

KG
11366
x.548

Zone
Chronograph Record.
Circle Readings
From Aug. 4. 1875 to Nov. 22. 1875
A. 19

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

Date.

First minute-break.

c, set at.

1875, Aug. 7

Aug. 9

Sum

Mean.

N. Coll.

S. Coll.

Obs.

W.A.R.

W.A.R.

Rec.

J.F.M.

J.F.M.

a.

s.

Mag.

REMARKS.

~~16 50 2~~
 17 1 31
 1 7.6

~~70 54 41~~
 82 53 00
 0.9

8.0

8.1

3 00
2 36.183 53 58
56.1

8.3

8.0

5 8
4 43.96.5 51 0
1.7

8.3

6.4

6 35
6 11.89.5 53 10
16.1

9.5

9.5

7 49
7 25.484 51 28
29.0

8.6

9 8
8 44.580 52 11
12.9

8.7

10 17
9 53.689 54 19
18.8

8.8

lower

11 23
10 58.891 54 23
23.3

9.0

l.s.b.

18 16
17 51.792 50 03
3.7

9.2

9.2

l.s.b.

27 25
27 2.389 53 10
11.0

9.0

9.2

D. per. + upper #. lost mds. were

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

5 1 52.0 16.5

5 1 41.1 56.0

10 1 5.9 31.1

10 1 10.3 35.6

5 0 54.8 21.4

5 0 57.2 22.5

not seen

50 1 34.0 57.4

clouds

35 2 58.8 23.5

clouds

55 0 6.1 31.3

clouds
~~50 0 21.4~~

50 0 0.6 25.5

40 4 *clouds*

40 4 30.5 52.9

0 3 37.4 2.4

0 3 31.0 55.1

55 0 50.7 15.7 *rej. 8 of 1st #*

55 0 25.4 50.8

Date. 1875, Aug. 7
First minute-break. Aug. 9
c, set at.

	N. Coll.	S. Coll.
Sum		
Mean.		

a.	s.	Mag.	REMARKS.
17 29 2 28 39.3	89 50 29 29.5	8.8 8.8	
30 04 29 40.4	94 10 37 37.6	9.3 9.4	
32 21 31 57.7	88 52 13 14.5	8.7 8.8	
34 03 33 40.1	88 51 44 46.1	8.7 9.0	
36 09 35 45.6	90 54 10 10.2	9.0 9.1	mid. wire?
37 21 36 58.5	90 54 27 27.9	8.3 9.0	
42 2 39 20 38 57.0	89 50 18 89 52 05 7.3	7.5 7.9	
44 21 40 58.6	90 52 46 48.3	9.1 22 8.9	
42 10 41 51.8	83 51 58 51.4	8.5 8.5	
44 02 43 39.3	90 54 16 16.5	8.6 8.4 8.7 8.6	2 nd Spr. " " "

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

35 2 4.9 30.3

35 2 13.7 38.1

25 4 12.6 38.3

25 4 21.7 45.9

50 1 41.2 6.3

50 1 41.8 6.2

20 0 44.4 10.9

20 0 40.7 6.1

55 1 1.9 26.5

55 1 1.9 25.0

35 4 51.1 16.0

35 4 53.4 16.7

55 4 20.5 45.4

55 4 26.3 50.1

15 3 38.1 2.2

15 3 44.1 7.2

5 1 23.4 48.9

5 1 23.4 47.1

50 2 40.3 4.0

50 2 40.5 2.2 lost last wire of 2nd #

18755 Haee. pr. j. 1552R

Date. 1875, Aug. 7
 First minute-break. Aug. 9

c, set at.

Sum

Mean.

N. Coll.

S. Coll.

a.

s.

Mag.

REMARKS.

17 40 38 90 54 19 9.1
 45-11.6 19.9 9.2

47 16 60 54 13
 46 52 14.0 6.3

49 9 93 51 30 9.0
 48 46.3 32.4

50 15 88 03 28 8.5
 49 57.9 27.5 8.9

51 38 90 53 59 9.0
 51.154 59.0 9.1

53 48 86 54 5 8.3
 53 20.5 8.0 9.0

55 02 95 54 41 7.0
 54 39.5 41.4 6.9

56 32 85 51 49 9.0
 56 8.5 50.9 8.6

58 10 90 54 13 9.0
 57 52.6 52.8 9.0

59 28 93 54 13 8.8
 59 49 13.2 9.0

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

45 2 12.8 38.0

45 2 10.8 34.5

lost

50 2 23.6 46.8

30 3 57.0 21.8

lost, ink failed

35 4 50.4 15.2

35 4 55.8 18.3

5 2 37.0 1.9

5 2 28.5 51.0

0 1 54.8 19.2

0 2 11.3 34.5

25 0 29.1 54.9

25 0 28.9 53.7

0 4 30.4 54.1

sure
15 0 1.6 24.8

10 3 23.9 48.5

10 3 24.1 47.0

50 2 34.1 58.1 seeing, very good

50 2 32.0 54.9 seeing pretty fair

Date.

1875, Aug. 10

First minute-break.

c, set at.

Sum

Mean.

N. Coll.

S. Coll.

Obs. W.A. R
Rec. J. F. M.

α .

δ .

Mag.

REMARKS.

~~17 310 93 53 21 9.4 #2~~

5 54 8.5 54 26 8.3
5 29.7 26.3

7 35 9.0 54 39 8.8 2 2nd S pr.
7 11.1 40.4 9.0

8 20 6.2 49 54 6.0 very faint + close companion folls.
7 58.6 53.6

10 07 9.3 49 53 9.2
9 45.5 54.5

11 50 9.2 53 58 9.3
11 26.9 59.7

13 30 7.2 49 51 7.5 4.6
13 7.0 52.1

22 30 8.0 49 54 9.1
22 6.6 54.9

24 11 8.2 49 51 8.4
23 48.0 51.9

26 01 9.3 53 20 9.5 lost 1st wire
25 38.1 20.8

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

~~45 0 6.7 28.8~~

40 1 12.8 35.9.

25 2 14.4 38.6

10 2 22.9 48.6

10 3 1.9 25.5

5 2 56.7 19.5

15 1 31.0 55.8

not seen

10 2 16.3 40.7

15 0 12.0 37.2

50 0 45.6 8.8

Date. 1875, Aug. 10
First minute-break. Aug. 25
c, set at. Aug. 26

Sum
Mean.

N. Coll.	S. Coll.
Obs. W.A.R.	W.A.R.
Rec. J.F.M.	J.F.M.

a.	s.	Mag.	REMARKS.
17.27.51 27 283	88 49 50 509	8.8 8.0	46. #?
32 50 32 263	85 55 05 59	8.9 9.0	8.8
34 03 38 39.5	92 55 02 36	9.2	
35 51 35 28.4	90 49 58 59	9.0 8.8	9.3 22
36 34 36 11.1	65 49 51 57	6.9	7.0
37 32 36 90	89 58 21 218	8.5 8.4	8.5
39 16 38 54.1	85 53 30 31.1	8.9 9.0	9.0
40 16 39 52.7	83 49 56 56.1	8.4 8.7	8.8
42 2 41 38.8	89 50 18 190	9.1 9.0	9.3
43 28 43 58	84 53 32 32.9	8.5 8.6	8.4

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

15 2 4.2 28.0

15 2 4.9 27.5

0 1 23.5 47.2 0 1 11.7 33.5

0 1 45.4 8.0

0 3 29.6 52.1

not seen

5 1 43.8 9.5 5 1 46.1 8.8

5 1 46.9 9.7

15 0 21.7 45.8 15 0 29.5 52.1

lost

40 2 11.7 34.8 40 2 23.1 44.8

40 2 12.2 33.5

35 0 51.7 14.1 35 0 58.6 19.5

35 0 48.6 10.3

5 4 51.4 15.4 10 0 1.5 24.4

5 4 50.2 13.0

45 2 18.0 42.3 45 2 17.0 41.2

45 2 1.3 24.4

30 4 16.8 39.0 30 3 8.8 29.1

30 4 7.6 28.4

Date. 1875, Aug. 10

First minute-break. Aug. 25
Aug. 26

set at.

Sum
Mean.

N. Coll.

S. Coll.

a.

s.

Mag.

REMARKS.

h - s
17 44 37
44 13.5

90 53 41
406

9.0 9.0
9.0

45 53
45 29.6

83

55 02
3.2

8.7 8.5
8.0

47 16
46 5.2

6.5

54 13
146

6.5 6.0
222 ex. minute
6.0

47 48

88

54 46

8.8 28.7 false strikes foll. 8
8.5

48 30
48 6.8

83

49 55
55.7

sure
9.0 8.6
8.7

49 40
49 16.8

85

55 04
52

8.8 8.7
8.8

50 37
50 13.9

80

52 23
57.7

8.2 8.0

51 38
51 15.4

90

53 59
59.0

9.1 9.2
9.0

52 33

89

53 46

9.0 8.8
8.8

54 49
54 25.5

91

52 20
21.6

9.1 9.3 wrong?
9.3

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

25 0 0.0 22.3 25 0 57.2 18.1

25 0 51.3 13.9

0 4 14.1 37.6 0 4 13.0 33.8

0 4 20.9 43.2

50 2 33.1 55.1 50 2 24.9 45.9

50 2 26.2 48.1

20 0 25.6 48.9 20 0 28.2 50.4

20 0 22.6 45.1

10 1 26.3 51.4 10 1 19.8 43.2

10 1 15.0 38.4

0 1 21.3 45.3 0 1 28.6 50.5

0 1 26.6 48.2

40 1 36.1 58.9 40 1 30.7 51.2

lost

5 2 36.7 58.9 5 2 39.8 0.0

5 2 22.9 44.6

15 4 41.0 4.1 15 4 44.2 4.9

15 4 41.4 4.4

40 4 44.1 7.7 40 4 30.4 50.5

40 4 48.9 12.5

Date.

First minute-break.

c, set at.

N. Coll.

S. Coll.

Sum

Mean.

1875, Aug. 10

Aug. 25
Aug. 26

a.

s.

Mag.

REMARKS.

