

5.19-20.1.19

3293 8 19.8 -36 20 82 12 -12

70556

5:102

-086 080 154 2.610

065 171
180
301

5.1

-3.55
8.65

1002+101+16.0

3283.000*

8.000*

19.000*

-36.000*

-20.000*

-0.002*

0.001*

8.650*

537.032

16.000

0.009

0.260

8.995

0.002

-0.965

-14.148

-0.005

0.001

-2.703

01.5 II

8294

8 21.0 -48 20

R 1 IV

76980

4.82 -15 -84 65

6m 0.8

11450

-052 +053 +077 6

2.613 3

Worked

8300 8 21.5 -51 55 HD

+3 1 part

3228

~~4~~

1918

B-2-12

3330

8

241

-51

84

B3

71510

514-15-60 QSS ✓

11531

746

-082 + 0998

+ 241

2.462

018311
116890
B6
447

1526
725

FL

E=46

SCA
12-105-07

0814 + 180
-016 + 021

14-

MJ-2.15

3330.000*

8.000*

24.100*

-51.000*

-34.000*

-0.016*

0.021*

7.250*

2-15 7.15
269

281.838

18.000

0.125

0.035

21 134

35.847

0.005

-0.990

-16 -14

-16.348

-0.005

-0.138

-4

-3.960

5016 184 947 30
4110 848 531 441 444
3326 8 241 -42 00

838

7145-9
11323
-8014 +801
-8013 +8025

702

1001 +801
-066 104 857 2.664

8.7

092 367
134
351

1647 1326

-2.3
7.7

400 1000
153

546-065 100 365 2.682

100 365
1018
9

3326.000*

3326.000*

8.000*

8.000*

24.100*

24.100*

-42.000*

-42.000*

0.000*

0.000*

-0.000*

-0.000*

0.007*

0.008*

7.05

7.700*

7.700* ⁰¹

346.737 ²⁶³

346.737 ²⁵⁷

27.800

27.800

27.1

0.048

0.055

0.172

0.172

21.500

23.756

0.009

0.010

-0.984

-0.984

-24.274

-23.864

-0.012

-0.013

-0.042

-0.042

-5.159

-5.539

5.74-16 1.255 02

3343 8 260 -34 57 B3E

71801

-081 106 257 2.683

DM 20

91 223
182
455

5.7

-1.4

7.15
7.8

8 +3 +23.6

3343.000*

8.000*

26.000*

-34.000*

-57.000*

-0.008*

0.003*

7.850*

371.535

23.600

0.033

0.265

18.432

0.008

-0.963

-19.691

-0.022

0.035

-7.476

3345 666-06-40 +09
8 26.7 -20 47

71933

-008 084 639 2.685
082 611
144
808

6.4

+7.0

$\frac{-1.7}{8.1}$

μX

40.035 1901.7 -0.008 ± 0.7 -0.12 ± 0.1
 $+0.004$ $+0.004$ -0.004

$$\frac{0.007}{39}$$

$$\frac{57.3}{59}$$

23.265

$$\frac{6.666}{40.061}$$

$$\frac{30}{40.061}$$

$$\frac{0.14}{0.091}$$

0.35

$$57.3$$

$$\frac{57.6}{-9.7}$$

$$\frac{57.73}{+2.3}$$

$$\frac{57.52}{-1.14}$$

5.81-16 1.22 +0.5
8 27.4 -47 00 82.5

3356
72067

-073 095 234 2.597 5.65
082 249
166
415
+001 +006 +30
-415
9.8 :

