

1191 890 215 (22)

120164 13 44.8 +38 48 5.6 969 -10.36

18636

8139 ¹⁸⁴

32 -0120 -024 32 N30

-0197 ± 3.4 -022 ± 2.4 66 → N30

300 626

POSIBLE W3 50

[M] = 0.615 619 | 474

01222 -0227

[C] 0.292 324

01280 -0226

-181

-168

POSIBLE -0112 -016

-19

-16

-137

-131 -016

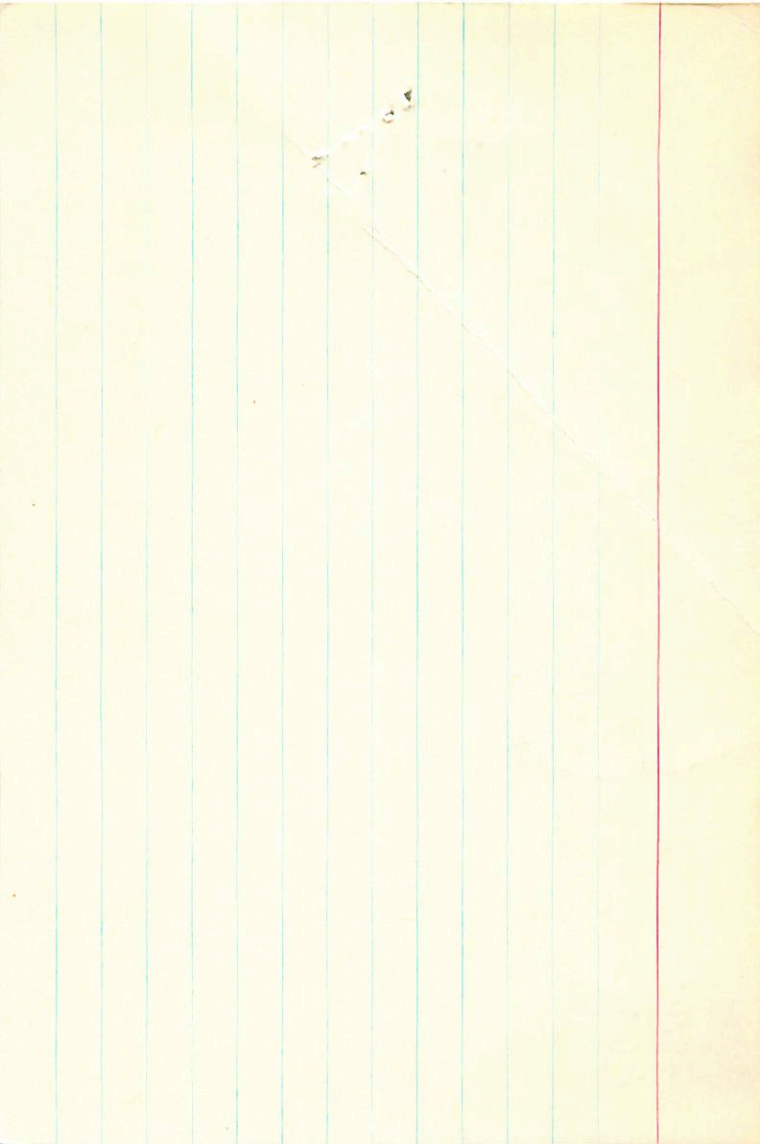
477

-141 -019

-10.3

0 0114 024

395



0456632

5186

13

44.9

+38

48

120H

120121

FLK 37

18636

47

5.97

+108

+0.84

3 E

$\frac{4.7}{55}$

$\frac{5.05}{8.96}$

$\frac{+0.34}{+0.54}$

$\frac{+0.02}{-0.02}$

$\frac{10.0}{10.0-2.10}$

8.98

10.01

+0.01

2 E

+0.45

547-035

2 1.347

1.230

1.267

2.606

(17)