17 55 56
55 23.1

83 55 06
76

8.6

2 8.0

8.2

56 46
56 23.4

90 57 10
124

9.0

2 9.2

8.9

57 34
57 11.0

87 53 54
539

8.8

8.8

8.9

58 32
58 9.1

88 49 50
526

8.9

9.2

9.0

59 38
59 14.8

80 49 56
566

7.1

8.2

8.4

1 11
0 47.9

90 55 09
10.0

8.8

8.9

9.0

2 42
2 18.5

83 50 21
206

8.4

2 8.8

8.5

3 25
3 1.9

86 49 59
596

8.8

8.8

8.6

4 49
4 26.9

93 54 34
342

9.1

9.3

9.2

6 6
5 43.3

86 51 18
203

8.4

8.8

9.0

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

55 3 56.0 17.9 55 3 50.4 10.4

55 3 53.7 14.9

50 4 21.7 45.5 50 4 27.1 49.3

50 4 16.9 40.4

10 2 23.1 46.2 10 2 25.1 46.7

10 2 22.5 44.9

15 0 58.3 22.0 15 0 56.4 18.8

15 0 52.3 15.7

5 4 3.6 25.4 5 3 54.2 15.6

5 3 55.5 18.6

55 0 40.0 2.9 55 0 30.5 51.6

55 0 31.9 54.0

45 1 29.8 54.2 45 1 20.6 44.4

45 1 28.9 53.6

5 1 27.0 49.8 35 3 54.7 15.5

5 1 27.7 49.3

30 1 58.6 21.7 30 1 55.6 16.9

30 1 47.7 10.0

45 0 38.9 2.9 45 0 32.1 54.5

45 0 29.9 53.1 Seeing very good
Seeing very bad
Seeing very bad

Date. 1875. Aug. 28
First minute-break. Aug. 29

or set at.

Sum
Mean.

N. Coll.	S. Coll.
Obs. W.A.R.	W.A.R.
Rec. J. F. M.	J. F. M.

a.	s.	Mag.	REMARKS.
1754 20 54 504 53 569	80 58 28 135 278	8.0 8.5	2
55 13 54 504	68 52 12 135	7.5 7.8	
57 15 56 578	89 58 16 163	9.1 9.2	2
58 10 57474	78 58 38 379	7.8 8.3	2
59 03 58 898	89 51 09 107	9.0 9.0	
0 43 0 215	85 52 34 358	8.6 8.8 8.7 8.9	2 nd 8 pr.
2 13 1 564	91 53 44 437	9.3 9.1	2
3 09 2 466	90 52 20 195	9.1 9.2	
4 42 4 191	78 58 10 102	8.1 8.3	
6 38 6 152	85 51 12 119	8.8 8.7 9.0 8.7	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

35 3 59.4 20.2

35 3 46.4 8.4

50 2 25.7 46.8

50 2 16.9 40.6

45 4 40.3 1.3

45 4 32.0 53.8

25 3 20.7 41.4

25 3 24.2 46.1

55 0 50.4 12.9

55 0 51.0 14.3

30 0 13.8 35.1

30 1 0.7 23.0

30 0 34.6 57.2

20 3 34.7 44.5

20 3 2.9 23.9

45.8 0 52.5 14.5

45 0 49.8 13.1

55 1 14.0 35.7

55 1 9.7 30.9

55 0 10.2 32.5

50 2 47.9 9.5

55 0 7.1 29.9

50 2 53.2 16.2

1875phase.phot.1552R

Date. 1875, Aug. 28
First minute-break. Aug. 29

c, set at.

Sum
Mean.

N. Coll.	S. Coll.

α .	δ .	Mag.	REMARKS.
18 53 7 30.8	92 01 38 378	9.5	too faint to obs.
9 04 8 41.2	79 52 17 167	6.3 6.9	
10 27 10 47	88 53 39 390	8.9 9.0	
12 42 12 19.3	77 57 34 338	8.3 8.2	
13 47 13 24.7	76 07 10 102	6.0 7.5	
15 31 15 9.6	86 53 33 327	9.0 9.0	
16 29 16 6.2	75 52 36 388	6.7 6.8	222
17 15 16 52.1	90 52 57 504	9.0 9.1	(3 rd tr. or 2 nd tr. were P)
19 00 18 37.4	90 52 39 389	9.0 9.2	
21 19 20 56.9	86 52 19 586	8.8 8.8	

Runs.

Sum

Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

25 3 3.5 24.5

too faint to obs.

45 4 5.1 25.0

45 3 57.0 18.9

25 1 19.4 41.0

25 1 9.3 30.3

30 1 12.1 34.5

30 1 9.7 31.9

50 4 56.9 19.2

50 ~~4~~ 60.2 21.8

30 2 19.3 40.4

30 2 18.4 40.9

30 0 10.4 32.4

30 0 13.0 34.2

15 0 17.1 39.1

15 0 13.0 36.7

25 1 37.8 58.5

25 1 32.8 54.9

5 2 18.4 39.8

5 2 9.8 31.1

Date. 1875, Aug. 28
 First minute-break. Aug. 29

set at.

Sum
 Mean.

N. Coll.	S. Coll.

a.	δ.	Mag.	REMARKS.
18			
22 21 80	50 17	8.9	8.2
21 58.1	17.0	9.1	
24 28	84 57 40	8.7	
24 6.5	39.3	8.3	
26 21	91 53 06	9.5	2
25 58.1	53.8	9.6	obs. bad.
28 13	80 55 04	9.2	
		9.1	
28 28	84 52 21	7.9	
28 57	20.3	8.4	
30 01	89 55 05	8.9	
29 36.8	37	9.0	
32 22	78 54 06	7.8	bb.
31 59.5	5.8	8.0	
43 52	63 52 50	5.9	
43 29.7	48.2	6.0	
44 53	84 53 04	8.5	
44 30.2	2.8	9.0	
46 17	92 52 31	8.8	
45 54.4	30.8	9.0	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

45 3 13.1 36.0

45 3 8.9 31.2

25 2 30.9 51.4

25 2 20.9 43.4

0 0 49.2 11.4

0 0 38.0 59.8

0 3 6.4 27.3

0 3 4.8 25.0

45 0 0.1 21.1

~~40 4 56.8 18.8~~

0 2 47.9 9.5

~~0 2 45.9 6.9~~

55 4 41.6 2.5

55 4 47.9 7.9

15 0 11.2 32.8

10 4 52.8 14.2

0 2 41.0 1.2

0 2 21.5 43.8

30 4 50.0 10.1

80 4 36.5 57.9

1875plate.procl.1552R

N. Coll.	S. Coll.
Sum	
Mean.	

ate. 1875, Aug. 28
first minute-break. Aug. 29
set at.

a.		s.		Mag.	REMARKS.
18 47 31	80	57 43		8.3	
47 8.5		42.1		8.3	
48 31	87	57 07		9.0	2 2 2
48 8.5		5.8		9.0	
49 10	80	57 12		9.0	
48 47.4		10.8		8.5	
51 18	8.9	54 43		9.0	
50 57		42.4		9.1	1st wire P
52 50	9.0	52 29		9.2	faint comp. 10" below
52 27.1		28.9		9.0	
53 47	9.5	53 52			too faint to obs.
53 24.2		50.5			
55 39	9.0	57 40		9.2	
55 16.3		38.7		8.0	# ?
58 12	8.7	53 06		8.8	
57 49.0		5.1		9.0	
				9.0	
59 44	8.9	50 03		5.7	2 2
59 21.6		2.1		8.8	
0 31	8.9	50 04		9.0	
0 8.2		2.5		9.0	
				8.8	2nd # in A.R. only

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

20 2 41.2 1.5

20 2 26.0 47.9

55 4 19.9 41.1

55 4 9.3 29.5

50 4 8.3 29.1

55 0 59.0 20.1

20 2 14.7 37.0

20 2 19.5 42.5

35 0 42.5 3.7

35 0 36.1 56.9

lost

too faint to obs.

25 2 31.4 52.4

^{sure}
25 0 45.0 7.8

55 4 4.5 23.4

55 4 52.3 12.2

55 3 56.0 17.2

55 4 47.4 8.5

0 1 21.9 42.5

0 2 27.9 48.9

0 1 43.5 5.1

0 1 43.6 5.0

Seeing, pretty good.
 Seeing, pretty steady
 on account of slight but difficult to see faint #1's

Date. 1875 Aug. 30
 First minute-break. Aug. 31
 set at.

Sum
 Mean.

N. Coll.	S. Coll.
Obs. W.A.R.	W.A.R.
Rec. J.F.M.	J.F.M.

α .	δ .	Mag.	REMARKS.
14 03 0 2 374	83 54 30 300	8.5	
4 42 4 191	78 53 10 102	8.0	
6 20 5 576	80 53 12 122	8.7	
8 05 7 429	70 51 42 423	9.2 6.5 9.3 7.0	ref. 1 st 8, 1 stroke for each 8 neg. order. 1 stroke for each 8
9 27 9 49	73 52 41 414	8.0 7.0	
11 01 10 382	83 52 29 289	8.6 8.8 8.7	
12 43 12 209	95 51 44 440	9.5 9.5	2 2 2
13 12 12 493	83 50 10 101	8.8 8.8	
14 31 14 89	88 54 42 423	9.0 8.9	
15 39 15 165	90 54 18 179	9.1 9.0	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

35 1 10.7 33.1

55 1 2.5 26.1

40 4 36.8 56.1

20 3 20.5 43.9

20 3 20.0 42.9

20 4 46.5 7.9

20 4 53.3 14.9

35 2 5.9 27.6

35 3 33.1 53.9

35 2 23.8 45.4

20 1 31.8 54.9

20 1 32.2 54.7

50 4 46.3 9.0

50 4 48.5 11.9

20 3 33.5 54.1

20 3 29.0 49.9

45 2 36.0 56.7

45 2 34.1 54.9

Date. 1875. Aug. 30
 First minute-break. Aug. 31

c, set at.

Sum
 Mean.

