

136328

+162765

15 17.3 +16 c8

-464

122

(27)  
-46.4 Kiephi

-124 on Yak

-00965 -005 Borden

-124 -005 GC

-138 -002 GV

-120 -0035 mean

-1285 +001 FN4

-125 +604

8.41 +0.89 +0.55 (2)

8.12 +0.245 (1)

779

736

505

2.3 MS

NO

38



136328.000\*

15.000\*

17.300\*

16.000\*

8.000\*

-0.125\*

0.004\*

2.300\*

28.840

-46.400

0.319

-0.543

34.426

-0.382

0.226

2212 Dubst

HR5702

15 17.5 +32 42 Am 24.56

$P=3.6$

6.16 + 0.24 + 0.09

-0.18 + 0.056

-0.26 + 0.19 (m(2))

-0.24 + 0.156

-3  
-27  
0.16

Handwritten scribbles

3.50

56.2

1801

-0.34 + 0.05

56.2

-5.6	+7.89	-3.30	+0.663	+0.718	+1.413	+7.9	+8.2
+6.67	+6.15	+4.20	-0.854	+0.883	-0.271	-1.5	-10.4
-5.35	+5	+8.44	+0.990	0	+0.995	+3.8	-20.9

1981

-759-651 540 842 015 005 004 033  
-014 003 012-003 -052 021 -24.5 008 -13 062  
-018 006 014-005 -062 104 -20.9 +14 +16 014

