

+0012±6.5
+0001
-0004
-030
-037
-038
+015
+3.5
004
-0.5
-133

-809-585
-150
989
+015
-028
+3.5
004
-0.5
-133

015 003-011-002 081-038 +3.4 -2.0 -2.8

57.817
-062
755

+0015
-0025
-00255

-8 37 54.05
+1.07
53.88

59.14

193575

36.851
20.845
57.716
750

152.0
760

38.0

57.009
56.149
1.209
54.92

72.59
36.3

37.2

744

+0022

6686
5543
816
5599

55.15

1938.82

57.772
770

+0022
+003-024

55.06
54.99

1.11

9551 2940 7912-6.116 0329-0049 +5.3 +2.5 0090 5.21

+0016 -036
+00163 -0333
-0318

13946/1 15 360 -8 85 dFL dFL

09168
0252

HR 58.5/16

6.48 + 52 - 0.2 593 ~

GC 21029/30

026.5 - 0.79

1.806 1174 1.354 2.668 714, 510
918 266 295

229 228

6.50 + 53 - 0.2 593 ~

295 240

1.322 .170 1.304 .2662 5, 13, 18, 4

+7

239

0

A0

9894 7607

3.20 - 6.5 - 0.5 - 4.7 2922 - 1490

-103 -10 -143

321 177 343 2688

317 127 361 2.625

17022

15 584 51

90 48

10.5

100

2125

327

120

40

436

2159

610

323

337-017

327

41

27

108

12022 436 90 48 10.5

99



RAD. VEL. : -10.500
 MODULUS : 37
 DISTANCE : 2.700
 PM. DEC. : -17.000
 PM. R.A. : N-3258.00
 DEC. : -84.100
 R.A. : 12.000

