

KG
11366
v.537

8

Zone.
Chronograph Record.
Circle Readings.
From Nov. 1st 1871, A. 8
March 11, 1872.

Sever, Francis & Co., University Booksellers, Cambridge.

1871phae.proj.1541R

1871phae.proj.1541R

16-94
 02 10
54 47
 01 77

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

Date.

First minute-break.

c, set at.

Nov. 19/571

Nov 22/571

N. Coll.	S. Coll.
46.322	46.150
329	165
321	155
325	157
320	150
Sum 17	277
Mean. 46.323	46.155

323
155
478
239

46.229

a.

s.

Mag.

REMARKS.

22 45 25 7.6 50 56

7.6
7.5

48 01 8.0 50 49

8.2

Nov

Nov -

49 54 8.9 50 54

9.1
9.0

51 55 8.7 50 58

8.7 Q 20
8.8

53 57 8.2 50 19

8.3

56 08 9.0 50 09

7.6
7.5

58 27 9.0 50 49

9.4
9.3

0 33 9.1 50 29

9.4
9.6

2 33 8.1 50 30

8.2
8.5

5 01 8.7 50 47

8.6
8.5

50 49

Runs.

A.		C.	
343	346	303	287
343	339	300	290
342	347	301	283
346	351	300	287
345	351	300	292
Sum			
Mean.			

19

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

~~25 2 29.3 16.2~~

25 3 6.2 53.3

25 2 25.0 15.0

~~30 2 39.2 23.2~~

30 2 39.2 26.6

25 3 52.1 40.3

25 3 45.7 34.7

20 4 49.5 37.0

20 4 46.2 34.9

5

0 3 50.2 38.2

10 3 45.7 32.3

10 3 44.0 31.0

30 4 27.0 14.3

30 3 54.6 43.2

50 4 28.0 16.0

50 4 31.5 19.8

50 3 15.3 3.0

50 3 15.3 4.1

35 1 19.3 7.7

35 1 16.5 5.0

MAR ds

MAR cc.

MAR

MAR

Date.

First minute-break.

c, set at.

Nov. 19 1871

Nov 22

46.267

N. Coll.	S. Coll.
46,320	46,208
315	158
315	158
307	158
30	208
Sum	
Mean. 46,315	219

a.

s.

Mag.

REMARKS.

23 7 40 93 50 49

93

92

10 09 90 50 08

93

93

12 51 90 50 40

91

14 38 90 50 47

90

16 49 94 50 20

76

80

19 02 90 50 17

90

22 09 97 50 39

78

75

24 28 90 50 16

90

96

26 27 84 50 16

80

~~80~~

28 31 82 60 39

87

WDR
WDR

ede

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

30 3 30.8 18.6

30 3 25.3 13.1

40 4 25.7 11.3

10 4 21.0 9.0

40 3 23.1 11.7

✓ five

35 0 47.0 35.0

0 2 1.2 47.3

0 2 45.7 32.4

5 0 1.3 -11.2

None

40 4 22.6 9.5

40 3 52.1 44.3

5 2 18.0 5.2

5 2 14.8 1.8

5 1 16.3 3.6

5 1 20.7 8.2

40 3 27.0 15.3

40 3 37.0 25.2

cont-a

1871pae.pro.1541R

Date.

First minute-break.

C. set at.

Nov. 19 1871

Nov 22 1871

N. Coll.

S. Coll.

Sum

Mean.

a.

s.

Mag.

REMARKS.

23 30 21 89 50 24 8.5

32 37 90 50 48 8.8

8.8

34 59 80 50 08 8.0

7.9

37 07 76 50 11 8.0

8.8

39 37 90 50 33 9.4

42 54 88 50 17 9.0

9.3

44 45 80 50 37 8.0

8.2

47 07 91 50 47 9.0

9.0

9.2

48 54 87 50 09 9.0

9.5

51 34 84 50 06 8.7

9.2

Runs.

Sum
Mean.

A.

C.

578	573	578	576
578	577	523	523
573	574	528	523
573	573	524	523
573	578	522	520

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

55 3 30.6 17.3

55 3 42.7 30.6

30 4 12.2 28.8

30 4 50.2 30.5

25 0 5.1 52.9

20 4 59.7 47.8

10 1 38.2 25.8

10 1 39.1 26.4

50 0 59.0 -13.3

5 0 45.0 33.0

5 0 51.5 39.0

45 0 52.6 40.2

45 0 45.3 32.0

35 0 39.0 27.5

35 0 30.2 18.6

10 3 52.8 45.3

(10 4 28.8 17.0)

15 1 4.1 50.8

15 1 10.2 -2.0

Both

Both

None.

Date.

First minute-break.

c, set at.

Nov 6 1871

Nov 7

Nov 9th

46.280

Sum

Mean.

N. Coll.

S. Coll.

46.490

46.474

4.72

4.70

46.4

874

46.475

46. 05.7

05.9

04.0

05.0

04.3

241

46. 04.8

475

048

522

261

a.

δ.

Mag.

REMARKS.

22 31 52 84 51 14

8.5

8.2

32 42 90 51 23

9.2

9.0

33 32 90 51 09

9.0

8.9

34 46 91 52 03

9.4

9.4

35 48 71 51 05

7.0

6.0

36 56 85 51 03

8.5 8.5

8.5

38 01 87 51 32

8.8 9.2

9.1

38 57 83 51 31

9.0 9.4

9.3

40 27 90 51 57

9.0 9.0

9.0

41 35 91 51 31

9.1 9.2

9.2

78 51 17

Runs.

	A.	C.
140	133	72
139	140	80
134	138	77
147	136	79
143	140	77
Sum	203	385
Mean	1406	1372

14.06 7.70
 13.72 6.58
 $\underline{.24}$ $\underline{1.12}$
 $+ .05$ $+ .22$
 $+ 14$

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

5 4 19.2 7.1

Nov. 6 W.A.P. Obs.
A.M. Rec.

5 4 22.2 11.3

(a doubt)

0 0 28.2 15.3

0 0 26.0 15.6

10 4 31.8 19.1 repeat 6

10 4 19.2 7.0

20 0 10.1 57.2

20 0 5.3 57.9

15 3 9.9 57.9

15 3 8.2 58.0

30 0 2.8 50.0 30 0 28.2 13.4

30 0 8.3 57.0

50 0 33.2 22.3 50 0 40.0 27.9

50 0 27.3 17.2

50 2 28.0 16.4 50 2 35.8 23.0

50 2 26.3 16.0

30 1 59.7 47.0 30 2 4.1 50.6

30 1 58.0 47.0

50 2 12.5 11.6 50 2 17.5 5.1

50 2 8.7 57.8

Date.

First minute-break.

C, set at.

1871 Nov 6th
Nov 7
Nov 9

Sum

Mean.

N. Coll.	S. Coll.
46.208	46.230
208	233
112	238
202	231
181	231
1025	163
46.205	46.233

= nov 7
205
233
438
219

a.

b.

Mag.

REMARKS.

46,219

22 42 28 78 51 17 6.5 8.5 8.2

8.0

43 35 86 51 16 8.8 8.5

8.8

45 15 72 51 32 8.8 8.1

6.5

pen failed

46 43 94 51 21 9.8 9.8

9.7

47 53 84 52 02 8.5 8.8 2*

8.4

49 43 93 51 12 9.5 9.8

9.4

50 04 90 51 26 8.8 9.2

9.0

52 11 90 51 48 not seen
" "

53 36 60 51 57 6.8 2 6.2

6.5

54 26 88 51 42 8.8 2* 9.0

50 46 9.0

Runs.

	A.	C.
263	260	198
265	260	200
267	261	201
268	262	205
269	268	203
Sum	328	301
Mean.	26.56	20.14

$$\begin{array}{r} 26.56 \\ 26.00 \\ \hline + 56 \\ + 11 \\ \hline 26.56 \end{array}$$

$$\begin{array}{r} 20.14 \\ 19.86 \\ \hline + 28 \\ \hline 20.14 \end{array}$$

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

5	0	22.1	10.3	5-3	26.4	45.2
5	3	9.3	38.4			
5	0	42.3	34.8	5-1	27.8	15.7
5	0	58.0	47.2			
~~45~~	~~3~~	~~9.7~~	~~56.1~~	45-3	14.7	1.9
45	3	4.2	53.4			
~~65~~	~~0~~	~~51.2~~	~~38.2~~	0-3	7.3	53.4
0	2	52.8	40.4			
~~20~~	~~0~~	~~40.3~~	~~27.9~~	20-0	44.9	32.8
20	0	36.2	25.8			
~~10~~	~~1~~	~~57.7~~	~~44.7~~	10-1	56.8	34.2
10	1	38.6	26.9			
~~45~~	~~3~~	~~58.7~~	~~46.8~~	55-4	1.2	47.2
55	3	55.1	42.9			
~~25~~	~~0~~	~~31.1~~	~~18.2~~			
~~25~~	~~0~~	~~50.6~~	~~19.1~~	25-0	31.1	18.2
25	0	28.6	17.7			
~~40~~	~~1~~	~~49.2~~	~~37.2~~	40-1	42.0	27.7
40	1	26.4	56.9			

Date.

