

127 B Tmc (74) Si<sup>2+</sup> 127

00 29.2 -63 15

50  
59  
82

(16)

MN117 1534 +8.2  
139 341 +10.5 +12.7

(79.9) 6.4

9.34

-15 -042 +135 +852 +6840 435 am

108-058

0786 #065

126 -026 44 499 2550 1w

2

13040 95 24 47.6  
+01555-0575 808 980  
+01640 -0550 5040 1428

111-059

1095

$-\frac{1}{5}9$   
 $0.15$   
 $2.946$   
 $0.56$   
 $+0.198 \pm 34$   
 $-0.56 \pm 3.2$

$16.771$   
 $93.2$   
 $0.136$   
 $27.62$   
 $41.2$

$15.620$   
 $27$   
 $33$

$-0.97$

$16.354$   
 $27.36$   
 $39.47$

$-0.3$   
 $335$   
 $27$   
 $19$

$16.712$   
 $27.83$   
 $69.52$   
 $2$

$-11$   
 $67$   
 $27.53$



127.000\*

0.000\*

29.200\*

-63.000\*

-15.000\*

0.111\*

-0.059\*

35

4.000\*

63.096

50.1

7.500

0.346

-0.352

14.7

19.181

-0.469

-0.471

10

-27

-33.150

0.123

-0.809

5 5.62  
 0 293 -63 14

+224 Sta. Val  
 +10.48  
 +8.2 Com  
 +9.3

-63°50 2887

5157 1028  
 8568 8372

.0207

0.5  
 -63.25  
 +214.5  
 -57.5  
 4.35

(16)

