

-0013 ± 2.4  
-0012

-0.21 ± 2.2  
-0.24

6.5 mi

116365 13 20.7 -4 40 5.9 g 103 +9.88

18109

7948 43.245 - 1900.9 -4 39 48.46 1898.2

$$\begin{array}{r} +064 \\ \hline 1309 \end{array}$$

$$\begin{array}{r} 25.549 \\ 17.729 \\ \hline 43.278 \\ 29.2 \\ \hline 307 \end{array}$$

(35.1)

$$\begin{array}{r} 6.05 \\ \hline 768 \\ \hline 1 \\ \hline -041 \end{array}$$

$$\begin{array}{r} 43.246 \\ \hline 248 \end{array}$$

$$\begin{array}{r} 12.162 \\ 31.100 \\ \hline 43.262 \\ + 2.16 \\ \hline 45.422 \end{array}$$

$$\begin{array}{r} +1.09 \\ \hline 47.37 \end{array}$$

$$\begin{array}{r} 57.26 \\ 51.470 \\ \hline 48.00 \\ \hline 48.20 \\ +23 \\ \hline 47.97 \end{array}$$

1427.13

786  
2

$$\begin{array}{r} 101.798 \\ \hline 36.0 \\ \hline 37.8 \end{array}$$

$$\begin{array}{r} 48.26 \\ \hline .89 \end{array}$$

1137.26

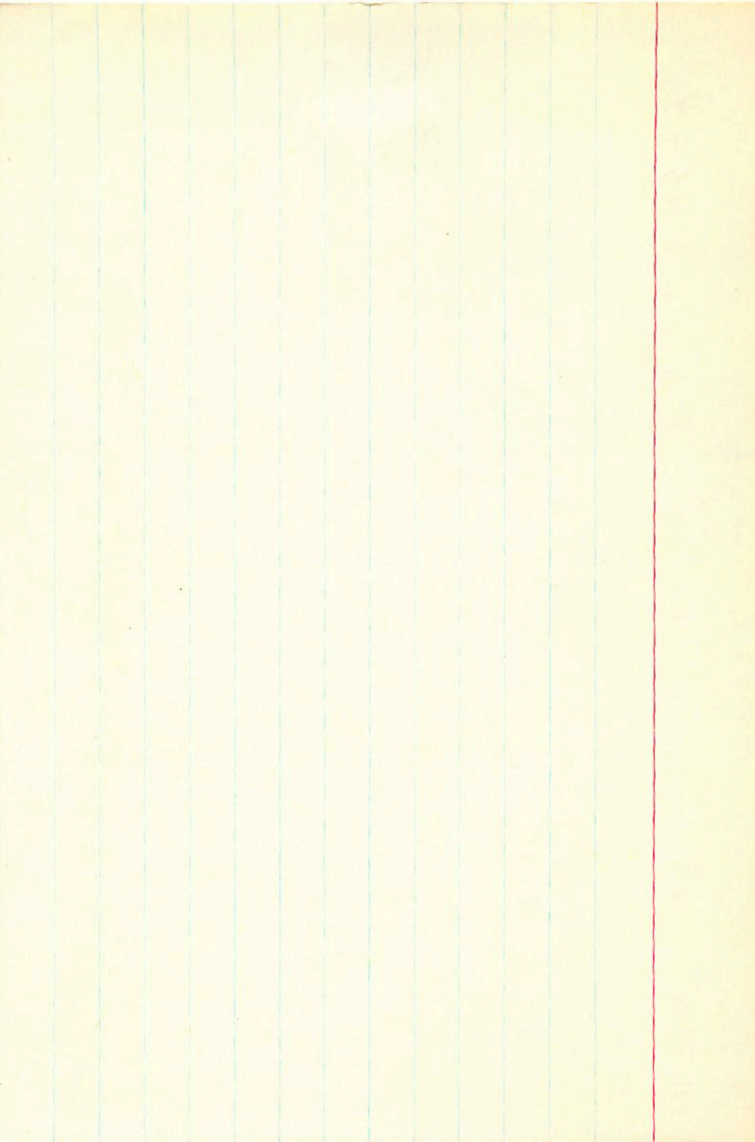
$$\begin{array}{r} 48.35 \\ +3 \\ \hline 49.32 \end{array}$$

1946.49

$$\begin{array}{r} 40.02 \\ 8.29 \\ \hline 48.31 \end{array}$$

$$\begin{array}{r} 48.31 \\ +26 \\ \hline 74.31 \end{array}$$

4849



116244

W7952

HR5042

G416116

5450

7706

3

5.04 + 110(2.18)

B 21.1 - 74 38

+26.1 358

+10 +6

47

133

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118

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13

-104 -139 62

-0260

20250 -133

11.00

1320 -17

-13.8 -37

-36.3 -42

81.3

(over) 173

787 -218 -562

552 -100 -800

-120 970 -208

+5815

-2834

+10574

+1426

+10154

-6348

+5241

-2187

-5791

+41.9

-16.8

-37.0

+16.2

-23.0

-6.0

+25.7

-398

-430

-16.2

-23.0

-6.0

-430

$$\begin{array}{r}
 842 \\
 -0262 \pm 4.3 \\
 \hline
 \end{array}
 \qquad
 \begin{array}{r}
 -144 \\
 -151 \\
 -139 \pm 4.1 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 7.901, 909.6 \\
 1.058 \\
 \hline
 8.959
 \end{array}
 \qquad
 \begin{array}{r}
 -0300 \\
 -0280 \\
 \hline
 \end{array}
 \qquad
 \begin{array}{r}
 32.46 \\
 5.88 \\
 \hline
 26.58
 \end{array}
 \qquad
 1907.7$$

