

+404762

21

51.6

+7 75

~5280
4019 Van

-44 R

9.30 +0.64 +0.03 GJE

S = .15

+280 -008 ⁷

$$\begin{array}{r} \checkmark \\ -532 \text{ f846 } 0 \ 1 \text{ f280-008-44 } 00 \text{ -039} \end{array}$$

$$150 \ 0 \ 236 \ 0 \ 710 \ 1.120 \text{ -44-37+23} \quad 023$$

$$\begin{array}{r} -6 \text{ f72-2} \\ \boxed{+61 \text{ -37-8}} \end{array}$$

$$019$$

$$+1 \text{ f82-2}$$

$$\boxed{+71 \text{ -39-15}}$$

$$\begin{array}{r} -1 \ 63 \text{ -1} \\ -3 \ 32 \text{ -2} \\ 5 \text{ -12-1} \end{array}$$

$$0 \ 72 \text{ -1}$$

$$0 \ 37 \text{ -2}$$

$$-1 \ \text{-13-1}$$

+404762

21

(45.4)

+4

(30)

-44051.8

R(4)

9.30 +0.64 +0.03 632 n

S = .14

+67 -41 -15 .02

+41 -44 -33 .035

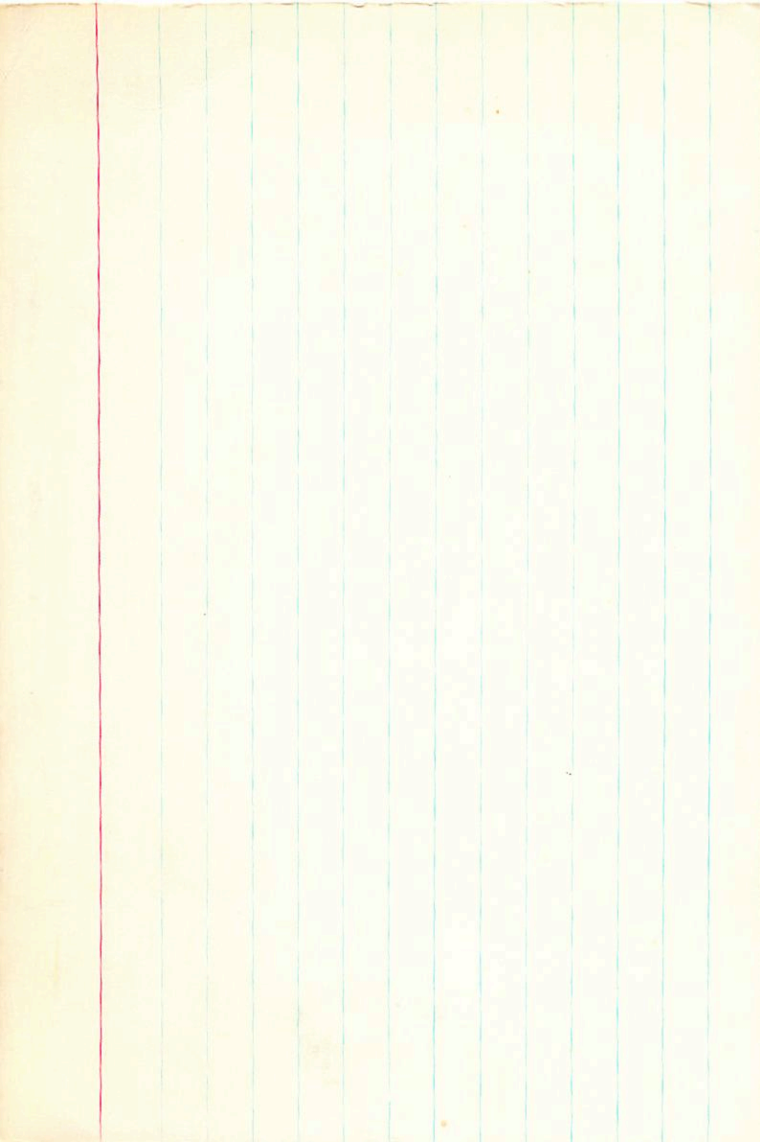
+280

-008

41

19
271

16
0



40208215

-0124±11.3

-043±9.0

-0131

-055

21 52.5 -47 10

+24.8±0.5(1)

