64.76		4.7	+0.4 4.3 +1.5	2.8	13 12	-75.66		3.3	-0.3 -4.1 -0.7	5.1		
	12 56	+51.86		5.1	-0.1 5.2 +1.2	4.0	13 23	-51.86		12.0	+0.4 1.6 -1.1	12.7		
	13 3	+73.68		6.5	+0.9 5.6 +1.7	3.9								
	13 6	+24.97		3.5	-0.6 4.1 +0.6	3.5								
						3.20	3.20						2.50 3.80	
		+6.7 -3.3 +5.1 -5.2 +2.4 -4.1				-11 -3.1								
		+6.4 -4.3				-4.7 -1.5 -7.5								
6	120	+73 -5.6				-5.1 -11.6								
2	160	204 132				98 131								
	280													
		+6.8 -4.4 +5.1 -5.2 +2.4 -4.1				-11 -3.1								
		+1.6 +1.3 +.6				-4.7 -1.5 -7.5								
-16	3.13	3 2.8 3.5				3.4								
	3.35	7 -3 +.8 +.4				+3								
1875	May 27	Mar												
	11 39	-11.99	-16	4.5	+0.9-3.6-0.2	-3.8	12 6	-59.80	-16	2.7	+0.4-2.3-1.3	-3.6		
	11 59	+54.84		5.1	+0.3 4.8 +1.3	3.5	13 12	-75.66		1.6	-0.3 +1.7 -0.7	3.4		
	12 12	+64.74		4.6	-0.2 4.8 +1.6	3.2	13 34	-49.87		2.1	-0.1 2.2 -1.1	3.3		
	12 49	-35.97		4.9	+0.8 4.1 -0.5	4.6	12 28	-47.88		2.3	+0.8 1.5 -1.0	2.5		
	13 43	-13.99		4.5	+0.3 4.2 -0.2	4.4								
	14 28			2.5										
						3.90	3.90						3.13 3.20	
5	450	+6.7 -4.8 +5.4 -4.8				-11 -3.6 -2.5 -4.1								
11	80					-1.3 4.2								
	530					-4.9 2.2								
						-1.7 1.5								
						2.4 7.8								
						1.55 0.0								
		+6.7 -4.8 +5.4 -4.8				-12 -3.9 -2.5 -4.1								
		+1.6 +1.2				-1.3 -1.3								
-16	3.22	1 3.2 3.6				4.2 4.7 3.3								
	3.69	8 -5 -1				+5 +10 -4								

1875 May 29 $h = +007$
wave

$n = -44$ $e = .00$ $k = -.058$

Star	RA	S	long.	T-RA	P-P	T-RA	P-P
128.0.4	12 49	173	+1.52	0	-2.45	-.01	-2.44
128.4.12	50	175	+1.51	-2.68	+0.06	2.74	-.36
129.3.12	56	176	+1.21	-3.00	+0.04	3.04	-.04
128.8.130	2 13	449	-.09	-3.26	-.01	3.05	+0.04
131.1.13	6	177	+1.54	-2.91	+0.01	2.92	-.24
135.3.13	28	179	+1.00	-3.04	+0.01	3.05	-.00
137.5.13	43	181	+1.19	-2.61	+0.00	2.64	-.52
138.6.13	49	182	+1.31	-2.95	+0.03	2.98	-.15

129+21-3.04
13.0-09-3.05
13.5+00-3.05
13.8+34-2.98
13.3-42-3.03
12.8+152-2.44
12.8+.81-2.74
13.7+119-2.64
13.1+117-2.61

13.6+3.06-1.74
13.8+2.17-2.17

$n = -44$
 $n = -42$
 $n = -46$
 $n = -44$

$n = -440$

1875 June 1 $h = +006$ -0.22
wave

$n = 48$ $c = 0$

Star	RA	S	T-RA	P-P	T-RA	P-P
120.1.11	59	167	+0.17	0	-2.30	+0.02
122.1.12	14	170	+0.00	-2.38	+0.04	-2.42

12.0+0.17-2.32
12.2.00-2.42
12.1+.08-2.37

1875 June 8 $h = +009$
wave

$n = -50$ $q = .00$ $k = -.056$

Star	RA	S	T-RA	P-P	T-RA	P-P
126.0.9	12 35	172	-.01	0	-2.14	+0.01
128.7.12	49	173	+1.52	-1.31	-.01	1.30
128.7.12	50	175	+1.51	-1.66	+0.06	1.72
130.5.13	3	449	-.09	-2.17	-.01	2.16
131.4.13	6	177	+1.54	-1.90	+0.01	1.91
135.3.13	28	179	+1.00	-2.10	+0.01	2.15
137.5.13	43	181	+1.19	-1.62	+0.00	1.62
138.6.13	49	182	+1.31	-1.97	+0.03	2.00
139.4.13	55	183	+1.04	-2.07	+0.02	2.09
141.6.14	5	458	+1.47	-2.15	-.06	1.99
142.7.14	10	187	+1.36	-1.97	+0.03	2.00
143.8.14	21	190	+1.30	-1.56	+0.01	1.52
144.9.14	26	192	+1.60	-1.48	+0.02	1.92

12.6-01-2.15
13.0-09-2.16
13.5+00-2.15
13.9+.04-2.09
14.2+36-2.00
13.4+06-2.17

18.2+43.14-2.634
13.4+3.29-0.55
13.6+3.06-0.49
13.8+2.17-1.10
14.0+2.14-1.12
14.1+4.74-5.997

$n = -48$
 $n = -48$
 $n = -48$
 $n = -48$
 $n = -48$
 $n = -48$

12.8+1.52-1.30
12.8+.81-1.72
13.7+1.19-1.62
14.3+1.30-1.52
14.4+.60-1.92
13.6+1.08-1.64

12.6-01-2.15
13.0-09-2.16
13.5+00-2.15
13.9+.04-2.09
14.2+36-2.00
13.4+06-2.17

18.2+43.14-2.634
13.4+3.29-0.55
13.6+3.06-0.49
13.8+2.17-1.10
14.0+2.14-1.12
14.1+4.74-5.997

$n = -48$
 $n = -48$
 $n = -48$
 $n = -48$
 $n = -48$
 $n = -48$

$\lambda =$	+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100						
1875	May 29 wave					1875	May 29 wave								
Star	RA in zone	R_{eq}	R_{lt}	R_{p}	$R_{p} - R_{lt}$	$R_{p} - R_{lt}$	RA in zone	R_{eq}	R_{lt}	R_{p}	$R_{p} - R_{lt}$	$R_{p} - R_{lt}$	$R_{p} - R_{lt}$	$R_{p} - R_{lt}$	
	h						h								
12 49	-25.97	-16	5.8	+0.8	5.0	-0.5	13 34	-49.87	-16	2.6	-0.1	-2.7	-1.1	-3.8	
12 50	+06.00		5.8	+0.3	5.5	+0.8	13 48	-39.92		4.4	+0.6	-3.8	-0.9	4.7	
12 56	+51.86		6.0	-0.1	6.1	+1.2									
13 3	+73.68		4.7	+0.9	6.8	+6.7									
13 6	+24.97		4.9	-0.6	5.5	+0.6									
13 28	+67.74		6.9	+0.0	6.9	+1.6									
13 43	-13.99		5.3	+0.3	5.0	-0.2									
13 49	+39.92		6.3	+0.2	6.1	+1.0									
							5.16	5.16						4.20 4.25	
8 2	928 50 978														
	+73 -6.8 +51 -6.1	+24 -5.5 +0.6 -5.5	-13 -5.0	-25 -5.0	-19 -2.7										
	+67 6.9	+39 -6.1		-39 -3.8											
	140 17	63 116		4 88											
	+70 -6.8 +51 -6.1	+31 -5.8 +0.6 -5.5	-13 -5.0	-32 -4.4	-49 -2.7										
	+19	+1.2	+1.8	+1	-3										
-16 4.85	49.1	4.92	5.0	5.4	5.3	2	5.2	2.9							
4.98	10 +0	+0	+1	+5	+4	+3	-2.0								
1875	June 1 wave														
11 59		-16	9.0	+0.8	8.2	-									
12 14	+67.74		7.6	-0.2	7.8	+1.5	-6.3								
							6.30	6.30							
	+67 -7.8														
	+18														
-16 4.00	1 6.0														
6.30	+0.0														
1875	June 8 wave														
12 35	+68.73	-16	9.0	+0.7	8.3	+1.6	-6.7	13 12	-76.66	-16	4.7	+0.3	4.8	1.7	6.3
12 49	-25.97		6.0	+0.8	5.2	-0.6	6.8	13 23	-51.86		3.1	+0.4	-2.7	-1.2	-4.4
12 50	+06.00		5.5	+0.3	5.2	+0.1	5.1	13 34	-49.87		2.9	-0.1	3.0	-1.2	4.2
13 3	+73.68		7.5	+0.9	6.6	+1.6	5.0	13 48	-39.92		4.4	+0.6	3.8	-1.2	6.0
13 6	+24.97		5.2	-0.6	5.8	+0.6	5.2	14 1	-38.92		4.7	+0.7	4.0	-0.9	5.0
13 28	+67.74		6.7	+0.0	6.7	+1.6	5.1	14 9	-58.81		4.85	+0.8	6.5	-0.3	7.6
13 43	-13.99		5.9	+0.3	5.6	-0.3	6.9								
13 49	+39.92		6.5	+0.2	6.3	+1.0	5.3	2 19							
13 53	+64.76		8.0	+0.5	7.5	+1.5	6.0								
14 5	+29.95		6.2	+0.2	6.0	+0.8	6.7								
14 10	+38.92		7.1	-0.5	7.6	+0.9	6.7								
14 21	-17.98		6.8	+0.9	5.9	-0.4	6.3								
14 26	+20.98		5.3	+0.8	6.1	+0.5	5.4								
							5.68	5.69							4.2
															5.24 5.42
13 6	884 262 1136	+68 -6.3	+24 -5.8 +0.6 -5.2	-13 -5.6	-25 -5.2	-5.1	-2.7								
	+73 6.6	+39 6.3		-17 5.9	-39 3.8	-49 3.0									
	+67 6.7	+25 6.0			-38 4.0										
	+64 7.5	+38 7.6													
		+20 6.1													
	272 291	150 318		30 15	12 130	0 57									
	+68 -7.3	+30 -6.4 +0.6 -5.2	-15 -5.7	-34 -4.3	-50 -2.8										
	+16	+1.8	+1	-1.4	-1.8	-1.2									
-16 5.38	4 5.7	5 5.6	5.1	2	6.1	3	5.1	2	4.0						
5.59	17 +.3	+1.2	-1.3	+1.7	-1.3	-1.4									

1875 June 10
Wave
Star RA S long. T.R.A P.P. (P.P.)

14.1+0.2 14 5 458 +0.47 0 = -1.75 -06 -1.69 -21.01 190 1.91

14.2+1.1 14 10 187 +0.36 -1.71 +0.03 1.74 -16.00 190 .90

14.3+0.0 14 21 190 +1.30 -1.35 +0.01 1.36 -58 194 .94

14.4-1.1 14 26 192 +0.60 -1.68 +0.02 1.64 -27.00 191 .91

14.5-2.1 14 27 193 +0.81 -1.64 -0.08 1.56 -36.00 192 .91

14.6-3.1 14 35 194 +0.31 -1.77 +0.04 1.81 -14.00 195 .94

14.35

14.1+0.47-1.69

14.2+3.6-1.74

14.8+3.1-1.81

14.3+3.8-1.75

14.3+1.30-1.36

14.4+6.0-1.64

14.4+5.1-1.56

14.4+9.0-1.52

n = -44

14.0+2.14-0.98

14.9+4.74-59.97+03

14.8+3.65+59.94-17

0 = +1.76+0.77 n = -44

+4.36-55.22 +178

+3.27+61.69 +52

0 = +1.24+0.51 n = -44

+3.84-55.25 +155

+2.75+61.66 -53

1875 June 10
Wave
Star RA S long. T.R.A P.P. (P.P.)

13.12 19 -42.14 0 = -19.87 +0.61 -20.58

14 1 184 +2.14 -0.98 +0.00 0.98

14 9 459 +4.74 -20.21 -21.59 97 +0.03

14 51 198 +3.65 +0.07 +10.59 94 -0.17

2 19 36 -2.34 -0.35 +2.5

13.2-42.14-20.58

2.3-2.34-19.75

0 = -42.52-18.73 n = -42

-2.42 -4.89

0 = -43.04-18.96 n = -42

-3.24 +0.53

1875 June 11
Wave
Star RA S long. T.R.A P.P. (P.P.)

13.5+7.13 28 179 +0.00 0 = -1.74 +0.01 1.71 -00 171

13.7+5.13 43 181 +1.19 -1.16 +0.00 1.16 -52 170 .72

14.1+1.14 5 458 +0.47 -1.52 +0.06 1.46 -21 169 .69

14.2+0.0 14 10 187 +0.36 -1.48 +0.03 1.51 -16 167 .67

14.3-1.1 14 21 190 +1.30 -1.11 +0.01 1.12 -58 170 .70

14.4-2.1 14 26 192 +0.60 -1.46 +0.02 1.44 -27 175 .74

14.5-3.1 14 27 193 +0.81 -1.50 -0.08 1.42 -36 178 .77

14.40 14.6-4.1 14 35 194 +0.31 -1.54 +0.04 1.58 -14 172 .70

14.16

13.5+0.0-1.71

14.2+4.74-10.38

14.1+4.7-1.48

14.2+3.6-1.57

14.6+3.1-1.58

14.1+2.9-1.57

0 = +1.15-5.05 n = -42

1.95

0 = +3.76-6.92 n = -45

1.68

0 = -42.43-20.06 n = -44

-2.63 +0.53

0 = -43.12-20.34 n = -47

-3.82 +0.73

1875 June 15
Wave
Star RA S long. T.R.A P.P. (P.P.)

13.7+4.13 43 181 +1.19 0 = -0.88 +0.00 0.88 -52 140 1.41

14.2-1.14 10 187 +0.36 -1.27 +0.03 1.30 -16.00 146 .46

14.3-2.14 21 190 +1.39 -0.88 +0.01 0.89 -61.00 150 .50

14.4-3.14 26 192 +0.60 -1.20 +0.02 1.22 -26.00 148 .47

14.15

13.4+3.29+59.99+01+00.00

14.0+2.14-0.41+0.00-0.41

14.1+4.74-0.41+0.00-0.42

+7.58 +7.58

0 = +2.93+1.30 n = -44

+1.78+0.69 -50

+4.38-5.12 -42

+7.88 -453

0 = +2.23+1.00 n = -45

+1.08+0.59 -55

+3.68 +7.58 -43

n = -43

0 = -2.70 - n =

Star	RA	δ	Tang.	T-Ra	P-P	P-P	P-P	Star	RA	δ	Tang.	T-Ra	P-P	P-P	P-P
1875 June 20 Harc	$h = +004$ $+0.024$							1875 June 20 Harc							
	$n = -.51$	$e = .00$	$h = +.022$												
13.7	13.7	13.43	181	+1.19	0	+0.08	+0.08	13.7	13.7	13.43	181	+1.19	0	+0.08	+0.08
13.8	13.8	13.49	182	+1.34	-0.34	+0.03	+0.03	13.8	13.8	13.49	182	+1.34	-0.34	+0.03	+0.03
13.80	13.80	13.53	183	+1.04	-0.35	+0.02	+0.02	13.80	13.80	13.53	183	+1.04	-0.35	+0.02	+0.02
14.9	14.9	14.57	199	+1.87	+0.03	+0.03	+0.03	14.9	14.9	14.57	199	+1.87	+0.03	+0.03	+0.03
15.0	15.0	14.59	201	+1.52	-0.16	-0.00	-0.16	15.0	15.0	14.59	201	+1.52	-0.16	-0.00	-0.16
15.03	15.03	15.15	201	+1.67	-0.19	-0.02	-0.17	15.03	15.03	15.15	201	+1.67	-0.19	-0.02	-0.17
14.42								14.42							
13.8 + 3.41 - 3.7								13.8 + 3.41 - 3.7							
13.9 + 0.4 - 3.7								13.9 + 0.4 - 3.7							
13.8 + 1.9 - 3.7								13.8 + 1.9 - 3.7							
13.7 + 1.19 + 0.08								13.7 + 1.19 + 0.08							
14.9 + 8.7 + 4.0								14.9 + 8.7 + 4.0							
15.2 + 6.7 + 1.7								15.2 + 6.7 + 1.7							
14.6 + 9.1 + 0.8								14.6 + 9.1 + 0.8							
2 = 7.47								2 = 7.47							
1875 June 21 Harc	$h = +005$ -0.029							1875 June 21 Harc							
	$n = -.48$	$c = .00$	$h = -.043$												
13.9	13.9	13.53	183	+1.04	0	-0.36	+0.02	13.9	13.9	13.53	183	+1.04	0	-0.36	+0.02
14.40	14.40	14.57	199	+1.87	-0.05	+0.03	+0.08	14.40	14.40	14.57	199	+1.87	-0.05	+0.03	+0.08
15.0	15.0	14.59	201	+1.52	-0.21	-0.00	+0.21	15.0	15.0	14.59	201	+1.52	-0.21	-0.00	+0.21
15.10	15.10	15.15	201	+1.67	-0.20	-0.02	+0.18	15.10	15.10	15.15	201	+1.67	-0.20	-0.02	+0.18
14.75								14.75							
13.9 + 0.4 - 3.8								13.9 + 0.4 - 3.8							
14.0 + 5.2 - 1.2								14.0 + 5.2 - 1.2							
14.4 + 2.8 - 3.0								14.4 + 2.8 - 3.0							
14.9 + 8.7 - 0.8								14.9 + 8.7 - 0.8							
15.2 + 6.7 - 1.8								15.2 + 6.7 - 1.8							
15.0 + 5.7 - 1.3								15.0 + 5.7 - 1.3							
02 = 7.35								02 = 7.35							
1875 June 24 Harc	$h = +007$ -0.025							1875 June 24 Harc							
	$n = -.42$	$e = .00$	$h = -.049$												
13.7	13.7	13.43	181	+1.19	0	+0.08	+0.08	13.7	13.7	13.43	181	+1.19	0	+0.08	+0.08
13.8	13.8	13.49	182	+1.34	+0.06	+0.03	+0.03	13.8	13.8	13.49	182	+1.34	+0.06	+0.03	+0.03
13.9	13.9	13.53	183	+1.04	-0.11	+0.02	+0.13	13.9	13.9	13.53	183	+1.04	-0.11	+0.02	+0.13
14.1	14.1	14.54	185	+1.47	+0.10	-0.06	+0.16	14.1	14.1	14.54	185	+1.47	+0.10	-0.06	+0.16
14.2	14.2	14.10	187	+1.36	+0.07	+0.03	+0.04	14.2	14.2	14.10	187	+1.36	+0.07	+0.03	+0.04
14.4	14.4	14.26	192	+1.60	+0.23	+0.02	+0.21	14.4	14.4	14.26	192	+1.60	+0.23	+0.02	+0.21
14.5	14.5	14.27	193	+1.51	+0.28	-0.08	+0.36	14.5	14.5	14.27	193	+1.51	+0.28	-0.08	+0.36
14.9	14.9	14.57	199	+1.87	+0.36	+0.03	+0.33	14.9	14.9	14.57	199	+1.87	+0.36	+0.03	+0.33
15.0	15.0	14.59	201	+1.52	+0.09	+0.00	+0.09	15.0	15.0	14.59	201	+1.52	+0.09	+0.00	+0.09
15.4	15.4	15.23	205	+1.57	+0.10	-0.01	+0.11	15.4	15.4	15.23	205	+1.57	+0.10	-0.01	+0.11
15.4	15.4	15.26	206	+1.58	+0.34	+0.05	+0.29	15.4	15.4	15.26	206	+1.58	+0.34	+0.05	+0.29
15.5	15.5	15.27	207	+1.58	+0.42	+0.08	+0.34	15.5	15.5	15.27	207	+1.58	+0.42	+0.08	+0.34
15.28	15.28	15.29	209	+1.51	+0.14	+0.02	+0.12	15.28	15.28	15.29	209	+1.51	+0.14	+0.02	+0.12
14.64								14.64							
13.8 + 2.17 + 1.34								13.8 + 2.17 + 1.34							
13.9 + 0.4 + 1.13								13.9 + 0.4 + 1.13							
14.2 + 3.6 + 0.4								14.2 + 3.6 + 0.4							
15.0 + 5.2 + 0.9								15.0 + 5.2 + 0.9							
15.5 + 5.1 + 1.2								15.5 + 5.1 + 1.2							
14.5 + 3.5 + 0.3								14.5 + 3.5 + 0.3							
13.7 + 1.19 + 0.52								13.7 + 1.19 + 0.52							
14.4 + 1.60 + 0.21								14.4 + 1.60 + 0.21							
14.4 + 1.61 + 0.36								14.4 + 1.61 + 0.36							
14.9 + 8.7 + 3.3								14.9 + 8.7 + 3.3							
15.4 + 6.8 + 2.9								15.4 + 6.8 + 2.9							
14.6 + 8.7 + 3.4								14.6 + 8.7 + 3.4							
02 = 1.60								02 = 1.60							