3356.000*

8.000*

27.400*

-44.000*

0.000*

0.001*

0.006*

9.800*

912.011

3.000

0.020

0.138

18.800

0.002

-0.989

-1.429

0.021

-0.054

18.573

3358 8 27.5 -47 46 E+075
 5.32 - 145 1.20 B2 TB

80126

$$\Delta m = 0$$

scr

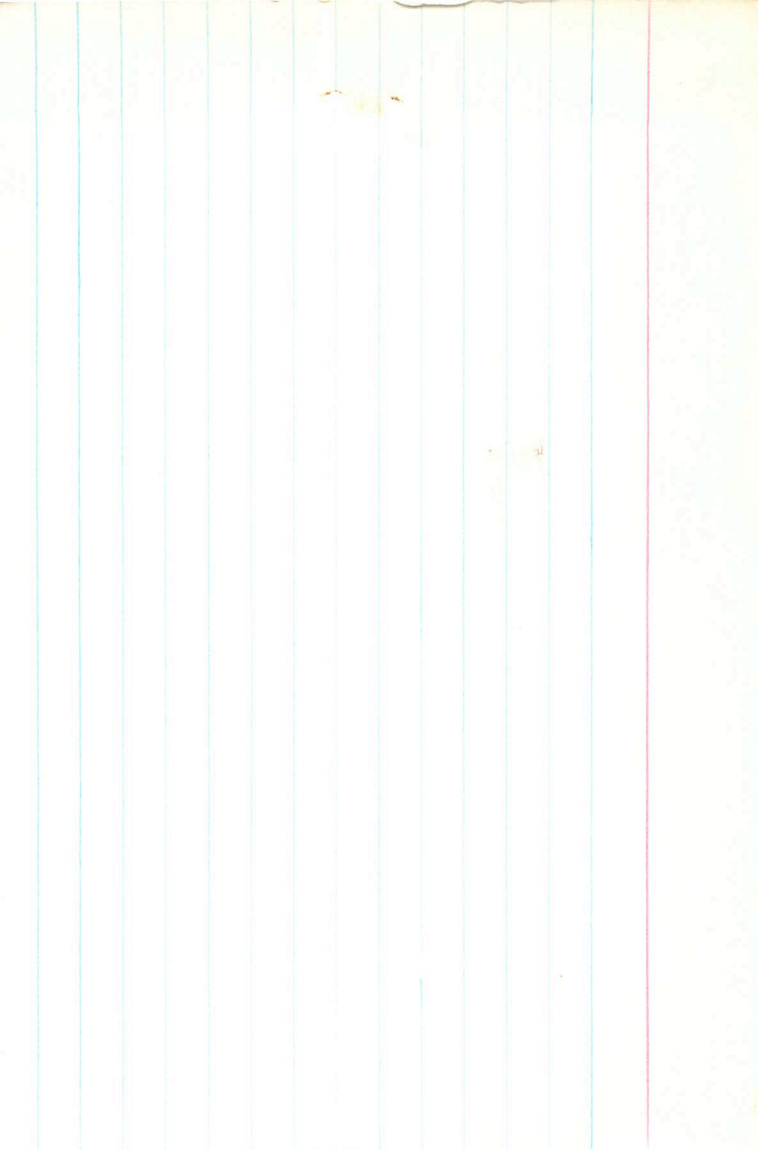
-052 080 183 2.613

071 143

$\frac{141}{287}$

$\frac{5.14}{5.96}$
 $\frac{-3.14}{9.28}$

-5.1 $\frac{141}{287}$ $\frac{5.14}{5.96}$
 $\frac{141}{287}$ $\frac{5.14}{5.96}$
 multiplied



3363 . 8 28.1 -44 10 BF

Chickering

~~-6000 + 1010~~ ~~1000~~
-6035 + 1003 slung
-6032 + 1005 + 9.
-6032 + 1005 + 9.

-0332
-030 + 1008

①

144

603 -48 101 403 2.507

86 413
178
585

5.9
185
9.7

3363.000*

8.000*

28.100*

-46.000*

-10.000*

-0.030*

0.008*

7.750*

354.813

9.000

0.113

0.106

41.044

0.019

-0.992

-2.190

-0.092

-0.074

-33.441

6.30 - 04 129

14.5
43.5

3371

F 23.0 - 44 34

B 4 2

72350

089 050

457

2.612

057

444

5.85⁵

-007 1005 +25.1

114

563

Vanished

-3.9

9.75⁵

3371.000*

8.000*

29.000*

-44.000*

-34.000*

-0.007*

0.005*

9.750*

891.251

25.100

0.038

0.127

37.353

0.006

-0.990

-19.850

-0.013

-0.056

-12.704

3373 8 29.6 -38 54 84 $\sqrt{2}$ 00
6.30 -145 +295 00

7226

-058 099 358 2.699 6.3
089 410
178
388

-001 +006 Var wif -1.3
9.6

$$\begin{array}{r}
 3375 \\
 7245 \\
 \hline
 6.38 - 16 \quad 1.26 \quad , 015 \\
 8 \quad 29.6 \quad - 47 \quad 42 \\
 82.5\sqrt{7}
 \end{array}$$

