4056 10 16.4 -41 25 A0 +23

-0023 -001
-026 -001
+25
Nuttal

-0032 -002 stay
-00315 -001
-0354
-033 +002

10.25
-41.4
-44
+3
8.7
+23

96
82126 811 2.811
119 817

600 -27 127 821 2.799
81 119 826
228
1064

5-34+24 1.49 5.2 +14

E=05

7049

89853

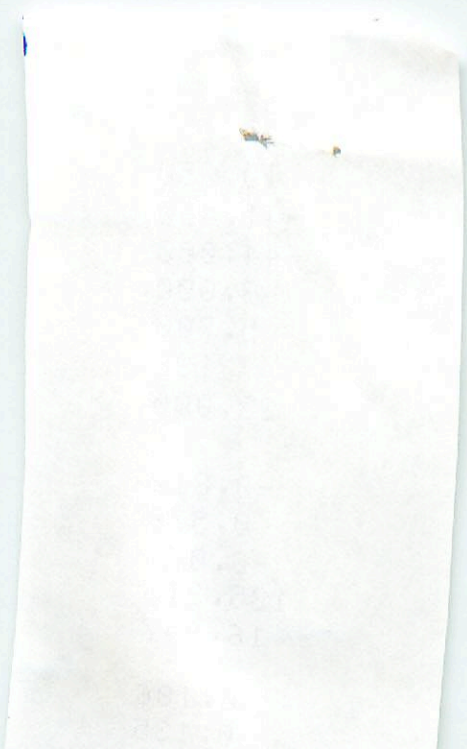
.285 .068 1.649 2.673

705 052 1.792

184

1756

59




10.250
-41.400
-44.000
3.000
5.700
138
23.000
-0.812
0.578
-0.075
135.315
16.947
0.186
0.135

3/24 ma · 10 20.6 +65 49 Aop -0.6a

4.88 -0.05 -010 -023 GC

-004 -023 N30

I b R en l wo f ha l en f

110 +46 10V -

$419 - 908$ $912 - 410 - 007 - 023 - 0.1 - 021\ 0 - 04\bar{3}$

$003\ 0\ 006\ 0\ 01\bar{4}\ 02\bar{8}\ 0\ 0\ 0$ 010

$+1\ +3\ -4$

$\boxed{+1\ -4\ -3}$

+0004 ± 2.0 −003 ± 1.7
+0006 −00

45 Leo 10 25.0 +10 01 Ap −5.7 v(3)
−10.0 w(3)
−7 c

HD 7781 −0.06 Ori(4) −8.2 a

90569
14361
6569

0.596 1894.7 +10 1 4.76 1890.4
−22 +18
.574 4.94

.587 39.4 4.69 1933.9
16 4
.603 4.73

41.330 5.97 42.80 1929.11
19.260 +.023 −37.52
0.590 −37 5.29
+17 −57
.592 +36
5.07

0.599 4.45 1939.21
18 +4
.607 4.49

#91
+5.4
−28

10,222
34.1
43.7

142.9
457
−.37

Balanced

45-lbs 10 25.0 +10 01 -8.2 %

5.80 -0.06 -0.09

45 Lu Cr Sr 10 250 +10 OH 12685.4

4101 -042 148 957 2.843 +Cr
-045 183 946 5 waters -7.8
G0564 -048 184 950 2.842 B
-030 180 956 2.846 Cr
174 963 2544
348
1211

-042 184 952 2.843
176 960 2445
342
1302

B 295 260 445 2366 10.4 +10.0 +9 +2 5.1 -7.4

54

4101.000*

10.000*
25.000*
10.000*
0.000*
0.008*
0.000*
5.900*
151.356
-7.800

-0.015
0.370

-5.180

0.040
-0.493

9.915

0.032
0.787

-1.26

70

4101.000*

10.000*
25.000*
10.000*
0.000*
0.000*
0.000*
5.350*
117.490 135
-7.800

-0.031
0.370

-6.563 -7

0.000
-0.493

4.801 +5

0.020
0.787

-3.816 -3

```
 10.400
 10.000
  9.000
  2.000
  5.600
    132
 -7.800

 -0.825
  0.425
  0.373
-30.610
 -6.947

  0.211
  0.843
 -0.494
 16.858
  6.079

  0.525
  0.329
  0.785
 25.173
 -2.865
```

JB

SB 2Sp

4118 10 023 -30 22 BG

90972
14421 5.m 11.4 5.55 -04 (-12.5) C

540 -016 116 851 2886 3914 (2)
111 954
222
1076

(1)

