1796 (8B) 0 19.8 +13 12 6.4 g K2 +3.3 b

204 ADS 303 optical ~~+0101~~ +0039 ± 2.1 +029 ± 1.7
GC 446 11m 29" +0046 +018
42 Pec

0 19 50.035 1905.4 +13 12 18.28 1895.2
174 +00425 +0235 1.59
464 49.861 +0017 0 +2 16.69 Bn, 50
.390 +00445 +025 1933.0
50.007 16.96
97 6 06 50 8
43 50.013 067 +021 17.04 Cape
291 50.001 50.005 17.59 1938.08" 40
388 +1 +.144 +11
50.012 17.70 yale
49.979 17.46 17.48 1939.9
531 +012 +6 +.79 1937.0
.991 (31.6) 17.72
544 (41.8)

```
  0.300
 13.200
 67.000
 21.000
  6.000
    158
  3.300

  0.865
  0.440
  0.242
311.176
 50.117

 -0.488
  0.621
  0.614
-88.968
-12.075

 -0.120
  0.649
 -0.751
 27.575
  1.891
```

87 00 19.3 5.96 +1.40 +1.40 -77 43 5.96 +1.40 180

1801

180 III

+19

+0031-004 f 4y

+010 -008

00 19

19 21.7 -77 42 14.7 Var

HR87 00 1.93 -22 42 +20.6

+014

1801 +0027 ±4.4 -005 ±4.2

03 -005

GC439 04 21.716 10.1 0026 14.70 9.8 0.3

+0027

-100 +20 -77.7

21.608 14.50 +47

070 -11

6.0

21.804 69.95 15.33 +20.8

-40

564

1.330 1159 245 MF +0027 -008

1.309 1.145 21.815 39.23 15.12 +0031 -0044

-127 +37

1.305 1.143 21.688 14.65

0099

010-011

0.300
-77.700
47.000
-11.000
6.000
158
20.800

0.855
0.235
-0.444
28.792
-4.656

-0.458
0.601
-0.630
-51.636
-21.771

-0.120
-0.751
-0.637
34.021
-7.058

20 22.8 1136 730 1.52

2114 0 22.8 +01 40 6.0 gG5 -4.18

228 (97)

GC496 -0010 -015 N30

44Pec -00 11±1.2 -012±1.1 GC cont N30

A[illegible] (97) 5.76 +0.85 +0.56

5.75 +86 +54 1 A

+55 1 20"

-00100 -0117 FRY 5.78 +86

0.4

-0150 +1.66

-013 -016 -13

-16

" 013 0 0015" pr 6.15

-4.1

```
  0.400
  1.660
-13.000
-16.000
  6.150
   170
 -4.100

  0.861
  0.479
  0.172
-89.341
-15.877

 -0.499
  0.731
  0.464
-24.714
 -6.101

 -0.097
  0.486
 -0.869
-30.872
 -1.681
```

6.19 +0.91 +0.55 C ~~(0.86)~~

2273 (101) C 24.1 -00 20 964 -22.78
239
10 Cut 555 240 476 327 6.4 +005
GC523 X=1741 +0046 +0045 ±1.5 +004 ±1.4 +068 +004 G
+0053 +004
+0045 +006

0 24 3.418 1901.0 -0 19 34.70 1897.8 1.000 9936
-220 +00 +0044 -21 -0006 1137
.198 +0046 +005 34.49 0706
22 46.540 +0090 53.69 1928.02 0075
1 16.792 27 18.62 -4.85
24 3.332 8 35.07 35.8 0074
090 19 -16 38.0 5.47
.422 35.33
.000 34.8 70.17 +36
6.22 -416 3.511 34.47 34.69 Curve
555 -10 34.9 1935.06
240 3.372 3.382 3.504 34.85 34.75
-012 +27 +.16
476 3.379 + .184 34.58
327 3.403 3.507 65.30 3436 34.72 1938.67
3.351 -13 -19 34.83 1540.50 Clean
.494 3455 34.43 1532.44

105 994 0 1 +068 +004 -22.7 0 0 01$\bar{5}$

-007 0 068 0 -03$\bar{3}$ 32$\bar{2}$ -22.7 -23 -2

-26 +30 +1 01

+24 -25 +1$\bar{5}$

226 367 325 -36

H↑
107

00 24.8 -00 20 -22.7

2273 1148

-523

5
+0047 000 Cashing

+00478 +0044 ZC

+00472 +0052

+032 000

0708

073 +001

0.4

-0.33

+73

+1

1144 785 088

5.5

1148 788 059 AP

-22.7

0726

1142 754 088 1000 9936

1132

-0036

-0.330
73.006
1.000
5.500
125.84
-22.700

0.861
0.484
-0.155
300.206
34.274

-0.499
0.747
0.439
-169.250
-31.265

-0.897
0.455
-0.885
-31.288
16.155

AR97 00 22-8 +1 40 -4.1

7IM 318 W3 50

0.4

-00123 -0072

-8 -1

-00131 -0070

+1.66

-18

-12

-0196

5.65

-058 -012

-4.1

124

1,136 730 152 MP

9157 -7268 0213

4014 -6868 -0036

0061

4.06

0.402
-1.650
-18.000
-12.000
5.650
1349
-4.100

0.861
0.479
0.172
-100.660
-14.288 -7.4
-6.9 -10.1
-0.499
0.731
0.464
0.984
-1.771 -1.7
-1.7 -1.8
-0.897
0.486
-0.869
-19.876
+23 0.948 2.2
401

AR102 02 04

+0016 ±9.0 −015 ±5.0
+0024 −015
0024 −014
00 24.7 −25 89 −3.0

2343 44.400 98.3 25.17 95.8
−83 51
.317 24.36

MN123,233 44.502 65.57 25.37 0.4
−20 −27 −25.8
482 25.64 40
−14
44.503 70.07 25.31 4.5
−15 −10 −3.0
488 25.41

210
1,202 850 256 · MF 0023 −016
1195 846 254 00254 −014
~~1196~~ 846 2x5

0343

1.

036 −019

0.400
-25.800
40.000
-19.060
4.500
79.43
-3.000 12.89

0.861
3.504
-0.068
101.575
8.273 +13.0 +12.1

-0.499
0.863
0.075
-162.980
-13.170 -20.7 -19.4

-0.097
0.030
-0.995
-19.221
1.458 +0.6 +0.7

129>33

102

00 24.7 -25 50 5.55 65

G8 II

2363

+0020 -013 f h4 -3.0

+0270

+024 -017

+008 -042

0.4
-25.4
+32
-17
8.5
-3

1202 850 256 FM

1146 846 254

```
  0.400
-25.800
 32.000
-17.000
  8.500
    501
 -3.000

  0.861
  0.504
 -0.068
 76.960
 38.776

 -0.499
  0.863
  0.075
-137.748
 -69.262

 -0.097
  0.030
 -0.995
-15.635
 -4.851
```

R.A.	:	0.400
DEC.	:	2.500
PM. R.A.	:	-3.000
PM. DEC.	:	-4.000
DISTANCE	:	5.600
MODULUS	:	132
RAD. VEL.	:	0.000
q1 (U)	:	0.861
q2 (U)	:	0.476
q3 (U)	:	0.179
dU	:	-21.260
U	:	-2.803
q1 (V)	:	-0.499
q2 (V)	:	0.725
q3 (V)	:	0.475
dV	:	-6.643
V	:	-0.876
q1 (W)	:	-0.097
q2 (W)	:	0.498
q3 (W)	:	-0.862
dW	:	-8.074
W	:	-1.064

HR
134 A   00 30.0 +28 00 -12.0

006

2442   -0007 ±3.2   +010 ±3.3

GC 647   10.445 4.2 -0005   16.04 94.1

32
477   -56
15.48

10.460   39.48   15.67

1239934 287 -2
458   +9
15.76

1236 93 286

-0006 +008   0.5

-0004 +011   +28.0

-0053   -5

-004 +007   +7
5.5

-12.0

0.500
28.000
5.000
7.000
5.500
125.89
-12.000

0.857
0.342
0.386
-6.567
-5.462

-5.5

-0.511
0.456
0.729
25.809
-5.499

-5.3

-0.074
0.822
-0.565
28.803
10.408

+10.1

ADS 455 (134) 00 30.2 +28 00 6.4 G5 gG6-130?