$$-070 \quad 100 \quad 306 \quad 2.653: \quad 635$$

$$\begin{array}{r}
 087 \quad 320 \\
 \hline
 174 \\
 \hline
 494
 \end{array}$$

$$-12 \quad +5 \quad +11.0$$

$$\begin{array}{r}
 -2.5 \\
 \hline
 8.85
 \end{array}$$

3375.000*

8.000*

29.600*

-47.000*

-42.000*

-0.012*

0.005*

8.850*

588.844

11.000

0.052

0.082

31.713

0.007

-0.993

-6.761

-0.032

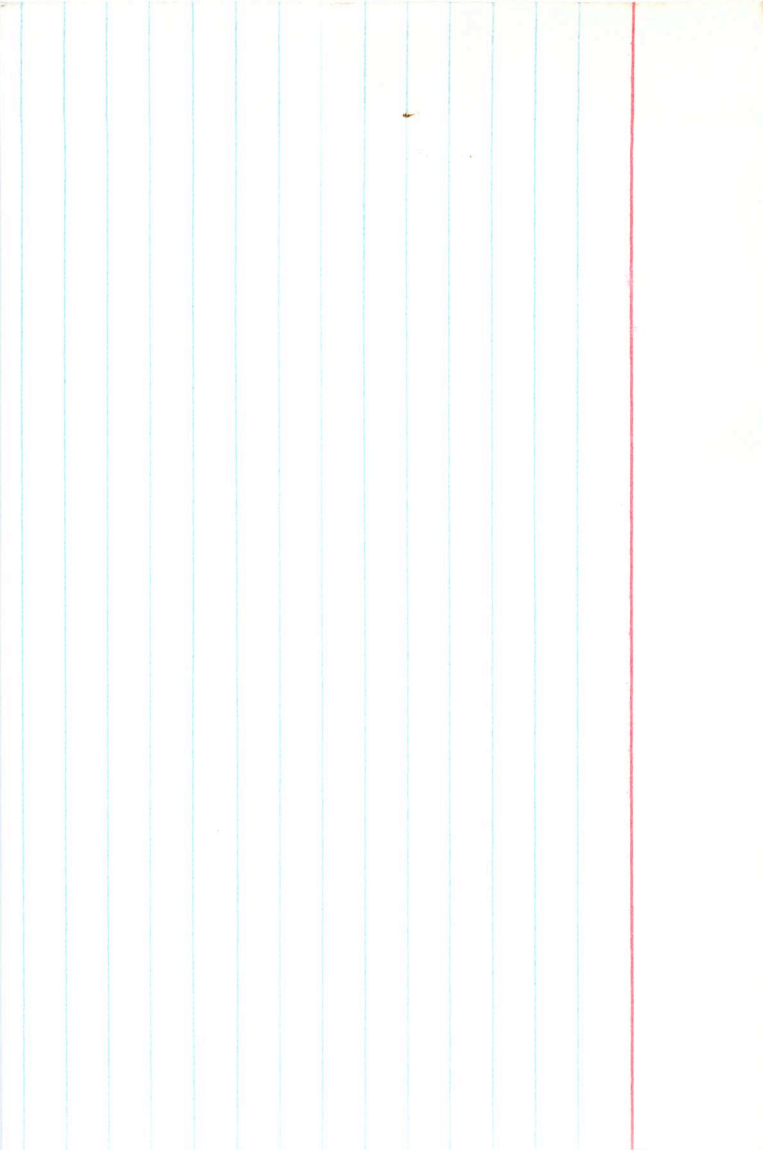
-0.086

-19.651

3849 8 318 - 88 40 138

From

105
5.57 - 45 - 106 444 2679 ①
92 454
184
63
6



3377

8 81.5

+36

36

42ms

12090

¹⁰²
 084 145 1065 2.947 -7673 9169 ≈
 155 1058 1012 0.75 ≈
 310

W350

-00210-0484

1364 9895 -5090 / 0891
 5986
 1231754 -8607 10020

062 224 92

-0253

-025-046

+24.915 917 91

0

2.11 8.11 2.11 8.11
 2.11 8.11 2.11 8.11
 2.11 8.11 2.11 8.11
 2.11 8.11 2.11 8.11