MN 118.64 +33 +12 +26 +9

+15 14 22 -5 +3 +8 +15 +17  
 +0123 +24 -57 ±23

15.705 9.3  
 -55.8  
 8.16  
 0124

0.50 33  
 2.52  
 -2.02  
 0.52 35.47

15.607  
 -23  
 1.584

17  
 0.05

num

+01230 -0.50

15.961  
 -15  
 1.981

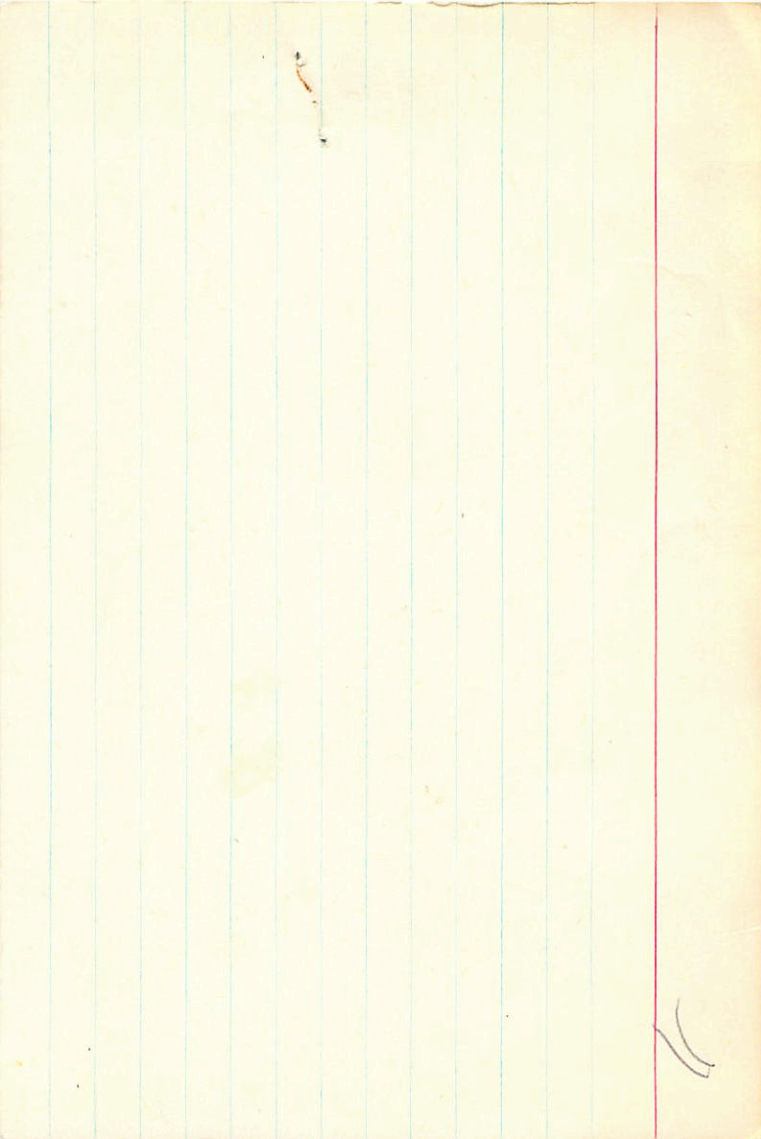
1.67  
 -10  
 1.77

6991

+01330 -0.27  
 +01415 -0.473  
 +010455  
 +010455

1550  
 -0515

+10.4  
 +8.2 23.6  
 +5.0 84  
 +10  
 +8.5



126-127-106

2884-2885-3003

625-626-651

ok

AB

~~AB~~

AB

126 - 026 + 11 70.1

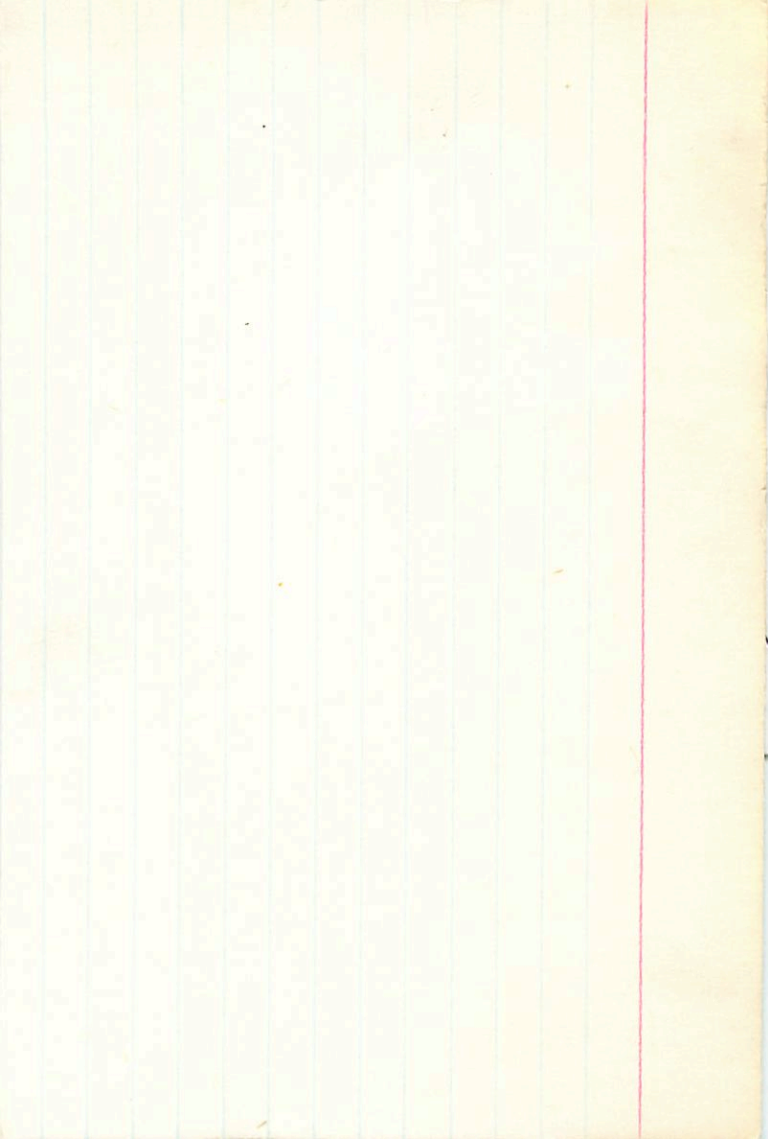
127

2.839

" "

136

Bul 51





126/127/136

OV 29.3 -63 14

AB 4.36 -006 -0.17 C

C 4.54 +14 +03 C

AB 5.15 +02 +01 C

433

-042 +135 870 2.847 (3)

E=0 122 878  
144

(+0.7)

(1122)

450<sub>2.3</sub>

+076 +167 +856 2.837 (3)

D=190 841

310

(122)

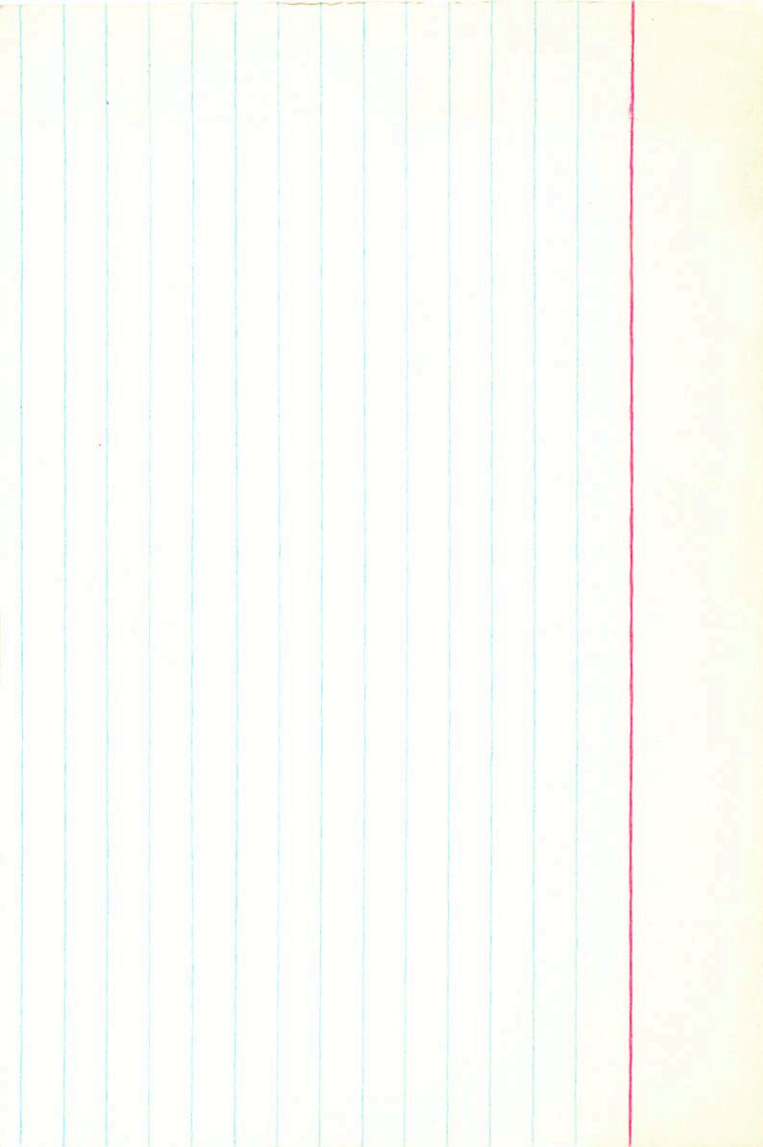
306

-007 +179 +997 2.900 (3)