50790

4076 10 19.8 −19 37 40

−34.76 9.19

4.63 0.74

−9928

−0841

3505 Si I persist numerous other metallic lines very sharp lines
d
mm Si (St, Hg) 10 20.0 +6.5 49 11.58

4072 +Hg

84822

4.98 -06 -16 J

-020 126 967 +Uranium

-2.6

-020 148 955 2827

135 959 2924

268

97

Δm = 1.7 mm

-00149 -0253 FIPM

+89

-00 91

-010 -021

505

+0.3

-0.4

106 149

-020 126967 4W

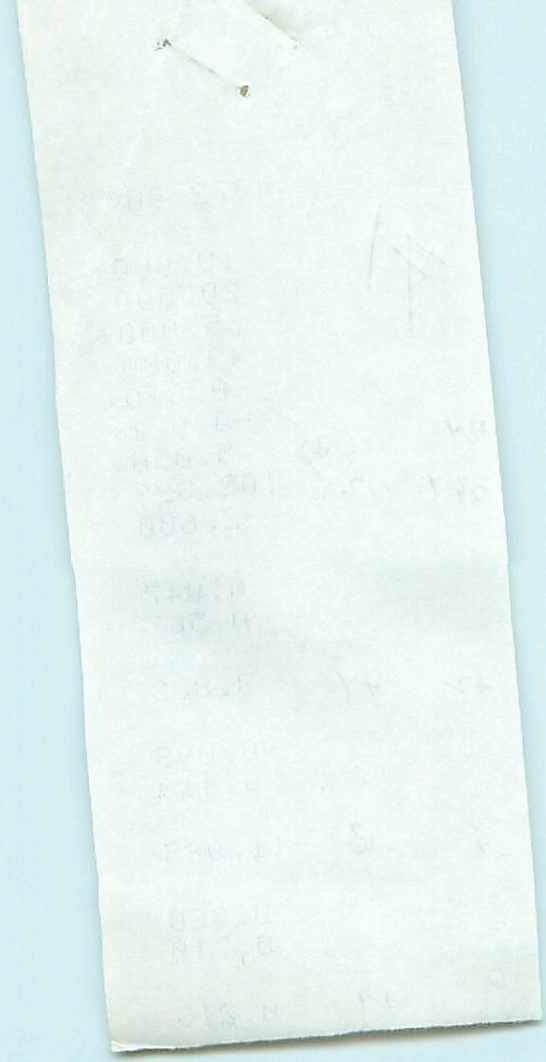
-020 141 955 2.8276

-18 135956 2827

132 960 2922

264

1224




4072.000*
10.000*
20.500*
55.000*
49.000*
-0.010*
-0.021*
5.050*
102.329
-2.600
0.047
0.567
3.333
-0.098
0.419
-11.085
0.020
0.710
0.213

~~30 Dec 64~~ -.0017 ±1.4 -.0007 -.023 ±1.3 -.027 Aop Mars Sp. B. = 11.6

89822 10 20.6 765 49 4.9 A0 -0.1a

14260

6528 33.032 1904.1 +65- 49 12.48 1901.1

28

.110

1.12

13.60

33.099 12.68 1944.88

10 -12

109 12.56

200

44.556 085 34.7 46.33 1933.3 16.94

48.820 -33.00

33.376 13.33

360 -92

016 12.51 49

+27 -02

043 12.49

33.111 -6 12.94 1938.76

103 -12

12.72

388 34.7

12.59

-1.01

-025

Rob

4072 10 20.5 +65 49 Ap

89822
14260

4.44 -07 -15 3 5

47
-16
-00149 -0253 F104
+ 40
-0091
-010-021

-020 +137 +554 (2) 2.927 (1) Gw
-16 137 957
131 274
1233
E = 0
11.6 ΔTm=1.7
-2.7W Sp R
(5)
MV = 0

4072.000*

10.000*
20.500*
65.000*
49.000*
-0.010*
-0.021*
5.000*
100.000
-2.700

0.047
0.567

3.167

-0.098
0.419

-10.900

0.020
0.710

0.095

49 Leo TX Leo 5.70 +06 +07 18" EB Sp.B, P=2.44

9636 10 32.4 +8 55 5.70 AO +16.7a

145-41 (4448) (4180?)