GC447 2942

-8.5 5(1)
-13.20(2)
-15.14(3)

6.38 +1.02 +0.75 1200"

11.26 +0845 +0.415 2200'
1806

1847.45 160.3 8.48 30 2

-008 +013 ?

1955 8.7 (IDS)

-0.009 +0.012 ~~60~~ 30

| -007 +009 |

100 102

+856	+342	+386	-0363	+0194	-0169	-1.7	-1.6	-6.3
-501	+456	+729	+0220	+0260	+0480	+4.8	-8.7	-3.9
-074	+822	-565	+0032	+0464	+0501	+5.0	+6.7	+11.7

(4.8)

```
 0.500
28.000
-8.000
 9.000
 4.800
    91
-12.000

 0.857
 0.342
 0.386
-14.077
 -5.919

 -0.511
  0.456
  0.729
 36.542
 -5.415

 -0.074
  0.822
 -0.565
 37.516
 10.203
```

5.55 +1.25 (0.31) c

135 0 31.2 -29 57

1:2 III 1:2 IV

554 +127

3054

Gabbs

-9 } 7 plate
+6 } Stands

-00190 -0245 FRY 0.01 var

44 49

-0247

-023-035

6.25

3/87 (1) 32.6 -26 24 -002 -001 7.82

-26.171 +0003±83 -008±80

66.693 00085 -0015

33.128 97.2 +0026 400 954 -05061 000

-16 -0018 36 0082

112 364

33.058 (70.29) 369 FR

-14 -9

044 378 -006-007

33.065 (64.32) 3.45

-13 -13 -27

05 3.72 -4

-4

1116 922 137 6.9

-7.3

R.A.	:	0.550
DEC.	:	-26.400
PM. R.A.	:	-6.000
PM. DEC.	:	-4.000
DISTANCE	:	6.900
MODULUS	:	240
RAD. VEL.	:	-7.300
q1 (U)	:	0.854
q2 (U)	:	0.518
q3 (U)	:	-0.043
dU	:	-31.584
U	:	-7.259
q1 (V)	:	-0.516
q2 (V)	:	0.855
q3 (V)	:	0.048
dV	:	-3.057
V	:	-1.082
q1 (W)	:	-0.062
q2 (W)	:	0.018
q3 (W)	:	-0.998
dW	:	1.229
W	:	7.579

3196 0 32.7 -03 52 5.2 dF7 +9.4a

321 ADS4490 Δm=0 +0277 -021 v30
13ut
GC696 +0276±1.1 -022±1.1 GC Cont. v30 v10

4PL 595
+02765 -0215 v30 +
1.42
+02755 -0205

+412 +9.4
A +414 -026 +02799 021 0418 -021

Spot 2 3.42

3.4 17 3.9 2.417
159 473

9995 9923 4074 9973 9891
0312 1156 -0736 0731 1476

3196.000*

0.000*
32.700*
-3.000*
-52.000*
0.414*
-0.026*
3.000*
39.811
9.400

1.616
0.157

65.795

-1.107
0.373

-40.581

-0.173
-0.915

-15.486

+1

313 28.2

-20 -14.4

-15

+40.2
-23.1
-12.5

3229 5.54 300 134 493 2638 GO

0 33.0 (224) (433) −0 47 dF2

HR143

14Ut 5.52+0.44−0.04 C

701GC

.306 .132 493 (3) SEC 2632 (4) C+

+11.2 .301 .140 .489 2.662 (2) 1, 8, 11, 5

.304 +136 .491 2.647

[m] 187 144 +478

+7 −6 ±1.5

+2.4

[c1] 432 92/130

+00945 −0605 GC+

3.45

+00952 −0411

1568

9500 8552 0190

1413 −5183 0206

+1426

+144−065

3229.000*

0.000*
33.000*
0.000*
-47.900*
0.144*
-0.065*
3.450*
549 513 48.979
6.200
358
0.433
0.185

123 22.364
348
-0.584
0.413

30 -26.026

-0.180
-0.092

-14.361

3229 143 ⊙ 33.0 -00 47 5.9 dF2 +6.2 6 +143 0.55 -0.8

322 14wt +0089 ± 1.8 -057 ± 1.6 -64

+0100 -062 3.25

GC701 +0094 +0093 -060 .057 +6.2

0 32 5-8.664 1898.3 -0 46 48.14 1897.4

5-8.847 (65.51) 44.04 -458 .206 88.878 (44.77) 44.27 + 3.00 45.14 1010.42

-13 834 -14 4423 5-8.603 -7 871 yale 1437.26 47 .77 1436.68

-015 .588 +00935 -059 47.75 -10 47.65 +27 47.50

yale 1437.26 +00942 -0596 1926.71

32.5 31, 41.742 16.745 58.487 .010 .497 58 43.27 16.38 46 46.85 -22 47.07 31.7

5-8.592 +3 595 32 (33.2) (34.3)

1413

.560 +.354 (35.1) .542 +.336 143 064 143 47.41 -2.27 47.28 -2.14 33.6 (36.2)

R.A.	:	0.550
DEC.	:	-0.800
PM. R.A.	:	143.000
PM. DEC.	:	-64.000
DISTANCE	:	3.250
MODULUS	:	45
RAD. VEL.	:	6.200
q1 (U)	:	0.854
q2 (U)	:	0.486
q3 (U)	:	0.185
dU	:	431.397
U	:	20.415
q1 (V)	:	-0.516
q2 (V)	:	0.750
q3 (V)	:	0.413
dV	:	-577.629
V	:	-23.244
q1 (W)	:	-0.062
q2 (W)	:	0.448
q3 (W)	:	-0.892
dW	:	-177.819
W	:	-13.473

3757

GC744

W346

Mleyh

0 3 34.9 +02 52 g144 +4.18(W14)

W(+0.2) 0045

6.98 +1.32 +1.52

6.38 +1.33 +1.52 1844 II R

A

Hr161

+0060 -051 N30

+0061 ±2.1 -055 ±2.1 Gc contr N30

+00605 -053 N30

+00605 -0525 F144

+0406

+062 -057

6.9

+090 -05.5 Gc

+023 -059 Z

+050 -051 N30

+091 -055

+25 -40 -17 .010

+49 -81 -30 .005

+58

6.39 +1.34 +1.51 Large

5.75 +0.53 (2) Negan

6.41 +1.35 +1.52 (5)

5.74 +0.535 (5)

5.21

3457.000*

0.000*
34.900*
2.000*
52.000*
0.092*
-0.057*
6.900*
239.883
4.100

0.244
0.223

59.435

-0.422
0.455

-99.356

-0.160
-0.862

-41.906

60 -0531
+0060 -051
60 -040

HR161 2.7 00 34.9 +00648 00610 00605 + 2 -0579 -1446 52 -0450 +4.1

3457 55.864 3.3 40.41 2.60 43.01 55.883 6.5 -10 873 269 .04 40.44 3.2 +12 40.56 277

GC744 280 5

5-5.973 65.87 35.44 -24 35.20 0.6
+0060 -056 964 +2.9
+00609 -056
0912 093-060 55.996 50.47 35.47 9.3
-7 -3 -6.0
989 35.44 6.0

1,310 1,158 220 MF +4.1

1265 1147 217

0.500	
2.900	
93.000	
-60.000	
6.060	
158.45	
4.100	
0.852	
0.473	0.03
3.227	5.64
240.467	
39.042	34.0
-0.522	
0.723	
0.453	
-435.260	
-67.125	5.74
-0.050	
0.504	
-0.862	
-165.629	
-29.704	26.3

+48 -4 -0.20 +0058 69808 82 758 45565

HB1162 00 34.5 -54 43 -6.4

3480 1178 0.848 0.141 (2) +0054=54 -0.20250

G074S ↗ 68.745 93.7 +0046 -001

-006 8.76 909

-832 +0046

.413 1.15

7.58

06 1177 846 144 48.882 2242 2302

547 9.808 15.48

81 58690 7.34

-5 95 .21

565 545 946 9952 7.55 +0046 -005

-26 -0046 0958 -06

-1.4 549 7.61 00521 -0007

1176 845 143 38.4

1129 847 149 58.61 7.6 0456

-25

619 7.85 047-005

1.174 843 143

```
 0.600
-54.700
 81.000
 -5.000
  5.650
    135
 -6.400

 0.852
 0.445
-5.278
178.381
25.839

-0.522
 0.770
-0.367
-134.033
-15.731

-0.050
-0.457
-0.988
-0.326
 5.638
```