+10 +22 -9

+16 -12 -17  
+14 -12 -15

-0014 + 006 member  
+ 005 F104

-0017  
-025

15 17.8 + 14 44

Ma

136404

11502848

⑦ -58.9 Krippin

-041 + 003 Tale  
-016 -007 Tale

-016-007 y

-044-005 GC  
-019-015

-0020 + 005 member  
-024 + 008 GC

-032 -010

-031 000  
-020 + 005 F104 (GC)  
-024 + 008 F104 (GC) ←

7.53 + 16.55 + 19.5 ②

6.38 + 0.915 ②

~~6.00  
4.8  
2.7~~  
8.1  
1.64

6.24

5.86

1.14

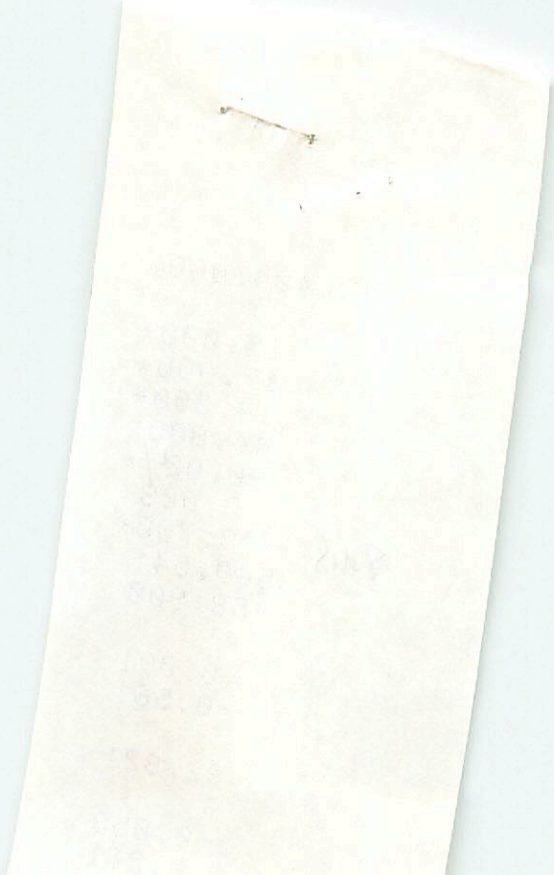
4.72

3.9

8.65

39





136404.000\*

15.000\*

17.900\*

14.000\*

44.000\*

-0.027\*

0.000\*

8.700\*

549.541

-58.900

8.65

0.091

-0.561

82.821

-0.058

0.211



136404.000\*

15.000\*

17.900\*

14.000\*

44.000\*

-0.024\*

0.008\*

8.650\*

537.032

-58.900

0.083

-0.561

77.745

019

136093 15 18.0 -66 02 700 40B

GC 2007

1074 ± 100

-045 ± 7.5

650305

2.976 3.4 1042

-008  
5253 98.7

133.25  
533.12  
2317

49.574

2822

329.05  
1316.2

3.42

13255

24.48

38

2837

24.05

1.58

302

68.1

198

3.199

189

714

82.5

1211

57.525

424

5495

3133

14750

285  
285  
285

8099592

+0003 ± 6.9  
+ 19

-031 ± 3.7  
- 026

136526

15

18.2

+30

53

9.9 dF3 - 43.965W

20625

815

10.1 dF4 - 43.483W

-43.602

88774

10.004

1907.8

+30 52

31.16

893.0

$\frac{-13}{9.991}$

$\frac{1.77}{32.93}$

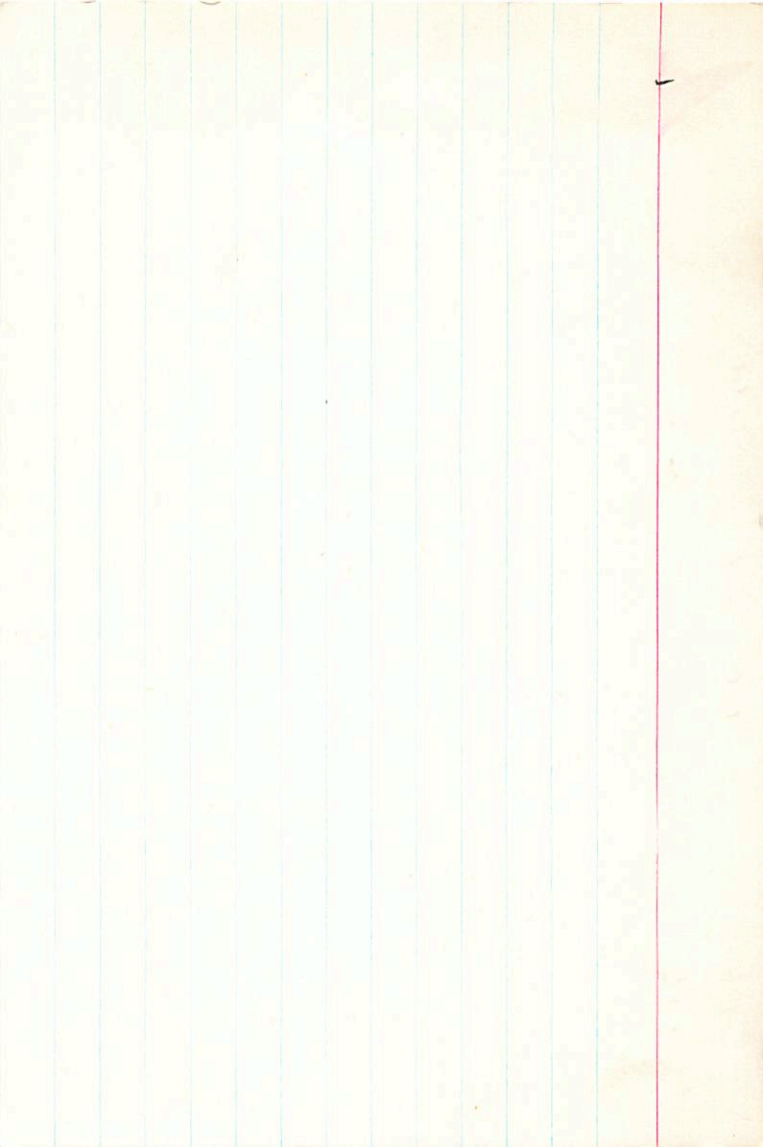
9.93

32.2

1930.2

$\frac{19}{9.49}$

$\frac{-37}{31.87}$





6.35 + 1.07 + 1.07 3 20"  
2nd

136442 15 18.2 -02 14 6.5 dno -4/c

20624 19 46.5 22 46.5 22

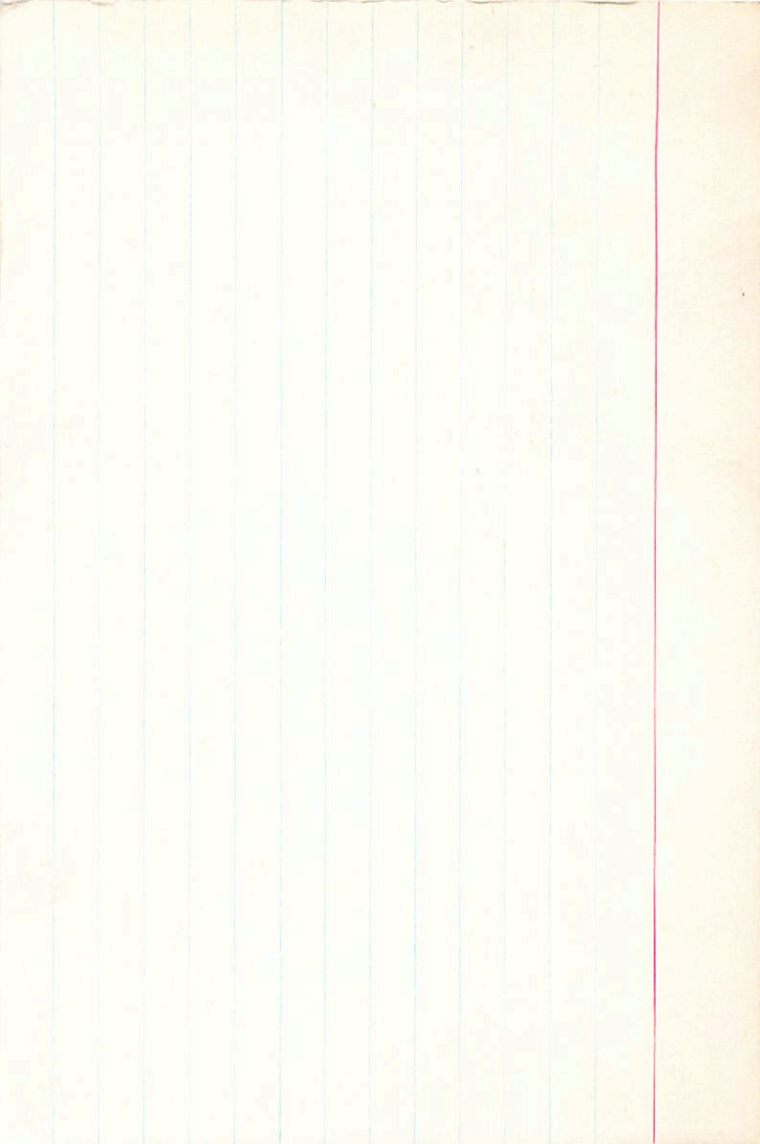
8875 -0178 ~~14~~ 19 N30 45.4

-01715.4 -178 ± 6.5 GC → N30

-762 176

-8622 816  
-5065 074





65er  
-0031 ± 1.7 +0 53 -112 ± 1.4  
-0030 -116

136514 15 18.5 +00 54 525 9104 +9.17  
20637 +113 (27)