$-0280 - 1388$

$$\begin{array}{r}
 8.045 \\
 - \quad 9 \\
 \hline
 036
 \end{array}$$

-101

$$\begin{array}{r}
 30.90 \\
 -50 \\
 \hline
 31.40
 \end{array}
 \qquad
 \begin{array}{r}
 1940.35 \\
 64.6 \\
 30.75
 \end{array}$$

$$\begin{array}{r}
 7.95 \\
 -0.50 \\
 \hline
 7.900
 \end{array}$$

$$\begin{array}{r}
 318 \\
 -50 \\
 \hline
 3230
 \end{array}
 \qquad
 1947.4$$

116498 13 21.5 -37 46 714 147 NY III +278

6618125

-0008  
-0005 ±40  
-0005 ±7.8

-28  
-034  
-004 ±7.8

30.865 1501.8

0005 -024

2204 1895.4

5.099 - 023

+0002 -015

32.05 1528.9

25.642  
741

5082  
2287

318

30.101  
842

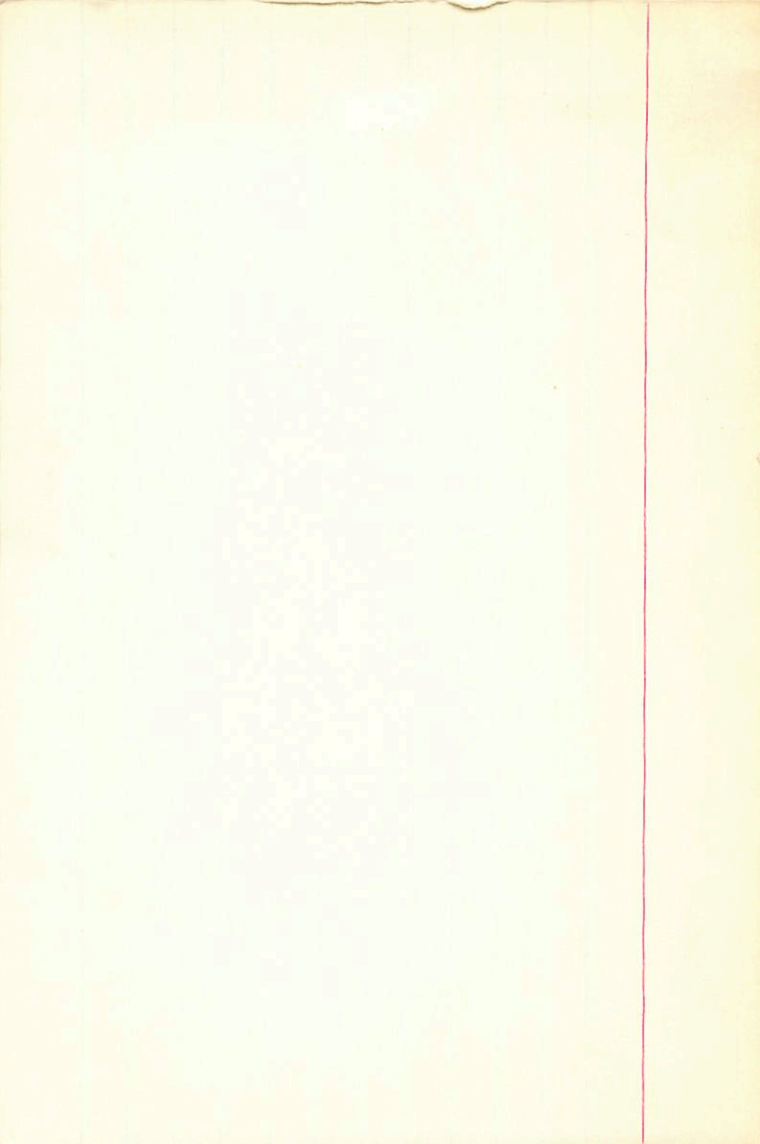
55 -123  
43

865

2305  
1985.4

30.84  
288

22.3  
-35  
22.68



A059990

116542

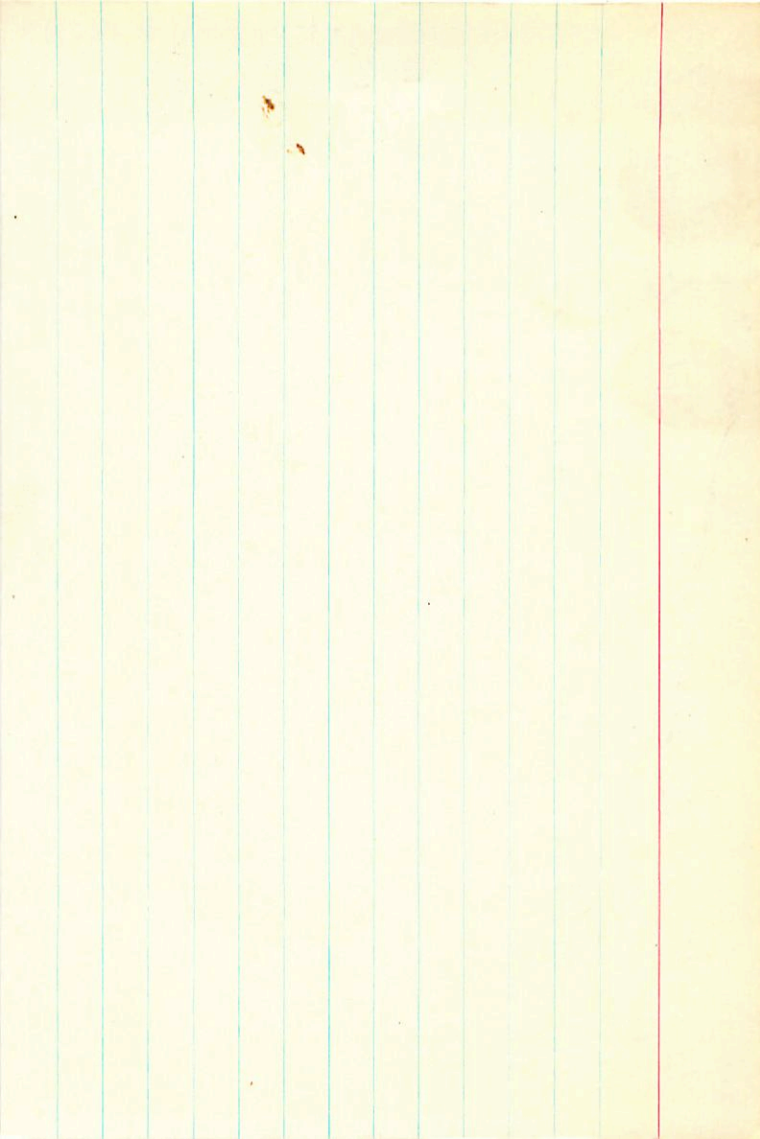
18130

7956

-0014 ± 5.3 -033 ± 3.6

13 21.8 +01 40 7.1 AS -15.26

45.374 1896.6 +1 39 35.93





116457 13 21.9 -64 13 132 132 -231

HR5048 16457

-161 -038 6-C

18132

-144 -023 N

7957

-150 -027 6-C

-0220 13 -023 13 N30

-0232 ± 5.4 -028 ± 4.2 6-C → M30

15416

-0246 -028

51777 12.5

-0231 -028

29.35 9.6

9229

-0234 -022

1.54

154-022

51477

-0237 -0363

27.81

9780

51477

-0237 -0303

28.5

40.14 2084

51477

-0237 -0303

28.5

40.14 2084

51477

-0237 -0303

28.5

40.14 2084

51477

-0237 -0303

28.5

40.14 2084

51477

-0237 -0303

28.5

40.14 2084

51477

-0237 -0303

28.5

40.14 2084

8996 -8996  
0282 -7315

88729  
88729