E=+01

177 999

350  
1353



530

$\beta$  Time

0 29.3 -63 17

110c B

2885

A0 3.76 -0.01 89E, 82E

140.48 A  
15.08 C

298

C 5.15 +0.02 A<sub>2</sub>

1089 -0.57 GC B

G0625 ✓

-0.07 -0.05 +1.42

1100 -0.56 GC A

H03003

A 4.34 -0.04 ~~89E~~ 89E

1106 -0.60 AN30

G0651

B 4.53 +0.15 +0.08 A2E

1090 -0.37 GC C

+1.53

1098 -0.57 A0

+0.15 64 -0.60 N30

+0.15 5 ±2.2 -0.55 ±2.2

4.36 -0.05 -0.15

4.53 +0.15 +0.02

5.15 +0.02

2

208  
10  
406  
81

125 992 - 893 Y51 098 - 057 410.4 051 99 - 133  
0011-007 097 050 - 259 426 + 4.7 75 + 1 0124

-6 +18 -14 025

$\boxed{+5 -22 -5}$

-19 +37 -1

$\boxed{+31 -27 +11}$

-15 +31 0

$\boxed{+26 -21 +5}$

14

-9 +22 +25 207

~~the~~ +5

$\boxed{+11 -25 -3}$

17

-12 +26 -16

$\boxed{+15 -30 -1}$

5015

0 50.1 +60 51

+225

AR244

4.78 +0.555 +0.035 2 egg

P 7/28 d

GL1047

482 +0.53 +0.12 J+

26

.346 .193 .412 (2) SPC 2.613 (4) CT

158  
262

511  
492

→ 340

[M<sub>1</sub>] 255 -4

466

[C<sub>1</sub>] 343  
143  
40

-0040 +170

-135

+1713

+167

-0655

1.35

-066 +167

+22.5

4.011 9.21

~~10097722~~ 4777 = 16  
~~10091~~ 7650  
+150  
1.39 834

~~500~~  
8.54

~~1002~~  
-5-5137

~~3890~~  
905

4585

3.60  
3.54

4.091

45.87

0.24

~~1~~  
090

~~1~~  
0.24

2



0.858 : R.A.  
 68.850 : DEC.  
 -135.000 : PM. R.A.  
 167.000 : PM. DEC.  
 1.350 : DISTANCE  
 19 : MODULUS  
 22.400 : RAD. VEL.

0.836 : p1 (U)  
 0.010 : p2 (U)  
 0.248 : p3 (U)  
 -222.606 : q1  
 7.270 : U

-0.248 : p1 (V)  
 0.030 : p2 (V)  
 0.836 : p3 (V)  
 194.372 : q1  
 22.342 : V

0.003 : p1 (W)  
 1.000 : p2 (W)  
 -0.031 : p3 (W)  
 288.272 : q1  
 14.084 : W

*Sf*

R.A. : 0.850  
DEC. : 60.850  
PM. R.A. : -135.000  
PM. DEC. : 167.000  
DISTANCE : 1.350  
MODULUS : 19  
RAD. VEL. : 22.400

q1 (U) : 0.836  
q2 (U) : 0.010  
q3 (U) : 0.548  
dU : -252.606  
U : 7.570

q1 (V) : -0.548  
q2 (V) : 0.030  
q3 (V) : 0.836  
dV : 194.372  
V : 22.345

q1 (W) : 0.008  
q2 (W) : 1.000  
q3 (W) : -0.031  
dW : 788.775  
W : 14.004



8M 9396  
-5007 3422  
10

10

51.2  
0 30.3 + 70 42  
-4418  
8471

10058 1004 PMS

3280 9447  
-611 148 1037

KE30  
20102 MW  
296  
1333  
1311

+0076 ± 2.7  
+004 ± 2.0  
+004  
22.53 ± 6.3

-10 19.648 87.5 ± 6.0

-47.5  
19.73

18.609

51

654

213

+00685 +004 22.57 1458.86

+00681 +0055 +07

+0335  
2264

4034 + 1011

2.846 2.846

296

1333

1311

22.53 ± 6.3

-20  
20.37

+07

2264

31

0.57  
+70.7

+103

+1

6.3

-10



v3

71+  
47+  
73  
205

100-1000  
100-1000

04611143032

18.57  
-03

6

17.54

6089

67m

18.46  
-11

111

6.30  
11

18.00

6089

67m

1527 1527 1527

13  
6

18.74  
67

111  
111  
222

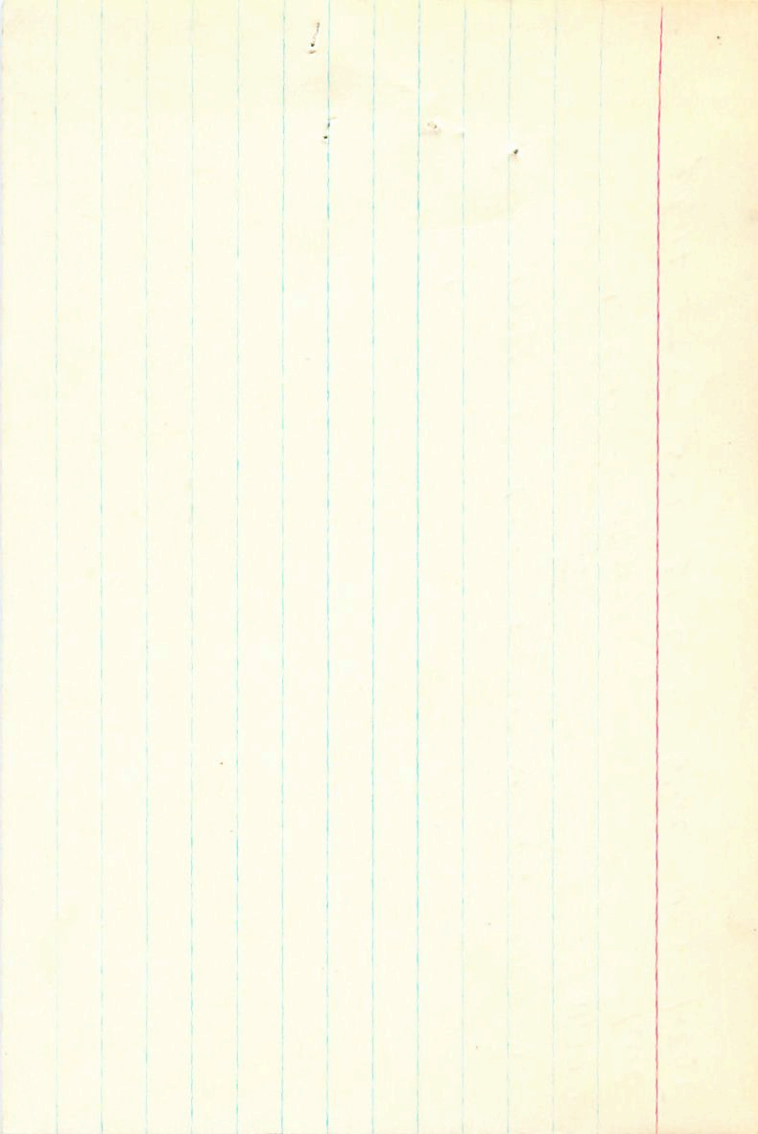
133

18983 18.07 18 15033 +27 5-6.045 29 0

001  
001  
001  
-01376.4

66640  
297

2924 0 29.9 +27 15 6.5 A2 +1.9



133

0 29.9 +27

18

6.5

A2

2924

640

LN -0.71507

+035 179

1.186

2.884 JG

→ 046 161

1193

2.986 et al

0.40 1.70

1.190

2.882

new ?