162 00 350 -54 41 6.40 +1.00 g 69
3788

16 100 II/III
-6 ?
+0050 -003 C CN
+0045 -001
+0045 -004 Gc
+0053 +005 Algalis?
0.6
+0459 -54.7
+045 -004
+83
-4
9980 9991 0446
+0045 -001 6.1
-0623 1081 -0090 -020 5.0 -6
+0059 ±5.4
33
0050 58.745 1893.7 8 + 96
8.76 7890.9
650 .413 7.80
7.6 16384
58.61 -24
+008 7.84
618

```
  0.600
-54.700
 83.000
 -4.000
  6.100
    165.96
 -6.000

  0.852
  0.445
 -0.278
185.154
 32.393

 -0.522
  0.770
 -0.367
-133.242
 -19.910

 -0.050
 -0.457
 -0.888
 -2.770
  4.867
```

45-48 42-45 41-42

1.275 1109 350 → C_m 376 | 45 5220

165 0 36.7 +30 35 K3 III

774

3127 3.28 +1.28 +1.48 J

2.67 +0.445 4A

2.74 +0.47 J(2)

2.70 +0.455

773

144 875

358

2.32

63

1.69

1.55

32

40

n_{Bcl} ~~-0.95~~

n_Y = -0.4

= +0.2 OCW

+01064 -0836 FRY -2.3a 54

~~+0025~~ ~~0016~~

-117 5F

+15

24

+01039 -0852

+0134

+0015

+0149

+1375 -0836

+19 -43

+139 -088

+1366 -0914

FRS

n_z = .024

0

158.7

-41.4

3.56

-11.7

+0.136 -0.090

R.A.	:	0.600
DEC.	:	30.600
PM. R.A.	:	158.700
PM. DEC.	:	-91.400
DISTANCE	:	3.560
MODULUS	:	52
RAD. VEL.	:	-11.700

q1 (U)	:	0.852
q2 (U)	:	0.313
q3 (U)	:	0.421
dU	:	415.742
U	:	16.499

q1 (V)	:	-0.522
q2 (V)	:	0.429
q3 (V)	:	0.737
dV	:	-523.777
V	:	-35.613

q1 (W)	:	-0.050
q2 (W)	:	0.847
q3 (W)	:	-0.529
dW	:	-399.683
W	:	-14.407

55 Psc (167) $\Delta m = 3.27$ $K0\ II{-}III^{-0.3}$ $F3\ V^{+3.0}$

3690 0 37.3 +21 10 5.6 gG7 -17.36

361 8.F0 8m7" physician +0018 ± 2.2 -033 ± 1.8 GC

GC784 +0018 -032

0 37 17.329 1896.2 +21 09 51.56 1894.0

-097 1.85

(+05558) .232 +0.0018 -0325 53.41

+0020 -0295 bn, 50

+0.2 17.311 0280 52.21 1934.3 1005

2 +15 335

.309 +029-35 .36 cape

OCW! .299

+0.5 17.321 +067 52.13 52.18 1938.25

-008 -1.28 -77

313 52.41

17.272 51.97 1927.9 yale

0 (37.3) 6

51.91 1933.5

(35.5)

```
   0.600
  21.200
  31.000
 -35.000
   5.400
     120
 -17.300

   0.852
   0.378
   0.364
  54.027
   0.201

  -0.522
   0.544
   0.657
-161.692
 -30.811

  -0.050
   0.750
  -0.660
-131.254
  -4.363
```

171
3750

00 37.5 6.00 +1.14 +1.09 c
-45 05
6.00 +1.15
+8
Now

1236 972 298
1233 970 297

+0035 +004 Stay
+0039 +008 Stay
0412
043 +004

0.6
-45.1
+61
+1
5.6
+9

9990 9932 0432
-0435 1168 -0010
-1.1
0.0045
6.23

0.600
-45.100
61.000
1.000
5.600
132
8.000

0.852
0.485
-0.199
176.093
21.618 +24

-0.522
0.820
-0.234
-102.624
-15.397 -13

-0.050
-0.303
-0.952
-11.710
-9.157 -1

HR171 00 37.5 -45 05 +7.9

37.5 0

1.224 964

1.036 972 298 +00035 +004 sky

[illegible] [illegible] 295 +00388 +0082

0.6

-45.1

61

4

5.75

7.9

0411

043 +004

	0.600	
	-45.100	
	61.000	
	4.000	
	5.750	
	141.25	
	7.900	5.85
		147.98
	0.852	
	0.485	
	-0.159	
	182.988	
+28.6	24.272	25.5
	-0.522	
	0.630	
	-0.234	
	-90.958	
-14.4	-14.694	-15.3
	-0.850	
	-0.303	
	-0.952	
	-16.019	
-9.7	-9.701	-9.5

3856 0 39.1 +65 52 5.9 gK0 -3.28

379 -0008±3.8 -004±2.6 GC
-0014 +004
GC825

0 39 3.428 1887.0 +65 52 25.54 1841.7
050 23
478 25.77

-013.0 -0089

3.377 26.05 1945.11
+017 -08
.394 25.97
-.084 +.20 53.4

Fid5
Smppl

58.1

9124 -7580 0157
M094 -6522 -0017

23 94.0 1168 813 214

3919 (180) 0 39.0 −46 22 4.6 G6 +16.5 a

378

GC523

−0013 +002 N30 6467 −9996 0138 −20

9174 −0275 0011 −15

~~+0018 ±5.6~~

−0016 ±3.5 +003 ±2.4

G8 III woods 0020 0016

μphe F125

−0188 −0015

4.60 +96 +7 3 (+2.02)

4.59 +0.56 +0.732

4.20 +0.365 45

F124

−0024 −002 Sty

−00165 +0053

−0027 +002

−015 +001

−0217

−020 −002

192

1,172 816 213 MF

1,170 814 212

7054 −9762 0200

7058 −2168 −1024

−1.5 0074

5.64

192

	180.000*	
	0.000*	
	39.000*	
	-46.000*	
	-21.000*	
	-0.015*	
	0.001*	
	4.250*	
39.9	70.795	
	16.500	
	-0.058	
	-0.202	
-7	-7.446	
	0.041	
	-0.256	
-2	-1.302	
	0.001	
	-0.945	
-14	-15.510	

52
41.6 — 344 / 346 / 2.8

μ Phe 00 39.0 −46 21 G8 III

180 +5 / 12

3919

4.59 +0.94 +0.73 C

4.20 +0.365 45

384 / 51 / 333 44 14 384 / 334

−0.00165 +0.0053 F54 4.27

17
−0170

−015 +001

+16.5a

16 0 05.7 −9 07 gG8
340

5.58 +1.03 +0.83 C

R.A.	:	0.650
DEC.	:	-46.400
PM. R.A.	:	-20.000
PM. DEC.	:	-1.500
DISTANCE	:	3.950
MODULUS	:	62
RAD. VEL.	:	16.500
q1 (U)	:	0.849
q2 (U)	:	0.488
q3 (U)	:	-0.203
dU	:	-58.964
U	:	-6.980
q1 (V)	:	-0.527
q2 (V)	:	0.810
q3 (V)	:	-0.257
dV	:	28.713
V	:	-2.469
q1 (W)	:	-0.039
q2 (W)	:	-0.325
q3 (W)	:	-0.945
dW	:	4.843
W	:	-15.293

3497r +7.4 (1)

ADS 588 0 39.8 +3 5.4 +8.36

+3.93 0.0257

+030 −043 Greenw

173 985 068 958 +630 -043 +8.3 -003 -043 +1 -204

-005 0 +029 -003 0 137 +8.3 +5 +1 0257

+5 +6 -7

+3 -4 -11

810 00 40.5 -60 32 +261 (9) C_5

HD 4088

HR 186 5.48 +1.32 (2.39) K5 III

GC 853

(1)

0360 19.8 -049

+0397 63

+0341 ± 7.1 -043 ± 5.5

+0366 -044

5
+0363 -050
+15 +1
+0378 -049
= 1274

27.529 1602.2 9.04 1843.5
1.630 2.43
25.899 6.61

20.321 22.27 1928.36
06.660 13.75
26.981 8.52
76 1.039 .94
.990 8.98
.932 .07
938 8.83 -2.22

