

1565

4 51.4 + 1 30<sup>29</sup>

A2

31209

5971

6.60 + 0.04 0.00 C

+0000.354 -001 25.5

20.352 95.6

20.04 18973

+0000

+0045

+0000.002

4.85  
+1.5  
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-2  
+20.0  
7.25  
+21

0.41 26 1.47

16



4.850  
1.500  
6.000  
-2.000  
7.350  
295  
21.000

0.195  
0.461  
0.866  
1.169  
10.525

-0.604  
0.752  
-0.264  
-24.302  
-12.724

0.773  
0.471  
-0.425  
17.499  
-3.761

16

1568  
31278

6017

7.8 1.2

16.235  
1227  
16357

1002254006  
-1002604000

2011  
16215  
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-1002604000

2762  
-2762  
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4234

30  
-7.4

4 53.3 + 53.40

AID

10021214  
-10024  
920  
1002254006  
+10026  
10026  
862  
-25  
692  
2762

dev  
3.48  
-7.4

44  
+53.66  
=43  
+7

Handwritten

4520 + 1926 dH

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31236

5999

Handwritten symbol

4.900  
53.660  
-43.000  
7.000  
3.000  
40  
-7.900

0.184  
-0.403  
0.897  
-35.547  
-0.499

-0.600  
0.676  
0.427  
94.949  
0.408

0.778  
0.617  
0.118  
-73.549  
-3.857

17

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4 523

+07 23

31331

~~10003~~ 5.5 -091095 950 2690

~~150003~~ 0080 W3 50

~~10775~~

(083) 458  
166  
62

~~10045~~

44

+0.4

+6

-8

5.88  
1.65  
7.53

~~1008-008~~

2.5

+7.0



18



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-8.000

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-12.886

10.531

-0.600

0.747

-0.287

-45.385

-19.225

0.778

0.463

-0.424

4.573

-5.759

18

S.O.P = 3.9

-0021 ± 1.9

+006 ± 1.3

76m

31278 4 531.3 + 53 40

4.4 A2 - 7.9 a

2950

6017 16.235  
122  
357

+53 40 28.02 - 1886.2  
-38  
27.64

A053534

4.6 1'

15.96

1927.2

1.5

1926.7

Phylog

16.123

1927.2

28.05

1926.7

div 11 m 26'

16.195

1927.2

29.85

1926.7

Phylog

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16.215

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1926.7

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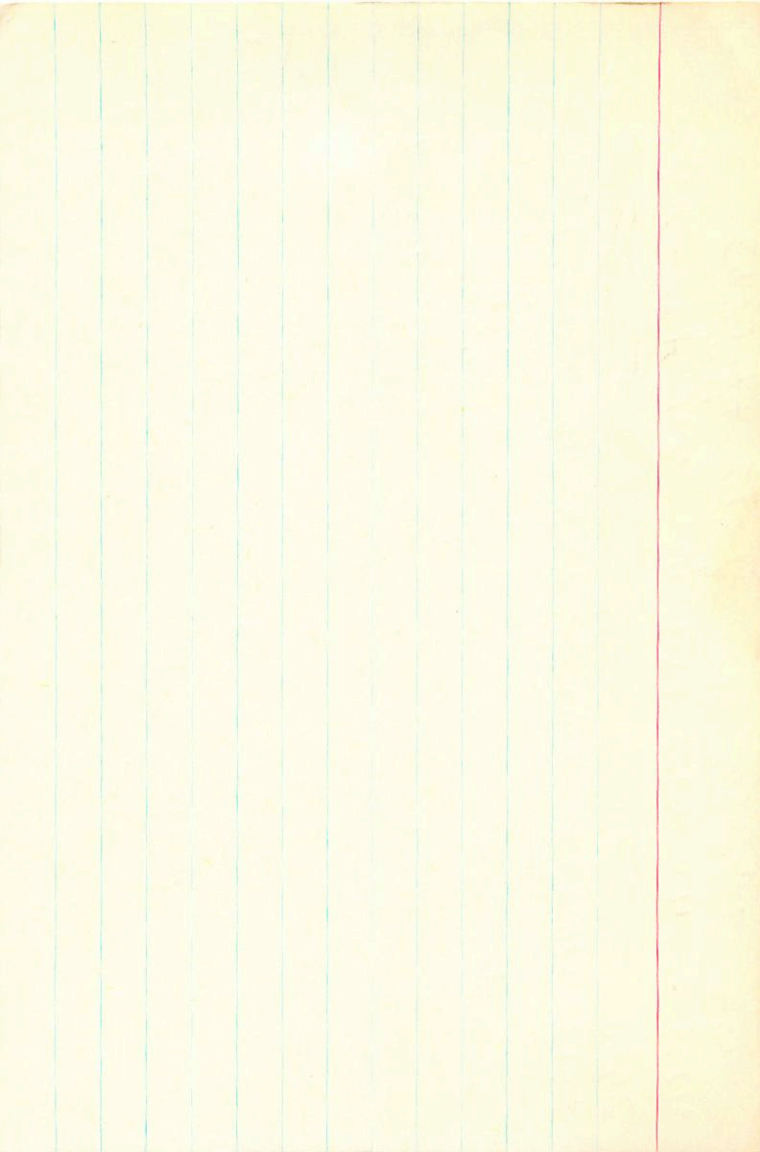
124

28.02

1926.7

237

124



7 Cam

HR156F

4 53.3 +53 40 -7.9a

440<sup>a</sup> +0.07<sup>+</sup> A1V

4.47 -0.02 0.00 -0.19 +0.066c

Sp. A.  $P=4d$

✓

958 269 906 592 -019 +006-7.9 005 -6.7 019

018 -005 -005 001 051 -017 -X7 -63 -4.5 15

+3 -8 -5

$\boxed{1.6 + 1 - 4}$

-9 +2 -4

15

+4.1 -7.6 -5.2

$\boxed{-8.7 + 1.5 - 4.8}$

25

+1.9 -6.4 -5.6

$\boxed{-8.0 - 0.4 - 3.2}$

7 Cam

W 2920

4 53.3 +53 40 A2 -7.9 a

HD 31278

4.47 -0.02 0.00 -019 +006 G-C

HR 1568

A12 -019 +006 (u12)

