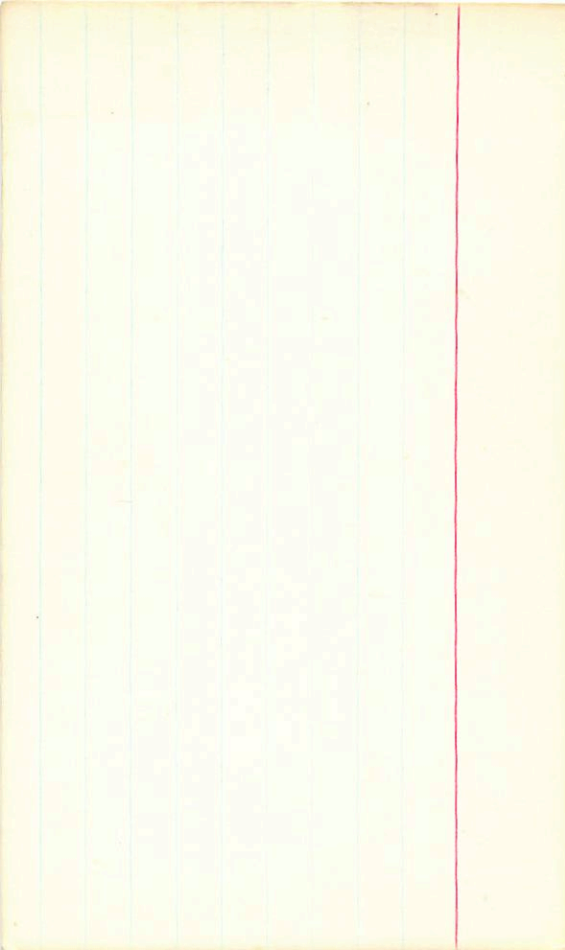


171371 18 33 38 - 22 36 5.2 109

9.85 +0.055 -0.32 3 July 71

$E = +20$



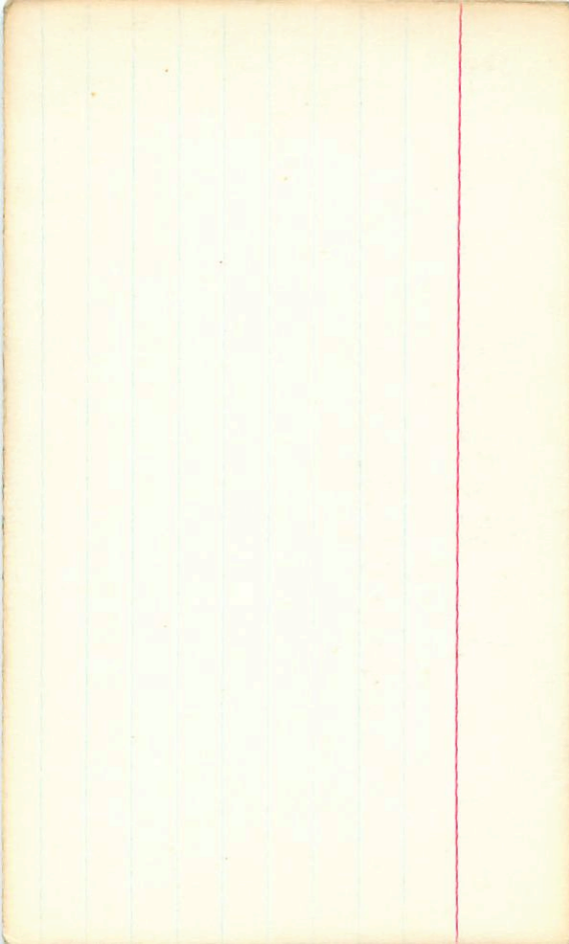
171446 18 34 00 -24 30 5.4 189

9.83 +0.265 +0.095 3 Aug 71

171471 18 24 07 -23 05 98 B9

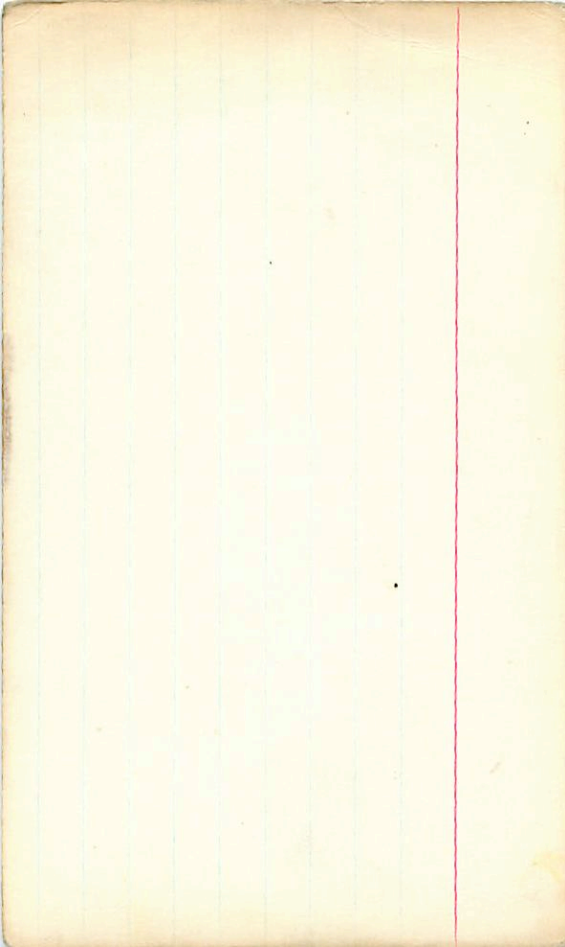
10.30 +0.085 -0.465 3 July 71

E-1030



D1527 18 34 25 -23 43 10.0 B9

10.22 +0.40 +0.23 3/4/71



171572

18 34 43

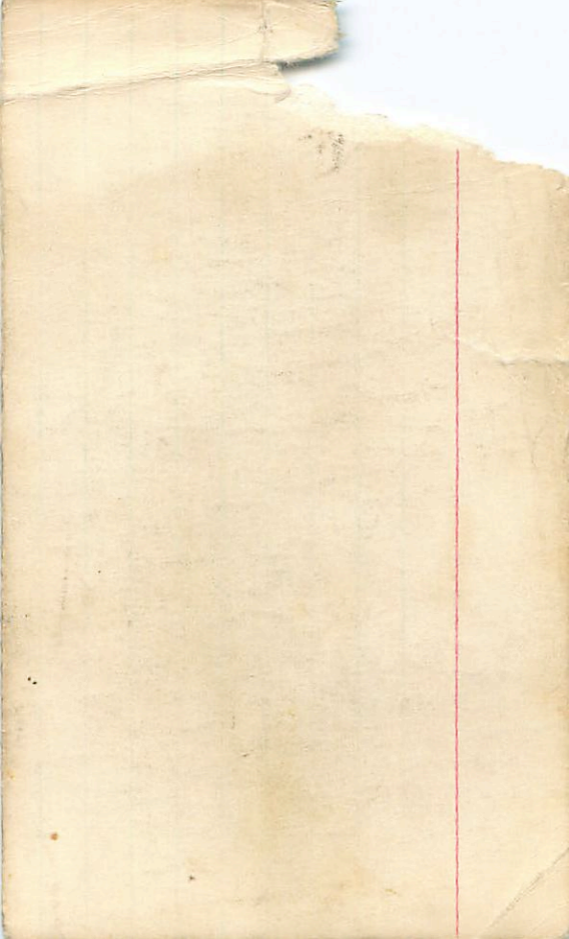
-24 15

91

9.43 +0.23 +0.105

ERN





NGC 1039  
M34

2 38.8 + 42 33 1950

440 ps.