HD 4088

GC 853				0341 / 0395 ± 7.1			-043 / -064	± 5.5
	00	40	27.529	1902.2	-60	32	09.04	1893.5
			1.630				+ 2.43	
1950 no. p.m.			25.899		-60	32	06.61	
II Cape	00	39	20.321		-60	40	22.27	
		1	06.663		+	8	13.75	
		40	26.984		-60	32	08.52	
		-	.011			-	.23	1928.36
1950.0		40	26.973		-60	32	08.75	
		-	40			-	08	
	00	40	26.933		-60	32	08.83	
				1.034				-2.22

```
  0.650
-60.500
552.000
-54.000
  6.000
    158
 26.100

  0.849
  0.424
 -0.316
985.039
147.882
```

+60

```
 -0.527
  0.723
 -0.446
-864.396
-148.651
```

-88

```
 -0.039
 -0.545
 -0.837
 89.690
 -7.639
```

209

5.79 3F3 .408 5.80 ±.44 1.70

4891 60 43.4 -47 50 G5 IV

13.5 14" ~~Allegheny~~ Yale C0 297 44.90 5.57 ±0.22 (3) -11.4±0.7
15
r.p. .044 ±.011 AJ 78 464
~~.047±11~~ 467 5.79 408 154 308 (2) ...
358 155
296 154

+0143 ±4.0 -001 ±4.4 +003
+0143 -008 -006
210 00 43 +0143 -22 48 -14.7
4384 42.711 4.5 0142 42.15 4.8
-651 04
060 42.11
Gu122 0.7 42.949 (65.84) 42.41
-23.243 -22.8 -13 -18
+219 436 42.59 +0143 -007
-11 01445
2.5
-14.7 42.578 (39.68) 4227 1998
-12 +27
563 42.00 202-011
1.175 834 145 (MF)
1171 886 43.008 (70.07) 42.57
-12 -4
42.997 42.53

0.7[illegible]
-22.800
219.000
-11.000
2.500
3[illegible]
-14.700

0.846
0.533
0.020
781.733
50.1 24.427

-0.533
0.542
0.082
-553.584
-36.9 -18.718

-0.027
0.080
-0.996
-30.141
+12.7 13.694 11.5

5.48 +0.58 (2.05) v

4358 w 0 43.7 -22 48 sg 66 -14.70 w (4)
GC 9224120
w 4423
Y 147 w (+2.4)

5.6

-23° 243

+01425 +001 OG+ 5.08 +10365
4.72
+0147 4.2
+199 -14.7
+201 -003
+198 -001

210
320
371

+38 -25 +5 .020
+55 -34 +15 .015

405

5.51 ±0.58 +0.65 1.20"
5.48 ±0.58 (2.05)

8 1/2 -12 Y(7)

0 43 42.711 1904.5 +01443±4.0 -001±4.4 GC
+0142 +003
-22 47 42.15 1904.8
.055 +05
.060 42.10

42 28.274
1 14.215
42.489
43 42.489
-023
.466
.4613
.453

55 54.47 1532.89
8 12.52
47 41.95
-29
42.26
+21
42.05

31.8

6.79
3.4

42.575
-012
563
.511 + .451
.451
+255

42.27 1539.68
+27 36.3
42.00 31.5
42.02
+.08

4255 GCSS1 WU20 0 43.5+C5 03 F2 -14.08 O(4)

```
                4398.000*

                   0.000*
                  43.700*
                 -22.000*
                 -48.000*
                   0.201*
                  -0.003*
                   5.000*
                 100.000
                 -14.700

                   0.797
                   0.026

                  79.295

                  -0.522
                   0.079

                 -53.379

                  -0.021
                  -0.997

                  12.579
```

4.05
B4.55 72 48

+51 59

-35 -29

+13

1175 839 195 3 mP

HR 216 OD 43.7 −22.47.5 G

4348 −14.8

5.50 55

20145 −018 Carbohy 5.50 506

2400 −018

748

5.50 603 349 438 ①

217
−18
2.50
−14.8

R.A.	:	0.700
DEC.	:	-22.800
PM. R.A.	:	217.000
PM. DEC.	:	-18.000
DISTANCE	:	2.500
MODULUS	:	32
RAD. VEL.	:	-14.800
q1 (U)	:	0.846
q2 (U)	:	0.533
q3 (U)	:	0.020
dU	:	756.658
U	:	23.632
q1 (V)	:	-0.533
q2 (V)	:	0.842
q3 (V)	:	0.082
dV	:	-576.876
V	:	-19.462
q1 (W)	:	-0.027
q2 (W)	:	0.081
q3 (W)	:	-0.99
dW	:	-32.57
W	:	13.71

4408 0 43.9 +15 12 5.6 g M4 -27.38

427 57Psc -0021±2.4 -043±2.2

6C928 -0020 -055

-0022 -048 -050

0 43 55.713 1899.4 +15 12 11.53 18553

106 2.18

.819 13.71

Gm, 50

-0022 -049 55.746 55683 (6605) 10.71 11.47 1933.70

-0020 -0462 +1 -11 -23 +10 64 137

-0240 747 672 1058 11.57 Cap

-027-050 55.749 11.4 3.8 11.58 1940.10

-6 10.37 11.51 10.14 +6

743 5567 (69.20) 11.64 (B6.6)

55.712 736 -21 +6 11.59 1139.9 yale

+12 11.57

724 -087 605 -2.12 1937.9

HR216 . OU 44.8 +6 28 -015 +14.3
-016
+0006 ±1.5 -011 ±1.7

4526 48.257 2.0 +0008 6.07 1.5
0007
24 53
228 6.60

GC941

+5.104 0.75 48.294 (66.48) 5.71
+6.45
±14 -16 -16
-18
5.6 283 5.55

0007 -014

+143 0009 -0133

48.287 (70.16) (74.3) 5.68
-7 -9 5
280 5.59 0115

014 -016

1.159 0.803 0.195 (MF)