8<sup>m</sup> 11<sup>m</sup> 26" both spin

P = 3.9



958 287 806 592 -019 +006 -7.9 005 -6<sup>4</sup> 017

018 005 -005 001 08.1 -047 -4.7 -1.2 -4.5 006

+9 -11 -4

$\boxed{-11 +6 -8}$

+12 -13 -3

006

+4.1 -7.6 -5.2

015

-8.7 +1.5 -4.8

+2.1 -6.6 -5.6

023

$\boxed{-8.2 -0.2 -3.3}$

Libertarian Aop with l (slat)  
Vinc 105 d (10m)

4 52.1 +10 04 +13.2

+42(5)  
+23 Y(4)  
+120W(3)  
+6-2V(1)

T'Bin  
31295  
C 5587  
W 2903  
HR1570

+0.0028 -0.126 / 2/2/50

29.94

+84 +046 -131 6L

-4 -64 -21 .010  
-1 -54 -17 .012

42.5  
P.O.

815 +5.0  
-27. -12

?

189 328 925 | +0376 -2006 -1630 +12.0  
-603 783 -154 | -1201 -4788 -5989 -2.0  
776 528 -347 | +1575 -3229 -1684 -4.5  
-7.2

19



1  
4.000  
40.000  
400.000

+1030 -130

1570 +10282 -12884 52.1 ±10 04

31295

+1164

5947

+102.5-130

2<sup>nd</sup> 4 Hand.

+10

3

+6

+11.0

+11.2

+10028 +1290

04211 +128

+10028

+10211 -128

222

52.1 ±10 04

44

465 +0.08 ±0.08 59-

042 184 1001 2.509 at of

034 188 1.016 2.857 56 strands

039 186 1008 2.507

184 a=0.57 199

388 a=0.06 49

1.009

1397

1463

7206

6634

-9400

2412

44 178 1007 2858

59-

2.509

2.857

2.507

199

49

70.1

443

-130

315

+11.2

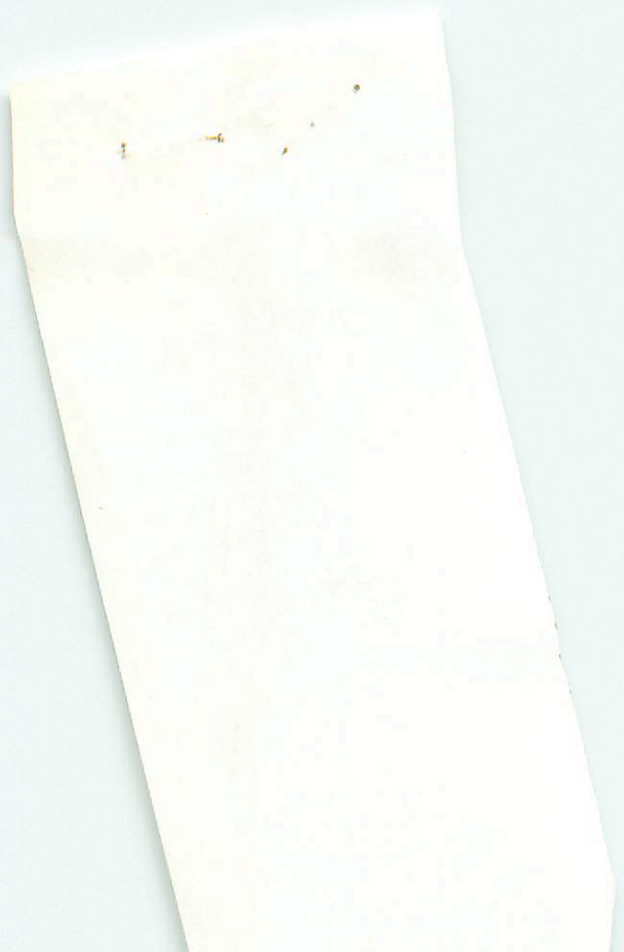
+1.25

398

024

408

20





1570.000\*

4.000\*

52.100\*

10.000\*

5.000\*

0.041\*

-0.128\*

3.150\*

42.658

11.200

-0.161

0.926

3.499

-0.592

-0.152

2.4  
38

14.1

$$\begin{array}{r} -133 \\ \hline 117 \\ \hline \end{array}$$

$$+0031 = 15$$

$$\begin{array}{r} +0017 \\ +0030 \\ +0030 \\ \hline \end{array}$$

$$\begin{array}{r} 8467 \\ +74 \\ \hline 8541 \end{array}$$

$$224497.1$$

$$\begin{array}{r} 693 \\ \hline 2937 \end{array}$$

$$\begin{array}{r} 8406 \\ +110 \\ \hline 8516 \end{array}$$

$$241886.0$$

$$\begin{array}{r} +11 \\ \hline 2419 \end{array}$$

$$-130$$

$$\begin{array}{r} 8407 \\ +24 \\ \hline 8431 \\ +25 \\ \hline 8456 \end{array}$$

$$242629.36$$

$$\begin{array}{r} +11 \\ \hline 2427 \end{array}$$

$$\begin{array}{r} 6860 \\ \hline \end{array}$$

$$\begin{array}{r} 2030 \\ -4 \\ \hline 2026 \end{array}$$

$$\begin{array}{r} 818 \\ \hline \end{array}$$

2π'Die

4 52.1 +10 of

+13e

HR1570

V. 204 +0.14"

A(1/2)