-0038 ± 2.3 -011 ± 1.6
-0036 -005
-0043 -003 -004
-0038

6618 24.819 1898.6 +8 5-4 33.28 1895.7

ADSTX37 1955 +60 9595 -9670
8802 9940 25.014 24.773 6955 3335 33,88 7816 -7732
4746 0458 +3.45 24.863 19 74 33.21 33.54 1934.5
-0567 20
5.86 883 24.62 (35.6) 33.57 1025 34.2 (38.5)

SMN25 6.088 887 77.87 1528.48
2'13 18.930 -43.90
24.918 33.67 2.0 33.67
-8.955 -127 (6634) 24.870 3343 33.45 -.21
.51 21 -7
-0039 -0008 71.9 3336 33.81
-0044 -0007 24.844 33.51 1939.59
-0584 -003 23 +11
33.62

-52.74 -5.56 9556 -9620 } 0538
705 0.99 2816 -2930 } -1040

23

4124 10 29.0 +32 85 AOE

91120 5850807

14455

590 074 157 1034 2955 AO 16

179 1019

358

435

215

155

024 172 1024 +0.3

-614 +041

-0135 +005

10.5

+32.66

-16

+5

4.75

-15.5

5.61

535

+00/2±2.6 −00±2.3

1.355 99.3 12.19 91.6

```
 10.500
 32.660
-16.000
  5.000
  4.750
     89
-15.500

 -0.832
  0.260
  0.490
 59.288
 -2.311

  0.228
  0.966
 -0.127
  8.357
  2.706

  0.506
 -0.006
  0.862
-32.459
-16.261
```

74

9138 10 251 −71 44

9137

51438

27.94 −30.04

1260 0.47

9286 4141 | 2389

3710 −9102 | 6530

+6W 1881

4131 10 30.6 +53 #6 AO

6 55 -02-01 2 55

91811

-004 152 6025 2.852

151. 1076

302

1.381 +0.4?

unwritten

-046-032

-0245

+2:

-046-035

-0045-0235

-0047 -0305

-0417

-037 -026

-31

6.4

10.5

+53.75

-62.5

-26

6.55

+2.

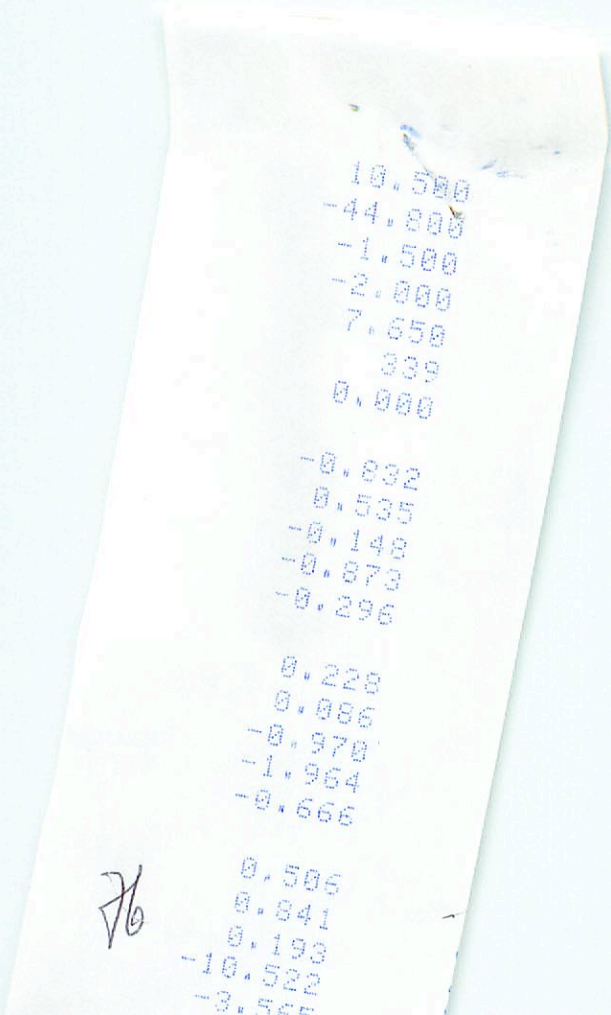
```
  10.500
  20.750
 -52.500
-26.800
   6.350
     204
   2.800

  -0.832
   2.866
   0.551
 137.545
  29.185

   0.226
   0.946
   0.229
-156.484
 -31.491

   0.596
  -0.316
   0.862
 -49.666
  -0.540
```

