

KG
11366
v. 586

C 24.
Zone Reductions
From Aug 6. 1874 to Sept. 14 1874.

Charles W. Sever,

Bookstore, Cambridge.

C. 24. $18^{\circ} 44' 14.1''$ 53 Aug. 23
 $18^{\circ} 40' 2.3''$ 57 " "
 " $48^{\circ} 25.8''$ 374 Sept. 7

For Constants of L see C20.

((8) -

((8) -

((8) -

((8) -

((8) -

((8) -

((8) -

((8) -

((8) -

((8) -

Continued from C. 23.

Values of $\log 15^{\circ} \tan i$ for Declinations for

May 29 to Sept 10 = 0.10600 m

$$\frac{d'}{\delta_t} \text{ (8) - D)} = 0.10460$$

$(Oct\ 29\ to\ Dec\ 10) = 0.10134_m$

$$d \quad \text{Dec } 11 \text{ to Dec } 31 = 0.09315 \text{ in}$$
 δ_{10}

d

$$((\delta) - D) \frac{d'}{100}$$
 δ_1

d

$$((\delta) - D) \frac{d'}{100}$$

8

d

$$((\delta) - D) \frac{d'}{100}$$
 δ_1

d

$$((\delta) - D) \frac{d'}{100}$$

8

323

Single Observations

2

Date₁ = 1874 Aug. 6
n = -34
c₀ = -06Observer
RecorderDate₂ = Aug 10
n = -44Observer
Recorder

Star.	α	δ	Mag.	T_1	T_m	T_0	T_r	T_g	T_b	Sum	Mean	Red. to T_m	T
1874	22	30 49 54	9.0	17	22	06	22	12.7	18.7	19.0	22.1	23.4	22
	22	6.6	54.9	9.0									22
	κ												22
	(δ) - D	κ'_{100}											22
Aug 6	c_1												22
	24	41 50 40	8.8	23	58.0	24	23.0	26.3	29.3	32.6	36.0	24	24
	24	17.9	41.0	8.8									24
	κ												24
	(δ) - D	κ'_{100}											24
Aug 6	c_2												24
	26	1 53 30	9.5	25	36.3	25	39.8	43.2	46.8	50.3	53.8	25	25
	25	38.1	20.8	9.3									25
	κ												25
	(δ) - D	κ'_{100}											25
Aug 6	a_1												25
	27	25 53 10	8.9	26	30.5	27	48	8.5	11.6	15.0	18.4	27	27
	27	2.3	11.0	8.9									27
	κ												27
	(δ) - D	κ'_{100}											27
Aug 6	a_2												27
	28	27 50 47	7.8	27	58.1	28	8.0	11.3	14.7	17.9	21.1	28	28
	28	4.2	48.4	7.5									28
	κ												28
	(δ) - D	κ'_{100}											28
Aug 6	a_1												28
	29	37 50 55	9.0	29	5.1	29	17.3	20.7	24.0	27.3	30.5	29	29
	29	14.3	55.8	9.1									29
	κ												29
	(δ) - D	κ'_{100}											29
Aug 6	a_2												29
	41	20 50 2	9.0	40	43.5	41	35	68	100	13.1	16.2	41	41
	40	57.4	3.3	9.1									41
	κ												41
	(δ) - D	κ'_{100}											41
Aug 10	a_1												41
17	28	37 50 47	7.8	27	48.0	28	11.3	14.6	17.7	21.0	24.4	28	28
	28	4.2	48.4	7.5									28
	κ												28
	(δ) - D	κ'_{100}											28
Aug 10	a_2												28
	29	37 50 55	9.0	29	7.2	29	20.5	23.7	27.2	30.3	33.7	29	29
	29	14.3	55.8	9.1									29
	κ												29
	(δ) - D	κ'_{100}											29
Aug 10	a_1												29
	41	20 50 2	9.0	40	43.5	41	68	10.0	13.1	16.2	19.5	41	41
	40	57.4	3.3	9.1									41
	κ												41
	(δ) - D	κ'_{100}											41
Aug 10	a_2												41

Aug. 6 +2 58.3 +.00
 Runs Aug. 10 5.25 +.00

 $\phi = 42^\circ 22' 48.35''$

3

	T _m - T	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	8'
	5	0 45.2	57.1	1023	57.15	51 57.20			30	49 53 50.61	
d	+15.1 1.17898 9.80897 1.09 395 _m					49 54 30.3 -12.42				- 6 + 0 + 7.65 + 35 - 6.20 53 52.35	+7.94
((8) - D) $\frac{d'}{100}$											
+1.51 -3.26	δ_1	22 37.28		53 49.1							
d	+27.2 1.43457 9.80182 1.34 239 _m	3 44.5	54.8	993	49.65	38 58.70 50 41 4.53 -22.00			40	50 40 42.53 - .19 + 0 + 8.35 + 38 - 6.20 40 44.87	+8.54
((8) - D) $\frac{d'}{100}$											
+1.46 -3.07	δ_2	24 47.66		40 41.8							
d	+12.3 1.08991 9.77609 0.97 200 _m	4 56.7	7.7	44	5 2.20	17 46.15 53 19 57.98 -9.38			0	53 19 42.60 - .4 + 0 + 11.06 + 46 - 6.40 19 47.68	+11.46
((8) - D) $\frac{d'}{100}$											
+1.30 -2.95	δ_1	26 4.77		19 44.7							
d	+28.0 1.44716 9.77761 1.33 077 _m	4 7.0	16.5	235	4 11.75	8 36.60 53 10 42.43 -21.42			10	53 10 21.01 - 21 + 0 + 10.89 + 46 - 6.40 10 25.75	+11.14
((8) - D) $\frac{d'}{100}$											
+1.30 -2.84	δ_2	27 29.64		10 22.9x							
d	+12.7 1.10380 9.80105 1.01 085 _m	3 23.0	33.2	562	3 28.10	44 20.25 50 46 26.08 -10.02			35	50 46 16.06 - 5 + 0 + 8.43 + 38 - 6.10 46 18.72	+8.76
((8) - D) $\frac{d'}{100}$											
+1.45 -2.74	δ_1	28 32.79		46 16.0							
d	+15.8 1.19866 9.79950 1.10 416 _m	3 46.3	55.3	1016	3 50.80	53 57.55 50 56 3.38 -12.71			25	50 55 50.67 - 1 + 0 + 8.60 + 39 - 6.10 55 53.49	+8.92
((8) - D) $\frac{d'}{100}$											
+1.44 -2.64	δ_2	29 42.14		55 50.8							
d	+23.6 1.37291 9.80762 1.28 653 _m	1 47.8	57.4	1052	1 52.60	0 55.75 50 3 1.58 -19.34			20	50 2 42.24 - 15 + 0 + 7.70 + 35 - 6.00 2 44.14	+7.90
((8) - D) $\frac{d'}{100}$											
+1.48 -1.62	δ_1	41 28.08		2 42.5							
d	+27.0 1.43136 9.80089 1.33 825 _m	3 10.6	20.9	315	3 15.75	44 32.60 50 46 37.85 -21.79			35	50 46 16.06 - .19 + 0 + 8.19 + 39 - 6.80 46 17.65	+8.39
((8) - D) $\frac{d'}{100}$											
+1.45 -2.74	δ_2	28 32.71		46 14.9							
d	+16.7 1.22272 9.79950 1.12 822 _m	3 42.8	54.6	974	3 48.70	53 59.65 50 56 4.90 -13.43			25	50 55 51.47 - 8 + 0 + 8.35 + 39 - 6.80 55 53.33	+8.66
((8) - D) $\frac{d'}{100}$											
+1.44 -2.64	δ_1	29 41.94		55 50.7							
d	+27.0 1.43136 9.80762 1.34 498 _m	1 42.3	54.1	964	1 48.20	1 0.15 50 3 5.40 -22.13			20	50 2 43.27 - 20 + 0 + 7.47 + 35 - 6.70 2 44.19	+7.62
((8) - D) $\frac{d'}{100}$											
+1.48 -1.62	δ_2	41 27.99		2 42.6							

Single Observations

Date₁ = 1874, Aug. 10Observer
RecorderDate₂ =Observer
Recorder

4

Ru

Star.	α	δ	Mag.	T_a	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
1874nae	2	13 53 44	9.1	κ	m	s	m	s	s	Ch.f.			
	κ												
	$((\delta) - D) \frac{\kappa'}{100}$												
Aug. 10	α_1												
	3	6 53 58	9.3							Ch.f.			
	κ												
	$((\delta) - D) \frac{\kappa'}{100}$												
Aug. 10	α_2												
	4	42 53 10	8.3							Ch.f.			
	κ	19.1 10.2											
	$((\delta) - D) \frac{\kappa'}{100}$												
	α_1												
	κ												
	$((\delta) - D) \frac{\kappa'}{100}$												
	α_2												
	κ												
	$((\delta) - D) \frac{\kappa'}{100}$												
	α_1												
	κ												
	$((\delta) - D) \frac{\kappa'}{100}$												
	α_2												
	κ												
	$((\delta) - D) \frac{\kappa'}{100}$												
	α_1												
	κ												
	$((\delta) - D) \frac{\kappa'}{100}$												
	α_2												
	κ												
	$((\delta) - D) \frac{\kappa'}{100}$												
	α_1												
	κ												
	$((\delta) - D) \frac{\kappa'}{100}$												
	α_2												

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	3	1 26.0	38.9	649	41 32.45				110		
d											
$((\delta) - D) \frac{d'}{100}$											
δ_1											
		0 57.0	9.2	62	31 3.10				30		
d											
$((\delta) - D) \frac{d'}{100}$											
δ_2											
		4 44.1	57.9		14 49.50				10		
d											
$((\delta) - D) \frac{d'}{100}$											
δ_1											
d											
$((\delta) - D) \frac{d'}{100}$											
δ_2											
d											
$((\delta) - D) \frac{d'}{100}$											
δ_1											
d											
$((\delta) - D) \frac{d'}{100}$											
δ_2											
d											
$((\delta) - D) \frac{d'}{100}$											
δ_1											
d											
$((\delta) - D) \frac{d'}{100}$											
δ_2											

Date₁ = 1874, Aug 23 ³²⁶
 $n = -43$

Observer
 Recorder

Star. α δ

Mag.

T_s

T_m

T_e

T_r

T_g

T_h

Observer

Recorder

Sum

Mean

Red. to T_m

T

23	4	4.52	17	7.5	18	32.7	8	56.6	5.9	3.3	6.6	10.0	8	2.28	3.28		
	κ	41.2	16.7	7.4		32.7		56.6						+4.92			
						32.7								-5.5			
	(δ) - D					32.7								-2			
24	α_1					32.7								+4.35			
	κ					32.7											
	(δ) - D					32.7											
26	α_2					32.7											
	κ					32.7											
	(δ) - D					32.7											
23	10	27.52	40	8.8	10	19	10	20.1	23.7	26.7	30.3	38.9	10	26.94			
	κ	4.4	39.8	2.0		19		20.1						+4.92			
						19								-5.6			
	(δ) - D					19								-2			
24	α_2					19								+4.34			
	κ					19											
	(δ) - D					19											
26	α_1					19											
	κ					19											
	(δ) - D					19											
23	11	12.51	37	9.4	11	4.0	11	7.1	-10.4	13.7	17.0	20.4	11	13.72			
	κ	49.4	27.1	9.2		4.0		7.1						+4.92			
						4.0								-5.4			
	(δ) - D					4.0								-2			
24	α_1					4.0								+4.36			
	κ					4.0											
	(δ) - D					4.0											
26	α_2					4.0											
	κ					4.0											
	(δ) - D					4.0											
23	12	18.51	8	9.2	11	5.0	12	13.2	16.5	19.4	23.0	26.3	12	19.72			
	κ	55.2	8.2	9.0		5.0		13.2						+4.92			
						5.0								-5.8			
	(δ) - D					5.0								-2			
26	α_2					5.0								+4.37			
	κ					5.0											
	(δ) - D					5.0											
23	12	18.51	8	9.2	11	5.0	12	13.2	16.5	19.4	23.0	26.3	12	19.72			
	κ	55.2	8.2	9.0		5.0		13.2						+4.92			
						5.0								-5.8			
	(δ) - D					5.0								-2			
26	α_2					5.0								+4.37			
	κ					5.0											
	(δ) - D					5.0											

Aug 23 $+2' 4.92 +.00$
 24 $4.94 -.01$
 Runs 26 $5.19 -.01$

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	$+26.6$ 1.42488 9.78658 1.31746_m	2 29.1	40.8	699 2	34.95	15 13.40 52 17 18.32 -20.77			5-	52 16 57.55 - .19 + .0 + 9.92 + .46 - 9.10 16 58.64	+10.19
((8) - D) $\frac{d'}{100}$											
$+1.34$ $+0.80$ δ_1		9 7.15		16 59.4							
d	$+23.2$ 1.36549 9.78658 1.25807_m	2 32.6	411.4	770 2	38.50	15 9.85 52 17 14.79 -18.12			5	56.67 - .14 + .3 + 9.98 + .46 - 9.30 16 57.64	+10.27
((8) - D) $\frac{d'}{100}$											
$+1.34$ $+0.80$ δ_2		9 7.23		16 58.4							
d	$+21.2$ 1.32634 9.78658 1.21892_m	2 34.1	45.2	793 2	39.65	15 8.70 52 17 13.89 -16.55			5	57.34 - .12 + .3 + 10.05 + .46 - 9.50 16 58.20	+10.36
((8) - D) $\frac{d'}{100}$											
$+1.34$ $+0.80$ δ_1		9 7.40		16 59.0							
d	$+22.0$ 1.34242 9.78280 1.23122_m	4 28.7	38.8	675 4	33.75	38 14.60 52 40 19.52 -17.03			40	52 40 2.49 - .13 + .0 + 10.31 + .48 - 9.20 40 3.95	+10.66
((8) - D) $\frac{d'}{100}$											
$+1.32$ $+0.92$ δ_2		10 30.80		40 4.9							
d	$+29.4$ 1.46885 9.78280 1.85715_m	4 23.7	35.6	593 4	29.65	38 18.70 52 40 28.64 -22.76			40	40 0.88 - .22 + .4 + 10.38 + .48 - 9.30 40 2.18	+10.60
((8) - D) $\frac{d'}{100}$											
$+1.32$ $+0.92$ δ_1		10 30.85		40 3.1							
d	$+24.6$ 1.39094 9.78280 1.27974_m	4 27.4	38.0	659 4	32.95	38 15.40 52 40 20.59 -19.04			40	40 1.55 - .16 + .4 + 10.45 + .48 - 9.60 40 2.68	+10.73
((8) - D) $\frac{d'}{100}$											
$+1.32$ $+0.92$ δ_2		10 30.85		40 3.6							
d	$+7.2$ 0.85733 9.79447 0.75780_m	2 19.7	29.4	496 2	24.80	25 28.55 51 27 25.47 -5.73			55	27 22.74 - .2 + .0 + 9.07 + .42 - 9.10 27 23.11	+9.47
((8) - D) $\frac{d'}{100}$											
$+1.40$ $+0.98$ δ_1		11 17.67		27 24.1							
d	$+19.3$ 1.28536 9.79447 1.18603_m	2 4.3	21.1	304 2	15.20	25 33.15 51 27 38.09 -15.35			55	51 27 22.74 - .10 + .2 + 9.13 + .42 - 9.20 27 22.97	+9.43
((8) - D) $\frac{d'}{100}$											
$+1.40$ $+0.98$ δ_2		11 17.71		27 24.0							
d	$+5.1$ 0.70459 9.79447 0.60804_m	2 21.2	32.9	541 2	27.05	25 21.30 51 27 26.49 -4.05			55	22.44 - .1 + .2 + 9.20 + .42 - 9.60 27 22.43	+9.59
((8) - D) $\frac{d'}{100}$											
$+1.40$ $+0.98$ δ_1		11 17.78		27 23.4							
d	$+19.7$ 1.29447 9.79447 1.19793_m	0 51.3	2.7	1140 0	57.00	6 51.35 51 8 56.27 -15.77			15	51 8 40.50 - .11 + .0 + 8.76 + .41 - 9.10 8 40.46	+9.06
((8) - D) $\frac{d'}{100}$											
$+1.42$ $+1.08$ δ_2		12 23.69		8 44.5							

Date 1 ³²⁶
Date₁ = 1874 Aug 23Observer
RecorderDate 2 ³²⁷
Date₂ = 1874 Aug 24
Date 3 ³²⁸
Date₃ = Aug 26Observer
Recorder

8

Star.	α	δ	Mag.	T_s	T_m	T_s	T_r	T_g	T_h	Sum	Mean	Red. to T_m	T
12	18 51 8	8.2	9.1	18	11 52.7	12 13.6	17.0	20.3	23.6	26.7	12	20.24	
κ					53.6							+4.37	
					58.6							-4.9	
(8) - D					55.6							-2	
α_1									+3.86		12	24.10	
												-1.79	
											12	22.31	+1.4
													+1.1
26			9.2	12	15 12 14.0	17.5	20.7	24.2	27.4	12	20.76		
κ					4.3							+3.775	
					8.9							-3.4	
(8) - D					4.1							-2	
α_2									+3.33		12	24.11	
												-1.78	
											12	23.36	+1.4
23	13	11 51 16	8.8	18	12 50.0	13 6.9	10.2	13.4	16.7	20.0	13	13.44	
κ					54.2							+4.92	
					56.6							-5.4	
(8) - D					53.6							-2	
α_1									+4.36		13	17.80	
												-1.82	
											13	15.98	+1.4
24			8.8	12	42.1	13 7.4	10.7	14.0	19.3	20.6	13	14.00	
κ					48.0							+4.37	
					49.8							-5.0	
(8) - D					45.4							-2	
α_2									+3.85		13	17.85	
												-1.79	
											13	16.06	+1.4
26			8.7	13	05 13 8.0	11.3	14.5	17.9	21.0	13	14.54		
κ					6.7							+3.775	
					7.0							-3.5	
(8) - D					4.1							-6	
α_1									+3.32		13	17.88	
												-1.73	
											13	16.13	+1.4
23	14	7 51 24	8.7	13	48.8	14 3.7	7.0	10.3	13.5	16.9	14	10.28	
κ					57.5							+4.92	
					53.1							-5.4	
(8) - D					57.8							-2	
α_2									+4.36		14	14.64	
												-1.82	
											14	12.82	+1.4
24			8.9	13	48.6	14 4.5	7.7	10.8	14.0	17.4	14	10.88	
κ					52.7							+4.37	
					56.3							-5.0	
(8) - D					52.9							-2	
α_1									+3.85		14	14.73	
												-1.80	
											14	12.93	+1.4
26			9.0	13	56.0	14 4.7	8.0	11.3	14.6	17.8	14	11.28	
κ					58.8							+3.775	
					59.0							-3.5	
(8) - D					54.9							-6	
α_2									+3.32		14	14.60	
												-1.73	
											14	12.82	+1.4
23	15	30 51 28	8.6	15	30 15 25.9	29.1	32.2	35.3	38.0	15	32.34		
κ					6.1							+4.92	
					8.3							-5.4	
(8) - D					5.8							-2	
α_1									+4.36		15	51.24	
												+4.92	
												-5.4	
											15	36.70	+1.4
												-1.83	
											15	34.87	+1.39
												-5.4	
											15	55.60	+1.4
												-1.83	
											15	53.77	+1.3
24			8.5	15	11.8	15 26.3	29.5	32.8	36.2	39.5	15	32.86	
κ					15.6							+4.37	
					18.1							-5.0	
(8) - D					15.2							-2	
α_2									+3.85		15	52.08	
												+4.37	
												-5.0	
											15	36.71	+1.4
												-1.80	
											15	34.91	+1.39
												-5.4	
											15	55.93	+1.4
												-1.80	
											15	54.13	+1.3

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	s'
d	+24.6 1.39094 979746 1.30340 _m	0 48.3	59.7	1080	0 54.00 3	6 54.35 51 8 59.29 -20.11			15	51 8 39.18 - .17 + 8.82 + .41 9.20 8 39.03	+9.05
(8) - D $\frac{d'}{100}$											
+1.42 +1.08 δ_1		12 23.73		8 40.1	16						
d	+15.9 1.20140 979746 1.10486 _m	0 55.2	6.4	16	0 0.80	6 47.55 51 8 52.74 -12.73			15	40.01 - .7 + 8.89 + .41 -9.50 8 39.73	+9.22
(8) - D $\frac{d'}{100}$											
+1.42 +1.08 δ_2		12 23.78		8 40.8							
d	+19.8 1.29667 979621 1.19888 _m	2 22.5	31.9	544	2 27.20	15 21.15 51 17 26.07 -15.81			5	51 17 10.26 - .11 + 0 + 8.90 + .41 -9.10 17 10.36	+9.20
(8) - D $\frac{d'}{100}$											
+1.41 +1.16 δ_1		18 17.39		14 11.5							
d	+28.6 1.45637 979605 1.35842 _m	2 14.9	25.9	408	2 20.40	15 27.95 51 17 32.89 -22.83			5	10.06 - .22 - .2 + 8.96 + .41 -9.20 17 9.99	+9.13
(8) - D $\frac{d'}{100}$											
+1.41 +1.16 δ_2		13 17.47		17 11.2							
d	+10.4 1.01703 979621 0.91924 _m	2 30.5	40.4	708	2 35.45	15 12.90 51 17 18.09 -8.30			5	9.79 - .3 - .3 + 9.03 + .41 -9.50 17 9.67	+9.88
(8) - D $\frac{d'}{100}$											
+1.41 +1.16 δ_1		13 17.54		14 10.8	59						
d	+18.5 1.26717 979494 1.16811 _m	4 48.1	58.3	1064	4 53.20	22 53.15 51 25 0.07 -14.73			55	51 24 45.84 - 9 + 0 + 9.04 + .42 -9.10 24 45.61	+9.37
(8) - D $\frac{d'}{100}$											
+1.40 +1.24 δ_2		14 14.22		24 46.5	59						
d	+18.0 1.25627 979494 1.15621 _m	4 48.3	57.8	1081	4 54.05	22 54.30 51 24 59.24 -14.33			55	44.91 - 9 - 5 + 9.11 + .42 -9.20 24 45.10	+9.39
(8) - D $\frac{d'}{100}$											
+1.40 +1.24 δ_1		14 14.33		24 46.3	59						
d	+13.4 1.12710 979494 1.02804 _m	4 52.0	2.1	1141	4 57.05	22 57.30 51 24 56.49 -10.67			55	45.82 - 5 - 5 + 9.18 + .42 -9.50 24 45.82	+9.50
(8) - D $\frac{d'}{100}$											
+1.40 +1.24 δ_2		14 14.22		24 47.1	59						
d	+26.5 1.42325 979415 1.32340 _m + 0.2	4 46.0	55.9	1019	4 50.95 37.30	27 57.40 26 11.05 51 30 2.32 51 28 15.97 -21.06 -0.16			50 55	51 29 41.26 - 18 + 0 + 9.12 + .42 -9.10 29 41.52	28 15.81 +9.36 + .00 + 0 + 9.12 + .42 -9.10 28 16.25
(8) - D $\frac{d'}{100}$											
+1.40 +1.39 δ_1		15 36.27		29 42.9	54						
d	+17.4 1.24797 979415 1.14862 _m -4.9	4 52.8	3.8	1166	4 58.30 42.70	27 50.05 26 5.65 51 29 54.99 51 28 10.59 -14.06 +3.90			50 55	40.93 - 9 - 5 + 9.18 + .42 -9.30 29 41.09	14.49 +9.46 - 2 + 9.18 + .42 -9.30 28 14.76
(8) - D $\frac{d'}{100}$											
+1.40 +1.39 δ_2		15 36.31		29 42.5	54						

Date₁ = 1874, Aug 23

Observer
Recorder

Date₂ = 1874, Aug 24

Observer
Recorder

-10

B17

Star.	α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
1874p	15	50 51 28	8.2	18	15	15	26.9	30.3	33.5	36.8	40.0	15	33.50
	κ	27.1 27.3	9.1	15	15	15	26.9	30.3	33.5	36.8	40.0	15	33.50
	$(\delta) - D$	27.1 27.3	9.1	15	15	15	26.9	30.3	33.5	36.8	40.0	15	33.50
	a_1	27.1 27.3	9.1	15	15	15	26.9	30.3	33.5	36.8	40.0	15	33.50
103	18	17 22 51 32	9.3	17	17	17	26.9	30.3	33.5	36.8	40.0	17	23.68
	κ	37.9 31.8	9.5	17	17	17	26.9	30.3	33.5	36.8	40.0	17	23.68
	$(\delta) - D$	37.9 31.8	9.5	17	17	17	26.9	30.3	33.5	36.8	40.0	17	23.68
	a_2	37.9 31.8	9.5	17	17	17	26.9	30.3	33.5	36.8	40.0	17	23.68
24	17	17 22 51 32	9.4	17	17	17	26.9	30.3	33.5	36.8	40.0	17	23.68
	κ	37.9 31.8	9.5	17	17	17	26.9	30.3	33.5	36.8	40.0	17	23.68
	$(\delta) - D$	37.9 31.8	9.5	17	17	17	26.9	30.3	33.5	36.8	40.0	17	23.68
	a_1	37.9 31.8	9.5	17	17	17	26.9	30.3	33.5	36.8	40.0	17	23.68
26	17	17 22 51 32	9.3	17	17	17	26.9	30.3	33.5	36.8	40.0	17	23.68
	κ	37.9 31.8	9.5	17	17	17	26.9	30.3	33.5	36.8	40.0	17	23.68
	$(\delta) - D$	37.9 31.8	9.5	17	17	17	26.9	30.3	33.5	36.8	40.0	17	23.68
	a_2	37.9 31.8	9.5	17	17	17	26.9	30.3	33.5	36.8	40.0	17	23.68
23	18	18 29 51 13	6.1	18	18	18	26.9	30.3	33.5	36.8	40.0	18	29.04
	κ	6.4 12.8	6.8	18	18	18	26.9	30.3	33.5	36.8	40.0	18	29.04
	$(\delta) - D$	6.4 12.8	6.8	18	18	18	26.9	30.3	33.5	36.8	40.0	18	29.04
	a_1	6.4 12.8	6.8	18	18	18	26.9	30.3	33.5	36.8	40.0	18	29.04
24	18	18 29 51 13	6.2	18	18	18	26.9	30.3	33.5	36.8	40.0	18	29.04
	κ	6.4 12.8	6.8	18	18	18	26.9	30.3	33.5	36.8	40.0	18	29.04
	$(\delta) - D$	6.4 12.8	6.8	18	18	18	26.9	30.3	33.5	36.8	40.0	18	29.04
	a_2	6.4 12.8	6.8	18	18	18	26.9	30.3	33.5	36.8	40.0	18	29.04
26	18	18 29 51 13	6.8	18	18	18	26.9	30.3	33.5	36.8	40.0	18	29.04
	κ	6.4 12.8	6.8	18	18	18	26.9	30.3	33.5	36.8	40.0	18	29.04
	$(\delta) - D$	6.4 12.8	6.8	18	18	18	26.9	30.3	33.5	36.8	40.0	18	29.04
	a_1	6.4 12.8	6.8	18	18	18	26.9	30.3	33.5	36.8	40.0	18	29.04
23	20	19 51 23	7.0	19	19	19	26.9	30.3	33.5	36.8	40.0	19	29.04
	κ	49.8 51 28.3	8.9	19	19	19	26.9	30.3	33.5	36.8	40.0	19	29.04
	$(\delta) - D$	49.8 51 28.3	8.9	19	19	19	26.9	30.3	33.5	36.8	40.0	19	29.04
	a_2	49.8 51 28.3	8.9	19	19	19	26.9	30.3	33.5	36.8	40.0	19	29.04
24	19	19 51 23	8.7	19	19	19	26.9	30.3	33.5	36.8	40.0	19	29.04
	κ	49.8 51 28.3	8.9	19	19	19	26.9	30.3	33.5	36.8	40.0	19	29.04
	$(\delta) - D$	49.8 51 28.3	8.9	19	19	19	26.9	30.3	33.5	36.8	40.0	19	29.04
	a_1	49.8 51 28.3	8.9	19	19	19	26.9	30.3	33.5	36.8	40.0	19	29.04
26	19	19 51 23	8.9	19	19	19	26.9	30.3	33.5	36.8	40.0	19	29.04
	κ	49.8 51 28.3	8.9	19	19	19	26.9	30.3	33.5	36.8	40.0	19	29.04
	$(\delta) - D$	49.8 51 28.3	8.9	19	19	19	26.9	30.3	33.5	36.8	40.0	19	29.04
	a_2	49.8 51 28.3	8.9	19	19	19	26.9	30.3	33.5	36.8	40.0	19	29.04

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	S	4	2.9	1152	57.60	27	50.95		50	51	28
	1.28103	1	41.9	938	46.90	26	1.45		55	29	16.34
$+1.40$ $+1.39$	d					51	29	55.94		-10	$+9.53$
	$((\delta) - D) \frac{d'}{100}$					51	28	6.64		-5	2
	$1.18118m$						-15.18			$+9.26$	$+9.26$
	1.08636						$+9.70$			$+42$	$+42$
$+1.40$ $+1.39$	δ_1	15	36.49	2942.82						-9.50	-9.50
	0.98683	55.64		2817.8	52					29	40.76
	$+15.6$	2	15.0	411	2	30	27.80		50	51	32
	1.19312		26.1		20.55	51	32	32.72		-07	$+9.51$
	$1.09279m$						-12.38			$+9.16$	
$+1.39$ $+1.52$	δ_2	17	27.59	3222.3	52					$+42$	
	$+12.9$	2	17.9	486	2	30	24.05		50	32	20.34
	1.1059		30.7		24.30	51	32	25.99		-07	$+9.51$
	$1.01026m$						-10.24			$+9.22$	
$+1.27$ $+1.52$	δ_1	17	27.83	3220.5	52					$+42$	
	$+19.9$	2	12.4	347	2	30	31.00		50	-9.30	
	1.29885		22.3		17.35	51	32	36.19		32	19.02
	$1.19852m$						-15.80			-9.30	
$+1.39$ $+1.52$	δ_2	17	27.87	3221.9	52					-9.30	
	$+21.2$	0	5.4	216	0	12	37.55		10	51	14
	1.32634		16.2		10.80	51	14	42.47		-12	$+9.15$
	$1.22886m$						-16.94			$+0$	
$+1.41$ $+1.62$	δ_1	18	32.98	14272	10					$+8.86$	
	$+16.2$	0	8.0	270	0	12	34.85		10	$+41$	
	1.20952		19.0		13.50	51	14	39.79		-9.10	
	$1.11204m$						-12.95			14	25.60
$+1.41$ $+1.62$	δ_2	18	32.95	1428.4	10					-9.30	
	$+28.6$	0	4.0	194	0	12	38.65		10	14	26.80
	1.33445		15.4		9.70	51	14	48.84		-13	$+9.27$
	$1.23697m$						-17.26			$+0$	
$+1.41$ $+1.62$	δ_1	18	32.96	1427.9						$+8.99$	
	$+9.1$	0	5.2	330	3	24	31.85		55	$+41$	
	0.95904	3	12.0		16.50	51	26	36.77		-9.10	
	$0.85967m$		21.0				-7.24			26	17.07
$+1.40$ $+1.76$	δ_2	20	12.80	2618.8	58					$+06$	
	$+21.6$	3	14.7	394	3	24	28.65		55	$+42$	
	1.33445		24.7		19.70	51	26	33.59		-9.10	
	$1.23508m$						-17.18			26	17.07
$+1.40$ $+1.76$	δ_1	20	12.80	2618.2	58					$+06$	
	$+24.9$	3	10.9	325	3	24	32.10		55	$+42$	
	1.39620		21.6		16.25	51	26	37.29		-9.30	
	$1.29683m$						-17.81			26	17.29
$+1.40$ $+1.76$	δ_2	20	12.92	2619.0						$+42$	

Date₁ = 1874, Aug 23

Observer

Recorder

Date₂ = 1874, Aug 24

Observer 1874, Aug 24

Recorder Aug 26

12

Star.	α	δ	Mag.	T_s	T_m	T_n	T_r	T_a	T_h	Sum	Mean	Red. to T_m	T
23	21	15 51 27	8.0	18	20 53 21	115	152	185	219	230	21	18.42	
	κ	20 52.1 26.3	8.5		535							+ 4.92	
	$((\delta) - D) \frac{\kappa'}{100}$				563							- .54	
	α_1				584							- 2	
										+ 4.36	21	22.78	
												- 1.86	
											21	20.92	
24			8.3	20	58 21 120	153	188	221	253	21	18.70		
	κ				16							+ 4.36	
	$((\delta) - D) \frac{\kappa'}{100}$				45							- .50	
	α_2				61.7							- 2	
										+ 3.84	21	22.54	
												- 1.83	
											21	20.71	
26			8.5	20	58 21 126	160	194	226	260	21	19.32		
	κ				25							+ 3.754	
	$((\delta) - D) \frac{\kappa'}{100}$				57							- .35	
	α_1				62.6							- 6	
										+ 2.31	21	22.64	
												- 1.78	
											21	20.85	
23	23	36 51 54	8.3	22	48 23 115	150	186	218	249	23	18.36		
18	κ	23 13.8 53.5	8.4		52.1							+ 4.92	
	$((\delta) - D) \frac{\kappa'}{100}$	22 54.4			57.5							- .53	
	α_2				530							- 2	
										+ 4.35	23	22.71	
												- 1.86	
											23	20.85	
24	23	13.8 51 53.5	8.3	23	22 23 115	34.9	38.1	414	44.9	23	38.16		
	κ				260							+ 4.36	
	$((\delta) - D) \frac{\kappa'}{100}$				29.7							- .51	
	α_1				26.2							- 2	
										+ 3.83	23	41.99	
												- 1.84	
											23	40.15	
26	23	13.8 51 53.5	8.1	23	22 23 122	35.3	38.8	421	45.4	23	38.76		
	κ				265							+ 3.754	
	$((\delta) - D) \frac{\kappa'}{100}$				303							- .36	
	α_2				265							- 6	
										+ 3.30	23	42.04	
												- 1.48	
											23	40.28	
23	24	33 51 33	8.3	24	27 24 275	30.8	34.3	377	410	24	34.26		
18	κ	24 10.6 32.7	7.9		63							+ 4.92	
	$((\delta) - D) \frac{\kappa'}{100}$				92							- .54	
	α_1				6.1							- 2	
										+ 4.36	24	38.62	
												- 1.87	
											24	36.75	
24			8.1	24	17 24 280	31.3	34.6	378	413	24	34.62		
	κ				250							+ 4.36	
	$((\delta) - D) \frac{\kappa'}{100}$				220							- .50	
	α_2				19.7							- 2	
										+ 3.84	24	38.46	
												- 1.84	
											24	36.62	
26			8.4	24	22 24 285	31.8	35.0	384	418	24	35.10		
	κ				249							+ 3.754	
	$((\delta) - D) \frac{\kappa'}{100}$				272							- .35	
	α_1				24.9							- 6	
										+ 3.31	24	38.42	
												- 1.79	
											24	36.62	
23	25	45 51 51	7.3	25	75 25 394	42.7	46.0	494	526	25	46.02		
18	κ	25 22.5 50.6	7.6		122							+ 4.92	
	$((\delta) - D) \frac{\kappa'}{100}$				135							- .55	
	α_2				11.7							- 2	
										+ 4.35	25	50.37	
												- 1.87	
											25	48.50	

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	8'
d	+25.0 1.39794 979447 1.29841 _m	1 42.4	53.0	954 ⁵⁶	47.70	26 0.65 51 28 5.57 -19.88			55	51 27 45.69 - 17 + 0 + 9.10 + .42 - 9.20 27 45.84	+9.35
$(\delta) - D) \frac{d'}{100}$											
δ_1	+140 +186	21 22.32		27 47.7							
d	+17.0 1.23045 979447 1.13092 _m	1 41.2	58.0	1052 ¹	52.60	25 55.75 51 28 0.69 -13.52			55	47.17 - 8 - 2 + 9.16 + .42 - 9.30 27 47.35	+9.48
$(\delta) - D) \frac{d'}{100}$											
δ_2	+140 +186	21 22.11		27 49.2							
d	+16.7 1.22292 979447 1.12319 _m	1 47.9	58.7	1066 ¹	53.30	25 55.05 51 28 0.24 -13.28			55	46.96 - 8 - 2 + 9.23 + .42 - 9.60 27 46.91	+9.55
$(\delta) - D) \frac{d'}{100}$											
δ_1	+140 +186	21 22.25		27 48.8							
d	+25.4 1.40483 978983 1.30066 _m	2 53.4	4.5	1179 ²	58.95	54 49.40 51 56 54.32 -19.98			25	51 56 34.34 - 17 + 0 + 9.57 + .45 - 9.20 56 34.99	+9.85
$(\delta) - D) \frac{d'}{100}$											
δ_2	+137 +204	23 22.22		56 37.0							
d	+12.0 1.07918 979015 0.97533 _m	4 22.6	32.8	554 ²⁹	27.70	53 20.65 51 55 25.59 -9.45			25	55 16.14 - 4 - 4 + 9.62 + .45 - 9.30 55 16.53	+9.99
$(\delta) - D) \frac{d'}{100}$											
δ_1	+138 +207	23 41.53		55 18.9							
d	+12.3 1.08991 979015 0.98606 _m	4 21.3	31.5	528 ²⁹	26.40	53 21.95 51 55 27.14 -9.68			25	17.46 - 4 - 4 + 9.69 + .45 - 9.70 55 17.82	+10.06
$(\delta) - D) \frac{d'}{100}$											
δ_2	+138 +207	23 41.66		55 19.9							
d	+25.2 1.45025 979367 1.34992 _m	1 36.3	41.5	718 ⁴¹	35.90	41 12.45 51 343 17.37 -22.38			20	51 32 54.99 - 21 + 0 + 9.18 + .42 - 9.20 32 55.18	+9.39
$(\delta) - D) \frac{d'}{100}$											
δ_1	+140 +215	24 38.15		32 57.3							
d	+14.9 1.17319 979367 1.07286 _m	1 39.4	30.5	899 ⁵¹	44.95	31 34.0 51 33 8.34 -11.83			30	32 56.51 - 6 - 2 + 9.24 + .42 - 9.30 32 56.79	+9.58
$(\delta) - D) \frac{d'}{100}$											
δ_2	+140 +215	24 38.02		32 58.9							
d	+10.2 1.00860 979367 0.90827 _m	1 45.1	55.9	1010 ⁵¹	50.50	30 57.85 51 33 3.04 -8.10			50	32 54.94 - 3 - 2 + 9.31 + .42 - 9.70 32 54.72	+9.68
$(\delta) - D) \frac{d'}{100}$											
δ_1	+140 +215	24 38.02		32 56.9							
d	+34.3 1.53529 979063 1.43192 _m	2 34.7	45.4	801 ³²	40.05	50 8.30 51 52 13.22 -27.03			30	51 51 46.19 - 31 + 0 + 9.50 + .44 - 9.20 51 46.62	+9.63
$(\delta) - D) \frac{d'}{100}$											
δ_2	+138 +226	25 49.88		51 48.9							