GC8987

+046 -131

+0028 -129 Gm50

4.592

42

189 328 925

+0358 -2006

-1648 -69 +12.0

-603 783 -154

-1143 -4788

-5931 -247 -2.0

775 528 -345

+1469 -3229

-1769 -79 -4.5

2372

908

+5  
-27

-12

1576 4 530 +14 57 +85

22913

-00089 -012120

+ 22 + 4

44

-00017 -0122

- 16 + 15

+ 15

- 4

-00033 -0104

-12.5

6.2

-0048

+ 4.5

-004 -0125





4.900

15.000

-4.000

-12.500

6.300

186-21

18/97

9.500

0.184

0.246

0.952

-17.912

5.783

16

-0.600

-0003 ± 7.5  
-0011

-0008 ± 8.3  
015

31411 4 53.3 +05 19 2.6 A0m +21.6δ

2921

6019 18.708 1902.0 +5 19 15.49 1902.3

$\frac{014}{722}$

$\frac{35}{15.8}$

-0007 -012  
+1

19344

18.655

$\frac{327}{68}$

15.12

$\frac{0006}{0009}$  FOI

$\frac{327}{68}$

15.29

$\frac{327}{68}$

LS

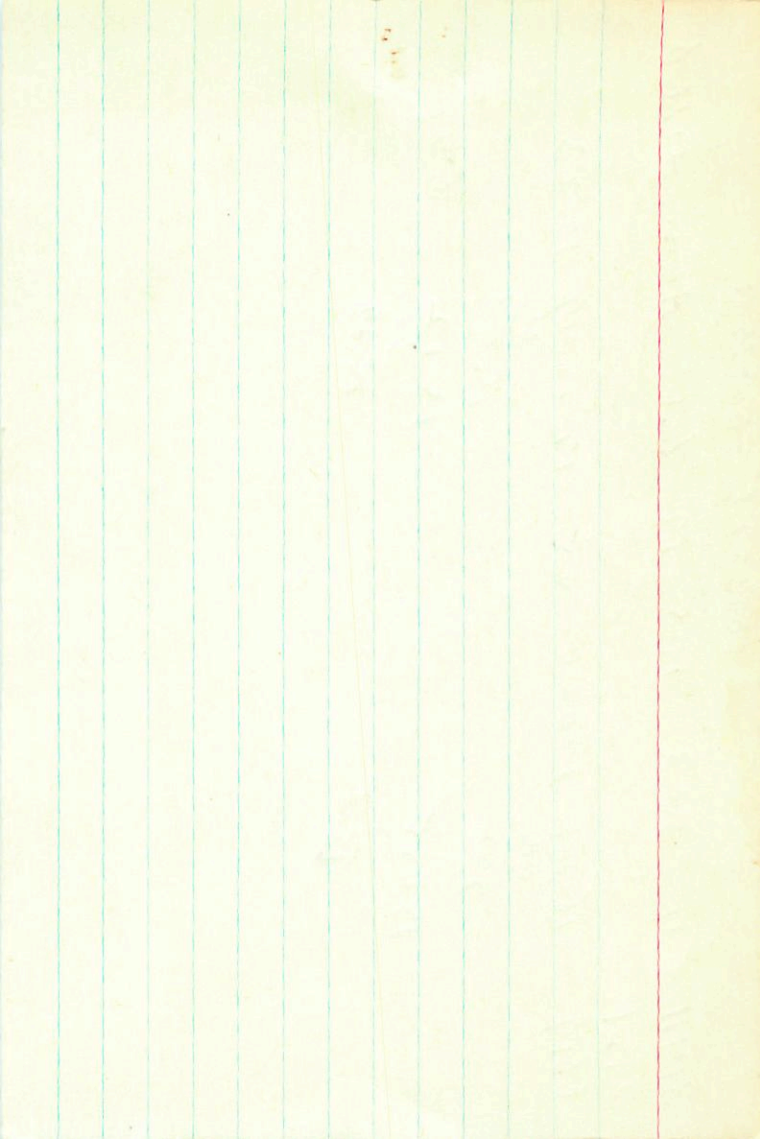
$\frac{327}{68}$

32 -) 48  
 $\frac{32}{160}$

32435

$\frac{327}{68}$





1578

4 53.3 + 5 19

AO

31411

6019

TOP #

6.44 +0.02 -0.01 C

48.

