

10, 11, 12 +13000

1527 0 17.1 +40 27 6.4 140 -37.58

178 066 -002754.5 -008 ± 3.5

06394 6.364, 1.17+1.11, -0028 -009

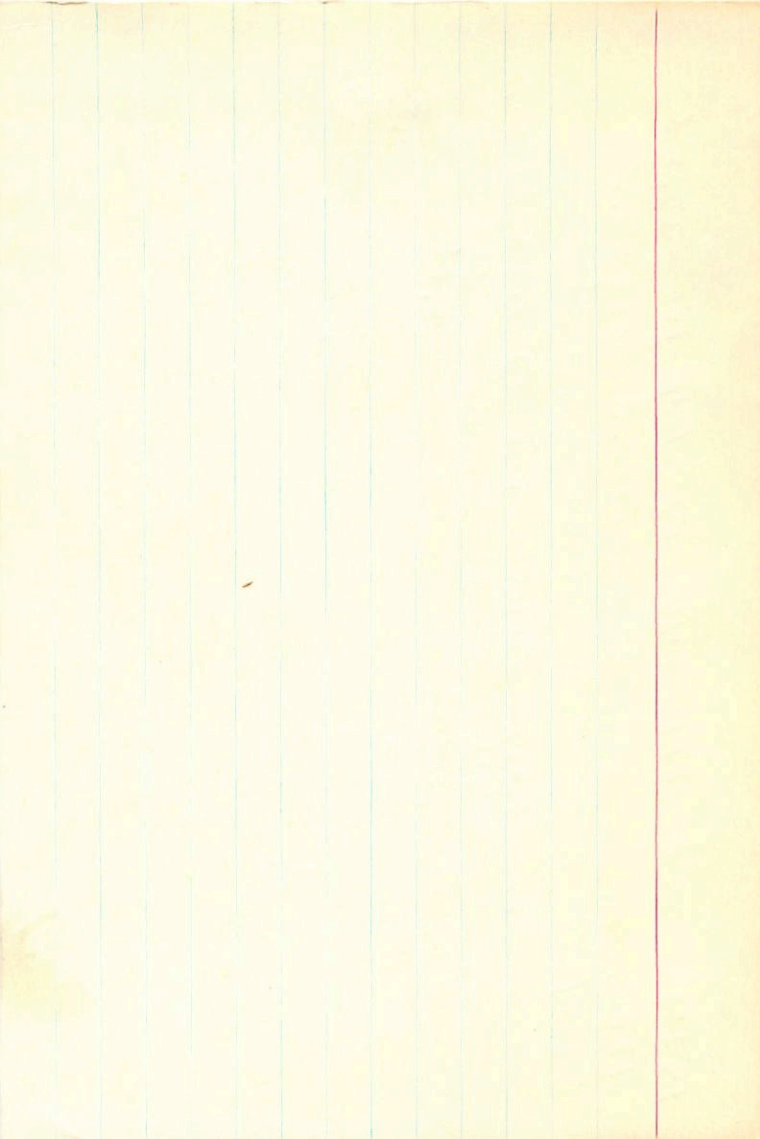
0 17 3.312 1401.5 +40 27 8.33 1896.7

$\frac{131}{443}$

$\frac{43}{8.76}$

15 445.2
1 18.7655
17 3.280
 $\frac{375}{.068}$

18 48.7 602.5
8 19.52 1926.2
27 $\frac{8.62}{1.2}$
 $\frac{8.50}{-1.26}$



1563 0 17.3 +15 58 6.8 968 +19.7

182
GC398 40 Pa
-0014±23 -005±2.2
-0020 -016

0 17 20.984 18953 +15 58 25,03 1890.2
077
21.071 -0017 -010 ✓
0 t2

Sum 50
1933.9

20.977
+1
20.978

54

24.59

Cycle

1939.2731

25.04

+06
25.10 1433

Grade

1939.94

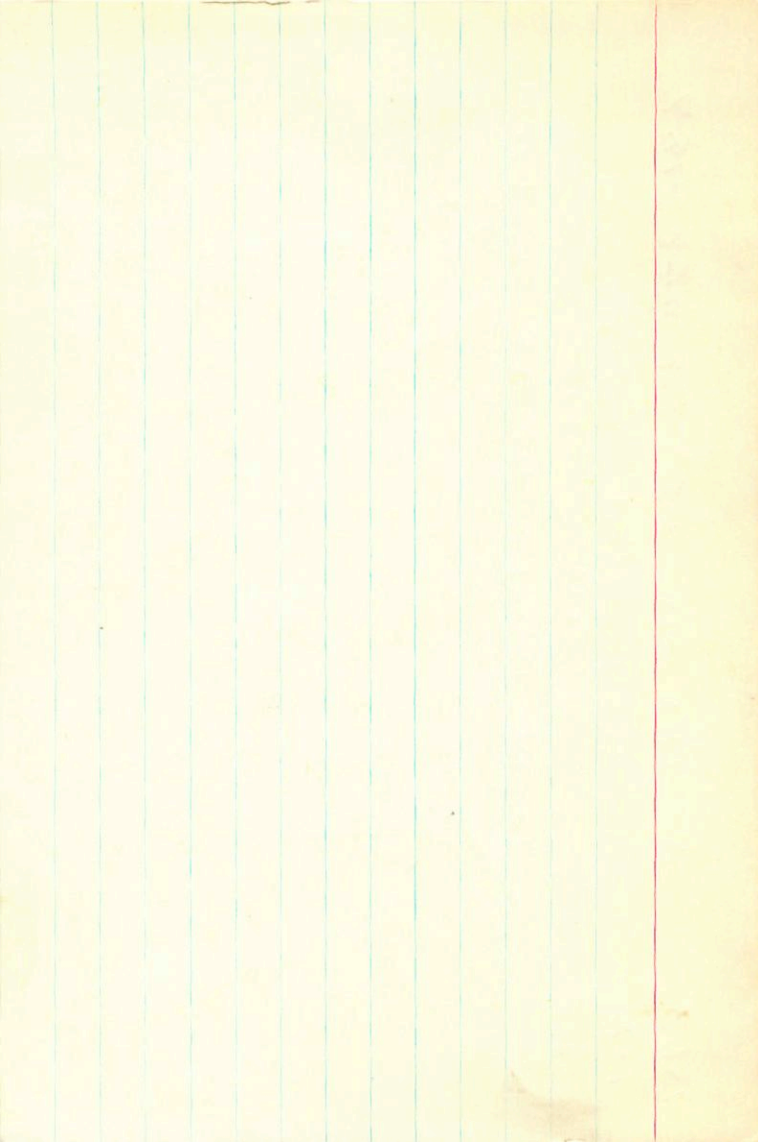
24.39

+15
24.54

37.7

20.987
+1
20.988

24.58
24.58 = .75



H01562 0 12.4 437 57 F9 +92

H05271
optimal

2.1

-141 -273

2 20⁰⁰ -144 -273 Reitz

6.98 +0.60 +0.03 = 145 -271 0.11111