Date₁ = 1874 Aug 23Observer
RecorderDate₂ = 1874 Aug 24
Aug 26Observer
Recorder

14

Run

Star.	α	δ	Mag.	T_s	T_m	T_e	T_r	T_z	T_h	Sum	Mean	Red. to T_m	T	
18749ae	25	45 51 51	7.8	18	25	223	25	22.5	433	467	580	533	25	46.62
	κ	25 22.5	58.6	7.6		270								+ 4.36
	(δ) - D					294								- .51
	a_1					262								- 2
													25	50.45
														-1.85
													25	48.60
														+1.30
														+2.2
26			7.7	25	25.9	25	40.6	43.8	47.3	307	535	25	47.24	
	κ				30.9									+ 5.75
	(δ) - D				33.4									- .36
	a_2				301									- 6
														- 2
													25	50.55
														-1.79
23	27	34 51 18	8.8	27	12	27	284	31.8	34.9	38.4	41.6	27	35.02	
	κ	27 11.1	17.9	8.5		4.2								+ 4.92
	(δ) - D					7.6								- .54
	a_1					4.3								- 2
													27	39.38
														-1.88
													27	37.50
														+1.44
														+2.1
24			9.1	27	6.7	27	281	32.2	35.8	38.9	42.3	27	35.66	
	κ				9.1									+ 4.36
	(δ) - D				11.1									- .50
	a_2				9.0									- 2
													27	39.50
														-1.86
													27	37.64
														+1.44
														+2.1
26			8.6	27	16.0	27	285	32.9	36.2	39.4	42.7	27	36.14	
	κ				18.1									+ 3.75
	(δ) - D				222									- .35
	a_1				18.4									- 6
														- 2
													27	39.46
														-1.80
23	28	39 53 10	9.1	28	18.2	28	322	35.7	39.0	42.4	45.7	28	39.00	
	κ	28 16.8	52.5	9.1		21.1								+ 4.92
	(δ) - D					23.4								- .57
	a_2					21.6								- 2
													28	43.33
														-1.88
													28	41.45
														+1.30
														+2.1
24			9.0	28	14.2	28	325	36.0	39.7	43.0	46.4	28	39.58	
	κ				17.2									+ 4.36
	(δ) - D				21.2									- .53
	a_1				17.5									- 2
													28	43.39
														-1.85
													28	41.54
														+1.30
														+2.1
26			9.0	28	14.4	28	332	36.7	40.1	43.4	47.0	28	40.08	
	κ				17.6									+ 3.75
	(δ) - D				20.9									- .37
	a_2				17.6									- 2
													28	43.37
														-1.80
23	32	25 51 06	8.5	31	5.25	32	210	24.2	27.5	30.5	34.0	32	27.44	
	κ	32 2.8	5.8	8.5		5.3								+ 4.93
	(δ) - D					5.8								- .53
	a_1					5.3								- 2
													32	31.82
														-1.91
													32	29.91
														+1.44
														+2.8
24			8.7	32	3.0	32	215	25.0	28.2	31.3	34.6	32	28.12	
	κ				6.8									+ 4.36
	(δ) - D				9.5									- .49
	a_2				6.4									- 2
													32	31.97
														-1.88
													32	30.09
														+1.44
														+2.8

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	s'
d	+20.4 130763 979063 1.20626 _m	2' 44.0	55.3	993 32' 49.65		49 58.70 51 52 3.64 -16.08			30	51 51 47.56 - 11 - 3 + 9.56 + 44 - 9.40 51 48.02	+9.86
(8) - D $\frac{d'}{100}$											
+1.38 +2.26 δ_1		25 49.98		51 50.3 10 32 5							
d	+17.1 1.23300 979063 1.12963 _m	2 48.2	0.0	982 2 24.10		49 54.25 51 51 59.44 -13.48			30	45.76 - 8 - 3 + 9.63 + 44 - 9.70 51 46.22	+9.96
(8) - D $\frac{d'}{100}$											
+1.38 +2.26 δ_2		25 50.12		51 46.5							
d	+30.7 1.48714 979589 1.38903 _m	0 51.7	3.2	1149 0 57.45		16 50.90 51 18 55.82 -23.39			5	51 18 32.43 - 26 + 0 + 8.94 + 41 - 9.20 18 32.32	+9.09
(8) - D $\frac{d'}{100}$											
+1.42 +2.42 δ_1		27 38.92		18 34.7							
d	+26.7 1.42651 979589 1.32840 _m	0 52.9	5.9	1188 0 59.40		16 48.95 51 18 53.89 -21.30			5	32.59 - 19 - 1 + 9.00 + 41 - 9.30 18 32.50	+9.21
(8) - D $\frac{d'}{100}$											
+1.42 +2.42 δ_2		27 39.06		18 34.9							
d	+17.7 1.24797 979573 1.14970 _m	0 2.0	12.4	144 0 7.20		16 41.15 51 18 46.34 -14.12			5	32.22 - 9 - 0 + 9.07 + 41 - 9.60 18 32.01	+9.39
(8) - D $\frac{d'}{100}$											
+1.42 +2.42 δ_1		27 39.06		18 34.4							
d	+17.4 1.24055 979946 1.12601 _m	4 33.9	43.7	776 4 38.80		58 9.55 53 0 14.47 -13.37			20	53 0 1.10 - 8 + 0 +10.67 + 50 - 9.20 0 2.99	+11.09
(8) - D $\frac{d'}{100}$											
+1.31 +2.50 δ_2		28 42.76		0 5.5							
d	+22.1 1.34439 977946 1.22985 _m	4 29.2	39.5	687 4 34.35		58 14.00 53 0 18.94 -16.98			20	1.96 - 13 - 4 +10.74 + 50 - 9.50 0 3.53	+11.07
(8) - D $\frac{d'}{100}$											
+1.31 +2.50 δ_1		28 42.85		0 6.0							
d	+22.5 1.35218 977946 1.23764 _m	4 30.0	39.9	699 4 34.95		58 13.40 53 0 18.59 -17.28			20	1.31 - 13 - 4 +10.82 + 50 - 9.50 0 2.66	+11.15
(8) - D $\frac{d'}{100}$											
+1.31 +2.50 δ_2		28 42.86		0 5.2							
d	+32.1 1.50651 979778 1.41029 _m	2 35.9	45.9	818 2 40.90		5 74.5 51 7 12.37 -25.72			15	51 6 46.65 - 27 + 0 + 8.75 + 40 - 9.20 6 46.33	+8.88
(8) - D $\frac{d'}{100}$											
+1.43 +2.84 δ_1		32 31.34		6 49.2							
d	+21.7 1.33646 979778 1.24024 _m	2 43.7	57.5	982 2 49.10		4 59.25 51 7 41.9 -17.39			15	46.80 - 13 - 3 + 8.81 + 40 - 9.40 6 46.45	+9.05
(8) - D $\frac{d'}{100}$											
+1.43 +2.84 δ_2		32 31.52		6 49.3							

Date₁ = 1874, Aug. 23Observer
RecorderDate₂ = Aug. 24

Aug. 26

Observer
Recorder

Run

Star.	α	δ	Mag.	T_a	T_m	T_o	T_1	T_2	T_h	Sum	Mean	Red. to T_m	T
18	32	25 51 06	8.9	18 32 12	32 220	23.3	28.7	31.9	33.2	32	28.62		
	κ	2.8 5.8	8.5	15.3	18.2						+ 3.73		
	(8) - D			15.3							- 34		
	a_1										- 6		
											- 2		
											+ 3.31		
											32	31.95	
											- 1.83		
											32	30.10	
23	33	32 51 46	7.5	23 33 25	33 253	28.9	32.2	33.3	38.8	33	32.16		
18	κ	9.1 51 45.8	8.0	13.4	16.0						+ 4.93		
	(8) - D			13.0							- 2		
	a_2										+ 4.36		
											33	36.52	
											- 1.91		
											33	34.61	
24			8.0	33 33 26	33 261	29.3	32.6	36.0	39.3	33	32.66		
	κ			5.4	8.0						+ 4.36		
	(8) - D			10.7	8.1						- 2		
	a_1										+ 3.83		
											33	36.49	
											- 1.88		
											33	34.61	
26			8.0	33 33 26	33 267	30.1	33.5	36.5	39.9	33	33.40		
	κ			12.0	16.0						+ 3.73		
	(8) - D			12.3							- 36		
	a_2										- 6		
											- 2		
											+ 3.29		
											33	36.71	
											- 1.83		
											83	34.86	
23	34	42 51 50	7.2	34 142	34 36.7	40.1	43.5	46.7	50.1	34	43.42		
18	κ	19.2 49.2	7.7	17.7	20.3						+ 4.93		
	(8) - D			17.4							- 53		
	a_1										- 2		
											+ 4.36		
											34	47.78	
											- 1.91		
											34	45.87	
24			7.5	34 183	34 37.3	40.5	43.8	47.3	50.7	34	43.92		
	κ			21.0	25.4						+ 4.36		
	(8) - D			21.6							- 57		
	a_2										- 2		
											+ 3.83		
											34	47.75	
											- 1.89		
											84	46.86	
26			7.8	34 280	34 37.9	41.1	44.5	47.9	51.3	34	44.54		
	κ			31.7	34.3						+ 3.73		
	(8) - D			31.3							- 86		
	a_1										- 6		
											- 2		
											+ 3.29		
											84	47.85	
											- 1.84		
											34	45.99	
23	36	7 50 8	8.8	35 380	36 44	7.6	11.0	14.2	17.3	36	10.90		
18	κ	44.8 7.5	8.3	42.2	44.9						+ 4.93		
	(8) - D			42.0							- 51		
	a_2										- 2		
											+ 4.40		
											36	15.30	
											- 1.93		
											36	13.37	
24			8.8	35 408	36 4.9	8.2	11.4	14.5	17.8	36	11.36		
	κ			48.6	53.3						+ 4.36		
	(8) - D			43.1							- 48		
	a_1										- 2		
											+ 3.86		
											36	15.22	
											- 1.90		
											36	13.32	
26			8.7	35 430	36 5.6	8.9	12.0	15.7	18.4	36	12.00		
	κ			48.1	57.0						+ 3.73		
	(8) - D			48.0							- 33		
	a_2										- 6		
											- 2		
											+ 3.32		
											36	15.34	
											- 1.85		
											36	13.47	

Runs

	$T_m - T$	A	C	Sum	$\frac{1}{18}$	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+13.3 1.12385 9.79778 1.02763 _m	2' 51.3	31.8 (1.8)	831	2	41.55 56.55	4 36.80 51 6 41.99 -10.66	4 51.80 6 56.99		15	51 6 46.33 - 5 - 3 + 8.87 + .40 - 9.70 6 45.82	+9.19
(8) - D $\frac{d'}{100}$												
δ_1	+1.43 +2.84	32 31.53		6 48.7	38							
d	+19.2 1.28330 9.79160 1.18090 _m	3 24.5	36.0	605	3	30.25	44 18.10 51 46 23.02 -15.17			35	51 46 7.85 - .19 + .0 + 9.41 + .44 - 9.30 46 8.21	+9.66
(8) - D $\frac{d'}{100}$												
δ_2	+1.89 +2.93	33 36.00		46 11.1	38	+50						
d	+24.8 1.39094 9.79160 1.28854 _m	3 20.7	31.8	525	3	26.25	44 22.10 51 46 27.04 -19.43			35	7.11 - .16 - .3 + 9.47 + .44 - 9.40 46 7.43	+9.72
(8) - D $\frac{d'}{100}$												
δ_1	+1.39 +2.93	33 36.00		46 10.4	38							
d	+21.1 1.32428 9.79160 1.22188 _m	3 23.1	32.9	580	3	29.00	44 19.33 51 46 24.54 -16.67			35	7.85 - .12 - .3 + 9.54 + .44 - 9.50 46 7.85 7.90	+9.83
(8) - D $\frac{d'}{100}$												
δ_2	+1.39 +2.93	33 36.25		46 10.8	38							
d	+26.0 1.41497 9.79095 1.31192 _m	4 26.0	30.9	509	4	25.25	48 22.90 51 50 27.82 - 20.51			30	51 50 7.31 - .18 + .0 + 9.48 + .44 - 9.30 50 7.75	+9.74
(8) - D $\frac{d'}{100}$												
δ_1	+1.39 +3.03	34 47.26		50 10.8	34							
d	+22.3 1.34830 9.79095 1.24525 _m	4 23.5	34.3	578	4	28.90	48 19.45 51 50 24.89 -17.59			30	6.80 - .13 - .4 + 9.54 + .44 - 9.40 50 7.21	+9.81
(8) - D $\frac{d'}{100}$												
δ_2	+1.39 +3.03	34 47.25		50 10.2	34							
d	+13.2 1.12057 9.79095 1.01752 _m	4 29.3	39.4	687	4	34.35	48 14.00 51 50 19.19 -10.41			30	8.78 - .5 - .4 + 9.61 + .44 - 9.80 50 8.94	+9.96
(8) - D $\frac{d'}{100}$												
δ_1	+1.39 +3.03	34 47.38		50 12.0	16							
d	+28.9 1.46090 9.80671 1.37361 _m	0 58.1	9.7	78	8	3.90	6 44.45 50 8 49.37 -23.64			15	50 8 25.73 - .23 + .0 + 7.75 + .35 - 9.20 8 24.40	+7.87
(8) - D $\frac{d'}{100}$												
δ_2	+1.49 +3.16	36 14.86		8 27.6	16							
d	+28.3 1.45179 9.80671 1.36450 _m	0 58.9	9.7	86	8	4.30	6 44.05 50 8 48.99 -23.15			15	25.84 - .21 - .1 + 7.80 + .35 - 9.30 8 24.47	+7.93
(8) - D $\frac{d'}{100}$												
δ_1	+1.49 +3.16	36 14.81		8 27.6	16							
d	+24.0 1.38021 9.80656 1.29277 _m	0 1.9	12.2	141	8	7.05	7 41.30 50 8 46.49 -19.62			15	26.87 - .15 - .0 + 7.86 + .35 - 9.70 8 25.23	+8.06
(8) - D $\frac{d'}{100}$												
δ_2	+1.49 +3.16	36 14.96		8 28.4								

Observer
RecorderDate₂ = Aug. 24 1874Observer
Recorder

2	Star.	α	δ	Mag.	T_s	T_m	T_e	T_h	Sum	Mean	Red. to T_m	T
18	38	0 50 35	34.2	7.2	37	37.5	0.4	3.7	378	3.62		
	κ	37.9		7.7	37	38.2		6.8		+4.93		
	(8) - D	$\frac{\kappa'}{100}$				42.0				- .52		
	α_1					38.6			38	8.01		
										-1.93		
									38	6.08		
24				8.0	37	37.5	0.9	4.0	38	4.08		
	κ				37	38.2		7.3		+4.36		
	(8) - D	$\frac{\kappa'}{100}$				86.0				- .49		
	α_2					33.7			38	7.93		
										-1.91		
									38	6.02		
26				8.2	37	37.5	1.4	4.8	378	4.72		
	κ				37	38.2		11.1		+3.75		
	(8) - D	$\frac{\kappa'}{100}$				87.0				- .34		
	α_1					34.0				- .2		
									38	8.05		
										-1.86		
									38	6.16		
23	41	45 51 53	31.8	8.7	41	40.5	43.8	47.0	41	47.10		
	κ	22.7		8.8	41	23.7		50.5		+4.93		
	(8) - D	$\frac{\kappa'}{100}$				27.4				- .53		
	α_2					23.9			41	51.46		
										-1.95		
									41	49.51		
24				8.8	41	40.8	44.1	47.4	41	47.14		
	κ				41	26.1		50.7		+4.35		
	(8) - D	$\frac{\kappa'}{100}$				29.7				- .57		
	α_1					26.1			41	51.26		
										-1.92		
									41	49.34		
26				8.6	41	41.5	44.7	48.0	41	48.02		
	κ				41	28.3		57.3		+3.75		
	(8) - D	$\frac{\kappa'}{100}$				81.2				- .36		
	α_2					28.2				- .6		
									41	51.32		
										-1.87		
									41	49.43		
23	43	28 52 29	28.2	9.4	42	20.0	23.6	26.6	43	28.88		
	κ	5.2		9.4	42	12		29.8		+4.93		
	(8) - D	$\frac{\kappa'}{100}$				40				- .36		
	α_1					60.8			43	31.03		
										-1.95		
									43	29.08		
24				9.2	42	20.3	23.8	27.2	43	27.18		
	κ				42	37.9		30.6		+4.35		
	(8) - D	$\frac{\kappa'}{100}$				1.5				- .52		
	α_2					38.2			43	30.99		
										-1.93		
									43	29.06		
26				9.2	43	21.0	24.4	27.9	43	27.84		
	κ				43	6.9		31.2		+3.75		
	(8) - D	$\frac{\kappa'}{100}$				8.5				- .36		
	α_1					6.8				- .7		
									43	31.13		
										-1.87		
									43	29.24		
23	44	39 53 36	33.6	8.0	44	18.8	22.2	25.7	44	25.76		
	κ	4.3			44	11.8		29.1		+4.93		
	(8) - D	$\frac{\kappa'}{100}$				14.8				- .58		
	α_2					11.3			44	30.08		
										-1.96		
									44	28.12		

Runs

	$T_m - T$	A	C	Sum	48	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	8'
d	+25.0 1.39794 9.80259 1.30653 _m	3' 55.0	4.8	1198	3'	59.90	33 48.45 50 35 53.37 -20.25			45	50 35 33.12 - 17 + 8.23 + 38 - 9.20 35 32.36	+8.44
(8) - D) $\frac{d'}{100}$												
+1.47 δ_1	+3.32	38 7.55	35 35.7									
d	+30.9 1.48996 9.80259 1.39855 _m	3' 48.4	59.4	1078	3	53.90	33 54.45 50 35 59.39 -25.04			45	34.35 - 26 + 4 + 8.27 + 38 - 9.40 35 33.30	+8.35
(8) - D) $\frac{d'}{100}$												
+1.47 δ_2	+3.32	38 7.49	35 36.6	48								
d	+30.4 1.48714 9.80259 1.39573 _m	4' 50.0	0.5	505	4	25.25	32 53.10 50 34 58.29 -24.87			45	33.42 - 26 + 5 + 8.33 + 38 - 9.70 35 32.12	+8.40
(8) - D) $\frac{d'}{100}$												
+1.47 δ_1	+3.32	38 7.63	35 35.4	31								
d	+23.2 1.36549 9.79047 1.26196 _m	1' 53.1	5.0	1181	1	59.05	50 49.30 51 52 54.22 -18.28			30	51 52 35.94 - 14 + 0 + 9.54 + 44 - 9.30 52 36.48	+9.84
(8) - D) $\frac{d'}{100}$												
+1.40 δ_2	+3.64	41 50.91	52 40.1	32								
d	+21.3 1.32838 9.79047 1.22485 _m	1' 55.6	7.1	27	2	1.38	50 47.00 51 52 51.94 -16.78			30	35.16 - 12 - 2 + 9.59 + 44 - 9.50 52 35.55	+9.89
(8) - D) $\frac{d'}{100}$												
+1.40 δ_1	+3.64	41 50.74	52 39.2	32								
d	+19.8 1.29667 9.79047 1.19314 _m	1' 56.0	6.9	29	2	1.45	50 46.90 51 52 52.09 -15.60			30	36.49 - 11 - 2 + 9.67 + 44 - 9.50 52 36.67	+9.98
(8) - D) $\frac{d'}{100}$												
+1.40 δ_2	+3.64	41 50.83	52 40.3	32								
d	+25.9 1.41330 9.78478 1.30408 _m	1' 55.3	46.0	812	7	40.60	26 7.75 52 28 12.67 -20.14			55	52 27 52.53 - 18 + 0 + 10.13 + 47 - 9.30 27 53.65	+10.42
(8) - D) $\frac{d'}{100}$												
+1.36 δ_1	+3.78	43 30.44	27 57.4	56								
d	+29.0 1.46240 9.78478 1.35818 _m	1' 33.3	44.9	782	7	39.10	26 9.25 52 28 14.19 -22.55			55	51.64 - 22 - 2 + 10.19 + 47 - 9.50 27 52.56	+10.42
(8) - D) $\frac{d'}{100}$												
+1.36 δ_2	+3.78	43 30.42	27 56.3	56								
d	+21.0 1.32222 9.78478 1.21300 _m	1' 39.1	49.1	882	7	44.10	26 4.25 52 28 9.44 -16.33			55	53.11 - 12 - 2 + 10.27 + 47 - 9.90 27 53.81	+10.60
(8) - D) $\frac{d'}{100}$												
+1.36 δ_1	+3.78	43 30.60	27 57.6	43								
d	+14.5 1.16137 9.77233 1.03972 _m	3' 17.0	25.9	429	3	21.45	39 26.90 53 41 31.82 -10.96			40	53 41 20.86 - 5 + 0 + 11.38 + 50 - 9.40 41 26.29 23 27	+11.83
(8) - D) $\frac{d'}{100}$												
+1.29 δ_2	+3.87	44 29.41	41 27.2									

326

Date₁ = 1874, Aug. 23

Observer
Recorder

327

Date₂ = Aug. 24
Aug. 26

Observer _____
Recorder _____

20

[illegible]

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	s'
d	+18.8 1.27646 9.77233 1.15479 _m	3' 15.0	26.4	414 ⁴³	3' 20.70	39 27.65 53 41 32.59 -14.28			46	53 41 18.31 - 9 + 11.45 + .50 - 9.60 41 20.54	+11.83
(8) - D $\frac{d'}{100}$	+1.29 +3.87			41 24.4							
δ_1		44 29.27									
d	+16.8 1.22531 9.77233 1.10364 _m	3 16.2	25.0	412 ⁴³	3 20.60	39 27.75 53 41 32.94 -12.90			40	20.24 - 7 + 11.54 + .50 - 100.0 41 22.18	+11.94
(8) - D $\frac{d'}{100}$	+1.29 +3.87			41 26.0							
δ_2		44 29.34									
d	+25.0 1.44716 9.80182 1.35498 _m	3 53.1	2.5	1156 ⁴⁵	3 57.80	38 50.55 50 40 55.47 -22.65			40	50 40 32.82 - .21 + 0 + 8.30 + .38 - 9.30 40 31.99	+8.97
(8) - D $\frac{d'}{100}$	+1.47 +3.98			40 36.0							
δ_1		45 49.54									
d	+27.0 1.45136 9.80182 1.33918 _m	3 56.0	5.7	14 ⁴⁴	4 0.70	38 49.65 50 40 52.59 -21.84			40	30.75 - .19 + 4 + 8.35 + .38 - 9.40 40 29.88	+8.50
(8) - D $\frac{d'}{100}$	+1.47 +3.98			40 33.8							
δ_2		45 49.58									
d	+26.5 1.42325 9.80182 1.33107 _m	4 54.0	4.9	1189 ⁴⁵ (43)	4 59.45	39 48.90 50 39 54.09 40 -21.43			40	32.66 - .18 + 5 + 8.41 + .38 - 9.80 40 31.42	+8.56
(8) - D $\frac{d'}{100}$	+1.47 +3.98			40 35.4							
δ_1		45 49.73									
d	+20.7 1.31597 9.80058 1.22255 _m	0 38.2	48.8	870 ⁴⁵	0 43.50	47 48.85 50 49 9.77 -16.69			35	50 48 53.08 - .12 + 0 + 8.45 + .39 - 9.30 48 52.50	+8.72
(8) - D $\frac{d'}{100}$	+1.47 +4.24			48 56.7							
δ_2		48 48.91									
d	+25.8 1.41162 9.80058 1.37820 _m	0 34.7	45.8	805 ⁴⁵	0 40.25	47 8.10 50 49 13.04 -20.81			35	52.23 - 18 + 8.50 + .39 - 9.50 48 51.43	+8.70
(8) - D $\frac{d'}{100}$	+1.47 +4.24			48 55.7							
δ_1		48 49.01									
d	+22.4 1.35025 9.80058 1.25688 _m	0 35.5	46.0	815 ⁴⁵	0 40.75	47 7.60 50 49 12.79 -18.06			35	54.73 - .13 + 1 + 8.56 + .39 - 9.50 48 53.74	+8.81
(8) - D $\frac{d'}{100}$	+1.47 +4.24			48 58.0							
δ_2		48 49.10									
d	+22.7 1.35603 9.79478 1.25681 _m	3 28.7	40.1	688 ⁴⁵	3 34.40	24 13.95 51 26 18.87 -18.06			55	51 26 0.81 - .14 + 0 + 9.07 + .42 - 9.30 26 0.786	+9.35
(8) - D $\frac{d'}{100}$	+1.43 +4.32			26 5.2							
δ_1		49 48.32									
d	+14.4 1.15836 9.79478 1.06014 _m	3 34.7	46.2	809 ⁴⁵	3 40.45	24 7.90 51 26 12.84 -11.49			55	1.35 - 5 + 4 + 9.13 + .42 - 9.50 26 1.31	+9.46
(8) - D $\frac{d'}{100}$	+1.43 +4.32			26 5.6							
δ_2		49 48.28									

Date₁ = 1874, Aug. 23Observer
RecorderDate₂ = Aug. 24

Aug. 26

Observer
Recorder

22

Star.	α	δ	Mag.	T_s	T_m	T_e	T_s	T_g	T_n	Sum	Mean	Red. to T_m	T
26 18	49	42 51 26	9.1	18 49 25.5	49 39.0	42.4	45.6	48.8	52.0	49	45.56		
	49	19.6 25.0	8.0	28.0							+ 3.73		
	κ			31.1							- .30		
	(δ) - D) $\frac{\kappa'}{100}$			28.2							- .2		
	α_1									49	48.85		
											- 1.91		
										49	46.93		
											- .34		
	(δ) - D) $\frac{\kappa'}{100}$									50	51.75		
	α_2									50	49.76		
											- 1.99		
23 18	50	45 51 31	9.6	50 27.0	50 40.5	43.8	47.5	50.8	54.0	50	47.38		
	50	22.2 29.7	9.4	30.5							+ 4.93		
	κ			34.1							- .34		
	(δ) - D) $\frac{\kappa'}{100}$			30.5						50	51.75		
	α_1									50	49.76		
											- 1.99		
24			9.6	50 28.5	50 41.3	44.5	48.0	51.1	54.7	50	47.92		
	κ			31.5							+ 4.35		
	(δ) - D) $\frac{\kappa'}{100}$			33.7						50	51.75		
	α_1			31.2						50	49.79		
											- 1.96		
26			9.8	51 17.7	50 41.9	45.2	48.6	51.7	55.2	50	48.50		
	κ			20.5							+ 3.78		
	(δ) - D) $\frac{\kappa'}{100}$			23.0						50	51.79		
	α_2			20.4						50	49.87		
											- 1.91		
23 23	51	46 51 8	7.2	51 32.7	51 41.0	44.3	47.5	50.7	54.1	51	47.52		
	51	23.1 7.2	7.9	35.7							+ 4.93		
	κ			37.8							- .53		
	(δ) - D) $\frac{\kappa'}{100}$			35.2						51	51.90		
	α_1									51	49.91		
											- 1.99		
24 24			7.8	51 27.4	51 41.6	44.9	48.1	51.3	54.8	51	48.14		
	κ			31.5							+ 4.35		
	(δ) - D) $\frac{\kappa'}{100}$			34.1						51	51.98		
	α_2			31.0						51	50.01		
											- 1.97		
26 26			8.0	52 8.4	51 42.1	45.4	48.7	52.0	55.3	51	48.20		
	κ			12.4							+ 3.72		
	(δ) - D) $\frac{\kappa'}{100}$			15.4						51	52.00		
	α_1			12.1						51	50.07		
											- 1.92		
23 23	54	0 51 33	7.8	53 40.5	53 54.6	58.0	1.3	4.7	8.0	54	1.32		
	53	37.0 31.5	7.3	43.2							+ 4.93		
	κ			46.6							- .34		
	(δ) - D) $\frac{\kappa'}{100}$			43.4						54	55.69		
	α_2									54	3.69		
											- 2.00		
24 24			8.0	53 38.4	53 53.2	58.7	1.8	5.3	8.7	54	1.94		
	κ			41.3							+ 4.34		
	(δ) - D) $\frac{\kappa'}{100}$			43.7						54	5.76		
	α_1			41.1						54	3.78		
											- 1.98		
26 26			7.7	53 36.5	53 53.7	59.0	2.4	5.8	9.1	54	2.40		
	κ			40.3							+ 3.78		
	(δ) - D) $\frac{\kappa'}{100}$			43.0						54	5.69		
	α_2			39.9						54	3.76		
											- .6		
											- .2		

Runs

	$T_m - T$	A	C	Sum	58	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	8'
d	+17.4 1.24055 9.79478 1.14133 _n	3' 33.8	44.0	778	3'	38.90	24 9.45 51 26 14.64 -13.85			55	51 26 0.79 - 8 + 9.20 + .42 - 9.90 26 0.39	+9.50
(8) - D) $\frac{d'}{100}$												
δ_1	+1.43 +4.32	49 48.36		26 4.7	53							
d	+16.9 1.22789 9.79399 1.12788 _n	3 22.6	34.1	567	3	28.35	29 20.00 51 31 24.92 -13.42			50	51 31 11.50 - 8 + 0 + 9.16 + .42 - 9.30 31 11.70	+9.50
(8) - D) $\frac{d'}{100}$												
δ_2	+1.43 +4.41	50 51.19		31 16.1	53							
d	+16.7 1.22272 9.79399 1.12271 _n	3 21.3	32.8	541	3	27.05	29 21.30 51 31 26.24 -13.27			50	31 12.97 - 8 + 3 + 9.22 + .42 - 9.50 31 13.00	+9.53
(8) - D) $\frac{d'}{100}$												
δ_1	+1.43 +4.41	50 51.22		31 17.4	53							
d	- 31.9 1.50379 9.79399 1.40378	1.0	11.9	129	3	6.45	29 41.90 51 30 47.09 + 25.34			50	31 12.43 - 27 - 3 + 9.29 + .42 - 9.90 31 13.00	+9.41
(8) - D) $\frac{d'}{100}$												
δ_2	+1.43 +4.41	50 51.30		31 16.4	16							
d	+12.3 1.08991 9.79446 0.99337 _n	1 1.3	12.9	142	1	7.10	6 41.25 51 8 46.17 - 9.85			15	51 8 36.32 - 4 + 0 + 8.78 + .41 - 9.30 8 36.17	+9.15
(8) - D) $\frac{d'}{100}$												
δ_1	+1.46 +4.50	51 51.37		8 40.7	16							
d	+17.1 1.23300 9.79446 1.13646 _n	0 58.1	10.0	81	1	4.05	6 44.30 51 8 49.24 -13.69			15	35.55 - 8 + 8.84 + .41 - 9.50 8 35.21	+9.16
(8) - D) $\frac{d'}{100}$												
δ_2	+1.46 +4.50	51 51.47		8 39.7	16							
d	- 23.4 1.36922 9.79746 1.27268	1 28.5	39.5	680	1	34.00	6 14.35 51 8 19.54 + 18.74			15	38.28 14 - 1 + 8.91 + .41 - 9.90 8 37.55	+9.17
(8) - D) $\frac{d'}{100}$												
δ_1	+1.46 +4.50	51 51.53		8 42.0	51							
d	+17.9 1.25285 9.79367 1.15282 _n	1 24.0	36.3	603	1	30.15	31 18.20 51 33 23.12 -14.21			50	51 33 8.91 - 9 + 0 + 9.19 + .42 - 9.30 33 9.13	+9.52
(8) - D) $\frac{d'}{100}$												
δ_2	+1.44 +4.68	54 5.13		33 13.8	51							
d	+20.8 1.31806 9.79367 1.21773 _n	1 21.8	33.0	548	1	27.40	31 20.95 51 33 25.89 -16.51			50	9.38 - .12 - 1 + 9.25 + .42 - 9.50 33 9.42	+9.54
(8) - D) $\frac{d'}{100}$												
δ_1	+1.44 +4.68	54 5.22		33 14.1	51							
d	+22.5 1.35218 9.79367 1.25185 _n	1 20.0	30.8	508	1	25.40	31 22.95 51 33 28.14 -17.86			50	10.28 - .13 - 1 + 9.32 + .42 - 9.90 33 9.98	+9.60
(8) - D) $\frac{d'}{100}$												
δ_2	+1.44 +4.68	54 5.20		33 14.7								

326

Date₁ = 1874, Aug. 23Observer
RecorderDate₂ = Aug. 24

Aug. 26

Observer
Recorder

24

23	Star.	α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
1874	m	55	28 51 15	9.4	18 33	10 53 21.6	28.2	31.7	33.0	38.3	55	31.56		
	κ	55	5.8	14.0	9.4							+4.98		
	(8) - D											-2		
	a_1										55	35.94		
												-2.01		
											55	33.93		+1.44
24				9.7	53	12.1	55 25.3	29.0	32.0	35.3	38.7	55	32.10	+4.34
	κ					14.5						-4.9		
	(8) - D					17.5						-2		
	a_2					14.7						55	35.93	-1.99
												55	33.94	-3.97
26				10.0	55	31.6	55 26.3	29.3	32.5	36.0	39.5	55	32.78	+3.78
	κ					14.5						-1.34		
	(8) - D					17.5						-2		
	a_1											55	36.08	-1.94
												55	34.43	-3.01
23	18	57	1 51 24	8.8	56 31.3	56 37.0	0.3	2.6	6.8	10.3	57	3.60	+4.93	
	κ	56	38.2	22.6	9.0	3.1						-5.4		
	(8) - D					38.2						-2		
	a_2					34.9						57	7.97	-2.01
												57	5.96	-1.99
24				8.8	56	37.7	56 37.4	0.7	4.0	7.3	10.7	57	4.02	+4.34
	κ					41.0						-5.0		
	(8) - D					43.5						-2		
	a_1					40.7						56	7.84	-1.99
												57	5.85	-3.97
26				9.0	56	37.7	56 38.0	1.3	4.4	7.7	11.2	57	4.52	+3.71
	κ					42.2						-3.5		
	(8) - D					43.3						-6		
	a_2					41.7						57	7.80	-1.94
												57	5.86	-3.97
23	18	58	4 57 02	9.0	57 45.7	57 55.8	8.0	6.3	9.5	13.0	58	6.32	+4.93	
	κ	57	41.0	6.7	8.8	48.3						-5.3		
	(8) - D					52.5						-2		
	a_1					48.8						58	10.70	-2.02
												58	8.68	-3.97
24				9.2	57	35.3	58 0.3	3.4	6.7	10.0	13.3	58	6.74	+4.34
	κ					37.0						-4.9		
	(8) - D					39.7						-2		
	a_2					37.3						58	10.57	-2.00
												58	8.57	-3.97
26				9.2	57	45.9	58 1.0	4.1	7.3	10.7	13.8	58	7.38	+3.71
	κ					49.3						-3.4		
	(8) - D					52.2						-6		
	a_1					49.1						58	10.67	-1.94
												58	8.93	-3.97
23	18	59	50 51 24	8.6	59 26.8	59 46.2	4.6	5.3	5.0	8.2	59	52.80	+4.93	
	κ	59	27.6	22.8	8.2	30.3						-5.3		
	(8) - D					34.0						-2		
	a_2					30.4						59	57.18	-2.03
												59	53.45	-3.97

Runs

	$T_m - T$	A	C	Sum	Mean λ	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+23.8 1.37658 9.79636 1.27894 _m	3' 58.7	9.5	82	94' 4.10	13 44.25 51 15 49.17 -19.01			5	51 15 30.06 - .15 + 8.90 + .41 - 9.30 15 29.92	+9.16
(δ) - D) $\frac{d'}{100}$											
+1.46 δ_1 +4.81		55 35.39		15 34.7	9						
d	+17.4 1.24056 9.79636 1.14291 _m	4 3.7	14.0	177	4 8.85	13 39.50 51 15 44.44 -13.99			5	30.45 - 8 - 4 + 8.95 + .41 - 9.50 15 30.19	+9.24
(δ) - D) $\frac{d'}{100}$											
+1.46 δ_2 +4.81		55 35.40		15 35.0	9						
d	+1.2 0.07918 9.79636 9.98154 _m	4 21.5	27.1	486	4 24.30	13 24.05 51 15 29.24 -0.96			5	28.28 - .00 - 4 + 9.02 + .41 - 9.90 15 27.87	+9.39
(δ) - D) $\frac{d'}{100}$											
+1.46 δ_1 +4.81		55 35.47		15 32.6	9						
d	+28.4 1.457188 9.79510 1.35898 _m	0 44.6	55.0	996	0 49.80	21 58.55 51 24 3.47 -22.85			0	51 23 40.62 - .22 + .0 + 9.05 + .42 - 9.40 23 40.47	+9.25
(δ) - D) $\frac{d'}{100}$											
+1.45 δ_2 +4.95		57 7.41		23 45.4							
d	+23.3 1.36736 9.79510 1.26846 _m	0 48.9	2.3	1112	0 55.60	21 52.75 51 23 57.69 -18.55			0	39.14 - .14 - 1 + 9.10 + .42 - 9.60 23 38.91	+9.37
(δ) - D) $\frac{d'}{100}$											
+1.45 δ_1 +4.95		57 7.30		23 43.9	11						
d	+22.8 1.35793 9.79510 1.25903 _m	0 50.0	0.1	501	0 55.05	21 58.30 51 23 58.49 -18.16			0	40.33 - .14 - 1 + 9.17 + .42 - 9.90 23 39.87	+9.44
(δ) - D) $\frac{d'}{100}$											
+1.45 δ_2 +4.95		57 7.31		23 44.8	22						
d	+17.5 1.24304 9.79840 1.14744 _m	2 15.0	24.3	393	2 19.65	0 28.70 51 2 33.62 -14.04			20	51 2 19.58 - 8 + 0 + 8.67 + .40 - 9.40 2 19.17	+8.99
(δ) - D) $\frac{d'}{100}$											
+1.47 δ_1 +5.04		58 10.15		2 24.2	22						
d	+29.4 1.46835 9.79840 1.37275 _m	2 4.7	17.0	217	2 10.55	0 37.50 51 2 42.44 -23.59			20	18.85 - 22 - 2 + 8.72 + .40 - 9.50 2 18.23	+8.88
(δ) - D) $\frac{d'}{100}$											
+1.47 δ_2 +5.04		58 10.04		2 23.3	22						
d	+18.4 1.26245 9.79840 1.16685 _m	2 13.7	23.9	376	2 18.80	0 29.55 51 2 34.74 -14.58			20	20.16 - 9 - 2 + 8.79 + .40 - 9.90 2 19.34	+9.08
(δ) - D) $\frac{d'}{100}$											
+1.47 δ_1 +5.04		58 10.20		2 24.4							
d	+22.4 1.35025 9.79510 1.25135 _m	0 21.5	32.9	544	0 27.20	22 21.15 51 24 26.07 -17.84			0	51 24 8.23 - 13 + 0 + 9.05 + .42 - 9.40 24 8.17	+9.34
(δ) - D) $\frac{d'}{100}$											
+1.45 δ_2 +5.18		59 56.74		24 13.4							