019 168 948 288 et al

174  
934  
1

931

173

238  
1232  
151

a=10  
A=23

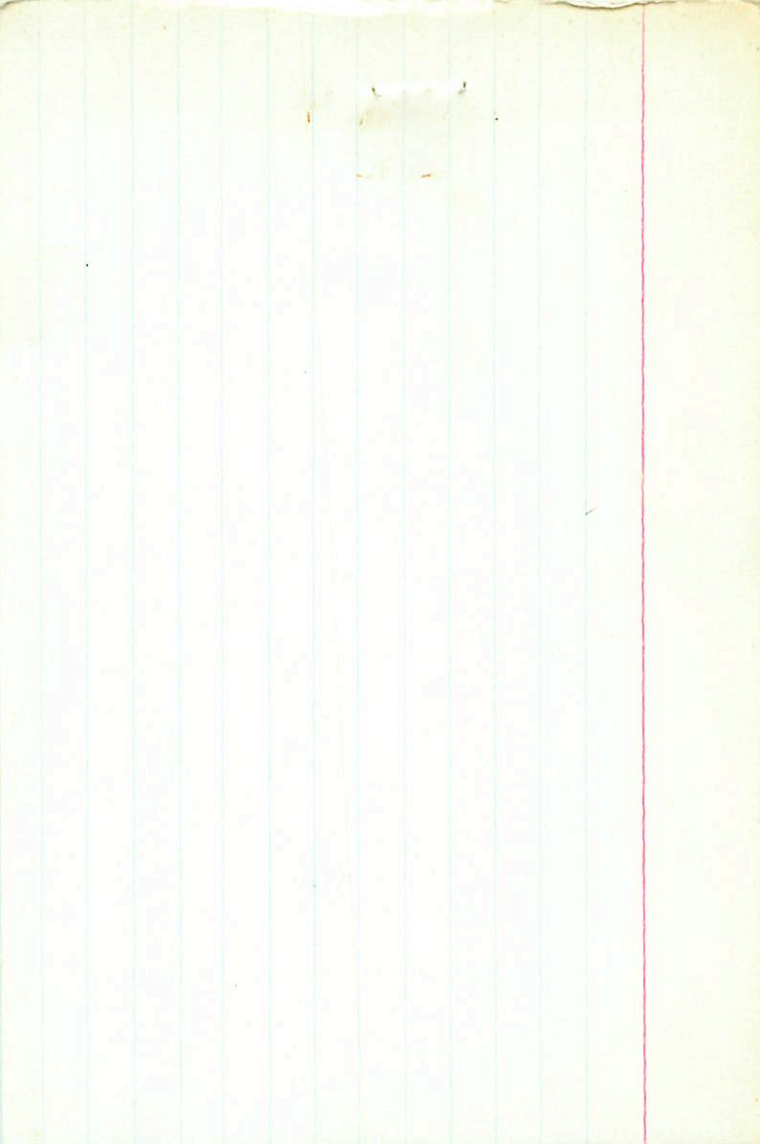
161  
122

14  
133  
17

1.25  
5.25

21.66

110-600



11 Ori  
1638 Si

5 01.7 +15 20

239  
150

32549

4.6.8-05-15 J 2 942

145

Redbird ✓ -030 149 1016 2.797 2r3

~~-24 150 1034 2984 ca3~~

-11

0340 5.56 189 1022  
+1050 298  
1300

-032 147 1025 2.740  
137 1081 0945  
294 155  
1305

FLY  
5.25

+0110-0346

-0.1

+16.66

+159

+016-036

+10

22



22

1638.000\*

5.000\*

1.700\*

15.000\*

20.000\*

0.016\*

-0.036\*

5.250\*

112.202

16.800

-0.029

0.95

4.7  
87.1128

5.5

+14

~~0.12~~

+12

12.857

-0.161

-0.104

-18

-25

-22.094

-0.034

-0.265

-7

-9

-0.231



41688

11 Dec

562

5-017 +15 20

Apr

HR1635

+8 [ ] W350

+0132-0321

+017-035-6c  
+018-033A30

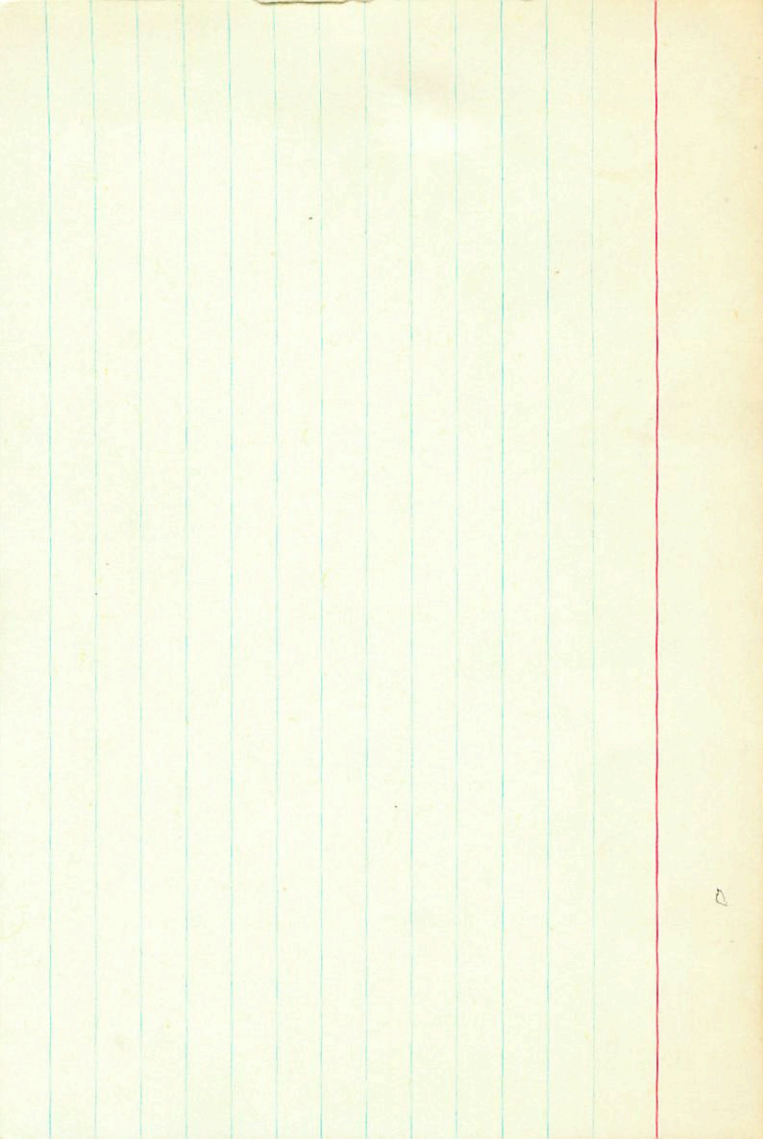
140-0324

+0202  
[0201-034]