8879 29.075 1901.7 +0 53 45.06 1899.6

A069596  
10<sup>31</sup> 150  
225

29.110  
21  
131

29.103

73  
106  
118  
-107

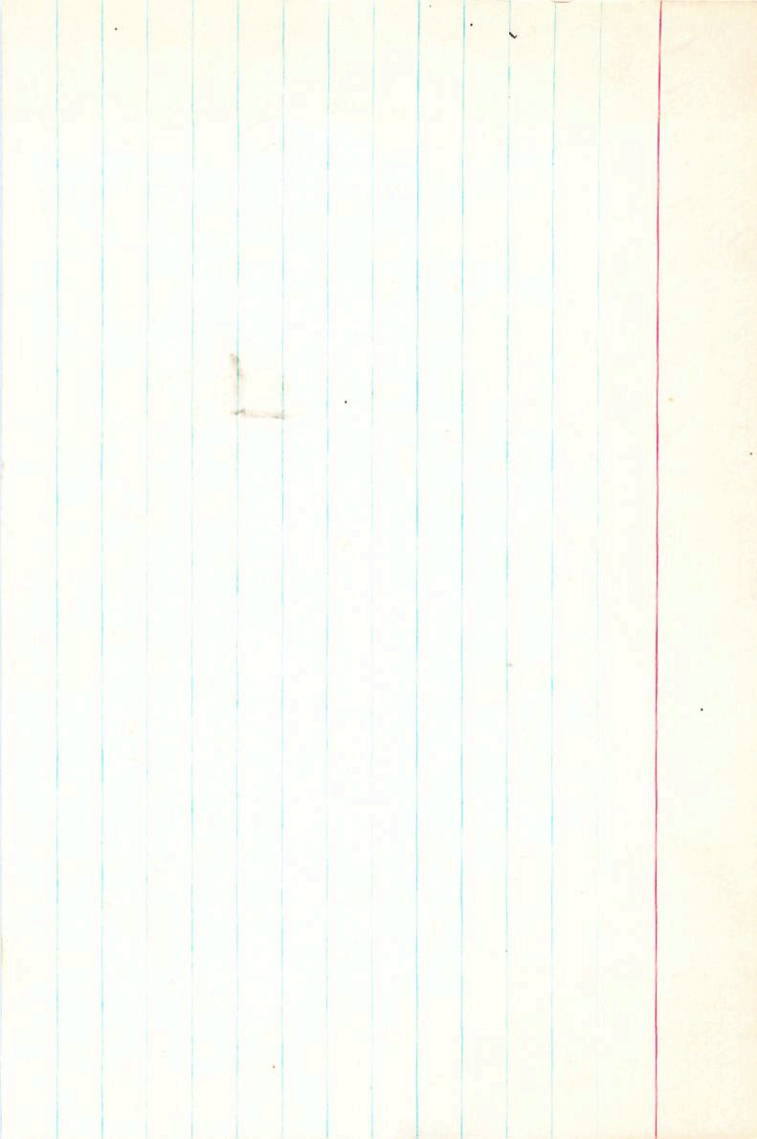
+5.64  
50.70

46.78 1934.4  
-114  
46.64 0.51

45.90 1941.34

-2  
45.87 7579  
46.26 37.9  
-4.44 (38.3)