0.750
6.450
14.000
-18.000
5.600
13.182
14.300

0.843
0.454
0.289
16.849
6.351

-0.538
0.695
0.477
-94.800
-5.682

-0.015
0.557
-0.830
-40.546
-13.274

60 Pec

4526 0 44.8 +06 28 6.2 g G6 +14.38

434 (216) +0011 -012 N30

GC 941 +0007±1.5 -011±1.7 GC Gen Cat N30 G8 III

-0006 -011

GC 0 44 48.257 1902.0 +06 28 06.07 1901.8

029 49

0 44 48.228 06 28 06.56

J Cape 44 48.293 06 28 05.90 1940.08

- GC - 10 +17

48.283 +0009 -0115 06.07

-1 055 +0134 -0.49

+0014 015-016 -013

215 00 44.7 +24 00 .239 Orbit

45021

410 · 89.9 83.1

0.779466724

Vel = 511

0422

3.84 01.03

8872 -7032 1743

0754 -7110 -0126

1.271 927 197 fwhm

1213 921 195

[m] 030

C_m = 187

[B-V] 1.580

927

$(B-V)_0$ = 873

V_0 = 3.97

[C] 464

Δ = 655 M_V = +08 / +20

E(b-y) +014

+051

032

+0026 +0028±6.9 +0030 +0025 +050 +037±7.3 +042 +038

HR 25 00 45.2 18 20 +1.6

4585 13.766 96.0 4.76 95.4

-151 -202

615 6.78

HD 6950 17.14 03.75

-18.127 13.819 -4 +0027 +039

-16

803

1,200 1174 283 03.79 +00276 +0382

125

1,254 1174 284 43.921 41.39 21.27 0393

24.869 16.63

1,240 1,133 0.285 MF 13.79 0 4.64 041 +034

-37 .05

7.53 4.64

1129 284 +20

0.75 4.49

-1833

13.814 70.78 394

-10

804

543

+34

6.0

+1.4

0.750
-18.330
43.000
34.000
6.000
158.46
1.500

0.843
0.533
0.072
249.020
39.582

-0.538
0.831
0.141
29.895
4.964

-0.015
0.158
-0.987
22.413
1.972

2IF R3 IV

4585 0 45.2 -18 20 5.9 g R3 +1.68

441 +0028±6.9 +037±7.3 Ge

+0023 +037

Ge950

0 45 13.776 1896.0 -18 20 4.76 1855.4

151 2.02

.625 +00255 +037 6.78

43 59.029 +0026 +036 25 17.32 1932.87

1 14.690 5 11.92

45 13.719 +0.0370 5.40

-.015 +034 +032 20 -0.29

.704 5.69

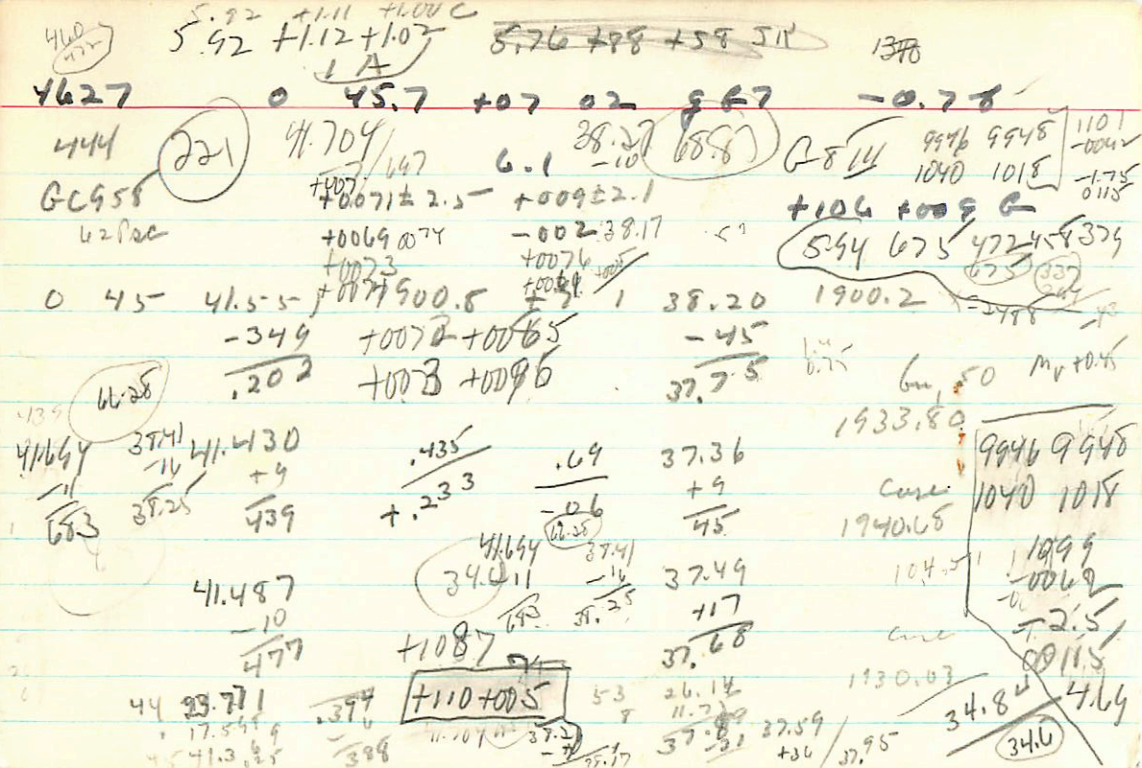
13.738 37.3 4.78 1933.7

-.021 -25

.717 5.03 1933.3

.710 5.36 37.9

+.085 +1.42



```
  0.750
  7.000
108.000
  2.000
  4.500
     79
 -0.700

  0.843
  0.451
  0.293
432.569
 34.155

 -0.538
  0.691
  0.483
-266.716
 -21.524

 -0.015
  0.565
 -0.825
 -2.520
  0.377
```

49-e

HQ221 PPM (H) 00 45% +0071 ±2.5 0074 +7 +0073 02 +009±2.1 +008 006 004 -0.7

4627 41.551 008 69 38.20 0.2

GCG58 116 004 JHA 202 131 -45

+6105 +45 41.694 66.28 38.41 37.78

-11 -16

683 38.25 +0072 +008

04 +0073 +009

41.704 60.87 38.27 1087

-16 -10 17

648 38.17 1004

1.210 912 237 110 +005

1.227 925 241 (MF) 41.457 40.68 32.94

1.216 918 239 -10 +17

9946 9948 1099 417 35.11 0.75

1040 1018 -0062 NO +7.0

-2.83 11.1

0115 6

464 5.8

-0.7

0.750
7.000
111.000
5.000
5.500
12
-0.700

0.843
0.451
0.293
450.682
56.557

-0.538
0.691
0.483
-264.483
-33.635

-0.015
0.565
-6.825
5.295
1.244

(224) 4654

S Pis 0 46.1 +07 19 gK5 +32.3a

HR224
963

14th KS III +083 -047 GC

4.27 +1.55 H +083 -046 N30

-045 FK3

W_3 50

+00568 -0481

00563 -0486

0.75
+7.3

.014 +27 -10 -35

0838

87

0.009 +36 -25 -40

086-053

-53

4.5
+32.3

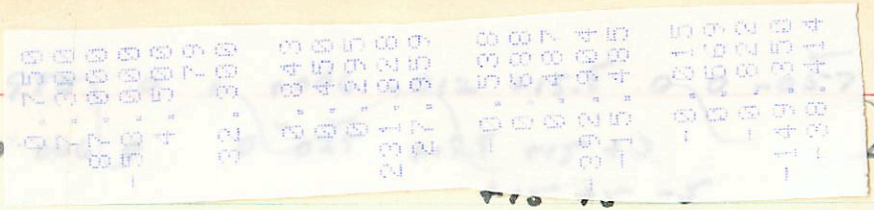
1.351 1.344 222 (MF Sht)

1.340 1336 219

4

199

-001 0



011

199 980 127 552 +083 -046 +32.3 -006 +4 -215

-017 001 081 -006 -052 389 +322 +31 +6 001

+26 +41 -16

+31 -17 -37

+27 +34 -12 014

+26 -12 -36

02

+25 +30 -10 016

+23 -7 -34

+25 +25 -7

+21 -2 -30

ADS671 (60") 0 46.1 +57 33

η Cas 46.7 36 1542

(4.0 / 7.6 } 11" 160°)

ε_0 324 +5.24 27

372 — 185 275 2.558

365 162

$\Delta m(V) = 4.03$ } nov 20 200

$\Delta m(B) = 4.74$ }

347 335 / 451

3.45 4.03

7.48 8.77

4973 60 44.0 -23 52

-24.345

?A 60

58146 33.62 15.58
13.748 10.22
5.33
3.93 6 -.20
.957 957 5.63 6.19
3,988 68.85 4.79 PR
-8
980

4,001 70.20. 4.12 +18
-6 -23
3.993 +0137 7.1
+0007 -011 +016 -023 +23.3
+0010 -024
+00085 -020
+0010 -019

R.A.	:	0.800
DEC.	:	-23.900
PM. R.A.	:	18.000
PM. DEC.	:	-23.000
DISTANCE	:	7.100
MODULUS	:	263
RAD. VEL.	:	23.300
q1 (U)	:	0.840
q2 (U)	:	0.542
q3 (U)	:	0.030
dU	:	6.401
U	:	2.380
q1 (V)	:	-0.543
q2 (V)	:	0.838
q3 (V)	:	0.053
dV	:	-133.719
V	:	-33.928
q1 (W)	:	-0.004
q2 (W)	:	0.061
q3 (W)	:	-0.998
dW	:	-6.958
W	:	-25.087

+0027 +0027 ± 4.6 +035 ± 4.5
+0027 +0029 +39
247
HR247 583 00 502 -24 17 +43 +34
35 +38.0 24 F
94
13.357 6.2 40.03 4.2
508 -1.74
384
.261 684 41.77
-24.374
13.434 (65.57) 39.17
GC1181
-13 -18
421 39.35 0.88
-24.3
+46
+0027 +0039 13.360 (38.05) 40.57
+27 +36
+0024 +0.0401 -12 40.30 5.5
348
+38.0
(70.27)
0359 13.460 39.22
-14 -6
042 036 436 28

0.850
-24.300
46.000
36.000
5.500
12.400
38.600

0.836
0.547
0.036
259.537
34.045

-0.548
0.835
0.041
33.672
5.797

0.008
0.054
-0.999
10.769
-36.528

-240874 ADS 726 5.46 +1.24 (2.28) c +342 GLW

5098 00 50.2 -24 17 5.6 g152

GC1051 (247)

+0022 ± 4.4 +038 ± 4.5

+042

13.357 1506.2 +0028 40.03 1504.2

-096 -174

13.261 4177

6-11

11 "

+0025 +040

+ 3 0

+0028 +040

+037 0025 -040 41.04 1533.7 607

13.341 +34

40.74 40.53

.340 +0027 -035

+0369 50.24

+034 -043 + 9.72

59.753 40.52

13.602 -01

13.355 40.53

13.340 +21

.340 40.32

1934.37

1934.0

HR 258 (?) 22.146 (?)