16091  
16091

16091  
16091

1748 -0.50

0170

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1335

-647

361

-26

275

-22

20.8 4725

20.8 4725

20.8 4725

20.8 4725

7100 1517-026

29.55

29.55

29.55

277 151557 24625

8996 -8996  
0282 -7315

-355-838-800-435-150-027-2.3 024 +2 -066

-053 009141-023-142 711 1.0 71 0 017

-7 +42 -2

[-35-23-2]

1.8  
-1.4

13 21.9 -64 13 F2

116457

HR 5048

GC 18132

5.30 + 0.41 - 0.03 C

372

1.34

2.4 2.40

[ $\alpha_m$ ] 194 + 21 + 225 . 275 . 149 . 569 2.670 (3) 3.315

[ $\alpha_l$ ] 514 + 117  
+ 134

40  
-02260  
-02340 - 6241  
-02340  
1151  
5  
-1523

2.70: + 21.0 - 12.7 - 0.4

411 1130  
-0255 ± 5  
-0241  
-4  
+ 566 - 420 - 16

-153 - 020

-2.36

66

351

484

10

143

105

104

140

152

153

1534

100

11

102

3.003

W

-3.002  
-3.032

-14.719

-16

-3.436  
-3.803

23.704

25

3.587  
-3.595

3.004  
2.904  
33.019  
-2.300

3.05  
408

13.328 : R.A.  
 -84.288 : DEC.  
 -381.088 : PM. R.A.  
 -24.888 : PM. DEC.  
 2.728 : DISTANCE  
 22 : MODULUS  
 -2.388 : RAD. VEL.

-8.728 : p1 (U)  
 -8.118 : p2 (U)  
 -8.294 : p3 (U)  
 887.888 : pb  
 22.888 : U

8.288 : p1 (V)  
 8.848 : p2 (V)  
 -8.884 : p3 (V)  
 -447.888 : pb  
 -14.888 : U

-8.124 : p1 (W)  
 8.888 : p2 (W)  
 -8.888 : p3 (W)  
 -88.217 : pb  
 -8.888 : W

R.A. : 13.350  
DEC. : -64.200  
PM. R.A. : -361.000  
PM. DEC. : -26.000  
DISTANCE : 2.750  
MODULUS : 35  
RAD. VEL. : -2.300