326

Observer
RecorderDate₁ = 1874, Aug. 23Date₂ = Aug. 24

Aug. 26

Observer
Recorder

26

24	Star.	α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
19	m	59	50 51 24	8.1	18 39	31.0	59 46.9	50.3	58.5	57.0	0.2	59 53.88		
	κ	59	27.6	22.5	8.2	34.3						+ 4.34		
	(8) - D					34.2					+ 3.83	59	57.61	
	α_1											- 2.00		
												59	58.41	
26				8.6	59 26.0	59 47.7	50.7	54.0	57.5	0.5	59	54.08		
	κ				27.7							+ 3.71		
	(8) - D				31.8						+ 3.29	59	57.37	
	α_2				29.2							- 1.95		
23												59	55.42	
19	0	52 51 39	9.0	19	0 33.8	0 47.1	50.4	54.0	57.3	0.7	0	53.94		
	κ	0	28.6	37.2	9.0	37.0						+ 4.93		
	(8) - D					39.6					+ 4.37	0	58.31	
	α_1					36.8						- 2.03		
												0	56.28	
24				9.1	0 34.2	0 48.1	51.3	54.6	57.9	1.2	0	54.62		
	κ				37.1						+ 3.82	0	58.44	
	(8) - D				40.5							- 2.01		
	α_2				37.3							0	56.43	
26				9.3	0 32.2	0 48.3	51.9	55.1	58.4	1.7	0	55.08		
	κ				36.7							+ 3.71		
	(8) - D				39.9						+ 3.28	0	58.36	
	α_1				36.3							- 1.96		
23												0	56.40	
19	5	12 50 3	8.0	4	57.3	5 8.6	11.7	15.0	18.3	21.4	5	15.00		
	κ	4	48.3	1.5	8.6	54.1					+ 4.40	5	19.40	
	(8) - D					57.0						- 2.05		
	α_2					54.1						5	17.35	
24				7.8	4 57.5	5 9.0	12.2	15.4	18.9	22.0	5	15.56		
	κ				54.8						+ 4.34	5	19.40	
	(8) - D				57.0						+ 3.84	5	17.37	
	α_1				54.4							- 2.03		
26				7.8	4 50.8	5 9.6	13.0	16.1	19.2	22.5	5	16.08		
	κ				54.0							+ 3.70		
	(8) - D				57.5						+ 3.29	5	19.34	
	α_2				54.1							- 1.97		
23												5	17.40	
19	6	40 50 48	9.0	6	15.8	6 37.0	40.3	43.6	47.0	50.1	6	43.80		
	κ	6	16.4	46.7	9.0	18.1					+ 4.38	6	47.98	
	(8) - D					22.7						- 2.06		
	α_1					19.2						6	45.92	
24				9.1	6 14.0	6 37.3	41.0	44.2	47.6	50.5	6	44.12		
	κ				17.0						+ 3.83	6	47.95	
	(8) - D				19.3							- 2.04		
	α_2				16.8							6	45.91	

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	8'
d	+19.6 1.29226 9.79510 1.19336 _m	0' 22.3	36.1	584	0' 29.20	22 19.15 51 24 24.09 -15.61			0'	51 24 8.48 - .11 + 9.10 + .42 - 9.60 24 8.29	+9.41
(8) - D $\frac{d'}{100}$											
δ_1	+14.5 +5.18	59 56.86		24 13.5							
d	+24.9 1.39620 9.79510 1.29730 _m	0 18.0	29.1	471	0 23.55	22 24.80 51 24 29.99 -19.83			0	10.16 - .17 - .0 + 9.17 + .42 -10.00 24 9.58	+9.42
(8) - D $\frac{d'}{100}$											
δ_2	+14.5 +5.18	59 56.87		24 14.8							
d	+17.7 1.23300 9.79272 1.13172 _m	0 56.0	7.2	32	1 1.60	36 46.75 51 38 51.67 -13.54			4.5	51 38 38.13 - .8 + .0 + 9.30 + .43 - 9.40 38 38.38 (38)	+9.65
(8) - D $\frac{d'}{100}$											
δ_1	+14.4 +5.27	0 57.72		38 43.6							
d	+17.3 1.23805 9.79272 1.13677 _m	1 56.0	8.2	42	2 2.10	35 46.25 51 38 51.19 -13.70			4.5	38 37.49 - .8 - .1 + 9.35 + 1.43 - 9.60 38 37.88	+9.69
(8) - D $\frac{d'}{100}$											
δ_2	+14.4 +5.27	0 57.87		38 42.9							
d	+18.8 1.27416 9.79272 1.17278 _m	0 54.1	5.2	1193	0 59.65	36 48.70 51 38 53.89 -14.89			4.5	38 39.00 - .10 - .1 + 9.42 + .43 -10.00 38 38.74	+9.74
(8) - D $\frac{d'}{100}$											
δ_1	+14.4 +5.27	0 57.84		38 44.0							
d	+20.9 1.32015 9.80746 1.23361 _m	1 14.9	24.5	394	1 19.70	1 28.65 50 3 33.57 -17.12			2.0	50 3 16.45 - .12 + .0 + 7.66 + .35 - 9.30 3 15.89	+7.89
(8) - D $\frac{d'}{100}$											
δ_2	+15.4 +5.64	5 18.89		3 20.7							
d	+21.2 1.32634 9.80746 1.23980 _m	1 13.7	23.2	369	1 18.45	1 29.90 50 3 34.84 -17.37			2.0	17.47 - .12 - .1 + 7.70 + .35 - 9.50 3 15.89	+7.92
(8) - D $\frac{d'}{100}$											
δ_1	+15.4 +5.64	5 18.91		3 21.5							
d	+22.0 1.34242 9.80746 1.25588 _m	1 12.5	22.0	345	1 17.25	1 31.10 50 3 36.29 -18.02			2.0	18.27 - .13 - .1 + 7.76 + .35 - 9.90 3 16.34	+7.97
(8) - D $\frac{d'}{100}$											
δ_2	+15.4 +5.64	5 18.94		3 22.0							
d	+23.8 1.37658 9.80058 1.28316 _m	0 50.9	1.1	1120	0 56.00	46 52.35 50 48 57.27 -19.19			3.5	50 48 38.08 - .15 + .0 + 8.45 + .38 - 9.40 48 37.36	+8.68
(8) - D $\frac{d'}{100}$											
δ_1	+15.0 +5.75	6 47.42		48 43.1							
d	+27.3 1.43616 9.80058 1.34274 _m	0 47.9	59.1	1070	0 53.50	46 54.85 50 48 59.79 -22.02			3.5	37.77 - .19 - .1 + 8.50 + .38 - 9.60 48 36.85	+8.68
(8) - D $\frac{d'}{100}$											
δ_2	+15.0 +5.75	6 47.41		48 42.6							

Date₁ = 1874, Aug 23Observer
RecorderDate₂ = Aug 24Observer
Recorder

28

Star.	α	δ	Mag.	T_s	T_m	T_e	T_r	T_g	T_h	Sum	Mean	Red. to T_m	T
23	6 ^m	40 57 48	8.9	19 6	6 38.3	47.4	48.8	47.9	51.2	6	44.72		
	κ	16.4 50 40.7	8.0		19.0						+ 3.40		
					22.3						- 6		
	(δ) - D				19.0						+ 3.28		
	α_1									6	48.00		
											- 1.99		
23	7	41 50 18	8.7	7 13.6	7 37.0	40.2	43.5	46.8	50.0	7	43.50		
19	κ	17.2 50 16.0	8.6		16.6						+ 4.93		
					20.5						- 5.5		
	(δ) - D				16.9						+ 4.36		
	α_2									7	47.86		
											- 2.05		
24			9.0	7 20.1	7 37.6	41.0	44.2	47.3	50.6	7	44.14		
	κ				23.8						+ 4.34		
					26.5						- 5.2		
	(δ) - D				23.5						+ 3.80		
	α_1									7	47.94		
											- 2.03		
26			8.7	7 18.7	7 38.1	41.6	44.5	47.8	51.1	7	44.62		
	κ				22.0						+ 3.70		
					24.2						- 1.36		
	(δ) - D				21.6						+ 3.26		
	α_2									7	47.88		
											- 1.98		
23	8	46 52 28	8.2	8 17.1	8 40.5	44.0	47.4	50.7	54.0	8	47.32		
19	κ	22.7 52 23.4	8.2		20.3						+ 4.93		
					22.7						- 5.6		
	(δ) - D				20.0						+ 4.35		
	α_1									8	51.67		
											- 2.06		
24			8.3	8 26.8	8 41.3	44.6	48.0	51.2	54.7	8	47.96		
	κ				30.1						+ 4.33		
					33.0						- 5.2		
	(δ) - D				30.0						+ 3.79		
	α_2									8	51.75		
											- 2.04		
26			8.2	8 28.0	8 41.6	45.0	48.4	51.8	55.2	8	48.40		
	κ				29.2						+ 3.65		
					31.0						- 3.6		
	(δ) - D				28.4						+ 3.26		
	α_1									8	51.65		
											- 1.99		
										8	49.67		

Single Observations

Aug 23	α_2												
18	6	38 51 51	8.8	18 6	6 34.1	37.7	41.0	44.4	47.5	6	40.94		
	κ	15.8 51 50.6	8.3		20.6						+ 4.92		
					24.4						- 5.5		
	(δ) - D				20.6						+ 4.35		
Aug 23	α_1									6	45.29		
18	7	48 51 27	8.9	7 29.8	7 44.6	48.1	51.5	54.6	58.1	7	48.50		
	κ	25.5 51 27.4	8.5		32.1						+ 4.92		
					36.1						- 5.4		
	(δ) - D				33.1						+ 4.36		
	α_2									7	48.574		
											- 2.79		
										7	58.25		
											- 6.90		
										7	53.95		

Runs	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+25.4 1.40993 980058 1.31651 _m	0' 37.0	59.0	1100 ³⁵	0' 55.00	46 53.35 50 48 58.54 -20.73			35	50 48 37.81 - 18 + 8.57 + 38 - 10.00 48 36.57	+8.776
(δ) - D) $\frac{d'}{100}$											
δ_1	+1.50 +5.75	6 47.51	48 42.3								
d	+26.6 1.42488 978642 1.33482 _m	1 26.1	37.7	638	1 31.90	16 16.45 50 18 21.37 50 -20.76 -21.62			5	52 18 0.65 50 17 34.15 - 17 + 7.93 + 9.97 + 46 - 9.30 17 58.65	+8.20
(δ) - D) $\frac{d'}{100}$											
δ_2	+1.53 +5.85	7 47.34	18 4.5								
d	+20.6 1.31387 978642 1.22381 _m	1 29.9	40.8	707	1 35.35	16 13.00 18 17.94 - 16.08 - 16.74			5	18 18.620 - 12 + 7.97 + 10.03 + 46 - 9.60 18 59.90	+8.30
(δ) - D) $\frac{d'}{100}$											
δ_1	+1.53 +5.85	7 47.44	18 6.8								
d	+23.0 1.36173 978642 1.25415 _m	1 27.9	38.0	659	1 32.95	16 15.40 18 20.59 - 17.95 - 18.69			5	18 12.64 - 14 + 8.05 + 10.11 + 46 - 10.20 18 0.26	+8.36
(δ) - D) $\frac{d'}{100}$											
δ_2	+1.53 +5.85	7 47.43	18 6.1								
d	+27.3 1.43616 978510 1.32726 _m	3 59.1	9.9	90	4 4.50	23 44.85 52 25 42.77 - 21.25			55	52 25 28.52 - 19 + 0 + 10.09 + 47 - 9.50 25 29.39	+10.57
(δ) - D) $\frac{d'}{100}$											
δ_1	+1.41 +5.93	8 51.02	25 35.3								
d	+18.0 1.25527 978510 1.14639 _m	4 6.0	16.5	225	4 11.25	23 37.10 52 25 42.04 - 14.01			55	28.03 - 9 + 10.15 + 47 - 9.60 25 28.92	+10.49
(δ) - D) $\frac{d'}{100}$											
δ_2	+1.41 +5.93	8 51.12	25 34.8								
d	+20.0 1.30103 978510 1.19213 _m	4 3.9	13.9	178	4 8.90	22 39.45 25 44.64 - 15.56			55	29.08 - 11 - 4 + 10.23 + 47 - 10.10 25 29.63	+10.55
(δ) - D) $\frac{d'}{100}$											
δ_1	+1.41 +5.93	8 51.08	25 34.5								
d	+20.3 1.30750 979089 1.20429 _m	3 38.3	118.2	865 ²³	3 43.25	49 5.10 51 51 10.02 - 16.01			30	51 50 54.01 - 11 + 0 + 9.47 + 44 - 9.00 50 54.81	+9.80
(δ) - D) $\frac{d'}{100}$											
δ_1	+1.37 +0.59	6 45.37	50 55.4								
d	+24.4 1.26482 979481 1.16513 _m	0 45.4	56.4	1018	0 50.90	26 57.45 51 29 2.37 - 14.63			55	51 28 47.74 - 9 + 0 + 9.11 + 42 - 9.00 28 48.18	+9.44
(δ) - D) $\frac{d'}{100}$											
δ_2	+1.39 +0.69	7 55.34	28 48.9								

Single Observations

Observer
RecorderDate₂ =Observer
RecorderDate₁ = 1874, Aug 23327
Aug. 24 30

Star.	α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
1874	40	31 51 17	9.0	18 40	18 40	30.8	340	37.2	40.4	40	33.92		
	40	31 51 17											
	κ	8.8	16.4										
	(8) - D	$\frac{\kappa'}{100}$											
Aug. 23	α_1												
18	52	50 52 29	9.3	52 32.2	52 440	47.3	37.0	54.3	57.7	52	50.86		
	52	50 52 29	9.0										
	κ	2.1	28.9										
	(8) - D	$\frac{\kappa'}{100}$											
Aug. 24	α_2												
18	22	49 51 3	9.3	22 28.6	22 466	48.7	53.0	56.2	59.6	22	53.02		
	22	49 51 3	9.1										
	κ	2.5	2.5										
	(8) - D	$\frac{\kappa'}{100}$											
Aug. 24	α_1												
18	31	33 51 41	8.3	30 29.2	30 484	37.8	53.0	58.3	1.9	30	55.08		
	31	33 51 41	6.9										
	κ	31.0	51 37.1										
	(8) - D	$\frac{\kappa'}{100}$											
Aug. 24	α_2												
18	38	48 53 41	8.9	39 18.8	39 484	47.8	53.1	58.7	2.0	39	55.20		
	38	48 53 41	9.0										
	κ	32.7	53 35.8										
	(8) - D	$\frac{\kappa'}{100}$											
Aug. 24	α_1												
18	47	20 50 45	8.4	47 00	47 177	21.2	24.2	27.3	30.7	47	24.20		
	47	20 50 45	8.5										
	κ	57.4	43.7										
	(8) - D	$\frac{\kappa'}{100}$											
Aug. 24	α_2												
18	52	50 52 29	9.4	52 26.9	52 444	47.8	37.2	54.6	58.0	52	51.18		
	52	50 52 29	9.0										
	κ	2.1	28.9										
	(8) - D	$\frac{\kappa'}{100}$											
Aug. 24	α_1												
19	2	26 52 20	9.1	19 2	19 21.2	24.5	28.0	31.2	34.7	2	27.92		
	2	26 52 20	9.3										
	κ	2.4	18.4										
	(8) - D	$\frac{\kappa'}{100}$											
Aug. 24	α_2												
19	4	15 50 28	8.7	3 45.9	4 11.9	15.1	18.4	21.6	24.9	4	18.38		
	4	15 50 28	8.6										
	κ	57.4	26.4										
	(8) - D	$\frac{\kappa'}{100}$											
Aug. 26	α_1												
18	6	38 51 51	8.8	18 6	13.1	6 35.2	38.5	42.0	45.2	6	41.88		
	6	38 51 51	8.3										
	κ	15.8	50.6										
	(8) - D	$\frac{\kappa'}{100}$											
	α_2												

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	8'
d	+11.0 1.04139 9.79621 0.94360 _m	3' 2.6	12.9	155 ⁸	3' 7.75	14 40.60 51 16 45.52 - 8.78			5	51 16 36.74 - 3 + 0 + 8.91 + .41 - 9.30 16 36.73	+9.29
(δ) - D) $\frac{d'}{100}$											
+143 +3.53		40 37.78		16 40.3	54						
d	+15.0 1.17609 9.78428 1.06637 _m	4 12.9	23.5	364	4 18.20	28 30.15 52 30 35.07 - 11.65			50	50 30 23.42 - 6 + 0 + 8.14 + .37 - 9.30 30 22.57	+8.45
(δ) - D) $\frac{d'}{100}$											
+138 +4.58		52 54.59		30 27.2	21						
d	+25.9 1.41330 9.77825 1.30755	1 11.1	21.7	328	1 16.40	1 31.95 51 3 36.89 - 20.30			20	51 3 16.59 - 18 - 1 + 8.72 + .40 - 9.30 3 16.22	+8.93
(δ) - D) $\frac{d'}{100}$											
+143 +2.00		22 56.46		3 18.2	46						
d	+22.4 1.35025 9.79288 1.24913 _m	1 36.1	48.7	848	1 42.40	36 5.95 51 38 10.89 - 17.75			45	51 37 53.14 - 13 - 2 + 9.33 + .43 - 9.40 37 53.35	+9.61
(δ) - D) $\frac{d'}{100}$											
+140 +2.75		30 58.44		37 56.1	47						
d	+33.3 1.52244 9.77336 1.40180 _m	2 52.1	3.2	1153	2 57.65	34 50.70 53 36 55.64 - 25.22			45	53 36 30.42 - 28 - 3 + 11.36 + 50 - 9.60 36 32.37	+11.55
(δ) - D) $\frac{d'}{100}$											
+128 +3.47		39 58.34		36 35.8	39						
d	+21.0 1.32222 9.80105 1.22927 _m	4 48.4	58.6	1070	4 53.50	432 54.85 50 451 59.79 - 16.95			35	50 45 42.84 - 12 - 5 + 8.44 + 38 - 9.50 45 41.99	+8.65
(δ) - D) $\frac{d'}{100}$											
+147 +4.13		47 27.56		44 46.1	54						
d	+20.7 1.31597 9.78445 1.20642 _m	1 9.2	20.4	296	4 14.80	28 33.55 52 30 38.49 - 16.09			50	52 30 22.40 - 12 - 48 + 10.26 + 47 - 9.60 30 23.37	+10.57
(δ) - D) $\frac{d'}{100}$											
+138 +4.58		52 54.44		30 28.0							
d	+16.9 1.22789 9.78609 1.11998 _m	4 31.7	43.4	751	4 37.55	18 10.80 52 20 15.74 - 13.18			0	52 20 2.56 - 8 - 5 + 10.06 + 47 - 9.60 20 3.36	+10.40
(δ) - D) $\frac{d'}{100}$											
+140 +5.40		2 31.12		20 8.8	56						
d	+29.2 1.46538 9.80366 1.37504 _m	1 17.1	28.0	451	1 22.55	26 25.80 50 28 30.74 - 23.72			53	50 28 7.02 - 23 - 1 + 8.10 + 37 - 9.60 28 5.65	+8.23
(δ) - D) $\frac{d'}{100}$											
+152 +5.56		4 21.81		28 11.2	33						
d	+25.9 1.41330 9.79079 1.31009 _m	3 34.7	44.6	793	3 39.65	49 8.70 51 51 13.89 - 20.42			30	51 50 53.47 - 18 - 4 + 9.60 + .44 - 9.50 50 53.79	+9.82
(δ) - D) $\frac{d'}{100}$											
+137 +0.59		6 44.86		50 54.4							

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	8'
d	+20.6 131389 979431 1.21418 _m	0 43.7	54.7	984 55'	49.20	26 59.15 51 29 43.4 -16.37			55 51	28 47.97 - 12 + 9.23 + 42 - 9.50 28 47.99	+9.52
(8) - D) $\frac{d'}{100}$											
δ_1	+139 +0.69	7 55.34		28 48.7	21						
d	+25.7 140993 979825 1.31418 _m	1 11.4	21.9	333	16.65	1 31.70 51 3 36.89 - 20.61			20 51	3 16.28 - 18 + 8.78 + .40 - 9.60 3 15.67	+8.99
(8) - D) $\frac{d'}{100}$											
δ_2	+143 +2.00	22 56.59		3 17.4	42						
d	+20.0 130103 979240 1.19943 _m	3 37.1	47.2	843	3 42.15	39 6.20 51 41 11.39 - 15.83			40 51	40 55.56 - 11 - 4 + 9.44 + .43 - 9.80 40 55.48	+9.72
(8) - D) $\frac{d'}{100}$											
δ_1	+140 +2.75	31 36.97		40 56.2	23						
d	+29.4 143775 979913 1.32288 _m	3 16.9	27.9	448	3 22.40	59 25.95 53 1 31.14 - 21.00			20 53	1 10.14 - .19 - 3 + 10.54 + .50 - 9.90 1 11.36	+11.12
(8) - D) $\frac{d'}{100}$											
δ_2	+132 +3.44	39 37.01		1 14.8	8						
d	+5.4 073239 979636 0.63475 _m	3 4.5	14.5	190	3 9.50	13 38.85 51 15 44.04 - 4.31			5 51	15 39.73 - 1 - 3 + 9.03 + .41 - 9.80 15 39.33	+9.40
(8) - D) $\frac{d'}{100}$											
δ_1	+143 +3.53	40 37.60		16 41.9	39						
d	+21.5 133244 980120 1.23964 _m	4 47.4	57.3	1047	4 52.35	42 56.00 50 45 1.19 - 17.36			35 50	44 43.83 - 12 - 5 + 8.48 + .38 - 9.90 44 42.62	+8.69
(8) - D) $\frac{d'}{100}$											
δ_2	+147 +4.13	47 27.67		41 46.8							
d	+19.4 128780 978609 1.17989 _m	4 29.1	41.1	702	4 35.10	18 13.25 52 20 15.44 - 15.13			0 52	20 3.91 - .10 - 5 + 10.15 + .47 - 10.10 20 3.68	+10.97
(8) - D) $\frac{d'}{100}$											
δ_1	+140 +5.40	2 31.08		20 9.1	36						
d	+21.5 133244 980382 1.24226 _m	1 21.9	32.5	544	1 27.20	26 21.75 50 28 26.34 - 17.46			55 50	28 8.88 - 12 - 1 + 8.21 + .37 - 10.00 28 7.33	+8.45
(8) - D) $\frac{d'}{100}$											
δ_2	+152 +5.56	4 21.82		28 12.9							
d											
(8) - D) $\frac{d'}{100}$											
δ_1											
d											
(8) - D) $\frac{d'}{100}$											
δ_2											

329
Date₁ = 1874, Aug. 27.
n = -36

Observer W. A. R.
Recorder J. F. M.

330
Date₂ = 1874, Aug. 31
n = -46

Observer W. A. R.
Recorder R. J. F. M.

34

Star.	α	δ	Mag.	T_s	T_m	T_e	T_r	T_g	T_h	Sum	Mean	Red. to T_m	T
18	8	37 53 28	7.8	18 7	33.0	7 57.2	0.7	4.2	7.7	17.0	4.16		
	κ	42.9 27.6 28.2	7.8		33.0 37.2 39.3						+3.36		
	(δ) - D				36.5					+ 2.84	- .49		
	a_1									8	7.00		
											- 1.66		
										8	5.34		+1.2
													+0.71
	a_2												
	(δ) - D												
	a_3												
18	9	37 51 56	8.8	9 15.8	33.5	37.0	40.2	43.6	46.8	9	40.22		
	κ	14.8 56.2	8.0		33.5 20.4 23.9						+3.36		
	(δ) - D				20.0					+ 2.88	- .46		
	a_1									9	43.10		
											- 1.69		
										9	41.41		+1.3
													+0.8
	a_2												
	(δ) - D												
	a_3												
18	10	36 52 27	8.5	10 20.8	33.9	37.1	40.6	43.9	48.9	10	37.16		
	κ	13.4 27.4	8.6		33.9 23.3 27.1						+3.36		
	(δ) - D				23.7					+ 2.87	- .47		
	a_1									10	40.03		
											- 1.69		
										10	38.34		+1.3
													+0.9
	a_2												
	(δ) - D												
	a_3												
18	11	14 52 38	9.3	11 45.2	33.5	38.9	42.0	45.4	50.4	11	38.76		
	κ	51.6 38.0	9.1		33.5 26.3 22.8						+1.70		
	(δ) - D				19.8					+ 1.08	- .60		
	a_1									11	39.84		
											- 1.56		
										11	38.28		+1.3
													+0.9
	a_2												
	(δ) - D												
	a_3												
18	12	18 52 7	8.0	12 12.7	33.5	38.9	42.0	45.4	50.4	12	17.38		
	κ	55.2 6.9	8.2		33.5 14.2 16.7						+3.36		
	(δ) - D				14.0					+ 2.88	- .46		
	a_1									12	20.26		
											- 1.70		
										12	18.56		+1.3
													+0.9
	a_2												
	(δ) - D												
	a_3												

Runs

Aug 27 ¹¹⁴⁷ +2 6.25 -01
31 6.37 -01

35

	$T_m - T$	A	G	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	8'
d	+25.7 1.44248 9.77456 1.37704 _m	1 14.0	25.0	395 56	19.75	26 28.60 53 28 34.85 -23.83			55	53 28 11.02 - 21 + 11.21 + 50 9.70 28 13.03	+11.49
(8) - D) $\frac{d'}{100}$											
δ_1	+1.27 +0.71	8 6.61		28 13.7							
d	+26.2 1.41830 9.77456 1.29886 _m	1 14.9	27.6	425 56	21.25	26 27.10 53 28 33.47 -17.90			55	13.57 - 18 - 1 + 10.87 + 50 -10.20 28 14.585	+11.88
(8) - D) $\frac{d'}{100}$											
δ_2	+1.27 +0.71	8 6.53		28 15.3							
d	+20.2 1.30535 9.78983 1.20118 _m	2 38.7	49.9	886 27	44.30	55 40.5 51 57 10.30 -15.89			25	51 56 54.41 - 11 - 3 + 9.65 + 45 - 9.70 56 54.89	+9.96
(8) - D) $\frac{d'}{100}$											
δ_1	+1.37 +0.85	9 42.78		56 55.7							
d	+19.0 1.27875 9.78983 1.17458 _m	2 39.1	51.2	903 27	45.15	55 3.20 51 57 9.57 -14.95			25	54.62 - 10 - 3 + 9.37 + 45 -10.10 56 54.21	+9.69
(8) - D) $\frac{d'}{100}$											
δ_2	+1.37 +0.85	9 42.72		56 55.1							
d	+13.5 1.13033 9.78478 1.02111 _m	2 11.0	24.0	350 57	17.50	25 30.85 52 27 37.10 -10.50			55	52 27 26.60 - 5 - 2 + 10.17 + 47 -9.70 27 27.69	+10.57
(8) - D) $\frac{d'}{100}$											
δ_1	+1.33 +0.93	10 39.67		27 28.6							
d	+19.0 1.27875 9.78478 1.16953 _m	2 6.1	18.9	250 57	12.50	25 35.85 52 27 42.22 -14.78			55	27 27.44 - 10 - 2 + 9.85 + 47 -10.20 27 27.44	+10.20
(8) - D) $\frac{d'}{100}$											
δ_2	+1.33 +0.93	10 39.61		27 28.4							
d	-32.4 1.51056 _m 9.78313 1.39968	1 55.3	6.9	22 47	1.10	35 47.25 52 27 53.50 +25.10			45	52 38 18.60 - 27 - 2 + 10.35 + 48 -9.80 38 19.56	+10.54
(8) - D) $\frac{d'}{100}$											
δ_1	+1.32 +0.99	11 18.50		38 20.6							
d	-29.1 1.46389 _m 9.78313 1.35302	1 50.0	3.4	1134 46	56.70	35 51.65 52 27 58.02 +22.55			115	20.57 - 22 - 2 + 10.03 + 48 -10.30 38 20.54	+10.27
(8) - D) $\frac{d'}{100}$											
δ_2	+1.32 +0.99	11 18.42		38 21.53							
d	+4.7 0.64210 9.78821 0.56631 _m	2 55.0	7.1	21 8	10.5	4 47.30 52 6 53.55 -3.68			15	52 6 49.87 - 1 - 3 + 9.82 + 46 -9.70 6 50.63	+10.24
(8) - D) $\frac{d'}{100}$											
δ_1	+1.36 +1.08	12 19.92		6 51.7							
d	+5.1 0.70754 9.78821 0.60178 _m	2 50.9	4.5	1154 18	57.70	4 50.65 52 6 57.02 -4.00			15	53.02 - 1 - 3 + 9.53 + 46 -10.20 6 52.77	+9.95
(8) - D) $\frac{d'}{100}$											
δ_2	+1.36 +1.08	12 19.94		6 53.8							

Date₁ = 1874, Aug. 27Observer
RecorderDate₂ = Aug. 31Observer
Recorder

36

Ru

Star.	α	δ	Mag.	T_s	T_m	T_e	T_r	T_g	T_h	Sum	Mean	Red. to T_m	T
18	13	28 52 51	8.6	18 12 58.9	13 21.5	24.7	28.0	31.5	35.0	13	28.14		
	κ	5.1 50.4	8.0	23							+ 3.36		
				5.3							- .48		
				62.2							- 2		
	(δ) - D										13	31.00	
	a_1										- 1.69		
											13	29.31	
											- 1.69		
											13	29.72	
	κ		7.8	13 65 13 22.8	26.3	28.8	33.1	36.6			+ 1.70		
				8.7							- .61		
				18.0							- 2		
	(δ) - D										13	30.79	
	a_2										- 1.57		
											13	29.22	
											- 1.57		
18	14	8 51 00	9.2	14 2.7 14 5.9	8.5	12.7	16.8	19.3			14	12.64	
	κ	40.0 50 59.9	8.8								+ 3.36		
											- .44		
	(δ) - D										14	15.54	
	a_1										- 1.72		
											14	13.82	
											- 1.72		
											14	13.80	
	κ		9.4	13 58.2 14 7.9	11.1	13.5	18.6	19.9			+ 1.70		
											- .57		
	(δ) - D										14	14.91	
	a_2										- 1.59		
											14	13.72	
											- 1.59		
18	15	32 51 30	8.5	15 10.7 15 27.0	20.4	33.7	37.0	40.2			15	33.66	
	κ	9.4 29.4	8.5								+ 3.36		
											- .45		
	(δ) - D										15	36.55	
	a_1										- 1.72		
											15	34.83	
											- 1.72		
											15	35.48	
	κ		9.6	15 9.1 15 28.8	32.1	35.4	38.7	42.4			+ 1.69		
				12.3							- .58		
				13.4							- 2		
	(δ) - D										15	36.57	
	a_2										- 1.60		
											15	34.97	
											- 1.60		
18	20	46 51 34	8.1	20 14.6 20 40.9	44.3	47.4	50.8	54.3			20	47.54	
	κ	23.6 33.3	8.0								+ 3.36		
											- .45		
	(δ) - D										20	50.43	
	a_1										- 1.74		
											20	48.69	
											- 1.74		
											20	49.24	
	κ		8.3	20 19.8 20 42.6	45.8	49.2	52.6	56.0			+ 1.69		
				24.2							- .58		
				27.0							- 2		
	(δ) - D										20	50.33	
	a_2										- 1.62		
											20	48.71	
											- 1.62		
18	23	17 51 55	8.8	22 57.5 23 13.3	16.4	19.8	23.5	26.5			23	19.90	
	κ	57.4 54.8	8.4								+ 3.36		
			8.7	58.5							- .46		
	(δ) - D										23	22.78	
	a_1										- 1.75		
											23	21.45	
											- 1.75		
											23	21.40	
	κ		8.3	22 59.0 23 14.7	18.0	21.4	24.7	28.2			+ 1.69		
			8.5	24							- .59		
				4.8							- 2		
	(δ) - D										23	22.48	
	a_2										- 1.63		
											23	21.85	
											- 1.63		

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+28.9 1.41330 9.78113 1.30048 _m	0' 7".3	14".2	265 ³⁵	13.25	47 35.10 52 49 41.35 -19.97			35	52 49 21.38 -18 +10.55 +49 -9.70 49 22.76	+10.86
(δ) - D) $\frac{d'}{100}$											
δ_1	+1.31 +1.18	13 30.62		49 23.9	35						
d	+20.0 1.30103 9.78113 1.18816 _m	0 9.9	23.1	330	16.50	47 31.85 52 49 38.22 -15.42			35	22.80 -10 +10.23 +49 -10.20 49 23.22	+106.2
(δ) - D) $\frac{d'}{100}$											
δ_2	+1.31 +1.18	13 30.53		49 24.4	24						
d	+9.9 0.99564 9.77887 0.90051 _m	4 52.2	2.8	1150	4 57.50	57 50.85 50 59 57.10 -7.95			20	50 59 49.15 -3 +5 +8.68 +40 -9.70 59 48.67	+9.00
(δ) - D) $\frac{d'}{100}$											
δ_1	+1.42 +1.24	14 15.24		59 49.9	24 50.35						
d	+15.6 1.19312 9.77887 1.09799 _m	4 42.8	52.9	957	4 47.85	58 0.50 51 0 6.87 -12.53			20	58 0.50 51 0 6.87 -12.53 +8.42 +40 -10.20 59 48.85 49.35	+8.71
(δ) - D) $\frac{d'}{100}$											
δ_2	+1.42 +1.24	14 15.24		59 50.6	54						
d	+20.3 1.30750 9.79415 1.20765 _m	4 51.1	2.1	1132	4 56.60	57 51.75 51 39 58.00 -16.13			50	51 39 41.87 -11 +9.20 +42 -9.70 29 41.85	+9.46
(δ) - D) $\frac{d'}{100}$											
δ_1	+1.40 +1.36	15 36.23		29 43.2	54						
d	+23.2 1.36549 9.79415 1.26564 _m	4 48.7	2.1	1108	4 55.40	57 52.95 51 39 59.32 -18.43			50	57 52.95 51 39 59.32 -18.43 +8.92 +42 -10.20 29 39.84	+9.15
(δ) - D) $\frac{d'}{100}$											
δ_2	+1.40 +1.36	15 36.37		29 41.2	49						
d	+30.1 1.47857 9.79335 1.37792 _m	4 52.0	3.0	1150	4 57.50	32 50.85 51 34 57.10 -23.87			115	51 34 33.23 -24 +9.27 +42 -9.80 34 33.05	+9.40
(δ) - D) $\frac{d'}{100}$											
δ_1	+1.39 +1.82	20 50.08		34 34.9	49						
d	+25.5 1.40654 9.79335 1.30589 _m	4 51.9	4.9	1168	4 58.40	32 49.95 51 34 56.32 -20.22			115	36.10 -17 +5 +8.99 +42 -10.30 34 34.99	+9.19
(δ) - D) $\frac{d'}{100}$											
δ_2	+1.39 +1.82	20 50.10		34 36.8	28						
d	+21.7 1.33646 9.78983 1.23229 _m	2 55.5	6.3	20	3 1.00	54 47.35 51 56 53.60 -17.07			25	51 56 36.53 -13 +3 +9.66 +45 -9.80 56 36.70	+9.95
(δ) - D) $\frac{d'}{100}$											
δ_1	+1.37 +2.04	23 22.92		56 38.9	28						
d	+19.3 1.28556 9.78983 1.18139 _m	2 55.9	6.9	28	3 1.40	54 46.95 51 56 53.32 -15.18			25	38.14 -10 +3 +9.38 +45 -10.40 56 37.44	+9.70
(δ) - D) $\frac{d'}{100}$											
δ_2	+1.37 +2.04	23 23.22		56 39.5							

Date₁ = 1874, Aug. 27Observer
RecorderDate₂ = Aug. 31Observer
Recorder

1874pae.

