1870phae.proj.1570.

KG
11366
v.566

Zone Observations & Reductions

64

From March 5, 1871 to April 17, 1871

Charles W. Sever, University Bookstore, Cambridge.

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C 4

Mar 5 - 1871 to Apr 17 1871

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uns

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
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											
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											

Adopted values of i for 1871.

1870-71	i	tang. i	For Circle Readings 15 tang i	For Declination 15 tang i
1870 Nov 10 — May 18/71	+5″40		0.08794 n	0.08794 n

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Date$_1$ = May 18/1 n = +.14 Observer W.A.R. Recorder A.M. Date$_2$ = March 9th n = +.18 Observer A.M. Recorder W.A.R.

Star. α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
21 56^s 20 41.0 K	50° 44'	8.3	21 2.7	25.3	33.2	37.0	40.9	45.0	18 14	36.28 +29.97	10.96	21 25.32 +29.82 +.17 −2
((δ) − D) $\frac{\kappa'}{100}$												21 55.29 +0.03
18 a_1 02												21 55.32
K		8.2	21 7.1	24.7	32.7	36.4	40.4	44.3	17 85	35.70 +30.6352	10.96	21 24.74 +30.4232 +.22 −2
((δ) − D) $\frac{\kappa'}{100}$												21 55.37 +0.09
a_2												21 55.35
24 12 22 56.8 K	−41 50 −8.8	9.0 8.8	23 19.2	40.3	46.1	52.0	53.8	57.8	25 60	51.20 +29.97	10.77	23 40.43 +29.82 +.17 −2
((δ) − D) $\frac{\kappa'}{100}$												24 10.40 +0.02
a_1												24 10.42
K		8.8	23 15.2	40.0	47.7	51.4	55.4	59.3	25 38	50.76 +30.6251	10.77	23 39.99 +30.4332 +.21 −2
((δ) − D) $\frac{\kappa'}{100}$												24 10.61 +0.07
a_2												24 10.68
25 51 24 36.3 K	−16 50 −1.3	8.0 7.5	25 6.7	21.1	28.7	32.7	36.3	40.2	15 90	31.80 +29.97	10.78	25 21.02 +29.82 +.17 −2
((δ) − D) $\frac{\kappa'}{100}$												25 50.99 0.00
27 a_1 42												25 50.99
K		8.4	24 57.4	20.5	28.2	31.9	35.7	39.7	15 60	31.20 +30.6251	10.78	25 20.42 +30.4332 +.21 −2
((δ) − D) $\frac{\kappa'}{100}$												25 51.04 +0.06
a_2												25 50.99
29 00 27 45.4 K	332 50 33.7	9.4 9.4	28 7.0	30.6	38.3	42.0	46.0	50.0	20 69	41.38 +29.97	10.92	28 30.46 +29.82 +.17 −2
((δ) − D) $\frac{\kappa'}{100}$												29 0.93 +0.03
a_1												29 0.96
K		8.6	28 23.6	29.8	37.7	41.8	45.8	48.8	20 49	40.98 +30.6252	10.92	28 30.06 +30.4232 +.22 −2
((δ) − D) $\frac{\kappa'}{100}$												29 .068 +0.03
a_2												29 .061
30 48 29 34.3 K	144 50 15.0	9.0 9.0	29 55.1	30.186	26.1	29.9	33.8	37.8	14 62	29.24 +29.4798	10.84	30 18.40 +29.82 +.17 −2
((δ) − D) $\frac{\kappa'}{100}$												30 48.37 +0.04
a_1												30 48.34
K		9.2	29 52.0	17.9	25.7	29.7	33.4	37.3	14 40	28.80 +30.6251	10.84	30 17.96 +30.4232 +.21 −2
((δ) − D) $\frac{\kappa'}{100}$												30 48.57 +0.02
a_2												30 48.49

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Runs

Mar. 7 - 0 5.7 + R. +24 Rys. 11
9 6.14 " 24

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+22.6	4 10.8	5.4	39	7.95	43	40.40		35	50 48 52.21	
	1.35411					50 43	34.69			* .14	+10.02
	9.80136					+	17.52			+ .98	
	1.24341									+ 8.88	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.80										− * 8.53	
−0 7.76 δ_1		22 14.12		43 45.9						43 53.70	
d	+17.6	4 5.7	2.0	39	3.85	43	44.50		35	43 52.00	
	1.24551					50 43	38.36			* .9	+ 9.58
	9.80136					+	13.64			+ .98	
	1.13481									+ 8.39	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.80										− * 8.7	
−0 7.76 δ_2		22 14.15		43 45.1						43 52.88	
d	+21.2	1 29.8	23.3	26	2.65	56	21.80		25	49 56 32.80	
	1.32634					49 56	16.09			* .12	+ 8.54
	9.80867					+	16.71			+ .34	
	1.22295									+ 8.02	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.61										− * 8.29	
−0 8.56 δ_1		24 29.03		56 24.5						56 33.29.05	
d	+24.8	1 32.2	26.8	26	2.50	56	18.85		25	56 32.26	
	1.39445					49 56	12.71			* .17	+ 8.08
	9.80867					+	19.55			+ .36	
	1.29106									+ 7.59	
((δ) — D) $\frac{d'}{100}$										+ .20	
+18.61										− * 8.4	
−0 8.56 δ_2		24 29.18		56 23.4						56 31.94	
d	+14.3	4 11.1	5.4	24	8.25	58	40.10		20	49 58 45.65	
	1.15534					49 58	34.39			* .5	+ 9.30
	9.80822					+	11.26			+ .98	
	1.05150									+ 8.07	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.61										− * 8.28	
−0 9.12 δ_1		26 9.60		58 37.6						58 46.67	
d	+23.0	4 17.4	13.0	24	15.20	58	33.15		20	58 45.12	
	1.36173					49 58	29.01			* .14	+ 8.82
	9.80822					+	18.11			+ 1.03	
	1.25789									+ 7.63	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.61										− * 8.5	
−0 9.12 δ_2		26 9.60		58 36.3						58 44.44 45.44	
d	+23.5	4 6.00	13.8	49	5.90	32	51.45		45	50 33 4.02	
	1.37107					50 32	45.74			* .15	+ 10.02
	9.80305					+	18.28			+ 1.18	
	1.26206									+ 8.69	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.73										− * 8.42	
−0 10.24 δ_1		29 19.13		32 55.4						33 5.62	
d	+6.5	4 48.3	44.0	49	46.15	33	22.0		45	33 1.12	
	0.81291					50 32	56.06			* 1	+ 9.70
	9.80305					+	5.06			+ 1.15	
	0.70390									+ 8.26	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.73										− * 8.6	
−0 10.24 δ_2		29 19.34		32 52.0						33 2.22	
d	+23.3	3 13.7	7.2	8	10.45	14	37.90		5	50 14 50.43	
	1.36736					50 14	32.19			* .14	+ 9.28
	9.80580					+	18.24			+ .77	
	1.26110									+ 8.35	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.66										− * 8.31	
−0 10.84 δ_1		31 7.00		14 40.6						14 51.40	
d	+26.0	3 14.7	8.2	8	11.95	14	36.40		5	14 50.62	
	1.41497					50 14	30.26			* .18	+ 8.78
	9.80580					+	20.36			+ .77	
	1.30871									+ 7.84	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.66										− * 8.5	
−0 10.84 δ_2		31 7.15		14 40.1						14 50.90	

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Date$_1$ = Mar 7 1871 Observer W.A.R. Recorder A.M. Date$_2$ = Mar 9 Observer A.M. Recorder W.A.R.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
6	32 30	07° 46.0	50 45.7	7.8	31	15.0	32.0	39.8	43.8	48.1	51.4	21 51 +29.8	43.02	10.96	31 32.06 +29.82 +.17 −2 32 2.03 −+0.05 32 1.99
	κ														
	$((\delta)-D)\frac{\kappa'}{100}$														
	α_1														
	33 0														
	κ			7.0	31	14.0	31.6	39.0	43.0	47.1	51.4	21 31 +30.82	42.62	10.96	31 31.66 +30.82 +.22 −2 32 2.28 0.00 32 2.28
	$((\delta)-D)\frac{\kappa'}{100}$														
	α_2														
	33 16 32 32.3 31 45.8	26.7 164 50 17.0 27.4	8.8 8.2	32	13.5	24.8	37.3	41.4	45.2	49.1	20 28 +29.82	40.56	10.85	32 29.71 +29.82 +.17 −2 32 59.68 −+0.06 32 59.63
	κ														
	$((\delta)-D)\frac{\kappa'}{100}$														
	α_1														
	36 20														
	37 15 32 32.3 κ	50 17.0	7.0	32	46.4	16.4	24.0	27.8	31.5	35.8	13 55 +30.61	27.10	10.85	33 16.25 +30.82 +.21 −2 33 46.76 −+0.01 33 46.75
	$((\delta)-D)\frac{\kappa'}{100}$														
	α_2														
	38 38 38 18.8	49 50.9 50 9.1	8.8	38	43.8	2.9	10.5	14.3	18.0	22.0	6 7 +29.82	13.54	10.76	39 2.79 +29.82 +.17 −2 39 32.76 −+0.10 39 32.67
	κ														
	$((\delta)-D)\frac{\kappa'}{100}$														
	α_1														
			8.0	38	33.1	2.3	10.0	14.0	17.7	21.5	6 55 +30.61	13.10	10.75	39 2.35 +30.82 +.21 −2 39 32.06 −+0.05 39 32.81
	κ														
	$((\delta)-D)\frac{\kappa'}{100}$														
	α_2														
	40 32 39 18.3	45.6 50 46.4	8.8 8.7	39	30.5	3.4	11.1	15.2	18.9	22.9	7 15 +29.82	14.30	10.96	40 3.34 +29.82 +.17 −2 40 33.31 −+0.12 40 33.20
	κ														
	$((\delta)-D)\frac{\kappa'}{100}$														
	α_1														
			8.0	39	55.7	30	10.7	14.5	18.4	22.5	6 41 +30.82	13.82	10.96	40 2.86 +30.82 +.22 −2 40 33.48 −+0.07 40 33.31
	κ														
	$((\delta)-D)\frac{\kappa'}{100}$														
	α_2														
	41 22 40 κ 8.2	41.1 50 41.8	8.4 8.5	40	40.2	53.2	1.1	5.0	8.7	12.9	32 0 +29.82	9.64	10.94	40 53.24 +29.82 +.17 −2 41 23.21 −+0.12 41 23.10
	κ														
	$((\delta)-D)\frac{\kappa'}{100}$														
	α_1														
			8.0	40	43.1	52.9	0.6	4.5	8.4	12.4	31 58 +30.61	3.76	10.94	40 52.82 +30.41 +.22 −2 41 23.43 −+0.07 41 23.27
	κ														
	$((\delta)-D)\frac{\kappa'}{100}$														
	α_2														

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+17.8	3′ 13.6	6.2	38′	9.90	44′	38.45		35	50 44 45.99	
	1.23300					50 44	32.74			+ .8	+9.88
	9.80120						+ 13.25			+ .77	
	1.12214									+ 8.84	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.77 δ_1		32 20.76		44 36.1						− 8.45	
−0 11.28										44 47.42	
d	+17.7	3 11.9	7.6	38	9.75	44	38.60		35	44 46.17	
	1.24797					50 44	32.46			+ .9	+9.39
	9.80120					+	13.71			+ .77	
	1.13711									+ 8.41	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.77 δ_2		32 20.95		44 35.17						− 8.6	
−0 11.28										44 46.96	
d	16.262	1 41.1	35.8	16	38.45	16	9.90		5	50 16 16.87	
	1.20952					50 16	4.19			+ .7	+9.01
	9.88565					+	12.68			+ .38	
	1.10311									+ 8.40	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.66										− 8.31	
−0 11.68 δ_1		33 18.29		16 5.9						16 17.57	
d	(+29.9)	1 55.2	50.9	6	52.60	15	55.75		5	16 13.01	
	1.47567					50 15	49.61			+ .24	+8.46
	9.80565					+	23.40			+ .46	
	1.36926									+ 7.94	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.65										− 8.5	
−0 11.88 δ_2		34 5.40		16 1.1						16 12.97	
d	+19.0	3 7.6	2.8	33	5.20	49	43.15		30	49 49 52.45	
	1.27875					49 49	37.44			+ .10	+8.84
	9.80957					+	15.01			+ .74	
	1.17626									+ 7.90	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.53										− 8.13	
−0 13.88 δ_1		39 51.20		49 39.3						49 53.16	
d	+29.2	8 15.0	11.8	33	13.40	49	34.95		30	49 51.87	
	1.46538					49 49	28.81			+ .23	+8.34
	9.80957					+	23.06			+ .77	
	1.36289									+ 7.50	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.53 δ_2										− 8.3	
−0 13.88		39 51.34		49 38.0						49 51.91	
d	+12.8	2 30.3	25.3	37	27.80	45	20.55		35	50 45 24.76	
	1.10721					50 45	14.84			+ .5	+9.76
	9.88120					+	9.92			+ .60	
	0.99635									+ 8.91	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.78 δ_1										− 8.36	
−0 14.20		40 51.93		45 12.0						45 26.16	
d	+12.2	2 24.3	20.4	37	22.35	45	26.00		35	45 25.44	
	0.85733					50 45	19.86			+ .2	+9.30
	9.80120					+	5.58			+ .58	
	0.74647									+ 8.44	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.73										− 8.5	
−0 14.20 δ_2		40 52.04		45 12.0						45 26.24	
						40				40	
d	+13.0	2 57.8	51.6	42	54.70	39	53.65		40	50 39 58.03	
	1.11394					50 39 40	47.94			+ .5	+9.75
	9.80194					+	10.09			+ .40	
	1.00385									+ 8.80	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.71										− 8.3	
−0 14.52 δ_1		41 41.81		40 45.0						40 39 59.48	
d	+19.7	2 53.0	48.8	42.1	50.90	40	57.45		40	39 40 58.84	
	0.98677					50 39 40	51.31			+ .3	+9.30
	9.80194					+	7.53			+ .67	
	0.84668									+ 8.36	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.71										− 8.5	
−0 14.52 δ_2		41 42.98		40 45.1						39 59.64	

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Date$_1$ = May 7 Observer V.A.R. Recorder S.M. Date$_2$ = May 9 Observer A.M. Recorder W.H.K. Ru

Star. α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
41 42 26 s 41 2.5 s κ ((δ) — D) $\frac{\kappa'}{100}$ a_1	49.4 50 50.2	82 8.8	41 35.9 s	47.7 s	55.5 s	59.5 s	3.4 s	7.4 s	29 35 +29.97 98	58.70 s	10.98	41 47.2 s +29.82 3 + .17 − .2 42 17.69 − + 0.13 42 17.57
κ ((δ) — D) $\frac{\kappa'}{100}$ a_2		8.6	41 44.1	(47.4)	55.1	59.6	3.0	7.0	+ 30.52		10.98	41 [illegible] +30.41 32 + .22 − .2 42 17.93 − + 10.08 42 17.76
44 35 43 21.4 κ ((δ) — D) $\frac{\kappa'}{100}$ a_1	10.5 50 11.4	7.0 7.5	43 51.8	44 5.0	12.7	16.6	20.3	24.3	89 15.78 +29.97 98		10.83	44 4.96 +29.82 3 + .17 − .2 44 34.92 − + 0.14 44 34.79
κ ((δ) — D) $\frac{\kappa'}{100}$ a_2		7.8	43 44.1	4.6	12.4	16.1	20.0	23.8	7 6 9 15.38 +30.60 57		10.83	44 4.55 +30.41 32 + .22 − .2 44 35.15 − + 0.09 44 34.97
46 29.6 45 14.6 κ ((δ) — D) $\frac{\kappa'}{100}$ a_1	21.4 50 22.3	9.0 9.0	45 39.8	57.6	7.3	11.2	15.2	19.0	35 23 70.46 +29.97 98		10.87	45 5.859 +29.82 3 + .17 − .2 46 29.56 − + 0.16 46 29.41
κ ((δ) — D) $\frac{\kappa'}{100}$ a_2		8.0	45 37.4	54.1	6.7	10.9	14.7	18.6	35 0 70.00 +30.70 57		10.87	45 59.13 +30.41 32 + .21 − .2 46 29.73 − + 0.11 46 29.53
47 16 46 2.4 κ ((δ) — D) $\frac{\kappa'}{100}$ a_1	4.0 50 8.0	8.0 8.9	46 38.4	44.5	51.7	55.7	59.6	3.6	27 5 15.5.02 +29.97 98		10.80	46 44.22 +29.82 3 + .17 − .2 47 14.19 − + 0.16 47 14.04
κ ((δ) — D) $\frac{\kappa'}{100}$ a_2		8.8	46 34.8	43.7	51.2	55.3	59.1	3.0	27 23 54.46 +30.70 57		10.80	46 43.66 + 30.41 32 + .21 − .2 47 14.26 − + 0.11 47 14.06
48 89 6 46 2.4 κ ((δ) — D) $\frac{\kappa'}{100}$ a_1	6.0 50 5.0	9.6 8.9	47 51.0	5.4	13.0	16.6	20.8	24.8	8 0 6 16.12 +29.97 98		10.81	48 5.31 +29.82 3 + .17 − .2 48 35.28 − + 0.18 48 35.11
κ ((δ) — D) $\frac{\kappa'}{100}$ a_2		9.5	47								10.81	

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+11.8	3′ 37.4	31.8	33	34.60	49	13.75		30′	50 49 17.17	
	1.04168					50 49	8.04			+ 4	+10.10
((δ) − D) $\frac{d'}{100}$	9.80058					+	9.13			+ .86	
	0.96040									+ 8.94	
										+ .30	
+18.74										− 8.36	
−0.14.80 δ_1		42 36.31		49 4.1						49 18.91	
d	+3.2	3 28.0	24.3	33	26.15	49	22.20		80	49 18.54	
	0.50515					50 49	16.06			+ 1	+9.65
((δ) − D) $\frac{d'}{100}$	9.80058					+	2.48			+ .82	
	0.39367									+ 8.54	
										+ .30	
+18.74										− 8.5	
−0 14.80 δ_2		42 36.50		49 4.9						49 19.69	
d	+13.1	1 55.5	50.7	10	53.10	10	55.26		10	50 10 59.58	
	1.11727					50 10	49.54			+ .5	+9.00
((δ) − D) $\frac{d'}{100}$	9.86411					+	10.04			+ .46	
	1.01162									+ 8.29	
										+ .30	
+18.58										− 8.14	
−0 15.60 δ_1		44 53.77		10 44.8						10 50.44	
d	+20.4	1 59.0	54.2	10	56.60	10	51.75		10	11 1.60	
	1.30963					50 10	45.61			+ .11	+8.52
((δ) − D) $\frac{d'}{100}$	9.80641					+	15.99			+ .46	
	1.20398									+ 7.87	
										+ .30	
+18.58										− 8.3	
−0 15.60 δ_2		44 53.65		10 46.2						11 1.82	
d	+19.8	1 42.6	37.3	1	39.95	21	8.40		0	50 21 18.16	
	1.29664					50 21	2.69			+ .11	+9.07
((δ) − D) $\frac{d'}{100}$	9.80489					+	15.47			+ .41	
	1.18950									+ 8.47	
										+ .30	
+18.61										− 8.17	
−0 16.24 δ_1		46 48.02		21 2.8						21 19.06	
d	+21.7	1 42.2	38.0	1	40.10	21	8.25		0	21 19.06	
	1.33646					50 21	2.11			+ .13	+8.63
((δ) − D) $\frac{d'}{100}$	9.80489					+	16.95			+ .41	
	1.22929									+ 8.05	
										+ .30	
+18.61										− 8.3	
−0 16.24 δ_2		46 48.14		21 3.2						21 19.39	
d	+5.8	2 25.0	23.9	17	24.45	5	21.90		15	50 5 20.75	
	0.76343					50 5	16.19			+ .1	+9.06
((δ) − D) $\frac{d'}{100}$	9.80731					+	4.56			+ .58	
	0.65868									+ 8.19	
										+ .30	
+18.54										− 8.08	
−0 16.52 δ_1		47 32.58		5 5.2						5 21.73	
d	+8.9	2 30.8	27.5	17	29.15	5	19.20		15	5 20.05	
	0.94939					50 5	13.06			+ .2	+8.65
((δ) − D) $\frac{d'}{100}$	9.80731					+	6.99			+ .60	
	0.84464									+ 7.77	
										+ .30	
+18.54										− 8.3	
−0 16.52 δ_2		47 32.60		5 3.9						5 20.40	
d	+14.3	0 82.3	26.0	15	29.15	7	19.20		15	50 7 24.72	
	1.15534					50 7	13.49			+ .5	+8.60
((δ) − D) $\frac{d'}{100}$	9.80701					+	11.23			+ .12	
	1.05029									+ 8.23	
										+ .30	
δ_1										− 8.07	
										7 25.25	
		0 84.2	28.9						15		
d											
((δ) − D) $\frac{d'}{100}$											
δ_2											

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Date$_1$ = Mar 7 Observer N.A.R. Recorder A.M. Date$_2$ = Mar 9 Observer A.M. Recorder N.A.R.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
κ	5h 50m 5s.1	0° 29′.0	9.5	44s	58s.1	50m 20s.4	28s.3	32s.1	35s.7	40s.0	15 65 +29.98	31s.30	10.90	50m 20.40 +29.83 +.17 −.2
((δ) − D) $\frac{\kappa'}{100}$														50 50.38 +0.19
α_1														50 50.19
κ			9.6	49	53s.5	20s.0	28s.0	31s.5	35s.4	39s.2	15 41 +30.61	30.82	10.90	50 19.92 +30.47 +.22 −.2
((δ) − D) $\frac{\kappa'}{100}$														50 50.53 +0.14
α_2														50 50.30
κ	5h 51m 1.4	0° 1.6	7.8 8.5	51	27.5	44.5	52.2	56.0	59.7	3.7	27 61 +29.98	55.22	10.79	51 44.43 +29.83 +.17 −.2
((δ) − D) $\frac{\kappa'}{100}$														52 14.41 +0.20
α_1														52 14.21
κ			8.2	51	22.2	44.0	57.4	55.3	54.5	3.4	27 39 +30.57	54.78	10.79	51 43.99 +30.47 +.21 −.2
((δ) − D) $\frac{\kappa'}{100}$														52 14.59 +0.15
α_2														52 14.35
κ	5h 52m 15.5	20.0 21.2	9.1 9.0	52	39.8	59.0	6.7	10.8	14.5	18.4	34 94 +29.98	69.88	10.87	52 59.01 +29.83 +.17 −.2
((δ) − D) $\frac{\kappa'}{100}$														53 28.99 +0.21
α_1	54m 19s													53 28.78
κ			8.7	52	39.6	58.5	6.1	10.2	14.1	18.0	34 69 +30.57	69.38	10.87	52 58.51 +30.47 +.21 −.2
((δ) − D) $\frac{\kappa'}{100}$														53 29.11 +0.16
α_2														53 28.86
κ	5h 54m 35.3	4° 48.3	8.8 9.1	54	54.9	55m 20.7	28.5	32.5	36.4	40.5	15 86 +29.98	31.72	10.97	55 20.75 +29.83 +.17 −.2
((δ) − D) $\frac{\kappa'}{100}$														55 50.73 +0.24
α_1														55 50.49
κ			9.3	55	1.3	20.3	28.7	32.0	35.9	39.7	15 60 +30.52	31.20	10.97	55 20.23 +30.47 +.22 −.2
((δ) − D) $\frac{\kappa'}{100}$														55 50.84 +0.19
α_2														55 50.56
κ	5h 56m 32.5	8° 31.3	8.2 8.5	56	55.4	17.1	24.8	28.7	32.6	36.6	13 98 +29.98	27.96	10.90	57 17.06 +29.83 +.17 −.2
((δ) − D) $\frac{\kappa'}{100}$														57 47.04 +0.25
α_1														57 46.79
κ			8.7	56	54.8	16.3	24.2	28.1	32.1	36.0	13 69 +30.52	27.38	10.90	57 16.48 +30.47 +.22 −.2
((δ) − D) $\frac{\kappa'}{100}$														57 47.09 +0.20
α_2														57 46.80