30680

6.55 +0.45 1-50

-127 -063 1+

44.749 1902.0

-47 9 52.06

1898.8

595

2.20

45.344

4986

9.081

56.29

1927.24

36.108

3.95

38.2

81.35

7.189

52.31

10.7

142

9671

91

431

45.049

44.838

51.40

52.16

30

506

51.37

2.30

017

44.697

52.79

1954.11

27
660

13
52.94

41.9

-527 850 -734 679 -127 -063 +248 046 -18.2 -204 ✓

-067 024 -105 039 -502 -358 +16.8 +143 -8.9

8364 21 52 419 419 29

208M ✓
202M 207

202M 207
4.80
6289 571 361 428 301 540

4.80 432 ✓
855 322 149 471 2250

4298 400

1153 806 165 183

052

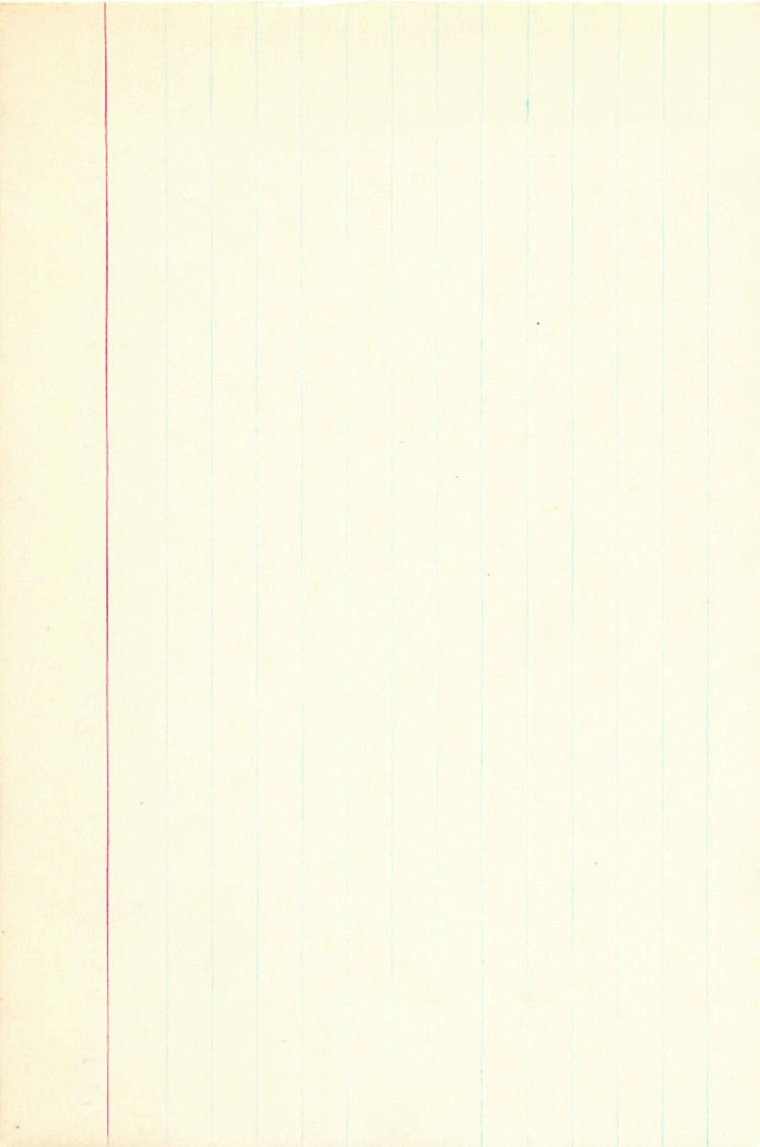
208742 21 52.8 779 19 6.8 g m2 -15.58

30681

13772

+0010 37 +016^u N30

+0012 52.0 +02241.986 → N30



205321

21 53.4

-37 29

1474 e

FD 1293

S.45 +08 ^{1.54} A2E m

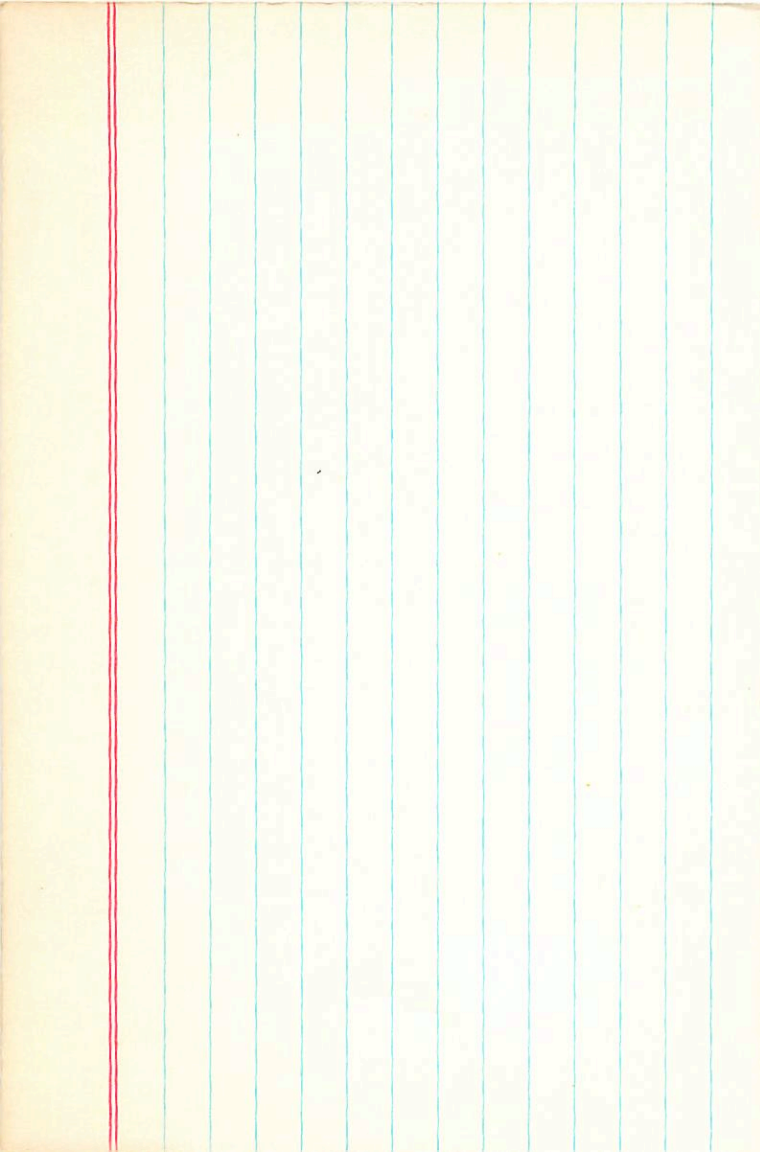
tab 24L
+27 SSt Ven

-6016 -004

-0018 +000

-0014 -002

-016



208323 21 53.6

+0069±90 -04157.8
+0048
-46 43 2.44 437

30700

F5E-2 16.9±0.8

32045 1897.6 -46 43 3.02 1595.0

-362

226

36.683

0.76

1.301

7.81 1028.26

35642

5.40

8337

44.6

36.140

2.81

586

41.7

853

1786

1.93

293

1603

36.893

1.58

2.14

26.497

3.84

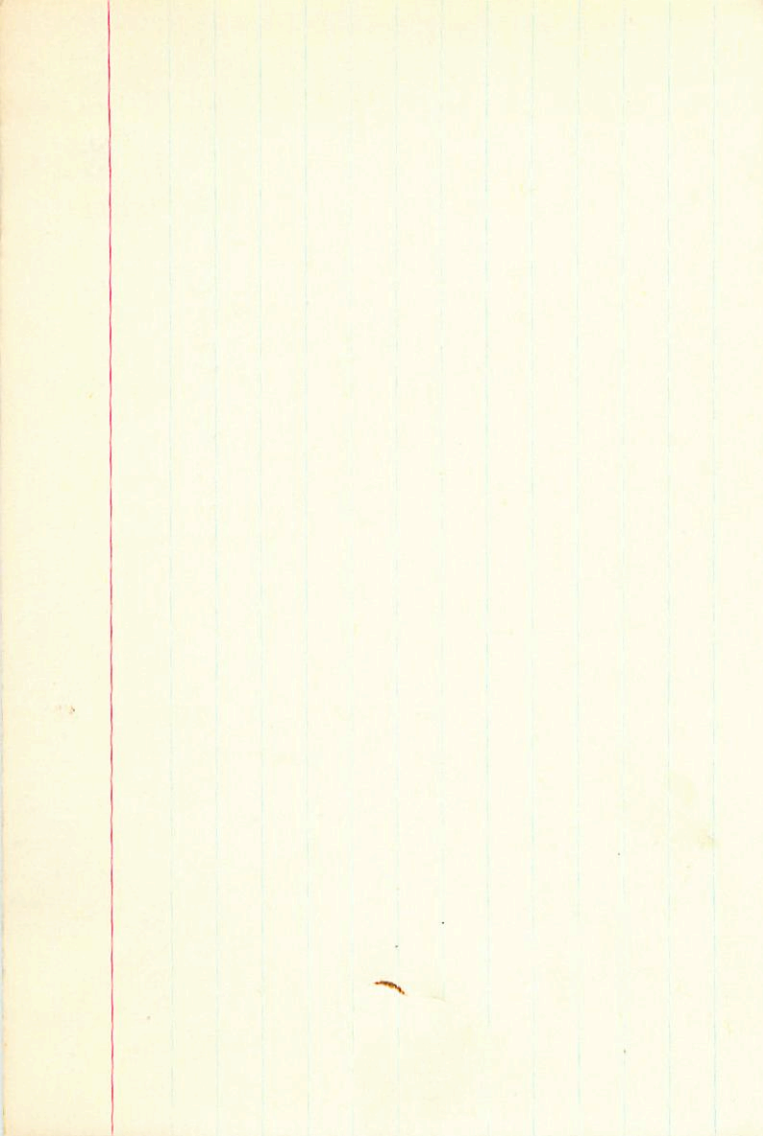
195.471

-24

210

12

39



208360

21 53.9 49 52

P5/7 + (6)

50.13533

+761