Star.	α	δ	Mag.	T_a	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
24	24	25 51 5	8.1	18 24	24 21.0	24.4	27.7	31.0	34.6	24	27.74		
κ		2.6	4.9	8.4	11.7	11.8					+ 3.35		
(8) - D					11.6				+ 2.89		24	30.63	
α_1											24	28.86	+1.4 +2.1
			8.3	24 24.3	24 22.7	26.2	29.5	32.7	35.9	24	29.40		
κ				26.6							+ 1.68		
(8) - D				29.0					+ 1.09		24	30.49	
α_2				26.9							24	28.84	+1.4 +2
26	26	26 30 30	9.0	26 00	26 18.6	21.7	25.1	28.5	31.8	26	25.14		
κ		58.6	29.9	9.0	3.0	8.3					+ 3.35		
(8) - D					3.8				+ 2.89		26	28.03	
α_1											26	26.25	+1.4 +2.0
			9.1	26 10.0	26 20.1	23.7	26.9	29.8	33.3	26	26.70		
κ				13.0							+ 1.68		
(8) - D				13.7					+ 1.10		26	27.80	
α_2				12.9							26	26.13	+1.4 +2
27	27	27 30 1	9.0	27 9.5	27 25.0	28.0	31.2	34.4	37.7	27	31.26		
κ		4.1	0.1	8.7	12.7	16.6					+ 3.35		
(8) - D					12.9				+ 2.89		27	34.15	
α_1											27	32.36	+1.4 +2.0
			9.1	27 7.0	27 26.4	29.7	33.0	36.9	39.5	27	32.92		
κ				10.3							+ 1.68		
(8) - D				12.8					+ 1.10		27	34.02	
α_2				10.0							27	32.34	+1.4 +2
28	28	54 52 47	9.0	28 28.8	28 48.3	37.8	37.2	38.6	2.1	28	55.20		
κ		31.4	46.6	9.2	32.7	35.3					+ 3.35		
(8) - D					32.3				+ 2.85		28	58.05	
α_1											28	56.28	+1.3 +2
			9.4	28 33.2	28 50.0	33.6	36.7	0.0	2.8	28	56.70		
κ				36.3							+ 1.68		
(8) - D				38.7					+ 1.05		28	57.75	
α_2				36.4							28	56.18	+1.3 +2
30	30	23 51 44	8.9	29 56.4	30 19.3	22.5	25.7	29.2	32.6	30	25.86		
κ		0.8	43.7	9.0	0.0	4.6					+ 3.35		
(8) - D					60.3				+ 2.87		30	28.73	
α_1											30	26.94	+1.3 +2.0
			9.7	30 0.7	30 20.6	24.2	—	31.0	34.4	30	27.53		
κ				3.8							+ 1.68		
(8) - D				6.1					+ 1.07		30	28.62	
α_2				3.5							30	26.94	+1.3 +2

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+18.1 1.20683 979809 1.11092 _m	4 53.8	4.9	1187 14	59.35	2 49.00 51 4 53.25 -12.91			15	51 4 0.22 42.34	+9.05
(δ) - D) $\frac{d'}{100}$										+ 8.79 + .40 - 9.80 45 41.81	
+14.2 δ_1 +2.14		24 30.28		5 44.0							
d	+28 0.44716 979778 1.35094 _m	3 2.0	13.9	159 3	7.95	4 40.40 51 6 46.77 - 2.24			15	25 44.53 - 0 + 5.51 + .40 10.40 45 43.01	+8.88
(δ) - D) $\frac{d'}{100}$											
+14.2 δ_2 +2.14		24 30.26		5 45.2							
d	+213 1.32838 980336 1.23774 _m	3 39.9	50.4	903 3	45.15	29 3.20 50 31 9.45 - 17.28			50	50 30 52.17 - .12 - .4 + 8.19 + .37 - 9.80 30 50.99	+8.40
(δ) - D) $\frac{d'}{100}$											
+14.6 δ_1 +2.30		26 27.71		30 53.3							
d	+138 1.13988 980336 1.05224 _m	3 44.3	54.7	990 3	49.50	28 58.85 50 31 5.22 - 11.28			30	53.94 - 5 + 7.95 + .37 - 10.30 30 51.87	+8.23
(δ) - D) $\frac{d'}{100}$											
+14.6 δ_2 +2.30		26 27.59		30 54.2							
d	+18.4 1.26482 980777 1.17859	3 3.0	12.3	153 3	7.65	58 40.40 50 1 46.95 - 15.09			20	50 1 31.86 - 9 - 3 + 7.69 + .35 - 9.80 0 30.20	+7.92
(δ) - D) $\frac{d'}{100}$											
+14.9 δ_1 +2.40		27 33.85		0 32.6							
d	+229 1.35984 980792 1.27376 _m	3 56.7	7.9	46 4	2.30	58 46.05 50 0 52.42 (1) -18.78			20	0 33.64 - .14 - .4 + 7.46 + .35 - 10.30 0 30.97	+7.63
(δ) - D) $\frac{d'}{100}$											
+14.9 δ_2 +2.40		27 33.83		0 33.4							
d	+229 1.35984 978780 1.24764 _m	3 35.9	46.8	827 3	41.35	44 7.00 52 46 13.25 - 17.69			35	52 45 55.56 - .14 - .4 + 10.51 + .48 - 10.00 45 56.59	+10.81
(δ) - D) $\frac{d'}{100}$											
+1.32 δ_1 +2.52		28 57.52		45 59.1							
d	+203 1.30750 978780 1.19530 _m	3 37.1	49.5	866 3	48.30	44 5.05 52 46 11.42 - 15.68			35	45 55.44 - .10 - .4 + 10.19 + .48 - 10.40 46 55.87	+10.53
(δ) - D) $\frac{d'}{100}$											
+1.32 δ_2 +2.52		28 57.50		45 58.4							
d	+256 1.40824 979192 1.30616 _m	4 39.2	10.0	92 5	4.60	43 43.75 51 44 50.00 - 20.24			35	51 44 29.76 - .18 - .5 + 9.44 + .43 - 9.80 44 29.72	+9.64
(δ) - D) $\frac{d'}{100}$											
+1.39 δ_1 +2.66		30 28.33		44 32.4							
d	+240 1.38021 979192 1.27813 _m	4 56.8	9.7	65 4	3.25	44 45.10 51 48 51.47 - 18.97			40	45 33.50 - .15 - .3 + 9.16 + .43 - 10.50 44 31.41	+9.41
(δ) - D) $\frac{d'}{100}$											
+1.39 δ_2 +2.66		30 28.33		44 34.1							

Date₁ = 1874, Aug. 27Observer
RecorderDate₂ = Aug. 31Observer
Recorder

40

Star.	α	δ	Mag.	T_2	T_m	T_a	T_e	T_g	T_h	Sum	Mean	Red. to T_m	T
31	335.1	41	6.3	18.3	31.9	31.0	34.2	37.5	40.9	31	34.26		
κ		10.5	40.8		12.0						+3.35		
					13.6						- .46		
(δ) - D					11.6						+ 2.87		
α_1										31	37.13		
										31	-1.79		
										31	35.34		
κ			7.7	31.1	31.2	32.6	36.0	38.3	42.7	31	35.98		
(δ) - D					18.4						+1.68		
α_2					21.5						- .59		
					18.8						+ 1.07		
κ										31	37.05		
(δ) - D										31	-1.68		
α_1										31	35.37		
κ													
18	32	25.5	6	8.7	32.1	32.2	25.6	28.0	32.3	32	28.92		
κ		2.8	5.8		13.2						+3.35		
(δ) - D					16.0						- .44		
α_1					13.3						+ 2.89		
κ										32	31.81		
(δ) - D										32	-1.80		
α_1										32	30.01		
κ													
κ													
(δ) - D											+ 1.09		
α_2										32	31.75		
										32	-1.69		
										32	30.06		
κ													
κ													
(δ) - D											+ 2.90		
α_1										34	10.98		
											+3.35		
											- .43		
											+ 2.90		
										34	13.88		
										34	-1.82		
										34	12.06		
κ													
(δ) - D											+ 1.10		
α_2										34	12.54		
											+1.67		
											- .55		
											+ 1.10		
										34	13.64		
										34	-1.71		
										34	11.93		
κ													
(δ) - D											+ 2.90		
α_1										36	12.34		
											+3.35		
											- .43		
											+ 2.90		
										36	15.24		
										36	-1.83		
										36	13.41		
κ													
(δ) - D											+ 1.10		
α_2										36	13.90		
											+1.67		
											- .55		
											+ 1.10		
										36	15.00		
										36	-1.72		
										36	13.28		
κ													
(δ) - D											+ 2.89		
α_1										38	5.06		
											+3.35		
											- .44		
											+ 2.89		
										38	7.95		
										38	-1.85		
										38	6.10		
κ													
(δ) - D											+ 1.09		
α_2										38	6.70		
											+1.67		
											- .56		
											+ 1.09		
										38	7.79		
										38	-1.74		
										38	6.05		

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+22.7 1.35603 9.79240 1.25443 _m	3' 34.0	44.5	785 ⁴³	3 39.25	39 9.10 57 41 15.35 -17.96			40'	51 40 57.39 - 14 + 9.39 + 43 - 9.90 40 57.35	+9.64
(8) - D $\frac{a'}{100}$											
+1.40 δ_1		31 36.74		41 0.1							
+2.75											
d	+17.2 1.23553 9.79240 1.13393 _m	3 37.0	48.6	856	3 42.80	39 5.55 57 41 11.92 -13.61			40	58.31 - 8 - 4 + 9.11 + 43 -10.50 40 57.23	+9.42
(8) - D $\frac{a'}{100}$											
+1.40 δ_2		31 36.77		48 9.0							
+2.75											
d	+15.6 1.17312 9.79778 1.09690 _m	2 49.2	0.9	1101	2 55.05	4 53.30 57 6 57.55 -12.50			15	51 6 47.05 - 7 - 3 + 8.79 + 40 -9.90 6 46.46	+8.09
(8) - D $\frac{a'}{100}$											
+1.43 δ_1		32 31.44		6 49.3							
+2.84											
d	+7.6 0.88081 9.79798 0.78459 _m	3 55.5	7.0	25	3 1.25	4 47.10 57 6 53.47 -6.09			15	47.38 - 2 + 8.55 + 40 -10.50 6 45.78	+8.90
(8) - D $\frac{a'}{100}$											
+1.43 δ_2		32 31.49		6 48.6							
+2.84											
d	+21.0 1.32222 9.80625 1.23447 _m	3 23.2	33.7	569	3 28.45	9 19.90 50 11 26.15 -17.16			16	50 11 8.99 - 12 - 3 + 7.85 + 36 -9.90 11 7.37	+8.06
(8) - D $\frac{a'}{100}$											
+1.49 δ_1		34 13.55		11 10.35							
+2.98											
d	+25.2 1.40140 9.80625 1.31365 _m	3 19.1	29.9	490	3 24.50	9 23.85 50 11 30.22 -20.69			10	9.53 - 17 - 3 + 7.62 + 36 -10.50 11 6.81	+7.78
(8) - D $\frac{a'}{100}$											
+1.49 δ_2		34 13.42		11 9.8							
+2.98											
d	+7.9 0.89763 9.80671 0.81034 _m	1 17.2	28.0	452	1 22.60	6 25.75 50 8 32.00 -6.46			15	50 8 25.54 - 2 - 1 + 7.82 + 36 -9.90 8 24.01	+8.15
(8) - D $\frac{a'}{100}$											
+1.49 δ_1		36 14.90		8 27.2							
+3.16											
d	+17.6 1.24551 9.80671 1.15822 _m	1 7.0	19.6	266	1 13.30	6 35.05 50 8 41.42 -14.37			15	27.03 - 9 + 7.58 + 36 -10.50 8 24.37	+7.84
(8) - D $\frac{a'}{100}$											
+1.49 δ_2		36 14.77		8 27.5							
+3.16											
d	+17.8 1.25042 9.80244 1.15886 _m	3 0.5	11.0	118	3 5.75	34 42.60 50 38 48.85 -14.42			45	50 38 34.43 - 9 - 3 + 8.27 + 38 -9.90 38 33.28	+8.53
(8) - D $\frac{a'}{100}$											
+1.47 δ_1		38 7.57		35 36.6							
+3.32											
d	+33.1 1.57983 9.80244 1.42821 _m	3 46.7	57.3	1040	3 52.00	33 56.35 50 36 2.72 -26.81			45	35 35.91 - 29 - 4 + 8.02 + 38 -10.50 35 33.48	+8.07
(8) - D $\frac{a'}{100}$											
+1.47 δ_2		38 7.52		35 36.8							
+3.32											

Date₁ = 1874, Aug. 27

329

Observer
Recorder

Date₂ = Aug. 31

Observer _____
Recorder _____

42

Ru

[illegible]

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	+ 8.9 0.99564 9.76324 0.86488 _m	1' 20.3	30.4	507 51	25.35	31 23.00 54 33 29.25 - 7.33			50	54 33 21.92 - 0.22 3 + 12.87 + 30 - 10.20 33 24.77	+12.83
(8) - D) $\frac{d'}{100}$											
+1.22 +3.49		40 8.08		33 28.3							
δ_1											
	+16.4 1.21484 9.76324 1.08408 _m	1 12.0	22.9	349 51	17.45	31 30.90 54 33 37.27 - 12.14			50	25.13 - 7 + 12.00 + 55 - 10.90 33 26.70	+12.47
(8) - D) $\frac{d'}{100}$											
+1.22 +3.49		40 8.13		33 30.2							
δ_2											
	+26.6 1.42488 9.76003 1.29091 _m	3 6.3	15.9	222 33	11.10	49 37.25 54 51 48.50 - 19.54			30	54 51 23.96 - 19 - 13 + 12.69 + 56 - 10.20 51 26.95	+12.97
(8) - D) $\frac{d'}{100}$											
+1.20 +3.67		42 11.58		51 30.6							
δ_1											
	+24.0 1.38021 9.76003 1.24624 _m	3 5.8	15.5	213 3	10.65	49 37.90 54 51 44.07 - 17.63			30	26.44 - 15 - 3 + 12.31 + 59 - 10.90 51 28.26	+12.72
(8) - D) $\frac{d'}{100}$											
+1.20 +3.67		42 11.65		51 31.9							
δ_2											
	+21.9 1.34644 9.48478 0.93122 _m	1 38.8	49.9	887 56	44.35	26 40.00 52 28 10.25 - 17.03			55	32 27 53.22 - 13 - 2 + 10.20 + 47 - 10.10 27 53.86	+10.52
(8) - D) $\frac{d'}{100}$											
+1.36 +3.78		43 30.59		27 57.6							
δ_1											
	24.4 1.38739 9.78478 1.27817 _m	1 35.4	48.8	842 56	42.10	26 6.25 52 28 12.62 - 18.97			55	53.65 - 15 - 2 + 9.90 + 47 - 10.50 27 53.05	+10.20
(8) - D) $\frac{d'}{100}$											
+1.36 +3.78		43 30.41		27 56.8							
δ_2											
	+23.5 1.36922 9.79367 1.26889 _m	2 0.9	11.9	128 52	6.40	30 41.95 51 32 48.20 - 18.57			50	51 32 39.63 - 14 - 2 + 9.25 + 42 - 10.10 32 29.26	+9.51
(8) - D) $\frac{d'}{100}$											
+1.42 +3.94		45 21.89		32 33.2							
δ_1											
	+19.8 1.29667 9.79351 1.19618 _m	2 1.8	14.2	160 52	8.00	30 40.35 51 32 46.72 - 15.71			50	31.01 - 11 - 2 + 8.97 + 42 - 10.70 32 29.57	+9.26
(8) - D) $\frac{d'}{100}$											
+1.42 +3.94		45 21.89		32 33.5							
δ_2											
	4 23.1 33.9 570 59				28.50	23 19.80 51 25 26.05			55		
(8) - D) $\frac{d'}{100}$											
δ_1											
	+11.1 1.04532 9.79494 0.94626 _m	4 28.5	39.7	682 39	34.10	23 14.25 51 25 20.62 - 8.84			55	51 25 11.78 - 3 - 5 + 8.83 + 42 - 10.80 25 10.15	+9.17
(8) - D) $\frac{d'}{100}$											
+1.44 +4.30		49 40.10		25 14.4							
δ_2											

329

Date₁ = 1874, Aug. 27Observer
Recorder

330

Date₂ = Aug. 31Observer
Recorder

44

Star.	α	δ	Mag.	T_s	T_m	T_e	T_r	T_a	T_h	Sum	Mean	Red. to T_m	T
18	50	37 51 19	9.1	18	50 25.3	50 86.6	40.2	43.2	46.5	49.8	50	43.26	
	κ	14.7	18.4	20	29.1							+3.34	
					31.5							-.45	
					28.7					+2.87		-.2	
	(δ - D) $\frac{\kappa'}{100}$										50	46.13	
	a_1										50	-1.88	
												44.25	
	κ			9.1	50 36.0	50 88.3	41.7	43.0	48.3	51.7	50	45.04	
	(δ - D) $\frac{\kappa'}{100}$									+1.06		+1.65	
	a_2										50	-.57	
												-.2	
											50	46.10	
											50	-1.78	
												44.32	
18	52	38 50 23.0	8.8		52 26.9		Ch. f.						
	κ	12.4	22.3	8.6	30.2								
					33.1								
	(δ - D) $\frac{\kappa'}{100}$				30.1								
	a_1												
				8.8	52 26.9	52 85.9	39.0	42.0	45.4	48.6	52	42.18	
	κ				30.2							+1.65	
	(δ - D) $\frac{\kappa'}{100}$				33.1					+1.07		-.56	
	a_2				30.1						52	-.2	
												43.25	
											52	-1.80	
												41.45	
18	53	38 51 19	8.1		53 32.0	53.3	-	-1.9	5.2		53	58.60	
	κ	32.1	18.4	7.7								+3.34	
	(δ - D) $\frac{\kappa'}{100}$								+2.87			-.45	
	a_1										54	-.2	
												1.47	
											53	-1.90	
												59.57	
				8.0	53 36.7	53 53.6	57.0	0.2	35	6.8	54	0.22	
	κ				39.7							+1.65	
	(δ - D) $\frac{\kappa'}{100}$				41.8					+1.06		-.57	
	a_2				39.4						54	-.2	
												1.28	
												-1.79	
											53	59.49	
18	55	31 52 00	8.6		55 14.0		Ch. f.						
	κ	8.1	51 58.5	8.4	14.0								
	(δ - D) $\frac{\kappa'}{100}$												
	a_1												
				8.6	55 9.1	55 28.6	32.0	35.3	38.6	42.0	55	35.30	
	κ				12.7							+1.65	
	(δ - D) $\frac{\kappa'}{100}$				15.6					+1.04		-.59	
	a_2				12.5						55	-.2	
												36.34	
												-1.79	
												34.55	
18	56	57 58 21	5.0		56 29.4	56 56.0	59.3	2.4	5.5	9.0	57	2.50	
	κ	34.7	20.1	4.8	32.4							+3.33	
	(δ - D) $\frac{\kappa'}{100}$				35.0					+2.87		-.44	
	a_1				32.3							-.2	
											57	5.37	
												-1.92	
											57	34.5	
				5.0	56 36.9	56 57.9	1.1	4.4	7.5	10.7	57	4.32	
	κ				40.2							+1.64	
	(δ - D) $\frac{\kappa'}{100}$				43.0					+1.06		-.56	
	a_2				40.0						57	-.2	
												5.38	
												-1.82	
											57	35.6	

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	+14.6 1.16435 9.79573 1.06608 _m	4 32.0	42.0	740	4 37.00	18 11.35 51 20 17.60 -11.64			0	51 20 59.6 - 6 + 9.04 + 42 - 10.10 20 5.43	+9.35
d											
((8) - D) $\frac{d'}{100}$											
+1.44 +4.40 δ_1		50 45.69		20 9.8							
	+9.0 0.95424 9.79573 0.85597 _m	4 35.7	46.7	824	4 41.20	18 7.15 51 20 13.52 -7.18			0	6.34 - 2 - 5 + 8.77 + 42 - 10.80 20 4.66	+9.12
d											
((8) - D) $\frac{d'}{100}$											
+1.44 +4.40 δ_2		50 45.76		20 9.1							
		0 3.1	12.9	160	0 8.00				0		
d											
((8) - D) $\frac{d'}{100}$											
δ_1					-30						
	+12.1 1.08279 9.80443 0.99322 _m	1 7.7	18.9	266	1 13.30	21 35.35 50 23 41.72 -9.84			0	50 23 31.88 - 4 - 1 + 8.07 + 37 - 10.80 23 29.47	+8.39
d											
((8) - D) $\frac{d'}{100}$											
+1.50 +4.57 δ_2		52 42.95		23 34.0							
		4 19.7	29.4	491	4 24.55	18 23.80 51 20 32.05			0		
d											
((8) - D) $\frac{d'}{100}$											
+1.45 +4.68 δ_1		54 1.02								-4 +7.84 + 42 - 10.10	
	+20.8 1.31806 9.79573 1.21979 _m	4 22.0	33.4	554	4 27.70	18 20.65 51 20 27.02 -16.59			0	51 20 10.43 - 12 - 4 + 9.04 + 42 - 10.80 20 8.93	+9.30
d											
((8) - D) $\frac{d'}{100}$											
+1.45 +4.68 δ_2		54 0.94		20 13.6							
		4 16.1	25.9	420	4 21.00	58 27.35			20		
d											
((8) - D) $\frac{d'}{100}$											
δ_1											
	+22.8 1.35793 9.78918 1.25311 _m	4 9.3	19.7	290	4 14.50	58 33.85 52 0 40.22 -17.91			20	52 0 22.31 - 14 - 4 + 9.44 + 45 - 10.90 0 21.12	+9.71
d											
((8) - D) $\frac{d'}{100}$											
+1.41 +4.81 δ_2		55 35.96		0 25.9							
	+30.2 1.48001 9.80473 1.39074 _m	3 2.9	13.4	163	3 8.15	19 40.20 50 21 46.95 -24.59			0	50 21 21.86 - 24 - 3 + 8.06 + 37 - 10.10 21 20.14	+8.16
d											
((8) - D) $\frac{d'}{100}$											
+1.51 +4.94 δ_1		57 4.96		21 25.0							
	+24.3 1.38561 9.80473 1.35034 _m	3 6.5	16.5	230	3 11.50	19 36.85 50 21 43.22 -22.40			0	20.82 - 15 - 3 + 7.83 + 37 - 10.80 21 18.04	+8.02
d											
((8) - D) $\frac{d'}{100}$											
+1.51 +4.94 δ_2		57 5.07		21 23.0							

Date₁ = 1874, Aug. 27

Observer
Recorder

Date₂ = Aug. 31

Observer
Recorder

46

[illegible]

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+1.5 1.24304 979079 1.13983m	4' 4.7	15.0	197 ³⁴ 4' 9.85		48 38.50 51 50 44.75 -13.80			30	51 50 ^{0.22} 30.95 - 8 + 8.56 + 44 -10.20 50 29.85	+8.88
((8) - D) $\frac{a'}{100}$											
δ_1	+1.42 +5.04	58 16.83		50 34.9							
d	+21.8 1.33846 979079 1.23525m	3 57.9	10.0	79 ³⁴ 4' 3.95		48 44.40 51 50 50.77 -17.19			30	33.58 - 13 - 4 + 8.31 + 44 -10.90 50 31.26	+8.58
((8) - D) $\frac{a'}{100}$											
δ_2	+1.42 +5.04	58 16.96		50 36.3							
d	+21.9 1.34044 978853 1.23497m	4 49.1	59.3	1084 ¹⁹ 4' 54.20		2 54.15 52 5 0.40 -17.18			15	52 4 43.22 - 13 - 5 + 9.83 + 45 -10.20 4 43.34	+10.10
((8) - D) $\frac{a'}{100}$											
δ_1	+1.41 +5.12	59 10.53		4 48.5							
d	+15.1 1.17898 978853 1.07351m	4 52.5	2.3	1148 ¹⁹ 4' 57.40		2 50.95 52 4 57.32 - 11.84			15	4 45.48 - 6 - 5 + 9.54 + 45 -10.90 4 44.46	+9.88
((8) - D) $\frac{a'}{100}$											
δ_2	+1.41 +5.12	59 10.66		4 49.6							
d	+22.9 1.35984 978013 1.24597m	3 44.1	59.4	1085 ²⁸ 3' 54.25		53 54.10 52 56 0.35 -17.62			25	52 55 42.73 - 14 - 4 + 10.70 + 49 -10.30 55 43.66	+11.091
((8) - D) $\frac{a'}{100}$											
δ_1	+1.36 +5.25	0 47.47		55 48.9							
d	+21.0 1.32222 978013 1.20835m	3 45.7	59.0	1077 ²⁸ 3' 53.85		53 54.50 52 56 0.87 -16.16			25	44.71 - 12 - 4 + 10.88 + 49 -11.00 55 44.42	+10.71
((8) - D) $\frac{a'}{100}$											
δ_2	+1.36 +5.25	0 47.55		55 49.7							
d	+20.4 1.30963 978609 1.30172m	4 36.3	42.1	724 ¹³ 4' 36.20		18 12.15 52 20 18.40 -15.91			0	52 20 24.9 - 11 - 5 + 10.08 + 47 -10.30 20 25.0	+10.39
((8) - D) $\frac{a'}{100}$											
δ_1	+1.40 +5.40	2 30.97		20 8.2							
d	+17.0 1.23045 978609 1.12254m	4 32.7	43.8	765 ¹³ 4' 38.25		18 10.10 52 20 16.47 -13.26			0	32.1 - 8 - 5 + 9.78 + 47 -11.00 20 21.33	+10.12
((8) - D) $\frac{a'}{100}$											
δ_2	+1.40 +5.40	2 30.99		20 7.7							
d	+29.4 1.46835 979715 1.37150m	3 33.5	42.9	764 ¹³ 3' 38.20		9 14.15 51 11 16.40 -23.52			10	51 10 52.88 - 22 - 4 + 8.90 + 41 -10.20 10 51.95	+9.05
((8) - D) $\frac{a'}{100}$											
δ_1	+1.48 +5.55	4 15.07		10 57.5							
d	+18.5 1.26717 979715 1.17032m	3 39.2	30.0	892 ¹⁵ 3' 44.60		9 3.75 51 11 10.12 -14.80			10	55.32 - 9 - 4 + 8.64 + 41 -11.00 10 53.24	+8.92
((8) - D) $\frac{a'}{100}$											
δ_2	+1.48 +5.55	4 15.18		10 58.8							

329
Date₁ = 1874, Aug. 27

Observer
Recorder

Date₂ = Aug. 31

Observer
Recorder

48

[illegible]

Single Observations

[illegible]

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	$+8.1$ 0.90849 979031 $0.80480m$	$0' 37.0$ $4 35.0$	48.7 44.9	857^{30} 799^{294}	42.85 39.95	$52 5.50$ $53 8.40$ $51 54 11.75$ $51 55 19.65$ -6.38 $+21.10$			36 25	$51 54 3.37$ -2 $+1005$ -1 $+9.64$ $+44$ -10.30 $54 534$	$55 35.75$ -19 -5 $+9.64$ $+44$ -10.30 $55 35.51$
$+143$ $+568$	-26.8 $1.42813m$ 979015 1.32428	$4 53.2$ 31 $5 35.18$		$54 11.0$ $55 41.2$							
$+143$ $+568$	$+151$ 1.17898 979031 $1.06929m$	$0 28.0$ $4 31.5$	41.7 43.1	706^{300} 746^{294}	35.30 37.30^{30}	$52 13.05$ $53 11.05$ $51 54 19.42$ $51 55 17.42$ -11.73 $+19.68$			30 25	769 -6 -1 $+9.35$ $+44$ -11.00 $54 6.41$	36.80 -17 -5 $+9.35$ $+44$ -11.00 $55 35.37$
$+143$ $+568$	-25.0 $1.39794m$ 979015 1.29409	$4 53.25$ $5 35.18$		$54 12.1$ $55 41.53$							
$+143$ $+568$	$+335$ 1.52504 9.80336 $1.43440m$	$3 36.0$ 45.8	818 3	4090		$29 7.45$ $50 31 13.70$ -27.19			50 50	$30 46.51$ -30 -4 $+8.21$ $+37$ -10.20 $30 44.77$	$+8.84$
$+152$ $+583$	$+20.9$ 1.32615 9.80336 $1.22951m$	$3 44.9$ 54.5	994 3	4970		$28 58.65$ $50 31 5.02$ -16.96			50	48.06 -12 -4 $+7.97$ $+37$ -11.00 $30 45.24$	$+8.18$
$+152$ $+583$	-21.0 $1.32222m$ 9.79965 1.22787	$4 28.8$ 39.9	687 4	34.35		$53 14.00$ $50 55 20.25$ $+16.90$			25 50	$55 37.15$ -12 -4 $+8.60$ $+39$ -9.30 $55 36.90$	$+8.83$
$+143$ -0.25	$+11.6$ 1.06446 9.79731 $0.96777m$	$4 27.0$ 38.5	655 4	32.75		$8 15.60$ $51 10 21.85$ -9.28			10 51	$10 12.57$ -4 -4 $+8.84$ $+41$ -9.30 $10 12.66$	$+9.17$
$+141$ -0.08	-40 $0.60206m$ 9.78346 0.49152	$3 57.3$ 11.4	807 4	5.35		$33 43.00$ $52 35 49.25$ $+3.10$ -35.90			45 52	$85 52.35$ -1 $+10.32$ $+48$ -9.60 $35 53.72$	$+8.83$ $+0.22$ $35 13.33$ -56 -4 $+10.30$ $+48$ -9.60 $35 14.15$
$+132$ $+0.07$	$+46.3$ 1.66558 9.78346 $1.55504m$	$0 19.85$ 58.80	$35 53.8$ 14.24								
$+132$ $+0.07$	$+22.5$ 1.35218 9.78934 $1.24752m$	$4 38.0$ 48.8	868 4	43.40		$58 49.5$ $52 0 11.20$ -17.68			20 51	$59 53.52$ -13 -5 $+9.70$ $+45$ -9.70 $59 54.01$	$+9.77$
$+136$ $+0.25$	$+328$ 1.51587 9.77778 $1.89965m$	$4 31.9$ 43.0	749 4	37.45		$8 10.90$ $53 10 17.15$ -25.10			10 53	$9 52.05$ -28 -8 $+10.90$ $+50$ -9.80 $9 53.54$	$+11.07$
$+129$ $+0.41$		$4 45.20$	$9 54.0$								

Single Observations

Date₁ = 1874, Aug. 27Observer
RecorderDate₂ =Observer
Recorder330
Aug 31

50

Star.	α	δ	Mag.	T_0	T_m	T_0	T_r	T_s	T_h	Sum	Mean	Red. to T_m	T
6	20 53 12	9.1	18 5 50.0	6 14.0	17.5	20.9	24.4	27.6	6	20.88			
κ	57.6	12.2	9.0	53.6	56.7	53.4							
(8) - D) $\frac{\kappa'}{100}$													
Aug. 27 α_1													
18	16 25 51 4	9.0	16 15 16 21.2	24.4	27.8	31.0	34.3	16	27.74				
κ	16 2.3	3.9	8.1	4.2	6.8	4.2							
(8) - D) $\frac{\kappa'}{100}$													
Aug. 27 α_2													
18	17 22 51 32	9.4	17 7.5 17 18.7	22.1	25.3	28.5	32.0	17	25.32				
κ	16 59.9	31.8	9.5	10.7	14.5	10.9							
(8) - D) $\frac{\kappa'}{100}$													
Aug. 27 α_1													
18	18 45 51 33	9.1	18 21.6 18 41.8	45.3	48.4	57.5	54.9	18	48.38				
κ	18 22.3	32.7	9.0	24.2	26.2	24.0							
(8) - D) $\frac{\kappa'}{100}$													
Aug. 27 α_2													
18	51 18 51 43	9.6	50 55.1	45.4	8.9								
κ	51 32	8.5	31.2	8.8	18 21 44.8	22 2.6	5.9	9.3	12.5	15.8	22	9.22	
(8) - D) $\frac{\kappa'}{100}$													
Aug. 31 α_1													
18	47 31 51 42	8.3	47 11.7 47 29.2	32.6	36.0	39.3	42.5	47	35.92				
κ	47 8.5	42.1	8.0	15.0	18.0	14.9							
(8) - D) $\frac{\kappa'}{100}$													
Aug. 31 α_2													
48	31 51 7	8.8	48 17.5 48 30.3	33.7	37.0	40.4	43.6	48	37.00				
κ	48 8.5	5.8	8.7	20.4	23.1	20.3							
(8) - D) $\frac{\kappa'}{100}$													
α_1													
κ													
(8) - D) $\frac{\kappa'}{100}$													
α_2													
κ													
(8) - D) $\frac{\kappa'}{100}$													
α_1													
κ													
(8) - D) $\frac{\kappa'}{100}$													
α_2													

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+27.5 1.43933 9.77744 132277 _m	2' 54.1	4.0	1181 ¹²	59.05	9 49.30 53 11 55.55 - 21.03			10	53 11 ^{0.22} 34.52 - .19 + 10.94 + .50 - 9.50 11 36.16	+11.22
((8) - D) $\frac{d'}{100}$											
δ_1	+1.28 +0.56	6 23.35		11 36.7 ²⁰					20	51 4 ^{0.22} 12.46 - .15 + 8.74 + .40 - 9.50 4 11.87	+8.99
d	+23.5 1.37107 9.77809 1.27516 _m	0 17.6	29.0	466 0	23.30	2 25.05 51 4 31.30 - 18.84			20	51 4 ^{0.22} 12.46 - .15 + 8.74 + .40 - 9.50 4 11.87	+8.99
((8) - D) $\frac{d'}{100}$											
δ_2	+1.42 +1.44	16 30.33		4 13.3 ⁵²					50	51 32 ^{0.22} 20.67 - .2 + 9.23 + .42 - 9.50 32 20.67	+9.58
d	+14.4 1.15836 9.79367 1.05803 _m	2 16.5	28.5	450 2	22.50	30 25.85 51 32 32.10 - 11.43			50	51 32 ^{0.22} 20.67 - .2 + 9.23 + .42 - 9.50 32 20.67	+9.58
((8) - D) $\frac{d'}{100}$											
δ_1	+1.39 +1.52	17 27.87		32 22.2 ⁵⁰					50	51 31 ^{0.22} 33 53.99 - .15 + 9.26 + .42 - 9.50 33 56.03	+9.52
d	+24.4 1.38739 9.79351 1.28690 _m	0 33.1	45.4	785 0	39.25	32 9.10 51 34 15.35 - 19.36			50	51 31 ^{0.22} 33 53.99 - .15 + 9.26 + .42 - 9.50 33 56.03	+9.52
((8) - D) $\frac{d'}{100}$											
δ_2	+1.39 +1.65	18 50.92		33 57.7 ⁴⁰					40	51 32 ^{0.22} 32 52.3 - .12 + 8.97 + .42 - 10.50 32 3.98	+9.25
d	+20.9 1.32015 9.79383 1.21998 _m	2 26.7	39.1	658 2	32.90	30 15.45 51 32 21.82 - 16.59			50	51 32 ^{0.22} 32 52.3 - .12 + 8.97 + .42 - 10.50 32 3.98	+9.25
((8) - D) $\frac{d'}{100}$											
δ_1	+1.40 +1.94	22 10.07		32 5.9 ⁴¹					40	51 43 ^{0.22} 19.62 - .12 + 9.16 + .43 - 10.50 43 18.28	+9.46
d	+21.0 1.32222 9.79192 1.22014 _m	1 13.0	24.0	370 1	18.50	41 29.85 51 43 36.22 - 16.60			40	51 43 ^{0.22} 19.62 - .12 + 9.16 + .43 - 10.50 43 18.28	+9.46
((8) - D) $\frac{d'}{100}$											
δ_2	+1.41 +4.13	47 36.62		43 22.4 ¹⁸					15	51 6 ^{0.22} 40.69 - .8 + 8.56 + .41 - 10.50 6 38.785	+8.86
d	+16.7 1.22272 9.79778 1.12650 _m	2 54.8	6.5	13 3	0.65	4 47.70 51 6 54.07 - 13.38			15	51 6 ^{0.22} 40.69 - .8 + 8.56 + .41 - 10.50 6 38.785	+8.86
((8) - D) $\frac{d'}{100}$											
δ_1	+1.45 +4.23	48 37.75		6 43.0							
d											
((8) - D) $\frac{d'}{100}$											
δ_2											
d											
((8) - D) $\frac{d'}{100}$											
δ_1											
d											
((8) - D) $\frac{d'}{100}$											
δ_2											

1874ptae.proj.1590

331

Date₁ = 1874, Sept. 1

91 = -41

Observer W.A.R.

Recorder J. F. M.

332

Date₂ = Sept. 2

91 = -43

Observer W.A.R.

Recorder J. F. M.

