

2.99
 2.98
 30985

607 175 955
 4 48.7 -41 24 $F2E$ $+25.1$ $4C$

$FD11421557$
 $GL5913$

-0.0002 ± 3.8 $+065 \pm 3.1$
 $+060$

6.0 } 14 "optical"
 10.0 } 815
 249 152 865 7164
 38.556 19054 0010
 $+ \frac{9}{565}$
 -0006 7062
 -0003 $+064$

21.96 1898.9
 -3.32
 $\frac{25}{28}$

23.04 1938.66

$+13$
 $\frac{91}{91}$

$22.$ $\frac{37}{37}$
 $+ 2.$

38.540
 -10

530
 -035

-0011 7063 865

2.75

-00105 7065
 -0119

3.29

-0008 7066



4

25



30985.000*

4.000*

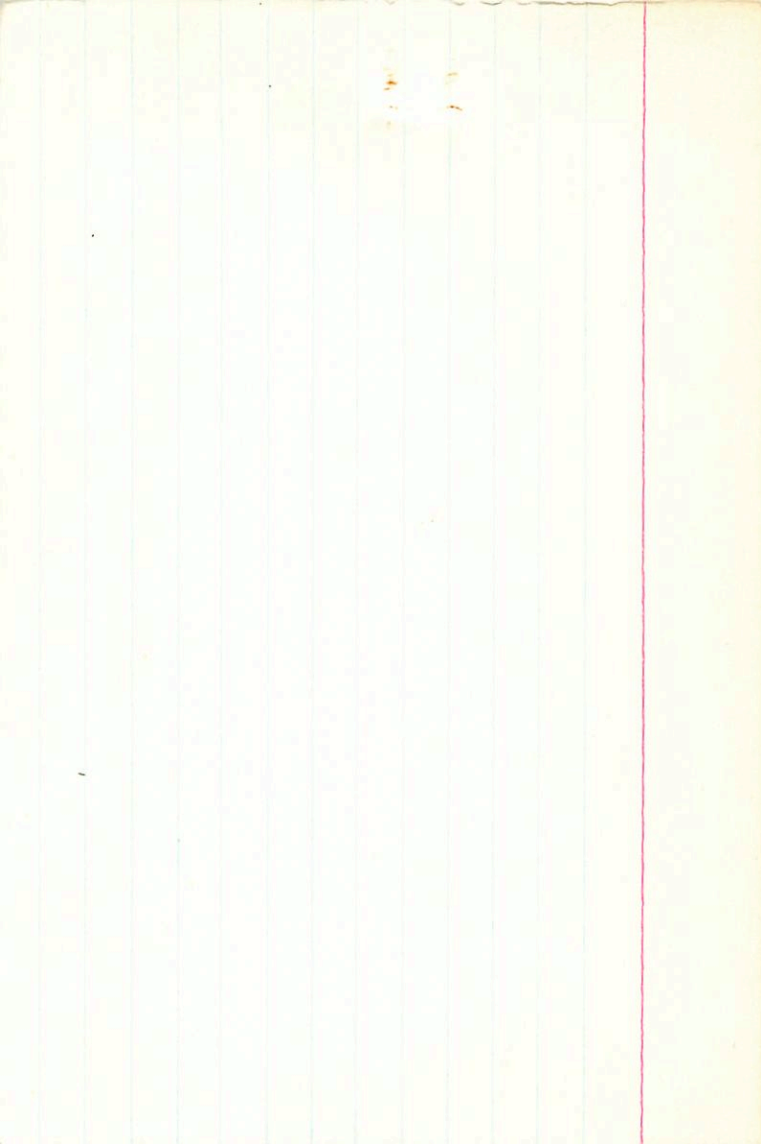
48.700*

1560 .4 50.4 +5 32 A9 12

31109

5954

4.37 +0.25 +0.15 C



1561 4 52.2 + 52 47 A2E

31124
5588

10 8/10
10 W
122
-16

5.65

052 170

1.126
340
1.466
104
1570

2872 @ 5 AC

2.183 JG
2875.40
1574 269

a=90

1-81

40.7
485

1114 + 014
-600
+
1010
-1010
-600
-600

57

1190 711

31236

10121

100004

(10121)

5444

121

165034

110110 109 1139

Y 5220 + 19 24

606 85 11243

10111 - 037

1038 516

~~10115 0355~~

72-34

4288 8868 0723
9034 - 1621 - 10057

-1.1515

1008 1000?