36.2



+0011 ± 3.2  
+005 ± 2.8  
+0010

136729 15 18.6 +52 08 5.5 A/m +8.18

20641

7882 36.808 1892.4 +52 8 15.85 1896.6

$$\begin{array}{r} -063 \\ \hline 745 \end{array}$$

52.69

44.052

36.742

758

763

$$\begin{array}{r} 1581 \\ \hline 787 \end{array}$$

42.5

36.790

+21

811

$$\begin{array}{r} -27 \\ \hline 15,61 \end{array}$$

44.0 1925.1

25.65

15.35

10.63

15.98

15.83

15.81 1944.71

-34

18.47

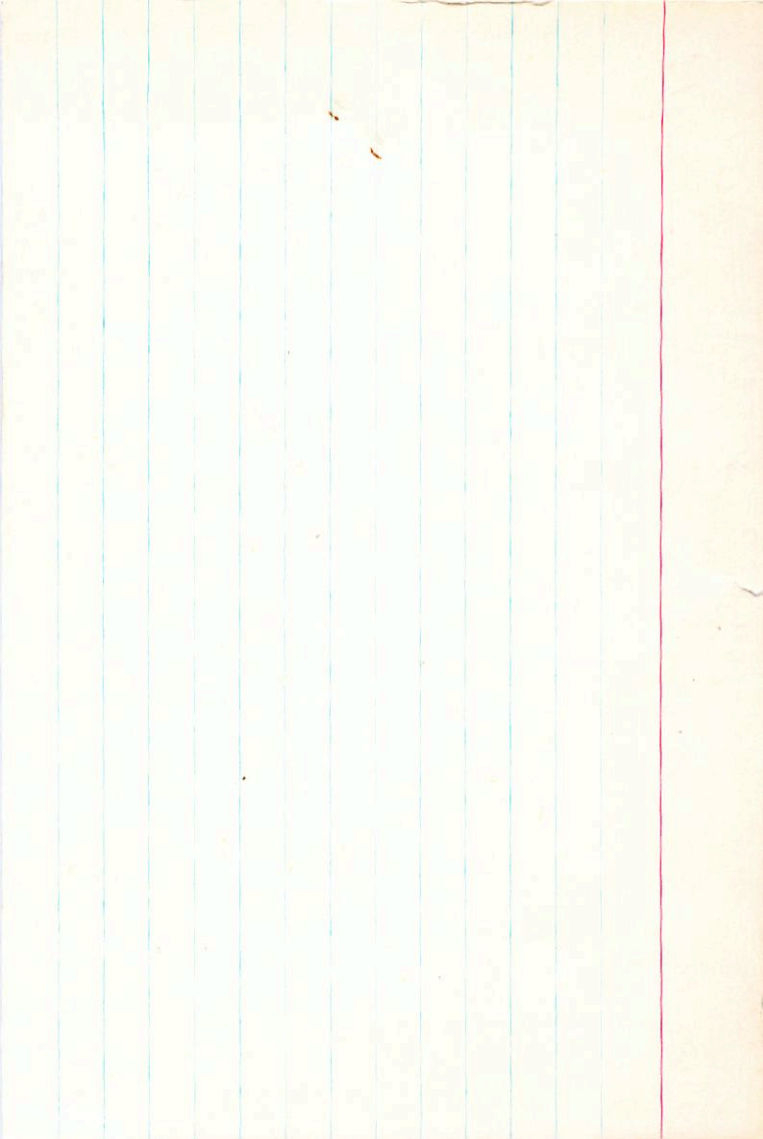
15.65

+1.04

6981

34.9

38.3



2437797 + 192.97

S bid 15 R.6 20 yr

-1904084 +17  
GC 20629

R.I.  
E + 0.2

$\theta = 130^\circ$

8.5  
8/12  
1.556  
6.50  
50

1.37

+1.70

-0034 311.4 +  
-009 ± 106 GC technique

-022 +006 M6 F103

-3 +1

-025 +007

F124 (M6)

-045 -006 F124 (GC)

+294.0

-025 +010

50

11.1

11.4

1.14

7.2

6.7

40



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*Handwritten signature or initials*



0.000\*

15.000\*

18.600\*

-20.000\*

-12.000\*

-0.025\*

0.010\*

9.000\*

630.957

294.000

11.56  
2045

2190

0.071

-0.832

89 - 100

-199.889

-0.046

-0.234

-169 - 162

-97.644

UP

0.096

0.503

358

+344

208.403

220-150

840 1118

Σ 150

550 55000 -  
130 6600 -

180- 150-

920- 091-

053- 096-

251

250-150-

8880  
1111

now

2150-  
2480-1150

150- 1050-

had 220-8400

had

1768- 9517  
3415- 3917

1365  
2444  
1381

12569- 1107-  
1223- 1266

5800

010

600

81- 44- 85+  
81- 56- 65+  
17- 48- 85+

6075  
130  
24  
6075  
2-086527 6271130

153  
69  
69

-350/0234  
73445

148883  
6220643

136422

φ' jump

15 18.6 -36 05  
3.52 +1.55 -  
28.1 (3)  
2387 (10)  
2942

9 mo M (10.5)

