

30

35d  
38

91.173

0.895  
-0.112

-91.647

-0.356  
-1.347

-27.923

0.267  
-1.419

106.800

39.811

3.000\*

-0.382\*

0.158\*

2.000\*

16.000\*

5.000\*

11.000\*

16.222\*

22

524  
38



96692.000\*

11.000\*

5.800\*

16.000\*

2.000\*

0.168\*

-0.360\*

2.400\*

4  
6287 30.200

106.800

-1.415

0.267

-60 -14.179

-1.240

-0.356

-116 -75.481

-0.070

0.895

76

29

91

93.498

\*

600

+31° 2240

11 3.1

+31 15

Y 2600

11 5.6  
8.315.8

+31 0  
+30 44.07

-15.4

ADS 8083;  $d = 34''$  binary  
AB: 35°(Y)  
 $\Delta m = 2$  mag.

83M(10)

A -14.0 to 4W dm1

B -28.1 to 5W dm2

HD 97101

The McCormick rel parallax is the mean for the 2 components.

-16.4

8.31 Map +8.3

11.2; M2 +9.3

G.C. 15366 +.578 -.210

715  
635  
621

+0.078

1844.31 264.7 36.23 10E

1867.23 264.4 36.03 3 Δ

1881.65 264.3 36.03 2 0E

1898.56 264.1 35.70 3 1W

1909.90 264.4 35.51 11

1918.85 264.4 35.42 6

+0.587 -0.204

0.1  
-140

16.0 ←

25

50

1880

1881

1882

1883

1884

1885

1886

1887

1888

1889

1890

1891

1892

1893

1894

1895

1896

1897

1898

1899

1900

1901

1902

1903

1904

1905

1906

1907

1908

1909

1910

1911

1912

1913

1914

1915

1916

1917

1918

1919

1920

1921

1922

1923

1924

1925

1926

1927

1928

1929

1930

1931

1932

1933

1934

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1936

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2007

2008

2009

2010

2011

2012

2013

2014

2015

2016

2017

2018

2019

2020

2021

2022

2023

2024

2025

-1.80

0.926

1.065

1.755

-0.119

0.009

-33.779

0.359

-2.746

~~14.000~~

10.471

\*0.100\*

-0.204\*

\*0.587\*

\*44.000\*

\*30.000\*

\*8.300\*

11.000\*

\*000.000\*

*OR*



97101

750  
100

11 08.4 +30 43 dm1 -14.08w(4)

-15366  
46866(70)

942 -28.18w(5)

8.56 +1.22

12600

067(5)

10.22 +1.46

13102240

4088883  
35"

~~±5 ±5~~  
+578 -210 60

0.588-205  
0.546-201

-40 +1 -1 .078



824(10)  
648(4)

78±8

$$+0448 \pm 4.9 \quad -210 \pm 4.5 \\ +0462 \quad -204$$

$$224 - 925 \quad 511 \quad 860 \quad +578 \quad -210 \quad -14.0 \quad -107 \quad -7 \quad -855$$

$$-129 \quad 024 \quad -564 \quad 104 \quad -1104 \quad -2.555 \quad -12.0 \quad +12 \quad -3$$

$$20.481 \quad 1896.1 \quad +30 \quad 43 \quad 12.99 \quad 1895.9 \quad -7 \quad -48 \quad -22 \quad 0.525$$

$$\begin{array}{r} -2.415 \\ 18.066 \\ \hline \end{array}$$

$$\begin{array}{r} 11.36 \\ 24.35 \\ \hline \end{array}$$

$$\boxed{-53 \quad +2 \quad +4}$$

$$19.618$$

$$638$$

$$17.5 \quad 1930.1$$

$$\begin{array}{r} 17 \\ 17 \\ \hline \end{array}$$

$$17.3$$

$$+0455 \quad -207$$

$$-205$$

97100

11 053 +30 43 49 65 -34.38(15)

