

20084
GC4030
W1865
7668
784059
HR 965

3 20.1 784 44 964 633.16

5.61 10.92 10.49

~~3086~~ 688-151 R

S = .19 W (+0.5)

80

+0525 -132 N30

+0525 -130±1.5 GC cont N30

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

+071±1 -129 ±1
+072 -132 N30

+081 -139
Grand
Avt.

22 ±10 C(10)

70131±3.1
+0125

-058±2.7
-065

YW

3 20.4 +73 02 7.3 gH2 -20.28

20709

4035

1868

25.051 1885.9 +73 1 57.23 1884.1

$$\begin{array}{r} -840 \\ \hline 24.211 \end{array}$$

$$\begin{array}{r} 24.958 \\ 58 \\ \hline 25.009 \end{array}$$

$$\begin{array}{r} 9716 \\ 5858 \\ \hline 2447 \end{array}$$

51.7

$$\begin{array}{r} 24.657 \\ 70 \\ \hline \end{array}$$

$$\begin{array}{r} 3.82 \\ \hline 61.05 \end{array}$$

$$\begin{array}{r} 56.86 \\ \hline 56.86 \end{array}$$

1945.24

$$\begin{array}{r} 753 \\ \hline 37.6 \end{array}$$

$$\begin{array}{r} 56.86 \\ \hline 56.86 \end{array}$$

58.14 19 30.1

53.5

$$\begin{array}{r} 58.32 \\ \hline \end{array}$$

$$\begin{array}{r} 151.59 \\ 57.59 \\ \hline 53.46 \end{array}$$

150⁹⁴₁₁₆ 3 20.7 + 49 41
+147
+42
-18

HP1034 +0025 -025 +D.0

34Pa +0026 -026 -0.5

4Pa +0028 -026 +0.3

2Pa +0028 -025 -2.4

+00268 -0255

1152
108

+485 -229 +840

-665 +529 +526

+567 +817 -104

+0598 +0277

+0820 -0639

+0649 -0958

+0875 +13.1 +15.3 -2.1

-1459 -2.9 -25.3 -1.7

-0289 -4.3 -5.0 -1.3

+13
-27
-5

P: -1.5

-2.15

175 pu.

85-

527

6117

+0064-0 487 → 62 +0102 ± 10.0 -028 ± 11.3
+0043 -044

21604 3 22.1 +53 45 6.4 Fom -4.16

1881 3.135 1909.1 +53 44 49.01 1910.5

4066 417
718
+1.11
5012

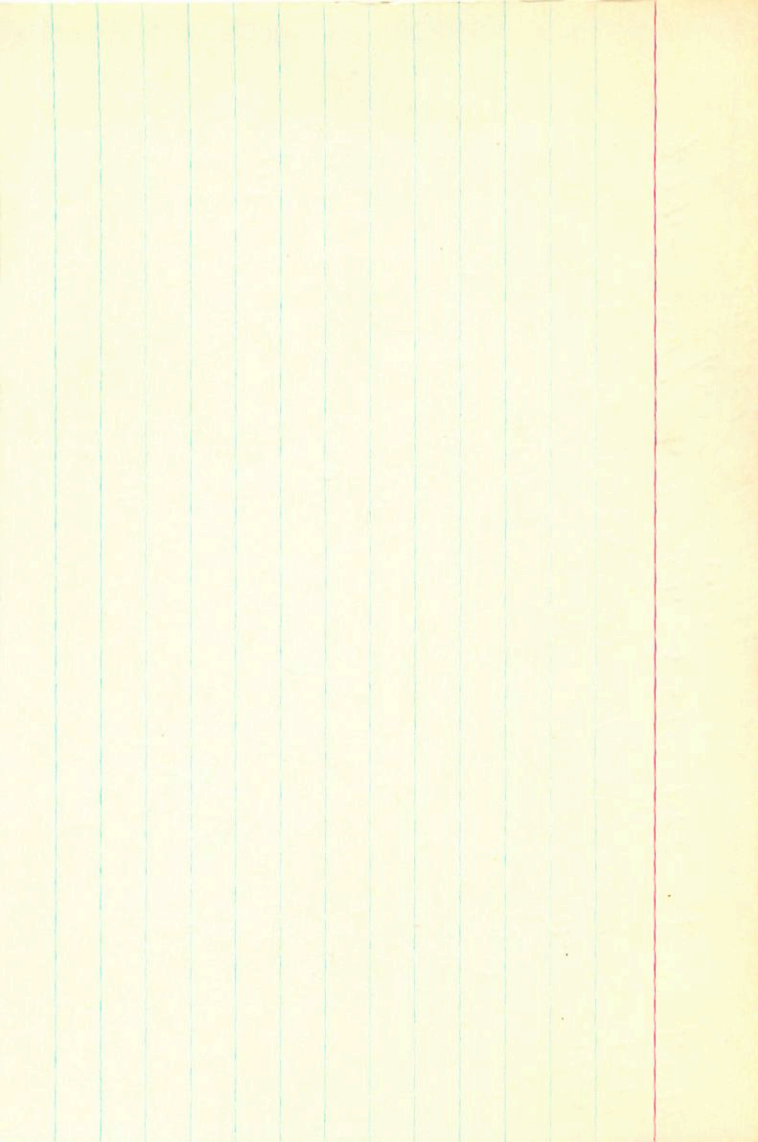
2. 718
10.95
51.630
2.150
50.77
-2.63 -53
48.63
+3.58
48.9

