ε Aqr 2 56.3 +21 08 A4 -7.5 b

A4 -6.0 b

-7.0 a

HR 8871 8

W1654/0

AB 4.63 +0.04 +0.08

A2 -015 -004 GC

-013 -002 N

AOS 2257 18520

1654

3582

Δm=0.34

5-3

-0009 -002 N30

-0012±1.0 -002±1.0 G Clout N30

360 633

θ Eri (838) 8" 3.4 } 4.4 }

2 56.4 −40 30 A +11.9 6 11Sp 4B

B +18.5 6

9971

(AB) 2.91 +0.13 A3 III −070 +021 (B) GC

−055 +026 (A) GC

−052 +024 N

−052 +026 F

−053 +025

18423

1662

3546

084 16 1084 2844

694 719 -644 760 -053 +025 +18.5 -016 -12.2 050

037 011 -038 -012 232 -128 +14.3 +10.3 +10.0 022

+20.8 +4.2 -8.1

+1.7 +12.1 -22.5

+16.9 +6.4 -9.7 035

-2.0

+2.6 -12.5 -20.2

696 718 653757 +022 -038 +31.9 -025 20 -135

-015 017 016 -018 014 156 +24.1 +17 +17

+18 +33 +7 01

25.465 1403.0 015

+17 +27 +12

25.465 1403.0
-084
.376
25.440
+ 2
25.442
+066

+0014±46
+0013
+0016

+0016 -042
$\boxed{+018\ -042}$

-036±3.1
-048
-043
+1

6.67 14072
+ 1.43
8.30

50 8.32 165 2.66
- 22
6.10
2.20

18482 2 56.4 +40 50 K2 +31.5 6

HB886 6.0 +022 -038 G-C

+1
-037

New

+018 -042

205 μa

584 -063 804	+0604 +0110	+0720 +40.2 +25.8
-666 533 522	-0644 -0535	-1624 -16.8 +16.6
464 844 -264	+0484 -1480	-0996 -28.6 -8.6

18482.000*

2.000*
56.400*
40.000*
50.000*
0.018*
-0.042*
6.550*
204.174
31.900

0.062
0.812

38.562

-0.164
0.517

-16.924

-0.128
-0.270

-34.638

41

STPer 2 56.9 +29 00 AJ+1P

+38°606

Mt Wilbert -50 bad (30)

+028±7 -029 ± 6 Rich.

-2 +3

+026 -026

+1

8765 5848

-4777 -8112

698 776 629 777 +028 -029 -50 -018 -31 -107

-020 013 017 -011 -043 142 -39 -29 -27

001

-77 -130 -135

-184 -80 +20

002

-59 +54 -85

+3 -113 -5

004

-39 +7 -58

-24 -66 +6

+0054 ± 5.0 -029 ± 5.1
+0051 -023

18700 2 58.0 +10 40 6.2027 R6 +18.38

1678

3614 1.169 1911.6 +10 40 24.43 1910.2

-207 +0051 1.15

.962 +0053 -026 25.58

+001

1.028 +0052 -025 -3 25.00 1934.1

+19 20 +00

.047

39.860 127 +078 -028 26.58 1928.55

21.165 59.48

1.025 26.00

40 -.105

1.065 .064 +.102 24.95

+15 +.22

080 7.05 25.1

1.240 65.44 24.12 25.08

-2 -3 -.50

235 2409

F=R4 +m

18700.000*

2.000*
58.000*
10.000*
40.000*
0.078*
-0.028*
7.050*
257.040
18.300

0.166
0.738

42

56.147

-0.343
0.173

-84.916

0.097
-0.653

12.908

-0022 ± 8.7 -105 ± 8.7
-0020 -122

18819 2 58.6 -27 50 -1.6 ± 0.8 C, (5)

3625 -63 -40 -10 7.40 +50 GO II

34.724 1899.4 -27 50 13.95 18983

111
.835

5.43
8.52

38.4

30.310
4430
34.740
3
743
14
762

760
-075

10.58 1934.23
5818
12.40
84
13.24
25
12.99

13.34
-4.82

564
57.8

39.5

9.017
25773
34.790
33
757

36.45
2287
13.59
-14
+2
13.69

1941.42

+09 (20)