52



130
130
130

4 51.8 + 11 21 A3

1564

31283

5493

5.19 + 13

078 148 1.079 2.868

② SPC

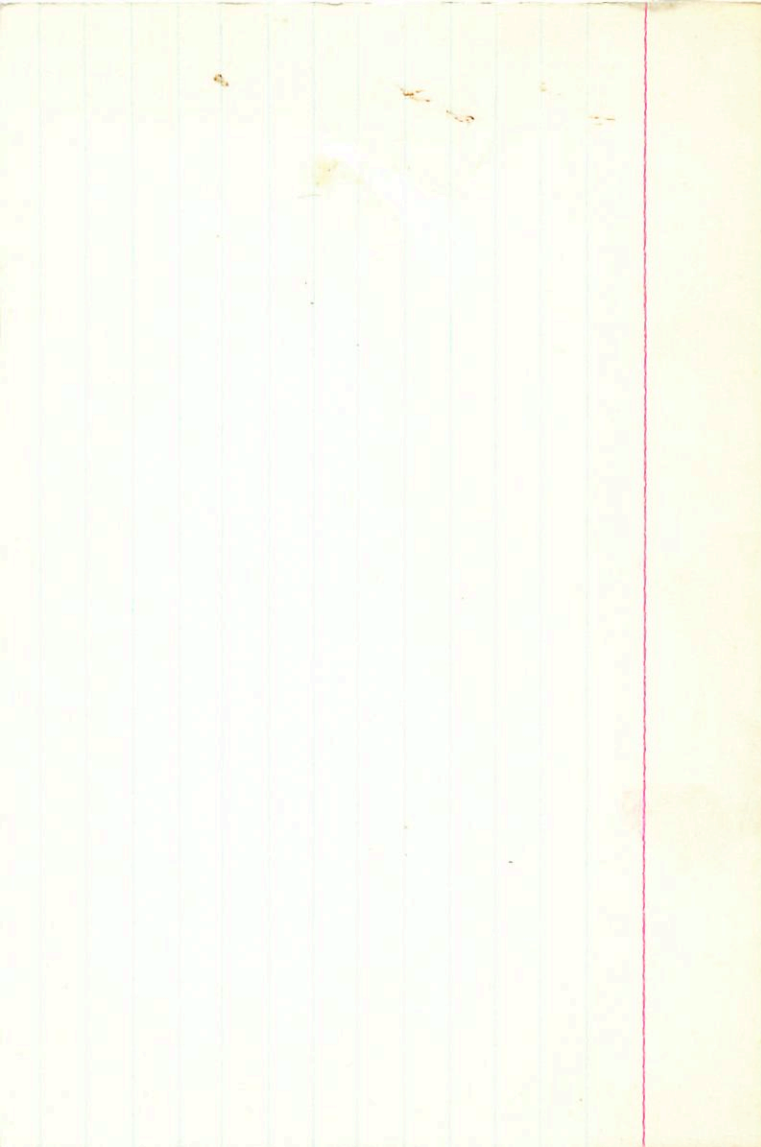
2.22

Ind.