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+22.5	3 7.5	1.3	53	4.40	29	43.95		5.0	50 29 55.61	
	1.34830					50 29	38.24			*− .13	+9.55
	9.80 351					+	17.37			+ .74	
((δ) — D) $\frac{d'}{100}$	1.23975									+ 8.64	
										+ .30	
δ_1										−* 8.14	
										8.00	
										29 57.16	
d	+26.4	3 9.5	6.3	53	7.40	29	40.95		5.0	29 55.37	
	1.42160					50 29	34.81			*− .19	+9.05
	9.80 351					+	20.56			+ .74	
((δ) — D) $\frac{d'}{100}$	1.31305									+ 8.20	
										+ .30	
δ_2										−* 8.2	
										29 56.22	
d	+16.9	2 7.2	0.8	22	4.00	0	44.35		2.0	50 0 51.94	
	1.22789					50 0	38.64			*− .8	+8.82
	9.80 792					+	13.30			+ .50	
((δ) — D) $\frac{d'}{100}$	1.12375									+ 8.10	
+18.50										+ .30	
$-0\ 18.24$ δ_1		52 32 29.71		0 34.5						−* 8.00	
										0 52.76	
d	+21.8	2 8.3	3.9	22	6.10	0	42.25		2.0	0 53.26	
	1.33846					50 0	36.11			*− .13	+8.37
	9.80 792					+	17.15			+ .50	
((δ) — D) $\frac{d'}{100}$	1.28432									+ 7.70	
+18.50										+ .30	
$-0\ 18.24$ δ_2		52 32.85		0 38.2						−* 8.2	
										0 53.43	
d	+19.2	3 29.4	23.9	3	26.65	19	21.70		0	50 19 31.00	
	1.28330					50 19	15.99			*− .10	+9.46
	9.80 519					+	15.01			+ .82	
((δ) — D) $\frac{d'}{100}$	1.17643									+ 8.44	
+18.56										+ .30	
$-0\ 18.64$ δ_1		53 47.34		19 13.8						−* 8.4	
										19 32.42	
d	+18.9	3 26.5	23.7	3	25.10	19	23.25		0	19 31.89	
	1.27646					50 19	17.11			*− .10	+9.04
	9.80 519					+	14.78			+ .82	
((δ) — D) $\frac{d'}{100}$	1.16959									+ 8.02	
+18.56										+ .30	
δ_2										−* 8.2	
$-0\ 18.64$		53 47.42		19 14.1						19 32.73	
d	+20.8	1 1.8	56.2	35	5.7.0	46	49.35		3.5	50 46 59.74	
	1.31506					50 46	43.64			*− .12	+9.37
	9.80 089					+	16.10			+ .24	
((δ) — D) $\frac{d'}{100}$	1.20689									+ 8.95	
+18.65										+ .30	
$-0\ 19.36$ δ_1		56 9.14		46 41.6						−* 8.16	
										47 50.95	
d	+18.9	1 0.3	55.4	35	5.7.85	42 6	50.50		3.5	46 58.99	
	1.27646					50 46	44.36			*− .10	+8.97
	9.80 089					+	14.63			+ .24	
((δ) — D) $\frac{d'}{100}$	1.16529									+ 8.53	
+18.65										+ .30	
δ_2										− 8.4	
$-0\ 19.36$		56 9.22		46 40.2						46 59.56	
d	+21.7	3 40.6	35.0	53	37.80	29	10.55		5.0	50 29 21.75	
	1.33646					50 29	4.84			*− .13	+9.65
	9.80 366					+	16.91			+ .86	
((δ) — D) $\frac{d'}{100}$	1.22806									+ 8.62	
+18.57										+ .30	
$-0\ 20.12$ δ_1		58 5.36		29 3.2						−* 8.04	
										29 23.36	
d	+21.7	3 37.1	34.3	53	36.60	29	12.35		5.0	29 23.12	
	1.33646					50 29	6.21			*− .13	+9.25
	9.80 366					+	16.91			+ .86	
((δ) — D) $\frac{d'}{100}$	1.22806									+ 8.22	
+18.57										+ .30	
$-0\ 20.12$ δ_2		58 5.37		29 4.1						− 8.2	
										29 24.18	

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Date$_1$ = Mar 7 36 | Observer W.A.R. | Recorder A.M. | Date$_2$ = Mar 9 37 | Observer A.M. | Recorder W.A.R. | Ru

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
6 κ	58 47	−27	88	58	17.0	24.6	28.4	32.0	36.2	13 62	27.64	10.78	58 1686
	57 32.8	50 41.4	8.9							+29.98			+29.83
													+ .17
													− 2
													58 46.84
													∓ 0.25
((δ) − D) $\frac{\kappa'}{100}$													58 46.59
a_1													+18.
													−02
			8.3	58	16.3	24.2	28.1	31.8	35.7	13 61	27.22	10.78	58 1644
										+30.59 51			+ 30.40 32
													+ .21
													− 2
													58 47.03
													∓ 0.20
((δ) − D) $\frac{\kappa'}{100}$													58 46.75
a_2													+18.
													−02
59 κ	48	56 8	9.6	59	~~14.5~~ 45.2	~~27.3~~ 19.5	~~31.0~~ 27.3	~~35.0~~ 31.0	~~39.2~~ 35.0	~~45.2~~ 39.2		11.01	
	58 34.0	50 58.1	9.5							15 20	30.40		59 1939
										+29.98			+ 29.83
													+ .17
													− 2
													59 49.31
((δ) − D) $\frac{\kappa'}{100}$													∓ 0.27 49.10
a_1													+18.
													−0
			9.3	59	18.8	26.6	30.8	34.8	38.5	14 95	29.90	11.01	59 1889
										+30.60 52			+ 30.40 32
													+ .22
													− 2
													59 49.49
((δ) − D) $\frac{\kappa'}{100}$													∓ 0.22
a_2													+18
													−0 20
7 κ	1 11	65	8.2	0	22.5	6.0	9.7	13.6	17.5			10.81	59 5821
	59 ~~27.2~~ 13.4	50 7.9 94	7.3		58.31					+29.98 99			+ 29.884
													+ .17
													− 2
													0 28.19
((δ) − D) $\frac{\kappa'}{100}$													∓ 0.27
a_1	12												~~59.73~~
				0	59								+18.
													0 27.93
			8.5	~~0~~	57.6	5.6	9.2	13.3	17.2	34 29	68.58	10.81	~~0~~ 5.77
										+30.59 51			59 + 30.40 32
													+ .21
													− 2
													~~0~~ 28.36
((δ) − D) $\frac{\kappa'}{100}$													∓ 0.22
a_2													0 28.06
													+18.
													−0 2
3 κ	25	89	8.3	2	36.0	54.9	2.7	6.5	10.3	14.3	32 87 65.74	10.82	2 549.2
	2 10.7	50 10.3	8.6							+29.98 99			+ 29.884
													+ .17
													− 2
													3 24.90
((δ) − D) $\frac{\kappa'}{100}$													∓ 0.29
a_1													3 24.62
													+18.
													−0.2
			8.8	~~3.8~~	54.5	2.1	6.0	10.3	13.9	32 68 65.36		10.82	2 545.4
										+30.59 51			+ 30.40 32
													+ .21
													− 2
													3 25.13
((δ) − D) $\frac{\kappa'}{100}$													∓ 0.24
a_2													3 24.81
													+18.
													−0 2
4 κ	52	35 3	9.3	4	0.1	24.0	31.6	35.6	39.4	43.2	17 38 34.76	10.92	4 2384
	3 38.6	50 36.8									+29.98 99		+29.884
													+ .17
													− 2
													4 53.72
((δ) − D) $\frac{\kappa'}{100}$													∓ 0.30
a_1													4 53.53
													+18.
													−0 2
			9.0	4	7.0	23.4	31.1	35.1	39.0	43.0	17 66 34.32	10.92	4 2340
											+30.60 52		+ 30.40 32
													+ .22
													− 2
													~~4~~ 54.00
((δ) − D) $\frac{\kappa'}{100}$													∓ 0.25
a_2													4 53.67
													+18.
													−0 2

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+12.5	0′ 25.8	20.3	25	33.15	57	15.20		25	49 57 19.02	
	1.08279					49 57	9.49			− 4	+8.45
	9.80852					+	9.53			+ 14	
	0.97925									+ 8.05	
((δ) − D) $\frac{d'}{100}$										+ 30	
+18.44 δ_1										− 7.87	
−0 20.44		59 5.03		56 59.2						57 19.60	
d	+12.2	0 24.0	30.0	25	32.00	57	16.35		25	57 19.82	
	1.08636					49 57	18.21			− 4	+8.05
	9.80852					+	9.61			+ 12	
	0.98282									+ 7.67	
((δ) − D) $\frac{d'}{100}$										+ 30	
+18.44 δ_2										− 8.0	
−0 20.44		59 5.19		56 59.4						57 19.87	
d	−25.8	1 40.3	24.9	25	37.60	56	10.75		25	50 55 45.13	
	1.41162n					50 56	5.04			− .18	+9.59
	9.79950					−	19.91			+ 38	
	1.29906									+ 9.09	
((δ) − D) $\frac{d'}{100}$										+ 30	
+1865 δ_1										− 8.09	
−0 20.80		0 7.75		56 25.8						55 46.63	
d	+12.2	1 10.4	5.9	26	8.05	56	40.30		25	56 43.57	
	1.08636					50 56	34.16			− 4	+9.22
	9.79950					+	9.41			+ 26	
	0.97380									+ 8.70	
((δ) − D) $\frac{d'}{100}$										+ 30	
+1865										− 8.3	
−0 20.80 δ_2		0 7.84		56 23.7						56 44.49	
1.38561n	−24.3										
~~9.80686~~	~~+33.7~~	0 12.0	4.9	15	8.45	7	39.90		15	50 ~~8~~ 7 ~~22.1~~ 15.12	
1.28041m	~~1.55264~~					50 7	34.19			− .15	+8.40
d	~~9.80686~~					±	~~2802~~			+ 2	
	~~1.44747~~						~~19.09~~			+ 8.23	
((δ) − D) $\frac{d'}{100}$										+ 30	
+1847 δ_1										− 7.85	
−0 21.28		0 46.40		6 54.4						7 15.67	
d	−9.10	0 14.0	10.0	15	12.00	7	36.35		15	7 13.73	
	1.32222n					50 7	30.21			− .12	+8.07
	9.80686					−	16.48			+ 5	
	1.21702									+ 7.84	
((δ) − D) $\frac{d'}{100}$										+ 30	
+18.47 δ_2										− 8.1	
−0 21.28		0 46.53		6 52.4						7 13.70	
d	+18.9	4 13.6	7.7	14	10.50	8	37.85		10	50 8 46.97	
	1.27646					50 8	32.14			− .10	+9.45
	9.80671					+	14.83			+ 1.01	
	1.17111									+ 8.24	
((δ) − D) $\frac{d'}{100}$										+ 30	
+18.45 δ_1										− 7.80	
−0.22.00		3 43.07		8 26.6						8 ~~47.62~~ 48.62	
d	+17.5	4 11.1	6.2	14	8.65	8	39.70		10	8 47.29	
	1.24304					50 8	33.56			− 9	+9.04
	9.80671					+	13.73			+ 98	
	1.13769									+ 7.85	
((δ) − D) $\frac{d'}{100}$										+ 30	
+18.45 δ_2										− 8.0	
−0 22.00		3 43.26		8 26.3						8 48.33	
d	+23.7	2 19.2	13.3	47	16.25	35	32.10		45	50 35 44.81	
	1.37475					50 35	26.39			− .15	+9.44
	9.80259					+	18.42			+ .55	
	1.26528									+ 8.44	
((δ) − D) $\frac{d'}{100}$										+ 30	
+18.54 δ_1										− 7.92	
−0 22.48		5 12.07		35 23.8						35 46.33	
d	+16.4	2 12.0	7.6	47	9.80	35	38.55		45	35 45.16	
	1.21484					50 35	32.41			− .7	+9.10
	9.80259					+	12.75			+ .53	
	1.10537									+ 8.34	
((δ) − D) $\frac{d'}{100}$										+ 30	
+18.54 δ_2										− 8.2	
−0 22.48		5 12.21		35 23.6						35 46.06	

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Date$_1$ = May 7 Observer W.A.R. Recorder A.M.

Date$_2$ = May 9 Observer A.M. Recorder W.A.R.

37

Star.	α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	5 48	0 80	86	5 5.4	18.4	26.1	29.8	33.7	37.7	14 57	29.14	10.79	5 18 35
4	33.8	50 2.5	91.0							+29.98 99			+29.8 84
	κ												+ .17
	((δ) — D) $\frac{\kappa'}{100}$												− 2
													5 48.33
													− * 0.30
	a_1												5 48.04
			86	5 8.2	18.1	25.9	29.4	33.4	37.2	M 38 28.76		10.79	5 17 97
										+30.54 51			+30.44 32
	κ												+ .21
	((δ) — D) $\frac{\kappa'}{100}$												− 2
													5 48.56
													− * 0.25
	a_2												5 47.93 48.23
8	2.6	18 5	83	7 2.64	57.6	57.3	3.1	6.9	10.9	31 18 62.36		10.86	7 57.50
7	7.0	50 20.0	9.4							+29.98 99			+29.8 84
	κ												+ .17
	((δ) — D) $\frac{\kappa'}{100}$												− 2
													8 21.48
													− * 0.33
	a_1												8 21.16
			8.0	7 2.90	57.1	58.7	2.8	6.5	10.3	30 96 61.92		10.86	7 57.06
										+30.54 51			+30.44 32
	κ												+ .21
	((δ) — D) $\frac{\kappa'}{100}$												− 2
													8 21.66
													− * 0.28
	a_2												8 21.29
9	40	−6 5	8.3	8 55.9	9 10.1	17.8	21.5	25.5	29.4	10 43 20.86		10.77	9 10.09
8	26.5	50 −4.9	8.4							+29.98 99			+29.84
	κ												+ .17
	((δ) — D) $\frac{\kappa'}{100}$												− 2
													9 40.07
													− * 0.33
	a_1												9 39.75
			8.8	8 5.00	9.6	17.3	21.2	25.0	28.8	10 19 20.38		10.77	9 9.61
										+30.54 51			+30.44 32
	κ												+ .21
	((δ) — D) $\frac{\kappa'}{100}$												− 2
													9 40.20
													− * 0.28
	a_2												9 39.84
11	27	15 0	9.5	10 40.8	57.6	5.2	8.9	12.8	16.7	34 14 68.28		10.85	10 57.43
10	13.6	50 16.7	9.3							+29.98 99			+29.84
	κ												+ .17
	((δ) — D) $\frac{\kappa'}{100}$												− 2
													11 27.41
													− * 0.35
	a_1												11 27.07
			9.3	10 36.5	57.1	4.8	8.7	12.5	16.4	33 95 67.90		10.85	10 57.05
										+30.54 51			+30.44 32
	κ												+ .21
	((δ) — D) $\frac{\kappa'}{100}$												− 2
													11 27.64
													− * 0.30
	a_2												11 27.26
12	24	23 5	7.5	11 45.5	52.2	57.9	3.9	7.8	11.6	31 54 63.08		10.88	52.20 11 57.62 11 52.20
11	10.3	50 2.5.2	7.5	41.5	54.0	1.5	4.5	9.2	13.3	3225 64.50		10.88	+29.84 11 57.62 11 52.62
	κ		7.2							+29.98 +29.98 99 99			+ .17 + 29.84 + 29.84
	((δ) — D) $\frac{\kappa'}{100}$												− 2 + .17 − 2
												22.18	12 23.60
												− * 0.36	− * 0.36
	a_1											12 21.83	12 23.25
			7.5	18 38.1	51.7	5.54	3.5	7.2	11.0	31 28 62.56		10.88 51.68	11 51.68
			7.5	34.2	58.3	8.09	4.7	8.6	12.8	3200 64.00		10.88	11 53.12
	κ									+30.60 +30.60 52 52			+30.44 32 + 22
	((δ) — D) $\frac{\kappa'}{100}$												− 2
												22.28	12 23.72
												− 0.31	− * 0.31
	a_2											12 21.89	12 23.33

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+1.30	2 19.2	14.0	22	16.60	0	31.75		20	50 0 36.27	
d	1.11394					50 0	26.04			+− 5	+8.90
	9.80792					+	10.23			+ 55	
	1.00980									+ 8.10	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.40										−+ 7.73	
−0 22.80 δ_1		6 6.44		0 14.6						0 37.44	
	+9.8	2 16.0	10.1	22	13.05	0	35.30		20	0 36.87	
d	0.99123					50 0	29.16			+− 3	+8.52
	9.80792					+	7.71			+ .53	
	0.88709									+ 7.72	
((δ) − D) $\frac{d'}{100}$										+ .30	
48.23 +18.40										−+ 8.0	
−0 22.80 δ_2		6 6.63		0 14.6						0 37.39	
	+25.1	4 39.8	34.8	4	37.20	18	11.05		0.	50 18 24.97	
d	1.39964					50 18	5.34			+− .17	+9.65
	9.80534					+	19.63			+ 1.10	
	1.29295									+ 8.42	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.44										−+ 7.76	
−0 23.64 δ_1		8 39.60		18 3.22						18 26.86	
	+22.1	4 35.2	32.2	4	33.70	18	14.65		0	18 25.80	
d	1.32439					50 18	8.51			+− .13	+9.30
	9.80534					+	17.29			+ 1.10	
	1.23767									+ 8.03	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.44										−+ 8.0	
−0 23.64 δ_2		8 39.73		18 3.5~~7~~						18 27.10	
	+14.2	4 56.0	50.7	29	53.35	52	55.00		25	49 53 0.49	
d	1.15229					49 52	49.29			+− 5	+9.40
	9.80912					+	11.20			+ 1.18	
	1.04935									+ 7.97	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.34										−+ 7.63	
−0 24.12 δ_1		9 58.09		52 38.1						53 2.26	
	+19.6	4 58.2	58.3	29	53.75	52	52.60		25	53 1.92	
d +	1.29226					49 52	46.46			+− .11	+8.97
	9.80912					+	15.46			+ 1.18	
	1.18932									+ 7.60	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.34										−+ 7.9	
−24.12 δ_2		9 58.18		52 38.9						53 2.99	
	+16.6	2 57.4	57.1	7	54.25	14	54.10		15	50 15 1.39	
d	1.22011					50 14	48.39			+− .8	+9.29
	9.80580					+	13.00			+ 70	
	1.11385									+ 8.37	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.41										−+ 7.6~~8~~9	
−0 24.68 δ_1		11 45.48		14 38.3						15 2.99	
	+20.6	2 58.1	58.6	7	55.85	14	52.50		15	15 2.49	
d	1.31887					50 14	46.36			+− .12	+8.86
	9.80580					+	16.13			+ 70	
	1.20461									+ 7.98	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.41										−+ 7.9	
−0 24.68 δ_2		11 45.67		14 38.8	37.50					15 3.45	
	+6.7	4 39.0	34.0	59	36.50	23	11.85		55	50 23 11.37	23 15.59
	+12.1					~~23 11.55~~				+− ~~.2~~	9.89 +− 4 9.87
d	0.82607			59	86.50	50 23	6.14			+ 1.10	+ 1.10
	9.80458					+	5.23			+ 8.51	+ 8.51
((δ) − D) $\frac{d'}{100}$	0.71859									+ .30	+ .30
	1.08279			22 47.5						−+ 7.72	+− 7.72
+18.43	9.80458	12 40.86		~~23 37.6~~		50 23	6.14			+ 9.45	
−0 25.04 δ_1	0.97531	4 16.8		22 52.7						23 12.64	23 17.74 ✓
	+13.6	4 42.1	38.8	59	40.45	23	7.90		55	50 23 12.38	23 16.52
	+18.9					~~23~~	~~7.70~~			+− 6	9.49 +− .10 9.44
d	1.13354					50 23	1.76			+ 1.13	+ 1.13
	9.80458					+	10.62			+ 8.11	+ 8.11
(δ) − D) $\frac{d'}{100}$	1.02606									+ .30	+ .30
+18.43	1.27646	40.32				50 23	1.76			−+ 8.0	−+ 8.0
−0 25.04 δ_2	9.80458	12 ~~41.46~~		22 48.8		+	14.76			23 13.87	23 17.96
	1.16898	12 41.76		22 ~~45.8~~							
				52.9							

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Date$_1$ = May 14 '86 Observer W.H.R. Recorder A.M. Date$_2$ = May 9 '87 Observer A.M. Recorder W.H.R.