-589 508

~~48.441~~ 1406.4

37.519 1906.2

337  
856

32065 7043 54.43

<sup>110</sup>  
371  
37.596  
-18  
578

1042

521  
335

37.464

-335

37.865

7043

<sup>110</sup>  
371

54.175

54.43

~~3600~~ 4

53.75 1604.7

435  
49.43

-0026 -050  
-00743 -0884

42.5

-0400

52.56 1941.27

-20  
52.76

10711

53.56  
4.13

-4.13

54.11

1956.16

-24  
54.35

-007743.2  
-0079  
-09642.7  
-094  
-087  
-0820  
-84

97.93  
48.2  
44.0



87 686

15 18.6 -86 05 105 III

5705

136422

20643 3.56 + 154 + 187 J  
3.56 + 153 + 185 C

2.75 + 0.645 J (2)  
2.64 + 0.625 E (2)  
2.69 + 0.635

1122

374

-00748 + 29  
-0872 F1R4 -2942

+ 58

+ 80 15

+ 986

-090-071

-0880

-083-079

231-

86  
1455-

285  
4.20

267 63

229

284

1.859

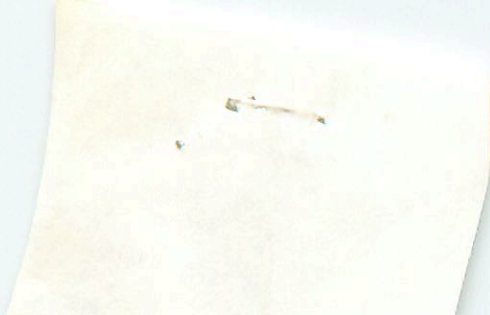
282

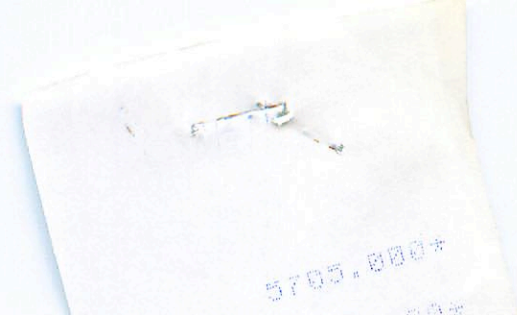
+15

-20

142  
2450  
41

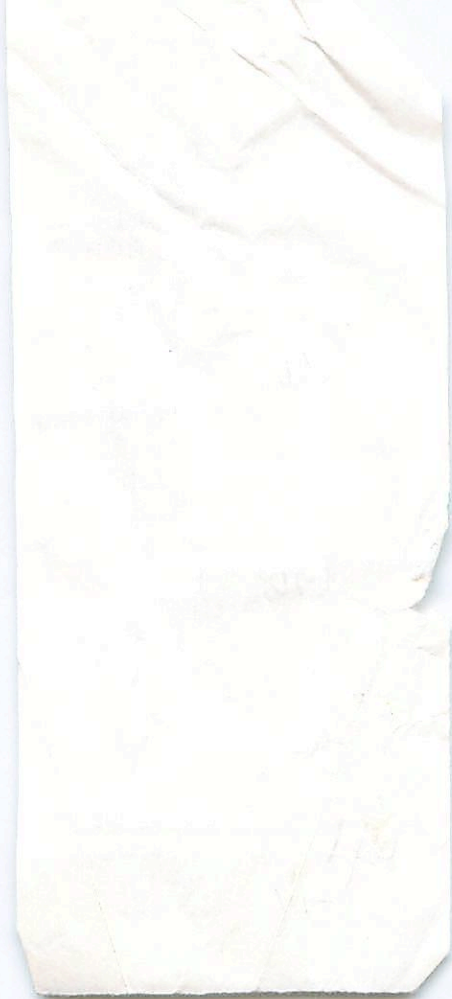
41





5705-000\*





5705.000\*

15.000\*

13.600\*

-35.000\*

-5.000\*

-3.090\*

-3.084\*

4.300\*

66-1 72.444

-29.400

3.230

-3.857

+40 41.857

-3.530

-3.419

-23 -26.865

-3.083

3.299

41

-14 -14.834

HR5705

15 18.6 -34 05 gmo

9' hup

3.59

+1.55 cont

-29.40217  
 -085 -087 PR  
 -093 -094 GC  
 -093 -076 H30  
 -----  
 -094 -086

-00745 -0872 F124

1060

-090 -084

15.3  
361  
113  
44  
4.05  
4.5E

15.3

361

113

44

4.05

4.5E

42



15.300

-36.100

-113.000

-84.000

4.050

65

-29.400

-0.516

-0.026

-0.856

233.593

40.257 853

0.6

+12  
25

15 18.6 -47 45 dF7

112 6

HR5648  
G020644  
5-01 +0.50 +0.04 2895 ~

1328 .162 1533 2.649 2 10, 7, 2

336  
-0147 37 +13  
-140 ±2.5 Gut

146-133

-H.2a

[m] 221 +19

[C] 467 152  
1.7

3-00 +271 -235 -81  
+448 -740 -167