52

Star.	α	δ	Mag.	T_s	T_m	T_a	T_e	T_g	T_h	Sum	Mean	Red. to T_m	T
16	35.0	46.5	8.9	16 38.5	16 33.2	586	2.0	3.3	8.7	17	1.96		
κ				41.3	41.2						+1.19		
$((\delta) - D) \frac{\kappa'}{100}$											- .54		
a_1											- .54		
16	35.0	46.5	9.0	16 38.5	16 33.4	589	2.3	5.7	9.1	18	2.28		
κ				42.2	42.0						+0.65		
$((\delta) - D) \frac{\kappa'}{100}$											- .57		
a_2											- .57		
18	47.0	49.8	7.7	18 19.0	18 41.9	454	4.87	52.2	55.7	18	48.78		
κ				22.2	22.1						+1.19		
$((\delta) - D) \frac{\kappa'}{100}$											- .54		
a_1											- .54		
18	47.0	49.8	7.3	18 23.1	18 42.4	460	4.93	52.7	56.0	18	49.28		
κ				26.5	26.2						+0.65		
$((\delta) - D) \frac{\kappa'}{100}$											- .57		
a_2											- .57		
20	29.0	44.0	8.8	20 3.2	20 27.7	310	34.3	37.4	40.9	20	34.30		
κ				8.8	8.3						+1.19		
$((\delta) - D) \frac{\kappa'}{100}$											- .57		
a_1											- .57		
20	29.0	44.0	8.5	20 6.9	20 28.2	315	34.7	38.0	41.4	20	34.76		
κ				10.5	10.1						+0.65		
$((\delta) - D) \frac{\kappa'}{100}$											- .53		
a_2											- .53		
22	15.0	26.0	4.1	21 44.6	21 54.8	580	1.3	4.6	7.9	22	1.32		
κ				47.4	47.5						+1.19		
$((\delta) - D) \frac{\kappa'}{100}$											- .50		
a_1											- .50		
22	15.0	26.0	9.0	21 54.5	22 17.6	208	24.0	27.2	30.3	22	23.98		
κ				2.3	2.1						+0.64		
$((\delta) - D) \frac{\kappa'}{100}$											- .52		
a_2											- .52		
23	15.0	10.3	9.1	22 46.0	23 12.4	15.9	19.4	22.5	26.0	23	19.24		
κ				50.2	49.7						+1.19		
$((\delta) - D) \frac{\kappa'}{100}$											- .53		
a_1											- .53		
23	15.0	10.3	8.7	22 58.4	23 13.0	16.5	19.8	23.2	26.4	23	19.78		
κ				2.0	2.0						+0.64		
$((\delta) - D) \frac{\kappa'}{100}$											- .55		
a_2											- .55		

+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+1.6
+1.3
+

Sept. 1. $+2.570$ $-.01$
 2. 6.38 $-.01$

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	$+20.8$ 1.31806 9.78163 1.20569_m	2' 44.0	2.7	1117 ³²	55.85	44 52.50 52 46 58.20 -16.06			35	52 46 42.14 - 12 + 10.27 + .49 -10.50 46 42.25	+10.61
((8) - D) $\frac{d'}{100}$											
$+1.32$ $+1.49$ δ_1		17 2.35		46 42.7 ³							
d	$+20.3$ 1.30750 9.78163 1.19513_m	2 49.0	3.5	1125 ³⁷	56.25	44 52.10 52 46 58.48 -15.67			35	42.81 - .10 - 3 +10.28 + .49 -10.60 46 42.85	+10.64
((8) - D) $\frac{d'}{100}$											
$+1.32$ $+1.49$ δ_2		17 2.13		46 44.3 ³³							
d	$+26.7$ 1.42651 9.78080 1.31331_m	3 10.0	15.0	160 ³³	8.00	48 40.35 52 58.0 46.05 -20.57			30	52 25.48 - .19 - 3 +10.35 + .49 -10.50 50 25.60	+10.62
((8) - D) $\frac{d'}{100}$											
$+1.31$ $+1.65$ δ_1		18 49.16		50 27.2 ³⁴							
d	$+23.1$ 1.36361 9.78097 1.25058_m	4 4.9	17.5	224 ³⁴	11.20	48 37.15 52 50 43.53 -17.81			30	50 25.72 - .14 - 4 +10.36 + .49 -10.70 50 25.69	+10.67
((8) - D) $\frac{d'}{100}$											
$+1.31$ $+1.65$ δ_2		18 49.11		50 27.3 ⁴¹							
d	$+26.0$ 1.41497 9.80136 1.32233_m	0 56.9	8.5	54 ⁴¹	2.70	41 45.65 50 43 51.35 -21.01			40	50 43 30.34 - .18 - 1 + 8.21 + .38 -10.40 43 28.34	+8.40
((8) - D) $\frac{d'}{100}$											
$+1.44$ $+1.80$ δ_1		20 34.79		43 30.1 ⁴¹							
d	$+24.7$ 1.39270 9.80136 1.30006_m	0 38.9	10.9	898 ⁴¹	4.90	41 43.45 50 43 49.83 -19.96			40	29.89 - .17 - 1 + 8.21 + .38 -10.50 43 27.78	+8.41
((8) - D) $\frac{d'}{100}$											
$+1.44$ $+1.80$ δ_2		20 34.72		43 29.6 ³⁶							
d	$+13.8$ 1.13988 9.80382 1.04974_m	1 24.5	35.9	604 ³⁶	30.20	26 18.15 50 28 23.85 -11.21			55	50 28 12.64 - .5 - 1 + 8.96 + .37 -10.40 28 11.51	+9.27
((8) - D) $\frac{d'}{100}$											
$+1.46$ $+1.95$ δ_1		22 1.84		28 13.5 ⁵⁸							
d	$+21.9$ 1.34644 9.80413 1.25056_m	3 25.9	37.9	638 ⁵⁸	31.90	24 16.45 50 26 22.83 -17.81			55	26 50.2 - .13 - 3 + 8.92 + .37 -10.50 26 3.65	+9.13
((8) - D) $\frac{d'}{100}$											
$+1.46$ $+1.95$ δ_2		22 23.54 ⁹⁴		26 5.6 ¹³							
d	$+29.5$ 1.46982 9.78756 1.36338_m	3 22.5	35.1	576 ¹³	28.80	9 19.55 52 11 25.25 -21.55			10	52 11 37.0 - .22 - .3 + 9.67 + .46 -10.60 11 2.98	+9.88
((8) - D) $\frac{d'}{100}$											
$+1.36$ $+2.04$ δ_1		23 19.66		11 5.0 ¹³							
d	$+17.9$ 1.24797 9.78756 1.14153_m	3 31.1	44.7	758 ¹³	37.90	9 10.45 52 11 16.83 -13.85			10	2.98 - .9 - .4 + 9.68 + .46 -10.77 11 2.22	+10.01
((8) - D) $\frac{d'}{100}$											
$+1.36$ $+2.04$ δ_2		23 19.66		11 4.3							

331
Date₁ = 1874, Sept. 1

Observer
Recorder

332
Date₂ = Sept. 2

Observer
Recorder

54

Star.	α	δ	Mag.	T_0	T_m	T_e	T_r	T_s	T_h	Sum	Mean	Red. to T_m	T
24	23 58 21	9.3	18 24 6.7	24 25.9	29.4	32.6	33.8	38.9	24	32.52			
κ	24	0.0	20.5	9.1	12.7								
$(\delta) - D$	$\frac{\kappa'}{100}$				9.7				+ 0.67	24	33.19		
a_1													
κ			9.2	24 7.3	24 26.4	29.8	33.0	36.3	29.3	24	32.96		
$(\delta) - D$	$\frac{\kappa'}{100}$				12.1								
a_2					13.1				+ 0.10	24	33.06		
κ					11.5								
$(\delta) - D$	$\frac{\kappa'}{100}$									24	33.06		
a_2													
25	45 51 51	7.8	25 27.6	25 43.0	46.3	49.6	53.0	56.3	25	49.64			
κ	25	22.5	50.6	7.6	30.4								
$(\delta) - D$	$\frac{\kappa'}{100}$				33.2				+ 0.65	25	50.29		
a_1					30.4								
κ			7.7	25 27.1	25 43.5	46.7	50.1	53.5	56.8	25	50.12		
$(\delta) - D$	$\frac{\kappa'}{100}$				30.4								
a_2					32.3				+ 0.07	25	50.19		
κ					29.9								
$(\delta) - D$	$\frac{\kappa'}{100}$									25	50.19		
a_2													
28	0 51 7	8.9	27 44.9	28 1.0	4.3	7.5	11.0	14.1	28	7.58			
κ	27	37.7	6.8	8.9	47.5								
$(\delta) - D$	$\frac{\kappa'}{100}$				30.7				+ 0.65	28	8.23		
a_1					4.7								
κ			9.1	27 42.2	28 1.3	4.8	8.0	11.2	14.6	28	8.02		
$(\delta) - D$	$\frac{\kappa'}{100}$				46.3								
a_2					47.7				+ 0.09	28	8.11		
κ					44.7								
$(\delta) - D$	$\frac{\kappa'}{100}$									28	8.11		
a_2													
28	57 52 35	9.0	28 38.0	28 53.5	57.1	65	8.9	7.1	29	0.42			
κ	28	34.9	34.7	9.8	40.8								
$(\delta) - D$	$\frac{\kappa'}{100}$				44.0				+ 0.63	29	1.05		
a_1					40.9								
κ			8.9	28 36.8	28 54.1	57.4	1.0	4.4	7.7	29	0.92		
$(\delta) - D$	$\frac{\kappa'}{100}$				39.9								
a_2					43.5				+ 0.06	29	0.98		
κ					40.1								
$(\delta) - D$	$\frac{\kappa'}{100}$									29	0.98		
a_2													
30	32 54 53	8.3	30 13.9	30 25.0	28.6	32.2	35.7	39.4	30	32.18			
κ	30	9.8	52.6	8.3	17.0								
$(\delta) - D$	$\frac{\kappa'}{100}$				18.7				+ 0.57	30	32.75		
a_1					16.9								
κ			8.5	30 20	30 25.6	29.1	32.8	36.4	40.1	30	32.80		
$(\delta) - D$	$\frac{\kappa'}{100}$				6.1								
a_2					9.7				+ 0.00	30	32.80		
κ					5.9								
$(\delta) - D$	$\frac{\kappa'}{100}$									30	32.80		
a_2													

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	$+22.8$ 1.35793 980489 1.26882_m	$3' 30.5$	42.5	730	$3' 36.50$	$19 11.85$ $50 21 17.55$ -18.57			0	$50 20 58.98$ $- .14$ $- 4$ $+ 7.84$ $+ 37$ $- 10.40$ $20 56.61$	$+8.93$
((8) - D) $\frac{d'}{100}$				$20 58.8$ $24 33.4$							
$+1.47$ $+2.14$ δ_1		$24 33.03$									
d	$+21.5$ 1.33244 980489 1.24333_m	$3 32.1$	44.0	761	$3 38.05$	$19 10.30$ $50 21 16.68$ -17.51			0	59.17 $- .12$ $- .4$ $+ 7.84$ $+ 37$ $- 10.60$ $20 56.62$	$+8.05$
((8) - D) $\frac{d'}{100}$				$20 58.8$ 32							
$+1.47$ $+2.14$ δ_2		$24 32.93$									
d	$+19.2$ 1.28330 979063 1.17993_m	$2 45.1$	57.7	1028	$2 57.40$	$49 56.95$ $51 52 26.5$ -15.13			30	$51 51 47.52$ $- .10$ $- .3$ $+ 9.35$ $+ .99$ $- 10.60$ $51 46.58$	$+9.66$
((8) - D) $\frac{d'}{100}$				$51 48.8$ 32							
$+1.38$ $+2.26$ δ_1		$25 50.06$									
d	$+20.2$ 1.30535 979063 1.20198_m	$2 44.2$	57.8	1020	$2 57.00$	$49 57.35$ $51 52 3.73$ -15.92			30	47.81 $- .11$ $- .3$ $+ 9.36$ $+ .49$ $- 10.70$ $51 46.77$	$+9.66$
((8) - D) $\frac{d'}{100}$				$51 49.0$ 16							
$+1.38$ $+2.26$ δ_2		$25 49.88$									
d	$+19.9$ 1.29885 979762 1.20247_m	$1 30.1$	41.7	718	$1 35.90$	$6 12.45$ $51 8 18.15$ -15.94			15	$51 8 221$ $- .11$ $- .2$ $+ 8.61$ $+ .41$ $- 10.60$ $8 0.50$	$+8.89$
((8) - D) $\frac{d'}{100}$				$8 0$ $8 2.9$ 16							
$+1.43$ $+2.45$ δ_1		$28 8.02$									
d	$+23.3$ 1.36736 979762 1.27098_m	$1 26.7$	39.9	666	$1 33.30$	$6 15.05$ $51 8 21.43$ -18.66			15	2.77 $- .14$ $- .1$ $+ 8.62$ $+ .41$ $- 10.70$ $8 0.95$	$+8.88$
((8) - D) $\frac{d'}{100}$				$8 3.4$ 48							
$+1.43$ $+2.45$ δ_2		$28 7.92$									
d	$+19.5$ 1.29003 978329 1.17932_m	$2 56.0$	8.7	47	$3 2.35$	$34 46.00$ $52 36 51.70$ -15.11			45	$52 36 36.59$ $- .10$ $- .3$ $+ 10.11$ $+ .48$ $- 10.70$ $36 36.345$	$+10.46$
((8) - D) $\frac{d'}{100}$				$36 38.9$ 48							
$+1.34$ $+2.53$ δ_1		$29 0.77$									
d	$+20.8$ 1.31806 978329 1.19735_m	$2 54.9$	8.0	29	$2 1.45$	$34 46.90$ $52 36 53.28$ -15.75			45	37.53 $- .12$ $- .3$ $+ 10.11$ $+ .48$ $- 10.80$ $36 37.17$	$+10.44$
((8) - D) $\frac{d'}{100}$				$36 39.7$ 32							
$+1.34$ $+2.53$ δ_2		$29 0.73$									
d	$+15.3$ 1.18469 975985 1.05034_m	$1 58.7$	10.9	99	$2 4.80$	$50 43.55$ $54 52 49.25$ -11.23			30	$54 52 38.02$ $- .56$ $- .2$ $+ 12.40$ $+ .59$ $+ 10.96$ $52 40.03$	$+12.91$
((8) - D) $\frac{d'}{100}$				$52 42.7$ 31							
$+1.19$ $+2.66$ δ_1		$30 32.34$									
d	$+26.9$ 1.42975 975985 1.29560_m	$1 50.7$	2.1	1128	$1 56.40$	$50 51.95$ $54 52 58.33$ -19.75			30	38.58 $- .19$ $- .2$ $+ 12.41$ $+ .59$ $- 11.00$ $52 40.37$	$+12.79$
((8) - D) $\frac{d'}{100}$				$52 43.0$							
$+1.19$ $+2.66$ δ_2		$30 32.42$									

Date₁ = 1874, Sept. 1Observer
RecorderDate₂ = Sept. 2Observer
Recorder

56

Star.	α	δ	Mag.	T_a	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
32	22 54 6	7.9	18 32 38.2	32 17.0	20.6	23.9	27.6	31.1	32	24.04			
31	59.5	5.8	7.8	41.6	45.2	41.7							
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_1													
κ													
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_2													
33	21 54 44	9.0	33 85 33 153	18.9	22.5	26.3	29.6	33	22.52				
32	58.5	42.7	8.7	11.0	13.7	11.7							
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_1													
κ													
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_2													
34	20 54 43	8.0	34 85 33 153	18.6	23.1	26.8	30.4	33	23.14				
33	57.2	42.2	7.8	4.2	6.9	3.9							
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_1													
κ													
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_2													
34	20 54 43	8.0	34 85 33 153	19.1	22.7	26.3	30.2	34	22.72				
33	57.2	42.2	7.8	4.2	6.9	3.9							
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_1													
κ													
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_2													
35	38 53 46	8.2	35 17.6	35 33.0	36.7	40.1	43.6	47.1	35	40.10			
35	15.0	45.0	8.5	20.8	23.5	20.6							
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_1													
κ													
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_2													
35	38 53 46	8.0	35 17.4	35 33.6	37.2	40.7	44.1	47.7	35	40.66			
35	15.0	45.0	8.5	21.0	23.5	20.6							
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_1													
κ													
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_2													
37	8 53 11	8.5	36 44.6	37 5.1	8.6	12.0	15.4	18.9	37	12.08			
36	45.9	10.9	8.3	47.8	50.7	47.7							
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_1													
κ													
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_2													
37	8 53 11	8.0	36 48.6	37 5.5	8.9	12.4	15.8	18.3	37	12.38			
36	45.9	10.9	8.3	51.3	54.5	51.5							
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_1													
κ													
$(\delta) - D$	$\frac{\kappa'}{100}$												
a_2													

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	$+42.3$ -17.7 $1.24797m$ 9.76817 1.12214	$3' 45.3$	56.8	1021	$3' 51.05$	3 57.30 54 6 3.00 $+13.25$			13	54 6 16.25 $-$ 8 $+12.00$ $-$ 4 $+11.61$ $+51$ -10.90 6 17.35	
$+124$ $+2.82$	δ_1	32	24.25	6	20.2						
	$+20.9$ 1.32615 9.76817 $1.19482m$	$3' 16.0$	28.7	447	$3' 22.35$	4 26.00 54 6 32.38 -15.64			13	16.74 $-$ 11 $-$ 3 $+11.99$ $+11.62$ $+51$ -11.00 6 17.73	
$+124$ $+2.82$	δ_2	32	24.17	6	20.6						
	$+10.8$ 1.03342 9.76146 $0.90088m$	$1' 38.1$	49.1	872	$0' 43.60$	42 4.75 54 44 10.45 -7.96			40	54 44 24.9 $-$ 3 $+12.79$ $+12.26$ $+57$ -10.90 44 4.38	
$+120$ $+2.91$	δ_1	33	22.67	44	7.3						
	$+20.6$ 1.31389 9.76146 $1.18133m$	$0' 30.6$	42.3	729	$0' 36.45$	42 11.90 54 44 18.28 -15.18			40	3.10 $-$ 11 $-$ 1 $+12.72$ $+12.27$ $+57$ -11.16 44 4.72	
$+120$ $+2.91$	δ_2	33	22.76	44	7.6						
	$+18.4$ 1.26482 9.76182 $1.18264m$	$2' 16.4$	28.9	453	$2' 22.65$	40 25.70 54 42 31.40 -13.57			40	54 42 17.83 $-$ 8 $-$ 2 $+12.69$ $+12.22$ $+57$ -10.90 42 19.62	
$+120$ $+2.97$	δ_1	34	22.42	42	22.6						
	$+17.1$ 1.23300 9.76182 $1.10082m$	$3' 19.1$	30.1	492	$2' 24.60$	40 23.75 54 42 30.13 -12.61			40	17.52 $-$ 7 $-$ 2 $+12.71$ $+12.23$ $+57$ -11.16 42 19.13	
$+120$ $+2.97$	δ_2	34	22.33	42	22.1						
	$+19.5$ 1.29003 9.77164 $1.16767m$	$3' 17.5$	29.1	466	$3' 23.30$	44 25.05 53 46 30.75 -14.71			35	53 46 16.04 $-$ 9 $-$ 3 $+11.66$ $+11.28$ $+50$ -10.90 46 16.80	
$+127$ $+3.11$	δ_1	35	40.32	46	19.9						
	$+20.1$ 1.30320 9.77164 $1.18084m$	$3' 18.1$	29.7	478	$3' 23.90$	44 24.45 53 46 30.83 -15.16			35	13.67 $-$ 10 $-$ 3 $+11.65$ $+11.28$ $+50$ -11.00 46 16.32	
$+127$ $+3.11$	δ_2	35	40.34	46	19.4						
	$+24.3$ 1.38561 9.77228 $1.26889m$	$1' 1.3$	12.9	142	7.10	11 41.25 53 13 46.95 $(12)-18.57$			10	53 13 28.38 (12) 15 $-$ 1 $+11.06$ $+10.72$ $+50$ -10.90 12 28.54	
$+131$ $+3.24$	δ_1	37	12.25	12	31.8						
	$+20.9$ 1.32015 9.77228 $1.20343m$	$2' 3.8$	15.9	197	$2' 9.85$	10 38.50 33 12 44.88 -15.97			10	28.91 $-$ 12 $-$ 1 $+11.09$ $+10.72$ $+50$ -11.00 12 29.00	
$+131$ $+3.24$	δ_2	37	12.09	12	32.2						

Date₁ = 1874 Sept. 1Observer
RecorderDate₂ = Sept. 2Observer
Recorder

Star.	α	δ	Mag.	T_z	T_m	T_s	T_r	T_b	T_h	Sum	Mean	Red. to T_m	T
38	53	53	9.0	18	37	46.2	38	3.0	86	13.2	15.4	19.1	38
37	46.8	52.4	9.1			48.1							38
κ						51.6							38
$(\delta) - D$						49.0							38
a_1													38
			9.3	37	40.2	38	5.7	9.0	12.8	16.0	17.6		38
κ						43.3							38
$(\delta) - D$						46.0							38
a_2						43.2							38
39	32	53	8.6	39	3.0	39	29.8	33.3	36.7	40.1	43.6		39
39	9.9	0.5	8.3			7.0							39
κ						10.0							39
$(\delta) - D$						6.7							39
a_1													39
			8.5	39	18.0	39	20.3	33.8	37.1	40.6	44.0		39
κ						17.1							39
$(\delta) - D$						18.4							39
a_2						16.7							39
40	12	54	4.4	40	2.3	40	6.9	10.4	14.0	17.6	21.1		40
39	49.8	43.2	9.0			4.7							40
κ						8.2							40
$(\delta) - D$						5.1							40
a_1													40
			9.0	40	22.5	40	7.1	10.6	14.4	17.8	21.4		40
κ						36.2							40
$(\delta) - D$						34.2							40
a_2						36.1							40
41	48	51	10	41	32.4	41	50.0	53.8	56.7	59.9	63.0		41
41	25.8	9.5	9.0			35.2							41
κ						38.0							41
$(\delta) - D$						35.2							41
a_1													41
			9.2	41	33.7	41	50.5	53.8	57.0	60.3	63.7		41
κ						36.9							41
$(\delta) - D$						40.4							41
a_2						37.0							41
43	28	52	2.9	43	3.9	43	23.3	27.0	30.2	33.5	36.8		43
43	5.2	28.2	9.4			6.9							43
κ						10.0							43
$(\delta) - D$						6.9							43
a_1													43
			9.2	43	3.9	43	23.7	27.3	30.8	34.1	37.3		43
κ						1.2							43
$(\delta) - D$						10.4							43
a_2						7.2							43

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	+23.1 1.36361 977026 1.23987 _m	0' 54.0	6.0	00' 1' 0.00		51 48.35 53 53 54.05 -17.37			30'	53 53 36.68 - .14 + 11.40 + .50 -10.90 53 37.53	+11.75
d											
(δ) - D) $\frac{d'}{100}$											
+1.26 δ_1		38 12.26		53 40.9							
+3.33				30							
	+29.4 1.46835 977026 1.34461 _m	0 50.7	3.5	1142 0	57.10	51 51.25 53 53 57.63 -22.11			30	35.52 - .22 + 11.41 + .50 -11.10 53 36.10	+11.68
d											
(δ) - D) $\frac{d'}{100}$											
+1.26 δ_2		38 12.27		53 39.4							
+3.33				23							
	+300 1.47712 977930 1.36242 _m	3 12.6	23.8	364 3	18.20	59 30.15 53 1 33.85 -23.04			20	53 1 12.81 - .24 - .3 + 11.50 + .50 -10.90 1 13.64	+11.73
d											
(δ) - D) $\frac{d'}{100}$											
+1.32 δ_1		39 36.95		1 17.1							
+3.44				23							
	+205 1.31195 977930 1.19705 _m	3 21.3	32.9	542 3	27.10	59 21.25 53 1 27.63 -15.74			20	11.89 - .10 - .3 + 11.51 + .50 -11.10 1 12.67	+11.88
d											
(δ) - D) $\frac{d'}{100}$											
+1.32 δ_2		39 36.87		1 16.1							
+3.44				41							
	+8.9 0.94939 976146 0.81685 _m	0 54.4	5.7	06 1	0.30	41 48.05 54 43 53.75 -6.56			40	54 43 47.19 - .2 - .1 + 12.27 + .57 -11.00 43 49.00	+12.81
d											
(δ) - D) $\frac{d'}{100}$											
+1.21 δ_1		40 14.11		43 52.5							
+3.50				41							
	-218 1.33846 _m 976146 1.20592	1 17.1	29.1	462 1	23.10	41 25.25 54 43 31.63 +16.07			40	47.70 - .12 - .1 + 12.27 + .57 -11.20 43 49.21	+12.71
d											
(δ) - D) $\frac{d'}{100}$											
+1.21 δ_2		40 13.88		43 52.7							
+3.50				13							
	+21.4 1.33041 977715 1.23356 _m	3 27.9	40.1	680 3	34.00	9 14.35 51 11 20.05 -17.12			10	51 11 2.93 - .12 - .3 + 8.68 + .41 -10.80 11 1.07	+8.94
d											
(δ) - D) $\frac{d'}{100}$											
+1.44 δ_1		41 56.99		11 4.7							
+3.65				13							
	+20.1 1.30320 977715 1.20638 _m	3 28.5	40.9	694 3	34.70	9 13.65 51 11 20.03 -16.08			10	3.95 - .11 - .3 + 8.69 + .41 -11.00 11 1.91	+8.96
d											
(δ) - D) $\frac{d'}{100}$											
+1.44 δ_2		41 56.90		11 5.6							
+3.65				56							
	+23.3 1.36736 978478 1.25814 _m	1 36.6	48.8	854 1	42.70	26 5.65 52 28 11.35 -18.12			55	52 27 53.23 - .14 - .2 + 9.94 + .47 -10.90 27 52.61	+10.28
d											
(δ) - D) $\frac{d'}{100}$											
+1.36 δ_1		43 30.44		27 56.4							
+3.78				56							
	+23.4 1.36922 978478 1.26000 _m	1 35.3	47.5	828 1	41.40	26 6.95 52 28 13.33 -18.20			55	55.13 - .14 - .2 + 9.98 + .47 -11.10 27 54.32	+10.29
d											
(δ) - D) $\frac{d'}{100}$											
+1.36 δ_2		43 30.38		27 58.6							
+3.78				1							

Date₁ = 1874, Sept. 1Observer
RecorderDate₂ = Sept. 2Observer
Recorder

60

Star.	α	δ	Mag.	T_s	T_m	T_a	T_s	T_s	T_h	Sum	Mean	Red. to T_m	T
44	47	53 42	7.8	18	44 11.8	44 22.3	25.7	29.2	32.7	36.2	44	29.22	
	κ	4.3	40.8	8.5	16.4	18.0						+1.17	
(8) - D	κ'				15.7						44	29.80	
α_1											44	28.11	
			7.8		44 10.8	44 22.7	26.2	29.8	33.2	36.6	44	29.70	
κ					14.4	17.9						+0.63	
(8) - D	κ'				14.4						44	29.71	
α_2											44	28.05	
46	17	52 31	8.8		45 47.2	46 18.3	16.8	20.2	23.6	27.0	46	20.18	
	κ	54.4	30.7	9.2	51.1	53.7						+1.17	
(8) - D	κ'				50.7						46	20.80	
α_1											46	19.09	
			9.0		45 58.7	46 18.8	17.3	20.6	24.1	27.4	46	20.64	
κ					53.3	62.1						+0.63	
(8) - D	κ'				62.1						46	20.69	
α_2											46	19.01	
47	16	51 11	8.6		46 54.4	47 16.8	20.0	23.3	26.6	30.0	47	23.34	
	κ	53.1	10.0	8.7	57.3	59.6						+1.16	
(8) - D	κ'				57.5						47	23.97	
α_1											47	22.23	
			8.8		46 58.6	47 17.1	20.5	23.8	27.0	30.3	47	23.74	
κ					58.4	67.7						+0.63	
(8) - D	κ'				63.2						47	23.82	
α_2											47	22.11	
48	21	51 40	8.5		48 32	48 19.6	22.9	26.3	29.5	32.9	48	26.24	
	κ	58.4	39.1	8.5	6.7	10.2						+1.16	
(8) - D	κ'				6.7						48	26.86	
α_1											48	25.12	
			8.2		48 10.7	48 20.0	23.4	26.7	29.9	33.3	48	26.66	
κ					14.5	17.5						+0.63	
(8) - D	κ'				14.2						48	26.72	
α_2											48	25.01	
49	20	51 54	8.2		48 57.7	49 18.3	21.9	25.3	28.5	32.0	49	25.24	
	κ	57.2	52.8	8.2	6.8	8.8						+1.16	
(8) - D	κ'				60.8						49	25.86	
α_1											49	24.12	
			7.9		49 7.7	49 18.1	22.3	25.8	29.0	32.4	49	25.72	
κ					10.3	18.2						+0.63	
(8) - D	κ'				10.4						49	25.78	
α_2											49	24.07	

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+13.5 1.13033 9.77250 1.00883 _m	3' 16.9	27.7	446 ⁴³	3' 22.30	53 26 05 41 31.75 -10.20			40	53 41 21.55 - 5 + 11.21 - 50 - 11.00 41 22.18	+11.63
(8) - D) $\frac{a'}{100}$											
+1.29 δ_1 +3.87		44 29.40		41 26.0							
d	+15.3 1.18469 9.77250 1.06319 _m	3 16.0	28.8	448 ⁴³	3 22.40	53 39 25.95 41 32.83 -11.57			40	20.76 - 3 + 11.21 + 50 - 11.20 41 21.18	+11.62
(8) - D) $\frac{a'}{100}$											
+1.29 δ_2 +3.87		44 29.34		41 25.0							
d	+29.5 1.46982 9.78412 1.35994 _m	3 8.4	20.1	285 ⁵³	3 14.25	52 29 34.10 31 39.80 -22.91			50	52 31 16.89 - 22 - 3 + 10.03 + .47 - 11.00 31 16.14	+10.25
(8) - D) $\frac{a'}{100}$											
+1.36 δ_1 +4.03		46 20.45		31 20.2							
d	+18.5 1.26717 9.78412 1.15729 _m	3 17.9	29.9	478 ⁵³	3 23.90	52 29 24.45 31 30.83 -14.36			50	16.47 - 9 - 3 + 10.03 + .47 - 11.10 31 15.75	+10.38
(8) - D) $\frac{a'}{100}$											
+1.36 δ_2 +4.03		46 20.37		31 19.8							
d	+25.8 1.41162 9.79699 1.31461 _m	3 56.4	8.8	52 ¹³	3 2.60	51 9 45.75 11 51.45 -20.64			10	51 11 30.81 - 18 - 3 + 8.68 + .41 - 10.90 11 28.89	+8.88
(8) - D) $\frac{a'}{100}$											
+1.44 δ_1 +4.11		47 23.67		11 32.9							
d	+20.5 1.31175 9.79699 1.21474 _m	3 2.0	13.0	150 ¹³	3 7.50	51 9 40.85 11 47.23 -16.40			10	30.83 - 11 - 3 + 8.69 + .41 - 11.10 11 28.69	+8.96
(8) - D) $\frac{a'}{100}$											
+1.44 δ_2 +4.11		47 23.55		11 32.8							
d	+19.5 1.29003 9.79240 1.18843 _m	3 54.0	5.3	1193 ⁴³	3 59.65	51 38 48.70 40 54.40 -15.43			40	51 40 38.97 - 10 - 4 + 9.17 + .43 - 11.00 40 37.43	+9.46
(8) - D) $\frac{a'}{100}$											
+1.42 δ_1 +4.21		48 26.55		40 41.6							
d	+12.5 1.09691 9.79240 0.99531 _m	3 37.6	11.3	109 ⁴⁴	4 5.45	51 38 42.90 40 49.28 -9.89			40	39.39 - 4 - 4 + 9.18 + .43 - 11.10 40 37.82	+9.53
(8) - D) $\frac{a'}{100}$											
+1.42 δ_2 +4.21		48 26.43		40 42.0							
d	+2.44 1.38739 9.79015 1.28354 _m	0 8.8	20.3	291 ³⁰	0 14.55	51 52 33.80 54 39.50 -19.21			30	51 54 20.29 - .15 - 0 + 9.39 + .44 - 11.00 54 18.97	+9.68
(8) - D) $\frac{a'}{100}$											
+1.41 δ_1 +4.29		49 26.53		54 23.3							
d	+15.3 1.18469 9.79015 1.08084 _m	0 16.9	29.9	468 ³⁰	0 23.40	51 52 24.95 54 31.33 -12.04			30	19.29 - 6 - 0 + 9.40 + .44 - 11.20 54 17.87	+9.78
(8) - D) $\frac{a'}{100}$											
+1.41 δ_2 +4.29		49 25.48		54 22.1							

Date₁ = 1874, Sept. 1Observer
RecorderDate₂ = Sept. 2Observer
Recorder

62

Star.	α	δ	Mag.	T_s	T_m	T_e	T_r	T_p	T_h	Sum	Mean	Red. to T_m	T
51	51	50 25	8.4	50 48.7	51 10.3	157	169	20.1	28.3	51	16.86		
	50	46.9	8.8	52.9							+1.16		
	κ			53.0							-50		
	(δ) - D			57.9					+ 0.64	51	17.50		
	a_1									51	15.74		
			8.7	50 50.0	51 10.9	14.2	17.4	20.6	23.9	51	17.40		
	κ			52.9							+0.63		
	(δ) - D			53.3					+ 0.09	51	17.49		
	a_2			52.7						51	15.75		
53	53	54 3	9.0	53 8.0	53 16.2	18.9	23.3	26.8	30.2	53	23.28		
	52	55.7	9.0	11.4							+1.16		
	κ			14.7							-56		
	(δ) - D			11.4					+ 0.57	53	23.85		
	a_1									53	22.11		
			9.0	53 6.3	53 16.9	20.3	23.8	27.4	30.8	53	23.84		
	κ			9.0							+0.62		
	(δ) - D			12.3					+ 0.00	53	23.84		
	a_2			9.2						53	22.13		
54	54	54 4.2	9.0	54 36.3	54 51.2	54.7	58.3	1.8	5.4	54	58.28		
	54	29.6	8.8	39.4							+1.16		
	κ			43.0							-58		
	(δ) - D			39.6					+ 0.55	54	58.83		
	a_1									54	57.10		
			9.0	54 33.5	54 51.7	53.3	58.8	2.3	5.8	54	58.78		
	κ			37.1							+0.62		
	(δ) - D			40.2					- 0.02	54	58.76		
	a_2			36.9						54	57.06		
56	56	54 4.2	7.7	55 44.0	55 59.5	2.0	6.7	10.3	13.7	56	6.64		
	55	41.7	8.0	48.6							+1.16		
	κ			51.2							-58		
	(δ) - D			47.9					+ 0.55	56	7.19		
	a_1									56	5.45		
			8.0	55 47.9	56 0.1	2.6	7.1	10.6	14.2	56	7.12		
	κ			52.0							+0.62		
	(δ) - D			54.6					- 0.02	56	7.10		
	a_2			57.5						56	5.39		
57	57	54 2.7	8.1	57 0.6	57 20.0	23.4	27.2	30.6	34.2	57	27.08		
	57	1.6	8.0	5.1							+1.16		
	κ			7.0							-57		
	(δ) - D			4.2					+ 0.56	57	27.64		
	a_1									57	25.89		
			8.2	57 49.0	57 20.5	24.3	27.6	31.0	34.7	57	27.62		
	κ			57.7							+0.62		
	(δ) - D			57.8					- 0.01	57	27.61		
	a_2									57	25.90		

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	8'
d	+25.0 1.39794 280412 1.30806 _m	4' 8.1	18.4	265 ⁵⁹ 4	13.25	23 35.70 50 25 40.80 - 20.33			55 50 25 20.47 - .17 + 7.92 + .37 - 10.90 25 17.65		+8.08
(δ) - D) $\frac{d'}{100}$	+1.50 +4.45										
δ ₁		51 17.24		25 22.1 ⁵⁹							
d	+24.7 1.39270 280412 1.30282 _m	4' 8.4	18.9	273 4	13.65	23 34.70 50 25 41.08 - 20.08			55 21.00 - .17 + 7.92 + .37 - 11.10 25 17.98		+8.08
(δ) - D) $\frac{d'}{100}$	+1.50 +4.45										
δ ₂		51 17.25		25 22.4 ²¹							
d	+11.9 1.07555 9.76852 0.95007 _m	1' 12.6	24.8	374 1	18.70	1 29.65 54 3 35.35 - 8.91			20 54 3 26.44 - .4 - 1 + 11.59 + .50 - 11.20 3 27.28		+12.04
(δ) - D) $\frac{d'}{100}$	+1.28 +4.62										
δ ₁		53 23.39		3 31.9 ²¹							
d	+14.6 1.16435 9.76852 1.03887 _m	1' 11.6	23.1	347 1	17.35	1 31.00 54 3 37.38 - 10.94			20 26.44 - .6 - 1 + 11.60 + .50 - 11.40 3 27.07		+12.03
(δ) - D) $\frac{d'}{100}$	+1.28 +4.62										
δ ₂		53 23.41		3 31.7 ⁴³							
d	+18.7 1.27184 9.76200 1.13984 _m	3' 24.1	34.1	582 3	29.10	39 19.25 54 41 24.95 - 13.80			40 54 41 11.15 - .9 - 3 + 12.23 + .57 - 11.20 41 12.63		+12.68
(δ) - D) $\frac{d'}{100}$	+1.24 +4.75										
δ ₁		54 58.34		41 17.4 ⁴³							
d	+21.9 1.34044 9.76200 1.20844 _m	3' 22.2	33.0	552 3	27.60	39 20.75 54 41 27.13 - 16.16			40 10.97 - .12 - 3 + 12.24 + .57 - 11.40 41 12.23		+12.66
(δ) - D) $\frac{d'}{100}$	+1.24 +4.75										
δ ₂		54 58.30		41 17.0 ⁴²							
d	+18.7 1.27187 9.76182 1.13969 _m	2' 53.0	2.9	1159 2	57.95	39 50.40 54 41 56.10 - 13.79			40 54 41 42.31 - .9 - 3 + 12.24 + .57 - 11.30 41 43.70		+12.69
(δ) - D) $\frac{d'}{100}$	+1.24 +4.86										
δ ₁		56 6.69		41 48.6 ⁴³							
d	+15.6 1.19312 9.76182 1.06094 _m	2' 55.5	6.9	24 3	1.20	39 47.15 54 41 53.53 - 11.57			40 42.02 - .7 - 3 + 12.25 + .57 - 11.40 41 43.34		+12.72
(δ) - D) $\frac{d'}{100}$	+1.24 +4.86										
δ ₂		56 6.63		41 48.2 ⁵⁵							
d	+22.9 1.35984 9.76413 1.22997 _m	0' 53.0	6.5	1195 0	59.75	26 48.60 54 28 54.30 - 16.98			55 54 28 37.32 - .14 - 1 + 12.02 + .55 - 11.30 28 38.44		+12.42
(δ) - D) $\frac{d'}{100}$	+1.26 +4.97										
δ ₁		57 27.15		28 43.4 ⁵⁶							
d	-24.2 +35.8 1.38382 _m 9.76431 1.25413 _m	1' 29.0	41.1	701 1	35.05	26 13.30 54 28 19.68 + 17.95			55 37.63 - .15 - 2 + 12.03 + .55 - 11.40 28 38.64		+12.41
(δ) - D) $\frac{d'}{100}$	+1.26 +4.97										
δ ₂		57 27.16		28 43.6							

Date₁ = 1874, *Sept. 1*Observer
RecorderDate₂ = *Sept. 2*Observer
Recorder

64

1874phae

Star.	α	δ	Mag.	T_s	T_m	T_a	T_r	T_g	T_h	Sum	Mean	Red. to T_m	T
39	48.54	28	8.8	18 39	24.0	34 42.4	46.0	48.6	53.0	56.7	59	49.54	
κ	25.5	27.8	9.0		27.2								+1.16
					50.8								- .57
(δ) - D)					27.3					+ 0.56		59	50.10
α_1												59	-1.76
												59	48.34
			9.0	59 20.5	59 43.0	46.3	50.0	53.6	57.2	59	52.02		
κ				24.8									+0.62
				27.8									- .60
(δ) - D)				24.5						- 0.01		59	50.01
α_2												59	-1.73
												59	48.28
19	12.54	11	7.5	19 0	46.5	1 7.6	11.1	14.7	18.2	21.7	1	14.66	
κ	48.8	9.7	7.5		49.5								+1.16
					52.4								- .57
(δ) - D)					49.5					+ 0.56		1	15.22
α_1												1	-1.78
												1	13.44
			7.5	0 57.4	1 8.1	11.6	13.7	18.7	22.1	1	15.12		
κ				54.5									+0.62
				57.4									- .60
(δ) - D)				54.4						- 0.01		1	15.11
α_2												1	-1.75
												1	13.36
2	26.52	20	9.4	2 9.5	2 24.0	27.5	31.0	34.1	37.7	2	30.86		
κ	2.4	18.4	9.3		12.9								+1.16
					16.3								- .53
(δ) - D)					12.9					+ 0.61		2	31.47
α_1												2	-1.80
												2	29.67
			9.5	2 7.3	2 24.6	28.0	31.3	34.6	38.0	2	31.30		
κ				10.9									+0.62
				13.4									- .56
(δ) - D)				10.6						+ 0.04		2	31.34
α_2												2	-1.77
												2	29.57
3	58.51	28	7.7	3 31.0	3 57.0	0.4	3.7	7.0	10.3	4	3.68		
κ	34.5	26.4	7.5		34.2								+1.16
					37.0								- .51
(δ) - D)					34.1					+ 0.63		4	4.31
α_1												4	-1.82
												4	2.49
			7.8	3 41.9	3 57.5	0.8	4.3	7.5	10.8	4	4.18		
κ				45.3									+0.61
				47.7									- .54
(δ) - D)				45.0						+ 0.05		4	4.23
α_2												4	-1.79
												4	2.44
4	52.52	47	8.0	4 29.5	4 49.6	53.0	56.5	59.8	61	4	56.40		
κ	28.7	45.2	8.2		82.0								+1.16
					85.6								- .54
(δ) - D)					82.4					+ 0.60		4	57.00
α_1												4	-1.81
												4	55.19
			7.9	4 38.1	4 50.1	53.5	56.9	0.3	3.7	4	56.90		
κ				42.0									+0.61
				44.2									- .57
(δ) - D)				41.4						+ 0.02		4	56.92
α_2												4	-1.78
												4	55.14

+1.28
+5.1

+1.2
+5.

