

$\frac{131}{38545}$ 5- 44.4 714 28 -042 ± 2.2
 +000 5-039 A2m +21.08
 +000 9 ± 2.4
 +000 5-039
 -042
 -044
 -044

3585
 7237 22.218

1597.1 714 28 17.54 1899.4

+2.13

$\frac{20.07}{13}$

18.54 1534.1

$\frac{18.67}{13}$

18.57 + 9 1540.08

$\frac{18.61}{13}$

18.32 + 11 1540.08

$\frac{19.43}{13}$

$\frac{18.57}{1.50}$

0006
1000

-047
-044

(4822) 169

$\frac{7}{16.80}$

$\frac{1}{97}$

1426
38.1
38.7

DU-035

765 064 ← 8349 170
 647 4979 1088
 22.166
 $\frac{39}{200}$

22.183
 $\frac{23}{11}$

22.195 6661 1699
 $\frac{22}{22}$

41.0

2161 777
 9763 10274
 22.173
 $\frac{26}{199}$

$\frac{200}{1030}$

22.175
 $\frac{23}{23}$ 0044

0007 -046

0005 -0443
0044

7144 0626
 6463 4950

$\frac{203}{203}$ 5.16
 00 43.0

0009 -045

120

1584 5 444 114 28 A3E

170
340
1176

38545
7237

PPM

5.71 + 0.9 + 1.125

1593

0.52

900-031

042

168

1.114

2.852

② SPC

10101

1011-039

020 171 1112

100085 - 0405 52

100085 - 039

176

9=073

63

Bud 51

1210

1.106

N=1000 ✓

1009-038

1025

1210

102

1.258
1.935

5.35

7628 0447 0589
6467 - 9929 10022

845

642-181 1.106

093

1011 244

1003-17

10022-0176 -13

2.4
1024
+4

1003-021
5.10
-

1003-021

10099

22198

1699

24
224

23
1676

6432

25183

1699

1989.000*

5.000*

44.400*

14.000*

28.000*

0.011*

-0.039*

5.28 5.450*

112.8 123.027

21.000

-0.047

0.968

15 14.612

-0.180

-0.217

-25 -26.658

NAME

-0.049

STAF

-0.124

-8 -8.675

Observer:

-9,069

11- -0,134
-0,055

-24,622

25 -0,217
-0,171

15,017

110 0,968
-0,045

21,000

117,490

5,250*

-0,038*

0,009*

28,000*

14,000*

44,400*

5,000*

1989,000*

1485

5 443

+14 28

+11

3854

Der 148 ¹¹⁰⁶ 1114 28852

181800

Duo - D35

1441 +1.61

7626 OAK 0350

6467 -9954 10023

3.200

-35

220

+11

72-283

12 246 1816 24.8

1058 2925 5718

1314 2.08

R.A. : 5.750
 DEC. : 14.450
 PM. R.A. : 0.000
 PM. DEC. : -35.000
 DISTANCE : 3.700
 MODULUS : 55
 RAD. VEL. : 21.000
 q1 (U) : -0.010
 q2 (U) : 0.250
 q3 (U) : 0.960

DU : -41.447
 U : 18.055

q1 (V) : -0.521
 q2 (V) : 0.825
 q3 (V) : -0.218
 DV : -136.889
 V : -12.104

q1 (M) : 0.853
 q2 (M) : 0.507
 q3 (M) : -0.122
 MP : -84.063
 M : -7.185

7020

1484

5

444

714

25
125

7210

3854

(F0180
F021)

042-168

¹¹⁰⁶1114

2852

430

572-887 1526

1467

012

1124
1151

(040-03)