$\frac{3.55}{3.55}$

$\frac{1.288}{+0.10}$

$\frac{2.84}{6.10}$

2.606

E(8-4) = +0.2

3.55

1.288

2.84

2.606

5.01 - 10.345

4.925

1.347

E(4-2) = 0.14

0.14

8.52

5.01 - 10.345

1.347

E(4-2) = 0.14

0.14

0.09

5.01 - 10.345

MV = 2316

0.333

0.09

5.01 - 10.345

ΔEUN = 0.40

Δ[\ln] = +0.11

0.09

5.01 - 10.345

2

2 Gen

120323

13

46.5

-32

Agal

+40.7a

-0038 ± 3.2 -064 ± 2.8

-0034 -060

120323

4.20 + 1.46 Egg

18666

4.04 + 1.50 Conc

-047 -064 G-C

8152

4.10-4.15

32.427 190515 -34 12-6.98 1900.8

169

+3.15

1.596

3.73

-25 -46 +3 023 +1.596

-17 -46 +4 014 0 32.487

-13 -54 -2 010 -1 -¹⁶/₄₇₁ 93

6.15 -1940.70

-11

471

6.04 131

32353 7017

746

32.427

-05

6.89

1557.18

32353

70

-05

-28

97.88

344

816

422

717

48.9

6.60

87

-2.

48.1

-448 -884 -562 +827 -047 -064 +40.7 036 -23 -251

-021 016 042 -032 052 275 +337 -30 -15 023

-28 -3 -44
[-25 -46 +3]

-26 +5 -41 014

~~-17~~ -46 +4

-25 +13 -48 010

[-13 -54 -2]

23

~~B~~ ~~45~~ ~~3~~

. VEL. : 34,300
 ODULUS : 139
 STANCE : 5.710
 . DEC. : -68.800
 . R.A. : -48.400
 DEC. : -34.200
 R.A. : 13.550

p1 (U) : -0.753
 p2 (U) : 0.140
 p3 (U) : 100.444
 U : 10.844

p1 (U) : 0.323
 p2 (U) : 0.479
 p3 (U) : 0.218
 U : 104.332
 U : 108.214

p1 (M) : 0.215
 p2 (M) : 0.303
 p3 (M) : 0.434
 M : 100.204
 M : 112.891

R.A. : 13.750
 DEC. : -34.200
 R.A. : -48.400
 DEC. : -60.000
 STANCE : 5.710
 DDULUS : 139 ¹⁷⁵
 . VEL. : ~~34.300~~
 409

q1 (U) : -0.753
 q2 (U) : 0.149
 q3 (U) : -0.641
 du : 100.474
 U : ~~-0.044~~
 1219

q1 (V) : 0.622
 q2 (V) : 0.479
 q3 (V) : -0.619
 dv : -254.330
 23 v : ~~-56.511~~
 4049

q1 (W) : -0.215
 q2 (W) : 0.865
 q3 (W) : 0.454
 dw : -205.204
 W : ~~-12.891~~

-90.00
 4049

R Len

120323

Gc18666

w8152

43149

-3309358

-13 -54 0

-20 41 17

-21 -34 10

~~22~~

94635

20105

889

889

13 46.5 -34

4.20 +1.51 -58

will 1.48

w-0035-063

+ 8 + 6

0000
-060

0000
-028

0409

0400
-040-062

.010

.020

.030

1

85 +4

8808

8285

12 29M6

Step 1520

43

-047 -062

~~0000~~

-484

-60

571

383

43

66

44070
+40866(6)
+1022(1)

48
23

834

855

740.7

2

0710

000

000

000

000

45533

8500

6110

1079

5186

1848

1889

-442 -894 -562 827 -047 -064 +10.7 036 -23 -251
-021 016 042 -032 052 275 +33.7 -30 -15

-29 -8 -29

04

-24 -32 11E

(X)

