+4.415 02 32.0 +5 14

2.55
+5.25
-301
-585
3.25
-72

2.[illegible]50
5.256
-301.000
-585.000
3.250
45
-72.000

0.644
0.427
0.535
-2099.595
-139.483

-0.659
0.732
0.176
-1092.713
-61.469

0.389
0.531
-0.753

22

22

73-67

975 90 63

9.74 534 437 233 (2)

0.39 -234 6.246 | 4.64 39 646 | 6.39 37 (471) | (24) 16

2 31 58 +05 14 06 -74.2

-766 (5) -767 3C

-75.4

-285 -585

-766 582

2.5 +5.25 -256 -585 3.45 -75.4

-793 -582

-294 -582 3.08 -766

```
  R.A.  :      2.550
  DEC.  :      5.250
, R.A.  :   -294.000
. DEC.  :   -582.000
STANCE  :      3.080
ODULUS  :     41
. VEL.  :    -76.600

q1 (U)  :      0.644
q2 (U)  :      0.427
q3 (U)  :      0.635
     dU : %-2072.244
      U :   -134.210

q1 (V)  :     -0.659
q2 (V)  :      0.732
q3 (V)  :      0.176
     dV : %-1104.075
      V :    -59.072

q1 (W)  :      0.389
q2 (W)  :      0.531
q3 (W)  :     -0.753
     dW : %-2005.726
      W :    -25.204
```

~~[illegible]~~ 2 32.5 +20 02-63.4 (25)

+19.378 2 upper

017 dis. RV

-036 -108

-38
-108
5

+1578 (1)

16115 2 32.7 -9 40 R4 +16.C

-10°513

54

744 43

726

606

66

6.86

74

-0010 +012 Jahnen

0 -3

-014 +009

↓

645 579 498	-0428 +0247	-0181	+2.4	+8.0
-658 752 -021	+0437 +0321	+0758	+23.2	-0.3
397 314 -866	-0263 +0134	-0129	-17.8	-13.8

16141 2 32.8 -02 46 -50.7 (3)

6C2106

W1458

7514

-40426

79 Cet

B-V x-B$_c$ dG2 -53 R W(3)

6.86 +0.68 +1.75 2 m clean

6.72 +0.66 +0.21 R G-5IV

GC -150$^{\pm 2}$ -42$^{\pm 2}$

Y -162±9 -440±9

-71 -31 +8

-40 -62 D .040 30±10 Y(10)