176 28.05′ 180 28.1 3.13 +3.0
18.0 28.1

36 And 0 52.3′ +23 21 +1.58 K0(3)

5286
5 13
GC 1091 0ˢ.42 +1.03 5.9 (?) K1(+2.3) IV (?)

ADS 755 0.0 (1)

0.44 5 (?) OCW +4.0

+128 ±5 −038 ±5 Y
+128 ±2 −026 ±2 GC

0.00 −028 (?)

187 −028

−031

9982 9545 1390
1535 3045 0150

149
−28 (?)
2.4

5.6 (?) 0.35′

+0093 ± 2.2 −029 ± 2.0
+0100 −030 031 −028
52 17.070 1898.1 +0101 +2.3 21 28.76 1896.2
483 0095 1.54
16.587 0000 30.32
6m, 50
16.984 1935.3
−2 17,304 6875 28.19 29.08
952 5 35 15
299 28.04 29.32
27.55
1938.70
16.982 2836 28.91
−5 10.189
978 359 −16
.945 28.75
27.88
16.875 29.52
+1 +.358 −5
876 29.47 1933.96
34.0
17.257 4.42 2817 29.18 37.8
−11 −29
2244 2838 −1.14

R.A.	:	0.850
DEC.	:	23.350
M. R.A.	:	0.000
M. DEC.	:	0.000
DISTANCE	:	0.000
MODULUS	:	10
D. VEL.	:	0.000
q1 (U)	:	0.836
q2 (U)	:	0.342
q3 (U)	:	0.428
dU	:	0.000
U	:	0.000
q1 (V)	:	-0.548
q2 (V)	:	0.533
q3 (V)	:	0.645
dV	:	0.000
V	:	0.000
q1 (W)	:	0.008
q2 (W)	:	0.774
q3 (W)	:	-0.633
dW	:	0.000
W	:	0.000

R.A. :	0.900
DEC. :	23.350
PM. R.A. :	149.000
PM. DEC. :	-28.000
DISTANCE :	2.400
MODULUS :	30
RAD. VEL. :	1.000
q1 (U) :	0.833
q2 (U) :	0.337
q3 (U) :	0.439
dU :	495.361
U :	15.398
q1 (V) :	-0.553
q2 (V) :	0.535
q3 (V) :	0.638
dV :	-429.581
V :	-12.335
q1 (W) :	0.019
q2 (W) :	0.774
q3 (W) :	-0.633
dW :	-90.212
W :	-3.357

22Wt

4.12
3.50

267 00 53.5 −11 32 ~~28 62~~ 1P4 III −25 8 b

5437

5.35 +1.50 (1.82) C δ P24 ±2.5

5.30 +1.48 +1.78 (3) −0019 −0051

4.54 +0.635 (3)

23Ut 56.3+0.525+0.68 -0026 ± 2.1 -014 ± 2.0
(213) -0028 -005

5722 0 56.2 -11 39 5.8 gG7 -18.66

556 ~~5.60+11.8 (2.23) 6~~

GG1173 56 13.577 1903.3 -11 38 58.35 1898.3

121 -0027 -0095 + 72
.698 -011 57.63

274 54 58.441 -0396- 46 44.71 1934.37
1 15.165 -038 -015 8 6.78
13.606 57.93
55 13.630 32.7 38 57.34 180
.576 58.27
341 .5 2 58.43
(346) + 57.84
578 57.

13.424 18 57.82 58.20 1939.89
-13 .606 -.19 +16
.611 -092 58.04 Yal
1533.7
13.434 57.80 1936.0
-629 -21 (37.7)
57.59

	0.950	
	-11.650	
	-34.000	
	-17.000	
	5.000	
	100	
	-18.600	
	0.829	
	0.530	
	0.176	
	-173.628	
-19.9	-20.643	-13.7
	-0.558	
	0.803	
	0.209	
	23.308	
-1.7	-1.553	-2,5
	0.031	
	0.272	
	-0.952	
	-26.771	
+153	15.215	+143

HR 288 00 59.0 −38 11 −31.1

6055

579 1.0 +00056 +055 Sby

34.2 +00058 +0534

529

89 0674 89

49 49

5.0 069 +049 5.04

−31.1 −31.1

1.268 992 212 (MP)

1.257 985 210

1.252 980 208

out

RI = 0.450

+0065 ± 5.6   +056 ± 5.4
+0053   +055

6055   0   59.0   -39   11   5.6   KO   -31.1

582   5.60 + 418 (2.23) L

GC1229   5

Scl   58.301   1909.0   -39   11   10.04   1907.5
-260   stg 2.38
.035   12.42

+0056 +055
+0058 +0575

58.217   10.90   1937.59
-029   +11   17.16
.188   10.79   8.59
58.306   9.82   1958.75
-.279   46.27

.233   +0674
.198   +068 +053
+.198

-027   9.79
.279   10.29
+2.13

37.2   38.7

R.A. :	1.000
DEC. :	-39.200
M. R.A. :	89.000
M. DEC. :	49.000
DISTANCE :	5.090
MODULUS :	104
RAD. VEL. :	-31.100
q1 (U) :	0.826
q2 (U) :	0.558
q3 (U) :	-0.080
dU :	399.620
U :	44.154
q1 (V) :	-0.563
q2 (V) :	0.804
q3 (V) :	-0.192
dV :	2.875
V :	6.274
q1 (W) :	0.043
q2 (W) :	-0.204
q3 (W) :	-0.978
dW :	-33.423
W :	26.934