$M_2 = +0.003$   $M_3 = -0.07$   $\odot$  Luchmans AN 282, 25

$r = -10 \text{ km/sec}$

+626	-057	+778	+0089	+0043	+0132	+5.8	-7.8
-662	+490	+568	-0094	-0372	-0466	-20.5	-5.7
+413	+870	-268	+0059	-0660	-0608	-26.4	+2.7

w

1060320

12.52 +1.74 +2.00; 13 Apr 23  
12.46 +1.74 +1.84 9 May 23  
12.74 +1.845 - 2.17 May 23  
12.58 +1.795 - 2.05 July 23

<sup>10.88</sup>  
11.39 +0.88 ~~12.42~~ 12 Apr 23  
11.24 +0.86 21 Apr 23  
11.32 +0.92 13 May 23  
11.56 +1.01 22 May 23  
11.30 +0.96 28 July 23

W

Van 164

12.27 + 11.65 + 1.81 13 Apr 73  
11.63 + 1.59 + 1.565 19 May 73

11.46 + 0.65 12 Apr 73  
10.75 + 0.65 21 Apr 73  
10.72 + 0.655 13 May 73  
11.35 + 0.665 22 May 73  
11.38 + 0.64 28 May 73

Van #6

(over)

12.44	+1.67	+1.24	24 Apr 69	
12.73	+1.52	+0.91	22 May 71	
12.71	+1.53	+0.83	24 " "	
12.21		12.54	+0.53	29 May 70
12.1		11.32	+0.545	23 May 71
11.29				
13.1				
12.1				

12.23 +1725 +1.12 3Apr73

10.55 +1.10 1Apr73

12.71 +1.64 +1.15 18Apr73

11.22 +1.185 12Apr73

(13.05 +1.555 +0.70 ~~18~~ 21Apr73)

11.46 +1.34 21Apr73

13.07 +1.67 +1.11 21May73

11.52 +1.28 13May73

12.32 +1.655 - 23July73

11.55 +1.24 22May73

10.87

+1.055 28July73

w

Var #17

(over)

13.56 +0.37 5 Apr 69 ?

11.36 +0.585 25 mar 71 ~~11.36~~

11.41 +1.00 8 Apr 71  
11.79 +1.18 28 May 71

13.20 +1.75 +1.49 22 Aug 71

13.31 +1.64 +1.31 24 " "

13.60 +1.76 - 3 June 73 June

11.58 +1.23 5 June 71

12.63 +1.81 +1.62 31 Apr 23

12.51 +1.79 +1.73 18 Apr 23

12.51 +1.82 +2.01 Q May 23

12.72 +1.77 - 2/may 23

11.44 +1.09 14 Apr 23

11.31 +0.97 12 Apr 23

11.19 +0.945 21 Apr 23

11.29 +1.00 13 May 23

11.48 +1.05 22 May 23

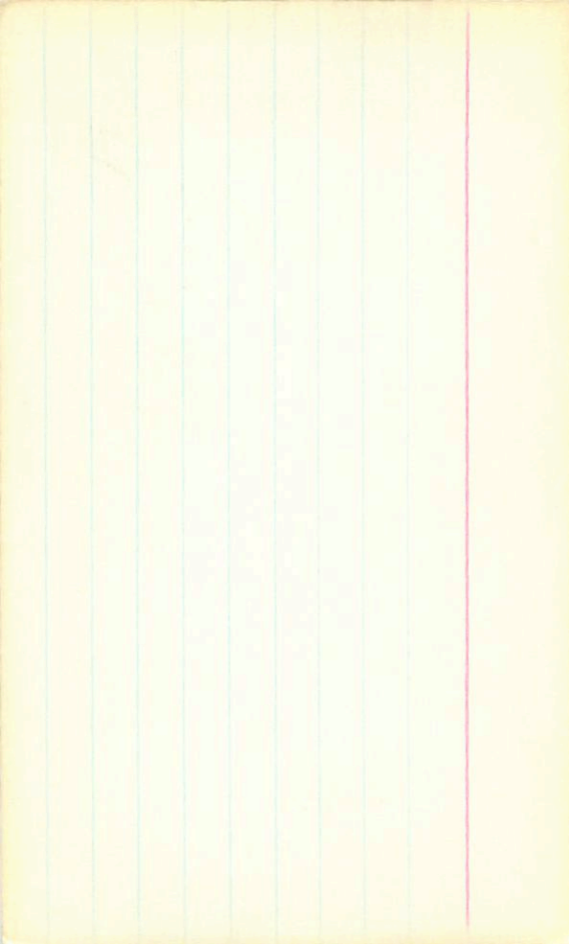
11.39 +1.05 28 May 23



W

- Van #6

1207 +1.455' - 1 May 72 1203 ~~4725~~

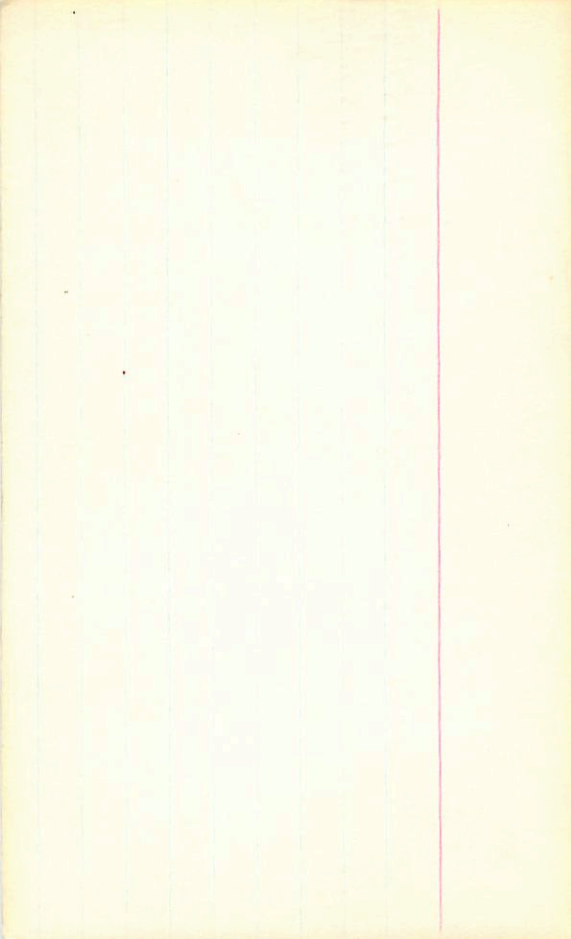


W-70

11.71 + 1.835 + 1.84 13 Apr 73

11.00 + 0.625 12 Apr 73

10.50 + 0.615 21 Apr 73



200  
1977  
6/17-155  
19.05  
15.75  
15.48  
15.35  
15.11  
15.04  
14.97  
14.90

7-231 15.24 +1.48 5.11 " "