+1.2
+5.

+1.4
+5.

+1.4
+5.

+1.4
+5.3

+1.4
+5.

+1.3
+5.

+1.38
+5.

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+22.2 1.34635 9.76413 1.21648 _m	0' 41.3	52.9	942 55	47.10	27 1.25 54 29 6.95 -16.46			5-5	54 28 50.49 - .13 - .1 +12.04 + .55 -11.30 28 51.64	+12.45
($\delta - D$) $\frac{d'}{100}$											
δ_1	+1.26 +5.18	59 49.60		28 56.8							
d	+25.5 1.40654 9.76413 1.27667 _m	0 39.0	51.0	890 55	44.50	27 3.85 54 29 10.23 -18.91			5-5	51.32 - .17 - .1 +12.05 + .55 -11.50 28 52.24	+12.42
($\delta - D$) $\frac{d'}{100}$											
δ_2	+1.26 +5.18	59 49.54		28 57.4							
d	+25.2 1.40140 9.76712 1.27452 _m	2 27.2	38.9	661 2	33.05	10 15.30 54 12 21.00 -18.82			10	54 12 218 - .16 - .2 +11.74 + .52 -11.30 12 2.96	+12.08
($\delta - D$) $\frac{d'}{100}$											
δ_1	+1.28 +5.29	1 14.72		12 8.2							
d	+20.7 1.31597 9.76712 1.18909 _m	2 31.9	43.7	756 2	37.80	10 10.55 54 12 16.93 -15.45			10	12 1.48 - .11 - .3 +11.75 + .52 -11.50 12 2.11	+12.13
($\delta - D$) $\frac{d'}{100}$											
δ_2	+1.28 +5.29	1 14.64		12 7.4							
d	+18.0 1.25527 9.78609 1.14736 _m	4 28.9	41.9	708 4	35.40	18 12.95 52 20 18.65 -14.04			0	52 20 4.61 - .9 - .5 +9.84 + .47 -11.20 20 3.58	+10.77
($\delta - D$) $\frac{d'}{100}$											
δ_1	+1.40 +5.40	2 31.07		20 9.0							
d	+20.7 1.31597 9.78609 1.20806 _m	4 27.9	41.0	689 4	34.45	18 13.90 52 20 20.28 -16.15			0	4.13 - .12 - .5 +9.85 + .47 -11.40 20 2.88	+10.15
($\delta - D$) $\frac{d'}{100}$											
δ_2	+1.40 +5.40	2 30.97		20 8.3							
d	+29.6 1.47129 9.79447 1.37176 _m	1 49.0	60.2	1092 56	54.60	25 53.95 51 27 59.45 -23.54			5-5	51 27 35.91 - .24 - .2 +8.96 + .42 -11.20 27 33.83	+9.12
($\delta - D$) $\frac{d'}{100}$											
δ_1	+1.46 +5.83	4 3.95		27 39.4							
d	+19.2 1.28330 9.79447 1.18377 _m	1 58.7	11.0	897 2	4.85	25 43.50 51 27 49.88 -15.27			5-5	34.61 - .10 - .2 +8.97 + .42 -11.30 27 32.88	+9.27
($\delta - D$) $\frac{d'}{100}$											
δ_2	+1.46 +5.83	4 3.90		27 38.1							
d	+24.0 1.38021 9.78163 1.26784 _m	2 31.6	43.2	748 2	37.40	45 10.95 52 47 16.65 -18.53			3-5	52 46 58.12 - .15 - .3 +10.30 + .49 -11.30 46 57.43	+10.61
($\delta - D$) $\frac{d'}{100}$											
δ_1	+1.38 +5.60	4 56.57		47 3.0							
d	+15.5 1.19033 9.78163 1.07796 _m	2 39.0	51.1	901 2	45.05	45 8.30 52 47 9.68 -11.97			3-5	57.71 - .6 - .3 +10.81 + .49 -11.50 46 56.92	+10.71
($\delta - D$) $\frac{d'}{100}$											
δ_2	+1.38 +5.60	4 56.52		47 2.5							

Date₁ = 1874, Sept. 1Observer
RecorderDate₂ = Sept. 2Observer
Recorder

66

Star.	α	δ	Mag.	T_e	T_m	T_o	T_r	T_g	T_h	Sum	Mean	Red. to T_m	T
18	6	47 57 12	8.9	18 6	350	6 46.6	47.9	53.3	52.6	58.9	6	53.30	
	κ	23.2	10.1	9.0	379							+1.16	
	(8) - D				407							- .51	
	a_1				379							- .2	
												53.93	
												-1.84	
												52.09	
													✓
			8.8	6	376	6 47.0	50.4	53.6	57.0	0.3	6	53.66	
	κ				40.2							+0.61	
	(8) - D				44.6							- .53	
	a_2				40.8							- .2	
												53.72	
												-1.81	
												51.91	
19	8	7 51 49	7.4	7 47.0	8 5.8	9.0	12.5	15.7	19.1	8	12.42		
	κ	43.1	47.2	7.3	50.5							+1.15	
	(8) - D				53.5							- .52	
	a_1				50.3							- .2	
												13.03	
												-1.84	
												11.19	
			7.7	7 46.7	8 6.1	9.5	12.5	16.2	19.6	8	12.84		
	κ				57.4							+0.61	
	(8) - D				54.5							- .55	
	a_2				50.9							- .2	
												12.88	
												-1.81	
												11.07	
10	0 53 5	9.1	9 36.8	9 52.8	0.1	2.4	6.9	10.1	10	3.46			
	κ	36.0	3.6	9.0	41.2							+1.15	
	(8) - D				43.7							- .54	
	a_1				41.0							- .3	
												4.04	
												-1.83	
												22.1	
			9.4	9 43.4	9 57.0	0.7	4.0	7.4	10.7	10	3.96		
	κ				48.4							+0.61	
	(8) - D				52.7							- .54	
	a_2				49.2							- .3	
												3.97	
												-1.82	
												21.5	
12	19 53 54	8.9	11 58.3	12 15.3	16.9	22.3	25.7	29.2	12	22.72			
	κ	53.8	52.5	8.7	24							+1.15	
	(8) - D				5.8							- .56	
	a_1				62.2							- .3	
												22.84	
												-1.84	
												21.00	
			9.0	11 53.0	12 13.7	19.4	22.7	26.2	29.8	12	22.80		
	κ				57.9							+0.61	
	(8) - D				16							- .59	
	a_2				58.1							- .3	
												22.79	
												-1.82	
												20.97	
14	1 53 8	3.5	13 43.3	14 6.0	9.5	12.9	16.3	19.7	14	12.88			
	κ	47.0	4.5		47.6							+1.15	
	(8) - D				54.4							- .54	
	a_1				48.1							- .3	
												13.46	
												-1.85	
												11.61	
			4.0	13 33.6	14 6.4	9.9	13.3	16.7	20.1	14	13.28		
	κ				59.0							+0.61	
	(8) - D				41.1							- .57	
	a_2				38.6							- .3	
												13.29	
												-1.83	
												11.46	

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	$\begin{matrix} 5 \\ +15.4 \\ 1.18752 \\ 9.77699 \\ 1.09051m \end{matrix}$	2 43.1	54.9	980 ¹²	49.00	$\begin{matrix} 9 \\ 59.35 \\ 51 \\ 12 \\ 5.05 \\ -12.32 \end{matrix}$			10	51 11 52.73	
d										- .6	+9.02
(8) - D	$\frac{d'}{100}$									+ 8.70	
δ_1	$\begin{matrix} +14.8 \\ +5.77 \end{matrix}$	6 53.57		11 56.3						+ .41	
										- 11.20	
										11 50.55	
	$\begin{matrix} +12.9 \\ 1.11059 \\ 9.77699 \\ 1.01358m \end{matrix}$	2 46.9	57.9	1048 ¹²	52.40	$\begin{matrix} 9 \\ 55.95 \\ 51 \\ 12 \\ 2.33 \\ -10.32 \end{matrix}$			10	52.01	
d										- .5	+9.04
(8) - D	$\frac{d'}{100}$									- .3	
δ_2	$\begin{matrix} +14.8 \\ +5.77 \end{matrix}$	6 53.39		11 55.4						+ 8.71	
										+ .41	
										- 11.40	
										11 47.65	
	$\begin{matrix} +22.1 \\ 1.34439 \\ 9.77111 \\ 1.24150m \end{matrix}$	0 38.0	49.7	877 ³⁵	43.85	$\begin{matrix} 47 \\ 450 \\ 51 \\ 49 \\ 10.20 \\ -17.44 \end{matrix}$			35	51 48 52.76	
d										- .13	+9.62
(8) - D	$\frac{d'}{100}$									- .1	
δ_1	$\begin{matrix} +14.5 \\ +5.88 \end{matrix}$	8 12.64		48 57.0						+ 9.32	
										+ .44	
										- 11.30	
										48 51.08	
	$\begin{matrix} +21.9 \\ 1.34644 \\ 9.77111 \\ 1.23755m \end{matrix}$	0 38.5	50.6	891 ³⁵	44.55	$\begin{matrix} 47 \\ 380 \\ 51 \\ 49 \\ 10.18 \\ -17.28 \end{matrix}$			35	52.90	
d										- .13	+9.63
(8) - D	$\frac{d'}{100}$									- .1	
δ_2	$\begin{matrix} +14.5 \\ +5.88 \end{matrix}$	8 12.52		48 57.0						+ 9.33	
										+ .44	
										- 11.40	
										48 51.13	
	$\begin{matrix} +22.5 \\ 1.35218 \\ 9.77846 \\ 1.23664m \end{matrix}$	3 55.7	7.9	36 ¹⁹	1.80	$\begin{matrix} 3 \\ 46.55 \\ 53 \\ 5 \\ 52.25 \\ -17.24 \end{matrix}$			15	53 5 35.01	
d										- .13	+10.95
(8) - D	$\frac{d'}{100}$									- .4	
δ_1	$\begin{matrix} +13.7 \\ +6.03 \end{matrix}$	10 3.68		5 40.6						+ 10.62	
										+ .50	
										- 11.40	
										5 34.56	
	$\begin{matrix} +14.8 \\ 1.17026 \\ 9.77846 \\ 1.05472m \end{matrix}$	3 1.8	13.1	149 ¹⁹	7.45	$\begin{matrix} (3) \\ 4 \\ 40.90 \\ 53 \\ 6 \\ 47.28 \\ (5) - 11.34 \end{matrix}$			15	35.94	
d										- .6	+11.03
(8) - D	$\frac{d'}{100}$									- .3	
δ_2	$\begin{matrix} +13.7 \\ +6.03 \end{matrix}$	10 3.52		5 41.5						+ 10.62	
										+ .50	
										- 11.50	
										5 35.47	
	$\begin{matrix} +20.1 \\ 1.30320 \\ 9.76991 \\ 1.17911m \end{matrix}$	4 6.9	17.9	248 ²⁹	12.40	$\begin{matrix} 53 \\ 35.93 \\ 53 \\ 55 \\ 41.65 \\ -15.11 \end{matrix}$			25	53 55 26.54	
d										- .10	+11.81
(8) - D	$\frac{d'}{100}$									- .4	
δ_1	$\begin{matrix} +13.3 \\ +6.22 \end{matrix}$	12 22.33		55 33.2						+ 11.45	
										+ .50	
										- 11.40	
										55 26.95	
	$\begin{matrix} +24.7 \\ 1.39270 \\ 9.76991 \\ 1.26861m \end{matrix}$	4 5.2	16.5	217 ²⁹	10.85	$\begin{matrix} 53 \\ 37.50 \\ 53 \\ 55 \\ 43.88 \\ -18.56 \end{matrix}$			25	26.32	
d										- .16	+11.75
(8) - D	$\frac{d'}{100}$									- .4	
δ_2	$\begin{matrix} +13.3 \\ +6.22 \end{matrix}$	12 22.30		55 31.7						+ 11.45	
										+ .50	
										- 11.60	
										55 25.47	
	$\begin{matrix} +24.8 \\ 1.39445 \\ 9.77795 \\ 1.37840m \end{matrix}$	1 16.1	27.1	432 ¹⁶	21.60	$\begin{matrix} 6 \\ 26.75 \\ 53 \\ 8 \\ 32.45 \\ -18.98 \end{matrix}$			15	53 8 13.47	
d										- .16	+10.98
(8) - D	$\frac{d'}{100}$									- .1	
δ_1	$\begin{matrix} +13.8 \\ +6.38 \end{matrix}$	14 12.99		8 19.4						+ 10.65	
										+ .50	
										- 11.40	
										8 13.05	
	$\begin{matrix} +24.7 \\ 1.54033 \\ 9.77795 \\ 1.42428m \end{matrix}$	1 9.3	20.9	302 ¹⁶	15.10	$\begin{matrix} 6 \\ 33.25 \\ 53 \\ 8 \\ 39.63 \\ -26.56 \end{matrix}$			15	13.07	
d										- .32	+10.82
(8) - D	$\frac{d'}{100}$									- .1	
δ_2	$\begin{matrix} +13.8 \\ +6.38 \end{matrix}$	14 12.84		8 18.7						+ 10.65	
										+ .50	
										- 11.60	
										8 12.29	

331
Date₁ = 1874, Sept. 1

Observer
Recorder

332
Date₂ = Sept. 2

Observer
Recorder

68

Ru

Star.	α	δ	Mag.	T_s	T_m	T_a	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
15	22 53 14	8.4	18 15 0.7	15 17.2	287	241	275	309	15	24.08			
κ	14 58.0	12.3	8.1	4.1						+1.15			
(δ) — D				3.9					+ 0.68	15	24.66		
α_1										15	22.80		
κ			8.5	15 24 5.3	15 17.5	210	245	280	314	15	24.18		
(δ) — D				5.1					+ 0.00	15	24.48		
α_2										15	22.64		
16	34 51 5	9.2	16 163 16 353	387	420	452	487	16	41.98				
κ	16 10.8	3.9	8.7	204					+ 0.62	16	42.60		
(δ) — D				20.1						16	40.73		
α_1										16	40.73		
κ			9.1	16 18.1	16 35.8	392	425	457	480	16	42.44		
(δ) — D				21.2					+ 0.05	16	42.49		
α_2										16	40.63		
17	53 52 42	9.0	17 392 17 575	548	583	17	570	17	58.26				
κ	17 29.6	40.2	9.0	17 392	17 575	548	583	17	570	+ 1.15			
(δ) — D									+ 0.59	17	58.85		
α_1										17	56.97		
κ			9.2	17 36.3	17 52.0	53.8	58.8	21	53.5	17	58.78		
(δ) — D				40.4					+ 0.01	17	58.79		
α_2										17	56.94		
19	31 52 47	7.4	19 87 19 296	330	364	399	433	19	36.44				
κ	19 7.4	45.8	7.5	126					+ 0.59	19	37.03		
(δ) — D				12.1						19	35.14		
α_1										19	36.94		
κ			8.3	19 4.4	19 30.2	33.6	37.0	40.2	43.7	19	36.94		
(δ) — D				12.6					+ 0.01	19	36.95		
α_2										19	35.09		
20	13 53 01	8.8	20 43 20 124	15.8	19.0	226	260	20	19.16				
κ	19 49.6	52.5	8.4	7.7					+ 0.57	20	19.73		
(δ) — D				7.9						20	17.89		
α_1										20	19.54		
κ			8.9	20 4.1	20 12.9	16.1	19.5	23.0	26.2	20	19.54		
(δ) — D				7.0					+ 0.00	20	19.54		
α_2										20	17.89		

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	8'
d	+2.02 1.30535 9.77711 1.18846 _m	0' 54.2	10.9	101 11	5.05	53 11 43.30 13 49.00 -15.43			10	53 13 33.57 -10 -1 +10.74 +50 -11.40 13 33.30	+11.13
(δ) - D) $\frac{d'}{100}$											
+1.38 +6.48 δ ₁		15 24.18		13 39.8							
d	+19.40 1.28780 9.77728 1.17108 _m	0 1.0	13.0	140 0 (11)	7.00	53 12 47.73 (13) 14 83			10	32.90 -9 -0 +10.74 +50 -11.60 13 32.45	+11.15
(δ) - D) $\frac{d'}{100}$											
+1.38 +6.48 δ ₂		15 24.02		13 38.9							
d	+21.9 1.34644 9.77793 1.24437 _m	3 25.4	37.5	629 3	31.45	51 6 22.60 -17.55			15	57 6 5.05 -13 -3 +9.61 +40 -11.30 6 3.60	+9.85
(δ) - D) $\frac{d'}{100}$											
+1.51 +6.58 δ ₁		16 42.24		6 10.2							
d	+21.2 1.32634 9.77793 1.23027 _m	3 26.8	39.3	661 3	33.05	51 6 21.68 -16.99			15	4.69 -12 -3 +9.62 +40 -11.50 6 3.06	+9.87
(δ) - D) $\frac{d'}{100}$											
+1.51 +6.58 δ ₂		16 43.14		6 9.6							
d	+19.1 1.28103 9.78246 1.16949 _m	2 18.7	31.1	498 2	24.90	52 42 29.15 -14.97			40	52 42 14.38 -9 -2 +10.23 +48 -11.40 42 13.58	+10.60
(δ) - D) $\frac{d'}{100}$											
+1.42 +6.69 δ ₁		17 58.39		42 20.3							
d	+18.4 1.26482 9.78246 1.15828 _m	2 20.9	33.6	545 2	27.25	52 42 27.48 -14.23			40	13.25 -8 -2 +10.24 +48 -11.60 42 12.27	+10.62
(δ) - D) $\frac{d'}{100}$											
+1.42 +6.69 δ ₂		17 58.36		42 19.0							
d	+24.3 1.32634 9.78147 1.64281 _m	1 16.0	28.7	447 1	22.35	52 46 26.00 48 31.70 -18.75			35	52 48 12.95 -15 -1 +10.33 +49 -11.20 48 12.41	+10.66
(δ) - D) $\frac{d'}{100}$											
+1.42 +6.82 δ ₁		19 36.51		48 19.2							
d	+24.3 1.38561 9.78147 1.27308 _m	1 16.2	29.0	452 1	22.60	52 46 25.75 48 32.13 -18.75			35	48 13.38 -15 -1 +10.34 +49 -11.60 48 12.45	+10.67
(δ) - D) $\frac{d'}{100}$											
+1.42 +6.82 δ ₂		19 36.51		48 19.3							
d	+11.3 1.05308 9.77930 0.93838 _m	3 34.6	45.0	796 3	39.80	53 59 8.55 1 13.25 -8.68			20	53 1 4.57 -3 -4 +10.55 +50 -11.50 1 4.05	+10.98
(δ) - D) $\frac{d'}{100}$											
+1.40 +6.88 δ ₁		20 19.29		1 10.9							
d	+12.5 1.09691 9.77930 0.98221 _m	3 33.7	44.9	786 3	39.30	53 59 9.05 1 13.43 -9.60			20	5.83 -4 -4 +10.55 +50 -11.70 1 5.10	+10.97
(δ) - D) $\frac{d'}{100}$											
+1.40 +6.88 δ ₂		20 19.08		1 12.0							

۱۱۱

Date₁ = 1874, Sept. 1

Observer
Recorder

332

Date₂ = Sept. 2Observer _____
Recorder _____

70

Ru

1874 piae. I

Star.	α	δ	Mag.	T_s	T_m	T_e	T_r	T_h	Sum	Mean	Red. to T_m	T					
21	45	52.54	9.5	14	21	23.7	21	43.5	46.1	50.7	53.6	57.2	21	50.38			
21	21.2	52.3	9.3			21.0							21	+1.14			
κ						30.0							21	- .54			
$((\delta) - D)$	$\frac{\kappa'}{100}$					26.9							21	- .3			
a_1													21	50.95			
													21	-1.90			
													21	49.05		+1.4	
																+7.0	
κ						22.0							21	50.90			
$((\delta) - D)$	$\frac{\kappa'}{100}$					25.7							21	+0.60			
a_2						22.0							21	- .57			
													21	- .3			
													21	50.90		+1.4	
													21	-1.87		+7.0	
													21	49.03			
κ																	
$((\delta) - D)$	$\frac{\kappa'}{100}$																
Sept. 1	a_1																
18	13	49.51	10	7.9	18	13	37.6	13	45.7	48.9	52.3	55.3	58.8	13	52.24		
13	24.7	10.2	7.6				31.2							13	+1.19		
κ							33.4							13	- .51		
$((\delta) - D)$	$\frac{\kappa'}{100}$						30.7							13	- .2		
a_2														13	52.90		
														13	-1.56		
														13	51.34		+1.4
																	+1.0
15	23.52	11	9.0	15	23	45	18.4	21.7	25.1	28.7	32.1	35.5	38.9	15	25.20		
15	0.2	10.2	8.8				6.2							15	+1.19		
κ							9.1							15	- .52		
$((\delta) - D)$	$\frac{\kappa'}{100}$						6.0							15	- .2		
a_1														15	25.85		
														15	-1.57		
														15	24.28		+1.4
																	+1.0
19	5	44.51	5.5	9.0	19	5	34.0	5	42.2	45.6	48.8	52.4	55.5	5	48.90		
5	20.8	53.9	9.1				37.0							5	+1.96		
κ							39.9							5	- .52		
$((\delta) - D)$	$\frac{\kappa'}{100}$						37.0							5	- .2		
a_2														5	49.52		
														5	-1.57		
														5	47.95		+1.4
																	+5.6
19	23	23.51	10	9.0	22	23	24.7	23	24.7	28.0	31.1	34.2	37.9	23	31.18		
22	59.6	8.0	9.0				1.9							23	+0.60		
κ							4.7							23	- .54		
$((\delta) - D)$	$\frac{\kappa'}{100}$						61.5							23	- .2		
a_1														23	31.22		
														23	-1.89		
														23	29.33		+1.5
																	+7.1
κ																	
$((\delta) - D)$	$\frac{\kappa'}{100}$																
a_2																	
κ																	
$((\delta) - D)$	$\frac{\kappa'}{100}$																
a_1																	
κ																	
$((\delta) - D)$	$\frac{\kappa'}{100}$																
a_2																	

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	$+23.5$ 1.37107 9.78030 $1.25737m$	0' 13.3	26.9	402 30	20.10	52 28.25 52 54 33.95 -18.09			30	52 54 15.86 - 14 - 0 +10.44 + .49 -11.50 54 15.15	+10.79
$(\delta) - D) \frac{d'}{100}$											
δ_1	+1.42 +7.01	21 50.47		54 22.2 30							
d	$+28.9$ 1.46090 9.78030 $1.34720m$	0 10.0	24.0	340 0	17.00	52 31.35 52 54 37.73 -22.24			30	15.49 - 22 - 0 +10.45 + .49 -11.70 54 14.57	+10.72
$(\delta) - D) \frac{d'}{100}$											
δ_2	+1.42 +7.01	21 50.45		54 21.5							
d											
$(\delta) - D) \frac{d'}{100}$											
δ_1											
d	$+21.5$ 1.33244 9.79715 $1.23559m$	3 32.7	44.8	775 3	38.75	9 9.60 51 11 15.30 -17.20			10	51 10 58.10 - 12 - 4 + 8.66 + .91 -10.30 10 56.71	+8.91
$(\delta) - D) \frac{d'}{100}$											
δ_1	+1.41 +1.21	13 52.75		10 57.92 14							
d	$+19.2$ 1.28330 9.78756 $1.17686m$	4 7.9	20.6	285 4	14.25	8 34.10 52 10 39.80 -15.03			10	52 10 24.77 - 10 - 4 + 9.64 + .46 -10.40 10 24.33	+9.96
$(\delta) - D) \frac{d'}{100}$											
δ_1	+1.35 +1.35	15 25.63		10 25.68 29							
d	$+11.9$ 1.07555 9.78999 $0.97154m$	3 59.5	10.9	704 4	5.88	53 43.15 51 55 48.85 -9.37			25	51 55 39.48 - .4 - 4 + 9.43 + .45 -10.50 55 38.78	+9.80
$(\delta) - D) \frac{d'}{100}$											
δ_1	+1.43 +5.68	5 49.38		55 44.5 14							
d	$+29.7$ 1.47276 9.79731 $1.37607m$	4 27.7	41.0	687 4	34.35	8 14.00 51 10 20.38 -23.77			10	51 9 56.61 - 24 - 4 + 8.70 + .41 -11.60 9 53.84	+8.83
$(\delta) - D) \frac{d'}{100}$											
δ_1	+1.52 +7.15	23 30.85		10 0.2							
d											
$(\delta) - D) \frac{d'}{100}$											
δ_2											
d											
$(\delta) - D) \frac{d'}{100}$											
δ_1											
d											
$(\delta) - D) \frac{d'}{100}$											
δ_2											

Date₁ = 1874, Sept. 7
n = -42

Observer
Recorder

Date₂ = Sept. 9
n = -36

Observer
Recorder

72

Ru

Star.	α	δ	Mag.	T_a	T_m	T_e	T_s	T_h	Sum	Mean	Red. to T_m	T
1874 Praesepe												
22	47 58.15	9.0	18 22 38	22 24.9	283	313	345	378	22	31.36		
22	24.4	8.9	84							263		
21	58.1 50 17.0		11.0							50		
(8) - D			8.3							2		
a_1										33.44		+1.4
										28.21		+2.1
										26.77		
22	22 22.6	22 26.7	300	300	334	367	397	22	33.40	30		
κ									+0.16	4.68		
(8) - D									5.10 +0.1	.43		
a_2										2		
										37.55		+1.4
										28.35		+2
										1.38		
24	57 50 57	7.7	24 44.4	24 59.0	22	54	88	120	25	5.48		
24	34.1 56.6	7.6	47.2							263		
κ			49.7							52		
(8) - D			47.1						3.17	2		
a_1										23.1		+1.4
										1.44		+2
										0.87		
24		7.5	24 38.2	25 0.7	40	73	106	139	25	7.30		
κ			41.0							4.68		
(8) - D			43.5						5.11 +0.2	.44		
a_2			40.9							2		
										2.24		+1.4
										1.38		+2
										0.81		
26	46 53 51	9.2	26 20.5	26 45.2	48.7	520	536	591	26	52.12		
26	23.5 51.1	9.3	23.7							263		
κ			26.5							58		
(8) - D			28.6						3.24	3		
a_1										48.88		+1.4
										1.40		+2
										47.48		
26		9.2	26 27.0	26 46.8	50.3	543	576	0.9	26	53.98		
κ			30.5							4.68		
(8) - D			33.5						5.17 +0.1	.49		
a_2			30.3							3		
										48.86		+1.4
										1.33		+2
										47.48		
28	12 53 06	9.1	27 48.4	28 18.3	168	202	235	271	28	20.18		
27	49.6 55.5	9.1	37.9							263		
κ			36.8							56		
(8) - D			52.4						3.22	3		
a_1										16.96		+1.4
										1.42		+2
										15.54		
28		9.0	27 58.4	28 15.2	186	221	254	280	28	22.06		

Runs

Sept-7. +2 5.50 -0.1
 9. 5.41 -0.1

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	s'
d	+23.1 1.36361 9.80534 1.27495 _m	1' 45.3	55.9	1012 ⁶¹	50.60	15 57.75 50 18 3.25 -18.83			5	50 17 44.42 - 14 + 7.86 - 11.10 17 41.34	+8.02
((8) - D) $\frac{d'}{100}$											
+1.47 +2.00 δ_1		22 28.24		17 43.3							
d	+6.7 1.03342 9.80534 0.94476 _m	1 56.9	9.5	64 ²	3.20	15 45.15 50 17 50.56 -8.81			5	41.75 - 3 - 2 + 7.88 - 11.30 17 38.59	+8.14
((8) - D) $\frac{d'}{100}$											
+1.47 +2.00 δ_2		22 28.30		17 40.6							
d	+18.4 1.26482 9.79918 1.17000 _m	2 12.0	24.0	360 ²	18.00	55 30.35 50 57 35.85 -14.79			25 50	57 21.06 - 9 - 2 + 8.53 + 35 - 11.30 57 18.53	+8.77
((8) - D) $\frac{d'}{100}$											
+1.43 +2.18 δ_1		25 2.30		57 20.7							
d	+26.4 1.42160 9.79918 1.32678 _m	2 6.0	19.1	251 ²	12.55	55 35.80 50 57 41.21 -21.22			25	19.99 - 18 - 2 + 8.55 + 35 - 11.50 57 17.149	+8.70
((8) - D) $\frac{d'}{100}$											
+1.43 +2.18 δ_2		25 2.26		57 19.4							
d	+28.5 1.45484 9.77061 1.33145 _m	2 35.2	46.9	821 ²	41.05	50 7.30 53 52 12.80 -21.45			30	53 51.35 - 20 - 3 + 11.49 + 30 - 11.50 51 57.61	+11.76
((8) - D) $\frac{d'}{100}$											
+1.25 +2.34 δ_1		26 48.73		51 54.0							
d	+23.7 1.37475 9.77061 1.25136 _m	2 38.1	53.0	911 ²	45.55	50 2.80 53 52 8.21 -17.84			30	50.37 - 15 - 3 + 11.52 + 30 - 11.70 51 50.591	+11.84
((8) - D) $\frac{d'}{100}$											
+1.25 +2.34 δ_2		26 48.74		51 52.8							
d	+27.8 1.44404 9.77862 1.32866 _m	0 2.0	15.4	174 ⁰	8.70	2 39.65 53 4 45.15 -21.31			20 53	4 23.84 - 21 - 0 + 10.68 + 50 - 11.50 4 23.31	+10.97
((8) - D) $\frac{d'}{100}$											
+1.30 +2.46 δ_1		28 16.84		4 25.8							
d	+20.0 1.30103 9.77862 1.18565 _m	0 8.0	20.2	282 ⁰	14.10	2 34.25 53 4 39.66 -15.33			20	24.89 - 10 - 0 + 10.70 + 50 - 11.70 4 23.73	+11.10
((8) - D) $\frac{d'}{100}$											
+1.30 +2.46 δ_2		28 16.87		4 26.2							
d	+11.5 1.06070 9.76182 0.92852 _m	2 41.0	57.7	927 ²	46.35	40 2.00 54 42 7.50 -8.48			110 54	41 59.02 - 3 - 3 + 12.35 + 57 - 11.60 42 30.28	+12.86
((8) - D) $\frac{d'}{100}$											
+1.20 +2.53 δ_1		29 6.52		42 2.8							
d	+23.9 1.37840 9.76182 1.24622 _m	2 31.0	43.7	747 ²	37.35	40 11.00 54 42 16.41 -17.63			40	58.78 - 15 - 3 + 12.39 + 57 - 11.80 41 59.76	+12.78
((8) - D) $\frac{d'}{100}$											
+1.20 +2.53 δ_2		29 6.53		42 2.3							

Date₁ = 1874 Sept. 7Observer
RecorderDate₂ = Sept. 9Observer
Recorder

74

Star.	α	δ	Mag.	T_s	T_m	T_a	T_f	T_z	T_h	Sum	Mean	Red. to T_m	T
31	12 49 51	8.2	18 30 54.4	31 16.6	20.2	23.3	26.5	29.7	31	23.30			
κ	30 49.2	50.2	8.4	58.8	1.4					-2.63			
(S) - D) κ'_{100}				58.2					-3.15	31	20.45		
a_1										31	18.66		
κ		8.3	30 52.7	31 18.6	21.8	25.3	28.3	31.6	31	25.12			
(S) - D) κ'_{100}			56.5	58.1					-5.10 +0.2	31	20.06		
a_2			56.1							31	18.67		
33	7 55 10	9.0	82 43.3	33 6.0	8.5	13.4	17.0	20.4	33	13.26			
κ	32 44.2	9.9	9.0	49.3						+2.64			
(S) - D) κ'_{100}				52.7					-3.27	33	9.99		
a_1				49.1						33	8.58		
κ		9.0	82 43.7	33 7.8	11.6	15.2	18.8	22.4	33	15.16			
(S) - D) κ'_{100}			48.1	51.4					-5.19 +0.1	33	10.01		
a_2			47.7							33	8.63		
34	40 53 04	8.1	34 18.5	34 40.0	43.5	46.9	50.4	53.7	34	46.90			
κ	34 17.8	3.4	8.2	23.7						+2.64			
(S) - D) κ'_{100}				26.0					-3.23	34	43.67		
a_1				23.1						34	42.72		
κ		8.4	34 24.5	34 41.9	45.3	48.9	52.1	55.6	34	48.76			
(S) - D) κ'_{100}			28.1	30.3					-5.17 +0.2	34	43.63		
a_2			27.6							34	42.00		
36	6 55 8	7.5	35 41.7	36 1.2	4.8	8.5	11.9	15.7	36	8.42			
κ	35 42.7	6.9	7.2	45.2						+2.64			
(S) - D) κ'_{100}				48.0					-3.27	36	5.15		
a_1				45.0						36	3.72		
κ		7.0	35 45.8	36 2.1	6.9	10.3	14.0	17.7	36	10.40			
(S) - D) κ'_{100}			49.0	51.0					-5.20 +0.1	36	5.24		
a_2			48.6							36	3.84		
38	29 54 48	7.8	38 2.1	38 26.7	30.1	33.9	37.4	41.1	38	33.84			
κ	38 6.8	47.3	8.0	5.8						+2.64			
(S) - D) κ'_{100}				7.9					-3.27	38	30.57		
a_1				5.3						38	29.12		
κ		8.4	37 59.2	38 28.8	32.2	35.9	39.5	43.1	38	35.90			
(S) - D) κ'_{100}			2.0	4.7					-5.20 +0.2	38	30.74		
a_2			6.20							38	29.32		

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+25.1 1.39967 9.80942 1.31509 _m	3' 19.4	31.7	511 ²³	25.55	49 22.80 49 51 28.30 -20.66			30	49 51 76.4 - 17 + 7.56 + 30 -11.40 51 3.90	+7.66
((8) - D) $\frac{d'}{100}$											
δ_1	+1.50 +2.73	31 20.2 ¹⁶	51 6.6	23	x.10						
d	+290 1.46240 9.80942 1.37782 _m	3 16.5	28.7	452 ²³	22.60	49 25.75 49 51 31.16 -23.89			30	51 7.19 - 23 - 3 + 7.58 + 30 -11.60 51 3.21	+7.62
((8) - D) $\frac{d'}{100}$											
δ_2	+1.50 +2.73	31 20.11	51 5.9	12							
d	+24.3 1.38561 9.75624 1.24783 _m	1 34.7	6.6	13 ²	0.65	10 47.70 55 12 53.20 -17.69			10	55 12 35.51 - 15 - 2 +12.88 + 60 -11.70 12 37.12	+13.51
((8) - D) $\frac{d'}{100}$											
δ_1	+1.17 +2.88	33 9.8 ⁷⁵	12 40.0	11							
d	+27.5 1.43953 9.75624 1.30154 _m	1 52.5	6.2	1187 ¹¹	59.35	10 49.00 55 12 54.41 -20.02			10	34.39 - 20 - 2 +12.92 + 60 -11.90 12 38.79	+13.30
((8) - D) $\frac{d'}{100}$											
δ_2	+1.17 +2.88	33 9.81	12 38.7	19							
d	+23.8 1.37658 9.77862 1.26120 _m	14 52.4	4.7	1171 ⁴	58.55	2 49.80 53 4 55.30 -18.25			15	53 4 37.05 - 15 - 5 +10.69 + 50 -11.60 4 36.44	+10.99
((8) - D) $\frac{d'}{100}$											
δ_1	+1.31 +3.02	34 43.52	4 39.5	20							
d	+21.2 1.32634 9.77862 1.21096 _m	14 55.0	8.4	34 ⁵	1.70	2 46.65 53 4 52.06 -16.25			15	35.81 - 12 - 0 +10.71 + 50 -11.80 4 35.10	+11.09
((8) - D) $\frac{d'}{100}$											
δ_2	+1.31 +3.02	34 43.53	4 38.1	16							
d	+23.4 1.36922 9.75714 1.23236 _m	1 45.3	56.5	1018 ¹	50.90	5 57.45 55 8 29.5 -17.07			15	55 7 45.88 - 14 - 2 +12.76 + 60 -11.80 7 47.28	+13.20
((8) - D) $\frac{d'}{100}$											
δ_1	+1.18 +3.14	36 54.90	7 50.4	16							
d	+21.8 1.33846 9.75714 1.20160 _m	1 46.0	57.9	1039 ¹	51.95	5 56.40 55 8 18.1 -15.91			15	7 45.90 - 12 - 2 +12.80 + 60 -12.00 7 47.16	+13.26
((8) - D) $\frac{d'}{100}$											
δ_2	+1.18 +3.14	36 5.03	7 50.3	36							
d	+28.5 1.45484 9.76057 1.32141 _m	1 8.5	19.2	277 ³⁶	13.85	46 34.50 54 48 40.00 -20.96			35	54 48 19.04 - 21 - 1 +12.45 + 58 -11.80 48 20.25	+12.81
((8) - D) $\frac{d'}{100}$											
δ_1	+1.20 +3.35	38 30.32	48 23.4	36							
d	+33.9 1.53020 9.76057 1.39677 _m	1 4.0	17.0	210 ¹	10.60	46 37.85 54 48 48.26 -24.93			35	18.33 - 30 - 1 +12.49 + 58 -12.10 48 18.99	+12.76
((8) - D) $\frac{d'}{100}$											
δ_2	+1.20 +3.35	38 30.54	48 22.3								