5 -0002

1.530

30.55

20  
164  
198

-15

1.610

4.82

+1.96

-0004

-0006

1.68

-006

+0.9

5.6

R.A. : 0.500  
DEC. : 27.300  
1. R.A. : -5.000  
1. DEC. : -13.000  
DISTANCE : 6.120  
MODULUS : 167  
D. VEL. : 1.900

q1 (U) : 0.857  
q2 (U) : 0.347  
q3 (U) : -0.382  
dU : -39.420  
U : -5.877

1 (V) : -0.511  
2 (V) : 0.465  
(V) : 0.723  
dV : -17.868  
V : -1.618

MD 2913

W 296

GC 6136

+0021 ± 1.9  
+0013  
0<sup>h</sup> 29 48.816 1899.8 +06 40 46.66 1896.6

105  
59

48.711  
46.07

IT Cape 0 28 31.456 +06 32 28.81

1 17.295  
8 17.25

29 48.751  
40 46.06

- 001  
- 01

48.752  
46.05

6 GC. - 006  
- 36

29 48.746  
46.41

+ 035  
+ 34

1926.9





5.68-01-18 Eq

A0

10 29.8 +6 40

1322

29B

5.72 + ~~1002~~ + 126 + 830 + 2.834 (3) Eq  
134 838  
288

5(11.2) = ~~10.25~~ 10.99

5.15

$V_1 = 5.55$

5.5

+0017 +0.1

+00185 +0.122

+16.0

0.5  
+6.66

+40  
+6

2.834

+16.0

001 180 834

130 839

20

00223 +0577

00240 +0185

00256 +0110

+0384

+040 +006

015 241 277 2624

15



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94.00  
95.00  
96.00  
97.00  
98.00  
99.00  
100.00