5ms

3377.000*

575

8.000*

31.500*

36.000*

36.000*

-0.025*

-0.046*

3.25

5.650*

113

134.896 ¹²⁵⁹

24.900

0.069

0.808

29.481

-0.203

-0.084

-29.422

-0.126

0.583

-2.422

3377

8 31.5

786 36

A2H#

72524

11744

400
100

57

W350

03

024

145

1.065

2.847

69 @ 5RU

-0484

1005

-0021

151

302

1.058

1.360

1.426

270

+046 = 2

+088 = 2

1.77

Buck 1

-030 -051

-22.9

10.3
56

3377.000*

8.000*

31.500*

36.000*

36.000*

-0.030*

-0.051*

5.500*

125.893

24.900

0.083

0.868

30.607

-0.223

-0.084

-30.217

-0.148

0.583

-4.100

3258 8 315 -38 12 82.572
6.45 -19 1.24 0

12787

-083 099 293 2653

084 310
148
478

6.45

09.3
58.2

-13 59 + 5.6

3388.000*

8.000*

31.500*

-38.000*

-12.000*

-0.013*

0.009*

8.900*

525

602.560

5.600

0.070

0.210

437.7

43.100

0.015

-0.978

42

3.283

-0.024

0.017

-1236

-14.226

3413 8 34.3 +50 417 -1.76
 73340 5.80 -0.14

IC 2391 3

-063 116 385 2-647 S
 105 358 2745
 210/ /
 808 068

+27
 111
 +

10207
 303
 +
 10007
 812
 +
 936

-110
 +103
 -0207



3413.000*

8.000*

34.300*

-50.000*

-47.000*

-0.017*

0.003*

7.350*

295.121

22.900

0.059

0.030

67 6.85
219 235

18.248

117 115

0.008

-0.994

-21 -21 -20.442

-0.056

-0.108

-15 -15 -18.887

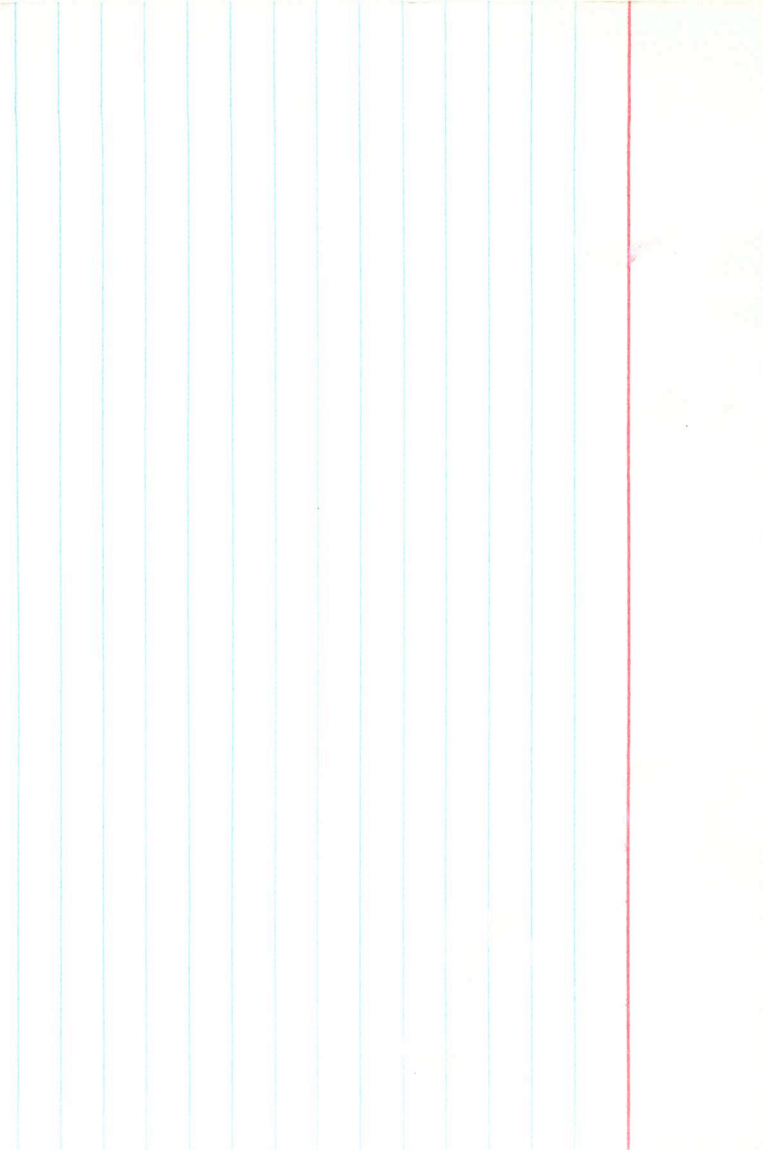
34236 8 35.9 -42 48 A911

180 127 1.537 2.713

10049 F1Y

10113

118.7a



3452 8 39.6 -47 08 45 II

097 115 1572 2.267

417.46

0015 0 664

0012-40025 F124

0122
S 0018-800
-0018-400

-002075.7 + 003740
= 004

34.646 1510.5 16.43 1504.1

$$\begin{array}{r} 674 \\ \underline{728} \end{array}$$

$$\begin{array}{r} -178 \\ 16.57 \end{array}$$

34.647

16.20

1540.02

$$\begin{array}{r} -5 \\ \underline{692} \end{array}$$

$$\begin{array}{r} -2 \\ \underline{7672} \end{array}$$

$$\begin{array}{r} -633 \\ \underline{\quad} \end{array}$$

$$\begin{array}{r} -15 \\ \underline{\quad} \end{array}$$

3445

8

389

✓ 52 80

95126

~~95126~~
95126

10.58

~ 24.02

15.0

4.59

0.51

7/14/92
3754

B 4 #
B 3 D

8 40.6 +3 34

77280

4.24 -19 -74C

6887

4.30 -20 -74 95

$\frac{7.29 - 20}{4.29} = \frac{0.29}{54} = 56$

2.715

-0.88 + 0.76 + 2.58

Sta 2653 SLV

-0.013 -0.02 ± 0.10

$\frac{1.52}{4.10}$

$\frac{6.2}{6.2}$

± 0.10

5 + 2 = 4.75

-0.2 - V₀ = 4.23

B - V₀ = -2.2

2 - B₀ - 7.55

± 2.10

-0.190

-0.17 + 0.01

Van

UV -2.50

3453 8 39.5 -48 44 81.5E
7273 00

-087 077 023 2.592
061 040 5.8
122
162

-001 +002 +180
-3.95
9.78

3453.000*

8.000*

39.500*

-48.000*

-44.000*

-0.001*

0.002*

9.750*

891.251

18.000'

0.010

0.050

10.156

0.000

-0.996

-17.601

0.002

-0.074

0.517

B6Ia

8 403 -45 14 B5Iaf

3456

74371

11528

5.20 + 23 55 C + 40

① 8152

② 2548

+ 218 + 043 + 226
 $\frac{84}{312}$

CS 12

204-400-

43
855-
 $\frac{101}{10}$

3456.000*

8.000*

40.300*

-45.000*

-14.000*

-0.004*

-0.002*

10.100*

1047.129

25.300

0.004

0.097

6.835

0.001

-0.995

-23.977

-0.021

-0.035

-22.609

3457
74375
11567

8 39.5 -59 34

4.32-12-81C

-019 +056 +080 (5)

$$\frac{112}{192}$$

2658

2.596(3)

(6.2)



Sp.B.

E = +13

-002 +010 ± 30 +12.9 W

V0 3.53 (8.0)