First minute-break.

C, set at.

1871 Nov 6

Nov 7

Nov 9

Sum

Mean.

N. Coll.

S. Coll.

a.

b.

Mag.

REMARKS.

22 55 29 70 51 46 9.2 lower * reg'd w

9.5

57 15 9.2 51 30 9.0 9.2 1st *

9.2

58 36 8.9 51 26 8.8 8.9

9.2

0 37 8.0 51 27 8.5 8.6

8.5

1 49 9.4 51 54 9.3 9.5

9.6

8 56 9.0 51 25 9.4 9.0

9.0

5 09 9.0 51 14 8.9 8.9

9.2

6 03 9.1 51 40 8.8 9.0

9.0

6 51 8.0 51 11 8.9 8.3

8.0

8 49 8.8 51 24 9.0 2.7

8.9

51 26

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

35 3 14.9 40.7 8 full

35 2 31.2 20.0

50 3 17.4 05.2 50 2 56.3 44.3

50 2 57.9 46.7

55 3 40.7 28.3 55 2 39.9 25.8

Sun 50 4 33.2 22.3

55 0 49.2 37.0 55 0 46.2 32.9

55 0 48.2 37.0

30 0 12.3 59.8 30 0 23.2 12.9

30 0 31.2 21.8

55 3 0.2 47.2 55 3 13.0 0.0

55 3 2.2 49.9

5 4 29.8 15.9 5 4 31.6 18.0

5 4 26.4 14.3

40 3 10.8 57.8 40 2 39.3 45.7

40 3 0.8 49.9

10 2 30.2 17.2 5 3 38.0 24.0 8 full

10 2 11.8 1.1

55 1 48.0 35.7 55 3 34.9 19.8

55 3 34.5 24.0

Date.

First minute-break.

C₂ set at.

1871 Nov 6

Nov 7
Nov 9

Sum

Mean.

N. Coll.

S. Coll.

α.

δ.

Mag.

REMARKS.

23 82 3

87 57 26

8.9 9.1

9.2

11 48

80 51 36

9.1 9.22^d * (Refracted)

9.0

-12 51

80 50 40

9.3 9.42^d * (Refracted)9.2 2^d *

13 45

80 50 58

9.0 9.0

~~9.2~~ 2^d *

15 02

80 50 52

9.1 9.0

9.2

17 22

80 50 24

8.8 7.6

7.5

18 39

82 52 42

8.4 9.22 *

9.0 1st of 3^{xs}

19 39

82 52 48

not seen

20 36

80 52 44

8.8 2^d 9.0

8.8

21 28

85 52 22

9.6 9.6

9.7 2^d *

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

45 2 44.2 33.1 55 2 9.9 56.7

W A R 665

~~45 2 24.3 12.2~~ 45 2 16.6 3.7

45 2 17.2 6.3

~~40 3 1.2 47.8~~ 40 2 58.8 44.9

40 2 35.2 23.4

~~40 4 11.2 27.7~~ 25 0 -3.8 -18.3~~30 1 53.6 40.8~~ 30 1 57.7 41.2

30 1 46.5 36.2

55 4 30.4 19.2 55 4 28.2 14.0

55 4 34.0 22.0

50 1 9.1 59.3 40 2 0.4 47.1

40 1 57.0 43.4

~~35 4 10.7 7.0~~ 35 4 9.8 56.2

35 4 18.1 7.6

~~0 2 16.7 3.7~~

0 2 19.0 9.3

Date.

First minute-break.

c, set at.

Nov 7
Nov 9

46.246

N. Coll.

S. Coll.

Sum

Mean.

a.

s.

Mag.

REMARKS.

~~23 53 36 60 51 57~~
0 17 20 60 51 18

6.0

2 Am. obs.
Y.R.

~~54 26 18 51 42~~
18 44 90 51 17

2.0

9.1

~~53 59 90 51 46~~
19 36 87 51 44

9.0

Low - fall #

~~54 15 92 51 30~~
20 42 89 50 45

9.2

9.2

~~58 36 89 51 26~~
22 40 93 51 36

9.1

9.0

2 Low - fall #

~~0 37 80 51 27~~
2 38 95 51 27

9.2

9.2

m. #

~~1 49 99 51 54~~
25 22 85 51 22

8.9

8.8

~~3 56 90 51 25~~
26 39 92 51 57

9.0

8.9

fall #

~~5 09 90 51 14~~
28 10 78 51 08

7.0

6.8

~~6 03 91 51 40~~
29 51 95 51 40

9.8

10.0

fall #

51 11

Runs.

	A.		C.	
	1.7	1.9	54.0	54.2
	1.8	0.9	54.4	54.3
	1.8	0.4	54.8	53.9
	0.8	1.8	53.7	54.1
	1.3	1.2	54.7	54.0
Sum	7.4	6.2	216	205
Mean.	1.48	1.24	54.32	54.10

$$\begin{array}{r}
 1.48 \quad 54.32 \\
 1.24 \quad 54.10 \\
 \hline
 2.4 \quad 22 \\
 +0.5 \quad +.05
 \end{array}$$

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

5 0 3.1 (4) 50.9

Am des
VRR ue.

5 0 44.7 32.0

35- 4 25.0 11.6

~~35- 3 15.5~~

35 8 21.3 7.2

35 0 15.5

45 2 54.8 39.8

45 3 7.8 54.9

55 2 25.8 11.0

55 2 20.4 7.8

0 1 18.8 3.7

0 1 13.1 -0.3

25 1 16.4 1.0

25 1 15.1 3.0

15 0 80.4 18.0

15 0 26.1 12.5

40 4 26.0 11.3

40 3 12.3 -0.7

same

Date.

First minute-break.

C, set at.

Nov 7 1871
Nov 9

Sum
Mean.

N. Coll.	S. Coll.

α .	δ .	Mag.	REMARKS.
~~6 51~~ 80 57 11			
0 31 04 93 51 33		9.1	
~~8 49~~ 88 51 29			
32 24 87 51 52		8.6	2
~~9 23~~ 87 57 26			
33 30 86 51 15		8.5	
~~4 41~~ 90 57 36			
34 34 85 57 26		8.5	
~~13 26~~ 88 49 58			
~~14 38~~ 30 47			
35 27 70 51 38		7.6	
~~15 02~~ 90 57 52			
36 35 89 51 32		8.6	
~~15 59~~ 99 51 26			
38 09 90 51 23		8.9	
~~17 22~~ 80 57 24			
39 54 85 51 49		8.9	2
~~19 39~~ 90 57 00			
40 46 85 51 34		8.3	
~~20 42~~ 89 50 45			
42 17 90 51 15		8.7	
~~51 46~~			
51 36		8.0	

Runs.

Sum

Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

50 0 228 80

50 0 108 -20

30 1 6.0 5/8

30 1 559 464 Sun

5 3 521 37.5 Born #1 fold spr.

5 3 499 36.4

11 11 11

55 2 180 3.9

55 2 110 58.9

45 0 424 282

45 0 437 390

50 1 170 26

50 1 134 0.2

55 4 481 35.9

55 4 476 35.0

30 4 524 37.7

30 4 487 36.2

45 4 15.9 14

45 4 10.5 -1.5

5 3 996 35.7

5 3 481 34.0

First minute-break.

c, set at.

Sum

Mean.

 α_{L}

8.

Mag.

REMARKS.

~~93 2253 9051 46~~ 8,8
10 4345 87 51 36 88

24 16 25 57 57

45-21 85 52 02 f.6

~~25 13 73 5742 50~~

4625 63 5202 68

~~26 09 80 5/12~~ 27

47 35-86 50 30 82

~~27 20 82 51 24 176~~

48 50 54 51 48 1.0

~~28 29 88 51 22 10~~

4955- 735133

29 38 915204 83

51 31 7.8 51 50

~~130 45 81 5134~~

52 54 78 51 27 80

~~31 56 89 5124 78~~

53 46 75 51 22

~~232 51 7.8 57.33 90~~

55 17 50 57 15 7

Runs.

Sum

Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

45 3 53 503

45 3 1.5 -10.7

20 1 276 130

20 1 2.39 11.9

20 ~~440~~ ~~464~~ 477

20 4 3.8 -10.6

50 3 16.9 2.7

50 3 12.2 -1.0

35 0 56.0 40.7

35 0 57.3 38.2

50 1 3.1 4.0

50 0 54.2 40.7

30 4 0.4 45.8

30 3 56.2 43.4

55 1 44.7 28.3

55 1 46.7 34.6

0 1 50.0 35.3

0 1 47.9 34.6

5 4 4.3 50.3

5 4 10.6 -3.0

0.4

24.2 of m. #

Date.

First minute-break.

C, set at.

Nov 23 1891
Nov 25

Sum

Mean.

N. Coll.

S. Coll.

a.

s.

Mag.

REMARKS.

23^h 51^m 34^s 84 50 06

88

86

58 39 89 50 33

89

86

56 05 78 50 45

79

76

58 20 82 50 28

80

82

1 00 90 52 03

Not- seen

3 7 90 50 02

80

91

92

5 7 90 50 16

91

92

fre # 23

7 9 90 50 50

80

80

m. # not the
October #

11 2 87 50 22

87

85

13 26 83 49 57

89

86

50 29

Runs.