~~10025-256~~

+0029-253 stay

+0035-2485 +761

+0337

7.67 4.7 120 453 2.553 @dawn

1033-252

2.14
-49.95

57
-262
3.5

+761

hA

w(3)

+316

852

McLenn

393 (2)

-12

+1.965

+0.62

7.21

21

55.7

209704

GC 30743

w13746

+00929

+061510 X

$$\begin{array}{r} +0007 \pm 29 \\ +0023 \\ \hline \end{array}$$

$$\begin{array}{r} 42.604 \\ -032 \\ \hline 1572 \end{array}$$

$$\begin{array}{r} 21.825 \\ -20.848 \\ \hline \end{array}$$

$$\begin{array}{r} 42.823 \\ \quad 33 \\ \hline \end{array}$$

$$\begin{array}{r} 1040 \\ -109 \\ \hline \end{array}$$

$$\begin{array}{r} 42.685 \\ -15 \\ \hline 670 \end{array}$$

$$\begin{array}{r} 1508 \\ \underline{650} \\ \hline \end{array}$$

$$\begin{array}{r} +088 \\ 16368 \\ 32323 \\ 42691 \\ \hline -37 \\ \hline 649 \end{array}$$

19840

33.8

$$\begin{array}{r} 9.72 \\ 51.43 \\ 18.29 \\ \hline +12 \\ \hline 18.09 \end{array}$$

$$\begin{array}{r} 18.94 \\ -1.5 \\ \hline \end{array}$$

$$\begin{array}{r} 18.09 \\ +16 \\ \hline 18.05 \end{array}$$

$$18.99 + 2.59$$

$$\begin{array}{r} 18.21 \\ +16 \\ \hline 18.05 \end{array}$$

$$\begin{array}{r} 7367 \\ 34.7 \\ \hline 3967 \end{array}$$

$$\begin{array}{r} -12 \quad 54 \quad 12.57 \quad 1898.2 \\ \quad \quad \quad -3.40 \\ \hline 20.97 \end{array}$$