6470  
7451

0420

9624  
2705



11/20

32549 5 01.7 +15 20 4.6 B9 +16.86

3003

6191

+6010 64-033 N30  
+0010 51.3-033 51.2-66 → N30

1650

5 00.5 + 76 25

-000236

-000231

~~3085~~ 91.1 -0014

-007 4677 89.5

610

34

3.247

0.13

-0009-0005

5.1

-00020

+264

-0012

34

-008-002.5

-2.5

36195

4963 1545.04

575

+ 24

420

412

4975

21.16

- 38

23



5.100  
76.400  
-34.000  
-7.500  
5.750  
141  
5.300

PASP 88, 275

$H_2$

ATM

2 Sp

+ 32.6

5.12 - 07

-4 43

5 043

1657

235 94

10000

10000

1145

168

5.12 - 34 146 856 2844 05.52

140 659

250

+ 0006 0000 7000

1139

40.65

+ 0026 - 0000

5.1

- 4.7

+ 5

- 2

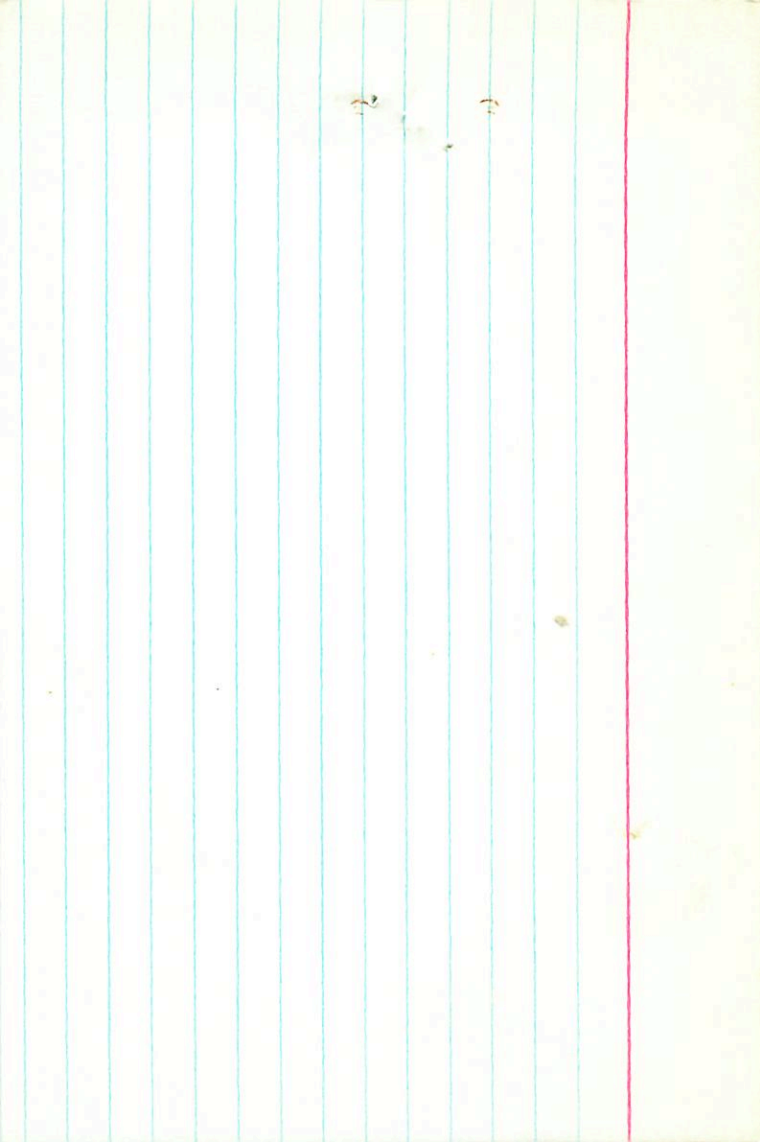
5.2

+ 32.6

+ 0037

+ 005 - 0002





4053694

+0010 = 2.6  
0006  
04.3

50.4  
+010 = 2.3

7321  
+80.92

32964

43

5.2

3029

+27  
17.216

+04  
14.72

1005

6246

17.248

1899.6

-4

43

13.94

1900.7

$\frac{050}{198}$

6.1

-49  
14.43

6661  
165

79.400

-4.7  
+0  
+3

14.74

1939.37

$\frac{17.206}{18}$   
224

37.1

5.7  
+326

14.52

1939.37

3.057  
14.125  
17.212

315  
119  
10008 - 4005  
10005  
10004

17.18  
3.25  
13.93

1534.04

$\frac{342}{398}$

1010 + 1012

10198  
40.5  
653

14.71

14.71  
-0.24

4142  
-584  
+798  
+244  
-428

582  
296

+90

-0.11  
-2.3  
-11.9

14.90

-0.24

+25.5  
-14.7  
-10.1

24



5.100  
-4.700  
10.000  
3.000  
5.200  
110  
32.600

0.129  
0.553  
0.822  
14.406  
28.369

-0.584  
0.716  
-0.383  
-17.424  
-14.390