AOS R183C

WLS67

up. 4. 6 506308

WLS

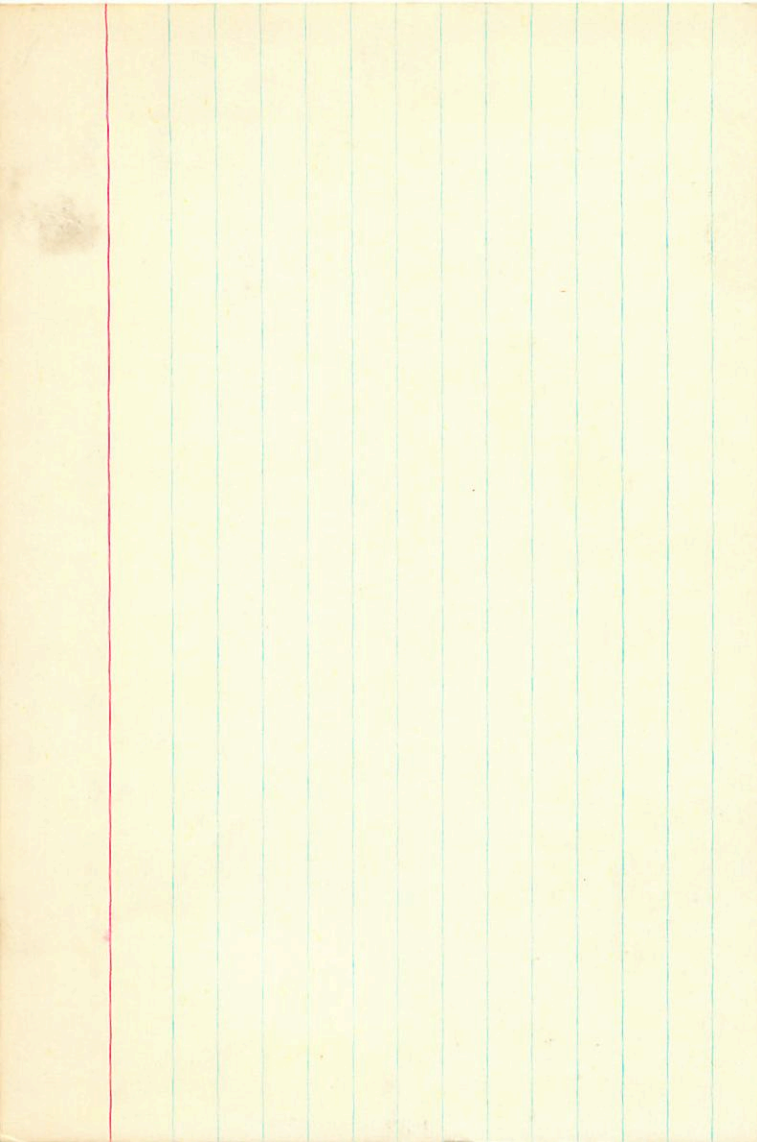
-164 (5)

-157 (13)

-152 (14)

-157 (16)

-164 (3)



660

1) 68.3 + 3.0 .44

+3102240

8.38 + 1.35 + 1.25 (5) 7.53 + 0.54 (2)