5192 187 1456
187 1456
12456
13 46.6 -34 12 gmb

120323

18666 0.1 4.2 +1.49 +1.4
4.2 +1.50 +1.47
420 +1.49 +1.735

-0035 -063 ±2.0

-029 -057 new ±.003 +40.7a

-0348 +39
-032 -052
400
410
-00332 -0596
-0410
-039 -056

2.58 +1.56 Eq (17)
2.44 +1.45 Mem.
2.51 +1.50

2.13
1.98
2.0
5.7
5.6

$m_v = -14$
 $M_v = -0.5$ CCW

2.06 1.86
2.47 1.455
2.09
2.629
5.3
2.20
1.90
1.706
1.11
1.11
5.55
5.55

5192.000*

13.000*

46.500*

-34.000*

-12.000*

-0.032*

-0.053*

5.600*

131.626

40.700

0.077

-0.645

-16.102

-0.216

-0.616

-53.483

-0.184

0.453

24

24





100

120771

13

48.2

+55

07

M4

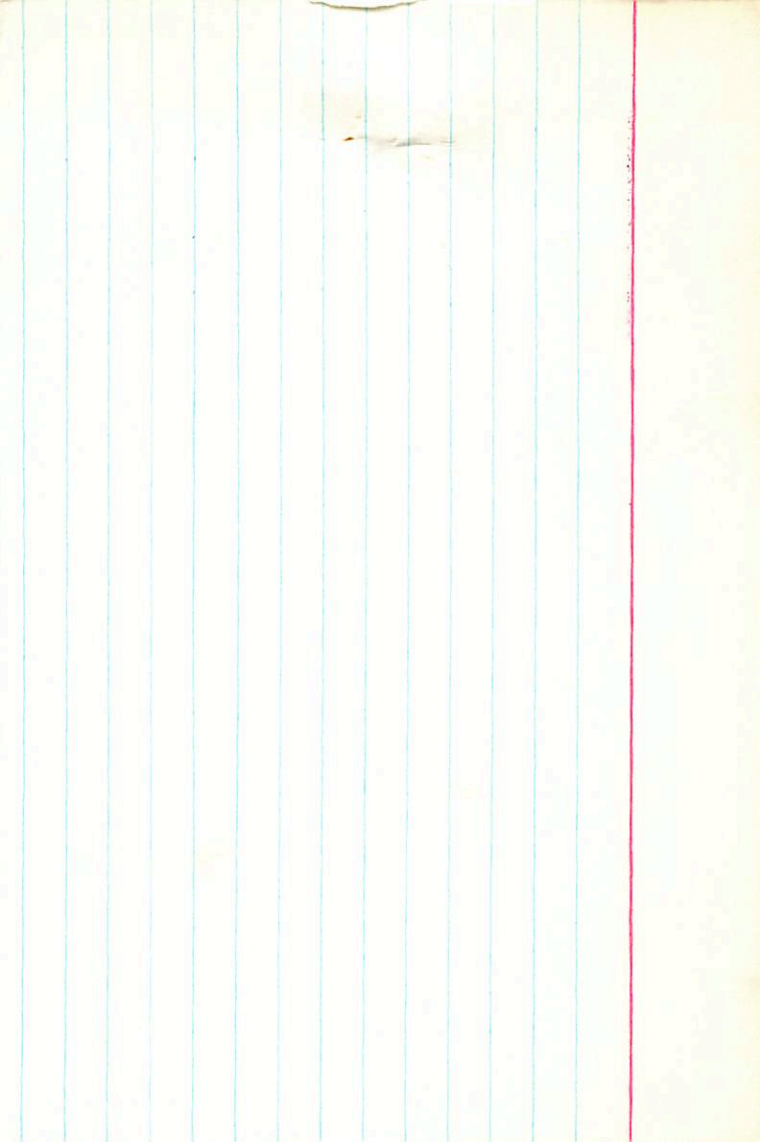
~~07~~

$7.55 - 2.75 + 1.50 + 1.45$

-9.76

-0.55 - 0.17 BL

-0.64 - 0.17 (hand B)



-0053 ± 2.5 -019 66.0
-0062 -019

-9.77

120771 13 48.2 + 55 07 8.2 g M4 300

18705 1 MY
8170 9.102 11.299 1506.9 4570.778 0.42 15044.56 0

52.45 0.104 57/9
226 1.2

392

679511

11.301 1.13 1544.91

2/303 20 0.93 1515

69 11.251 563 282 62

17 9 245 20

90 260 92 255 8 826

17 0.69 46.1

162 19 417
417 3930

25

25

29

110

369

25

13.800 : R.A. P
 25.100 : DEC.
 -89.000 : FM. R.A.
 -17.000 : FM. DEC.
 9.000 : DISTANCE
 931 : MODULUS
 -9.500 : AD. VET.