078 + 182 + 1.063 2.868

$M_V = 10.8$

$M_V = 10.8$
4.4



1583
3/18/17

1105
160
4
53.4
25
48
711

145 235 846 2807

11151030

6169 049 1.201

1185
1203
1.94

100141015
10141015

116
20
483
114
15
423
114



53

.A. : 4.900
EC. : -25.800
.A. : 21.000
EC. : 15.000
NCE : 4.630
LUS : 84
EL. : 11.000

(U) : 0.184
(U) : 0.808
(U) : 0.560
dU : 73.895
U : 12.393

(V) : -0.600
(V) : 0.543
(V) : -0.587
dV : -15.170
V : -7.734

(W) : 0.778
(W) : 0.228
(W) : -0.585
dW : 86.000
W : 0.820



Sci 2000

32045

4 57.6 -12 37 FO 15

HR1611

478 +26 +17 J
478 +28 +16 349

GC6104

478 +27 +15 C

6480

1171 1169 1.002 3 2759 (4) 624

[20] 200

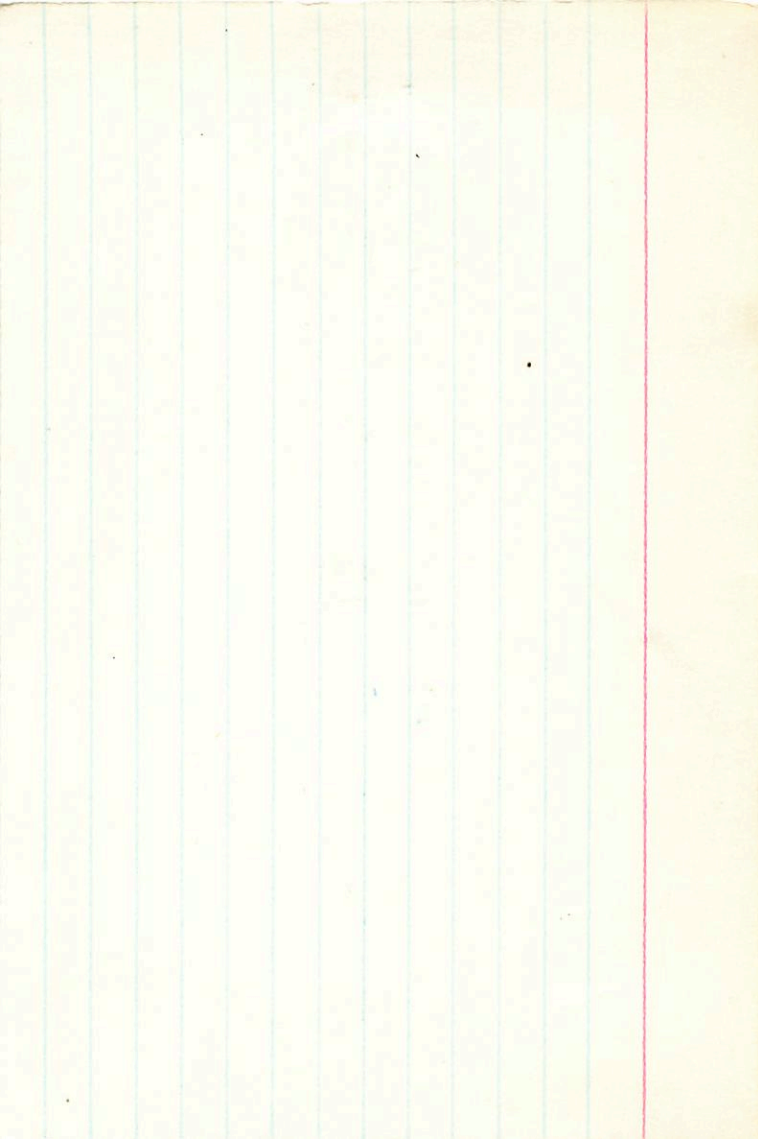
1157 1172 1.997 (989) - 3,97 -

[21] 627

1164 1170 1.000 2.755

2.30 -17.4-4.8 +8.1

-238 -40 +17



1632 (23614)

5 015 +27 37 A) \bar{V}

8280
6186

6062 035 1220 24 +12 drum

+1.69
+2.08

1149
146

841

134 200 868 2.808 2582

4723

7015-048

020-018

6662 3822
2999 2583
5457 ~8560

~~22~~
~~84~~

488
+220

72.4
-18.7
= 53.6

54

Handwritten notes on a piece of paper, possibly a receipt or ledger, with several lines of text and some illegible markings.

800
800
800
800
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800

1000
1000
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1000
1000
1000

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1000
1000
1000
1000

1000
1000
1000
1000
1000
1000

R. T.

DEC.