W1682 2 59.0 726 16 km -4c

BC 3629 ✓

-0010 ± 2.6 +0007 ± 2.3

400

57.003 1899.4 56.92 1892.5

ADW

-0013 +009

4'

570.143 809	-0473 +0061	-0412	-3.8	-3.2
-667 656 353	+0554 +0280	+0834	+7.8	-1.4
480 741 -469	-0398 +0316	-0082		+1.9

+840 +05 +4 +02 +225 +07

2,79

T Hor 2 59.3 -50 50 7.2-13.7 Vis

+24 +11

+11 +24 +35

+50.0 Zeeman

+015 +017 Sh3

+5 -4 Mg 11.4

~~+022~~ ~~+011~~

+017 +013 Sky

+4

+021 +010 corr.

V

43

63

```
        0.000*

        2.000*
       59.300*
      -50.000*
      -50.000*
        0.021*
        0.010*
       11.000*
2240 1584.893
       50.000

        0.096
        0.044

216   153.935

       -0.043
       -0.557

-124  -95.849

        0.034
       -0.829

+34    12.20
```

-25.7 9 Sta

L Cet 2 59.7 +03 54 gM2 -20.6 G

2.48 +1.60 +2.01 M2 III -24.6 Sta

18884
1688
3643

VB = 1.5 Egg

-009 -073 F1K3
-009 -074 G-C
-009 -077 N30
-009 -075

-20 -9 +10 .0325
-28 -14 +7 .020

99
-0006 -077 N30
-0006 ±0.6 -074 ±0.6 G-C con G N30

HD 14981

1184 3 000 -18 24 ?.53 +33

-18516

NO

9534 -7843

1184 -6303

-00303 -0368

-0431

-0404 -0344 0564 +1.95

+0062 0150

4.12

+2.1

-00319 -0508 W 350

-00317 -0454

-0451

-0424 -0485

18878 3 005 747 39 -27 Van

SSU

IBUS 3531

6 50 30 29

-004-005 Cowboy

-004-005

74

-5

HB

-27

44

	3.000
R.A. :	47.650
DEC. :	-14.000
PM. R.A. :	-5.000
PM. DEC. :	1.500
DISTANCE :	20

45

18928 3 00.5 +28 04 +10.8 8

HR916 6.3 +084 -017 G

3656 087 0844 45 +084 -008 Y

1006 0047 90 +086 -015

NO 513 +0048 -015 (H)

+0048 -015

+085 -013

570	115	814	2296	-0071	2225	+11.4 +88	+20.2
-667	643	376	-2687	-0396	-3083	-15.8 +4.1	-11.7
480	757	-443	1934	-0466	1468	+7.5 -4.8	+2.7

+0057 -0118 0774

0754 0101

$\boxed{0076 -015}$ +1.9 4.97

707 707 471 882 +086 -015 +10.8 -007 +5 -062

-061 005 061 -005 -265 313 +9.5 +7 +7

-19 +35 -1 01

+0064 -017

+0053 -009 02

-6 +22 +2

30.649 51 +0055 -013 2.980 31 $\boxed{+20 \ -10 \ +2}$

287

41.2 +0057 -0118 -80

30.60

30.679 57.55 30.21

71 -10 -10

654 5285 30.11

1841 3 00.0 15 24

-0371 -037.7

9943 -7760 0525
1070 -6182 0067

+0069 ± 6.5 -003 ± 49
6.25.r +0070 -006

18975 3654 3 00.5 -02 17 dF7 +35 c

AOS 2316 2.5 +094 -003 G
5 5 6.

