

185112

19 361 -45 15

-165 (3)

(2)

9.03 850 453 314 (4)

905 537 452 250 (1)  
545 452 300

-13

-005  
90374

+5.90  
11  
+1601

(25) 17

1037 -243

37, -243

52  
-243  
3.04  
-16.5

R.A. : 19.600  
 DEC. : -48.300  
 R.A. : 56.000  
 DEC. : -243.000  
 ANCE : 3.040  
 ULUS : 41  
 VEL. : -16.500

(U) : 0.416  
 (U) : -0.253  
 (U) : -0.873  
 DU : 365.233  
 U : 29.220

(U) : 0.267  
 (U) : 0.952  
 (U) : -0.149  
 DU : %-1049.543  
 U : -40.182

(M) : -0.869  
 (M) : 0.171  
 (M) : -0.464  
 MP : -350.623  
 M : -6.564

52

52

Sp. B. P = 7.6

185912 19 37.6 +54 51 5.9 dF4-14.6a

27206

12049 +0041<sup>23</sup> +166<sup>25</sup> N30

A126 +0034±2.2 +170±1.9 RC → N30

3656 . 00

299 165 451

+0041 +164  
Country

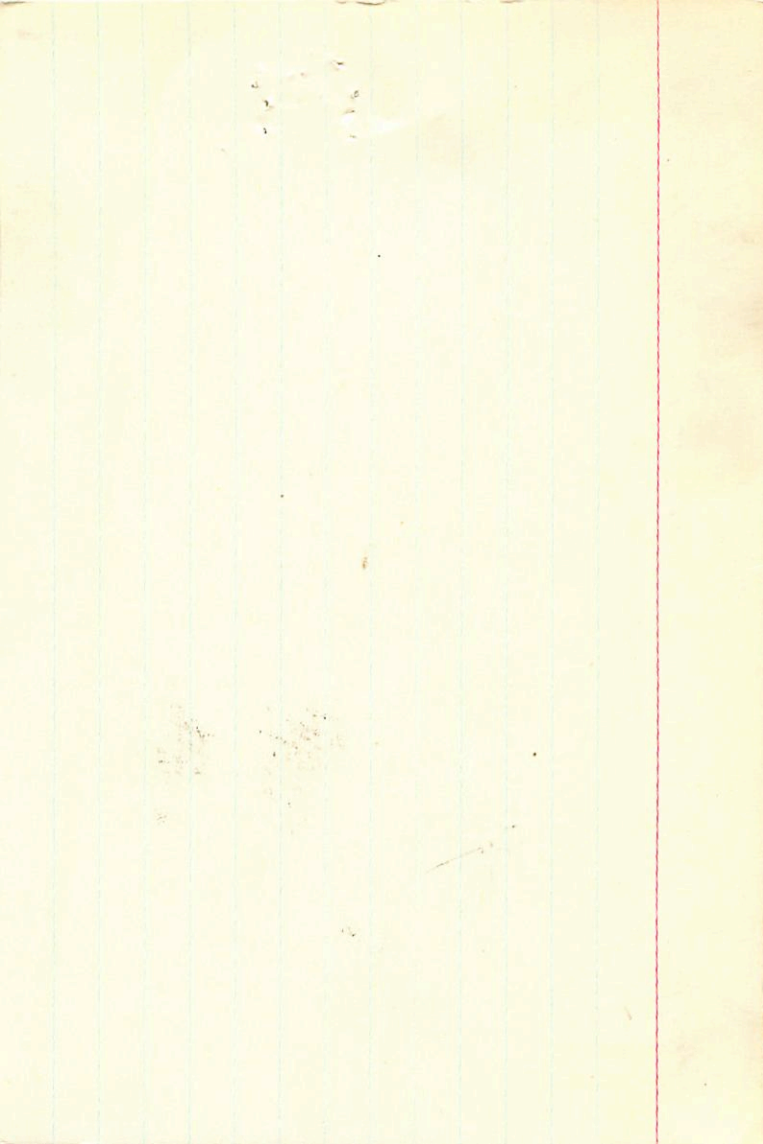
0-132

235 164

41  
164  
3.06  
-165

16.5

7347 5992  
-6784 8021



down

185912

19 37.4

RS 51 51 51  
-6.5

of FY

HR7484

2 7.4

5.86 145 -01 3595m

GC27206

3 B

2 2p

.294 .145 .45 / 50C 2.663

294

[m] 218 +6

② hit

[m] 39 ✓ +13

+22.5 -14.3 +0.8

+793 -10 +172

18

16 egg  
186408

750314  
79 40.5 + 50 24 6.3 86.3 - 25.1 8

-0162 21.6 -155 ± 1.5  
-0154 -153

34

Ab 512851

388 627  
368 876  
27284

5.96 + 0.44 + 0.19 6.4  
6.20 + 0.66 + 0.20 6.52  
5.76 + 2.25  
6.60 + 2.32

27284/60

12083

29.120  
1014

1887 410 214 335 255 1890.5  
590 411 210 349 312  
-35-158 6.4  
312

345

30.134  
4926

0145 158 416 226 354 2518  
683 418 222 351  
-218  
-158  
1.684

(H)

4022

0149 754  
331  
-801  
33.4 3  
33.30  
31.02  
30.7  
31.71  
-9.50

0149 754

29.536  
524  
530

331  