q1 (U) : -0.796  
q2 (U) : -0.118  
q3 (U) : -0.594  
dU : 607.093  
U : 22.907

q1 (V) : 0.593  
q2 (V) : 0.048  
q3 (V) : -0.804  
dV : -447.608  
V : -14.033

q1 (W) : -0.124  
q2 (W) : 0.992  
q3 (W) : -0.032  
dW : -30.217  
W : -0.999

66



A058891 13 21.9 +55 4 -20① -9.12

Σ 4799

.0474

90

<sup>74</sup>N30

+0144 -028<sup>74</sup>N30  
+0143 ±0.5 -027 ±0.566<sup>74N31</sup>

+124 -02866  
+124 -028630  
+120 -025 F103  
+128 -027

-350-937    821 571    +123 -027 -9.1  
~~+424~~ +125 +127 -622-7 -071

043-008-115 021 104 -583 -5.2 +5 +2 0474

+7-10-9

-12 0 -8

666 vi  
116568  
18135

13

+0105 ± 2.4 -036 ± 1.9  
+0102 -039  
21.9 -04 54 5.8 DF3 +13.66

7960 56.873 1898.9 -4 54 12.02 1897.5

-537  
          
1,336

39.816  
17.782  
          
56.598  
26  
          
1625  
1,612  
          
637

56.747  
          
1761

1398  
          
699  
          
+363

35.5

+1.89  
          
10.13

21.65 1927.43

50.40

2.05  
          
51

11.54  
          
11.23

          
11.31

11.80  
          
+3108  
11.77

          
11.54

          
-1.41

66.71

          
33.4

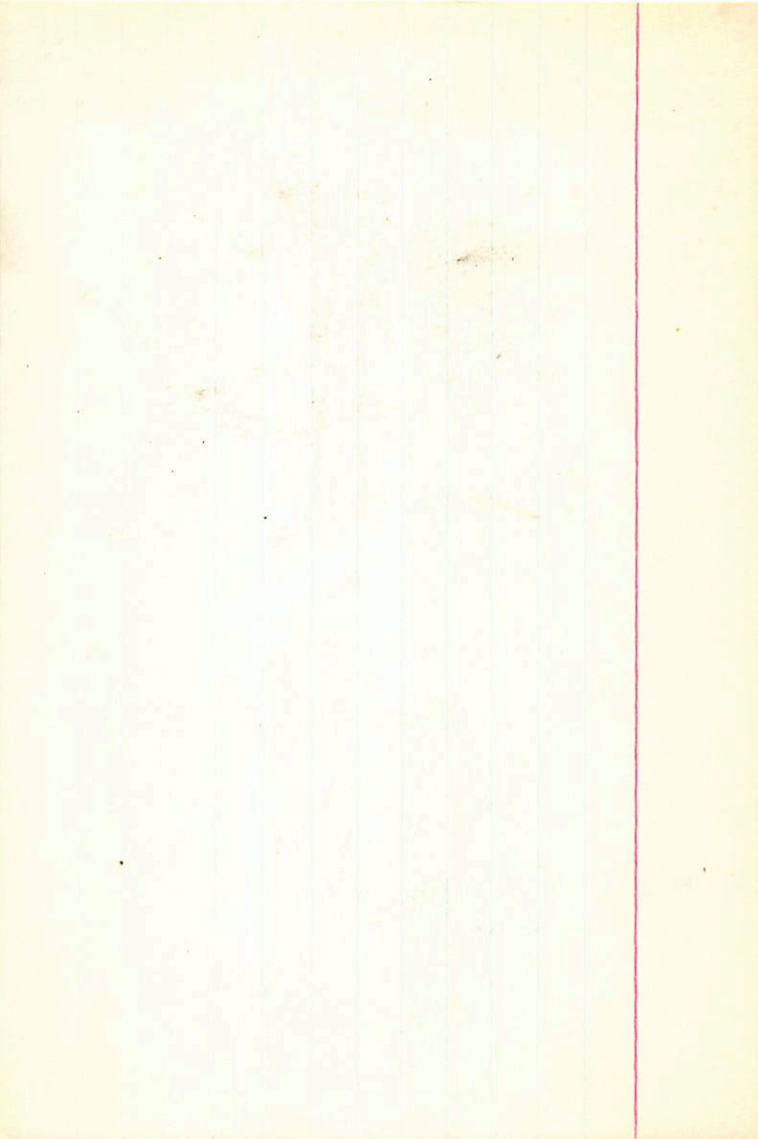
          
35.9

-19-0

7.74 + 06 + 10  
1.1

+3202346  
13 22.1 +3224 +026 +010 Rndy

116634  
1.9(5) sup?             
+006 6006 00  
+3



116738

+34.424

13 22.7 +03 86

~~13 20.5 +03 53~~

+053 +033 ACNF

+117

② 255

④ 27

+111

⑤ 29

+109

+1049 +055

$$\begin{array}{r}
 5.81 + 0.6 + 0.9 \\
 1.3 \\
 \hline
 13 \quad 22.7 \\
 + 240 \quad 2578
 \end{array}$$

$$\begin{array}{r}
 5.81 \\
 + 0.6 \\
 + 0.9 \\
 \hline
 7.31 \\
 + 240 \\
 \hline
 247.31 \\
 - 0.254 \\
 \hline
 247.056
 \end{array}$$