AD59893

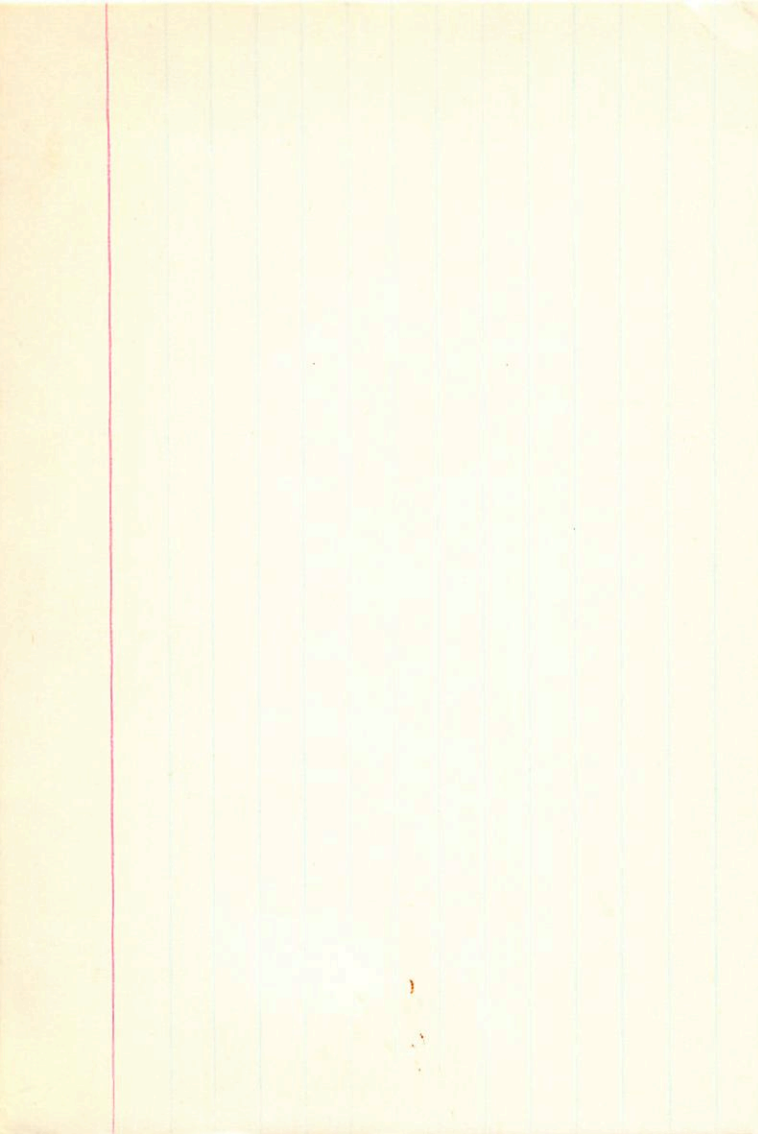
10.00 + 1.48 + 1.18 (5) 886 + 0.51 (2)

24" sum = 5"

216.4 (3)  
15.7 (16)

66

-140



-10° 3216

Y 2603

HO 97214

LPM 370

11

11

11

4.0

6.2

8.8

46.5

48

24

7

-10

-10

-10

11

24

41.95

400

601

46 C (7)

0.450 WIND

879  
753  
758  
195  
1

9.0 MO + 8.4  
to: 0.047

Lynchew - .87 + .66

-0.951 + 0.597 CR

-0.950 + 0.600

1.75

+40.0

31





601.000\*

11.000\*

8.000\*

-10.000\*

-42.000\*

-0.950\*

0.600\*

1.750\*

22.387

40.000

5.318

0.036

120.498

0.200

-0.700

-21.878

0.018

0.705

28.598

31

+5' 2463

11 5.8

+5' 16

604

11 8.3  
10.17  
4.24

+5' 44  
44.99

97K18  
97K18

→ 9209  
3121035  
Canting

H18K  
Port

+15  
7/8.2

Li 18.1368 -317 -031

9.80  
9.17  
9.75  
5.74  
1.4

8.8 K8 +7.4

-293 -030 Y

-3 -4  
+2

-0.296 -0.034

-310 -35 1.4  
+18.2

334 -010 (13)

612-118 112

0.46 (3)

22

23

18 500  
19 500  
20 500  
21 500  
22 500  
23 500  
24 500  
25 500  
26 500  
27 500  
28 500  
29 500  
30 500  
31 500  
32 500  
33 500  
34 500  
35 500  
36 500  
37 500  
38 500  
39 500  
40 500  
41 500  
42 500  
43 500  
44 500  
45 500  
46 500  
47 500  
48 500  
49 500  
50 500

2

604.000\*

11.000\*

10.700\*

4.000\*

45.000\*

-0.310\*

-0.035\*

1.400\*

19.055

18.200

1.196

0.160

25.702

-0.623

-0.514

-21.223

-0.608

0.843

3.761

32

+74° 45' 26

Y 2611

11 5.6  
" 8.6  
" 12.9  
~~5.9~~

+74 16  
<sup>+74</sup>  
+73 44.97

603

\*

ADS 8100 AC;

dl = 7" 5.  
Δm = 3.5 mmHg.

gm SW

73 M(6)  
80 G(8)

(B)

A

+8.163w dms

G.C. 1544g - .402 + .105

Optical comparison to No 2612 (Y)