-56 -23 +21 060

-0100 ±2.4 -427±2.1
-0110 -434

-152 -430
618 786 -066 958 ~~-066 958~~ -53.0 028 +3 -2033

094 -017 -119 022 341 -644 -52.9 -42 -33

-32 -53 -59 033

49.390 1893.3 -3 46 2007 886.6

-78 -36 +9

567
957

27.07
53.00

34,068
15.430
49.498
.519
522

13,72
457
-500

45.1

48.55 1933.66
35.48
13.07
-84
13,35
-58
13,

1CH9
15,50
-22.50
1940.06

11,507
38.64
51.8

49.411
410

19.286
30.191
49.46 +3
-30
440

54.65
37.77
16.88
-14
16.46

16.23
38
15,95
15,

1941.35

105
52

1624 2 331 −42 20

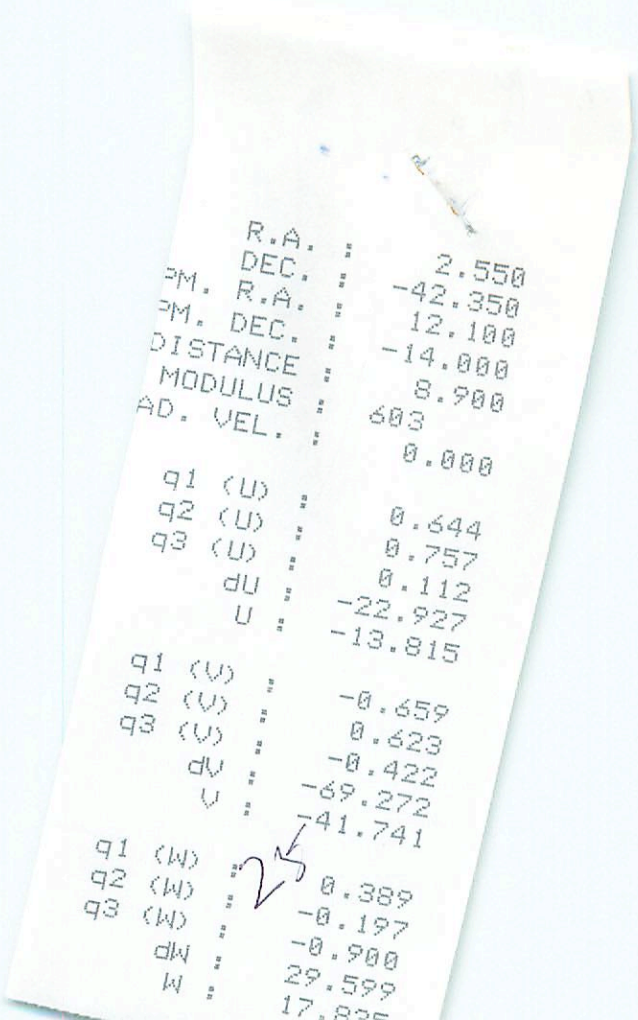
+121
−14
84
—

25

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

qi (U) :
q2 (U) :
q3 (U) :
dU :
U :

qi (W) :
q2 (W) :
q3 (W) :
dW :
W :



R.A. :	2.550
DEC. :	-42.350
PM. R.A. :	12.100
PM. DEC. :	-14.000
DISTANCE :	8.900
MODULUS :	603
RAD. VEL. :	0.000
q1 (U) :	0.644
q2 (U) :	0.757
q3 (U) :	0.112
dU :	-22.927
U :	-13.815
q1 (V) :	-0.659
q2 (V) :	0.623
q3 (V) :	-0.422
dV :	-69.272
V :	-41.741
q1 (W) :	0.389
q2 (W) :	-0.197
q3 (W) :	-0.900
dW :	29.599
W :	17.835

16082 2 33.4 +51 45 7.3 dF=9 -15.56

1465 25

3122 +0003 0000 N30

+51.544 +0005 ± 23 -006 ± 2.0 GC corr ± N30

6-9 Orbit

+0080±80 −007±5.4
+0085 −010

16024 2 33.5 +65 32 6.1 185 +41.46

3125

1467 29.407 19009 +65 31 43.81 19086

−393 0.29

.014 44.10

29.375 43.80 1945.25

17 −6

392 43.72

378

5.93 +0.48 +0.04

HR 756 2 33.8 +38 31 5.9 +1.46

+146 −152 →

36.3 pc

−639	004	769	4422			4422	+116.0	+1.6
−660	519	544	−4567	−4950		−4517	−34.5	+0.8
396	854	−335	2740	−7772		−5032	−18.3	−0.5

1996 2 35.2 +37 ~~37~~ dt=6 +8.5 δ V(3)

W1484

V +2

-0.033 -0.043
-0.031 -0.037
-0.032 -0.040
"043

48 pm.

48

+639 +020 +769	-1302 -0038	-1340 -6.4 +6.5	0
-660 +525 +534	+1345 -1000	+0345 +1.6 +4.5	+6
+396 +948 -350	-0807 -1606	-2415 -11.6 -3.0	-15

16327 2 35.2 +37 81 +16 -17 g F6 (+8.5) 0 +10 V30

HR764 -0032 -040 -039

CC3159 6.16 +44 +045 555 -043 -042

.306 .170 .529 (2) SPC 2.645 (4) C+

[N] 225 +4 307

[C] 468 302 11.37 +1.245 +1.17 555

+108 +112 +2.4 (3.55)

639 019 764	-1181 -0038	-1219	+6.5
-660 528 534	1220 -1051	+0169	+4.5
354 848 -350	-0732 -1688	-2420	-3.0

+8.56

-039 -042bc →

+0029 ±4.7 +007±4.5

+2 0406 6-21+100 +78C

16467 2 36.0 +03 14 6.4 G8 +2.46

1493 77 5HR +4.7 (1)

3168 0.531 1896.6 +3 13 34.67 1893.5

755 -40

.376 39.27

GSH

0.433 39.02 1934.1

+23 +11

.456 39.13

+ +00186 F103

1942.8

0.475

015

490

+00156 000

0279 -003

030 -010

16399 2 35.4 +7 25 F5

HR770

GC3162 6.40 +42 -04 (5)