-8.747 : p1 (U)
 0.951 : p2 (U)
 0.139 : p3 (U)
 127.930 : q1
 29.402 : q2

0.252 : p1 (V)
 0.918 : p2 (V)
 0.429 : p3 (V)
 -200.872 : q1
 -131.337 : q2

-0.239 : p1 (W)
 -0.441 : p2 (W)
 0.899 : p3 (W)
 90.000 : q1
 48.411 : q2

123

R.A. : 13.800
DEC. : 55.100
PM. R.A. : -89.000
PM. DEC. : -17.000
DISTANCE : 9.000
MODULUS : 631
RAD. VEL. : -9.700

q1 (U) : -0.747
q2 (U) : 0.651
q3 (U) : 0.136
dU : 127.930
U : 79.402

q1 (V) : 0.625
q2 (V) : 0.618
q3 (V) : 0.476
dV : -200.672
V : -131.237

25
q1 (W) : -0.226
q2 (W) : -0.441
q3 (W) : 0.869
dW : 90.080
W : 48.411

R. A. : 13.800
DEC. : 55.100
R. A. : -52.450
DEC. : -10.280
ANCE : 8.250
ULUS : 447
VEL. : -9.700

1 (U) : -0.747
2 (U) : 0.651
3 (U) : 0.136
dU : 74.586
U : 32.000

1 (V) : 0.625
2 (V) : 0.618
3 (V) : 0.476
dV : -119.028
V : -57.789

1 (W) : -0.226
2 (W) : -0.441
3 (W) : 0.869
dW : 53.633
W : 15.531

25

150-50

13 576 +25 43

188.2 (25)

Pass 1025

1249 0.70

714 (7)

065 409

+ 72

409

625

138.2

26





665-22

13 59.3

409 10

val 16

R834

16.88 0.75

2063

11.22 4.205

0.2063

AT 86,567

4170 ~ 795 T

172

~ 795

44

41914

R.A. : 14.000
DEC. : 9.150
R.A. : 172.000
DEC. : -745.000
ANCE : 4.900
JLUS : 95
JEL. : 19.600

(U) : -0.722
(U) : 0.556
(U) : -0.411
dU : % -2544.837
U : -251.090

(V) : 0.636
(V) : 0.767
(V) : -0.081
dV : % -2196.872
V : -211.379

(W) : -0.271
(W) : 0.320
(W) : 0.908
dW : % -1347.462

27

27

Pass 841

13

59.8

-5

28

664-37

at

11.09.74

+91 α

¹²⁴⁰

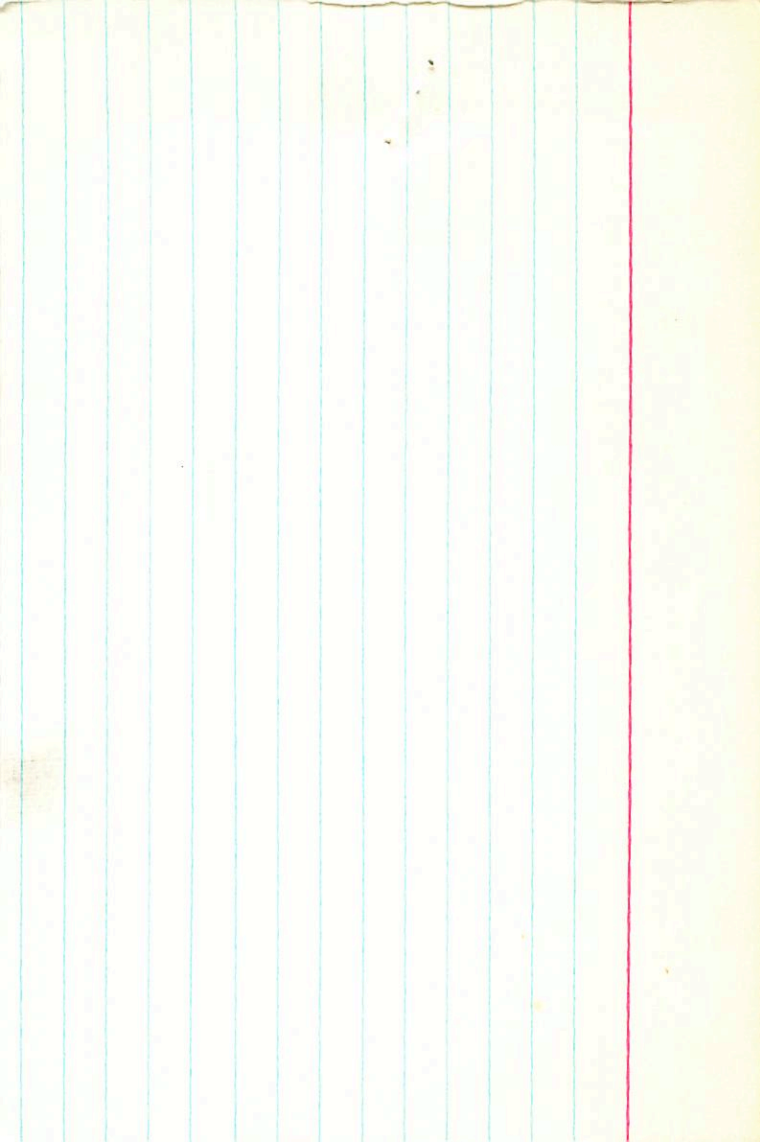
-035-340 Ross

-040-355 Nucleon

-055-465 G1

-045-410

7



H4 R5

ad 43

13 59.9 -05 24 +91 c Md (3)