10  
10  
10

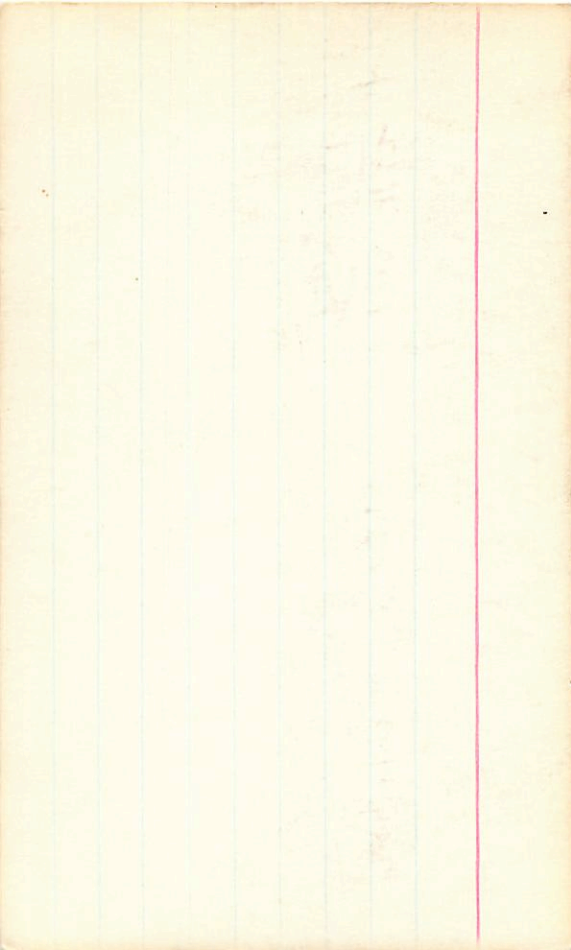
M22-I-11

Blue

12.59 + 11.47 = 24.06

12.12 + 0.605 = 12.725  
12.09 + 0.62 = 12.71  
12.10 + 0.61 = 12.71

I-120  
K45562621+2411



1122-Var 25

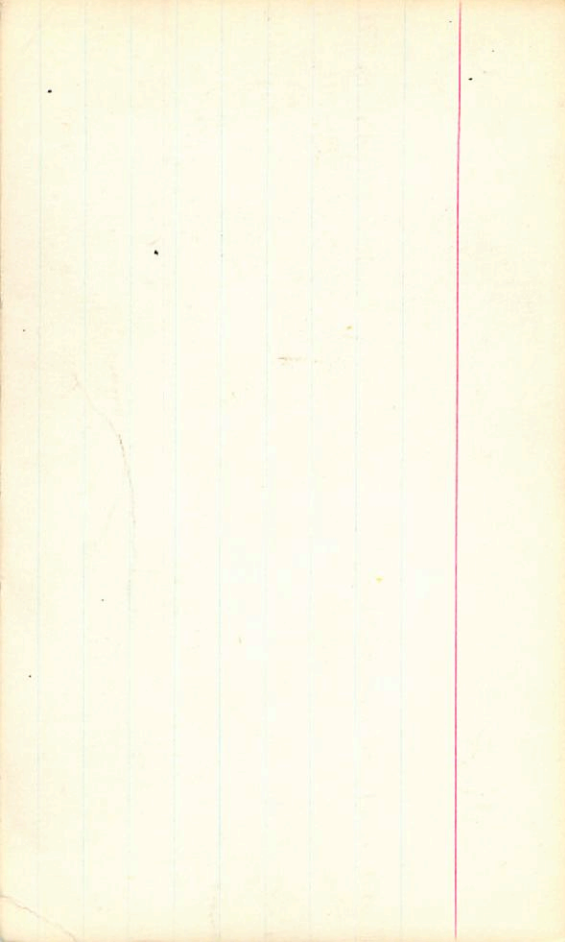
30 July 10.01 -11.72 +1.50  
31 July 10.86 +1.73 +1.56  
1 Aug 10.79 +1.74 +1.46  
2 Aug 10.84 +1.72 +1.65  
25 July 10.94 +1.74 +1.60 9:10 PM  
25 Aug 10.84 +1.72 +1.50 7:25 PM  
30 Aug 10.64 +1.64 +1.28 8:15 PM  
2 Sept 10.81 +1.65 +1.62 7:40 PM

~~800~~

9.80 +0.715 1 Aug 71  
9.79 +0.74 4 Aug 71  
9.75 +0.75 5 Aug 71

9.30 9.90 +0.745 28 Sept 71  
7:45 9.99 +0.76 27 Sept 71  
7:45 PM 9.74 +0.735 1 Oct 71  
7:50 PM 9.42 +0.715 28 Oct 71  
7:35 PM 9.60 +0.74 25 Oct 71





1972 (cont)

M22 - Van Dyke

30 Apr 10.30	+1.70	+1.64	9.91	+0.70	15.5
31 Apr 11.00	+1.65	+1.50	9.98	+0.70	16.71
1 May 10.91	+1.64	+1.39	9.96	+0.715	16.71
2 May 10.85	+1.67	+1.51	9.80	+0.70	22.5
13 May 10.67	+1.47	+1.05	9.56	+0.695	27.5
24 May 10.51	+1.49	+1.15	9.78	+0.71	17.0
			7:45 PM		
			7:10 AM		
			7:45 PM		