1875phae.proj.1.1

Star	P.A.	δ	tang.	T.R.A.	P.P.	P.P.	T.R.A.	Star	P.A.	δ	tang.	T.R.A.	P.P.	P.P.
1875	June 27	$h = +012$	-0.18	$n = -.58$	$e = .00$	$L = -.11$		1875	June 27	$h = +012$	-0.18	$n = -.58$	$e = .00$	$L = -.11$
14.9	+4 14 57	199	+0.87	0 = +0.91	+0.03	+0.58	-50	14.9	+4 14 57	199	+0.87	0 = +0.91	+0.03	+0.58
15.0	3 14 59	465	+52	+0.62	+0.00	0.62	-30	15.0	3 14 59	465	+52	+0.62	+0.00	0.62
15.03	15.2	+1 15 10	201	+67	+0.68	-.02	0.70	-39	15.03	15.2	+1 15 10	201	+67	+0.68
15.4	-1 15 23	205	+57	+0.63	+0.05	0.62	-93	15.4	-1 15 23	205	+57	+0.63	+0.05	0.62
15.4	1 15 26	206	+88	+0.83	+0.05	0.75	-51	15.4	1 15 26	206	+88	+0.83	+0.05	0.75
15.5	2 15 27	207	+88	+0.87	+0.08	0.79	-51	15.5	2 15 27	207	+88	+0.87	+0.08	0.79
15.45	15.5	-2 15 29	209	+51	+0.61	+0.02	0.59	-30	15.45	15.5	-2 15 29	209	+51	+0.61
15.27								15.27						

15.0+52+0.62	14.8+3.65+2.50	+0.0	+2.50	+0.1+2.51
15.5+51+0.89	14.9+2.29+1.49	+0.0	+1.49	+0.0+1.49
15.2+51+.60	15.2+2.45+2.83	+0.0	+2.83	+0.0+2.83
14.9+0.87+0.88	15.3+3.13+2.10	+0.0	+2.10	+0.0+2.10

15.2+.87+.70	0 = +3.14	+1.90	$n = -.61$	0 = +2.68	+1.78	$n = -.61$
15.4+.57+.62	+1.78	+0.89	-.50	+1.52	+0.74	-.49
15.4+.88+.78	+1.94	+2.23	-.63	+1.68	+2.08	-.64
15.4+.88+.79	+2.62	+1.50	-.57	+2.36	+1.35	-.57
15.3+.78+.70						

$n = 6.58$	$n = 6.58$
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Star	P.A.	δ	tang.	T.R.A.	P.P.	P.P.	T.R.A.	Star	P.A.	δ	tang.	T.R.A.	P.P.	P.P.
1875	June 28	$h = +010$	-0.58	$n = -.58$	$e = .00$	$L = -.053$		1875	June 28	$h = +010$	-0.58	$n = -.58$	$e = .00$	$L = -.053$
14.1	+8 14 54	158	+47	0 = +0.81	-.06	0.87	-27	14.1	+8 14 54	158	+47	0 = +0.81	-.06	0.87
14.2	7 14 10	187	+36	+0.87	+0.03	0.84	-21	14.2	7 14 10	187	+36	+0.87	+0.03	0.84
14.4	5 14 26	192	+60	+0.94	+0.02	0.92	-36	14.4	5 14 26	192	+60	+0.94	+0.02	0.92
14.30	14.5	-4 14 27	193	+81	+1.05	-.08	1.13	-47	14.30	14.5	-4 14 27	193	+81	+1.05
14.9	+0 14 57	199	+87	+1.15	+0.09	1.12	-50	14.9	+0 14 57	199	+87	+1.15	+0.09	1.12
15.4	-5 15 23	205	+57	+0.83	-.01	0.84	-33	15.4	-5 15 23	205	+57	+0.83	-.01	0.84
15.4	5 15 26	206	+88	+1.10	+0.05	1.05	-51	15.4	5 15 26	206	+88	+1.10	+0.05	1.05
15.5	6 15 27	207	+88	+1.18	+0.08	1.10	-51	15.5	6 15 27	207	+88	+1.18	+0.08	1.10
15.34	15.5	-6 15 29	209	+51	+0.86	+0.02	0.84	-30	15.34	15.5	-6 15 29	209	+51	+0.86
14.88								14.88						

14.1+47+0.87	15.3+3.13+2.36	-.01	+2.35	+0.0+2.36	2.3-2.34	+0.00	-.01
14.2+36+.84							
14.5+51+.84							
14.3+47+.85	0 = +2.68	+1.50	$n = -.56$	0 = +2.79	-3.19	$n =$	

14.4+.80+0.92	0 = +2.37	+1.33	$n = -.56$	0 = +3.10	$n =$		
14.4+.81+1.13							
14.9+.87+1.12							
15.4+.88+1.05							
15.4+.88+1.10							
15.5+.51+0.84							
15.0+.76+1.03							

1875	June 30	$h = +010$	-0.13	$n = -.54$	$e = .00$		
14.3	+3 14 21	190	+1.30	0 = +1.86	+0.01	1.85	-70
14.4	2 14 26	192	+60	+1.45	+0.02	1.43	-32
14.6	+0 14 35	194	+81	+1.25	+0.04	1.21	-17
14.7	-1 14 40	197	+04	+1.13	+0.00	1.13	-02
14.9	3 14 57	199	+87	+1.58	+0.03	1.55	-47
15.0	-4 14 59	465	+52	+1.36	+0.00	1.36	-28
14.65							

14.3+31+1.21	14.8+3.65+3.16						
14.7+.04+1.13	14.9+2.29+2.24						
15.0+.52+1.36							
14.8+.29+1.23	0 = +3.36	+1.93	$n = -.57$	0 = +3.26	+1.10	+3.16	
14.3+1.30+1.85	+2.00	+1.01	-.50	+2.29	+1.07	+2.24	
14.4+.60+1.43							
15.0+.87+1.55							
14.6+.92+1.61	0 = +2.73	+1.61	$n = -.59$				
	+1.37	+0.63	-.46				

$n = 6.60$	$n = 6.60$
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14.3+1.30+1.85	14.8+3.65+3.16						
14.4+.60+1.43	14.9+2.29+2.24						
15.0+.87+1.55							
14.6+.92+1.61							

14.3+1.30+1.85	0 = +3.36	+1.93	$n = -.57$	0 = +3.26	+1.10	+3.16	
14.4+.60+1.43	+2.00	+1.01	-.50	+2.29	+1.07	+2.24	
15.0+.87+1.55							
14.6+.92+1.61	0 = +2.73	+1.61	$n = -.59$				
	+1.37	+0.63	-.46				

$n = 6.60$	$n = 6.60$
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$M_g =$	+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100
1875	June 27	WAR				1875	June 27	WAR	
Star	Ra Linzort	R _g R _H P ₁ P	R _g R _H P ₁ P	R _g R _H P ₁ P	R _g R _H P ₁ P	Star	Ra Linzort	R _g R _H P ₁ P	R _g R _H P ₁ P
	L ₂ m						L ₂ m		
	14 57 +03+1.00	-16 14.4 +0.7 -7.0 +0.1	-6.9			14 51 -53.84	-16 6.8 +1.0 -5.8 -14 -7.2		
	14 59 +26.96	8.7 +0.5 8.2 +0.6	7.6			14 56 -41.91	5.9 -0.1 6.0 -10 7.0		
	15 70 +15.99	4.5 -0.1 4.6 +0.4	4.2			15 13 -43.90	5.1 -0.2 5.3 -11 6.4		
	15 23 +22.97	7.4 +0.3 7.1 +0.6	6.5			15 21 -50.86	5.3 +0.4 5.2 -13 6.5		
	15 26 +02.100	5.9 -0.7 6.6 +0.0	6.6						
	15 27 +02.100	6.2 -0.4 6.6 +0.0	6.6						
	15 29 +26.96	6.6 -0.6 7.2 +0.6	6.6						
			6.80			6.80			6.78 6.78
6 480									
4 312									
792									
		+26 -8.2 +0.3 -7.0				-53 -5.8			
		+22 7.1 +0.2 6.6				-41 6.0			
		+26 7.2 +0.2 6.6				-43 5.3			
						-50 5.2			
		14 225 7 202				187 223			
		+25 -7.5 +0.2 -6.7				-47 -5.6			
		3 +.6				4 -1.1			
-16 6.78		3 6.9				3 6.7			
6.79		10 +.1				-1			
1875	June 28	WAR							
	14 5 +29.95	-16 8.7 +0.2 -8.5 +0.8	-7.7			15 21 -50.86	-16 6.4 +0.4 6.3 -13 -7.6		
	14 10 +38.92	7.2 +0.5 8.1 +0.9	7.5			2 -19	+0.8 --		
	14 26 +20.98	5.2 -0.8 9.0 +0.5	8.5						
	14 27 +06.100	9.3 +0.3 9.0 +0.1	8.9						
	14 57 +03.100	9.3 +0.7 8.6 +0.1	8.5						
	15 23 +22.97	9.0 +1.3 8.7 +0.6	8.1						
	15 26 +02.100	7.8 -0.7 7.8 +0.0	7.8						
	15 28 +02.100	7.1 -0.4 7.5 +0.0	7.5						
	15 29 +26.96	7.8 -0.6 8.4 +0.6	7.8						
			8.03			8.03			7.60 7.60
		+29 -8.5 +0.6 -9.0				-50 -6.3			
		+38 8.4 +0.3 8.6							
		+20 9.0 +0.2 7.8							
		+22 8.7 +0.2 7.5							
		+26 8.4							
9 927		135 430 13 329							
66									
987									
		+27 -8.6 +0.3 -8.2				-50 -6.3			
		+7 +.1				-1.2			
-16 7.94		8 7.6 4 8.1				1 7.5			
7.99		10 +.0 +.2				-4			
1875	June 30	WAR							
	14 21 -17.98	-16 8.5 +0.9 -7.6 -0.6	-8.2			14 51 -53.84	7.1 +1.0 +1.0 -6.1 -13 -7.4		
	14 26 +20.98	7.9 -0.8 8.7 +0.5	8.2			14 56 -41.91	6.6 -0.1 -4.7 7.7 -10 8.7		
	14 35 +43.90	8.3 +0.1 8.2 +1.1	7.1			2 -19	+0.8 --		
	14 40 +64.76	8.7 +0.1 8.6 +1.6	7.0						
	14 57 +03.100	8.2 +0.7 7.5 +0.1	7.4						
	14 59 +26.96	8.9 +0.5 8.4 +0.6	7.8						
			7.62			7.62			8.05 8.05
6 372									
2 210									
582									
		+64 -8.6 +4.3 -8.2 +2.0 -8.7 +0.3 -7.5 -17 -7.6				-53 -6.1			
		+26 8.4				-41 7.7			
		6 11				94 138			
		+64 -8.6 +4.3 -8.2 +2.3 -8.5 +0.3 -7.5 -17 -7.6				-47 6.9			
		+15 +1.0 +.6 +.1 -.4				-1.1			
-16 7.69		7.1 7.2 7.9 7.4 8.0				2 8.0			
7.73		-6 -.5 +.2 -.3 +.3				+3			

[illegible]

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1875phase

1875	July 10	$h = -0.06$ -0.14																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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156 +2 +0.85	154 +88 +128	152 +245 +2.24																
157 +28 +0.96	159 +143 +1.70	153 +3.13 +2.55																
158 +09 +0.84	160 +146 +1.69	158 +4.78 +3.82																
158 +29 +0.96	166 +.81 +1.25	162 +2.61 +2.35																
161 -64 +0.78	167 +1.54 +1.84	164 +1.87 +1.70 +1.86																
162 -08 +0.80	161 +1.47 +1.81																	
163 +25 +1.40	160 +1.19 +1.48																	
164 +04 +0.85	160 +1.04 +1.41																	
160 +12 +0.88																		
n = 3.38																		

1875	July 11	h = +0.01	-0.32	-582	-64 C = .00	$\alpha = -0.12$	0.766	-610	-0.									
152	+8 15 10	200	- .06	+0.74	+0.02	0.72	+10	01	+0.82	+0.81	15 13	467	+2.45	0 = +	2.31	-0.3	+2.34	
154	6 15 23	205	+ .57	+1.15	-0.01	1.16	-36	01	.80	.79	15 21	203	+3.13	+2.85	-1.14	2.72		
154	6 15 26	206	+ .88	+1.31	+0.05	1.28	-50	01	.70	.69	15 49	217	+4.78	+3.99	+2.88	3.71		
155	5 15 29	209	+ .51	+1.11	+0.02	1.09	-33	-01	.76	.75	16 14	472	+4.07	+3.33	-1.06	3.39		
156	4 15 38	212	+ .12	+0.87	+0.02	0.86	-08	00	.78	.78	16 28	476	+2.61	+2.41	+0.06	2.34		
157	3 15 40	213	+ .28	+0.96	+0.05	0.96	-18	00	.78	.78	16 22	226	+1.87	+1.69	-0.01	1.76	+16	
157	3 15 45	216	+ .09	+0.81	-0.02	0.83	-06	00	.77	.77			-2.26		+21			
158	2 15 51	218	+ .29	+0.92	-0.01	0.93	-19	00	.74	.74	16 59	235	+7.33	+5.31	+0.03	+5.94		
15.58	+1 15 55	471	+1.43	+1.87	+2.1	1.66	-92	00	.74	.74								
160	0 16 0	220	+1.66	+1.86	+1.6	1.70	-106	00	.64	+12.76								
163	-3 16 16	225	+ .35	+1.00	+0.02	0.98	-22	00	.76	.76								
163	-3 16 20	473	+ .25	+1.05	+0.13	0.92	-16	00	.76	.76								
164	-4 16 25	227	+ .04	+0.76	-0.07	0.83	-08	00	.80	.80								
166	-6 16 37	231	+ .62	+1.26	+0.01	1.25	-52	+01	.73	.74								
167	-7 16 43	477	+1.54	+1.61	+0.04	1.57	-99	-01	.58	+13.72								
168	-8 16 46	478	+ .27	+0.93	+0.05	0.88	-17	.01	.71	.72								
169	-9 16 52	233	+ .17	+0.95	+0.06	0.89	-11	.01	.78	.79								
1652	169 -9 16	53234	+ .60	+1.13	+0.01	1.12	-38	+01	+0.74	.75								
60	16.25								0.754									

152 -16 +0.72	152 +2.45 +2.24	153 +3.13 +2.55																
156 +12 +0.86	158 +4.78 +3.71	162 +4.07 +3.39																
157 +28 +0.96	166 +1.59 +3.74	164 +1.87 +1.70 +1.92																
158 +09 +0.83	170 +1.33 +5.42	170 +7.33 +5.41																
158 +29 +0.93																		
163 +35 +0.98																		
163 +25 +0.92																		
164 +04 +0.83																		
168 +27 +0.88																		
169 +17 +0.89																		
161 +17 +.88																		
154 +88 +1.28																		
159 +143 +1.66																		
160 +1.66 +1.70																		
167 +1.54 +1.57																		
164 +1.36 +1.55																		
157 +1.37 +1.55																		