0.800  
0.427  
-0.427

54

5.100  
-4.700  
5.000  
-2.000  
5.200  
110  
32.600

0.139  
0.553  
0.822  
-1.966  
26.574

-0.584  
0.716  
-0.383  
-20.584  
-14.736

0.800  
0.427  
-0.422  
14.840  
-12.134

24

1671  
+86.13 +10 +16  
5 05.9 -0.8 44

5.75 139.7

36.2

Menu 283  
72

-0.22  
+113.226  
-0.10 +23  
-0.16

7.1

56.905  
+0006  
0004

7275 99.7

618  
394

+50  
42.28

5.1

9057 56.342  
+0004 -0.19  
-36

413.26 39.25

-8.78

452-  
+25  
415

+0004 -0.203

+35  
42.91

+3

+006

-21.5

4003-0215

6.0

4384 0206  
-0007

+27.0

56.395

43.84 68.42

424  
424

4380  
4380

25



32650 5 06.0 +73 53 5.4 Aop +9.36

3052

39

+0009 -029 N30

6288

+0021±2.2 -033±1.6 GC → N30

+0015

-031

+107

-700

+770

+600

+350

-572

+500

+160

+813

+1061 +10.6 +6.5

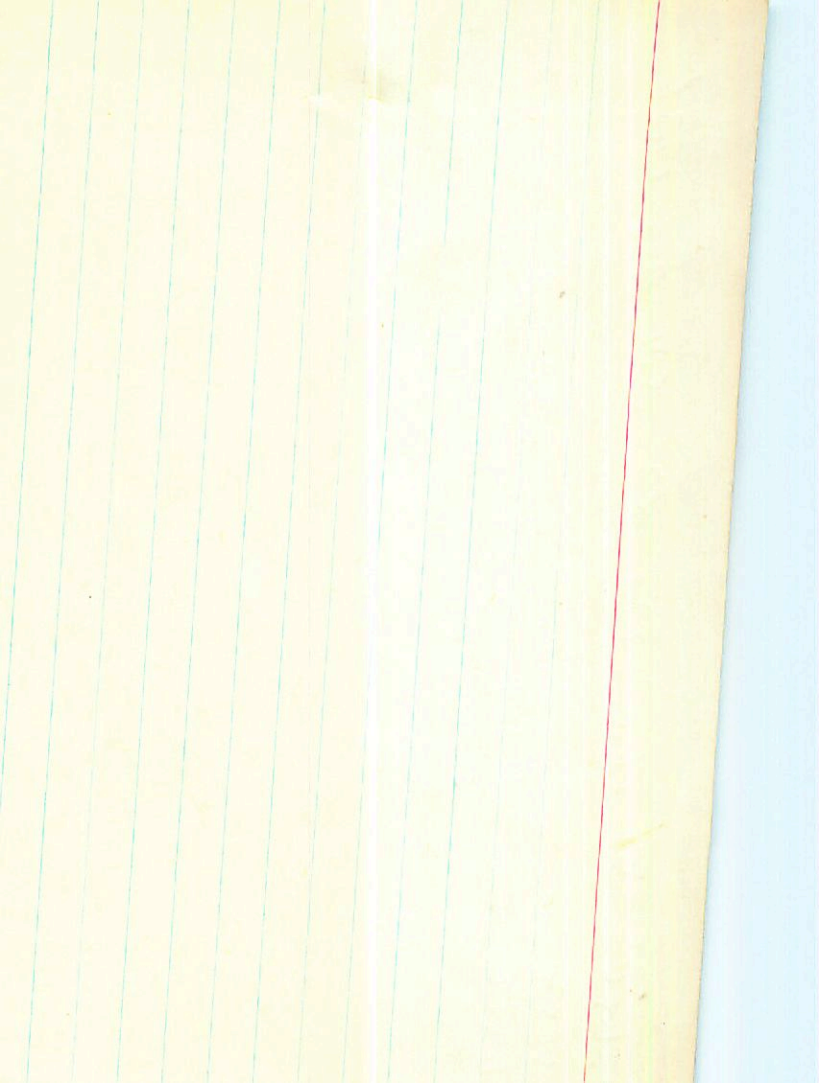
-0910 -91 +5.6

-0470 -4.7 +3.3

+0033 +1028

-0176 -0734

+0250 -0720



1650

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09.1

to

27

058

6m 0.3-0.1 :2

60 →

6.69 02.7 110 688 2.771

E+06

6.66-07-32 ✓

014

2000.3

-030 115 628 2.773 058

0.2

-78 114 682 2.772

SAS 10

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684

10 6.5

2589 14000

5.15

7.2

10000-1001 Hank

+9

10005 0001

7.00

10000

1214

1009 000

26



5.150  
0.500  
9.000  
0.000  
7.730  
352  
28.900

0.127  
0.476  
0.870  
5.429  
27.058

-0.580  
0.747  
-0.324  
-24.741  
-18.061

33654

1652

5

10.7

+53

09

AD

DAD 7,1

252

(015)