28.9 1926.8
21.50
50.77
-2.63 -53
48.63
+3.58
48.9
1944.63 -1.28
48.84
1.28

30.4

2.866
419
+1.7
483
2.894
+1.3
899
419
173

49.02
-2.22
48.80
49.06
3.13
48.73
1944.63
1946.87
11.830
39.5
29.0



1029

~~1029~~

~~21071~~

21071

-29 103 444 2.727

3 224 148 56

-124 0A013 329

-28(2) 0A014 367

-3.21205 Apr 577 517

63

$$\begin{array}{r} 10 \quad 5.90 \\ \quad 5.70 \\ \hline 0.20 \end{array}$$
 0.044
 .635

$$\begin{array}{r|l} 9353 & 9352 \quad 6181 \quad 0455 \\ 3 & 3537 \quad -9861 \quad -0009 \end{array}$$

06

7.216 31.80

107cm

3 22.1 108 51

14R1030

~~21604~~

~~188~~

21120
1882

4070

WB + 1.7

-066 -21.0a

-065 -071 FN3

-075 N30

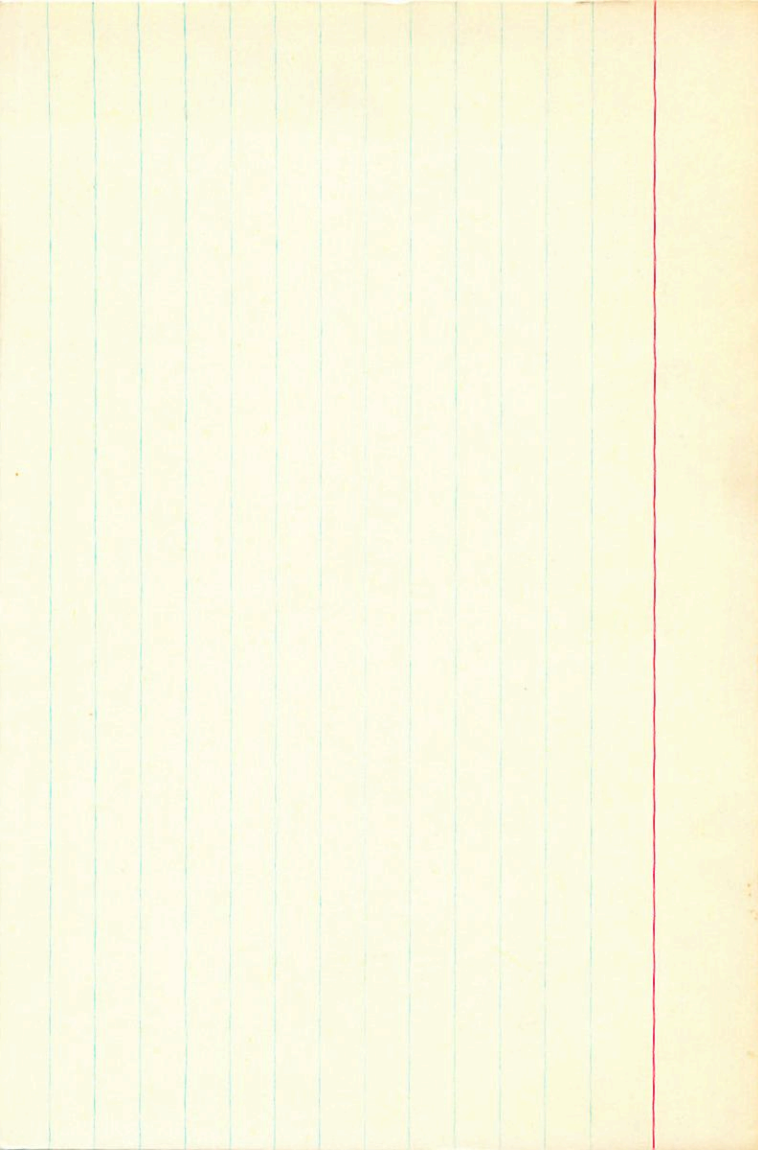
-065 -075 6-6

3.57 10.89 10.64 6811

-066 -074

-5045¹⁰⁰ -075 N30

-5045 ± 0.9 -073 ± 0.9 66 cm 5 N30



2.1110

3

22.3

+21 33

9144

*19.06

7.3

~~1030~~ +026

-004 G

772 635 ✓ 524 P52 +026-004 +15.0-002 +10 -016 ✓

-020 001 017-001 -090 055 ✓ +16.2 +10 +12

-20 +39 +5 003

+34 -24 +13

244

21252

3

22.9

-1.5

13

260

444.514(3)