U : 28.911
 Ub : 993.573
 p1 (U) : -0.378
 p2 (U) : -0.735
 p3 (U) : -0.592

U : -29.093
 Ub : N-1058.00
 p1 (V) : 0.952
 p2 (V) : 0.219
 p3 (V) : -0.729

W : 38.792
 Wb : 997.922
 p1 (W) : -0.927
 p2 (W) : 0.941
 p3 (W) : -0.399

09

R.A. : 16.000
DEC. : -84.100
PM. R.A. : % -3278.00
PM. DEC. : -17.000
DISTANCE : 2.700
MODULUS : 35
RAD. VEL. : -10.500

q1 (U) : -0.378
q2 (U) : -0.735
q3 (U) : -0.562
dU : 663.573
U : 28.911

q1 (V) : 0.652
q2 (V) : 0.219
q3 (V) : -0.726
dV : % -1058.85
V : -29.093

q1 (W) : -0.657
q2 (W) : 0.641
q3 (W) : -0.396
dW : 997.955
W : 38.765

147510

16 206

10 3E-

+101a

6057

396 584

+10069 +005 6000

333 274

4080 2005

010

109

15.0
+101

12

100

R.A. : 16.350
DEC. : -39.100
R.A. : 104.000
DEC. : 5.000
DISTANCE : 0.510
MODULUS : 13
VEL. : 10.100

q1 (U) : -0.305
q2 (U) : -0.142
q3 (U) : -0.942
dU : -119.883
U : -11.028

q1 (V) : 0.636
q2 (V) : 0.706
q3 (V) : -0.312
dV : 260.036
V : 0.135

q1 (W) : -0.709
q2 (W) : 0.694
q3 (W) : 0.124
dW : -254.799
W : -1.966

100

392A

147584

61566

~~147584~~ 2255

16 23.1 -69 58

-447640

191 131

Free

2-03845 +10517 FIVE

sp 1255 p 5761

197

916

577

5058

040

426

101

101

R.A. : 16.400
DEC. : -70.000
1. R.A. : 577.000
1. DEC. : 106.000
DISTANCE : 0.400
MODULUS : 12
D. VEL. : 7.600

q1 (U) : -0.294
q2 (U) : -0.609
q3 (U) : -0.736
dU : -581.022
U : -12.582

q1 (V) : 0.633
q2 (V) : 0.453
q3 (V) : -0.628
dV : 819.974
V : 5.089

q1 (W) : -0.716
q2 (W) : 0.651
q3 (W) : -0.253
dW : -342.786
W : -6.043

800 261

-6006 ± 6.3
-0012

154417 17 02.7 +00 46 5.9 dff -17.5a

-423 636⁰⁰¹⁴

339

149 f

9855

43.977 1894.8 +0 46 27.82- 1899.4

033
010

+17.31

0013 -337

45.13 17.05

44.949

-00124 -3386

33.559 1933.35 +0.75

974

-0116

33.49 646 17

43.948

40.1

-0117-333

333

963

6678

32.55 1186.34 1.15

-047

13.901 2272

972

34.9 35.5

5424 -3640 816

12 900 2031

33.23

-11.90

-8402 -6244

102



17.050
0.750
-17.000
-333.000
1.150
17
-15.500

-0.150
0.495
-0.856
-768.903
0.210

5.500

155895

19

14.6

-2659

~64,1625

652 387 184 405 (1)

652 385 179 409 (4)

-4608513

17 15.3

-46

35

+22.5

+946 ± 10.0

+213 ± 7.3

100

+185

c, +2

156274

5.48 +0.80 G-8

.1683

B 110V cage

+20.5 ± 0.8
+24.5 ± 0.8

23353

9977

+975 +213 GC

15.190

1901.1

-46

35

7.08

1846.8

-4626

-11.33

+1029 +166 +46 →

10.567

18.41

+1005 +188 GC

22.235

+1017 +177

51.370

32.59

1931.90

71.71

17.25

3.605

41.25

35.9

466

655

13.84

232

39.7

1.524

652

200

11.10

39.7

+178

14.490

11.94

+6

39.7

-0.75

14.051

11.76

+7.25

39.7

+22.5

450

10.43

1939.81

39.7

+1048

3487

10.54

10.54

+1047 +178

-0.45

133 + 116
116 C7
125 + 17
203

348

811.02
591
4544
14.051
3.944
-3487



103



105

177.350
-46.600
1524.000
178.000
-0.750
7
22.500

-0.002
-0.001
-0.050
-0.037
-20.049

0.050
0.770
-0.290
3441.075
17.762

103

-0.020
-0.050
-0.100
-3615.001
-27.974

6.35 + 4.5
9.23 15.5
17 -34 56

1406426

12.1 -34 170 km (mm)

+1167-176

+3.4 W(4)
-4.5 L(2)

+0939 -182 030
+0954 -170 00 →

+0946 -176

7.6 10.

0.68

(4.1162)

-105	-102	-989	-5783	+0850	-4933	-3.7
571	808	-144	+3.1450	-6740	+2.4710	+18.8
-814	580	020	-4.4834	-4838	-49672	-37.7

1

204

1 2 3

6426.000*

17.000*

15.500*

-34.000*

-56.000*

1.167*

-0.176*

-0.680*

7.311

0.000

15284

(6249)

17

173

-25

52

525 447 344

70031 - 183

7046 - 183

154682

183 593 109

(905)

242 544

076
182

~~205~~
218

305 21 =
331 6000
318

1605

17 253 -08 10

-0344165

158170

6.36 +58 1.73 6072

6623653

65104

445 +55
1.91

-0066 -0140 664
-0065 -0375

-0058 ±3.4 -133 ±34

19.329 1913.8 -0074
210
539

58.59 19103 -0965
5128
5331

-045 -1372

57.850

-149

21.542
19.319
2.223

-0063 -137 39.93

1933.85

18.45

-094

58.38
3.43

406
-116
390

56.114
56.