[m] 201 +20 .281 .1150 .510 (2) SPL 2.655 (4) C+

289

[C] 454 +65

85

+2.85

3.55

+18 -4

+00545 -0375 GC+ ±4.0

+00587 -0345

+0798

+081 -040

+13.0 f

-0003 ± 4.7 +052 ± 4.9

-007 -0007 +044

1646 -004 +044 2 35.5 -23 13 gag +2

-0005 +048 +047

1488

3163 28.649 1904.7 -23 18 30.05 -004 +052 1904.6

014 6.78 +1.075 +0.885 (1) -2.136

.663 6.82 +0.845 (2) 32.41

20.778 18.62.23

7.540 +31.70

28.618 1933.65

00 2 30.53

620 -79

+20 1661

640 31.32

+20

28.645 31.02 36.4

-1 +1.39 34.8

644 31.12 1934.15

28.624 31.14

+1 +26

.636 30.93

+1.41

1933.75 3660

2

16445.000*

2.000*
35.500*
-23.000*
-13.000*
-0.004*
0.044*
6.300*
181.970
24.300

0.130
0.361

32.407

0.164
-0.201

28

NO

16743

-58046S

3209

2726

-574

6.78 223

345

+41

(A) 7.88 324 177 466 2634

2 37 25.9 -53

194 + 1545

6.75 218 175 447 2.720

+3.05

+0559 +0501

+0065 +0067

+0053 +0543

+00955 +0525

+0956

+0959 +0944

8558 8725

8810 8280

-3.30

±8.0

+0046 +067 ±7.1

24.837 6.0 +0044 +047

-286 0111 +047 0.21 95.6

.553 0102 +043 2.87

3.08

41.302

48.552 30.23

25.854 38.4

855 24.56 24.87 1.1

-35 28.50 + 16 -27

820 1.06 886 1.37

-58

1.64

+01

1.63

~~27.557~~ 30.146 66.893 5475 0102 +049

-21 -14 0.1069 +0531

.125 54.93

AOS2008 +0020 ±5.9 −015 ± 4.3 N2 II-III
+0028 −014 F>L

1648 0 2 36.2 +14 39 7.3 g N3 +1.2 6

1494

3171 14.815 1901.1 +14 38 43.50 1896.4
10 m 11 0.5 −098 .80
.717 44.30

14.770 43.76 1934.60
+19 00 57
789 43.76

141

52.455 32.13.60 1931.10
22.234 20.95
14.693 44.86 32.8
047 43.62
.74 0 +24 36.2
+1.2 43.86
152

140 31.7
+063

43.81
−.49

AOS2028

14619 2 323 -00 04 dGy +39.98

AOS2028
1499
3203

+025 -158 Q-
+022 -156 Hawk

+0048 ±2 -156±3 vs Hawk

+0055 ±10.0 -158 ± 8.7

+0048 172 Carlsberg

067 -172

67
-172
245
134.9

0.684

DO Leo 1850 2 37.6 +40 20 +28.0 b

+590529 +26.8 Orbit

N506 B-V +0.20 MV +1.7

+0032 −009 Y
− 4 + 2
+0028 −007 →

632 −257 718	+0617 +0095	+0712	+14.2	+34	+ 20.1
+640 284 695	−0644 −0084	−0738	−14.8	+5	+19.5
404 914 015	+0344 −0303	+0091	+1.8	+2	+0.4

2.00

297 159 463 2.64
59 136 569

16620 2 37.2 −12 06 FS TD −V

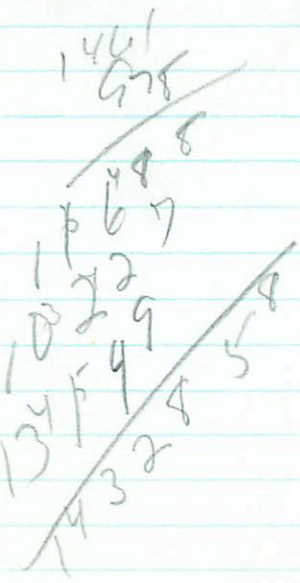
HR7781 (5m=0)
Ewt 4.84 +45 −02 ② +17 559
83Cat 82 24 +5 24
26
GC3199 46 5.6 1.50 27 .366 .193 .464 2.660 ② 3,1,0
2.7 2.9 348

[m] 259 +6
[c] 391 108
114

+27

2.15
75
2.90

−26 ±10
+01000 −2345 30
60 574 −02333
487 −8
141 2649
323
+1432
+146 −237
+15.2W



+410508	2	37.6	+42	03	9	+

W1503 9.2

+.36 −.10

4.85
1.00
2.5
+24.8

?