145

+30

-36

-9


10.500
-44.800
-1.500
-2.000
7.650
339
0.000
-0.832
0.535
-0.148
-0.873
-0.296
0.228
0.086
-0.970
-1.964
-0.666
76
0.506
0.841
0.193
-10.522

4187 10 40.6 +57 27 35

93728

14736

-02 -10

+01<-057

+01<-053

-623 149 1011 2862

142 1016

284

00

13

+0016 ±2.1 058 ±1.5

34.787 944

44.31 94.2

+0.45

+0.01 -048

+0M -048

76

-75

-15K

10.66

+57.5

+28

-53

67.5

-18.5

4185 10 38.5 −64 50 Ap 'Si'

92644

14695 5.52 −17 −56

~~[illegible]~~

34.787 99.8 +0014±21 −058±1.5 ~~[illegible]~~

−95 +0022 −060 44.31 54.2

.692 3.24

47.55

+00205 −059 4467 44.91

34.742 +00187 −0577 −18

−1 44.49

741 +0151

$\boxed{+015-053{,}5}$

4135/6 10 29.8 -44 48 08 (2) 14"
08 6.5

~~Sig~~

~~0000~~ ~~001~~ ~~000~~ stmt
-0008 -010
Δ -0.4 Set II
Δ Varied Set II
-0055 -0065
-0058
-003-007

5.74 -84 91 256 2.658 (2)
66 313
379
445

6.14 -44 100 561 2.651 (2)
102 87 570
174
744

7.4

4135.000*

10.000*
29.800*
-44.000*
-48.000*
-0.003*
-0.002*
7.900*
380.189
-0.400

0.007
-0.147

2.626

-0.004
-0.970

-1.149

-0.015
0.193

-5.936

78

4203 10 43.1 +30 57 B9 V

10.7
+3
-25.5
-33.5
5.35
+14
0230

-022 -033

-00174 -0375 W50
-00175 -0350 F-14

+8.0 Wanted

+14 40 plus

0234
-023 -030

5.36 -06 -15
48
5.35 -026 182 965 2821 A1 V
124 570
248
218

M_V = +0.15
V_0 5.30
5.15

4203.000*

10.000*
43.100*
30.000*
57.000*
-0.023*
-0.036*
5.150*
107.152
5.000

4217 ID 44.3 60 20 6.25 AV

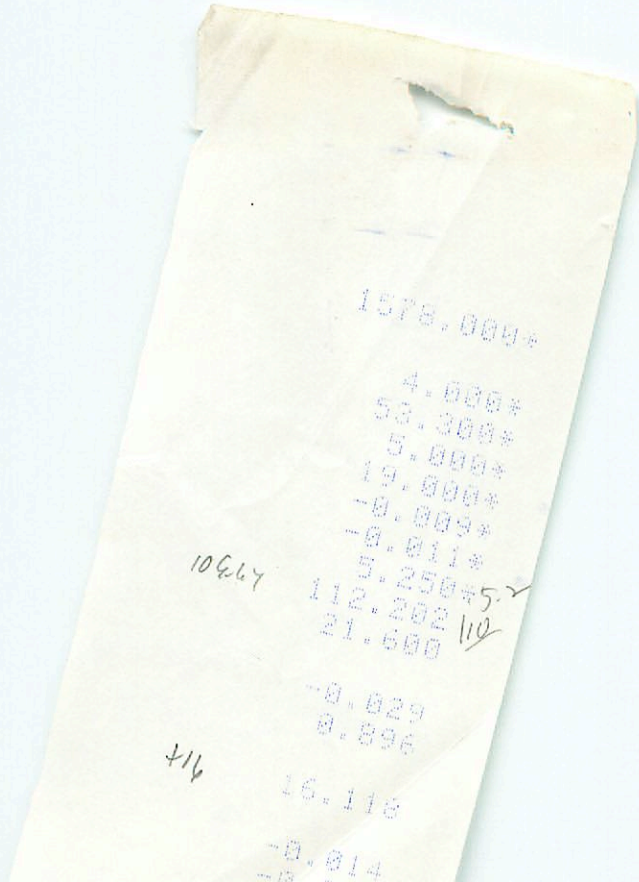
Spec Eq. yps.