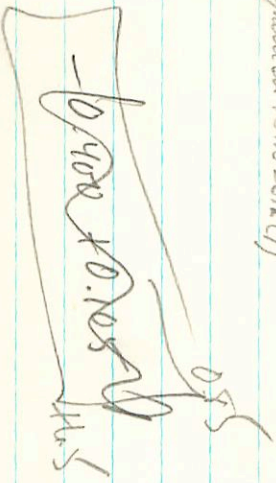
~~1436 109~~  
393 109

(B)

gmo + 3.063w

7.64 K8 + 7.4

+0.077



109  
133

1404

109

8.16

8.16

63



-10.646

0.668  
-1.013

-0.287

0.554  
-0.263

27.740

0.497  
1.657

6.500

14.791

0.850\*

0.105\*

-0.400\*

45.000\*

73.000\*

12.100\*

11.000\*

603.000\*



97584 11 12.0 +73 45 4 drs +8.1 (w13)

GC15449 7.63 +1.03 +1.07<sup>2023</sup> Mich 7.8 drs  
w6898(905) ~~8.3 drs~~

X2611

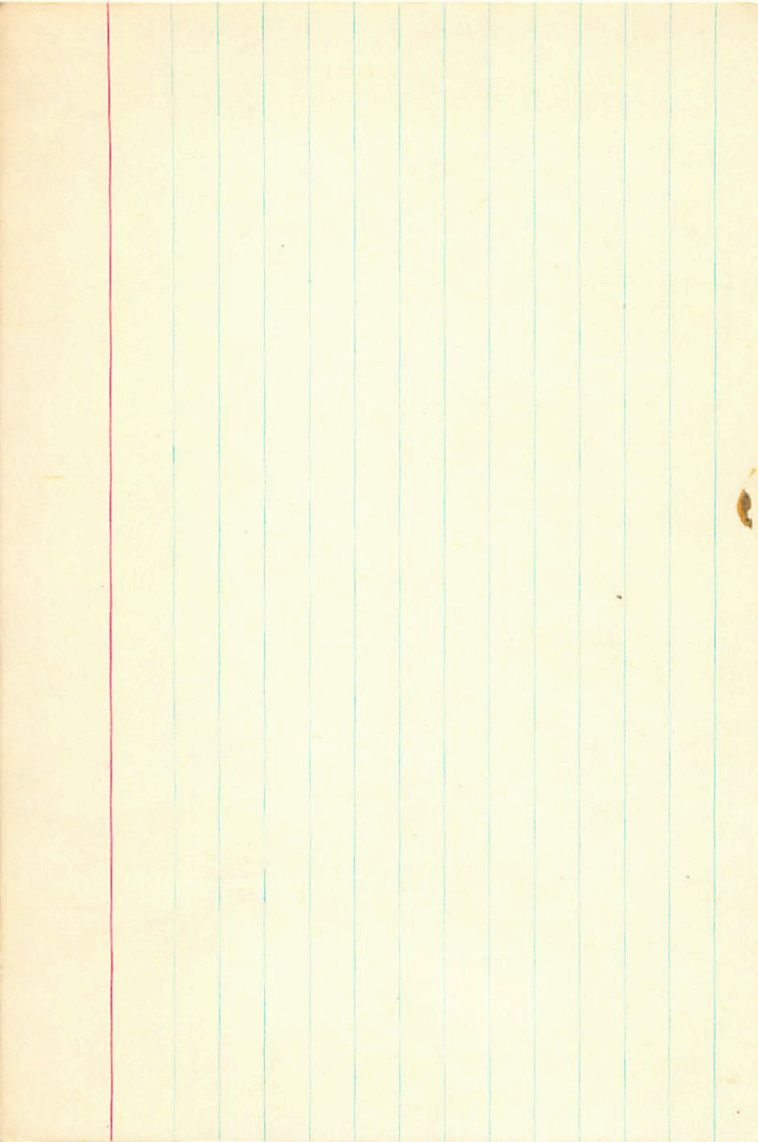
+760456

-402 +105

+28 0 -9 .071

+26 +1 -7 .077

73M(6)  
766(8)  
—  
77±8



603

189208

11 12.1

+23

45-

+790456

+760

ADD 8100

A 272 + 1.04 + 0.92 (2)