R. T.

"

"

"

"

5.000

27.600

22.000

-48.000

1.850

9 Am

20⁵
-0026 ± 1.9
-0023
5 02.8 +5-1 32

-24
-1.48

HR1637

4.90^H
+0.37^H
vwd
vwd

-024 -775 66
FOE
+7.85
+257

32537

497 10 1022

301510^m 90"
6249 13^m 6"

45.327 1889.2 +51 32 1.04 1887.3
158
485
+10.97
12.01

Camby

217 152⁵⁴ 2023

1926.8
8.91
29.7
-9.04
1944.05

47.86
57.42
45.325
384
344

50.3

174-73
9R
7R

45.329
344
371
-114

58.8
8.02
6.82
2.08
4.74
3
5.0
2.05
-22
1.83

1926.8
8.91
29.7
-9.04
1944.05

A.1-

45.358 / 3⁴

1.78 1.78 / 0.3

1944.05
1946.97

969 246 783 623 -024-125 -1.4 -137 -1-516

105
101
166

023 133 -006 -034 250 602 -0.5 0 -1 46

+6 +12 -12

[+6 -11 -13]

+6 +13 -13 44

5

41.34
+165

1689

5 02.7

+35

52

A7 B p

3268

-088 1.219

649 ~~013~~ ~~706~~ ²

6214

+1.54

589

094 202 908

2.838 @ 546

-0006 -012

-007 -012

-9

-12

493

R.A. : 5.050
DEC. : 51.550
1. R.A. : -46.000
1. DEC. : -173.000
DISTANCE : 2.310
MODULUS : 29
VEL. : 7.400
(U) : 0.150
(U) : -0.375
(U) : 0.915
DU : 286.942
U : 7.833
1.57
-R

56



R.T.
DEC.

10.000
10.000
10.000
10.000

...

1645

5 01.8 -24 28 A.3m

32667

4195

5.60 +0.10 (+13)C

5.59 045 187 1.004 2900 27,93,5

390
195
595
1385
1.468

260
a=065
n=013

274
1398
1468

1.81

47...