18.237

-0.044

0.514

3.503

0.011

-0.825

-12.024

0.500

6.660

40.000

6.000

4.900

95

16.000

0.857

0.459

0.235

174.370

20.415

-0.511

0.690

0.513

-76.579

0.698

-0.074

0.560

-0.825

2.072

-13.009

417

NS

3003 0 30.5 -63 18 5.2 42 +5.06

306

66651

136

+0123 -047 N30

+0136<sup>±2.9</sup> -037<sup>±2.7</sup> GC cont N30

5115 +02

+0117<sup>±2.9</sup> -037<sup>±2.7</sup>

22615 7.1 0124

-322347 3.4

518  
097

0125

-041 1.72  
22.25

hubs 16, 6

±9.9

±12 +4 +6 -2 +5

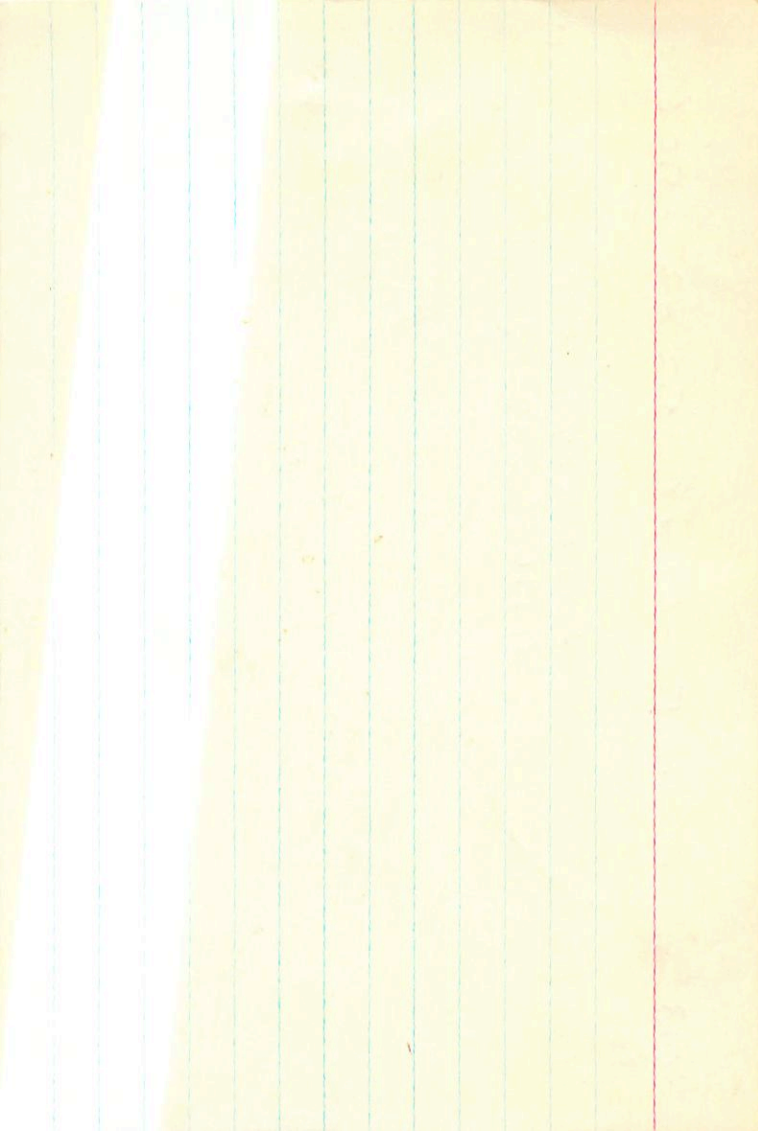
km

27.519  
- 22  
496

23.56 39.37  
+17  
23.39

27.936  
- 45  
891

24.85 69.39  
- 10  
54.91



1416

0 33.6 + 6.0 00

3283

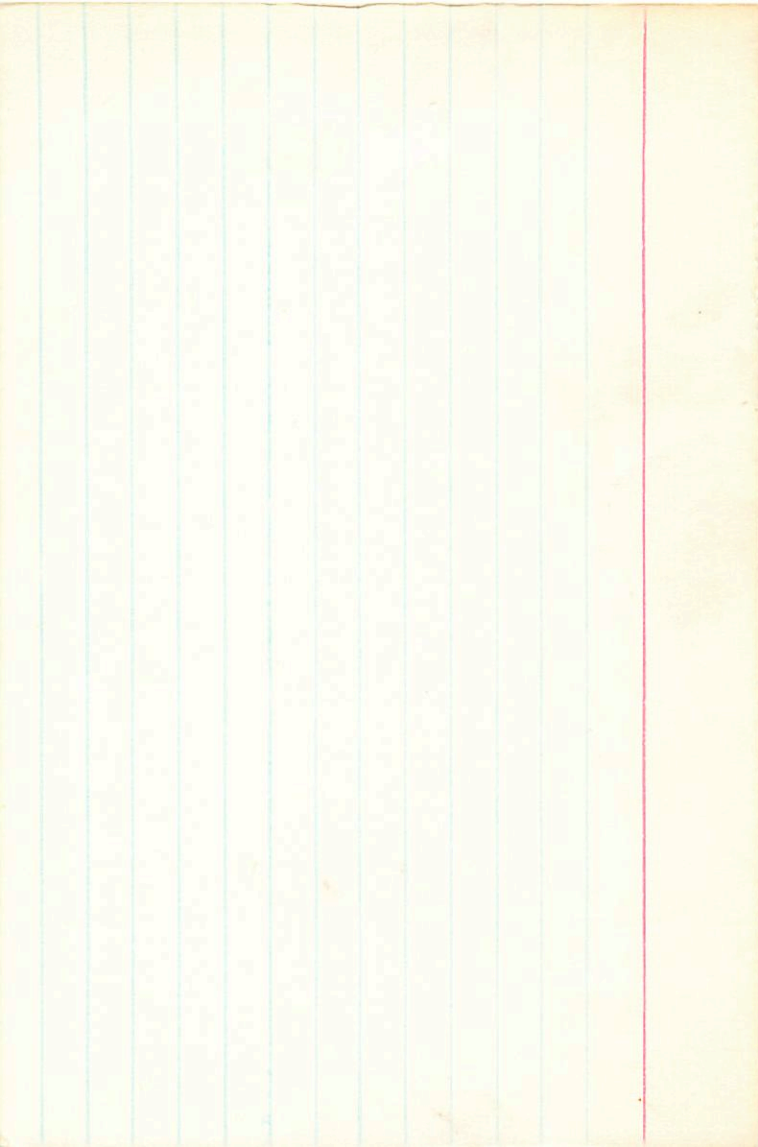
717

+224 +050 1.534 000 SPC

Bud 51

A2IG?





157 3326 07 336 -23 07

+136

3326

34 648  
124219 732 2.783

Ap (Si)

1052 049604 082-1120

7358  
82

072-049

232

-28

-44

413.5

183

0 39.5 - 56 47

3 Phe

3980

830

5.64 + 22 (+3) C

(+060 + 276 + 775 - 595 -)

10<sup>th</sup> 10"

5.71 064 270 755

540

1295

1229

1423

8673

915

2880

35

2,277,420

Band 51

1.12

1258

Q=077

181

0 85.6 + 58/28

135

~~(181) - 0.01 - 0.12 down~~

Sum :

New

-2

Δm m d  
0.7

185 00 40.3 -38 45 A0E

4065

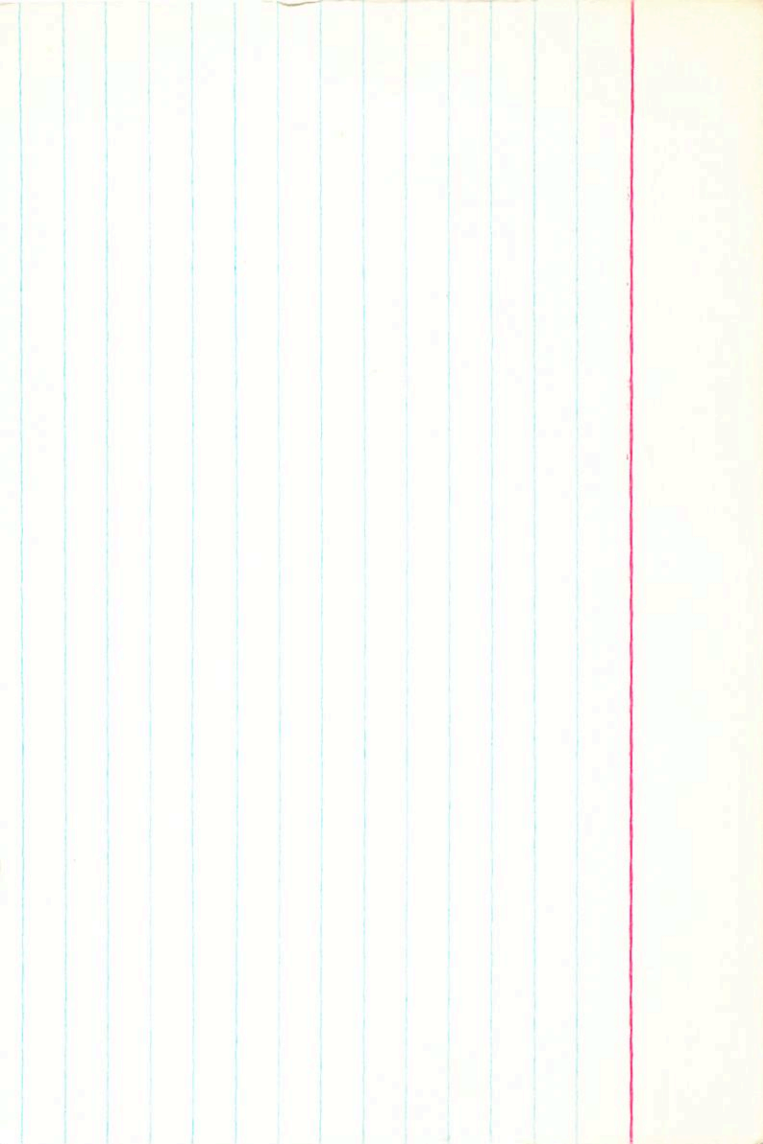
6.04 -0.13 +146 916 2.867 (2) 895

142 913

254

1197

$m_v = +0.85$



109183

Σ Ph

0 39.5 - 56 47

1450 + 9.06

5.78 + 0.12

012

—

+089 + 048 Gct

10013'