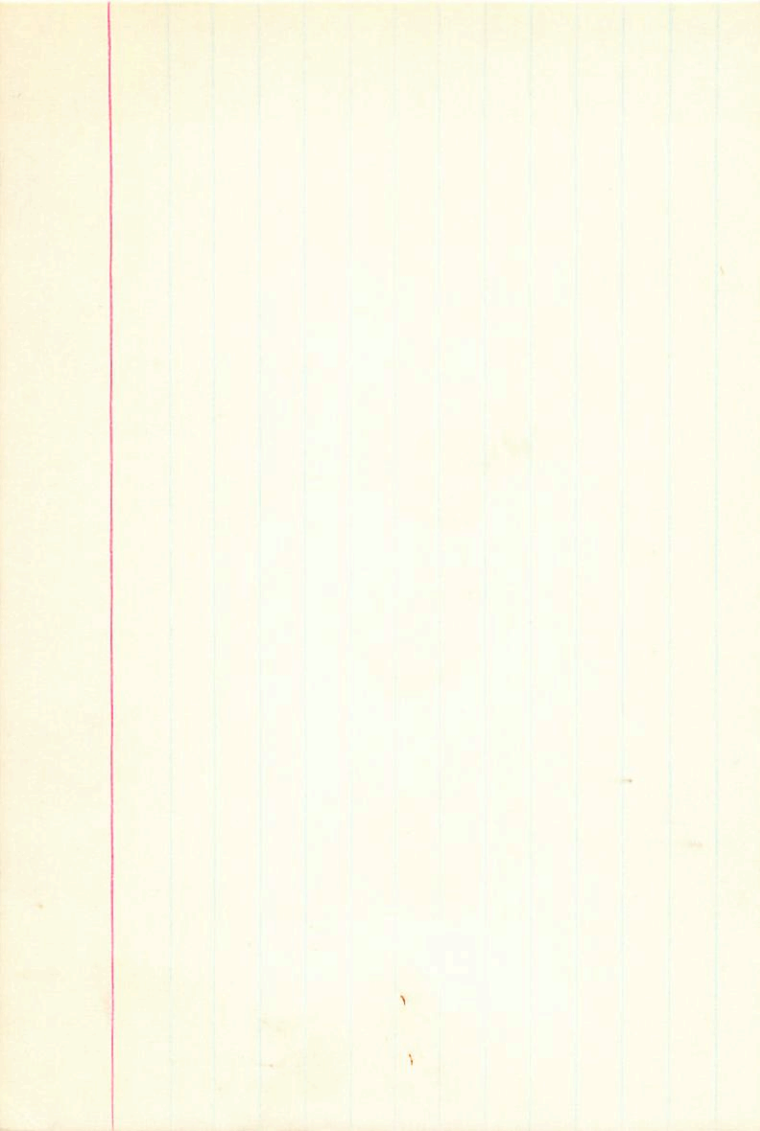
+ 0.405 (2)

AC 7.5

$\delta m = 3.5$

6L

+8.1



-17.8336

11

8.1

-17

20

35

37

-17.3337

11

12.8

49.2

-17 51.07

Y 2618

49 M(7)

93

A 15C SW

36

Q.7b  
64 Y(12)  
55 C(8)

0 +18 2 SW 50(90) +18

9.9  
9.9

170-735 17.0

10.4 MD  
9.5 MD

Am 20-624

F.16 - .80

2 Triple systems: 11.2 K6, 11.2 K6, also

9.1 M5, 20 "opm. Ret. parallel is mean for A8 VC

9.96 +1.31 +1.21 B

-17.0337 Sp. B long 147

184 202

10.05 +1.32 +1.21 B

C 13.70 +1.55 +1.05 B

A-B Component, 1.755 - 80 83"

+0.170 -0.735

CR

A 9.08 +0.58 B

B 9.16 +0.60 B

C 12.30 +1.14 B

24

-41.161

1hr

0.691  
-2.083

GM

-39.678

1hr

-0.275  
-1.566

-54.206

-60

-0.041  
-2.465

2.000  
21.878

2452  
2.60

1.700\*  
-0.735\*  
0.180\*

-51.000\*

-17.000\*

12.800\*

11.000\*

37.000\*





FLK: 717

Y 2631

SZUMA

11

12.5

TLK

38

11

14.8

18.5/18.0

TLK

23

6.79

(38)