-801  
33.4 3  
33.30  
31.02  
30.7  
31.71  
-9.50

-142-157

29.226  
333

331  
-801  
33.4 3  
33.30  
31.02  
30.7  
31.71  
-9.50

-224  
154

29.226  
333

331  
-801  
33.4 3  
33.30  
31.02  
30.7  
31.71  
-9.50

-2714

29.226  
333

331  
-801  
33.4 3  
33.30  
31.02  
30.7  
31.71  
-9.50

-0146 E.2.0  
-0146  
-164 E.1.8  
-140

27255

32.052 1887.1 +50 24 2.49 1880.6

$\frac{918}{970}$

$\frac{1138}{13,877}$

52.10  
40272

344  
21422  
5.65

1926.4

32.372

49.6

$\frac{7340}{347}$

366

6.47  
6.50

106

$\frac{56.1}{347}$

370  
490

32.114

3.80  
-26  
1974.74

120

245

28

3.522

5.01  
-786

2



182307

19 41

+24 24

888

+24344

(24)

-230

-884

-90

688 373 182341 (4)

ML

2016  
CO 310

244  
24

*[Faint mirrored bleed-through text from the reverse side of the page]*

R.A. : 19.700  
DEC. : 24.500  
R.A. : 98.000  
DEC. : -269.000  
ANCE : 2.510  
JLUS : 32  
VEL. : -9.000

(U) : 0.436  
(U) : 0.755  
(U) : -0.490  
dU : -777.927  
U : -20.303

(V) : 0.251  
(V) : 0.421  
(V) : 0.872  
dV : -430.791  
V : -21.531

(W) : -0.864  
(W) : 0.503  
(W) : 0.006  
dW : % -1006.828  
W : -32.037

53

7564

187423 19 48.7 42 30 60 -16.785(4)

6C27510

1944 (20)

W12215

5.78 + 0.53 + 0.21 6.25 P

74678  
41104019

-0.22 -0.265 64 S = -1.5

-0.232 -3.27

-341

-16.7

-341 -329

-335 -328

1.8

6C

-341 -320 6C

-571-64 +37 .025

3.93 + 23 8 4

-74-77 +33 .02

563

6.116 5.3 424 190 333 2.530

182 242

192

192

408 409 668

4.2390  $m_1 = 170$

2-4 604

C1 453

13.609 4.16 409 668

40 310

+4764

u-6 (154)

u-7 1022

097

2479

A(12)