6-64093

7.97 +0.67 1.69

11.885

~~7.97 +0.66~~

Share

4224

10664

17.98425 / 25328

-150595

4224 188

-191 -270

-20 -27 -64 .025

-141344-268±10

-31 -31 -71 .02

Cash Ref

-141±5 -250±4

-150 -260

-24511 C(F)

-0182 ± 9.0
-0103
-270 57.5
-279

~~34.664~~ 1897.9

55.707 1907.4 -15 12 37.93 1904.5

$$\begin{array}{r} 562 \\ + 269 \\ \hline \end{array}$$

$$\begin{array}{r} + 18.29 \\ \hline 25.64 \end{array}$$

56.269

$$\begin{array}{r} 46.209 \\ 09.775 \\ \hline 55.984 \end{array}$$

(26.4)

$$\begin{array}{r} 52.10 \\ 19.12 \\ \hline 32.98 \\ - 1.60 \\ \hline 33.58 \end{array}$$

302

497

$$\begin{array}{r} 340 \\ \hline 295 \end{array}$$

$$\begin{array}{r} 55.978 \\ + 17 \\ \hline 995 \end{array}$$

$$\begin{array}{r} 996 \\ \hline 273 \end{array}$$

$$\begin{array}{r} 23.00 \\ - 19 \\ \hline 33.99 \end{array}$$

$$\begin{array}{r} 33.88 \\ \hline 9.24 \end{array}$$

(29.5)

428 531 004089

21242 3 235 +28 33

408532

426.5000

424-104 Y
+3 -)

Hydromini

double

4027-105 \$0

4049-104 4603
4038-1045

"And it strongly reminds; identity of Hall's 1939 number variable.
A number of stellar lines are double on these plates; maximum
separations of the double lines, 120 Angstroms."

R.P. Young D.D. Feb 1, 71. 1939 4088-107

45 90, 13-77

My-HL₄ = 4033 - 4005

DDO, 1, 71
+16.9

10017 7046

-107 #7.5

32.970 19062

32.30 19034

25082

21242

3

23.6

2882

116.9

6.43

$$\begin{array}{r}
 +024 \sim 104 \quad \gamma \\
 + \quad 3 \\
 - \quad 2 \\
 \hline
 \end{array}
 \rightarrow 02$$

W x Niv

$$\begin{array}{r}
 +049-104 \quad \text{AG122} \\
 +028-105 \quad \gamma \rightarrow
 \end{array}$$