D

35
557

7210

7628 0641
6467-4974
0350
-0023

1258 2465
18145
2980 13216 2465
5717

R.A. : 5.750
DEC. : 14.450
R.A. : 0.000
DEC. : -35.000
DISTANCE : 5.570
MODULUS : 130
VEL. : 21.000

q1 (U) : -0.010
q2 (U) : 0.250
q3 (U) : 0.968
dU : -41.447
U : 14.944

q1 (V) : -0.521
q2 (V) : 0.825
q3 (V) : -0.218
dV : -136.889
V : -22.379

q1 (W) : 0.853
q2 (W) : 0.507
q3 (W) : -0.122
dW : -84.063
W : -13.495

156

702

122

010409

22241

5 537 63 06 825

27550

120.11 57343
3667 ±48

2.78

P.A. : 5.900
PEC. : -63.100
P.A. : 120.110
EC. : 573.430
NCE : 2.180
LUS : 27
EL. : 25.000

(U) : -0.044
(U) : 0.998
(U) : -0.036
dU : 2702.325
U : 72.853

(V) : -0.504
(V) : -0.053
(V) : -0.862
dV : -274.222
V : -29.030

(W) : 0.862
(M) : 0.020
(M) : -0.506
dW : 276.539
W : -5.100

96117 55409 29661 828072 121-50.0

96114

9621 4743 2642 4923 825-079

8072 9039

4272 4278

4615

(19) (21)

4477-45-47 C
26-11-88 C
12 05.5 -50 22

B² III²
BC III²

105882
16576

3744
5271
3932
-9234
4615

14) 6.38 -24 127 842 2889 4621 2.85 07E

-079 + ~~884~~ + 269 2.724
2.675 (13)

-021 + 1840 + ~~891~~ 2.814 2.786
2.814 2.786

-016 + 948 - 410 2.473 2.222

-3409-9485
6.46 9.12

23.7
233-582505

+ 10
V6 = 43
(6.1)

4621
186313-6124
F144

-0338

-032-004

9041 9084 } 0350
4222-4271 } 1057

-21
-71 MV-15

4618.000*

12.000*

5.500*

-50.000*

-22.000*

-0.032*

-0.008*

6.100*

13489 147.5 5.85

165.959

15.500

0.123

-0.428

110 ✓ +12

13.767⁹

-0.074

-0.881

129 -25^{.54} -25.936

-0.062

0.202

-3² -7.163

-079 102 2682
-1897 402 -101 660

10587
105343
105487

4618/19

-28 110 635 -024 102 872 2.829
-079 103 264 2.162
-014 043 270 21
-50 22 44 2.677
368 11

4621 -201258
12066
-50 28 436 89
2.44 852

447-18-67 400
-079 102 264 2.679
-1.55 mV 1000

6.9 15 -079 102 264 2.679
3409 ~ 9.85
-50.5
-9
-9

4.3.02 6.18 0.37
855 2818 89
+0.3
-1160

43 15 585
19 6.37 -046 146 855 2818 89
+0.3

6.2 103 5.9
108 222 108
4619 456 -1.6 43 (E+D)
4619 1080 +0.3 6.2
4621 80 -3.5 2.4

41121
-0.326
-0.326 -0.306
+0.1904 9035 6350
-0557
10883

4271 -4275
4619 6.08 4.15 4 bank
2933 486 -1.854
130, 251 477 6.760

4271 -4275
10883
4619 6.08 4.15 4 bank
2933 486 -1.854
130, 251 477 6.760

-6.157

u

-0.062
0.202

-25.296

se

-0.074
-0.881

11.757

11A

0.123
-0.428

16.000

147.51

151.356

5.900*

-0.008*

-0.032*

-22.000*

-50.000*

5.500*

TIME

STA

12.000*

0.000*

4819

-0045 ± 8.0
-0033

12 05.5 -50 29 6.4 B9m 44.88

+9.354
var

105383

16575
7268

6.37 -0.5

+15 +20 +14 +11
1546
28.839 1900.4
-1 222
29.067

409

13, 1, 1, 2, 3, 4
1521.4
11.338
17.558
28.896
28.014
29.014
-603

28.870

-23
1000

-50 29 6.01 1890.8
+41
5.60

45.23 1927.86

21.020
6.25
6.20
-19
6.34
1377
6.88
-1.28

83.04
41.5
50.7

480
28.925
-136

6.97
-47
7.44

1955.18

CRIP
Mm
L

12 372 -39 42

110073

110073

4.63 -09 -40 C

450
330

+147P (var?)