116704

$$\begin{array}{r}
 -0.006 \\
 -0.006 \\
 \hline
 -0.012
 \end{array}$$

6618147

$$\begin{array}{r}
 43.621 \quad 14001 \\
 024 \\
 \hline
 43.645
 \end{array}$$

$$\begin{array}{r}
 57.67 \\
 1898.1
 \end{array}$$

$$\begin{array}{r}
 78 \\
 \hline
 5245
 \end{array}$$

$$\begin{array}{r}
 -0.006 \\
 -0.14 \\
 \hline
 -0.146
 \end{array}$$

$$\begin{array}{r}
 43.625 \\
 -0.008 \\
 \hline
 43.617
 \end{array}$$

$$+ 4$$

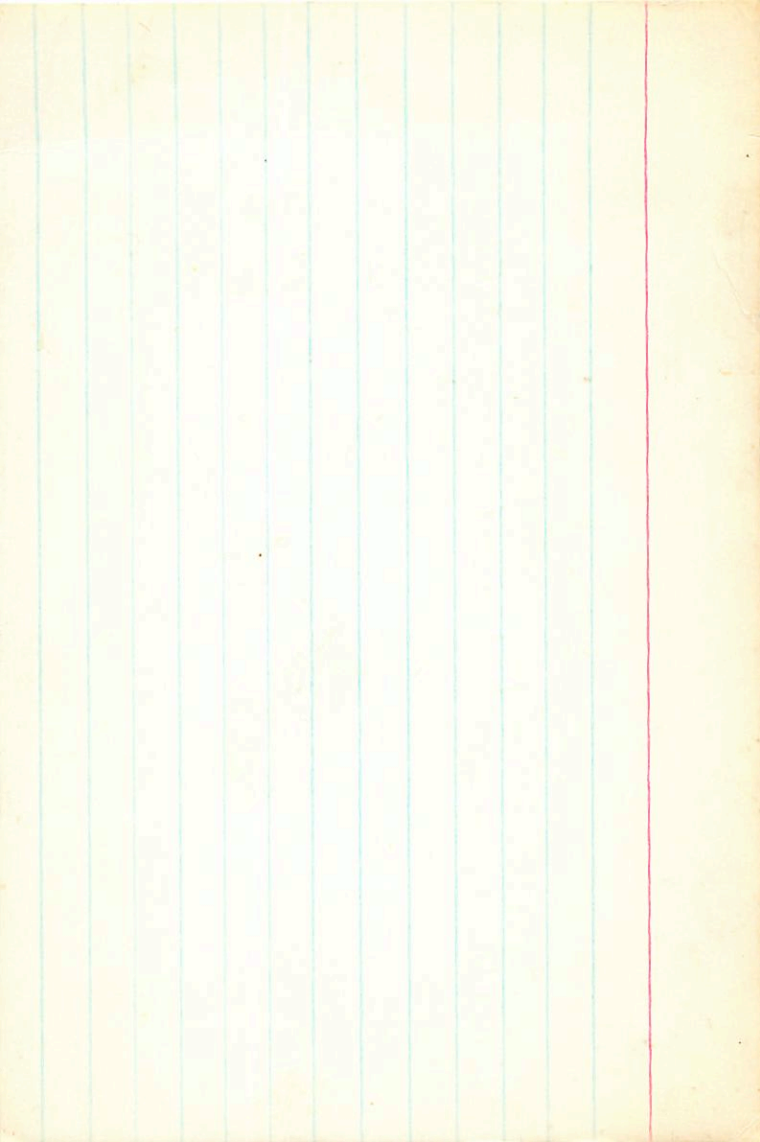
$$\begin{array}{r}
 52.09 \\
 -1.7 \\
 \hline
 50.39
 \end{array}$$

$$1940.41$$

$$\begin{array}{r}
 43.604 \\
 + 19 \\
 \hline
 43.623
 \end{array}$$

$$\begin{array}{r}
 52.27 \\
 -2.2 \\
 \hline
 50.07
 \end{array}$$

$$1928.32$$





2.10  
2.10  
2.10

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$$\begin{array}{r} -0400 \neq 83 \\ -0420 \\ \hline \end{array}$$

$$+086 \neq 11.3$$

$$+100$$

116926 13 23.3 +68 26 9.7 d65 -20.68

18158

7967

17.415 1905.2

~~17.792~~

1.48 19086

3.56

19.207

57.92

-218 -102

18.10

54

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-15 1930.2

159 42

0.05

1.048

213

25) 1.048

214) 213

5720

-215 +1026A

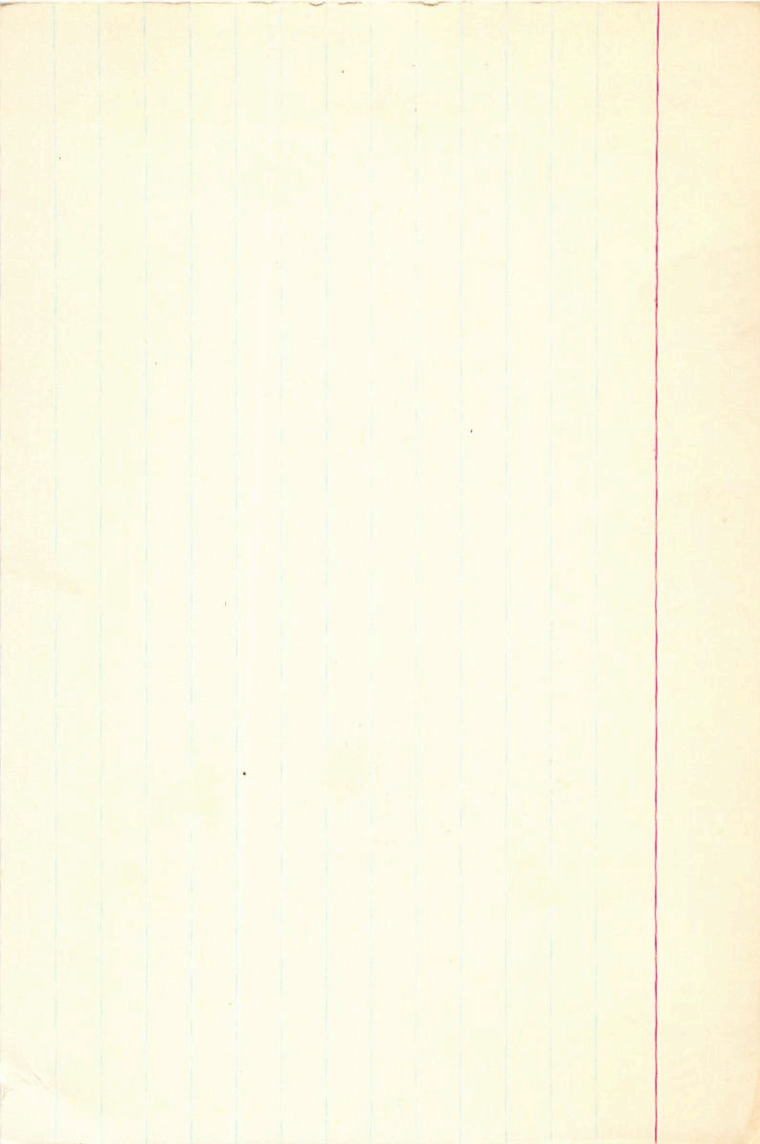
17023 30

16091

405

-0345

65.75



116926      13    23.3    +68    26    9.7    265    -20.68

+680724

9.7

-221 +086 GC

-218 +102 GAZ

-220 +090

-0405 +097

77.470.