+47

1024 64 008 MF

-0232 ± 4.6  
-0233

-320 ± 4.2  
-333

25

42.556 18950

+11 80 13.02 1891.7

1.276

18.66

44.232

31.68

43.344

17.511 1432.9

7261

348

536

17.92

1366 36.3

43.177

41.3

15.70 1939.71

444.6

188

15.74

268

16.83

-964

-14.85

100 - 100

100 - 100

100 - 100

100 - 100

100 - 100

100 - 100

M

100 - 100

16,008

+27

-0,136

0,600

-42,711

18-

0,763

-1,309

-28,532

17-

-0,632

-1,707

-16,700

22,909

8/167

\*1,800\*

\*0,328\*

\*0,338\*

\*30,000\*

\*11,000\*

\*49,700\*

\*19,000\*

187923,000\*

MS

+304191

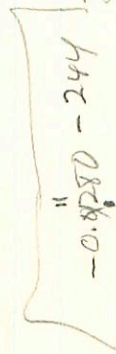
422

188427 19 52.6 +0.3 56 5.5 dms +50.2  
62597 9.40507444 230 (3) +520.2

12260 602758 135600  
62357 (10) 39 M  
62253 -0.8280 -244 31.7 M  
-270.47 -251.4 Y  
-278  
-285

4771 +533 -703 -4251 -6215 +12466 -39.5 -35.2 -74.7  
+222 +700 +674 -2946 -8162 +1108 -35.2 +34.0 -1.2  
-854 +476 -201 +11334 -5550 +5784 +18.3 -10.5 +7.8

-281  
-250  
2.73  
+51.3



Carbon  
MCR  
-188.250  
-281-250

57



10. 10. 1974  
10. 10. 1974  
10. 10. 1974  
10. 10. 1974

+100 4091

188 540

19 52.8 +10 36 2667

-1928 (18)

G-143-7

883+0.58 -0.11 8amples (D)

-31 267

883 416 100 163 (5)  
883 417 113 128 (2)

-200.66

(145)

~~(Lambertum)~~  
~~-0.25 242~~

-038 +277 y.c.c. → 1430

+55 +315 Gorden (D)

-31 +289 AG 143

145  
G<sub>0</sub> 145

+4.96

(100)