+1514

-024

089
082

654
659

2719
2421

W

-5
+14

3

11
-00455

-00489

-0506

-0500
-024

-0365 GC + 50030

-133
+9

104
823

102

-1034-024

-045-055

5.7

23 82642-220

124
-34.7

-23.5

-123

414
451

9040 9321 / 0574
2441 -5971 50037

± 1.2 ± 2.5

9.610 60

$\frac{202}{812}$

-0046 -085

~~-0045 -084~~

-0052 -087

-0034 -087

45.13 93.7

-1.327
43.21

9.664

-6.63

9.594

$\frac{40}{554}$

-0045 -00373

-00434 -00337

44.42 39.10

-10
44.12

44.17

-49
45.27

55.30

-0496

9.557

+13

$\frac{570}{570}$

-048.5 -025.5

45.66 69.73

-20

45.86

Observer

12.600
39.200

Date: - /

STAR

TIME

-63.000

-29.500

4.400

76

15.100

-0.852

0.243

-0.465

161.730

5.250

0.522

0.307

-0.796

-162.836

-24.370

0.050

0.920

0.388

-140.247

-4.780

Comments:

1484444
 11
 20 94304
 7/2 7/2 2.1
 12 43.5
 102.1
 13
 -070 +09B +30A
 -56
 2.688
 4811
 488
 4
 885

110956
 (12327)

V_0
 4.57 4.63-16-14C
 2.698 362
 2.782
 34
 9114 -898
 0324
 3340 -433
 016
 0024
 016

-037 -019

-0364 -0166

+04

-0207

-0330 -019

\rightarrow
 7.20
 1146410
 1032-030
 450

-037-011

for units

-037-011

3305
 9438

-4584

-578

$V_0 = 4.57$
 $F = 7.44$
 5653

-20
 -67

946-8731/88BP
 3432-4815
 0044-0034
 -037/017

5422-8922
 3350
 0916
 -0020
 116
 0089
 8004
 MV -123

29.590
200
590

10.0
30.682
727
21.006

56.58
57.44
57.98

11.3
13.0
1.80

3.9
3.2
39.22
15.86

-0050
-0000
-0000
-0000

074
1000
1000
1000

039
030
050
15

11.3
13.0
1.80

3.9
3.2
39.22
15.86

29.533
+9
842

120
120
120

120
120
120

120
120
120

120
120
120

037.5 = 017

↙

Observer: _____

Date: ____ / ____ - ____ / ____

R.A. : 12.700

DEC. : -56.200

STAR PM. R.A. MAGN 0.000 TIME

PM. DEC. : 0.000

DISTANCE : 0.000

MODULUS : 10

RAD. VEL. : 0.000

q1 (U) : -0.846

q2 (U) : 0.082

q3 (U) : -0.527

dU : 0.000

U : 0.000

q1 (V) : 0.533

q2 (V) : 0.080

q3 (V) : -0.843

dV : 0.000

V : 0.000

q1 (W) : 0.027

q2 (W) : 0.993

q3 (W) : 0.111

dW : 0.000

W : 0.000

Comments:

MW
4548/59
401 -0.18 -0.26
413 -17.5 -25.5
4102 -17.5 -25.5
50.7
-5-6 54
B2E-2
850
02

112452/1
12/13 21.8

517-09 -50 C
B5.12

1412
13.4

13.5
0.581
10/13 13.4

-082 +078 +199
2758
2.658
39

Power

22205
12/13 13.4

-032 +044 +273
2.54
3

9244 -8617
0234
0237
0210

+12.0
+11
498
67
E = 45
V0 = 3.87
5.9

3806
6.3
+13.4

412-071 095
412-071 084326
2.667
2.608

9470
3305
9794
4414
10023
10.7

MV-205

12.850		4898.000*
-56.900		
-45.800		12.000*
-20.000		51.700*
6.200		-56.000*
174		-54.000*
13.400		-0.026*
		-0.015*
-0.836	6.17	5.900* (2)
0.048	121	151.356
-0.546		15.000
94.618		
9.127		0.100
		-0.547
0.548		
0.087	+9	6.885
-0.832		
-73.241		-0.074
-27.076		-0.831
-0.008	-25	-23.663
0.995		
0.099		-0.069
		0.099
-93.411		
-14.902	-10	-9.023