1514

105  
33



43

2149

672

98

4243

1504

1894

12441

1444

1244128





5693.000\*

15.000\*

10.000\*

-0139 ± 3.5  
-140  
-0149

136351 15 18.6 -47 45 5.1 155 -  
20644  
9884

23

5.00 + 0.47 + 1.65 5 24.1

38.609 1907.9 -47 44 5-0.68 1903.6

585  
39,194 + 6.64  
44,04

~~0140~~  
-0140

49.14 1940.31

38.733

-17  
576

103

1192  
596

2143 -144

95.91  
48.0

69.59 100.48  
50.24

69.59

-6.20

38326 53.56  
-27  
323

-598

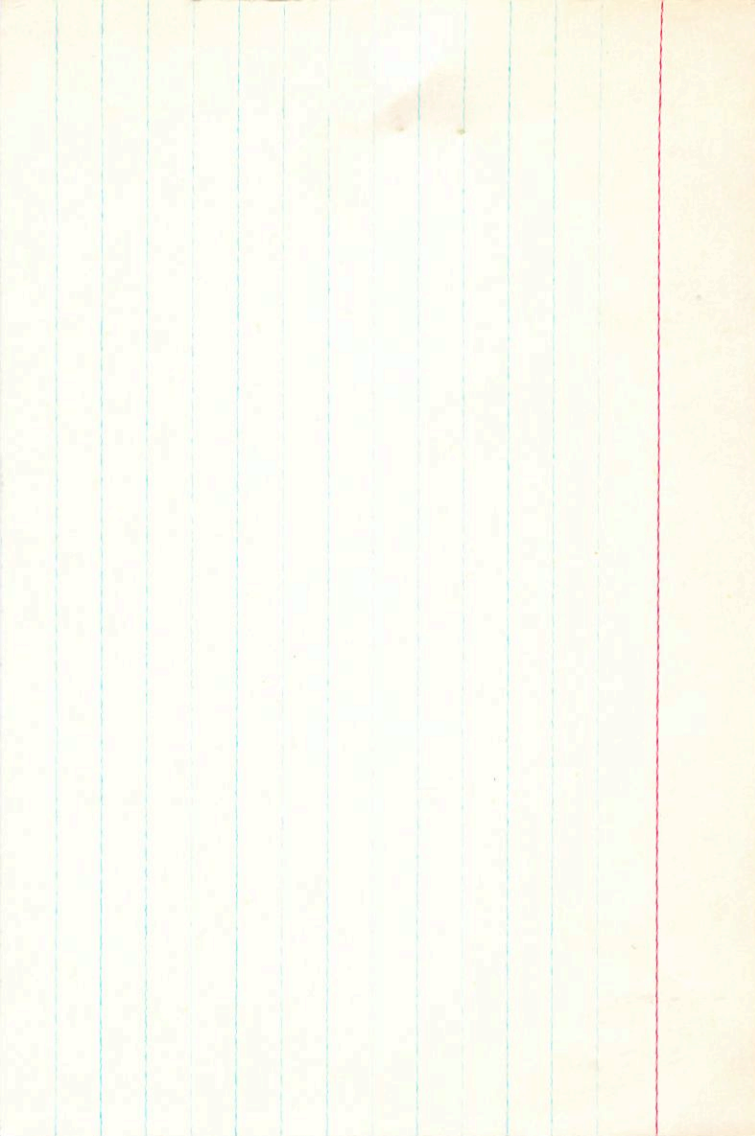
74.4

1955.60

50.97  
-15  
51.15

50.97

38.492  
-16  
476



136655

+20.2681

8.88

15 19.11 +25 44

→ 463

847 0.95

-160 -170

-111

+20

2.60

→ 343

44

2

593

16

1  
RAD. VEL. : -34.340  
MODULUS : 33  
DISTANCE : 2.800  
PM. DEC. : -120.000  
PM. R.A. : -111.000  
DEL. : 22.750  
P.A. : 12.380

PL (U) : -8.51

6.747  
-120.000  
-8.107  
6.748

6.744  
6.745  
6.746

PL (U) :  
PL (U) :  
PL (U) :

PL (U) :  
PL (U) :  
PL (U) :

R.A. : 15.300  
DEC. : 25.750  
PM. R.A. : -111.000  
PM. DEC. : -120.000  
DISTANCE : 2.600  
MODULUS : 33  
RAD. VEL. : -34.300  
q1 (U) : -0.510

q2 (U) : 0.743  
q3 (U) : -0.427  
dU : -178.005  
U : 8.747

q1 (V) : 0.667  
q2 (V) : 0.661  
q3 (V) : 0.344  
dV : -400



+023 -114

5716 15 19.0 +44 37 -0.38

+0022 ± B.  
-114 ± 10.6  
-116

58.9M 57.580 19083 +0034 53.03 19027

+0026 -111  
7026 -111

+4.82  
57.85

68.030

53.02 1552.42

58.036

-35

5267  
5.18

+148

-510 843 -164

-5063 -29.8 0 -258

667 511 534

-1867 -11.0 -0.2 -11.2

-544 -164 823

+0193 +1.1 -0.2 +0.9

-0628 -4435

+0822 -2689

-0670 +0863



136359

15 19.1

+9  
-29  
-60

29 F8D<sup>27</sup>

1.56  
4.25

HR5700

GL20654

5.66 +0.49 -0.005 2599

[m]

210

+27

154

[L]