1417-9

41.35

19.91125

$$\begin{array}{r}
 +037-104 \quad \gamma \\
 \hline
 \end{array}$$

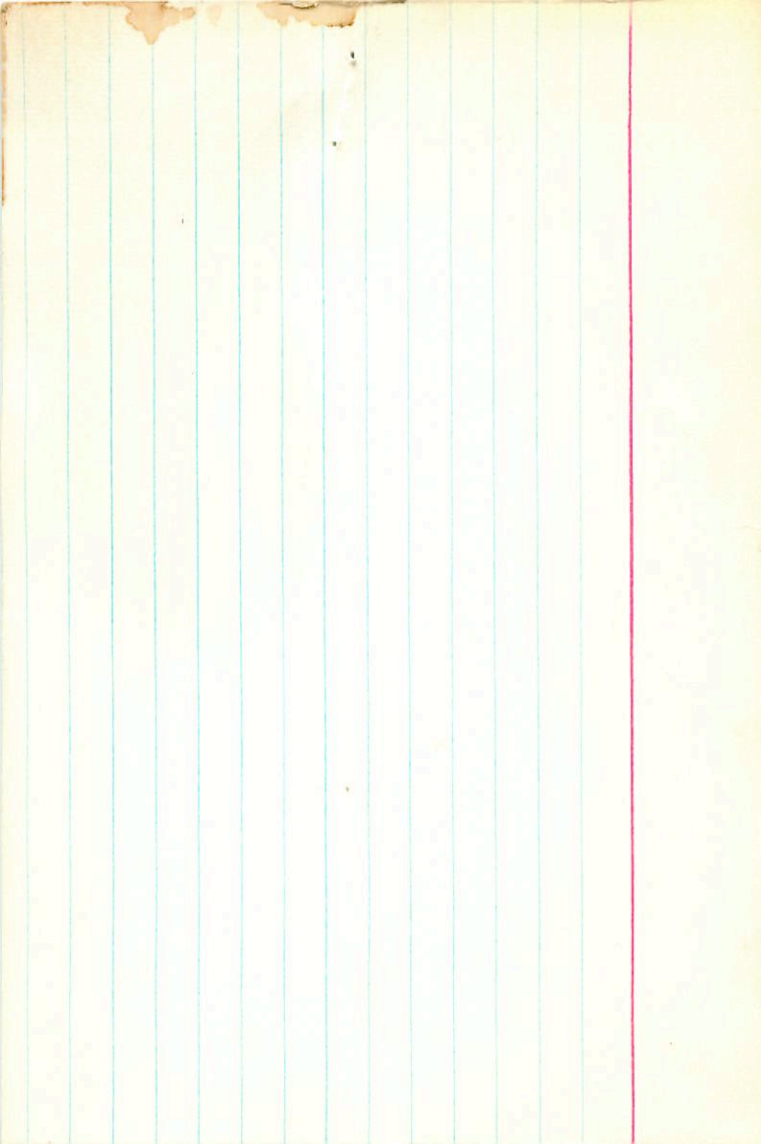
+14.9

$$\boxed{+037-107}$$

3.5

$\left[\begin{array}{l}
 \text{h587} \\
 \text{h585} \\
 \text{h588-} \\
 \text{h585} \\
 \text{h587}
 \end{array} \right]$





1033

984 RD

602-07-66

602-02-94

610-8104

new 076

new 076

611
616
610
611
611

611

611

04 107 298 9741

R

3 411 410 8104

611 610 611

611 611

611 611

611 611

400
- 53

63



1033.000*

3.000*

24.300*

60.000*

4.000*

71574 3 256 35 57 4004

10524

70065-1002 Country

1287 1088 8807 278
JW HLE

1273 1082

5.0
10.15



3 26.2 +55 17

1046

21447

4146

AB 5.10 +0.04 +0.05 5

-86
-9

ADS
252.5
9.515"

A 5.06 +0.05 +0.03 524

+0.19 +0.8 1.062 2.883 0.005 PC

027

1.22
1.41050
1.35
1.05
1.19
1.4
2.883
2.89150
2.883
32

Band 51 2010

BC(17)

10.20 +0.00 +0.50 53-

272

171.

1058

1400.5

-0.45/-0.08
+0.3

-0.052 -0.05

-0.055 -0.064

-0.46.5

-0.49-0.09

1.46 1.48 1.49 1.54
9=0.33
10=0.52

+0.98
476

10.504 92.0

240

799

10.400

37

432

15.30

~~10050~~ 72.3 ~~10075~~ 17
~~10052~~ ~~1006~~

59

5176

50.36

50.28

10.504

520

4511

51.04
- 1.86
50.86

1046.000*

3.000*

26.200*

55.000*

17.000*

-0.045*

-0.000*

4.1 ~~4.300*~~

6.61 72.444

0.300

-0.092

0.810

27

54

-6 -6.451

0.125

0.586

19

38

+8 9.196

-0.151

-0.013

0

-10 -10.964

3.450	:	R.A.
25.300	:	DEC.
-84.000	:	M. R.A.
-2.000	:	M. DEC.
3.000	:	STANCE
40	:	MODULUS
0.000	:	D. VEL.

0.488	:	p1 (U)
-0.333	:	p2 (U)
0.811	:	p3 (U)
-22.439	:	q1
-3.228	:	q2

-0.282	:	p1 (V)
0.484	:	p2 (V)
0.284	:	p3 (V)
134.707	:	q1
2.393	:	q2

0.282	:	p1 (M)
0.282	:	p2 (M)
-0.812	:	p3 (M)
-128.323	:	q1
-2.410	:	q2

2/0

R.A. : 3.450
DEC. : 55.300
1. R.A. : -86.000
1. 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 : -6.619

by

-000765.9 -01665.4

24

21567 3 26.9 +35 30 7.7 gms -79c

R.P.M

1921 51.747 1915.2 735 30 1.81 1913.7

(-80)