4898

12 50.16 -56 54

38396

4.3

$\frac{169}{.565}$

~~0037 ± 33~~

~~0035~~

~~W43~~

~~010 ± 28~~

2445 586

$\frac{92}{23.53}$

~~019~~

~~014~~

38346

(69.39)

$\frac{11}{557}$

2.4.55

-34

$\frac{2489}{}$

38441

(39.44)

-34

$\frac{412}{}$

~~32.95~~

~~15~~

~~38.10~~

~~02.95~~ ~~0.260~~

~~0.260~~

~~00.38~~

~~01.25~~

~~W37~~

~~02.17~~

0317

~~00.25~~ -0.018

~~00.35~~

~~01.49~~

0027

~~02.99~~ ~~01.08~~

4899

12-510.0 -56 56

-024-
-024-
-024-
-024-

34618 27

-020.449

50.30 57.1

169
607

-0231
-02411

69
61

57

35.590
.11
601

64.88

57.13
-34
57.77

35652

~~35346~~

3594

5087

-15

-60372 -62.200

-02365 -0184

-39
655

~~5102~~

-0294

9417-8804

0316
-0048

0317
-0037

-0294
-0294 -0102

3222-4772

3.2
0769

2.55
0606

5.78

5.54

4540 63445

13 034 -48 12

RST

-0635 -080 Stay
-00307 -0037

113703

404

4.70-14-57

-0307

-00321 024

-063 059 375 2.7x3

-0304 -0161

See
644
19

Book

-29.72 -1468
7/58 0.22
391 160

551

MV = -0.75

VO 4.60

5.35

-024-014

+14251

~~9151
475
-5388
-0.445
62
0078~~

472-074 118 377 2725

1.1
Plink

5.64

9604
2785
8182
5750 } 10051
0328

022
AR
96 342
143
151

4940.000*

13.000*

3.400*

Think

-48.000*

-12.000*

-0.029*

-0.019*

5.350*

8.7
138

117.490

14.200

0.104

-0.562

+6

4.257

-0.099

-0.789

-25

-22.857

-0.079

0.248

-8

-5.820

4476

(14512)

13 10.4 -50 26 85.52

km02 03

5.71
5.72

5.42 -012 142 958 2.78

-014-000

13.2

141 940

280
280
14

23.58 1716

-019-021

-50.4

-30 9734 ~~8862~~

9.91-098

-20

-0935 -034 strong

5.7 2264 ~~9955~~

-00201 -0275

-1 9560 -8138 0376

-0284

6268

2864 -58.1 -0051

-0287 -0233

6237

22 2674 6.51

15.665 -
111.971 -
0.888
0.974
0.889 -

11-

10.236 -
79.831 -
0.784 -
0.221
2.581

11-

9.839
67.035
0.585
0.051
0.809 -

11+

1.000 -
138
5.700
25.000 -
30.000 -
50.100 -
13.200

124

57 via

115 202

(5001)

13 13.3

-19 41 gKI

434.10

+345 254

EC17551

(99896)

5.25

+0.97 Cape

433.72(6)

W7885

5.25 +1.02 +0.88 2.19"

436.2 C(13)

43028

5.19 +1.01 +2.11 12' W(12.1)

431.7 W(13)

-1903653

4317 -111 (circled)

-49 -7

+9

0.12

(4306-711)

42 42

-62

~~44~~ -3

+3

0.30

4305 -123.0 CC

~~-69~~

~~44~~ +1

~~4~~

0.25

78K
711

4311.511 -112.59 Y

-85

+6

-8

0.20

4705

4391(8)

306

-120

430 C(14)

115 202

(Joy MP)