A.		C.	
236	238	162	165
236	209	152	156
236	237	157	157
238	225	163	152
209	236	170	147
Sum			
Mean.			

Pointer.	Stroke.	Rev.	A.	C.	REMARKS.
15	1		0.0	46.7	YWR
15	1		19.5	47.1	
45	4		17.0	36	
45	4		20.3	8.0	
35	2		53.0	37.7	YWR
35	3		6.2	54.0	
55	0		22.3	9.7	
55	0		24.7	12.7	
15	4		52.2	41.3	
20	1		40.4	25.3	
20	1		50.6	37.8	
5	2		2.9	49.0	
5	2		2.2	49.9	
25	4		13.2	0.1	
25	4		9.6	56.9	
0	1		43.6	29.8	
0	1		48.0	36.0	for #
25	1		3.3	48.0	
25	0		55.5	41.8	

date.

first minute-break.

set at.

Mar 25 1871

Sum

Mean.

N. Coll.

S. Coll.

α.

δ.

Mag.

REMARKS.

0 16 22 88 50 29 83

85

18 22 91 50 52 91

93

22 49 85 51 54 82

81

25 29 80 50 23 89

78

27 31 89 50 44 80

85

29 55 80 49 59 92

88

31 57 85 50 19 81

78

32 44 84 50 17 85

88

35 51 85 51 44 85

~~39 01~~

85

39 01 90 50 57 92

92

bol H

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

50 4 28.1 15.3

50 4 32.0 19.8

30 1 59.5 46.2

30 1 59.5 46.7

@low-damile

25 4 10.7 57.2

25 4 16.1 4.0

55 4 48.8 34.0

55 4 42.1 29.4

35 3 54.7 39.8

35 3 54.0 41.1

20 4 19.2 5.0

20 4 12.6 -0.2

0 4 3.8 49.6

0 4 3.2 49.1

5 1 87.3 22.5

5 1 84.7 22.2

35 4 47.0 32.4

35 4 52.1 39.8

30 3 6.1 51.3

30 2 56.5 43.3

ate.

First minute-break.

set at.

Nov 25 1871

Nov 25

Sum

Mean.

N. Coll.

S. Coll.

a.

δ.

Mag.

REMARKS.

0 40 45 9.5 50 85

10.2

Not seen

42 46 8.9 50 34 9.0

8.7

44 37 9.5 50 04 7.8

7.2

46 54 8.9 50 07 9.3

9.2

49 33 8.8 50 42 8.7

8.6

52 52 8.4 50 55 8.4

8.5

55 11 9.1 50 20 9.1

9.2

6.0 back to 10

57 14 6.8 50 19 6.5

6.8

59 26 9.3 49 55

8.6

Not seen

1 55 8.8 50 53

8.4

Runs.

Sum
Mean.

A.

C.

276	276	220	218
178	278	218	214
280	278	226	220
282	278	220	213
281	278	226	215

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

15 3 1.1 478

50 2 318 182

50 2 412 277

15 3 540 391

15 3 50.5 37.6

15 0 37.0 229

15 0 44.8 32.2

40 1 6.2 57.9

40 1 10.6 57.4

25 3 21.6 18.0

25 3 30.2 17.6

0 4 15.0 0.3

0 4 21.6 8.3

0 4 16.2 57.7

0 4 11.3 57.7

25 4 29.7 16.3

25 4 54.5 40.6

55 4 53.1 39.3

obs. a 74 & 60 in RH.
before 055-11

Along very good

Date.

Nov. 28

First minute-break.

Set at.

46.230

Sum
Mean.

N. Coll.	S. Coll.
46.376	46.093
058	097
058	100
058	123
058	098
Sum 206	451
Mean. .361	098

a.

s.

Mag.

REMARKS.

23 81 50 80 50 31

33 51 80 50 57

35 53 91 51 02

38 29 84 50 11

40 36 74 50 31

43 39 95 50 06

22

45 07 84 50 48

47 09 70 50 48

20

48 54 87 50 09

51 39 87 50 19

50 05

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

1871pbae.pro.1541R

Date.

First minute-break.

c, set at.

N. Coll.

S. Coll.

Sum

Mean.

a.

s.

Mag.

REMARKS.

23 54 18 80 50 05

56 05 78 50 45

58 03 85 50 18

1 10 90 51 03

3 11 80 50 42

5 10 85 50 46

7 55 81 50 54 8.0 double

8.0

10 07 93 50 44 9.0

12 08 70 49 59 8.0 20

13 41 90 51 24 9.0

51 30

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

25- 4 35.0 5.7

25- 4 18.7 0.8

40 0 18.3 4.3

40 0 17.4 59.8

20 1 20.6 2.7

55- 4 32.8 7.0

Date.

1871 Dec 1

First minute-break.

1871 Dec 2

c, set at.

Sum

Mean.

N. Coll.

S. Coll.

α .

δ .

Mag.

REMARKS.

0 15 34 8.5 57 30 8.8
8.8

17 58 9.5 52 02 9.5-22

19 36 8.9 51 44 9.0

23 12 8.6 51 48 8.9
9.2

25 58 8.8 51 10 8.7
8.9

27 52 9.5 50 59 9.5
9.6

30 53 9.0 50 31 9.2
9.1

32 47 8.9 50 03 8.8

34 55 8.0 50 16 not seen.
~~8.8~~

37 10 9.4 50 14 9.5
9.5
50 59

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

50 3 11.3 52.9

50 3 14.2 57.6

15 4 19.3 1.2

35 4 24.8 60

35 0 16.3 57.9

35 0 11.3 53.7

10 4 57.3 36.4

10 4 57.8 31.9

20 4 0. 40.2

20 4 7.1 46.8

50 2 8.2 48.0

50 2 4.0 43.0

20 0 -0.3 -19.3

~~15 4 8.2 36.3~~

5 4 55.9 360

5 4 60.7 41.9 lower *

Date.

7871 Dec 1

First minute-break.

7871 Dec 2

C, set at.

Sum

Mean.

N. Coll.

S. Coll.

a.

s.

Mag.

REMARKS.

3926 885059 9.0

9.2

41 33 525016 6.0

6.0

43 36 675048 6.5

6.5

47 13 945103 10.0

49 52 955041 9.2

9.5

51 58 845024 8.8

8.8

53 51 904958 9.3

9.5

56 09 925028 9.5

9.3

57 36 885024

0 22 855757 8.7

8.8

Runs.

Sum

Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

20 4 20.0 0.9

20 4 25.3 7.0

5 2 34.5 15.0

5 2 33.7 13.9 A M Obs + Rec

35 0 5.0 45.7 Ordinary seeing

35 0 9.2 50.8

20 0 46.4 28.3

Too faint to obs

40 1 17.1 57.8

40 1 19.3 0.9

55 3 34.9 15.3

55 3 28.7 9.4

A M Obs + Rec
seeing very bad

25 1 37.2 16.8

25 1 58.3 39.2

5 fol

55 0 57.2 34.2

55 0 49.7 31.0

25 1 17.5 58.3

25 1 16.3 58.0

Date.

First minute-break.

c, set at.

1871 Dec 9

Dec 12

46.184

N. Coll.	S. Coll.
46.351	46.015
356	070
361	16
349	15
349	20
Sum 266	56
Mean 46.253	46.016

353
015
368
184

a.	s.	Mag.
0 ^h 26 ^m 7 ^s	88 50 58	9.6 9.2
28 44	93 50 57	9.2 9.5
30 59	90 50 45	9.0 9.2
33 07	92 50 07	9.0
36 19	89 51 04	8.4 8.4
40 09	82 50 24	8.2 8.4 8.2
40 14	83 50 24	8.4 8.4
42 44	89 50 30	8.6 8.7
44 53	92 50 41	9.6
47 13	94 51 02	10.0 9.8

REMARKS.

~~2.1~~
W.R.
W.R.

Not seen
Not seen.
Pro fur...

Runs.

	A.	C.
49.1	49.9	38.9
50.0	48.2	39.5
49.4	48.0	38.9
49.8	48.8	39.4
49.7	49.0	39.1
Sum	248.0	
Mean.		

DEC 11

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

25 1 3.8 46.0

~~25 1 1.7 44.0~~

25 1 87.3 19.0

~~25 1 31.1 12.8~~

35 3 29.4 119

~~35 3 21.4 41.0~~

15 1 21.7 2.2

15 4 12.0 52.7

15 3 40.9 30.5

55 4 41.1 2.2

55 4 36.8 18.8

55 4 41.1 21.2

~~55 4 36.8 18.8~~

50 2 44.6 25.0

50 2 38.1 17.8

40 3 55.6 36.9

20 1 7.9 48.2

20 0 47.4 29.4

Date.

First minute-break.

C, set at.

7871 Dec 6th

Dec 12

46.178

Sum

Mean.

N. Coll.		S. Coll.	
46	34.3	46	01.8
	33.4		01.0
	34.8		01.2
	34.6		02.0
	34.6		00.6
1717		06.6	
84.34		01.32	

46.343
013
356
46.178

a.

S.

Mag.

REMARKS.

