20084
GC4030
w1865
7668
+84°59
HR 965

3 20.1 +84 44 gG4 +33.16
5.61 +0.42 +0.49
~~3 08 6~~
G5II-III R
S=.19 w(+0.5)
+32.4 V(6)
+31.9 w(3)

80
+0525 -132 N30
+0525 -130±1.5 GC con't N30

+76 -4 -11 .010
+102 -16 -22 .007
+114 -23 -29 .006

+071±1 -128±1 GL
+072 -132 N30

+081 -139 Gmw Agt.

22±10 C(10)

+0131±3.1 −058±2.7
+0125 −065

20709 3 20.4 +73 02 7.3 gN2 −20.28 4W

4035

1868 25.051 1885.9 +73 | 57.23 1884.1

−840 3.82

24.211 61.05

24.955 9716 56.86 1545.24

58 24.8558 ~~4.770~~

25.009 +647 56.86 753 37.6

24.65 51.7 58.14 19 30.1

57 − 6 53.5

.707 58.32

5.18

57.59

−3.46

$150_{94}{}_{\pm 18}$ 3 20.7 +49 41 $^{+147}_{+42}$ $^{}_{-18?}$

27

HR103Y +0025 −025 +0.6

34Pa +0026 −026 −0.5

4Pa +0028 −026 +0.3

2Pa +0028 −025 −2.4

+00268 −0255

p = ~~+1.5~~ −2.5

+13 −2? −5

175 pm.

1152 168

+485 −229 +840	+0548 +0277	+0875 +13.1 +15.3 2.1
−665 +529 +526	+0820 −0639	−1459 −21.9 −25.3 −1.6
+567 +817 −104	+0649 −0558	−0289 −4.3 −5.0 −.3

+0064-0 45 →64 +0102 ±10.0 −028 ±11.3
+0043 −044

21004 3 22.1 +53 45 6.4 Fom −4.16

1881 3.135 1909.1 +53 44 49.01 1910.5
4066 −417 +1.11
2.718 5012

10.95
51.630
2.580
2.180
.760
+ 5
705 22.47

2.866
+ 17
883

2.894
+ 5
899

(30.4)

849
+.13
941
173

28.9 1926.8
21.50
5070
5007
−2.07 −.53
48.63
+ 35
48.9

45.02
−22
48.80

49.06
−31
48.75

48.84
1444.63 −1.28

11530
39.5
(29.0)

1946.87

1029

~~2496~~

2107

-29 103 444 2.727

3 224 448 56

-124 0A013 329

-28(21 0A014, 367

-3.2105 App 597 517

0.044

5.90 .636

5.70

0.20

9353 9352 6181 | 0455

3 3537 -9641 | -0009

-06

7.26 31.80

WB +1.7

1 0 Tam 3 22.1 +0.8 s⁻¹ -066 -21.0a

1HR1030 -065 -071 FR3

-075 N30

+0.80 C -065 -075 G-L

3.57 +0.89 +0.64 GrIII

-066 -074

~~2100~~

~~188~~

21120

1882

4070

-0045 10D -075 N30

-0045 ±0.9 -073 ±0.9 GC cm & N30

21110 3 22.3 +31 83 G1X4 +18.06

7.3 +026 -004 G

272 635 524 P52 +026 -004 +15.0 -002 +10 -016

-020 001 017 -001 -090 035 +16.2 +10 +12

-20 +39 +5 003

+34 -24 +13

-744

21252 3 22.8 -15 13 dGO +44.5 tw(3)

GC40B3

W 1895 [illegible]

7.97 +0.67 1.69

~~7.97 +0.66 +1.69~~ Stay

X7C4

-15°59'5 [illegible]

17.48424 / 25328 (1)

426 [illegible]

-20 -27 -64 .025

-31 -31 -71 .02

-141 -270 dc

-141±4 -265±10 V

Cape Rel -141±5 -250±4

-150 -260

-24±11 G(5)

-0182 ±9.0 -270 ±7.5
-0103 -279

~~34.664 1897.9~~

55.707 1907.4 -15 12 37.93 1904.5

562
56.269

+12.29
25.64

46.209
09.775
55.984
597

(26.6)

-2.10 1934.23
19.12
32.98
-1.40
33.58

802
34.0
29.5

996
273

-5.978
+17
995

33.60 1933.79
-19
33.79

33.88
8.24

+28 [3?] 064089

DDO 1, 71

21242 3 235 +28 33 6.5 165 +16.9

+28.532

+26.5 Herb

+024 -104 Y
13 -
+027 -105 So

H Pearmain double

+049 -104 AGHB
+038 -104.5

"Had to study several words of the Supp. to get variable; a number of stellar lines are double on these plates; separation of the double line, 120 km/sec."