-035 +290

-032 +288 31

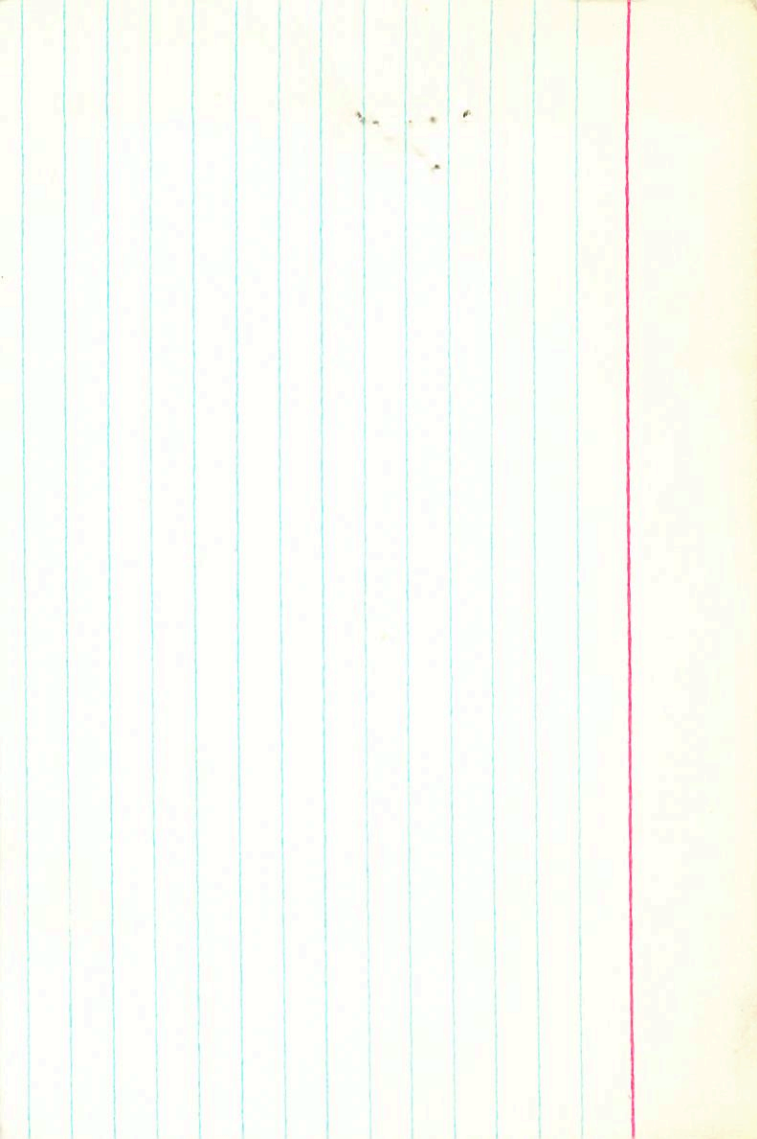
-037 292

-38

292

2.85

7926



+1004091

19

52.8

+10

36

-194.5  
-206.7

25.1

40188510

9072  
-200.9

8.93 + 0.575 - 0.115 2.5ad

$M_V = 5.75$

$m-M = 3.06$

$S_2 + 1.22$

+269 → M30

-0.87

+2

-0.31 1267. Y

S2 47.098

+10 36 11.41 1939.71

+4

-0.81

+3

1272 → M30

$\frac{109}{11}$

11.45

417 00.

+157.9

-119.6

+62.6

+470 +610 = 638

-0690 +7865

+7175 +29.9 +128.0

+222 +618 +755

-0326 +7968

+7642 +31.9 -15.17

-854 +496 -154

+1254 +6395

+7649 +31.9 +30.9

172  
76



EL. : 19.850  
EL. : 18.400  
EL. : 18.000  
ANCE : 18.000  
PLUS : 2.850  
EL. : 37

EL. : -192.800  
CID :  
COT : 8.420  
COT : 8.412  
COT : -8.448  
COT : 764.102  
COT : 121.703

COT : 8.320  
COT : 8.410  
COT : 8.734  
COT : 813.834  
COT : -112.102

COT :  
COT :  
COT :  
COT :  
COT :

COT :  
COT :

P.A. :  
SEC : 19.850  
SEC : 19.850  
SEC : 20.000  
SEC : 20.000  
SEC : 20.000  
SEC : 20.000  
ANCE : 2.850  
PLUS : 87  
DEL. : -192.800

(U) :  
(U) : 0.466  
(U) : 0.612  
dU : -0.640  
U : 764.105  
U : 151.703

(V) :  
(V) : 0.226  
(V) : 0.616  
dV : 0.754  
V : 813.024  
V : -115.207

(W) :  
(W) : -0.850

+422

189087

19 55.2

+29 41

8.2

667-29.70

C2605  
12304

~~POB~~

-3065

50A(28)  
24M(17)

+090 +247 Y  
-3  
087 244

47#5

7.89 483319 2950

+033

MR

ND773.2

+083

AR

C<sub>0</sub> 289

+5.73

10075 to 40-Calculus

5.82

98 242

113

242

2.07

-302



257

10. 200  
11. 200  
12. 200  
13. 200  
14. 200  
15. 200  
16. 200  
17. 200  
18. 200  
19. 200  
20. 200

YULUS  
TANCE  
DEC  
R.A.  
DEC  
R.A.  
DEC  
R.A.

R.A. : 19.900  
DEC. : 29.700  
R.A. : 113.000  
DEC. : 242.000  
TANCE : 2.070  
DULUS : 26  
-30.200

189340  $\frac{7637}{45}$  19 57.1 - 10.05 d.f. 8 + 22.18 w. 14

GC27689 318 264 - 424 636 + 21.7 (31)

W12331 5.87 + 0.58 + 0.05 + 0.02 R

Y4733 AM 21 m up  $S = 0.06$

-105228 - 1.88 - 399

-50 -36 +1 .040  $\frac{278-399}{\text{Candy}}$

-55 -43 +1 .035  $\frac{658-399}{-278-399}$

-278 -398 +215

-1905 -398 Gut

-19635 -3975

-281 +23.1

-280 -397 2.15

+4 -278 -398 00

-267 +10 -400 +10 Y

-275 -398

666

374 (16)

367 (10)

396 (17)