9994 -6547 2586
-0347 -7559 0707
+4.2 0787
0.5 ✓

-1435 -2675
[-142 -272]

026
~~557897~~ 614 754 -141 -273 +5 -165 +6 -~~211~~ -1014

011013 -141 -165 545 -606 +7.0 +7 +1

+35 -19 -25

03

-27 44 -40

1585

00 00.5 15 00

635 B

4042.5 - 10596 17105

1400 D

1-D/605

00 17.8 +30 42

KITE Heddit

W187

+10.2 6

+30°43

+0.050 +0.057 Y&L

~~-1 +2~~

1632 0 18.1 +32 39 6.0 175-36.18

192 -0023±5.2 -013±3.6 6-6

G-C 414

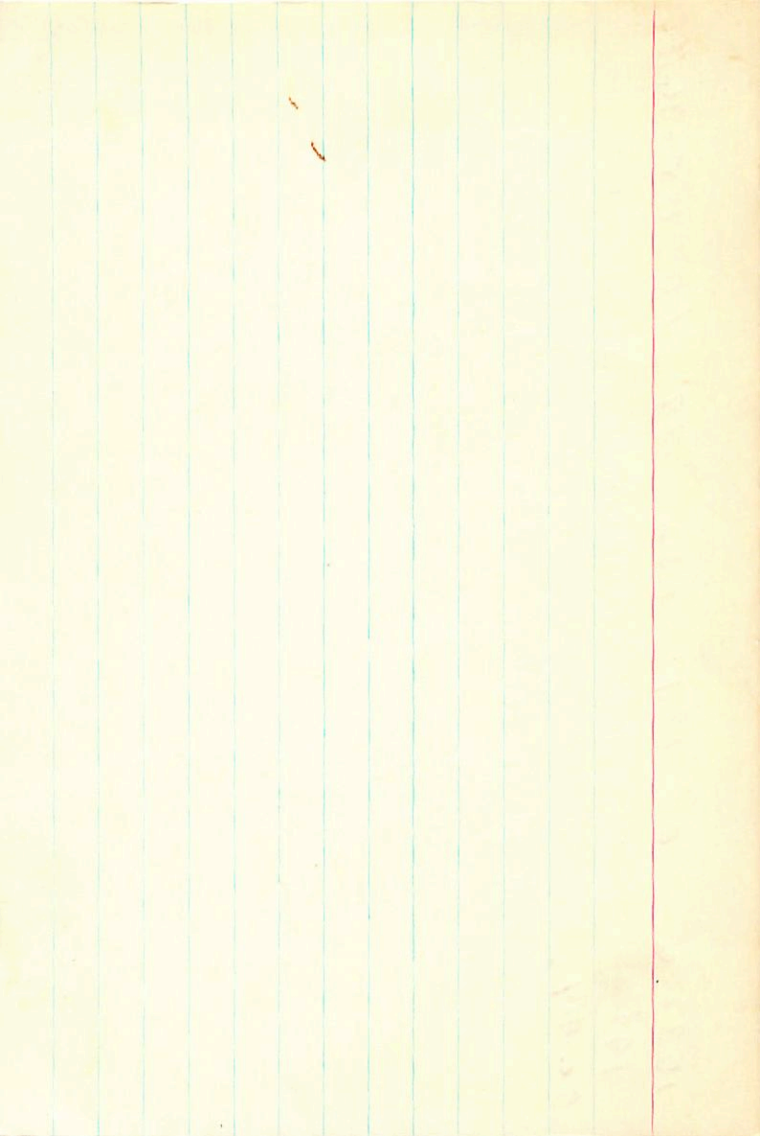
0 18 8.236 1894.0 +32 38 2.76 1901.7

$$\begin{array}{r} 129 \\ 8.236 \\ \hline 9.365 \end{array}$$

$$\begin{array}{r} 16 \\ 1 \\ 18 \\ \hline 49.842 \\ 18.382 \\ \hline 68.224 \\ 60.720 \\ \hline 7.504 \\ 29.6 \\ \hline -0.16 \\ \hline 7.344 \end{array}$$

$$\begin{array}{r} 29 \\ 8 \\ \hline 42.6 \\ 19.78 \\ \hline 62.38 \\ 2.28 \\ \hline 64.66 \\ 1.12 \\ \hline 65.78 \end{array}$$