$$\begin{array}{r} 27.39 \\ 7.70 \\ \hline \end{array}$$

$$\begin{array}{r} 19.69 \\ 1.75 \\ \hline 18.94 \end{array}$$

113

310

$$\begin{array}{r} 18.38 \\ \hline \end{array}$$

$$18.99 + 2.59$$

$$\begin{array}{r} 7367 \\ 34.7 \\ \hline 3967 \end{array}$$

205808 21 +0043+3.7 +016+3.2
 30759 +0049 +020
 56.5 -23 07 dFS -10.48

13811 29.096 1406.9 -23 6 43.20 1402.2

-185
 28.911
 43.96

4.867
 24255
 52.78 193475

31.1

29.127
 29.127
 .069
 .144
 .655
 064
 153

44.71
 43.77
 43.26
 76.00
 38.0

29.096
 .18
 .074
 43.32
 23
 43.09
 43.77
 35.8

25 Aug

209125

30749

13523

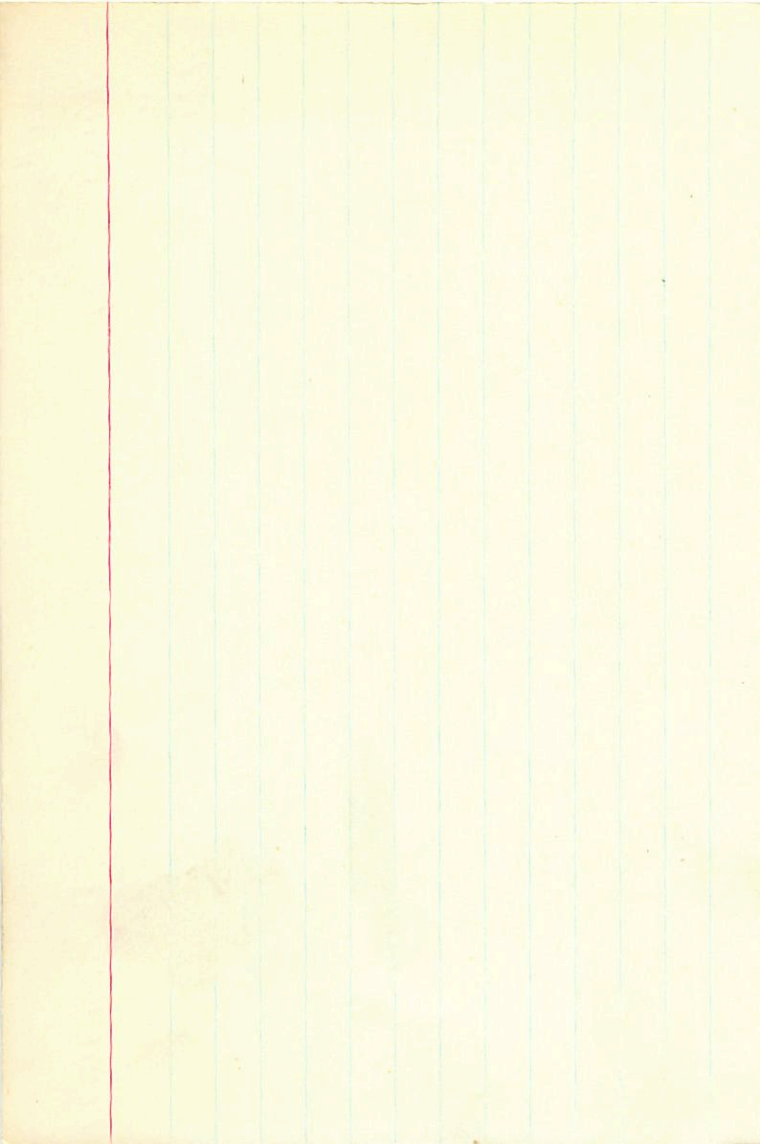
21 58.5

400 22

5.8 g 124 46.78

40003³⁵ - 009³⁷ M30

40004 ± 2.0 - 007 ± 1.7 GC M30



106up

209369

30800

13825

21

58.5

772

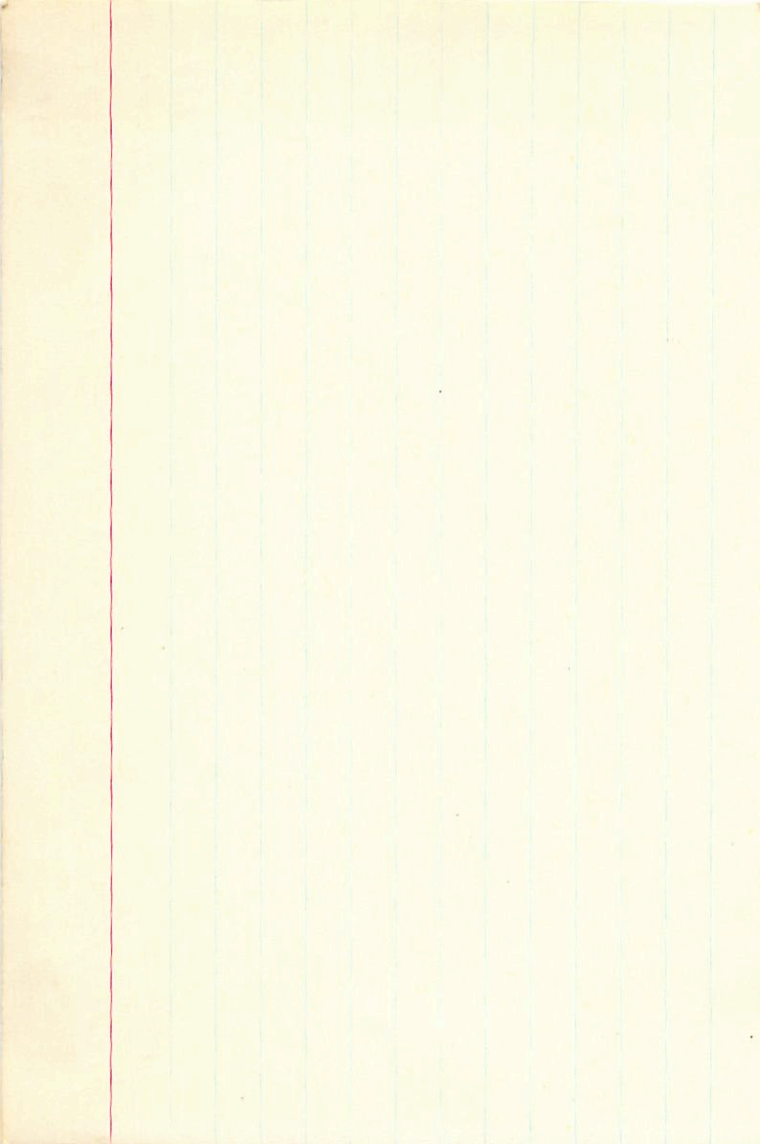
56

5.2

df3-210a

-0168⁵⁶ -156⁶⁴ N30

-0171⁷¹⁴ -157⁵¹²



209144

21 58.2 132 46 FS 1.6

HR9391

GL30789

1st 2nd 3rd

.298 .136 .562 ② 5MC 2.656 ③ ④ ① +

-0007#65 +064FL9

14753 DD.L 6-247 99.1

189

502

3

1-21-

890 + 040 -

789	612	254	-0323	+1573	+1600
-144	269	952	+0068	+0867	+0504
-597	744	-300	+0282	+2358	+2650

50+

51-

0

13
39
77
129
509

13822

10.51+58 +28 R

105-53
0032

+018-530 G
+046-528 Cin

21.46

14.7

+30

-530

~~480~~ 345

os

1

G-1814

3.44

(+18.7)

1049 580 509 103 (3)

48

48

1904455

21 58.4 +9 43 dicy

14.0

29

d

Y(R) + 010

N(R) - 070

-16.0:

"

+0.051: -530:

4.63

-70 -116 -51

230

2530

410

15.7

10⁻¹/10

24ml(8)

