

KG
11366
V. 521

Flexure.
Collimations. A 2
Runs.

From Oct. 4/1879 to Jan. 2/1880

Σ₂

2

579 Oct. 4
7 45

	N.C			Flexure			S.C		
E	H	G	P	E	H	G	P		
10 0									
58.0	7.2	2.3	3.8	48.9	7.2	8.0	2.2		
57.7	7.7	2.1	4.0	49.2	7.2	7.9	1.7		
57.3	7.7	2.0	3.8	49.1	7.3	7.8	2.0		
57.8	7.7	2.0	3.4	49.0	6.8	7.8	1.7		
57.3	7.4	2.2	3.3	49.0	6.6	7.8	1.9		
31	27	6	33	2	1	43	45		
57.62	7.54	2.12	3.66	49.04	7.02	7.88	1.90		
212	366	57.62	49.04	7.88	190				
11974	1120	7.54	7.02	11690	892				
59.87	5.60	2.12	7.80	58.45	4.46				
58.45	4.46	3.66	1.90						
1.42	1.14	25.094	24.876						
1.14		62.73	61.44						
28			1.29						
11.4			1.64						

Oct. 4

 $\bar{I} = 7$ 45

46.758

754

744

770

700

226

46.745

46.952

948

952

951

951

4

46.951

46.745

1696

46.848

Set C at 46.869

4

879 Oct. 6

= 12 40

46.796

798

795

805

800

494

46.799

46.949

958

948

949

949

53

46.951

46.799

1750

46.875

Cont at 46.875

6

1879 Oct. 7
E=7 45

	N. 6		Flexure		S. 6	
E	F	G	H	E	F	G
10 0						
57.8	7.8	3.5	5.8	50.5	8.1	9.7
57.9	8.0	3.4	5.9	50.2	8.0	9.6
58.0	8.0	3.7	5.9	50.1	8.2	9.7
58.0	8.2	3.4	5.8	50.2	8.0	9.5
57.9	8.1	3.5	5.8	50.3	8.2	9.7
46	1	25	42	13	5	32
57.92	8.02	3.50	5.84	50.26	8.10	9.64
350	584			9.64	434	
12142	1386			11990	1244	
0.71	6.93			59.95	622	
59.95	622					
0.76	0.71					
71						
147						
+ .37						

Oct. 7
I=7 415

46.761

750

761

758

760

290

46.758

46.938

939

935

928

940

180

46.936

46.758

1694

46.847

Cset at 46.875

8

879 Oct. 13

7 = 10 20

N. G.		Flexure		S. G.			
E	F	G	H	E	F	G	H
10							
1.3	8.7	1.5	5.0	52.7	8.2	8.7	3.2
1.0	8.7	1.8	4.8	52.8	8.8	8.7	3.2
1.1	8.7	1.9	4.9	52.6	8.4	8.5	3.0
1.0	8.8	2.0	4.9	52.9	8.4	8.7	3.4
1.1	9.0	2.0	4.7	52.4	8.4	8.2	3.3
5	3.9	4.2	4.3	32	22	28	11
1.10	8.78	1.84	4.86	52.64	8.44	8.56	3.22
1.84	4.86			8.56	3.22		
9.4	13.64			121.20	11.66		
1.19	6.82			0.60	5.83		
0.60	5.83						
0.59	0.99						
0.99							
1.58							
+ .39							

1879 Oct. 13

III

46.815

46.818

807

807

818

818

819

815

816

818

75

76

46.815

46.815

46.839

46.840

831

842

827

848

838

850

827

842

162

222

46.832

46.844

815

815

1647

1659

46.823

r 46.829

Set c at 46.826

10

1879 Oct. 14

T=10 20

46.780

46848

789

840

790

839

780

838

785

84.7

24

212

46.785

46842

842

1627

46813

Set c at 46826

	N. C.			Flexure		S. C.		
E	H	G	H	E	H	G	H	
10 1								
0.3	9.5	5.1	5.0	51.4	8.9	10.6	3.6	
59.8	9.8	5.3	5.3	51.7	8.9	10.3	8.3	
59.8	9.9	5.3	5.3	51.6	9.0	10.8	3.0	
0.2	9.8	5.0	5.0	51.4	9.0	10.6	2.8	
0.3	9.8	5.0	5.0	51.7	9.0	10.4	2.7	
4	38	7	6	28	48	27	4	
0.08	9.76	5.14	5.12	51.56	8.96	10.54	3.08	
514	512			1054	308			
522	1488			12210	1204			
261	744			1.05	6.02			
105	602							
1.56	1.42							
142								
298								
+0.75								