63.4

108

158170.000*

17.000*

25.300*

-8.000*

-10.000*

-0.095*

-0.137*

2.000*

25.119

-63.600

-0.201

-0.933

54.276

-0.763

0.261

2.35
44.34

753

40511520

A

-0009 ± 10.0 +030 ± 9.0
+0005 +034

172088 18 35.8 -03 14 6.5 dF8 -20.98

25481 248 259 442674

11090 46.225 18941 -3 14 20.75 1893.7

6m=0
~~406449~~
20

050
275

-1.69
22.44

-0002 +032 60+
-0001 +034 5 -20.9

27.639

37.64
15.05

1934.91 -001 5 070 + 034

17.702

45.341
1

590
295
43.9

22.59
1.41

7599 3.1

26 ± 9

24 (39)

340
-27
213

295
+020

21.18
21.02

16
20.93
+1.51

38.0

14.83 138

31.450

463 10
-34

1277

51.6342
3070

1941.08

20.93
+23
-14 / 20.84

44.3

106



172088.000*

000*

174140
HR2079
G-2572

18 462 +23 27 FS

AD

6.2 318.159.405 - 2Bgn

216 +18
3M 414

325

+50188 -002

1875
+23.9

+0213

+27

$\frac{+50188 - 002}{+23.9}$

$\frac{1875}{+23.9} = 78.45$
-02

+001375.1

-00375.7

10.929
~~10.929~~

960

+00116
~~100111~~

~~100~~
126.67

55.6

859

+00127 -0016

2547

10.948

+00155

(57.57)

2841

43

-00

28.14

10.940

2908

2917

~~10.940~~

~~10~~
28.23



18.750
23.400
27.000
-2.000
1.900
24
-0.200

0.236
0.779
-0.582
20.335
0.604

0.395
0.470
0.789
41.900

Wjaldt - Sm A561
+0076 ± 4.3 -276 ± 3.4
+0075 -277
-3208464 312
19 030 -32 06

10023266A 177474
+00755 2065 0643

4858 17584
11543

+00979 -2745
+0522
+092-2758

+091 -276 22
328 19 326 2.68220
714, 804 154 355 2.13000.

2.393 1890.4
-453
1,940

-37 8 13.63 18847 3.7
650 Cap
0784
56.16
+17.47

3.9 1905
62 -374
419 810 115
448
115
3.8 +340

21.197
41256
2.435
2.4164
3.9

+378
529 388 2909
-885 978 -0008

22.64 / 1929.39
12 59
10.98
8.20

1.44
1.44
1.44

2.328
3.6

0585
1.16
Σ mo = 2.99
0574.120

11.61 1940.8
-15.52
71.6

15
15
15

15
15
15

15
15
15

-963 271 -604 797 +091-276-52.0 167 431-1042

058 161 025-045 204 881-41.4-11 +40 0643

-8 +54 +15
[+53 -17 +5]

long my G1 Bo, F1

1022 486 309

Monday + Monday

341 162 370 2631 #3,80

NR → 330 184 351 2636 +39

119 356 195 353 2617 +39

113 348 190 350 2619 +38

19 330 184 398 2636 +39

410 312 199 359 2626 736

113 360 190 350 2614

350 191 368 2627 +38

6 324 174 388 2633

340 160 360 2631 438

1032 257 316

264 302 2631

9.14 344 154 885 2.630

0.335 164 356 2632

7224 10.14 270

80



~~19.850~~
-37.100
115.000
-276.000
1.000
16
-38.000

0.301
-0.110
-0.947
275.010
40.350

0.352
0.336
0.003
100

-0022#6.5 -099473 S.P.O. P=4.8
-0018 -112
19 06.4 +16 46 dF2 +9.81

HR7267

178619.4

26374
11603 6.06 +0.71

6.5

-032-05566

-028 -10566+

6.66 +0.48

25.862 19022 T16 46 18.61 1902.5

40M (8)