10.50 + 0.98 + 0.77 ①

9/11

1887-1888

19 P. 200
209167
30804
13529

21 58.7
-0009 ± 2.4 +001 ± 2.1
-0012 -003
+08 01 5.8 gms -23.38

40.264 1900.1 +8 0 57.91 1899.7

045
1309

40.246

14
260

40.274

-1
273

266

-043

37.3

-5
57.86

57.94 19340

18
58.02

57.61 1940.70

14
57.47

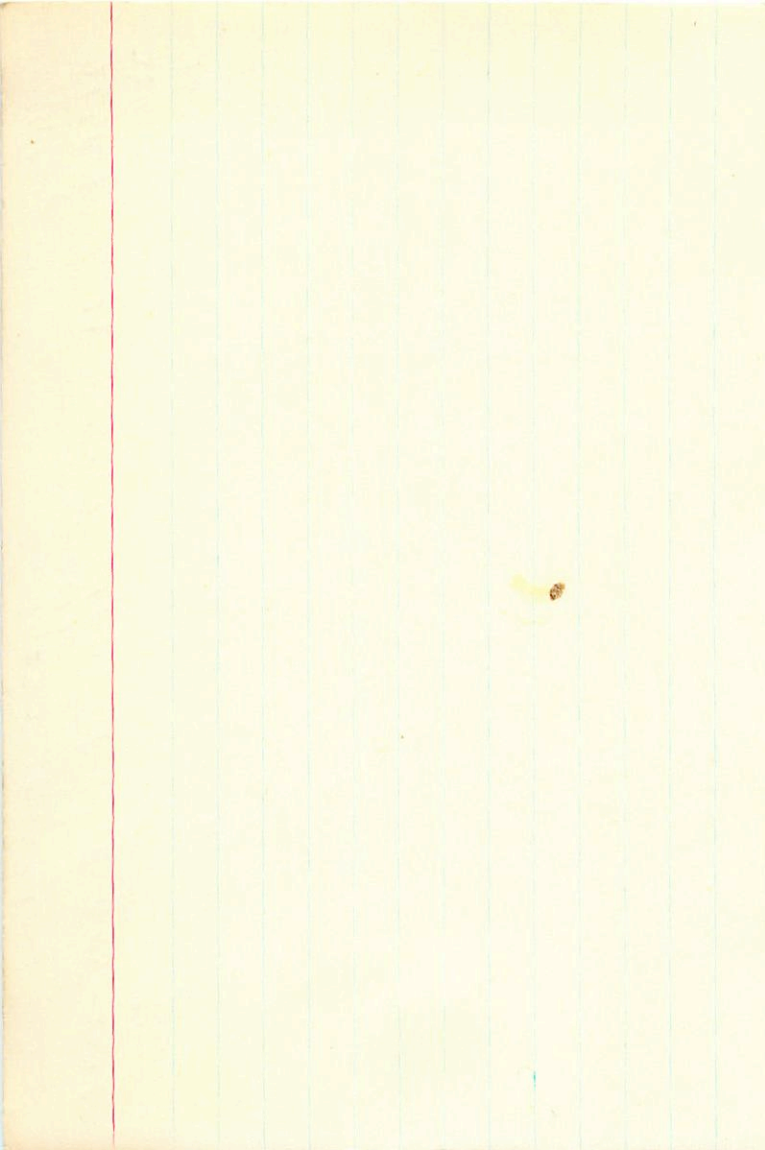
1549

57.74

-12

717
37.4

37.7



AD515549 7.6-7.6

+0008±8.7 -004±6.3
+0014 -002

209260 21 59.0 +39 00 7.1 40 -1488

30811

13834 0.026 1907.5 +39 0 17.39 1908.6

b m 20

-034
59,992

56.87
3 140
00.010
30

040
5
035 025
+033

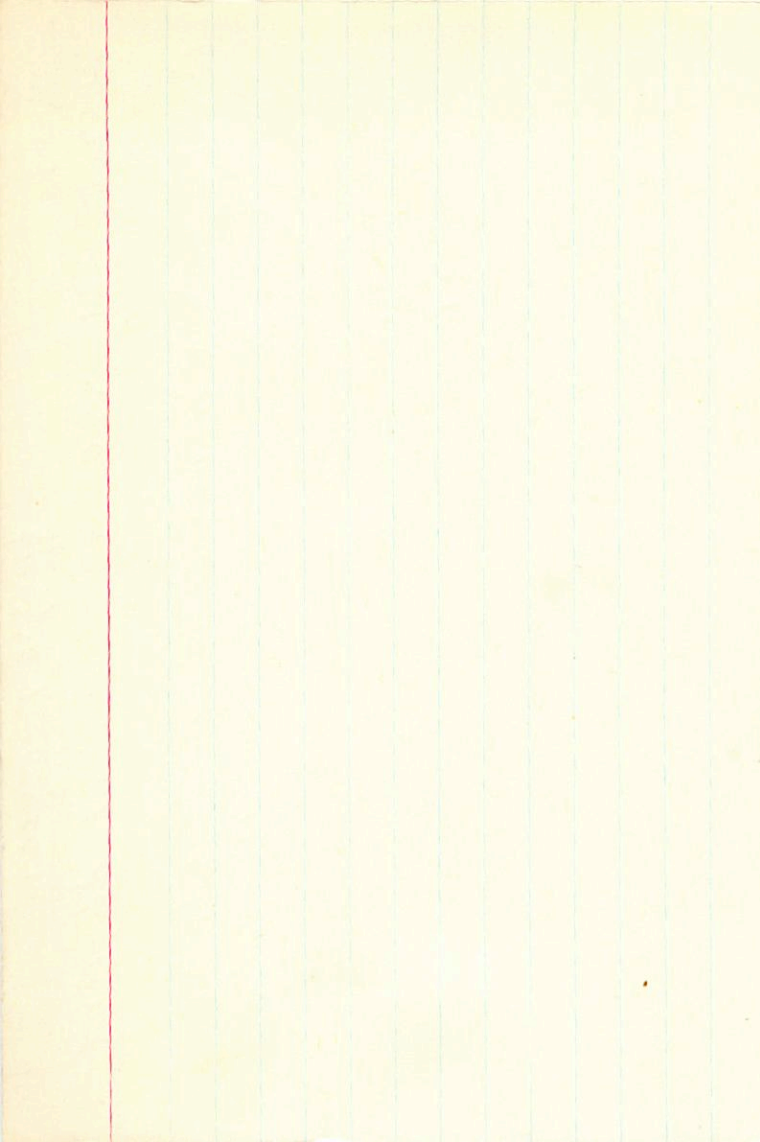
23.5

17
17.56

5.0
11.72 1925.3
16.72
.56

17.28
17.13 103 620
17.41 31.0

17.62 1936.7
17.52
-04
22.4



209240

21 59.4 -18 09

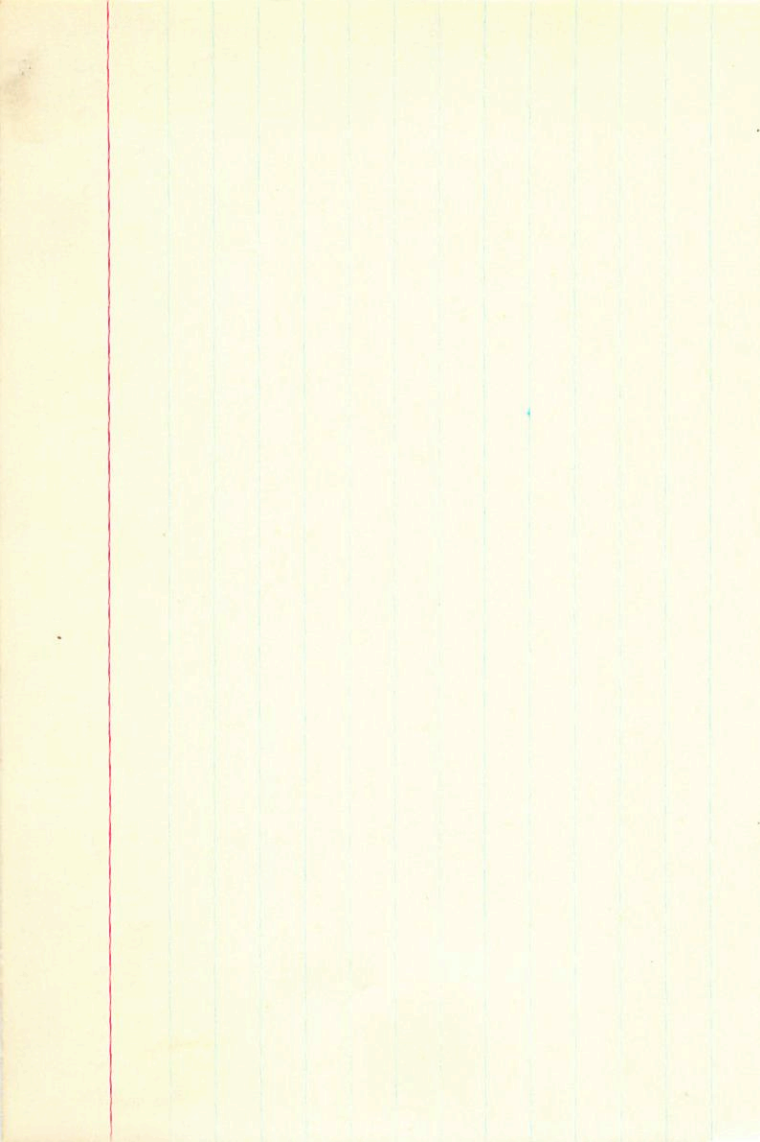
6.4 g G7 -16.56

30816

13836

+0085³⁵ -057³⁴ N30

+0083±23 -055±2.4 RC → N30



209100

21

595

-5659

1045

Edw

-4000

8389

1148 239 -2.5583

APR 1

8941, -2.558

1169 607622-205 (3)

466 588 605 202 (3)

597 613 (206)

RT loc

209318

21 59.5

443

39

-47.56

BK 5.07

13637

+004657 +02050

X0304117

-536 Dub

+063 +041 AB123

+066 +037

gib
205

En

11

11/10/1911
11/10/1911
11/10/1911

11/10/1911
11/10/1911
11/10/1911

11/10/1911
11/10/1911
11/10/1911

11/10/1911
11/10/1911
11/10/1911

7.000
7.000
-47.251
-47.500

0.789
0.611
0.660
0.517
0.950

-0.144
0.089
0.986
0.258
0.167

-0.597
-0.797
-0.158
-48.054
-4.640

47

9397 21 5-5-1 +10 44 185 III

209285

6.37 -10-62 +10 30

-052 107 393 2.704

098 103

-15.2

196

599

605

-1.35

7.4

+0009 +002

+00117 +0144

+0172

~~+019~~

022

$$\begin{array}{r}
 +0001 \text{ } \$43 \\
 +00007 \\
 \hline
 33.927 \text{ } 1914.2
 \end{array}$$