1926.9



1671

0

18.5

+37

42

5.2

df2

+9.1e

197

ALL

GC 425

PA and

+0047

-040

N30

+0050 ± 2.0

-034

1/2

CONC

N30

WGS

+00466 -0360

13

0.3

+00474 -0357

+37.7

73

056

-40

058 -040

2.0

+9.1

GC 425

GC 425

N30

29



R.A. : 0.300
 DEC. : 37.700
 PM. R.A. : 73.000
 PM. DEC. : -40.000
 DISTANCE : 2.000
 MODULUS : 25
 RAD. VEL. : 9.100

p1 (U) : 0.000
 p2 (U) : 0.000
 p3 (U) : 0.400
 u : 170.912
 v : 0.100

p1 (V) : -0.400
 p2 (V) : 0.310
 p3 (V) : 0.310
 u : -100.000
 v : 2.000

p1 (W) : -0.100
 p2 (W) : 0.000
 p3 (W) : -0.410
 u : -200.000
 v : -0.000



R.A. : 0.300
DEC. : 37.700
PM. R.A. : 73.000
PM. DEC. : -40.000
DISTANCE : 2.000
MODULUS : 25
RAD. VEL. : 9.100

q1 (U) : 0.865
q2 (U) : 0.300
q3 (U) : 0.403
dU : 179.912
U : 8.184

q1 (V) : -0.488
q2 (V) : 0.310
q3 (V) : 0.816
dV : -192.341
V : 2.595

q1 (W) : -0.120
q2 (W) : 0.902
q3 (W) : -0.415
dW : -203.814
W : -8.893

20

BD603

00 18 42 -33 8-91

SB10

ATM4623

1462 -0.04 +27 -0.25 Meridian
1462 -0.05 +26.5 -0.30 Egan Road

LP9378

0182 (223) Kuntze
0470 100 K

ADSR

1624

4174

3248

00

151

44

5000

5000

0030

0000

41.00

$$\frac{196}{46}$$

5000

5000

41.00

0000

0000

41.00

0010000

5000

5000

41.00

10000000

5000

5000

41.00

2000000

5000

5000

41.00

$$\frac{200}{46}$$

5000

5000

41.00

4335

1100

5000

41.00

8501

5000

5000

41.00

0000

0000

5000

41.00

0000

0000

5000

41.00

408

0000

5000

41.00

1724

OV 188 -86 25

-0007 -043 Sdy

-00042 -0411

-0005 -0416

-003 -046

-3.7

-46

8.6

+95.)

30

R.A. " 0.300
DEC. " " -36.100
R.A. " " -3.700
-46.000

3.40 +155

9W

T cut on 19.2 -20 20 +29.1 f

HD1760

352
9W

1.52
53

7.0

P.A.

+056 -019 #3 LB

+056 -018 Fly

~~+058 -022~~

+058 -023

||
||

1.1726 843 287

8115

21

11

52

130

08

3.20

3

1875

1875

1875

200

0.460

0.000*

19.200*

-20.000*

-20.000*

0.058*

-0.022*

7.000*

251.189

29.100

0.185

-0.037

45.448

-0.224

0.166

-51.411

31

-0.045

-0.985

-39.915



1000
 2000
 3000
 4000
 5000
 6000
 7000
 8000
 9000
 10000
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 91000
 92000
 93000
 94000
 95000
 96000
 97000
 98000
 99000
 100000

15

0.000*

0.000*

19.000*

-20.000*

-20.000*

0.058*

-0.023*

7.000*

251.189

29.100

0.183

-0.038

44.845

-0.228

0.167

31
-52.395

-0.046

-0.985

-40.116

RW
14.516
307
313
47.5
46.5

6.22 tons SR 102d

+29.18

1760 19.2 -20 20 5.55 gmse

200 23940 6686 +0048 ± 5.9 -001 ± 6.1 474
GC437 2981 24 +0039 -018 948
Tot 308 165 +0047 ± -005 → 565

0 19 14.508 1910.1 -20 20 6.25 1908.4
-191 +1.04
14.319 +2640 -0285 +2305 6.21

17 58.600 -0414 28 26.44
1 15.842 -0345 8 19.58
6564 19 14.742 20 6.13
31 14.418 7.01
2 409 .419 7.32

836 502 -035 1938.95 5.59
-42 558 161 2.87
-112 122 -586 2.03 2.87
6.75 6.72
- .51

(26.1)

27.8

240

1059-020

+864 +502 -637
 -490 +856 +166
 -115 +126 -985

+0246
 = 012

+2416 -0476 +2340 +56.2 -1.1 155.1
 -1370 -0811 -2181 -52.3 +48 -47.5
 -0322 -0119 -0441 = 10.6 -28.7 -37.3

9.16

10.74 1092.81

1500.

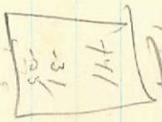
+964 +502 -089
 -490 +856 +165
 = 1161 +124 -985