31.000
-25.500
-33.500
5.250
112
14.000

-0.845
0.297
0.445
40.401
10.758

0.260
0.955
-0.143
-178.566
-22.044

0.467
0.006
0.884
-49.299
6.847


1578.000*
4.000*
53.300*
5.000*
19.000*
-0.009*
-0.011*
5.250*
112.202
21.590
-0.029
0.896
16.116
-0.014

8x10 7"

42/8 10 48.2 −15 00 40

93526

88,84 +15, −44

Opt Exp −36, −44

52746 Valid

(A)

8.552 6.5 −0070 ±42 −044 ±3.0

345 −0073 −050 43.31

300 1.9

41.41

−0076 −047

9.036

+.10 −0975 −0468 43.42 41.45

046 −0922 ±2.5

43. 17

5.25 -08 1.34 -13 05 15

4221 10 45.0 -56 30

93563 46 25 6

-029 105 741 2.664

100 747

200

947

5.1

-2.25

7.35

+31.6

-0016 -0145

-00147 -0091

-0122

-010 -005

8535 — 545 — 51 06

86352

56.431 — 19126 — −0016 ±5.7 — −012 ±3.7

060

.071

−0016

−017

−008 35.73 1.054

54

35.19

−0006

−0093 −012

56.094

+015

56.109

038

56020

±12

56032

3.539 (20.17)

−30

35.509

35.59 1941.40

−21

35.80

−61

19

4221.000*

10.000*
45.000*
-56.000*
-30.000*
-0.010*
-0.005*
7.350*
295.121
31.000

0.030
-0.283

-0.056

-0.010
-0.958

-32.767

-0.043
0.036

-11.487

81

P = 15.9

WRMC	10 51.1	+43 27	−17.4 G
1+R4248	4.90		+046 −030 GC
WL753		A1 V	+052 −025 N
			+048 −029

+0241 −021 PBS Aug 99

+045 −021	047		
	044	−016	−053
	1457	1.000	0450
	819	−0044	6
	896		

296 -955 688 725 +045 -029 -17.4 -020 -12.0 -055
-015 006 -047 019 -161 -194 -12.6 +12.0 -3.7