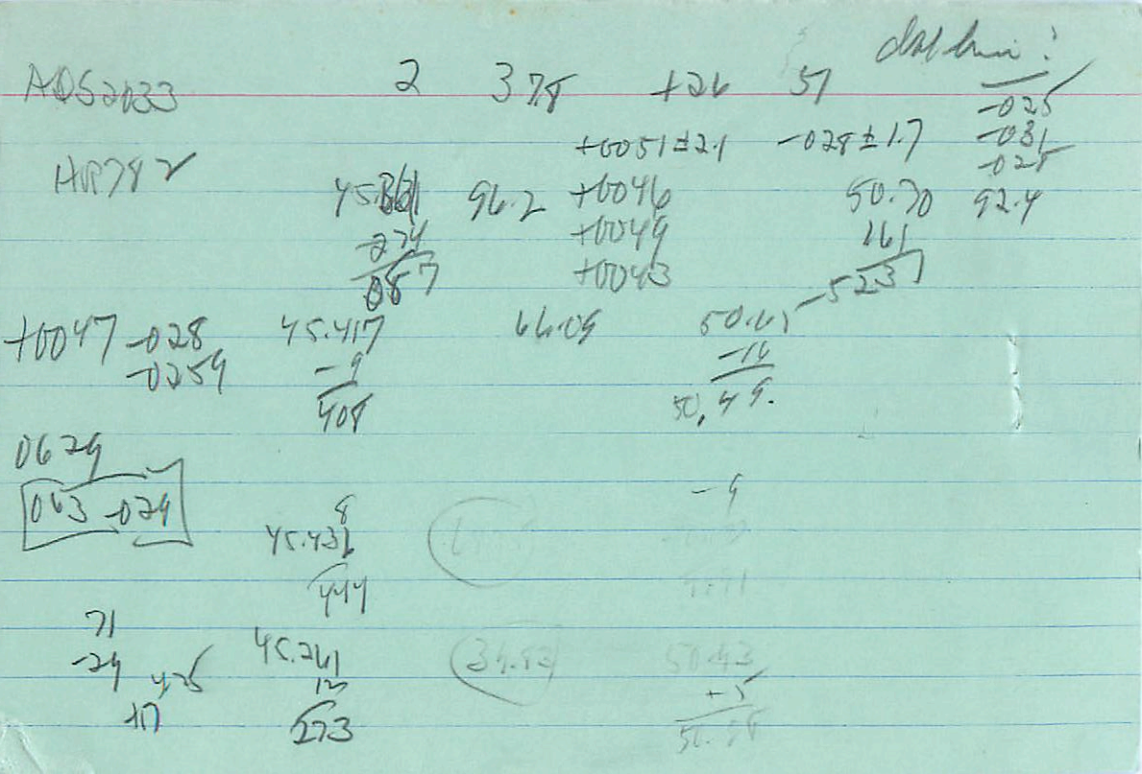
635 773 670 742 +36 -.10 +24.5 -067 +17 -351