107
969

-0020 -105
-0015
-125

4.67

25.925 1810

35.4

23.28
19.80 1933.4

311

36.6

25.985

905
064

222-106

1990

19.16 1939.7

1948

1905 -3.80

33.8

1535 345 -9357

~~-958295 289 957 -028 -105 +9.8 -030 +2.8 -4.74~~

~~-027 -029 -008 -008 -090₂ -175₉₄ +9.4 +2.7 -9.0 03~~

~~-0.3 -14.9 -13.0~~

~~+0.5 -13.4 -9.0 04~~

~~$\boxed{-15.9 -0.6 -2.4}$~~

~~+0.7 -12.9 -7.7 045~~

~~$\boxed{-14.9 +0.3 -2.1}$~~

no

~~-14 +1 -2 05~~

~~+0.9 -12.5 -6.7~~

~~-14.0 +1.5 -1.8~~

→ $\boxed{-14 +1 -2}$ 0475

184216 19819 255 -14 31 7-8-0
992481 841 532 41- 319- 319-0

961-1337

(9)

9

109

184266.000*

19.000*

28.500*

-16.000*

-31.000*

0.094*

-0.176*

6.000*

158.489

-319.000

-0.027

-0.888

279.145

-0.611

0.366

-213.606

05 52- 247 51

1951

29 1951
pass

190009

20 00.8 -22 44 F8Z +7.6 4C

F01254

6.44 +0.50 (1.62) +6C 4W
+7

35
14

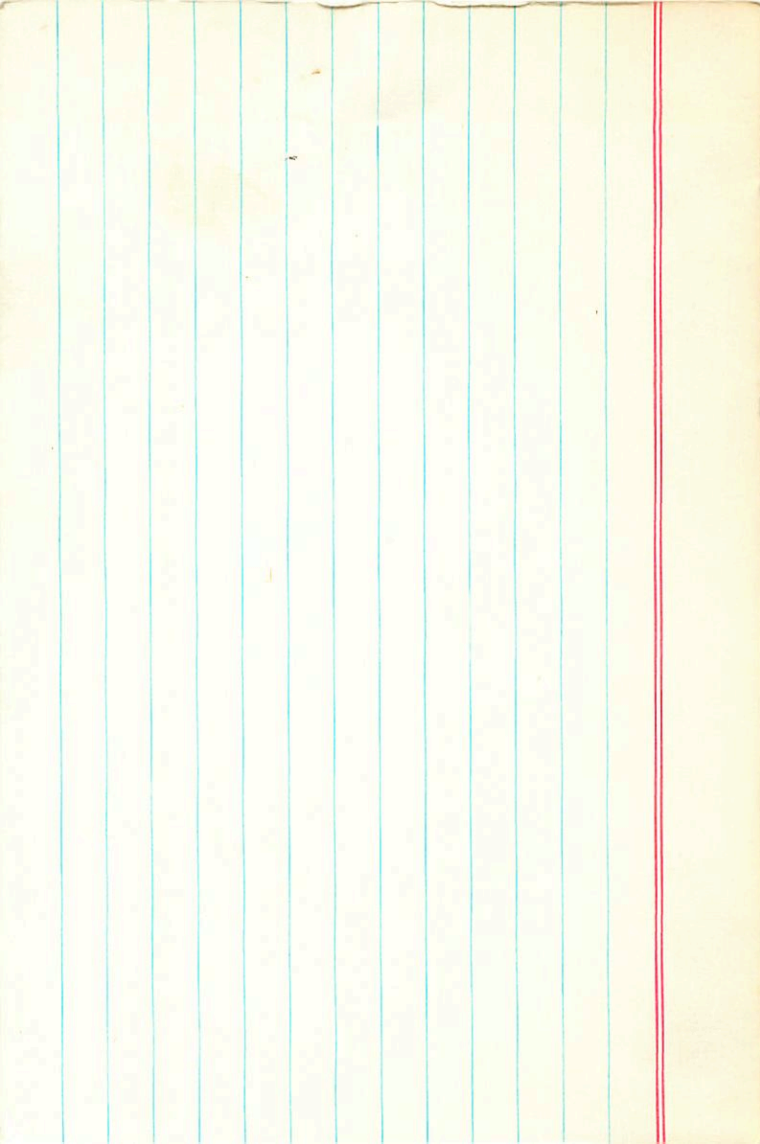
~~0000~~

-0025 +025 ZC →

-034

-11
+8

+10



W(73.5)