1879. Oct. 14. Level.

π	E
46.9	59.3
<u>63.1</u>	<u>42.6</u>
110.0	101.9

$$101.9$$

$$4 \overline{) 81}$$

$$I = \frac{2.02}{3.45}$$

$$2 \overline{) 5.47}$$

$$\underline{2.72}$$

$$2.75$$

$$10 \overline{) 0.84} = 0.084$$

$$= 0.056$$

$$\begin{array}{r} 272 \\ \cdot 0.056 \\ \hline 1632 \\ \hline 360 \\ \hline 15 \end{array}$$

$$b = +15$$

12

Oct 19 1879

$$\begin{array}{r}
 46787 \\
 793 \\
 800 \\
 810 \\
 793 \\
 \hline
 8983 \\
 46797
 \end{array}
 \qquad
 \begin{array}{r}
 46894 \\
 882 \\
 902 \\
 892 \\
 900 \\
 \hline
 4690 \\
 46894 \\
 46797 \\
 \hline
 1691 \\
 46845
 \end{array}$$

Sum of 46826

1879 Oct. 20
I-15 45

46.875

880

879

883

870

387

46.877

705

1582

46.791

46.696

700

710

710

710

26

46.705

Cont at 46.791

14

1879, Oct. 22

T= 15 40

46.783

46.828

795

840

790

822

794

829

780

830

42

149

46.788

46.830

788

1618

46.809 C. set at 46.809

1879 Oct. 23
 $I = 9$ 40

Runs

E		H		G		H	
5	0	~~38.3~~					
32.2	31.7	38.3	37.8	36.7	35.6	39.1	37.8
32.5	32.0	38.0	38.1	36.5	35.7	38.6	37.7
32.7	31.9	38.2	38.0	36.8	35.9	39.0	37.8
32.4	31.4	38.3	38.2	36.3	35.7	38.5	37.9
32.8	31.9	38.4	38.2	36.3	35.8	38.1	38.1
26	39	12	3	26	37	33	43
32.52	31.78	38.24	38.06	36.52	35.74	38.66	37.86

46.790

788

792

780

770

420

46.784

46.830

842

842

827

830

171

46.834

784

1618

46.809 C set at 46.809

Seeing very bad indeed

16

879. Oct. 25

I = 13

0

46.936

46.593

930

595

923

58.9

923

590

923

600

135

457

46.927

46.591

927

1578

46.759

C set at 46.759

1879 Oct. 26
I = 4 45

46.829	46.730
830	739
830	730
838	723
837	730
14	2

46.833

46.730

833

1563

46.781 C set at 46.759

N.C.		Flexure		L.C.			
E	H	G	H	E	H	G	H
10 1							4
6.9	11.9	1.8	4.1	58.0	12.2	9.8	4.3
7.1	12.1	1.3	4.9	58.1	12.2	9.5	3.7
6.6	12.1	1.6	4.7	58.0	12.8	9.0	4.0
7.0	12.0	1.5	4.8	58.3	12.5	9.2	4.2
6.3	11.9	1.5	4.8	58.7	12.3	8.9	4.3
3.9	0	2.7	3.3	11	2.0	1.4	5
6.78	12.00	1.54	4.66	58.22	12.40	9.28	4.12
15.4	46.6			9.28	4.12		
8.32	16.66			12.50	16.52		
4.16	8.33			3.75	8.26		
3.75	8.26						
0.41	0.07						
107							
48							
+ .12							