375

-0188 43.5 -398 43.1  
-0793  
-348

472489 -175 955 -275 -358 +23.1 07024 -1.855

-246061 -134 034 -1.255 -346 +22.6 +11 -20

-11 -26 -35 06

4.239 1400.2 -10 5 25.19 18954

-4049-2

936  
5175

+2173  
3.46

94  
49

22.84 1934.22

42.467  
22.058  
4.5225  
-20

20.46  
1.30

4039

7493  
37.5

37.3

505  
-84  
501

19.16  
+39  
18.74

1940.71

42.1

454  
-921

4.412  
-3  
407

11.73  
+10

21.42  
20.20  
-16.94

55

189340.000\*

19.000\*

57.100\*

-10.000\*

-5.000\*

-0.280\*

-0.398\*

2.150\*

26.915 18.20

~~23.100~~

317

-1.301

-0.802

-40.44 -49.1

~~-53.554~~ 42

-1.870

0.494

-34.70 -205

~~-38.942~~ 227

0.358

-0.336

-1.09

~~1.856~~ -12

24.7 17.38

~~50.2~~ -57.4

34.7 -30.2

11.0 -6.9

41.1

12.1

1.0

189340 19 57.1 -10 05 600

HR7637

2027689 4.58 5.85 + 58 + 4 2895 ✓

589 375 121 358

1377 .194 .328 2.612

[m] 262 +13

369 180

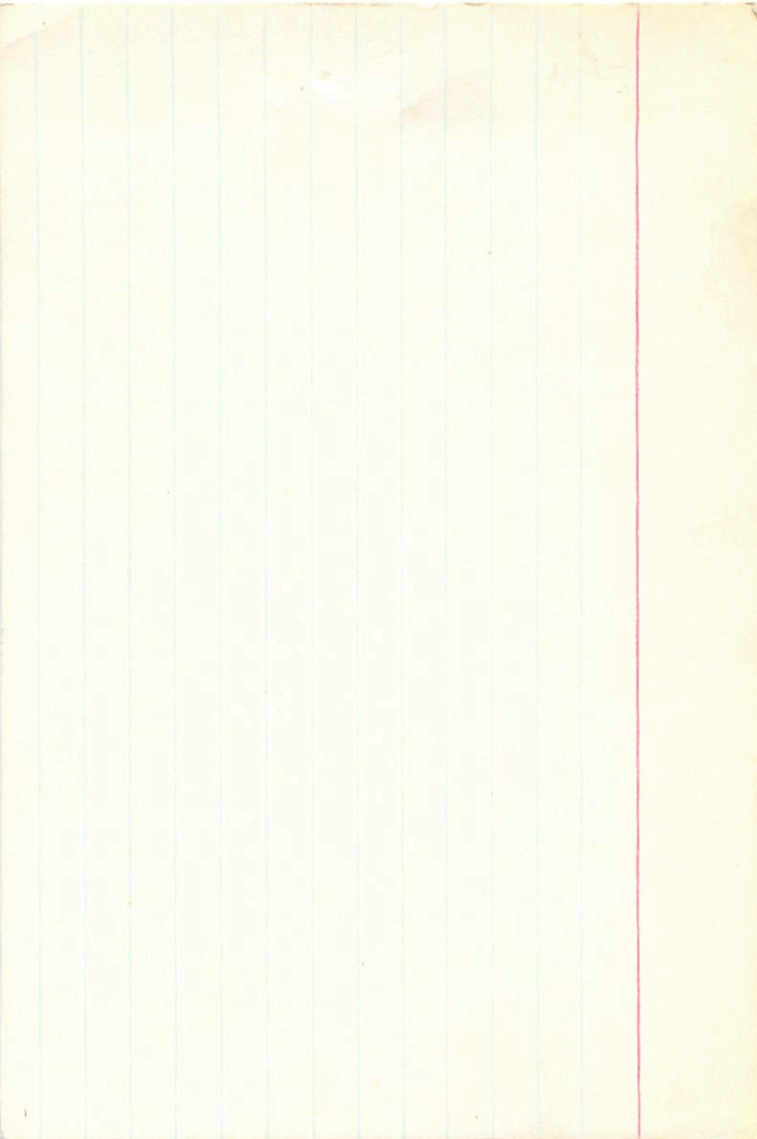
③ 2, 2, 1, 1, 3

[5] 251 -23

R<sub>0</sub> 263 340

2.20 57.1 -40.1 +1.4.0

-1292 -871 +335





199567  
GC27793

20 00.6 -67 27  
324 276 244  
-412 564

265 → 265  
-11.240.664  
-441(2)  
-12

W12348

6.08 70.63 - G2E Cage

-11.5255

NUM

20297 +491

248 37

Y473 190 202 298 2552

+1462 -511-3  
-688664

N786 -6845 +839

-684 0c

609 359 195 298 249 2

446 -12.0

470 -3080 -45 .050

+845-687 1.65

+74 -30 -46 -056  
+100 -45 -69 -040

2216  
-670  
D.96  
-12.0

1477 -170

870-670

444(12)  
511(15)  
4757

+145878.7  
+1406

-68455.7  
-692

-67 27 14.12 1893.6

33830  
-7.345  
26482

3897  
38.41

8.57 1928.25

6.90

1.64

232

59.32  
4

5936

23.95

3981

27.072

3105.3  
-1.930

923

30.423  
-17

30.406

30.406  
-4.494

25.912

25.912  
-4.194

189517

20

00.6

-67

27

G-2V