/



2145
WRE

3 266 182 W

WRE
⑤ 524

1030 035 PPM

1027-035

9110
4124

6683
→ 434

044
-0757

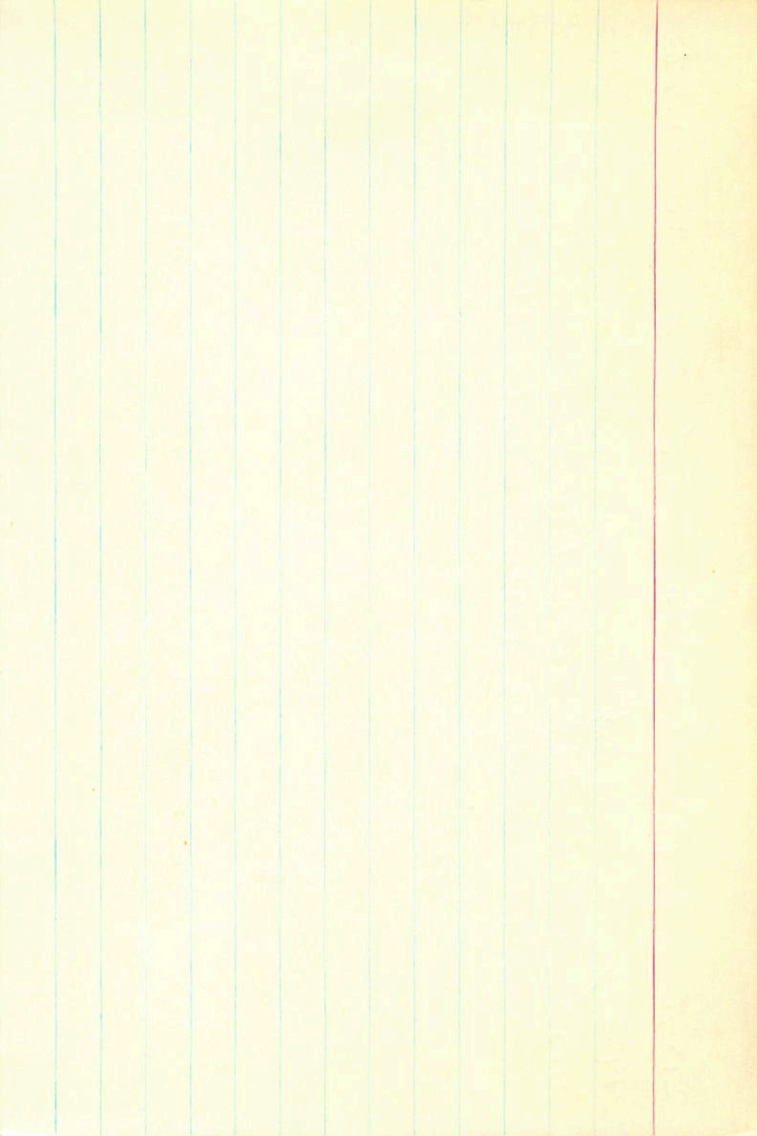
~~1356~~ 94.44
1368 99.54

919

21590 3 26.9 +16 35 70 AU +2.46

1922
4155

23
+0019 -022 N30
+0017 ± 3.6 -023 ± 3.6 GL Cont to N30



415.90

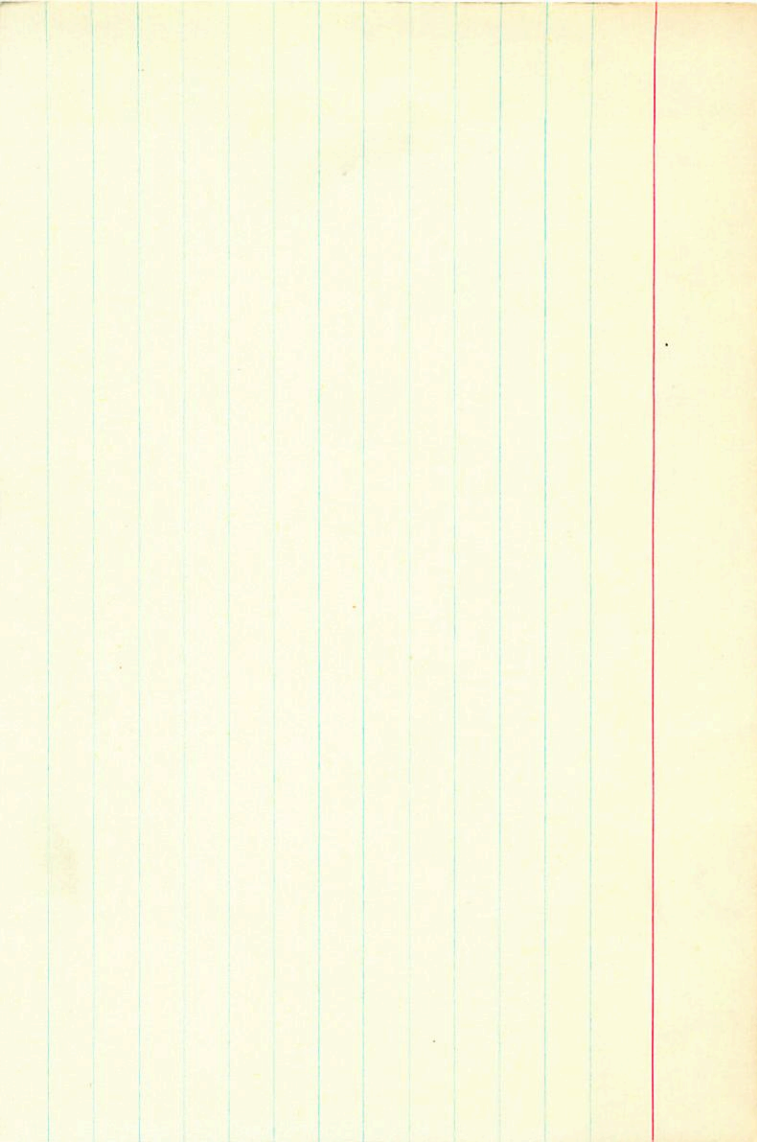
5 PM 3 27.0 +47 49 +15.98

HR1052 4.31 +1.35 12.15

71552
 1924
 4158

600 +019 N30
 +0007 ± 1.4 GC
 +0007 ± 1.4 +023 ± 1.4 GC
 CON N30

7006 +022 GC
 +007 +019 N30
+008 +024 F123
 +007 +022



+0008 ± 3.4
+0005
-12 5-1

21688 3 27.2 5.6 A1 n +14176

1928

4164 14.215 1999.1 -12 50 45.04 1997.6

$$\begin{array}{r} 14 \\ -041 \\ \hline 174 \end{array}$$

$$\begin{array}{r} 3.358 \\ 10.815 \\ \hline 14.173 \end{array}$$