41.0
4.05

+ 0019 - 036

+ 026

1

57



1645.000*

5.000*

1.000*

-24.000*

-20.000*

0.026*

-0.036*

4.000*

63.096

7.000

-0.117

0.584

3rd

HR1674

33262

3033
625

39.037
193
220

+7 +4 -1 .072
39.046
-35
058

-00481 +1158 F104

-0347
-034 +115

39.006
35.11
995

8053
39.026
196

38.2

5.1
-57.5
-63
115
-0.15 27

1195
259.7
+4.60

25.37
39

9705
48.5
40.9

-0046 ± 3.2 +109 ± 2.8 -1.7 (SA)
-0051 +113 -2.0 C
5 04.7 -57 32 -2.2 a

4.6 + 0.5⁵¹ FSE

111
-037 +109 G6
-032 +115 K10
-042 +118 F13
-037 +114

-4.61
30.57

26.78 1941.48
+22
26.56

-843 537

85



5.100

-57.500

-63.000

115.000

-8.150

-2.100

100

33256

5 6.2 -4 81

F8E

H01673

+0031 +013

6-66292

+00278 +0116

6852

+0411

+043 +011

512-445-054

.300 .151

307 127

③ JPL

.443

526

446-

2-637 ⑤

~~2-440~~

6+

[m] 209 +18

43

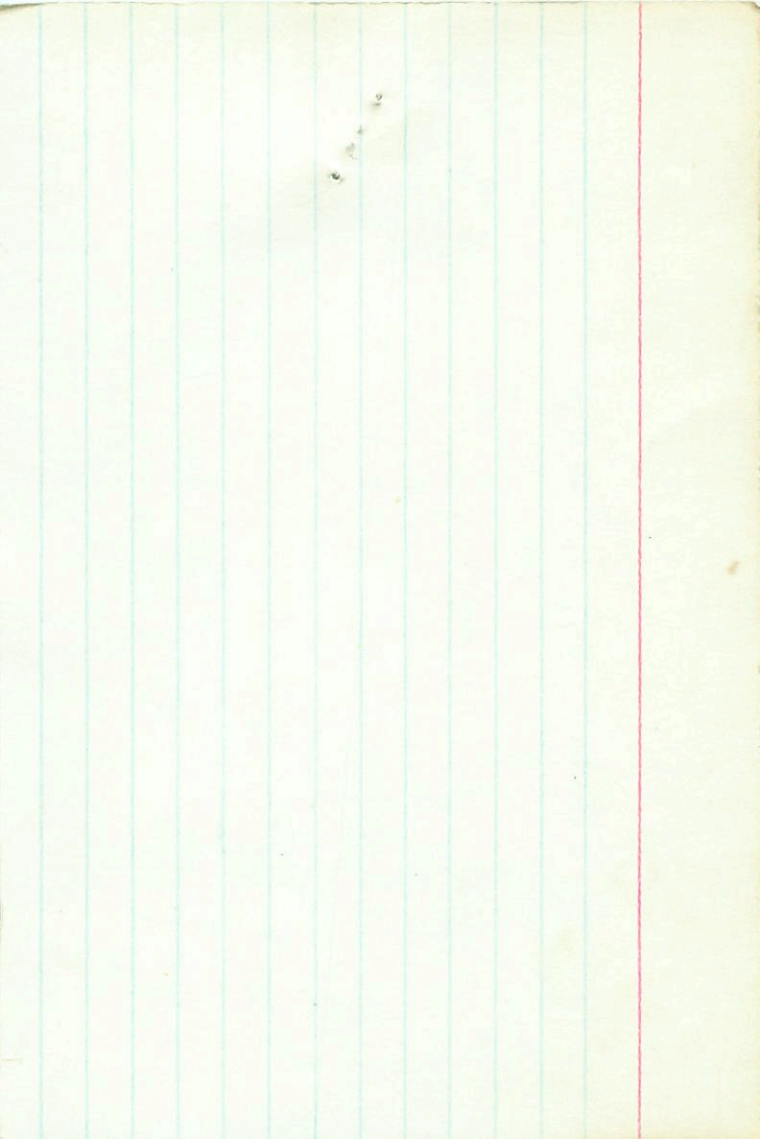
[G] 383

11

2.10 +5.4-5.6 +16

45+

+70 -77 +288



68 km

33256 5 06.2
+0029 ± 2.8
+0030
-0040 31
+0031
+0034

+019 ± 2.4
+014
5.2 dF1
+9.4a

3054
+0031
+0034
+0038

+013
+014

6292 14.875
-4 31 10.65 1903.5

$$\frac{133}{742}$$

$$14928 \text{ (6000)}$$

$$\frac{-88}{11.53}$$

$$\frac{0.580}{14.235}$$

$$\frac{1080}{10.71}$$

$$\frac{19.24}{59.10}$$

1933.83

$$\frac{17.846}{421}$$

$$\frac{845}{103}$$

$$\frac{10.14}{-1.320}$$

$$\frac{11.05}{+0.49}$$

$$\frac{14.852}{870}$$

$$14933$$

$$\frac{11.21}{+2.22}$$

$$1940.81$$

$$\frac{960}{1103}$$

$$1103$$

$$10.99$$

$$\frac{-9.64}{37.3}$$

$$33.8$$

59

1178 5 09.5 ✓ 44 174 -4.0

33216 Press 1002175 2124 2524

END END

END END

0
3
1cm
-4

630 604 007

R.A. DEC. 5.100
 PM. R.A. DEC. -4.288
 PM. R.A. DEC. 43.000
 DISTANCE 11.000
 MODULUS 1.000
 RAD. VEL. 23
 2.400

0.137
 0.258
 0.824
 25.833
 0.045

0.384
 0.717
 -0.384
 -81.381
 -2.438

0.000
 0.452
 -0.451
 184.839
 0.380

P1 (U)
 P2 (U)
 P3 (U)
 P4
 P5
 P6
 P7
 P8
 P9
 P10
 P11
 P12
 P13
 P14
 P15
 P16
 P17
 P18
 P19
 P20
 P21
 P22
 P23
 P24
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 P51
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 P86
 P87
 P88
 P89
 P90
 P91
 P92
 P93
 P94
 P95
 P96
 P97
 P98
 P99
 P100

R.A.	:	5.100
DEC.	:	-4.500
PM. R.A.	:	43.000
PM. DEC.	:	11.000
DISTANCE	:	1.800
MODULUS	:	23
RAD. VEL.	:	9.400

q1 (U) :
q2 (U) :