+2658 -0286 +2372
 -1507 -0487 -1994
 -0357 -0071 -0428

99

17.86 3402
 1620

-1.1
 +4.8
 -28.7



T Amf
1795 +26043

1795 0 19.8 +26 43 7.35 gmc - god
203

203

-007 -004 dthin
-8 +13 MC
+22 +6

46.426 1917.3
-092
334
+0016

46,33
-523

+0028+136 +026+9.3
+26 43 9.96 1915.1
-91
9.05

8.1 1929.7
-15
7.95

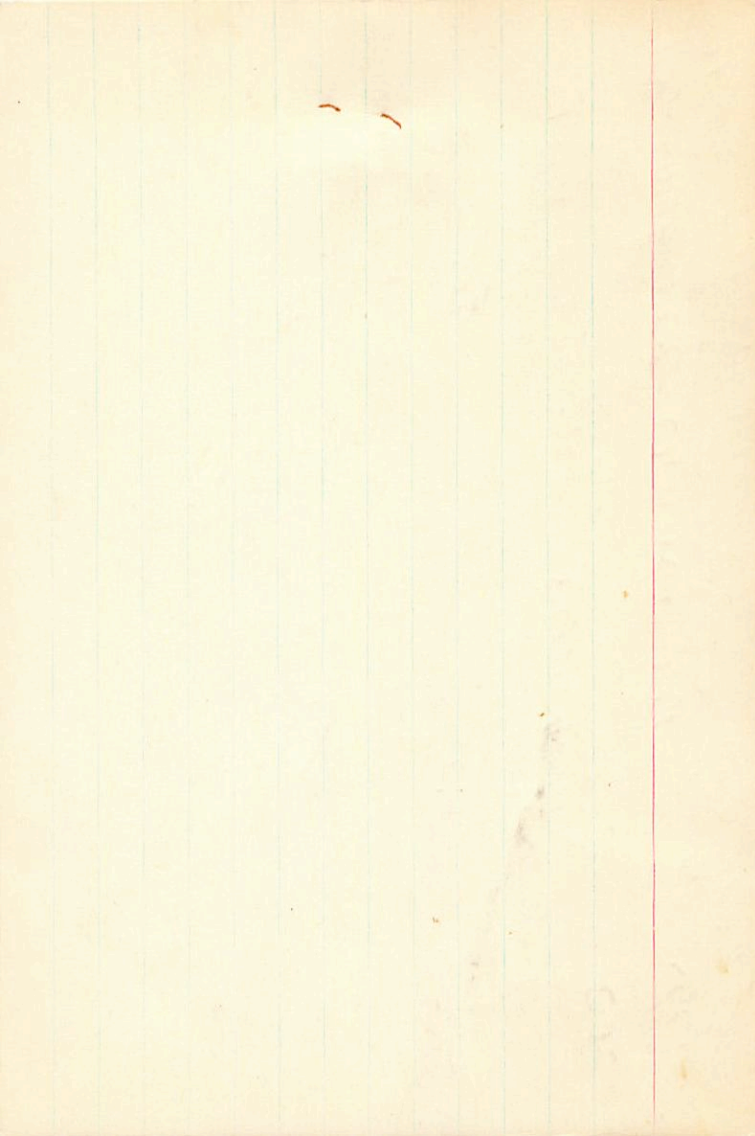
+0022.49
+006

802 1919.78

46.316 1922.24

240267.5 12.16 9.61 +2.08
N R R

-007-004



T And

00

158 +26 43

-007 -004

~~58.85~~ 10.75 8.46 +22.4
~~80.83~~ 10.04 8.10 +20.7
~~86.86~~ 9.51 7.88 +1.69
~~180.85~~ 9.42 7.55 +1.65
~~416.83~~ 9.06 7.33 +1.13

b = -220 E = +0.5

43.

-008 +013 Mc
 -006 +009
 -004 +005

11.6 -90

87
 89
 79
 56
 64

5801
 1085

805 6.65
 +1.50 +1.12
 +0.92 May

108
 612
 141
 574
 54
 67

V R R=J

~~2440223.64 10.51 8.64 +1.50~~

~~286.66 11.46 8.56 +1.64~~

~~262.54 11.85 9.47 +1.99~~

~~267.59 12.16 9.61 +2.045~~

~~416.85 10.09 8.39 +1.23~~

~~453.69 10.72 8.48 +1.37~~

~~478.86 10.80 8.67 +1.52~~

2440058.85 10.74 8.42 2.24

8083 10.05 7.80 +1.86

8686 9.51 7.59 +1.69

130.95 9.42 7.37 +1.65

1831 0 20.3 +38 29 7.0 g M4 -23.2 B

209 +0005 ± 6.3 -004 ± 4.9 C-C

66453

0 20 18.540 +38 28 37.16 1904.5

$$\begin{array}{r} -020 \\ \hline 1820 \end{array}$$

$$\begin{array}{r} 18 \\ \hline 37.34 \end{array}$$

$$\begin{array}{r} 18 \\ 1 \\ 20 \\ \hline 59.42 \\ 19.008 \\ \hline 48.412 \\ 20 \\ \hline 16.515 \\ 16.512 \\ \hline 0.003 \end{array}$$

$$\begin{array}{r} 20 \\ 8 \\ \hline 28 \\ 17.8 \\ 19.40 \\ \hline 37.20 \\ -15 \\ \hline 37.05 \\ \hline 17 \\ \hline 37.22 \end{array}$$

1925.0

32



Faint, illegible text, possibly bleed-through from the reverse side of the page.

VI
(10)

Faint, illegible text, possibly bleed-through from the reverse side of the page.

10

Faint, illegible text, possibly bleed-through from the reverse side of the page.

Handwritten text or markings, including what appears to be the number '10' and some scribbles.

0.000*

0.000*

19.800*

26.000*

43.000*

-0.004*

0.009*

11.4

11.600*

1410

2089.296

-90.000

-0.001

0.344

-32

-32.395

0.029

0.739

-11

-5.844

32

0.037

-0.580

128.568

1879 0 20.5 -16 13 6.6 g m3 -22 C

459 R 5.33 +0045 ±3.4 +036 ±3.1
211 R -5 +80 (2) +0049 +037 -4.8 (1)

1658

32.170 1905.8 -16 13 12.55 1901.5
-158
31.972
32.157
-15
139
+070
31.3
+0049
44
+034
13.38 1938.76
-1.74
14.32
13.38
+29
13.09
13.4

96
49
864
384
4704
430
7

16.172
15.595
32.170
17
15.3
151
142
170
+47 +33
+51 +34
49 34
32.177
19.67
13.02
13.12 +20 / 12.92
32.60 1931.14
+19.35
13.25
13.39
13.344 / 95
12.94
+33
112.22
37.1
35.6

R = 5.33
R-I = +10.80

(2)

453
0718

527
878
45

240 M

(+107
-13
-23)