Star. α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
14 45^s	0 8.5	9.1	13 59.1	14 16.8	24.3	28.3	32.2	36.1	13 7 7 27.54		1.082	14 16.72
13 31.8	50 10.3	8.8							+29.98 99			+29.884
K												+ .17
((δ) — D) $\frac{\kappa'}{100}$												− 2
												14 46.70
c_1												− 0.37
												14 46.34
		8.6	13 57.2	16.3	24.0	27.7	32.7	35.6	13 5 32 7.06		1.082	14 16.24
K									+30.59 51			+30.732
((δ) — D) $\frac{\kappa'}{100}$												+ .21
												− 2
												14 46.83
c_2												− 0.32
												14 46.43
16 14	38 9	8.8	15 29.4	47.0	57.8	58.6	2.5	6.3	28 9 2 57.84		1.093	15 46.91
15 0.7	50 37.7	9.0							+29.98 99			+29.834
K												+ .17
((δ) — D) $\frac{\kappa'}{100}$												− 2
												16 16.89
a_1												− 0.39
17 58												16 16.51
		8.8	15 25.8	46.5	54.2	58.2	1.9	6.0	28 6 8 57.36		1.093	16 46.43
K									+30.59 52			+30.732
((δ) — D) $\frac{\kappa'}{100}$												+ .22
												− 2
												16 17.02
a_2												− 0.34
												16 16.61
18 49	39 0	8.6	~~14 10.3~~	~~27.8~~	~~35.5~~	~~39.4~~	~~43.0~~	~~48.1~~	15 7 9 31.58		1.094	18 20.64
17 35.8	50 40.8	8.3	15 7.3	20.5	28.4	32.3	36.2	40.2	+29.98 99			+29.884
K												+ .17
((δ) — D) $\frac{\kappa'}{100}$												− 2
												18 50.62
a_1												− 0.48
												18 50.22
		8.7	18 0.8	20.1	28.0	32.0	35.7	39.7	15 5 5 31.10		1.094	18 20.16
K									+30.59 52			+30.732
((δ) — D) $\frac{\kappa'}{100}$												+ .22
												− 2
												18 50.75
a_2												− 0.36
												18 50.32
19 48	12 9	9.0	~~18 7.3~~	~~20.8~~	~~28.4~~	~~32.2~~	~~36.2~~	~~40.3~~	2505 50.10		1.084	19 39.26
18 ~~34.8~~	50 ~~47.7~~	9.0	19 25.0	39.3	47.0	50.8	54.8	58.6	+29.98 99			+29.884
~~37.8~~ K	15.3											+ .17
((δ) — D) $\frac{\kappa'}{100}$												− 2
												20 9.24
a_1												− 0.42
												20 8.83
18 34.8	50 14.7	9.0	19 6.2	18.8	26.5	30.0	34.4	38.2	14 7 9 29.58		1.084	19 18.74
K									+30.58 51			+30.732
((δ) — D) $\frac{\kappa'}{100}$												+ .21
												− 2
												19 49.22
a_2												− 0.37
												19 48.88
21 5	5 6 2	9.5	20 58.7	21 23.5	31.3	35.2	39.0	43.2	17 2 2 34.44		1.085	21 2.344
19 51.3	50 5 ~~2~~ 1	9.4							+29.98 99			+29.884
K												+ .17
((δ) — D) $\frac{\kappa'}{100}$												− 2
												21 53.42
a_1												− 0.44
												21 52.99
		9.2	20 1.5	20 8.1	44.9	49.1	5 2.8	5 6.4	24.06 48.12		1.085	20 37.12
K									+30.59 52			+30.732
((δ) — D) $\frac{\kappa'}{100}$												+ .22
												− 2
												21 7.71
a_2												− 0.38
												21 7.282

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+176	4′ 29.4	23.9	14	26′.65	8	21.70		10′	50 8 29.80	
	1.24551					50 8	15.99			− 9	+9.51
	9.80686					+	1.381			+ 1.06	
	1.14031									+ 8.24	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.35										− 7.57	
−02580 δ_1		15 4.69		8 5.9						8 31.72	
d	+190	4 29.5	25.7	14	27.60	8	20.75		10	8 ~~29.57~~ ~~29.07~~	
	1.27875					50 8	14.61			− .10	+9.13
	9.80686					+	1240 14.91			+ 1.08	
	1.08355									+ 7.85	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.35										− 7.8	
−02580 δ_2		15 4.78		8 5.0						8 ~~28.34~~ 30.85	
d	+175	2 42	1.3	47	425	35	44.10		45	50 35 51.99	
	1.24304					50 35	38.39			− 9	+9.45
	9.80259					+	13.60			+ 56	
	1.13357									+ 8.74	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.44										− 7.7	
−02628 δ_1		16 34.95		35 27.5						35 53.74	
d	+206	2 77	3.0	47	5.35	35	43.00		45	35 52.87	
	1.31387					50 35	36.86			− 12	+9.01
	9.80259					+	16.01			+ 50	
	1.20440									+ 8.33	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.444										− 7.9	
−0 26.28 δ_2		16 35.05		35 27.7						35 53.98	
d	+133	4 32.3	27.1	44	29.70	38	18.65		40	50 38 23.27	
	1.12385					50 38	12.94			− 5	+10.11
	9.80228					+	10.33			+ 1.08	
	1.01407									+ 8.78	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.43										− 7.65	
−02716 δ_1		19 8.65		37 58.6						38 25.75	
d	+194	4 35.0	32.0	44	33.50	38	14.85		40	38 23.78	
	1.28780					50 38	8.71			− .10	+9.67
	9.80228					+	15.07			+ 1.10	
	1.17802									+ 8.37	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.43										− 7.9	
−02716 δ_2		19 8.75		37 58.4						38 25.55	
d	+143	4 12.3	7.1	9	9.70	13	38.65		5	50 13 44.14	diff #s
	1.15534					50 13	32.94			− 5	+9.60
	9.80595					+	11.20			+ 1.01	
	1.04923									+ 8.34	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.32										− 7.5	
−02744 δ_1		20 27.15		13 18.8						13 46.24	
d	+125	4 43.0	38.0	9	41.00	13	7.35		5	13 11.00	diff #s
	1.09691					50 13	1.21			− 4	+9.37
	9.80610					+	9.79			+ 1.13	
	0.99095									+ 7.98	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.32										− 7.7	
−02744 δ_2		20 7.20		12 45.2						13 12.67	
d	(+247)	1 29.0	24.0	26	26.50	56	21.85		25	50 56 35.20	diff #s
	1.39270					50 56	16.14			− .16	+9.58
	9.99950					+	19.06			+ .34	
	1.28014									+ 9.10	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 7.7	
δ_1										56 37.08	
d	−246	0 56.0	52.1	25	54.05	56	54.36		25	56 29.33	diff #s
	1.38739					50 56	48.16			− .16	+9.07
	9.99950					−	18.83			+ .22	
	1.24483									+ 8.71	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.46										− 7.9	
−0 27.88 δ_2		21 25.72		56 2.6						56 30.50	

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Date$_1$ = 6 May 36 Observer N.R. Recorder S.M. Date$_2$ = May 9 37 Observer S.M. Recorder N.R. Ru

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
1 2	23 36	254	8.6	22 43.0	23 7.6	15.3	19.3	23.0	27.0	9 22	18 44	10.88	23 7.56
	22 22.9	50 27.4	9.0							+29.98 99			+29.884
	κ												+ .17
	((δ) — D) $\frac{\kappa'}{100}$												− 2
	a_1												23 37.54
													− 0.445
													23 37.10 +18.3 −0.2
			9.0	22 50.4	1.0	14.7	18.7	22.7	26.6	8 97	17.94	10.88	23 7.06
										+30.49 52			+30.382
	κ												+ .22
	((δ) — D) $\frac{\kappa'}{100}$												− 2
	a_2												23 37.65
													− 0.40
													23 37.18 +18.3 −0.2
2 5	40	38.2	9.7	24 44.2	25 8.1	15.9	19.8	23.5	27.7	9 50	19.00	10.92	25 8.08
										+29.98			+29.884
	κ												+ .17
	((δ) — D) $\frac{\kappa'}{100}$												− 2
	a_1												25 38.06
													− 0.46
													25 37.61
			9.5	24 48.4	7.7	16.2	19.0	22.8	27.3	9 20	18.40	10.92	25 7.48
										+30.59			+30.382
	κ												+ .22
	((δ) — D) $\frac{\kappa'}{100}$												− 2
	a_2												25 38.07
													− 0.41
													25 37.59
26	57	47.1	8.4	26 1.0	26.8	34.7	38.6	42.6	46.4	18 91	37.82	10.97	26 26.85
25	43.2	50 49.1	9.1							+29.98 99			+29.884
	κ												+ .17
	((δ) — D) $\frac{\kappa'}{100}$												− 2
28	a_1 36												26 56.83
													− 0.47
													26 56.37 +18.3 −0.2
29	34		8.2	26 16.9	26.1	34.2	38.2	41.9	46.0	18.64	37.28	10.97	26 26.31
31	κ 34									+30.59 52			+30.382
	((δ) — D) $\frac{\kappa'}{100}$												+ .22
													− 2
	a_2												26 56.90
													− 0.43
													26 56.40 +18.3 −0.29
32	50	27.3	8.2	32 2.5	23.0	30.7	34.7	38.4	42.3	16 91	33.82	10.89	82 22.93
31	37.5	58 29.4	8.9							+29.99			+29.84
	κ												+ .17
	((δ) — D) $\frac{\kappa'}{100}$												− 2
	a_1												32 52.92
													− 0.51
													32 52.41 +18.2 −0.31
			—	32 9.5	22.6	30.4	34.0	37.42	42.0	16.82	33.28	10.89	32 22.39
										+30.59 52			+ 30.382
	κ												+ .22
	((δ) — D) $\frac{\kappa'}{100}$												− 2
	a_2												32 52.98
													− 0.47
													32 52.44 +18.2 −0.31
34	18	43.3	4.0	33 35.3	48.0	55.8	59.8	3.6	7.6	29 4.8	58.96	10.95	33 48.01
33	4.7	50 45.5	5.8							+29.99			+ 29.84
	κ												+ .17
	((δ) — D) $\frac{\kappa'}{100}$												− 2
	a_1												34 18.00
													− 0.52
													34 17.48 +18.2 −0.3
			—	33 29.6	47.4	55.5	59.3	3.0	7.1	29 23	58.46	10.95	33 47.51
										+30.58 52			+ 30.382
	κ												+ .22
	((δ) — D) $\frac{\kappa'}{100}$												− 2
	a_2												34 18.09
													− 0.48
													34 17.55 +18.1 −0.32

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+2.96	2 4.6	7.4	54	4.50	25	43.85		5	50 25 57.33	
	1.39094					50 25	38.14			− .16	+9.20
((δ) − D) $\frac{d'}{100}$	9.80412					+	19.19			+ .50	
	1.28300									+ 8.56	
+18.33										+ .30	
−0 28.72 δ_1		23 53.43		25 30.3						− 7.6	
										25 59.03	
d	+1.67	1 59.0	56.0	36	57.50	25	50.85		5	25 57.74	
	1.22272					50 25	44.71			− .8	+8.86
((δ) − D) $\frac{d'}{100}$	9.80412					+	13.03			+ .46	
	1.11478									+ 8.18	
+18.33										+ .30	
−0 28.72 δ_2		23 53.51		25 30.2						− 7.7	
										25 57.90	58.90
d	+2.39	4 14.0	9.0	49	11.50	33	36.85		4	50 33 49.73	
	1.37840					50 33	31.14			− .15	+9.85
((δ) − D) $\frac{d'}{100}$	9.80290					+	18.59			+ 1.01	
	1.26924									+ 8.09	
										+ .30	
δ_1										− 7.5	
										33 52.08	
d	+1.91	4 8.9	4.6	49	6.75	33	41.60		4	33 50.31	
	1.28103					50 33	35.46			− .10	+9.49
((δ) − D) $\frac{d'}{100}$	9.80290					+	14.85			+ 0.98	
	1.17187									+ 8.31	
										+ .30	
δ_2										− 7.7	
										33 52.10	
d	+2.59	1 5.3	0.8	36	3.05	46	45.30		8	50 46 54.64	
	1.41330					50 46	39.59			− .18	+9.32
((δ) − D) $\frac{d'}{100}$	9.80089					+	2.05			+ 2.68	
	1.30213									+ 8.94	
+18.27										+ .30	
−0 29.80 δ_1		27 14.74		46 31.7						− 7.5	
										47 1.46	
d	+2.46	0 57.6	46.0	35	48.80	46	59.55		3	47 ~~12.45~~ 1.69	
	1.39094					50 46	53.41			− .17	+8.87
((δ) − D) $\frac{d'}{100}$	9.80089					+	~~+9.04~~ 7.28			+ .19	
	1.27977									+ 8.55	
+18.37 δ_2		+ 9.4								+ .30	
−0 29.80		0.97313								− 7.8	
		9.80089								47 ~~+3.57~~ 1.76	
		0.86196									
		27 14.77		46 32.0							
d	+2.04	0 53.0	47.8	55	50.40	26	57.95		5	50 27 8.15	
	1.30963					50 26	52.24			− .11	+8.96
((δ) − D) $\frac{d'}{100}$	9.80397					+	15.91			+ .19	
	1.20154									+ 8.58	
+18.24										+ .30	
−0 31.72 δ_1		33 16.65		26 38.1						− 7.3	
										27 9.81	
d	+1.29	0 46.5	41.8	53	44.15	27	4.20		5	27 8.12	
	1.11059					50 26	58.06			− .5	+8.63
((δ) − D) $\frac{d'}{100}$	9.80397					+	10.06			+ .17	
	1.00250									+ 8.21	
+18.24										+ .30	
−0 31.72 δ_2		33 10.68		26 37.5						− 7.85	
										27 9.25	
d	+1.27	8 48.0	42.2	38	45.60	44	2.75		3	50 44 6.88	
	1.10380					50 43	57.04			− .5	+10.05
((δ) − D) $\frac{d'}{100}$	9.80136					+	9.84			+ .91	
	0.99310									+ 8.89	
+18.28 δ_1										+ .30	
−0 32.16		34 35.76		43 37.5						− 7.3	
										44 9.63	
d	+1.79	8 49.8	44.9	38	47.35	44	1.00		3	44 8.73	
	1.25285					50 43	54.86			− .9	+9.62
((δ) − D) $\frac{d'}{100}$	9.80136					+	13.87			+ .91	
	1.14215									+ 8.50	
+18.28										+ .30	
−0 32.16 δ_2		34 35.83		43 38.7						− 7.85	
										44 10.85	

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Date$_1$ = May 7 | Observer W.A.R. | Recorder A.M. | Date$_2$ = May 9 | Observer A.M. | Recorder W.A.R.

Star.	α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
1	36 08	14 3	8.6	35	41.3	49.0	52.9	56.8	0.7	26 07 5	2.5 14	10.84	35 41.30
	34 55.5	50 16.0	9.2	17.7						+29.999			+29.84
													+ .17
													− 2
													36 40.89
													− 11.29
													− 0.53
													36 10.96
			8.6	35 20.4	40.7	48.5	52.6	56.2	0.2	25 82	51.64	10.84	35 40.80
										+30.57 51			+30.382
													+ .21
													− 2
													36 11.37
													− 0.48
													36 10.83
2	37 31	24 4	8.5	36 41.7	42.7	9.4	13.3	17.2	21.0	6 26	12.52	10.88	37 1.64
	36 18.9	50 26.7	8.7							+2999 30.00			+29.845
													+ .17
													− 2
													37 31.63
													− 0.54
													37 31.10
			8.8	36 42.0	1.2	8.8	12.9	16.7	20.8	6 04	12.08	10.88	37 1.30
										+30.58 52			+30.382
													+ .22
													− 2
													37 31.78
													− 0.50
													37 31.22
3	38 43	18	7.5	37 50.5	38 10.6	18.3	22.0	26.0	29.8	10 68	21.36	10.80	38 1.56
	37 30.7	50 4.1	7.1							+2999 30.00			+29.845
													+ .17
													− 2
													38 40.55
													− 0.54
													38 40.02
			8.0	37 55.5	10.7	17.8	21.7	25.5	29.6	10 47	20.94	10.80	38 1.14
										+30.57 51			+30.382
													+ .21
													− 2
													38 40.61
													− 0.50
													38 40.15
4	40 42	5 7 5	8.5	39 56.2	11.3	19.0	23.0	27.0	31.0	11 13	22.26	11.00	40 1.26
	39 29.4	50 56.9	8.16							+2999 30.00			+29.845
													+ .17
													− 2
													40 41.25
													− 0.57
													40 40.69
41	30												
			8.0	39 52.3	10.9	18.7	22.6	26.8	30.5	10 93	21.86	11.00	40 1.086
										+30.58 52			+30.382
													+ .22
													− 2
													40 41.44
													− 0.53
													40 40.85
42	38	−18	8.1	42 41	20.2	6.5	14.2	17.9	21.7	25.6	8 59	17.18	10.78	42 6.40
	41 25.3	50 1.6	7.5							+2999 30.00			+29.845
													+ .17
													− 2
													42 36.39
													− 0.57
													42 35.83
			8.5	42 41	45.2	6.0	13.7	17.5	21.2	25.2	8 36	16.72	10.78	42 5.94
										+30.57 51			+30.382
													+ .21
													− 2
													42 36.51
													± 0.53
													42 35.92

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+2.36	+ 26.5	21.7	9'	24.0	13	24.25		5	50 13 37.03	
	1.37291					50 13	18.54			− .15	+9.58.5
((δ) − D) $\frac{d'}{100}$	9.80610					+	18.49			+ 1.06	
	1.26695									+ 8.34	
+18.15 δ₁										+ .30	
−0 32.76		36 28.91		13 6.7						− 7.1	
										13 39.48	
d	+20.4	4 21.7	19.0	9	20.35	13	28.00		6	13 37.84	
	1.30963					50 13	21.86			− .11	+9.20
((δ) − D) $\frac{d'}{100}$	9.80610					+	15.98			+ 1.03	
	1.20367									+ 7.98	
+18.15 δ₂										+ .30	
−0 32.76		36 28.98		13 7.0						− 7.1	
										13 39.74	
d	+1.99	3 10.6	5.0	58	7.80	24	40.55		55	50 24 50.37	
	1.29885					50 24	34.84			− .11	+9.46
((δ) − D) $\frac{d'}{100}$	9.80428					+	15.53			+ .74	
	1.19107									+ 8.53	
+18.18 δ₁										+ .30	
−0 33.20		37 49.28		24 19.5						− 7.1	
										24 52.73	
d	+1.92	3 8.2	4.0	58	6.10	24	42.25		55	24 51.49	
	1.28330					50 24	36.11			− .10	+9.10
((δ) − D) $\frac{d'}{100}$	9.80428					+	14.98			+ .74	
	1.17552									+ 8.16	
+18.18 δ₂										+ .30	
−0 33.20		37 49.40		24 19.7						− 7.1	
										24 52.89	
d	+2.01	3 46.3	41.1	18	43.70	4	4.65		15	50 4 14.74	
	1.30320					50 3	58.94			− .11	+9.26
((δ) − D) $\frac{d'}{100}$	9.80746					+	15.80			+ .89	
	1.19860									+ 8.18	
+18.07 δ₁										+ .30	
−0 33.60		38 58.09		3 43.4						− 7.0	
										4 17.00	
d	+1.46	3 41.0	37.0	18	39.00	4	9.35		15	4 14.68	
	1.16435					50 4	3.21			− .6	+8.98
((δ) − D) $\frac{d'}{100}$	9.80746					+	11.47			+ .89	
	1.05975									+ 7.85	
+18.07 δ₂										+ .30	
−0 33.60		38 58.22		3 42.9						− 7.2	
										4 16.46	
d	+1.51	3 25.2	19.5	28	22.35	54	26.00		25	50 54 31.95	
	1.17898					50 54	20.29			− .6	+10.13
((δ) − D) $\frac{d'}{100}$	9.79981					+	11.66			+ .82	
	1.06673									+ 9.07	
+18.24 δ₁										+ .30	
−0 34.20		40 58.93		54 0.8						− 7.1	
										54 34.98	
d	+1.86	B 24.4	21.3	28	22.85	54	25.50		25	54 33.72	
	1.26951					50 54	19.36			− .10	9.74
((δ) − D) $\frac{d'}{100}$	9.79981					+	14.86			+ .82	
	1.15726									+ 8.72	
+18.24										+ .30	
−0 34.20 δ₂		40 59.09		54 1.9						− 7.4	
										54 36.06	
~~−13.8~~	~~+4.62~~	0 27.0	21.9	25	24.45	57	23.90		25	49 57 ~~54.9~~	
1.13988	1.66464					49 57	18.19			4.32 − 5	+8.40
~~9.80852~~	~~9.80852~~					+	3540			+ .10	
1.03634	~~1.56110~~					−	1087			+ 8.05	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.02 δ₁										− 6.9	
−0 34.80		42 53.85		56 34.0						57 8.82	
d	+2.07	0 57.4	47.0	25	49.20	56	59.15		25	57 9.32	
	1.31597					49 56	53.01			− .12	+8.10
((δ) − D) $\frac{d'}{100}$	9.80852					+	16.31			+ .74	
	1.21243									+ 7.45	
+18.02										+ .30	
−0 34.80 δ₂		42 53.94		56 35.4						− 7.2	
										57 10.22	

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Date$_1$ = May 7 Observer N.J.R. Recorder A.M. Date$_2$ = May 9 Observer N.J.R. Recorder A.M.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
7	43 98	962	86	42	54.5	6.2	14.1	18.0	21.8	25.7	860	17.20	10.93	43 6.27
	42 20.9	50 38.7	8.5							+29.99	30.00			+29.845
	κ													+ .17
	((δ) — D) $\frac{\kappa'}{100}$													− 2
	a_1													43 36.26
														+ 0.59
														43 35.68
			8.6	42	53.8	5.6	13.8	17.6	21.4	25.4	837	16.74	10.93	43 5.81
										+30.58	52			+30.382
	κ													+ .22
	((δ) — D) $\frac{\kappa'}{100}$													− 2
	a_2													43 36.39
														+ 0.54
														43 35.79
45 08		69	8.0	44	23.1	38.4	46.0	50.0	53.7	57.7	2458	49.16	10.82	44 38.34
43 55.6		50 19.4	7.5							+29.99	30.00			+29.845
	κ													+ .17
	((δ) — D) $\frac{\kappa'}{100}$													− 2
	a_1													45 8.33
														+ 0.59
														45 7.75
			7.8	44	23.0	37.9	45.6	49.5	53.3	57.2	2435	48.70	10.82	44 37.88
										+30.59	51			+30.382
	κ													+ .21
	((δ) — D) $\frac{\kappa'}{100}$													− 2
	a_2													45 8.45
														+ 0.55
														45 7.84
46 25		574	8.8	45	34.7	55.4	3.3	7.1	11.2	15.0	3320	66.40	10.99	45 55.41
45 12.4		50 55.0	8.4							+29.99	30.00			+29.845
	κ													+ .17
	((δ) — D) $\frac{\kappa'}{100}$													− 2
	a_1													46 25.40
47 12														+ 0.61
														46 24.80
			8.8	45	38.0	55.0	2.4	6.8	10.8	14.7	3300	66.00	10.99	45 55.01
										+30.56	52			+30.382
	κ													+ .22
	((δ) — D) $\frac{\kappa'}{100}$													− 2
	a_2													46 25.59
														+ 0.57
														46 24.96
48 24		124	8.6	47	46.3	48 2.8	10.5	14.3	18.2	22.2	6801	13.60	10.83	48 2.77
47 22.0		50 18.0	8.5							+29.99	30.00			+29.845
	κ													+ .17
	((δ) — D) $\frac{\kappa'}{100}$													− 2
	a_1													48 32.76
														+ 0.61
														48 32.16
			9.0	47	44.2	2.3	10.0	13.8	17.7	21.7	6551	13.10	10.83	48 2.27
										+30.56	51			+30.382
	κ													+ .21
	((δ) — D) $\frac{\kappa'}{100}$													− 2
	a_2													48 32.83
														+ 0.57
														48 32.21
51 15		57 423	9.4	49	13.9	48 50 53.0								
50 2.8				50	51.0	50.0	57.7	1.5	5.6	9.2	3034	60.68	10.95	50 49.80
Y 48 29.0		50 43.8	7.5							+29.99	30.00			+29.845
κ														+ .17
((δ) — D) $\frac{\kappa'}{100}$														− 2
53 a_1 42														51 19.84
														− 0.64
														51 19.21
			9.0	50	29.8	49.3	57.4	1.2	5.0	9.0	3019	60.38	10.95	50 49.43
										+30.57	52			+30.382
κ														+ .22
((δ) — D) $\frac{\kappa'}{100}$														− 2
a_2														51 20.00
														− 0.60
														51 19.35

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+68	1 0,3	54,1	45	56,20	36	57.16		45	50 36 50.72	
	0.83251					50 36	45.44			+ 2	+9.27
	9.80244					+	5.28			+ .24	
	0.72289									+ 8.75	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.14										− 7.0	
−035.12 δ_1		43 53.82		36 17.9						36 52.99	
d	+120	1 04	57,0	45	58,70	36	49.65		45	36 52.83	
	1.07918					50 36	43.51			+ 4	+8.90
	9.80244					+	9.32			+ .24	
	0.96956									+ 8.40	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.14										− 7.3	
−0 35.12 δ_2		43 53.93		36 19.3						36 54.43	
d	+152	0 59,1	53,9	13	56,05	6	52.30		15	50 6 58.52	
	1.18184					50 6	46.59			+ 6	+8.64
	9.80701					+	11.93			+ .19	
	1.07679									+ 8.21	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.02										− 6.8	
−035.60 δ_1		45 25.77		6 24.8						7 00.36	
d	+149	0 56,4	52,8	13	54,60	6	53.75		15	6 59.31	
	1.17319					50 6	47.61			+ 6	+8.31
	9.80701					+	11.70			+ .19	
	1.06814									+ 7.88	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.02										− 7.1	
−0 35.60 δ_2		45 25.86		6 24.9						7 00.52	
d	+207	0 9,4	3,9	30	6,65	52	41.70		80	50 52 57.98	
	1.31597					50 52	35.99			+ .12	+9.24
	9.79996					+	15.99			+ 2	
	1.20387									+ 9.04	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.16										− 7.0	
−0 36.00 δ_1		46 41.96		52 18.2						52 54.22	
d	+170	0 43	−0.3	30	2,50	52	46.35		30	52 53.34	
	1.23045					50 52	40.21			+ 8	+8.91
	9.79996					+	13.13			+ 0	
	1.11835									+ 8.69	
((δ) — D) $\frac{d'}{100}$				19.0						+ .30	
+18.16										− 7.3	
−0 36.00 δ_2		46 43.12		52 ~~18.6~~						52 54.95	
d	+165	0 23,2	17,1	10	20,15	12	28.20		10	50 12 35.42	
	1.21748					50 12	22.49			+ 7	+8.62
	9.80625					+	12.93			+ 7	
	1.11167									+ 8.32	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.00										− 6.8	
−0 36.68 δ_1		48 50.16		12 0.6						12 37.24	
d	+181	0 23.0	18.0	10	20.50	12	27.85		10	12 35.90	
	1.25768					50 12	21.71			+ 9	+8.27
	9.80625					+	14.19			+ 7	
	1.15187									+ 7.99	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.00										− 7.1	
−0 36.68 δ_2		48 50.21		12 0.4						12 37.07	
d	+18.8 ~~+13~~	1 20.3	15.2	41	17,75	41	30.60		40	50 41 39.48	
	1.27416					50 41	24.89			+ .10	+9.36
	9.80182					+	14.59			+ 31	
	1.16392									+ 8.85	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.06										− 6.8	
−0 37.04 δ_1		51 37.27		41 5.0						41 42.04	
d	+202	1 18.9	15.0	41	16,95	41	31.40		40	41 41.09	
	1.30963					50 41	25.26			+ .11	+9.00
	9.80182					+	15.83			+ 31	
	1.19939									+ 8.50	
((δ) — D) $\frac{d'}{100}$										+ .30	
+18.06										− 7.10	
−0 37.04 δ_2		51 37.41		41 6.0						41 42.99	

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Date$_1$ = May 7 36 Observer W.A.R. Recorder A.M. Date$_2$ = May 7 37 Observer A.M. Recorder W.A.R.