333

Date₁ = 1874, Sept. 7Observer _____
Recorder _____Date₂ = Sept. 9Observer _____
Recorder _____

76

Run

[illegible]

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+25.48 1.40483 9.75714 1.26797 _m	1' 49.0	0.2	492 * 16	3 24.60	5 53.75 55 7 59.25 -18.53			15	55 7 40.72 - .16 +12.81 + .60 -11.90 7 42.06	+13.24
(8) - D) $\frac{d'}{100}$											
δ_1	+1.18 +3.63	41 48.47		7 45.7	16						
d	+28.7 1.45788 9.75714 1.32102 _m	1 45.9	58.2	1041	1 52.05	5 56.30 55 8 17.1 -20.94			15	40.77 - 22 +12.85 + .60 -12.20 7 41.78	+13.21
(8) - D) $\frac{d'}{100}$											
δ_2	+1.18 +3.63	41 48.64		7 45.4	32						
d	+19.3 1.28556 9.80927 1.20083 _m	2 31.9	43.1	750	2 37.50	50 10.85 49 52 16.35 -15.85			30	49 52 0.50 - .10 - 3 + 7.57 + .20 -11.70 51 56.54	+7.74
(8) - D) $\frac{d'}{100}$											
δ_1	+1.51 +3.73	42 49.10		52 0.3	32						
d	+15.1 1.17898 9.80927 1.09425 _m	2 34.7	47.1	818	2 40.90	50 7.45 49 52 12.86 -12.42			30	49 52 0.44 - 6 - 3 + 7.59 + .30 -11.90 51 56.34	+7.80
(8) - D) $\frac{d'}{100}$											
δ_2	+1.51 +3.73	42 49.15		52 0.1	28						
d	+24.3 1.38561 9.80852 1.30013 _m	2 56.9	8.6	55	3 2.75	54 45.60 49 56 51.10 -19.96			25	49 56 31.14 - 15 - 3 + 7.57 + .30 -11.70 56 27.13	+7.69
(8) - D) $\frac{d'}{100}$											
δ_1	+1.51 +3.94	45 42.14		56 31.1	28						
d	+22.5 1.35218 9.80852 1.26670 _m	2 58.2	10.2	84	3 4.20	54 44.15 49 56 49.56 -18.48			25	31.08 - 13 - 3 + 7.59 + .30 -11.90 56 26.91	+7.73
(8) - D) $\frac{d'}{100}$											
δ_2	+1.51 +3.94	45 42.07		56 30.9	22						
d	+22.6 1.35411 9.75805 1.21816 _m	1 57.0	7.9	49	2 2.45	0 45.90 55 2 51.30 -16.53			20	55 2 34.87 - .14 - 2 +12.70 + .60 -12.10 2 35.91	+13.14
(8) - D) $\frac{d'}{100}$											
δ_1	+1.20 +4.08	47 0.13		2 40.0	22						
d	+21.1 1.32428 9.75805 1.18833 _m	1 56.8	9.1	59	2 2.95	0 45.90 55 2 50.81 -15.43			20	35.38 - .11 - 2 +12.74 + .60 -12.30 2 36.29	+13.21
(8) - D) $\frac{d'}{100}$											
δ_2	+1.20 +4.08	47 0.12		2 40.4	15						
d	+15.4 1.18752 9.76765 1.06117 _m	0 27.1	41.0	681	0 34.05	7 14.30 54 9 19.80 -11.51			15	54 9 8.29 - 6 - 0 +11.79 + .52 -12.00 9 8.54	+12.25
(8) - D) $\frac{d'}{100}$											
δ_1	+1.26 +4.14	47 44.01		9 12.7	15						
d	+14.8 1.17026 9.76765 1.04391 _m	0 26.2	41.9	681	0 34.05	7 14.30 54 9 19.71 -11.06			15	8.65 - 6 - 0 +11.83 + .52 -12.20 9 8.74	+12.29
(8) - D) $\frac{d'}{100}$											
δ_2	+1.26 +4.14	47 44.07		9 12.9							

333
Date₁ = 1874, Sept. 7

Observer
Recorder

334
Date₂ = Sept. 9

Observer
Recorder

78

Star.	α	δ	Mag.	T_a	T_m	T_s	T_r	T_z	T_h	Sum	Mean	Red. to T_m	T
1874	48	51 54 47	8.7	48 33.7	48 57.0	54.4	58.1	1.6	5.3	48	58.08		
	κ	28.8		36.6	40.1						-2.65		
				36.8					3.28		-1.60		
										48	54.80		
											-1.51		
										48	53.29		
	$(\delta) - D$												
	a_1												
			9.0	48 88.5	48 53.2	56.5	0.1	3.6	7.0	49	0.08		
	κ			42.7	45.6						-4.63		
				42.1					5.21	402	-5.1		
										48	54.91		
											-1.44		
										48	53.43		
	$(\delta) - D$												
	a_2												
			9.0	49 26.5	49 35.7	39.3	43.0	46.6	50.1	49	42.94		
	κ	12.3	3.1	29.8	32.3						-2.65		
				29.3					3.28		-1.60		
										49	39.66		
											-1.51		
										49	38.15		
	$(\delta) - D$												
	a_1												
			8.9	49 24.3	49 37.7	41.2	45.0	48.4	52.1	49	44.88		
	κ			26.8	30.9						-4.63		
				27.1					5.21	701	-5.1		
										49	39.71		
											-1.44		
										49	38.28		
	$(\delta) - D$												
	a_2												
			8.2	50 14.9	50 35.0	88.4	41.5	44.8	48.0	50	41.54		
	κ	8.8	53.8	18.3	20.5						-2.65		
				17.8					3.17		-1.60		
										50	38.37		
											-4.63		
										50	36.77		
	$(\delta) - D$												
	a_1												
			8.1	50 24.2	50 36.8	40.1	43.3	46.5	48.8	50	43.30		
	κ	5.6	54.1	27.6	30.3						-4.63		
				27.6					5.12	702	-5.1		
										50	38.22		
											-1.54		
										50	36.46		
	$(\delta) - D$												
	a_2												
			8.5	51 26.5	51 54.8	58.2	1.9	5.4	9.1	52	1.88		
	κ	33.8	54.1	30.4	33.1						-2.65		
				30.4					3.28		-1.60		
										51	58.60		
											-1.54		
										51	57.06		
	$(\delta) - D$												
	a_1												
			8.8	51 37.8	51 56.4	0.3	3.7	7.3	10.9	52	3.72		
	κ	20.5	2.7	41.9	44.7						-4.63		
				41.9					5.21	701	-5.1		
										51	58.55		
											-1.48		
										51	57.03		
	$(\delta) - D$												
	a_2												
			9.3	52 48.8	53 18.8	23.3	26.8	30.3	34.0	53	26.84		
	κ	57.8	26.0	52.4	56.6						-2.65		
				53.0					3.27		-1.59		
										53	23.57		
											-1.54		
										53	22.03		
	$(\delta) - D$												
	a_1												
			9.4	53 23	53 21.4	25.2	28.7	32.5	35.8	53	28.72		
	κ			5.4	9.3						-4.63		
				5.7					5.20	701	-5.1		
										53	23.56		
											-1.47		
										53	22.05		
	$(\delta) - D$												
	a_2												
			8.5	54 46	54 28.7	22.1	33.7	39.1	42.5	54	35.62		
	κ	5.1	44.2	17.7	20.6						-2.65		
				17.6					3.26		-1.58		
										54	32.36		
											-1.56		
										54	30.80		
	$(\delta) - D$												
	a_1												
			8.2	54 22.4	54 30.5	33.8	37.5	41.0	44.4	54	37.44		
	κ			25.6	29.0						-4.63		
				25.7					5.19	701	-4.9		
										54	32.28		
											-1.50		
										54	30.75		
	$(\delta) - D$												
	a_2												

Runs

Sept. 9

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	
d	+21.3 1.32838 9.75913 1.19351 _m	2' 23.0	34.7	577 ²⁷	28.85	55 19.50 54 57 25.00 -15.61			25	54 57 9.39 - 11 +12.62 + .60 -12.10 57 10.38	+13.09
(8) - D $\frac{d'}{100}$											
δ_1	+1.21 +4.24	48 54.50		57 14.6 ²⁷							
d	+18.0 1.25527 9.75913 1.12040 _m	2 25.2	38.6	638 ²⁷	31.90	55 16.45 54 57 21.86 -13.20			25	8.66 - 8 +12.67 + .60 -12.30 57 9.53	+13.17
(8) - D $\frac{d'}{100}$											
δ_2	+1.21 +4.24	48 54.66		57 13.8 ¹⁹							
d	+134 1.12710 9.75769 0.99079 _m	4 34.9	44.9	798 ⁴	39.90	55 3 8.45 54 5 13.95 -9.79			15	55 5 4.16 - 5 +12.76 + .60 -12.10 5 5.32	+13.26
(8) - D $\frac{d'}{100}$											
δ_1	+1.20 +4.30	49 39.35		5 9.6 ¹⁹							
d	+178 1.25042 9.75769 1.11411 _m	4 31.5	43.1	746 ⁴	37.30	55 3 11.05 54 5 16.46 -13.00			15	3.46 - 8 - 5 +12.81 + .60 -12.40 5 4.34	+13.28
(8) - D $\frac{d'}{100}$											
δ_2	+1.20 +4.30	49 39.44		5 8.6 ²⁹	-1"						
d	+23.6 1.37291 9.80867 1.28758 _m	4 8.0	17.9	259 ⁴	12.95	53 36.40 49 55 41.90 -19.39			25	49 55 22.51 - 15 - 4 + 7.58 + 30 -11.90 55 18.30	55 22.31 - 7 - 4 + 7.60 + .30 -12.10 55 18.20
(8) - D $\frac{d'}{100}$											
δ_1	+1.57 +4.38	50 38.28		55 22.7 ²⁹							
d	+31.9 1.50879 9.75931 1.36910 _m	3 26.2	37.8	640 ³	32.00	54 16.35 54 56 21.85 -23.39			25	54 55 58.46 - 26 - 3 +12.60 + .59 -12.20 55 59.16	54 55 58.03 - 12 - 4 +12.65 + .59 -12.40 55 58.78
(8) - D $\frac{d'}{100}$											
δ_2	+1.57 +4.38	51 58.28		56 3.7 ²⁸							
d	+33.8 1.52892 9.76431 1.39923 _m	1 0.9	12.1	130 ¹	6.50	54 41.85 54 28 47.35 -25.08			55	54 28 22.27 - 50 - 2 +12.11 + .55 -12.20 27 22.41	+12.34
(8) - D $\frac{d'}{100}$											
δ_1	+1.25 +4.63	53 23.28		27 27.0 ⁵⁷							
d	+23.0 1.36173 9.76431 1.23204 _m	2 8.2	20.9	291 ²	14.55	54 25 33.80 54 27 39.21 -17.06			55	27 22.15 - 14 - 2 +12.16 + .55 -12.40 27 22.30	+12.55
(8) - D $\frac{d'}{100}$											
δ_2	+1.25 +4.63	53 23.32		27 26.9 ³⁸							
d	+18.0 1.25527 9.77164 1.13291 _m	3 37.7	48.2	859 ³	42.95	53 44 5.40 53 46 10.90 -1.58			35	53 45 57.32 - 8 - 4 +11.40 + .50 -12.20 45 56.90	+11.78
(8) - D $\frac{d'}{100}$											
δ_1	+1.30 +4.72	54 32.10		46 1.6 ³⁸							
d	+117 1.06819 9.77164 0.94583 _m	3 42.0	53.0	950 ³	47.50	53 44 0.85 53 46 6.26 -8.83			35	57.43 - 4 - 4 +11.43 + .50 -12.40 45 56.88	+11.85
(8) - D $\frac{d'}{100}$											
δ_2	+1.30 +4.72	54 32.06		46 1.6							

Date₁ = 1874, Sept. 7Observer
RecorderDate₂ = Sept. 9Observer
Recorder

80

Run

Star.	α	δ	Mag.	T_s	T_m	T_o	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
1874bae	55	30 58 20	9.2	18 35 15.8	53 30.4	34.0	37.3	40.9	44.2	55	37.36		
	κ	7.3	18.9	9.3	19.0						26.5		
					22.0						3		
					18.9					- 3.25			
(S) - D	κ'									55	34.11		
a_1										55	32.54		
											1.57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
											3		
											57		
					</								

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	s'
	+18.5 1.26717 9.77592 1.14909m	3' 35.6	46.9	825	3' 41.25	19 7.10 53 21 12.60 -14.10			0	53 20 58.50 - 8 + 10.98 + .50 -12.20 20 57.66	+11.26
(8) - D) $\frac{a'}{100}$											
+1.33 +4.81	δ_1	55 33.87		21	2.5						
	+13.8 1.13988 9.77592 1.02188m	3 40.3	51.8	921	3 46.05	19 2.30 53 21 7.71 -10.51			0	57.20 - 5 - 4 +11.00 + .50 -12.40 20 56.21	+11.41
(8) - D) $\frac{a'}{100}$											
+1.33 +4.81	δ_2	55 34.01		21	1.0						
	+19.6 1.29226 9.76218 1.16044m	4 34.0	6.4	04	5 02.20	37 48.15 54 39 53.65 -14.47			40	54 39 39.18 - 10 - 8 +12.33 + .56 -12.30 39 39.62	+12.74
(8) - D) $\frac{a'}{100}$											
+1.24 +4.91	δ_1	56 45.21		39	44.5						
	+21.3 1.32838 9.76218 1.19656m	4 52.9	5.3	1182	4 59.10	37 49.25 54 39 54.66 -15.72			40	38.94 - .11 - 5 +12.37 + .56 -12.60 39 39.11	+12.77
(8) - D) $\frac{a'}{100}$											
+1.24 +4.91	δ_2	56 45.21		39	44.0						
	+12.8 1.10721 9.75877 0.97198m	0 38.7	48.9	876	0 43.80	57 45.5 54 39 10.05 -9.37			25	54 59 0.68 - 5 - 1 +12.65 + .60 -12.30 59 1.57	+13.19
(8) - D) $\frac{a'}{100}$											
+1.22 +4.98	δ_1	57 34.64		59	6.6						
	+12.5 1.09691 9.75877 0.96168m	0 39.0	51.0	900	0 45.00	57 3.35 54 39 8.76 -9.15			25	58 59.51 - 9 - 1 +12.70 + .60 -12.60 59 0.16	+13.25
(8) - D) $\frac{a'}{100}$											
+1.22 +4.98	δ_2	57 34.64		59	5.1						
	+18.2 1.26007 9.76974 1.13581m	2 37.5	2.8	1143	2 57.15	54 51.20 53 56 56.70 -13.67			25	53 56 43.03 - 8 - 3 +11.59 + .59 -12.20 56 42.90	+12.07
(8) - D) $\frac{a'}{100}$											
+1.30 +5.06	δ_1	58 34.45		56	48.0						
	+16.3 1.21219 9.76974 1.08793m	2 52.3	5.9	1182	2 59.10	54 49.25 53 56 54.66 -12.24			25	42.42 - 7 - 3 +11.62 + .59 -12.50 56 42.03	+12.11
(8) - D) $\frac{a'}{100}$											
+1.30 +5.06	δ_2	58 34.53		56	47.1						
	+24.6 1.39094 9.75660 1.25354m	3 39.8	49.9	897	3 44.85	9 3.50 55 11 9.00 -17.93			10	55 10 31.07 - .16 - 4 +12.86 + .60 -12.40 10 31.93	+13.26
(8) - D) $\frac{a'}{100}$											
+1.22 +5.37	δ_1	2 9.91		10	57.3						
	+24.8 1.39445 9.75660 1.25705m	3 38.7	50.8	895	3 44.75	9 3.60 55 11 9.01 -18.07			10	50.94 - .16 - 4 +12.91 + .60 -12.70 10 51.55	+13.31
(8) - D) $\frac{a'}{100}$											
+1.22 +5.37	δ_2	2 9.97		10	56.9						

333
Date₁ = 1874 Sept. 7

Observer
Recorder

334
Date₂ = Sept. 9

Observer
Recorder

82

Run

Star.	α	δ	Mag.	T_2	T_m	T_2	T_2	T_2	T_2	Sum	Mean	Red. to T_m	T
1	4	52 54 11	8.2	17	3 57.0	4 21.2	24.7	28.2	31.8	33.3	4	28.24	
		58.4	8.5		0.0							2.66	
		9.6			3.0							.58	
					6.00							3	
										- 3.27			
(8) - D										4	24.97		
											1.61		
a_1										4	23.36		
			8.3	4	28	4 23.2	26.8	30.3	33.7	37.1	4	30.22	
					1.3							4.63	
					10.8							.49	
					7.3					- 5.20 + 0.1		3	
(8) - D										4	25.05		
											1.55		
a_2										4	23.47		
	5	41 54 38	8.8	5	16.7	5 40.0	43.5	47.0	50.7	54.2	5	47.08	
		17.3	8.9		20.6							2.66	
					23.2							.59	
					20.2					- 3.28		3	
(8) - D										5	43.80		
											1.61		
a_1										5	42.19		
			9.0	5	25.3	5 42.0	45.5	49.1	52.4	56.3	5	49.06	
					28.6							4.66	
					31.7							.50	
					28.5					- 5.21 + 0.2		3	
(8) - D										5	43.87		
											1.55		
a_2										5	42.30		
	6	33 53 37	8.5	6	22.6	6 31.3	34.8	38.3	41.7	45.2	6	38.26	
		9.3	9.2		25.4							2.66	
					28.8							.57	
					25.3					- 3.26		3	
(8) - D										6	35.00		
											1.63		
a_1										6	33.37		
			8.8	6	22.6	6 33.5	36.8	40.1	43.8	47.2	6	40.28	
					26.4							4.68	
					28.3							.49	
					26.1					- 5.22 + 0.1		3	
(8) - D										6	35.10		
											1.57		
a_2										6	33.57		
	7	07 53 31	9.0	7	22.5	7 54.4	57.7	61.4	65.0	68.2	8	1.34	
		43.7	9.2		26.2							2.66	
					28.9							.57	
					25.9					- 3.26		3	
(8) - D										7	58.08		
											1.64		
a_1										7	56.44		
	6	43 7	9.5	7	22.5	7 58.8	62.6	66.3	69.8	73.4	7	16.22	
					28.1							4.68	
					33.1							.49	
					27.9					- 5.22 + 0.2		3	
(8) - D										7	11.04		
											1.58		
a_2										7	9.44		
	9	46 55 5	7.5	9	22.7	9 45.0	48.6	52.2	55.8	59.4	9	52.20	
		23.4	7.8		27.0							2.66	
					30.5							.60	
					26.7					- 3.29		3	
(8) - D										9	48.91		
											1.63		
a_1										9	47.28		
			8.0	9	22.6	9 47.0	50.5	54.0	57.8	61.2	9	54.10	
					36.8							4.68	
					40.2							.51	
					36.9					- 5.23 + 0.1		3	
(8) - D										9	48.90		
											1.66		
a_2										9	47.31		

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+28.2 1.45025 9.76712 1.32337 _u	2 57.1	7.9	50 * 13	2.50	9 45.85 54 11 51.35 -21.06			10	54 11 30.29 - 20 - 3 + 11.84 + 52 - 12.40 11 30.02	+12.13
δ_1	+1.29 +5.56	4 24.65		11 35.6							
d	+22.9 1.35984 9.76712 1.23296 _u	3 0.9	13.4	143 3	7.15	9 41.20 54 11 46.61 -17.10			10	29.51 - 14 - 3 + 11.88 + 52 - 12.70 11 29.04	+12.23
δ_2	+1.29 +5.56	4 24.77		15 34.6							
d	+26.9 1.42975 9.76236 1.29811 _u	2 51.2	2.9	1141 0	57.05	36 57.30 54 38 56.80 -19.87			45	54 38 36.93 - 17 + 12.30 + 56 - 12.40 38 37.19	+12.66
δ_1	+1.26 +5.67	5 43.45		38 42.9							
d	+20.6 1.31387 9.76236 1.18229 _u	0 55.9	9.0	49 8	2.45	36 45.90 54 38 51.31 -15.21			45	36.10 - 11 - 1 + 12.35 + 56 - 12.70 38 36.19	+12.79
δ_2	+1.26 +5.67	5 43.58		38 41.9							
d	+12.8 1.10721 9.77319 0.98640 _u	2 57.8	9.0	68 3	3.40	34 44.95 53 36 51.45 -9.69			21 53	36 41.76 - 5 - 3 + 11.25 + 50 - 12.40 36 41.03	+11.67
δ_1	+1.33 +5.74	6 34.70		36 46.8							
d	+14.2 1.15229 9.77319 1.03148 _u	2 55.5	9.2	47 3	2.35	34 46.00 53 36 51.41 -10.75			45	40.66 - 5 - 3 + 11.28 + 50 - 12.70 36 39.66	+11.70
δ_2	+1.33 +5.74	6 34.85		36 45.4							
d	+25.4 1.40483 9.77370 1.28453 _u	0 42.4	35.1	975 0	48.75	31 59.60 53 34 51.10 -19.25			30	53 33 45.85 - 16 - 1 + 11.20 + 50 - 12.40 33 44.98	+11.53
δ_1	+1.34 +5.79	7 3 57.78		33 50.8							
d	-11.9 1.06819 _u 9.77370 0.94789 _u	0 28.9	41.7	706 0	35.30	32.1305 53 34 18.46 +8.87			30	34 29.33 - 1 + 11.22 + 50 - 12.70 34 26.30	+11.67
δ_2	+1.34 +5.79	7 10.80		31 32.1							
d	+25.5 1.40654 9.75757 1.27005 _u	3 42.9	53.6	965 3	48.25	4 010 55 6 56.0 -18.62			15	55 5 46.98 - 16 - 4 + 12.77 + 60 - 12.50 5 47.65	+13.17
δ_1	+1.24 +6.01	9 48.52		5 53.7							
d	+17.2 1.23553 9.75757 1.09904 _u	3 49.7	1.1	1108 3	55.40	3 52.95 55 5 58.36 -12.56			15	45.80 - 7 - 4 + 12.82 + 60 - 12.80 5 46.31	+13.31
δ_2	+1.24 +6.01	9 48.56		5 52.3							

Date₁ = 1874, Sept. 7Observer
RecorderDate₂ = Sept. 9Observer
Recorder

84

Star.	α	δ	Mag.	T_0	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
10	13.9	46.7	9.5	10 28.0	10 37.5	40.9	44.6	48.0	51.5	10	44.50		
κ			9.2								-2.67		
(8) - D											-3.58		
a_1											-3		
											-3.28		
											10	41.22	
											-1.65		
											10	39.57	
			9.3	10 30.2	10 38.5	43.1	46.5	50.0	53.5	10	46.52		
κ											-4.68		
(8) - D											-4.48		
a_2											-3		
											-5.21 + 0.2		
											10	41.34	
											-1.59		
											10	39.78	
13	47.0	48.2	8.1	12 52.1	13 9.0	12.6	16.2	18.7	23.3	13	16.16		
κ			7.5								-2.67		
(8) - D											-1.60		
a_1											-3		
											-3.30		
											13	12.86	
											-1.65		
											13	11.21	
			8.2	12 43.4	13 10.8	14.6	18.2	21.7	25.2	13	18.10		
κ											-4.68		
(8) - D											-5.1		
a_2											-3		
											-5.23 + 0.1		
											13	12.90	
											-1.59		
											13	11.28	
14	45.7	8.8	7.8	13 52.8	14 6.9	10.6	14.2	17.6	21.2	14	14.10		
κ			8.2								-2.67		
(8) - D											-1.60		
a_1											-3		
											-3.30		
											14	10.80	
											-1.65		
											14	9.15	
			8.4	13 52.5	14 8.8	12.6	16.0	18.4	23.4	14	16.04		
κ											-4.68		
(8) - D											-5.1		
a_2											-3		
											-5.23 + 0.2		
											14	10.83	
											-1.59		
											14	9.22	
15	45.2	57.8	7.7	14 53.7	15 11.7	14.9	18.1	21.4	24.7	15	18.16		
κ			8.0								-2.67		
(8) - D											-1.50		
a_1											-2		
											-3.10		
											15	14.97	
											-1.73		
											15	13.24	
			7.0	15 18	15 13.8	16.9	20.1	23.3	26.5	15	20.12		
κ											-4.68		
(8) - D											-4.3		
a_2											-2		
											-5.15 + 0.1		
											15	15.00	
											-1.68		
											15	13.38	
16	42.2	23.7	8.1	15 49.0	16 4.9	8.4	11.9	15.1	18.8	16	11.82		
κ			8.5								-2.67		
(8) - D											-1.57		
a_1											-3		
											-3.27		
											16	8.55	
											-1.69		
											16	6.86	
			8.3	15 53.1	16 6.7	10.3	13.8	17.2	20.5	16	13.70		
κ											-4.68		
(8) - D											-4.3		
a_2											-2		
											-5.21 + 0.2		
											16	8.51	
											-1.63		
											16	6.82	

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	$+15.5$ 1.19035 9.77112 1.06745 1.06745	$0' 21.9$	34.0	559	$0' 27.95$	47 20.40 53 49 25.90 -11.68			35	53 49 14.22 - 6 - 0 +11.45 + .50 -12.50 49 13.61	+11.89
$(\delta) - D$ $\frac{d'}{100}$											
$+1.33$ $+6.09$ δ_1		10 40.90	(38.3)	49 19.7	35						
d	$+13.4$ 1.12710 9.77112 1.00422	$0 24.0$	38.3	323	$0 16.15$	47 2.20 53 49 7.61 -10.10	47 17.20 49 22.61		35	12.51 - 5 - 0 +11.49 + .50 -12.80 49 11.65	Ex. Circle reading +11.94
$(\delta) - D$ $\frac{d'}{100}$											
$+1.33$ $+6.09$ δ_2		10 41.07		49 17.7	40						
d	$+20.7$ 1.31597 9.76129 1.18326	$0 13.6$	24.4	380	$0 19.00$	42 29.35 54 44 34.85 -15.25			40	54 44 19.60 - .11 - 0 +12.40 + .57 -12.60 44 19.86	+12.86
$(\delta) - D$ $\frac{d'}{100}$											
$+1.28$ $+6.30$ δ_1		13 12.49		44 26.2	40						
d	$+28.4$ 1.45332 9.76129 1.32061	$0 6.3$	19.7	260	$0 13.00$	42 35.35 54 44 40.76 -20.72			40	19.84 - .20 - 0 +12.45 + .57 -12.90 44 19.76	+12.882
$(\delta) - D$ $\frac{d'}{100}$											
$+1.28$ $+6.30$ δ_2		13 12.57		44 26.1	14						
d	$+18.1$ 1.25768 9.75660 1.12028	$4 11.2$	21.1	323	$4 12.15$	8 32.20 55 10 37.70 -12.19			10	55 10 24.51 - 8 - 4 +12.86 + .60 -12.60 10 25.25	+13.34
$(\delta) - D$ $\frac{d'}{100}$											
$+1.25$ $+6.38$ δ_1		14 10.40		10 31.6	14						
d	$+19.7$ 1.29447 9.75660 1.15707	$4 11.0$	21.8	328	$4 16.40$	8 31.95 55 10 37.36 -14.36			10	23.00 - .10 - 4 +12.91 + .60 -12.90 10 23.97	+13.37
$(\delta) - D$ $\frac{d'}{100}$											
$+1.25$ $+6.38$ δ_2		14 10.49		10 29.8	24						
d	$+15.8$ 1.19866 9.80807 1.11273	$4 12.2$	51.9	641	$4 32.05$	57 59.20 58 16.30 50 80 22.80 -12.76	58 11.30 0 6.60		20	49 59 51.84 - 7 - 5 +7.58 + .30 -12.30 59 47.30	Ex. Circle reading +7.76
$(\delta) - D$ $\frac{d'}{100}$											
$+1.56$ $+6.46$ δ_1		15 14.80		59 53.8	24						
d	$+15.2$ 1.18184 9.80807 1.09591	$4 42.9$	54.2	971	$4 48.35$	57 59.50 50 0 5.21 -12.47			20	49 59 52.74 - 6 - 5 +7.60 + .30 -12.70 59 47.83	+7.79
$(\delta) - D$ $\frac{d'}{100}$											
$+1.56$ $+6.46$ δ_2		15 14.87		59 54.3	59						
d	$+20.1$ 1.30320 9.77524 1.18444	$4 17.7$	28.7	464	$4 23.20$	23 25.15 53 25 30.65 -15.29			35	53 25 15.36 - .10 - 4 +11.05 + .50 -12.50 25 14.27	+11.41
$(\delta) - D$ $\frac{d'}{100}$											
$+1.87$ $+6.54$ δ_1		16 8.23		25 10.8	59						
d	$+17.1$ 1.23300 9.77524 1.11424	$4 20.3$	33.0	533	$4 26.65$	23 21.70 53 25 27.11 -13.01			35	14.10 - 8 - 4 +11.08 + .50 -12.90 25 12.66	+11.46
$(\delta) - D$ $\frac{d'}{100}$											
$+1.37$ $+6.54$ δ_2		16 8.25		25 19.2							

333
Date₁ = 1874, Sept. 7

Observer
Recorder

334
Date₂ = Sept. 9

Observer
Recorder

86

Run

Star.	α	δ	Mag.	T_0	T_m	T_s	T_r	T_g	T_h	Sum	Mean	Red. to T_m	T
16	47.3	16.5	8.8	17 16.5	17 16.8	15.4	18.8	22.2	25.7	17	18.78		
κ				64									
$(\delta - D) \frac{\kappa'}{100}$				63.2						- 326			
a_1										17	15.52		
										17	-1.70		
										17	13.82		
			9.1	16 58.8	17 13.7	17.1	21.3	24.0	27.4	17	20.70		
κ				3.1									
$(\delta - D) \frac{\kappa'}{100}$				7.1						- 5.20 +01			
a_2				63.3						17	15.52		
										17	-1.64		
										17	13.88		
			8.3	17 57.2	18 10.8	14.1	17.7	21.1	24.7	18	17.68		
κ				13									
$(\delta - D) \frac{\kappa'}{100}$				60.7						- 328			
a_1										18	14.40		
										18	-1.69		
										18	12.71		
			8.4	18 23	18 12.7	16.4	18.6	23.1	26.4	18	19.68		
κ				5.5									
$(\delta - D) \frac{\kappa'}{100}$				8.3						- 5.21 +02			
a_2				5.7						18	14.49		
										18	-1.63		
										18	12.84		
			8.6	19 30.5	19 48.6	57.9	83.3	88.9	2.4	19	55.12		
κ				33.6									
$(\delta - D) \frac{\kappa'}{100}$				36.0						- 3.27			
a_1				33.4						19	52.15		
										19	-1.71		
										19	50.44		
			8.8	19 30.6	19 50.6	54.0	57.5	6.9	4.4	19	57.48		
κ				35.0									
$(\delta - D) \frac{\kappa'}{100}$				88.0						- 5.21 +01			
a_2				34.5						19	52.29		
										19	-1.65		
										19	50.68		
			9.0	20 17.9	20 54.8	87.9	1.1	4.3	7.6	21	1.14		
κ													
$(\delta - D) \frac{\kappa'}{100}$										- 3.19			
a_1				20 24.4	21 13.2	14.3	19.2	22.0	25.9	21	19.44		
				33.0									
				33.3						- 3.19			
				32.6						21	16.25		
			9.3	21 34.5	20 56.6	57.8	3.0	6.2	9.6	21	3.04		
κ				87.8									
$(\delta - D) \frac{\kappa'}{100}$				42.4						- 5.15 +02			
a_2				38.2						21	21.30		
				52.4						- 4.70			
				54.5						21	14.49		
				57.8						21	-1.76		
			7.4	21 54.7	22 10.4	14.5	18.2	21.8	25.3	22	18.14		
κ				57.6									
$(\delta - D) \frac{\kappa'}{100}$				57.6						- 3.30			
a_1										22	14.84		
										22	-1.70		
										22	13.14		
			7.8	22 4.9	22 13.0	16.4	20.0	23.7	27.2	22	20.06		
κ				8.1									
$(\delta - D) \frac{\kappa'}{100}$				10.3						- 5.24 +01			
a_2				7.8						22	14.84		
										22	-1.64		
										22	13.18		

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'	
d	+15.6 1.19312 9.77626 1.07538 _m	0 54.9 (54.9)	6.7	916 1.6 (1 0.80)	45.80	21 2.55 53 23 8.05 -11.90	21 2.55 21 47.55 53 53.05	(51)	53	18 41.15 - 7 +10.93 + .50 -12.60 18 39.90	En Stroke + Circle runs +11.35	
((8) - D) $\frac{d'}{100}$	+1.38 +6.63											
δ_1		17 15.20		18 46.5								
d	+17.4 1.24055 9.77626 1.12281 _m	0 52.5	7.4	1199 0	59.95	16 48.40 53 18 53.81 -13.27			5	18 40.54 - 8 - 1 +10.96 + .50 -12.90 18 39.01	+11.37	
((8) - D) $\frac{d'}{100}$	+1.38 +6.63											
δ_2		17 15.25		18 45.6								
d	+17.0 1.23045 9.76870 1.10515 _m	1 37.1	48.1	852 1	42.60	1 5.75 54 3 11.25 -12.74			20	54 2 58.51 - 7 - 2 +11.71 + .50 -12.70 2 57.93	+12.12	
((8) - D) $\frac{d'}{100}$	+1.34 +6.71											
δ_1		18 14.05		3 4.6								
d	+14.0 1.14613 9.76870 1.02083 _m	1 38.7	50.8	895 1	44.75	1 3.60 54 3 9.01 -10.49			20	58.52 - 5 - 2 +11.75 + .50 -13.00 2 57.70	+12.18	
((8) - D) $\frac{d'}{100}$	+1.34 +6.71											
δ_2		18 14.20		3 4.4								
d	+22.0 1.34242 9.77575 1.22417 _m	2 53.0	5.6	1186 2	59.30	19 49.05 53 21 54.55 -16.76			0	53 21 37.79 - 13 - 3 +11.00 + .50 -12.60 21 36.53	+11.34	
((8) - D) $\frac{d'}{100}$	+1.38 +6.85											
δ_1		19 51.82		21 43.4								
d	+23.0 1.36173 9.77575 1.24348 _m	2 51.1	4.5	1156 2	57.80	19 50.85 53 21 55.96 -17.52			0	38.44 - 14 - 3 +11.04 + .50 -13.00 21 36.81	+11.87	
((8) - D) $\frac{d'}{100}$	+1.38 +6.85											
δ_2		19 52.01		21 43.7								
d	-16.8 1.20952 _m 9.80807 1.12359 +46.8 1.67025 9.80807 1.58432 _m -352 1.54655 _m 9.80807 1.46462 +29.5 1.46982 9.80807 1.38389 _m -205 1.51175 9.75751 1.17526 _m	4 27.1	38.0	651 4	32.55	58 15.80 50 0 21.30 +13.29 -38.40			20	50 0 34.54 - 8 - 4 +7.60 + 30 -12.50 0 29.87	49 59 42.90 59 59 42.90 +7.78 - 59 - 4 +7.60 + 30 -12.50 59 37.67	+7.27
((8) - D) $\frac{d'}{100}$	+1.58 +6.93											
δ_1		20 57.77		0 36.8								
d	-352 1.54655 _m 9.80807 1.46462 +29.5 1.46982 9.80807 1.38389 _m -205 1.51175 9.75751 1.17526 _m	4 40.8	51.6	924 4	46.20	58 2.15 50 0 7.56 +24.29 +29			20	49 59 43.27 50 0 36.74 - 35 +7.54 +7.62 + 30 -12.80 0 31.55	49 59 43.27 59 59 43.27 +7.54 - 23 - 5 +7.62 + 30 -12.80 59 38.11	+7.64
((8) - D) $\frac{d'}{100}$	+1.58 +6.93											
δ_2		20 57.78		0 38.4								
d	+20.5 1.51175 9.75751 1.17526 _m	3 15.9	26.1	420 3	21.00	4 27.35 55 6 32.85 -14.97			15	55 6 17.88 - .10 - 3 +12.79 + .60 -12.70 6 18.44	+13.26	
((8) - D) $\frac{d'}{100}$	+1.28 +7.04											
δ_1		22 14.42		6 25.5								
d	+12.3 1.08991 9.75751 0.95342 _m	3 21.1	33.9	550 3	27.50	4 20.85 55 6 26.26 -8.98			15	17.28 - 4 - 3 +12.84 + .60 -13.10 6 17.55	+13.37	
((8) - D) $\frac{d'}{100}$	+1.28 +7.04											
δ_2		22 14.47		6 24.6								

T _m - T	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	8
-20.9 1.32015 7.80897 1.23512 +32.3 1.50920 9.80897 1.42417	0' 54.1	11.0	101 53.1	5.05	57 43.30 49 53 48.80 + 17.19 - 26.56			30	49 54 5.99 - 12 + 7.76 + 30 - 12.60 54 1.15	53
-28.9 1.06090 2.80897 1.37587 +24.1 1.38202 9.80897 1.29699 +17.6 1.24551 9.75751 1.10902	1 5.2	17.9	231 31	11.55	51 36.80 49 53 42.21 + 23.76 - 19.82			50	49 54 5.99 - 23 + 7.61 + 30 - 12.90 54 0.74	53
23 22.85 28.67 3 25.4 35.8 612 3 30.60					4 17.75 55 6 23.25 - 12.85			15	55 6 10.40 - 8 - 3 + 12.79 + .60 - 12.50 6 10.88	+13.2
24 44.92			6 18.1	18						
+22.4 1.35025 9.75751 1.21376	3 19.9	32.7	526 3	26.30	4 22.05 55 6 27.46 - 16.36			15	11.10 - 12 - 3 + 12.84 + 60 - 13.10 6 11.29	+13.2
24 44.98			6 18.5							
+26.7 1.42651 9.76835 1.30086	4 0.1	12.2	123 0	6.15	8 42.20 54 4 47.70 - 19.99			20	54 4 27.71 - 19 - 6 + 11.71 + .51 - 11.40 + 28.34	+12.
23 49.88			3 30.4	58						
+11.8 1.09188 9.77507 9.5295	3 51.1	3.8	1149. 3	5.745	23 50.90 53 25 56.31 - 8.97			55	53 25 47.34 - 4 - 4 + 11.10 + .50 - 12.70 25 46.16	+11.5
8 14.81			25 52.0	14						
+12.1 1.08279 9.75678 1.27455	4 33.9	45.7	796 4	39.80	8 9.55 55 10.14.96 - 8.82			10	55 10 6.14 - 4 - 5 + 12.90 + .60 - 12.90 10 6.65	+13.4
11 21.49			10 12.8							