+864	+504	+1072	+2891	+0812	+3703	+148.1	0	= 148.1
-492	+541	+225	-1644	+1356	-0290	-116	-4.9	-16.5
-112	+196	-974	-0375	+0316	-0059	-2.7	-21.4	-23.8

148

400

1874 57 20.5 -16 13 M2 M

BC459

NOA HR

$$6.47 + 160 + 185$$

$$5.33 + 0.98 \text{ (2)}$$

$$\begin{array}{r} 495 \\ 107 \\ \hline 388 \\ -363 \\ \hline 25 \end{array}$$

$$\begin{array}{r} 498 + \\ 107 \\ \hline 386 \\ -363 \\ \hline 23 \end{array}$$

(±2)

$$+0047 + 0365$$

$$+00475 + 0355 F114$$

$$+0684$$

$$+071 + 031$$

5

$$+0047 + 033 G-L$$

$$+0051 + 034 New(4)$$

(-22)

33

631-2

-0.12

0

9.9

9.92

-0.1

300

37

3.7

-3.5

9.46 + 3.23 (2)

9.14

6.63

0.315

2.57

34

1917

0 7112 160 91 -122

54 (27)

0113 -100 (H)

790

150 -100

245
-100

370

120



23

0.330
-0.100
300.000
37.000
3.700
55
-3.500

0.864
0.484
0.141
1313.061
71.664

-0.491
0.745
0.451
-567.727
-32.776

-0.113
0.459
-0.881
-79.983
-1.310

34

35



R.A.	:	0.350
DEC.	:	60.700
R.A.	:	-245.000
DEC.	:	-100.000
STANCE	:	3.700
	:	55
	:	000

2035 0 22.0 +14 02 6.8 g 110 -15.88

224 430ac

66483

+0008 ± 2.5 -001 ± 2.2
+0015 -002

0 22 2.613 1898.0 +14 02 18.79 1891.7
-.042
.571

60.50

18.61
.5
18.69

1933.0

Comp

1939.76

18.74

+12
18.86

36.0

18.77

44.3

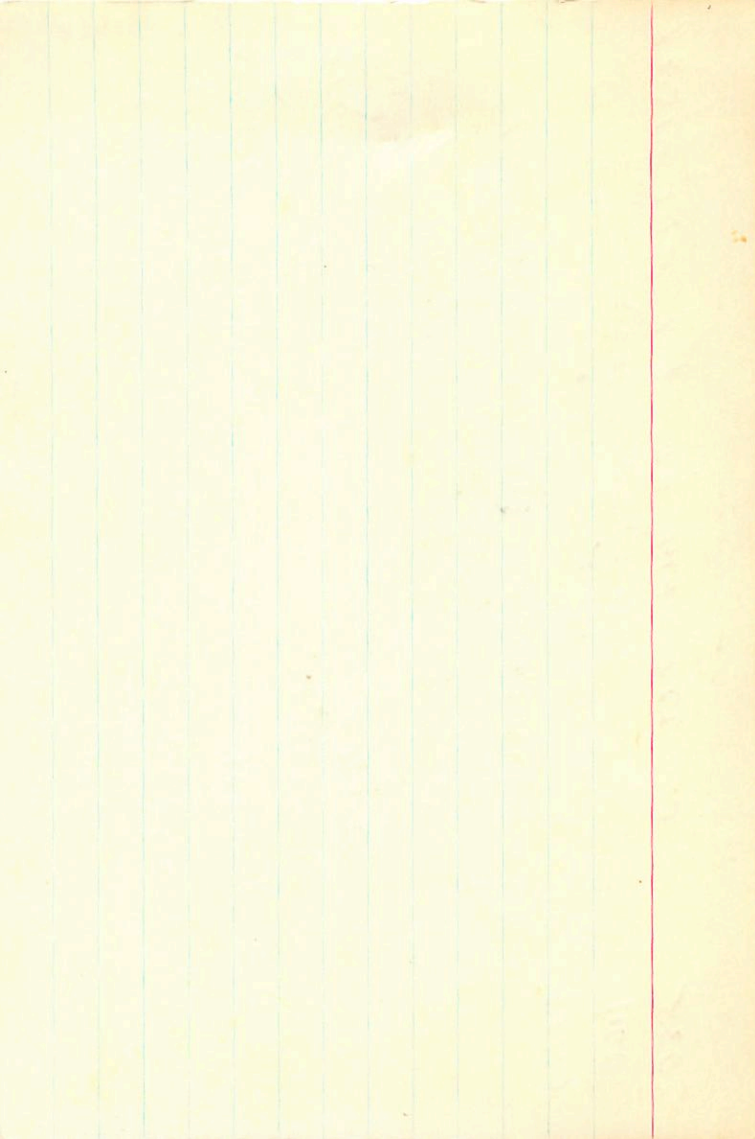
2.631

+1
632

.628

+057

-06



T49073

0 22.5

+49

49

DN3

-65.184(3)

W226

8.6

T67

+037

MLR

+0106 -011

(+16 -01?)

-17-64 +13 .05

-14-66 +13 .04

-7±13M(6)