-230 043 275 -052 -8.43 1.521 +15.4 +14 +12

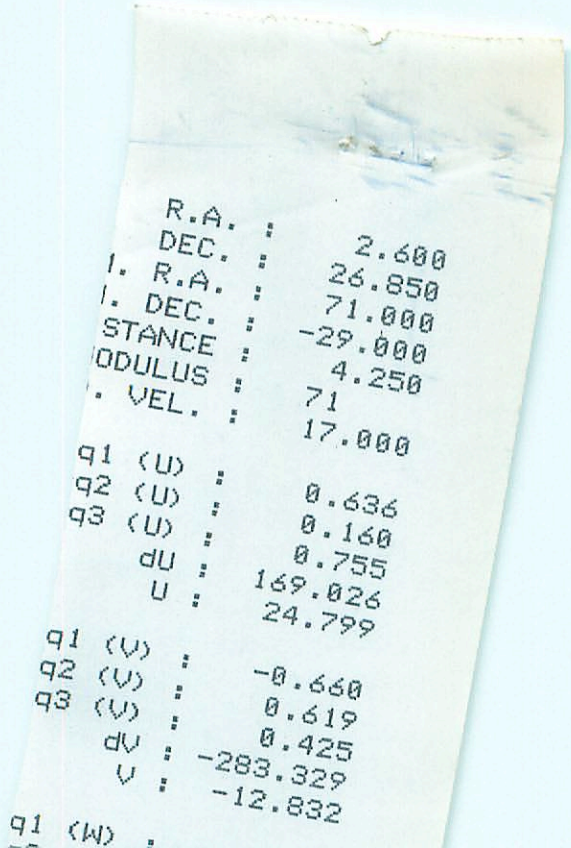
-3 +42 +10 05

+42 -11 0 06

0 +37 +11



R.A. :
DEC. :
R.A. :
DEC. :
STANCE :
ODULUS :
VEL. :
12.000
(U) :
(U) :
(U) :
dU :
U :
24.799
(V) :
(V) :
(V) :
dV :
V :
-12.832
(W) :


R.A. : 2.600
DEC. : 26.850
I. R.A. : 71.000
I. DEC. : -29.000
STANCE : 4.250
ODULUS : 71
. VEL. : 17.000
q1 (U) : 0.636
q2 (U) : 0.160
q3 (U) : 0.755
dU : 169.026
U : 24.799
q1 (V) : -0.660
q2 (V) : 0.619
q3 (V) : 0.425
dV : -283.329
V : -12.832
q1 (W)

789 2 37.9 -43 06 0-26

16754

3217

137
-30
339
+186

4.74 +0.06 +0.06 C

+033 +186 +955 2.885 Crawl(s)

372
13 27
13 3 179

now

+102-030

0890 -032
0892 -029
13.80
1311 +30

+20 C
+14 Fifth run
+17:

94
192
948
1332
1330
32

a = +039 ✓ 1.6
2 - +012 ✓
+1.16
3.15

+0081 -028 slug
+ 6 10
+096 -025

7831 9307
6215 3657

1040
+1.95
0210
3.39

+0088 # 35 −024 # 3.1

53.577 50 +0087 −036

+0087 −037 15.87 99.3

+0084 −030

396 1.22

181 18.65

53.475 (35.26)

−18 20.29

460 +21

20.08

53.48

−14

5.99 20.42 0050 −032

−2

20.44

53.759 69.52 20.47

−7 −18

7192 20.79

3

782 2 378 +24 51

16428

3215

+0052033

24"

A 5.30 +007 +0.10

Sh?

8786	835 87
4775	5466

new?

+181 impound

B 5.45 +0.70 +0.24

s

+0051 "-0254

-

+0050 -027

+0070

ከአስ
ሰላም
ስለሆነ
ሁሉም
ሰው
ደህና
ነው
ብዬ
እገምታለሁ
ሰላም
ለአንተ
ይሁን
ከአክብሮት
ጋር
ከሰላምታ
ጋር
ከሰላምታ
ጋር
ከሰላምታ
ጋር

16754

HR789 2 32.9 -48 06 +20c

+14 4 Sets vm

GL3217 4.74 +0.06 (1.55) Lmpl

4.83 0.00 +057 -024 GC

+0088 ±3.5 -024 ±3.1

-036

53.577 1405.0 +0082 19.87 1894.3

-396 +0085 -030 1.22

.181 +3 18.65

+0091 -027

53.475 106.2 -26.2 20.24 1894.26

-17 +21

440 PRS 20.08

Sunset

(3)

636 772 -683 730 +097 -024 +20, -016 +14 -055

-062 010 075 -012 -230 403 +146 +11 +9

-5 +36 +8 015

+35 -12 -6

-1 +29 +10 02

+31 -6 +1

G 76-21 2 38.2 +9 33 → −68.3 Cal

+90 352 Koval?