27 wt (315) 2463.1 -0026 ± 2.5 -028 ± 2.4

-0021 -030

6482 1 03.1 -10 15 6.4 g G8 +12.3 6

623 418

+0024 -029 6.P3 +1.02 +86 120 Rom

1313 3 6.485 1897.9 -10 14 46.75 1893.3

135 +1.59

.620 -0023 -033 45.16

1 5.1.356 22 49.05 1933.65

1 16.185 -00235 -029 8 2.95

6.544 -0305

3 14 46.07

6.544 -0347 -39

46 122 '649

-6 -033-035

538 130 46 +37

37.6 46.09

9177 - 2464

6.554 47.06 1939.10

3972 -14 +22

540 5.42 0037 → 4.3

-078 46.87

19 33.74 1935.5

.557 46.02

-5 -30 42.2

552 46.32 46.41 / 1.25

6.35 9113 4117-7910-6118 0475 +0075 +7.4 +10.3

Pt.
$M_V = +0.78$ 6.01 615 1230 418 472 (349) 5.70 359 285

Dale $V_0 = 5.56$ 85

$X = 2130$

E(B-V) 076

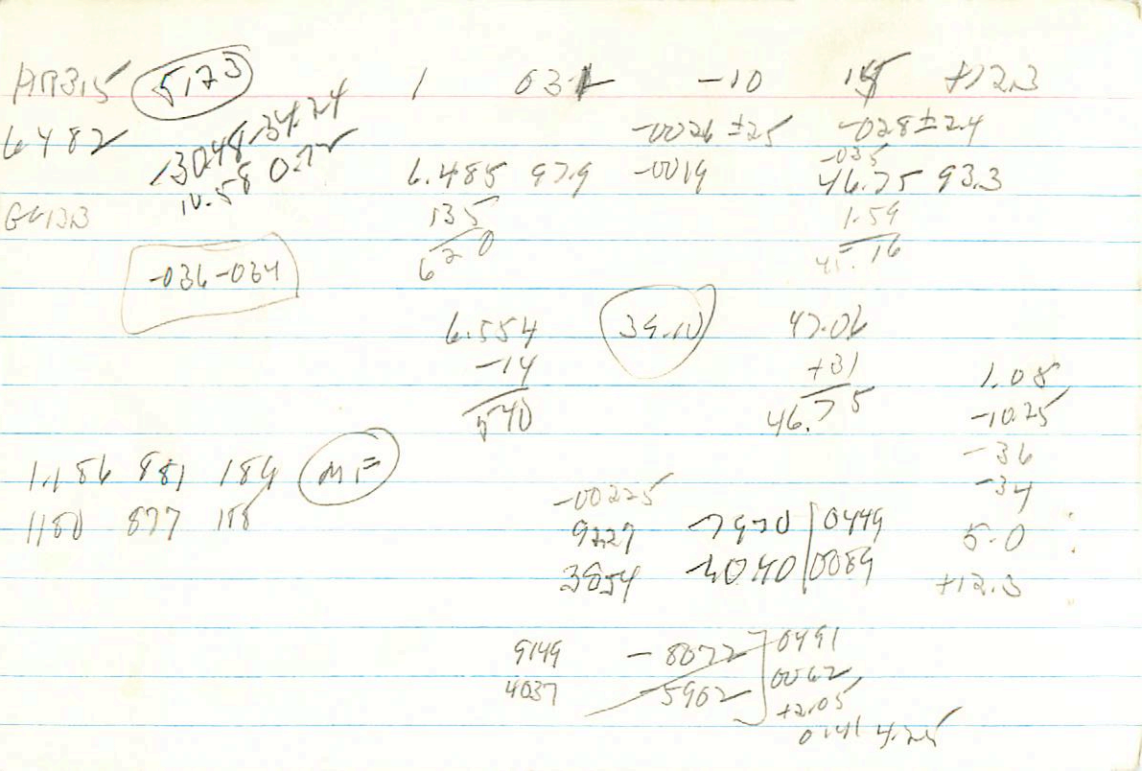
E(10-?) 081

5848 / [illegible] [illegible] 59

788

[illegible]

[illegible]



1.650
-10.250
-36.000
-34.000
5.000
100
12.300

0.822
0.529
0.211
-223.322
-19.743 -18.4
-1.8

-0.567 -0.5
0.795
0.214
-32.938
-0.663
-0.4

0.454
0.295
-0.954
-56.670
-16.9 -17.400

4.2 } 1.4
4.2 }

6595 — -0034 ± 2.0 — +003 ± 2.1

634 — -0035 — +011

β Phe — 1335 — 0026 — 03.9 +005 — -46 — 3-9 — G4 — -1.1 a

.25

HR 322

3.26 — +0.89 — G8 III — -035 — +003 GC

41:41 binary — -025 — +011 N30

-030 — +009 FK3

-030 — +008

GC 1335 — 3 — 51.330 — 1500.4 — -46 — 5-9 — 9.80 — 1897.6

169 — -16

51.499 — 9.96

70.06

51.403 — 51389 — 9.57 — 9.74 — 1939.29 — +.05

-51 — -24 — -20 — +14 — +14 — -.47

.352 — 315 — 9.71 — 9.60 — 15 — -.44

141 — +2

1.138 — 767 — 162 — 95.82 — 3.0

clean — 47.9 — -.11

.335 — 50.3

-.164 — 9.43

+.53

-0031 — +006

51.362 — -0317 — 0908 — 1956.53

-044 — -.15

.318 — -030 +002 — 9.26

?

274 961 -231 682 -030 +005 -1.1 -006 +1 025

+008 +002 -029 -006 066 -025 -> -1 0

+2 +1 +2 025

0 +3 -1

+2 -2 02

+3.4 015

1.050
-47.000
-44.000
2.000
3.000
396
-1.100 0.14

0.922
0.550
-0.148
-111.676
-4.283 -5.7

-0.567
0.765
-0.305
87.929
3.835 +4.9

0.054
-0.334
-0.941
-10.877
0.602 +0.5

HR 332 — 1 05.3 −62 03 −7.8

6743

+0103±30 −004±2.9

20.095 6.6 +0100 +046 −012 −010 31.10 5.4 1.1

−447 18 −62.0

19.648 30.92 1.46

00

20.318 (69.51) 31.61 −1.4

−42 −6 5.0

276 .67 −7.8

+0100 −009

1.138 758 141 (MF)

+01093 −006

1137 757

1136 757

20.025 (39.44) 31.57 0761

[illegible] 58 +29 (035 −014)

083 31.26

1997

R.A.	:	1.100
DEC.	:	-62.000
PM. R.A.	:	166.000
PM. DEC.	:	-14.000
DISTANCE	:	5.000
MODULUS	:	100
RAD. VEL.	:	-7.800
q1 (U)	:	0.818
q2 (U)	:	0.503
q3 (U)	:	-0.280
dU	:	268.741
U	:	29.061
q1 (V)	:	-0.572
q2 (V)	:	0.654
q3 (V)	:	-0.496
dV	:	-254.584
V	:	-21.592
q1 (W)	:	0.066
q2 (W)	:	-0.566
q3 (W)	:	-0.822
dW	:	61.842
W	:	12.596

27.3

-19.9

12.7

+0103 ± 3.0 −004 ± 2.9
+0097 −015

6793 (332) 1 05.3 −62 03 5.3 65 −7.86

654

1372 5 20.095 1506.6 −62 2 31.10 1905.4
Lime

−447
19.648

+15
30.92

+01112 −0048 FNY

20.025
−038
19.987

+0782

+080 −009

31.54 1935.69
+23
31.31
31.57 −0.65

1749
874

136
68
.055

20.148
−025
.123
+.407

(41.8)

31.92
−09
31.83

1957.18
48.44
(43.0)

20.07
−053
.017

31.1 1946.9
−61
31.71

81 Pec

6903 (339) 07.1 +19 24 5.6 gF5 -8.07

-0006 ±3.1 +010 ±2.5
-0004 -005

669 -0005 +005

1404 -0003 +008

7 8.488 1904.7 +19 23 32.17 1503.7

027 -0.46
8.515 31.71

-0042

-004 +004

8.511 31.12 1933.5
+5 +7
516 31.19 172

209

8.499 504 30.8 31.95 37.49 35.5
-6 -016 -7
493 31.88 Yale 31.8

8.444 31.48 1939.9
+8 +17
472 165 31.54 - 17

HR339 1 07.1 +19 24 −8.0

−0006 ±3.1
−0008
−0006
4.7 0005

+010
+010 ±2.5
−009
+008

9.488 3.2.17 3.7
−37 −16
5.15
8.479 (65.64) 32.41 31.61
6403
+18.1K3
−11 −23
468 .19
GC1404

−0007 +009
−0047 +0085

8.489 (37.49) 31.95 −0066
−4 −6
485 31.89 −005 +006

(045)
1.073 621 048 (MF)

(64.65)
8.473 32.41
−4 −16
464 32.25

1.1
+19.4
−5
+6
5.0
−8.0

1.100
19.400
-5.000
6.000
5.000
100
-8.000

0.818
0.352
0.455
-6.259
-4.466

-0.572
0.588
0.572
29.500
-1.628

0.066
0.728
-0.682
19.238
7.382

2640

B23 475
055

+3.0

HR341
6953
BD1415
124.186

1 07.6 +25 12 −115 −111 +4.5
−0002 74.2 −112 #3.5
36.294 1.6 −0004 36.51 5.1
010 −0003 5.03
304 66.04 41.54
36.339 34.94
−9 −16 1.1
330 .78 +25.2
0
−116
68.95 6.0
36.331 34.32 +4.5
−4 −12
1.330 1.319 0.214 MF 327 34.20
−0023 −113
1.317 1.308 211
−0001 −1117
−0014
000−116

1.100
5.200
0.000
-115.000
6.000
158.46
4.500

0.818
0.305
0.488
-167.498
-24.349

-0.572
0.527
0.629
-289.782
-43.098

0.066
0.793
-0.605
-436.230
-71.861

341 1 07.6 +25 12 g 125 +4.56

6953 GL ±3.5

5.80 +1.46 +1.82 (2) -0002 -1065

0000 -1035

000

60

0 -108

6953 1 07.6 +25 12 gK5 +4.56

GC1415
W674

6.0

+6.40(4)
+4.6w(5)