408

+88

+115

119  
137  
1283549

.324

.185

.463

2.645

4.605

333

+40  
-01155

56  
+285

±5 GL+

-01115

-0229

-084-020

+5.7

1672

-0822

1000

-1.0

-7.7

+1.5

-073

+2.7

212

+200

-263

+115

-018

5.7

116 553

321

145

463

2645

1672

452

3349

8648

150648

668924

822624

48



5700.000\*

15.000\*

136359

15 19.1 -60

FJ0970  
G620654

5.65

-003 -024

6.644 1912.7 -011

436

6.585

-0.116 -0.25

1.14  
42.80

-0.73 -0.18

6.285

-25  
260

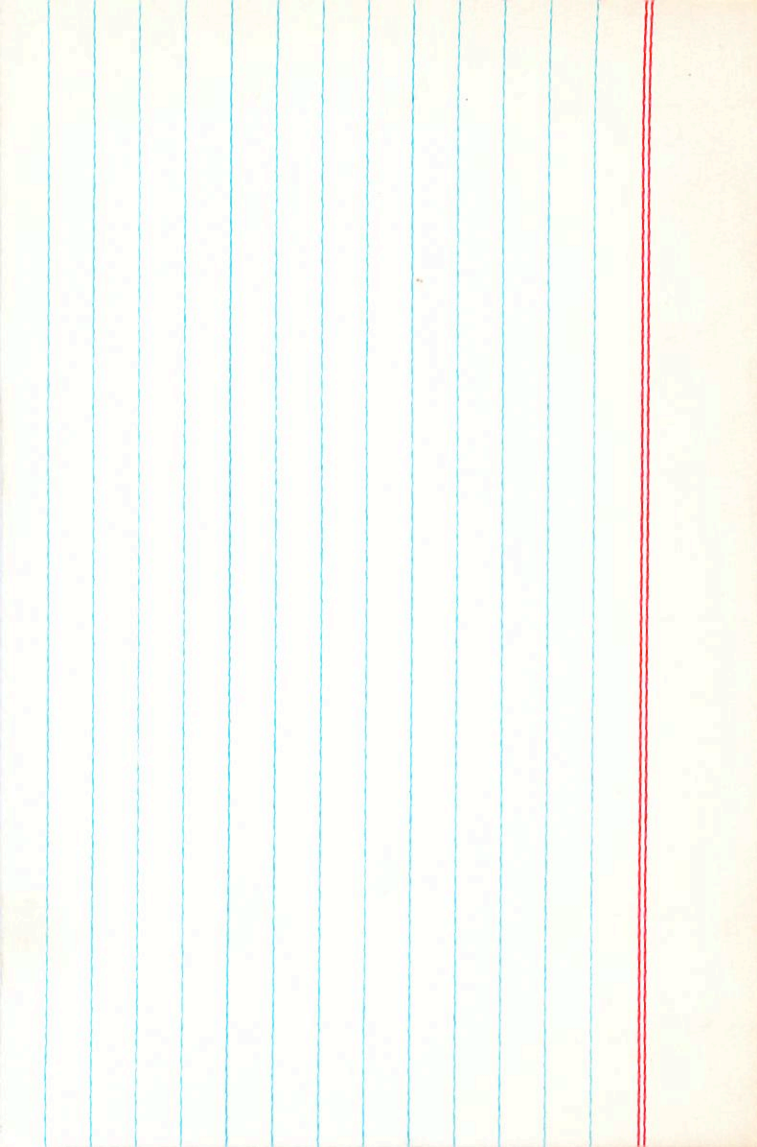
-325

43.53 1941.16

-30

43.83

-1.03





G-620696

96.17

21.1  
15 19.1

+30 39

28

5

+0.101 - .189

Paul 5/

4

 $\lambda m = 0.3$ 

595

 $\rho = -6.8 a$ 

Obl. Cp. in A.T.W., 19, 196

$$\left. \begin{array}{l} P = 41.56 \\ G = 0.84 \end{array} \right\} \text{Danjon BA 11, 191, 1935}$$
look at Sebermazel orbit

4.98 +0.61 +0.04 4

46 m (4)

4.86 +0.175 (2)

73 h (5)

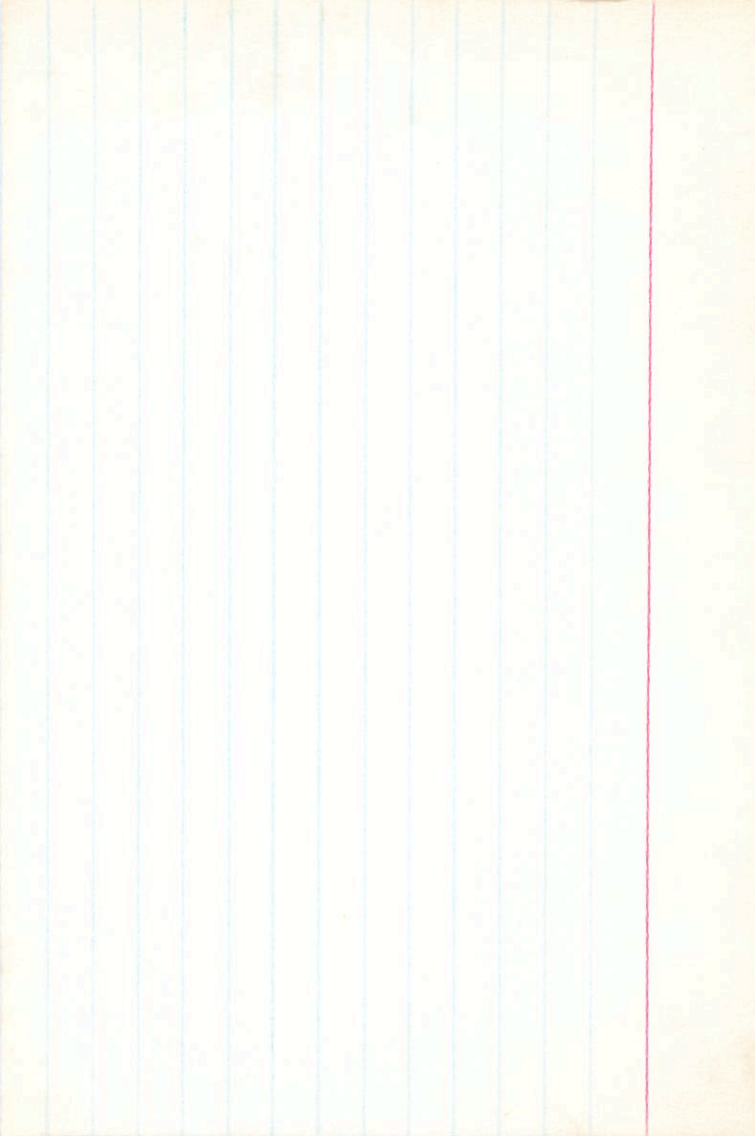
	$m_1$	$m_2$	$n$	$v$	$w$
--	-------	-------	-----	-----	-----

59 s (28)

$\pi = 0.60$	+4.6	0.79	-14	-5	-12
--------------	------	------	-----	----	-----

59 (39)

065	+475	0.62	-13	-5	-12
-----	------	------	-----	----	-----



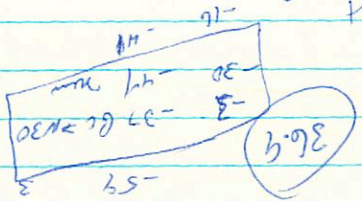
15 15.4  
 13645 / (10)  
 8891 W  
 (C-2004)

~~30766 19095~~  
 22631 19017  
 $\frac{71}{2}$

83.252  
 29.650  
 $\frac{22.342}{2}$   
 11.171

22.576  
 $\frac{551}{6}$   
 92.166  
 1.70

22.022  
 $\frac{511}{9}$



~~33 30.12~~  
 19062  
 $\frac{30.81}{2.5}$   
 12381 33.35 18947

192359  
 30.74  
 37.07  
 34.17  
 33.17  
 32.52  
 32.11  
 34.07  
 34.13  
 11.571

1940.48  
 32.74  
 33.09

19456  
 $\frac{32.2}{1}$   
 32.91

~~-550~~  
~~+667~~  
~~-507~~

-364  
+349  
+663

-752  
-658  
~~+663~~  
-51

+0320  
+0388  
+0292

+0207  
-0678  
=1677

41027  
-1006  
-1385

depth/area

c

+12.9  
+11.3  
+0.9

22.6

5204

15 19.4

-5.9 of

-0018 ± 5.4 -047 ± 3.6

22.63/01.7

-0025

33.39 94.7

-098

087

-0040

260

-050

718

-0096

3079

525

22.529

(64.72)