~~1100 (110)~~

122 (110)  
131 (110)  
111 (110)

38  
34  
39

9.32 + 1.42

+ 1.08 MIE JM

+ 1.6963M

(TLK.1)

Unit 8-1383 -2977 +179

10 Mup

8.4 M2

-2.955 + 0.192

Gen'r

9.32 9.31 + 76 R

4<sup>AD</sup>  
3<sup>AD</sup>  
2<sup>AD</sup>  
1<sup>AD</sup>

9.32 + 1.42 + 1.08

(38)

9.32 + 1.42 + 1.08 (5)

8.32 + 0.76 SLD

-13<sup>3</sup>3333

11 9.2

11 13.957.2

-13 574

607

49

03

8.44 0.66

MCC-AD -184 -106

10.00 Mo +8.0

460717 11 17.5 +18.5 of dm1 +4608w(3)

GC 155-29

W 6632

Y 2631

S 24 m m

9.24 +1.45 +1.21 mick +40.1 (107)

9.32 +1.42 +1.08 m. E 5 + M

-2.960 +180

-2.955 ± 0 +192.53 G-R

-2.948 ± 7 +149 ± 10 GC

-2.962 ± 8 +175 ± 5 G-R ±

-2.985 ± 6 +179 ± 6 m m

-2.55 +18 G m

-2.948 +129 G

-2.962 +175 G-R ±

-2.960 +170

+130 -16 -7 .114

2.965 109

1004 110

122 G-R

(1263 121)

+146 -25 -11 .100

-2.949 ± 6.7 +149 ± 10 GC

-2.985 ± 6 +179 ± 6 R 8-1500

113 ± 7

-2

1454 988 1344  
914 405 - 2.960 + 170 + 46.9 155 + 43 327

~~2.910 152 545 029 1345 0 3302 119.0 3 - 19~~

845-029 2.910 + 152

3.302 13650  
- 4854 = 6.7  
+ 4914  
611 + 179  
+ 445 100 + 105

23 + 86 + 45  
+ 66 7 2.51 1407.4  
- 6.35 +

57.16

130 + 117 + 46  
+ 127 - 3 - 24

249

28.544 1402.9

22.562  
57.406  
9.34  
91.254  
90.619  
19.00

344  
39.171  
- 12.235

32.2  
267

36053  
- 075

11.5  
- 11.58  
59.52  
- 24  
54.33

1965  
59.82  
+ 3.66  
1430.2

0.2  
- 11  
0.09

55.5  
27.8  
20.4

-19° 3242

11  
11

14.2  
~~16.5~~  
18.9 ~~55~~ 2

-19  
~~-19~~  
-20

39  
~~55~~  
10.24

\*  
608

AJS 8138;  $d = 5''.7$   
 $\Delta m = 2.3 \text{ mag.}$

17  
23  
7

7  
8  
6

Yale Zone +.200 -.131  
-13 -6  
+1

8.6: MO +8.7

1877.12 507.1 6.34 260

1910.88 314.4 6.03 8-

19

222 -106  
+0.187 -0.134  
0.6  
3.7

35

270

4-185  
4-186  
4-187  
4-188  
4-189  
4-190  
4-191  
4-192  
4-193  
4-194  
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4-262  
4-263  
4-264  
4-265  
4-266  
4-267  
4-268  
4-269  
4-270

4  
2  
1

0.162

0.611

-0.159

-3.046

-0.787

-0.010

-14.599

-0.082

-1.084

3.700

13.183

0.600\*

-0.136\*

0.187\*

-10.000\*

-20.000\*

18.900\*

11.000\*

608.000\*

25



+40.477-39

39

11 170 +40 46 30  
11 19.6 +40  
22.2 19.9 +40 14.69

+2043.1  
25 M(19)

52  
548  
MATH

+10 208

ph

212

1000

8.155  
6.6  
6.6

94 MO

Hd. -109-003

-094 MR

10.83 +186 +125 (3)

9.34 +0.64 (2)

-0.103 -0.002

-70  
105 0 165

99



-9, 982

0, 927

-0, 163

-4, 242

0, 054

-0, 181

6, 678

0, 371

0, 434

-7, 000

21, 380

1, 650\*

0, 000\*

-0, 105\*

15, 000\*

40, 000\*

22, 200\*

11, 000\*

39, 000\*

Handwritten signature or initials.