18

1879 Oct. 29

I = 13 30

46.828

46.765

829

758

825

757

822

759

822

750

26

39

46.825

46.758

758

1583

46.791

C set at 46.791

E	N.b.			Flexure & Index L.b.			
	H	G	H	E	H	G	H
10. 1							
1.8	9.2	3.3	7.0	52.4	9.3	9.6	5.2
2.0	9.0	3.0	7.1	52.7	9.8	9.3	4.8
1.7	9.6	3.1	6.4	52.6	9.8	9.8	4.3
2.0	9.2	3.1	6.9	52.8	9.6	9.4	5.1
2.0	9.4	3.0	6.9	52.6	9.2	9.7	5.0
9.5	14	5	43	31	27	28	44
1.90	9.28	3.10	6.86	52.62	9.54	9.56	4.88
31.0	6.86			9.56	488		
500	1614			218	1442		
25.00	8.07			109	7.21		
109	7.21						
1.41	0.86						
0.86							
2.27							
+5.7							

1879 Nov. 5
 $\Pi = 19 \quad 10$

46.798	46.623
790	620
804	622
790	630
800	640
482	135
46.796	46.627
627	
1423	
46.711	

C set at 46.711

E	N.C. F	G	Flexure No	E	N.C. F	G	No.
10	1						
8.5	13.4	59.9	3.8	57.9	10.1	4.2	1.1
8.1	13.0	59.8	4.1	57.7	10.9	4.1	1.1
8.1	13.2	59.8	3.9	57.9	10.4	4.4	1.8
8.9	13.2	59.8	3.7	57.9	10.8	4.9	1.1
8.2	13.0	59.9	4.1	57.9	10.5	4.3	0.5
18	8	42	46				
8.36	13.16	59.84	3.92	57.86	10.54	4.38	1.12
59.84	3.92			4.38	112		
820	1708			224	1166		
4.10	8.54			112	5.83		
112	583						
298	271						
271							
569							
+142							

20

1879. Nov. 6

 $\overline{I} = 15 \quad 0$

46.837	46.593
840	588
830	584
843	580
841	58.4
<u>191</u>	29
46.838	46.586
586	
<u>1424</u>	
46.712	

C set at 46.711

		N.B.		R		P		Q		S		T		U	
10	1	91	120	56.5	31	593	11.0	2.1	0.2						
		92	117	56.2	24	593	10.9	2.1	0.5						
		86	121	56.8	23	592	10.9	1.9	0.0						
		87	119	56.9	29	592	10.9	2.1	0.0						
		91	121	56.3	22	591	10.9	2.2	0.8						
		47	98	2.8	29	15	46	4	5						
		8.94	11.96	56.56	2.58	59.30	10.92	2.08	0.10						
		56.56	2.58			208	0.10								
		12550	1454			138	11.02								
		2.75	7.27			0.69	5.51								
		0.69	5.51												
		2.06	1.76												
		176													
		382													
		+ .96													

1879 Nov. 10

I = 13

20

I

46.842	46.787
841	788
850	788
833	785
860	782
246	30
46.847	46.736
736	
1585	
46.792	

II

46.820	46.693
824	688
828	689
843	694
830	688
145	2
46.829	46.690
690	
1519	
46.759	
792	
151	
46.775	

C = 46.775

N.C.				Flexure				
E	F	G	H	E	F	G	H	
10	10.2	107	06	52	541	9.1	6.1	2.4
	50	104	08	53	541	9.1	6.2	2.8
	49	101	08	59	545	86	60	3.1
	52	100	01	55	542	87	59	3.6
	53	105	02	50	542	9.1	56	2.2
	6	11	15	24	11	46	48	15.1
	5.12	10.22	030	548	54.22	8.92	5.96	3.02
	030	548			596	302		
	542	1570			018	1194		
	271	7.85			0.09	5.97		
	009	597						
	2.62	1.88						
	188							
	450							
	+1.12							

22
 1879, Nov. 15
 $\Gamma = 11$ 15

46.790 46.798
 771 791
 781 790
 780 780
 781 788
 3 47
 46.781 46.789
 789
 10
 46.785

C set at 46.775

P. lersum

	ν	ϵ	R	l_0	m_0		ν	R	S	ϵ	m_0
10	26	79	42	72	531	6.2	9.9	53			
	30	85	39	79	532	6.1	9.4	52			
	29	71	34	79	537	5.9	9.2	52			
	38	79	38	80	530	6.1	9.6	58			
	30	76	34	77	539	5.9	9.1	52			
	148	30	37	887	169	302	22	17			
	2.96	760	393	7.74	53.38	6.04	9.44	534			
	393	7.74			944	534					
	689	1534			282	1138					
	335	767			14.14	5.69					
	1.41	569									
	1.94	1.98									
	198										
	392										
	+ .98										