$$\begin{array}{r}
 -39 \\
 \hline
 888
 \end{array}$$

$$\begin{array}{r}
 +0004 = 3.6 \\
 +020 \\
 \hline
 55.70 \text{ } 1909.6 \\
 -24 \\
 \hline
 55.76
 \end{array}$$

+00009

$$\begin{array}{r}
 33.882 \\
 + \quad 20 \\
 \hline
 33.902 \\
 014
 \end{array}$$

$$\begin{array}{r}
 55.68 \text{ } 1933.1 \\
 +26 \\
 \hline
 55.94 \\
 \hline
 48
 \end{array}$$

1459 0431

SH

209942(3⁰)

22 00.1 +82 35 d45 -22.284(5)

GC30830

-17.524(3⁰)
orbit

W13844(6⁰)

-18

45337

+820673(4⁰)

-71 14"

		52	
	-140	-034	+2
	-14823	-020	+3
4	-124	-036	CA'2
8	-118	-037	
	<u>-140</u>	<u>-034</u>	
	75(7)25		
	10A(7)25		
	17)		

-0730 ± 2.2 -034 ± 2.1
-0730 -039

-500866 992 129 -140 -034 -18.0 -034 -18-019 ✓

~~-079~~ 017 -121 -029 469 -654 -2.3 -2 +1
-194

16-46-19 014

6.877 1880.5 182 37 4701 1870.6 [50-1 +12]

2.36
49.37

5.051

11.928

46.95 1945.96

7.042

46.84

125

43.646
 -0.40
 $\hline 606$

5.4

40009
 40014
 40011
 40013

-0.11
 -0.05
 -0.10
 -0.06
 $\hline 50.7$

3.1

43.669
 -1
 $\hline 679$

50.52
 -1.0
 $\hline 51.52$

5221

40048

43.697
 -23
 $\hline 674$

51.14
 -20
 $\hline 51.34$

40012
 40015
 40020

-0.08
 -0.074

$11022-011$

43.659
 -10
 $\hline 649$

51.23
 -20
 $\hline 50.96$

3528

8464 22 009 +11 08 R415

TM (8)

-07-20 +02

~~10008-008 OCT~~

-012

112

1023

2.756

10008-008 OCT

108

1025

10011-0055 F124

246
1248

-0.26

~~10008-009~~

$$m_V = -0.25$$

10162

10008-009

22

10 8.65

+0118

+11.1

5.9

1018-009

1014-013

+14

-13

6.05

-0.2

-11.301

-0.075
-0.558

-5.950

-0.038
0.783

6.736

0.044
-0.275

-0.200
151.356

5.900*
-0.009*

0.018*
8.000*

11.000*
0.900*

22.000*

8404.000*

4258
-3
4255
4254

197
4-
1977

bh.