29 ~~24.624~~ 1909.2 +

19 46.572 1917.6 +49 32 47.90 1915.0

7.11 1720.8 49 41 6.8 1920.8

-0.10

7.070

26.187

26.156

27.126
27.126
3.83

27.437

27.437

25

7.05

19.40

26.45

26.15
26.15
3.6.30

26.17

26.17

25.93

1929.7

HD2107
-52064

00 22.6 -51 45 158

+150 -29 CP -2.6 250

+170 -26 →

PPM

8.6 +0.40 -

0170 -046

34-251

257

-48

3.8

-2.6



36

R.A. : 3.448
 DEC : 157.188
 R.A. : 370.889
 DEC : -48.848
 STANCE : 2.838
 BOUNDS : 88
 DEC : -8.688

 01 (U) : 0.361
 02 (U) : 0.138
 03 (U) : -0.388
 04 : 247.884
 U : 28.184

 01 (U) : -0.488
 02 (U) : 0.888
 03 (U) : -0.811
 04 : -887.788
 U : -887.184

 01 (U) : -0.888
 02 (U) : -0.188
 03 (U) : -0.388
 04 : 0.888
 U : 3.388

R.A. : 0.400
DEC. : -51.750
R.A. : 255.000
DEC. : -48.000
DISTANCE : 3.500
MODULUS : 50
VEL. : -2.600

q1 (U) : 0.861
q2 (U) : 0.423
q3 (U) : -0.282
dU : 547.954
U : 28.196

q1 (V) : -0.499
q2 (V) : 0.809
q3 (V) : -0.311
dV : -557.709
V : -27.144

q1 (W) : -0.097
q2 (W) : -0.408
q3 (W) : -0.908
dW : 20.536
W : 3.389

36

2126

+33039

0 23.0

+33 51

8.3910

~~350~~

~~3W~~

W230

8.22 + 1.02 + 0.74 10.11 - 14

S = 14

~~10~~
~~5000~~

-005 -01

A05363

0 246 - 8 09

-8.65

60

54.0 number

0.360 5037621954

365

$$a^3 = 48.627 \times 10^{-3} \quad a^3/p = 16.68 \times 10^{-4}$$

$$p^2 = 25.16 \times 10^{-2}$$

$$-0.0028 + 0.038 \text{ via}$$

$$\begin{array}{r} 0 \\ \hline -0028 \\ \hline 7037 \\ -042 \end{array}$$

860 500 693
-501 899 333
-043 333 -452
-638

-1712 - 10879
10557 + 1400
+ 10855 + 0584

-083
+2398
+0969

7110245

10.17

0.81

Y1 No.

-3.4 + 0.09 P
+ 9.8 + 0.33 P
+ 3.1 - 0.94 P

HD 2344

W 243

GC 531

- 0010 ± 3.3
- 0018

- 1001 ± 2.8
- 1005

GC 0 24 46142 1897.4

402 32 15.13 1892.1

53

σ6

46,195

15.07

II Cape

0 23 29,203

402 23 56.37

1 16942

8 18.50

24 46,145

32 14.87

001

01

46,146

14.86

1 GC

- 006

± 36

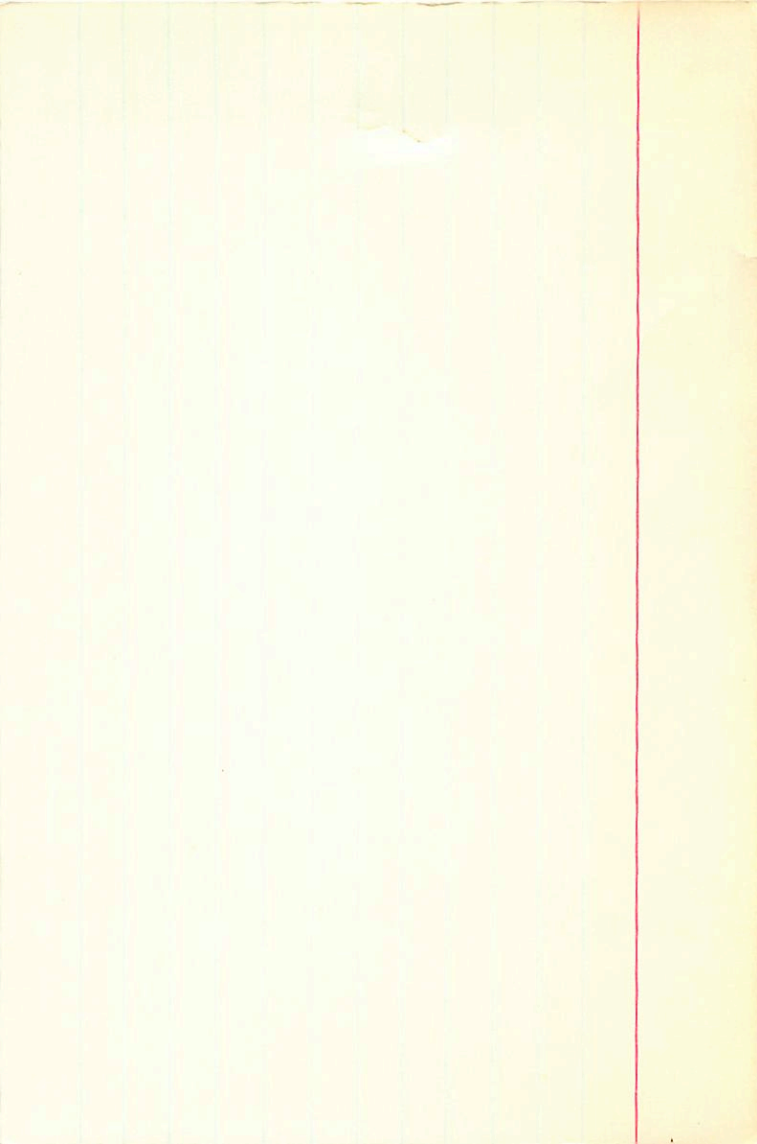
46,140

15.22

1926.7

- 015

4 .15



MCW

2438
17664

0 25.5 -11 52

-0-1
-8.1 @ Van

MCW

021 = 50. 43-9

10/10/10
10/10/10

210

+00233 W 25/0-33200+

00248
113 7 P15

0475-0137

1510

9850 9830 0583
0586 1581

8.49 82848

1715

2762 1.64
2762 1.64

2762 1.64

28

404.0
200.0
200.0
200.0

R.A.

DEC.