8 50 00 85 50 43

9.0

~~off~~

8.7

53 28 76 50 11

8.0 2

8.0

55 11 91 50 20

8.2

8.1

57 36 88 50 14

8.8

8.7

1 1 40 86 51 55

8.7

8.9

1 3545 78 49 58

4.9 sure

38 10 83 51 23

8.4 2

8.4

39 50 88 51 15

8.5

42 15 90 51 20

8.9 2

9.1

43 58 81 51 09

8.3 2 #2

Not seen

Runs.

Sum
Mean.

A.		C.	
36.1	27.1	23.8	23.8
36.4	36.1	23.8	23.3
35.5	35.4	23.0	23.0
36.2	35.7	22.4	23.0
36.3	36.4	23.1	23.0
36.2			

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

40 1 14.1 56.1

40 0 9.8 50.8

10 2 26.0 9.1

10 2 12.4 53.6

0 3 15.7 56.4

0 3 8.3 48.8

5 4 10.6 52.5

5 4 8.3 49.0

25 8 28.4 10.9

25 3 22.3 4.1

20 1 3.9 43.0

0 1 6.0 46.9

0 0 56.7 36.5

5 3 50.3 31.0

5 3 56.7 37.7

0 4 8.2 48.9

0 4 1.6 42.5

10 4 25.7 5.4

ok. fair

" "

" "

2?

Date.

First minute-break.

c, set at.

Dec 9
Dec 12

Sum
Mean.

N. Coll.

S. Coll.

a.

δ.

Mag.

REMARKS.

1 46 02 83 52 01 84

83

48 01 92 50 13 87

82

H ?

for #

51 08 90 49 59 90

91

mid #

53 38 90 50 40 90

84

for #

53 56 84 51 04 83

83

mid # ?

58 23 90 51 00 91

92

2

1 13 72 50 27 75

83

3 11 89 50 02 92

22

86

5 47 87 49 56 89

88

7 55 93 50 54 95

95

95

1

Runs.

Sum
Mean.

A.		C.	
43.2	43.2	30.7	29.6
43.8	43.0	30.2	29.5
43.0	42.9	30.0	30.4
42.5	43.0	30.0	29.8
42.0	43.0	29.2	29.2

Dec 12

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

20 2 26.2 7.2

20 2 16.2 58.2

10 4 53.0 34.3

5 0 27.2 2.1

20 ~~4~~ 1.6 42.0

25 0 13.5 53.1

40 3 40.2 20.3

40 3 28.0 8.3

20 1 57.9 38.8

15 455.5 86.0

20 3 5.6 46.5

20 3 9.1 50.2

63-1 39.2 19.4

55 0 57.3 37.2

~~25 3 19.4~~

20 1 7.3 47.7

25 3 15.4 55.0

25 3 10.6 50.0

25 4 12.3 52.8

25 4 5.2 45.0

V.A.R.
W.A.R.

Ch. failed

Ch. ok

Dec 14

N. Coll.	S. Coll.
46.364	46.025
340	020
350	019
345	022
352	019
Sum 251	105
Mean. 46.350	46.021

350
021
371
-185-

Date.

Dec 20

First minute-break.

Dec 27

c, set at.

46.185-

Sum

Mean.

a.

δ.

Mag.

REMARKS.

1 29 08 89 50 40

not seen

31 11 92 51 38 92 2

32 59 91 51 16 90

90

35 45 78 49 58 83 90

82

37 37 95 51 57 100 20 first star

not seen?

39 21 82 50 06 84

85

42 15 90 51 20 93 90

92

43 58 61 50 09 84 sure

64 sum

47 10 92 51 41 84

92

49 15 90 50 30

85

1871phae.proj.1541R

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

45 0 88.2 146

5 2 88.7 17.7

5 2 7.9 49.5

25 0 31.0 2.7

25 0 36.3 18.6

25 2 12.3 50.2 A.?

~~15 2 9.8~~

15 2 14.3 51.9

15 2 9.8 50.2

0 4 57.4 35.2

0 2 50.9 33.0

10 4 30.3 80

10 4 6.2 48.0

35 4 5.1 43.1

35 4 23.7 6.0

50 3 22.8 04

50 3 15.4 56.0

~~C 2 2~~

W. M. #

Ref. h. x. ful

Dec 21 1871

Date.

First minute-break.

set at.

46.172

Sum
Mean.

N. Coll.	S. Coll.
46.327	46.020
331	008
336	11
330	607
331	12
155	58
46.331	.012

Dec 16

331
012
343

172

a.

δ.

Mag.

REMARKS.

1 51 33 84 50 45

Not seen

84

5-3 35 83 52 02

85

84

53-56 84 51 04

85

85

58 37 84 50 43

~~2 00 07 91~~

84

2 00 07 91 51 40

93

93

2 02 89 51 11

90

89

5 27 88 51 38

89

88

7 58 89 51 02

90

91

10 07 89 50 18

89 7/4

88

11 52 90 50 58

Not seen

51 58

89

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

40 3 41.3 21.8 W.A.R. Obs. & Rec.

20 1 23.4 2.3 W.A.R. Obs. & Rec.

20 1 36.0 18.3

15 4 1.4 3.5

15 4 4.8 4.4

40 0 40.8 17.8

40 1 0.6 4.9

40 3 23.5 1.3

40 3 33.2 15.2

10 3 9.6 47.4

10 3 8.4 48.7

45 0 20.1 57.5

45 0 16.8 57.3

20 2 2.2 39.6

20 1 53.9 35.6

5 1 7.1 45.4

5 1 0.0 40.2

25 0 25.6 6.7

Date.

First minute-break.

c, set at.

DRC 20/4/71
DRC 27

46

N. Coll.		S. Coll.	
337	337	020	020
336	364	045	078
336	310	045	022
335	266	035	015
336	336	027	012
Sum			
Mean.		339	364
		020	

82017

46,188
182

46,185-

a.		s.		Mag.	REMARKS.
2	14 20	8.5	51 58	8.4	
				8.5	
17	16	8.0	50 55	9.4	
				9.0	
19	14	6.5	50 00	6.5	
				6.8	
21	36	8.4	50 34	8.3	
				8.5	
24	29	6.5	57 44	6.0	
				6.0	
27	07	9.1	57 44	9.2	
				9.4	
29	10	8.0	57 08	8.5	
				8.7	
31	34	8.5	51 04	8.5	
				8.5	
33	52	8.2	49 55	8.4	
				8.5	
36	06	8.4	50 11	8.2	
				8.3	
		50 31			

Runs.

Sum

Mean.

A.

C.

41.0	40.7	27.6	27.1
41.0	40.0	27.6	26.7
41.0	40.2	27.2	26.3
41.2	40.5	27.3	26.7
40.4	41.0	27.2	26.6
40.7			

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

25 1 17.8 56.1

25 1 17.7 58.9

25 3 24.0 1.3

25 3 31.0 12.2

20 4 59.0 36.2

20 3 54.8 35.0 *ml.*

45 4 15.3 57.1

45 4 0.2 40.0

35 4 19.7 57.3

35 4 8.7 50.5

35 4 57.6 30.2 *Mid #*

35 4 51.0 32.3

15 0 50.7 26.8

15 1 13.5 53.6

15 4 23.7 0.6 *both #*15 4 25.7 5.7 *1st 500*

25 3 52.4 29.6

25 3 97.3 27.3

10 2 39.4 17.0

10 2 44.7 25.0

Date.

First minute-break.

c, set at.

Dec 20 1971

Dec 27

Dec 21

Sum

Mean.

N. Coll.

S. Coll.

Dec 21

46.362
356
356
366
352

46.211
02
06
03
-03

4252

46.358

6

46.027

46.186-29027

Mag.

REMARKS.

2 39 09 92 50 31

93

94

41 30 91 51 18

92

93

44 14 93 50 30

80

94

46 51 87 51 10

84

85

49 04 92 50 27

93

94

54 51 87 50 27

84

85

57 06 90 50 36

90

92

58 48 68 50 43

65

70

3 01 27 87 50 59

86

88

3 17 94 51 20

93

89

9.4 #/pr

Runs.

	A.		C.	
	Sum	Mean.	Sum	Mean.
552	574		423	428
578	567		427	427
576	586		424	426
577	570		418	413
570	567		420	412

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

50 2 53.5 29.4

50 2 50.4 31.1

5 0 47.7 26.0

fair - # 15.11

5 0 33.8 13.8

" " " ?

50 3 32.5 9.2

50 3 18.3 5.9

2nd 5 pr. 4.11

10 2 46.8 23.9

10 2 37.0 17.9

55 2 57.2 27.6

55 1 55.1 35.7

55 1 25.0 1.9

55 1 22.8 3.2

45 2 27.2 2.8

45 2 24.7 2.8

40 0 44.7 22.1

40 2 42.2 22.4

S. line

20 4 43.0 20.6

leaving tolerable the first

20 4 51.0 31.3

part of the zone, but bad

0 3 16.7 8.5

the last part. Problem

0 3 8.8 49.3

with the illumination.

Date.

Jan 2 1972

First minute-break.

Jan 8

c, set at.

46.1524

46.142

N. Coll.	S. Coll.
46 176	46.136
176	133
75	140
171	134
174	
Sum	
Mean.	46.174 134

δ.