99625

11 25.1

~~-0044~~ 4.2  
~~-0050~~  
~~-25~~

35 1019  
35 1019

6.5 dec -14.68

15724

6952

6.74 + 1.08 + 2.10 = 2.24''

-0047 + 0.25

-0044 + 0.24

8.825

19064

-25

35

8.44

1906.0

-0

191

-1.45

-0630

9.072

9.89

-061031

54.151

54.33

1935.11

1468

14.328

14.42

29.6

9.140

9.25

302

8.862

8.27

~~8.68~~  
~~16.2~~  
-14.8

8.54

9.50

9.41

1939.57

203

9.10

9.25

9.845

9.40

9.31

9.95

+1.58

26596

-5604554 } (429.4)  
 28.3 -5652  
 NYE -2.7  
 46

F0710 68060D 8.33 +1.06 (2.18) (091)

HPR E minor

-531 +029 (227)

-509 +23 CP →  
~~-515 +17 CP~~

8.35 +1.06 +0.505 (3)

1618 (Tr-D) (227)  
 606 588 346

-550 +31 CR V.20

7.50 +0.8 (2)

-530 +27  
 -681 +37

6.53  
 5.95  
 (0.9)

HW1

NDF

Apply

9442 -9687  
 8109 2664

5307  
 1227



22



0.000\*

11.000\*

28.300\*

-56.000\*

-52.000\*

-0.530\*

0.025\*

0.800\*

14.454

-2.700

2.231

-0.375

33.268

-0.956

-0.924

-11.326

-0.657

0.070

-9.682

37

+41° 2201

11 23.8  
11 26.3  
28.9

+41 19  
+41 31

612

51  
25  
26  
52.0

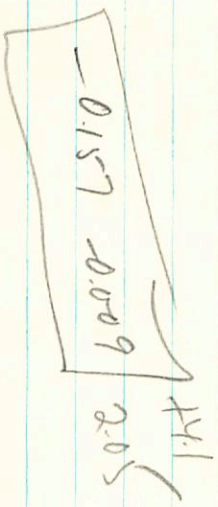
+40 47.55

41°  
26.3  
26

41 2000

186. pg. I 815 - .157 = .009

9.7 MQP 78.1



9.80 1.21 149 - 0.193

SL

Handwritten signature or initials.

612.000\*  
11.000\*  
28.900\*  
40.000\*  
48.000\*  
-0.157\*  
-0.009\*  
2.050\*  
25.704  
4.100  
0.636  
0.355  
17.806  
-0.322  
0.071  
-7.981  
-0.218  
0.932  
-1.778

-20 1513-110

11 25.9

-2 38

613

11 3018 45.0

-3 9.48

49  
24  
73

MCC-AC -135 -117

11.3 MO +8.7

206

4m

Yoga 6/16

11 39.5

+27 00

10.5 AM 3 HOC

7/10/4

POD -510 WRP

+9.6 (10)  
+9.30 -774 Rms

1100 405

Grds abt W

9.12

0.5E

1008

1.514 1.22

9.45

1.06

1010  
-800

+10.1.0.2 WPM

+9.65 (10)  
+8.5 (5)

10.0L 1.52 1.19

1.06

0.25

9.25

12.6.10

6.11

9796 944  
2211 0132

5-4 5.91

11.11 0.35

WPa -0.26

39

M : 50' 838  
PM : 1041' 205  
d3 (M) : 0' 293  
d5 (M) : 0' 039  
d1 (M) : 0' 591

20  
U : -50' 489  
UP : N-1510' 21  
d3 (U) : -0' 139  
d5 (U) : 0' 202  
d1 (U) : 0' 403

U : -25' 598  
UP : N-2344' 4  
d3 (U) : 0' 531  
d5 (U) : 0' 452  
d1 (U) : -0' 812

PM' DEG : 0' 200  
MODULUS : 11  
DISTANCE : 0' 520  
PM' DEC : -800' 000  
PM' R.A. : 1010' 000  
DEC : 51' 000  
R.A. : 11' 220