Copy  $\Delta d \pm 1.00$

$\Delta S \pm 1.6$

Epoch 1538.58

" 1511.0  $\gamma = 22.5$

& 1504.9 = 33.7

$P = 3$

$P_0 = 14.1$

$P_{.25\mu} = 8.18 \Delta \quad 12.46 S$

$\Delta M = 0.001 = 0.008 \delta$

$\Delta M_S = +0.002$

172 975 - 837 SW 8 + 189 + 048 + 5.0 - 040 - 8.123

-015 007 088 - 039 114 450 + 4.9 25 + 1 012

+15 + 39 + 2

+36 - 8 - 18

015

+13 + 31 0

+28 - 7 - 16

014

+13 + 33 + 1

+30 - 7 - 16



10.9

3 Ok

183 29.5 00 39.5 -54 47

3490

+6  
+10

47  
+0110 +0475 66.4  
42  
+3.5

+0110 +0517  
0.2

16  
+0956+6

+097+047

+8.4

5.2 ✓

5.70 +0.21 - Cope 053

29.13

2.880 5

29.15

2.259

1.405

1.445

755

742

562

1304

1187

1372

1422

270

281

1.402

9=067

12=155

-053

NO

+29

480

9=075

12=055

+10

16

183.000\*

0.000\*

39.500\*

-56.000\*

-47.000\*

0.097\*

0.047\*

5.200\*

3.2  
75.9 436 109.648  
8.400

0.489

-0.286

35 +23 51.241

-0.076

-0.399

-9 -7 -11.676

16  
-0.126  
-0.871

-17 -14 -21.141

5.74 +0.19

0.479  
0.450

App 17.1

3980 0 39.5 -56 47 5.8 CFO +9.88

382

+0899 ± 4.2  
+0120  
-1046 ± 3.4  
+049

8.4

GC830 0 39 29.904 1911.0 -56 46 34.79 1904.9

0.386

-2.07

29.518

+123

36.86

10 m 13''

29.891

-033

29.858

~~29.858~~ +340

+ 1.66

35.16

1938.58

-04

35.20

29.99

-0.537

29.45

1.185

592

1.519

926

34.4

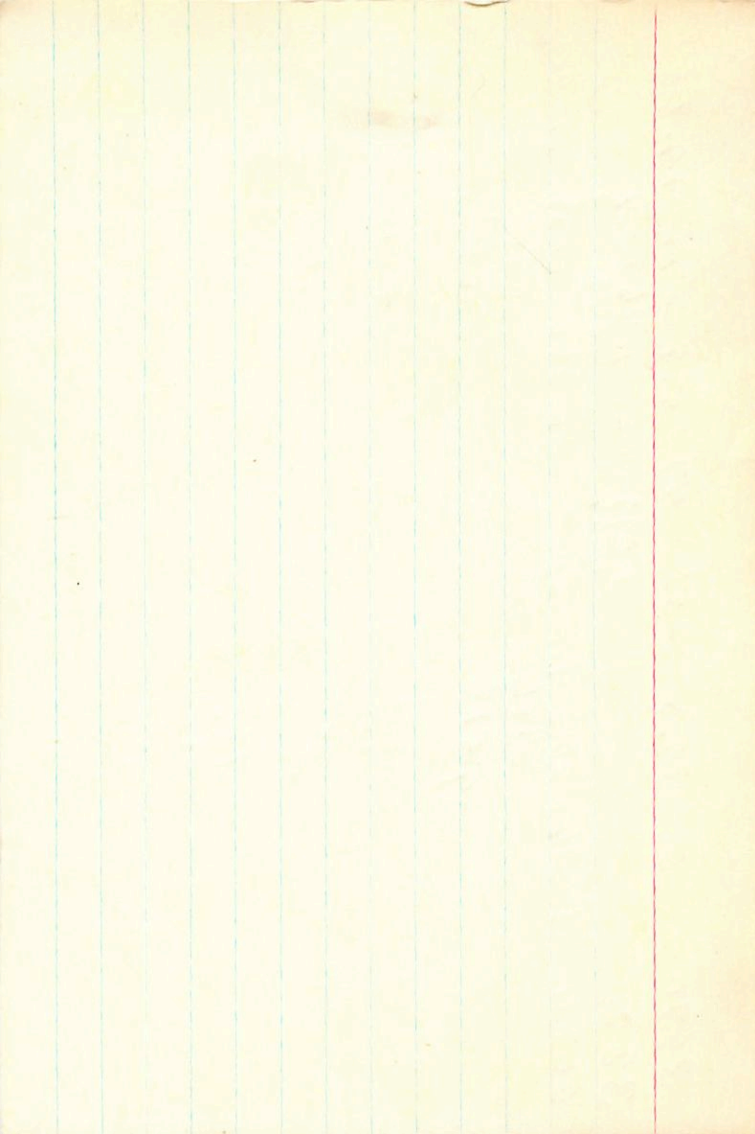
1946.9

412.7

072

894

376



van  
-16 4 Sk

# 706 0 41.1 -57 44 1102

ADV MW

4.40 00

(8)

-006 +011 66  
+003 +015 130

+003 +021 123  
000 +016

11-20"

16,5 -7,25, -14,0, +11, +5, +17, +6

MW 123, 213 -8, -12, -24, -22

NWR 95 +12 (5)

128884 -845534 0001010 +10-014 -8.1040  
0002 0-014 066 009 +5.3 +5.2+0.9 021

$$\begin{array}{r} +8 +1 -6 \\ \hline -1 \ 0 \ -9 \end{array}$$

$$+9.3 +1.4 -5.9$$

014

$$\begin{array}{r} -0.8 -0.5 -11.0 \end{array}$$

$$+7.3 +1.2 -7.3$$

031

$$\begin{array}{r} -1.7 -2.5 -5.9 \end{array}$$

191

0 41.1

-57 45'

$\eta$  phe

4150

866

(3.5)

4.36 ~~0.60~~ -0.03 C

915

AIV

+012 +133 1.090 2 860, (raw(s))

36

1058

$\frac{246}{1380}$

55 85

new?  $\pm 4$  slope

+12  $\pm 4$  slope

+10 n km

-16 Str 4Var

137

a=016 96  
a=85

1.85

VarVal

274  
1058

-0.1

362

4.15'

$\frac{00023 \times 0156}{80}$   
 $\frac{+00057}{+004}$   
 $\frac{-35}{+012}$



188 ~~640-33645~~

1

2



0.000\*  
41.100\*  
-57.000\*  
-45.600\*  
0.004\*  
0.012\*  
4.150\*  
67.608  
-3.000

0.041  
-0.291

196 0 42.4 + 54 56

4222

894

5.42 + 0.04 + 0.04 54 -

405625 Skin ? ①

12 m 2"

10 m 88"