10.77 +1625 +151 17 Oct 23

10.69 +166 +1365 21 Aug 22

10.76 +173 +1.41 25 Aug 22

10.84 +1.70 +1.54 3 Aug 22

11.03 +1.67 +1.62 13 Aug 22

11.15 +1.72 +1.33 13 Aug 23 PM

~~10.48~~ +1.47 +1.20 19 Aug 23 15:22

10.44 +1.51 +1.17 21 Aug 23 15:27

10.54 +1.72 +1.66 29 Aug 23 1:59

10.67 +1.705 +1.51 27 Aug 22

11.05 +1.75 +1.40 29 Aug 23

11.02 +1.70 +1.31 31 Aug 23

10.63 +1.53 +1.08 17 Sep 23

9.57 +0.67 14 Oct 23

9.62 +0.675 22 Oct 23

9.83 +0.705 5 Aug 22 11:58 PM

9.76 +0.665 22 Aug 22 10:58 PM

9.76 +0.71 23 Aug 22

10.01 +0.72 18 Aug 22 10:30

10.15 +0.77 4:05 AM 13 Aug 23

9.73 +0.67 4:25 AM 14 Aug 23

9.76 +0.755 1:20 AM 23 Aug 23

~~10.02~~ +0.715 11:20 AM 23 Aug 23

9.70 +0.74 1:00 AM 24 Aug 23

10.07 +0.70 10:00 PM 30 Aug 23

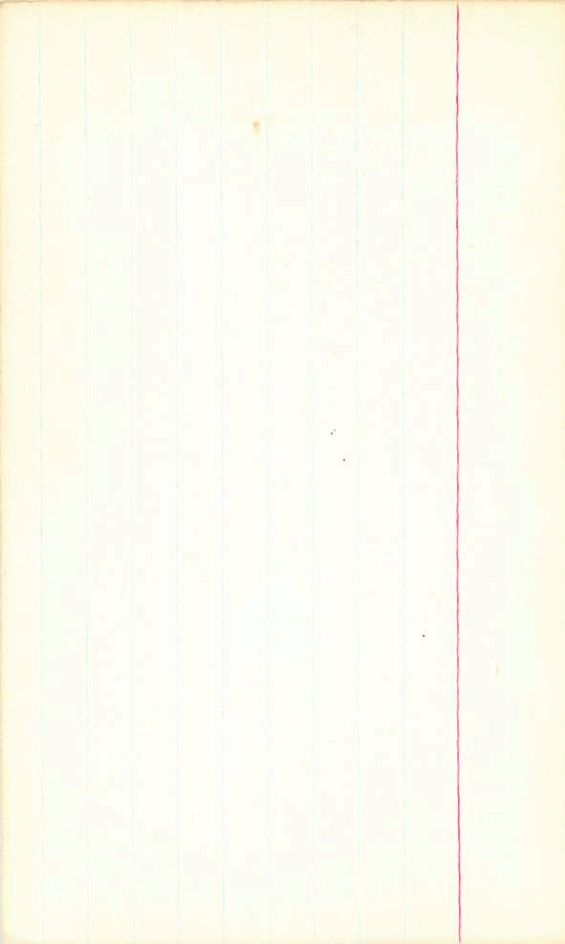
9.86 +0.665 9:35 14 Sep 23  
9:54 +0.645 9:55 18 Sep 23

22-III 86

12.54 + 1.295 + 0.97 + 0.4071

11.85  
11.83  
~~11.88~~  
11.84

+ 0.575 + 0.2547  
+ 0.58 17 Oct 71  
+ 0.58



M22-III-14

$$\begin{array}{r} 11.22 + 1.79 + 1.59 + 1.59 + 1.59 + 1.59 \\ \hline 11.70 + 1.79 + 1.59 + 1.59 + 1.59 + 1.59 \\ \hline 11.70 + 1.79 + 1.59 \end{array}$$

$$\begin{array}{r} 10.15 + 0.79 + 0.79 + 0.79 + 0.79 \\ \hline 10.08 + 0.79 + 0.79 + 0.79 + 0.79 \\ \hline 10.12 + 0.78 \end{array}$$

I-12

M22-12

✓

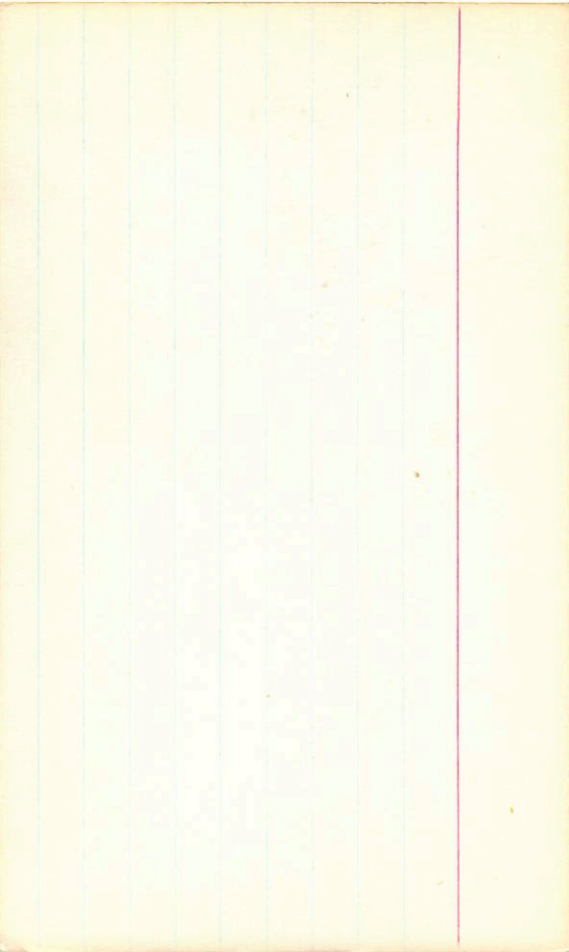
1175 +145 +1035 3 July 71  
 1177 +142 +114 25 July  
1176 +145 +111

~~1 July 1063 +0705~~  
 1087 +0675 4 July 71  
 1080 +0665 5 July 71  
1084 +067

II -12

1158 +167 +150 3 July 71  
 1154 +160 +151 24 July 71  
1156 +163 +1505

1062 +0715 5 July 71  
 1063 +0705 12 July 71  
 1064 +0715 4 July 71  
1065 +071





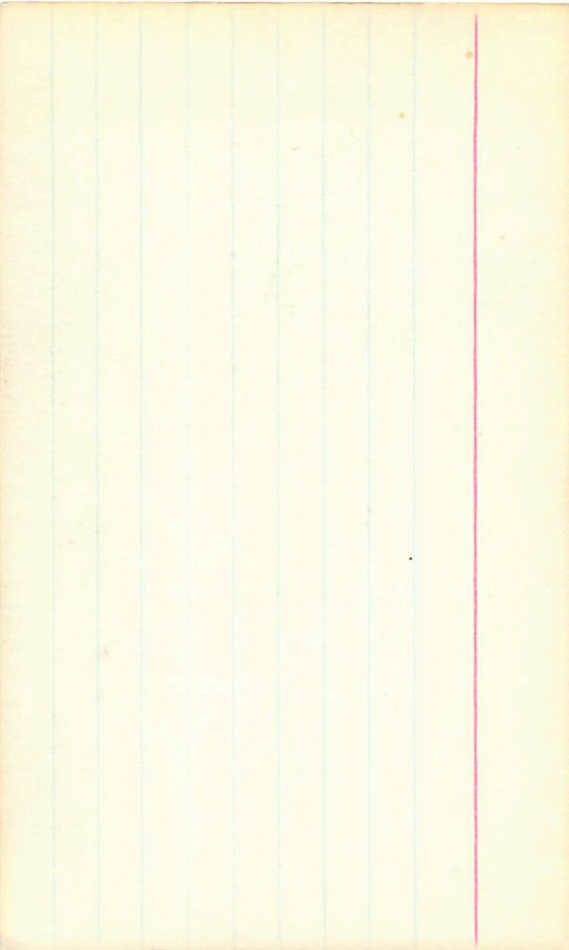
M22-III-3

$$\begin{array}{r} 1096 + 1.855 + 1.83 \quad 200 \text{ cent} \\ \hline 11.07 + 1.78 + 1.70 \quad 24 \text{ cent} \\ \hline 11.01 + 1.82 + 1.76 \end{array}$$

?

$$(11.07 - 0.65 \text{ 4/10/77})$$

$$\begin{array}{r} 10.34 + 0.745 \text{ 5/10/77} \\ \hline 10.71 + 0.76 \text{ 12/10/77} \\ \hline 10.28 \quad \overline{+0.75} \end{array}$$