22.000

11.100

14.000

-13.000

6.050

162.18

-0.200

218.78

0.789

0.547

-0.278

17.673

2.922

74

-0.5

0.5

-0.55

-74.495

-11.970

AD815587 46701384 7022327.1 +1514130

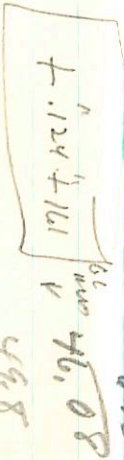
209675 22 01.4 +68 01 8.8 DEC8+55.58

30851

13854 21.423 19042 +68 0.52.24 1909.2

-1.021

20.402



-6.16

49.8 1929.8

~~SE(10)~~

20.94

994

8.74+52+57

-17
49 63

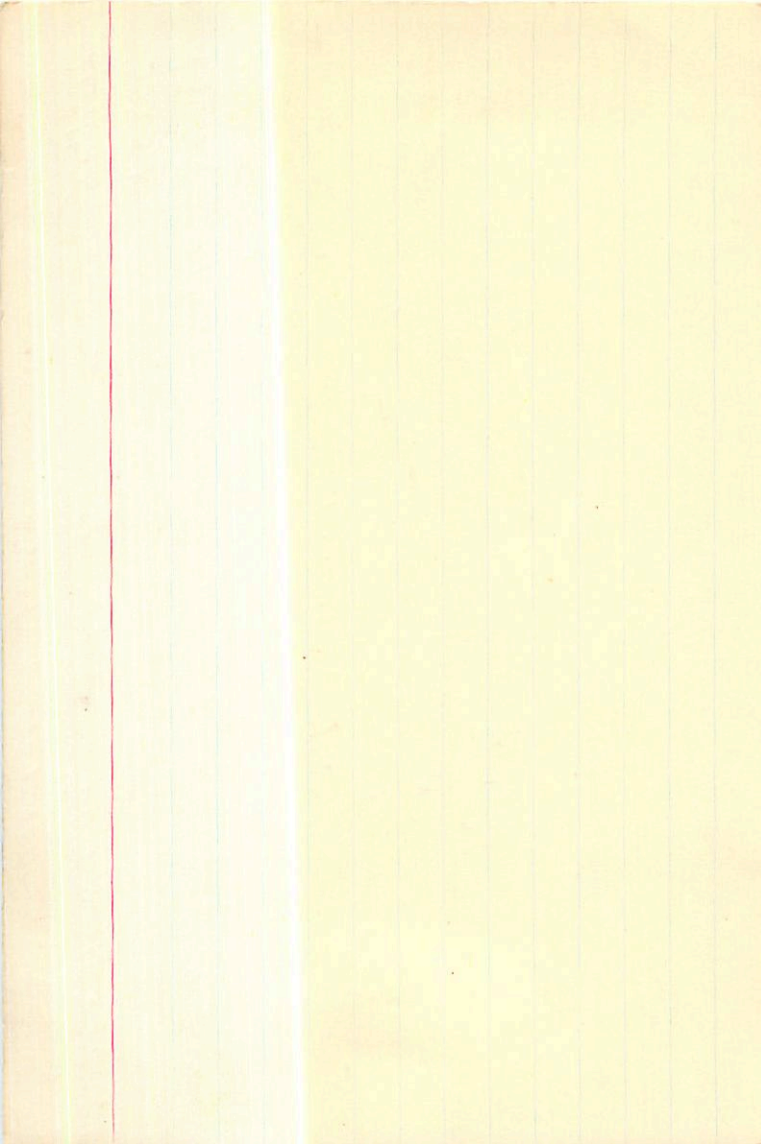
SE(10)

8.74+0.92+0.57 220"

MV	+6.2	+43	+42	+18
	+5.2	+61	+35	+22
	+4.2	+79	+88	+26

1236

+133 "+165" CAZ



$+2087 +$
 $\begin{array}{r} 212 + 1087 \\ \hline 22 \end{array}$
 5417

$+0323$
 $+0822$
 $+0905$
 $+089$
 $+64$
 10
 23
 23
 -116

-44 226 693 $+31$ $+2.6$

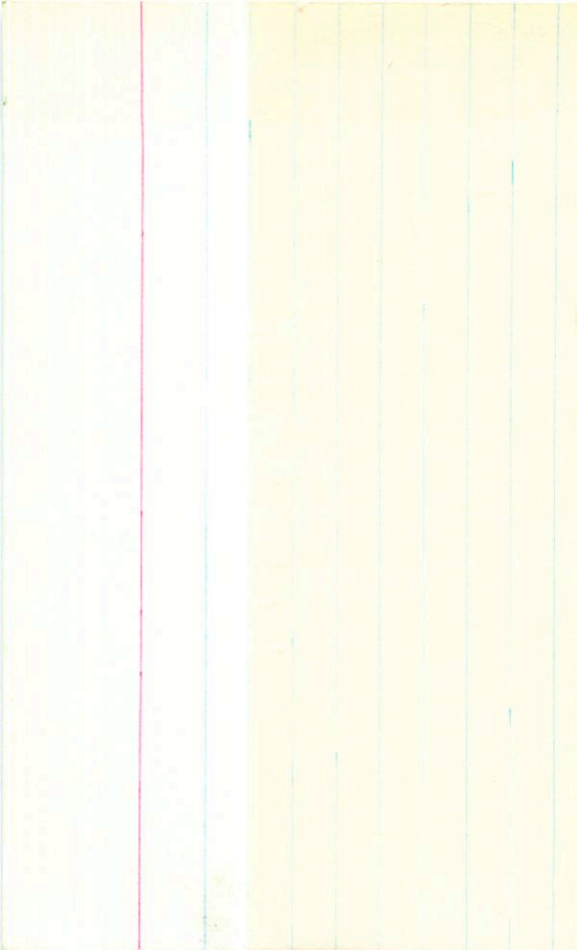
4.25 218 203 682 2758

$8/18$
 324

1.45

-6.7

1880 26



PO 2265 6.5 2265

Σ up 22 02.3 +64 23 43 -7.28

HR9417

711 4.5 Am(A)

dfy -6.28
-6.28

A0515600

Dm=2.03

+205 +087 A } GC

+155 +088 B } GC
+200 +088 GC + 2500

w 13565/9

0160 085
205477.2 0324
23072 0324
18.124

+057
+051
+049
1.52
4.62
5493 762

35A(14)
15M(F)

0324 +040

45.11

20.316 +0323 +0917

988 8127 2226
-18704 5824 6520
-1045

3976(LT)
246(LF)