11.09 +0.81 +1.44 2 Aley

w8248

Ros 8741

6 = 24

405

644

0 -40

"
0.39 185⁰ length

-035 -350 900
-40 -355 400
-055 -495 60

-500 -866 -094 556 0 - .40 +91 038 -9 -1.855

0 019 0 -033 156 080 +90.6 -78 -45 01

-62 -36 -157

-40 -23 -483 .004

-250 -322 -187

-52 -30 -325 006

-192 -256 -102

82



1

64.370*

13.000*

200*

122196

-3709083

12

58.1 -37 48 F5 -23.0 ± 5.5

22.4(7) 5-4 duty

952

122196

8.68 +48 -18 2 15

8.73 +46 (1.49) F5

(22.8)

8.70 +47 -0389 -077 49 CP

1.48 +62 1.40

S = 20

1.48

1.49

(4)

Felt 1.74

8.73 -10.96 1.49

(-22.9)

-460 -776 CP

FIRY

-0380 -073 4+8 +7

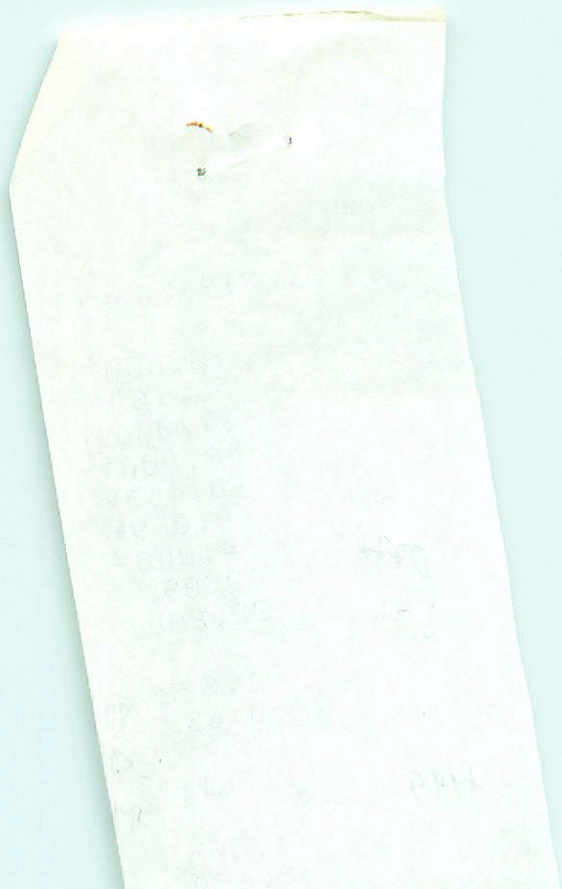
-450 -64

-4504

-450 -064

29

b
t
D



122196.000*

13.000*

58.100*

-37.000*

-48.000*

-0.450*

-0.069*

4.000*

63.096

-22.800

0221

5,24

1.522

-0.682

80

184.9

111.611

50

10

-1.505

-0.620

834 805

122196 13 58.1 -87 48 F5 VI

~~878~~ + 46

868 + 0.48 - 0.15 (2)

-22.86

⁵ -0380 -073 Y+12 F+14

425

-avg

-450 -0.9

30



122196.000*

13.000*

58.100*

000*

Pass 838

13 593 + 9 10

G65-22

11.57 + 0.76 + 0.09 SIP

11.32 + 0.80 ✓ (2)

209

+16: (1)

+155 - 11(2)

(+240) - 850. 11000

+180 - 840 12000

+174 - 764 dy

(+170 - 820)

468

9
34
11

35

1931, 1932

1931

1932

1933

1934

1935

1936

1937

1938

1939

1940

1941

1942

18

SOFT OF NEG #

14.000

9.150

172.000

-820.000

4.650

85

16.000

-0.722

0.556

-0.411

-2742.497

-240.004

0.636

0.767

-0.081

-2469.599

-211.486

-0.271

0.320

0.908

-1461.181

-109.000

31

H5

01,199

W8246 13 582 +0911 and G-3 +16d and (1)

CC825

11.6

$\sigma = 0.12$

R935

11.61 +0.72 +0.08 15nd

Now

(22)