N. Coll.	S. Coll.

a.	δ.	Mag.	REMARKS.
18 16 45 9.3 16 22.9	50 58 57.5	9.1 9.1	
17 42 17 190	87 54 24 24.0	8.8 8.2	
19 03 18 40.3	85 50 57 56.2	9.0 8.5	2
19 55 19 32.6	87 54 44 44.2	8.8 8.5	2 2 2
20 40 20 179	82 54 13 12.8	8.5 8.0	
22 04 21 41.6	88 51 32 31.2	8.7 8.4	2 2 2
22 47 22 24.4	89 50 05 4.2	8.5 8.8	2
23 40 23 17.1	91 52 58 57.2	8.8 9.0	
24 57 24 34.5	92 50 38 38.0	8.7 8.7	# ? 2nd spec. ref. 1st 8
26 21 25 58.6	90 50 30 29.9	9.0 8.6	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

5 3 1.9 24.0

5 3 7.0 28.0

40 1 30.5 51.3

40 1 36.1 56.4

5 3 0.2 22.0

5 3 5.5 26.5

20 2 7.9 29.7

20 2 15.8 38.2

50 3 11.7 34.2

50 3 13.9 34.9

30 3 52.0 13.7

30 3 54.5 16.8

0 1 6.7 29.0

0 1 12.7 36.3

5 3 14.8 35.9

5 3 20.8 43.1

25 2 8.7 30.9

25 2 37.8 59.2

30 4 57.1 19.0

35 0 11.2 33.8

Date. 1875, Aug. 30
 First minute-break. Aug. 31

c, set at.

Sum
 Mean.

N. Coll.	S. Coll.

a.	s.	Mag.	REMARKS.
18 38 46 87	51 43		not seen
			not seen
39 55 88	53 36	8.4	
39 327	85	9.0	
41 17 88	53 09	8.8	
40 544	78	8.8	
42 15 90	52 47	8.3	
41 522	467	8.8	
43 31 88	57 33	9.0	2
43 83	325	9.0	
44 23 90	53 47	9.0	
44 09	465	9.0	
45 43 90	50 41	9.0	
45 205	396	9.0	
47 13 82	50 59	7.0	
46 509	584	7.9	
49 02 85	51 10	8.5	upper + foll. #
48 390	94	8.7	
50 01 52	50 33	4.5	
49 384	320	4.5	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

not seen

not seen

25 4 23.1 44.0

25 4 22.4 43.7

55 2 7.7 28.9

55 2 8.8 29.7

15 2 56.3 18.1

15 2 48.9 11.1

30 2 23.3 45.5

30 2 24.9 47.1

15 3 43.1 3.1

15 3 44.8 6.9

25 0 19.1 42.6

25 0 22.7 46.9

5 1 0.5 23.0

5 1 7.1 30.0

50 3 43.0 6.4

50 3 38.1 58.8

30 2 44.5 7.1

30 2 49.0 11.1

Date. 1875. Aug. 30
 First minute-break. Aug. 31

c, set at.

Sum
 Mean.

N. Coll.	S. Coll.

a.	s.	Mag.	REMARKS.
18 51 09 50 46.9	85 50 25 24.1	8.3 8.2	9.1 mag. pr
52 35 52 12.4	86 50 23 22.3	8.5 8.7	
53 47	91 53 52	8.9 9.0	# ?
54 21 54 8.3	88 52 53 51.7	8.3 7.9	
55 54 55 31.0	91 52 56 55.2	8.6 9.3 8.6 9.1	several #'s in field
56 57 56 34.7	48 50 21 20.1	5.0 5.0	
58 27 58 4.4	88 53 16 15.0	8.7 8.5	
0 10 59 47.8	84 51 28 18.0	9.0 8.9	# ?
1 16 0 52.5	93 52 50 48.8	9.1 8.9	
2 17 1 52.4	89 52 43 41.9	8.4 8.5	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

40 0 41.3 3.7

40 0 25.6 48.5

40 2 22.4 43.9

40 2 18.2 41.5

10 2 6.7 27.5

10 1 57.9 19.4

10 2 42.5 5.7

10 2 38.0 0.9

10 0 55.0 16.9

10 0 31.9 53.2

10 0 52.2 14.1

5 4 40.5 1.4

40 4 42.2 3.4

40 4 47.1 9.8

50 0 40.4 0.8

50 0 39.0 0.9

35 0 9.5 32.2

35 0 18.1 41.8

15 0 5.5 26.9

10 4 57.2 19.1

20 2 18.1 39.2

20 2 12.5 34.6

Towards the last
Seeing tolerably fair, better
Seeing pretty fair

Date.

First minute-break.

c, set at.

1875, Sept. 1
Sept. 4

Sum

Mean.

N. Coll.

S. Coll.

Obs. W.A.R. W.A.R.
Rec. J.F.M. J.F.M.

a.

b.

Mag.

REMARKS.

18 16 50 83 49 54 not seen
15 27.2 54.2

17 53 88 49 59 9.0 #?
17 30.2 55.2
8.5

19 11 80 52 18 9.0 (lim.) 2nd 8 pr.
16 48.6 18.0 8.9
8.9
8.9

20 02 80 49 54 2
19 38.7 53.6
8.0

21 52 92 49 57 9.2
21 29.2 56.2
9.0

23 35 8.6 52 40 8.7
23 12.2 39.2
8.7

24 29 7.2 54 48 7.5
24 6.9 47.8
7.4

25 32 92 54 57 9.1
25 9.7 57.2
9.1

26 40 9.1 55 05 8.8 222
26 26.2 53
9.0

27 13 9.0 55 04 9.2
26 46.7 37
8.4

Runs.

Sum

Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

not seen

0 1 23.1 46.7

5 1 4.9 29.2

45 3 56.9 17.9

45 3 25.0 46.9

45 3 56.9 18.9

45 3 22.9 44.7

lost

10 2 16.5 41.2

5 3 13.9 37.2

5 ^{over} 4 22.8 45.8

25 1 22.6 44.2

25 1 22.0 44.0

15 2 49.5 11.1

15 2 44.7 7.9

5 3 21.2 43.0

5 3 20.2 43.1

0 0 59.5 21.1

55 4 51.6 14.2

0 2 58.6 19.9

0 2 46.3 8.9

1875pae.pro.1.1552R

Date. 1875 Sept. 1
 First minute-break. Sept. 4
 c. set at.

N. Coll.	S. Coll.
Sum	
Mean.	

α .	δ .	Mag.	REMARKS.
18 28 12 27 49.6	91 -	5306 50	9.2 2 9.0
29 05 80 28 42.3	54 41.4	42 9.1	8.7
30 01 29 36.8	89 37	55-05 8.6	8.7
31 12 30 49.2	84 50.2	19 51 8.2	8.0 h.b.
18 43 59 43 36.8	93 84	5409 9.0	9.0 reg. order
45 02 44 35.2	93 50.7	53 52 9.0	9.0 reg. order.
46 56 46 33.3	87 18.2	54 19 8.5	8.4 2
47 41 47 18.9	85 8.7	54 09 7.0	7.0
48 51 48 28.8	86 56.0	54 57 8.8	8.5
50 17 49 54.8	85 42.5	54 43 8.0	8.0 reg. order

Runs.

Sum

Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

0 2 3.0 24.5

0 1 47.3 10.8

20 4 12.3 34.2

20 4 10.6 33.0

0 2 54.9 17.0

0 2 54.1 15.9

10 4 55.9 9.4

10 4 45.1 9.9

55 2 27.2 48.9

55 2 26.2 48.3

10 4 5.8 26.7

10 4 3.7 24.9

45 2 7.9 29.0

45 1 24.9 46.7

55 2 24.3 46.0

55 1 58.2 20.1

5 3 54.0 15.2

5 3 51.6 13.0

20 2 4.0 25.5

20 2 1.5 23.4

Date. 1875, Sept. 1
 first minute-break. Sept. 4

set at.

Sum
 Mean.

N. Coll.	S. Coll.

a.	S.	Mag.	REMARKS.
18.51 56 51 33.8	88 54 15 55	8.3 8.7	
53 25 53 25	88 55 08 70	8.7 8.8	1st + last wires, obs?
54 25 54 19	86 55 01 00	8.7 8.4	
55 30 55 7.3	93 53 20 189	9.0 9.1	
56 42 56 19.5	82 54 39 38.7	7.8 8.2 8.0 8.5	
58 05 57 42.3	89 52 58 57.8	8.5 9.2	
19.0 17 58 54.1	88 50 41 400	9.0 8.7 9.0 8.6	22
2 03 1 39.7	54 53 13 11.7	5.8 6.0	false strokes after S
4 26 4 29	88 50 45 43.4	8.9 9.1	
5 26 5 25	62 52 13 116 52 5	4.5 5.5	22

Runs.

Sum

Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

10 0 3.1 24.5

5 4 59.1 20.2

55 3 21.5 42.1

55 3 15.9 37.5

0 4 26.9 47.4

0 4 29.1 50.5

45 0 1.8 22.7

40 4 57.6 18.5

20 4 37.7 58.2

25 1 54.1 18.6

20 4 30.9 51.3

25 1 27.9 50.0

5 0 38.9 59.9

5 0 38.9 0.8

20 2 35.1 56.7

20 4 41.2 3.0

20 2 12.2 34.2

20 4 32.8 53.9

50 3 37.5 57.9

50 3 46.4 7.2

20 0 51.2 13.7

20 0 57.7 19.9

50 2 24.9 46.1

50 2 21.4 43.1

Date. 1875, Sept. 1
 first minute-break. Sept. 4
 set at.

N. Coll.	S. Coll.
Sum	
Mean.	

α .	δ .	Mag.	REMARKS.
19 6 19 5 556	92 52 05 38	9.0 9.0	
7 53 7 291	83 54 15 139	8.4 8.4	2 2 2
8 32 8 86	85 54 19 579	8.5 8.6	
10 22 9 586	91 54 53 519	9.0 9.0 8.9 9.0	
11 54 11 303	88 50 17 189	8.9 9.0	
13 10 12 468	90 52 17 156	9.1 9.1	
14 19 13 558	74 51 08 30	7.8 7.0	
15 14 14 504	90 52 46 440	9.2 9.0	
16 43 16 181	88 51 16 142	8.8 8.6	
17 43 17 185	93 54 34 323	9.2 9.2	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

0 0 14.1 36.1

0 0 15.1 39.1

45 4 45.1 7.3

45 4 52.0 14.1

5 1 22.1 43.2

5 1 22.1 44.3

10 2 12.0 33.5

10 1 45.1 6.9

45 2 47.1 10.3

45 2 38.0 1.1

45 2 55.5 17.8

45 3 0.5 23.8

55 3 35.7 56.9

55 3 44.5 6.4

15 4 57.4 19.2

15 4 50.7 11.5

45 4 36.1 57.0

45 4 30.0 51.6

30 1 43.9 6.2 Seeing, pretty fair.

30 1 36.9 59.1 Seeing, very good indeed

N. Coll.

S. Coll.

Date. 1875, Sept. 5

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

First minute-break.