Runs

 Sep. 12 +2 7.31 -01
 14 6.56 -01

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	s'
d	+28.3 1.45179 9.77626 1.33265 _m	0' 55.5	9.0	45 61	2.25	16 46.10 53 18 53.41 -21.51			5	53 18 31.90 -21 +11.08 + .50 -12.60 18 30.66	+11.36
((8) - D) $\frac{d'}{100}$											
+132 +408 δ_1		47 0.10		18 34.7							
d	+19.0 1.27875 9.77626 1.15961 _m	1.9	15.0	169 61	8.45	16 39.90 53 18 46.46 -14.44			5	32.02 -9 +11.03 + .50 -12.80 18 30.65	+11.43
((8) - D) $\frac{d'}{100}$											
+132 +408 δ_2		47 0.18		18 34.7							
d	+19.6 1.29226 9.78246 1.37932 _m	2 35.3	49.1	844 42	42.20	40 6.15 52 42 13.46 -23.95			40	52 41 57.51 -10 -3 +10.45 + .48 -12.50 41 57.81	+10.80
((8) - D) $\frac{d'}{100}$											
+136 +416 δ_1		47 54.91		42 2.0							
d	+20.2 1.30535 9.78246 1.19241 _m	2 33.0	46.6	796 2	39.80	40 8.55 52 42 15.11 -15.57			40	59.54 -10 -3 +10.40 + .48 -12.50 41 57.49	+10.75
((8) - D) $\frac{d'}{100}$											
+136 +416 δ_2		47 54.83		42 1.6							
d	+26.2 1.41830 9.78130 1.30420 _m	0 37.9	51.9	898 0	44.90	47 34.5 52 49 10.76 -20.15			35	52 48 50.61 -18 -1 +10.57 + .48 -12.60 48 48.88	+10.87
((8) - D) $\frac{d'}{100}$											
+135 +424 δ_1		48 46.92		48 53.1							
d	+16.7 1.22272 9.78130 1.10862 _m	0 45.0	59.1	1041 0	52.05	46 56.30 52 49 2.86 -12.84			35	50.02 -8 -1 +10.51 + .49 -12.80 48 48.13	+10.91
((8) - D) $\frac{d'}{100}$											
+135 +424 δ_2		48 46.12		48 52.4							
d	+9.7 0.98677 9.77456 0.86593 _m	0 37.1	10.9	80 1	4.00	26 44.35 53 28 57.66 -7.34			35	53 28 44.32 -3 -1 +11.27 + .50 -12.70 28 43.35	+11.73
((8) - D) $\frac{d'}{100}$											
+131 +422 δ_1		49 27.41		28 47.6							
d	+7.8 0.89209 9.77456 0.77125 _m	0 57.8	10.6	84 1	7.68	26 44.15 53 28 50.71 -5.90			35	44.81 -2 -1 +11.21 + .50 -12.90 28 43.59	+11.68
((8) - D) $\frac{d'}{100}$											
+131 +429 δ_2		49 27.23		28 47.9							
d	+30.5 1.48430 9.77490 1.36380 _m	2 23.0	38.0	630 2	3.150	25 16.85 53 27 24.16 -23.11			55	53 27 1.05 -24 -2 +11.24 + .50 -12.70 26 59.83	+11.48
((8) - D) $\frac{d'}{100}$											
+131 +440 δ_1		50 46.20		27 4.2							
d	+30.8 1.48855 9.77490 1.36805 _m	2 23.4	35.8	592 2	29.60	25 18.75 53 27 24.31 -23.34			55	09.7 -25 -2 +11.18 + .50 -12.90 26 59.48	+11.41
((8) - D) $\frac{d'}{100}$											
+131 +440 δ_2		50 46.26		27 3.9							

Date₁ = 1874, Sept. 12Observer
RecorderDate₂ = Sept. 14Observer
Recorder

92

Star.	α	δ	Mag.	T_s	T_m	T_o	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T	
51	57.53	00	8.8	51	41.6	52	2.9	6.3	9.9	13.3	16.8	52	9.84	
κ	54.0	52	8.7		46.0								17.30	
(S) - D					49.3								1.60	
a_1					45.6						- 8.10		1.17	
													1.74	
													1.40	
													0.34	
													10.38	
κ			8.8	51	40.6	52	3.5	7.0	10.4	13.8	17.2	52	10.38	
(S) - D					43.8								8.05	
a_2					46.4								1.17	
					43.6						- 8.75		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4							1.16	
						57.5					- 8.05		1.63	
													1.33	
													0.30	
													13.20	
κ	54	0.51	3.3	7.8	53	48.8	54	6.4	9.9	13.2	16.6	19.9	54	13.20
(S) - D	53	37.0	31.5	7.3		51.6							7.30	
a_1						54.4			</					

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+28.2 1.38382 977930 1.26772 _m	4 6.6	18.5	251 24	12.55	38 35.80 53 0 43.11 -18.96			20 53 0	24.16 -15 +10.78 +1.50 -12.70 0 22.55	+11.09
$(\delta) - D) \frac{d'}{100}$	+134 +4.51										
δ_1		52 1.68		0 27.1							
d	+26.8 1.42813 977930 1.31203 _m	4 4.0	15.9	199 24	9.95	58 38.40 53 0 44.96 -20.51			20	24.45 -7 +10.72 +1.50 -12.90 0 22.54	+10.99
$(\delta) - D) \frac{d'}{100}$	+134 +4.51										
δ_2		52 1.64		0 27.0							
d	+21.7 1.33646 9779351 1.23457 _m	1 18.2	31.3	495 57	24.75	31 24.60 51 33 31.91 -17.16			30 51 33	14.75 -13 +9.27 +1.46 -12.60 33 11.68	+9.53
$(\delta) - D) \frac{d'}{100}$	+144 +4.68										
δ_1		54 5.14		38 16.4							
d	+31.5 1.49831 9779351 1.39642 _m	1 10.4	21.8	322 1	16.10	31 32.25 51 33 38.81 -24.91			30	13.90 -26 +9.22 +1.40 -12.50 33 10.45	+9.35
$(\delta) - D) \frac{d'}{100}$	+144 +4.68										
δ_2		54 5.11		38 15.1							
d	+27.3 1.43616 9778918 1.32994 _m	4 5.9	16.6	225 24	11.25	58 37.10 52 0 44.41 -21.38			20 52 0	23.03 -19 +9.75 +1.45 -12.60 0 20.40	+9.97
$(\delta) - D) \frac{d'}{100}$	+141 +4.81										
δ_1		55 35.99		0 25.2							
d	+29.9 1.47564 9778918 1.36945 _m	4 1.9	13.7	156 24	7.80	58 40.55 52 0 47.11 -23.41			20	23.70 -24 +9.69 +1.45 -12.50 0 20.76	+9.86
$(\delta) - D) \frac{d'}{100}$	+141 +4.81										
δ_2		55 36.00		0 25.6							
d	+7.9 0.89763 9778030 0.78253 _m	0 8.4	21.9	303 30	15.15	52 33.20 52 54 40.51 -6.06			30 52 54	34.45 -2 +10.69 +1.49 -12.50 54 32.81 51 35.05 51 48.87 -24 +10.63 +1.49 -13.00 54 32.92	+11.16
$(\delta) - D) \frac{d'}{100}$	+136 +4.87										
δ_1		56 14.30		54 37.7							
d	-30.1 1.47857 9778030 1.36347 _m	0 36.0	49.9	859 30	42.95	52 54.0 52 54 11.96 +23.09			30	35.05 51 48.87 -24 +10.63 +1.49 -13.00 54 32.92	+10.87
$(\delta) - D) \frac{d'}{100}$	+136 +4.87										
δ_2		56 14.52		54 37.8							
d	+28.1 1.44871 9778837 1.34168 _m	3 54.0	6.1	01 19	00.05	3 48.30 52 5 55.61 -21.96			15 52 5	33.65 -21 +9.84 +1.45 -12.50 5 30.89	+10.04
$(\delta) - D) \frac{d'}{100}$	+141 +4.99										
δ_1		57 39.21		5 35.9							
d	+19.7 1.29447 9778837 1.18744 _m	3 58.0	11.5	95 19	4.75	3 43.60 52 5 50.16 -15.40			15	34.76 -11 +9.78 +1.45 -13.00 5 31.84	+10.08
$(\delta) - D) \frac{d'}{100}$	+141 +4.99										
δ_2		57 39.11		5 36.8							

335

Date₁ = 1874. Sept. 72Observer
RecorderDate₂ = Sept. 9. 14.Observer
Recorder

94

Star.	α	δ	Mag.	T_s	T_m	T_o	T_r	T_g	T_h	Sum	Mean	Red. to T_m	T
59	552 4	3.1	7.0	18.5	59 12.1	18.5	18.8	22.1	25.6	59	18.82		
κ	42.3		6.3	56.1							7.31		
				56.7							5.58		
				56.0							1.76		
(8) - D									- 8.07		2		
α_1										59	10.75		+1.4
											1.46		+5.
										59	9.29		
										59	19.38		
κ			7.0	5-8	45.9	59 12.7	16.1	19.3	22.8		5.05		
					32.8						1.49		
					54.3						1.76		
(8) - D					50.3				- 8.72		2		
α_2										59	10.66		+1.4
											1.39		+5.
										59	9.27		
19	0	43 52 36	4.0	19 0	19.4 0 48.9	52.3	56.6	58.9	2.5	0	55.84		
κ	19.5	54.3	8.3		22.3						7.31		
					24.3						1.60		
					22.1						1.17		
(8) - D									- 8.10		2		
α_1										0	47.74		+1.4
											1.45		+5.
										0	46.29		
										0	56.36		
κ			8.8	0	28.6 0 49.5	52.9	56.3	59.8	3.3		5.05		
					32.8						1.50		
					35.4						1.77		
(8) - D					32.1				- 8.74		2		
α_2										0	47.62		+1.4
											1.39		+5.
										0	46.23		
										2	1.34		
κ	1	48 52 34	8.3	1	33.0 1 54.5	57.7	1.5	4.8	8.2		7.31		
	1	24.8	32.1	7.8	37.2						5.58		
					40.3						1.76		
(8) - D					36.8				- 8.07		2		
α_1										1	53.27		+1.4
											1.46		+5.
										1	51.81		
										2	1.90		
κ			8.1	1	36.5 1 54.9	58.6	1.8	5.4	8.8		5.05		
					38.8						1.49		
					41.1						1.76		
(8) - D					38.8				- 8.72		2		
α_2										1	53.18		+1.4
											1.40		+5.
										1	51.78		
										3	46.28		
κ	3	34 53 37	8.8	3	10.6 3 39.4	42.7	46.4	49.7	53.2		7.31		
	3	10.7	35.6	8.8	19.6						1.61		
					22.4						1.17		
(8) - D					19.2				- 8.12		3		
α_1										3	38.16		+1.4
											1.45		+5.
										3	36.71		
										3	46.86		
κ			8.7	3	15.7 3 40.0	43.3	46.8	50.3	53.9		5.05		
					19.2						1.51		
					22.0						1.77		
(8) - D					19.0				- 8.76		3		
α_2										3	38.10		+1.4
											1.39		+5.
										3	36.71		
										5	8.14		
κ	4	56 53 27	9.4	4	40.0 5 1.2	4.8	8.0	11.7	15.0		7.32		
	4	32.3	25.4	9.1	48.0						1.61		
					46.5						1.17		
(8) - D					43.2				- 8.13		3		
α_1										5	0.01		
											1.47		+1.4
										4	58.54		+5.
										5	8.74		
κ			9.1	4	45.7 5 1.8	5.2	8.8	12.2	15.7		5.05		
					48.4						1.51		
					51.8						1.77		
(8) - D					48.6				- 8.76		3		
α_2										4	59.98		+1.4
											1.40		+5.
										4	58.58		

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+22.8 1.35793 9.78853 1.25106 _m	4' 44.9	56.4	1013 ¹⁹	4' 50.65	2 57.70 52 5 50.1 -17.83			15	52 4 47.18 - 14 + 9.83 + 45 -12.80 4 44.47	+10.09
((8) - D) $\frac{d'}{100}$											
δ_1	+1.41 +5.12	59 10.70		4' 49.6							
d	+29.1 1.46389 9.78853 1.35702 _m	4 38.4	50.3	887 ¹⁹	44.35	3 4.00 52 5 10.56 -22.75			15	47.81 - 22 - 5 + 9.77 + 45 -13.00 4 44.76	+9.95
((8) - D) $\frac{d'}{100}$											
δ_2	+1.41 +5.12	59 10.68		4 49.9							
d	+33.7 1.52763 9.78013 1.41236 _m	3 37.5	49.9	874 ²⁸	43.70	54 4.65 52 56 11.96 -25.85			25	52 33 46.11 - 30 - 4 +10.71 + .50 -12.90 55 44.08	+10.87
((8) - D) $\frac{d'}{100}$											
δ_1	+1.36 +5.25	0 47.65		55 49.3							
d	+24.3 1.38561 9.78013 1.27034 _m	3 43.9	55.2	991 ²⁸	49.55	53 58.80 52 56 53.36 -18.64			25	46.72 - 15 - 4 +10.65 + .50 -13.20 55 44.48	+10.96
((8) - D) $\frac{d'}{100}$											
δ_2	+1.36 +5.25	0 47.59		55 49.7							
d	+24.5 1.38917 9.78379 1.27756 _m	0 17.9	32.5	504 ⁵⁰	25.20	32 23.15 52 34 30.46 -18.95			50	52 34 11.51 - 15 - 0 +10.38 + .48 -12.90 34 9.27	+10.66
((8) - D) $\frac{d'}{100}$											
δ_1	+1.89 +5.85	1 53.20		34 14.6							
d	+23.1 1.36361 9.78379 1.25200 _m	0 17.7	31.1	488 ⁵⁰	24.40	32 23.95 52 34 30.51 -17.87			50	12.64 - 14 - 0 +10.27 + .48 -13.20 34 10.25	+10.61
((8) - D) $\frac{d'}{100}$											
δ_2	+1.89 +5.35	1 53.17		34 15.4	+30						
d	+27.1 1.43297 9.77319 1.31076 _m	2 26.1	38.4	645 ⁴⁷	32.25	35 16.10 53 37 23.11 -20.45			45	53 37 2.66 - 19 - 2 +11.42 + .50 -13.00 37 1.37	+11.71
((8) - D) $\frac{d'}{100}$											
δ_1	+1.33 +5.49	3 38.04		37 6.9							
d	+27.9 1.44560 9.77319 1.32339 _m	2 24.6	37.1	617 ⁴⁷	30.85	35 17.50 53 37 24.06 -21.06			45	3.00 - 20 - 2 +11.36 + .50 -13.30 37 1.34	+11.64
((8) - D) $\frac{d'}{100}$											
δ_2	+1.33 +5.49	3 38.04		37 6.8							
d	+24.9 1.39620 9.77490 1.27570 _m	3 10.1	21.1	312 ⁵⁸	15.60	24 32.75 53 26 40.06 -18.87			53	53 26 21.19 - .16 - 3 +11.23 + .50 -13.10 26 19.63	+11.54
((8) - D) $\frac{d'}{100}$											
δ_1	+1.34 +5.60	4 59.88		26 25.2							
d	+20.1 1.30320 9.77490 1.18270 _m	3 12.4	23.9	363 ⁵⁸	18.15	24 30.20 53 26 36.76 -15.23			53	21.53 - .10 - 3 +11.17 + .50 -13.30 26 19.77	+11.54
((8) - D) $\frac{d'}{100}$											
δ_2	+1.34 +5.60	4 59.92		26 25.4							

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+19.8 1.29667 9.76922 1.17049 _m	4' 40.0	55.9	959 ²⁴	47.95	58 0.40 54 0 7.71 -14.81			20 53	59 52.90 -10 +11.82 +50 -13.10 59 51.97	+12.17
$((\delta) - D) \frac{d'}{100}$											
δ_1	+1.31 +5.68	5 53.73	8	59 57.6	5065						
d	+13.2 1.12057 9.76922 0.99439 _m	4 42.4	53.9	963 ²⁴	46.75	58 0.20 54 0 6.76 -9.87			20	56.89 -5 -5 +11.75 +50 -13.40 59 55.64 53.14	+12.15
$((\delta) - D) \frac{d'}{100}$											
δ_2	+1.31 +5.68	5 53.75	5	59 88.8	53						
d	+17.4 1.24055 9.77405 1.11929 _m	3 7.0	18.5	255 ⁵³	12.75	29 35.60 53 31 42.91 -13.16			50 53	31 29.75 -8 -3 +11.34 +50 -13.10 31 28.28	+11.74 ³
$((\delta) - D) \frac{d'}{100}$											
δ_1	+1.34 +5.79	7 10.83		31 34.2	53						
d	+11.3 1.05308 9.77405 0.93173 _m	3 9.2	21.3	305 ⁵³	15.25	29 33.10 53 31 39.66 -8.54			50	31.12 -3 -3 +11.27 +50 -13.40 31 29.43	+11.71
$((\delta) - D) \frac{d'}{100}$											
δ_2	+1.34 +5.79	7 10.97		31 35.2	53						
d	+19.9 1.29885 9.77527 1.17852 _m	3 48.2	0.4	486 ⁵³	84.30	23 54.05 53 26 1.36 -15.08			55 53	25 46.28 -10 -4 +11.23 +50 -13.20 25 44.67	+11.59
$((\delta) - D) \frac{d'}{100}$											
δ_1	+1.35 +5.88	8 14.59		25 50.6	59						
d	+7.6 0.88081 9.77507 0.76048 _m	3 35.0	7.9	29 ⁴³	1.45	23 46.90 53 25 53.46 -5.76			55	25 47.70 -2 -4 +11.17 +50 -13.40 25 45.91	+11.61
$((\delta) - D) \frac{d'}{100}$											
δ_2	+1.35 +5.88	8 14.71		25 51.8	43						
d	+25.7 1.40993 9.77250 1.28703 _m	3 45.5	57.0	1025 ⁴³	57.25	38 57.10 53 41 44.1 -19.37			40 53	40 45.04 -18 -4 +11.49 +50 -13.20 40 43.61	+11.77
$((\delta) - D) \frac{d'}{100}$											
δ_1	+1.34 +6.04	10 9.08		40 49.6	43						
d	+25.7 1.45788 9.77250 1.33498 _m	3 41.4	52.9	943 ⁴³	47.15	39 1.20 53 41 7.76 -21.62			40	46.14 -22 -4 +11.42 +50 -13.50 40 44.30	+11.66
$((\delta) - D) \frac{d'}{100}$											
δ_2	+1.34 +6.04	10 9.15		40 50.3	29						
d	+25.2 1.40140 9.79934 1.30534 _m	2 37.1	8.2	53 ²⁸	2.65	54 45.70 50 56 53.01 -20.20			25 50	58 32.81 -17 -3 +8.65 +35 -13.14 58 28.51	+8.80
$((\delta) - D) \frac{d'}{100}$											
δ_1	+1.50 +6.16	11 87.29		55 34.7	28						
d		3 51.0	2.9	1139 ²⁸	56.95	53 57.40 50 55 57.96			25		
$((\delta) - D) \frac{d'}{100}$											
δ_2											

Date₁ = 1874, Sept. 12Observer
RecorderDate₂ = Sept. 14Observer
Recorder

98

Star.	α	δ	Mag.	T_a	T_m	T_e	T_r	T_s	T_h	Sum	Mean	Red. to T_m	T
12	543.58	39	9.4	19.12	28.5	35.1	38.4	1.5	4.8	12	58.38		
12	19.2	37.1	9.3		31.6						-7.33		
κ					34.8						-1.55		
$((\delta) - D) \frac{\kappa'}{100}$					31.5						-1.76		
a_1									-8.06		-2		
										12	50.32		
											-1.56		
										12	48.76		
			9.8	12	44.1	12	52.2	35.8	39.0	2.4	58.96		
κ											-8.05		
$((\delta) - D) \frac{\kappa'}{100}$											-1.16		
a_2									-8.68		-2		
										12	50.28		
											-1.51		
										12	48.77		
13	25.50	23	8.7	13	28.1	13	34.1	37.6	40.8	43.9	47.3		
13	1.6	23.4	8.5		31.2								
κ					33.7						-7.33		
$((\delta) - D) \frac{\kappa'}{100}$					31.0						-1.55		
a_1										-8.06	-2		
										13	32.68		
											-1.58		
										13	31.10		
			9.1	13	34.6	13	34.9	38.0	41.2	44.5	47.7		
κ					37.1						-8.05		
$((\delta) - D) \frac{\kappa'}{100}$					60.9						-1.45		
a_2					57.3						-1.16		
										-8.68	-2		
										13	32.58		
											-1.52		
										13	31.06		
14	52.50	37	9.0	14	43.6	15	0.7	4.1	7.4	10.6	14.0		
14	28.8	35.0	9.0		46.2								
κ					48.9						-7.33		
$((\delta) - D) \frac{\kappa'}{100}$					46.2						-1.55		
a_1										-8.06	-2		
										14	59.30		
											-1.57		
										14	57.73		
			9.2	14	43.9	15	1.2	4.7	8.0	11.2	14.5		
κ					47.3						-8.05		
$((\delta) - D) \frac{\kappa'}{100}$					50.0						-1.47		
a_2					47.1						-1.16		
										-8.70	-2		
										14	59.22		
											-1.51		
										14	57.71		
16	36.51	41	8.8	16	16.3	16	43.3	46.6	50.0	53.3	56.6		
16	12.1	39.3	8.7		19.0								
κ					22.7						-7.33		
$((\delta) - D) \frac{\kappa'}{100}$					19.3						-1.58		
a_1										-8.09	-2		
										16	41.87		
											-1.57		
										16	40.39		
			8.8	16	20.9	16	44.0	47.6	50.7	53.8	57.0		
κ					23.7						-8.05		
$((\delta) - D) \frac{\kappa'}{100}$					26.2						-1.49		
a_2					23.6						-1.16		
										-8.72	-2		
										16	41.90		
											-1.51		
										16	40.39		
17	53.52	42	9.1	17	31.0	18	0.1	3.3	6.9	10.0	13.5		
17	29.6	40.2	9.0		33.1								
κ					38.0						-7.33		
$((\delta) - D) \frac{\kappa'}{100}$					34.0						-1.60		
a_1										-8.12	-2		
										17	58.64		
											-1.56		
										17	57.08		
			9.0	17	43.7	18	0.4	3.7	7.0	10.5	13.9		
κ					47.8						-8.05		
$((\delta) - D) \frac{\kappa'}{100}$					50.7						-1.50		
a_2					47.4						-1.17		
										-8.74	-2		
										17	58.36		
											-1.50		
										17	56.86		

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+26.9 142975 980213 1.33648 _m	0' 20.6	34.0	546 ⁴⁵ 0	27.30	37 21.05 50 39 28.36 -21.70			45- 50	39 6.66 - 19 + 8.36 + .33 -13.10 39 2.06	+8.50
(δ) - D) $\frac{d'}{100}$											
+1.52 δ_1 +6.27		12 50.28		39 8.3							
d	+14.9 1.17319 980213 1.07992 _m	0 28.2	41.3	695 ⁴⁵ 0	34.75	37 18.60 50 39 20.16 -12.02			45-	8.14 - 6 - 0 +8.32 + .33 -13.30 39 3.43	+8.59
(δ) - D) $\frac{d'}{100}$											
+1.52 δ_2 +6.27		12 50.29		39 9.7							
d	+9.7 0.98677 980412 0.89549 _m	4 22.1	33.2	553 ⁴ 4	27.65	23 20.70 50 25 28.01 -7.86			55-	50 25 20.15 - 3 - 4 +8.12 + .32 -13.10 25 15.42	+8.37
(δ) - D) $\frac{d'}{100}$											
+1.54 δ_1 +6.32		13 32.64		25 21.7							
d	-16.0 1.20412 _m 980412 1.11284	4 42.3	53.1	954 ⁴ 4	47.70	23 0.65 50 25 7.21 +12.97			55-	20.18 - 7 - 5 +8.08 + .32 -13.30 25 15.16	+8.28
(δ) - D) $\frac{d'}{100}$											
+1.54 δ_2 +6.32		13 32.60		25 21.4							
d	+21.2 1.32634 979934 1.23028 _m	2 30.1	42.7	728 ² 2	36.40	55 11.95 50 57 19.26 -16.99			25-	50 57 2.27 - 12 - 3 +8.66 + .35 -13.20 56 57.93	+8.86
(δ) - D) $\frac{d'}{100}$											
+1.51 δ_1 +6.44		14 59.24		57 4.4							
d	+20.8 1.31806 979934 1.22200 _m	3 28.3	40.9	692 ² 2	34.60	55 13.75 50 57 20.31 -16.67			25-	3.64 - 12 - 2 +8.62 + .35 -13.40 56 59.07	+8.83
(δ) - D) $\frac{d'}{100}$											
+1.51 δ_2 +6.44		14 59.22		57 5.5							
d	+30.7 1.48414 979224 1.38398 _m	3 2.9	15.5	184 ³ 3	9.20	39 39.15 51 41 46.46 -24.21			40	51 41 22.25 - 25 - 3 +9.41 + .42 -13.20 41 18.60	+9.55
(δ) - D) $\frac{d'}{100}$											
+1.47 δ_1 +6.58		16 41.77		41 25.2							
d	+27.0 1.43136 979224 1.32820 _m	3 5.1	17.4	225 ³ 3	11.25	39 37.10 51 41 43.66 -21.29			40	22.87 - 19 - 3 +9.37 + .42 -13.50 41 18.44	+9.57
(δ) - D) $\frac{d'}{100}$											
+1.47 δ_2 +6.58		16 41.86		41 25.0							
d	+32.8 1.51587 978230 1.40277 _m	2 11.3	23.8	341 ² 2	17.05	40 31.30 52 42 38.61 -26.28			40	52 42 13.33 - 28 - 2 +10.44 + .48 -13.40 42 10.58	+10.65
(δ) - D) $\frac{d'}{100}$											
+1.42 δ_1 +6.69		17 58.50		42 17.3							
d	+19.7 1.29447 978230 1.18137 _m	2 17.0	29.9	469 ² 2	23.45	40 24.90 52 42 31.46 -15.18			40	16.28 - 10 - 2 +10.41 + .48 -13.60 42 13.45	+10.77
(δ) - D) $\frac{d'}{100}$											
+1.42 δ_2 +6.69		17 58.28		42 20.1							

Date₁ = 1874, Sept. 12Observer
RecorderDate₂ = Sept. 14Observer
Recorder

100

Star.	α	δ	Mag.	T_s	T_m	T_e	T_t	T_s	T_h	Sum	Mean	Red. to T_m	T
19	31 52 47		7.0	19 19	19 37	41.3	43.0	48.4	51.7	19	44.86		
κ	7.4	45.8	7.5	12.2	15.8						-7.33		
$(\delta) - D) \frac{\kappa'}{100}$				12.1					-8.12		-1.60		
a_1										19	36.74		
										19	-1.57		+14
										19	35.17		+6
			8.0	19 15.7	19 88.5	42.0	45.3	48.8	52.2	19	45.36		
κ				20.2	22.6						-8.05		
$(\delta) - D) \frac{\kappa'}{100}$				19.5					-8.74		-1.50		
a_2										19	36.62		+14
										19	-1.51		+6
										19	35.11		
20	13 53 1		8.0	20 12.1	20 20.5	24.0	27.7	30.8	34.3	20	27.46		
κ	44.6	52.59.1	8.4	16.0	18.2						-7.33		
$(\delta) - D) \frac{\kappa'}{100}$				15.4					-8.13		-1.60		
a_1										20	19.33		+14
										20	-1.57		+6
										20	17.76		
			8.5	20 14.1	20 21.1	24.6	27.8	31.4	34.7	20	27.92		
κ				16.9	20.2						-8.05		
$(\delta) - D) \frac{\kappa'}{100}$				17.1					-8.75		-1.50		
a_2										20	19.17		+14
										20	-1.56		+6
										20	17.44		
21	45 52 54		9.3	21 24.6	21 52.3	33.5	38.8	42.2	5.6	21	58.88		
κ	21.2	52.3	9.3	29.4	31.2						-7.34		
$(\delta) - D) \frac{\kappa'}{100}$				28.1					-8.14		-1.60		
a_1										21	50.74		+14
										21	-1.58		+6
										21	47.16		
			9.3	21 37.0	21 52.3	34.9	39.2	42.8	6.3	21	59.43		
κ				40.3	42.9						-8.05		+14
$(\delta) - D) \frac{\kappa'}{100}$				40.1					-8.75		-1.50		+6
a_2										21	50.35		+14
										21	-1.52		+6
										21	46.83	49.03	
23	23 37 10		8.9	22 54.8	23 46	7.9	11.3	14.5	17.7	23	11.20		
κ	22 59.6	8.0	8.4	38.2	1.6						-7.34		+152
$(\delta) - D) \frac{\kappa'}{100}$	30.5	8.0		58.2					-8.07		-1.56		+715
a_1										23	30.20	23 3.13	+152
										23	-7.34	23 -1.62	+715
										23	-1.55	23 1.51	+152
										23	-1.55	23 31.13	+715
			9.2	22 59.2	23 47	8.4	11.7	14.9	18.5	23	11.64	23 -1.62	+152
κ			9.0	59.2	59.2						-8.05	23 -1.62	+715
$(\delta) - D) \frac{\kappa'}{100}$				59.2					-8.70		-1.56	23 29.51	+152
a_2										23	39.72	23 2.94	+715
										23	-8.05	23 -1.56	+152
										23	-4.76	23 1.38	+715
										23	2.23	23 31.02	+152
25	16 51 26		8.5	25 06	25 24.1	27.5	30.7	34.1	37.4	25	30.76		
κ	24 52.4	24.0	8.2	4.0	7.6						-7.34	23 274.6	
$(\delta) - D) \frac{\kappa'}{100}$				4.1					-8.09		-1.57		
a_1										25	22.67		+152
										25	-1.63		+715
										25	21.04		
			8.2	24 53.1	25 24.1	28.0	31.2	34.6	37.8	25	31.26		
κ				56.3	59.0						-8.05		
$(\delta) - D) \frac{\kappa'}{100}$				56.1					-8.71		-1.48		
a_2										25	22.55		+152
										25	-1.57		+715
										25	20.98		

Runs

1874phae.ppt

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'	
d	+328 1.51589 9.78130 1.40177 _n	1' 8.9	23.5	324 ³⁶	16.20	46 32.15 52 48 39.46 -25.22			33 ⁵²	48 14.24 - 28 + 10.58 + 49 - 13.40 48 11.62	+10.78	
(δ) - D $\frac{d'}{100}$												
δ_1	+142 +6.82	19 36.59	48 18.4	36								
d	+25.9 1.41330 9.78130 1.29920 _n	1 12.0	25.8	378	18.90	46 29.45 52 48 36.01 -19.92			35	16.09 - 18 - 1 + 10.51 + 49 - 13.60 48 13.30	+10.81	
(δ) - D $\frac{d'}{100}$												
δ_2	+142 +6.82	19 36.53	48 20.1	23								
d	+121 1.08299 9.77930 0.96669 _n	3 34.2	44.8	790	39.50	59 8.85 53 1 16.16 -9.26			20	53 1 6.90 - 4 - 4 + 10.80 + .50 - 13.40 1 4.72	+11.22	
(δ) - D $\frac{d'}{100}$												
δ_1	+140 +6.88	20 19.16	1 11.6	23								
d	+108 1.03342 9.77930 0.91732 _n	3 32.7	44.0	767	38.35	59 10.00 53 1 16.56 -8.27			20	8.29 - 3 - 4 + 10.73 + .50 - 13.70 1 5.75	+11.16	
(δ) - D $\frac{d'}{100}$												
δ_2	+140 +6.88	20 19.04	1 12.6	30								
d	+30.8 1.48855 9.78030 1.37345 _n	0 8.1	22.2	303	15.15	52 33.20 52 54 40.51 -23.63			30	52 54 16.88 - 25 - 0 + 10.69 + .49 - 13.50 54 14.31	+10.93	
(δ) - D $\frac{d'}{100}$												
δ_1	+142 +7.01	21 50.58	54 21.3	30								
d	+19.0 1.29875 9.78030 1.16365 _n	0 15.2	29.6	448	22.40	52 25.95 52 54 32.51 -14.57			30	17.94 - 9 - 0 + 10.62 + .49 - 13.50 54 15.16	+11.02	
(δ) - D $\frac{d'}{100}$												
δ_2	+152 +7.20	21 50.45	54 22.2	14								
d	+13.0 1.11394 9.79731 1.01585 _n	4 19.7	31.4	511	25.55	8 22.80 7 42.90 51 10 30.11 51 9 50.21 -10.37 + 6.14			10	51 10 19.74 - 5 - 4 + 8.89 + .37 - 13.40 10 15.51	9 56.35 - 2 - 85 + 8.89 + .37 - 13.40 9 52.14	+9.17 +9.19
(δ) - D $\frac{d'}{100}$												
δ_1	+152 +7.15	23 30.3	10 22.7	14								
d	+12.4 1.09342 9.79731 1.0460 9.9517	4 18.4	30.5	489	24.45	8 23.90 51 10 30.46 -27.75 -30.78			10	10 20.87 - 4 - 4 + 8.84 + .37 - 13.70 10 15.74	10 59.68 - 40 - 4 + 8.84 + .37 - 13.70 9 54.75	+8.77
(δ) - D $\frac{d'}{100}$												
δ_2	+152 +7.15	23 2.90	10 22.9	18								
d	+26.7 1.42651 9.79463 1.32574 _n	3 12.2	24.1	363	18.15	24 30.20 51 26 37.51 -21.27			55	51 26 16.24 - 19 - 3 + 9.17 + .37 - 13.50 26 12.08	+9.34	
(δ) - D $\frac{d'}{100}$												
δ_1	+151 +7.30	25 22.55	26 19.4	58								
d	+35.2 1.54654 9.79463 1.44577 _n	3 2.6	15.8	184	9.20	24 39.15 51 26 45.71 -27.91			55	17.80 - 23 - 3 + 9.12 + .37 - 13.70 26 13.25	+9.15	
(δ) - D $\frac{d'}{100}$												
δ_2	+151 +7.30	22.49 25 26.28	26 20.6									

Date₁ = 1874, Sept. 12

Observer _____
Recorder _____Date₂ = Sept. 14Observer _____
Recorder _____

Run

[illegible]

Continued in C. 25

Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	s'
d	+20.5 1.31175 9.79447 1.21082 _m	1' 46.4	58.0	1044 ⁵⁶	52.20	24 56.15 51 28 3.46 -16.25			55 51 27 47.21		
(8) - D $\frac{a'}{100}$											
+1.51 δ_1		26 33.29		27 50.6							+9.46
+7.39											
d	+25.8 1.41162 9.79447 1.31069 _m	1 39.2	51.7	909 ⁵⁶	45.45	26 2.90 51 28 9.46 -20.45			55 - 49.01		
(8) - D $\frac{a'}{100}$											
+1.51 δ_2		26 33.29		27 51.9							+9.34
+7.39											
d	+20.9 1.32015 9.78543 1.21018 _m	0 55.2	8.9	41 1	2.05	21 46.30 52 23 53.61 -16.22			0 52 23 37.39		
(8) - D $\frac{a'}{100}$											
+1.46 δ_1		27 35.18		23 41.8							+10.51
+7.47											
d	+21.6 1.33445 9.78543 1.22448 _m	0 51.8	5.5	1173 0	58.65	21 49.70 52 23 56.26 -16.77			0 23 39.49		
(8) - D $\frac{a'}{100}$											
+1.46 δ_2		27 35.02		23 43.5							+10.43
+7.47											
d	+7.7 0.897463 9.78313 0.78536 _m	3 11.2	23.4	346 3	17.30	34 31.05 52 36 38.36 -6.10			415 52 36 32.26		
(8) - D $\frac{a'}{100}$											
+1.45 δ_1		28 39.36		36 37.1							+10.83
+7.57											
d	+18.4 1.26482 9.78313 1.15255 _m	2 1.0	14.5	155 2	7.75	35 40.60 52 37 47.16 (36) 14.21			415 52 37 32.95		
(8) - D $\frac{a'}{100}$											
+1.45 δ_2		28 39.08		36 37.3							+10.71
+7.57											
d	+24.8 1.39445 9.78395 1.28300 _m	1 47.7	0.5	482 1	24.10	30 34.25 52 33 31.56 -19.19 -23.98			50 52 32 42.37		
(8) - D $\frac{a'}{100}$											
+1.46 δ_1		31.0		47.0							+10.54
+7.69											
d	+31.0 1.49136 9.78395 1.37991 _m	30 9.08		32 46.99							
(8) - D $\frac{a'}{100}$											
+1.46 δ_2		30 9.10		32 47.7							+10.33
+7.69											
d	+24.1 1.38202 9.78395 1.27057 _m	1 46.7	58.9	1056	52.80	30 55.55 52 33 2.11 -18.65 -22.90			50 52 32 42.37		
(8) - D $\frac{a'}{100}$											
+1.46 δ_1		31 53.32		57 18.3							+10.57
+7.82											
d	+24.4 1.45484 9.77997 1.33944 _m	2 12.5	24.5	370 2	18.50	55 29.85 52 57 31.81 -18.71			25 52 57 13.10		
(8) - D $\frac{a'}{100}$											
+1.44 δ_1		31 53.54		57 19.3							+10.94
+7.82											

Date ₁ =		Observer		Date ₂ =		Observer							
		Recorder				Recorder							
Star.	α	δ	Mag.	T_{δ}	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
κ													
$((\delta) - D) \frac{\kappa'}{100}$													
a_1													
κ													
$((\delta) - D) \frac{\kappa'}{100}$													
a_2													
κ													
$((\delta) - D) \frac{\kappa'}{100}$													
a_1													
κ													
$((\delta) - D) \frac{\kappa'}{100}$													
a_2													
κ													
$((\delta) - D) \frac{\kappa'}{100}$													
a_1													
κ													
$((\delta) - D) \frac{\kappa'}{100}$													
a_2													
κ													
$((\delta) - D) \frac{\kappa'}{100}$													
a_1													
κ													
$((\delta) - D) \frac{\kappa'}{100}$													
a_2													

1874 base proj. 15905