1879 Nov. 16

46.792 46.695

795 710

805 712

807 710

813 711

12 38

46.802 46.708

708

1510

46.755

C set at 46.765

24

1879 Nov. 24

D = 17 15

46.821 46.595

811 590

820 612

830 600

822 597

104 494

46.821 46.599

599

1720

46.710

C set at 46.710

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26 Nov 29-30
 $T = 16^h 30^m$

46.871 46.520

863

511

871

527

871

532

875

518

351

108

46.870

46.522

46.870

1392

46.696

Set of 46.696

1
1
0

1879 Dec 1-2
 $I = 16$ 40

~~46.835~~
~~85~~
~~82~~
~~85~~
~~6~~

861

867

860

290

46.858

882

1340

46.670

46.495

483

474

480

470

412

46.882

C set at 46.696

28

1879 Dec. 3

T = 17^h 20^m

46.832 46.602

833 600

830 600

831 594

826 604

2 00

46.830 46.600

600

1430

46.715

Set c at 46.715

1879, Dec. 4

 $I' = 17 \quad 45$

N.C.

Y.B.

I	II
46.801	.810
800	.811
800	.823
830	.812
820	.811
51	67

I	II
46.637	.631
648	.629
647	625
637	628
633	637
2	0

46.810 46.813

46.640 46.630

810

813

1450

1443

46.725

46.721

721

1446

Set c at 46.723

30

1879 Dec. 4-5

I = 16 50

		N. C.		Flexure		S. C.		
E		F	G	H	E	F	G	H
10	1							
11.6		17.2	15.4	11.4	2.8	16.5	21.8	10.0
11.4		17.2	15.8	12.1	2.9	17.0	21.4	10.3
11.8		17.0	15.9	12.2	2.8	16.4	22.0	10.2
12.0		17.0	15.7	12.2	2.8	16.8	21.8	10.0
12.1		17.0	15.9	12.2	2.8	17.0	21.9	10.0
39		4	37	1	41	37	39	5
11.78		17.08	15.74	12.02	2.82	16.74	21.78	10.10
15.74		12.02			27.78	10.10		
752		910			3060	2684		
1376		14.55			15.30	13.42		
1530		13.42						
-1.564		+1.13						

46.823 46.600
 837 607
 840 612
 823 602
 832 602
 155 23

46.831 46.605

605

1436

46.718

Corrected 46.723

1879 Dec 6
 $I = 13 \quad 40$

46.822

820

818

818

820

98

46.820

46.689

638

638

631

638

34

46.677

820

1457

46.728 c set at 46.723

32

1879 Dec 8

17-12 40

46,821

46.602

813

603

828

607

823

620

840

605

125

37

46,825

46,607

825

1432

46.716 c set at 46.723

1879 Dec 15
 $P = 15^h 20^m$

N.B.

Flare

L.C.

E	F	G	H	E	F	G	H
10.1							
16.4	21.0	18.0	11.3	7.8	20.5	23.8	10.0
16.3	20.7	17.8	11.0	7.7	20.9	23.9	10.1
16.7	21.0	18.0	11.1	8.2	20.7	24.1	10.0
16.0	21.1	17.8	11.2	8.4	20.6	24.1	9.4
16.3	20.6	17.4	11.2	8.1	20.2	24.1	9.4
17	44	40	8	2	29	0	48.9
16.34	20.88	17.80	11.16	8.04	20.54	24.00	9.78
17.80	11.16			24.00	9.78		
14.14	32.04			32.04	30.36		
17.07	16.02	10.5		16.02	15.18		
16.02	15.18	8.4					
~~10.5~~	0.84	<u>4.189</u>					
~~8.4~~		+4.7					
~~2.10~~							
~~1.10~~							

Runs

E	F	G	H
5.0	0.0	0.0	0.0
58.1	56.5	2.7	2.7
58.0	56.5	2.5	2.8
57.8	57.1	1.9	2.8
57.4	57.3	2.5	2.4
57.8	56.8	2.3	2.5
48	42	19	32
57.82	56.84	2.38	2.64
59.2	57.8	53.4	51.8
59.0	57.8	53.0	52.0
59.1	57.7	53.0	51.8
59.0	57.1	53.0	51.7
59.7	57.4	52.7	51.7
10	28	1	40
59.02	57.56	53.02	51.80