W1695 8.5 +0069 -0045
8.6 +0067 -0055

29.500 1893.7 -2 16 55.21 1890.0
-388 +004 18
.112 43.7 +102 -009 55.03
4.34

13.539 49.55 1533.46 480
15.842 0555 37.4
29.381 418 54.40 47.4
24 306 -1.00
.405 1441.34 55.40 55.00
-2 16.74 38 -.03
403 21.74 55.02
59.100 55.00
30340 29.438 +4 -30 432 -16.6 55.10

707707 ~ 0"01 +094 -002 +35 : 0-f -013

-066 0 066 0 -313 313 +35 +25 +25

40.7 M.

+13 +37 -1 035

570 506 647 +2837 -0143 +2694 | +11.0 +22.6 = 33.6
-667 745 004 -3320 -0212 -3532 | -14.4 -14.4
450 434 -702 +2389 -0123 +2276 | +9.3 -26.6 = -17.3

+9 +41 -1 02

$\boxed{+36 -15 -14}$

015

C = +017 -024 Cm

+4 +46 -1

$\boxed{+40 -19 -10}$

013

+1 +49 -2

```
   3.000
  -2.300
 102.000
  -9.000
   4.340
      74
  33.000

   0.570
   0.510
   0.645
 253.499
  39.976

  -0.667
   0.745
   0.000
-353.939
 -26.115

   0.480
   0.430
  -0.765
 213.681
  -9.463
```

45

1401G 3 014 +5 56 +24.7 Abs

6.74 +52 04

+0.152 +0.46

$\boxed{233\ 46}$

234
46
2.35
+24.7

7286 9987 236
6386 0418 031

R.A.	:	3.000
DEC.	:	5.950
M. R.A.	:	234.000
M. DEC.	:	46.000
ISTANCE	:	2.750
MODULUS	:	35
D. VEL.	:	24.700
q1 (U)	:	0.570
q2 (U)	:	0.412
q3 (U)	:	0.711
dU	:	718.400
U	:	43.053
q1 (V)	:	-0.667
q2 (V)	:	0.737
q3 (V)	:	0.107
dV	:	-574.862
V	:	-17.754
q1 (W)	:	0.480
q2 (W)	:	0.535
q3 (W)	:	-0.695
dW	:	646.517
W	:	5.774

46

.236 78L ~~.24 75~~

~~1X~~410 1901~~9~~ 3 01.2 +5 56

+50~~4444~~

G23666

±9.5 ±122

+0157 +050

+01582 +0562

+01576 +0503

2328

11.259 1.6 16.26 2.4

-760 -2.38

N.489 13.88

234 · +058

2333

772 9168 2355

yes-No

11.347 (55.87)

+12

.409

17.13

-5

1708

6340 0384

+8.85

10.5

1.94 350 154 419 2.617

(2.50) (349)

346 283 387 14.43

0317

7737 9980 2364

6336 0625 0382

+8.7

0314

C_a=28.8 2.48

±12.2 +0026 -036±113 -021

1899| 3 01.9 +55 53 6.5 68 -10.96

1706

3681| 55.117 1909.4 +55 52 32.11 1908.9

0

3.39
51.560
54.950
209
55.159
160 582

+0013 -028
+1 +1
+0014 -027
+012.-027

299

1.48
33.59

40.0
54.25
34.25
-1.45
32.80
+34
33.14 883

1926.2

3294
-63

55.233
-8
225

55.227
-30
197

194
+077

33.19
-24
9.5
32.69
32.88
-10
32.72

1945.83

1946.87

11.790
39.3

30.4

47

10991.000*

3.000*
1.900*
55.000*
53.000*
0.012*
-0.027*
5.000*
100.000
-10.900

0.069
0.776

-1.626

-0.089
0.630

-15.749

-0.084
-0.036

-0.010

47

Per 03 02.0 +38 39 M4 II-III

HR921 +0110 -102 F1V4 E=0 +27.4 (10)