Star.	α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
1	54 50 / 53 38.8	281 / 50 30.9	8.0 / 8.5	54	6.0	19.6	27.3	31.3	35.0	39.1	152 3 +29.99	30.46 30.00	10.90	54 19.56 +29.845 +.17 −2 54 49.55 −0.66 54 48.90
κ														
((δ) − D) $\frac{\kappa'}{100}$														
α_1														
			8.5	54	0.0	19.1	26.7	30.7	34.7	38.6	149 8 +30.57	29.96 53	10.90	54 19.06 +30.373 +.22 −2 54 49.63 −0.62 54 48.97
κ														
((δ) − D) $\frac{\kappa'}{100}$														
α_2														
	0 55 30 / 53 50.7	50 48.8 / 50 50.1	8.5 / 8.5	55	17.6	55 0.2	8.0	12.1	15.8	19.8	5 59 +29.99	11.18 30.00	10.98	55 0.20 +29.845 +.17 −2 55 30.19 −0.67 55 29.53
κ														
((δ) − D) $\frac{\kappa'}{100}$														
α_1														
			8.2 / 8.5	23.7	59.6	7.3	11.6	15.3	19.4		353 +30.57	70.64 53	10.98	54 59.66 +30.373 +.22 −2 55 30.23 −0.63 55 29.56
κ														
((δ) − D) $\frac{\kappa'}{100}$														
α_2														
	57 30 / 56 18.5	162 / 50 19.0	8.6 / 8.0	56	44.7	57.1	6.8	10.6	14.4	18.5	349 +29.99	69.88 30.00	10.85	56 59.03 +29.845 +.17 −2 57 29.02 −0.67 57 28.36
κ														
((δ) − D) $\frac{\kappa'}{100}$														
α_1														
			8.6	56	41.4	58.5	6.4	10.0	14.1	17.9	346 +30.66	69.38 52	10.85	56 58.53 +30.373 +.21 −2 57 29.09 −0.64 57 28.41
κ														
((δ) − D) $\frac{\kappa'}{100}$														
α_2														
	58 30 / 57 18.1	305 / 50 33.4	6.3 / 7.1	57	46.6	58.8	6.5	10.4	14.4	18.3	348 +29.99	69.68 30.00	10.90	57 58.78 +29.845 +.17 −2 58 28.77 −0.68 58 28.10
κ														
((δ) − D) $\frac{\kappa'}{100}$														
α_1														
			7.6	57	44.4	58.4	6.1	10.0	13.9	18.0	346 +30.17	69.28 30.53	10.90	57 58.38 +30.373 +.22 −2 58 28.95 −0.66 58 28.26
κ														
((δ) − D) $\frac{\kappa'}{100}$														
α_2														
8	2 24 / 1 12.3	−22 / 50 0.5	9.0 / 9.0	1	31.5	54.0	1.6	5.4	9.1	13.2	332 +29.99	64.66 30.00	10.78	1 53.88 +29.845 +.17 −2 2 23.87 −0.70 2 23.18
κ														
((δ) − D) $\frac{\kappa'}{100}$														
α_1														
			8.0	1	28.4	52.4	1.2	5.0	8.8	12.7	321 +30.56	62.28 52	10.78	1 53.44 +30.373 +.21 −2 2 24.00 −0.66 2 23.30
κ														
((δ) − D) $\frac{\kappa'}{100}$														
α_2														

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	+13.6	3 41.1	89.2	58	40.15	29	8.20		5.0	50 29 13.09	
d	1.133554					50 29	2.49			− .5	+9.76
	9.80366					+	10.60			+ .89	
	1.025514									+ 8.62	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 6.7	
+17.97											
−0.3860 δ_1		55 6.87		28 37.6						29 16.15	
	+19.1	3 46.5	42.1	53	44.30	29	4.05		5.0	29 12.79	
d	1.281103					50 28	57.91			− .10	+9.38
	9.80366					+	14.88			+ 8.89	
	1.172631									+ 3.29	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 7.00	
+17.97											
−0 38.60 δ_2		55 6.94		28 36.6						29 15.17	
	−17.8	4 19.0	13.5	34	16.25	48	32.10		3.0	50 48 12.92	
d	1.240555					50 48	26.39			− .8	+10.21
	9.80074					−	13.47			+ 1.03	
	1.129231									+ 8.96	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 6.7	
δ_1										48 16.43	
	−24.0	4 11.3	6.0	34	8.65	48	39.70		3.0	48 14.99	
d	1.380221					50 48	33.56			− .15	+9.76
	9.80074					−	18.54			+ .98	
	1.268899									+ 8.63	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 7.00	
δ_2										48 17.75	
	+14.3	2 28.8	22.2	7	25.50	15	22.85		8.0	50 15 28.34	
d	1.155341					50 15	17.14			− .5	+9.20
	9.80580					+	11.20			+ .58	
	1.049088									+ 8.37	
((δ) − D) $\frac{d'}{100}$										+ .30	
+17.89										− 6.5	
−0 39.44 δ_1		57 46.25		14 51.6						~~+ 6.54~~	
										15 30.40	
	+17.1	2 26.8	20.7	7	23.75	15	24.60		5.0	15 31.85	
d	1.233300					50 15	18.46			− .8	+8.86
	9.80580					+	13.39			+ .58	
	1.126744									+ 8.06	
((δ) − D) $\frac{d'}{100}$										+ .30	
+17.89 δ_2										− 6.80	
−0 39.44		57 46.30		14 54.5						15 33.91	
	+12.2	2 40.7	34.9	52	37.80	30	16.55		5.0	50 30 14.34	
d	1.086636					50 30	4.84			− .4	+9.54
	9.80351					+	9.50			+ .62	
	0.977781									+ 8.66	
((δ) − D) $\frac{d'}{100}$										+ .30	
+17.92										− 6.6	✓
−0 39.76 δ_1		58 46.02		29 37.5						30 17.28	
	+14.0	2 36.7	33.4	52	35.75	30	13.30		5.0	30 18.06	
d	1.146133					50 30	7.16			− .5	+9.20
	9.80351					+	10.90			+ .62	
	1.037581									+ 8.33	
((δ) − D) $\frac{d'}{100}$										+ .30	
+17.92										− 6.90	✓
−0 39.76 δ_2		58 46.18		29 40.6						30 20.36	
	+22.4	0 38.7	33.4	25	36.05	57	12.30		25	49 57 24.24	
d	1.350250					49 57	6.59			− .13	+8.38
	9.80852					+	17.65			+ .14	
	1.246711									+ 8.07	
((δ) − D) $\frac{d'}{100}$										+ .30	
+17.76										− 6.3	
−0 40.92 δ_1		2 20.14		56 45.4						57 26.32	
	+25.0	0 38.2	33.8	25	36.00	57	12.35		25	57 25.91	
d	1.397944					49 57	6.21			− .17	+8.03
	9.80852					+	19.70			+ .14	
	1.294402									+ 7.76	
((δ) − D) $\frac{d'}{100}$										+ .30	
+17.76										− 6.6	
−0 40.92 δ_2		2 41.06		56 46.4						57 27.34	

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Date$_1$ = Mar 7 1871 Observer W.A.R. Recorder A.Jr. Date$_2$ = Mar 9 1871 Observer A.M. Recorder W.A.R. Ru

Star. α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
3 38	29 7	9.4	2	48.2	9.2	16.9	21.0	24.8	28.8	10 07 +30.00	2 0.14	10.90	3 9.24 +29.85 +.17 −2 3 39.24 −✱ 0.72 3 38.52
4 42													
((δ) − D) $\frac{\kappa'}{100}$													
a_1													
		9.4	2	46.2	8.9	16.7	20.5	24.4	28.4	9 89 +30.54 53	19.78	10.90	3 8.84 +30.37 3 +.22 −2 3 39.45 −✱ 0.68 3 38.73
κ													
((δ) − D) $\frac{\kappa'}{100}$													
a_2													
5 34 4 22.5	28 7 50 31.4	8.5 8.4	4	50.0	5 2.7	10.3	14.0	18.0	22.0	6 70 +30.00	13.40	10.90	5 2.50 +29.85 +.17 −2 5 32.50 −✱ 0.73 5 31.77
((δ) − D) $\frac{\kappa'}{100}$													
a_1													
		8.8	4	49.0	2.2	9.8	13.7	17.8	21.6	6 51 +30.56 53	13.02	10.90	5 2.12 +30.38 3 +.22 −2 5 32.68 −✱ 0.69 5 31.96
κ													
((δ) − D) $\frac{\kappa'}{100}$													
a_2													
6 31 5 19.2	9 1 50 11.8	8.5 8.9 8.3	5	52.3 42.0 42.0	6 0.4 0.5	8.0 8.1	11.9 12.0	15.5 15.7	19.5 19.6	5 53 5 59 +30.00 +30.00	11.06 11.18	10.82 10.82	6 0.24 +29.85 +.17 −2 30.24 −✱ 0.73 6 29.51 6 0.36 +29.85 +.17 −2 30.36 −✱ 0.73 6 29.63
κ													
((δ) − D) $\frac{\kappa'}{100}$													
a_1													
		— —	5	49.0 40.6	59.9 "	7.4 "	11.4 "	15.5 "	19.1 "	35 33 +30.55 52 35 33 +30.55 52	70.66 70.66	10.82 10.82	5 59.84 +29.85 +.17 −2 30.39 −✱ 0.69 6 29.67 5 59.84 +30.38 3 +.22 −2 30.39 −✱ 0.69 6 29.67
κ													
((δ) − D) $\frac{\kappa'}{100}$													
a_2													
8 16 7 5.0	30 3 50 33.0	8.0 9.0	7	28.0	47.1	54.9	58.7	2.5	6.5	28 97 +30.00	5.794	10.90	7 47.04 +29.85 +.17 −2 8 17.04 −✱ 0.75 8 16.29
((δ) − D) $\frac{\kappa'}{100}$													
a_1													
9 39		8.2	7	22.1	46.7	54.4	58.0	2.1	6.0	28 74 +30.56 53	57.48	10.90	7 46.58 +30.38 3 +.22 −2 8 17.14 −✱ 0.71 8 16.40
κ													
((δ) − D) $\frac{\kappa'}{100}$													
a_2													
12 21 11 10.7	4 41 50 46.9	8.0 8.7	11	32.0	53.2	12 0.8	4.8	8.8	12.8	32 04 +30.00	64.08	10.96	11 53.12 +29.85 +.17 −2 12 23.12 −✱ 0.78 12 22.34
κ													
((δ) − D) $\frac{\kappa'}{100}$													
a_1													
		8.0	11	33.1	52.8	0.8	4.4	8.2	12.3	31 82 +30.56 53	63.64	10.96	11 52.68 +30.38 3 +.22 −2 12 23.24 −✱ 0.73 12 22.48
κ													
((δ) − D) $\frac{\kappa'}{100}$													
a_2													

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+2 5.0	3 10.9	5.3	5 3	8.10	29	40.25		50′	50 29 50.90	
d	1.32222					50 29	34.54			± .12	+9.58
	9.80351					+	16.36			+ .74	
((δ) — D) $\frac{d'}{100}$	1.21367									+ 8.66	
										+ .30	
+17.85 δ1		3 56.37		29 12.8						− 6.4	
−0 41.24										29 54.08	
	+22.7	3 7.8	2.4	53	5.10	29	43.25		50′	29 54.79	
d	1.35603					50 29	37.11			± .14	+9.23
	9.80351					+	17.68			+ .74	
((δ) — D) $\frac{d'}{100}$	1.24748									+ 8.33	
										+ .30	
+17.85 δ2		3 56.58		29 16.1						− 6.70	
−0 41.24										29 57.32	
	+12.5	4 22.4	17.7	54	20.05	28	28.30		50′	28 32.33	
d	1.09691					50 28	22.59			± 4	+9.94
	9.80382					+	~~10.21~~			+ 1.03	
((δ) — D) $\frac{d'}{100}$	0.98867						9.74			+ 8.65	
										+ .30	
+17.82										− 6.3	
−0 41.80 δ1		5 49.59		27 54.2						28 35.97	
	+13.1	4 18.0	15.0	54	17.00	28	31.35		50′	28 35.42	
d	1.11727					50 28	25.21			± 5	+9.59
	9.80382					+	10.21			+ 1.03	
((δ) — D) $\frac{d'}{100}$	1.00903									+ 8.31	
										+ .30	
+17.82										− 6.33	
−0 41.80 δ2		5 49.78		27 56.6						28 38.41	
0.89763	+7.9	3 23.2	17.5	13	20.35	9	28.80		10′	50 9 28.49	9 36.73
9.80671	+18.4					50 9	22.29			± 2	+9.35 ± 9 +9.28
0.70228	1.26482					+	6.20			+ .79	+ .79
	9.80671									+ 8.28	+ 8.28
((δ) — D) $\frac{d'}{100}$	1.15947									+ .30	+ .30
+17.74						+	14.44			− 6.2	− 6.2
−0 42.16 δ1		6 47.25 47.37		8 49.5 54.6						9 31.64	9 39.81
	+10.8	3 22.7	18.8	13	20.75	9	27.60		10′	9 29.93	9 36.52
d	+19.2					50 9	21.46			± 3	+9.02 ± .10 +8.95
	1.03342					+	8.47			+ .79	+ .79
((δ) — D) $\frac{d'}{100}$	9.80671									+ 7.96	+ 7.96
	0.92807									+ .30	+ .30
	1.28330					+	15.06			− 6.50	− 6.50
+17.74 δ2	9.80671	6 47.41		8 50.3						9 32.48	9 38.97
−0 42.16	1.17795	47.41		56.8							
	+19.0	2 58.2	47.8	52	50.50	29	57.85		50′	30 6.94	
d	1.27875					50 29	52.14			± .10	+9.53
	9.80351					+	14.80			+ .67	
((δ) — D) $\frac{d'}{100}$	1.17020									+ 8.66	
										+ .30	
+17.78										− 6.2	
−0 42.68 δ1		8 34.07		29 27.6						30 10.27	
	+24.5	2 55.2	51.9	52	53.55	29	54.80		50′	30 7.74	
d	1.38917					50 29	48.66			± .16	+9.17
	9.80351					+	19.08			+ .70	
((δ) — D) $\frac{d'}{100}$	1.28062									+ 8.33	
										+ .30	
+17.78										− 6.55	
−0 42.68 δ2		8 34.18		29 27.7						30 10.36	
	+21.1	2 29.0	23.7	37	26.35	45	22.80		35′	50 45 32.64	
d	1.32428					50 45	16.29			± .12	+9.69
	9.80120					+	16.35			+ .58	
((δ) — D) $\frac{d'}{100}$	1.21342									+ 8.93	
										+ .30	
+17.75					+.06					− 6.1	
−0 44.16 δ1		12 40.09		44 52.1						45 36.23	
	+19.6	2 24.7	20.9	2.37	22.80	45	25.55		35′	45 34.59	
d	1.29226					50 45	19.41			± .11	+9.36
	9.80120					+	15.18			+ .58	
((δ) — D) $\frac{d'}{100}$	1.18140									+ 8.89	
										+ .30	
+17.75										− 6.56	
−0 44.16 δ2		12 40.23		44 53.2						46 37.39	

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Date$_1$ = Mar. 7 1871 Observer W.R. Recorder All. Date$_2$ = ~~Mar 9~~ Observer D.M. Recorder W.R.

Star.	α	δ	Mag.	T_δ	T_m	T_o	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
6	18 02.2	0 136	98	17 ~~28.8~~	~~24.0~~	~~35~~	33.0	~~37.0~~	40.9	16 16	32.32	10.84	17 21.48
May		55 12.8	9.0	35.0	21.7	29.0				+29.98			+29.82
16	κ 48.4									97			+.17
	((δ) — D) $\frac{\kappa'}{100}$												−2
													17 51.46
	a_1												+ 0.07
													17 51.53
6	27 42	111	90	26	50.5	11.8	19.5	23.4	27.3	31.3	11 33	22.66	1083	27 11.83
May		50 11.4	8.9								+29.98			+29.83
26	κ 26.8													+.17
	((δ) — D) $\frac{\kappa'}{100}$													−2
														27 41.81
	a_2													−+ 0.01
														27 41.80
6	23 0	267	85	33	5.1	16.9	24.6	28.3	32.2	36.1	13 81	27.62	1089	33 16.73
May		50 ~~27.4~~	8.9								+29.98			+29.83
~~21~~	~~κ 45.8~~	170												+.17
32	32.3													−2
	((δ) — D) $\frac{\kappa'}{100}$													33 46.71
														−+ 0.06
	a_1													33 46.65
6	36 20	206	70	35	27.3	49.1	56.9	6.8	4.8	8.7	3003	60.06	10.91	35 48.15
May		50 31.4	7.3								+29.98			+29.83
35	κ 6.3													+.17
	((δ) — D) $\frac{\kappa'}{100}$													−2
														36 19.13
	a_2													−+ 0.08
														36 19.05
6	37 15	~~406~~	~~9.5~~	~~37~~	1.1	(484)	36 56.2	~~59.8~~	4.3	8.0			10.94	36 48.40
May											+29.98			+29.83
7	κ													+.17
	((δ) — D) $\frac{\kappa'}{100}$													−2
														37 18.38
	a_1													−+ 0.09
														37 18.29
6	54 19	78	80	53	31.7	~~48.8~~	56.3	(0.1)	46.	~~8.0~~			10.82	53 48.64
May		50 4.0	~~86~~			49.5	57.2	(1.0)	5.0	8.9	+29.98			53 ~~48.70~~
53	κ 4.9		90										24864	+2983
	((δ) — D) $\frac{\kappa'}{100}$												+2983	+.17
													+.17	−2
													−2	18.62
	a_2													54 10.48
													18.62	−+ 0.22
													−+ 0.22	54 18.40
													54 18.40	54 19.26
7	2 12	~~320~~	85	1	26.5	44.3	52.0	56.0	59.8	3.8	2759	55.18	10.91	1 44.27
May		50 33.4	9.0								+29.98			+29.84
0	κ 57.8										99			+.17
	((δ) — D) $\frac{\kappa'}{100}$													−2
														2 14.25
	a_1													−+ 0.28
														2 13.98
7	17 58	−47	90	17	10.3	27.8	35.5	39.4	43.0	47.1	19 28	38.56	10.77	17 27.79
May		50 −2.4	9.0								+29.98			+29.84
16	κ 44.2										99			+.17
	((δ) — D) $\frac{\kappa'}{100}$													−2
														17 57.77
	a_2													−+ 0.69
														17 57.39
7	28 36	−58	90	27	48.2	28 8.5	16.1	19.8	23.8	27.7	9 59	19.18	10.77	28 8.41
May		50 −3.7	9.1								+29.99			+29.84
27	κ 23.2													+.17
	((δ) — D) $\frac{\kappa'}{100}$													−2
														28 38.40
	a_1													−+ 0.47
														28 37.93
7	29 34	480	68	28	53.0	44 4.0	11.7	15.7	19.6	23.5	7 45	14.90	10.98	29 3.92
May		50 50.1	7.2								+29.99			+29.84
28	κ 20.8													+.17
	((δ) — D) $\frac{\kappa'}{100}$													−2
														29 33.91
	a_2													−+ 0.49
														29 33.42