B-V0 -25

W-B0 -50

MV -705

3457.000*

8.000*

39.500*

-59.000*

-34.000*

-0.002*

0.010*

8.000*

398.107

12.900

0.043

-0.099

+14 15.844

-0.008

-0.977

-16 -15.913

0.020

-0.188

+5 5.699

75
863

3476 8 42.1 -29 39 80 III
 5.15 -22 -1.02

77753

-050 029 -888 2.568

019 -078

1035

-04

485

-545

10.30

+027 -004 1250
 0.527

Approved

Paul Kemp

3476.000*

8.000*

42.100*

-49.000*

-39.000*

0.027*

-0.004*

10.300*

1148.154

28.000

-0.094

0.033

-106.992

-0.010

-0.996

-39.439

0.088

-0.078

99.232

3470

~~3466~~

8 44.3 46.6 53 88

11 41
~~11 41~~
 6.20 -0.55 117 610 2.759 \overline{RFE}
 101 624
 2020

$$m_r = -0.15$$

$$V_0 \frac{6.2}{6.35}$$

-6016 -04260
 -6016 / -0415134 74.7

-6016
 -0115
 -0354
 -0354

~~Plater~~

3470.000*

8.000*

44.300*

66.000*

53.000*

-0.014*

-0.038*

6.250*

177.828 199.1

4.700

0.109

0.686

+24 22.590

-0.158

0.424

-26 -26.015

-0.013

0.591

0.423

86 5.2
171.8

19.223

18419

-0216 #3-0 -042 #26

36.45 1889.1

3474 8 43.0 -36.58 85

eg

141

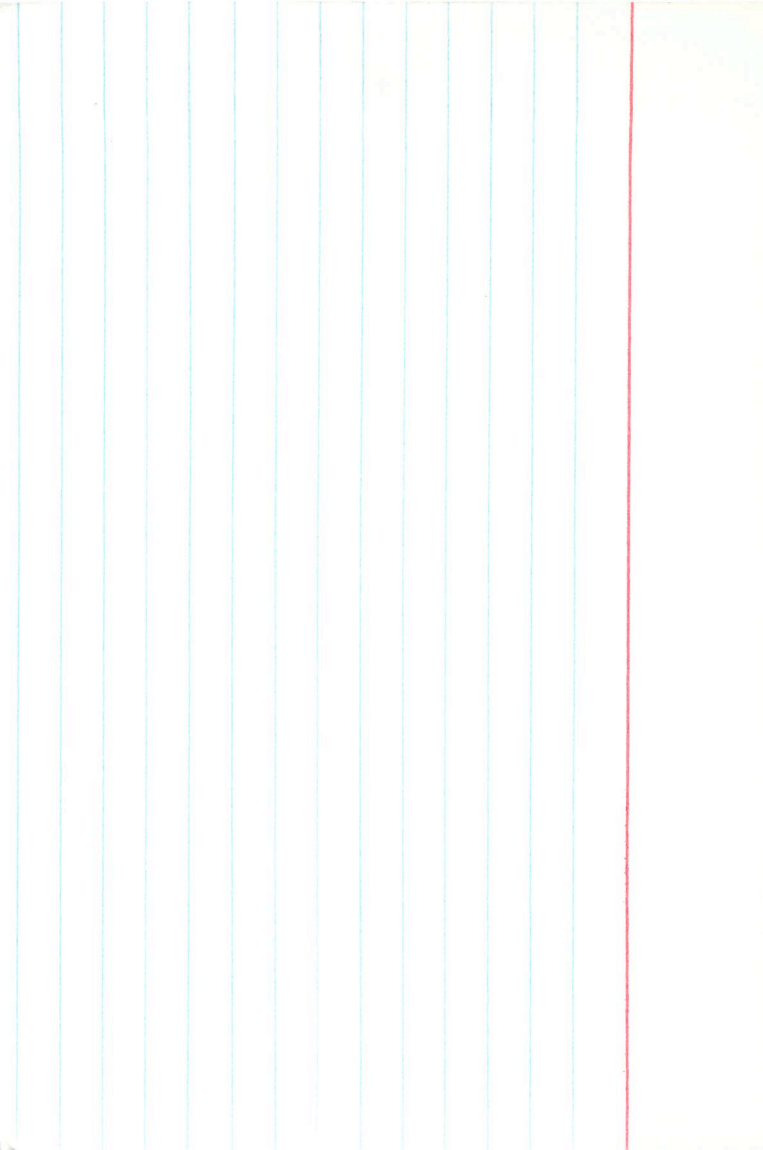
5.77-4764 305 2606 (2)

50 314

100

414

ward



3454
75149
12125

8 448 -45 44

B4FE
B3IE

7288 +039: +096 (2) 2.54 (2)

76.

Im Tn 10?

3501 8 46.4 -42 17 85

+303
-004 -002
-0015 -001

Frags

-004
-015
+002

Wiss
wie
40

259

142
6.44 -64 63 197 263 2
44 210
88
298

3501.000*

8.000*

46.400*

-42.000*

-17.000*

-0.015*

0.002*

9.050*

645.654

30.300

0.052

0.125

37.370

0.006

-0.992

-26.235

-0.049

0.012

-31.276

3528

8

48.5

-41 57

09 20

75759

2.59

5.98 -10

1.14

+20 60

M.N. 124, 97
D. 6000

d₃₃₁₁

sp.