34.12

+1  
580

-26  
34.35

-0035 -045

40

22.576

(40.65)

32.34

-50307 -0425

-12  
503

-24  
33.0

-0236

50255-0396

22.520 (45.0) 33.20

097/004

-6  
33.91

5.02

PV 40.21

514

5693.000\*

15.000\*

18.600\*

-47.000\*

-45.000\*

-9.146\*

-9.133\*

3.15  
426 3.050\*  
48.738  
-11.200

0.481

-0.834

130 29.955

-0.789

-0.535

-25 -26.133

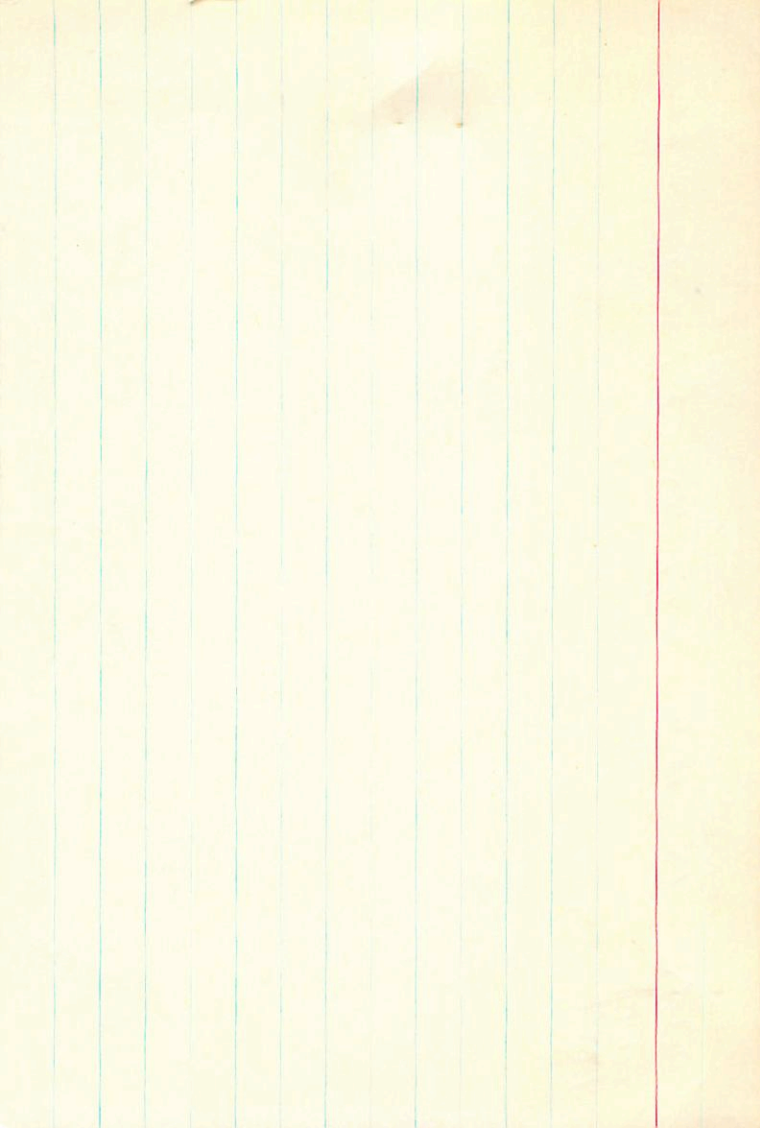
43 -9.151  
0.134

-8 -7.648

$-0139 \pm 3.5$     $-143 \pm 3.0$   
 $-0149$     $-140$   
 $-47$     $45$     $5.1$     $15$     $-11.2a$   
 $\rightarrow 0141$     $-148$   
 $5.00 + 0.47 + 1.65 = 5.24''$   
 136351   15   18.6  
 20644  
 9884

$38.609$     $1907.9$     $-47$     $44$     $50.68$     $1903.6$   
 $\frac{585}{39,194}$     $\frac{664}{44,104}$   
 $25 \pm 6$     $-0140$     $-140$     $49.14$     $1940.31$   
 New  $38.733$     $-17$

$\downarrow$   
 $\frac{1192}{596}$     $\frac{22}{49.3}$     $95.91$   
 $1143 - 144$     $169.59$     $160.48$     $48.0$   
 $\frac{868}{-598}$     $38.326$     $53.56$     $50.24$     $74.4$   
 $\frac{38.442}{-16}$     $323$     $50.97$     $-6.20$     $1955.60$   
 $\frac{476}{-15}$     $57.15$





224

11/11

OK

11/11

5700.000\*

15.000\*

19.100\*

-60.000\*

-29.000\*

-0.004\*

-0.020\*

2.950\*

33.905

5.700

3.240

-0.770

4.946

13.9

-0.302

-0.635

141

-15.389

4/5

3.136

-0.054

149

4.975

136359 15 19.1 -60 29  $\sqrt{F\bar{V}}$  +5.7 4C

F0970

G020654

5.65 +0.48 (1.61)

$-114$   
 $-0117$  15.8 -027 14.2

-003 -024

6.144 1912.7 ~~0.154~~ 43.96 1907.2

436

$\frac{585}{6.285}$   
 $-0.116$  -028  $\frac{42.80}{42.80}$

$-0.073$  -018

6.285

$\frac{-25}{26}$

43.53 1941.14

-30

$\frac{43.83}{43.83}$

32.5

-1.03