R.C. Young DDO Pub 1, 71. 1939 +038 -107

[illegible] 90, 137

$M_2 - M_1 = +0033 - +0005$

Pool 1 0E:22

107 Jr.'s

Pool 1 02:20

L 28058 ✓

6.43

2124 ✓ 3 23.6 +28 82 +16.9

2 x Ni

+024 -104 Y
+ 3 − 1 → CC
− 2 + 2 I=104

+049 -104 AGN2
+028 -105 Y →

+037 -104

+037 -107 +16.9

3.5

41.35 104.74
19.91 1.28

5584 5734
2854 -8454

1023

040

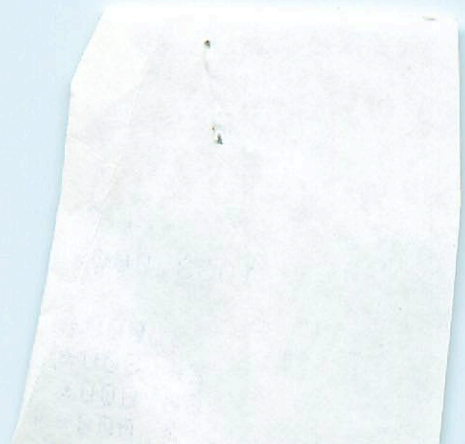
911

XSS

010-810-4024

010-810-4024

63



1033.000*

3.000*
24.300*
60.000*
4.000*

2457 3 254 -85 57 +300

1051

+966 50-111-1111

1287 ابو عمر

1273 ابو عمر

1046 3 26.2 +55 17 5.0 1045

21447

4146 AB 5.10 ±0.04 ±0.05 J

ADS 2865 4.5 15"

A 5.06 ±0.05 ±0.03 SSS

±0.19 ±1.48 1.062 000 SPL

2.873

2.847 JL

2.883

-86 -9

-045 -008

±0.3

-0052 -005

-0055 -0064

-0468

-049 -009

023

164

Bul 51 2010

B(17) M_V = +0.6 B 16.20 ±0.00 ±0.50 SSS

a = 033 ✓ 148

r = 052.

+0.90

4.15

1046.000*

3.000*
26.200*
55.000*
17.000*
-0.045*
-0.008*
4.1 ~~4.300~~*
6.41 72.444
0.300

-0.092
0.810 54
27

-6 -6.451

0.125
0.586 38
19

+8 9.196 61

-0.151
-0.013 0

-10 -10.964

```
R.A.      :    3.450
DEC.      :   55.300
M. R.A.   :  -86.000
M. DEC.   :   -9.000
DISTANCE  :    3.000
MODULUS   :   40
D. VEL.   :    0.000

q1 (U)    :    0.488
q2 (U)    :   -0.322
q3 (U)    :    0.811
dU        :  -99.429
U         :   -3.958

q1 (V)    :   -0.666
q2 (V)    :    0.464
q3 (V)    :    0.584
dV        :  134.707
V         :    5.363

q1 (W)    :    0.565
q2 (W)    :    0.825
q3 (W)    :   -0.012
dW        : -166.252
W         :   -6.419
```

R.A. :	3.450
DEC. :	55.300
1. R.A. :	-86.000
1. DEC. :	-9.000
ISTANCE :	3.000
MODULUS :	40
D. VEL. :	0.000
q1 (U) :	0.488
q2 (U) :	-0.322
q3 (U) :	0.811
dU :	-99.429
U :	-3.958
q1 (V) :	-0.666
q2 (V) :	0.464
q3 (V) :	0.584
dV :	134.707
V :	5.363
q1 (W) :	0.565
q2 (W) :	0.825
q3 (W) :	-0.012
dW :	-166.252
W :	-6.619