①

②

+ 0.14 152

007 164

010 158

1.139

1.121

1.130

2.873

2.873

2.873

JG et al

2.873  
4.52

3.446

1.466

a = -009

[m] 1.840 208

[m] 1.128

1.444

266

470

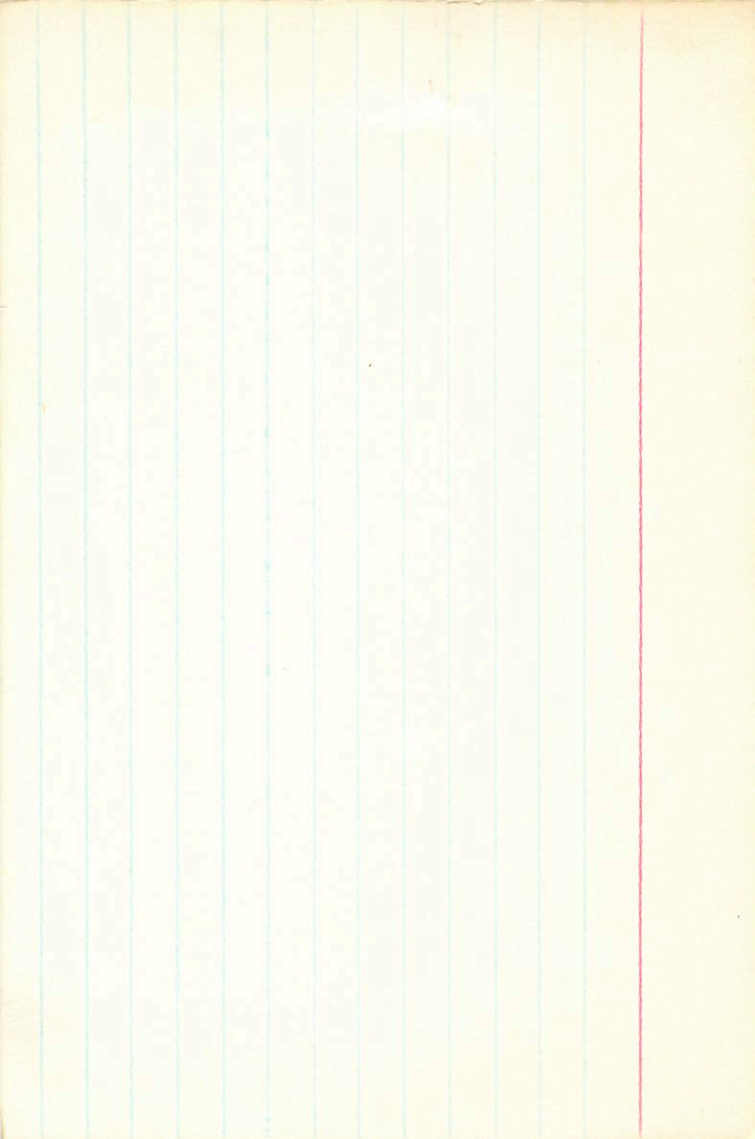
1.336

+ 0.15

000 161 1128

5.25

18  
19



HR 196 0 42.4 +54 57 42 -8.56

5.5

W405

A05625

12 m 2" eqm

4252

-027 +005 6-6

-024 +003 G<sub>n</sub>(2)

-026 +004

007 164 1121 2873

SMU 109 1836

~~003-006~~ (A)

032-016

-57

-6

575

-815

184 923 819 574 -026 1004 -8.5 003 - 7.0009

005 004 -026 003 009 -128 -4.9 -4.5 -0.9

-14 -14 -6

-15 0 +2

006  
01

-3.9 -13.7 -6.1

-14.2 -0.4 +2.7

*Handwritten signature*

P.A. DEC. : 8.788  
M. R.A. DEC. : 54.958  
M. DEC. : 56.888  
DISTANCE : 5.888  
MODULUS : 5.158  
D. VEL. : 187  
-8.508

d1 (U) : 8.848  
d2 (U) : 8.848  
d3 (U) : 8.848  
d4 (U) : 8.848  
M : -131.818  
-18.858

d1 (U) : 8.848  
d2 (U) : 8.848  
d3 (U) : 8.848  
d4 (U) : 8.848



R.A. : 0.700  
DEC. : 54.950  
M. R.A. : -56.000  
M. DEC. : -6.000  
DISTANCE : 5.150  
MODULUS : 107  
D. VEL. : -8.500

q1 (U) : 0.846  
q2 (U) : 0.094  
q3 (U) : 0.525  
dU : -131.616  
U : -18.566

q1 (V) : -0.533  
q2 (V) : 0.098  
q3 (V) : 0.841  
dV : 70

12<sup>th</sup> 2<sup>nd</sup> polypropylene 10<sup>th</sup> 78"

4222 0 42.4 +54 57 51.5 A2 - 8.56

408 A05625 -0031 ± 2.8 +005 ± 2.3 0 L  
B6894 -0031 +007

412 25.392 1893.7 +54 56 53.67 1895.5  
 $\frac{175}{.567}$   
-27  
53.40

166

41 0.06  
1 25.250  
42 25.392  
172  
1484  
478

48 40.4 1927.2  
8 13.12  
56 53.15  
427  
53.7 2.12

1269  
123 (46.4)