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	−18.5	0′ 14.6	8.3	50	11.45	32	36.90		5′0	50 32 20.69	
d	1.13033					50 32	31.19			− 5	+8.99
	9.80305					−	10.50			+ 5	
	1.02132									+ 8.69	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 8.5	
δ₁										32 21.18	
	+21.3	1 8.5	56.9	11	0.20	11	48.15		10	50 11 59.13	
d	1.32838					50 11	42.44			− .12	+8.52
	9.80610					+	16.69			+ 0	
	1.22242									+ 8.34	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.66										− 8.3	
−0 9.76 δ₂		28 0.46		11 49.6						11 59.35	
	+11.6	2 40.3	35.4	57	37.85	25	10.50		55	50 25 13.84	
d	1.06446					50 25	4.79			− 4	+9.45
	9.80428					+	9.05			+ .62	
	0.95668									+ 8.57	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.69										− 8.3	
~~−0 14.58~~ δ₁		34 5.34								25 14.99	
	+19.9	2 24.7	18.0	52	2.35	30	27.00		50	50 30 36.79	
d	1.29885					50 30	21.29			− .11	+9.44
	9.80351					+	15.50			+ .58	
	1.19030									+ 8.67	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.69										− 8.3	
−0 12.76 δ₂		36 37.74		30 25.2						30 37.93	
	~~−12.7~~	2 12.9	6.5	42	9.20	40	39.15		40	50 40 23.59	
d	1.10380					50 40	~~33.44~~			− 5	9.62
	9.80182					−	9.85			+ .53	
	0.99356									+ 8.84	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 8.4	
δ₁										40 24.81	
	+16.9	4 54.8	50.0	14	52.40	7	55.95		10	50 8 3.51	
d	1.22789					50 7	50.24			− 8	9.66 +9.65
	9.80686					+	13.27			+ 1.18	
	1.12279									+ 8.26	
((δ) − D) $\frac{d'}{100}$	+17.8									+ .30	
+18.51	1.25042					+	13.97			− 8.0	
−0 18.92 δ₂	9.80686	54 36.91		7 46.2						8 5.17	8 5.86
	1.14522										
	+17.8	1 46.3	40.8	51	43.55	31	4.80		50	50 31 12.95	
d	1.25042					50 30	59.09			− 9	+9.30
	9.80336					+	13.86			+ 41	
	1.14172									+ 8.68	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.54										− 7.9	
−0 21.60 δ₁		2 32.52		30 52.8						31 14.35	
	+17.5	2 18.9	14.2	27	16.55	55	31.80		25	49 55 39.89	
d	1.24304					49 55	26.09			− 8	+8.80
	9.80882					+	13.80			+ 55	
	1.13980									+ 8.03	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.28										− 7.5	
−0 26.84 δ₂		18 15.67		55 14.4						55 41.19	
	+20.2	3 12.4	7.7	28	10.05	54	38.30		25	49 54 48.52	
d	1.30535					49 54	32.59			− .11	+8.97
	9.80882					+	15.93			+ .77	
	1.20211									+ 8.01	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.17										− 7.2	
−0 30.32 δ₁		28 56.10		54 20.0						54 50.29	
	+10.9	8 49.3	44.0	33	46.65	49	1.70		30	50 49 4.42	
d	1.03743					50 48	55.99			− 3	+10.18
	9.80058					+	8.43			+ .91	
	0.92595									+ 9.00	
((δ) − D) $\frac{d'}{100}$										+ .30	
+18.35										− 7.4	
−0 30.64 δ₂		29 51.77		48 36.6						49 7.21	

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Date$_1$ = Mar. 7, 1871 Observer VHP Recorder AM

Date$_2$ = Mar. 9. 1871 Observer AM. Recorder VHP

Star. α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
7 41 34 Mar 7	19	9.8	30	37.0	3.7	11.6	15.1	19.0	23.0	724 +29.99	14.48	10.80	31 3.68 +29.84 +.17 −.2 31 33.67 −* 0.49 31 33.18
((δ) − D) $\frac{\kappa'}{100}$	50 4.0	9.5										
30 36.7												
a_1												
7 41 30 Mar 7	−.15	8.8	40	52.8	57.8	7.4	11.2	15.2	18.7	352 5 +29.99	70.50	10.79	40 59.71 +29.845 +.17 −.2 41 29.70 −* 0.56 41 29.15
((δ) − D) $\frac{\kappa'}{100}$	50 1.9	8.6								30.00			
40 17.5												
a_2												
7 47 12 Mar 7	−.58	8.5	46	47.5	41.3	49.0	52.8	56.8	0.7	26 0 6 5 +29.99	2,12	10.77	46 41.35 +29.845 +.17 −.2 47 11.34 −* 0.60 47 10.75
((δ) − D) $\frac{\kappa'}{100}$	50 −.32	8.5								30.00			
45 57.2												
a_1												
7 53 42 Mar 7	19.7	10.5	52	54.4	3316.0	24.0	28.2	32.3	36.2	13 6 +29.94	27.34	10.87	53 16.47 +29.845 +.17 −.2 53 4646 −* 0.65 53 45.82
((δ) − D) $\frac{\kappa'}{100}$										30.00			
a_2													
8 4 42 Mar 7	3.7	9.0	3	5.8	4 2.2	10.0	13.6	17.6	21.6	6 5 0 +30.00	13,00	10.80	4 2.20 +29.85 +.17 −.2 4 32.20 −* 0.72 4 31.48
((δ) − D) $\frac{\kappa'}{100}$													
a_1													
8 9 39 Mar 7	−.93	8.1	8	56.7	8.6	16.2	20.0	23.7	27.8	9 6 3 +30.00	19.26	10.76	9 8.51 +29.85 +.17 −.2 9 38.51 −* 5 9 37.76
((δ) − D) $\frac{\kappa'}{100}$	50 −6.5	8.0											
8 28.2													
a_2													
6 48 39 Mar 9	6.0	9.6										10.81	
((δ) − D) $\frac{\kappa'}{100}$													
a_1													
7 50 11 Mar 9	−.88	8.9	49	15.8	46 53.4	4.4	8.2	12.0	(16.7)			10.75	4
((δ) − D) $\frac{\kappa'}{100}$	50 −6.2	8.0											
48 8.8													
a_2													
Mar 9		8.9										10.75	
((δ) − D) $\frac{\kappa'}{100}$													
a_1													
8 10 18 Mar 9	41.6	6.5	8.9	22.2	43.4	57.2	55.?	54.0	63.0	2716 +30.56	54.32	10.94	9 43.38 +30.56 +.22 −.2 10 13.94 −* 0.73 10 13.18
((δ) − D) $\frac{\kappa'}{100}$	50 44.2	8.1											
9 12.8													
a_2													

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+26.7 s	1′ 8.0″	2.5″	21	5.25″	1	43.10		20	50 1 58.39	
	1.426651					50 1	37.39			×− .19	+8.50
d	9.807777					+	2.00			+ .26	
	1.322212									+ 8.13	
((δ) − D) $\frac{d'}{100}$										+ .30	
										−× 7.2	
+18.16											
−0 31.28 δ_1		31 51.24 (34)		1 28.4						1 69.69	
	+69	3 10.1	5.0	23	7.50	59	40.80		20	49 59 40.52	
	0.838855					49 59	35.09			×− .2	+9.13
d	9.808 07					+	5.43			+ .74	
	0.734887									+ 8.11	
((δ) − D) $\frac{d'}{100}$										+ .30	
										−× 6.9	
+1804											
−0 34.44 δ_2		4 1 47.19		59 8.3						59 42.75	
	−30.1	2 18.1	4.1	27	10.10	55	38.25		25	49 55 8.82	8.
	1.478577					49 55	32.54			×− .24	+8.62
d	9.808677					−	23.72			+ .53	
	1.375178									+ 8.03	
((δ) − D) $\frac{d'}{100}$										+ .30	
										−× 6.7	
+17.95											
−0 36.24 δ_1		4 7 28.70		54 34.5						55 10.74	
	+16.6	2 40.3	35.3	2	37.80	20	10.55		0	50 20 17.81	
	1.220111					50 20	4.84			×− 8	+9.31
d	9.805504					+	12.97			+ .62	
	1.113094									+ 8.47	
((δ) − D) $\frac{d'}{100}$										+ .30	
										−× 6.6	
δ_2		54 3								20 20.62	
	+1.4	0 38.9	33.8	20	36.35	2	12.00		20	50 2 15.26	
	1.056902					50 2	4.29			×− 3	+8.56
d	9.807777					+	8.97			+ .14	
	0.952611									+ 8.15	
((δ) − D) $\frac{d'}{100}$										+ .30	
										−× 6.2	
δ_1										2 17.62	
	+1.8	2 17.1	11.2	32	14.15	50	34.20		30	49 50 37.81	
	1.041886					49 50	25.49			×− 4	+9.80
d	9.809577					+	9.32			+ .53	
	0.969639									+ 9.01	
((δ) − D) $\frac{d'}{100}$										+ .30	
+17.63										−× 6.0	
−0 43.08 δ_2		9 55.39		49 58.5						50 41.61	
		0 32.3	26.0	15	29.15	7	19.20		15		
d											
((δ) − D) $\frac{d'}{100}$											
δ_1											
		1 50.2	45.6	31	47.90	51	0.45		30		
d											
((δ) − D) $\frac{d'}{100}$											
δ_2											
		2 11.5	6.6	32	9.05	50	39.30		30		
d											
((δ) − D) $\frac{d'}{100}$											
δ_1											
	+21.2	2 27.8	24.2	42	26.00	40	22.35		40	50 40 32.66	
	1.326234					50 40	16.21			×− .12	+8.26
d	9.801197					+	16.45			+ .58	
	1.216225									+ 7.50	
((δ) − D) $\frac{d'}{100}$										+ .30	
+17.79										−× 6.5	
−0 43.24 δ_2		10 30.(47)		39 51.2						40 34.42	

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Date$_1$ = 1871 March 22 Observer W.A.R
n = +.16 Recorder A.M

Date$_2$ = 1871 March 25 Observer W.A.M
n = +.11 Recorder W.A.R

Star. α	δ	Mag.	T_a	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
54 51	0 28.3	7.5	53	30.0	47.1	54.5	58.6	2.5	6.7	2897	57.94	10.90	53 46.04
52 52.9	50 31.9	7.2								+13.20			+13.03
κ													+ .19
((δ) — D) $\frac{\kappa'}{100}$													− 2
													53 59.24
													− 0.78
a_1													53 58.46
44 15		7.2	53	33.4	46.9	54.7	58.5	2.4	6.3	2885	57.76	10.90	53 46.86
45 31		55.36								+13.28			+13.17
κ 46 35													+ .13
((δ) — D) $\frac{\kappa'}{100}$ 48 32													− 2
													54 00.14
													− 0.72
a_2 49 44 53 43													53 59.42
56 35	48.8	8.3	56	2.7	22.9	30.8	34.5	38.5	42.6	1693	33.86	10.98	56 22.88
55 27.2	50 52.4	8.1								+13.21			+13.03
κ													+ .20
((δ) — D) $\frac{\kappa'}{100}$													− 2
													56 36.09
													− 0.80
a_1													56 35.29
		7.8	56	2.7	22.7	30.8	34.8	38.5	42.5	1693	33.92	10.98	56 22.72
										+13.28			+13.17
κ													+ .13
((δ) — D) $\frac{\kappa'}{100}$													− 2
													56 36.00
													− 0.74
a_2													56 35.26
57 24	8.4	8.2	57	31	10.3	18.2	21.9	25.7	1057	21.16	10.82	57 10.34
56 15.8	50 12.0	7.5							+13.20			+ 13.03
κ													+ .19
((δ) — D) $\frac{\kappa'}{100}$													− 2
													57 23.54
													− 0.78
a_1													57 22.75
		8.0	56	1.5	10.3		21.7	25.6	29.6	1051	21.02	10.82	57 10.20
										+13.28			+13.17
κ													+ .13
((δ) — D) $\frac{\kappa'}{100}$													− 2
													57 23.48
													− 0.73
a_2													57 22.75
58 24	12.6	9.2	57	56.4	13.1	20.6	24.5	28.2	32.0	1184	23.68	10.84	58 12.84
56 15.8	50 12.0									+13.20			+13.03
κ 57 16.4													+ .19
((δ) — D) $\frac{\kappa'}{100}$													− 2
													58 26.04
													− 0.80
a_1 59 55													58 25.24
		9.3	58	1.6	12.6	20.3	24.1	28.0	32.0	1170	23.40	10.84	58 12.56
										+13.28			+13.17
κ													+ .13
((δ) — D) $\frac{\kappa'}{100}$													− 2
													58 25.84
													− 0.74
a_2													58 25.10
9 0 55	21.6	8.5	59	24.4	42.9	50.6	54.2	58.2	2.0			10.87	0 41.88
57 47.5	50 25.3	7.7	1	00	.8	5.1	53.5	57.3	1.3			+13.20	+ 13.03
κ													+ .19
((δ) — D) $\frac{\kappa'}{100}$													− 2
													0 55.08
													− 0.82
a_1													0 54.26
		8.1	0	24.5	41.6	49.5	53.3	57.0	1.0	2624	52.48	10.87	0 41.61
										+13.28			+13.17
κ													+ .13
((δ) — D) $\frac{\kappa'}{100}$													− 2
													0 54.89
													− 0.76
a_2													0 54.13

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Runs Mar 22 – 0 593 R. Rev. +.23 Rds. "
25 5,15 M. .23

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+16.0	0 46.4	42.0	53	44,20	27	4.15		55	50 27 11.47	
	1.20412					50 26	58.22			10.69	
	9.80397	+17.0				+	+247			+ 7	+8.71
	1.09603	1,23045					13.25			+ .16	
((δ) – D) $\frac{d'}{100}$		9.80397								+ 8.32	
+16.95		1,12236								+ .30	
δ₁ −0 55.28		54 16.44		26 17.8						− 7.15	
										27 12.25 13.03	
d	+13.5	0 46.7	43.8	55	45,25	27	3.10		55	27 8.48	
	1.13033					50 26	57.95			+ 5	+9.01
	9.80397					+	10.53			+ .18	
((δ) – D) $\frac{d'}{100}$	1.02224									+ 8.58	
+16.98										+ .30	
δ₂ −0 55.28		54 16.40		26 14.6						− 7.60	
										27 9.89	
d	+20.2	4 43.4	39.2	34	41,30	48	7.05		30	50 48 16.75	
	1.30535					50 48	1.12			+ .11	+9.96
	9.80074					+	15.63			+ 1.08	
((δ) – D) $\frac{d'}{100}$	1.19403									+ 8.69	
+16.99										+ .30	
δ₁ −0 55.92		56 52,28		47 23.6						− 7.20	
										48 19.51	
d	+12.8	4 35.7	33.8	34	34,75	48	13.60		30	48 18.36 12	
	+200	1.09691				50 48	8.45			+ 5	+10.27
	+10721	9.80074				+	9.91			+ 1.06	
((δ) – D) $\frac{d'}{100}$	9.80074	0.90074					67			+ 8.96	
+16.99	0.99589	0.98559								+ .30	
δ₂ −0 55.92		56 52,25		47 24.9						− 7.60	
										48 21.03 20.79	
d	+7.2	0 26.7	23.1	15	24,90	7	23.45		15	50 7 23.17	
	0.85733					50 7	17.52			+ 2	+8.34
	9.80701					+	5.65			+ 9	
((δ) – D) $\frac{d'}{100}$	0.75228									+ 7.97	
+16.86										+ .30	
δ₁ −0 56.16		57 39.61		6 28.4						− 6.95	
										7 24.56	
d	+8.7	0 24.0	27.4	15	28,20	7	20.15		15	7 21.83	
	0.93952					50 7	15.00			+ 2	+8.62
	9.80701					+	6.83			+ .11	
((δ) – D) $\frac{d'}{100}$	0.83447									+ 8.23	
+16.86										+ .30	
δ₂ −0 56.16		57 39.61		6 26.9						− 7.40	
										7 23.05	
d	+16.4	1 9.8	5.2	11	9,50	11	40.85		10	50 11 47.77	
	1.21484					50 11	34.92			+ 7	+8.53
	9.80625					+	12.85			+ .25	
((δ) – D) $\frac{d'}{100}$	1.10903									+ 8.05	
+16.85										+ .30	
δ₁ −0 56.36		58 42.09		10 53.0						− 6.95	
										11 49.35	
d	+11.0	1 5.7	5.1	11	5,25	11	43.10		10	11 46.57	
	1.04139					50 11	37.95			+ 3	+8.83
	9.80625					+	8.62			+ .25	
((δ) – D) $\frac{d'}{100}$	0.93558									+ 8.31	
+16.85										+ .30	
δ₂ −0 56.36		58 41.95		10 51.6						− 7.40	
										11 48.00	
d	−1.8	1 20.8	17.1	1	19,35	21	29.00		0	50 21 8.93	
	1.25768					50 21	23.07			+ 9	+8.73
	9.80489					−	14.14			+ .30	
((δ) – D) $\frac{d'}{100}$	1.15051									+ 8.22	
+16.83				20 13.4						+ .30	
δ₁ −0 57.00		1 11.09		20 7.8						− 6.9	
										21 10.76	
d	+17.1	1 50.0	46.7	1 36.7	48,35	21	00.00		0	21 8.21	
	1.23300					50 20	54.85			+ 8	+9.10
	9.80489					+	13.36			+ .41	
((δ) – D) $\frac{d'}{100}$	1.12583									+ 8.47	
+16.83										+ .30	
δ₂ −0 57.00		1 12.96		20 12.9						− 7.4	
										21 9.91	

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Date$_1$ = Mar 22 1871 — Observer HAR. / Recorder A.M. — Date$_2$ = Mar 25 — Observer A.M. / Recorder HAR.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
9	2ʰ 12ᵐ	0° 44′.2	9.2	1ᵐ 0ˢ.0		53ˢ.5	57ˢ.3	1ˢ.3					
	1 42.50	47.9	9.0	1 48.5	59.2	6.8	10.7	14.7	18.8	3502 +13.20	70.04	10.96	1 5908 +13.03 +.19 −2
													2 12.28 −✱0.84
													2 11.44
			9.2	1 46.9	58.8	6.5	10.5	14.5	18.5	3488 +13.28	69.76	10.96	1 5880 +13.17 +.13 −2
													2 12.08 −0.78
													2 11.30
3	2 1.89	24.9	9.1	2 47.3	56.8	4.4	8.5	12.2	16.1	3380 +13.20	67.60	10.88	2 5672 +13.03 +.19 −2
			9.1										3 9.92 −✱0.84
													3 9.08
			8.8	2 43.5	56.5	4.4	8.0	11.8	15.0	3367 +13.28	67.34	10.88	2 5646 +13.17 +.13 −2
													3 9.74 −0.78
													3 8.96
8	2 25.0	23.3	9.6	8 34.0	46.3	57.9	1.8	5.6				10.88	8 664 +13.03 +.19 −2
7	15.3	50 27.0		7 44.2	6.8	14.5	18.3	22.0	26.0	8761 +13.20	17.52		8 19.84 −✱0.87
													8 18.97
			9.7	7 49.9	6.8	14.2	18.3	22.1	26.1	8750 +13.28	17.50	10.88	8 662 +13.17 +.13 −2
													8 19.90 −0.82
													8 19.08
10	4 1.33	44.7	9.1	10 1.7	25.8	33.9	37.6	41.6	45.6	1845 +13.20	36.90	10.96	10 2594 +13.03 +.19 −2
9		50 48.4											10 39.14 −✱0.89
													10 38.25
			9.0	10 48	25.7	33.6	37.4	41.3	45.4	1834 +13.28	36.68	10.96	10 2572 +13.17 +.13 −2
													10 39.00 −0.84
													10 37.16 38.16
11	38	9.2	8.6	11 12.9	25.8	33.5	37.3	41.4	45.2	1832 +13.20	36.64	10.82	11 2582 +13.03 +.19 −2
10	21.2	50 13.0	8.9										11 39.02 −✱0.89
													11 38.13
			8.8	11 10.6	25.7	33.4	37.1	41.0	45.0	1822 +13.28	36.44	10.82	11 2562 +13.17 +.13 −2
													11 38.90 −0.83
													11 38.07

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	+10.6	3′ 53.4	49.8	38′	57.85	43	56.50		35	50 43 58.78	
d	1.02531					50 43	50.57			✱− 3	+9.78
	9.80136					+	8.21			+ 90	
	0.91461									+ 8.61	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.86 δ₁		228.30		43 4.3						−✱ 6.70	
−0 57.32										44 Σ1.66	
	+11.9	3 36.4	52.7	38	54.55	43	53.80		35	43 57.87	
d	1.07555					50 43	48.65			✱− 4	+10.04
	9.80136					+	9.22			+ 90	
	0.96485									+ 8.88	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.86 δ₂		2 28.16		43 3.2						− 7.40	
−0 57.32										44 0.51	
	+9.4	3 36.2	32.8	58	34.50	24	13.85		53	50 24 15.26	
d	0.97313					50 24	7.92			✱− 3	+9.37
	9.80448					+	7.34			+ 83	
	0.86550									+ 8.27	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.79 δ₁		3 25.87		23 20.3						−✱ 6.80	
−0 57.56										24 17.83	
	+13.0	3 40.4	37.3	58	38.85	24	9.50		55	24 14.50	
d	1.11394					50 24	4.35			✱− 5	+9.61
	9.80443					+	10.15			+ 83	
	1.00631									+ 8.53	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.79 δ₂		3 25.75		23 19.2						− 7.3	
−0 57.56										24 16.81	
	+22.4	3 36.1	52.3	58	54.20	23	54.15		55	50 24 5.70	
d	1.35025					50 23	48.22			✱− 13	+9.34
	9.80443					+	17.48			+ 90	
	1.24262									+ 8.27	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.9 δ₁		8 35.66		23 9.7						−✱ 6.60	
−0 58.76										24 8.44	
	+16.7	3 51.8	49.0	58	50.40	23	57.95		53	24 5.83	
d	1.22272					50 23	52.80			✱− 8	+9.62
	9.80443					+	13.03			+ 87	
	1.11509									+ 8.53	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.9 δ₂		8 35.77		23 9.6						− 7.10	
−0 58.76										24 ~~7.55~~ 8.35	✓
	+24.2	3 26.8	23.1	38	24.95	44	23.40		35	50 44 35.23	
d	1.38382					50 44	14.47			✱− .15	+9.57
	9.80136					+	18.76			+ .78	
	1.27312									+ 8.64	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.9 δ₁		10 54.94		43 38.9						−✱ 6.60	
−0 59.32										44 ~~37.56~~ 38.20	✓
	+20.9	3 23.3	19.0	~~38~~	~~21.15~~	44	27.20		35	44 38.25	
d	1.32015					50 44	22.05			✱− .12	+9.85
	9.80136					+	16.20			+ .78	
	1.20945									+ 8.89	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.9 δ₂		10 54.85		43 41.7						− 7.10	
−0 59.32										44 41.00	
	+12.9	3 53.0	48.8	13	50.90	8	57.45		10	50 9 1.64	
d	1.11059					50 8	51.52			✱− 5	+9.13
	9.80671					+	10.12			+ .87	
	1.00524									+ 8.01	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.58 δ₁		11 54.71		8 4.8						−✱ ~~6.60~~ 6.40	
−0 59.56										9 4.37	
	+15.0	3 54.4	51.8	~~43~~	53.10	8	55.25		10	9 1.87	
d	1.17609					50 8	50.10			✱− 6	+9.40
	9.80671					+	11.77			+ 90	
	1.07074									+ 8.26	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.58 δ₂		11 54.65		8 4.7						− ~~0.70~~ 7.00	
−0 59.56										9 4.27	

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Date$_1$ = Mar 22 39 17 Observer W.R. Recorder S.M. Date$_2$ = Mar 25 40 Observer A.M. Recorder W.R. Ru