Mag.

REMARKS.

1 4246 63 57 18

6.0

44 54 93 57 56 96

100

46 52 87 51 36 86 2p

8.6

48 34 77 57 52 80

8.0

48 36 95 57 53

seen

not seen

52 15 90 57 58

8.5

63 10 91 57 06 94

9.5

68 03 87 57 50 87

8.5

2 0 07 91 57 40 92

9.4

2 41 90 57 32

8.8

Runs.

Sum
Mean.

2	5	C.
573	572	430
568	574	426
564	572	426
572	568	422
576	570	424

Ti	(No)		
±0.2	-0.9	388	355
2	9	387	356
0	7	385	363
0	2	388	355
-2	-0.6	384	358

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

5	0	37.0	14.9
25	2	50.2	29.5
25	2	45.2	23.0
45	1	54.0	32.6
45	1	57.9	35.0
30	2	9.8	47.1
30	2	9.1	47.3

mark
mark
mark
mark

25	0	29.0	7.0
25	0	9.1	47.0
15	2	38.0	17.0
15	2	38.6	15.2
30	4	35.8	15.3
30	4	24.9	3.0
40	3	31.4	9.5
40	3	21.3	59.1
50	2	37.2	16.4
50	2	40.6	17.8

Date.

First minute-break.

c, set at.

Jan 2 1871
Jan 8

Sum
Mean.

N. Coll.

S. Coll.

α .

δ .

Mag.

REMARKS.

2 551 86 51 43 88

87

7 44 85 51 58 84

84

9 57 92 51 38 93

91

12 28 88 51 52 87

86

14 39 65 51 30 66

68

16 25 88 51 48 90

90

Brm 1 sh for each
1 sh each.

19 01 99 51 17 95

93

22 27 90 51 50 92

90

24 39 95 51 44 69

72

(95 seen)

27 17 85 51 55 99

82

51 31

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

40	0		43.8	21.8	
40	0		42.1	20.0	
25	1		3.0	41.1	
25	1		4.8	42.1	
45	0		7.8	45.2	
45	0		20.0	57.0	
30	2		56.2	33.8	
30	2		2.2	39.4	
50	3		48.3	26.0	
50	3		57.7	34.2	
35	0		34.3	12.7	Regular and
35	0		47.8	25.2	
5	1		11.1	49.1	
5	1		21.2	58.0	
35	0		2.8	39.0	
35	0		-4.4	32.3	
35	4		22.3	0.9	
35	4		14.0	51.8	
25	3		16.2	52.0	
25	3		16.1	54.0	

Date.

First minute-break.

c, set at.

Jan 2 1972² Lang

Sum
Mean.

N. Coll.	S. Coll.

a.	s.	Mag.	REMARKS.
2 29 37	88 57 31	9.1 89	~~Warm up.~~
33 21	90 57 53	89 87	
35 42	85 51 45	86 85	
87 51	90 57 40	92 89	
40 24	90 57 26	90 90	Warm up.
58 31	87 57 41	85 1	
3 01 15	92 50 26	93 91	
3 32	83 51 31	85 81	
5 30	86 57 06	87 86	
8 26	83 57 24	83 84	
	57 36		

Runs.

Sum
Mean.

A.

C.

312	314	152	144
312	316	143	142
315	316	143	143
315	310	145	144
317	313	147	144

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

50 2 36.7 150

50 2 29.6 7.2

30 0 48.7 26.1

30 0 42.0 18.7

35 3 3.9 41.7

35 3 7.0 44.2

40 3 47.3 24.2

40 3 52.7 29.3

55 1 44.5 23.0

55 1 50.5 26.9

40 2 27.0 3.9

55 2 18.2 55.4

55 2 27.8 3.0

50 1 23.9 2.2

50 1 15.7 53.1

20 2 11.0 48.0

15 2 12.6 49.3 Sum

55 3 10.5 47.3

55 3 8.2 45.8

Date.

First minute-break.

C, set at.

Jan 2 1972

Jan 8

Sum

Mean.

N. Coll.

S. Coll.

a.

s.

Mag.

REMARKS.

3 10 48 86 57 36

86

85

13 05 88 57 14

90

86

16 12 93 57 34

2p

95

17 58 88 51 43

1

86

22 57 84 51 37

85

25 24 90 57 17

too faint to obs.

10.0

30 58 88 57 36

89

90

33 59 75 57 53

not seen

36 19 91 57 21

92

92

full #

38 43 83 57 38

86

85

Runs.

Sum
Mean.

A.	C.
330 330 330 330 330	

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

45 2 44.6 21.3

45 2 45.0 20.7

10 1 50.4 27.1

10 2 57.3 32.3

~~45 1 21.3 -0.7~~

45 4 44.0 20.0

40 0 28.9 5.1

45 1 21.3 -0.7

45 1 8.0 4.1

~~5 1 50.5 27.7 # 10" m. Rig~~

45 3 17.1 54.8

45 3 29.7 5.3

0 2 35.9 13.5

0 2 15.3 52.0

45 0 15.2 53.2

45 0 11.6 47.2

Seeing very bad.

Stars blurred

Seeing pretty good

Date.

First minute-break.

c, set at.

Jan 24/1872

Jan 31

46.197

Sum

Mean.

N. Coll.	S. Coll.
46.199	46.792
205	189
205	180
206	189
208	183
1023	443
46.205	46.189

Jan 18

205

189

354

187

a.

s.

Mag.

REMARKS.

2^h 15^m 3^s 85 51 46
 4 20 13 90 51 35

Jan 24

17 48 84 51 07
 22 58 89 51 09

2p
 68 #? not seen

19 20 80 51 06
 26 58 84 52 01

8.5
 9.4

22 36 90 51 44
 28 41 89 51 45

8.7
 9.4

25 09 85 52 04
 30 39 90 51 27

-30° 49' X

X? 3000

27 56 70 51 25
 32 49 80 52 53

8.5
 8.7

30 42 94 51 17
 34 53 70 52 06

8.2
 8.4

33 32 88 51 14
 36 50 81 51 47

2p 8.4 not seen

35 02 87 51 24
 38 24 90 51 20

not seen

37 50 93 51 28
 40 32 85 53 02

not seen

Runs.

	A.	C.
42.8	41.7	12.9
42.3	41.5	12.7
41.6	42.2	12.8
41.7	42.0	13.0
42.6	41.9	12.4
Sum	211.0	219.3
Mean.	42.20	43.86

Jan 24

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

15 0 0.0⁴ 2.49

20 2 23.5 48.2

20 3 0.2 25.3

35 8 43.0 8.2

35 3 54.1 20.2

~~10 0 54.1 39.9~~

30 0 14.6 39.6

30 0 26.0 45.0

15 3 13.5 39.1

15 3 15.3 41.8

35 1 40.6 6.3

35 1 36.3 2.3

55 3 45.0 19.3

Jan 31

WNR

Riz 1st slip

Paint

Date.

First minute-break.

c, c, set at.

Jan 24 1872

Jan 31

41.698

N. Coll.	S. Coll.
41724	41.688
730	680
764	682
714	684
722	684
104	374
Sum	41721
Mean.	41.675

Jan 31
675
721
1396
698

a.

s.

Mag.

REMARKS.

~~40 26 89 51 06~~
4 42 23 94 51 09

6.9 8.7 both, reg. order.
6.7 9.0

~~42 58 83 51 41~~
45 10 86 51 51

8.5 Double 4a = 3 4b = 5'
may 9.6

~~44 52 9.5 51 05~~
49 11 80 52 16

7.7
6.6

~~48 13 9.1 51 57~~
52 38 9.0 51 52

not seen
not seen

~~50 53 9.0 51 06~~
54 44 8.9 51 43

9.0 4 or 5 #'s
9.4 not seen

~~53 03 8.6 50 56~~
56 31 9.0 51 44

9.6 n
#?
not seen

~~55 27 8.8 50 51~~
58 36 9.1 51 50

9.3 20 not seen

~~58 30 8.7 50 44~~
5 0 02 8.6 52 35

2 20 3 3' #
x

~~0 59 8.9 52 26~~
3 54 8.0 51 16

7.3
8.3

~~3 22 8.3 52 23~~
6 15 9.0 51 30

8.7
8.9

Runs.

	A.	C.
520	517	229
520	578	230
521	510	230
577	506	230
516	571	230
Sum		
Mean.		

Jan 31

Pointer.	Stroke.	Rev.	A.	C.	REMARKS.
10	3		26.8	52.4	Spn 2 nd # fall.
10	3		15.4	40.3	2 nd spn.
30	0		16.2	-18.8	#? comes too late
30	0		45.2	100	false spn
5	0		58.4	24.1	
5	1		32.1	58.5	
40	0		2.9	27.8	#?
40	0		49.9	14.2	
35	2		48.2	130	
30	4		7.9	34.1	
Cost 2 wins					
5	2		58	308	
5	2		26.1	51.8	
50	3		34.1	-0.2	
50	3		53.0	18.7	

Date.

Jan 24

First minute-break.

c, set at.

Sum
Mean.

N. Coll.

S. Coll.

α .

δ .

Mag.

REMARKS.