[illegible]

1875	July 12	n = +0.02	m = -.63	c = .00	L = +0.33	1875	July 12
Star	RA	Dec	Parallax	T-RA	P-P	T-RA	Star
15.0	14 59 465	+0.52	0 = +1.06	+0.00	+1.06	-33	15 21 203
15.4	15 26 208	+ .58	+1.35	+0.05	1.30	-35	15 49 217
15.5	6 15 209	+ .51	+1.13	+0.02	1.11	-32	16 14 472
15.6	5 15 38	+ .12	+0.83	+0.02	0.91	-28	16 28 229
15.7	4 15 40	+ .28	+1.00	+0.03	1.00	-18	16 22 226
15.7	4 15 43	- .05	+0.84	-0.02	0.86	+03	4 42
15.8	3 15 45	+ .09	+0.83	+0.02	0.85	-06	16 59 235
15.58	15.9	2 15 55	+1.43	+1.92	+2.1	1.71	-90
16.1	10 16 8	- .06	+0.58	-0.01	0.59	+00	+00
16.2	-1 16 12	- .08	+0.81	+0.03	0.78	+05	-01
16.3	2 16 16	+ .35	+1.08	+0.02	1.06	-22	.01
16.3	2 16 20	+ .25	+1.13	+0.13	1.00	-16	.01
16.4	3 16 25	+ .04	+0.83	-0.07	0.90	-03	.01
16.6	5 16 37	+ .62	+1.00	-0.01	1.10	-39	.02
16.7	6 16 39	+ .81	+1.36	+0.01	1.35	-51	.02
16.8	7 16 46	+ .27	+1.00	+0.05	0.95	-17	.02
16.9	8 16 52	+ .17	+1.06	+0.06	1.00	-11	.03
16.9	8 16 53	+ .60	+1.15	+0.01	1.17	-38	.03
16.47	16.0	-1 16 0	+1.66	+1.99	+1.6	1.83	-185
16.80							-00
15.0 + 5.2	+1.06	15.4 + 8.8	+1.30	15.3 + 3.3	+2.83		
15.6 + 1.2	+0.91	15.9 + 1.4	+1.71	15.8 + 4.7	+3.85		
15.7 + 2.8	+1.00	16.6 + 6.2	+1.10	16.2 + 4.0	+3.37		
15.7 - .05	+0.86	16.6 + 8.1	+1.35	16.5 + 2.6	+2.26		
16.74 + .09	+0.45	16.9 + 6.0	+1.17	16.4 + 1.8	+1.77	+1.93	
16.1 - .66	+0.89	16.3 + 8.7	+1.33	17.0 + 7.3	+5.71		
16.2 - .08	+0.78						
16.3 + 2.5	+1.00	0 = +3.00	+1.90	n = -.63	0 = +2.13	+1.42	n = -.67
16.4 + .04	+0.90	+4.65	+2.92	-.63	+3.78	+2.44	-6.45
16.6 + .87	+1.00	+3.94	+2.44	-.62	+3.07	+1.96	-6.4
16.0 + .13	+0.93	+2.48	+1.33	-.54	+1.61	+0.85	-5.3
n = 6.55		+1.74	+0.84	-1.0	+0.87	+0.36	-1.0
1875	July 31	n = +0.03	-0.09	-6.0	-6.3	c = .00	-6.60
17.1	17 17 480	+ .86	+3.55	+2.4	+3.11	-54	00 + 2.57
17.2	2 17 9	+ .26	0 = +2.54	+0.01	2.63	-16	2.47
17.2	2 17 11	+ .75	+2.81	-0.05	2.86	-47	2.39
17.5	-1 17 28	+1.30	+3.26	+0.06	3.20	-82	2.38
17.5	1 17 29	+ .23	+2.62	+0.03	2.59	-14	2.45
17.7	3 17 42	+ .53	+2.72	+0.04	2.68	-33	2.35
17.9	-5 17 54	+1.26	+3.25	-0.03	3.28	-79	00 + 2.49
17.44							2.443
17.1 + 2.6	+2.63	17.0 + 7.3	+7.29				+2.443
17.5 + 2.3	+2.59	17.5 + 2.50	+8.75	+4.05			
17.7 + 5.3	+2.68	17.7 + 3.12	+4.31				
17.4 + 3.4	+2.63	17.9 + 5.03	+5.00				
17.2 + 8.6	+3.11	0 = +6.99	+4.66	n = -.67			
17.2 + 7.5	+2.66	+2.16	+1.32	-6.6			
17.5 + 1.30	+3.20	+2.78	+1.68	-6.0			
17.9 + 1.26	+3.28	+3.99	+2.87	-5.9			
17.5 + 1.04	+3.11			-6.78			
n = 6.69				-6.30			
0 = +6.29	+4.16	n = -.66					
+1.46	+0.64	-5.84					
+2.08	+1.20	-5.8					
+3.29	+1.89	-5.7					
		-5.96					
		-6.12					

$\lambda =$	+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100
1875	July 12					1875	July 12		
Star	R.A. Linx corr	R _g -R _h P-P	R _g -R _h P-P	R _g -R _h P-P	R _g -R _h P-P	R _g -R _h P-P	R.A. Linx corr	R _g -R _h P-P	R _g -R _h P-P
	L m						L m		
	14 58	-16	-16	-16	-16	-16	15 21	-16	-16
	15 26 +02.100	10.0	10.0	10.0	10.0	10.0	15 49 -58.81	9.4	9.4
	15 29 +26.96	11.5	11.5	11.5	11.5	11.5	16 14 -56.82	10.5	10.5
	15 38 +58.81	12.7	12.7	12.7	12.7	12.7	16 28 -45.89	9.5	9.5
	15 40 +45.89	11.9	11.9	11.9	11.9	11.9	16 22 -33.94	9.5	9.5
	15 43 +71.70	10.9	10.9	10.9	10.9	10.9	4 42	9.5	9.5
	15 45 +62.78	11.9	11.9	11.9	11.9	11.9	16 59 -64.76	9.8	9.8
	15 55 -22.97	11.3	11.3	11.3	11.3	11.3			
	16 8 +72.69	12.4	12.4	12.4	12.4	12.4			
	16 12 +73.68	13.0	13.0	13.0	13.0	13.0			
	16 16 +39.92	10.8	10.8	10.8	10.8	10.8			
	16 20 +17.88	10.7	10.7	10.7	10.7	10.7			
	16 25 +61.76	11.5	11.5	11.5	11.5	11.5			
	16 37 +18.98	12.4	12.4	12.4	12.4	12.4			
	16 39 +05.100	11.6	11.6	11.6	11.6	11.6			
	16 46 +46.88	12.9	12.9	12.9	12.9	12.9			
	16 52 +54.84	12.5	12.5	12.5	12.5	12.5			
	16 55 +20.98	11.3	11.3	11.3	11.3	11.3			
	16 0 -28.96	10.3	10.3	10.3	10.3	10.3			
		10.81	10.81	10.81	10.81	10.81			
									10.64 10.78
	+71 -11.5 +58 -13.0 +26 -12.1 +02 -10.7	-22	-22	-22	-22	-22			
	+62 12.4 +45 11.5 +39 10.5 +18 12.5	-28	-28	-28	-28	-28			
18 1458	+72 12.2 +47 12.2 +20 11.1 +05 11.4	-33	-33	-33	-33	-33			
6 468	+73 13.1 +46 12.6								
1926	+64 12.1 +54 12.5								
	342 11.3 0 11.8 85 37 25 46	83	83	83	83	83			
	+68 12.3 +50 -12.4 +28 -11.2 +08 -11.5	-28	-28	-28	-28	-28			
-16 1080	+16 10.6 5 11.2 3 10.5 3 11.3	-7	-7	-7	-7	-7			
10.80	23 -2 +.44 -3 +.5	+0	+0	+0	+0	+0			
1875	July 31								
July 12									
17 4 +03.100	10.0	10.0	10.0	10.0	10.0	10.0	16 59 -61.76	9.8	9.8
17 9 +147.88	12.8	12.8	12.8	12.8	12.8	12.8	17 32 -43.90	10.3	10.3
17 11 +09.100	10.7	10.7	10.7	10.7	10.7	10.7	17 44 -50.86	9.9	9.9
17 28 -17.98	11.4	11.4	11.4	11.4	11.4	11.4			
17 29 +149.87	12.3	12.3	12.3	12.3	12.3	12.3			
17 42	-0.11								
17 54 -16.99	12.1	12.1	12.1	12.1	12.1	12.1			
	11.50	11.50	11.50	11.50	11.50	11.50			
									10.95 11.13
6 300	+47 -13.1	+03	+03	+03	+03	+03	-43 -9.8	-64	-64
3 39	+49 12.9	+09	+09	+09	+09	+09	-50 9.5		
339	16 60	12	12	12	12	12	93 13		
	+48 -13.0	+06	+06	+06	+06	+06	-46 -9.6		
	+12	+2	+2	+2	+2	+2	-11		
-16 1130	2 11.8	2	2	2	2	2	10.7		
11.38	+5	-3	-3	-3	-3	-3	-16		

$M_3 =$	$+60+80$	$+40+60$	$+20+40$	$+0+20$	$+0-20$	$-20+40$	$-40-60$	$-60-80$	$-80-100$
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1875

Aug. 9
N. A. R.

Dear

KA	zinLoSL
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16	20	+47.88
16	25	+64.76
16	30	+051.00
16	43	-25.97
16	46	+16.88
18	3	+23.97
18	15	+71.70
18	18	+35.93

Reg-Rel.

Reg-Rfl Rfl

4	426	-16	412	204
5	566	-16	550	180
6	632	-16	616	164
7	723	-16	707	147
8	837	-16	821	131
9	971	-16	955	115
10	1132	-16	1116	99
11	1321	-16	1305	83
12	1537	-16	1521	67
13	1780	-16	1764	51
14	2050	-16	2034	35
15	2346	-16	2330	19
16	2669	-16	2653	3
17	3019	-16	3003	-13
18	3406	-16	3390	-29
19	3830	-16	3814	-45
20	4291	-16	4275	-61
21	4789	-16	4773	-77
22	5324	-16	5308	-93
23	5896	-16	5880	-109
24	6505	-16	6489	-125
25	7151	-16	7135	-141
26	7834	-16	7818	-157
27	8554	-16	8538	-173
28	9311	-16	9295	-189
29	10105	-16	10089	-205
30	10936	-16	10920	-221
31	11804	-16	11788	-237
32	12709	-16	12693	-253
33	13651	-16	13635	-269
34	14630	-16	14614	-285
35	15646	-16	15630	-301
36	16700	-16	16684	-317
37	17791	-16	17775	-333
38	18919	-16	18903	-349
39	20084	-16	20068	-365
40	21286	-16	21270	-381
41	22525	-16	22509	-397
42	23801	-16	23785	-413
43	25114	-16	25098	-429
44	26464	-16	26448	-445
45	27851	-16	27835	-461
46	29275	-16	29259	-477
47	30736	-16	30720	-493
48	32234	-16	32218	-509
49	33769	-16	33753	-525
50	35341	-16	35325	-541
51	36950	-16	36934	-557
52	38597	-16	38581	-573
53	40282	-16	40266	-589
54	42005	-16	41989	-605
55	43766	-16	43750	-621
56	45565	-16	45549	-637
57	47403	-16	47387	-653
58	49279	-16	49263	-669
59	51194	-16	51178	-685
60	53147	-16	53131	-701
61	55139	-16	55123	-717
62	57169	-16	57153	-733
63	59238	-16	59222	-749
64	61346	-16	61330	-765
65	63493	-16	63477	-781
66	65679	-16	65663	-797
67	67904	-16	67888	-813
68	70168	-16	70152	-829
69	72471	-16	72455	-845
70	74813	-16	74797	-861
71	77194	-16	77178	-877
72	79615	-16	79599	-893
73	82076	-16	82060	-909
74	84577	-16	84561	-925
75	87118	-16	87102	-941
76	89700	-16	89684	-957
77	92322	-16	92306	-973
78	94985	-16	94969	-989
79	97688	-16	97672	-1005
80	100431	-16	100415	-1021
81				

1875

Aug. 9
Wak

RA 1000000

16	28	-45.89
16	36	-58.81
18	12	-70.71
16	22	-33.94
16	59	-64.76

Re - Re

$$R_{\text{eff}} = R_{\text{eff}} + (P - P)$$

Reg.

-16	¹⁴ 11.58	+0.6	¹¹ 10.9	-12	12.1
	11.4	+0.3	11.1	-16	12.4
	10.9	+0.8	10.1	-19	12.5
	10.8	-2.4	11.2	-99	12.1
	11.8	+0.5	11.9	17	136

$$\begin{array}{ccccccc} +.64 & -13.8 & +.46 & -14.0 & +.23 & -13.5 & +.05 & -12.1 \\ +.71 & 14.5 & & & +.35 & 13.2 & & \\ 13.5 & 3 & & & 58 & & & \end{array}$$

-1.25	-13.2	-1.5	-10.9	-1.0	-10.1
-33	11.2	58	11.1	64	-
58	11.2	83	2.0	134	-

	+6.7	-14.1	+4.6	-14.0	+2.9	-13.3	+0.5	-12.1
		+1.6		+1.1		+0.8		+0.1
-16	12.2	1.25		12.9		1.26		12.0
	2	+1.2		+1.1		+1.1		-1.5
	12.4							

-29	-12.2	.51	-11.0	⁷⁰ 67	-10.1
	-0.7		-1.3		1.6
2	12.9	2	12.3	2.1	11.7
	+ .4		- .2		- .8

1875

Aug. 10

16	16	+39.92
16	20	+47.88
16	25	+64.76
16	30	+85.100
16	43	+25.97
16	46	+46.88
16	52	+54.81
16	55	+20.98
17	20	+49.87
46	15	+71.70
18	33	+06.00

-16

3.7	+ 0.	3-13.4	+1.1
3.7	+ 0.	3-13.4	+1.1
13.3	+ 0.6	13.9	+1.7
13.3	+ 0.6	13.9	+1.7
-	+ 0.5	-	-
-	+ 0.5	-	-
3.6	+ 0.	0 13.6	+1.5
3.6	+ 0.	0 13.6	+1.5
12.5	+ 0.	2 12.3	+0.6
12.5	+ 0.	2 12.3	+0.6
13.1	+ 0.	6 13.7	+1.4
13.1	+ 0.	6 13.7	+1.4
13.6	+ 0.	0 13.6	+2.0
13.6	+ 0.	0 13.6	+2.0
13.0	+ 0.	1 12.9	+0.2
13.0	+ 0.	1 12.9	+0.2

16	14	-56.82
16	36	-58.81
18	12	-70.71
16	22	-33.94
16	59	-64.76

13	-16	13.2	+0.6	-12.6	-15	-13.1
		11.9	+0.3	11.6	-16	13.2
		10.5	+0.8	9.7	19	12.1
		11.4	-0.4	11.8	-10	12.8
		11.9	+0.5	12.0	17	13.7

8	168	+64	-139	+54	-136	+39	-134	+06	-129
5	490	+41	136	+49	137	+20	123		
	658	135	15	3	13	59	57		
		+68	-137	+51	-136	+29	-128	+06	-129
	45		+16		+11		+7		+2
-16	123	2	121	2	12.5	2	12.1	1	12.7
	131	11	-8		+1		-3		+3

-33	-11.8	-56	-12.6	-70	-9.7
		-58	11.6	-64	-
		14	42	134	-
				70	-
-33	-11.8	-57	-12.1	-67	-9.7
		-8	-1.4		16
1	12.6	2	13.5	1	11.3
	+2		+1.1		-1.1

[illegible]

[illegible]