Star. α	δ	Mag.	T_s	T_m	T_o	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
4 12 41 s 11 34.6	0 38.8 50 42.6	9.2 9.3	12 13.1	29.6	36.9	40.9	44.9	48.9	2012 +13.20	40.24	10.94	12 29.30 +13.03 +.19 −2 12 42.50 −+0.901 12 41.59
κ ((δ) − D) $\frac{\kappa'}{100}$ α_1 43												+16.6 −0.5
κ ((δ) − D) $\frac{\kappa'}{100}$ α_2		8.9	12 16.3	29.1	38.0	40.8	44.6	48.6	2001 +13.28	40.02	10.94	12 29.08 +13.17 +.13 −2 12 42.36 −0.85 12 41.51
												+16.6 −0.5
15 56. 14 49.7	5 0.0 50 53.9	7.0 7.5	15 21.7	43.2	51.1	54.8	58.8	2.9	2708 +13.31 21	54.16	10.98	15 43.18 +13.03 +.20 −2 15 56.39 −+0.93 15 55.46
κ ((δ) − D) $\frac{\kappa'}{100}$ α_1												+16. −1 0.
κ ((δ) − D) $\frac{\kappa'}{100}$ α_2		7.2	15 28.4	43.1	50.9	54.7	58.7	2.7	2701 +13.28	54.02	10.98	15 43.04 +13.17 +.13 −2 15 56.32 −0.88 15 55.44
												+16. −1 0.
17 23 16 16.7	9.6 50 13.6	9.2 9.1	16 51.4	17 11.5	19.1	23.1	26.9	30.7	1113 +13.20	22.26	10.83	17 11.43 +13.03 +.19 −2 17 24.63 −+0.92 17 23.71
κ ((δ) − D) $\frac{\kappa'}{100}$ α_1												+16.4 −1 0.
κ ((δ) − D) $\frac{\kappa'}{100}$ α_2		8.8	16 56.9	11.3	19.0	22.8	26.7	30.6	1104 +13.28	22.08	10.83	17 11.25 +13.17 +.13 −2 17 24.53 −0.87 17 23.66
												+16.4 −1 0.
18 36.0 17 30.0	0.1 50 4.1	9.1 9.1	18 4.4	25.4	33.3	37.2	41.0	44.9	1818 +13.20	36.36	10.79	18 25.57 +13.03 +.19 −2 18 38.77 −+0.93 18 37.84
κ ((δ) − D) $\frac{\kappa'}{100}$ α_1												+16.4 −1 1.
κ ((δ) − D) $\frac{\kappa'}{100}$ α_2		9.0	18 14.8	25.4	33.0	36.9	40.7	44.6	1806 +13.28	36.12	10.79	18 25.83 +13.17 +.13 −2 18 38.61 −0.88 18 37.73
												+16.4 −1 1.
19 49 18 43.2	2 6.1 51 30.2	9.5 9.3	19 18.4	37.1	45.1	49.1	53.0	57.0	2439 +13.20	48.78 48.39	10.89	19 37.95 +13.03 +.19 −2 19 51.15 −+0.95 19 50.14
κ ((δ) − D) $\frac{\kappa'}{100}$ α_1												+16.4 −1 1.
κ ((δ) − D) $\frac{\kappa'}{100}$ α_2		9.5	19 24.4	37.6	45.3	49.3	53.X	57.X	2426 +13.28	48.52 48.46	10.89	19 37.63 +13.17 +.13 −2 19 50.85 −0.90 19 49.95 50.01
												+16. −1.1

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+16.52	4 22.8	17.9	44	21,35	38	27.00		40	50 38 33.65	
	1.20952					50 38	21.07			*– 7	+9.73
	9.80228					+	12.58			+ .99	
	1.09974									+ 8.51	
((δ) — D) $\frac{d'}{100}$										+ .30	
										– * 6.50	
+16.63 δ_1		12 58.22		37 37.0						38 36.88	
–0 59.84											
d	+12.8	4 20.1	18.9	44	19.50	38	28.85		40	38 33.64	
	1.10721					50 38	23.70			*– 5	+10.02
	9.80228					+	9.94			+ .99	
	0.99743									+ 8.78	
((δ) — D) $\frac{d'}{100}$										+ .30	
										– 7.00	
+16.63 δ_2		12 58.14		37 36.8	×1″					38 36.66	
–059.84											
d	+21.5	3 17.5	13.8	33	15,65	49	32.70		30	50 49 42.40	
	1.33244					50 49	25.77			*– 12	+9.65
	9.80043					+	16.63			+ .76	
	1.22081									+ 8.71	
((δ) — D) $\frac{d'}{100}$										+ .30	
										– * 6.40	
+16.59 δ_1		16 12.05		48 45.1						49 45.65	
–1 0.56											
d	+14.6	3 12.7	9.2	33	1095	49	37.40		30	49 43.54	
	1.16435					50 49	32.25			*– 6	+9.96
	9.80043					+	11.29			+ .74	
	1.05272									+ 8.98	
((δ) — D) $\frac{d'}{100}$										+ .30	
										– 7.00	
+16.59 δ_2		16 12.03		48 45.9						49 46.50	
–1 0.56											
d	+20.0	3 13.2	9.1	13	1115	58 9	37.20		10	50 9 46.96	
	1.30103					9	31.27			*– .11	+8.94
	9.80656					+	15.69			+ .74	
	1.19553									+ 8.01	
((δ) — D) $\frac{d'}{100}$										+ .30	
										– * 6.20	
+16.46 δ_1		17 40.17		8 48.8						9 49.70	
–1 0.92											
d	+14.4	3 9.4	7.0	13	8.20	9	40.15		10	9 46.29	
	1.15836					50 9	35.50			*– 5	+9.22
	9.80656					+	11.29			+ .71	
	1.05286									+ 8.26	
((δ) — D) $\frac{d'}{100}$										+ .30	
										– 6.80	
+16.46 δ_2		17 40.12		8 47.8						9 48.71	
–1 0.92											
d	+21.2	2 57.1	54.0	22	5-3,33	59	52.80		20	50 0 3.56	
	1.32634					49 59	46.87			*– .12	+8.70
	9.80804					+	16.69			+ .67	
	1.22235									+ 7.85	
((δ) — D) $\frac{d'}{100}$										+ .30	
										– * 6.10	
+16.41 δ_1		18 54.25		59 [illegible].0						0 6.16	
–1 1.20											
d	+10.5	2 49.2	48.7	22	48,95	59	59.40		20	0 2.51	
	1.02119					49 59	54.25			*– 3	+9.01
	9.80804					+	8.26			+ .64	
	0.91710									+ 8.10	
((δ) — D) $\frac{d'}{100}$										+ .30	
										– 6.70	
+16.41 δ_2		18 54.14		59 3.6						0 4.82	
–1 1.20											
d	+19.5	1 50.2	46.1	56	48,15	26	0.20		53	50 26 9.48	
	1.29003					50 25	54.27			*– .10	+8.91
	9.80412					+	15.21			+ .41	
	1.18209									+ 8.30	
((δ) — D) $\frac{d'}{100}$										+ .30	
										– * 6.10	
+16.45 δ_1		20 6.59		25 10.8						26 12.29	
–1 1.44											
d	+13.2	1 47.1	44.7	56	47.90	26	2.45		53	26 7.60	
	1.12057					50 25	57.30			*– 5	+9.22
	9.80412					+	10.30			+ .41	
	1.01263									+ 8.56	
((δ) — D) $\frac{d'}{100}$										+ .30	
										– 6.70	
+16.45 δ_2		20 6.46		25 8.7						26 10.12	
–1 1.44											

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Date$_1$ = Mar 22 | Observer A.S.R. | Recorder A.M.

Date$_2$ = Mar 25 | 40 | Observer A.M. | Recorder A.S.R.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
4	22m 53s	0° 27′.5	9.2	22m 29s.3	42s.4	50s.0	54s.0	57s.9	1s.9	2662	53s.24	10s.89	22m 42s.35
2	21 47.2	50 34.6	9.2							+13.20			+13.03
													+ .19
													− 2
													22 55.55
													− 0.96
													22 54.59
			9.0	22 29.9	42.0	50.0	54.0	57.8	1.8	2656	53.12	10.89	22 42.23
										+13.28			+13.17
													+ .13
													− 2
													22 55.51
													− 0.91
													22 54.60
	24 0	43.3	9.0	23 30.9	46.6	54.3	57.3	2.0	6.1	2873	57.46	10.95	23 46.51
	22 54.7	50 47.4	8.9							+13.20			+13.03
													+ .19
													− 2
													23 59.71
													− 0.98
													23 58.73
			8.8	23 33.8	46.3	54.2	58.3	2.1	6.0	2869	57.38	10.95	23 46.43
										+13.28			+13.17
													+ .13
													− 2
													23 59.71
													− 0.93
													23 58.78
	25 4	10.0	8.9	24 34.7	52.1	59.8	3.7	7.5	11.4	3145	62.90	10.83	24 52.07
	23 58.8	50 14.1	9.1							+13.20			+13.03
													+ .19
													− 2
													25 5.27
													− 0.97
													25 4.30
			8.6	24 38.0	52.0	59.8	3.6	7.3	11.5	3146	62.84	10.83	24 52.01
										+13.28			+13.17
													+ .13
													− 2
													25 5.29
													− 0.92
													25 4.37
	26 26	50.3	8.6	26 1.0	14.2	22.1	26.0	30.0	33.9	1262	25.24	10.98	26 14.26
	25 20.2	50 54.4	8.8							+13.22			+13.04
													+ .20
													− 2
													26 27.48
													− 1.00
													26 26.48
			8.9	25 58.4	14.2	22.1	26.0	29.8	33.8	1259	25.18	10.98	26 14.20
										+13.28			+13.17
													+ .13
													− 2
													26 27.48
													− 0.95
													26 26.53
	28 51	−8.0	8.4	28 22.0	37.2	44.9	48.7	52.5	56.6	2399	47.98	10.76	28 37.22
	27 45.3	58 −3.8	8.7							+13.21			+13.04
													+ .19
													− 2
													28 50.43
													− 0.99
													28 49.44
			8.7	28 17.6	37.3	45.0	48.4	52.6	56.6	2397	47.94	10.76	28 37.28
										+13.28			+13.17
													+ .13
													− 2
													28 50.56
													− 0.94
													28 49.62

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+12.9	0 25.3	21.1	53	23.20	27	25.15		55	50 27 29.28	
d	1.11059					50 27	19.22			− 5	+8.65
	9.80397					+	10.06			+ 9	
	1.00250									+ 8.32	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.38										− 6.10	
δ_1 −1 2.16		23 10.97		26 29.7						27 31.84	
	+12.3	0 25.0	20.7	53	22.85	27	25.50		55	27 29.94	
d	1.08991					50 27	20.35			− 4	+8.93
	9.80397					+	9.59			+ 9	
	0.98182									+ 8.58	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.38										− 6.60	
δ_2 −1 2.16		23 10.98		26 30.1						27 32.27	
	+15.6	0 18.0	14.2	40	16.10	42	32.25		40	50 42 38.42	
d	1.19312					50 42	26.32			− 7	+8.89
	9.80166					+	12.10			+ 4	
	1.08272									+ 8.59	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.40										− 6.10	
δ_1 −1 2.40		24 15.13		41 38.8						42 41.21	
	+12.6	0 16.4	12.7	40	14.55	42	33.80		40	42 38.42	
d	1.10237					50 42	28.65			− 5	+9.17
	9.80166					+	9.77			+ 6	
	0.98997									+ 8.86	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.40										− 6.60	
δ_2 −1 2.40		24 15.18		41 38.6						42 40.94	
	+17.4	2 5.3	1.7	12	3.50	10	44.85		10	50 10 52.56	
d	1.24055					50 10	38.92			− 8	+8.73
	9.80641					+	13.64			+ 48	
	1.13490									+ 8.03	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.30										− 5.90	
δ_1 −1 2.64		25 20.60		9 52.8						10 55.39	
	+14.0	2 3.2	0.0	12	1.60	10	46.75		10	10 52.58	
d	1.14613					50 10	41.60			− 5	+9.00
	9.80641					+	10.98			+ 46	
	1.04048									+ 8.29	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.30										− 6.50	
δ_2 −1 2.64		25 20.67		9 52.4						10 55.08	
	+8.3	2 16.8	13.0	32	14.90	50	33.45		30	50 50 33.94	
d	0.91908					50 50	27.52			− 2	+9.50
	9.80043					+	6.42			+ 51	
	0.80745									+ 8.71	
((δ) − D) $\frac{d'}{100}$		42.								+ .30	
+16.36		~~26.84~~		49 34.5						− 6.00	
δ_1 −1 2.92		26 ~~38.74~~		~~50 24.5~~						50 37.44	
	+15.5	2 20.3	17.8	32	19.05	50	29.30		30	50 36.14	
d	1.19033					50 50	24.15			− 7	+9.75
	9.80043					+	11.99			+ 53	
	1.07870									+ 8.99	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.36										− 6.60	
δ_2 −1 2.92		26 42.89		49 36.4						50 39.29	
	+15.2	0 6.2	1.3	30	3.75	52	44.60		30	49 52 50.66	
d	1.18184					49 52	38.67			− 6	+7.95
	9.80912					+	11.99			+ 0	
	1.07890									+ 7.71	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.17										− ~~0.57~~	
δ_1 −1 3.44		29 5.61		51 49.5						52 ~~5.76~~ 52.91	
	+19.7	0 9.6	5.1	30	7.35	52	41.00		30	52 57.37	
d	1.29447					49 52	35.85			− .11	+7.18
	9.80912					+	15.54			+ 2	
	1.19153									+ 7.97	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.17										− 6.36	
δ_2 −1 3.44		29 5.69		51 49.8						52 53.27	

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38 39 19

Date$_1$ = Mar 22 Observer N.R. Recorder A.M.

Date$_2$ = Mar 25 40 Observer A.M. Recorder N.R.

Run

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
9 ~	29 25	0 ~~3.4~~	~~9.0~~	~~29~~	29.2	11.5	19.2	23.1	26.7	30.7	1112	22.24	10.78	29 1146
	28 19.7	50 ~~1.0~~ 1.8	8.9								+13.21			+13.04
	κ													+ .19
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														29 24.67
	α_1													-* 0.99
														1.80
														29 23.67
			—	29	~~44~~ 41.2	11.4	18.9	22.7	26.7	30.4	11 01	22.02	10.78	29 11.24
											+13.28			+13.17
	κ													+.13
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														29 24.52
	α_2													- 0.95
														29 23.57
	30 22	23.0	9.0	30	20.7	11.6	19.0	23.0	26.7	30.6	11 09	22.18	10.88	30 1130
	~~28 38.5~~ 29 17.8	50 ~~32.3~~ 27.3	8.0								+13.21			+13.04
	κ													+ .19
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														30 24.51
	α_1													-* 1.01
														30 23.50
			8.7	30	3.6	11.3	19.0	23.0	26.9	30.7	11 09	22.18	10.88	30 1130
											+13.28			+ 13.17
	κ													+.13
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														30 24.58
	α_2													- 0.95
														30 23.63
	32 37	— 3.6	8.4	32	18.5	39.8	47.7	51.4	55.3	59.1	2533	50.166	10.77	32 3989
	31 46.0	50 0.6	9.2								+13.21			+13.04
	κ													+ .19
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														32 53.10
	α_1													— 1.01
														32 52.09
			8.8	32	19.6	39.6	47.5	51.5	55.3	59.1	2530	50.160	10.77	32 3983
											+13.28			+13.17
	κ													+.13
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														32 53.11
	α_2													- 0.96
														32 52.15
	33 36	— 3.5	8.9	33	13.3	23.8	31.5	35.5	39.3	43.0	1731	34.462	10.78	33 2384
	32 31.83	50 0.7	8.18								+13.21			+13.04
	κ													+ .19
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														33 37.05
	α_1													— 1.02
														33 36.03
			9.0	33	14.8	23.7	31.6	35.2	39.0	43.0	1725	34.50	10.78	33 2372
											+13.28			+13.17
	κ													+ .13
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														33 37.00
	α_2													— 0.97
														33 36.03
	35 15	54.5	8.8	34	37.0	41	7.9	13.7	17.7	21.6	6 50	13.00	11.00	35 200
	34 10.2	50 58.7	9.0								+13.32			+13.04
	κ													+ .20
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														35 15.22
	α_1													— 1.06
														35 14.16
			8.7	34	44.6	1.9	9.7	13.5	17.5	21.5	6 41	12.82	11.00	35 182
											+13.28			+13.17
	κ													+ .13
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														35 15.10
	α_2													— 1.00
														35 14.10

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	−17.5	3′ 13.4	9.7	28	11,5	54	3680		25	49 54 16.92	
d	1.24797					49 54	30.87			− 9	+8.69
	9.88882					−	13.95			+ .74	
	1.14473									+ 7.74	
((δ) − D) $\frac{d'}{100}$										+ .30	
										+ 5.70	
+16.16 δ_1		29 39.83		53 16.4						54 19.91	
−1 3.56											
	−30.0	3 3.9	0.4	28	2,15	54	4620		25	54 17.36	
d	1.47712					49 54	41.01			− .24	+8.74
	9.80882					−	23.65			+ 69	
	1.37288									+ 7.99	
((δ) − D) $\frac{d'}{100}$										+ 30	
										− 6.20	
+16.16 δ_2		29 39.73		53 16.3						54 19.90	
−1 3.56											
	−9.4	4 33.8	29.8	59	31,80	23	16.55		55	50 23 3.28	
d	0.97313					50 23	10.62			− 3	+9.55
	9.80458					−	7.34			+ 1.03	
	0.86565									+ 8.25	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.21										− 5.7	
−1 3.76 δ_1		30 39.71		22 3.4						23 7.13	
	+7.7	4 44.7	41.7	59	4320	23	5.15		55	23 6.01	
d	0.88649					50 23	0.00			− 2	+9.87
	9.80458					+	6.01			+ 1.08	
	0.77901									+ 8.56	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.21										− 6.31	
−1 3.76 δ_2		30 39.84		22 5.8						23 9.57	
	+21.4	1 23.1	19.8	26	21,45	56	26.90		25	49 56 37.84	
d	1.33041					49 56	20.97			− .12	+8.28
	9.80867					+	16.87			+ .32	
	1.22702									+ 7.78	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.09										− 5.50	
−1 4.28 δ_1		33 8.18		55 36.3						56 40.62	
	+20.2	1 23.0	19.7	26	21,35	56	27.00		25	56 37.77	
d	1.30535					49 56	21.85			− .11	+8.54
	9.80867					+	15.92			+ .32	
	1.20196									+ 8.03	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.09										− 6.10	
−1 4.28 δ_2		33 8.24		55 35.9						56 40.21	
	+10.5	1 23.1	19.8	26	21,45	56	26.90		25	49 56 29.25	
d	1.02119					49 56	20.97			− 3	+8.37
	9.80867					+	8.28			+ .32	
	0.91780									+ 7.78	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.08										− 5.50	
−1 4.44 δ_1		33 52.11		55 27.7						56 32.12	
	+8.9	1 23.0	19.7	26.	21,35	56	27.00		25	56 28.86	
d	0.94939					49 56	21.85			− 2	+8.63
	9.80867					+	7.01			+ .32	
	0.84600									+ 8.03	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.08 δ_2										− 6.40	
−1 4.44		33 52.11		55 27.0						56 31.39	
	+25.0	3 54.7	52.6	28	53,35	53	55.00		25	50 54 8.38	
d	1.39794					50 53	49.07			− .17	+9.82
	9.79981					+	19.31			+ 90	
	1.28569									+ 8.79	
((δ) − D) $\frac{d'}{100}$		3033								+ 30	
+16.17		1799								− 5.25	
−1 4.80 δ_1		35		53 7.8						54 12.55	
	+17.2	3 44.2	48.0	28	48,60	53	59.75		25	54 7.88	
d	1.23553					50 53	54.60			− 8	+10.16
	9.79981					+	13.28			+ .87	
	1.12328									+ 9.07	
((δ) − D) $\frac{d'}{100}$										+ 30	
+16.17										− 6.25	
−1 4.80 δ_2		35 30.24		53 7.0						54 11.79	

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Date$_1$ = Mar 22 Observer H.R. Recorder A.M. Date$_2$ = Mar 23 Observer A.M. Recorder W.H.R.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
9	37 52	-4.0	9.4	37 14.5	39.6	47.3	51.0	54.8	58.6	251.3 +13.21	50.126	10.77	37 39.49 +13.04 +.19 −.2 37 52.70 −1.04 37 51.66
9	34 43.4 36 47.8	50 46 0.2	8.5										
	((δ) − D) $\frac{\kappa'}{100}$												
	α_1												
	κ		9.1	37 21.0	39.6	47.1	51.1	54.9	58.7	251.4 +13.28	50.126	10.77	37 39.51 +13.17 +.13 −.2 37 52.69 −0.99 37 51.80
	((δ) − D) $\frac{\kappa'}{100}$												
	α_2												
9	39 21 34 34 38 16.3	1.9 50 46 6.1	9.7 8.5	39 ~~17.6~~ 23.8	10.7	18.3	22.3	26.0	30.6	104.3 +13.21	21.146	10.80	39 19.66 +13.04 +.19 −.2 39 23.87 −1.06 39 22.81
	κ		9.7	38 54.7	10.6	18.3	21.8	26.1	30.0	106.5 +13.28	21.136	10.80	39 10.56 +13.17 +.13 −.2 39 23.84 −1.01 39 22.83
	((δ) − D) $\frac{\kappa'}{100}$												
	α_2												
40	42 39 37.7	46 50 51.2	8.5 8.6	40 14.0	30.0	37.8	41.8	45.7	49.5	204.8 +13.21	40.96	10.97	40 29.99 +13.04 +.19 −.2 40 43.20 −1.08 40 42.12
	κ		8.9	40 14.3	29.7	37.6	41.4	45.5	49.4	203.6 +13.28	40.72	10.97	40 29.75 +13.17 +.13 −.2 40 43.03 −1.04 40 41.99
	((δ) − D) $\frac{\kappa'}{100}$												
	α_2												
42	52 41 47.7	38.7 50 43.0	9.0 9.2	42 15.1	34.7 3	47.1	50.8 50.2	54.8 7	58.7 8	251.2 07 +13.16	50.14 14	10.94	42 39.30 +13.04 +.19 −.2 42 52.46 −1.09 42 51.37
	κ		9.0	42 13.2	39.2	46.8	50.6	54.5	58.5	249.6 +13.28	49.92	10.94	42 38.98 +13.17 +.13 −.2 42 52.26 −1.05 42 51.21
	((δ) − D) $\frac{\kappa'}{100}$												
	α_2												
43	41 42 37.1	33.8 50 38.2	8.5 8.4	43 15.2	29.4	37.1	40.9	44.8	48.8	201.0 +13.21	40.20	10.92	43 29.28 +13.04 +.19 −.2 43 42.49 −1.09 43 41.40
	κ		8.8	43 19.7	29.1	37.0	40.9	44.8	48.7	200.5 +13.28	40.10	10.92	43 29.18 +13.17 +.13 −.2 43 42.46 −1.05 43 41.41
	((δ) − D) $\frac{\kappa'}{100}$												
	α_2												

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Runs

	$T_m - T$	A	C	Sum	Mean χ	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+2.50	2′ 11.2	11.6	24	12.40	55	35.45		25	49 55 49.72	
d	1.39494					49 55	29.52			− .17	+ 8.41
	9.80867					+	19.70			+ .51	
	1.29455									+ 7.77	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 5.30	
+15.99 δ₁		38 7.65		54 46.9						55 52.23	
−1 5.32											
	+18.5	2 12.2	8.9	27	10.55	55	37.80		25	55 47.23	
d	1.26717					49 55	32.65			− .9	+ 8.73
	9.80867					+	14.58			+ .51	
	1.16378									+ 8.01	
((δ) − D) $\frac{d'}{100}$		.79								+ .30	
+15.99										− 5.90	
−1 5.32 δ₂		38 7.69		54 44.7						55 50.06	
	~~.69~~ −1.31	4 36.8	34.0	19	35.40	3	12.95		15	50 2 56.72	
d	1.11727m					50 3	7.02			− .5	+ 9.19
	9.80762					−	10.30			+ .46	
	1.01283m									+ 7.88	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 5.30	✓
+15.96 δ₁		39 38.77		1 55.0						3 0.61	
−1 5.60											
	+15.9	0 3.2	0.3	20	1.75	2	46.60		20	2 53.95	
d	1.20140					50 2	41.45			− .7	+ 8.36
	9.80762					+	12.50			+ 0	
	1.09696									+ 8.13	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 5.90	
+15.96 δ₂		39 38.79		1 50.8						2 56.41	✓
−1 5.60											
	+16.0	0 45.8	41.3	35	43.55	47	4.80		35	50 47 11.26	
d	1.20412					50 46	58.87			− .7	+ 9.07
	9.80089					+	12.39			+ .16	
	1.09295									+ 8.68	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 5.4	
+16.02 δ₁		40 58.14		46 9.0						47 14.93	
−1 5.88											
	+15.4	0 47.1	42.6	35	44.85	47	3.50		35	47 10.27	
d	1.18752					50 46	58.35			− .6	+ 9.34
	9.80089					+	11.92			+ .16	
	1.07635									+ 8.94	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 6.00	
+16.02 δ₂		40 58.01		46 7.7						47 13.61	
−1 5.88											
	+21.2	0 11.5	6.2	45	8.85	37	39.50		45	50 37 58.03	
d	1.32634					50 37	33.57			− .12	+ 8.70
	9.80228					+	16.46			+ 2	
	1.21656									+ 8.50	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 5.30	
+15.96 δ₁		43 7.23		36 47.1						37 53.43	
−1 6.32											
	+25.8	0 14.0	10.4	45	12.20	37	36.15		45	37 57.04	
d	1.41162					50 37	31.00			− .18	+ 8.94
	9.80228					+	20.04			+ 5	
	1.30184									+ 8.77	
((δ) − D) $\frac{d'}{100}$		.17								+ .30	
										− 5.90	
+15.96 δ₂		43 7.2		36 47.8						37 54.08	
−1 6.32											
	+11.1	3 26.3	12.6	48	14.55	34	33.80		45	50 34 36.50	
d	1.04532					50 34	27.87			− .3	+ 9.46
	9.80290					+	8.63			+ .74	
	0.93616									+ 8.45	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 5.20	
+15.93 δ₁		43 57.33		33 34.3						34 40.76	
−1 6.48											
	+9.5	3 16.0	12.8	48	14.40	34	33.95		45	34 36.19	
d	0.97772					50 34	28.80			− .3	+ 9.73
	9.80290					+	7.39			+ .74	
	0.86856									+ 8.72	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 5.80	
+15.93 δ₂		43 57.34		33 33.6						34 40.12	
−1 6.48											

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#42 27 39

Date$_1$ = Mar 22 Observer N.A.R. Recorder A.M.