~~3 6 37 8.5 50 29~~ 8.2

5 08 32 8.2 52 41 8.6

~~9 12 50 50 05~~ 7.8

11 37 7.8 51 21

~~12 13 8.5 51 01~~ 8.4

13 47 8.3 52 49 8.6

~~14 20 7.8 51 17~~ 9.1

18 55 9.0 52 30 9.5

~~16 21 9.0 51 53~~ 9.0

21 03 9.2 51 12 7.5

~~18 24 9.4 50 54~~ 7.9

23 03 8.2 51 21 8.2

~~20 48 8.9 50 53~~ 8.2

24 18 8.0 51 50

~~23 17 9.1 51 31~~ 7.8

28 08 7.9 51 21 7.9

~~25 24 9.0 50 17~~ 7.7

30 27 7.2 52 30 7.7

~~30 55 9.1 51 58~~ 8.0

32 44 8.0 52 09

Several #'s
#2
1

Cont.

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

40 2 24.9 50.1

40 2 54.5 20.4

45 2 16.6 43.0

Time 2.

35 0 42.3 8.4

35 0 31.2 2.1

50 2 44.0 10.8

50 2 55.5 21.0

10 1 46.8 12.6

10 2 49.8 15.0

0 1 16.1 41.8

0 1 43.6 7.7

30 4 31.1 56.8

0 2 8.1 32.1

0 2 21.8 46.9

50 4 8.6 35.0

50 4 21.9 48.1

10 4 50.7 15.3

CO

Jan 31 See us
magnitudes but hours. A line
towards the last.

Selling food
very being horrible
Nanny.

Date.

First minute-break.

c, set at.

Jan 10 1872

1872 Jan 12

46181 1872 Jan 21

Sum

Mean.

N. Coll.

S. Coll.

a.

δ.

Mag.

REMARKS.

3^h 6 17 80 52 17 8.4
8.1

WFR
WFR

9 40 89 52 20

not seen

12 23 85 53 01 8.5
8.5

15 14 89 52 43 8.6
8.9

17 10 82 52 27 8.5
8.0

19 54 86 52 54 8.6
8.8

23 54 87 52 31 8.7
8.8 9.0

27 33 89 52 27 9.0
9.2

29 31 74 52 25 8.7 Same
8.2 8.5

32 11 86 52 53 9.2
9.5 9.5

Runs.

Sum

Mean.

A.

C.

168	16.6	4.0	4.6
168	16.6	4.0	4.6
16.0	16.0	-2	3
163	16.3	9	4
166	16.6		

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

5 2 37.2 19.9

A. In.

5 2 29.3 13.1

A. In.

20 2 18.3 59.3

20 2 12.6 56.3

40 0 41.3 24.6

40 0 40.4 25.3

55 0 35.9 37.6

55 1 26.1 9.1

5 for

25 4 11.5 53.8

25 4 13.3 57.0

50 2 48.6 30.2

50 2 44.1 28.2

50 2 55.2 24.3

55 1 5.1 46.9

Rings the led obs.

55 1 7.9 36.0

55 4 45.1 27.2

55 4 53.8 37.3

0 0 0.7 29.9

30 1 37.5 20.0

30 1 6.2 50.0

30 1 10.3 40.3

Date.

Jan 10 1872

first minute-break.

7872 Jan 12

set at.

7872 Jan 21

Sum

Mean.

N. Coll.

S. Coll.

a.

δ.

Mag.

REMARKS.

3 34 25 90 52 04 9.1

9.0 9.2

36 19 90 52 33 8.8

9.0

88 14 90 52 05 9.4

9.2

40 48 66 52 05 6.3

7.0

43 55 84 52 11 8.4

8.5

45 49 92 52 25 9.0 9.0

48 13 80 51 45 8.1 9.2

9.5

50 38 90 52 43 9.2

52 27 85 52 32 8.8 6.3

54 29 90 52 24 9.0

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

20 0 15.1 0.3 20 0 9.0 36.9

20 0 10.8 52.1

50 3 15.5 58.2 50 3 10.1 37.8

50 3 24.5 9.1

Spal clouds

15 4 15.4 0.0

15 4 14.7 58.0

15 3 21.3 2.7

15 3 22.0 5.3

10 2 44.1 26.0

10 2 59.2 42.3

Jan 24

55 4 6.2 47.9

~~55 4 31.3 58.2~~
not in line

35 3 19.0 1.1

35 19.8 35.3

35 3 27.8 11.9

40 1 15.3 -2.5

Too thick to observe
not in line

50 2 56.1 38.0

50 03 23.0 50.0

55 4 13.9 55.4

55 4 24.4 50.4

Date.

First minute-break.

c, set at.

Jan 10 1872

Sum
Mean.

N. Coll.	S. Coll.

α .	δ .	Mag.	REMARKS.
3 56 26 9.0	52 44	9.2 9.0	
58 40 9.3	53 03	9.2	
4 0 16 8.5	52 40	8.4	
3 15 9.0	52 36	9.0 8.8	
6 39 9.2	52 39	9.5 9.2	
8 39 8.3	52 39	8.1 7.9	
10 45 8.0	53 02	8.2 8.3	
12 19 8.5	53 01	8.6 8.6	
14 20 6.6	51 37	6.0 7.0	
16 30 7.9	52 12	7.5 8.2	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

35 4 39.2 20.2 Jan 24 35 4 42.2 9.2 (C?)

20 1 35.8 17.8 20 01 28.8 54.0

40 3 48.1 30.0

45 2 4.9 46.8 45 02 7.2 33.0

45 0 3.7 45.3 40 4 44.3 13.0

40 4 23.7 5.9 40 4 23.0 48.2

20 1 30.8 14.7 20 1 40.8 5.5

20 1 59.2 40.2 20 2 26 27.6

45 0 35.2 16.0

Seeing good
45 0 32.6 - 2.4

10 1 5.0 46.3

10 1 0.8 26.0
See pr. pages
in vol

Date.

First minute-break.

c, set at.

Feb 11872

Feb 4 1872

Sum

Mean.

N. Coll.

S. Coll.

a.

s.

Mag.

REMARKS.

4 36 37 8.1 51 05 86

38 24 9.0 51 20 95

9.2

40 32 8.8 53 02 89

9.0

42 23 8.9 51 10

8.7 }
9.0 }
8.8 }

Double

lower x

45 22 9.0 51 09 96

9.5

47 51 9.0 50 01 91

9.0

50 20 8.4 50 02 88

52 38 9.0 51 52 92

55 26 9.5 51 45 98

57 41 8.8 51 52 84

85

WDR
WDR

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

15 4 27.0 57.8

A m
A m

0 3 47.2 12.0

W

0 4 10.2 34.3

20 2 52.7 16.2

20 2 56.7 23.0

10 3 8.3 32.9

25 m.

10 3 37.2 3.0

15 0 2.6 28.0

15 0 27.0 52.2

20 3 4.0 28.7

20 3 5.8 31.0

20 2 13.2 37.1

20 2 8.8 33.0

30 2 18.5 43.7 Cart sh. up d
gas out

35 4 0.7 25.4

25 2 28.8 54.0

25 2 32.0 58.1

Date.

First minute-break.

c, set at.

Feb. 1872

1872 Feb 4

N. Coll.

S. Coll.

Sum

Mean.

a.

s.

Mag.

REMARKS.

4 59 29 94 52 33 10.0

5 1 30 90 51 54 9.0

not seen

3 32 80 52 02 8.4
9.06 43 91 52 07 9.3
8.88 32 82 52 41 8.4
8.011 50 91 52 02 9.3
9.014 19 78 52 06 7.7 Red-
8.2

21 49 75 51 07 7.7

23 32 92 51 13 9.2
9.2

25 24 85 52 29 8.5

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

50 0 86.6 13

25 4 51.8 17.8
~~30 2 35.0~~

30 2 35.0 16

30 2 21.7 48.6

15 2 52.8 170

15 2 46.1 11.9

40 2 49.2 14.2

40 2 43.4 10.4

20 2 21.6 45.8

20 2 12.2 38.6

15 3 0.7 26.1

15 2 44.0 8.4

15 0 56.4 20.4

10 0 27.8 8.2

10 0 23.7 49.8

55 0 38.6 3.8

55 0 28.7 55.2

*new close double
comp m.*

Date.

First minute-break.

c, set at.

P-26.1 1872
1872 Feb 4

Sum

Mean.

N. Coll.

S. Coll.

a.

s.

Mag.

REMARKS.

5 29 18 89 52 40

8.5

8.7

31 00 80 52 07

8.3

33 07 70 52 24

6.9

7.0

35 15 81 52 06

6.8

same

6.5

37 43 80 52 39

8.9

9.0

39 28 82 51 20

8.0

8.0

42 05 89 52 09

8.8

8.8

44 07 88 52 13

8.9

8.7

46 00 70 51 46

6.8

7.0

48 03 80 52 01

8.8

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS

40 4 506 167

40 4 26.8 52.6

15 2 59.2 28.2

15 2 32.2 56.9

55 4 7.3 31.3

55 3 48.3 13.2

15 2 41.4 6.4

15 2 50.1 15.9

45 0 27.5 -7.6

45 0 15.0 41.3

0 4 40.5 4.9

0 4 27.0 52.0

15 0 43.2 6.3

15 0 33.1 58.3

10 0 25.4 50.2

10 0 15.6 41.2

35 2 28.0 53.0

35 2 27.3 52.3

20 2 37.0 1.4

20 2 27.1 53.9

W.R. }
W.R. }mid & fol wires
5 fol

Seeing pretty good
 up to 4th used the
 new (Swins) eye piece
 Found the same difficulty
 as Jan 31 in observing
 faint stars. At 4th 14"
 put on the old eye
 piece and found a
 vast improvement.