7341

4156

$$\begin{array}{r} +0216 \pm 2.2 \\ +0216 \\ \hline -123 \pm 2.4 \\ -115 \end{array}$$

$$-314 - 949 - 337 \ 541 + 306 - 120 + 341 \ 040 - 11 - 535$$

$$096 \ 013 - 290 - 038 \ 635 - 1.312 + 32.1 - 30 - 10$$

$$-4 - 65 - 33 \ 024$$

$$16.237 \ 1894.4 - 19 \ 40 \ 40.20 \ 18946$$

$$\begin{array}{r} -1.201 \\ \hline 15.036 \\ \hline 4.81 \\ \hline 33.39 \end{array}$$

$$42.01 \ 1933.67$$

$$\begin{array}{r} 55.334 \\ 20.416 \\ \hline 15.512 \\ 804 \\ +112 \\ \hline 880 \\ \hline 1180 \end{array}$$

$$\begin{array}{r} 15940 \\ \hline 1180 \end{array}$$

419

$$\begin{array}{r} 38.6 \\ \hline 48 \\ \hline 38.16 \\ \hline 4.80 \end{array}$$

$$259$$

$$36.3$$

41.7

$$\begin{array}{r} 37.50 \ 1936.42 \\ \hline 34.54 \\ \hline 38.46 \end{array}$$

$$15.994$$

200001

Observer:

Date: / - /

A. : 13.200

C. : -19.700

STA A. : 325.000

C. : -111.000

ICE : 4.050

US : 65

L. : 34.100

U) : -0.809

U) : 0.343

U) : -0.477

dU : % -1354.205

U : -103.697

V) : 0.581

V) : 0.590

V) : -0.561

dV : 531.610

V : 15.188

(W) : -0.089

(W) : 0.731

(W) : 0.677

MP : -513.625

M : -10.093

TIME

Comments:

5024 74

-0736 + 4.0

-030 ± 3.466 7210

115823 205 13

-0636 17.6 -52

-030 29 5.7 88 + 6.28

18034

-0032

-024

7921

34631 1408.7

-52 29

8.53 1902.2

+149

+1.43

-0038 - 014

5117

780

544-057 112412 2.745

-0.2

2.10

-031 - 014

20.91 14.46

34.701

13.47

095 723 (663)

-0.2

7.72

1938.73

1323

9237 10254

-120

674

29.9

-53

8.25

-52.5

2260 - 5135

34.66

106

7.8

1938.4

-43

0324

34.66

106

-36

1938.4

-43

0004

+ 666

106

-36

1938.4

-43

0.225

+ 666

106

-36

1938.4

-43

1526 - 016

14.6

106

-36

1938.4

-43

21.571

2881 - 5358

2881 - 5358

8.21

1.11

36.4

37.51

2881 - 5358

2881 - 5358

8.21

1.11

36.4

13.300

-52.500

-43.000

-16.000

5.750

141

9.800

-0.800

0.013

-0.599

98.308

8.012

0.589

0.204

-0.782

-88.555

-20.172

-0.112

0.979

0.171

-60.337

-6.847

87103

11 2919

66308

13 319

48 02

2237 - 68
144 0.54

9764 - 7720

7158 - 4357

Y :	13.500
V :	-48.000
W :	0.000
X :	0.000
E :	0.000
S :	10
U :	0.000
U :	-0.784
U :	-0.624
U :	0.000
U :	0.000
U :	0.605
U :	0.288
U :	-0.743
U :	0.000
U :	0.000
(W) :	-0.158
(W) :	0.957
(W) :	0.243
(W) :	0.000
dw :	0.000
W :	0.000

8758

13

411

-50

76

119419

17036

2414 13487

8.88 0.21

9753
2209

-7547

-6520

6300

10711

000.0	:	M
000.0	:	MP
061.0	:	(M)
096.0	:	(M)
-0.203	:	(M)
000.0	:	^
000.0	:	^P
-0.735	:	(^)
0.277	:	(^)
0.619	:	(^)
000.0	:	U
000.0	:	UP
-0.659	:	(U)
-0.032	:	(U)
-0.759	:	(U)
0.000	:	EL
10	:	US
0.000	:	ICE
0.000	:	CC
0.000	:	AA
0.000	:	AA
-50.750	:	CC
13.700	:	AA