- 11.950

0.000

0.400

2421 0 25.5 +44 07 5.2 A2 +2.0a

70074
+0096 ±3.1 -0.14 -0.10 ±2.1 Gc

SPB
Out

+0066
+0074
-1
-0.14
-0.12
+2

66546

0 25 31.920 18923 +44 07 5.47 18983

-444
424

+0075 -0.14 1.52
+00787 -0.106 5.99

0548

1526.7
9967 9969
6758 0816

25

24 11.34

25 20.215

31.553

31.102

31.662

-0.10

1052

+2.28

4580 413 5.8

5.17 8 47.2

44.4 7 18.12

5.53

-1.1 4

5.3 4

+2.4

5.55

-41

936 1706

+860 +2024 +448 +3728 -0087 +3641 +1715 +.9 +8.4

-501 +170 +848 -2172 -0726 -2898 -139 11.5 -12.1

-093 +664 -249 -0403 -4116 -4519 -217 -1.5 22.2

+31159

+5-2

2453 00 25.8 +32 10 6.7 Aop -18.0a

-0020 57.3
-0027 -016

255 49.937 1902.0 +32 9 4135 1904.7
096
50.033

50.033
49.97 106 -0025 -014
-0019 -022

9 42.2 1929.7
-001
95.9
0.17
42.03

100 P
-028
0.28

+459 +336 +387
-506 +134 +715
-43
+436 +543
-1189 -7.0
+0079 -13.4
+0110 +9.5

-17.3 -0287
-0370
-0713
-1827 -179-70 -25
+0302 -154-134 -8
-0403 -65+98 +3

36

-18 Roberts
Co. 2.

00 258 +32 10 6-42-ADP

2453
81059

~~10021573~~ -024578

66533 . 44987 20 4185 4.7

49937 8268 4166

2504
+58060

0 26.5 +59 12

G-47 26
7.8 964-55c

259

-0057

+005 21 623

7

512

702

349

385
115

7

-0069

+009

-2
1400

+1
+010 76c

-0065

+008

-7

0

-0072

+008

2637 0 27.5 -04 14 6.0 gmo +4.76

265

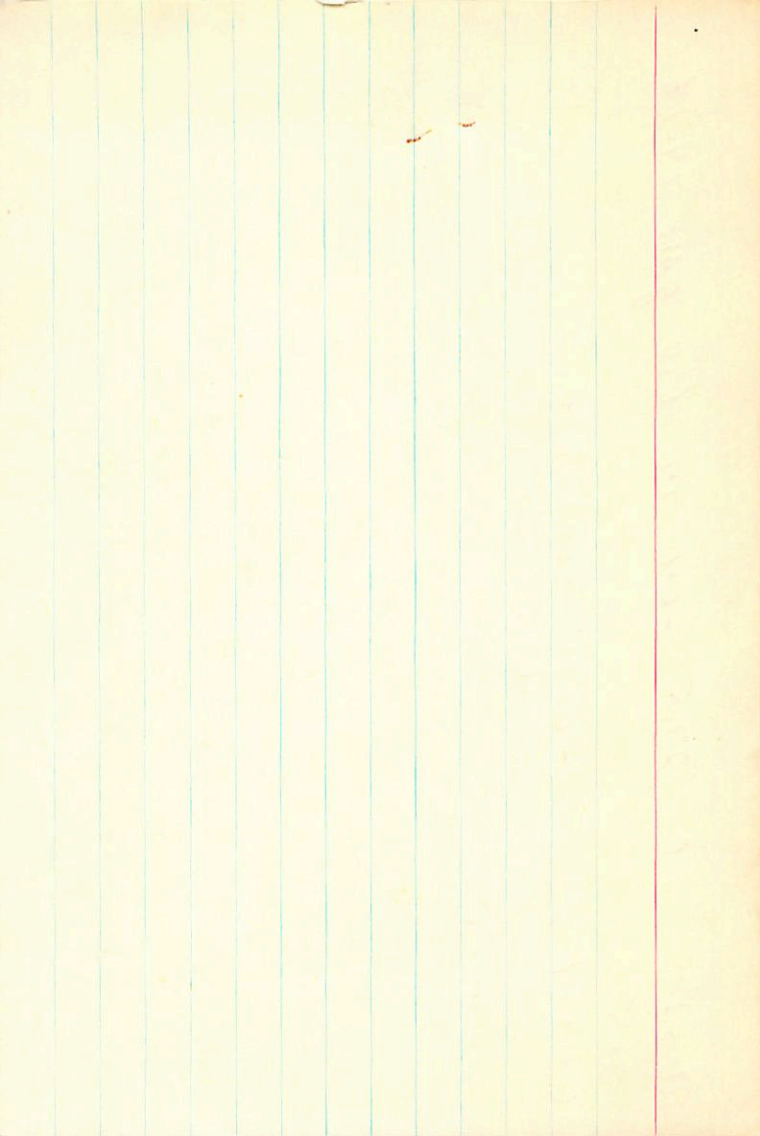
GC 584

+0006 -009 N30

1264

+0006 ± 0.5 -008 ± 0.9 GC cont N30

AD5410 11^m 10¹¹



78
172

0 27.4 -1.24 dF1

2629

9.48 + 0.34 - 0.07 $\Sigma \epsilon_i^2 =$

236

446

.132

.547

2.689 (2)