+24 -85 G-20

1.06

+161

MCM

+145

Y(R)

-1 M ± 11

+17 ± 10 Yoh

-497 -568 160 987 +24 -85 +16 -136 +3 -3975

019-068-208 118 0 -1308 +158 -14 -8 012

-1 -102 -123
-14 -7 14 -153
12

-1 -64 -148
-7 -13 -120
12

105

-14 -117 -328 +90

-297 -~~190~~ -422

-201 -122

-14 -138 -355

-306 -244 -150

01

015

-14 -98 -242
-208 -142 -54

G-65-202 13 55.3 + 9 10

176-764

Row 838

11.5-7 74

d
P=1874

14.0
+ 5.5

V + 15.5

14.8
- 7.5

+ 19.1

32

9 Clm
G-15033

14 03.7 - 36 07.5
1.95 +1.03 Egg (9")
1.95 +1.00

969 +1.30
+1.30 (87)
+1.80 (19)
+5.60 w(4)

1100E-10

w(+0.6)

W 24-5 1974

W 82720
W 82204
-2509260

-638
-518
0.75
+1.3

+28 -52 -25 .055
+26 -48 -5 .060

-522 -522 60
-509 -520 130
-510 -520

W 200 517 (14)

267 (8)
350 (7)

59 ± 6

-514-855-599 808 -510 -520 +1.3 306-1-1.950

-262-157 443-266 0.2843 -1 0

0 485

-043171.7 -52271.7 -1459 -42

-0432 -526

-36 7 29.63 19034

+32-58-29

43.891 1906.8

1.862
-753

+24.33

5.30

45

44.315

24.29 1939.48

38.9

45.71

+3.22

12.216

24.35

8.549

1941.3

27.56

42.3

-22.26

35.714

33.41

41.214
+29
-870

44.072
-1.681

25.314
+16
-25.00

43.629

3304

1956.28

-624

-28
33.72



14.050
-36.100
-638.000
-518.000
0.750
14
1.300

MV
1318

-0.716
0.094
-0.692
1518.596
20.551

0.609
0.400
-0.595
-2758.936
-09.744

33

-0.282
0.050
0.400

WGVN 14 04.4 +38 04

-027-012

1047

-34
-12
965

+22

34



14.040
20.050

1000000

(10,12) 10 -16

113 1/2

123558

14 06.2 -19 019 M3 +58e

6619088

to 217

-7.88 -54.83

8888

69126

4.36 1.10
7.10 + 1.55

+180

0.000 0.056

6.87 + 1025

-24 -116 -19
-8 -17 -19

+58

-0.004 -0.056
+58.0

-0002 -090

+0001

8.42

2 -16

+0014

~~30~~ 211

9.2
+58

+002-066

-69 -116 -59

-7 -19 -19

The vector gain
in the vertical
moment

R.A. : 14.190
 DEC. : -19.880
 PM. R.A. : 2.880
 PM. DEC. : -66.000
 DISTANCE : 8.280
 MODULUS : 437
 RAD. VEL. : 28.880
 dl (U) : -0.70

03 (U) 0.278
 03 (U) -0.043
 U -0.123
 -79.087
 01 (U) 0.281
 02 (U)

R.A. : 14.100
DEC. : -19.000
PM. R.A. : 2.000
PM. DEC. : -66.000
DISTANCE : 8.200
MODULUS : 437
RAD. VEL. : 58.000

q1 (U) : -0.70

q2 (U) : 0.290
q3 (U) : -0.643
dU : -97.123
U : -79.667

q1 (U) :
q2 (U) :

123585

14 06.5 44 05

F7BW p 52

~93.6407

Sr 4077 and 4216 extremely strong;

otherwise star looks like dwarf;
possibly comp center; looks somewhat

weak-lined.

2/15/15
15/15

+6722 -038 7fc

+47

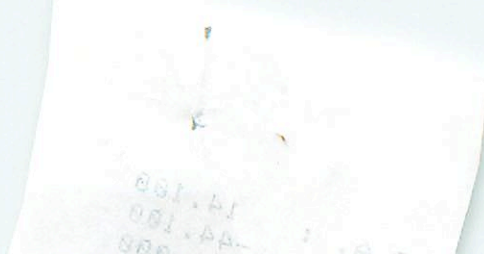
-34

513

4034-034

123585
14 06.5 44 05
F7BW p 52

36



14.100
-44.100
300

FB

14 02.9 +59 52

57

FB143

1338-028-1107

-052+30

-104

+30

920

-67



37