HD19058 +0113 -103

147.130 -3.85 4.7

3.3 1.85 +1.60 +1.25 +1.66

+130 +28.2 -103

1.56 1.245

1.42 1.61 -2 4.65

E=+0

Per 3.35 +1.60 +1.66 -3.7 +55 -47 -18 +130 +28.2 60±

HR921 1.85 +1.25 4.65 +37 -71 -12 -106 M4 III -17

48

3 Rem

91.000+

2.000+
2.000+
3.000+
19.000+
0.130+
0.103+
4.72 4.650+
88.1 85.114
28.200

0.367
6.825

+56 54.519 81

-0.680
0.484

-47 -44.878

48 -0.102
-0.292

-17 -16.921

321.060*

3.000*
2.000*
38.000*
39.000*
0.130*
-0.106*
4.720*
87.902
28.200

0.368
0.825

55.594

-0.696
0.484

48

-47.503

-0.114
-0.892

-18.234

ρ Per 3 02.0 +38 39 gM4 +28.2 T

921

M4 II-III

3.2-3.5 +1.6q M4 III

+130 −104 FK3
+132 −106 GC
+130 −107 M30
+131 −106

185 156
147
162
−8.5
.49
494

+39	−14	−13	.025
+50	−36	−14	.014
+56	−45	−16	012
+47	−30	−14	016

24(20)
30 M(6)
8±6

+131 +2852

-106

563	-646	826	+3496	+0231	3727	+37.3	+23.3	+60.6
-667	564	487	-4142	-2834	-7176	-71.8	+13.7	-58.1
488	824	-287	+3030	-4140	-1110	-11.1	-8.1	-19.2

Over
19058
GC3682
W1707

Y635
+380630

3 02.0 +38 39

Semi-reg. var 3.2-3.8

3.2
3.8 } +1.70

M4 III

W(-0.4)

gM4 +28.2 ✓

+28.2 L(6)
+19.1 V(1)
+29.1 W(1)

68

+0111 −107 N30
+0113 ±1.0 −105 ±1.2 GC Cont N30

+57 −47 −16 .0115 ✓
+56 −45 −16 .012
+50 −36 −14 .014

184
35
46
1.73
−2
1

+132 −106 GC
+130 −107 N30
+131 −104

1.84 +1.34
1.94 +1.25
1.80

1.70 +1.265
35
132
16.3
−3 1

2A(2)
30 M(6)

T ±L

1.80
8.2
5
1.66 −16

713 701 624 782 +131 -106 +28.2 -066 +17.6 -393

-093 047 092 -046 -223 659 +15.5 +15.8 | -6.8 +81.7 -11.7 01

65.8 -48.7 -12.9

-0.6 71.9 -5.5 | 0.1 52.5 -4.0

-3.3 -36.6 -8.8 | 0.3 -26.7 -6.5

5.9 -13.3 -5.5 | -0.5 -9.7 -4.0

+0.6 +59.7 -8.6

+48.6 -32.9 -14.2 015

0346 (1.20) +0056 ± 1.9 +0048 +018 ± 1.9 +015 B3 IV +

19400 3 02.1 −72 06 5.5 B9 +11.8 6

1710 −064 (092) III 512 2209 +0145 +0145 035.1 2014.5 FIR

3687 9.266 1904.0 51.60 1899.8

−72.249 258 −40

8.008 ~~250~~ 52.50

934 B8 IV

8.159 52.16 1939.08

+23 −10

8.182 52.26 95.45

47.7

(43.7) (47.9)

436 3.61

218 1.80

+210 +.70

−47.2 256

−44.1 257

−44.3 257

−47.5 257 8.254

mod 6.21

9030 7123 0281

4296 6968 −0071

51.35 1954.37

49

R.A. :	3.050
DEC. :	-72.100
1. R.A. :	0.000
1. DEC. :	0.000
STANCE :	0.000
MODULUS :	10
). VEL. :	0.000
q1 (U) :	0.561
q2 (U) :	0.788
q3 (U) :	-0.254
dU :	0.000
U :	0.000
q1 (V) :	-0.667
q2 (V) :	0.249
q3 (V) :	-0.702
dV :	0.000
V :	0.000
q1 (W) :	0.490
q2 (W) :	-0.563
q3 (W) :	-0.665
dW :	0.000
W :	0.000

49

3.64

HR423 3 021 +40 24 100 M

-34.1 b

-051 +002 GC
0 +1
+003

50

```
923.000*

  3.000*
  2.100*
 40.000*
 24.000*
 -0.051*
  0.003*
  5.000*
100.000
-34.100

 -0.137
  0.823

-41.797

  0.169
  0.501

 -0.165

 -0.106
 -0.267

 -1.488
```

50

AR 922
25
19.84/5

AB 2336

3

025 052 585 2270 [0.760]