+24
344

2054
212 +088

41.13

2845

204579

65416

3.34

2770

3.35

-491871 902 432 - +200 +058 -6.7 079 -6 150

098 039 175 069 189 1064 -2.9 -2.5 +1.5 ~~035~~
+2 +48 +1
 $\boxed{+38-17-9}$ 025

+4 +53 +3 02

$\boxed{+48-19-11}$

+42 +18 -10 23

-205 +1.15 USNO

AD 515400
 108917 8417
 +0320 +20 +097EAS
 +0326 +091 -107 -11d5
 22 02.3 +64 23 Am -7.27

209790 4.26 + 0.39
 30977 ① 2000 039
 13869

② 6.44 + 0.54 - 0.01 599m + 208 + 057 RC

20.454 1877.2 +64 23 1.56 18738

2330
 18,124
 -6.63
 5493 22070.65

2.26 yr.
 0.073
 5m = 2.03

20.313
 2253
 441
 88
 202
 101
 1.52 1945.11
 -9

9238 9456
 3824 3254
 341 2291
 2217 0142
 101

+650
 9238

A 5.10
 B 5.41
 P = 810d

Vickers G. and Scarfe C.
 1976 PHSF 98 944

R.A. : 22.050
 DEC. : 64.400
 M. R.A. : 491.000
 M. DEC. : 88.000
 DISTANCE : 2.020
 MODULUS : 25
 D. VEL. : -10.100
 q1 (U) : 0.794
 q2 (U) : 0.541
 q3 (U) : 0.277
 DU : 1024.249
 U : 23.168
 q1 (V) : -0.152
 q2 (V) : -0.264
 q3 (V) : 0.952
 DV : -263.309
 V : -16.294
 q1 (W) : -0.588
 q2 (W) : 0.799
 q3 (W) : 0.128
 DM : -258.513
 M : -7.844

23.03

-16.97

7.13

Mystic

17-2.2 078-6180

039

-2 + 2
+29 -1
25 -11 -7

037

2 + 30 -1
6 -13 -7

SS

SS

407.9d ~~378.7~~

+2205071 22 02.1 +220 49 -378.7 R2 -381.4(12)

H202 09421

Prm.

8.91 11.50

950 USD = 130

Apr

~~401035~~
~~4011013~~

+1128-0055
-0212-0044
-0834-0063

41073
-0256
-0902

+102-405.9
-24-333
-86.173
-357
-5410
-227

4010-0055

401647-00257

4043-020 A6103

+010
+033

+042-003
+038+0003

+053-006 Yk

+793

+546

-173

4041-007

+038

-149

+462

+974

-590

+030-002

A p

4013-010

9.5

116

115

114

113

112

111

110

109

108

107

+0020
+0007 \$6.4

~005 \$6.7
1000

3.572 19046

-031
3.541

3.59

+ 049

34.59 19034

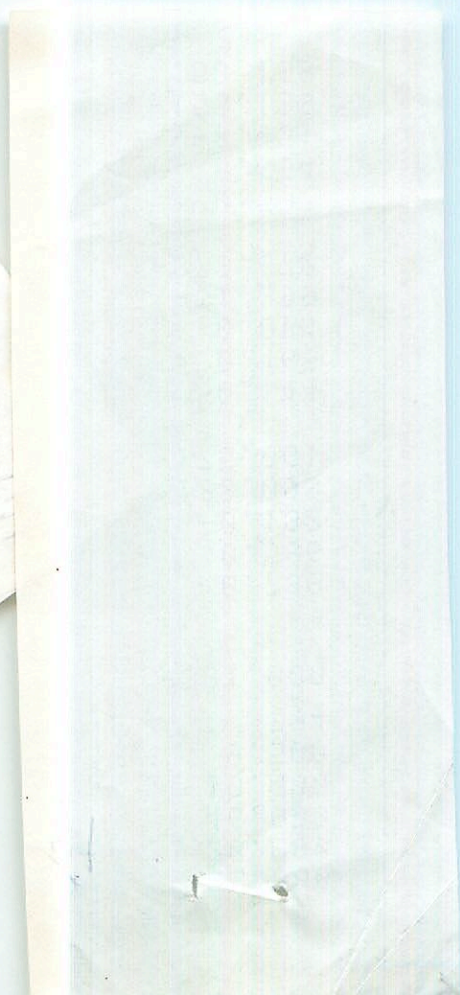
+23
34.77

35.0 1924.1

-24
34.80

4003

51



209204 21 55.7 -12.54 852 + 316 w(3)
 GC30243 7.21 +0.62 +1.565 395 (2) Mr. Sun
 W13758

700939 7061510 Y

$$\begin{array}{r} +0007 \pm 2.9 \\ +0023 \end{array}$$

$$\begin{array}{r} +067 \pm 2.7 \\ +067 \end{array}$$

$$42.604 \quad 1903.9$$

-12

54

17.57

1899.2

$$\begin{array}{r} -032 \\ \hline 1572 \end{array}$$

$$\begin{array}{r} -3.40 \\ \hline 20.97 \end{array}$$

$$21.825$$

$$20.848$$

$$\begin{array}{r} 42.673 \\ \hline 33 \end{array}$$

156

$$\begin{array}{r} 1670 \\ \hline 19 \\ \hline 632 \end{array}$$

$$\begin{array}{r} 1508 \\ \hline 650 \end{array}$$

$$\textcircled{33.8}$$

$$+078$$

$$\begin{array}{r} 10.368 \\ 32323 \\ 42691 \\ \hline -5 \\ -37 \\ \hline .649 \end{array}$$

$$\begin{array}{r} 9.72 \\ 51.43 \\ 18.29 \\ \hline +12 \\ \hline 8 \\ \hline 18.09 \end{array}$$

$$27.39 \quad 1933.77$$

$$\begin{array}{r} 7.70 \\ \hline 19.69 \end{array}$$

$$\begin{array}{r} 113 \\ \hline 38 \end{array}$$

310

$$\begin{array}{r} 19.69 \\ \hline 75 \end{array}$$

$$\begin{array}{r} 18.94 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 18.38 \\ \hline 259 \end{array}$$

$$\begin{array}{r} 18.99 \\ \hline 16 \end{array}$$

$$+259$$

$$18.21 \quad 1939.90$$

$$+16$$

$$\begin{array}{r} 18.05 \end{array}$$

$$7367$$

$$\begin{array}{r} 34.7 \end{array}$$

$$\textcircled{3956}$$

$$\begin{array}{r} 42.685 \\ \hline 19 \\ \hline 670 \end{array}$$

167