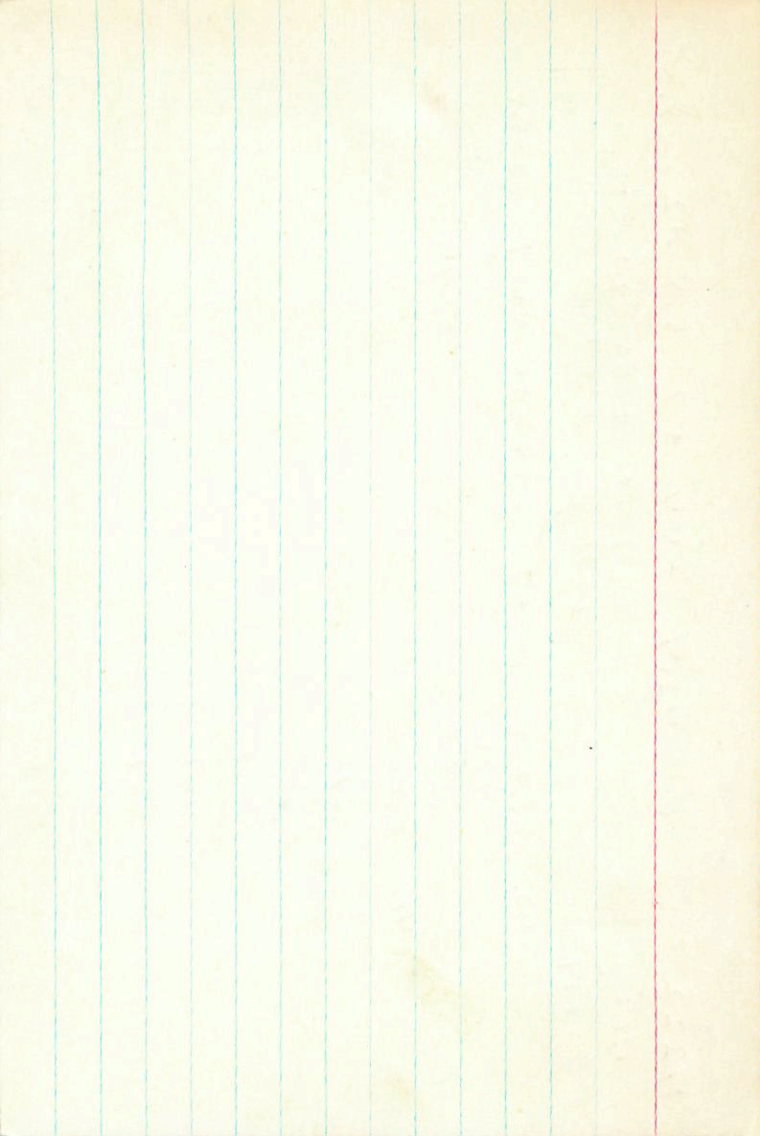
25.407  
-010  
397

53.80 1941  
-24

53.71

25.396  
-2  
1394

53.56 19  
+031  
53.56  
-23  
53.79



155

4293

00 42.5 - 42 57

710

Handwritten circled scribble

00 74 - 098

Handwritten box containing 087-098

183766 811 279

Handwritten scribbles

204

4321

00

4323

+55

01

~~815~~

~~10110  
16107~~

1090  
108

1111 2531

106 164 001

4281 502-259  
4281 1464

12  
+0012-1006

1010 010

53-  
109  
81

19



AT

10,000  
10,000  
10,000



204

4321 0 43.4 +55 02- 6.5 A3 -8.3

418 +0016±4.2 -009±3.4 6L  
 66916 +0008 +0003  
 +0010 -005

0 43 22.613 1997.0 +55 1 56.20 1893.8

-084  
529  
 57  
56.71

41 56.40 54 53 44.4 1925.3

1 25.470 8 12.25  
 43 22.172 55 1 57.13 117.66  
 12.44  
53.5

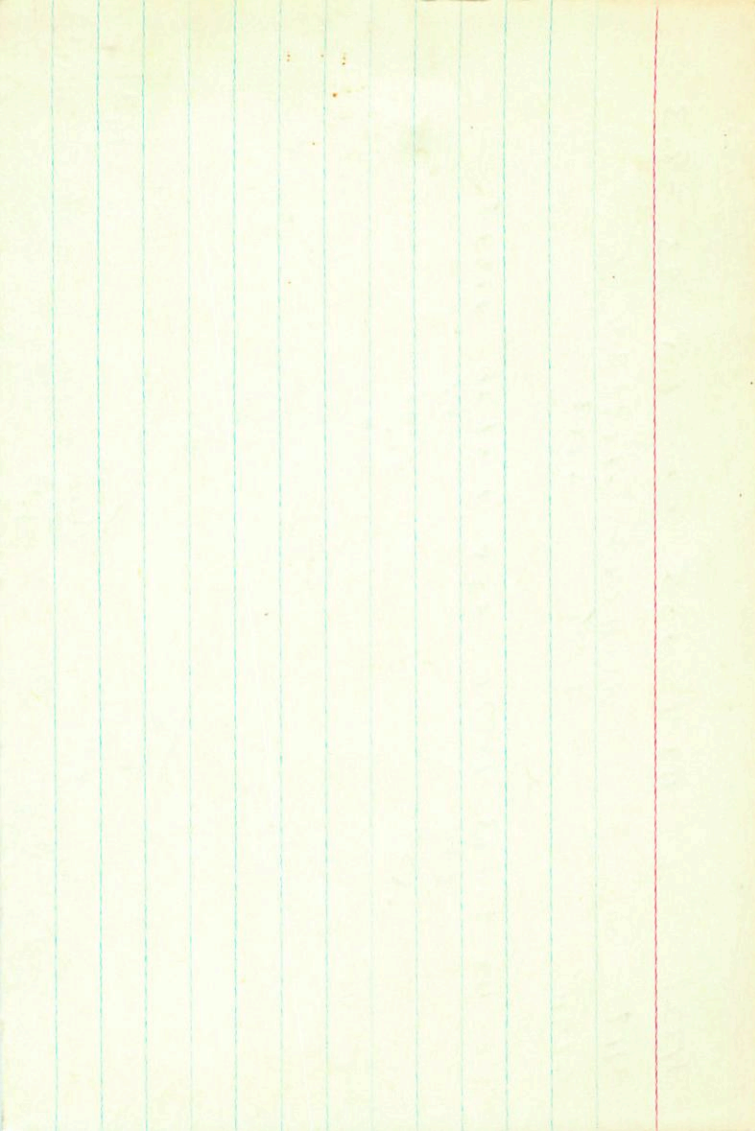
(42.2)

22.579 57.12  
570 +0.34  
 19

1945.40  
1939.2  
 45.4

1946.46

22.582  
590  
 56.84 -24  
 56.88  
 +1.13 56.79  
 -23.65





0.500

-63.250

214.500

-51.500

4.350

74<sup>ms</sup> 5124

9.000

0.857

0.379

-0.351

299.543

19.050

12

-0.511

0.719

-0.471

-409.244

-34.581

-25

-0.074

-0.583

-0.809

108.655

-2

71

$\beta' B^{-1} T_{nc}$

126 - 127 - 136      0    29.3 - 63 417

2884-2885-3003

<sup>opt</sup>  
 AS 486    7.36    -0.06 -0.17    C  
~~MS~~ 127    7.54    +0.14 +0.03    C  
 AB 136    5.15    +0.02 +0.01    C

126 -026 +141 +844 ① 2850 (wards)

127    -    -    2.839    " "  
 136    -    -    -    -

Bul 51