64

-0007 55.9 -0116 55.4

21567 3 26.9 +35 30 7.7 gM3a -79c 24

R Per

1921 51.747 1915.2 +35 30 1.81 1913.7

-80

21488 +52.44 3 266 +52 44 +26.4

+25 (1)

+030 -035 PPM

+027-035 9110 6653 044

4134 → 4136 -0757

+350 99.44

+368 99.58

9.14

21590 3 26.9 +16 35 7.0 A0 +2.46

1922
4155

+0019 −022 N30

+0017 ±3.6 −023 ±3.6 GC Cont to N30

+15.7 (1)

σ Psc 3 27.0 +47 49 +15.98

HR1052 4.31 M +1.35 K IR3 IV

2155 2
1924
4158

+0007 +019 N30 (60)
+0007 ± 1.4 +023 ± 1.4 GC
con ± N30

+006 +022 Rc
+007 +019 N30
+006 +024 FK3
+007 +022

+0008 ±3.8 +005 ±3.9
+0005 +001

21688 3 27.2 -12 5-1 5:6 A1 n +14.7 6

1928

4164 14.215 1899.1 -12 50 45.04 1897.6
-041 -26
.174 45.30
37.2
3.358 56.15
10.815 11.85
14.173 33 1933.96
44.0 252
-1.0
45.35
194
188 B
14.201 45.35 1938.56
0 +020 +20
45.15 36.3
45.25 38.7
+.05

2589 3 274 +42 03 +5 van

26?

64 +36

+0082-023 Cambridge

041-023

123

23

4

+15

2158G 3 23.4 +42 02
+41643

+1 -4
+0887 -0160 W_c 50
-0164

+0938 [+097 -019] 0824
0812

2174H 3 29.7 +57 42 FS

AR1071
GC4226

T16

[m_1] 213 +35 1340 .343 .153 .428 ② SPL 2.628 ④ C+
366 448

[C_1] 350 $\frac{67}{10}$ $\frac{2}{}$

67
64
3

478-366 799	+0136 +0224	-0543	-57.2
-665 443 601	-0189 +0882	+0623	-43.0
577 818031	+0163 +1628	+1791	-2.2

-71.6

+0008 +042 N30

-0017 -001 G4

F006

21DX2 3 2P.2 -42 48 +12

HP1025

Stinger

-0064 -003

475

3.500
-42.800
-96.000
-3.000
4.750
89
12.000

0.478
0.853
0.209
-171.774
-12.796

-0.665
0.507
-0.548
214.832
12.571

0.574
-0.123
-0.810
-189.778
-26.632

66

21727 3 28.6 +43 80 dsg

GR-40 +102 (8)

C_v 307 8.61 428 230 344 2.54 2 (3)

$C_T^{3.6}$

3.67
1.13
5*

2177 V 3 29.0 +45 53

HR1069
GC4210
3 Gem

5.32 +40 -02 (2)

.267 .148 .540 (5) SPL 2.625 (5) C+
.12
279
W 50
-0514
3.5
+45.4
108
-74
2.61
45.3

[my] 190 +29
[C] 487 +77
106
+2.57

3 spo. -40.6 -23.3 -20.4 -51
-527 -218 -4027 -64

5 45.2

1081 3 29.0 -4

21981

4212 MN118,609 5.

-20, -75, -1, -77, -5

6.04 087 141

new?