33.311

project

-010 063 -122 2.5-98 1

061 -120
122
+2

-606 -607

4.4
-4.0

9.4
10.15

3525.000*

8.000*

48.500*

-41.000*

-54.000*

-0.006*

-0.002*

915

8.400*

676

478.630

23.400

0.011

0.125

+10

8.122

0.001

-0.992

-22.848

-0.028

0.022

-18

-12.863

5.77-09 1.28 09

3860 8 52.7 -60 09 B5H

76538

-018 092 389 2.650

089 353

178
371

55

-804 +013 +2.0

~~-2.25~~
9.25

3560.000*

8.000*

52.700*

-60.000*

-9.000*

-0.004*

0.013*

8.250*

446.684

2.000

0.059

-0.125

25.945

-0.012

-0.977

-7.209

0.024

-0.172

10.403

3562 6.27-17-62
8 516 -44 52 BOSTON

76566

+02

066 092 335 2.654

080 348

6.2

160
50

+22.0

+001 +006

-2.5

8.7

3562.000*

8.000*

51.600*

-44.000*

-52.000*

0.001*

0.006*

8.700*

549.541

22.000

0.019

0.080

11.980

0.001

-0.997

-21.159

0.022

-0.004

11.992

6.36 - 12 1.32 ✓

3568 8 53.6 - 58 02 85 ✓

76640

-039 121 438 2.740

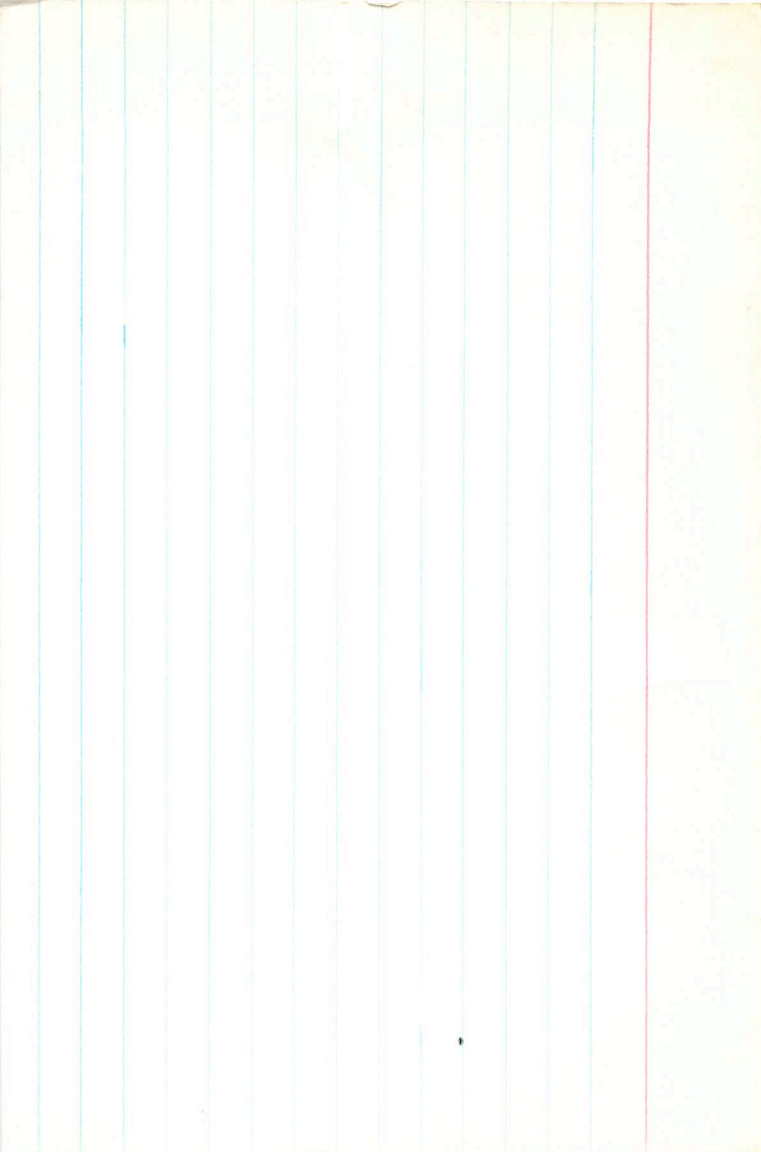
114 446

$\frac{228}{674}$

63

(3)