R.A. : 11.650  
DEC. : 27.000  
PM. R.A. : 1010.000  
PM. DEC. : -800.000  
DISTANCE : 0.250  
MODULUS : 11  
RAD. VEL. : 9.500

q1 (U) : -0.875  
q2 (U) : 0.425  
q3 (U) : 0.231  
dU : % -5344.4  
U : -57.769

q1 (V) : 0.403  
q2 (V) : 0.905  
q3 (V) : -0.136  
dV : % -1710.7  
V : -20.486

39  
q1 (W) : 0.267  
q2 (W) : 0.026  
q3 (W) : 0.963  
dW : 1041.602  
W : 20.839

W/285

73102240

11 42.1 + 31 15

8.96 + 1.13 + 1.06 (2)

10.415 (2)

+ 26.2

23

M : 39.217  
M : 25.281  
d3 (M) : 0.200  
d3 (M) : -0.000  
d1 (M) : 0.320

N : -43.110  
qN : N-1900.000  
d3 (N) : -0.000  
d3 (N) : 0.010  
d1 (N) : 0.410

N : -10.000  
qN : -001.022  
d3 (N) : 0.320  
d3 (N) : 0.410  
d1 (N) : -0.020

O. NET : 39.300  
MODIF : 35  
SOURCE : 3.100  
DEC : -301.000  
B. : -33.000  
DEC : 31.300  
K. : 11.300

R.A. : 11.700  
DEC. : 31.250  
R.A. : -32.000  
DEC. : -381.000  
DISTANCE : 2.140  
MODULUS : 27  
VEL. : 26.200

q1 (U) : -0.875  
q2 (U) : 0.413  
q3 (U) : 0.252  
dU : -631.455  
U : -10.308

q1 (V) : 0.410  
q2 (V) : 0.910  
q3 (V) : -0.064  
dV : %-1696.096  
V : -47.115

q1 (W) : *W* 0.256  
q2 (W) : -0.048  
q3 (W) : 0.966  
dW : 52.787  
W : 26.711

+31° 2290

11 37.1  
11 39.6  
42 14.8  
+31° 47  
+31 15.36

285

July 1984

735 W77 +35 Aug

-0.027 -371

1021

-381 (A)

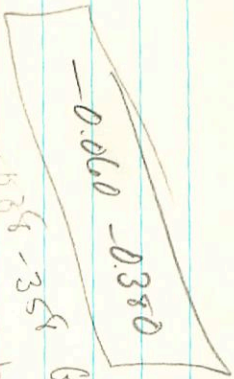
1267 2000

C. 18.1450 -0.06 -0.38

-32  
-371

74  
555

8.9 x 8 + 7.5



2/14  
Kahn  
R (3)

638 -354  
667 -394

637

-50 -370 1.85  
+27.0

18





11.000\*  
42.100\*  
31.000\*  
15.000\*  
-0.000\*  
-0.050\*  
-0.370\*  
1.850\*  
23.442  
27.000

-0.516  
0.252

-5.301

-1.693  
-0.064

-41.399

0.023  
0.966

26.612

141

45

11" 37.6  
43.3

+72 53  
+72 31

617

11" 43.3  
20.2

+72 21.35  
20.2

246.2

11/11/11

54  
27  
51

997

231 added

Green Coat. 7.023 7.066

16  
57  
16

9.21 KR 7.7

+0.023 +0.066  
-231



+0.088 +0.518 BKNS

+0.110 +0.162

+0.116 +0.167

24

-19,908

0.697  
-0.183

-7,031

0.550  
0.272

-11,651

0.460  
-0.049

-23,100  
20,893

1.600\*  
0.066\*  
0.023\*  
21.000\*  
72.000\*  
43.000\*  
11.000\*

617,000\*

793 11 441 -13 94 728

I DR3  
842 103

~~222~~ 230

757 200

9308 6283  
3687 -2780

}  
||

48



~~6.718~~  
830

0.789  
-0.675

~~11.207~~  
15

0.062  
-0.523

~~41.507~~  
4280

0.611  
0.926

2  
30.000  
25.119  
2.000\*  
-0.075\*  
-0.255\*  
49.000\*  
44.000\*  
59.400\*  
9.000\*

273.000\*

WJ