$$\begin{array}{r} 14.173 \\ 188 \beta \\ \hline 194 \end{array}$$

$$\begin{array}{r} 14.201 \\ 0 \\ \hline +020 \end{array}$$

(37.2)

$$\begin{array}{r} 56.18 \\ \hline 45.30 \end{array}$$

$$\begin{array}{r} 11.85 \\ 44.0 \\ \hline 45.35 \end{array}$$

$$\begin{array}{r} 1.25 \\ \hline 45.35 \end{array}$$

$$\begin{array}{r} 45.35 \\ +20 \\ \hline 45.15 \end{array}$$

$$\begin{array}{r} 45.25 \\ \hline 45.15 \end{array}$$

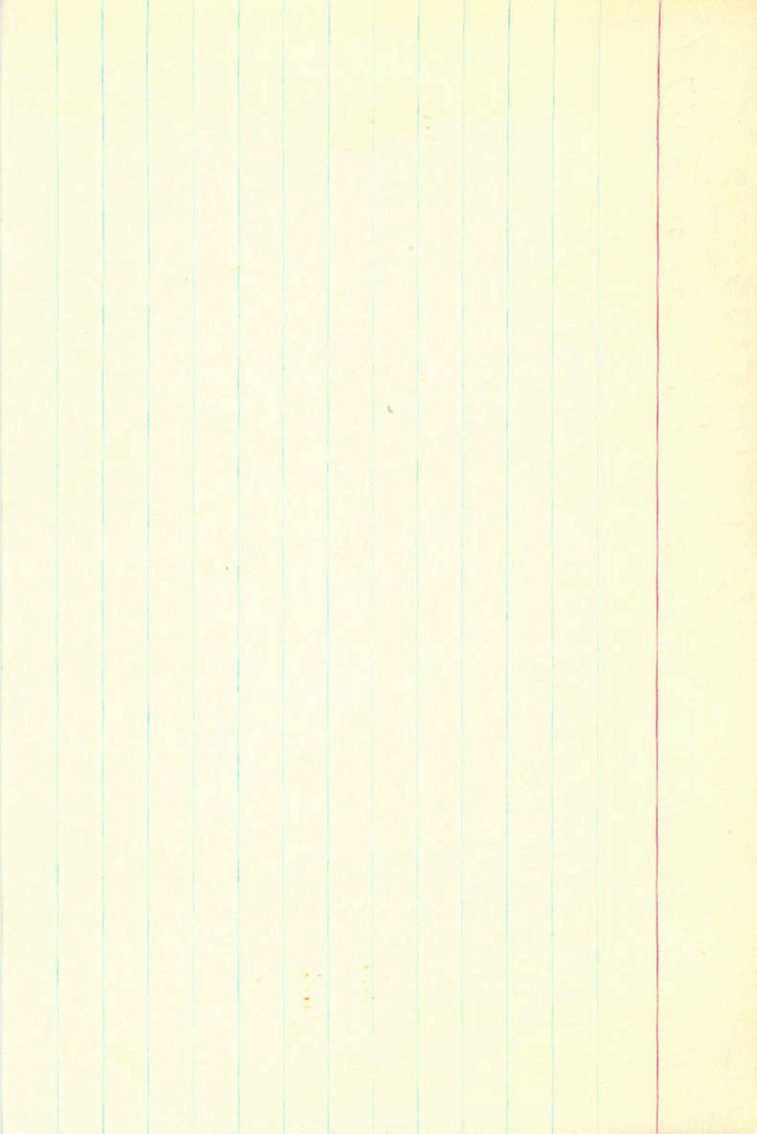
$$\begin{array}{r} 1.05 \\ \hline 1.05 \end{array}$$

$$\begin{array}{r} 1933.96 \\ 252 \\ \hline 1938.56 \end{array}$$

$$1938.56$$

$$\begin{array}{r} 36.3 \\ \hline 36.3 \end{array}$$

$$\begin{array}{r} 38.7 \\ \hline 38.7 \end{array}$$



21589

3

274

742 03

450an

25p?