02.5 (040) +25 (080) 04 -000 ±20

+0003 ±0.7
+0006
+0002
+0003

30.341 9.12
-16
350

43.15 9.48
33
1347

-008
-015
-012

65.77

+0003 -012
+0024 -010

30.366
25
394

42.91
3
42.94

E(1y) = 0.045

+0036

30.353
13
366

68.88

42.47
-9
42.38

V_0^{AB} =

+004 -013

30.352
+9
361

58.78

42.95
-10
42.85

4
-13
-0.75

19165 3 02.8 +27 30 +87 C

+27°478 8.45 +0.49 -0.01 FG V

S = +04

+063 ±3 0 > Y

+060 -050 Y

±7 ±3

+064 -054 Reity

716 698 462887 +064 -059 +87 -027 40 -246
3 5
-046 019 045 -019 -125 303 +77.2 +54 +55 .01
1 5 7 3

+41 +85 +15

$\boxed{+81 -7 -41}$

007

+36 +98 +5

3L

19258 3 03.6 +11 28 7.3 gM1 -74.38

$+11^{0}434$

1717

+0014 -004 Gu 50

-0048

+0205

+022 -008

7.22 +1825 +2.23 ①

5.50 +0965 ③

552
127
4^{23}
410
4.35

121

~~530~~
~~4.08~~
~~5.1~~
~~773~~
~~7~~

965
5.62
5^{4}
4.10
38

965

51

		19258.000*
		3.000*
		3.600*
		11.000*
		28.000*
		0.022*
		-0.008*
7.9		8.350*
380	355	467.735
		-74.300
		0.045
		0.756
39	-40	-34.928
		-0.097
		0.167
49	-47	-57.837
	51	0.029
		-0.633
458	457	60.408

925 3 01.8 – 7 48

19107
3677

5126 +0.21 +0.07 C
+114 +189 +899 000 SPC

new

66.06

49.089
+7
096

42.77
+5
42.72

+15

1925p 3 046 +52 45 +3.5

WK +55

+0161 -105 (Cowley)

132 -105

242
-105

245
+35

82

19495 0 056 +13 21 +2652 (21)

+120443

8.78+1505 +460 (2)

8.10+0.59 (2)

+25.2 Muffin

0 ~~[illegible]~~

~~002 -046 Fuhrman~~ (1)

-0019 -046 Menikem

-0019 -043 BC

-0020 -041 FKY

-029

-029 -044 Fuhrman → Menikem

~~[illegible] -046~~

-014 -045 ←

60

53

8.7
544
794.
25.
-0.135
0.772
-90.892
-0.062
0.185
-44.471
-0.135
-0.609
-170.162
57
24
121

45

19495.000*

3.000*
6.000*
13.000*
26.000*
0.000*
-0.046*
9.500*
9.4
794.328
767
25.200

-0.068
0.773

-33 -34.650

-0.157
0.185

-116 -120.262

-0.135
-0.607

-119 -122.345

1946 7 3 04.9 -13 87 +6M

-00034 -2625 F105

6.96 401 583 -395

β Per 3 04.9 +40 46 +4.0a

HR936 +3.7 orb

19354 64 +006 -001 Gc

1731 +0003 -001 N30

+0005 ±0.8 000 ±0.8 Gc Con 4 N30

3733

+3 +2 0 .043

1877 3 038 181 16

506

-0347 -0147

7807 -4455 0346

-4255 0098 0101

R3

TU Per 3 05.4 +53 00 -380 cw(2)

1733 P=0.61

+020±1=044±12

19755 8 56 -74 42 P2 III

-740235 -42 23

6-63788

2918 6.79 143 681 760 626 434 ② 4.14

-358 84 859 541

Dynamic

0918 NU 030 6.18 6. E 030

3 5 182 -74 30 471

-41 1384

9990 7570

0634 6534 0914 ✓

-0084

-4.4 0095 5.10

+075 +053

18.114 00.8

876

17.238

+0178 +057

+0164 +050

+061

+0164 +055 47.01 923

+0169 -3.00

50.01

+0169 +055

+0176 +059

28.357

-11.010

17.347

.333

17.680

+11

691

28.48

+0712

+075 +053

48.0

18.13

.027

47.1

-.23

47.33

34.40

+1578

48.62

+13

48.49

+03

48.46

18.184

-2

144

1955.92

46.50

+7

46.43