1875pha

1875 1875pha	Aug. 28 1875 h = +034 +053	1875 1875pha	Aug. 28 1875 h = +056 1875	Aug. 28 1875 h = +056 1875	Aug. 28 1875 h = +056 1875	
Star	Pa	S	Tang.	TARA P/P	TARA P/P	
17.7 +12 17 42 246	+0.53	0 = +16.32	+0.04 +16.48	-39	+07 +16.9 16.26	
18.15 18.6 +3 18 33 260	+0.80	+16.62	+0.03 +16.60	-40	+02 16.16 18.15	
19.2 -3 19 12 495	+0.20	+16.38	+0.04 +16.34	-12	-02 23 21	
19.3 -4 19 19 274	+0.05	+16.28	+0.03 +16.25	-03	-02 22 20	
19.4 -5 19 26 275	+0.53	+16.57	+0.01 +16.50	-31	-03 21 18	
19.28 19.2 -3 19 14 272	+1.33	+17.14	+0.12 +17.02	-78	-02 +18.29 27	
18.90						
17.7 +53 +16.48	+17.50	17.5 +2.50 +17.40	+0.04 +17.44	+0.04 +17.44	16.175 16.26	
19.2 +20 +16.34	17.6 +2.58 +17.68	+0.04 +17.72	+0.04 +17.72	+0.04 +17.72	17 32 48.2	
19.3 +05 +16.25	17.7 +3.12 +17.92	+0.03 +17.95	+0.03 +17.95	+0.03 +17.95	17 38 48.3	
18.7 +26 +16.86	18.6 +4.19 +18.35	+0.01 +18.36	+0.01 +18.36	+0.01 +18.36	17 44 48.4	
	19.2 +2.40 +17.82	-0.02 +17.80	-0.01 +17.81	-0.01 +17.81	18 36 49.0	
18.5 +80 +16.60					18 41 49.1	
19.2 +1.33 +17.02	0 = +2.24 +1.08	+0.04 +17.04	+0.04 +17.04	+0.04 +17.04	19 13 27.1	
18.8 +10.6 +16.81	+2.32 +1.36	-0.59 +1.52	+0.91 -0.60	-0.60	19 18 27.3	
	+2.86 +1.59	-0.56 +2.06	+1.11 -0.55	-0.55		
	+4.23 +1.99	-0.47 +3.43	+1.55 -0.45	-0.45		
	+2.14 +1.44	-0.67 +1.34	+1.00 -0.75	-0.75		
1875 Aug. 29	h = +087	h = +087	h = +087	h = +087	h = +087	
17.5 +10 17 28 240	+1.80	0 = +17.96	+0.08 +17.90	-74	+02 +17.16 17.18	
17.5 +10 17 29 241	+0.23	+17.28	+0.03 +17.25	-13	+02 17.12 17.14	
17.57 17.7 +8 17 42 246	+0.53	+17.57	+0.04 +17.53	-30	+02 03 05	
18.6 -7 18 33 260	+0.80	+17.49	+0.02 +17.47	-46	-00 01 01	
19.2 -3 19 12 495	+0.20	+17.34	+0.04 +17.30	-11	-02 19 17	
19.3 -8 19 19 274	+0.05	+17.25	+0.03 +17.22	-03	-02 19 17	
19.4 -9 19 26 275	+0.53	+17.03	+0.01 +17.00	-30	-02 12 10	
19.14 19.2 -7 19 14 272	+1.33	+18.06	+0.12 +17.94	-76	-02 +17.18 16	
18.58						
17.5 +23 +17.25	+17.5 +2.50 +17.54	+0.03 +18.54	+0.03 +18.54	+0.03 +18.54	17.103 17.18	
17.7 +53 +17.33	17.6 +2.58 +18.56	+0.03 +18.59	+0.03 +18.59	+0.03 +18.59	17 32 48.2	
19.2 +20 +17.30	18.6 +4.19 +19.59	-0.01 +19.58	-0.01 +19.58	-0.01 +19.58	17 38 48.3	
19.3 +05 +17.22	19.2 +2.40 +18.49	-0.03 +18.46	-0.03 +18.46	-0.03 +18.46	18 36 49.0	
18.4 +25 +17.28	19.3 +3.29 +18.92	-0.03 +18.89	-0.03 +18.89	-0.03 +18.89	19 13 27.1	
					19 18 27.3	
17.5 +130 +17.90					18 41 49.1	
18.5 +80 +17.47	0 = +2.25 +1.26	+0.04 +17.40	+0.04 +17.40	+0.04 +17.40	19 13 27.1	
19.2 +1.33 +17.84	+2.33 +1.31	-0.56 +1.44	+0.82 -0.57	-0.57	19 18 27.3	
18.4 +114 +17.77	+4.24 +2.30	-0.54 +3.35	+1.81 -0.54	-0.54		
	+2.15 +1.18	-0.55 +1.26	+0.69 -0.55	-0.55		
	+3.04 +1.61	-0.53 +2.15	+1.12 -0.52	-0.52		
1875 Aug. 30	h = +036	h = +036	h = +036	h = +036	h = +036	
17.7 +11 17 42 246	+0.53	0 = +18.27	+0.04 +18.23	-36	+08 +17.895 17.97	
18.6 -7 18 33 260	+0.80	+18.48	+0.02 +18.46	-57	+10 +17.87 17.94	
19.2 -4 19 12 495	+0.20	+18.26	+0.04 +18.22	-17	+02 17.92 17.94	
19.3 -5 19 19 274	+0.05	+18.06	+0.03 +18.03	-03	-04 18.08 18.04	
19.4 -6 19 26 275	+0.53	+18.32	+0.01 +18.31	-36	-05 18.00 17.96	
19.14 19.2 -7 19 14 272	+1.33	+18.76	+0.03 +18.79	-86	-04 +18.12 18.08	
18.58						
17.6 +53 +18.23	18.5 +80 +18.46					
19.2 +20 +18.22	17.9 +1.26 +18.79					
19.3 +05 +18.03	19.2 +1.33 +19.02					
18.7 +26 +18.76	18.5 +1.62 +18.62					
18.7	18 45 264	+0.65	+28.36	+0.08 +29.28	-35	+28.95
18.9	18 52 492	+0.96	+29.43	+0.03 +29.40	-48	+28.92
18.10						
18.7 +65 +29.28						28.935
18.9 +96 +29.40						6.7 -20.69 +18.42
18.8 +80 +29.34						0 = -21.49 -9.71

[illegible]

[illegible]

1875phae.pr.j.16

$z =$	+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100										
1875	Aug. 31						1875	Aug. 31											
Line	RA in Zen			Reg. R. H. P. P. (P. P.)		Reg. R. H. P. P. (P. P.)	Line	RA in Zen			Reg. R. H. P. P. (P. P.)		Reg. R. H. P. P. (P. P.)						
	17 42 +25.97			-16 13.7. -0.1 -14.1 +0.8		-13.3		17 44 -50.86			-16 11.80. +0.1 -10.6 -13		-11.9						
	18 3 +23.97			13.0. +0.2 12.8 +0.7		12.1		18 36 -57.82			11.82. -0.2 11.4 -16		13.0						
	18 33 +06.100			13.1. +0.1 13.0 +0.2		12.8		19 13 -42.90			12.6. +0.9 11.7 -11		12.8						
	19 12 +57.86			14.7. +0.3 14.4 +0.9		13.0		19 18 -57			10.5. +0.2 10.3 -14		11.7						
	19 14 -19.98			13.3. +0.8 12.5 -0.5		13.0		6 5			+0.3								
	19 19 +64.76			15.3. -0.5 15.8 +1.7		14.1													
	19 26 +25.97			13.3. -0.5 13.8 +0.8		13.0													
	19 40 +53.84			15.1. +0.1 15.0 +1.5		13.5													
	17 54 -17.98			14.6. +0.5 14.1 -0.5		11.6													
						12.93		12.93										12.57	12.35
	+64 -5.8 +51 -14.4 +25 -14.1 +0.6 -13.0 -19 -12.5							-50 -10.6											
	+16 +53 15.0 +23 12.8							-57 11.4											
9	83.7			+25 13.8				-42 11.7											
4	14.0		4 94 13 80.7			16 36		149 7											
	977																		
	12.83		+64 -15.8 +52 -14.7 +24 -16.9 +0.6 -13.0 -0.8 -11.8					-50 -11.2											
			16 +1.3		+1.6		+2		-1.2										
-16	13.4	1 14.2 2 13.4 3 13.0 1 12.8 2 12.0				3 12.4													
	12.75	12 +1.4 +.6 +.2 +.0 -.8				-.4													
1875	Sept. 1																		
	17 42 -17.98			14.8. +0.5 -11.3 -0.5 -1.8		-1.8													
	18 3 +23.97			-16 12.5. +0.2 12.3 +0.7		11.6		17 44 -50.87			-16 11.4. +0.2 -11.2 -13 -12.8								
	18 15 +71.70			15.2. +0.0 15.2 +0.9		13.3		17 53 -57.82			11.8. +0.2 11.7 -16 13.3								
	18 33 +06.100			13.6. +0.1 13.5 +0.9		13.3		18 36 -57.82			12.1. -0.2 12.3 -16 13.8								
	19 12 +57.86			16.2. -0.5 16.7 +1.7		15.0		18 12 -70.71			10.4. +0.3 9.6 +0.1 -19 12.0								
	19 14 -19.98			14.4. -0.5 15.0 +0.8		14.2		6 41 -77.63			9.3. +1.2 8.1 +0.1 -21 11.6								
	19 19 +64.76			16.4. +0.1 16.8 +1.5		15.1					+0.3 7.5								
	19 26 +25.97			16.3. -0.0 16.3 +1.5		14.8													
	19 40 +53.84			13.4. -0.5 13.9 +1.2		12.7													
	19 45 +56.82					13.53		13.53										12.62	12.54
	19 42 +41.91																		
9	13.77																		
5	31.0																		
	28.7																		
			+71 -15.2 +53 -14.6 +23 -12.3 +0.6 -13.5 -17 -11.3					-50 -11.4 -70 -9.6											
			+64 16.7 +56 16.3 +25 15.0					-57 11.7 -77 -8.1											
			+141 13.9					-57 12.3											
			135 119 0 16.8 8 73					14 5.2 7 177											
			+67 -15.9 +50 -15.6 +24 -13.6 +0.6 -13.5 -17 -11.3					-5.5 -11.6 -73 -8.8											
			+17 +1.2		+1.6		+1.2	-1.4											
-16	13.69	2 14.2 3 14.4 2 13.0 1 13.3 1 11.7				3 13.1 2 10.7													
	13.20	14 +1.1 +1.3 -.1 +.2 -1.4				+.0 -2.4													
1875	Sept. 4																		
	17 42 -17.98			16.0. +0.5 -15.5 -0.5 -1.6		-1.6													
	18 3 +23.97			-16 14.8. +0.2 14.6 +0.7		13.9		17 53 -57.82			-16 14.5. +0.2 -14.3 -16 15.9								
	18 15 +71.70			15.5. +0.1 15.4 +0.2		15.2		18 12 -70.71			13.0. +0.3 12.8 -19 14.6								
	18 33 +06.100			15.3. -0.5 15.8 +1.7		14.1		6 41 -77.63			12.3. +1.2 11.4 +0.1 2.1 14.7								
	19 12 +57.86			15.3. +0.1 15.2 +1.5		13.7		19 49 -56.88			13.2. -0.5 13.7 12.6 12 13.8								
	19 14 -19.98			16.0. -0.0 16.0 +1.5		14.5		19 49 -72.69			14.4. +0.5 13.6 -19 15.5								
	19 19 +64.76			14.5. +0.9 13.6 +1.8		11.8					+0.3								
	19 26 +25.97			12.6. +0.5 13.1 +1.2		11.9													
	19 40 +53.84																		
	19 45 +56.82																		
	19 42 +41.91																		
8	71.2					13.89 13.89												14.80	14.88
5	94.0																		
	35.2																		
			+64 -15.8 +53 -15.2 +23 -14.6 +0.6 -15.4 -17 -15.5					-57 -14.3 -70 -12.2											
			+66 13.6 +56 16.0					-46 13.7 -77 11.1											
			+141 -13.1					-72 13.6											
			10 94 0 14.3					3 80 9 69											
			+65 -14.7 +50 -14.8 +23 -14.6 +0.6 -15.4 -17 -15.5					-51 -14.0 -73 -12.3											
			+16 +1.2		+1.6		+1.2	-1.4											
-16	13.1	2 13.1 3 13.6 1 14.0 1 15.2 1 15.9				2 15.3 3 14.2													
	14.27	13 -1.1 -.6 -.2 +1.0 +1.7				+1.1		+1.0											

1875	Left 5 wave	$h = +0.02$	$n = -60$	$e = .00$	$h = -0.01$	1875	Left 5 wave	$h = +0.02$	$n = -60$	$e = .00$	$h = -0.01$		
Star	RA	PA	T-RA	P-PA	T-RA	Star	RA	PA	T-RA	P-PA	T-RA		
17.9	+1.1	17.9	24.52	+1.26	+24.00	17.9	+1.1	17.9	24.52	+1.26	+24.00		
18.0	+1.0	18.0	25.5	+0.55	0 = +23.69	18.0	+1.0	18.0	25.5	+0.55	0 = +23.69		
18.2	+8	18.2	15.257	-.05	+23.33	18.2	+8	18.2	15.257	-.05	+23.33		
18.6	+4	18.6	33.260	+80	+23.76	18.6	+4	18.6	33.260	+80	+23.76		
19.0	+0	19.0	0.270	+24	+23.45	19.0	+0	19.0	0.270	+24	+23.45		
19.7	-7	19.7	40.277	+18	+23.43	19.7	-7	19.7	40.277	+18	+23.43		
19.7	-7	19.7	45.280	+15	+23.39	19.7	-7	19.7	45.280	+15	+23.39		
19.8	-8	19.8	46.281	+01	+23.31	19.8	-8	19.8	46.281	+01	+23.31		
19.8	-8	19.8	49.283	+11	+23.15	19.8	-8	19.8	49.283	+11	+23.15		
19.7	+3	19.7	40.263	+34	+23.38	19.7	+3	19.7	40.263	+34	+23.38		
19.49	19.7	-7	42.279	+33	+23.60	19.49	19.7	-7	42.279	+33	+23.60		
19.01						19.01							
18.3+55	+23.65	17.9+126	+24.03			17.9+4.33	+26.09	+04	+26.13				
18.2-.05	+23.29	18.5+80	+23.74			18.2+16.88	+23.67	+03	+33.70				
19.0+24	+23.38	18.2+103	+23.88			19.8+2.74	+24.93	-02	+24.91				
19.7+18	+23.43					19.8+53.75	+51.81	-02	+51.79				
19.8+15	+23.39												
19.8+01	+23.31												
19.8+11	+23.44												
18.7+34	+23.44												
19.7+33	+23.49												
19.2+21	+23.42												
$n = -56$	-04												
1875	Left 5 wave	$h = +0.02$	$n = -58$	$e = .00$	$h = +0.12$	25.085							
17.9	+1.1	17.9	25.2	+1.26	+25.83	17.9	+1.1	17.9	25.2	+1.26	+25.83		
18.0	+1.0	18.0	25.5	+0.55	0 = +25.34	18.0	+1.0	18.0	25.5	+0.55	0 = +25.34		
18.2	+8	18.2	15.257	-.05	+25.13	18.2	+8	18.2	15.257	-.05	+25.13		
18.6	+4	18.6	33.260	+80	+25.27	18.6	+4	18.6	33.260	+80	+25.27		
19.0	+0	19.0	0.270	+24	+25.18	19.0	+0	19.0	0.270	+24	+25.18		
19.7	-7	19.7	40.277	+18	+25.15	19.7	-7	19.7	40.277	+18	+25.15		
19.7	-7	19.7	45.280	+15	+25.14	19.7	-7	19.7	45.280	+15	+25.14		
19.8	-8	19.8	46.281	+01	+25.14	19.8	-8	19.8	46.281	+01	+25.14		
19.8	-8	19.8	49.283	+11	+25.19	19.8	-8	19.8	49.283	+11	+25.19		
20.1	-0	20.1	5.287	-.02	+25.12	20.1	-0	20.1	5.287	-.02	+25.12		
19.8	+3	19.8	40.263	+86	+25.24	19.8	+3	19.8	40.263	+86	+25.24		
19.82	19.7	-7	42.279	+33	+25.22	19.82	19.7	-7	42.279	+33	+25.22		
19.15						19.15							
18.2-.05	+25.09	17.9+126	+25.86			18.2+16.88	+25.88	+04	+35.10				
19.0+24	+25.20					19.8+2.74	+26.68	-01	+26.67				
19.7+18	+25.18					19.8+53.75	+53.91	-01	+53.90				
19.8+15	+25.15												
19.8+01	+25.14												
19.8+11	+25.11												
20.5-.02	+25.11												
18.7+36	+25.30												
19.7+33	+25.31												
19.5+15	+25.18												
1875	Left 5 wave	$h = +0.02$	$n = -56$	$e = .00$	$h = +0.03$	25.705							
18.2	+1.1	18.2	15.257	-.05	0 = +25.76	18.2	+1.1	18.2	15.257	-.05	0 = +25.76		
18.3	+1.0	18.3	18.258	+40	+25.90	18.3	+1.0	18.3	18.258	+40	+25.90		
18.9	+4	18.9	54.492	+96	+26.30	18.9	+4	18.9	54.492	+96	+26.30		
18.58	18.9	+4	18.54	267	+1.27	+25.88	18.58	18.9	+4	18.54	267	+1.27	+25.88
19.7	-4	19.7	40.277	+18	+25.84	19.7	-4	19.7	40.277	+18	+25.84		
19.7	-4	19.7	45.280	+15	+25.82	19.7	-4	19.7	45.280	+15	+25.82		
19.8	-5	19.8	46.281	+01	+25.73	19.8	-5	19.8	46.281	+01	+25.73		
19.8	-5	19.8	49.283	+11	+25.82	19.8	-5	19.8	49.283	+11	+25.82		
20.1	-8	20.1	5.287	-.02	+25.77	20.1	-8	20.1	5.287	-.02	+25.77		
19.80	19.7	-4	42.279	+33	+25.84	19.80	19.7	-4	42.279	+33	+25.84		
19.31						19.31							
18.2-.05	+25.72	18.9+96	+26.27			18.2+16.88	+35.68	+03	+35.71				
18.3+40	+25.86					18.4+2.98	+27.21	+02	+27.23				
18.9+24	+25.85					18.4+3.21	+27.53	+02	+27.55				
19.7+18	+25.84					19.8+2.74	+27.30	-01	+27.29				
19.8+15	+25.82					19.8+53.75	+53.99	-01	+53.99				
19.8+01	+25.73												
19.8+11	+25.81												
20.1-.02	+25.76												
19.3+13	+25.80												

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[illegible]

1875	Oct 5	h = +02	+031	n = -32	e = -30
Star	Ra	S	Long. Dec.	T.R.A	P.P.
	h_m				
20.1	+1	20 5	287	-	.024.00
20.3	-1	20 18	289	+	.54.130
20.20					
20.1	-02	+44.39			
20.2	+4.45	+46.91			
20.3	+64	+44.74			
n = 32					

1875	Oct 5	h = +02	+031	n = -32	e = -30
Star	Ra	S	Long. Dec.	T.R.A	P.P.
	h_m				
20	13	502	+4.45	0 = +	47.05, +14, +46.91
20.1	-02	+44.39			
20.2	+4.45	+46.91			
20.3	+64	+44.74			
n = 32					

1875	Oct 13	h = +01	+000	n = -31	e = .00	h = +0.04
20.1	+1	20 5	287	-	.02.00	+148.13, +01, +48.12
20.3	-1	20 18	289	+	.54.130	+148.27, +06, +48.33
20.20						
20.1	-02	+44.39				
20.2	+4.45	+46.91				
20.3	+64	+44.74				
n = 32						