644 739

6082-023 (circled)

091-023 (boxed)

123
22

4

f15

65

21589
440643

3 274 42-02

+1
+60809 -0100 W350
-0104

+0978 8C604
[4097-019] 0924
0812

21744 3 24.7 +57 42 FY

AG1071

664226

516

1340 .343 .153 .928 @ SPL 2.628 (4) +

(448)

[M] 213 +35

[E] 350 $\frac{67}{10}$

67
66
3

478-364 899	+0136	0729	-6543
-665 443 401	-0189	+0882	+0623
574 818 031	+0163	+1628	+1791

-57.2
-43.0
-2.2

-21.6

+6008 +042 N30

~~-6017 -001~~ 64

1000

21742

3

28.2

-42

48

412

HP1025

Stampwood

-5064-003

575

18

66

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
-0.010
-189.778
-26.632

66

21927

GRAD

3 28.6

F43 30

464

F102 (8)

6001

8.61 428 2:0 344 2.54 2 (8)

936

367
113

2170

3 29.0 445 53

HR 1069

GC 4210

36 Pan

5.32 + 40 - 02 (3)

.267 .142 .540 (S) SPL 2.675 C+

4340

19617

190 + 29

[27] 487 + 77
10

+ 2.57

~~W850~~

279

- 0514

W850

~~W850~~ 488 - 0741
492 - 0736

~~W850~~ 492 - 0736
492 - 0736

3.5

445.6

108

574

26.1

45.3

3 sp. - 40.6 - 23.3 - 20.4 551

- 527 - 218 - 4027 69

67

5 45.2
3 25.0

1881

21481
4212
mm118109 5.

20, 75, 1, 17, 5

6.04 087 141

9752	7473	0636
4029	6645	0246

224
162
1080

124

1404
501

Sm 7 607 510 600
~~925~~ 353 1838
925 1884 632

70.15

5.85

5 = 60638 2 = 0244

M : d3 (M) : d5 (M) : d1 (M)
 W : d3 (W) : d5 (W) : d1 (W)
 T : d3 (T) : d5 (T) : d1 (T)
 TH : d3 (TH) : d5 (TH) : d1 (TH)
 F : d3 (F) : d5 (F) : d1 (F)
 SA : d3 (SA) : d5 (SA) : d1 (SA)
 SU : d3 (SU) : d5 (SU) : d1 (SU)

1097 284
 141
 294
 134
 1376
 154007M 4030
 4075 T030

+0071240

+0117229

0.665

11.4

+0058

+02242.48

2.4

$\frac{216}{379}$

+0055

+026-76

0061

$\frac{43.2}{4}$

0.543

+0057+023

42.54

29.34

$\frac{-10}{533}$

+00543 +0265

$\frac{-4}{42.54}$

+0660

0.663

+064+024

42.02

55.75

$\frac{-21}{625}$

$\frac{-16}{42.15}$

0.749

415

64.40

$\frac{-15}{735}$

$\frac{-11}{42.16}$

2630

J 29.4 +42 00

J +0.0135 -0.148

+53.78

14.5.70, 19, 1965

X106

I	1398	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
1II	172.4	1941.51	0.46	-615	+121	-041	-398	0.63	52	8.33