HR6744

6.09 + 0.06 + 0.06 (3)

5.88 + 0.205 (2)

-12.06

+1458 -684 66

+1466 -692 700

} GCS system

59

691 207 327  
691 395 502 328  
390 492

6.93 + 0.60 + 0.14 3 BS

189431

20 00.7

38 01 66

-37.9

654

6627748

+0044 (-434)

+0066 = 8.3 -390 ± 6.5

+070 -375 CP → CV

43.693 1898.9

+0076

-373  
46.00 1895.4

344  
~~344~~

-337  
43.356

+0081  
+5

+21.29  
24.71

24 C(7)

4.114

+0071 -381  
+5 +6  
+0076 -375

48.27 1928.50

39.542  
43 654  
652  
-18  
634

+090 1935.7

8.80  
39.47  
08

395  
CV →

4361  
24  
634

40.0  
-25  
39.75

39.39  
+30  
39.09

84 395

107  
-845  
1189 37.9



68



.A. :  
EC. : 20.000  
.A. : -38.000  
EC. : 107.000  
NCE : -395.000  
LUS : 1.870  
EL. : 24  
: -37.900

(U) :  
(U) : 0.494  
(U) : -0.064  
DU : -0.067  
U : 316.821  
: 40.351

(U) :  
(U) : 0.202  
(U) : 0.979  
DU : 0.043  
U : %-1751.57  
: -45



G-186-11

190404

20 01.8 +23 13 dms

-2.9 @  
-2.48 wv(4)

627828

7.29 +0.82 +0.40 N1E

-1.6 @P

74762

$\delta = 07$

-2.0

+220398

-1.016 -91866

41A(20)  
76M(17)

7728 489 325 243 (3)  
2264  
6.98  
6.36

-1.010 -9084

+3.0  
-7.8

41A

6.90 +32- 1A  
+305 6.44

41A

-1.013 -915 66 →

914

-1.004 -897 71 →  
-1.026 -890 AG-103

6.90 +31 -1090  
6.57 -914  
6.1 -1096

1000-914

-1.015 -908  
-1.012 -896

6.90 +31 -1090  
6.57 -914  
6.1 -1096  
-2.1

-1090  
-914

-2.6

1.6

-866 500 354 919 -1.010 -510 -2.4 -358 -1-3.945  
-870 -310 -505 -179 -3.275 -3.855 -2.0 ÷ 1 + 2 079

-4 -41 -24  
-21 21 -38  
3.1.8 -24

-5 -52 -30  
-26 27 -17  
44 10 30

-43 -47 -51  
-66 -35 + 21  
-53 -59 -43 043  
-87 -46 + 24

9

0.494  
1.12

-2.180

1.450

-214.000

-1000.000

23.500

20.000

D. VFL.

MODULUS

ISTANCE

M. DEC.

R. A.

DEC.