34

Dec. 15

collimation

46.830

46.612

825

600

823

614

820

600

820

595

118

21

46.824

46.604

604

1428

46.714

C set at 46.723

1879 Dec. 17
 $T = 17^h 45^m$

46.813	46.536
717	528
790	53.2
800	52.7
794	53.2
414	25
46.783	46.535
<u>535</u>	
1318	
46.659	

$C = \text{set at } 46.723$

Flexure

E	F	F	G	H	E	F	G	H
10 0								
19.2	18.3	23.8	21.8	16.1?	7.2	19.8	22.8	9.5
19.3	18.6	23.7	21.3	16.2	7.0	19.2	22.8	9.6
19.9	18.4	23.9	21.5	16.0	6.9	19.5	22.7	9.5
19.9	18.8	23.9	21.6	16.0	6.8	19.3	23.1	9.5
19.7	18.7	24.0	21.6	16.2	6.8	19.0	23.2	9.4
30	28	38	28	5	47	18	46	25
19.60	18.56	23.76	21.56	16.10	6.94	19.36	22.92	9.50
21.56		16.10			22.72	9.50		
4116		3986			2986	2886		
20.58		19.93			19.93	14.43		
19.93		14.43						
<u>0.65</u>		<u>5.50</u>						

36 1879 Dec. 18
 T = 17 45

Runs

E	F	G	H
5' 0			
8.3 7.8	11.7 11.0	3.2 1.8	58.3 57.2
8.4 7.9	11.5 10.9	3.1 2.2	58.4 56.8
8.5 8.1	11.4 11.0	3.3 1.8	58.0 56.7
8.9 7.8	12.0 10.8	3.7 2.0	58.3 56.5
8.7 8.0	11.7 11.0	3.7 2.2	57.8 56.7
28 46	33 47	20 0	8 39
8.56 7.92	11.66 10.94	3.40 2.00	58.16 56.76

N. b.

Flexure

S. C.

E	F	G	H	E	F	G	H
10 1							
20.5	23.2	15.4	10.3	9.0	20.0	18.7	5.0
21.0	23.0	15.4	9.9	9.1	20.0	18.3	4.7
20.2	23.0	15.3	9.7	8.8	19.9	17.9	4.2
21.2	22.8	15.9	9.8	8.6	19.9	17.9	4.7
20.3	22.8	15.4	9.3	9.0	19.6	18.2	4.7
32	48	24	40	45	44	10	33
20.64	22.96	15.48	9.80	8.90	19.88	18.20	4.66
15.48	9.80			18.20	4.66		
36.12	32.76			27.10	24.54		
18.06	16.38			13.55	12.27		
13.55	12.27						
4.51	4.11						
4.11							
4.862							
+ 2.15							

Thermom. = Therm 11° to 19°

Dec. 18

37

46.878

46.417

880

~~414~~

874

418

872

420

870

418

24

87

46.875

46.417

417

1292

46.646

C set at 46.646

38

1879 Dec. 21

 $T = 18^h \text{ } 0^m$

46.790

46.398

804

388

792

387

780

377

797

380

463

430

46.793

46.386

386

1179

46.589

c set at 46.589

1879 Dec 28.9
 $I = 18^h 20^m$

46.889 46.443

891 445

883 430

883 444

880 448

26 10

46,885 46,442

885

13 27

46.663 Ltc at 46.663

40

1880, Jan. 2

T = 18 55

E

J

Runs.

G

76

5' 0' 0' 0'

45.2	44.2	48.0	48.0	42.8	42.0	38.2	37.2
45.4	44.2	48.0	48.4	42.5	41.3	38.1	37.0
45.2	44.4	48.0	48.6	42.8	41.7	38.2	37.1
45.6	44.2	48.4	48.2	42.7	41.6	38.2	37.0
45.7	44.6	48.3	48.0	43.0	41.7	38.3	37.1
21	16	7	12	38	33	7	4
45.42	44.32	48.14	48.24	42.76	41.66	38.14	37.08

46.870

46.402

852

390

866

397

860

386

860

39.8

808

473

46.862

46.395

862

1257

Set c at 46.628

Ε
C
18