~~10.3~~ ✓



5.54-15 1.29

858

40

-41

54.5

T

3600

97705

00

213

-071

109

426

2.711

98

440

198

646

~~1400~~

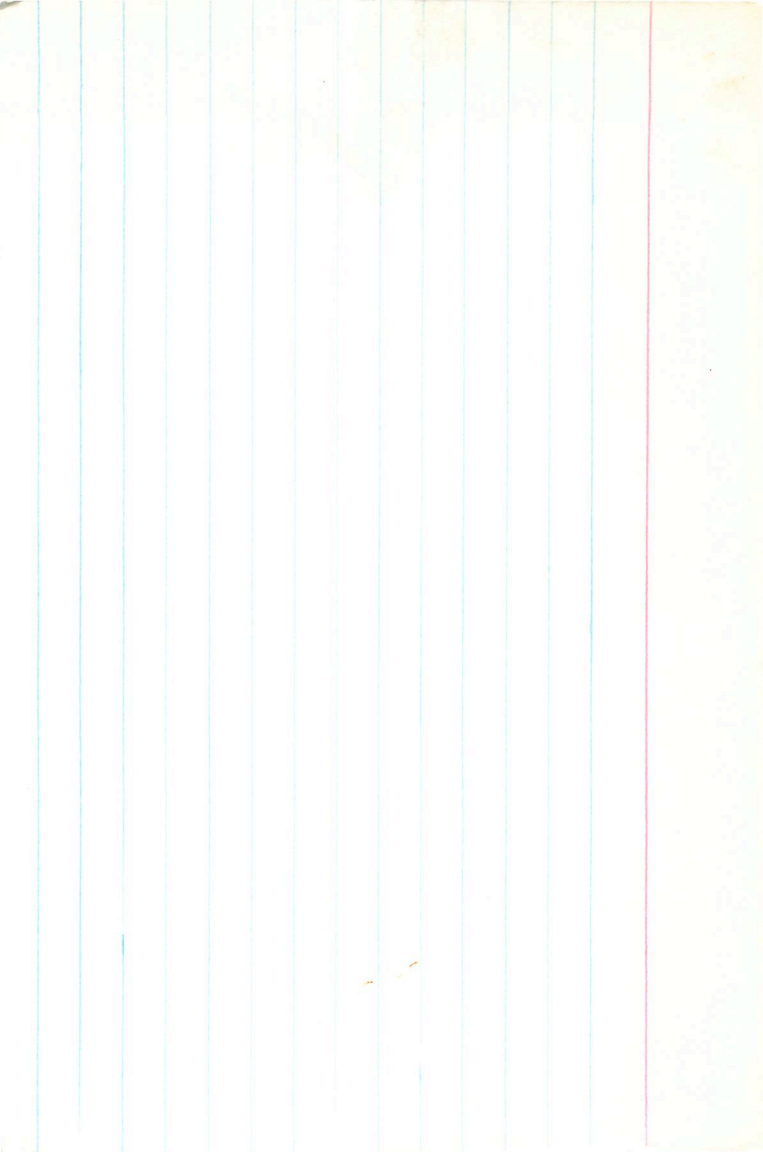
-04 + 4

Var

5.55

-1.05

6.65



1.0
 -0.4
 -1.3
 $+2.2$

$+0.9$
 -1.3
 $+1.3$
 $+1.3$
 $+1.3$

-0.2
 $+0.2$
 $+0.2$
 $+0.2$

$+3.6$
 $+3.6$
 $+3.6$
 $+3.6$

100
 100
 100
 100

1.35

1.1
 1.1
 1.1
 1.1

1.1
 1.1
 1.1
 1.1

1.1
 1.1
 1.1
 1.1

1.1
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 1.1

1.1
 1.1
 1.1
 1.1

1.1

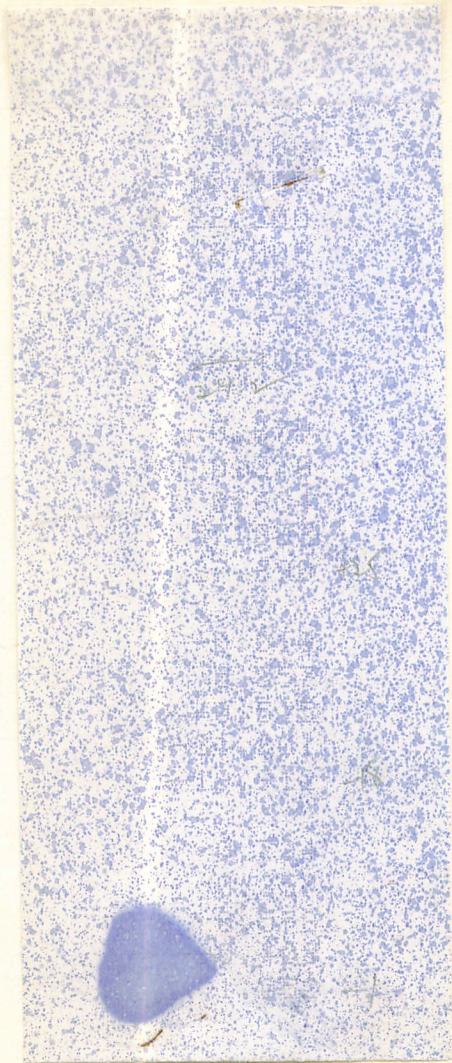
1.1
 1.1
 1.1
 1.1

1.1

1.1
 1.1
 1.1
 1.1

1.1

1.1



of
6.39

16 line 1 kg

9 05.0 + 10 52

3623

-042 121 543 5 warm +25.3

74316

-040 114 560 2.714 G

-40 114 548 2.722 3 Ca

-040 114 550 2.718

111 811 + 118 280 9

111 55 355 204

222 780 972

1/9

F121

102
204
508
972

623

-100

-0119

-00143

121

112

110

100

100

-005

Red

1.1

3623.000*

9.000*

5.000*

10.000*

52.000*

-0.020*

-0.009*

6.300*

181.970

25.300

0.048

0.636

+23

+21

24.900

-0.035

-0.515

-18

-17

-19.417

-0.085

0.574

+2

+5

-0.949

5.75 5.2
141 110

3629 6.10 - 1.55 1.24
 9 05.1 -55 86 B2 12 12

78548 0.035
 105

-042 077 257 2.650

069 305
 138
 443

-101 1005 0.40
 1000
 1000
 1000

6.0

-2.45

8.45

3629.000*

9.000*

5.100*

-55.000*

-36.000*

-0.001*

0.005*

8.450*

489.779

29.000

0.021

-0.086

7.577

-0.003

-0.991

-30.224

0.012

-0.099

3.195

BSFa

3654

9 09.3

-44

40

BSIa

7986

12688

4.59 + 0.22 - 0.60 C

+222 - 042 + 118⁸⁴ G

2.536 ③

2.662

202

-004 + 007 ± 3.5 + 33.7

126

+56

$V_0 = 3.5$

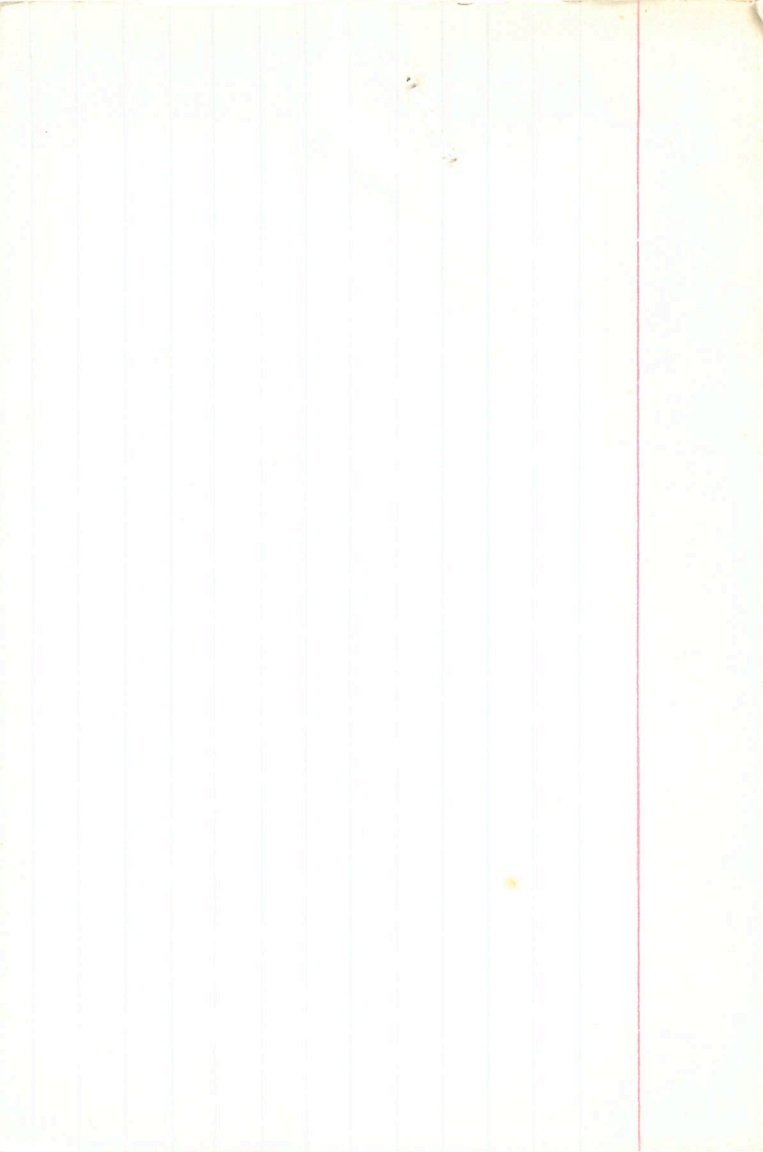
9.95

-28