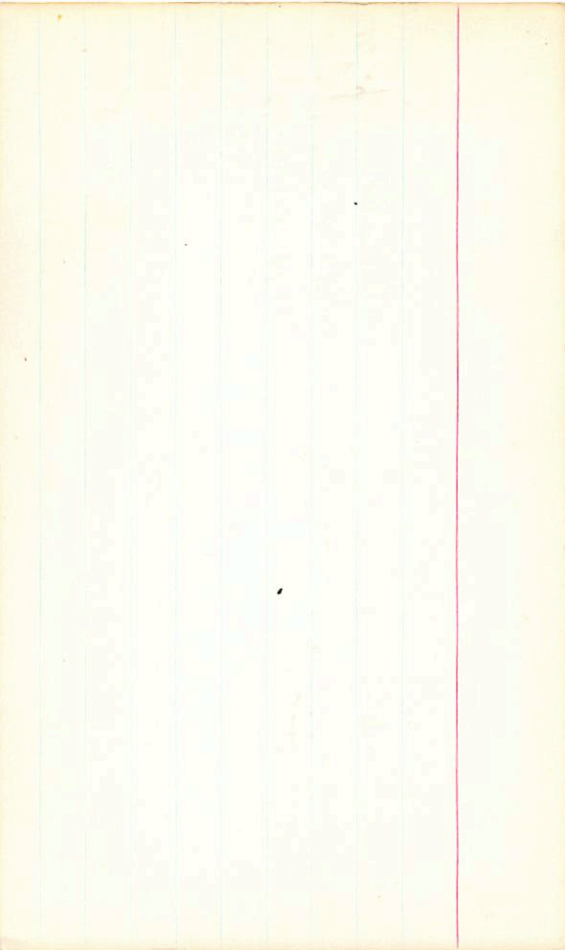


11  
M22-31

12.05  
+1.48  
10.99  
+1.12  
10.11  
+1.12  
11.94  
+1.17  
11.12  
+1.12  
12.00  
+1.12  
10.11  
+1.12  
11.12  
+1.12

10.46  
+0.65  
11.13  
+0.65  
11.11  
+0.65  
11.13  
+0.65

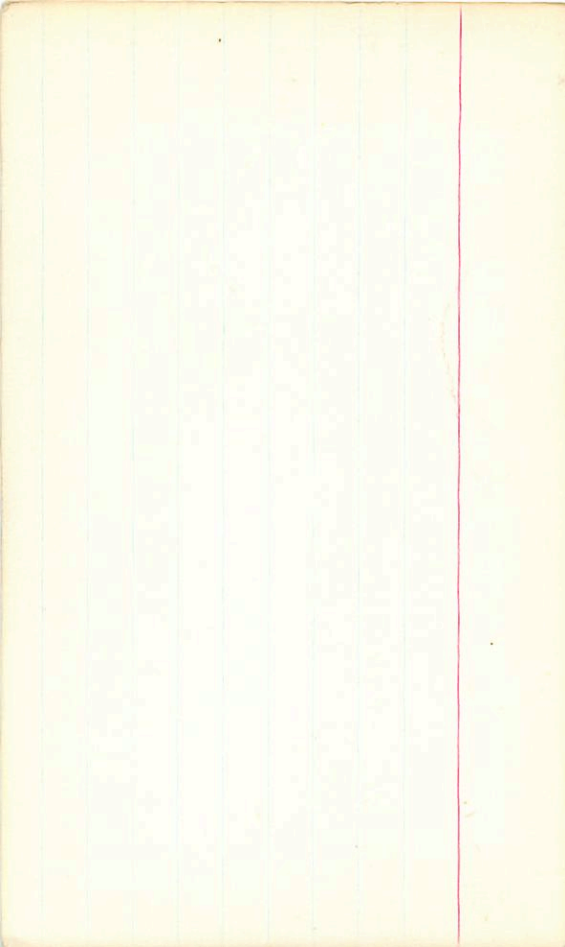
11 Aug 71  
11 Aug 71  
11 Aug 71  
11 Aug 71



M22-102

30 Jun 71 11.13 +1.84 +1.87  
3 July 11.18 +1.77 +1.64

10.20 +0.76 1 July 71  
10.13 +0.76 4 July 71  
10.04 +0.735 5 July 71  
10.12 +0.75



I

M22-97

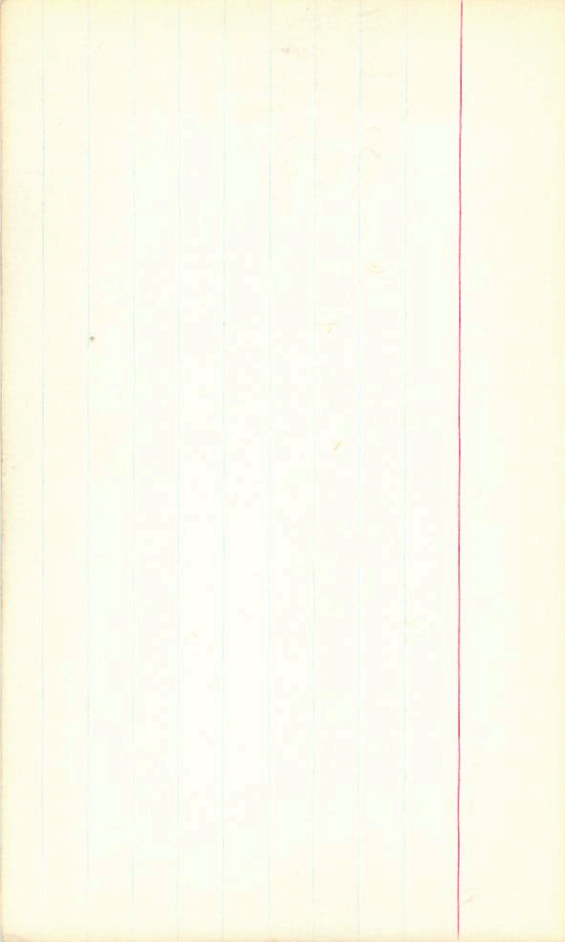
30 July 10.93 +1.78 +1.68  
 30 July 11.06 +1.795 +1.62

1-98

12.40 +1.27 +0.865 25 July 71

10.06 +0.755 1 July 71  
 10.03 +0.765 4 July 71  
 9.99 +0.765 5 July 71  
10.03 +0.76