						-99	+62.21
19	49	284	+ 53.78	+	61.31	1.69	+63.00
20	53	509	+ 5.72	+	49.80	+ 1.15	1.973
21	8	510	+ 4.55	0 = +	49.52	1.15	49.69
21	27	308	+ 2.75	+	49.21	+ 0.08	49.15
21	16	306	+ 1.89	+	48.83	1.01	48.82

1875	Oct 14	h = +01	+000	n = -32	e = -12	h = +0.00
20.1	+1.5	20 5	287	-	.02.00	+148.31, +01, +48.30
20.3	-1.5	20 18	289	+	.54.130	+148.27, +06, +48.33
20.20						
20.1	-02	+44.39				
20.2	+4.45	+46.91				
20.3	+64	+44.74				
n = 32						

21	23	418	-2.50	0 = +	47.29, +01, +47.30
21	27	308	+2.75	+	49.30, +06, +49.21
21	16	306	+1.89	+	48.84, +01, +48.83

20.1	-02	+44.39				
20.2	+4.45	+46.91				
20.3	+64	+44.74				
n = 32						

21.4	-2.80	+47.30	+00	+47.30		
21.4	-2.80	+47.30	+00	+47.30		
21.4	-2.80	+47.30	+00	+47.30		

		y=		+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100													
		1875	Oct 5	MAR						1875	Oct 5	MAR													
		Star	RA	lim	cor	Reg	R _H	P _{IP}	Reg	R _H	P _{IP}	Star	RA	lim	cor	Reg	R _H	P _{IP}	Reg	R _H	P _{IP}	Star	RA	lim	cor
2	140		h										h												
1	130		20	5	+69.72	-16	14.4	-0.2	-14.6	+1.8	-12.8		20	13	-57.82	-16	10.4	+0.5	-9.9	-14	-11.3				
	240		20	18	+111.00		12.3	-0.2	12.5	+0.7	12.3														

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1875	Oct. 17	Wave	$h = +0.21 + 0.38$	$n = -.30$	$e = -.10$	$h = -.25$	1875	Oct. 17	Wave																		
Star	Ra	δ	tang. ϵ	TERR	P.P.	TERR	Star	Ra	δ	tang. ϵ	TERR	P.P.	TERR														
21.1	21.2	21	8 30.3	+	0.57	41.16	50.29	-.06	50.35	-	17	-	12.02	50.05	50.05												
21.15	21.2	21	10 30.5	+	.77	1.26	50.35	+.01	50.31	-	23	13+02	49.95	49.97	49.97												
21.4	21.4	21	25 30.7	-	.11	1.00	50.05	+.02	50.03	+	03	10+01	49.96	49.97	49.97												
21.6	21.6	21	38 36.9	+	.16	1.01	50.21	+.01	50.17	-	05	10	00	50.02	50.02												
21.7	21.7	21	42 57.7	+	1.14	1.52	50.53	+.04	50.49	-	34	15	00	50.00	50.00												
22.0	22.0	21	59 31.1	-	.02	1.00	50.15	+.02	50.13	+	01	10	02	50.04	50.02												
21.74	22.0	22	1 31.2	+	.46	1.10	50.30	+.06	50.24	-	14	-	11	07	49.99	49.97											
21.57	22.2	22	10	+	.40									50.002													
21.4	-11	22	03											50.003	50.004												
21.6	+16	22	17											21.4	-2.80	0=	+49.01	-.01	+49.05								
22.0	-02	22	13												21	27	30.8	+	2.75	+51.39	+.04	51.30					
22.0	+46	22	24												21	16	30.6	+	1.89	+50.77	+.01	50.76					
21.8	+12	22	14																								
21.2	+77	22	31																								
21.7	+14	22	49																								
21.4	+15	22	40																								
$n = -3.31 -0.1$										$0 = -2.92 -1.08$ $n = -3.7$																	
$0 = +1.80 +0.90$ $n = -5.07$ $+0.94 +0.36$ -38 440										$0 = -3.75 -1.35$ $n = -3.6$																	
$n = -3.31 -0.1$																											
1875	Oct. 18	Wave	$h = +0.21 + 0.34$	$n = -.35$	$e = -.08$	$h = +.043$	1875	Oct. 18	Wave																		
22.0	22.0	22	1 31.2	+	.46	1.02	50.86	+.06	50.79	-	16	-	09	04	50.51	50.55											
22.1	22.1	22	4 51.4	+	.10	1.00	50.69	+.02	50.67	-	04	.08	00	.53	.53	22	7	52.1	+	3.02	0=	+51.87	-.01	+51.88			
22.1	22.1	22	7 51.6	+	1.58	1.87	51.30	+.18	51.22	+	55	.15	.53	.53													
22.10	22.2	0	22	10 52.2	-	.15	1.01	50.62	+.02	50.60	+	05	.08	.57	.57												
22.2	22.2	0	22	15 51.7	-	.03	1.00	50.69	+.01	50.68	+	01	.08	.61	.61												
22.3	22.3	-1	22	19 52.4	+	1.26	1.61	51.15	+.04	51.11	-	45	.13	00	.53	.53											
22.40	22.7	-5	22	41 82.3	+	.42	1.09	50.86	+.05	50.81	-	15	.09	07	.57	.56											
22.1	22.23	22	44 32.4	+	.44	1.10	50.99	+.04	50.95	-	15	-	09	07	.62	.62											
$n = -3.32$										$0 = +2.86 +1.16$ $n = -4.11$ $0 = +1.60 +0.78$ $n = -4.4$ $.44$																	
22.0	+46	22	79																								
22.1	+10	22	67																								
22.2	-15	22	60																								
22.2	-03	22	68																								
22.7	+42	22	81																								
22.2	+16	22	71																								
22.1	+158	22	12	11																							
22.3	+126	22	11																								
22.2	+142	22	18																								
$n = -3.32$										$0 = +4.35 +2.04$ $n = -4.7$ $+3.51 +1.22$ -35 $+5.62 +2.22$ -34.10 $+2.92 +1.38$ -4.7 -4.22																	
1875	Oct. 19	Wave	$h = +0.21 + 0.64$	$n = -.38$	$e = -.07$	$h = +.144$	1875	Oct. 19	Wave																		
20.3	20.3	+10	20	18 28.9	+	.84	1.30	51.33	+.04	51.29	-	32	-	09	10	51.02	20	13	52.2	+	4.45	0=	+53.31	+.14	+53.17		
20.4	20.4	+9	20	27 25.0	+	.19	1.02	51.19	+.05	51.14	-	07	.07	13	51.00	1.13	20	33	50.4	+	3.61	+52.45	+.10	52.35			
20.5	20.5	+8	20	32 29.2	+	.25	1.03	51.05	+.06	50.99	-	06	.07	12	50.83	0.95	20	53	50.9	+	5.72	+53.13	+.07	53.36			
20.6	20.6	+7	20	37 29.4	+	.99	1.40	51.39	+.05	51.31	-	38	.10	10	50.86	0.96	22	7	52.1	+	3.02	+52.57	+.01	52.55			
20.7	20.7	+6	20	41 29.8	+	.66	1.20	51.18	+.02	51.16	-	25	.08	09	50.83	0.92											
20.55	20.8	+5	20	49 50.7	+	.52	1.13	51.25	+.05	51.20	-	20	.08	07	50.92	0.99											
22.0	22.0	-7	22	1 31.2	+	.46	1.10	51.48	+.06	51.42	-	17	.08	10	51.17	1.07											
22.1	22.1	-8	22	4 51.4	+	.10	1.00	51.29	+.02	51.27	-	14	.07	12	51.16	1.04											
22.1	22.1	-8	22	7 51.6	+	1.58	1.87	51.98	+.17	51.84	+	60	.13	12	51.08	1.06											
22.14	22.2	-9	22	10 52.2	-	.15	1.01	50.62	+.02	50.60	+	05	.08	.57	.57												
22.3	22.3	-10	22	19 52.4	+	1.26	1.61	51.62	+.03	51.59	-	48	-	11	14	51.00	0.86										
21.27	22.2	22	10																								
20.4	+19	20	14																								
20.5	+25	20	29																								
22.1	+10	20	27																								
22.2	-15	20	18																								
21.3	+10	20	15																								
20.3	+84	20	29																								
20.6	+99	20	34																								
22.1	+158	20	12	11																							
22.3	+126	20	11																								
21.0	+14	20	15																								

15=	+60+80	+40+60	+20+40	+0+20	+0-20	+20-40	-40-60	-60-80	-80-100
1875	Ret 17 mare					1875	Ret 17 mare		
Sur	RA	Sur	Reg-Ref	Pip	Reg-Ref	Pip	Reg-Ref	Pip	Reg-Ref
	21 8 +22.97	-16 17.3 -0.7 18.0 +0.7	-17.3	21 23 -92.38	-16 11.0 +0.2 11.2 -2.4 -13.60				
	21 10 +081.00	16.4 +0.7 15.7 +0.3	15.4	21 27 -116.88	14.8 +1.2 13.6 -1.2 -14.8				
	21 25 +75.66	18.2 +0.2 18.2 +2.0	16.0	21 16 -34.94	15.2 +1.1 14.1 -0.9 15.0				
	21 38 +55.83	16.6 -0.4 17.0 +1.5	15.5						
	21 42 -11.99	15.7 +1.0 14.7 -0.3	15.0						
	21 50 +69.72	17.1 15.2 -0.1 17.2 +1.9	15.3						
	22 1 +30.95	15.2 17.1 -0.3 15.5 +0.9	14.6						
			15.59						1490 1490
6 780	+75 -18.2	+55 -17.0	+22 -18.0	+08 -15.7	-11 -14.7	-34 -14.1	-46 -13.6		
2 180	+69 -17.2		+30 -16.5						
760	4 154		52 135						
	+72 -17.2	+55 -17.0	+26 -16.7	+08 -15.7	-11 -14.7	-34 -14.1	-46 -13.6		
	+2.0	+1.5	+1.7	+1.3	-1.4	-1.9	-1.2		
-16 174	2 15.6	1 15.5	2 16.0	1 15.4	1 15.1	1 15.0	1 14.8		
15.20	9 +1.2	+1.1	+1.6	+1.0	-1.3	-1.4	-1.6		
44									
1875	Ret 18 mare								
	22 1 +30.95	-16 15.2 -0.3 15.5 +0.9	-14.6	22 7 -149.87	-16 13.9 +0.9 13.0 -1.3 -14.3				
	22 2 +60.80	17.8 +0.2 17.6 +1.6	16.0						
	22 7 -26.96	15.7 +0.5 15.2 -0.7	15.9						
	22 10 +77.63	15.9 +0.5 15.4 +2.1	13.3						
	22 15 +70.71	15.9 -0.4 16.3 +1.9	14.4						
	22 19 -16.99	15.0 +0.2 14.8 -0.4	15.2						
	22 41 +33.94	16.1 +0.1 16.1 +1.0	15.1						
	22 44 +32.94	15.2 +0.3 14.9 +1.0	13.9						
			14.80						14.30 14.30
8 640	+60 -17.6		+30 -15.5		-16 -14.8	-26 -15.2	-49 -13.0		
30	+77 -15.4		+33 -16.1						
670	+70 -16.3		+32 -14.9						
204 193			5 165						
	+69 -16.4		+32 -15.5		-16 -14.8	-26 -15.2	-49 -13.0		
	+1.9		+1.9		-5	-7	-1.3		
-16 1975	3 14.5	3 14.6	1 15.3	1 15.9	1 14.3				
14.74	7 -1.2	-1	+1.6	+1.2	-1.4				
1807									
1875	Ret 19 mare								
	20 7 +041.00	-16 15.3 -0.2 15.5 +0.1	-15.4	20 13 -57.82	-16 11.2 +0.5 9.2 -1.6 -13.8				
	20 27 +52.85	16.8 +0.3 16.5 +1.4	15.1	20 33 -53.84	11.2 +0.6 10.6 -1.4 12.0				
	20 32 +17.88	15.5 +0.1 15.4 +1.3	14.1	20 53 -61.79	13.3 +0.4 12.9 -1.4 14.6				
	20 37 -041.00	15.6 +0.0 15.6 +0.0	15.6	22 7 -19.87	13.4 +0.9 12.5 -1.3 13.8				
	20 41 +15.99	14.1 -0.3 14.1 +0.5	13.9						
	20 49 +25.97	13.5 +0.1 13.4 +0.8	12.6						
	22 1 +30.95	15.0 -0.3 15.3 +0.9	14.4						
	22 4 +60.80	15.5 +0.2 15.3 +1.6	16.7						
	22 7 -26.96	14.3 +0.5 13.8 -0.7	14.4						
	22 10 +77.63	14.5 +0.5 16.0 +2.1	13.9						
	22 19 -16.99	14.9 +0.2 14.7 -0.4	15.1						
			14.65						1347 13.55
11 3815									
11 220									
585									
	+60 -18.3	+52 -16.5	+25 -13.4	+04 -15.5	-04 -15.6	-26 -13.8	-53 -10.6 -61 -12.9		
	+77 -16.0	+47 -15.4	+30 -15.3	+15 -14.4	-16 -14.7		-49 -12.5		
	137 143	99 119	55 87	19 99	20 103		2 31		
	+68 -17.1	+49 -15.9	+27 -14.3	+09 -14.9	-10 -15.1	-26 -13.8	-51 -11.5 -61 -12.9		
	+1.8	+1.3	+1.8	+1.3	-1.3	-1.7	-1.4 1.7		
-16 1441	2 15.2	2 14.6	2 13.5	2 14.6	1 15.4	1 14.5	1 12.9 1 14.6		
14.34	4 +1.9	+1.2	-1.9	+1.2	+1.0	+1.1	-1.5 +1.2		
19									

1875 phase

1875	Oct 20	h = +023 +071	m = -38	e = 00	b = -1073	1875	Oct 20					
Star	RA	S	Long.	TRA	P.P.	Star	RA	S	Long.	TRA	P.P.	
	h m			s			h m			s		
203	+10 20	18	289	+ 0.84	0 = +51.92	+07 +51.56	57.63	20 13	502	+ 4.45	0 = +53.55	
204	+9 20	27	290	+ .19	+51.73	+05 51.68	-.07	20 33	504	+ 3.61	+53.02	
205	+8 20	32	292	+ .25	+51.80	+06 51.74	-.10	20 53	509	+ 5.72	+53.87	
206	+7 20	37	294	+ .99	+52.01	+05 51.96	-.38	22 7	521	+ 3.02	+52.81	
2052	20.8	+5 20	49	507	+ .52	+51.82	+05 51.77	-.20	20 43	299	+ 1.83	+52.30
220	-7 21	59	314	- .02	+51.75	+02 51.73	+01 -.05					
220	-7 22	1	312	+ .46	+51.89	+06 51.83	-.17					
221	-8 22	4	317	+ .10	+51.73	+02 51.71	-.04					
221	-8 22	7	316	+ 1.58	+52.38	+06 52.24	-.60					
2208	22.2	-9 22	10	522	- .15	+51.70	+02 51.68	+ .06				
21.30												

204 + 19 + 51.68	202 + 4.45 + 53.41	+ 0.3	+ 53.44	+ 0.2	+ 53.43
205 + 25 + 51.74	205 + 3.61 + 52.92	+ 0.2	+ 52.94	+ 0.1	+ 52.93
220 - 02 + 51.73	209 + 5.72 + 53.80	+ 0.1	+ 53.81	+ 0.0	+ 53.80
221 + 16 + 51.71	221 + 3.02 + 52.82	- 0.2	+ 52.80	- 0.3	+ 52.79
222 - 15 + 51.68	207 + 1.83 + 52.32	+ 0.2	+ 52.34	+ 0.1	+ 52.33
244 + 07 + 51.71					
0 = +4.38 + 1.73	n = -39	0 = +3.31 + 1.12	n = -42		
203 + 84 + 51.68	+ 3.54 + 1.23	- 35	+ 2.47 + 0.92	- 4	- 36
206 + 99 + 51.96	+ 5.65 + 1.10	- 37	+ 4.58 + 1.79	- 4	- 38
221 + 1.53 + 52.20	+ 2.95 + 1.09	- 37	+ 1.88 + 0.78	- 4	- 39
210 + 1.14 + 52.05	+ 1.76 + 0.63	- 36	+ 0.69 + 0.32	- 4	- 41
		- 36.8			- 39.2

1875	Oct 21	h = +022	m = -42	e = 00	b = 0	1875	Oct 21	h = +022	m = -42	e = 00	b = 0
203	+1	20	18	289	+ .84	0 = +52.50	20	13	502	+ 4.45	0 = +52.11
204	0	20	27	290	+ .19	+52.25					
205	-1	20	32	292	+ .25	+52.33					
20.10											
204 + 19 + 52.24	20.2 + 4.45 + 53.97	+ 0.0									
205 + 25 + 52.27											
204 + 22 + 52.25	0 = +4.23 + 1.72	n = -41									
203 + 84 + 52.46	0 = +3.61 + 1.51	n = -42									
0 = -3.34											

1875	Oct 25	h = +022 w = +043	m = -42 e = 00 h = +039		51.285	20 43 299	+ 1.83	+ 55.13, - .02	+ 55.13
20.4	11.5	20 27 290	+ .19	0 = + 51.10 + .05 + 51.35	- .08	+ 06 + 51.27	51.33	20 53 509	+ 5.72 0 = + 56.75 + .01 56.71
206	+1.3	20 37 294	+ .99	+ 51.75 + .05 51.70	- .43	+ .05 .27	.32	22 33 525	+ 3.27 + 55.87 + .16 55.71
207	+1.2	20 41 298	+ .66	+ 51.61 + .02 51.59	- .28	+ .05 .31	.36	22 45 825	+ 2.20 + 55.48 + .08 55.40
20.62	20.8	11.5 20 49 507	+ .52	+ 51.56 + .05 51.51	- .22	+ .04 .29	.23		
220	-7	22 59 311	- .02	+ 51.37 + .02 51.35	+ .01	- .00 .36	.36		
221	-2	22 4 314	+ .10	+ 51.10 + .02 51.38	- .04	- .01 .34	.23		
225	-6	22 29 320	- .01	+ 51.46 + .06 51.40	+ .02	- .02 .40	.28		
226	-7	22 35 321	+ .18	+ 51.51 + .07 51.44	- .08	- .02 .36	.24		
226	-7	22 37 322	+ .57	+ 51.54 + .01 51.53	- .25	- .02 .28	.26		
226	-7	22 39 528	+ .88	+ 51.77 + .02 51.75	- .38	- .02 .37	.35		
227	-8	22 41 323	+ .42	+ 51.58 + .05 51.53	- .18	- .03 .35	.32		
228	-9	22 46 326	- .15	+ 51.44 + .05 51.39	+ .06	- .04 .45	.41		
22.48	22.4	-5 22 263 19	+ 1.17	+ 51.96 + .15 51.81	- .50	- .02 + 51.31	.29		
21.91					51.36	51.358			