Hereafter the old one will
 be used. Modestly
 with the observations of
 Jan 1 was clearly with the eye piece

Date.

First minute-break.

c, set at.

Reg. 7 hrs 2 Fish?

Feb 8 1872

41.737

Sum

Mean.

N. Coll.	S. Coll.
41,727	41,742
722	730
722	737
830	751
927	746
128	290
41,726	41,748

748
226
54
737

a.

s.

Mag.

REMARKS.

3^h 37 35 65 51 18 6.8 2

Ward
Ward

Ward
Ward

39 09 82 51 84 8.5

41 36 85 50 43 8.6

44 08 87 50 00 9.0

47 02 57 50 19 8.5

49 43 95 51 06 8.2 Same

52 14 80 50 16 8.3

55 58 86 50 24 8.7

8.4

3 58 01 90 50 33 8.8 Same

8.9 Same

4 00 30 95 51 28 9.8

For faint

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

50 0 32.4 18

50 0 15.5 -15.4

40 0 40.6 80

25 0 ~~58.0~~⁴ 192

0 4 48.2 15.7

15 1 18.0 46.8

5 2 34.8 1.8

55 4 45.4 12.3

55 4 9.6 36.4

45 3 25.8 54.4

45 3 19.0 47.2

55 0 30.4 -1.1

1st 12 cont 2 w2nd 12

Date.

first minute-break.

c, set at.

Feb. 7 1952
 156.8

Sum
 Mean.

N. Coll.

S. Coll.

41.672

655

670

677

679

41.673

41.679

777

776

751

751

756

735

787

The 6

787

678

1466

733

a.

s.

Mag.

REMARKS.

4 03 27 88 50 00 90

9.0

5 28 92 50 32 90

8.9

92 m. 3.2nd H

92 m.

7 47 92 50 30 91

9.0

30' of end - H's

10 02 80 51 57 92

9.6

12 39 80 51 17 8.6 De

8.9

14 20 6.6 51 37 6.8

6.9

17 35 9.3 51 58 9.1

9.0

Bottom in AR by order.

20 13 9.0 51 35 9.1

22 58 8.9 51 09

no soon

26 05 9.0 52 36

52

9.1

9.0

9.2

8.3

2nd m.

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

20 4 53.5 212

20 4 184 46.2 C 2 16.

50 2 26.5 53.5

50 2 21.0 49.2

50 4 82.8 0.4

50 0 56.1 23.8

25 1 52.6 22.4

25 1 46.8 14.7

5 1 11.8 39.2

5 1 9.0 36.7

45 0 56.5 24.3

45 0 57.0 25.1

25 0 40.3 7.7

25 0 41.5 8.8

45 4 26.0 54.3

45 4 16.0 45.0

not shed.

10 4 23.7 57.8 E?

45 2 34.4 2.4 3 wins for Cant #

45 2 45.0 13.8 C 3 to be Cant #

no spin
Polar (d.e.e? w)

Date.

First minute-break.

c, set at.

N. Coll.

S. Coll.

Sum

Mean.

Feb. 7 1872

Feb. 8 1872

a.

s.

Mag.

REMARKS.

4 29 20 90 51 23

8.5 sure

8.5 sure

31 45 80 50 57

Sure

9.2

Obs?

33 55 87 52 45

8.9

8.7

36 50 81 51 47

8.7

8.5

38 43 91 50 43

9.2

9.4

41 54 22 50 18

8.8

~~22 May~~ #?

8.1

22 May not sure

45 31 80 51 38

8.0

7.9

47 47 88 50 46

8.7

8.9

51 42 90 50 32

8.6 sure

8.5

53 44 89 50 26

8.7

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

0 0 45.0 13.3

0 0 47.3 16.0

25 2 16.2 44.8 Cont A

35 4 28.6 51.2

25 4 17.8 46.7

35 1 56.0 23.3

35 1 56.3 24.0

40 1 55.9 22.9

40 1 31 30.0

5 0 13.0 39.4

5 0 46.8 13.0

45 1 51.2 18.5

45 1 46.1 14.0

35 2 35.3 2.8

35 2 38.5 6.3

50 1 49.8 16.8

50 1 37.4 4.2

55 2 21.0 48.8

55 2 22.1 50.0

Sentry box.

ate.

rst minute-break.

set at.

Trak 12 14 2
Feb. 14 1872

Sum

Mean.

N. Coll.	S. Coll.
463	60
457	57
459	59
462	60
463	59
Sum	Sum
Mean	Mean

a.

s.

Mag.

REMARKS.

h m s
4 42 29 84 50 34 89

W. A. R.
W. A. R.

45 53 89 51 06 89
90

47 47 88 50 46 87
82

57 26 85 50 04 89
89
89

very order.

53 21 80 50 49 89
89
89

55-35 71 49 52 89
89
89

57 59 80 50 28 89
89
89

3 26 94 50 53 89 93 m.
93

5 44 77 50 24 78 20 4
74

7 19 92 50 28 93
93

Runs.

A.		C.	
463	460	246	252
457	457	8	47
459	459	9	45
462	460	8	50
463	459	25.8	50
Sum			
Mean.			

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

15 3 7.0 34.5
20 0 19.7 -7.0

15 3 10.0 38.7 Sum
30 2 34.0 8.1 Isolati.

(Feb. 14 {more})
MAR
MAR
MAR

20 0 5.0 32.0

20 0 28.3 -3.7

1st even

30 3 49.1 20.8

30 3 44.8 11.9

30 1 53.6 24.8

30 2 2.8 29.7

55 1 51.0 27.3

55 2 0.9 27.2

30 2 10.6 42.4

25 4 38.9 6.1

P off #15

55 4 24.0 56.5

55 4 33.0 1.0

55 2 25.7 54.3

55 2 25.0 57.8

ate.

first minute-break.

c, set at.

Feb. 12 1872

Feb. 14

41.767

N. Coll.	S. Coll.
41.637	41.907
635	200
620	200
623	203
622	207
157	18
Sum 41.634	2036
Mean.	

Feb. 14

2036

6314

1035

767

a.

s.

Mag.

REMARKS.

5 9 45 80 50 52 8.3

9.2 200 #15? 9.5 full

11 56 9.5 57 53 9.7

9.5

13 53 87 50 20 8.7

8.7 Double 9.5 m.

16 01 9.2 50 54 9.1

8.8

18 05 9.4 50 22 9.5

9.5

21 49 25 51 07 7.9

7.3

24 18 80 51 50 8.0

8.6

28 24 9.3 50 54

9.5 m.

28 32 8.5 50 53 8.5

9.2

30 08 8.8 49 56 8.6

8.3

A.		C.	
148	146	382	877
142	106	389	373
148	5	387	377
153	7	13	370
120		10	85.5

F26.14

Runs.

Sum

Mean.

Pointer.	Stroke.	Rev.	A.	C.	REMARKS.
30	1	3.8	35.6		Ch. failed
30	3	46.8	14.0		sun in 51°
30	2	17.9	51.1		
30	1	29.7	57.5		
0	3	83.7	5.6		close double ^{hr.} a a = 2"
0	3	30.0	51.8		mag 9.4 AV = 2"
					4a = 1" AV = 1"
30	0	14.5	13.2		
30	0	22.0	-10.0		5th hr 5 faintly
0	1	16.3	47.2		6? c?
0	1	20.8	49.9		
15	0	12.0	-11.5		Ch. ok.
15	1	8.0	35.2		sun
30	4	29.9	2.7		
30	4	36.0	4.9		
25	4	21.8	52.9		
25	4	42.8	11.3		
25	2	0.3	33.6		
25	2	10.7	37.2		

18710hae.proj.1541R

Date.

First minute-break.

c, set at.

N. Coll.

S. Coll.

Sum

Mean.

a.

s.

Mag.

REMARKS.

5-3403 8.0 50 43 80

79

36 37 8.8 51 02

Exp. Carefully

92

39 03 9.0 50 33 88 2p

88

40 47 9.2 50 40 91

87

45 49 8.8 51 51 85 22p

84

47 07 8.8 50 20 86

85

50 12 6.4 51 06 65 Too late

68

52 49 6.0 49 53 60

60

55 52 8.8 51 32 73 22p

90

57 22 9.2 51 21 95

95

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

35 4 46.2 18.9

~~35 4 5.33 20.3~~

not all in line.