11.72 +0.59 23 Sept  
 11.73 +0.59 17 Oct 71  
11.72 +0.59





M22-82

~~1457 + 0.52 + 0.33 + 0.01~~

13.97 + 1.17 + 0.41 + 2.3 July 71

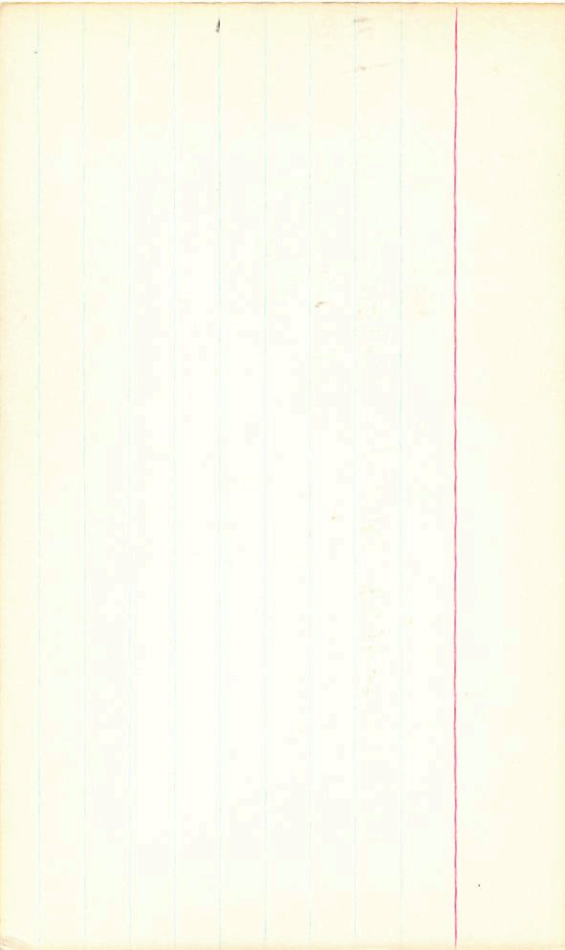
2

13.30 + 0.55 1 July 71

13.29 + 0.57 4 July 71

13.28 + 0.58 3 July 71

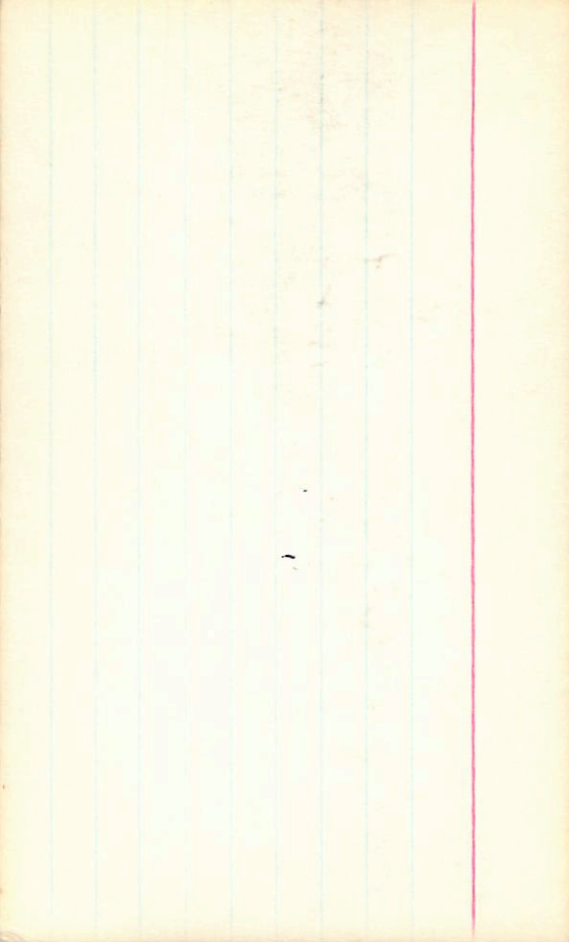
13.29 + 0.57



M 22 - I - 81

14.57 + 0.92 + 0.33 21 Oct 71

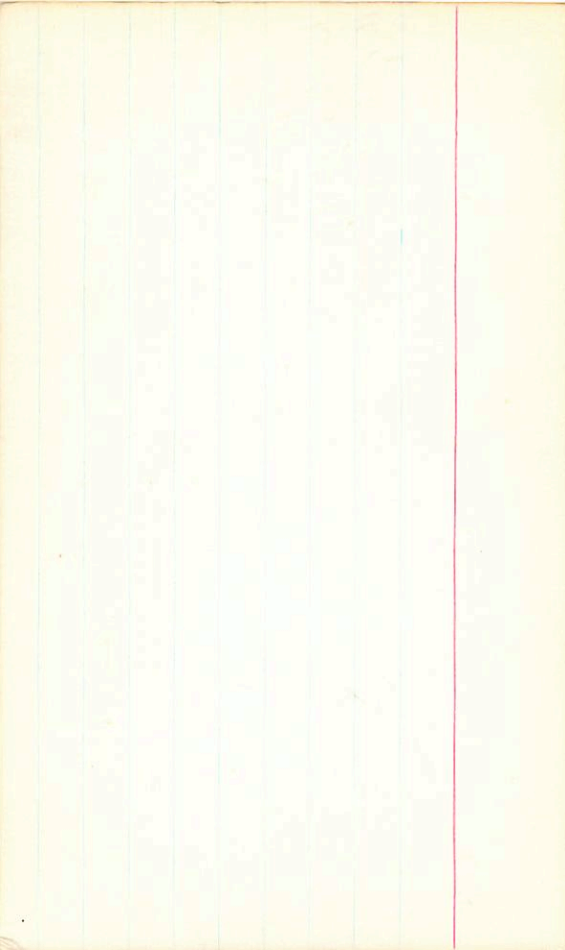
~~13.64~~ + 0.27 4 Aug 71  
13.54 + 0.24 5 Aug 71  
13.62 + 0.255