+0235 +014 T
0 +2

10.14+45-25

→ +.348 +.016

16208 2 38.2 +02 41 Ag65 +65382(3)

+20412 7.8

W1510

+20412 7.09 +1.015 +0.715 (1) +0035 +015 Gmelin 1950

6.67 +0.39 (3) +058±7 +007±6

630

583 (6.35)

+0033

+60 -9 -36 .010 +0494

+051 +012

637 771 047 559 +058 +007 +65.3 0 +033
-037 0 045 0 -17.5 213 +65.3 +50 +42

+41 +52 +2 022

+51 -1 -43

+32 +58 +4 015

+60 -9 -36

+115 +83 +7 008

+25 +72 +5 007

+67 -17 -31

+11.9

HD16851 2 38.9 41 31 766 +162 2.56 N51E

GL3242

+000C ± 1.13 +003 ± 9.5

55.564 1901.2 46.83 1948.9

+0011 +006

Ken Stacy

2Cp 5B

16920 2 39.1 -54 46 5.13 F2 -1.16

1519

3246
5 Hor

280 784

759 52 536 2676

340

6.237

56.34

48.40

16825 2 3 9.2 −14 46 dF7

HR756
GC3247

5.97 +0.485 +0.005 25955

.279 .169 .486 2.662 (2) 73,4,9

562
506

[m] 219 ±2

[4] 480 ±20

HR747 2 35.5 +10 32 A2p +6.1δ

6.30 +0.06 +0.06 −025 −019 Gc

A2Ve −017 Gc+

16861

1525

456 24

643 746 182883 -025 -017 +6.1 003 +1.1 -0[illegible]

016 002 019 -002 0[illegible] -0[illegible] +6.0 +[illegible] +[illegible] 8

+15 -6 -9

-8 +2 -16

+18.[illegible] -[illegible] -12.4 16

~~+13 +3 -20~~

-12.7 +4.1 -15.5

~~+14.6 -7.8 -10.5~~ 5

+21.6 -12.4 -15.1

-16.1 +4.7 -23.9

85 wt

−0017 ±2.3 −019 ±2.1
−0013 −016

16861 2 39.8 +10 32 6.3 A2p +6.18

1528 6.27 +07 +11 A2V

3260 47.152 1900.1 +10 31 46.76 1897.0

+085
.237

1.01
47.77

0086 −024 Cmby

47.174
+19
.195 .82

024 024

47.26
00

1934.1

10129

33.7

26.418
20.738
47.156
40
.196
.1 x 12 .208

21.87
26.05
47.92
.90
47.02 47.29
x 24

1927.44

33.8

36.8

47.175
+7
.182

.195
.042

46.82
+17
46.99

1939.75

47.18
.59

+0083±17.0 −107±13.0

16933 2 41.2 +46 38 Fy +24.78

3288

1542

6.9

~~+07 6~~

+080 −096 Gmw

12.673 1913.2 +46 37 54.88 1911.9

8834 9269

4686 −3752

647 763 727 687 +050 -096 +24.7 -070 +8 -310

-052 045 061 -053 0 50 2 +17.0 +13 +11

+13 +45 -3 015

+40 -16 -19

+0032±6-1 +017±6.5

TW Cas 2 41.7 +65 31 8.3 B9+A0 -2306

1547 -19.6 Orbit

2 41 44.405 1904.0 +63 30 59.95 1904.6

+009 -017 GP

17084 2 4/4 -35 05 +34 G5/5 +61

2xR or -38.48

71 -65
7006 -060

081-060

+1 9/1 Orbit

6310 9809 0911
9955 1945 -0481

17155 2 41.8 -46 39 34.7±1.8 C, (4)

GC3302

Y559 9.04 +1.05 K5 IV

-460790

+060 -502 GC

+067 -516 Cand Mem

-42 -60 -11 .038

-64 -71 +28 .01

13±13 C(4)

~~649 761 -727 687 +060 -502 +347 -365 +025~~ 624

649 761 -727 687 +060 -502 +347 365 -25 -1.635
-039 -237 046 278 -1.502 -905 +23.5 +189 +15

-132 -75 = 188 01

-164 -171 +35

2nd Level +0058 ± 12.2 −502 ± 15.0

17155

46.013 1404.2 −46 39 24.81 1405.5

−266

45.747

+22.34

7.47

ST For 2 42.2 -29 25 8.7 10.2

277d

doing

"045 -0034 +0039 +24 (2)

+2 0

~~-0082 +0039~~

618	724	300	-1544 +1338	-0206
-662	687	-296	+1412 +1270	2682
422	015	906	-0900 +0028	-0872

ρ=+24

ST For 8.7 +1.65 +1.22 -485

HD17166 6.3 +1.70 9.55

662

437

587

+03

-65°

RTF