R. A.

R.A. : 20.000  
DEC. : 23.200  
M. R.A. : % -1090.000  
M. DEC. : -914.000  
DISTANCE : 1.460  
MODULUS : 20  
D. VEL. : -2.100

0.494  
0.729

1582

190406

GC27835

w12424

44760

H1604121

20 01.9 +16 56 dg1

5.80 +0.61 +0.09 J+M

5.77 +0.59 +0.66<sup>0.2</sup> Mich

$\sigma = 0.05$

+828

+2.7 w(13)

+4.7 v(12)

(+15.5(11))

+5.8 f

-0278 -415

-02755 -4115

-402 -415 60

-41 -21 +9 .059

-37 -19 +7 .067

-3954

+42

-393 -414

12

724 (10)

304 (12)

625 (0-)

6056

-0250 ± 1.8  
-0276

-415 ± 1.6  
-415

51.335 - 1889.8

1.714

53.049

51.392

2

794

51.637

-11

626

710

-1.339

+16 56 0.25 1889.2

65.40

50.996

54.39

25.23

25.48

61.35 - 1934.3

14

6.49 1099

41.83

4.50 1940.50

37.4

0

5.50

48.2

-19.98

50

1968-1969  
1970-1971  
1972-1973  
1974-1975  
1976-1977  
1978-1979  
1980-1981  
1982-1983  
1984-1985  
1986-1987  
1988-1989  
1990-1991  
1992-1993  
1994-1995  
1996-1997  
1998-1999  
2000-2001  
2002-2003  
2004-2005  
2006-2007  
2008-2009  
2010-2011  
2012-2013  
2014-2015  
2016-2017  
2018-2019  
2020-2021  
2022-2023  
2024-2025

190406.000\*

20.000\*

1.900\*

16.000\*

56.000\*

-0.393\*

-0.414\*

1.200\*

17.378

~~4.000~~

5.8

-2.250

-0.546

~~42.27~~

41.400

-1.399

0.827

~~19.51~~

~~20.000~~

0.548

~~0.100~~

17.78

~~43.3~~

203  
244

62



150406

20 1.9 +16 56

dg1

HR7672

G622835

5.80+60+8 255~

15598

✓

528<sup>5</sup>

.884 .193<sup>1.27</sup>

187 321

② SRC 2.615

580

387

187 347

③

④ Gnt

[m] 267 580 Lne [m]