9752	7473	0638
4029	6645	-0246

324
142

1080

1404

-12 ——— 1541

a = 0153

n = 097

294 / 1
13 4
1 7 6 +5
15 +0074 +030

+075 +030

+0.15

5.85

Sin 2 Cos 2 Sin θ Cos θ
~~6260~~ 3587 .7184 .6632
9216

5 = 00638 2 = 0244

0.695 11.7 +0.55 +0.55 +0.55 +0.55

0.79 +0.55 +0.55 +0.55 +0.55 +0.55

0.79 +0.55 +0.55 +0.55 +0.55 +0.55

0.79 +0.55 +0.55 +0.55 +0.55 +0.55

0.79 +0.55 +0.55 +0.55 +0.55 +0.55

0.79 +0.55 +0.55 +0.55 +0.55 +0.55

2630 J 29.4 +42 00 | J +0.0135 −0.″140 | +53.78

+5.3.70 | 19, 1965

											×10⁶
I	139.8	1942.33	0.37	−543	+075	−015	−364	0.55	49	8.66
II	110.8	1944.43	0.26	−469	−023	+054	−331	0.47	44	8.58
III	172.4	1941.51	0.46	−615	+121	−041	−398	0.63	52	8.33

Δm = −0.2

14 S (8) 8.34 +0.48 +0.16 (3) G7 V

π	M_V	m₁ = m₂			
			η	ν	w
−.015	+4.9	13	+76	−36	−18

F2 +36 (7)

21844 3 29.8 +47 47 +38.3 s

+47.850

6.7 +130 -026 G

+129 -024 G(7)

753609 741672 +130 -025 +38.3 -019 +28 -081

-103 015 079 -012 -431 445 +25.7 +16 +20

-6 +42 +24 02

+5 +31 +26 04

+39 +9 +3

1079 +11.5-8 3 29.9 +9 12 +11.8

BGM +10.5 (3)

+035-045 5.6 Hg mm

21845 V Bm

~~B~~ ~~33.20~~ ~~16~~ 16

16 16 +54 1 -2.0

342 864 840 to 50 2.

3 2917 +1605 Δ m 21.7 m

LTT 1114"

0074 - 173

077 - 173

ETA 10"

1887 1184 0655

0156 4764 4540

$\Delta m = 1.4''$ $0.4''$

1023 3 243 +60 04 BSV

6.45

041 104 658 2791

116 640

$E(1-\gamma) = -1009$

$m_V = +0.25$

V_0 6.05

+022 -017 GL

+020 -016

+018 -019 +lon

63

5 85.2

087 +103

1081 3 25.0 -47 33

21481

4212 MN110,609 5.58 +0.11 - Cape (10085) +0.64 +0.24

-20, -5, -1, -7, -5

6.04 087 147 1097 2.846 1, 2, 8, 3, 10

New?

5472 7473	0638
4029 6645	0246

224
142 a = 0453
1080 a = 047

294
35
13 7 7 5
1 6
+0074 +030
+075 +030

1404
1401

-12

+0.15
5.85

Sin 2 Cos 2 Sin Θ Cos Θ
3587 .7184 .6632
5216

b = 0.0638 z = 0244

+0057±40 +018±29

0.665 11.4 +0055 +022 42.47 7.6

276 +0055 +026 −76

.379 0061 43.24

0.58 +0057 +023 42.54 39.36

−10 −4

583 +00583 +0265 42.18

+0660

0.663 +064 +024 42.02 55.78

−38 −16

.625 42.18

(15)

0.749 42.57 64.40

−15 −15

735 42.66

```
R.A.      :
DEC.      :
PM. R.A.  :
PM. DEC.  :
DISTANCE  :
MODULUS   :  34
RAD. VEL. :

dI (U)    :
d2 (U)    :
d3 (U)    :
dU        :
U         :

dI (V)    :
d2 (V)    :
d3 (V)    :
dV        :
V         :

dI (W)    :
d2 (W)    :
d3 (W)    :
dW        :
W         :
```

R.A.	:	3.500
DEC.	:	45.900
PM. R.A.	:	-108.000
PM. DEC.	:	-76.000
DISTANCE	:	2.650
MODULUS	:	34
RAD. VEL.	:	-45.300

q1 (U)	:	0.478
q2 (U)	:	-0.190
q3 (U)	:	0.857
dU	:	-101.891
U	:	-42.296

q1 (V)	:	-0.665
q2 (V)	:	0.559
q3 (V)	:	0.495
dV	:	35.433
V	:	-21.215

q1 (W)	:	0.574
q2 (W)	:	0.807
q3 (W)	:	-0.141
dW	:	-495.026
W	:	-10.383

17