204 + 19 + 54.35	207 + 1.83 + 55.15	+ 0.2	+ 55.17	+ 0.2	+ 55.17
220 - 02 + 54.35	209 + 5.72 + 56.71	+ 0.2	+ 56.73	+ 0.2	+ 56.73
221 + 10 + 54.38	225 + 3.27 + 53.71	- 0.2	+ 56.69	- 0.2	+ 56.69
225 - 01 + 54.40	228 + 2.20 + 55.40	- 0.2	+ 55.38	- 0.3	+ 55.37
218 + 07 + 54.37					
0 = +1.76 + 0.80	n = -45	0 = +0.91 + 0.46	n = -51		
206 + 99 + 54.70	+ 5.65 + 2.36	- 42	+ 4.80 + 2.02	- 42	
207 + 66 + 54.59	+ 3.20 + 1.32	- 41	+ 2.35 + 0.98	- 42	
216 + 88 + 54.75	+ 2.13 + 1.01	- 47	+ 1.28 + 0.66	- 52	
224 + 1.17 + 54.81		- 43.8			
216 + 92 + 54.71					
n = -440					

$\zeta =$	+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100
1875	Oct 20					1875	Oct 20		
Star	RA Distanz		Ry-Rx Rf	Ry-Rx Rf	Ry-Rx Rf	Star	RA Distanz		Ry-Rx Rf
	20 18 +0.41.00		-16 15.6 . -0.2 -15.8 +0.1		-15.7		20 13 -57.82		-16 14.8 . +0.5 -14.3 -1.6 -15.9
	20 27 +52.85		16.3 . +0.3 16.0 +1.4		14.6		20 33 -53.84		14.1 . +0.6 13.5 -1.4 14.9
	20 32 +147.88		16.2 . +0.1 16.1 +1.3		14.8		20 53 -61.79		14.7 . +0.4 14.3 -1.7 16.0
	20 37 -0.1.00		15.4 . +0.0 15.4 +0.0		15.4		22 7 -149.87		14.7 . +0.5 13.8 -1.3 15.1
	20 49 +25.97		16.5 . +0.1 16.4 +0.8		15.6		20 43 -32.94		14.5 . +0.2 14.3 -0.9 15.2
	21 59 +69.72		16.1 . -0.1 16.2 +1.9		14.3				
	22 1 +30.95		14.7 . -0.3 15.0 +0.9		14.1				
	22 4 +60.80		17.1 . +0.2 16.9 +1.6		15.3				
	22 7 -24.96		15.9 . +0.5 15.4 -0.7		16.1				
	22 10 +77.63		16.1 . +0.5 15.6 +2.1		13.5				
					14.94	14.94			15.42 15.42
	+69 -16.2 +52 -16.0 +25 -16.4 +0.4 -15.8 -0.4 -15.4 -26 -15.4 -57 -14.3 -61 -14.3								
	+60 -16.9 +47 -16.1 +30 -15.0								
10 940	+77 -15.6								
5 710	206 7 99 1 55 114				58 97 9 116				
150									
	+69 -16.2 +49 -16.0 +27 -15.7 +0.4 -15.8 -0.4 -15.4 -29 -14.8 -53 -13.9 -61 -14.3								
	+1.8 +1.3 +.8 +.1 -1.4								
-16 15.1	3 14.4 2 14.7 14.9 15.7 15.5 15.6 15.3 1 16.1								
15.10	-1.7 -1.4 -1.2 +.6 +.4 +.5 +.2 +1.0								
1875	Oct 21								
	20 18 +0.41.00		-16 14.2 . -0.2 -14.4 -0.7 -14.2				20 13 -57.82		-16 13.8 . +0.5 -13.3 -1.6 -14.9
	20 27 +52.85		16.1 . +0.3 15.8 +1.4		14.4				
	20 32 +0.7.88		14.9 . +0.1 14.8 +1.1		13.4				
3 00					14.00				14.90 14.90
1 90									
90									
	+52 -15.8		+0.4 -14.4						
	+47 -14.8								
	99 106								
	+49 -15.3		+0.4 -14.4						
	+1.3 +.1								
-16 14.10	2 14.0		1 14.3						
14.22	-1		+ .2						
1875	Oct 25								
	20 27 +52.85		-16 16.5 . +0.3 -16.2 +1.4 -14.8				20 43 -32.94		13.7 . +0.2 -13.5 -0.9 -14.4
	20 37 -0.1.00		14.6 . +0.0 14.6 -0.1		14.7		20 53 -61.79		-16 14.7 . +0.4 14.3 -1.7 16.0
	20 41 +15.99		14.5 . -0.3 14.8 +0.5		14.3		22 33 -51.86		14.3 . +0.5 13.4 -1.3 14.7
	20 49 +25.97		15.0 . +0.1 14.9 +0.8		14.1		22 45 -39.92		14.2 . +1.0 13.2 -1.1 14.3
	21 59 +69.72		15.6 . -0.1 15.7 +1.9		13.8				
	22 1 +30.95		17.4 . +0.2 17.4 +1.6		15.6				
	22 4 +60.80		15.7 . -0.1 15.8 +1.8		14.0				
	22 29 +68.73		16.2 . -0.6 16.8 +1.5		15.3				
	22 35 +53.84		13.8 . -0.3 14.1 +0.7		13.4				
	22 37 +22.97		13.3 . -0.5 14.1 +0.1		14.0				
	22 39 +0.2.100		14.6 . +0.0 14.6 +1.0		13.6				
	22 41 +33.94		15.9 . -0.3 16.2 +2.1		14.1				
	22 46 +77.63		14.9 . +0.7 14.2 -0.4		14.6				
	22 26 -13.99				14.33	14.33			14.85 14.85
	+69 -15.7 +52 -16.2 +25 -14.9 +15 -14.8 -0.4 -14.6 -32 -13.5 -51 -13.4 -61 -14.3								
	+60 -15.2 +53 -16.8 +22 -14.1 +0.2 -14.1 -1.3 -14.2 -39 -13.2								
	+68 -15.8 +33 -14.6								
13 429	+77 -16.2								
4 340	274 25 5 10 80 16 +17 9 17 8 11 7								
769									
	+68 -16.5 +52 -16.5 +27 -14.5 +0.8 -14.4 -0.8 -14.4 -35 -13.3 -51 -13.4 -61 -14.3								
	+1.8 +1.4 +.8 +.3 -1.0 -1.4 1.8								
-16 14.7	9 14.5 2 15.1 13.7 14.1 14.7 14.3 14.8 1 16.1								
14.45	-1 -1.1 +.6 -1.8 -1.4 +.2 -1.2 +.3 +1.6								

Star	RA	S	Tang. μ	T.Ra	P.P.	P.P.	Star	RA	S	Tang. μ	T.Ra	P.P.	P.P.
1875	Oct. 27	h = +0.25					1875	Oct. 27					
206	+8 20 37	294	+0.99	0 = +55.45	+0.55	55.72	206	26 45 299	+1.83	+56.14	-0.22	56.36	
207	+7 20 41	298	+1.66	+63.59	+0.22	55.57	207	20 53 509	+5.72	0 = +57.37	+0.07	57.30	
208	+6 20 49	507	+1.52	+58.59	+0.05	55.54	208	21 50 510	+4.55	+56.49	+0.56	56.86	
210	+4 21 1	302	+1.78	+55.77	+0.01	55.73	210	8 59 415	-2.43	+54.73	+0.27	54.46	
2086	21.2 + 2 21 10	305	+1.77	+55.70	+0.04	55.66							
222	-8 22 15	317	-1.03	+55.45	+0.01	55.44							
223	-9 22 19	524	+1.26	+55.87	+0.04	55.83							
225	22 29	320	-1.01	+55.09	+0.06	55.63							
2230	22.4 - 10 22 26	319	+1.17	+65.75	+0.15	55.80							
21.40													
208 + 52 + 55.54							208 + 52 + 55.54						
222 - 03 + 55.44							222 - 03 + 55.44						
225 - 01 + 55.63							225 - 01 + 55.63						
21.5 + 25 + 55.44							21.5 + 25 + 55.44						
208 + 99 + 55.72							208 + 99 + 55.72						
207 + 66 + 55.57							207 + 66 + 55.57						
210 + 78 + 55.73							210 + 78 + 55.73						
212 + 77 + 55.66							212 + 77 + 55.66						
213 + 1.26 + 55.83							213 + 1.26 + 55.83						
224 + 1.17 + 55.80							224 + 1.17 + 55.80						
212 + 94 + 55.72							212 + 94 + 55.72						
1875	Oct. 28	h = +0.25					1875	Oct. 28					
216	21 38 309	+0.16	0 = +56.25	+0.01	+56.21	+0.1	216	21 38 309	+0.16	0 = +56.25	+0.01	+56.21	+0.1
21.6 + 16 + 56.21							21.6 + 16 + 56.21						
1875	Nov. 2	h = +0.23 + 0.41					1875	Nov. 2					
22.2	+5 22 15	317	-0.03	1.00	+59.10	+0.01	22.2	+5 22 15	317	-0.03	1.00	+59.10	+0.01
22.5	+2 22 29	320	-0.01	1.00	+59.16	+0.01	22.5	+2 22 29	320	-0.01	1.00	+59.16	+0.01
22.6	+1 22 35	321	+1.18	1.02	+59.45	+0.07	22.6	+1 22 35	321	+1.18	1.02	+59.45	+0.07
22.7	0 22 37	322	+1.57	1.16	+59.46	+0.01	22.7	0 22 37	322	+1.57	1.16	+59.46	+0.01
22.8	-1 22 39	328	+1.85	1.33	+59.53	+0.02	22.8	-1 22 39	328	+1.85	1.33	+59.53	+0.02
22.9	-2 22 41	323	+1.42	1.09	+59.52	+0.05	22.9	-2 22 41	323	+1.42	1.09	+59.52	+0.05
22.0	-3 22 44	324	+1.44	1.10	+59.50	+0.04	22.0	-3 22 44	324	+1.44	1.10	+59.50	+0.04
22.1	-4 22 46	326	-1.15	1.01	+59.43	+0.05	22.1	-4 22 46	326	-1.15	1.01	+59.43	+0.05
22.2	-5 22 56	327	+1.89	1.33	+59.61	+0.04	22.2	-5 22 56	327	+1.89	1.33	+59.61	+0.04
22.3	-6 22 59	329	+2.26	1.03	+59.53	-0.01	22.3	-6 22 59	329	+2.26	1.03	+59.53	-0.01
22.4	-7 23 19	532	+1.42	1.09	+59.57	-0.01	22.4	-7 23 19	532	+1.42	1.09	+59.57	-0.01
22.5	-8 23 26	319	+1.17	1.54	+59.82	+0.15	22.5	-8 23 26	319	+1.17	1.54	+59.82	+0.15
22.6	-9 23 31						22.6	-9 23 31					
22.7	-10 23 31						22.7	-10 23 31					
22.8	-11 23 31						22.8	-11 23 31					
22.9	-12 23 31						22.9	-12 23 31					
22.0	-13 23 31						22.0	-13 23 31					
22.1	-14 23 31						22.1	-14 23 31					
22.2	-15 23 31						22.2	-15 23 31					
22.3	-16 23 31						22.3	-16 23 31					
22.4	-17 23 31						22.4	-17 23 31					
22.5	-18 23 31						22.5	-18 23 31					
22.6	-19 23 31						22.6	-19 23 31					
22.7	-20 23 31						22.7	-20 23 31					
22.8	-21 23 31						22.8	-21 23 31					
22.9	-22 23 31						22.9	-22 23 31					
22.0	-23 23 31						22.0	-23 23 31					
22.1	-24 23 31						22.1	-24 23 31					
22.2	-25 23 31						22.2	-25 23 31					
22.3	-26 23 31						22.3	-26 23 31					
22.4	-27 23 31						22.4	-27 23 31					
22.5	-28 23 31						22.5	-28 23 31					
22.6	-29 23 31						22.6	-29 23 31					
22.7	-30 23 31						22.7	-30 23 31					
22.8	-31 23 31						22.8	-31 23 31					
22.9	-32 23 31						22.9	-32 23 31					
22.0	-33 23 31						22.0	-33 23 31					
22.1	-34 23 31						22.1	-34 23 31					
22.2	-35 23 31						22.2	-35 23 31					
22.3	-36 23 31						22.3	-36 23 31					
22.4	-37 23 31						22.4	-37 23 31					
22.5	-38 23 31						22.5	-38 23 31					
22.6	-39 23 31						22.6	-39 23 31					
22.7	-40 23 31						22.7	-40 23 31					
22.8	-41 23 31						22.8	-41 23 31					
22.9	-42 23 31						22.9	-42 23 31					
22.0	-43 23 31						22.0	-43 23 31					
22.1	-44 23 31						22.1	-44 23 31					
22.2	-45 23 31						22.2	-45 23 31					
22.3	-46 23 31						22.3	-46 23 31					
22.4	-47 23 31						22.4	-47 23 31					
22.5	-48 23 31						22.5	-48 23 31					
22.6	-49 23 31						22.6	-49 23 31					
22.7	-50 23 31						22.7	-50 23 31					
22.8	-51 23 31						22.8	-51 23 31					
22.9	-52 23 31						22.9	-52 23 31					
22.0	-53 23 31						22.0	-53 23 31					
22.1	-54 23 31						22.1	-54 23 31					
22.2	-55 23 31						22.2	-55 23 31					
22.3	-56 23 31						22.3	-56 23 31					
22.4	-57 23 31						22.4	-57 23 31					
22.5	-58 23 31						22.5	-58 23 31					
22.6	-59 23 31						22.6	-59 23 31					
22.7	-60 23 31						22.7	-60 23 31					
22.8	-61 23 31						22.8	-61 23 31					
22.9	-62 23 31						22.9	-62 23 31					
22.0	-63 23 31						22.0	-63 23 31					
22.1	-64 23 31						22.1	-64 23 31					
22.2	-65 23 31						22.2	-65 23 31					
22.3	-66 23 31						22.3	-66 23 31					
22.4	-67 23 31						22.4	-67 23 31					
22.5	-68 23 31						22.5	-68 23 31					
22.6	-69 23 31						22.6	-69 23 31					
22.7	-70 23 31						22.7	-70 23 31					
22.8	-71 23 31						22.8	-71 23 31					
22.9	-72 23 31						22.9	-72 23 31					
22.0	-73 23 31						22.0	-73 23 31					
22.1	-74 23 31						22.1	-74 23 31					
22.2	-75 23 31						22.2	-75 23 31					
22.3	-76 23 31						22.3	-76 23 31					
22.4	-77 23 31						22.4	-77 23 31					
22.5	-78 23 31						22.5	-78 23 31					
22.6	-79 23 31						22.6	-79 23 31					
22.7	-80 23 31						22.7	-80 23 31					
22.8	-81 23 31						22.8	-81 23 31					
22.9	-82 23 31						22.9	-82 23 31					
22.0	-83 23 31						22.0	-83 23 31					
22.1	-84 23 31						22.1	-84 23 31					
22.2	-85 23 31						22.2	-85 23 31					
22.3	-86 23 31						22.3	-86 23 31					
22.4	-87 23 31						22.4	-87 23 31					
22.5	-88 23 31						22.5	-88 23 31					
22.6	-89 23 31						22.6	-89 23 31					
22.7	-90 23 31						22.7	-90 23 31					
22.8	-91 23 31						22.8	-91 23 31					
22.9	-92 23 31						22.9	-92 23 31					
22.0	-93 23 31						22.0	-93 23 31					
22.1	-94 23 31						22.1	-94 23 31					
22.2	-95 23 31						22.2	-95 23 31					
22.3	-96 23 31						22.3						

[illegible]

Star	RA	δ	Tang.	μ	α	β	γ	Star	RA	δ	Tang.	μ	α	β	γ
1875 Nov. 6 mare			$h = +0.16$ $+0.25$		$m = -28$	$e = .00$	$k = +0.56$	1875 Nov. 6 mare							
212	21 10 305		+0.77	0	+61.11	+0.01	+61.07	22 24 150			-4.12	0	+59.69	-15	+59.64
213	21 16 306		+1.89		+61.49	+0.01	+61.48	22 33 525			+3.27		+61.83	+16	+61.67
222	22 29 320		- .61		+61.06	+0.06	+61.00	22 45 325			+2.20		+61.78	+08	+61.70
224	22 33 321		+ .18		+61.13	+0.02	+61.06	23 4 529			+3.66		+62.05	+02	+62.03
226	22 37 322		+ .57		+61.04	+0.01	+61.03	23 24 162			-2.75		+60.21	+13	+60.08
227	22 39 528		+ .88		+61.24	+0.02	+61.25								
227	22 41 323		+ .42		+61.66	+0.05	+61.61								
227	22 44 324		+ .44		+61.12	+0.01	+61.08								
228	22 46 326		- .15		+61.07	+0.05	+61.02								
229	22 56 327		+ .89		+61.21	+0.02	+61.17								
230	22 59 329		+ .26		+61.03	+0.01	+61.04								
232	23 11 330		+ .05		+61.11	+0.03	+61.08								
232	23 14 531		+ .42		+61.07	+0.01	+61.06								
2298 233	23 16 532		+ .42		+61.05	+0.01	+61.06								
22.61	22 26 319		+0.17		+61.36	+0.15	+61.21								