-791 +524 +313	<del>7806</del> +2409	110275	+81.1 -6.4	+74.7
+596 +551 +582	<del>5882</del> +2533	<del>3350</del>	+26.6 -12.0	-38.6
-133 -648 +750	+1313 -2980	-7667	-13.2 -15.4	-28.6

-352 4938 930368 -220+044-20.6 087-19 Page 166

-075 030 206-079 005-115-76 +7 +3 025

+7 +45-18  
[+36-24-16]

025

+7 +20-6  
[+33-15-14]

03

+7 +59 +1  
[+51-21-14]

02

-0002 -0001  
-0007 -0009  
-0007 -0009

W Vi 13 23.8 -03 07

-0005 -0005

+0006 ± 12.2 +0005  
+0002  
8.98 6.5

26.987 10.5  
-24  
9.13

-2.3683

H09116802

G618161

26.887 33.38 9.27  
-7 9.17  
880 +0035 9.10

W Vi

13.4  
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-6.50

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66-

997 " 4  
818 " 1  
198 " 8  
298 " 8  
387 " 1

42

898 " 1  
297 " 1  
398 " 1  
222 " 8  
268 " 8

224

118 " 8  
252 " 2  
484 " 1  
394 " 8  
187 " 1

888 " 8  
888 " 1  
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888 " 1  
887 " 1  
884 " 1

66



WVH 13 23.5 - 30  
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- 65 hundred

- 006 - 006

-597 +352 -491  
+592 +618 -518  
-121 +703 +701

+02279 -0100  
-0168 -0176  
+0034 -0200

+0127 +31.5 +31.9  
-0243 -85.0 +33.7  
-0176 +3.6 -45.6

+63  
-51  
-90



117043 13 24.3 +63 31 6.6 266-30.66  
-0584#38 +213#28  
-0593 +246 -303 (7)

18173

7974 17.486 1883.7 +63 31 2.69 1883.3

$$\begin{array}{r} 3.872 \\ \hline 21.358 \end{array}$$

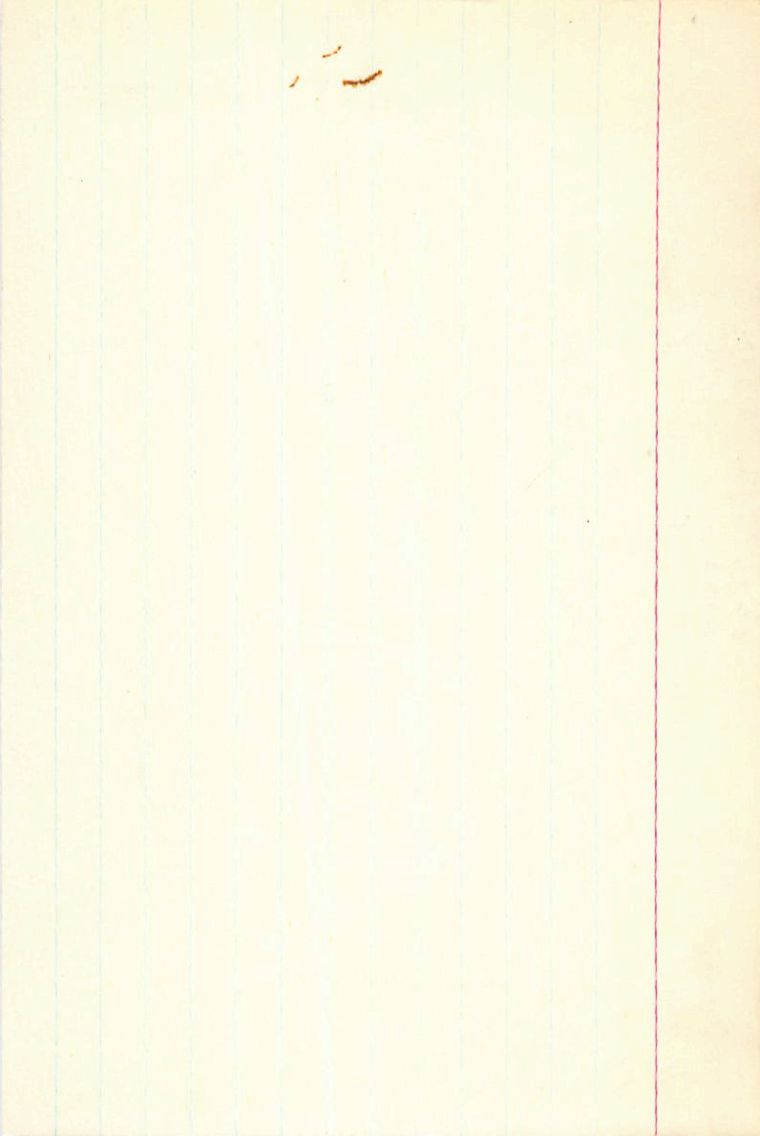
$$\begin{array}{r} 14.21 \\ \hline 16.90 \end{array}$$

5070

$$\begin{array}{r} 17.752 \\ 29 \\ \hline 781 \end{array}$$

$$\begin{array}{r} 1.83 \ 1944.96 \\ -14 \\ \hline 1.69 \end{array}$$

6-51 458 272 352 (1)  
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V 743 km 13 25.3 -51 02

1015  
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1006-050



68





13.400  
- 51.050  
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- 51.000  
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- 5.500

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- 0.012  
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- 0.241

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- 900.004

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$\pm 6.5$

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330      13.4      -644

9414      -175

-5141      -7

4547      6      115

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13.400  
-64.400  
-175.000  
-7.000  
6.000  
158  
15.000

-0.791  
-0.130  
-0.598  
287.727  
36.628

0.597  
0.052  
-0.801  
-215.716  
-46.197

-0.135  
0.990  
-0.036  
15.550  
1.926

69

HR5072

117/76

113 26.0 714 03

446 232 357 2576

446 451 221 354 (2)