580 327

170

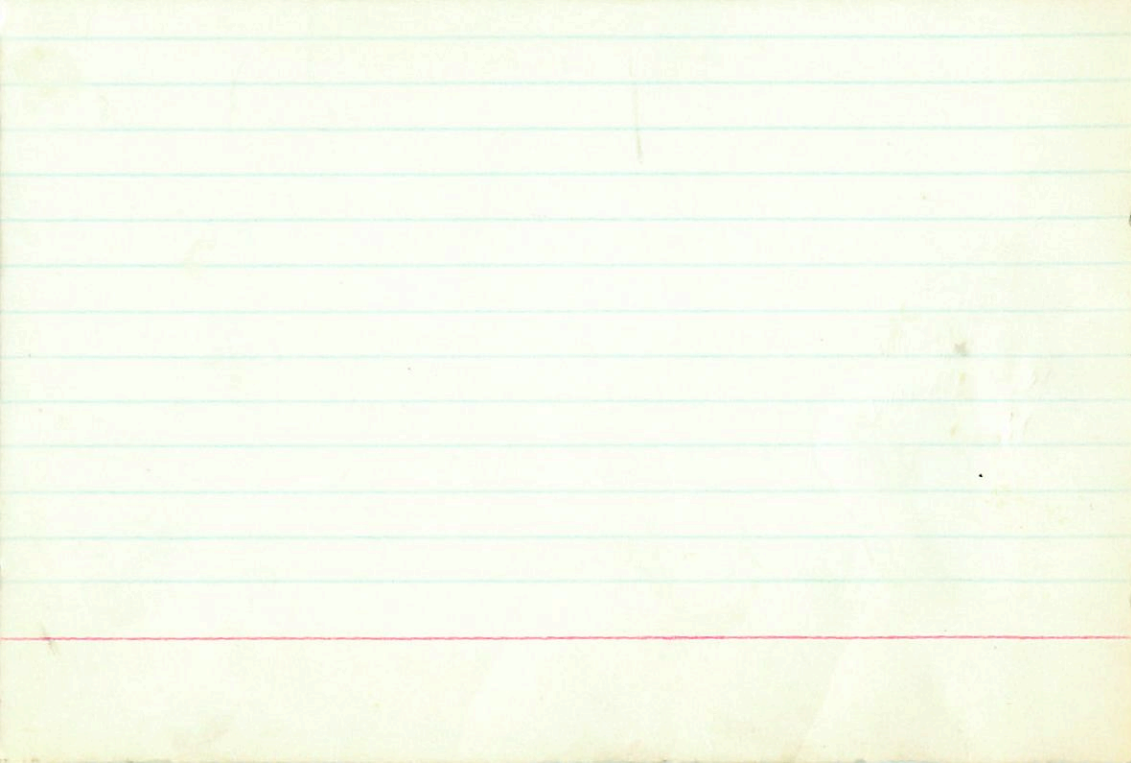
324

④

80343

[G] 243 160 -39.7 -19.7 +8.7

859+ 1091- 1552-  
-2254 -1400 +558



A0513348

190777 27874

14R 7693

98921

G.338

ambly

0221114

260114

32

114

127

236

20217\*7.5  
+106\*5.5  
+100  
282

20 03.3 +38 20 60 -24.28

617 413 222 336  
357 203

20.284 1910.2 +38 19 59.00 +258 +112 6m(2)

-864  
19.420  
25.61  
54.142  
19.754  
55.896  
55.2

17.7

40.5 1925.7

57.7  
22.0

55.65  
82  
55.2  
56.86  
56.50

55.2  
71  
71

19.78

11  
591

6346 8439 2874

5302

~7726

57.2

-230

+255 +1006 G-C

859 512 620 785 +256 +110 -24.2 -068 -15 407  
220 058 131 035 977 895 -19.0 -10 +16 035

63

338.344  
-18.344  
-0.242  
0.238  
0.232  
0.226  
0.220  
0.214  
0.208  
0.202  
0.196  
0.190  
0.184  
0.178  
0.172  
0.166  
0.160  
0.154  
0.148  
0.142  
0.136  
0.130  
0.124  
0.118  
0.112  
0.106  
0.100  
0.094  
0.088  
0.082  
0.076  
0.070  
0.064  
0.058  
0.052  
0.046  
0.040  
0.034  
0.028  
0.022  
0.016  
0.010  
0.004  
0.000

0.000  
0.004  
0.008  
0.012  
0.016  
0.020  
0.024  
0.028  
0.032  
0.036  
0.040  
0.044  
0.048  
0.052  
0.056  
0.060  
0.064  
0.068  
0.072  
0.076  
0.080  
0.084  
0.088  
0.092  
0.096  
0.100  
0.104  
0.108  
0.112  
0.116  
0.120  
0.124  
0.128  
0.132  
0.136  
0.140  
0.144  
0.148  
0.152  
0.156  
0.160  
0.164  
0.168  
0.172  
0.176  
0.180  
0.184  
0.188  
0.192  
0.196  
0.200  
0.204  
0.208  
0.212  
0.216  
0.220  
0.224  
0.228  
0.232  
0.236  
0.240  
0.244  
0.248  
0.252  
0.256  
0.260  
0.264  
0.268  
0.272  
0.276  
0.280  
0.284  
0.288  
0.292  
0.296  
0.300  
0.304  
0.308  
0.312  
0.316  
0.320  
0.324  
0.328  
0.332  
0.336  
0.340  
0.344  
0.348  
0.352  
0.356  
0.360  
0.364  
0.368  
0.372  
0.376  
0.380  
0.384  
0.388  
0.392  
0.396  
0.400

R.A. : 19.650  
 DEC. : 50.400  
 R.A. : -218.000  
 DEC. : -158.000  
 STANCE : 1.680  
 DULUS : 22  
 VEL. : -27.000  
 Q1 (U) : 0.426  
 Q2 (U) : 0.800  
 Q3 (U) :  
 NP :

(U) :  
 (U) : 339.745  
 dV : -16.344  
 V :

1 (W) : -0.842  
 2 (W) : 0.536  
 3 (W) : 0.065  
 dW : -749.600  
 W : -15.612

3

182307

19 41 424 24

887

4243514

(24)

930  
-887  
-----  
53

688 373 182341 (4)

Ab

20300

2346  
24  
-----  
2370

Clinton

400 65 - 264

089-264

98

264

251

98

(31) 35

53