RUR

-21, -1, 44

094

086

1.811

2.754

1.7  
09

113

1.292  
1.226

1.819

600

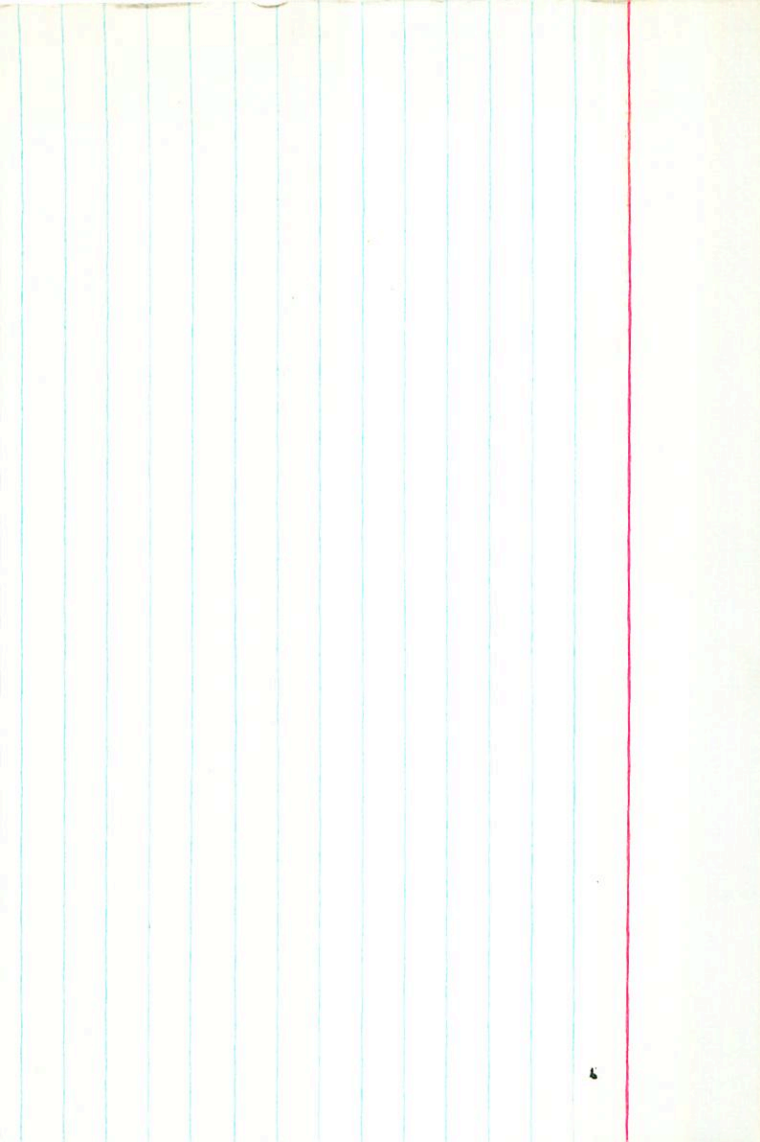
113

1292

1.819

1.7  
1.7

2.1





6 Sep

5 10.0 - 11 5-6

+25C

HR 1696

+026-014GC

10<sup>h</sup> 12<sup>m</sup>

4.43 - 0.09

BTV

16 Sep

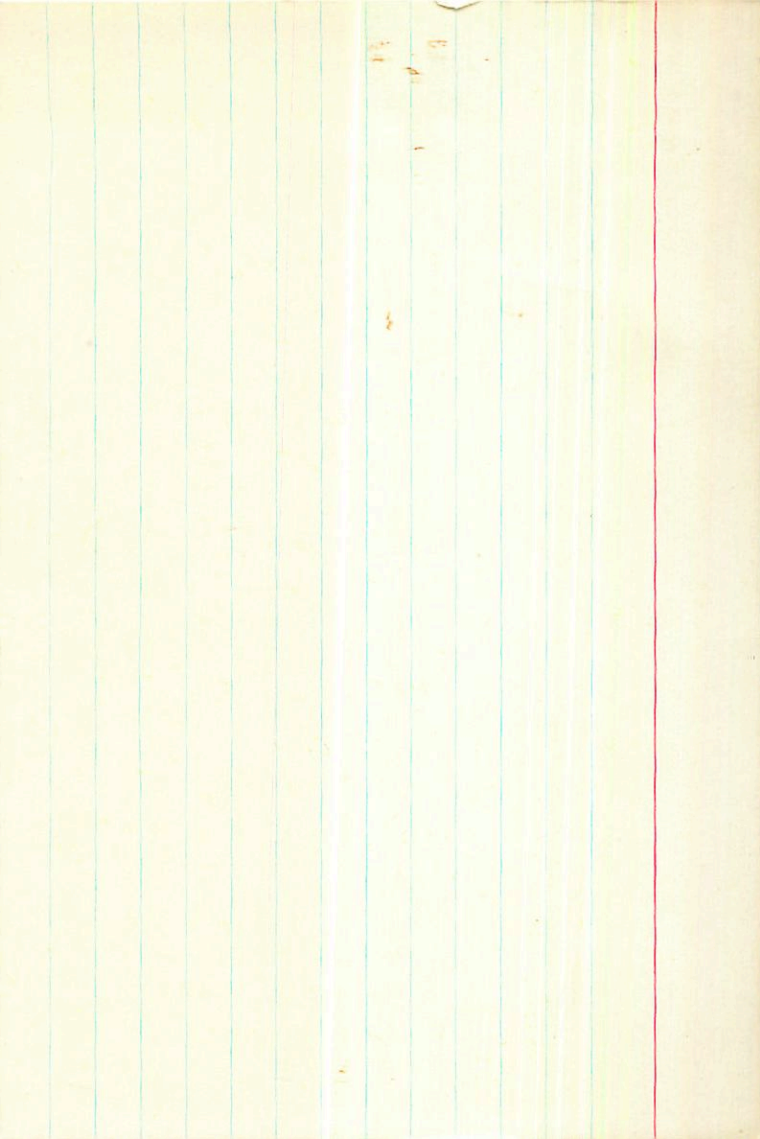
1621

W, 1 -14, +56, +58, +81

1559

(14)

+6, 0, +17, +50, +22, +24



u Sep

5 10.7 -16 16 +27.7a

HR1702

3.26 -0.09 Ap

33904

+042-0266c

3094

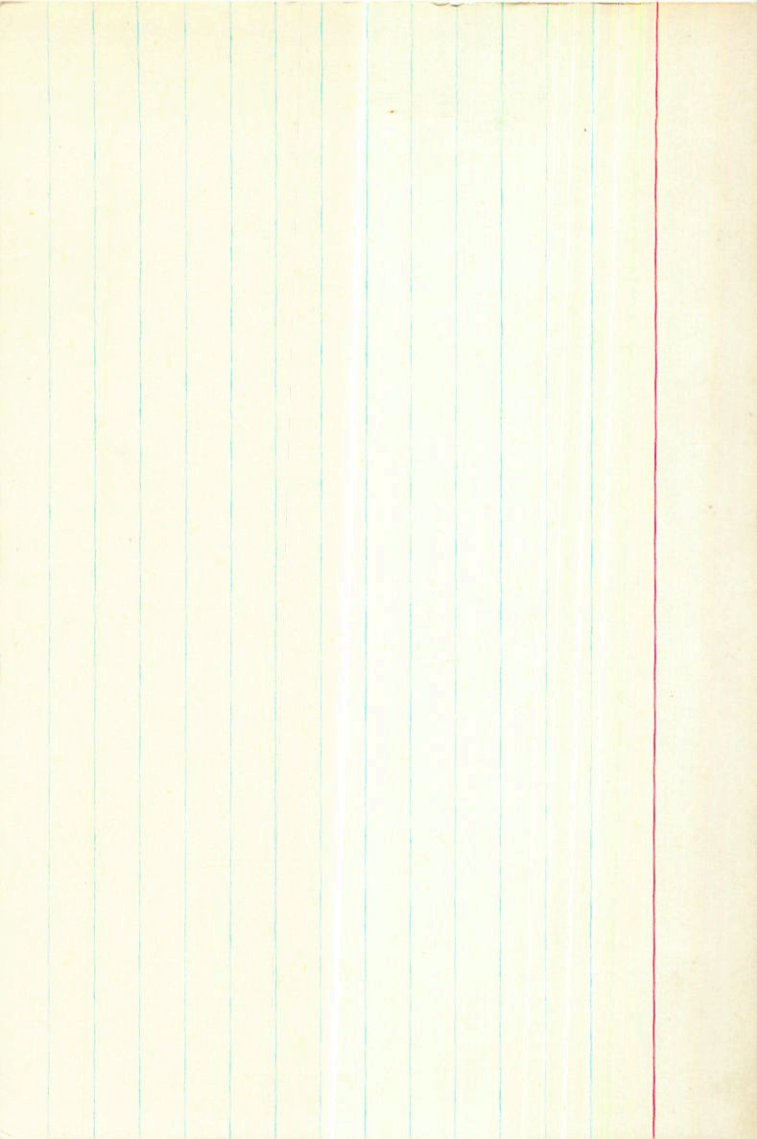
u -0.24 N30

+035-024N30

6362

+0020 u  
+0028 2.4 -0.28 ± 1.8 GC → N30

+040 -0.25



<sup>12.4</sup>  
 H<sub>2</sub>mm  
 -038 +098 +661 4 2.735-15  
 10.7 -16 17.4 8.5 4p  
 69 669 174  
 174  
 2.11  
 2.7358515 6920.2  
 2.827  
 2735  
 097