M22-68

12.56 + 1235 + 0.655

11.92 + 0.57 + 1 Aug 71  
11.83 + 0.58 5 Aug 71  
11.87        + 0.575



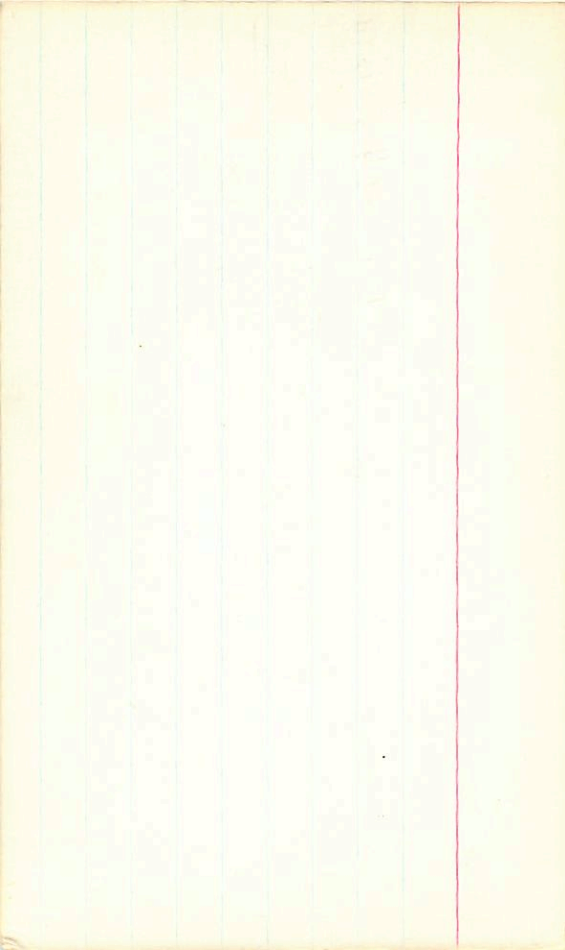
MS-224

1 71225

~~11.36 10.495 11.371~~

12 Prof's 16.04 522.14 25.11 Pa

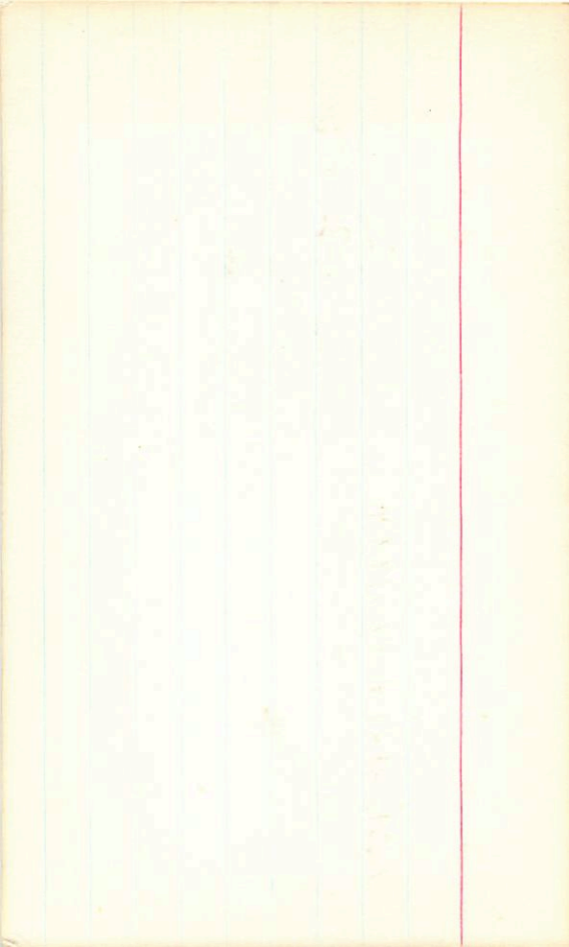
11.32 10.495 41.771  
11.38 10.495 16.771  
11.39 10.495 54.771  
11.36 10.499





Nov - ISY

13.21	+1.29	+0.84	21 Oct 71	23 Sept 71	12.21	+0.59
					<u>12.23</u>	<u>+0.61</u>
					<del>12.22</del>	<del>+0.60</del>



I

M22-62

12.10 +0.77 +0.08 27.97  
12.13 +0.77 +0.06 23.55 6.87

11.87 +0.315 27.97  
11.90 +0.345 27.97  
11.91 +0.34 27.97  
11.86 +0.315 23.87

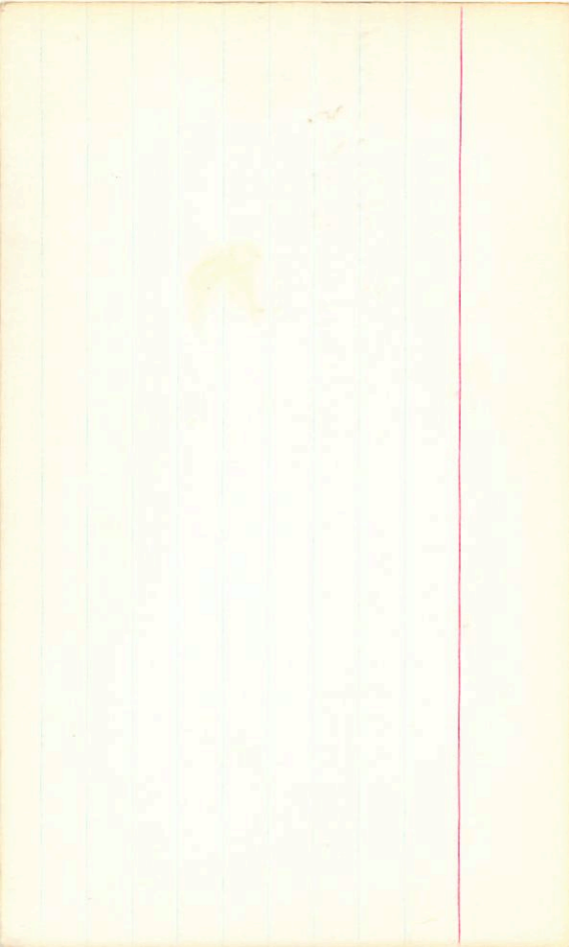
4:25 AM

5:10 AM

10:45 PM

354

1186



1572

M72 Var B5

10.33 +1.885 - 21 July 72  
 11.36 +1.99 - 25 July 72  
 11.37 +1.94 +2.01 3 Aug 72  
 10.99 +1.88 +1.95 17 Aug 72  


---

 11.10 +1.87 +1.99 13 Aug 73  
 11.27 +1.95 - 19 Aug 73  
 11.21 +1.93 +2.02 21 Aug 73  
 11.29 +1.915 +2.21 3 Aug 73  
 11.07 +1.865 +2.05 27 Aug 73  
 11.23 +1.95 +2.10 29 Aug 73  
 11.20 +1.97 +2.10 31 Aug 73

-24

mag

9.58 +0.765

10.24 +0.79 23 July 72  
 10.27 +0.90 23 July 72  
 9.98 +0.75 18 Aug 72  


---

 10.17 +0.75 4.00 AM 13 Aug 73  
 10.15 +0.78 4.15 AM 14 Aug 73  
 10.18 +0.765 4 AM 23 Aug 73  
 10.07 +0.745 1.01 AM 23 Aug 73  
 10.03 +0.715 00.30 AM 24 Aug 73  
 10.29 +0.805 9.45 PM 3 Sept 73  
 10.17 +0.78 9.25 PM 14 Sept 73

11.50 PM

5 July 72

11.45 PM

11.25 +1.88 +1.55 17 Sept  
11.05 +1.85 +1.52 17 Oct 23

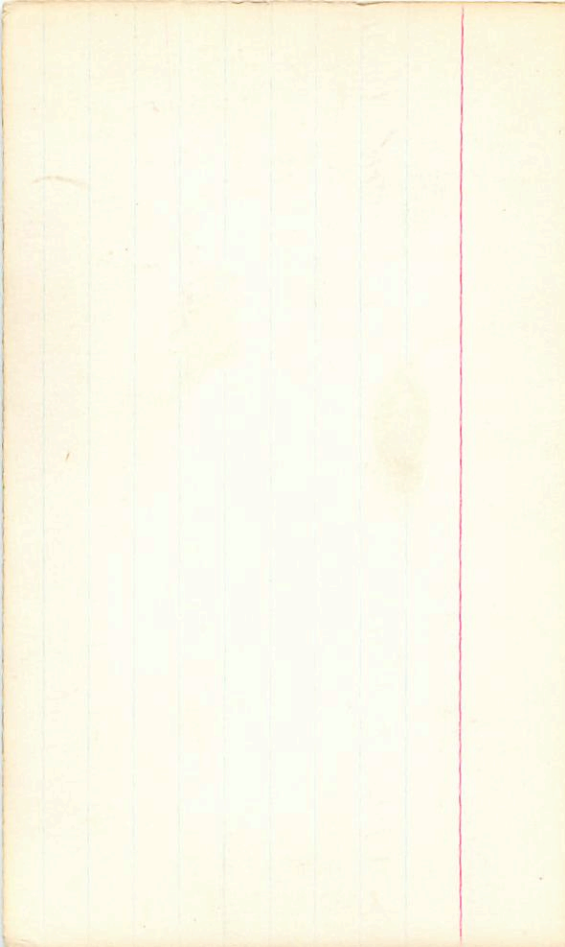
10.09 +0.755 7:45 PM West  
10.13 +0.70 7:30 PM West  
10.06 +0.74 2 Oct 23

-24.0

M 22-Van 49

30 Jun 71	11.13	+1.90	+1.89	
3 July 71	11.29	+1.945	+2.18	
6 July 71	11.23	+1.945	-	
25 July 71	11.14	+1.94	+2.00	
28 Sept 71	11.20	+1.89	+1.91	
29 Sept 71	11.19	+1.92	+2.07	7:25 PM
13 Oct 71	11.11	+1.85	+1.83	8:05 PM
24 Oct 71	11.26	+1.92	-	7:35 PM