435 229 353

1

9.137 72.12 43.18

117242 13 26.0 +53 00 F0 -7 c

HRS074

$$\begin{array}{r}
 -118 -015 ac \\
 \hline
 -086 -013 Gm(2) \\
 \hline
 -104 -014
 \end{array}$$

~116 -018 GC →

-117 -026 N30

97.700.

$$\begin{array}{r}
 -116 -022
 \end{array}$$

-789	594	158	+4338	-0619	3719	+28.9	-1.1	+278
598	684	416	-3288	-6713	-4001	-31.1	-2.9	-340
-139	-423.895		+0764	-0441	+0323	+2.5	-6.0	-3.8

183



-366-530 755652 -104-014 -7-011-6-035

-035 004092010 -133 478 -4.2 +4 2.15 012

-7 x42-9

~~1470~~ 59103 5.9 0115 -0122 #42  
522 -0111 -025 2016542  
625 024 1604 30  
1670

59.169 15.69  
199 4<.05  
15.79

54055 15.52  
32 5733  
687 15.21  
1531

+0007 ± 3.8  
+0003

40

117261 13 26.2 +40 59 6.5 0.3 -58.38

18218

7994

13.922 1899.5 +40 59 19.54 1894.3

$\begin{array}{r} -035 \\ \hline 887 \end{array}$

$\begin{array}{r} 3.51 \\ \hline 23.05 \end{array}$

$\begin{array}{r} 7.68 \\ 6235 \\ \hline 13.915 \\ .882 \\ \hline 878 \end{array}$

28.1

7.5 - 1925.1

$\begin{array}{r} -46.91 \\ \hline 20.55 \end{array}$

5537

$\begin{array}{r} 171 \\ \hline 20.85 \end{array}$

27.0

$\begin{array}{r} 21.00 \\ \hline 20.80 \end{array}$

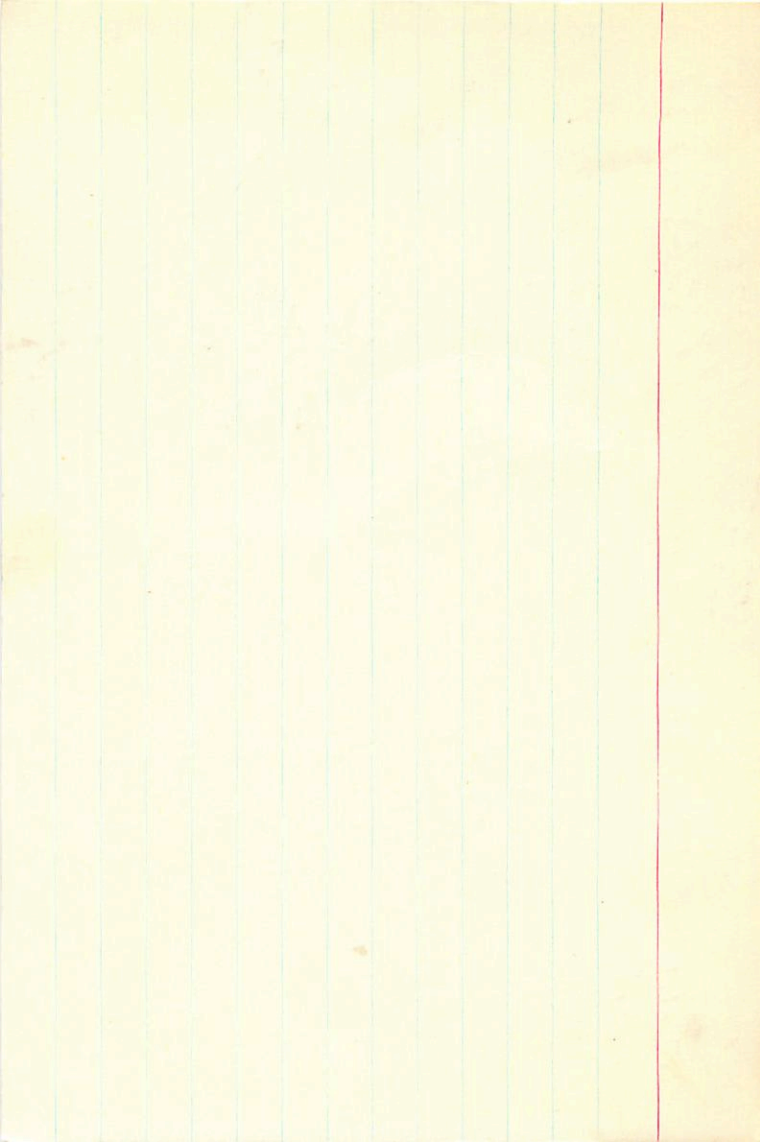
$\begin{array}{r} -21.20 \\ \hline 20.80 \end{array}$