225 -01 +61.00	212 +77 +61.07	225 +3.27 +61.67	+0.00 +61.67	23.4 -2.75 +60.08	-0.01 +60.07	-0.02 +60.06
226 +18 +61.06	213 +89 +61.48	228 +2.20 +61.70	-0.01 +61.69			
227 +42 +61.61	226 +88 +61.25	231 +3.66 +62.03	-0.02 +62.01			
228 -15 +61.02	229 +89 +61.17					
230 +26 +61.04	224 +117 +61.21					
232 +05 +61.08	221 +172 +61.24					
228 +13 +61.05						

$$n = -19 -01$$

$$0 = +2.15 + 0.43 n = -20$$

$$+2.07 + .65$$

$$+2.54 + 0.787$$

$$0 = -3.87 - 1.11 n = -38$$

1875 Nov. 7 mare			$h = +0.18$ $+0.32$		$m = -220$	$e = .00$	$k = +0.32$	1875 Nov. 7 mare							
224	22 7 316		+1.58	0	+61.54	+0.02	+61.52	22 33 525			+3.27	0	+62.28	+16	+62.12
222	22 10 522		- .15		+61.36	+0.02	+61.34	22 45 325			+2.20		+61.91	+08	+61.83
222	22 19 522		+1.26		+61.70	+0.02	+61.66								
223	22 29 320		- .01		+61.42	+0.06	+61.36								
226	22 35 321		+ .18		+61.46	+0.07	+61.39								
226	22 37 322		+ .57		+61.48	+0.01	+61.47								
227	22 39 528		+ .88		+61.63	+0.02	+61.61								
227	22 41 523		+ .42		+61.49	+0.05	+61.44								
226	22 44 324		+ .44		+61.54	+0.01	+61.50								
22.52	22 26 319		+1.17		+61.75	+0.15	+61.60								
222 -15 +61.34		225 +3.27 +62.12													
225 -01 +61.36		227 +2.20 +61.83													
226 +18 +61.39															
227 +42 +61.44															
225 +11 +61.38															
221 +1.58 +61.59															
223 +1.26 +61.66															
226 +.88 +61.61															
224 +1.17 +61.60															
224 +1.10 +61.62															
$n = -22$															

* A comparison of the none observation
for Nov. 11 & 17 ~~shows~~ gives $h' = +0.6$ nearly

[illegible]

1875 Nov. 17 $h = +0.17 + 0.37$ $m = -11$ $e = .00$

Star	RA	S	Temp.	TRA	P.P.	P.P.
00 +1 0 21			+0.54	0 = +65.70	+0.03	+65.76
01 2 0 4 337			+1.01	+65.80	-0.03	+65.83
04 5 0 24 339			-0.08	+65.66	+0.00	+65.66
23.5 +4 23 31 351			+1.03	+65.73	-0.01	+65.74
23.6 323 34 333			+0.09	+65.71	+0.00	+65.71
23.8 1 23 46 538			+0.33	+65.76	+0.01	+65.75
23.8 1 23 48 539			+1.63	+65.03	+0.28	+65.83
23.9 +0 23 53 336			+0.11	+65.76	+0.05	+65.71
28.89						

0.4 -0.8 +65.66	23.6 +4.30 +66.11	+0.01	+66.72	+0.00	+66.11
23.6 +0.9 +65.71	23.7 +2.37 +66.10	+0.00	+66.10	+0.00	+66.10
23.8 +3.3 +65.75	0.4 +1.90 +65.91	-0.01	+65.90	-0.01	+65.90
23.9 +1.1 +65.71					
0.1 +1.01 +65.83	0 = +4.19 +0.41	$n = -10$			
23.5 +1.03 +65.74	+2.26 +0.39	-17			
23.8 +1.53 +65.83	+1.79 +0.19	-11			
23.8 +1.19 +65.84	0 = +3.11 +0.31	$n = -09$			
24.0 +1.27 +65.88	+1.18 +0.30	-22			
$n = -08$	+0.71 +0.10	-4			
		-133			

1875 Nov. 20 $h = -0.07 + 0.27$ $m = -23$ $e = .00$

0.4 +2 0 24 339			+0.08	0 = +6.41	+0.00	+6.41
0.6 0 0 33 10			+1.47	+6.77	-0.01	+6.78
0.7 -1 0 41 11			+0.44	+6.49	-0.01	+6.50
0.9 -3 0 56 15			+0.13	+6.45	+0.01	+6.44
0.65						
0.4 -0.8 +6.41	0.4 +1.90 +6.87	+0.00	+6.87			
0.7 +1.44 +6.50						
0.9 +1.13 +6.44	0 = +1.74 +0.42	$n = -24$				
0.7 +1.6 +6.45	0 = +0.43 +0.09	$n = -21$				
0.5 +1.47 +6.78						
$n = -25$						

1875 Nov. 21 $h = -0.03 + 0.03$ $m = -26$ $e = .00$

0.0 +2 0 2 1			+0.54	0 = +6.51	+0.03	+6.58
0.1 1 0 4 337			+1.01	+6.53	-0.03	+6.56
0.1 1 0 7 3			+0.26	+6.48	+0.01	+6.49
0.2 0 0 13 4			-0.17	+6.37	+0.00	+6.37
0.4 -2 0 24 339			-0.08	+6.42	+0.00	+6.42
0.6 -4 0 33 10			+1.47	+6.77	-0.01	+6.78
0.23						
0.1 +1.26 +6.47	0.2 +4.09 +7.64	$n = -30$				
0.2 -1.7 +6.37	0.4 +1.90 +6.96	-28				
0.4 -0.8 +6.42		-290				
0.2 +0.09 +6.45	0 = +4.09 +1.22	$n = -30$				
0.4 +1.01 +6.56	+1.90 +0.54	-28				
0.5 +1.47 +6.78	0 = +2.55 +0.97	$n = -34$				
0.4 +1.24 +6.67	+0.66 +0.29	-44				
$n = -20$		-390				

1875 Nov. 17 $h = -0.17 + 0.37$ $m = -11$ $e = .00$

Star	RA	S	Temp.	TRA	P.P.	P.P.
00 +1 0 21			+0.54	0 = +65.70	+0.03	+65.76
01 2 0 4 337			+1.01	+65.80	-0.03	+65.83
04 5 0 24 339			-0.08	+65.66	+0.00	+65.66
23.5 +4 23 31 351			+1.03	+65.73	-0.01	+65.74
23.6 323 34 333			+0.09	+65.71	+0.00	+65.71
23.8 1 23 46 538			+0.33	+65.76	+0.01	+65.75
23.8 1 23 48 539			+1.63	+65.03	+0.28	+65.83
23.9 +0 23 53 336			+0.11	+65.76	+0.05	+65.71
28.89						

0.1 -4.83 +65.16	+0.00	+65.16	-0.01	+65.15
12.5 -2.82 +65.58	+0.01	+65.57	+0.01	+65.57
0 = -4.94 -0.55	$n = -11$			
-2.93 -0.12	-04			
	-075			
0 = -6.02 -0.65	$n = -11$			
-4.01 -0.23	-06			
	-085			
	-090			

1875 Nov. 20 $h = -0.07 + 0.27$ $m = -23$ $e = .00$

0.4 +2 0 24 339			+0.08	0 = +6.41	+0.00	+6.41
0.6 0 0 33 10			+1.47	+6.77	-0.01	+6.78
0.7 -1 0 41 11			+0.44	+6.49	-0.01	+6.50
0.9 -3 0 56 15			+0.13	+6.45	+0.01	+6.44
0.65						
0.4 -0.8 +6.41	0.4 +1.90 +6.87	+0.00	+6.87			
0.7 +1.44 +6.50						
0.9 +1.13 +6.44	0 = +1.74 +0.42	$n = -24$				
0.7 +1.6 +6.45	0 = +0.43 +0.09	$n = -21$				
0.5 +1.47 +6.78						
$n = -25$						

1875 Nov. 21 $h = -0.03 + 0.03$ $m = -26$ $e = .00$

0.0 +2 0 2 1			+0.54	0 = +6.51	+0.03	+6.58
0.1 1 0 4 337			+1.01	+6.53	-0.03	+6.56
0.1 1 0 7 3			+0.26	+6.48	+0.01	+6.49
0.2 0 0 13 4			-0.17	+6.37	+0.00	+6.37
0.4 -2 0 24 339			-0.08	+6.42	+0.00	+6.42
0.6 -4 0 33 10			+1.47	+6.77	-0.01	+6.78
0.23						
0.1 +1.26 +6.47	0.2 +4.09 +7.64	$n = -30$				
0.2 -1.7 +6.37	0.4 +1.90 +6.96	-28				
0.4 -0.8 +6.42		-290				
0.2 +0.09 +6.45	0 = +4.09 +1.22	$n = -30$				
0.4 +1.01 +6.56	+1.90 +0.54	-28				
0.5 +1.47 +6.78	0 = +2.55 +0.97	$n = -34$				
0.4 +1.24 +6.67	+0.66 +0.29	-44				
$n = -20$		-390				

$\lambda =$	+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100
1875	1875	1875	1875	1875	1875	1875	1875	1875	1875
Star	RA	Dec	RA	Dec	RA	Dec	RA	Dec	RA
0 2	+24.97	-16.12	0 2	+24.97	-16.12	0 2	+24.97	-16.12	0 2
0 1	+05.100	-13.5	0 1	+05.100	-13.5	0 1	+05.100	-13.5	0 1
0 21	+73.68	-15.4	0 21	+73.68	-15.4	0 21	+73.68	-15.4	0 21
23 37	+61.00	-15.0	23 37	+61.00	-15.0	23 37	+61.00	-15.0	23 37
23 31	+61.79	-15.0	23 31	+61.79	-15.0	23 31	+61.79	-15.0	23 31
23 16	+41.91	-14.9	23 16	+41.91	-14.9	23 16	+41.91	-14.9	23 16
23 18	+25.97	-13.2	23 18	+25.97	-13.2	23 18	+25.97	-13.2	23 18
23 53	+59.80	-17.1	23 53	+59.80	-17.1	23 53	+59.80	-17.1	23 53
8	976	+73	8	976	+73	8	976	+73	8
3	129	+61	3	129	+61	3	129	+61	3
05	+61	+59	05	+61	+59	05	+61	+59	05
134	132	100	134	132	100	134	132	100	134
16	14.07	+6.7	16	14.07	+6.7	16	14.07	+6.7	16
14.05	10	+5	14.05	10	+5	14.05	10	+5	14.05
4	272	+73	4	272	+73	4	272	+73	4
2	140	+58	2	140	+58	2	140	+58	2
212	157	+1.0	212	157	+1.0	212	157	+1.0	212
16	14.72	+1.0	16	14.72	+1.0	16	14.72	+1.0	16
14.38	1	+1.0	14.38	1	+1.0	14.38	1	+1.0	14.38
84	157	+1.0	84	157	+1.0	84	157	+1.0	84
6	228	+79	6	228	+79	6	228	+79	6
2	280	+73	2	280	+73	2	280	+73	2
508	102	+102	508	102	+102	508	102	+102	508
13.67	13.64	+13.67	13.67	13.64	+13.67	13.67	13.64	+13.67	13.67
14.07	13.64	+14.07	14.07	13.64	+14.07	14.07	13.64	+14.07	14.07
13.64	7	+13.64	13.64	7	+13.64	13.64	7	+13.64	13.64
11	4.07	+11	11	4.07	+11	11	4.07	+11	11
13.64	2	+13.64	13.64	2	+13.64	13.64	2	+13.64	13.64
13.64	7	+13.64	13.64	7	+13.64	13.64	7	+13.64	13.64

[illegible]

$\lambda =$	+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100
1875	Nov. 22	Nov. 22				1875	Nov. 22		
Star	R.A. Dim. Long.	Ry-R _H P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀	Ry-R _H P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀	Ry-R _H P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀	Ry-R _H P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀	Ry-R _H P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀	Ry-R _H P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀	Ry-R _H P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀	Ry-R _H P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀ P ₁₀
	22 56 +.01+1.00	-16 12.7 +.0.6-12.1 +0.1	-12.0			1 2 -60.80	-16 14.9 +.0.7-12.7 -1.8	-14.6	
	22 59 +47.88	14.4 -0.6 15.0 +1.5	13.5			1 13 -72.69	11.2 -0.3 11.5 -2.7	13.3	
	23 14 +33.94	15.7 +.0.1 15.6 +1	14.5			23 4 -53.64	10.5 +.0.6 9.9 -1.6	16.5	
	23 31 -0.6 1.00	14.8 +.0.8 14.0 -0.1	14.1						
	0 41 +32.94	13.4 -0.1 13.5 +1.0	12.5						
	0 56 +58.81	16.3 +.0.4 15.9 +1.7	14.2						
	1 3 +13.99	13.0 -0.3 13.3 +0.5	12.8						
	1 5 +23.97	13.2 +.0.2 13.0 +0.8	12.2						
	23 11 +64.76	15.9 -0.2 16.1 +1.9	14.2						
9	297					13.33	13.33		13.10 13.10
3	30								
327	+64 -16.1 +4.7 -15.0	+33 -15.6 +0.1 -12.1 -0.6 -14.0	-60 -12.7 -72 -11.5			-53 -9.9			
	+58 -15.9	+32 -13.5 +1.3 -13.3	11.3 22.6						
	5 9	5 9.1 14 5.4							
	+64 -16.1 +5.2 -15.4	+32 -14.5 +0.7 -12.7 -0.6 -14.0	-56 -11.3 -72 -11.5			-1.7			
	+2.0	+1.6 +1.0 +1.3 -1.2	2			13.0			
-16 13.37	14.1	13.8 13.5 12.4 14.2							
13.27	+1.7	+1.1 +1.1 -1.0 +1.8							
1875	Nov. 24								
	22 56 +.01 1.00	-16 15.3 +.0.6-14.7 +0.1	-14.6			22 24 -88.48	-16 11.5 +.0.7-14.8 -2.6	19.5	
	22 59 +47.88	15.5 -0.6 16.1 +1.5	14.6			23 4 -53.84	13.1 +.0.6 12.5 -1.6	-14.1	
	23 11 +64.76	16.9 -0.2 17.1 +1.9	13.2			23 34 -57.82	13.2 +.0.3 12.9 -1.7	14.6	
	23 31 -0.6 1.00	15.1 +.0.8 14.3 -0.1	14.4						
4	280					14.70			14.35 14.35
2	70								
350	+64 -17.1 +4.7 -16.1	+0.1 -14.7 -0.6 -14.3	-53 -12.5			-57 -12.9			
			10			11			
	+64 -17.1 +4.7 -16.1	+0.1 -14.7 -0.6 -14.3	-55 -12.7						
	+2.0	+1.4 +1.0 -1.2	-1.7						
-16 14.63	15.1	14.7 14.5 14.7 14.5	2			14.1			
14.58	+1.5	+1.1 +1.1 -1.1 -1.2							
1875	Nov. 29								
	23 11 +64.76	-16 16.6 -0.2-16.8 +2.0	-14.8			0 6 -86.57	+16 18.4 +.0.4-14.0 -2.7	17.5	
	23 14 +33.94	16.4 +.0.1 16.3 +1.1	15.2			0 9 -56.82	-9.2 8.8 +.0.5 8.7 -1.7	-10.2	
	23 31 -0.6 1.00	14.5 +.0.8 13.7 -0.1	13.8			23 34 -57.82	14.4 +.0.3 14.1 -1.8	12.5	
	23 46 +41.91	15.1 -0.2 15.3 +1.4	13.9			23 42 -42.90	12.6 13.4 +.0.4 12.2 -1.8	13.5	
	23 48 -25.94	12.8 14.3 +.0.0 12.8 -0.7	13.5						
	23 53 +59.80	17.8 +.0.2 17.6 +1.8	15.8						
	0 2 +24.97	-16 15.9 -0.2 16.1 +0.8	15.3						
	0 4 -0.6 1.00	13.2 -0.2 13.4 -0.1	13.5						
8	884					14.48	14.48		13.20 13.20
2	40								
224	+64 -16.8 +4.1 -15.3	+33 -16.3 -0.6 -13.7 -25 -12.8	-57 -11.1			-42 -12.2			
	+59 -17.6	+24 -16.1 -105 -13.4	99 3.3						
	0 12.9	57 4 11 11							
	+64 -16.8 +5.0 -16.4	+2.8 -16.2 -0.5 -13.5 -25 -12.8	-49 -11.6						
	+2.0	+1.6 +1.9 -1.2 -1.8	-1.6						
-16 14.24	14.8	14.8 15.3 13.7 13.6 13.2							
14.22	+1.6	+1.6 +1.1 -1.5 -1.6							

1875	Nov 30	h = -06	+006	n = 00	e = 1575	Nov 30	h = -06	+006	n = 00	e = 1575
Star	Ra	S	Tang.	T-Ra	P-P	T-Ra	P-P	T-Ra	P-P	T-Ra
238	+1 23 46	538	+ .33	D = +4.18	+ .01	+4.17	∞	+4.17	∞	+4.17
238	+1 23 48	539	+ .53	+4.26	+ .01	+4.26	+10	+4.26	+10	+4.16
239	0 23 53	336	+ .11	+4.14	+ .05	4.09		4.09		4.09
00	-1 0 2	1	+ .54	+4.06	+ .03	4.03		4.03		4.03
01	-2 0 4	337	+ .01	+4.03	- .03	4.06		4.06		4.06
01	-2 0 7	3	+ .26	+4.11	+ .01	4.10	∞	4.10	∞	4.10
23.95										+4.102

23.8 + .33 + 4.17
 23.9 + .11 + 4.09
 0.1 + .26 + 4.10
 23.9 + .23 + 4.12

23.8 + .53 + 4.06 + 10
 0.1 + .01 + 4.06
 23.9 + .11 + 4.06
 n = +.05

1875	Dec 1	h = -02	+034	n = -01	e = 00	Dec 1	h = -02	+034	n = -01	e = 00
0.4	+1 0 24	539	- .08	D = +3.70	+ .00	3.70	∞	+3.70	0	26 5
0.6	-1 0 33	10	+ .14	+3.66	- .01	3.65	∞	+3.66	12	28 17
0.50								+3.680		
0.4	+08	3.70						12.5	-2.82	+3.69
0.6	+1.47	+3.65								
n = +.02										