Date$_2$ = Mar 25 40 Observer W.M. Recorder N.A.R.

Star.	α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	9h 46m 29s	5' 53.4	8.5	46m	31.5s	17.6s	25.3s	29.2s	33.1s	37.1s	14 23	28.46s	11.00s	46 17.46
	45 24.7	50 58.4	9.1								+13.22			+13.04
														+.20
														−2
														46 30.68
														−1.12
														46 29.56
			8.7	46	00	17.4	25.3	29.2	33.3	37.2	14 24	28.48	11.00	46 17.48
											+13.28			+13.17
														+.13
														−2
														46 30.76
														−1.08
														46 29.68
	47 18	26.0	5.0	47	15.0	49	12.7	16.5	20.4	24.4	7 59	15.78	10.82	47 4.89
	46 14.8	50 30.5	5.6								+13.21			+13.04
														+.19
														−2
														47 18.10
														−1.11
														47 16.99
			6.0	46	54.0	4.9	12.6	16.4	20.3	24.4	7 56	15.72	10.89	47 4.83
											+13.28			+13.17
														+.13
														−2
														47 18.11
														−1.07
														47 17.04
	49 13	53.1	9.5	48	35.5	59.3	7.1	11.1	14.9	18.9	35 13	70.26	11.00	48 59.26
	48 18.0	50 49.9	7.0								+13.32			+13.04
	48 9.3	54.7												+.20
														−2
														49 12.48
														−1.14
														49 11.34
			9.2	48	37.4	59.4	7.2	11.1	14.8	18.9	35 13	70.26	11.00	48 59.26
											+13.28			+13.17
														+.13
														−2
														49 12.54
														−1.09
														49 11.45
	50 22	45.3	6.0	49	48.3	50 7.8	15.5	19.4	23.3	27.4	9 34	18.68	10.96	50 7.72
	49 18.0	50 49.4	7.0								+13.21			+13.04
														+.19
														−2
														50 20.93
														−1.14
														50 19.79
			6.5	49	51.9	7.8	15.4	19.2	23.4	27.1	9 29	18.58	10.96	50 7.62
											+13.28			+13.17
														+.13
														−2
														50 20.90
														−1.09
														50 19.81
	51 27	35.4	8.5	50	58.2	51 14.8	22.6	26.5	30.3	34.3	12 85	25.70	10.92	51 14.78
	50 25.5	50 40.0	8.7								+13.21			+13.04
														+.19
														−2
														51 27.99
														−1.14
														51 26.85
			8.7	50	57.0	14.8	22.8	26.4	30.3	34.3	1283	25.66	10.92	51 14.74
											+13.28			+13.17
														+.13
														−2
														51 28.02
														−1.10
														51 26.92

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	−1.40	2 35.6	31.8	24	33.70	55	11.65		25	50 54 57.91	
	1.14613					50 55	8.72			− 5	+9.64
	9.79965					−	10.81			+ .60	
	1.03372									+ 8.79	
((δ) − D) $\frac{d'}{100}$										+ .30	
+15.90										− 5.20	
δ_2 −1 7.04		46 45.46		53 55.3						55 2.35	
d	+1.75	3 01.7	56.4	~~28~~ 24	~~2.80~~ 58.80	54	49.55		25	54 57.91	
	1.24304					50 54	4.40			− 9	+9.97
	9.79965					+	13.51			+ 6.9	
	1.13063									+ 9.07	
((δ) − D) $\frac{d'}{100}$										+ .30	
+15.90										− 5.80	
δ_2 −1 7.04		46 45.58		53 55.0						55 2.08	
d	−10.9	2 0.9	57.2	56	59.05	25	49.30		55	50 25 35.49	
	1.00432					50 25	43.37			− 3	+9.02
	9.80412					−	7.88			+ 46	
	0.89638									+ 8.29	
((δ) − D) $\frac{d'}{100}$										+ .30	
+15.82										− 5.10	
δ_1 −1 7.20		47 32.81		24 5 32.2						25 39.41	
d	+10.8	2 17.0	14.1	27	15.55	25	32.80		15 55	25 36.07	
	1.03342					50 25	27.65			− 3	+9.35
	9.80412					+	8.42			+ .53	
	0.92548									+ 8.55	
((δ) − D) $\frac{d'}{100}$										+ .30	
+15.82										− 5.60	
δ_2 −1 7.20		47 32.86		24 32.6						25 39.82	
d	+23.8	2 50.1	45.8	27	47.95	55	0.40		25	50 55 13.84	
	1.37658					50 54	5.47			− .15	+9.61
	9.79965					+	18.37			+ .64	
	1.26417									+ 8.82	
((δ) − D) $\frac{d'}{100}$										+ .30	
+15.84										− 5.10	
δ_1 −1 7.52		49 27.18		54 10.8						55 18.35	
d	+21.9	2 48.7	46.4	27	47.55	55	0.80		25	55 12.56	
	1.34044					50 ~~55~~ 54	5.65			− .13	+9.92
	9.79965					+	16.91			+ .64	
	1.22803									+ 9.11	
((δ) − D) $\frac{d'}{100}$										+ .30	
+15.84										− 5.70	
δ_2 −1 7.52		49 27.29		54 9.3						55 16.78	
d	+19.4	3 43.5	40.6	38	42.20	44	6.15		35	50 44 15.25	
	1.28780					50 44	0.22			− .10	+9.66
	9.80136					+	15.23			+ .85	
	1.17810									+ 8.61	
((δ) − D) $\frac{d'}{100}$										+ .30	
+15.79										− ~~5.07~~ 5.10	
δ_1 −1 7.76		50 35.58		48 3 12.0						44 19.81	
d	+15.7	3 39.5	36.9	38	38.35	44	10.00		35	44 17.02	
	1.19590					50 44	4.85			− 7	+9.95
	9.80136					+	12.17			+ .83	
	1.08520									+ 8.89	
((δ) − D) $\frac{d'}{100}$										+ .30	
+15.79										− 5.70	
δ_2 −1 7.76		50 35.60		43 13.5						44 21.27	
d	+16.6	2 19.8	15.0	47	17.40	35	30.95		45	50 35 37.93	
	1.22011					50 35	25.02			− 8	+9.22
	9.80274					+	12.91			+ .53	
	1.11079									+ 8.47	
((δ) − D) $\frac{d'}{100}$										+ .30	
+15.74										− 4.90	
δ_1 −1 7.96		51 42.59		34 34.3						35 42.25	
d	+17.7	2 20.8	14.7	47	20.25	35	28.10		45	35 36.71	
	1.24797					50 35	22.95			− 9	+9.48
	9.80274					+	13.76			+ .53	
	1.13865									+ 8.74	
((δ) − D) $\frac{d'}{100}$										+ .30	
+15.74										− 5.50	
δ_2 −1 7.96		51 42.66		34 32.7						35 40.69	

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Date$_1$ = Mar 22 Observer W.R. Recorder A.M. Date$_2$ = Mar 25 Observer W.R. Recorder A.M.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
9	52m 12s	40.8	8.7	51m	52s.8	57s.1	9s.0	12s.9	16s.5	20s.6	6 01	12s.02	10.94	52m 1.88
	51 8.5	50 45.4	8.9								+13.21			+13.04
	κ													+.19
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														52 14.29
	a_1													— 1.15
														52 13.14
			8.8	51	56.2	0.9	8.8	12.8	16.5	20.7	5 97	11.94	10.94	52 1.00
	κ										+13.28			+13.17
	((δ) — D) $\frac{\kappa'}{100}$													+.13
														— 2
	a_2													52 14.28
														— 1.11
														52 13.17
	54 30	29.0	7.5	53	59.4	54 16.7	24.4	28.3	32.3	36.1	13 78	27.56	10.90	54 1.666
	53 27.0	50 32.6	7.5								+13.21			+13.04
	κ													+.19
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														54 29.87
	a_1													— 1.15
														54 28.72
			8.0	54	1.7	16.7	24.3	28.0	32.0	36.0	13 70	27.40	10.90	54 1650
	κ										+13.28			+13.17
	((δ) — D) $\frac{\kappa'}{100}$													+.13
														— 2
	a_2													54 29.78
														— 1.11
														54 28.67
	56 0.5	47.3	9.0	55	34.4	52.5	0.1	4.1	8.0	12.0	31 67	63.34	10.97	55 52.37
	55 2.8	50 51.4	8.8								+13.21			+13.04
	κ													+.19
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														56 5.58
	a_1													— 1.17
														56 4.41
			8.7	55	38.7	52.4	0.0	4.0	8.0	12.0	31 64	63.28	10.97	55 52.31
	κ										+13.28			+13.17
	((δ) — D) $\frac{\kappa'}{100}$													+.13
														— 2
	a_2													56 5.59
														— 1.13
														56 4.46
	58 11	50.7	8.5	57	37.8	59.5	7.1	11.1	15.0	19.0	35 17	70.34	10.99	57 59.35
	57 9.5	50 55.8	9.2								+13.32			+13.04
	κ										22			+.20
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														58 12.57
	a_1													— 1.18
														58 11.39
			8.8	57	42.4	59.3	7.3	11.1	15.1	19.0	35 18	70.36	10.99	57 59.37
	κ										+13.28			+13.17
	((δ) — D) $\frac{\kappa'}{100}$													+.13
														— 2
	a_2													58 12.65
														— 1.14
														58 11.51
10	2 7	8.7	7.0	1	36.8	52.4	0.0	3.9	7.7	11.7	31 57	63.14	10.82	1 52.32
	1 52	50 18.3	7.2								+13.21			+13.04
	κ													+.19
	((δ) — D) $\frac{\kappa'}{100}$													— 2
														2 5.53
	a_1													— 1.18
														2 43.35
			7.5	1	29.8	52.3	0.0	3.9	7.7	11.7	31 56	63.12	10.82	1 52.30
	κ										+13.27			+13.16
	((δ) — D) $\frac{\kappa'}{100}$													+.13
														— 2
	a_2													2 5.54
														— 1.14
														2 4.43

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+8.3	1 41.0	37.1	41	39,05	41	9 30		46	50 41 9.81	
	0.91908					50 41	3.37			+- 2	+4.93 9.23
	9.80182					+	6.44			+ .39	
	0.80884									+ 8.56	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 4.9	
+15.74 δ₁		52 28.88		40 6.0						41 14.14	
−1 8.12											
d	+4.8	1 38.4	35.6	41	37,50	41	11,35		40	41 9.92	
	0.68124					50 41	6.20			+- 1	+9.49
	9.80182					+	3.72			+ .37	
	0.57100									+ 8.83	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 5.50	
+15.74 δ₂		52 28.91		40 5.8						41 13.91	
−1 8.12											
d	+17.3	3 4.4	54.8	53	2,10	29	46,25		50	50 29 53.79	
	1.23805					50 29	40.32			+- 8	+9.28
	9.80351					+	13.47			+ .69	
	1.12950									+ 8.34	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 4.70	
+15.66 δ₁		54 44.38		28 49.8						29 58.37	
−1 8.52											
d	+14.8	3 3.0	0.5−	53	1.75−	29	4660		50	29 52.98	
	1.17026					50 29	41.45			+- 6	+9.57
	9.80351					+	11.53			+ .69	
	1.06171									+ 8.64	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 5.30	
+15.66 δ₂		54 44.33		28 48.7						29 57.25	
−1 8.52											
d	+18.0	0 57.5	57.7	35−	58,25−	46	52.10		35−	50 47 0.11	
	1.25524					50 46	46.17			+- 9	+9.09
	9.80089					+	13.94			+ .21	
	1.14410									+ 8.67	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 4.70	
+15.66 δ₁		56 20.07		45 55.7						47 4.56	
−1 8.80											
d	+13,6	0 57.1	50.4	35−	52,25−	46	56.10		35−	47 1.48	
	1.13354					50 46	50.95			+- 5	+9.41
	9.80089					+	10.53			+ .21	
	1.02237									+ 8.95	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 5.30	
+15.66 δ₂		56 20.12		45 56.8						47 5.59	
−1 8.80											
d	+21.6	2 13.1	9.8	32	11,45−	50	36.90		30	50 50 47.67	
	1.33445					50 50	30.97			+- .13	+9.40
	9.80027					+	16.70			+ .51	
	1.22266									+ 8.72	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 4.60	
+15.61 δ₁		58 27.00		49 43.3						50 52.47	
−1 9.20											
d	+17.0	2 11.7	8.5−	32	10,10	50	38.25		30	50 46.24	
	1.23045					50 50	33.10			+- 8	+9.72
	9.80027					+	13.14			+ .51	
	1.11866									+ 8.99	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 5.20	
+15.61 δ₂		58 27.12		49 41.6						50 50.76	
−1 9.20											
d	+15.5	4 36.1	32.5−	14	3430	8	14.05		10	50 8 20.29	
	1.19033					50 8	8.12			+- 7	+9.27
	9.80686					+	12.17			+ 1.06	
	1.08513									+ 7.98	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 4.30	
+15.44 δ₁		2 19.79		7 15.4						8 25.26	
−1 9.88											
d	+22.5	4 41.1	39.8	1 4	40.45	8	7.90		10	8 20.41	
	1.35218					50 8	2.75			+- .13	+9.49
	9.80686					+	17.66			+ 1.08	
	1.24698									+ 8.24	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 4.90	
+15.44 δ₂		2 19.87		7 15.1						8 25.00	
−1 9.88											

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Date$_1$ = Mar 22 Observer W.R. Recorder L.M. Date$_2$ = Mar 25 Observer L.M. Recorder W.R.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
20	16 56.5	0 −16.1	9.0	16	26.5	43.8	51.5	55.1	59.0	2.9	2723	54.46	10.75	16 43.71
15	55.5	50 −5.3	8.8							+13.22			+13.05
κ													+ .19
((δ) − D) $\frac{\kappa'}{100}$													− 2
a_1													16 56.93
													− 1.24
													16 55.69
			9.0	16	27.8	43.7	51.3	55.2	59.0	2.8	2720	54.40	10.75	16 43.65
											+13.27			+13.16
κ														+ .13
((δ) − D) $\frac{\kappa'}{100}$														− 2
a_2														16 56.92
														− 1.21
														16 55.71
22	3 59	19.6	8.3	22	25.4	45.8	53.6	57.5	1.3	5.2	2834	56.68	10.87	22 45.81
21	55.6	50 24.4	8.4								+13.22			+13.05
κ														+ .19
((δ) − D) $\frac{\kappa'}{100}$														− 2
a_1														22 59.03
														− 1.29
														22 57.74
			8.4	22	27.2	46.0	53.4	57.4	1.3	5.3	2837	56.74	10.87	22 45.87
											+13.27			+13.16
κ														+ .13
((δ) − D) $\frac{\kappa'}{100}$														− 2
a_2														22 59.14
														− 1.26
														22 57.88
25	12	−10.1	9.0	24	35.9	45.2	9.7	13.7	17.6	2104	646	12.92	10.76	25 2.17
24	14.7	50 −5.3	8.8							+13.22				+13.05
κ														+ .19
((δ) − D) $\frac{\kappa'}{100}$														− 2
a_1														25 15.39
														− 1.28
														25 14.11
			8.9	24	46.8	2.0	9.9	13.6	17.4	21.5	644	12.88	10.76	25 2.13
											+13.27			+13.16
κ														+ .13
((δ) − D) $\frac{\kappa'}{100}$														− 2
a_2														25 15.40
														− 1.26
														25 14.14
25	53	−10.1	7.6	25	35.4	46.3	49.0	52.7	56.5	0.5	2600	52.00	10.75	25 41.25
24	55.0	50 −5.3	7.0							+13.22				+13.05
κ														+ .19
((δ) − D) $\frac{\kappa'}{100}$														− 2
a_1														25 54.47
														− 1.28
														25 53.19
			8.6	25	33.3	41.3	48.9	52.8	56.7	0.5	2602	52.04	10.75	25 41.29
											+13.27			+13.16
κ														+ .13
((δ) − D) $\frac{\kappa'}{100}$														− 2
a_2														25 54.56
														− 1.26
														25 53.30
27	3	46.2	9.1	26	35.8	57.4	59.6	3.4	7.4	11.4	3137	62.74	10.96	26 57.78
26	4.0	50 51.0	9.2							+13.33				+13.05
κ										23				+ .20
((δ) − D) $\frac{\kappa'}{100}$														− 2
a_1														27 5.01
														− 1.38
														27 3.68
			9.0	26	37.8	51.5	59.5	3.4	7.3	11.3	3130	62.60	10.96	26 51.64
											+13.27			+13.16
κ														+ .13
((δ) − D) $\frac{\kappa'}{100}$														− 2
a_2														27 4.91
														− 1.30
														27 3.61

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+1.72	2 35.0	31.7	32	33.35	50	1500		30	49 50 22.65	
	1.23553					49 50	9.07			+ − .8	+8.49
	9.80957					+	13.58			+ .60	
	1.13304									+ 7.67	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 3.60	
+15.04 δ_1		17 10.73		49 15.3						50 27.54	
−1 12.28											
d	+1.58	2 34.3	32.1	32	33.20	50	15.15		30	50 22.48	
	1.19866					49 50	1000			+ − .7	+8.75
	9.80957					+	12.48			+ .60	
	1.09617									+ 7.92	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 4.60	
+15.04 δ_2		17 10.75		49 14.8						50 27.13	
−1 12.28											
d	+2.04	2 43.4	40.4	2	41.90	20	6.45		0	50 20 16.46	
	1.30963					50 20	0.52			+ − .11	+9.00
	9.80504					+	15.94			+ .62	
	1.20261									+ 8.19	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 3.30	
+14.93 δ_1		23 12.67		19 9.0						20 22.16	
−1 13.16											
d	+1.8.7	2 42.5	40.0	2	41.25	20	7.10		0	20 16.57	
	1.27184					50 20	1.95			+ − .10	+9.27
	9.80504					+	14.62			+ .62	
	1.16482									+ 8.45	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 3.70	
+14.93 δ_2		23 12.81		19 8.8						20 21.94	
−1 13.16											
d	+2.33	3 7.1 7.48	7.0 11.9	33	13.35	49	35.00		30	49 49 47.47	
	1.36736					49 49	29.07			+ − .14	+8.56
	9.80957					+	18.40			+ .74	
	1.26487									+ 7.66	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 3.[illegible]	
+14.83 δ_1		25 25.94		48 39.4						49 52.93	
−1 13.48											
d	+1.53	3 9.1	7.0	33	8.05	49	40.30		30	49 47.23	
	1.18469					49 49	35.15			+ − .6	+8.86
	9.80957					+	12.08			+ .71	
	1.08220									+ 7.91	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 4.30 3.70	
+14.83 δ_2		25 25.97		48 38.9						49 52.39	
−1 13.48											
d	+5.9	2 12.3	8.1	32	10.20	50	38.15		30	49 50 36.88	
	0.77085					49 50	32.22			+ − .1	+8.47
	9.80942					+	4.66			+ .51	
	0.66821									+ 7.67	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 3.10	
+14.81 δ_1		26 8.00		49 28.6						50 42.25	
−1 13.60											
d	+8.0	2 14.0	11.7	32	12.85	50	35.50		30	50 36.67	
	0.90309					49 50	30.35			+ − .2	+8.71
	9.80942					+	6.32			+ .51	
	0.80045									+ 7.92	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 4.30 3.70	
+14.81 δ_2		26 8.11		49 28.1						50 41.68	
−1 13.60											
d	+16.0	1 44.0	39.0	36	41.50	46	6.85		35	50 46 13.31	
	1.20412					50 46	0.92			+ − .7	+9.27
	9.80105					+	12.39			+ .39	
	1.09311									+ 8.65	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 3.20	
+14.87 δ_1		27 18.55		45 5.6						46 19.38	
−1 13.76											
d	+1.38	1 41.3	37.0	36	39.15	46	9.20		35	46 14.74	
	1.33788					50 46	4.05			+ − .5	+9.58
	9.80105					+	10.69			+ .39	
	1.02887									+ 8.94	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 3.50	
+14.87 δ_2		27 18.48		45 6.8						46 20.52	
−1 13.76											