142, 144

236 21

[m] 176 +42
[m] 498 84
120
104

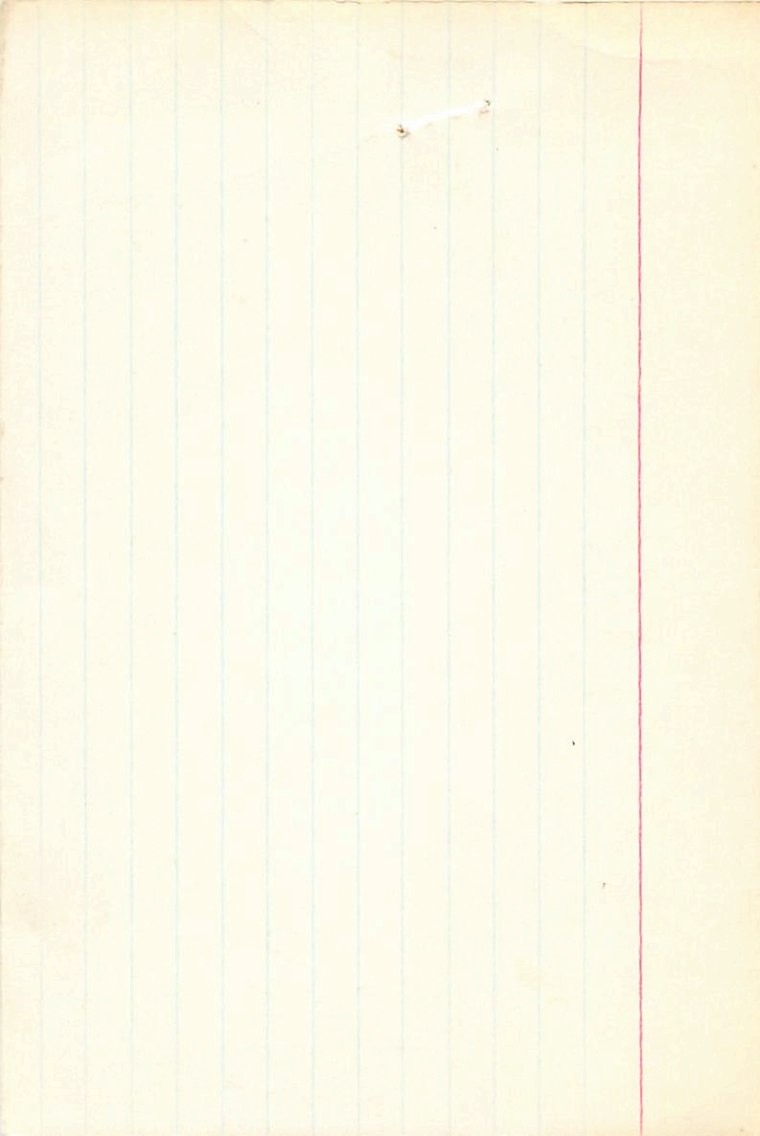
42.3

157

-78

425

-5.5



10101-078 Carbonyl

HD2629 263 66581 0 27.4 -01 24 dFI 10.38
116ct 7.38+34-07 2.5 +150 -073 ± 0.2

20" +0100 ± 2.4 -073 ± 2.1 GC
+0096 -069

0 27 21.254 1900.6 -1 23 34.39 1896.6
-794
20.760
+3.90
30.49

Copy

9985 9084 21.135
1047 4158 ~~110~~ 112
-0002
320 21.109
+003
112

33.75 1938.27
+29

37.8
41.2

37.2

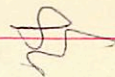
33.76
33.342.85 1937.26
+10
33.24

33.34
33.34
33.34

116
112
+358

111 876
112
25.6

119 593 0 1 +150 -073 +0.3 0 0 -346



-018 0 150 0 -085 710 +0.3 0 0

-6 +47 -23

015

+29 -40 -14

-4 +36 -17

02

+24 -31 -8

-3 +24 -12

03

+15 -20 -8

-0.7 62.9 -16.2
-4.1 -31.8 -26.0
7.4 -11.6 -16.2

-8.5 +71 -34.6

018

45.6 -61.9 -20.4

R.A. : 0.450
DEC. : -1.400
1. R.A. : 151.000
1. DEC. : -78.000
STANCE : 4.280
MODULUS : 72
VEL. : -5.500

q1 (U) : 0.859
q2 (U) : 0.488
q3 (U) : 0.157
dU : 434.272
U : 30.307

q1 (V) : -0.505
q2 (V) : 0.755
q3 (V) : 0.418
dV : -640.585
V : -48.280

q1 (W) : -0.085
q2 (W) : 0.438
q3 (W) : -0.895
dW : -223.002
W : -11.086



GN And

28 And

0 27.5 +29 49

2628

264

GC583

A05409

13^m 2^m 11^m
12^m 14^m 11^m

13^m 2^m 11^m

-4 A (20)

11

5.18 +0.23

+0030 -055 N30

+0027 -051 E14 GC600
E14 GC630

+041-054

3.55

Am
-11.5 (5)
double line
-10.22

5.75
5.16 5.9 .023

+037 -053 GC

+039 -055
+038 -054

120 553 497 868 +025 -054 -10.2 -027 -5-223 ✓

-005 003 035 -027 104 154 -8.8 -9 -1

-4 +8 -15 022

0 -17 -7?

-4 +7 -15 023

-1 -16 -4

639



1905

1906

1907

1908

1909

1910

375
56.22

28

41

-19

-7

59

2589 0 27.7 776 75 969 + 1908 w(3)
66579 w(2.5) .018

484 6.21 + 0.84 + 0.55 R01R

+7610

95 - 26 - 5 . 018

+332 ±3 - 022 ±366
+353 - 014 GA2
+336 - 020

021 ±12 - 6(7)

+0984±3.2 -022±3.2
+0991 -028

39.770 1884.8 +76 44 38.35 1886.0

6.416
33.354

+1.41
39.76

39.352
79

38.14 1946.06

143
7

-9
38.05

+6.077

-1.71

~~NOT REPLY~~

1587
G 31-46

00 20 43 -00 06.9

-3.25

-0.29 NO

-3.7 C

300 037

-3.7 (3)
-3.7 (2)

-0.54

9.92 + 90 545 16

3023

9980

9999

9.92 + 92 + 60 1814

0025

132

-0.32

+0.4

0.33

-0.1

300

0.315

37

9.46 + 323 (2)

2.57

9.14

660

3.7

-3.5

34