~~20 0 58.2 11.2~~

045 52° 0'

50 0 88.3 10.4

~~50 0 42.2 9.3~~

40 4 19.1 51.0

~~40 4 16.3 43.1~~

30 0 6.6 38.1

~~30 0 13.8 41.0~~

ch. failed to finish

0 4 30.3 32.2

~~0 0 55.1 21.2~~

15 4 66.9 38.0

~~20 0 16.6 44.1~~

30 0 10.8 41.6

~~30 0 12.2 39.0~~

Seeing very fine

50 2 5.3 36.2

Seeing very fine

~~50 2 8.0 35.6~~

0 2 4.4 34.9

Cont-a

~~0 2 49.9 16.0~~

Date.

First minute-break.

C, set at.

Feb 15-16

Feb 17

41.750

Sum

Mean.

N. Coll.

S. Coll.

41.742

41.720

710

720

717

728

715

722

716

725

747

726

747

717

739

750

730

754

731

760

730

763

754

a.

s.

Mag.

REMARKS.

5^h 36 45 - 8.6 51 24

6.4 fol

Obs. A. M

3 9 05 - 8.7 50 03

8.5

Rec. A. M

40 47 9.2 50 40

9.2
9.5

46-5-8 8.5 51 31

8.5 220
8.5

47 57 8.8 57 07

8.6
9.2

50 12 6.0 57 05

6.5
6.7

53 36 8.5 50 37

8.8
8.8

55-52 8.8 51 32

9.4 220
9.5

57 22 9.2 51 21

9.5
10.0 ?

59 56 8.5 50 10

8.5
8.5

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

Obs. A. M.
Rec. A. M.

20 0 43.3 13.8

46 4 10.3 39.7

40 3 35.2 5.1

50 2 12.7 44.5

50 2 18.1 49.0

15 2 2.1 31.1

15 2 8.8 38.3

20 0 2.2 31.4

20 0 7.2 36.0

45 2 30.2 59.8

45 2 27.4 56.4

50 2 3.4 33.3

50 1 58.5 28.8

55 3 26.1 56.0

0 3 9.7 39.3

10 3 25.2 54.6

10 2 54.2 22.1

Date.

First minute-break.

C₁ set at.

N. Coll.

S. Coll.

Sum

Mean.

7872 Feb 16thFeb 17th

a.

δ.

Mag.

REMARKS.

6 2 21 83 49 58 8.0

8.0

4 23 88 50 49 8.5

8.5

6 57 83 52 21 8.6

8.8

9 22 80 52 25 9.1

9.2

Zero x

18 03 80 50 14 9.1

9.4

19 58 80 50 09

Op not seen
" "

21 39 85 50 48 8.8

9.0

24 12 88 49 56

not seen

9.0

26 26 85 51 32 9.3

9.0

28 16 79 51 39

8.0

Runs.

Sum

Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

25 0 42.7 11.0 *Upper Star*

25 0 48.3 17.4 " "

35 0 38.1 2.3

35 0 38.9 7.8

0 1 34.7 5.0

0 1 38.0 7.1

55 2 58.8 28.8

55 2 59.1 29.4

5 4 48.1 16.1

5 4 44.7 12.4 *5 for*

35 0 49.1 17.5

35 1 42.7 12.3

25 2 28.2 56.4

45 3 4.0 33.0

50 4 23.4 53.2

40 4 33.2 33 *d fd lost + 10 sec*

ate.

first minute-break.

set at.

N. Coll.

S. Coll.

Sum

Mean.

7872 Feb 16thFeb 17th

a.

s.

Mag.

REMARKS.

6 31 18 8.5 50 11 8.7

8.6

33 12 8.5 49 52 8.8

8.9

86 20 7.3 50 31 7.5

7.5

43 17 8.5 51 40 7.5

7.5

45-43 8.8 57 52 8.6 222 get-5 m.

46 52 8.0 57 08 8.0

8.0

~~49 22~~ 8.0 57 00 7.6

49 03 7.9

51 19 9.2 57 16 9.5

10.0

53 57 7.7 57 27 7.8

7.8

56 16 9.5 50 52

Ex

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

10 2 39.0 3.9

10 2 35.0 4.0

30 1 57.8 20.4

30 1 54.8 21.8

50 3 29.7 59.0

50 3 33.8 1.7

40 4 2.6 31.8

40 3 54.0 26.4

30 1 53.0 23.9

10 4 0.0 28.3

10 4 9.1 38.2

25 0 77.5 47.7

25 0 17.4 46.4

5 3 7.0 29.8

5 2 55.8 23.9

55 1 5.4 34.8

55 1 8.3 37.1

ate.

first minute-break.

set at.

Feb. 24 1892

Feb. 27 1892

Sum

Mean.

N. Coll.

S. Coll.

a.

s.

Mag.

REMARKS.

5 46 00 20 57 46 6.5

7.5

WARR
WARR.

49 23 60 49 55 6.2 26.0

WARR
WARR

51 08 88 49 59 8.5
8.6 8.8

54 13 88 49 54 8.9
9.0 8.9

57 22 92 51 21 9.4 20
9.6 9.4

58 57 90 50 53 9.0
9.2 8.9

2 36 87 50 38 8.8 20
9.0 8.6

4 2 3 88 50 49 8.7
8.8 8.6

6 59 79 52 34 8.0
8.4 8.0

10 32 88 50 02 9.0
9.2 9.1

Runs.

Sum
Mean.

A.

C.

Mar 11 1872

Pointer.

Stroke.

Rev.

A.

C.

REMARKS

35- 2 5.3 38.5

25- 2 16.6 44.3

25- 4 14.3 47.6

25- 4 12.5 39.5

25- 4 16.3 47.2

25- 0 32.2 6.1

(9.0 m)

25- 0 35.1 2.3

20 4 54.6 29.0

25- 3 59.6 31.6

25- 4 7.3 33.8

25- 4 7.3 37.5

0 2 11.3 43.8

0 2 20.4 47.0

0 2 26.4 58.4

30 1 9.3 41.1

30 1 19.6 46.2

30 1 9.0 39.2

45- 0 58.2 30.0

45- 1 1.1 26.7

45- 1 1.1 31.1

35- 0 22.0 -5.0

35- 0 33.4 -0.7

35- 1 26.5 -3.4

45- 4 1.6 34.9

45- 4 9.4 37.2

45- 4 1.3 32.8

20 2 0.6 31.8

Ch. ok

20 1 59.7 24.8

seeing bad

20 1 56.9 26.3

Shepherd on out of

ate.

First minute-break.

C, set at.

N. Coll.

S. Coll.

Sum

Mean.

P. 9h. 24 1822

a.

s.

Mag.

REMARKS.

6 13 05 90 50 28

8.7

~~8.7~~ 8.7

14 59 74 51 42

7.7

✓ 1st Min

~~7.7~~ 7.2

20 01 93 50 59

seen

22 27 75 51 03

8.0

~~8.0~~ 7.8

24 17 80 51 11

8.3

~~8.3~~ 8.2

26 26 85 51 32

8.6

8.9

28 16 79 50 39

8.0

~~8.0~~ 8.0

32 04 94 50 45

9.5

9.4

32 28 90 50 45

9.4

9.3

34 19 84 52 52

8.7

8.7

A little hazy

Runs.

Sum

Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

55 0 43.5 15.2

man 11 18.2

55 0 46.2 16.5

40 1 54.9 27.8

~~40 1 58.8 29.7~~

40 1 58.8 29.7

not seen

20 1 6.9 38.8

~~20 1 8.7 38.5~~

20 1 8.7 38.5

10 2 36.1 9.0

10 2 3 1.3 2.0

50 4 11.2 44.2

50 4 7.0 38.1

40 4 50.0 22.2

40 4 48.0 18.0

35 3 51.8 24.0

35-3 52.1 23.3

35 3 51.8 24.0

2^m ✓ m.

35-3 52.1 23.3

30 0 40.8 13.6

30 0 40.8 11.1

Date.

Perk. 241172

N. Coll.

S. Coll.

first minute-break.

Sum

Mean.

a.		s.		Mag.	REMARKS.
6	36 51	88	50 54	88	
				86	
39	43	80	50 59	92	51 Ceph.
				~~90~~	
43	14	9.3	50 47		
45	43	88	51 52	86	
				92	
47	16	9.5	50 04	92	Sum
				94	abn Mang
~~49 03~~	~~79~~	~~88~~	~~51 33~~	90	
51	22			96	#?
54	19	9.0	50 08	93	
				98	
56	16	9.5	50 52	~~96~~	not - seen
58	47	89	49 57	86	
				92	
7	0 27	80	50 08	87	Sum
				94	Mang

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

25 4 29.8 1.4

Mar 11 1872

25 4 27.9 2.7

20 4 51.8 23.9

20 4 51.8 22.7

30 1 14.8 50.1

30 1 34.0 4.6

15 3 14.5 45.8

15 3 10.8 41.1

50 0 39.7 12.3

50 0 59.5 29.9

15 0 39.0 9.7

15 0 50.6 19.4

25 1 29.2 1.1

Reeling my goal
at first had had from
about the middle of
Arizona. Many and
unsteady.

15 1 39.8 10.6

15 1 2.2 30.8

Many and few stars,
Reeling good many

1871phae.proj.1541R

ate.

first minute-break.

Sum

Mean.

N. Coll.

S. Coll.

c, set at.

α .

δ .

Mag.

REMARKS.

19740302-0101-1541R