60

$+0003 \pm 1.8$
 $+0002$
 -015
 -015
 $+15.82$
 -015 ± 1.6

15 Dec

480
 111
 1290
 (014)
 27
 1108

HR1676

$+0.35$
 \checkmark

4.83 + 0.30 + 0.19 F2V

33274

3060

6506

50.109
 $\frac{016}{093}$

1897.4 +15 32 6.32

1995.2

100Y - 0.15 6.6

899

~~199176 939~~
~~27737.14~~
 $\frac{82}{82}$

~~4.74~~
~~31.4~~

50.086
 $\frac{27}{109}$

176 939

6.45
 $\frac{18}{18}$

1933.9

10090

36.2

6.63

33.6

301

24.211
 25.825
 50.032
 $\frac{058}{081}$
 $\frac{27}{081}$

1927.35

9.55
 57.25

41.4

100Y-023

1006-023

$\frac{100}{100}$
 $+0.009$

16.2
~~6.53~~
 -1.6

4.44

6.14
 $\frac{6.14}{6.14}$

1938.65

50.043
 $\frac{26}{111}$

8.14

6.42

6.57

61

R.A.
DEC.

R.A.
DEC.

STANICE
DOLUS

VEL.

P1 (U)
P2 (U)
P3 (U)

P1 (U)
P2 (U)
P3 (U)

R.A. :
DEC. : 5.100
R.A. : 15.550
DEC. : 6.000
STANCE : -23.000
ODULUS : 4.440
VEL. : 77
31.400

q1 (U) :
q2 (U) : 0.139
q3 (U) : 0.234
dU : 0.962
U : -21.729
28.537

q1 (V) :
q2 (V) : -0.584
q3 (V) :

1678

33246

63520

5 089 +6237

~~5 44~~ 42

125 172 935

252

885
388.0
172.2
846.8-
108.78-
105.91-

10
20
30
40
50
60
70
80
90
100

M
MP
(M)
2b
(M)
1b

11.508
0.00



1700
34045

202
143

5 11.7 -14 40 +310

+7.22
+1.12
+2.14

230 195 652
6982.710

621 152 1065

1000-1100
1000-1100

1000-1100

11

-

420

+31.0

0.0

LS 577 ~~650~~ 5

11/11/11

29



19

19

19.05.2008

19.05.2008

19.05.2008

1711 5 12.5 +22 13 A2 TD

34053

6413

6.13

+08 +14 Gamma

051 160 1.159 2.883 32

5.5 w3
h by
-1.78
/ 10.1

220

546

2.10

1.479

a=91

+0.68

1.541

a=87

+0.65
5.45

-50116 -0.222

-0.233

-00148
1.479
1.541
+0.68
+0.65
5.45

63

1711.000*

5.000*

12.500*

22.000*

13.000*

-0.036*

-0.021*

5.450*

123.027

-10.000

-0.025

0.986

-12.92-

1780

34435

5 ⁹⁵/₁₁

140

SS 4.3-

+20

~~100~~

~~117~~
~~120~~
~~114~~

969

600-04-1353

070 228 9832882

0012-1035
~~025-1035~~

015-1035

30 ~~18~~
25 ~~35~~
506 486
+200 420

118
341
171

R.A. : 5.250
DEC. : -35.000
R.A. : -18.000
DEC. : 35.000
ANCE : 4.860
ULUS : 94
VEL. : 20.000

(U) : 0.105
(U) : 0.895
(U) : 0.435
dU : 141.100
U : 21.920

(V) : -0.571
(V) : 0.412
(V) : -0.710
dV : 108.221
V : -4.057

(W) : 0.814
(W) : 0.174
(W) : -0.554
dW : -28.050
W : -13.709

64

64

118
341
171

1001.000*

4.000*

52.200*

52.000*

47.000*

-0.005*

0.013*

4.850*

93.325

-16.000

-0.028

0.962

-17.001

0.056

0.419

-1.471

0.020

0.105

0.198

5

153 205
\$11 \$5.1
6424
4 5220 +15 24

178 190 784 2784
205

7055 Van?

156 811
31236

626 55 1104
570

1061 -037

10121

10615-0355
72-34

4248 8868
9034 -1621

0723
-10057
-155

105604
(106)

5444

0176
3.74

191 248 707

921

15.2+ 519 One 50E
941

1124

2100
2010
6504

2237
224

1242 9819 471E 6424 1107
458 +109 3164 6424 1107

52