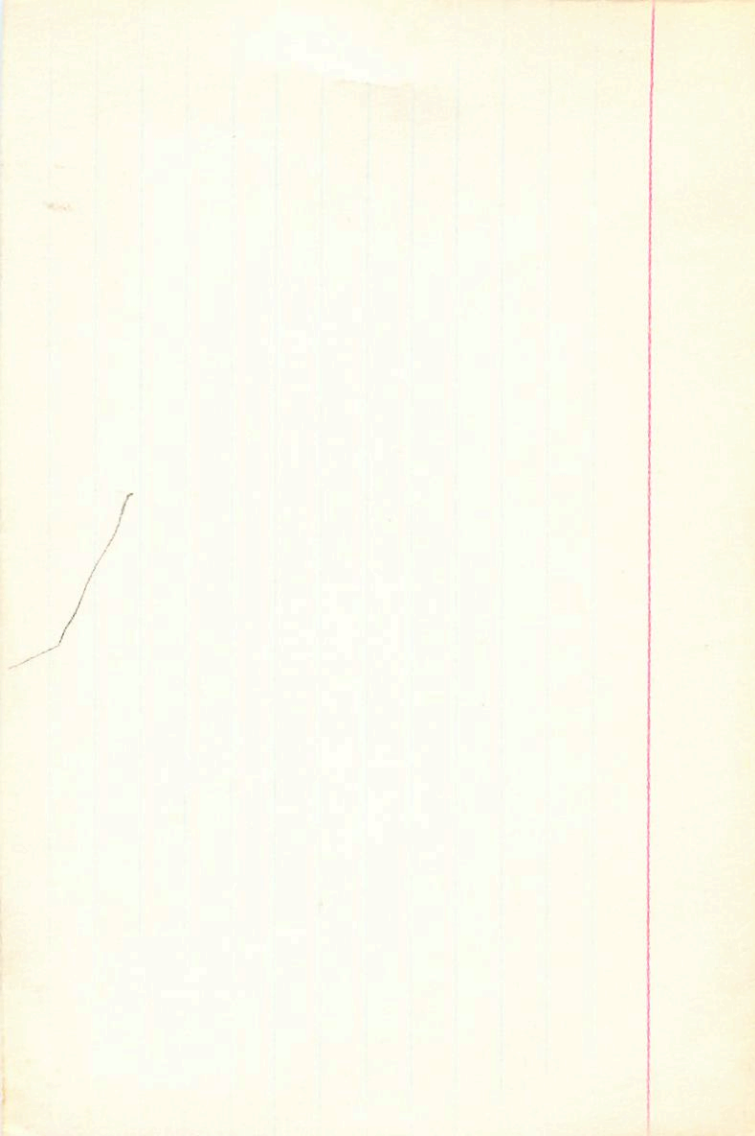
$\Delta m = 0.2$

8.34 +0.68 +0.16 ③

145(8)

674

II	MV	$m_1 = m_2$	2	v	w
-015	+4.9	13	+76	-36	-18



③ 136

3 29.8 +47 47 +38.3 6

21844

47.850

6.7

+130 -026 6

+129 -024 6(2)

753609 741672 +130-025 138.3 -019 +28. -081

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

-6 +72 +24 02

+5 +31 +26

04

+39 +9 +3

101528

1079

3

29.9

49

12

11.8

10.5 (B)

B 9 A

Hg man

5.6

1035-045

~~100022~~ 21.9 - 042 ± 1.6
6022 -042
6020 -042

53.919
196
323
1906.1
21.07 1905.1
1158
2295

0022-043
+0023-042

21.58 1933.9
67
21.65 120

53.362
621
353
0400 034

1035-045

21.21 1938.69
+21
21.42

53.366
022
188
058
53.288

89

2195 V Bud

200 200 940 1050 20

~~3-33.20~~ 16 + 54 16

-2.0

2 29.7 145 05
AM 217th

LT 111M

0074 173

ETA 10"

077-773

5990 9811 1987
0454 8767 0156

$$\Delta m = 1.4 \text{ } 0.4$$

1023 3 243 +60 04 B9T

6.45

041 104 658 2.791

$$E(10.7) = -10.9$$

116 640
2327
9.25

162 000

$$m_V = +0.25$$

$$m_B = 6.05$$

+0.22 -0.17 0.6

+0.20 -0.16

$$\boxed{+0.18 -0.19} + 0.60 + 0.76$$

63

5 45.2
3 29.0 -47 33

087 +103

1081

21981

4212

MM1187609
22, 75, 1, 77, 5

(14085)

5.98 +0.11 - case

7064 +024

6.04 087 147 1097 2846 12, 83, 100

new?

9752 7473 0634
4029 6645 -0246

224
142
1080

a = 0.153
A = 0.47

294
13775

70074 +030

7075 +030

-124

1404
1501

+0.15

Sim 7 Gen 2 Sim 600
3597 1784 6632
9216

5.85

5 = 0.0638 2 = 0.244

$$\begin{array}{r}
 0.665 \\
 11.4 \\
 +0071270 \\
 +0058 \\
 +02242.49 \\
 \hline
 101572.9
 \end{array}$$

$$\begin{array}{r}
 216 \\
 \underline{379} \\
 0061 \\
 +026-76 \\
 \hline
 43.24
 \end{array}$$

$$\begin{array}{r}
 0.548 \\
 -10 \\
 \hline
 533 \\
 +0057+023 \\
 +00553+0265 \\
 \hline
 42.54 \\
 \underline{42.54} \\
 39.34
 \end{array}$$

$$\begin{array}{r}
 0.663 \\
 -31 \\
 \hline
 625 \\
 +0660 \\
 \boxed{+064+024} \\
 4202 \\
 \underline{42.15} \\
 55.71
 \end{array}$$

$$\begin{array}{r}
 0.749 \\
 \sim 15 \\
 \hline
 735 \\
 415 \\
 42.51 \\
 \underline{42.16} \\
 64.40
 \end{array}$$

3.200 : R.A.
 45.200 : DEC.
 -100.000 : PM. R.A.
 -70.000 : PM. DEC.
 3.000 : DISTANCE
 34 : MODULUS
 -45.000 : RAD. VEL.

0.478 : p1 (U)
 -0.190 : p2 (U)
 0.057 : p3 (U)
 -101.001 : UB
 -42.200 : U

-0.000 : p1 (V)
 0.000 : p2 (V)
 0.000 : p3 (V)
 30.400 : UB
 -21.210 : V

0.000 : p1 (W)
 0.000 : p2 (W)
 -0.141 : p3 (W)
 -400.000 : WB
 -10.000 : 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

67