1702  
 33904  
 3.24-11.39 C  
 E +02 (-41)  
 FINV  
 3.20 V0  
 $\frac{3.8}{-0.6}$   
 199  
 25  
 219

+0331  
 +3  
 404-028  
 277a  
 043-026  
 +277a  
 +12  
 +12  
 E = +03  
 V0 = 3.20 4.20  
 B-V0 = -14  
 n-V0 = -11  
 MV = -1.0

1945

4 Nov

4 32.9 - 55 9

29305

3.26-10-37 C

1

2

+27  
~~+15~~

5 10.9 -13 00

4.33 -0.07 052

-0.15 -0.05 6

2x sep

-R 1705

2.5 2.5

(10) +18, +2, +25, +37, +38, +24

+54, 1 -3 -10 +9





562

1723 5 13.4 -27 00 039

506-10

-040 131 864 2.424 864

9983

119 874  
238  
112

1767

10004-057

1005-051

+296

2202

$V_0$  5.05

$M_V + 0.38$

$\frac{4.78}{}$

1000-020/62

000-020 F149

5.07-039 B08562.832

118 864

1004-021

230  
1120  
1100

2252-740

9748

$$+6004 \text{ } ^{-032} - 018 \text{ } ^{+31}$$

32

$$23.922 - 1509.3 + 10002 = 52.91 \quad 14042$$

$$\frac{14}{938}$$

$$\frac{+42}{52.09}$$

5.2

$$03.927$$

~~000 - 022~~

$$53.10$$

$$1988.26$$

-22

$$+35$$

$$+2$$

000

$$+24$$

-26

$$\frac{924}{-109}$$

$$\boxed{+003.5-026}$$

$$\frac{52.84}{-78}$$

4.7

+24

$$23.924$$

$$+22$$

$$849.24$$

$$+110$$

$$\textcircled{64.27}$$

82

$$\frac{981}{+22}$$

$$\frac{849.14}{+22}$$



1723.000\*

5.000\*

13.400\*

-27.000\*

0.000\*

0.004\*

-0.021\*

4.650\*

87.10 100

85.114813

29.000

-0.080

0.554

9.259

-0.061

-0.642

-23.861

-0.009

-0.529

-16.134

28

100.00  
100.00  
100.00  
100.00  
100.00  
100.00

100.00  
100.00  
100.00  
100.00  
100.00

100.00  
100.00  
100.00  
100.00

5.200  
-27.000  
3.500  
-26.000  
4.700  
87  
29.000

0.116  
0.825  
0.554  
-99.926  
7.349

-0.576  
0.510  
-0.639  
-71.356  
-24

1751 05C1 5 17.8 8.1 5 6.5 4.7 5.4

21128

5.5+ spg ads

125 055 060 252 234 234  
see

090 785 785  
150 150  
9 9

5.3  
2.24

-60115 -0167 30

-17  
-15

-60109 0156  
-60108 -0138

010-015

6.6  
5.5

21110  
-0143

-0002330

-017526

GD 8711 69031

20.5 PG 45



14 Dec 70 35-1 - 3F  
 34203 5 13.3 +11 17 5.5 A0 -8.2.6

-211 -792  
 -647 +762

3127  
 6436  
 890  
 143

$$\begin{array}{r} 010^2 \\ -1000 \\ \hline 17.357 \\ +10 \\ \hline 17.309 \\ +26 \\ \hline 17.335 \end{array}$$

$$\begin{array}{r} 1.1 -0008 \\ -0005 \\ \hline 12.2811 \end{array}$$

$$\begin{array}{r} 12.2811 \\ -010 +24 \\ \hline 12.2911 \end{array}$$

$$\begin{array}{r} 12.2911 \\ -013 \\ \hline 12.2781 \end{array}$$

$$\begin{array}{r} 12.2781 \\ -017 \\ \hline 12.2611 \end{array}$$

$$\begin{array}{r} 12.2611 \\ -011 \\ \hline 12.2501 \end{array}$$

$$\begin{array}{r} 12.2501 \\ -009 \\ \hline 12.2411 \end{array}$$

5.2  
 +113  
 -9  
 -10.5  
 5.3  
 -8.2

17.306  
 17.309  
 +26  
 17.335

0049  
 -009 -010.5

69.37

12.01

17.306



718

5 13.3 + 11 17

40 ~~8~~ - 8.2

34203

6436

5.5

130

1.5

1000

0.12

0.126

8.2

2013.013

1000

1000

1000

-0.2 + 0.5

145 1090

143 1.115

141 1.162

141 2.5890

1.117 a - 0.04 1.378

2.874

2.862

2.823

42

a = -3

1.299

1.384

+ 0.1

5.2

+ 1/3

- 1/3

- 1/3

5.2

- 8.2

1.12 1101

20.4

30

5.200  
11.300  
-13.000  
-13.000  
5.200  
110  
-8.200

0.116  
0.304  
0.946  
-25.748  
-10.577

-0.576  
0.796  
-0.186  
-14.293  
-0.045

0.809  
0.523  
-0.267  
-81.124  
-6.702



~~5.200~~  
11.300  
-9.000  
-10.500  
5.300  
115  
-8.200  
  
0.116  
0.304  
0.946  
-19.988  
-10.048  
  
-0.576  
0.796  
-0.186  
-15.558  
-0.264  
  
0.809  
0.523  
-0.267  
-59.879  
-4.682

30

1750      5      17.8      +27      54      0880

Dring

525

6.25 75 67 750 2734 3 59

99 735

915

H.8a abut

10 5.74  
- 0.55  
6.60

~~009-017~~  
~~006-0155~~

006-016



31