+1.3 -16.7 -18.6 015
-23.4 -5.9 -7.1

01
025

-4.1 -23.1 -21.9

025

+5.7 -11.3 -14.0
-16.9 -4.1 -10.6

Sp. B. P =

94334 10 51.1 +43 27 4.5 40 -17.4 G

14624
6753

+0048 ±22 -028 N30

PRS Sup +0044 ±1.5 -027 ±1.2 G → N30

+0049 -021

1.0000
-0044

+044 -021

Σ_{40} $\Lambda = 15.9^{d}$ F

WIME	10	51.1	+43 27	-12.4a
4248	4.8		AIE	+046 -030 G +052 -025 N +046 -029 E +048 -029

256 -555 688 725 +048 -029 -124 -020 -12.0 -055

-014 006 -046 019 -156 -150 -12.6 +12.0 -31.7 017

+2.8 -14.9 -17.8

+21.2 -5.3 -8.3

-3.6 -22.7 -21.9 01

-30.5 -7.9 -3.2

019

+4 -14 -17

-20 -5 -9

+1.6 -16.4 -18.6 015

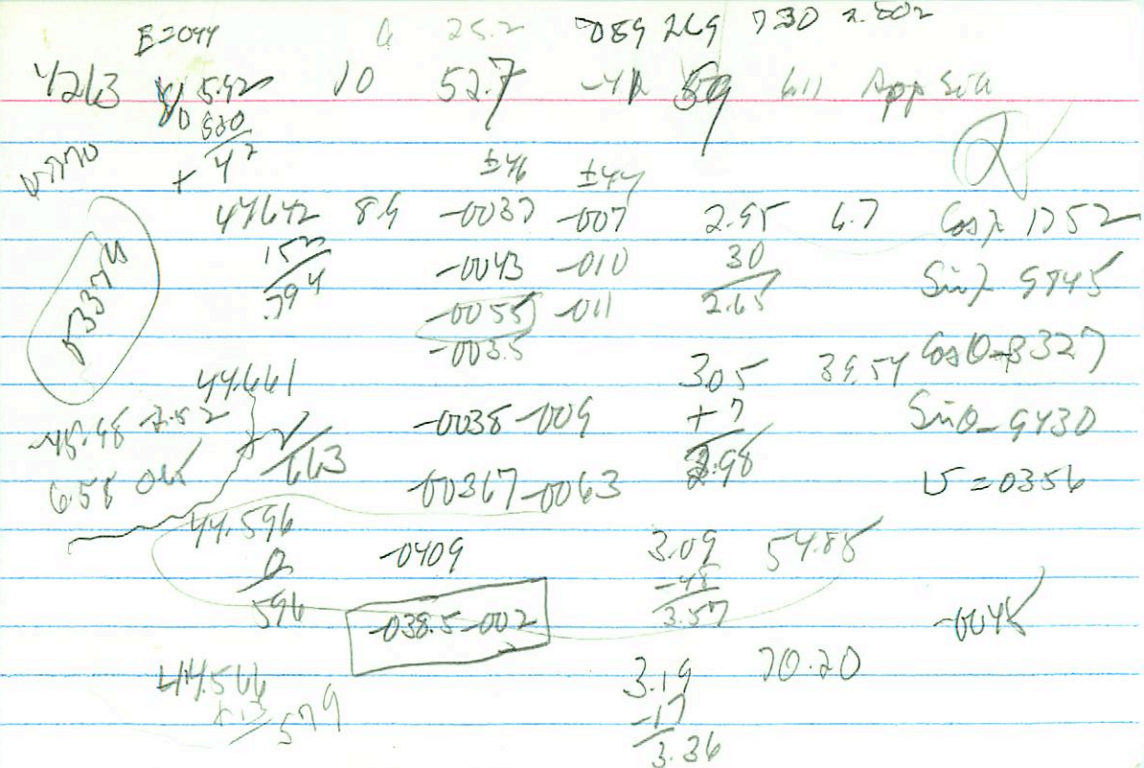
-23.0 -5.9 -7.4

+6.8 -11.0 -15.3 03

-16 -3 -11

+5 -8.5 -14.5 04

-13. -3



9489 1.000 | 0460
3144 -0014 | 6020

9447 1.000 | 0460
3279 -0185 | 0017

209 /
8.72-25 26.41

4242 10 57.7 -43 32 89

5.80 -42 183 828 2832 (2) 5g

120 836
240
1076

-0607 +010 stop
-0065 +0135 -4.6

-0707
-064 +018

+0.55

-0068 ±8.0 +0014 ±5.7

42.284 65.1 -0076 +0018 14.28 93.2

3[illegible] -0071 +0012 -23

4.137 -0072 +0005 14.51

42.654 -00680 +0087 15.52 56.07

-6 -48

688 +0740 14.00

$\boxed{+072.5\ +013}$

42.622 14.11 6946

-7 -21

629 14.32

82

11.000
-43.500
-100.000
13.000
5.450
123
-4.600

-0.860
0.462
-0.216
324.265
40.887

0.307
0.132
-0.942
-97.566
-7.669

82

0.407
0.877
0.256
-85.722
-11.723

0755

4267 10 57.7 -43 82 8.81

-0058 +004 Pat

-035 LBD RBD 2.821

(19) 838

225

-0067 +010 Stip

-0065 +015

-0062 +010

11.0

-43.5

-900

+13

8.45

-4.6

-0075

-0655 +014

4263 10 52.8 −41 59 Hoa

null

4262 ~ TO 52.0 -70 27 B8

4240 10 57.2 -41 03

-24 5 127 716 2744 5 4

6.15 -35 132 704 2803 (2)
122 711
244
55

-0044 +0005 Cut
-0505 +001 +15.7
-0367
-035 +005

6.1
4
5.7

-0036373 +009174.7

-0062 -007

12.874 ,19043 7.78 18925

164

13.038

-47

8.25

12.455

315

12.770

90

.860

+25

885

-153

~~26.85~~

6.15

1.823

7.97

27

8.24

8.24

8.48

-.23

1929.01

-6.918

-0.047
-0.023

-22.163

-0.054
-0.940

15.575

0.152
-0.340

15.700
135.038
5.700*
0.005*
-0.035*
-3.900*

-0007 ±2.0 +030 ±1.7
-0001 +039

60 Leo 10 58.7 +20 27 Am −10.2

4300 ~~+36 +0.10~~ 0.2

95608 4.42 +0.07 +0.05 ~~+015 −037 60~~

15162 −005 +037

6814 39.777 1904.3 −010 +030

032

.809

39.815

10

825 1611 (31.8)

806

39.768 −003

18

786

+20 26 53.99 1900.0

−1.50

52.49

53.57 1933.1

21

53.78

54.04 1939.07

54.01 23

53.90

+1.41

12 17

36.1

(36.1)

259 -966 350 937 -006 +015 +033 -10.2 +012 -7 +183

+007 -003 +018 012 +066 +052 -9.6 +9 -2 024