1875	Dec 2	h = -02	+006	n = -04	e = 00	Dec 2	h = -02	+006	n = -04	e = 00
220	+2 22 1	520	+ .46	D = +62.96	+ .01	62.90	∞	+62.88	22	24 150
222	0 22 15	317	- .03	+2.97	+ .01	2.96	∞	+2.97	96	
223	-1 22 19	524	+ .12	+3.06	+ .04	3.02	∞	+3.06	95	
22.17								+62.937		
22.0	+46	+62.90						22.14	-4.12	+2.78
22.2	-03	+62.96								
22.1	+21	+62.93								
22.3	+1.26	+63.02								
n = +.09										

$\lambda =$	+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100
1875	Nov 30					1875	Nov 30		
Star	P.A. Linzcor		Ry-R.H.P.P.	Ry-Ry	Ap. Ry	Star	P.A. Linzcor		Ry-R.H.P.P. Ry-Ry Ap. Ry
	h m		h m			h m			
	23 46 +11.91		-10 12.8 -0.2	13.0 +1.4		-11.6			
	23 48 -25.97		12.4 +0.0	12.4 -0.7		13.1			
	23 53 +59.80		15.2 +0.2	15.0 +1.8		13.2			
	0 2 +24.97		12.0 -0.2	12.2 +0.8		11.4			
	0 4 -051.00		13.7 -0.2	13.9 -0.1		14.0			
	0 7 +47.88		13.7 +0.4	13.3 +1.5		11.8			
						12.52	12.52		
	+41 -13.0	+24 -12.2		-05 -13.9	-25 -12.4				
	+59 -15.0								
	+47 -13.3								
	147 113								
	+49 -15.6	+24 -12.2		-05 -13.9	-25 -12.4				
	+1.5	+0.8		-0.2	-0.8				
-16 12.60	3 12.3	11.1		11.1	13.2				
12.52	(6) -0.3	-1.2		+1.5	+0.6				
1875	Dec 1								
	0 24 +73.68	-16 13.6 +0.1	13.5 +2.3	-11.2		0 26 -34.94	101 7.1 -0.4	10.5 -1.0	-11.5
	0 33 -23.97	14.7 +0.6	14.1 -0.7	14.8		12 28 -92.58	7.1 +0.8	6.3 -3.0	10.95
	+73 -13.5			13.00					11.50 11.50
				-23 -14.1					
				-34 -10.5					
				57 46					
	+73 -13.5			-25 -12.3					
	+0.3			-0.9					
	11.2			2 13.2					
-16 12.50	-1.3			+0.7					
12.50									
1875	Dec 2								
	22 1 +30.95	-16 12.3 -0.3	12.6 +1.0	-11.6		22 24 -88.48	-16 8.8 +0.7	8.1 -2.9	12.90
	22 15 +70.72	12.6 -0.4	13.0 +2.2	10.8					
	22 19 -16.99	13.05 +0.2	13.3 -0.5	13.4					
			12.9	11.93	11.93				
			12.7						
		+30 -12.6	-16 -13.3						
		+1.0	-0.6						
-16 12.55		11.6	13.5						
11.93		-0.9	+1.0						

Star	RA	S	long	T-Ra	P-P	T-Ra	P-P	Star	RA	S	long	T-Ra	P-P	T-Ra	P-P
1875 Dec 6 HAR	h=-028 -045	138				-13	e=-.00h=-.05	1875 Dec 6 HAR							
223+23	22 19 524	+1.26	0=	+0.28	+0.04	+0.24	-16	222+21	22 19 524	+1.26	0=	-0.54	-15-42		
225 230	+1.6 22 50 329	+1.26		+0.16	-0.01	0.17	-03								
0.9	-3 0 56 15	+1.13		+0.05	+0.01	0.04	-02								
1.4	-8 1 25 22	+1.26		+0.11	+0.06	0.05	-03								
1.5	-9 1 30 23	+1.11		+0.18	+0.09	0.09	-14								
1.6	-10 1 35 349	+1.09		+0.07	-0.01	0.08	-01								
0.8	0 49 13	+1.13		+0.13	+0.01	+12	-22								
1.30	1.6 -1.0 1 39 25	+1.15		-0.06	-13-59	-02									
0.61															
230+26	+0.17							22.4	-4.12	-0.42	-0.07	-0.49			
0.9+13	+0.04														
1.4+26	+0.05														
1.6+29	+0.08														
1.6+15	-0.23+0.7														
0.9	+18 +0.08														
22.3+126	+0.24														
1.5+1.11	+0.9														
0.8+1.73	+1.2														
0.2+1.87	+1.15														
m=-.06	+0.2														
1875 Dec 12	h=-018					-02	-06 e=.00	h=-029							
1.8	1 48 30	+0.37	0=-	3.74	+0.03	3.80	-02	1.8	1 48 30	+0.37	0=-	3.74	+0.03	3.80	-02
1.9	5 1 56 82	+1.89		3.69	+0.11	3.70	-06	1.9	5 1 56 82	+1.89		3.69	+0.11	3.70	-06
2.0	4 2 0 33	+1.42		3.79	+0.02	3.81	-03	2.0	4 2 0 33	+1.42		3.79	+0.02	3.81	-03
2.1	3 2 5 351	+1.21		3.67	+0.07	3.74	-07	2.1	3 2 5 351	+1.21		3.67	+0.07	3.74	-07
2.2	2 2 10 352	+1.66		3.71	+0.01	3.72	-04	2.2	2 2 10 352	+1.66		3.71	+0.01	3.72	-04
2.2	2 2 11 353	+1.12		3.76	+0.03	3.79	+01	2.2	2 2 11 353	+1.12		3.76	+0.03	3.79	+01
2.2	2 2 13 35	+1.06		3.76	+0.02	3.77	+00	2.2	2 2 13 35	+1.06		3.76	+0.02	3.77	+00
2.4	0 2 22 37	+1.14		3.70	+0.06	3.76	-01	2.4	0 2 22 37	+1.14		3.70	+0.06	3.76	-01
2.5	1 2 32 355	+1.36		3.74	-02	3.72	-02	2.5	1 2 32 355	+1.36		3.74	-02	3.72	-02
2.6	2 2 33 39	+1.00		3.80	-01	3.79	-00	2.6	2 2 33 39	+1.00		3.80	-01	3.79	-00
2.6	2 2 36 40	+1.14		3.63	+0.08	3.71	-07	2.6	2 2 36 40	+1.14		3.63	+0.08	3.71	-07
2.6	2 2 37 41	+1.05		3.72	+0.01	3.73	-00	2.6	2 2 37 41	+1.05		3.72	+0.01	3.73	-00
2.7	3 2 43 44	+1.50		3.69	+0.06	3.75	-03	2.7	3 2 43 44	+1.50		3.69	+0.06	3.75	-03
2.8	4 2 45 45	+1.20		3.55	+0.11	3.66	-08	2.8	4 2 45 45	+1.20		3.55	+0.11	3.66	-08
2.9	5 2 50 47	+1.16		3.74	+0.02	3.76	-00	2.9	5 2 50 47	+1.16		3.74	+0.02	3.76	-00
3.0	6 3 00 50	+1.85		3.68	+0.05	3.73	-06	3.0	6 3 00 50	+1.85		3.68	+0.05	3.73	-06
2.36	1 39 25	+1.15		3.86	-0.13	3.73	-01	2.36	1 39 25	+1.15		3.86	-0.13	3.73	-01
1.8+37	-3.80			1.9+3.05	-3.62	-01	-3.63	1.8+37	-3.80			1.9+3.05	-3.62	-01	-3.63
2.0+1.12	-3.81			2.1+2.24	-3.79	+00	-3.79	2.0+1.12	-3.81			2.1+2.24	-3.79	+00	-3.79
2.2-1.12	-3.79			2.3+2.33	-3.62	+00	-3.62	2.2-1.12	-3.79			2.3+2.33	-3.62	+00	-3.62
2.2-0.6	-3.77			2.4+3.13	-3.63	+00	-3.63	2.2-0.6	-3.77			2.4+3.13	-3.63	+00	-3.63
2.4+1.4	-3.76			2.6+2.39	-3.73	+01	-3.72	2.4+1.4	-3.76			2.6+2.39	-3.73	+01	-3.72
2.5+0.0	-3.79							2.5+0.0	-3.79						
2.6+0.5	-3.73							2.6+0.5	-3.73						
2.9+0.6	-3.76							2.9+0.6	-3.76						
1.6+1.5	-3.73							1.6+1.5	-3.73						
2.2+2.6	-3.77							2.2+2.6	-3.77						
1.1								1.1							
1.9+89	-3.70							1.9+89	-3.70						
2.1+1.21	-3.74							2.1+1.21	-3.74						
2.2+66	-3.72							2.2+66	-3.72						
2.6+1.14	-3.71							2.6+1.14	-3.71						
2.8+1.29	-3.66							2.8+1.29	-3.66						
3.0+85	-3.73							3.0+85	-3.73						
2.4+1.01	-3.71							2.4+1.01	-3.71						
0=+0.7								0=+0.7							

$\gamma =$	+60+80	+40+60	+20+40	+0+20	+0-20	-20-40	-40-60	-60-80	-80-100	
1875	Dec 6					1875	Dec 6			
Star	RA	Dec	RA	Dec	RA	Dec	RA	Dec	RA	Dec
	22 19		-16				22 24	-88 48	-16	
	22 56									
	0 56 +58.81		16.1 +0.6 15.7 +1.8							
	1 25 +46.88		14.0 -0.3 14.3 +1.5							
	1 30 -10.99		12.9 +0.4 12.5 -0.3							
	1 35 +61.79		15.8 +0.2 15.6 +2.0							
	0 49 -30.95		14.2 +0.7 13.5 -0.9							
	1 39 +56.83		16.2 +0.4 15.8 +1.8							
							13.58	13.58		
	+61 -15.6	+58 -15.7								
		+46 -14.3								
		4 0								
	+61 -15.6	+52 -15.0								
		+2.1								
	-16 13.25	13.5 2								
	13.58	+ .3								
		+ .1								
1875	Dec 12					1875	Dec 12			
	1 48 +38.92		-16 14.6	0.2 -14.8 +1.4			1 53 -149.87		-16 13.1	-0.2 -13.3 -1.5
	1 56 +011.00		14.0 +0.1 13.9 +0.0				2 5 -40		+0.4	12.7 -1.4
	2 0 +33.94		14.5 -0.0 14.5 +1.2				2 19 -41.91		12.5	+0.8 13.7 -1.4
	2 5 -14.99		16.5 +0.5 16.3 -0.4				2 26 -50.86		13.0	+0.4 12.6 -1.5
	2 10 +16.99		14.8 -0.2				2 31 -42.90		12.5	+0.5 12.0 -1.4
	2 11 -12.99		14.6 +0.5 13.8 -0.3				12 58 -89		10.1	+1.0 11.3 -3.1
	2 13 +72.70		15.1 +0.2 14.9 +1.9				14 51			
	2 22 +57.82		15.5 +0.4 15.4 +2.4							
	2 32 +36.93		15.1 +0.2 14.7 +1.2							
	2 33 +68.73		13.7 -0.2 13.9 +2.3							
	2 36 -11.99		14.4 +0.4 14.0 -0.3							
	2 37 +64.76		15.0 +0.2 15.7 +2.1							
	2 43 +27.96		15.5 +0.4 15.1 +1.0							
	2 45 -17.98		14.8 +0.7 14.1 -0.5							
	2 50 +63.77		17.5 +0.8 16.7 +2.1							
	3 00 +031.00		14.7 -0.1 14.8 +0.1							
	1 39 +56.83		18.3 +0.4 17.9 +1.8							
							14.16	14.05		14.35 14.30
15	240 +68 -13.9	+57 -14.9	+38 -14.8 +0.1	13.9 -1.4 -16.3			-14 -13.3			
5	150 +64 -15.7		+33 -14.5 +0.3	14.8 -1.2 -13.8			-1.1 -13.7			
	390 +63 -16.7		+36 -14.7 +1.6	-1.1 -14.0			-5.0 -12.6			
			+27 -15.7	-1.4 -14.1			-4.2 -12.0			
	15 5.7		14 19.1	2.0 8.7	14 18.2		18.2 11.6			
	+65 -15.4	+57 -14.9	+34 -14.8 +0.7	-14.3 -1.3 -14.5			-4.6 -12.9			
	+2.2	+1.9	+1.2	+ .3			4 -1.6			
-16	14.02	13.0	13.04	13.63	14.04	15.0	4 14.5			
14.19	-1.0	-1.0	- .4	+ .0	+1.0		+ .5			

Star	RA	S	tang.	TRA	P.P.	TRA	P.P.	Star	RA	S	tang.	TRA	P.P.	TRA	P.P.
02	110 0 13	4	-0.17	-4.02	+00	-4.02	+00	02	110 0 13	4	-0.17	-4.02	+00	-4.02	+00
04	110 0 24	337	-0.18	-4.04	+00	-4.04	+00	04	110 0 24	337	-0.18	-4.04	+00	-4.04	+00
050	0.9 + 3 0 56	15	+0.13	-4.01	+01	-4.02	+01	050	0.9 + 3 0 56	15	+0.13	-4.01	+01	-4.02	+01
15	3 1 30	23	+1.11	-3.81	+09	-3.90	-10	15	3 1 30	23	+1.11	-3.81	+09	-3.90	-10
16	4 1 35	347	+0.09	-4.03	+01	-4.02	+01	16	4 1 35	347	+0.09	-4.03	+01	-4.02	+01
18	6 1 48	30	+0.34	-3.92	+03	-3.95	+03	18	6 1 48	30	+0.34	-3.92	+03	-3.95	+03
170	1.9 - 7 1 56	32	+0.69	-3.83	+11	-3.94	+08	170	1.9 - 7 1 56	32	+0.69	-3.83	+11	-3.94	+08
1.19								1.19							

0.2 - 17 - 4.02	15 + 2.40 - 3.82	+0.01 - 3.89	+0.00 - 3.82	12.5 - 2.82 - 4.32	-0.02 - 4.34
0.4 - 08 - 4.04	19 + 3.05 - 3.78	+0.00 - 3.78	+0.00 - 3.78		
0.9 + 13 - 4.02	0.4 + 1.90 - 4.02	-0.01 - 4.03	-0.02 - 4.04		
1.6 + 0.9 - 4.03					
1.8 - 01 - 4.03					

1.0 + 0.5 - 4.03 - 2	0 - 12.41 + 0.22	n = -0.09	0 - 2.81 - 0.80	n = -11
1.5 + 1.11 - 3.90	+3.06 + 0.27	-0.09		
1.9 + 0.89 - 3.94	+1.91 -	-0.090		
1.7 + 1.00 - 3.92	0 - 11.40 + 0.10	n = -0.07	0 - 3.82 - 0.02	n = -11
n = 1.10 - 0.3	+2.05 + 0.14	-0.07		
	+0.90 -	-0.070		

1875 hce 14 h = -0.21 - 0.05 n = -0.6

0.0 + 1 0 2	1	+0.51	0 = -4.42	+0.03	-4.45	-0.03	∞ = 4.48
0.1 0 0	4	337	+1.01	-4.59	+0.03	-4.56	-0.06
0.1 0 0	4	3	+0.26	-4.48	+0.01	-4.49	-0.02
0.2 - 1 0 13	4	-0.17	-4.53	+0.00	-4.53	+0.00	∞ = 5.3
0.20							-4.543
0.10							5.32

0.0 + 5.4 - 4.45	
0.1 + 2.6 - 4.49	
1.2 - 1.7 - 4.53	
1.1 + 1.21 - 4.48	
0.0 + 4.0 - 4.47	
0.1 + 1.01 - 4.56	

n = -0.7
+0.29

1875 hce 15 h = -0.79 - 0.04 n = -0.02 e = 0.0

0.9 + 1 0 56	15	+0.19	0 = -4.93	+0.01	-4.94	-0.00	∞ - 4.94
1.0 0 1 3	16	+0.70	-4.98	+0.00	-4.98	-0.01	∞ + 0.7
0.87 0 49	13	+1.73	-4.73	+0.01	-4.72	-0.03	∞ + 1.73
1.1 - 1 1 5	17	+0.56	-5.06	+0.00	-5.00	-0.01	∞ - 5.01
0.95							5.313
1.0							5.023

0.9 + 1.3 - 4.94	1.2 + 4.236 - 2.69	+0.00 - 2.89	+0.01 - 2.88	-4.957
1.1 + 5.6 - 5.00	1.3 + 2.41 - 5.02	+0.01 - 5.01	+0.01 - 5.01	
1.0 + 4.0 - 4.97				

1.0 + 7.0 - 4.98	0 = 14.202 + 2.06	n = -0.057		
0.8 + 1.73 - 4.78	+2.07 - 0.04	+0.02		
0.7 + 1.22 - 4.84		-0.025		
n = -13	0 = 14.15 + 1.98	n = -0.057		
	+1.20 - 0.16	+0.12		
		+0.23		
		-0.070		

$$n = -0.2 \quad c = 0$$

1875 Dec. 18
W. A. R. $h = .019 - .004$

1875	Dec 18
	Wash.

	RA	S	temp.	T-RA	P-P	T-RA	P-P		RA	S	temp.	T-RA	P-P	T-RA	P-P
Star	RA	S		T-RA	P-P	T-RA	P-P	Star	RA	S		T-RA	P-P	T-RA	P-P

[illegible]
$$\begin{array}{r} 0.0 + 54 = 6.41 \\ 0.1 + 26 = 6.37 \\ 0.0 + 40 = 6.39 \end{array}$$
 $0.1 + 1.01 = 6.40$
$$n = +62$$