Sept. 7

Rec. J. M. J. F. M.

Sum

Mean.

c, set at.

a.	S.	Mag.	REMARKS.
18 16 50 83 49 54			not seen (sure)
			not seen (<u>sure</u>)
17 53 88 49 59 9.1			
17 30 2 59 2			
		8.9	
20 02 80 49 54 8.0			
19 38 7 53 6			
		8.2	
21 19 86 52 59 8.7			
20 56 9 58 6			
		8.8	
23 11 80 53 23 9.0			bb.
22 48 6 22 6			
		8.9	
		9.0	
		8.9	
42 41 88 48 52 9.2			
42 18 3 52 8			
		8.9	
43 59 93 54 0 9 8.5			
43 36 8 54			
		9.0	
		9.2	
		9.1	reg. order.
45 34 80 48 56 8.9			
45 11 1 55 5			
		8.9	false stroke + rattles after 8
46 56 87 54 19 8.8			
46 33 3 54 2			
		8.6	
48 50 83 53 55			22 to faint to obs.
48 31 54 1			
		9.3	84 ind. wire coincide
	54 10 6		

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

not seen

not seen

0 1 6.9 29.8

sure 5 0 51.6 15.1

10 1 58.9 21.8

10 2 15.7 39.4

5 2 9.0 31.1

5 2 13.0 35.0

40 2 57.5 17.7

40 2 25.3 46.8

40 2 50.7 11.8

40 2 27.3 49.2

20 2 14.1 37.4

sure 10 3 51.9 14.4

50 4 36.0 55.0

55 2 41.4 2.8

55 2 49.1 11.3

55 2 49.1 11.3

5 4 17.0 39.5

5 4 13.0 35.7

45 1 26.5 47.6

45 1 23.0 44.1

10 0 18.6 41.9

Date. 1875, Sept. 5
First minute-break, Sept. 7

c, set at.

Sum
Mean.

N. Coll.	S. Coll.

α.		δ.	Mag.	REMARKS.
49 33 49 10.0	87	54 10 94	8.8 8.3	
50 42 50 19.1	87	54 46 45.3	8.5 8.2	
52 48 52 25.8	92	54 30 29.7	8.7 8.8	22
53 27 53 5.1	80	54 31 30.7	8.6 9.0	a 9.6 comp. pr. below.
54 25 54 1.9	86	55 01 00	8.5 8.2	G. L.
2 04 1. 40.7	89	53 09 48	9.0 8.9	middle, of 3 stars
3 05 2 41.7	88	53 06 50	8.9 9.0	
4 12 3 18.2	89	51 51 48.3	9.0 9.0	222
4 54 4 30.7	92	50 06 47	8.0 8.2	222 another 8.0 mag. in field
5 33 5 9.0	79	52 44 42.4	8.1	lost 1 st wire

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

55 0 40.6 2.1

55 0 32.8 56.0

15 4 42.5 3.7

15 4 42.8 5.5

35 1 1.7 22.9

35 1 0.8 22.5

30 3 47.8 9.0

30 3 44.1 4.3

0 4 55.1 17.1

0 4 39.0 60.1

55 1 9.1 29.9

55 1 5.2 27.1

55 2 58.8 19.6

55 2 58.9 20.8

15 0 14.4 37.9

15 0 16.0 39.2

0 2 28.1 50.0

sure 55 4 14.7 37.1

20 2 18.8 45.4

lost

Date. 1875, Sept. 5
 First minute-break. Sept. 7

set at.

Sum
 Mean.

N. Coll.	S. Coll.

a.	δ.	Mag.	REMARKS.
19 7 41- 7 22.5	83 508	8.5 8.3	222 false stroke + call the after 8
8 21 7 57.5	88 576	9.0 8.8	
9 46 9 23.4	78 47	8.3 7.7	
11 12 10 29.7	88 99	9.1 9.0	
12 33 12 9.0	77 547	7.8 7.3	
13 46 13 22.9	88 585	9.0 8.9	22
14 30 14 6.4	80 2.0	8.0 7.5	
15 34 15 10.1	80 51 891	7.7 7.8	
16 48 16 19.7	80 499	9.0 9.2	
17 43 17 19.9	93 323	9.1 9.3	lost 2 nd wire

Runs.	Sum Mean.	A.		C.	
Pointer.	Stroke.	Rev.	A.	C.	REMARKS.
8	10	3	19.0	41.8	
	10	3	18.2	41.6	
	10	2	47.8	8.9	
	10	2	30.8	52.9	
	5	3	12.8	33.8	
sure	0	0	12.0	36.1	
	55	0	37.0	59.9	
	55	0	18.1	42.2	
	5	4	3.1	23.7	
	5	3	59.5	20.6	
	5	0	21.1	43.2	
	5	0	20.2	43.0	
	0	2	5.8	25.9	
	0	2	5.2	27.1	
	0	4	55.2	17.6	
	0	4	53.8	16.7	
	10	4	19.0	40.5	
	10	4	14.0	36.9	
	30	1	40.8	2.9	
	30	1	36.8	58.0	

Date. 1875, Sept. 5
 First minute-break. Sept. 7

set at.

Sum
 Mean.

N. Coll.	S. Coll.

α .	δ .	Mag.	REMARKS.
19 19 59 19 36.5	66 50 0 49 59.5	6.5 6.9	false stroke & cattle after 8
21 07 20 44.2	7.5 49 58 570	6.7 7.0	reddish color.
22 37 22 13.8	88 50 38 346	8.9 9.0	
24 13 23 48.2	8.5 50 10 7.9	8.4 7.8 8.9	an 8.9 mag. folls. above
25 27 25 3.4	8.8 53 42 403	7.3 7.7	
27 01 26 37.9	8.1 53 43 408	8.0 8.0	
28 02 27 58.2	8.5 53 46 44.9	8.4 8.6	
29 07 28 43.5	9.0 53 56 548	8.6 8.3 8.7 8.4	2
29 57 29 23.2	9.0 53 33 310	9.0 9.0	lost 1st wire
30 46 30 21.5	8.9 53 11 90	8.6 8.9.4	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

0 4 10.5 31.2

0 4 30.0 50.8

5 1 6.1 26.9

5 1 7.6 30.4

25 1 55.2 16.9

25 1 55.1 17.8

55 2 5.0 26.8

55 2 2.9 25.2

55 1 7.6 30.9

20 3 20.4 40.5

20 3 17.8 38.5

20 3 9.7 28.9

20 3 9.0 30.1

20 0 13.0 34.9

20 0 17.5 40.6

10 0 30.2 52.8

5 3 41.5 1.8

10 0 28.2 51.4

5 3 38.0 58.8

30 3 11.6 31.9

30 3 1.0 21.8

50 4 37.7 58.0

50 4 37.4 57.9

[the time]
Seeing, pretty bad most of
Seeing, quite unsteady and
variable.

date.

1875, Sept. 8

first minute-break.

Sept 14

set at.

Sum

Mean.

N. Coll.

S. Coll.

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

Rec. J.F. M. J.F. M.

a.

δ.

Mag.

REMARKS.

19 0 26 84 17 28
0 2.1 260

not seen

19 2 13 82 55 03 8.3
1 500 2.5

8.5

3 29 88 53 35 8.8
3 0.3 338 7.8

9.0

reg. order

4 22 85 54 11 8.5
3 584 9.6

8.7

5 18 83 52 35 9.3
4 542 334

9.5

6 15 78 54 53 8.4
5 518 518

8.0

7 48 80 51 09 8.5 222
7 247 7.3

8.6

8 25 94 54 53 9.4
8 15 512

lost

9 46 78 55 05 8.6
8 234 42

8.5

10 58 90 52 26 9.0
10 344 241

lost

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

not seen

0 1 52.9 14.0

0 2 3.1 22.9

25 4 54.0 14.6

25 4 12.9 32.2

25 4 46.2 6.9

25 4 8.3 25.3

50 4 42.9 4.5

50 4 43.1 3.6

25 3 3.7 24.9

30 0 55.0 15.8

10 2 28.4 49.0

10 2 23.9 42.7

55 1 43.1 4.5

55 1 40.1 0.2

10 4 23.0 43.0

0 0 7.2 29.0

0 0 14.5 35.0

35 4 36.6 55.8

~~35 4 50.1~~

date.

first minute-break.

set at.

Sum

Mean.

N. Coll.

S. Coll.

1875, Sept. 8

Sept. 14

a.

s.

Mag.

REMARKS.

19 11 51 90 55 08

not seen.

13 14 82 51 11 8.7
12 50.3 9.1 8.510 18 89 51 46 8.7 222
14 54.1 44.4

9.0 false stroke + rattle after s

15 52 87 53 08 9.0
15 28.4 3.0 8.8~~16 43 88 51 16 8.6~~
17 00 87 51 31 8.8
16 36.1 29.819 01 88 53 38 8.6 false strokes before last rattle.
18 37.2 36.6 8.520 11 78 52 19 7.7
19 47.7 17.0 7.521 06 90 53 31 9.0
20 42.6 29.7 9.222 01 94 52 55 9.0 mid. of 3 stars in s
21 37.5 58.4 9.223 03 81 50 44 8.0
22 38.2 41.0 7.8

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

lost

55 0 5.6 27.0

50 4 45.4 6.9

15 4 34.0 54.7

15 4 35.0 53.3

0 1 24.9 46.0

0 1 9.1 28.7

30 4 0.5 21.1

30 4 4.5 23.0

25 2 18.1 38.9

25 2 3.1 22.1

45 1 32.3 53.3

45 1 28.9 49.8

30 3 43.1 3.9

30 3 45.7 4.1

5 4 57.9 18.0

5 4 50.9 10.7

20 2 4.1 25.0

20 1 58.7 19.3

Date. 1875, Sept. 8
 First minute-break. Sept 14

set at.

Sum
 Mean.

N. Coll.	S. Coll.

α .	δ .	Mag.	REMARKS.
19 24 14 23 50.9	94 51 16 143	9.4 9.4	ind. wire ?
25 21 24 57.8	73 54 30 28.9	7.0 7.6	
26 22 25 42.7 58.5	85 54 32 30.6	8.8 8.8	
27 54 27 29.2	90 54 33 30.8	8.9 9.0	4 th wire ?
28 43 28 10.5	90 54 12 9.5	8.9 8.6	
29 35 29 10.6	89 54 13 10.6	9.1 9.0	
31 10 30 45.8	90 50 01 49 55.9	8.6 8.8	
32 27 32 3.0	70 49 57 54.8	6.0 5.5	
33 21 32 55.8	var. 49 55 52.6	6.0 9.0 5.0 8.7	ind. wire + foll. for 8.7 mag.
35 08 34 43.4	90 49 54 52.5	8.9 9.0	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

45 4 19.9 41.9

45 4 18.8 38.8

30 4 39.7 58.9

30 4 46.9 6.5

30 2 49.9 10.9

30 2 42.1 1.9

30 2 15.7 36.8

30 2 18.5 38.0

50 4 1.3 21.0

50 3 57.2 15.3

50 2 53.1 14.0

50 2 55.9 14.0

0 4 37.2 56.9

0 4 27.3 46.5

5 3 14.2 35.1

5 3 16.9 38.2

10 0 16.4 39.1

10 1 6.6 26.9

10 0 12.3 34.4

10 1 17.9 39.8

10 0 42.7 4.1 Seeing, moderately good.

10 0 42.9 5.3 Seeing, very bad.

Date. 1875, Oct. 13

First minute-break.

set at.

Oct. 14

Oct. 17

Sum
Mean.

N. Coll.	S. Coll.
Obs. W.A.R.	W.A.R.
Rec. J.F.M.	J.F.M.
	W.A.R.
	J.F.M.

W.A.R.
J.F.M.
W.A.R.
J.F.M.

a.	δ.	Mag.	REMARKS.
h m s' 20 6 30 6 3.3	83 50 59 55.9	8.5 8.5	22
7 15 6 38.3	80 52 00 51 57.1	7.5 7.5	
8 12	82 52 17	7.7	not seen
9 25	89 52 52	9.0 8.7	
10 27	91 52 31	8.8 8.9	four strokes for 8 lost
12 00 11 33.7	85 53 00 52 57.9	8.4 8.4	
13 3	80 51 5	9.0 9.0	
14 11 13 44.7	89 51 57 54.4	9.0 8.8	
15-13 14 46.3	82 57 49 45.7	9.1 9.2 8.7 8.9	reg. order, 1 stroke for each 8 8.8 8.9
16 23 15 56.3	85 51 4 06	8.8 8.9 8.4 8.5	8.8 8.8

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

5 1 45.9 1.1

5 1 45.9 4.9

5 0 25.8 42.1 5 0 32.6 49.9

5 0 37.7 54.9

not seen too faint to obs

45 3 16.6 33.6

15 2 52.0 6.4 15 2 53.0 10.0

15 2 54.4 11.4

35 4 23.1 37.7 not seen
lost

5 0 21.0 37.4 5 0 17.2 35.1

5 0 16.7 34.1

55 4 25.3 40.9 55 4 20.9 38.7

55 4 27.1 44.0

5 3 8.0 22.9 5 3 1.2 18.4

5 3 10.8 26.2

15 2 14.2 29.0 15 2 11.4 28.0

15 2 18.1 34.9

0 0 52.3 8.8 0 1 0.8 18.4

0 0 26.9 43.9 0 0 33.1 51.6

0 0 50.1 9.1

0 0 50.1 9.1

Date. 1875, Oct, 13

First minute-break.

c, set at.

N. Coll.

S. Coll.

Sum

Mean.

Oct. 14

Oct. 17

a.

s.

Mag.

REMARKS.

20 17 31
17 4.88.9 57 18
146

8.8

8.7

8.5

18 51
18 24.78.8 52 27
244

8.6

8.7

9.2

20 18
19 51.08.2 52 04
3.9

7.9

8.0

7.5

21 23
20 56.98.9 52 52
99.2

9.0

8.8

9.0

22 28
22 1.28.6 52 17
14.3

8.6

8.5

8.8

23 43
23 16.88.5 52 36
32.8

8.8

2

8.2

false rattle after 8

8.4

24 24
23 57.99.4 52 32
29.0

9.4

9.3

9.0

25-36
25 9.79.1 52 52
98.9

9.6

9.3

rej. md. wire Hazy.

26 37
26 10.68.8 52 9
6.2

9.6

8.8

9.3

reg. order

28 05
27 38.39.4 52 17
43.7

9.7

9.2

current-faulted
Oct. 14

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

45 2 36.9 53.0 45 2 26.2 43.9

45 2 25.7 43.7

35 2 35.6 50.8 35 2 38.5 54.7

sure 55 1 55.9 13.0

55 3 29.0 44.7 55 3 13.2 29.4

55 3 29.7 46.1

10 3 6.8 21.1 10 2 59.9 16.4

10 3 10.7 27.3

45 2 47.6 31.0 45 2 38.8 55.5

45 2 40.1 57.0

~~25~~ 4 10.3 24.2 25 4 9.0 24.7

25 4 7.4 23.1

30 3 19.6 34.1 30 3 19.2 36.5

30 3 14.1 29.9

10 3 13.9 27.6 10 3 14.0 30.8

55 0 47.6 31.1 55 0 44.2 1.9

15 0 2.8 17.9 15 0 34 20.4

Date.	1875, Oct. 13	N. Coll.	S. Coll.
First minute-break.	Oct. 14		
c, set at.	Oct. 17	Sum	
		Mean.	

a.		s.		Mag.	REMARKS.
20 29 25	80	51 00	50 57.2	9.4	9.0 2 Hazy
28 57.8				8.8	
30 13	95	51 2	50 58.5	9.5	not seen
29 45.5				9.4	
31 48	85	50 10	69	8.5 2	8.8
31 20.6				8.6	
32 36	90	50 30	269	8.8	9.1
32 7.8				8.0	ch failed
33 56	82	51 1	50 57.3	8.3	7.7 222
33 29.9					ch. failed
34 36	72	51 52	52.1	—	7.4
34 8.5					ch failed
35 30	84	51 19	16.2	8.4	lost 8.4
35 2.7				8.4	new sheet
38 43	88	51 20	17.2	9.0	8.9
38 15.2				8.5	8.7
39 34	90	51 5	22	9.0	8.4 #2
38 58.8				8.2	
39 6.1					
41 2	90	51 33	300	9.0	ref. and irre
40 34.9				8.8	9.0

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

0	4	37.1	51.6	0	4	21.6	39.0
---	---	------	------	---	---	------	------

0	4	23.0	40.0
---	---	------	------

not seen	0	3	35.2	51.9
----------	---	---	------	------

0	3	26.9	44.1
---	---	------	------

50	4	57.4	14.9	50	4	55.8	15.1
----	---	------	------	----	---	------	------

50	4	54.8	12.7
---------------	--------------	-----------------	-----------------

35	0	24.9	42.1	35	0	14.7	32.9
----	---	------	------	----	---	------	------

35	0	15.2	32.1
---------------	--------------	-----------------	-----------------

0	4	8.9	25.1	0	4	8.9	24.9
---	---	-----	------	---	---	-----	------

0	4	12.1	27.9
--------------	--------------	-----------------	-----------------

10	0	16.2	33.1	10	0	7.6	26.6
----	---	------	------	----	---	-----	------

lost

45	0	13.1	31.7
----	---	------	------

45	1	15.1	33.4
----	---	------	------

40	4	24.2	39.2	40	4	4.5	21.1
----	---	------	------	----	---	-----	------

40	4	11.8	27.8	40	4	18.5	36.2
----	---	------	------	----	---	------	------

50	4	41.8	56.5	55	4	35.1	52.2
----	---	------	------	----	---	------	------

55	4	37.0	53.0
----	---	------	------

30	1	20.5	37.3	Account of clouds seeing very bad, stopped on
----	---	------	------	--

30	1	16.2	34.5	30	1	20.7	38.9
----	---	------	------	----	---	------	------

Date.

1875 Oct. 17

First minute-break.

Oct. 14

c, c, set at.

Sum

Mean.

N. Coll.

S. Coll.

a.

s.

Mag.

REMARKS.

2 20 42 53 72 256	8.3 8.1 41 38.1	8.5 Oct. 17 9.0 lost 445 8.0	
48 52 93 24.5	8.6 50 28 29.6	8.7 Oct. 17 all the rest in black 8.6	
44 48 44 18.6	8.2 50 38 34.3	9.3 9.0	
45 59 45 30.7	9.0 50 55 51.8	9.0 9.0	
46 54 46 25.9	8.7 52 47 46.0	9.0 8.6 8.7 reg order 8.4	
47 57 47 30.4	9.2 51 25 21.6	8.9 222 8.6 8.7	
48 32 48 3.7	9.0 52 10 6.9	lost lost	
48 50 49 21.2	8.8 50 46 42.3	9.0 8.5	
52 18 51 38.1	6.2 50 34 30.9	5.0 5.0	
53 40 53 12.5	8.0 49 55 57.5	8.8 8.7	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

Oct. 17	20	3	8.4	23.9	
Oct. 13	20	3	17.3	32.1	
	20	3	17.8	34.7	
Oct. 17	35	1	57.9	15.9	
	35	1	57.8	14.8	
	25	1	57.1	14.7	
	25	1	59.1	17.2	
	5	4	38.8	54.3	
	5	4	39.3	55.5	
	15	0	52.7	9.7	
	15	0	47.9	4.8	
	40	0	9.7	27.9	
	35	4	12.3	28.0	
	40	0	20.1	39.1	
	lost				
	lost				
	15	3	48.5	6.3	
	15	3	55.1	12.6	
	30	0	5.9	24.2	
	30	0	5.0	23.0	
	5	4	39.3	55.3	
	5	4	42.8	58.1	

Date.

1875 Oct. 17
Oct. 14

First minute-break.

c, set at.

Sum
Mean.

N. Coll.

S. Coll.

a.

δ.

Mag.

REMARKS.

20 55 28 20
55 00

49 57
54.1

5.4
9.1

9.0 lost 1st wire

56 26
55 57.7

90

49 59
56.0

9.3 22

9.1

57 9
56 40.0

70

51 38
34.2

7.4

6.8

58 24
57 53.8

78

52 4
0.3

8.0

8.5

0 32
0 3.5

73

51 53
48.3

7.2

7.5

21
1 08
0 39.7

90

49 59
55.8

9.5

9.3

2 32
2 3.0

88

49 54
52.4

9.2

9.0

3 55
3 27.9

92

55 13
9.9

9.3

9.2

5 47
5 15.4

88

51 1
54.1

8.9 22

8.8

6 29
5 58.5

87

49 57
52.9

8.8

8.3

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

6el.17

5 2 26.3 43.9

5 2 26.3 43.9

5 2 29.0 46.5

5 0 14.3 31.1

5 0 20.5 39.4

25 2 14.3 30.9

25 2 15.9 32.9

0 0 48.1 4.9

0 0 48.3 4.3

10 1 40.2 56.6

10 1 47.1 3.4

5 0 33.5 51.5

5 0 28.2 46.5

10 0 46.5 4.6

10 0 47.2 5.1

50 0 17.1 34.4

50 0 19.4 36.8

0 4 11.8 27.8

0 4 12.2 28.2

5 3 28.1 45.4 seeing ^{very} pretty bad

5 3 25.1 42.0 seeing pretty fair

Date. 1875 Oct. 18
 First minute-break. Oct. 19

c. set at.

Sum
 Mean.

N. Coll.	S. Coll.
Obs. W.A.A.	Rec. J.F.M.

a.		s.		Mag.	REMARKS.
21	0 32 0 3.5	73	51 53 483	7.4 8.0	
1	40 9.8	80	52 6 24	7.9 8.5	22
2	17 1 46.9	88	52 37 332	9.1 9.4	
4	9 3 38.3	85	52 1 0.5	9.6	not seen.
8	18 4 47.9	80	53 50 460	9.0 9.2	
7	28 6 57.4	75	53 57 520	7.5 8.2	
8	18 7 47.8	70	53 18 142	7.0 7.4	
9	16 8 45.0	86	52 8 41	9.1 8.0 9.2 8.5	2 nd 8 pr. 2 nd 8 pr.
10	16 9 45.7	86	53 47 431	8.7 8.8	
11	10 10 38.0	90	53 12 78	9.0 9.2	

Runs.

Sum

Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

10 1 40.7 59.9

10 1 53.8 12.8

5 3 42.7 1.8

55 3 44.5 1.1

25 3 29.3 47.2

25 3 34.6 51.8

0 0 39.7 59.1

not seen

10 4 58.0 17.3

15 0 0.8 18.5

10 1 6.2 24.8

10 1 4.6 22.4

45 1 54.9 14.0

45 1 58.2 15.5

55 1 42.5 1.6

55 1 55.8 13.9

15 2 32.2 50.1

15 2 42.9 59.4

50 3 1.5 19.5

50 3 10.9 25.7

Date. 1875, Oct. 18
First minute-break. Oct. 19

N. Coll.	S. Coll.
Sum	
Mean.	

c, set at.

a.		s.		Mag.	REMARKS.
12	26	9.1	52 47	9.0	
11	54.1		42.6	8.5	
13	18	8.1	53 50	8.3	
12	46.1		46.5	8.2	
14	34	8.6	54 03	8.5	
14	9.7		53 59.1	9.0	
15	26	8.7	52 31	9.0	2 nd 8 pr.
14	54.6		27.1	6.9	
				5.0	
16	14	7.8	53 38	7.7	
15	41.5		34.3	8.2	
17	17	8.3	54 03	8.0	
16	44.3		53 09.2	8.3	
18	40	8.6	53 44	8.9	
18	7.7		40.5	7.5 (wrong # ?)	
19	48	8.8	51 31	8.5	2 2
19	15.3		27.1	8.8	
20	34	8.9	53 4	8.9	
20	1.7		54	8.5	
21	29	8.5	53 56	8.0	
20	56.8		52.1	8.4	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

15 3 0.0 18.4

15 3 15.9 32.4

10 4 47.7 6.9

10 4 52.1 10.2

0 1 33.7 51.2

0 1 34.8 52.1

30 3 58.9 5.9

30 4 4.9 20.7

25 1 50.4 8.9

25 1 52.9 9.4

0 1 53.5 11.9

0 2 3.3 20.1

20 0 19.8 39.4

Pure 20 4 5.1 19.9

30 3 0.8 19.1

30 3 21.9 39.9

0 0 52.8 10.7

0 0 31.3 49.1

5 4 4.1 20.8

5 4 4.9 20.3

Date.

First minute-break.

c, set at.

N. Coll.

S. Coll.

Sum

Mean.

1875, Oct. 18
Oct. 19

a.		s.		Mag.	REMARKS.
21	22 31 58	32 21	6.0		
	21 58.6	16.1	5.8		
23	97 67	52 44	6.4		
	23 19.5	38.8	7.5		
24	55 81	53 14	8.3		
	24 22.1	9.5	8.6		
26	04 83	52 19	sure 8.5		
	26 04	19.2	8.6		
27	09 95	52 04	9.3	pr. #? a 5.5 mag. pr.	
	26 35.4	57 58.9	9.5		
28	16 92	53 22	9.1	several #'s in the field	
	27 48.8	76	8.8		
28	24 88	50 11	9.2	2 nd s pr. mean R.A	
	28 52.0	6.1	9.0		
			9.2	mean s + R.A	
			8.8		
31	19 85	52 34	8.5	pr. #	
	30 45.1	30.0			
			8.3	neg. order, 1 stroke for	
			9.2	rej 4 th wire 82 nd #	
32	53 90	52 10	9.1		
	32 19.6	5.3	9.2		
33	24 65	53 28	5.0		
	32 50.0	23.8	5.0		

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

40	4	28.2	44.9
40	4	31.9	47.4
20	1	4.2	21.8
20	1	12.6	28.5
50	1	0.5	18.6
50	1	9.0	25.9
45	4	21.1	39.0
45	4	25.7	42.3
0	1	0.0	18.3
0	0	58.1	16.5
50	3	15.1	31.5
50	3	8.9	24.0
50	3	55.9	15.2
50	4	1.5	18.0
30	0	27.5	46.5
30	0	25.0	43.7
55	0	5.1	23.7
55	0	10.6	28.9
35	2	15.5	43.3
35	2	27.3	44.5

Date. 1875, Oct. 18
 First minute-break. Oct. 19

c, set at.

Sum
 Mean.

N. Coll.	S. Coll.

α .	δ .	Mag.	REMARKS.
21 34 53 80 53 34 34 194 298		8.9 9.0	
31-52 81 51 41 31-187 338		9.2 9.2	
37 45 80 52 43 37 118 381		9.0 22 8.9	
38 31 86 53 11 37 56.7 64		7.5 7.7	
40 48 86 52 54 40 138 493		8.8	lost
42 40 80 53 40 41 255 52 553		8.5 8.8	
43 34 86 52 53 42 580 489		8.5 8.9	
44 38 85 52 52 44 38 477		8.8 8.4	
45 34 80 52 9 44 591 5759.8		8.5 8.8	
47 09 80 50 18 46 328 131		9.0 9.2	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

30 0 37.5 55.4

30 0 38.7 55.3

20 2 39.2 57.8

20 2 40.3 57.9

20 2 9.8 27.1

20 2 12.8 29.0

50 4 11.1 27.7

50 4 12.7 28.0

5 4 46.4 3.5

lost

0 4 26.3 44.0

0 4 28.5 45.1

10 0 34.4 52.9

10 0 28.2 45.1

15 1 25.4 43.1

15 1 30.0 47.1

50 4 30.2 47.7

50 4 39.3 54.9

45 2 35.5 54.2

45 2 36.0 53.9

Date.

First minute-break.

c, set at.

1875, Oct. 18
Oct. 19

N. Coll.

S. Coll.

Sum

Mean.

α .

δ .

Mag.

REMARKS.

21 45 26 83 51 43 7.8 222
48 56.8 388
8.4

50 03 83 51 52 missed on account of setting wrong
not seen

51 1 6.5 52 38 6.0
50 250 339
6.0

52 13 8.7 51 57 22
51 37.8 464
8.5 #?

53 15 8.8 50 16 8.5 2nd 8 pr. 1st stroke for each 8
52 38.4 117 8.6
8.5 2nd #

54 28 8.7 50 14 8.5
53 57.6 8.5
8.1

56 02 8.3 50 37 8.4
55 25.3 32.3
8.5

56 59 9.0 50 5 9.0
56 22.4 0.7
9.0

58 06 9.4 52 25 9.5 22
57 28.5 20.6
9.3

58 56 8.0 52 6 7.4
58 16.4 1.0
7.8

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

20 1 15.8 35.2

20 1 20.4 39.0

wrong setting.
not seen

25 2 4.0 21.9

25 1 58.2 15.1

lost

5 4 53.9 10.4

50 0 42.7 2.5

50 1 10.6 28.0

50 1 25.7 45.5

50 1 47.4 5.7

25 2 35.7 55.1

25 2 34.5 51.9

55 4 43.2 1.5

50 4 50.8 8.8

35 4 26.1 43.4

35 4 46.9 5.1

55 4 2.0 18.9 seeing pretty good

55 4 13.2 28.9 seeing very bad

Date.

First minute-break.

c, set at.

1875 Oct. 20

Oct. 25

Sum

Mean.

N. Coll.

S. Coll.

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

rec f.F.M. f.F.M.

a.

s.

Mag.

REMARKS.

20 56 11
55 46.0

64 54 42
38.9

7.0

False stroke + rattle after 5

6.9

57 25
56 55.8

88 54 36
82.3

9.0

~~not~~ not seen, sure,

0 13
59 82.8

69 54 43
39.5

7.3

7.5

false stroke + rattle after 8

2 8
1 37.0

85 58 53
49.5

8.8

2 #?

8.9

lower + foll. of three stars

2 52
2 21.0

78 53 26
22.5

8.5

Ch. failed stopped

4 30
3 59.6

87 53 8
4.0

9.0

8.8

5 47
5 16.3

85 54 31
26.7

8.8

8.7

7 11
6 40.1

83 54 45
40.7

8.5

8.2

8 33
8 2.4

83 54 10
6.1

8.8

8.2

10 18
9 47.8

75 58 57
82.9

7.8

7.5

Runs.

Sum

Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

20 2 0.8 17.5

20 2 9.7 28.1

not seen

25 3 58.8 17.1

20 1 46.0 2.6

20 1 49.1 9.1

10 4 17.1 33.9

10 4 2.5 20.4

35 4 4.0 19.1

35 3 58.9 16.9

55 2 31.2 47.9

55 2 17.7 36.9

30 4 17.6 33.8

30 4 11.9 30.1

20 0 9.4 25.7

20 0 5.1 24.9

50 4 38.4 53.2

50 4 44.1 2.9

5 3 6.1 22.0

5 3 7.6 26.2

Date. 1875, Oct. 20

First minute-break. Oct. 25

c, set at.

Sum

Mean.

N. Coll.

S. Coll.

a.

s.

Mag.

REMARKS.

21 11 46 90 53 24
11 14.8 20.0

9.0

ch. failed

13 01 58 53 24
12 29.9 23.4

6.2

ch. failed

14 34 84 54 32
14 34 28.5

8.6

new sheet

15-51 7.2 54 54
15 18.1 50.3

6.8

6.2

17 2 9.1 54 52
16 29.1 47.6

9.0

9.2

18 16 8.0 54 20
17 43.7 15.7

9.0

9.2

19 44 7.0 54 44
19 11.8 40.2

7.7

7.0

8.4

8.0

2

20 34 7.3 54 40
20 1.3 44.7

7.2

7.8

21 28 8.5 53 56
20 56.8 52.1

8.2

8.7

22 58 9.0 52 33

9.2 *?

9.0

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

~~40 0 4~~

40 0 40.8 59.4

35 2 28.7 47.1

30 2 23.9 41.0

30 2 14.9 33.8

10 0 29.0 45.9

10 0 33.9 52.9

10 3 12.0 27.7

10 3 16.9 36.1

40 4 57.4 13.8

40 4 55.2 13.4

20 0 53.3 10.4

20 0 53.3 10.4

20 0 54.9 13.7

20 0 32.9 51.8

15 1 18.1 34.8

15 1 19.5 39.5

5 3 54.8 10.5

5 4 0.7 18.0

30 2 1.0 16.9

30 1 54.9 13.0

Date. 1875, Oct. 20

First minute-break. Oct. 25

c, set at.

Sum
Mean.

N. Coll.	S. Coll.

a.		s.		Mag.	REMARKS.
21	24 55	8.1	03 14	8.0	
	24 22.1		9.5	8.4	
25	52	7.9	54 0	7.5	
	25 19.3		1.0	8.0	
26	46	7.7	54 10	7.5	
	26 13.5		46.2	7.0	
28	33	8.5	14 25	8.8	
	28 0.1		20.5	8.6	
30	12	8.5	54 36	8.4	
	27 39.1		32.0	8.8	
31	35	9.1	54 29	9.1	2
	31 1.8		24.2	9.1	
32	24	8.8	54 15	8.0	
	31 50.5		10.4	8.0	
33	41	8.5	54 26	8.0	
	33 7.1		22.0	8.6	
34	38	8.2	54 9	7.9	
	34 4.1		4.6	8.4	
35	30	7.5	54 47	6.7	6.7 pure
	34 56.6		42.7	7.6	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

50 1 8.7 25.1

50 1 2.1 19.7

55 4 46.9 2.8

55 4 35.9 53.8

10 4 34.8 49.9

10 4 11.7 28.9

40 0 26.1 43.0

40 0 26.5 45.1

25 3 46.5 2.5

25 3 39.0 57.4

35 1 20.5 37.0

35 1 22.3 40.9

50 0 35.5 51.5

50 0 32.5 51.7

35 3 37.2 52.7

35 3 33.7 51.1

55 0 49.9 8.2

55 0 50.0 9.0

15 2 44.2 59.9

15 2 49.5 8.4

Date. 1875, Oct. 20

First minute-break. Oct. 25

c, set at.

Sum

Mean.

N. Coll.

S. Coll.

a.

s.

Mag.

REMARKS.

221 36 30
35 56.0

6.0 54 17
18.2

6.3

6.4

37 51
37 16.4

88 03 29
24.5

9.0

2

9.0

38 44
38 10.4

81 14 37
32.6

8.5

8.3

39 38
39 5.7

9.0 55 04
54 58.9

9.3

8.9

40 38
40 3.7

90 53 57
47.0

9.4

9.2

42 31
41 57.8

80 54 44
39.7

9.2

9.1

43 49
43 14.2

88 53 31
26.5

8.8

9.0

45 07
44 31.0

83 53 38
31.1

8.9

8.7

46 20
45 44.8

84 54 20
15.6

8.8

8.5

47 28
46 52.5

94 54 57
6.29

9.5

?

9.5

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

45 2 40.0 55.2

45 2 42.2 1.1

35 0 53.8 109.

35 1 3.6 21.7

25 2 48.7 4.7

25 2 47.0 5.8

0 0 18.0 36.2

0 0 15.4 35.6

10 3 26.0 42.7

10 3 24.9 43.6

20 0 31.0 46.9

20 0 28.1 47.5

30 3 44.2 59.4

30 3 46.0 2.5

25 3 56.1 11.8

25 3 57.7 15.5

40 4 19.1 34.5

40 4 21.2 39.2

5 2 29.9 45.4 seeing, very good.

5 2 45.0 2.8 seeing, very fine.

Date. 1875, Oct. 27
 First minute-break. 11:00.26
 c, set at.

Sum
 Mean.

N. Coll.	S. Coll.
Obs. W.A.R.	W.A.R.
Rec. J.F.M.	J.F.M.

a.	8.	Mag.	REMARKS.
21 15 48 15 154	77 52 47 42.6	8.8 8.0 8.8 8.0	reg. orders,
17 47 17 149	91 54 53 48.9	9.0 9.2	and near 4th.
18 40 18 70	72 53 41 36.7	7.5 7.8	false obs.
19 50 19 170	82 54 53 49.7	7.8 8.0	
21 11 20 384	78 54 48 43.5	8.8 7.8 8.5	
22 23 21 486	83 49 57 53.0	9.5 9.1	lost
23 57 23 228	85 50 00 49 56.1	9.3 8.2 8.1	
25 31 24 586	90 51 17 13.0	8.6 8.9 8.4 8.6	clouds
27 9 26 354	95 52 4 57 59.5	9.2 6.5 9.3	5 or 6 stars in the field hazy
28 22 27 498	87 53 14 9.7	8.4 9.0 8.6	several stars in the field

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

15	3	51.4	8.4
15	3	51.4	8.4

15	4	7.3	21.3
15	3	50.1	5.4

10	2	17.6	34.9
----	---	------	------

10	2	25.0	34.7
----	---	------	------

20	4	10.1	25.9
----	---	------	------

20	4	5.1	14.7
----	---	-----	------

10	1	15.5	34.1
----	---	------	------

10	1	7.2	17.4
----	---	-----	------

15	2	11.3	26.9
----	---	------	------

15	1	25.0	35.0
----	---	------	------

15	2	16.1	25.3
----	---	------	------

55	3	13.0	31.5
----	---	------	------

sure

5	2	52.1	3.1
---	---	------	-----

0	4	13.8	30.5
---	---	------	------

0	4	29.7	41.1
---	---	------	------

45	2	30.8	48.7
----	---	------	------

45	1	19.1	37.5
----	---	------	------

45	2	33.7	44.8
----	---	------	------

41	1	23.6	34.8
----	---	------	------

0	1	1.7	19.3
---	---	-----	------

0	1	32.2	42.2
---	---	------	------

0	1	1.4	12.1
---	---	-----	------

50	0	39.7	54.9
----	---	------	------

50	0	46.0	56.1
----	---	------	------

Date. 1875, Oct. 27
~~Nov. 6~~
 First minute-break. ~~Nov. 6~~
 c, set at. Nov. 6

N. Coll.	S. Coll.
Sum	
Mean.	

α.		δ.	Mag.	REMARKS.
21	30 29	85	54 31	8.4
	29 53 4		26 7	8.7
31	35	91	54 29	9.1
	31 18		24 2	9.0
32	55	83	52 50	7.5 22 lost 2 nd & 3 rd wire of end #
	82 21 5		45 3	8.6
				7.8
				8.5
33	31	88	52 27	lost.
	32 57 7		22 5	8.7
34	32	75	55 11	8.0
	34 40		80	7.0
35	33	80	52 44	22 not seen
	34 59 2		40 0	9.0
36	15	91	51 30	9.0
	35 41 6		26 3	8.5
37	14	90	49 56	9.0
	36 39 2		57 8	8.8
38	15	75	52 40	7.8
	37 41 6		35 3	7.0
39	17	88	49 58	8.5
	38 41 9		54 1	8.4

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

30 3 53.5 10.1

30 3 59.1 7.9

35 1 19.1 37.1

35 1 17.9 27.4

15 1 47.6 3.8

15 0 50.1 6.4

15 1 40.9 50.5

15 0 42.3 51.5

lost

35 3 14.3 22.1

50 2 14.9 30.8

50 2 22.1 1.1

not seen

20 0 51.9 1.5

30 4 7.2 23.1

30 4 16.4 25.2

5 3 10.4 27.8

5 3 11.1 21.9

25 0 3.5 19.8

25 0 1.9 12.2

5 1 22.6 40.6

5 1 24.8 36.6

Date. 1875, Oct. 27
Nov. 6

First minute-break.

c, set at.

Sum

Mean.

N. Coll.

S. Coll.

a.

b.

Mag.

REMARKS.

21 40 48 86 52 54 8.7 222
40 139 49.3
9.0

41 25 88 52 19 8.1 2nd 5 pr.
40 501 145 7.7
8.3 rep. 1st 5 pr.
7.5

42 33 88 54 28 8.4
41 59.0 228 9.1
9.1

43 34 86 52 53 8.5
42 59.0 489
8.4

44 31 73 49 55 8.5 reg. order.
43 56.3 507 8.3
8.5
8.0

46 17 90 54 38 9.0
45 41.7 305
9.0

47 32 89 54 39 8.5 222
46 56.7 345
8.5

48 07 90 54 42 9.0
47 31.5 372
9.0

49 51 83 52 45 8.5
49 15.2 405
8.0 2nd 5 pr.
9.1

51 01 94 52 52 9.1 222
52 25.8 477
53 17 9.1

Runs.

Sum

Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

5 4 43.9 58.4

5 4 40.4 48.1

45 2 14.8 31.6

45 2 17.7 27.1

45 2 4.0 14.4

35 2 33.8 48.8

35 2 38.1 47.1

10 0 48.8 5.5

10 0 51.0 0.9

5 4 59.2 17.4

10 0 3.1 14.5

25 1 53.7 9.9

25 1 58.5 6.9

25 0 41.5 58.0

25 0 48.9 57.8

20 3 34.6 51.0

20 3 41.9 50.1

15 4 47.8 4.4

20 0 25.1 34.2

15 4 55.0 4.9

10 2 33.4 49.0

10 2 46.4 54.1

1875phae. prod. 1552R

Date. 1875, Oct. 27
first minute-break. Nov. 6

Sum
Mean.

N. Coll.	S. Coll.

a.		s.		Mag.	REMARKS.
21 52 49		91 53 17			not seen
51 37		92 55 7			not seen
53 22	84	51 40		8.5	
52 41.7		50 55.8		8.5	
54 14	91	55 9		8.9	
53 45.3		53		8.7	
55 9	86	48 15		8.5	
				8.5	
56 21	82	51 27		9.0	2 nd 8 pr
55 51.4		23.6		8.0	22 rej. 2 nd wire of 1 st #
				8.0	
57 9	53	52 16		4.0	
56 32.5		11.0		5.0	
58 50	90	55 9		8.8	2 nd 8 pr.
58 20.9		52		8.9	
				8.5	2 nd 8 pr.
0 31	88	52 53		8.7	22
59 54.4		48.2		8.2	
1* 16	92	53 00		6.9	
0 38.9		52 55.0		6.9	

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

not seen (sure)

not seen (sure)

0 4 19.1 36.7

0 4 9.1 17.4

50 4 54.9 12.8

50 4 54.0 3.9

5 4 50.2 8.7

5 4 56.0 9.1

35 0 26.9 43.8

35 2 5.2 21.9

35 1 17.9 28.5

45 4 14.6 29.7

45 4 12.7 21.7

50 4 45.4 1.9

50 4 42.3 50.5

10 1 37.1 53.0

10 1 39.1 48.8

5 0 1.1 17.9

5 0 15 11.1

date.

1875, Oct. 27

first minute-break.

Nov. 6

c, set at.

Sum

Mean.

N. Coll.

S. Coll.

a.

s.

Mag.

REMARKS.

22 2 38 80 50 20
2 07 155

9.2

reg. order.

9.0

9.2

9.0

3 38 95 54 52
3 08 498

9.2

9.2

4 39 80 53 32
4 19 271

8.6

7.7

8.6

7.9

2nd S pr. 4th wire of 2nd # - w

5-30 77 53 55
4 123 507

7.2

7.7

7 33 88 53 47
6 58 422

8.5

8.4

9 3 76 52 38
8 257 331

7.5

7.7

10 9 88 53 50
9 314 459

8.6

4 stars in the field

8.9

11 29 88 52 4
10 502 51 598

9.4

8.9

false after S
not seen clouds

13 3 89 51 26
12 241 223

9.0

14 08 85 51 29
13 294 237

9.0

8.5

not seen clouds

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

40 4 8.5 24.8

40 4 11.5 21.7

10 0 16.0 32.9

10 0 18.1 28.1

30 2 28.7 44.5

30 2 29.3 38.9

5 4 24.7 41.2

5 4 30.7 39.4

15 2 41.9 58.1

15 2 45.0 52.1

25 1 52.0 8.4

25 1 50.8 59.4

10 3 52.3 8.0

10 3 52.2 0.9

55 4 51.6 8.4

55 4 51.0 59.8

not seen (pure)

35 2 34.1 45.1

not seen seeing moderately good

35 1 6.8 16.9 seeing good

date. 1875, Nov. 20
 first minute-break. Nov. 22
 set at.

Sum
 Mean.

N. Coll.	S. Coll.
Obs. W.A.R. W.A.R.	
Rec. J.F.M. J.F.M.	

α .	δ .	Mag.	REMARKS.
23 32 24 31 35.5	8.5 57 46 0.6	8.5 2 2	
33 07 32 21.0	9.2 54 35 29.2	9.0	
34 33 33 44.5	7.9 54 26 20.4	8.1	
35 24 34 36.0	9.0 52 10 4.5	9.0 8.8	
36 41 35 53.5	9.2 52 24 18.7	9.5 9.1	
38 16 37 27.5	7.7 54 47 40.6	8.3 8.2	
39 46 38 58.0	8.9 54 20 13.9	8.2 8.7	
41 53 40 44	9.1 52 34 24.7	9.0 8.8	
42 55 42 53	9.3 54 17 11.3	9.0	
43 48 42 57.7	9.5 54 25 18.6	9.2	lost 1 st of 3 rd wires
		9.5	lost 1 st wire of 2 nd wire

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

55 4 24.3 27.9

30 0 50.2 54.9

35 3 37.0 42.1

50 4 42.8 50.7

50 4 36.0 41.7

40 0 35.2 44.9

40 0 32.9 38.1

15 2 57.2 4.9

15 3 7.4 11.8

~~40 4 51.1~~

40 4 50.5 54.7

30 1 10.5 18.3

25 4 21.9 24.9

~~45 3 5.0 10.3~~

40 1 12.9 20.4

~~40 0 52.1 56.5~~~~40 0 52.1 56.5~~

date.

1875, Nov. 20

first minute-break.

Nov. 22

Sum

Mean.

N. Coll.

S. Coll.

a.

δ.

Mag.

REMARKS.

45-45
44 51.4

88 54 45
35.2

9.0

~~8.6~~

46 58
46 11.1

83 52 25
19.2

7.9

~~8.4~~ upper + foll. #

47 38
46 48.4

9.0 54 44
38.2

8.2

~~8.5~~

48 46
47 56.3

9.0 54 37
31.2

8.5

pr. #

~~8.8~~

49 45
48 55.5

9.0 54 28
22.5

8.5

50 52
50 2.3

88 54 27
21.5

8.7

~~8.8~~

52 12
51 22.0

7.5 52 41
35.0

7.5

22

~~7.5~~

52 57
52 7.0

8.8 54 25
19.1

8.6

~~8.8~~

53 46
52 56.4

88 54 44
38.4

8.6

~~8.8~~

55 38
54 47.8

9.0 54 17
11.1

9.5

~~8.4~~

~~8.8~~

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

15 2 3.9 11.1

~~15 4 51.0 53.3~~

35 4 56.4 5.1

~~35 4 59.2 4.2~~

20 1 20.8 28.6

~~20 1 16.4 31.5~~

25 3 16.2 24.0

~~25 2 14.0 19.1~~

35 1 44.8 51.1

~~circumference~~

35 3 50.1 56.9

35 3 49.5 52.9

20 4 20.5 26.9

20 4 22.2 25.9

40 0 33.6 42.6

40 0 37.1 42.0

20 0 21.2 30.1

20 0 20.7 25.5

45 3 59.5 7.2

45 3 8.0 16.5

45 2 39.5 44.5

Date.

1875, Nov. 20

First minute-break.

Nov. 22

c, set at.

N. Coll.

S. Coll.

Sum

Mean.

a.

s.

Mag.

REMARKS.

56 52
56 1979 54 51
4496.9
7.058 19
57 1478.0 54 27
2158.7
8.959 2
58 12.07.0 55 00
54 5367.2
7.359 46
59 55.18.8 54 56
50.08.5
9.0perhaps 5^{mm} instead of 59^{mm}1 11
0 17.97.9 54 52
7577.8
7.4lost 1st wirelost 1^{2d} wire~~2 46 7.0 53 60~~
~~2 4 50 5 306~~
~~1 11.9 53 53~~

8.5

~~3 36 7.4 58 28~~
~~3 9 8.6 52 48~~
~~2 17.1 435~~9.1
8.5

2 2

~~4 3 7.8 54 38~~
~~4 3 7.8 54 38~~
~~3 107 324~~7.8
8.2

o.k.

~~5 22 8.5 54 19~~
~~5 22 8.5 54 19~~
~~4 29.6 12.6~~8.4
8.8

o.k.

~~6 48 7.4 53 19~~
~~7 0 8.2 53 45~~
~~6 8.1 394~~9.5
8.8

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

10 4 34.3 41.9

10 4 41.7 44.9

35 1 35.6 43.9

35 1 45.1 48.7

5 0 4.1 12.9

5 0 6.0 11.1

5 3 18.4 26.0
~~22.0 22.0~~

5 3 17.9 22.1

10 3 27.8 35.0

10 3 37.1 41.5

55 4 18.0 21.4

~~35 3 14.9 21.8~~

15 1 8.0 12.0

~~25 2 6.6 14.0~~

25 2 11.1 15.0

~~45 1 9.9 18.5~~

45 1 18.9 23.4

~~45 0 25.0 33.5~~

15 4 37.2 39.5

1875phae.proj.1552R

N. Coll.	S. Coll.
Sum	
Mean.	

Date. 1875, Nov. 20
First minute-break. Nov. 22
c, set at.

α .	δ .	Mag.	REMARKS.
0 8 15 50	54 45	8.5	
0 8 15 71	54 22	7.4	
9 11 83	53 5	22	
9 38 20	53 14		
8 45.8	83	6.8	
10 13 80	53 14	8.0	
10 25 75	54 17		
9 32.3	107	7.5	
11 6 80	53 5	9.0	
11 14 80	53 7		
10 21.1	14	9.3	
12 12 82	53 9	9.2	22
12 48 83	54 59		
		8.4	md. of 3 #2
13 00 78	50		
14 13 9.3	52 43		
13 21.0	38.0	9.5	
14 13 88	58 59	9.4	
15 42 9.0	52 22		20
14 49.6	16.7		
16 57 9.0	53 27	9.2	
16 2.5	21.5	8.4	
		8.0	
17 20 73	53 07		
16 25.6	1.0		
		8.0	lost 1st wire

Runs.

Sum
Mean.

A.

C.

Pointer.

Stroke.

Rev.

A.

C.

REMARKS.

~~20 1 26.8 35.1~~~~45 4 23.5 28.4~~

not seen

50 0 48.0 51.5

~~50 0 53.0 59.9~~

45 3 49.4 52.5

~~55 2 46.3 54.1~~

55 2 57.9 1.1

~~55 3 52.1 58.1~~

5 2 3.1 7.1

not seen

20 1 19.7 24.2

~~5 2 32.4 40.7~~

not seen

40 2 10.4 14.1

~~25 2 42.4 49.5~~~~25 3 25.2 32.2~~

35 2 49.8 53.1

not seen seeing very good

55 3 33.4 36.7 seeing very good
indeed

Date.

First minute-break.

c, set at.

Sum

Mean.

N. Coll.

S. Coll.

a.

8.

Mag.

REMARKS.