HR341

(341)

t24°186

-003 -112 QC
-013±5 -113±5 y

-15 -46 -45 .010

-0002 ± 4.2 -112 ± 3.5
-0002 -101

36.294 1901.6 +25 11 36.51 · 1905.1
010 5.03
1.304 41.54

36.307 39.86 1927.9
2 591 -5
309 297 39.81 28.8

36.29 -007 27.2 38.6 1929.7 23.7
-5 -11
285 35.49
18.30
39.15
-2.39

-1.100
25.200
0.000
-108.000
6.000
.158
4.500

0.818
0.305
0.488
-155.947
-164 -22.519

-0.572
0.527
0.629
-269.797
-30.2 -39.930

0.066
0.793
-0.605
-406.145
-524 -67.093

7076 / 086 +14 26 +16 -> -19

+180175

-0019-020 Carlberg -24
6.74
+16.3

T470-020

+0.92 +140

-036 -015 Abrev

-00/0# -0203
-019-024

1.1 -0156

+14.4 -001 52 -204

-13.5 -20
6.74

-14 -0221

-00117-0142 2L

6.7 -021-022

+16.3

+ 2 + 7
+ 15 + 25

-00101 -0110

11748 71 148

-22
-22
6.7
+16.3

-0147

-013-014

-019 077 072 .765 10.95 -033

-00117 -0142

37340 7.8 -0015 -021 44.08 35.40 4.8
-15 -0021 -020 [illegible] 64
325 -0016 -020 44.18 36 04
384

37.297 71.266 34.80
241 -17
34.63

37.287 58.64 35.11
281 -17
34.94

37.306 57.86 35.20
-30
35.40

R.A.	:	1.150
DEC.	:	14.450
PM. R.A.	:	-19.000
PM. DEC.	:	-24.000
DISTANCE	:	6.740
MODULUS	:	223
RAD. VEL.	:	6.300

q1 (U)	:	0.814
q2 (U)	:	0.388
q3 (U)	:	0.433
dU	:	-115.063
U	:	-22.912

q1 (V)	:	-0.576
q2 (V)	:	0.637
q3 (V)	:	0.512
dV	:	-22.207
V	:	-1.722

q1 (W)	:	0.077
q2 (W)	:	0.666
q3 (W)	:	-0.742
dW	:	-82.551
W	:	-23.068

```
  R.A. :     1.150
  DEC. :   -14.450
. R.A. :   -20.000
. DEC. :   -20.000
STANCE :     6.910
ODULUS :   241
. VEL. :     6.300

q1 (U) :     0.814
q2 (U) :     0.549
q3 (U) :     0.192
    dU : -126.718
     U :   -29.329

q1 (V) :    -0.576
q2 (V) :     0.805
q3 (V) :     0.141
    dV :   -23.431
     V :    -4.761

q1 (W) :     0.077
q2 (W) :     0.225
q3 (W) :    -0.971
    dW :   -28.428
     W :   -12.970
```

322
351. 6.8 1 08.8 +20 46 +15.8

7087

W_3 50

+00267 -0076
-0082

0374

039-012

1.1
+20.75
+42
-12
40
+15.8

1146 857
1.205 846 251 MF
1142 837

	1.100	
	20.750	
	42.000	
	-12.000	
	4.000	
	65	
	15.800	
	0.818	
	0.342	
	0.463	
	132.816	
+17.9	15.698	+36.3
	-0.572	
	0.574	
	0.586	
	-139.101	
2.8	0.482	-21.1
	0.066	
	0.744	
	-0.665	
	-30.073	
-12.1	-12.403	-17.1

X

~~H~~ PAC 5 4 332 413 -5 1 08.8 +20 46 ~~47~~ G8 III

3 51
108 7

4.66 +1.03 +0.81 2 J +15.8a

~~4.27 +0.38 2 J~~

423 +0.345 4 A

-0061
+0.00268 ~~-0.0226~~ FRY 388 48 3.7 4.1
-42

12
+0376 +15.8a 4.1

+039 -010 ~~076~~

1.1
+20.75
+41.5
-1.0
4.37

+138V V106 FR5

1226
4.66 613 457 359 +15 +345 R-J x = 24.8 V_0 4.47 +0.3 4.15

048
B 045 266
320
B -054

1.100
20.750
41.500
-10.000
6.350 4.15
186 67.6
15.800

0.818
0.342
0.463
134.242 64.
32.315 2/64

-0.572
0.574
0.586
-132.390
-15.393 1 +0.4

0.066
0.744
-0.665
-23.165
-14.819 -12.1

HR353 1 09.2 −2 31 −8.9

−013

7147 1.15 −0044 ± 26 −020 ± 2.2

−023

−2.5 10.359 97.8 −0041 58.18 921

GC 1444 −6.0 030 −0041 1.16

989 57.02

−3.14 −2.3 10.630 38.58 58.00

6.0 −9 +36

−8.4 821 57.64

40.286 (4137) 9.64

1.328 1.213 0.252 (MF) 20.554 11.50 −0041 −019

10.840 58.17 −0187

842 58.21 −0614

20 +6

1307 1197 247 81 ✓ 58.15 / −060 −023

1.150
-2.500
-60.000
-20.000
6.000
158.49
-8.900

0.814
0.497
0.301
-285.379
-47.912

-0.576
0.759
9.304
81.014
10.132

0.877
0.421
-0.904
-67.901
-2.719

3 4hd   5.91 +1.39 +1.64 C

7147   1   09.2   .02   31   g K4   -88 + W(3)

GC1444   (353)   5.55 +1.40 +1.66 K4 IV R

W690

-3° lul

-0042 -019
-020

-0629

-061 -024

±3   ±2
-066   -020 GC
-038±7   -019±7 Y

-66 +20 -6 .005

−0044 ± 2.6   −020 ± 2.2
−0040   −018

9 10.759 1897.8   −2 30 58.18 1892.1

230
.989

7 54.476
1 16.368
9 10.844
013
857
− 9
848

834

10.830 − .155
− 9
821

(38.6)

−2 37 157.13 1934.12
57 58.28
30 57.85
− 43
58.28
+ 32
57.96

1.16
5702

44

1938.58

58.00
+ 36
57.64
57.80
− 0.78

36.35
(44.3)

7218 1 10.1 +31 43

6.337 95.2 38.62 86.9

6.127 5.79 88.8

4.887 2.5 .0220±23 -.013±.95
31.01 41

4.914 57.91 31.85

H0360 +0N -024

7B18

1 11.0 +24 19 -025 +5.9

-016
-024

+009 ±2.3 -030 ±1.9

+7.0 41

76.6

1.651 97.8 +0013 9.54 99.3

-47
604

+0013
+0021

152
06

1.705 65.25 9.69 11

-11
694

-29
5.40

1.203 867 258

1202 866

1.702 68.72 9.46

-4
1.698

-17
9.37

1.694 68.42 10.53

-4
690

-11
10.42

+0013 -026

+00148 -0238

0202

021-028

1.2
+243
+23
-28
4.5
+6.6

11
-24
4.55
+6.6

R.A.	:	1.200
DEC.	:	24.300
R.A.	:	11.000
DEC.	:	-24.000
TANCE	:	4.550
DULUS	:	81
VEL.	:	6.600
q1 (U)	:	0.809
q2 (U)	:	0.303
q3 (U)	:	0.503
dU	:	3.935
U	:	3.639
q1 (V)	:	-0.581
q2 (V)	:	0.543
q3 (V)	:	0.607
dV	:	-89.366
V	:	-3.260
q1 (W)	:	0.089
q2 (W)	:	0.783
q3 (W)	:	-0.616
dW	:	-84.840
W	:	-10.960

φ Pac 6 11.0 +24 19 g G7 +5.9a

HR360 4.44 +1.02 G KOIII

10ʰ8"

7318 +0018

706 +023 −030

+025 −018

+012 −030 GC

+026 −018 FR3

+023 −032 GCT

+025 −022

φ Pac

G4

812	309	495	+0925	−0357	+0523	+3.8		+2.9
−578	544	608	−0645	−0419	−1264	−8.4		+3.6
−081	780	−620	+0092	−0886	−0742	−5.2		−3.7

305 852 412 511 +025 -022 +5.9 -010 +2 -095

-008 003 024 -010 009 125 +5.4 +5 +2

+4 +10 -4 016

[+8 -4 -9]

+3 +8 -3 02

[+6 -3 -6]

013

+6 +12 -5

[+9 -3 -9]

Cl Psc 1 11.0 +24 19 120 III

360

7318

4.64 +1.02 +0.85

4.27 +0.375 25

±2.5

+0.00120 −0.0260 fh4

+5.9a

+0.5 OCW

+017 −030

360.000*

1.000*
11.000*
24.000*
19.000*
0.017*
-0.030*
4.400*
603 75.858
5.900

0.022
0.500

4.616

-0.124
0.609

-4 -5.791

-0.105
-0.616

-10 -11.562