33.3

$\begin{array}{r} 13.89 \\ \hline 1911 \end{array}$

21.2 1930.2

$\begin{array}{r} -29 \\ \hline 20.91 \end{array}$



-0470 ± 2.6  
+026 ± 2.0 58  
+030 26

117566 13 26.5 +78 54 5.9 964 +15.16  
-0501

18223

7997 30.029 1883.7 +28 54 6.90 1586.8

3.116  
33,145

<sup>94</sup>  
-0787 +0295

-1.64  
5-2.6

7.20 1945.46

DPO (5091)  
M. Smith  
+15000 2.000

-6986

-0495 +0299

5.04

7.85 -10

800007

30.032  
87  
.119

-6986

7.95  
7.0

140  
24

6562

62000

28948  
93

65.02

7.95  
7.0

140  
24

↙

-1481

-147 +034

7.72  
7.0

1447 015-1  
1447  
0076  
+28

7.1

418 total 6  
+2.7

24.04

9882 - 9880  
08992 - 2870

1447 015-1  
1447  
0076  
+28

7.1

4055919

+1202597

13 26.6 +11 44

8.6 d68 +296

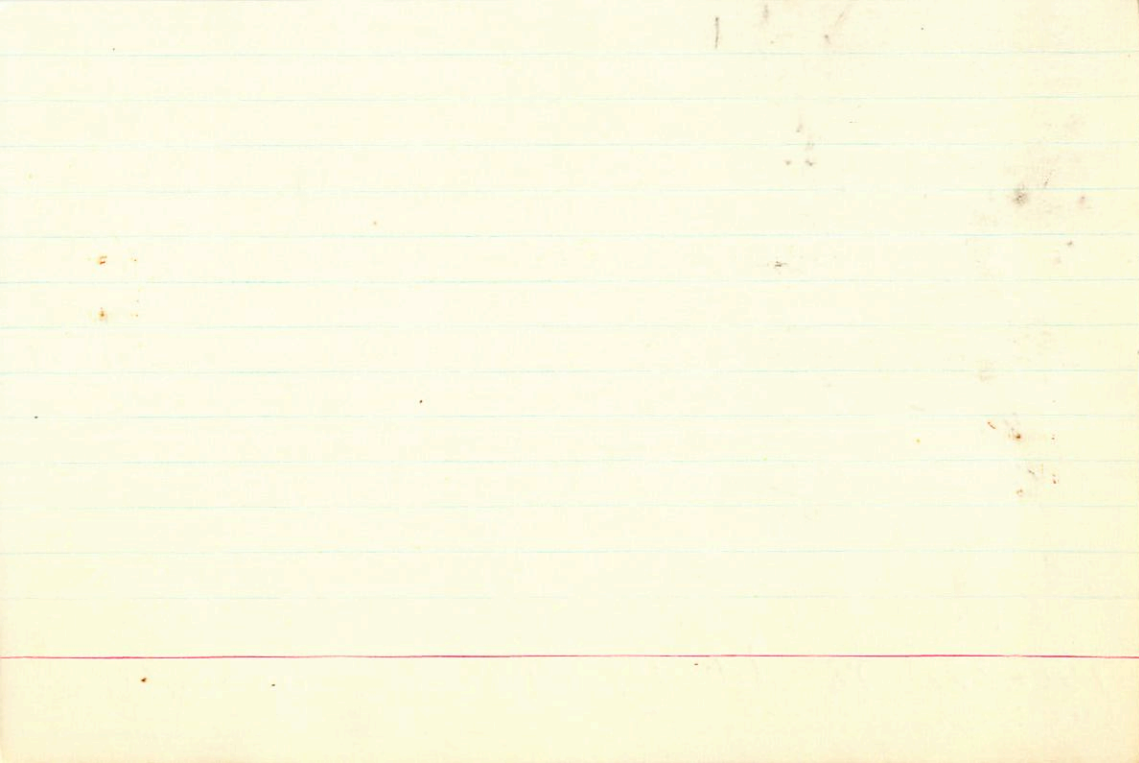
2w

7994

-12648 -207464

-1 -9

-177 -216



117246

13 26.8 -15 25 gk2 +19.38 w(3)

GC18235

6.89 +1.38 +1.57 RYTH R

w8004

6.40 +1.415 +1.56 (2)

-1703862

6.20 +0.545 (2)

+0028 -0195 GG → F104

587 68

+0029 -0295 NW → F104

595

+0028 -0245

285

+0398

+040 ±3 -022 CC ±3

+0.041 -0.20 +conv

7.4 ~~+0249 -021 ±6 Y~~

GLT +040 -027

-70 +6 -22 .003

-58 +2 -12 .004

6.06 -145

538

wo

197

730

$+6028 + 3.1 - 022 + 3.2$   
 $+0029 - 032$   
 ~~$-317 - 948$~~

$46846$        $1402.7$        $-18$        $28$        $14.45$        $1500.3$

$$\begin{array}{r} 1 \\ -132 \\ \hline 714 \end{array}$$

$$\begin{array}{r} 25897 \\ 20855 \\ \hline 46752 \end{array}$$

$$\begin{array}{r} 46752 \\ 8035 \\ \hline 54807 \end{array}$$

$$\begin{array}{r} 46811 \\ 813 \\ \hline 47624 \\ + 100 \\ \hline 48724 \end{array}$$

374

$+109$   
 $13.36$   
 $28.50$   
 $46.70$   
 $134.18$

$$\begin{array}{r} 13.36 \\ \hline 28.50 \\ \hline 46.70 \end{array}$$

$$\begin{array}{r} 15.20 \\ 19.98 \\ \hline 35.18 \end{array}$$

$$\begin{array}{r} 14.23 \\ 14.60 \\ \hline 28.83 \end{array}$$

$$\begin{array}{r} 14.23 \\ 14.60 \\ \hline 28.83 \end{array}$$

$$\begin{array}{r} 14.60 \\ 14.60 \\ \hline 29.20 \end{array}$$

$$\begin{array}{r} 14.60 \\ 14.54 \\ \hline 29.14 \end{array}$$

$$\begin{array}{r} 14.54 \\ 1.20 \\ \hline 15.74 \end{array}$$

36.8

$$\begin{array}{r} 1.20 \\ 1.18 \\ \hline 2.38 \end{array}$$

8





117246.000\*

13.000\*

26.800\*

-18.000\*

-28.000\*

0.041\*

-0.020\*

7.400\*

2.3

301.995

~15.30

5087 13 27.4 + 6 17 628 NO

$$\begin{array}{r}
 -019 \text{ } 1044 \text{ } 00 \\
 \phantom{-019} \text{ } 0 \\
 \hline
 1044
 \end{array}$$

74

112807  
~~42424~~

10

226 -42

57

665 310

495

FS

FLB

GURRIB

(NO)

(215)

(33)

2.656

FLB

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21066

2154

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