-46

-6.1

110 - 6.35



3656 9 09.7 -34 03 BF

370

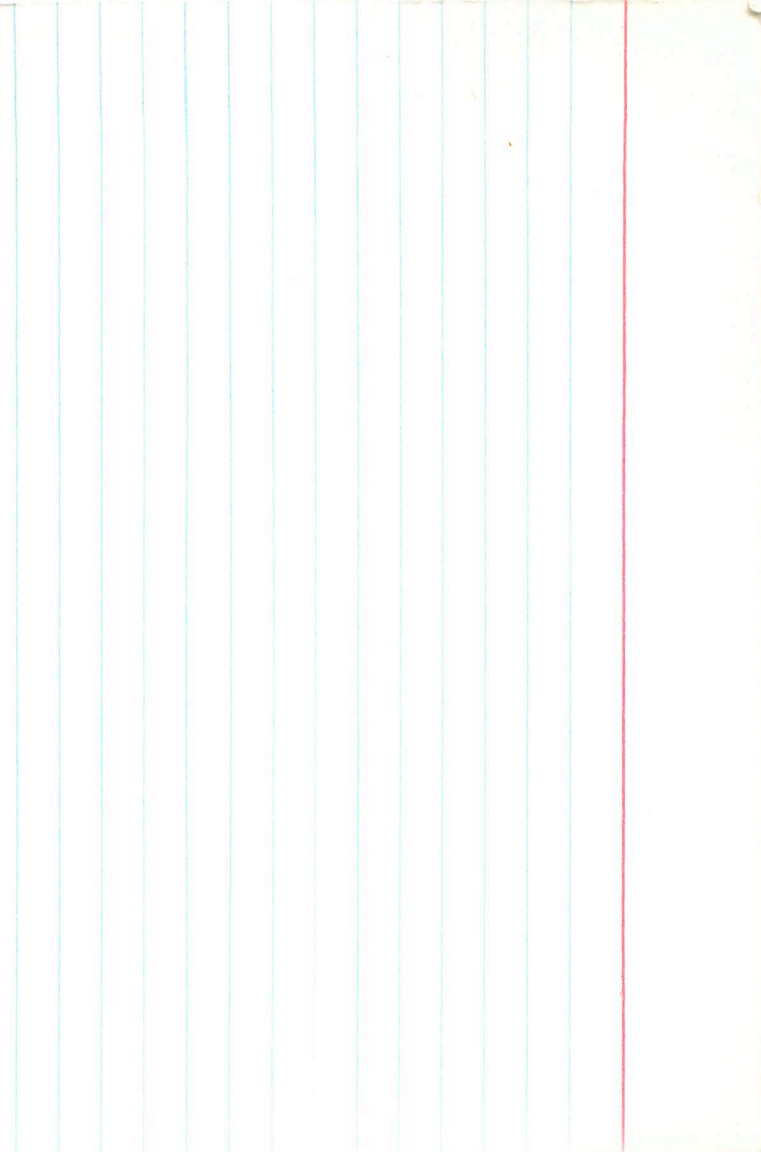
5870-255

Handwritten

76 558

251

056



5.78-22-82

8655

9 09.8

-46

22

82 11.5

79275

Ob

~~042 074 107 2.624~~

~~062 125~~

~~124
249~~

~~0 x 2 (x 7.0)~~

0

8.775

8.50
-2.75

3658.000*

9.000*

9.800*

-46.000*

-22.000*

0.000*

0.002*

8.500*

501.187

7.000

0.007

0.023

3.608

0.000

-1.000

-6.851

0.007

0.020

3.409

3674

9

12.5

-43

02

842

79735

5.24 -15 -55

15.6

+02

-052

088

422:

2.686

072

432

5.15

~~144~~

~~598~~

-17

-025 +016 +10.0

6.85

3674.000*

9.000*

12.500*

-43.000*

-2.000*

-0.025*

0.016*

6.850*

234.423

13.000

0.137

0.059

32.814

0.006

-0.996

-11.549

-0.033

0.066

-6.830

3654.000*

9.000*

9.300*

-44.000*

-40.000*

-0.004*

0.007*

9.850*

9.6
E32

933.254

33.700

0.037

0.046

32 36.155

0.002

-0.998

-32 -31.720

0.009

0.039

+9 9.709

3688

86057

12801

A1Z6

B5

9 14.2 -47 42

6.03 to 0.29 - 0.19 C

+271 +083 +814 ② 2686③

NOV2

164
980

4.8

-2.75

9.55



3672 9 12.3 -43 56 3672

79694 584-14-47 +02 06

141 -047 692

+22!

-024 +015

450 2.700

869

499
~~1581~~
6

515

745

9.2

3672.000*

9.000*
12.300*
-43.000*
-56.000*
-0.024*
0.012*
7.200*

251

275.423
20.000

0.120
0.049

130

33.971

0.003
-0.997

-19

-18.984

-0.043
0.055

-10

-10.616

3672.000*

9.000*
12.300*
-43.000*
-56.000*
-0.024*
0.015*
7.200*

275.423
20.000

0.130
0.049

36.881

0.005
-0.997

-78.693

-0.033
0.055

-7.796

3703 9 16.4 5 -50 50 89

1098 91C.2.716 812

109 601
807 812
828

1.1

3483

3708 9 17.0 -51 20 B7Iaf

80558

5.87+0.55-0.40 C

12559