198802

20 50.4 -11 46 dG1 -0.86W(5)

GG29125

6.40 +0.68 (+1.72) (+1.615) egg(3) uelen

W13104

-1205854

-400 627 ^{around} -34

HR7884

3V6 306 25V
+00295 +043 GGT
+00305 +044 +0032 +044 ~~around~~ -3.2(215)

+6 +6 -1 .035
+9 +8 -2 .025

+044⁸ ~~+047 +042~~ 1.7

+046 +047 GC
+02929 +04010 Y
045 042

6.37 408 169 421 (3)

6.39 415 175 414

6.38 411 172 480

(295) 398

82 224 22
(24) (339)
6.37 408 169 421
6.24

48
42
214
-3.3

+003152.4
+0028
+047+2.7
+039

21

21.563 1900.8 -11 45 50.03 1900.7

$$\begin{array}{r} -153 \\ 410 \end{array}$$

$$\begin{array}{r} -232 \\ 5235 \end{array}$$

$$\begin{array}{r} 59.545 \\ 22017 \\ 21.557 \\ 21.557 \\ 527 \\ -13 \\ 514 \end{array}$$

$$\begin{array}{r} 29.65 \\ +3642 \\ 52.973 \\ 1 \\ 51.63 \\ +32 \\ 51.31 \end{array}$$

34.2

68.99
35.10
34.3

$$\begin{array}{r} 21.515 \\ -15 \\ 500 \\ +097 \\ \hline 507 \\ \hline 507 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 50.86 \\ +16 \\ 50.70 \\ +1.35 \\ \hline 51.06 \\ \hline 51.35 \end{array}$$

1440.24

R.A. : 20.850
DEC. : -11.750
R.A. : 48.000
DEC. : 42.000
DISTANCE : 2.140
MODULUS : 27
VEL. : -3.300

q1 (U) : 0.642
q2 (U) : 0.352
q3 (U) : -0.681
dU : 213.030
U : 7.956

20 505 02 4:05 11- 517 407

208851

HR5544H

5215229

1.38 418 207 395 2.588 ②

1,2013,1,19

80-

195560

1408041

622528

11 Apr

[21] 282

[9] 314

20 57.9 -4 55 G1E

$$\begin{array}{r}
 6.20 + 63 + 22C \\
 6.22 + 63 + 16 \quad 3E99 \\
 \hline
 6.21 + 63 + 19 \quad 5E99 \\
 1,406.209.357 \quad 25A
 \end{array}$$

2.620

③ 64

2.20 + 7.7 - 23.9 - 3.9

-108 - 491 - 448

11

0.0
0.0
0.0
0.0

12.05.2018

11 Aug 363 ~~344~~ 328.2v 33 337 07v w(+40)
199960 20 57.9 -04 55- d6- -12.48 w(3)

6229318 6.23 70.63 +1.92 Egg(3) McLean

w13187 (8041)
HP8041 +003450 -134 48 N30
-505433 +0032±1.6 -127±1.6 66 → N30

35A(20) (034) +045 -128 6c

76 -26 -3.035
+5 -28 -6.03 00387 -1373 (PNS)

(53 -122) 050.4 -137.3 W40
-17.4

8471 6771 135
-5314 -7359 -6559 } 2.3

50
-1333
2.12
-16.4

112

112

112

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

1880 00 000

PA

650

PA

PA

PA

PA

179960.000*

20.000*

57.900*

-4.000*

-55.000*

0.046*

-0.140*

2.300*

28.840

-17.400

16.4

-0.143

-0.615

16.4

6.²~~5~~74

-0.522

0.600

24.2

-25.⁵~~5~~09

112

-0.441

-0.511

0.57

-3.⁶~~5~~28