10.13	+0.745	1 July 71
10.15	+0.78	4 July 71
10.09	+0.775	5 July 71
10.15	+0.785	23 Sept 71 7:40 PM
10.24	+0.775	27 Sept 71 7:40 PM
10.15	+0.785	17 Oct 71 7:45 PM
10.32	+0.77	23 Oct 71
10.26	+0.82	25 Oct 71





I-6

12-22-8

12.06 +1.45 +1.045 3 pay 71  
12.07 +1.445 +0.97 2 pay 71  
12.06 +1.44 +1.00

11.27 +0.655 1 pay 71  
11.25 +0.635 4 pay 81  
11.22 +0.635 1 pay 71  
11.25 +0.64

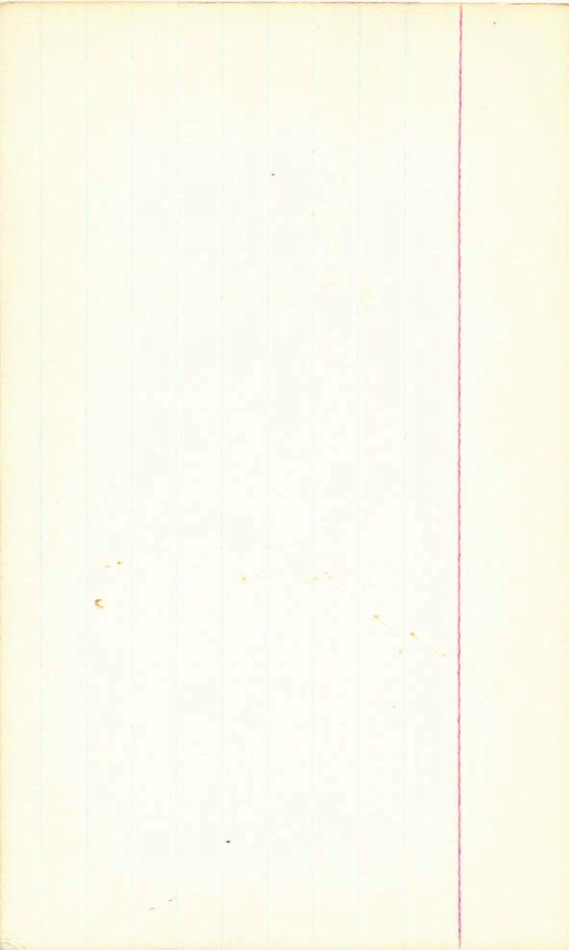
25

22 I 27

Blue

12.40 + 1.01 + 0.65 21 Oct 71  
12.37 + 1.175 + 0.59 23 July 74

11.78 + 0.56 23 Sept  
11.80 + 0.60 12 Oct 71  
11.79 + 0.58



I-

1172.51

Blue

1776

1272 11.18 +0.61 3 July 71  
 1264 11.26 +1.04 23 July 71

12.13 10.58.5 1 July 71  
 12.05 10.58 4 July 71  
12.04 10.60.5 5 July 71  
 12.09 10.59

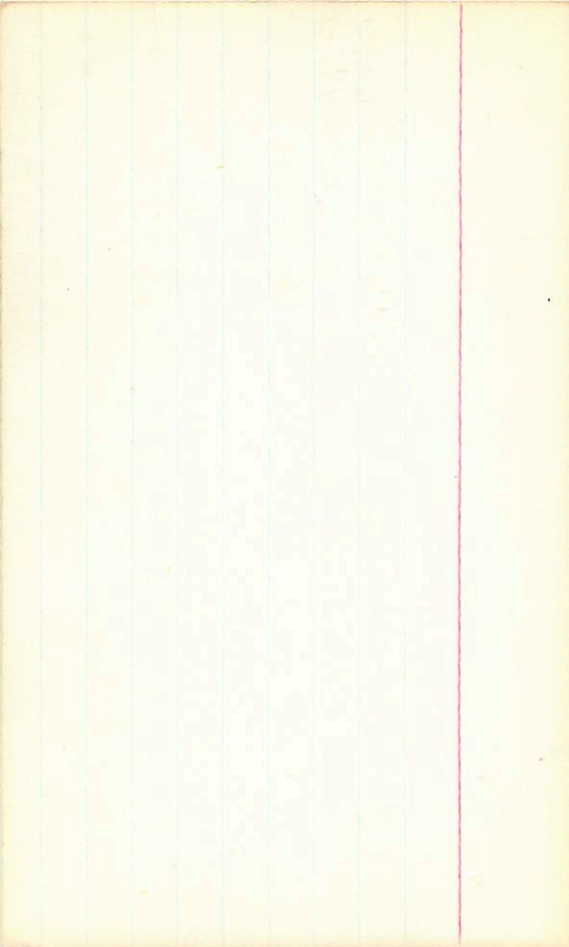
I 52

13.93 +1.14 +0.375 23 July 71

Blue

13.94 +1.16 +0.53  
 11.5 0.45

Red

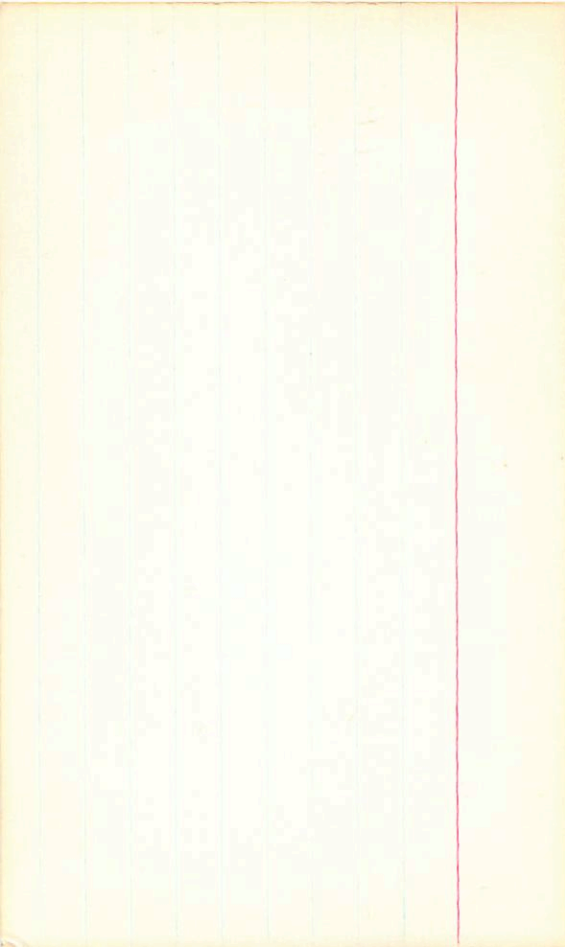


1122-53

(Blue)

1271 + 1.29 + 0.84 3 pgs 71

12.12 + 0.61 1 pgs 71  
12.07 + 0.615 4 pgs 71  
12.03 + 0.64 5 pgs 71  
12.67 70.62



127-57

(Blau)

60

12.05 + 11.525 + 12.6 3 pages

11.24	+ 0.63	1 page
11.20	+ 0.665	1 page
<u>11.14</u>	+ 0.685	1 page
11.19	<u>+ 0.66</u>	