686,73

5264 Si 14 00.4 -41 10

122502

6.10-12 (1.365) C

$$\begin{array}{r} 0241.1 \\ \hline 11 \\ \hline 414 \text{ PINS} \end{array}$$

~~$$\begin{array}{r} 48 \\ 196 \\ 557 \\ 2705 \\ \hline 16a \end{array}$$~~

~~$$\begin{array}{r} 10302 \\ 0171 \\ \hline 0.34 \text{ } 1-149 \end{array}$$~~

$$\begin{array}{r} 138 \\ 606 \\ 276 \\ \hline 2885 \\ 130 \end{array}$$

~~$$\begin{array}{r} 2879 \\ 541 \\ \hline 16.51 \end{array}$$~~

$$\begin{array}{r} 44.0 \\ -0.9 \end{array}$$

$$\begin{array}{r} 286 \\ 286 \end{array}$$



$$\begin{array}{r} 7.9 \\ 211 \\ 6.10-71 \\ 155610 \\ 2.238 \end{array} \text{ (2)}$$

$$\begin{array}{r} 5999 \\ 7026 \\ \hline 688-7046 \end{array}$$

138 624

$$\begin{array}{r} 276 \\ \hline 900 \end{array}$$

123021 190806
-40 17.1

-095 +072 +195 (5)

26 km 81 m

18 03.0 -40 56

82 II

HR5285

2405 2696

(339)

122550 435 -0.19 -0.78 C

2.655

(13)

(1680)

-64 -79
9889 -4959
-2182 +10.8 ± 0.4

2442 2400
931 072

4.42
4.30
-2.32

-025 -019 0819

-0250 -0190
+ 29 + 21

-095 089
-0211 -0159

-0023 -025

-021 -016

-0220 -015

-0021 -0215

246

V0 = 422

1000
-0019
-0023
-2.6

-0240 -0177

-23
-3.5
-2.25

E = 14
(150)

Observer:

Date: / - /

STA		TIME
.A.	: 14.050	
EC.	: -40.950	
105	f 128.000	
ET	f 10.300	
(U)	: -0.716	
(U)	: 0.035	
(U)	: -0.697	
dU	: 68.600	
U	: 1.453	
(V)	: 0.639	
(V)	: 0.436	
(V)	: -0.634	
dV	: -103.293	
V	: -19.533	
(W)	: -0.282	
(W)	: 0.899	
(W)	: 0.334	
dW	: -52.761	
W	: -3.199	

Comments:

9.012 64"

64194

5296 14 06.3 -51 16 RS

(108) 6.07-05 -26 @244 Si*

Opt 2 52 +100 +125 D

Sq. D. L.O

-026 131 746 2.501 Sctm

Plank

Slng?

124 751 23269 4099
243 0-46/04

(-015)

~~W/B~~ ~~25~~ ~~64~~ ~~5~~ ~~1~~
Slng

(+5.2)

544-022-26 744 2.502

MV = +0.25

66 BFD

~~W/B~~ ~~24~~ ~~014~~ ~~114~~

114 748

5765

-0365
-037-015

SPD 26.0

9933-2298 544-8231
1159 4687 5310-5279

5296.000*

14.000*

6.300*

-51.000*

-16.000*

-0.000*

-0.015*

5.000*

6.0

158

131.024

5.224

0.131

-0.699 110

+17

13.668

-0.135

-0.696 110

-25

-21.476

-0.015

0.165

-2

-1.173

50-16

14 06.3 -51 16

-10033 104 Pw/M

23¹³ 125 741 2.755
(134) 750

-0310 1411
-513
-51
0
5.7

FSR

17.050 17.5
212
262

17.056

~~17.056~~

17.111 56.10
-40
140
071

17.114
-32
131

71.25

38.49

-005855.2
-0034
-0043
-0048

6.23
-24
6.52
6.44
-35
6.82

5.61
-35
5.99

-027 = 3.7
6.75 6.9
114
5.61 -0.4

-019
-012

Observer:

Date: / /

STAR

TIME

14.100
-51.300
-51.000
-51.000
5.700
138

5.200

-0.709

-0.098

-0.698

107.185

11.165

0.641

0.321

-0.697

-96.949

-17.085

-0.293

0.942

0.165

44.240

6.964

Comments: