

KG  
11366  
v.528

Collimation. Level.  
Fluor. Remote A  
10  
From Apr. 30. 1885 to Feb. 2. 1886



Nov 15 8h

9.0 feet -









Apr. 30. 1885.

	North	South
21	57.8	24.8
	55.2	25.8
	55.1	25.0
	55.8	24.9
	55.1	23.3
	<u>0</u>	<u>23.8</u>
	55.60	24.76
		55.60
		<u>80.36</u>
		40.18 set at 40.2

Aug 30

58.7	14.8
58.1	12.2
58.0	14.2
57.3	14.9
56.8	14.7
<u>399</u>	<u>208</u>
57.98	14.6
	57.98
	<u>72.14</u>
	36.1 set at 36.1



May 2 1875  
132

50.6	98
50.0	98
45.0	100
50.1	118
50.4	100
<u>2501</u>	<u>514</u>
50.02	1028
	<u>5002</u>
	6030
	30.1

Set of 30.1

13	30
61	1
61	2
61	8
<u>11</u>	
61.37	

May 3 1885

8<sup>h</sup> 30<sup>m</sup>

472	160
470	158
464	160
468	17.1
458	17.3
<u>032</u>	<u>322</u>

<u>4664</u>	1644
	<u>4664</u>
	6308

31.5 set - 01 - 31.5 set.

13<sup>h</sup> 0<sup>m</sup>

506	138
504	146
498	150
497	128
493	152

May 4  
8<sup>h</sup> 20<sup>m</sup>

472	121
482	16.6
481	15.6
496	16.8
489	13.0
<u>430</u>	<u>241</u>
21 4850	1482
	4860
	6342
	31.7 set - 01 - 31.7



May 9 1885

10<sup>h</sup> 50

562 9.9

560 9.8

565 9.9

566 8.2

568 6.2

5648 440

850

5648

6528

3164 set-off

13 30

611 7.7

612 7.3

618 7.6

6137 7.40

6107

6877

344 set-off

316

Aug 10  
9<sup>h</sup> 15<sup>m</sup>

581 88

585 86

580 88

574 104

561 93

565 469

5770 938

5770

6708

33,54 Del 87 33,5

12<sup>h</sup> 30<sup>m</sup>

652 130

652 140

657 152

649 160

648 151



May 11

11 2013 20

638 98

628 112

636 105

601 93

608 100

111 508

6222 1016

Set-01-33.5

1016

6222

7238

862

558 254

607 261

600 250

591 258

588 250

484 273

5968 2546

1568

8574

426 Set-36.2

May 12 1885

Runs before adjusting microscopes for focus.

E		H		G		H	
5' 0'	7.8	0 0 8.1	5 0 31.800	31.6	5 0 0.2	59.7	34.0 33.9
	8.2	8.1	31.0	31.6	0.1	59.3	33.8 33.8
	8.3	7.6	31.2	31.8	0 0	59.6	34.0 34.0
	7.9	7.9	31.6	31.7	59.7	58.7	34.2 34.1
	8.1	8.3	31.7	31.8	59.3	58.9	34.1 33.7
5' 0'	8.06	8.00	5 0 31.46	31.70	5 0 59.86	59.24	5 0 34.02 33.90
0' 0'	8.00		0 0 31.70		0 0 59.24		0 0 33.90
	+ .06		- .24		+ .62		+ .12

Adjusting microscopes for focus  
Set anew zero.

Runs after adjustment.

May 13		G		H	
5' 0'	17.6	17.8	18.0	29.8	24.3
	18.2		17.6	29.4	24.9
	17.8		18.2	29.7	24.8
	17.7		18.7	29.6	24.6
	18.1		18.3	29.9	24.7



May 12

94

571	13.8
578	14.1
577	16.1
571	16.2
575	15.4
<hr/>	
22	256
	152
5749	5544
	<hr/>
	7212
	36.3

Sel-OT-363

May 13

$\Sigma$	$\eta$	$\epsilon$	$H$
5' 0" 9.9" 0' 8.3"	5' 0" 10.2" 0' 10.8"	5' 0" 19.8" 0' 19.3"	5' 0" 15.6" 0' 16.3"
9.9 8.0	10.3 10.8	19.1 19.6	15.7 16.1
9.7 7.8	10.4 10.6	19.3 19.7	15.9 16.2
9.7 8.6	10.2 10.8	19.2 19.6	15.8 15.7
9.9 8.6	10.1 10.8	19.4 19.9	15.6 16.0
5' 0" 9.82 8.26	10.24 10.76	19.38 19.62	15.66 16.06
8.26	10.76	19.62	16.06
+ 1.56	- .52	- .24	- .34

May 16 1885

11<sup>h</sup> 12<sup>m</sup> 2<sup>s</sup>

681 4.3

701 4.8

682 6.1

709 5.1

652 6.5

3475 266

6950 532

6550

7482

374 set-off

13<sup>h</sup> 30<sup>m</sup>

687 7.2

658 4.8

701 7.7

— —

set-off 374

May 17  
9<sup>h</sup> 30

11<sup>h</sup> 0

670	115
646	110
688	100
652	100
648	106
<hr/>	<hr/>
264	34
6528	1068
	6528
	<hr/>
	7156
	3798
	<hr/>
	24380

666	<del>110</del>
672	53
672	122
652	113
666	108
<hr/>	<hr/>
38	11
6656	



May 19 1885

$$\begin{array}{r}
 729 \quad 135 \\
 749 \quad 130 \\
 745 \quad 132 \\
 753 \quad 115 \\
 765 \quad 125 \\
 \hline
 248 \quad 146 \\
 7496 \quad 1252 \\
 \hline
 7496 \\
 8788 \\
 4394 \text{ of } 439
 \end{array}$$

Level

$$\begin{array}{r}
 180 \quad 145 \\
 196 \quad 130 \\
 \hline
 176 \quad 78 \\
 1880 \\
 1550 \\
 1880 \\
 \hline
 1258 \\
 1639 \\
 450 \\
 -2,411
 \end{array}$$

$$\begin{array}{r}
 \times \\
 122 \quad 110 \\
 4,8 \quad 54 \\
 \hline
 1,50 \quad 84 \\
 850 \quad 420 \\
 430 \\
 -215 \\
 -245 \\
 \hline
 60 \\
 2,30 \\
 21 \\
 \hline
 66 \\
 42 \\
 \hline
 62.57
 \end{array}$$

My 21  
Hh

716	90
732	60
	68
741	66
746	66
757	67
<hr/>	<hr/>
23 2	35 1
74.64	702
	74.64
	<hr/>
	81.66
	40.83

After addition  
to Sun Cal for Jan

740	01
740	01
736	00
726	30
748	28
<hr/>	<hr/>
190	60

7380	120
	7380
	<hr/>
	7500
	370
	Set 8-37.5

Collimation May 26<sup>th</sup> 1885:

$$21 - 87.1 \quad 20 - 94.2$$

$$84.0 \quad - 95.8$$

$$85.3 \quad 94.8$$

$$86.0 \quad 95.2$$

$$86.0 \quad 94.4$$

$$\underline{85.68} \quad 20 \quad 94.88$$

$$21 \quad 85.68$$

$$2056$$

$$21 \quad 35.3 \quad \text{Det-01}$$

$$\text{Det-01 } 37.4$$



Level May 27 1885

Up

18.2 15.1

19.6 13.8

19.3 14.0

18.2 15.1

$$\begin{array}{r}
 75-3 \quad 180 \\
 1882 \quad 1450 \\
 -432 \\
 -216
 \end{array}$$

Down

~~12.1 10.7~~  
~~7.4 4.8~~

11.9 1.8

4.8 7.8

11.8 0.6

5.2 6.0

$$\begin{array}{r}
 337 \quad 162 \\
 8.42 \quad 405
 \end{array}$$

-437

-218

-216

$$\begin{array}{r}
 217
 \end{array}$$

1 di = .22

2

b = -4.8

May 29

Broughty Mr Bond's

Concession No. 35447

The following are the tobacco  
concessions accompanying the monster.

This the monster will be designated

No. 1  
No 4 will be read as heuristics.

Ken Concessions

320 +0.5

42 +0.5

52 +0.5

62 +0.4

72 +0.5

82 +0.4

92 +0.1

Collimation May 20<sup>th</sup> 1888

North

South

~~21.8~~~~86.8~~

83.2

83.0

81.8

82.0

80.8

18

9

108

82.16

20 93.0

91.6

93.0

90.2

90.5

13

7

83

91.66

82.16

7382

369 at at

North  $14 \frac{1}{2}^m$  South

83.0

84.6

82.2

82.1

81.6

15

12

135

82.70

96.8

97.2

96.2

95.0

98.2

12

32

332

96.64

82.70

179.30

39.65





Run 3

Run  
~~80h-57.5~~  
 13 10  
 3004  
 6'3.5"

14<sup>h</sup> 25<sup>m</sup>

55.2

3004  
 620

30







Aug 8 1885

12<sup>h</sup> 30<sup>m</sup>

13<sup>h</sup> 4<sup>m</sup>

21 86.5 20.5

85.2 50.6

86.1 50.5

86.1 50.5

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

86.5 50.2

673

667

678

669

29.53

7.11

30.00

60

21 38.17 set

June 9, 1885

11<sup>h</sup>  
 2 81.0 941  
 81.3 812  
 83.0 932  
 80.2 958  
 81.7 944  


---

 57  
 21819  
 5430  
 5014  


---

 15744

37.5

61-01-372

13<sup>h</sup> 30

557  
 547  
 (546)  
 (546)  
 3000  
 602

15<sup>h</sup> 00

534  
 532  
 (536)  
 (536)  
 3004  
 592

15<sup>h</sup> 20

820 18  
 826 18  
 828 32  
 828 16  
 828 20  


---





June 11 1885

12 h

868	968
<del>866</del>	958
867	948
846	917
838	912
<u>285</u>	<u>285</u>
<u>867.1</u>	9120
	8571
	8141
	40.4 per cent

h  
13 30

658  
654  
(658)  
(654)  
3020  
688

h  
12 30

727  
720  
(718)  
(714)  
3020  
699

h  
15 0

617  
612  
(624)  
(617)  
3021  
681

15 20

871	966
871	953
863	958
862	960
868	962
	<u>299</u>
225	9558
8670	8670
	<u>8268</u>
	413

June 13/85 -

13 <sup>h</sup> 20

71.2

70.3

(71.6)  
(70.7)

3002

71.6

14 30

68.4

67.6

6

3002

72.0

h -  
15 0

67.6

66.7

(67.4)  
(66.7)

3002

71.6

15 20

66.6

64.9

(66.4)  
(66.2)

3002

71.0

h -

15-30

71.0 586

504 558

502 552

82.0 587

886 582

51-01-

406



June 14 HFS-

12<sup>h</sup> 30<sup>m</sup>

916	942
910	952
902	958
902	968
888	978
<hr/>	<hr/>
18	299
90.36	958
	90.36
	<hr/>
	8634
	432501-01

13<sup>h</sup> 20<sup>m</sup>

781  
786  
(775)  
(767)  
2846  
756

14 00

754  
718  
=  
2846  
788

15 00

727  
722  
(726)  
(715)  
2849  
758

15 30

718  
712  
(715)  
(711)  
2849  
755

Sum 16

11<sup>h</sup>

878  
866  
(856)  
(858)

11<sup>h</sup> 30<sup>m</sup>

2231	20682
19	677
10	676
00	672
11	682
<u>79</u>	<u>389</u>
2 ~ 1.54	206788
	22 152
	<u>6952</u>
	21 348 2101.

Summ 701K5-

14<sup>h</sup> 10<sup>m</sup>

21

982

20 740

942

750

935-

748

936

749

928

752

143

239

9286

7498

9286

16764

388 21-21-

14<sup>h</sup> 20<sup>m</sup>

15 00

736

714

3012

30124

757

76.6



du 2  
12h 0m

13 30

21 90.820 93.8

91.8 92.8

92.2 93.7

92.6 93.3

91.4 93.9

88 155

91.8 20 93.10

21 91.76

84.86

92.43

70.6

29.98

74.5

Aug 22 1885

12<sup>h</sup> 45<sup>m</sup>

904	880
896	872
896	868
888	862
888	868
<hr/>	<hr/>
492	380
8584	8760
	8584
	<hr/>
	8744
	387 set.
	<hr/>

14 00

65.2  
64.8  
2982  
737

15 00

622  
617  
2984  
697

16 00

612  
607  
2987  
681

11  
Lunenburg

13<sup>h</sup>

876  
86.8  
856  
848  
860  
818  
8636

54.6  
53.8  
54.5  
54.8  
54.1  
221  
5442  
8636  
8038  
404 del-ol.

13 30

654  
64.9  
29.50  
66.4

14 15

63.6  
62.8  
2550  
68.7

15 40

60.5  
60.1  
2553  
67.8

$$b = -6.2^{\circ}$$



January

13 30

22 922 2 931

921 924

907 923

902 948

903 932

54 172

9108 9344

91.08

8452

423 set of

13 45

717

712

30.14

732

14 30

685

614

30.14

722

15 15

675

669

30.14

720

16 0

662

657

3066

71.6

16 40

655

650

30.6

71.2

1'

Dec 25 1185

14 30

941  
938  
940  
925  
936  
180  
9360

976  
978  
980  
982  
978  
354  
9788  
9360  
9148  
45.7 set at

14 40

733  
727  
3011  
75.9

16 0

712  
70.5

16 20

70.7  
70.1  
3018  
75.7

Jan 27 1885

14 00

21	964	20	545
	966		956
	962		968
	961		961
	956		955
	<u>305</u>		<u>288</u>
	968		956
			9615
			<u>1194</u>
			9597
			4800 <del>215</del>

15 15

722  
30'08  
55.8

16 15

16 45

703	696
30'09	3009
56.2	76.0



Aug 2 1885

14 20

21	87.2	20	916
	176		912
	85.8		918
	87.9		937
	87.8		939

363

8926

132

9264

+ 826

9990

40.0 set 51

15 0661 ~~65~~

653 Not

# 2982 mi

707

15 30

654

645 mi

644 mi

2983

703

Remained back from M,

hr  
16 0

646

639

636

2983

698

Aug 4 1885

15 h m

16 017 0

21 882

892

897

891

894

21 8932

972

970

963

973

961

339

5678

8532

8610

43.0 set - 01

692

—

688

8006

1742

682

—

577

2005

736

July 6 1885 - Runs:

E		F <sub>1</sub>		F <sub>2</sub>		H	
5' 0' 22.2	0' 0' 20.8	5' 0' 23.0	0' 0' 23.1	5' 0' 51.0	0' 0' 51.2	5' 0' 29.9	0' 0' 28.7
22.1	20.8	22.6	23.0	51.2	51.6	29.9	30.1
21.8	21.0	22.1	22.4	51.3	51.8	30.0	30.1
21.2	20.7	21.9	22.8	51.1	51.4	29.2	30.2
21.9	20.9	21.8	23.1	51.2	51.6	29.5	30.6
5 0 21.84	20.84	5' 0' 22.28	22.88	5' 0' 51.16	51.52	5' 0' 29.70	29.94
20.84		22.88		51.52		29.94	
+ 1.00		-0.60		-0.36		-0.24	



July 6 1885 -  
15h on

936

938

916

932

933

155-

9310

918

917

911

912

916

34

9168

9310

8478

424 Set of -

15 10

674

668

663

3022

736

16 10

666

660

656

3022

730

Aug 8/85-

146

$$\begin{array}{r} 996 \\ 997 \\ 998 \\ 999 \\ 1000 \\ 1001 \\ \hline 5991 \end{array}$$
$$\begin{array}{r} 859 \\ 875 \\ 872 \\ 874 \\ 881 \\ \hline 364 \\ 8728 \\ 9558 \\ \hline 2686 \\ 4345 \end{array}$$

15<sup>h</sup> 15<sup>m</sup>

718  
 713  
 776  
 3004  
 80.8

$$\begin{array}{r} 16 \text{ } 15 \\ \hline 17,2 \quad 17,3 \\ \hline 17,6 \\ 3004 \\ 807 \end{array}$$

1715

Brochet in Sumpfung

$$\begin{array}{r} 743 \\ - 1 \\ \hline 72.6 \\ 3004 \\ 80.5 \end{array}$$





July 11/885-  
16 h m

21	956	20	978
	967		958
	971		952
	952		954
	956		976
	<u>        </u>		<u>        </u>
	22		318
	9604		9626
			9604
			<u>        </u>
			9240
			46.2 set of.

h m  
16 0  
692  
~~6~~  
678  
3004  
413

h m  
17 20  
66.2  
          
307  
929

Aug 12/85

16 h 0<sup>m</sup>

506 588

552 582

568 510

547 552

551 577

274 419  
5548 5838

Set at 46.3

16 h 0<sup>m</sup>

669

50'13

512

5834  
5548  
9382  
46.9

17 20

641

5011

733

Ben Caneel a thermometer for  
Mr. Caneel for Bond Street.

No 35238

Kew Concha's

32° + 0.4

42 + 0.5

52 + 0.4

62 + 0.2

72 + 0.1

82 + 0.1

92 + 0.1

July 15

1540

902 888

912 887

917 885

808 889

916 886

55 458

9110 8916

9110

8026

45,1 set of

16 02

721

713

706

2997

762

16 30

713

807

697

2998

767

17 00

697

691

686

2988

755

June

W

7.4

6.9

14.3

7.15

W

1.1

1.0

1.1

.55

6.60

- 330

Don

2

120

80

200

1000

W

3.1

10.0

13.1

6.55

345

- 175

- 330

505

253

2

253

106

6 = - 53



Aug 16  
1640~

956	946
951	962
938	962
946	955
930	962

<u>221</u>	<u>287</u>
9442	9574
	9642
	<u>1016</u>
	9508
	97121-05

16 0

723  
3

3013  
782

17 20

704  
1

3013  
758

18 0

682  
1

3013  
752

July 18 185-

16<sup>h</sup> 30<sup>m</sup>16 4017 20

2.1  
1.7  
1.8  
5.6  
1.87

508

508

91.1

2.7

90.80

1.57

5277

46.4 set - 81-

738

733

71.3

3107

80.2

716

90.0

68.9

3007

514

17 45

704

657

67.8

3008

767

July 19/85-

1645-

712

706

684

2558

757

Set-01-466

22 958

536

957

522

948531

157

89

9523

9257

5523

9820

491

Set-01-466

2 ~  
1720

70.5

68.9

68.3

2558

75.6

1750

706

68.9

68.3

2558

70.4



July 20 1885

16 40<sup>m</sup>

971	897
988	893
987	902
988	904
988	880
<u>932</u>	<u>4496</u>
98.64	8552
	9864
	8856
	443 set at

16 50

751
745
(732)
(722)
3000
8 16

Aug 2, 1885

187 0

1720

952  
 952  
 958  
 989  
 991  
 462  
 9924

914  
 528  
 518  
 913  
 921  
 98  
 9156  
 5524  
 9120  
 456541-57-

186  
 778 (765)  
 2983  
 826

713  
 777  
 772

190

769  
 763  
 742  
 2584  
 819

July 22 1885-

$16^h 18^m$  N  $\frac{S}{20}$   
 $27' \quad \cancel{20} \quad 20 \quad 96.2$   
 $98.1 \quad 98.2$   
 $98.4 \quad 97.1$   
 $98.2 \quad 98.1$   
 $98.0 \quad 97.4$   
 $99.2$   


---

 $98.38 \quad 97.50$   
 $97.50$   


---

 $95.88$   
 $47.94$

$16^h 20^m$   


---

 $75.0$   
 $74.5$   
 $72.3$   
 $80.0$   
 $80.3$   
 $30.13$   
 $76.6$

$16^h 0^m$   


---

$713$   
 $708$   
 $689$   
 $30.15$   
 $76.0$

$19^h 0^m$   


---

$686$   
 $691$   
 $668$   
 $30.17$   
 $75.2$



July 23

951	19
949	68
948	22
946	15
941	18
<hr/>	
245	82
9490	164
94	9450

9654  
48.3 sel-OT

16 430m

717  
713  
654  
3023  
79.6

18 0  
69.3  
68.8  
67.2  
30.23  
76.2

18 30

650  
684  
66.6  
3024  
75.6

19 0

686  
678  
661  
30.24  
75.0

Aug 25 1955

816	831
887	831
89.8	844
88.6	851
88.0	851
<hr/>	<hr/>
437	172
9874	8344
	8874
	<hr/>
	9218
	461 set of

19 0	19 20
858	1758
857	853
828	
2988	2988
81.6	81.4
1	

July 27 1885

	N	S	
21	92.0	94.2	<u>1840</u>
	92.8	94.6	686
	92.9	94.8	688
	93.1	95.3 <sup>29</sup>	66.1
	92.1	96.1	3015
	<u>92.58</u>	<u>95.00</u>	76.2
		92	
		1700	

Set at 48.50

17 30

660  
 652  
3015  
 76.5

18 00

653  
 646  
 63.2  
 3014  
 72.1

19 15

628  
 620  
3113  
 708



Aug 28

16 h m  
30

922  
912  
918  
52  
9173

30  
28  
25  
80  
267  
9103  
9440

472 set-01

715  
708  
692  
2979  
768

19 00

19 20

661  
654  
1  
2957  
718

658  
657

Aug 30 115

878  
872  
878  
868  
870  

---

866  
8732

858  
858  
851  
852  
856  

---

24

8550  
8532  
8562  
484 21-

858 500  
851 504  
850 950  
854 955  
854 957  

---

16

17  
8534 9532  
8534  

---

8666  
433

1840~

661  
653  
638  
2919  
my

Aug 4 1885

808	978
808	973
883	973
907	968
900	971
<u>16</u>	<u>363</u>
90,32	9726
	90,32
	8758
	43.8 set OT

17<sup>h</sup> 30<sup>m</sup>

532
727
703
2980
771

18 15

72.4
71.7
2510
860

19 20

716
708
2980
771



Aug 6 1885

899	988
898	987
896	985
898	885
897	882
893	

9908

942 set st.

180

634  
627  
613  
3010  
917

190

623  
615

1920

616  
611  
3010  
204

2020

609  
601  
3009  
200

Aug 8 1883

18 h m s  
18 0 0

912	989
918	992
911	991
923	958
922	989
<u>86</u>	<u>419</u>

661	641
612	632
3020	3020
520	516

<u>9102</u>	9918
	91.72
	<u>9090</u>
	454 set-01

19 0

633
<u>626</u>
3020
657

20 00

624
<u>616</u>
3018
782 <sup>s</sup>

Aug 9 1885

228672,928	
828	980
169	954
178	920
890	882
<u>382</u>	<u>404</u>
8264	9808
	8764
	<u>8572</u>
	429 sel-

18 <sup>2</sup> / <sub>30</sub>	h ~
<u>647</u>	<u>200</u>
647	639
641	633
3016	3014
717	712



Aug 11 1875-

527	08
518	28
517	30
<u>62</u>	30
927	23
	<u>119</u>
	208
	927
	9445
	47.2 set 07

190
<hr/>
931
724
3010
763

25 0

722
717
8010
766

Aug 15 1885 —

882  
 86.0  
 880  
 889  
 891  


---

 802  
 88.04

860  
 848  
 850  
 858  
 86.3  


---

 279  
 8558  
 8804  


---

 8362  
 418541-01-

17 <sup>4</sup> 15 ~  
 63.6  
 62.7  
 2998  
 73.3

18 15  


---

 617  
 61.2  
 3001  
 70.6

19 00

605  
 585  
 3001  
 69.0

20 0

598  
 592  
 3003  
 670

21 0

58.0  
 585  
 3003  
 66.8

Aug 16 1875

844	31
842	41
851	21
841	44
838	42
<u>156</u>	<u>177</u>
8292	854

8352  
177

937 set out

1 m  
190

613  
 607  
 3024  
 71.1

h  
20 40

596  
 588  
 3026  
 617.8



Aug 18

20<sup>h</sup> 0<sup>m</sup>

880  
878  
870  
882  
879  
1

950  
951  
958  
957  
950  
446

711  
782  
2987  
1  
761

400  
8800

9892  
8800  
8692  
43500

Aug 19 HW-

21<sup>h</sup> 0<sup>m</sup>

68.2

67.7

29.77

75.3

Sulat ~~21~~ 43.4

21<sup>h</sup> 15<sup>m</sup> N S

21 95.2 91.2

93.3 91.1

94.0 90.3

93.9 90.6

93.6 90.7

21 94.00 90.58

54

Sulat 43.4

52.6

46.1

Runes Aug 20<sup>th</sup> 1885

$\Sigma$	$f$	$g$	$h$
5' 0" 17.4 00' 16.9	5' 0" 17.7 00' 17.0	5' 0" 40.0 00' 40.2	5' 0" 26.3 00' 26.8
18.6 16.3	17.4 17.0	40.2 40.1	26.8 26.0
17.6 16.3	17.6 17.4	40.2 39.7	26.7 26.6
17.4 16.4	17.3 17.2	39.7 40.1	26.8 26.2
<u>17.1</u> <u>16.9</u>	<u>17.1</u> <u>17.3</u>	<u>40.6</u> <u>40.1</u>	<u>27.0</u> <u>26.1</u>
16.9	17.0	40.2 40.04	26.8
5' 0" 17.42 16.56	5' 0" 17.42 17.18	40.14	26.72 26.34
0' 0" 16.56	17.18		
+ .86			

Fluorine

North Coll.

	Mean			
$\Sigma$ 453	19.6	19.8	19.0	19.47
$f$	20.2	19.6	19.8	19.87
$g$	42.7	42.6	43.1	42.80
$h$	29.2	29.8	29.1	29.37
				<u>1115.1</u>
				27875

Level

South Coll.

	Mean			
453	25.0	25.0	25.0	25.00
	10.9	11.0	11.6	11.17
	35.1	35.2	35.2	35.17
	35.2	36.0	36.6	35.93
				<u>10727</u>
				2682
				<u>2187</u>
				1.05
				+ .53



~~Σ~~ Level Aug 20

Up

Down

Σ	W
7.0	0.9
8.9	-1.0
6.8	-1.2
9.2	-1.2
<u>32.1</u>	<u>43</u>
802	-108
-108	
694	
<u>1847</u>	

Σ	W
<del>126</del> 13.6	3.2
7.0	9.6
13.4	3.2
7.0	9.8
<u>41.0</u>	<u>258</u>
<u>20.50</u>	<u>100</u>
10.25	<del>22.24</del> 645
	380
	-190
	<u>347</u>
	<u>537</u>
	268
	<u>21</u>
	268
	<u>586</u>
	<u>163</u>

b = -56

Aug 20 1885

19 h 0 m

21	888	26
	872	27
	878	12
	874	12
	877	22

<u>359</u>	<u>99</u>
8798	158
	8758

8556

460 set 21

649  
61.2  
30.08  
68.9

20	0
<hr/>	
59.8	
59.2	
30.10	
68.0	

21	0
<hr/>	
58.3	
57.6	
30.13	
66.1	

Vocation

Sep 30

Returned from vacation

W.R.

21 871  
 757  
 803  
 100  
 807  


---

 4018  
 8036  


---

20 957  
 963  
 967  
 948  
 907  


---

 280  
 9560  
 8036  


---

 7596

21 38.0

h ~  
 19 10

56.0  
 153  
 30.03  
 64.2

21 h ~  
 0

52.2  
 51.2  
 30.07  
 62.8  
 30.14  
 60.1



Oct 1 1885

reference

Cleaned plate

Reversed position of plate

Adjusted for perpendicularity

21	740	20	999	721	948
	555		953		944
	533		902		950
	73.3		972		950
	73.7		979		948
	<u>198</u>		<u>415</u>		<u>280</u>
21	7396	20	9830		9560
		21	7396		69.114
			<u>27226</u>		<u>65.04</u>
		21	361		32.6 set of

20 hr

542  
53.6  
3011  
60.1

21 30

51.6  
100  
30.13  
57.0

Oct 5 1930

21 622 20 950

630

951

607

965

59

166

21 6197

9552

6197

5749

287 set at

19 40

21 40

506

472

499

467

3002

5003

59,1

54,3

Oct-7/1885

524

516

508

523

531

---

102

5204

---

---

70

59

87

58

74

---

348

696

5204

5900

29,5

set at



201-10 185-

21 521	20 512
523	511
541	566
531	572
522	570
<hr/>	<hr/>
138	311
5276	5622
	5276
	4898
	240- Ref

20 0      21 30

547	<del>528</del>	528
542	<del>524</del>	524
3013		3015
580		571

Oct 11

577	962
164	840
1216	952
577	961
572	960
<u>576</u>	278
5712	9556
	5712
	<u>5268</u>
	26,321-

21 <sup>h</sup> 00	2 2 40
522	453
518	467
3018	3023
528	566

Oct 12 1885-

21 1761  
 $\begin{array}{r} 1761 \\ 1761 \\ 1761 \\ 1761 \\ 1761 \\ \hline 1761 \end{array}$

279

1761

1761

534<sup>2</sup>

26.7 Sel.

5.14  
 $\begin{array}{r} 5.14 \\ 5.14 \\ 5.14 \\ 5.14 \\ 5.14 \\ \hline 5.14 \end{array}$   
 3.2  
~~5.14~~

20<sup>4</sup> 30<sup>m</sup>  
 446  
 442  
 30'30  
 36,3

21 30  
 420  
 414  
 302  
 130



Oct 14 1885

20h 10m

$$\begin{array}{r} 608 \\ 607 \\ 607 \\ \hline 60.6 \\ 9.4 \\ \hline 70.0 \end{array}$$

$$\begin{array}{r} 100 \\ 80 \\ 100 \\ \hline 280 \\ 9.4 \end{array}$$

Set on rising sun

20 40

$$\begin{array}{r} 551 \\ 24.6 \\ 2961 \\ 59.0 \end{array}$$
22 00

$$\begin{array}{r} + 26 \\ 523 \\ 2961 \\ 57.0 \end{array}$$

$$\begin{array}{r} 70.0 \\ 35.0 \text{ Set} \end{array}$$

21

$$\begin{array}{r} 608 \\ 594 \\ 594 \\ \hline 296 \\ 5987 \end{array}$$

$$\begin{array}{r} 950 \\ 943 \\ 948 \\ \hline 141 \end{array}$$

$$\begin{array}{r} 9400 \\ 5987 \\ 5457 \\ 273 \text{ Set} \\ \text{Set } 3570 \end{array}$$

0017 1/15

19<sup>h</sup> 40<sup>m</sup>

155	137
155	136
155	148
155	147
152	147
<u>475</u>	<u>65</u>
5950	1430
	1950
	7380
	36.9 set-ol.
	<u>200</u>
	529
	52.5
	30.05
	57.4

2230

584	961
594	950
588	940
584	948
575	941
<u>425</u>	
5850	240
	9480
	1850
	5330
	26.6 set-36.9

001-18185

18h 15m

580	80	02
604	81	18
580	83	28
587	81	08
588	80	11
489	355	67
588	80	134
	587	1878
	6648	6012
	38.2	30.1 total
	20h 20m	
560		
56.5		

20h 40m

562  
557  
3007  
58.2

21 30

550  
544  
3007  
580

21 40

643	62
622	588
628	588
628	588
630	588
151	9948
6302	6302
	6250
	31.2 total - 30.1



001-19 1185

$$Q = 21 \ 30,0$$

$$\begin{array}{r} 22^h \ 30^m \\ \hline 55 \ 1542 \\ \hline 55 \\ \hline 551 \\ 547 \\ \hline 5022 \\ 19,2 \end{array}$$

$$\begin{array}{r} 23 \ 30 \\ \hline 21 \ 652 \quad 07 \\ 659 \quad 04 \\ 644 \quad 12 \\ 642 \quad 11 \\ 655 \quad 02 \\ \hline 256 \\ 6572 \end{array}$$

Oct 20 1885-

<i>Rms</i>	<i>f</i>	<i>g</i>	<i>H</i>
5' 0 244 0' 0 23.4	5' 0 237 0' 0 25.0	5' 0 37.2 0' 0 36.8	5' 0 38.6 0' 0 32.0
24.7	24.3	38.0	30.6
24.6	24.2	37.8	30.5
24.7	24.1	38.1	30.4
24.9	24.6	38.2	30.2
<u>24.66</u>	<u>24.18</u>	<u>37.86</u>	<u>30.66</u>
23.32	24.58	37.38	31.28

Level Oct 20

up

<i>E</i>	<i>W</i>
10.2	1.8
9.0	2.9
10.7	1.3
<u>9.7</u>	<u>2.3</u>
39.6	8.3
9.90	2.08
<u>2.08</u>	
119.8	
<u>39.7</u>	
182	
<u>39.1</u>	

down

<i>E</i>	<i>W</i>
10.8	1.0
7.1	4.7
11.0	1.0
<u>4.9</u>	<u>5.9</u>
33.8	12.6
<u>84.5</u>	<u>31.5</u>
315	84.5
530	1760
-265	570
3.91	5.99
<u>656</u>	<u>5.89</u>
3.28	
6 = .65	

level Oct 20 1885 <sup>real</sup> 2 SeriesUp  
Σ W

13.0	3.0
9.8	4.8
12.3	3.5
<u>11.6</u>	<u>4.3</u>
46.7	15.6
11.68	3.90
77.8	
-38.9	

Down  
Σ W

<del>6.9</del>	<del>5.0</del>
10.2	7.4
7.8	3.0
9.0	1.6
6.8	4.8
<u>9.1</u>	<u>1.4</u>
32.7	10.8
8.18	2.70
	<u>8.18</u>
	-44.8
	-2.24
	-3.85
	<u>6.13</u>
	-30.6
	<u>6 = -61</u>

$$G = -63 \text{ adopt}$$



00-20775-

20<sup>h</sup> 0<sup>m</sup>

620	46
610	45
603	49
591	54
614	53
<hr/>	
36	247
60.72	494
	6072
	8566
	328 set.

20 0

601  
 596  
 3023  
 616

21 00

591  
 588  
 3023  
 610

22 30

576  
 572  
 3023  
 607

Dec 26 1145

21	191	580
	83	582
	196	584
	587	587
	195	589
	<u>22</u>	<u>4</u>
	19.44	5825
		1944
		1952
		28.801

21 40m

416  
482  
3004  
54.2

22 40m

474  
471  
3008  
54.0

23 50

463  
459  
3010  
53.6

Oct 27

$h_n$   
 21 0  
 551  
 54.6  
 3023  
 57.7

0 0  


---

 51.25  
 508  
 3004  
 57.2



Oct 30

20<sup>h</sup> 30

35.6

38.3

30.0

57.0

Round Bacon Clock Saturday morning 11-9 AM.  
 Oct-30. By Saturday night - 11-6 PM. it had ~~gained~~  
 1<sup>m</sup> 49. Chandler kept up comparing with  
 394 for this point - till Monday night - when the clock  
 stopped, but during this interval the old rate of .8<sup>s</sup> daily  
 was maintained

Nov 4

441	23.0
446	23.1
432	24.6
426	23.7
438	21.6
<hr/>	<hr/>
183	160
4366	2320
	4366
	6686
	334 set

21 40<sup>m</sup>  


---

 451  
 447  
 299  
 484

Nov 5 1885

Mr. Estlin came out and looked over the balloon clock. He found that the axis of the record wheel had no end-stroke, and the change of temperature had caused a bending which made the clock movement drag and finally stop.

Started the clock at  $7^{45}$  M.T. Nov. 5 10<sup>5</sup> Ser  
of 394.



Novy  
h h  
21 50

52.4  
2967  
56.0

2336

21.456 21 05  
53 988  
57.3 10  
57.2 997  
57.2 996  

---

36 4999  
50.72 9958  
50.72  

---

5070  
283

21 518 21 26  
574 22  
57.4 18  
458 22  
458 22  

---

2530 106  
5068 212  

---

5068 5068  
5280  
26.0  
25.8 set at

Nov 10

20<sup>h</sup>.<sup>m</sup>

44<sup>h</sup>

296<sup>h</sup>

51.1

Nov 1/1885-

2140<sup>m</sup>

494

2980

52.0

22 40

464

2983

51.9

h m  
0 0

446

2980

51.6

Q-21 25.8

532

113

512

115

522

110

522

109

512

102

105

52

5210

11.04

1

5210

6314

31.6

Q-25.8



Nov 12

$$Q = 31.6$$

21<sup>h</sup> 0<sup>m</sup>

482

2972

53.6

Nov 15 1885

20 30

57.3 41

51.4 1.1

10.6 3.2

10.0 8.6

10.1 8.4

---

34 18.4

50.68 36.8

50.68

54.36

27.2 sel.

2 40

406

2970

57.1

0 30

36.4

2969

41.3

Nov 16 1880

20<sup>h</sup> 0<sup>m</sup>

402	87
388	64
350	56
382	64
396	60
<hr/>	<hr/>
468	345
3936	690

3936

4626

20.1541-81 -

20 40

41.2  
2988  
46.2



Nov 17 1885

2040

460	8.2
407	8.8
425	9.7
418	8.7
412	9.0
<hr/>	
72	4.4
4144	8.68
<hr/>	
	4.44

5012

25.1 set of -

b = -6.1

2040

464
3007
51.9

220

441
3807
58.6

2345

417
3807
48.2

Nov 28 1875

22<sup>h</sup> 0<sup>m</sup> -

32.2

31.7 (M.)

3011

40.8

23<sup>h</sup> 0<sup>m</sup>

3517

351.2 (M.)

3011

40.7

21	358	189
	356	189
	383	180
	409	158
	357	188
	<u>463</u>	<u>44</u>
	3926	1888
		<u>3526</u>
		5814

29.1 Set at 29.1 at 22<sup>h</sup> 40<sup>m</sup>Before 22<sup>h</sup> 40<sup>m</sup> Set at 25.0

0	0	0	30
<hr/>		<hr/>	
30.2		28.6	
29.5 (M.)			
3008		3007	
40.7		380	

Nov 29 1885

2140

360	254
382	266
348	245
348	262
348	258
<u>348</u>	<u>289</u>
266	2578
3532	3532

6110

20.5 selol

2130

342  
 336 (44, /  
 3007  
 41.6

23 0

323  
 317  
 3008  
 404

23 30

312  
 306  
 3008  
 390



Dec. 21/85

23<sup>h</sup> 0<sup>m</sup>

21	374	20	142
	363		151
	380		152
	371		154
	378		135
	<u>366</u>		<u>207</u>

21	3732	1434
		3732
		<u>5206</u>

260 set of

23<sup>h</sup> 0<sup>m</sup>

285

280 (all,)

2976

347

0 0

273

277 (all,)

2977

353

0 45

26.5

2972

354

Dec 3 HK

		23 <sup>h</sup> 45 <sup>m</sup>	0 30
21	328.21		
	328	33.8	327
	336	33.3 (M1)	32.1
	326	29.3	29.25
	320	37.7	37.2
	<u>148</u>		
	3296		
	184		
	1365		
	3296		
	<u>4664</u>		
	233 Set at		

The Ballou Clock which was taken  
by Mr. Astor 2 miles app to day was  
returned at 6 PM, Dec 2 and set in  
circulation then 394 at 9<sup>h</sup> 0<sup>m</sup> PM.  
At 5 PM, Dec 3 it was of low of 394  
and for Mr. Edmonds. The same in  
morning of Dec 3 394 was abruptly changed  
from 394 to 395.  
Fadwney at company with 394 sep 216

Dec 6 1885  
2<sup>h</sup> 5<sup>m</sup>

21 308

31.3

36.0

31.6

31.0

27

21 2114

21 122

127

110

138

123

120

21 1240

31.14

9354

218 set of

21 15

298

291 (h,)

2957

400

23 21

267

262 (h,)

0 0

258

252

29.49

361

0 45

257

252 (h,)

29.48

352



25402  
23002

286	58
286	62
280	55
269	54
241	56
<u>402</u>	<u>245</u>
2804	570
	2804
	1574
	16.9 Oct

23 10

152

158 m,

2889

2817

h —

0 0

141

144 (h,)

2980

260

1 h 0 ~

132

13.8

29.94

227

Dec 8 1885

21<sup>h</sup> 10<sup>m</sup>

22<sup>h</sup> 15<sup>m</sup>

21 229 137

223 122

212 138

215 131

216 131

95 159

2150 1318

2150

3508

175501-

285

280 M!

3019

326

1

Dec. 10

Monday

21	417	56
	420	69
	418	67
	422	53
	424	51
	<hr/>	<hr/>
	99	316
		632
	<u>4198</u>	<u>4454</u>
		4830
		41 501



Dec 12 1881

2215

4	288	148
	302	130
	312	138
	302	148
	257	148

<u>511</u>	<u>212</u>
------------	------------

3022	1424
------	------

3022

4446

222

set

2230

304

300 (m.)

3063

40.0

2315

295

250

3063

387130

265

272

215

261

255

3061

327

Dec. 15/85

287	160
282	148
280	150
253	149
288	149
<hr/>	<hr/>
480	256
<hr/>	1512
60	2460
2860	<hr/>
	4372
	219 set

14.5

---

268  
264 (M1)  
2958  
341

2230

275  
272 Mr  
2987  
370

Dec. 16 1885

280	136	<u>22</u> <sup>h</sup> 15 <sup>m</sup>
288	122	33.6
291	130	33.1
295	126	30.24
292	120	
<u>280</u>	<u>126.8</u>	<u>41.0</u>

20.7 set-

<u>23 30</u>	<u>1</u> <sup>h</sup> 0 <sup>m</sup>
327	312
321	30.6 (m, 1)
3027	3030
38.7	39.0

<u>2</u> <sup>h</sup> 0 <sup>m</sup>
295
30.2
30.29
36.1

<u>5</u> 20
271
264 (m, 1)
3033
35.3

<u>6</u> 20
262
257
3033
35.3



Dec 19 1885-

0 h 0 m

246	142
252	131
250	132
247	141
251	126
246	162
212452	1324
	2452
	3516
	19.1 set-01-

332
341
2546
37.0

Dec 20 1850

		25 30	3 00
221	137	202	23.3
216	132	204 (m4)	23.7 (m1)
228	158	2970	2977
210	136	300	26.1
217	140		
92	203	240	
2184	1406	184	
	2184	188 m1	
	3590	2975	
	18000	26.6	

4 15	5-0	5-45
180	16.1	11.0
186	16.7	113 (m1)
2979	2580	2580
258	258	258

Dec 21 1885-

## Runs

$\Sigma$	$\#$	$\#$	$\#$	$\#$	$\#$	$\#$	$\#$
50 25.6	96	008.1	5'00"8	00 1.3	50 54.5	00 55.5	50 1.0
25.3	97	7.86	1.0	0.9	54.9	54.8	0.2
25.7	93	7.7	1.1	0.9	55.6	54.9	0.1
25.5	93	7.9	0.7	0.6	55.8	54.9	0.0
25.5	95	7.6	0.8	0.5	55.5	54.6	0.0
<u>94.8</u>	<u>7.78</u>	<u>0.88</u>	<u>0.84</u>	<u>55.26</u>	<u>54.94</u>	<u>0.26</u>	<u>0.7</u>
							0.46

## Level

## Up

$\Sigma$	$n$
5.0	8.6
12.9	0.7
7.0	6.3
<u>12.0</u>	<u>1.3</u>
36.9	16.9
92.2	42.2
	9.22
	<u>5.00</u>
	-2.50

## Down

$\Sigma$	$n$
16.0	5.9
13.0	7.8
<u>13.9</u>	<u>8.0</u>
19.0	7.7
13.2	8.8
<u>13.8</u>	<u>7.2</u>
18.7	10.2
16.3	12.1
24.0	3.0
16.00	8.00
7.00	3.00
<u>-2.00</u>	<u>-6.00</u>

$$-2.00 = 6 = -6.0$$



Dec 13

328	135	
522	140	
812	140	
316	137	
310	130	
<hr/>	<hr/>	
86	185	
3152	1590	
	3152	
	<hr/>	
	4542	
	227 el-	

224

Dec 24  
1185

336	150
324	160
334	180
332	185
322	161

151	329
3302	1658

0302

4560

248 del -

23<sup>h</sup> 15<sup>m</sup>

329

321 (u,)

3007

440

0<sup>h</sup> 15<sup>m</sup>

302

29.6 (u,)

3007

420

1 0

292

28.6 (u,)

2 0

33.0

32.6 (u,)

3012

400

2 45

264

26.0 (u,)

3017

372

~~3 15~~

Dick

224	224
214	252
204	277
218	287
211	288
<u>67</u>	<u>418</u>
2134	2836
	2134
	<u>970</u>
	2485

1 45 ~

---

~~32~~  
 36.2 (m.)  
 33.7  
 29.5  
 35.0

2 15

---

33.5  
 33.1  
 29.8  
 38.0

3 15

---

321  
 318  
 29.87  
 35.1

5 20

---

320  
 313  
 29.93  
 37.3

6 0

---

304  
 29.8  
 29.86  
 37.4



Dec 29. 1955 -

256	130
227	138
217	120
226	131
224	122

128	141
-----	-----

2256	1282
------	------

2256

2535

17.7 set.

$$\begin{array}{r} 340 \\ \hline \end{array}$$

33.4

328 (24, 1)

29.37

86.8

$$\begin{array}{r} 345 \\ \hline \end{array}$$

337

326

29.34

388

Dec. 30

272	120
285	170
~90	162
290	16.6
~71	16.6
<u>408</u>	<u>234</u>
2816	1668
	2816
	<u>4484</u>
	224

Jan 6 1875

330

5 00

5 45

274

248

242

29~~54~~

2943

2942

412

326

330

@ = 22.9



Dec. 7/1885-

20.2	187
21.0	187
19.6	196
21.8	20.5
<u>203</u>	<u>19.6</u>
1029	471
2058	1942
	2058
	4000

200 set 01

830

16.6

350

16.2

2967

294

530

14.1

2969

241

Jan 14 1883

340

131

3070

218

400

134

3068

212

515

10.3

3065

18.2

① Sel - at 21 20.0

2 32

31

43

38

40

188

2103.76

028

313

020

020

021

162

3204

076

3580

17.9 at 20.0

Jan 17 1886

84.8	216
13	260
53	211
80	221
9.1	205
<hr/>	<hr/>
415	53
800	2106
	830
	2556
	15.0 set.

4	20
3	<hr/>
	288
	2972
	64.2

3	45
	<hr/>
	28.2
	29.14
	339

5	15
	<hr/>
	264
	2974
	82.3

5	50
	<hr/>
	26.2
	29.74
	82.0



Jan. 23

34 15

4 00

4 45

101	281
96	309
108	282
103	368
87	291
<hr/>	
485	526
990	3092
	990
	4082
	204 sel

122	325
129	311
127	301
111	290
101	201
<hr/>	
90	35
1180	3030
	1180
	4200
	212

128	291
138	285
112	285
112	281
164	228
<hr/>	
154	410
1388	2820
	1388
	4208
	210 sel
	204 sel

h u	214
315	212
40	210
44	221
549	

5-49

136	330
148	310
120	318
115	320
110	320
<hr/>	
99	118
1158	3236
	1158
	4434
	222

n u	4 00
3 30	
<hr/>	
142	124
3030	3030
321	288

5 20	
<hr/>	
88	
3032	
238	

Sel 201

Dec 25

W 11h 20m M4  
 08 357  
 10 347  
 10 336  
 18 348  
 87 348  
 53 236  
 348 2  
 1.06  
 2556

Adjusted 17.89  
 N.C. on S.C.  
 before the time  
 for focus

12h 20m  
 16 367  
 18 368  
 23 351  
 23 355  
 24 350  
 11 2 255  
 24 3550  
 224 3814  
 19.07

1h 0m  
 18 357  
 18 342  
 20 352  
 17 351  
 06 348  
 29 44  
 1.58 2488  
 1.58 1.58  
 2646  
 18.23

110  
 17 318  
 22 318  
 07 313  
 21 328  
 20 321  
 98  
 3186  
 104  
 3350  
 16.85

1h 15m

Adjusted  
 S.C. on W.C.

130  
 W.C. S.C.  
 08 319  
 18 339  
 19 330  
 04 318  
 58 327  
 116 128  
 3256  
 1.06  
 1322  
 1688

330  
 17 316  
 18 302  
 11 316  
 21 308  
 18 318  
 1.5 60  
 1.70 3120  
 170  
 3250  
 1645



Jan 26

940<sup>m</sup>

2	108	21301
	00	311
	06	312
	11	309
	19	<u>295</u>
		1533
44		3066
0.88		.88
		3154
		<u>1577</u>

h m  
10 30

40	30
28	302
18	303
17	307
26	313
16	311
105	36
210	3072
	510
	3252
	<u>31641</u>

h m  
11 35

10	290
21	290
14	284
04	283
10	288
59	488
118	2876
	1115
	2994
	<u>1497</u>

Over All Day of S.O.

h m  
12 5

22	321
21	333
21	324
26	314
24	321
14	117
228	339
	3234
	218
	<u>3462</u>
	<u>1731</u>

1245131<sup>h</sup> 0<sup>m</sup>

27	316
33	317
20	316
29	318
52	330
<u>151</u>	
262	97
	3154
	262
	3456
	<u>1728</u>

Adjusted S.O.

16	308
28	322
18	321
24	321
28	326
<u>114</u>	98
228	3196
	218
	3424
	<u>1712</u>

Set-171



Jan 26 1886

345

351

30'13

318

4<sup>h</sup> 10<sup>m</sup>

33.8

30.14

31.9

5 45

320

30.19

33.1

5<sup>h</sup> 10<sup>m</sup>

87

304

71

290

6.8

270

7.0

272

7.4

287

423

374

2846

748

748

359417.95

Feb. 1  
1<sup>h</sup> 0<sup>m</sup>

21	6	5	21	302
	56			305
	58			292
	53			303
	58			288
	58			301
				<u>1800</u>
				3000
21	746			746

~~21746~~  
~~21746~~  
1873

145  
292  
308  
312  
305  
300  
1517  
3034

81  
 71  
 79  
 79  
 70  
380  
 760  
 20,54  
0794  
1897

of pure shunters

20  
70  
68  
62  
76  
62  
338  
676

260  
 212  
 242  
 267  
241  
 262  
 2524  
 676  
3200  
 16.00  
 sel -

92 252  
 68 289  
 83 252  
 86 250  
 88 250

250  
200  
2883  
321

330  
187  
2883  
311

350  
17.5  
2513  
30.6

Feb 2 HHX

~~80.00~~

20.0

30.07

31.1

Feb 3

~~Up Down~~

~~3.1 4.8~~ ~~2.0 6.2~~

~~4.8~~ ~~6.2~~

~~2.0~~ ~~3.1~~

~~+1.8~~

Up Down

38 85

+57

285

40

04 64

76.00

3.00

285

2.99

t = 7.61











Comparison of No. 4 and metal thermometer  
 $M_4$ ,  $M_1$ , spirit-thermometer  $N_6$  and Canceled  
 thermometer designated No. 1.

Date	Time	Weather	$M_4$	$M_1$	$[M_4 - M_1]$
May 19	9 <sup>30</sup>	Clear	64.5	62.5	+2.0
19	9 45		65.3	63.0	+2.3
19	9 55		65.8	63.7	+2.1
19	10 30		68.8	67.0	+2.8
19	10 50		70.6	67.9	+2.7
19	11 5		71.1	68.4	+2.7
19	11 15		71.6	68.8	+2.8
19	11 25		72.0	69.2	+2.8
19	12 0		74.8	71.4	+3.4
19	12 10		75.0	71.8	+3.2
19	1 0 PM		77.2	74.0	+3.2
19	1 15		78.0	74.6	+3.4
19	7 30		78.0	74.6	+3.4

May 20 No. 4, No. 6, No. 6 - No. 4, No. 6, No. 6 - No. 4								
9 <sup>30</sup>	Cloudy	62.5	62.1	16.56	61.8	-0.7	-0.3	+0.4
9 45		62.1	61.8	16.10	61.0	-0.1	-0.8	+0.3
10 0		61.2	61.3	15.47	59.8	-1.4	-1.5	-0.1
10 15		60.3	59.7	15.05	59.1	-1.3	-0.6	+0.6
10 25		59.3	59.4	14.46	58.0	-1.3	-1.4	-0.1
10 40		59.1	58.8	14.47	58.0	-1.1	-0.8	+0.3
11 0		59.5	58.7	14.90	58.9	-0.6	-0.8	+0.6
11 20		60.0	58.9	15.22	59.4	-0.6	+0.5	+0.1
11 30		60.7	59.5	15.11	59.2	-1.0	-0.3	+0.7
1 0		61.7	61.8	16.13	61.0	-0.7	-0.8	-0.1

May 21

Time	Weather	No	No	No.4	No.1	No.-low	No.-M,	No.4-M,
8 30	cloudy	1346	562	556	547	+6	+1.5	
9 20		1440	579	577	564	+2	+1.5	
10 15		1456	582	581	567	+1	+1.5	
10 30		1500	599	597	582	+2	+1.7	
3 45 Pm.		1541	618	623	614	-8	+1	
6 0		1480	586	580	580	+6	+6	
7 0		1488	588	560	560			
9 30		10.93		53.6	541			

May 22

9 30	4hr Cloudy	1471	615	596
10 0		1501	620	602
10 20		1780	640	628
10 50		1843	648	638
11 20		1820	647	636
11 30		1884	652	637

May 24

8 Pm	1330	573	567
------	------	-----	-----



May 25

6 <sup>40</sup>	Cloudy	Mo4 M, Mo4-M,	550	544
9 0	"		597	582
9 30	"		611	596
10 0	"		622	605
10 20	"		633	617
11 0	"		657	636
11 30	"		681	657
12 0	"		682	658
1 0	"		686	668
4 30	"		688	682
6 00	"		677	669
8 45	"		636	641

May 27

9 0	clean	7	715	691
9 45	"		738	707
10 10	"		750	721
10 45	"		766	738
11 30	"		787	756
7 30	Plu		696	686

May 26

5 <sup>40</sup>	clean	Mo4 M, Mo4-M,	600	582
5-50	"		615	606
6 40	"		644	630
8 20	"		684	670
9 30	"		713	689
10 20	"		727	703
11 00	"		740	719
11 15	"		743	720
11 30	"		757	726
11 45	"		758	732
12 0	Remained Mo, and Mo, y to 20 tunda			
	After 20 minutes bottle read 670			
12 20	Replaced bottle other numbers			
1 0	Plu		777	748
9 0	Plu		679	679



May 28

$42 + 0.5$      $72 + .2$   
 $47 + .5$      $82 + .2$   
 $52 + .5$   
 $57 + .5$   
 $62 + .5$

Bought - Correll a thei monster No.

It nice in design noted

No. 1 It is heavy beside No. 4.

Time weather No. 4 No. 1 No.

6 <sup>40</sup> am clear	58.1	54.5	54.5
8 30	57.6	56.7	56.8
9 00	58.7	58.4	57.6
9 20	59.1	58.2	57.6
9 45	58.2	58.7	58.6
10 00	58.8	58.5	58.6
10 30	59.9	59.3	59.1
10 45	60.7	60.0	59.7
11 00	61.0	60.2	59.8
11 05	61.8	60.9	60.4
11 30	61.5	60.8	60.5
11 45	61.2	60.7	60.3
12 00	61.2	60.4	60.4
12 30	62.0	61.3	60.9
12 40	62.2	61.0	60.9
13 00	62.3	61.4	61.6
3 30	60.7	60.2	60.3
4 00	60.6	59.4	59.8
7 45	53.7	58.5	54.1

May 29

Rain May No 1 M,

5 40	476	465	470
6 0	496	488	484
6 45	525	516	510
8 30	596	589	576
8 50	611	606	592
9 10	629	624	619
9 30	641	634	623
9 50	659	651	632
10 0	671	664	647
10 45	697	683	667
11 00	707	700	681
11 50	731	724	701

~~1 30~~ Removed No 1 and M, outside

<del>2 30</del>	—	721	730
<del>3 30</del>	—	734	740
<del>4 30</del>	—	725	725
<del>6 0</del>	—	636	652

6 30	661	652	652
------	-----	-----	-----

May 30

745 Rain 546 596 583

May 31

5 30	Rain	542	543	544
6 00		540	543	539
8 30		557	545	556
3 30		547	546	541
5 30				



June 1	Mr, Kv, M,		
8 30 <sup>m</sup> Cloudy	56.4	55.7	55.2
9 0	57.0	56.4	55.7
9 30	58.4	57.3	56.8
9 45	59.5	58.2	57.6
10 00	59.8	58.8	58.2
10 30 "	60.8	59.7	58.8
11 00 "	64.4	63.1	61.8
11 30 Clearing	65.2	64.2	62.8
1 0 "	67.6	66.7	66.2
1 5	Removed Kv. After swinging in it read 68.0		
1 10	Placed Kv and M, in open air		
1 25	—	64.4	65.2
3 30		61.9	62.7
3 45		62.3	63.2
3 55		62.1	63.2
4 10		60.6	(62.1)
Prz McLeod	discovered that after topping the pole of M, it reads less		
6 30	57.7	(59.0)	(58.0)
7 30	53.7	(55.7)	(54.7)
7 35	Remained Kv and M, to Coye.		
8 30	52.6	52.3	(52.7)
10 00	52.2	50.8	(51.9)



June 32 The lower reading of  $M_1$  is the reading of the Topping  
 Time Machine No. 4 No.  $M_1$

8 0 Cloudy	601	594	594
			59.2
8 30	613	606	60.2
			60.3
8 45	615	606	60.5
			60.6
9 30	616	608	60.7
			60.8
9 45	622	615	61.1
			61.3
11 0	649	641	63.6
			63.8
12 30	657	653	64.8
			64.8

Sunny No. 1 68.2

12 10 Reposed No. 1

5 0	632	625	63.5
			62.9
9 30	578	—	56.7
			57.2

Sunny No. 1 = 63.0

Paced No. 1 in company from below in cellar.  $M = 19.61 = 51.1$   
 $No. 1 = 51.2$

June 33

11 10 Partly Clear	624	614	(60.2)
			(61.1)
12 20	643	635	(63.3)
			(63.4)
1 30	Sunny No. 1 = 63.3		
1 40	651	642	64.3
			63.5
3 30	67.8	66.1	65.2
			65.8
6 30	63.1	62.2	63.2
			62.7
8 0	57.5	56.8	57.5
			57.5
9 20	55.2	54.4	55.2
			54.7
10 0	54.0	53.3	53.9
			53.9

June 4

9 0	63.8	650	63.6
			64.6
9 30	67.1	66.4	67.1
			67.5
9 45	67.6	66.6	67.6
			67.6
10 10	70.7	70.1	68.6
			68.6
10 45	73.2	72.6	73.1
			72.9
11 30	72.7	71.9	72.5
			72.5
11 40	$M_1$ and $M_2$ out side		
12 30		73.0	72.3
			71.8
1 0		72.2	71.8
			71.8

Jan 4

130 72.2 71.4 (71.3)

330 65.6 64.6 (65.8)

50 65.3 64.7 (64.8)

610 64.2 63.6 (64.2)

630 63.8 63.2 (63.6)

Jan 5<sup>th</sup> 57.2 56.6 (57.8)

9 AM 57.7 57.2 (57.7)

10 0 57.4 57.7 (57.4)

Jan 10

8<sup>th</sup> AM 58.2 57.3 (57.7)1<sup>st</sup> PM 72.6 71.5 (72.0)

Jan 11

1 PM 72.7 72.0 (71.7)

Slowing rate = 4.1.8







Dec. B. Photo MIT Balena 0.5 Sec 354

3	4	Pin	0.9	"	"
4	8	Pin	0.9	"	"
4	4	Pin	0.9	"	"
5	9	Pin	0.8	"	"











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