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Date$_1$ = Mar 22 — Observer W.R. / Recorder A.M. — Date$_2$ = Mar 25 — Observer A.M. / Recorder W.R.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
10	28 59	−11.2	8.4	28 26.0	47.3	54.7	58.7	2.4	6.5	28 96 +13.22	58.92	10.74	28 47.8 +13.05 +.19 −2
	27 54.3	−6.8	8.5										29 0.40 −1.30
	κ												28 59.10
	((δ) − D) $\frac{\kappa'}{100}$												
	a_1												
			8.9	28 31.5	47.1	54.8	58.7	2.4	6.3	28 93 +13.27	57.86	10.74	28 47.12 +13.16 +.13 −2
	κ												29 0.39 −1.27
	((δ) − D) $\frac{\kappa'}{100}$												28 59.12
	a_2												
	30 54	−7.3	8.4	30 18.3	37.0	44.7	48.4	52.3	56.3	23 87 +13.22	47.74	10.76	30 36.98 +13.05 +.19 −2
	29 50.7	−2.4	8.2										30 50.20 −1.31
	κ												30 48.89
	((δ) − D) $\frac{\kappa'}{100}$												
	a_1												
			8.2	30 21.1	37.0	44.6	48.5	52.1	56.1	23 83 +13.27	47.66	10.76	30 36.90 +13.16 +.13 −2
	κ												30 50.17 −1.28
	((δ) − D) $\frac{\kappa'}{100}$												30 48.89
	a_2												
	32 6	16.6	9.7	31 35.9	55.1	2.8	6.8	10.5	14.5	32 97 +13.22	65.94	10.85	31 55.09 +13.05 +.19 −2
	31 7.6	50 21.5	9.3										32 8.31 −1.33
	κ												32 6.98
	((δ) − D) $\frac{\kappa'}{100}$												
	a_1												
			9.6	31 38.6	54.8	2.7	6.7	10.3	14.4	32 89 +13.27	65.78	10.85	31 55.93 +13.16 +.13 −2
	κ												32 8.20 −1.30
	((δ) − D) $\frac{\kappa'}{100}$												32 6.90
	a_2												
	34 22	33.7	8.5	33 50.2	34 10.6	18.5	22.2	26.0	30.1	10 74 +13.22	21.48	10.85	34 10.63 +13.05 +.19 −2
	33 κ 23.9	15.3											34 23.85 −1.33
		50 20.2	8.9										34 22.52
	((δ) − D) $\frac{\kappa'}{100}$												
	a_1												
			8.8	33 44.5	10.5	18.0	22.0	26.0	30.0	10 65 +13.27	2 1.30	10.85	34 10.45 +13.16 +.13 −2
	κ												34 23.72 −1.31
	((δ) − D) $\frac{\kappa'}{100}$												34 22.41
	a_2												
	36 10	28.6	6.8	35 42.9	57.7	5.5	9.4	13.3	17.3	343 2 +13.22	68.64	10.90	35 57.74 +13.05 +.19 −2
	35 11.1	50 33.5	6.6										36 10.96 −1.35
	κ												36 9.61
	((δ) − D) $\frac{\kappa'}{100}$												
	a_1												
			7.1	35 40.0	57.8	5.5	9.3	13.3	17.2	34 31 +13.27	68.62	10.90	35 57.72 +13.16 +.13 −2
	κ												36 10.99 −1.33
	((δ) − D) $\frac{\kappa'}{100}$												36 9.66
	a_2												

Run

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+19.2	4 31.0	32.2	34	33.60	48	14.75		30	49 48 23.99	
	1.28330					49 48	8.82			+- .10	+8.90
d	9.80987					+	15.17			+ 1.06	
	1.18111									+ 7.64	
$((\delta) - D)\frac{d'}{100}$										+ 30	
										− 3.36 2.90	
+14.73 δ_1		29 13.83		47 16.0						48 29.99	
−1 14.00											
	+15.6	4 32.3	30.9	34	31.60	48	16.75		30	48 23.93	
	1.19312					49 48	11.60			+- .7	+9.15
d	9.80987					+	12.33			+ 1.04	
	1.09093									+ 7.88	
$((\delta) - D)\frac{d'}{100}$										+ .30	
										− 3.50	
+14.73 δ_2		29 13.85		47 15.6						48 29.58	
−1 14.00											
	+18.7	0 26.4	24.1	30	25.25	52	23.10		30	49 52 31.93	
	1.27164					49 52	17.17			+- .10	+8.00
d	9.80927					+	14.76			+ .9	
	1.16905									+ 7.71	
$((\delta) - D)\frac{d'}{100}$										+ .30	
										− 2.8	
+14.69 δ_1		31 3.58		51 22.9						52 37.13	
−1 14.24											
	+15.8	0 24.7	22.5	30	23.60	52	24.75		30	49 52 32.07	
	1.19866					49 52	19.60			+- .7	+8.28
d	9.80927					+	12.47			+ .9	
	1.09584									+ 7.96	
$((\delta) - D)\frac{d'}{100}$										+ .30	
										− 3.50	
+14.69 δ_2		31 3.58		51 22.6						52 36.85	
−1 14.24											
	+19.2	1 29.0	24.0	6	26.50	16	21.85		5	50 16 30.95	
	1.28330					50 16	15.95			+- .10	+8.67
d	9.80565					+	15.03			+ .32	
	1.17689									+ 8.15	
$((\delta) - D)\frac{d'}{100}$										+ .30	
										− 2.8	
+14.69 δ_1		32 21.67		15 22.4						16 36.82	
−1 14.40											
	+16.3	1 25.6	23.3	6	24.45	16	23.50		5	16 31.51	
	1.21219					50 16	18.75			+- .7	+8.95
d	9.80565					+	12.76			+ .32	
	1.10578									+ 8.40	
$((\delta) - D)\frac{d'}{100}$										+ .30	
										− 3.50	
+14.69 δ_2		32 21.59		15 22.6						16 36.96	
−1 14.40											
	+20.4	3 10.8	7.8	8	9.30	14	39.05		5	50 14 49.09	11
	1.30963					50 14	33.12			+- .11	+9.02
d	9.80580					+	15.97			+ .74	
	1.20334									+ 8.09	
$((\delta) - D)\frac{d'}{100}$										+ .30	
										− 2.70	
+14.63 δ_1		34 37.15		13 40.7						14 55.41	
−1 14.72											
	+21.0	3 10.9	9.3	8	10.10	14	38.25		5	14 49.54	
	1.32222					50 14	33.10			+- .12	+9.26
d	9.80580					+	16.44			+ .74	
	1.21596									+ 8.34	
$((\delta) - D)\frac{d'}{100}$										+ .30	
										− 3.35	
+14.63 δ_2		34 37.04		13 40.7						14 55.45	
−1 14.72											
	+14.8	4 29.4	26.3	54	27.85	28	20.50		50	50 28 26.11	
	1.17026					50 28	14.57			+- .6	+9.63
d	9.80382					+	11.54			+ 1.03	
	1.06202									+ 8.36	
$((\delta) - D)\frac{d'}{100}$										+ .30	
										− 2.70	
+14.60 δ_1		36 24.21		27 18.1						28 33.04	
−1 14.92											
	+17.7	4 32.7	30.9	54	31.80	28	16.55		50	28 25.20	
	1.24797					50 28	11.40			+- .9	+9.86
d	9.80382					+	13.80			+ 1.03	
	1.13973									+ 8.62	
$((\delta) - D)\frac{d'}{100}$										+ .30	
+14.60										− 3.30	
−1 14.92 δ_2		36 24.26		27 16.8						28 31.76	

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Date$_1$ = 1871 March 22 Observer W.A.R Recorder A.M. Date$_2$ = 1871 ~~January 18~~ March 25 Observer A.M. Recorder W.A.R

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
8	43m 31s	0° 24.1	8.2	43	18s	17.5	25.2	29.2	32.9	37.0	1416	28.36	1.089	43 17.47
	March 22	50 29.5	7.7								+13.19			+13.02
	42 κ 21.8													+ .19
	((δ) − D) $\frac{\kappa'}{100}$													− 2
														43 30.66
	α_1													− 0.70
														43 29.96
8	44 15	50.6	8.5	44	1.0	(44.7)	43 32.5	56.3	0.3	4.3			1.099	43 44.63
	~~42 6.7~~	50 54.8	9.3								+13.20			+13.02
	42 κ 49.1	5												+ 20
	((δ) − D) $\frac{\kappa'}{100}$													− 2
														43 57.83
	α_2													− 0.71
														43 57.12
8	45 31	23.5	9.1	45	3.4	18.7	26.1	29.9	33.6	37.6	1459	29.18	1.088	45 18.30
	44 22.1	50 26.9	9.1								+13.20			+13.03
	κ													+ .19
	((δ) − D) $\frac{\kappa'}{100}$													− 2
														45 31.50
	α_1													− 0.71
														45 30.79
8	46 35	20.4	8.2	46	2.3	21.0	29.0	32.7	36.7	40.6	1600	32.00	1.087	46 21.18
	45 25.8	50 23.9	~~8.9~~								+13.20			+13.03
	κ													+ .19
	((δ) − D) $\frac{\kappa'}{100}$													− 2
														46 34.33
	α_2													− 0.72
														46 33.61
8	~~48 32~~	~~28.8~~	9.2	Not 48	0.0	17.6	~~25.4~~	~~29.3~~	32.9	37.0	1422	28.44	1.090	48 17.54
	κ										+13.20			+13.03
	((δ) − D) $\frac{\kappa'}{100}$													+ .19
														− 2
														48 30.74
	α_1													− 0.74
														48 30.00
8	49 ~~44~~	~~42.4~~	9.5	Not 49	13.1	30.9	38.7	42.5	46.6	50.5	2092	41.84	1.090	49 30.89
	κ										+13.20			+13.03
	((δ) − D) $\frac{\kappa'}{100}$													+ .19
														− 2
														49 44.09
	α_2													− 0.75
														49 43.34
8	50 43	14.0	8.5	50	~~15.0~~ 13.8	30.0	37.6	41.6	45.5	49.6	2043	40.86	1.084	50 30.02
	~~49~~ 34.7	50 17.5	8.7								+13.20			+13.03
	κ													+ .19
	((δ) − D) $\frac{\kappa'}{100}$													− 2
														50 43.22
	α_1													− 0.75
														50 42.47
8	59 55	−14.1	8.8	1	1.0	—	—	53.5	57.3	1.3	2679	53.58	1.075	59 42.83
	58 47.0	50 −6.4	9.2	59	29.9	42.9	0.6	54.2	58.2	2.0	+13.20			+13.03
	κ													+ .19
	((δ) − D) $\frac{\kappa'}{100}$													− 2
														59 56.03
	α_2													− 0.80
														59 55.23
9	3 59	17.7	9.1	3	34.0	46.3	54.0	57.9	1.8	5.6	2856	57.12	1.086	3 46.26
	2 51.8	50 21.4	9.2								+13.20			+13.03
	κ													+ .19
	((δ) − D) $\frac{\kappa'}{100}$													− 2
														3 59.46
	α_1													− 0.84
														3 58.62
9	13 43	50 2	9.1	13	44.0	30.9	38.5	42.6	46.8	50.4	2092	41.84	1.078	March 22 3106
	March 27	50 4.8	7.2		49.7	31.3	38.9	43.0	47.2	50.9	2113	42.26	1.078	13 3106
	12 κ 36.4		6.8								+13.20 +1320			+13.13
		8.1												+ .19
	((δ) − D) $\frac{\kappa'}{100}$													− 2
														13 31.48
														+13.03
														+ .14
														− 2
														13 44.68
														± 0.90
														13 43.78
8	55 36	−10.5	9.5	8	55 56	29 10.2	55 22.9	30.8	34.8	38.5	42.4	16 85	33.70	10.75	55 22.95
	~~54~~ 27.8	50 −6.9	9.4								+13.28			
	March 28													

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March 25

Runs	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	
	+15.7	2 25.5	22.0	54	23.75	25	24.60		53	50 25 30.92
d	1.19590					50 25	18.67			+ 9.07
	9.80428					+	12.25			+ 55
	1.08812									+ 8.29
((δ) — D) d'/100										+ 30
+17.18										− 7.50
−0 52.56 δ₁		43 47.14		24 39.9						25 32.49
	−16.4	53.0	50.6	37 30	52.80	50	55.53		30	50 50 36.94
d	1.21484					50 50	49.62			+ 9.46
	9.80027					51	12.68			+ 44 21 17
	1.10305									+ 8.73
((δ) — D) d'/100										+ 30
+17.24										− 7.55
−0 52.76 δ₂		44 14.36		50 45.8						50 38.79 56
	+14.9	4 35.1	31.1	59	33.10	23	15.25		55	50 23 20.95
d	1.17319					50 23	9.32			+ 9.55
	9.80458					+	11.63			+ 6
	1.06571									+ 1.06
((δ) — D) d'/100										+ 8.25
										+ 30
δ₁										− 7.40
										23 23.10
	+18.8	3 22.2	19.9	3	21.05	19	27.30		0	50 19 36.07
d	1.27416					50 19	21.37			+ 9.15
	9.80519					+	14.70			+ .10
	1.16729									+ 7.8
((δ) — D) d'/100										+ 8.19
+17.10										+ 30
−0 53.36 δ₂		46 50.71		18 44.6						− 7.30
										19 37.92
	+17.5	0 2.3	57.4	54	59.85	27	48.50		55	50 27 56.21
d	1.24304					50 27	42.54			+ 9
	9.80382					+	13.64			+ 0
	1.13480									+ 8.32
((δ) — D) d'/100										+ 30
										− 7.30
δ₁										27 57.44
	+17.8	4 47.8	44.0	39	41.90	43	2.45		35	50 43 10.32
d	1.25042					50 42	56.52			+ 9.91
	9.80151					+	13.80			+ 9
	1.13987									+ 1.10
((δ) — D) d'/100										+ 8.60
										+ 30
δ₂										− 7.35
										43 12.88
	+15.0	4 23.1	19.8	9	21.45	13	26.90		5	50 13 32.72
d	1.17609					50 13	20.97			+ 9.33
	9.80610					+	11.75			+ 6
	1.07013									+ 1.01
((δ) — D) d'/100										+ 8.08
+17.01										+ 30
−0 54.44 δ₁		50 59.48		12 40.4						− 7.20
										13 34.85
	+12.9	2 56.4	52.7	32	54.55	49	53.80		30	49 49 58.06
d	1.11059					49 49	47.87			+ 5
	9.80954					+	10.19			+ 6
	1.00810									+ 7.67
((δ) — D) d'/100										+ 7.67
										+ 30
+16.76 δ₂										− 6.7
−0 56.76		0 11.99		49 3.2						49 59.95
	+12.3	0 34.9	31.0	5	32.95	17	15.40		5	50 17 21.59
d	1.08991					50 17	9.47			+ 4
	9.80550					+	12.12			+ .11
	1.08335						9.62			+ 8.14
((δ) — D) d'/100										+ 30
										− 6.70
+16.75 δ₁		4 15.37		16 25.6						17 23.40
	−12.9	2 2.2	58.2	16	59.20	5	49.15		15	50 5 33.09
	18.2					50 5	43.22			+ 8.65
d	1.11059	Mar 22				−	10.13			+ 46
+16.52	9.80954	1359.88		4 35.4						+ 7.94
−1 00.08	1.00569	14 0.30		4 31.2		−	14.29			+ 30
((δ) — D) d'/100	1.26007	+20.3								− 6.30
	9.80 δ₂ 16	3 34.8	31.5	33	33.15	49 49	15.20		30	5 35.44
	1.15517	1307.80				49	10.05			
		9.80972				+	+0.03			
+16.83		1.20146		1205.16			+ 16.04			
−0 55.68										

Mar 25 49 49 2608.4 8.98 2

− .115
+ 83
+ 7.90
+ 30
− 7.4

49 2166 27.61 8'

5 2893
− 9
+ 46
+ 7.94
+ 30
− 6.30
5 31.24

+8.61

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Date$_1$ = May 14 '89 (n = +.09) Observer / Recorder WAR, AM. Date$_2$ = May 28. (n = +.15) Observer / Recorder WAR, AM. Run

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
7	27 17 52	0 / 28 8	80	26	25.7	45.5	53.5	57.5	1.6	5.8	28 39 +30.82	56.78	11.39	26 45.39 +30.72 +.12 −2
	25 59.9	52 30.9	8.5											27 16.21 −0.33
	κ													27 15.88
	((δ) − D) $\frac{\kappa'}{100}$													
	α_1													
6	5H 20 − 7	25 33												
			8.4	27 (22.8) 23	10.5	14.4	18.4	22.5			68 +13.43	13.62	11.39	27 22.3 +13.26 +.19 −2
	κ													27 16.66 +0.05
	((δ) − D) $\frac{\kappa'}{100}$													27 15.71
	α_2													
27	22	22	80	27	38.8	48.7	56.6	0.6	4.8	8.8	29 95 +30.82	59.90	11.36	27 48.54 +30.72 +.12 −2
27	8.2	52 24.4	8.0											28 19.36 −0.34
κ														28 19.02
((δ) − D) $\frac{\kappa'}{100}$														
α_1														
			8.2	28	~~1.6.6~~	~~×5.5~~	13.7	17.8	21.9	26.0	5 49 +13.44	16.98	11.36	28 5.62 +13.27 +.19 −2
κ														28 19.06 +0.04
((δ) − D) $\frac{\kappa'}{100}$														28 19.10
α_2														
29 18		5 07	6r	28	35.7	40.8	48.9	52.8	57.1	1.0	2606 +30.82	52.12	11.48	28 40.64 +30.72 +.12 −2
27 55.9		52 52.9	7.3											29 11.46 −0.35
κ														29 11.11
((δ) − D) $\frac{\kappa'}{100}$														
α_1														
			7.5	28 ~~27.8~~ no S	5.7.8	5.2	10.0	14.2	18.4		34 56 +13.45	69.12	11.48	28 57.64 +13.27 +.20 −2
κ														29 11.09 +0.03
((δ) − D) $\frac{\kappa'}{100}$														29 11.12
α_2														
26 9		46 8	28	30	14.4	36.3	44.5	48.7	52.7	56.4	23 91 +30.82	47.82	11.47	30 36.35 +30.72 +.12 −2
29 52.4		52 49.0	8.6											31 7.17 −0.37
κ														31 6.80
((δ) − D) $\frac{\kappa'}{100}$														
α_1														
			8.4	30	35.8	39.3	81.5	5.5	9.6	13.9	323 8 +13.45	64.76	11.47	30 53.29 +13.27 +.20 −2
κ														31 6.74 +0.01
((δ) − D) $\frac{\kappa'}{100}$														31 6.75
α_2														
32 12		24.1	88	31	21.6	39.5	47.4	51.6	55.6	57.8	253 9 +30.82	50.78	11.37	31 89.41 +30.72 +.12 −2
20 54.7		52 26.3	9.0											32 10.23 −0.37
κ														32 9.86
((δ) − D) $\frac{\kappa'}{100}$														
α_1														
			8.0	31	41.4	56.4	45	8.6	12.5	16.7	338 7 +13.44	67.74	11.37	31 06.37 +13.27 +.19 −2
κ														32 9.81 0.00
((δ) − D) $\frac{\kappa'}{100}$														32 9.81
α_2														

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Runs

Mar 14 28 — Rem: −0° 6.29 R. +24″ 5.64 R. +.23; Rem: Rms

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+19.7	3′ 46′	43″	33	44.55	49	3.80		50′	52 29 12.20	
	1.294447			53		52 48	5.751			+− .11	+11.82
d	9.784611					2 +	1.469			+ 89	
	1.167021									+ 1064	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 8.80	
+18.75 δ_1		2 34.63		28 45.3						29 15.22	
−0 29.88											
	−20.6	3 178	11.1	53	14.45	29	33.90		50	29 12.90	
	1.313874					52 29	28.26			+− .12	+11.82
d	9.784611					−	5.36			+ 74	
	1.186421									+ 1080	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− ~~8.80~~ 10.20	
+18.75 δ_2		2 34.46		28 44.6						29 14.52	
−0 29.88											
	+19.7	0 230	29.5	0	31.25	22	17.10		0	52 22 18.06	
	0.986777					52 22	10.81			+− 3	+11.00
d	9.785776					+	7.25			+ 12	
	0.861047									+ 1051	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 8.80	
+18.71 δ_1		2 37.73		21 50.0						22 20.26	
−0 30.24											
	−11.0	0 204	13.8	0	17.10	22	31.25		0	22 17.39	
	1.041392					52 22	25.61			+− 3	+ 11.13
d	9.785776					−	8.22			+ 7	
	0.915092									+ 1069	
((δ) − D) $\frac{d'}{100}$		3781								+ .40	
										− ~~8.8~~ 10.10	
+18.71 δ_2		2 ~~59.35~~		21 48.2						22 18.42	
−0 30.24											
	+49	1 30.2	26.7	31	28.45	51	19.90		30	52 51 17.23	
	0.690202					52 51	13.61			+− 1	+11.78
d	9.780971					+	3.62			+ 36	
	0.559111									+ 1103	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 8.80	
+18.81 δ_1		2 29.92		50 49.7						51 20.21	
−0 30.52											
		1 21.9	16.2	31	19.05	51	29.30		30		
						52 51	23.66				
d											
((δ) − D) $\frac{d'}{100}$											
+18.81 δ_2		2 29.93									
	+22.0	4 44.8	42.7	34	43.80	48	4.55		30	52 48 11.81	
	1.342422					52 47	58.26			+− .13	+12.38
d	9.781471					+	13.55			+ 1.13	
	1.131833									+ 1098	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 8.90	
+18.78 δ_1		3 25.58		47 44.2						48 15.29	
−0 31.12											
	+17.5	4 47.7	41.1	34	44.40	48	3.95		30	48 11.27	
	1.243044					52 47	58.31			+− 9	+12.54
d	9.781471					+	12.96			+ 1.08	
	1.112455									+ 11.15	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 10.20	
+18.78 δ_2		3 25.53		47 42.5						48 13.61	
−0 31.12											
	+17.8	3 47.9	44.3	58	46.10	24	2.25			52 24 9.26	
	1.250442					52 23	55.96			+− 9	+11.77
d	9.785431					+	13.30			+ 91	
	1.123791									+ 1055	
((δ) − D) $\frac{d'}{100}$										+ 1.40	
										− 8.70	
+18.68 δ_1		3 28.54		23 40.8						24 12.33	
−0 31.48											
	+15.0	3 48.3	42.0	58	46.15	24	3.20			24 8.77	
	1.176091					52 23	57.56			+− 6	+11.93
d	9.785431					+	11.21			+ 89	
	1.049461									+ 10.72	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 10.10	
+18.68 δ_2		3 28.49		23 39.1						24 10.60	
−0 31.48											

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Date$_1$ = Mar. 14 — Observer W. A. R. — Recorder A. M. — Date$_2$ = Mar 28 — Observer W. A. R. — Recorder A. M. — Runs

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	3 59.5 / 32 41.8	54.1 / 52 59.3	8.3 / 8.5	33 8.0	26.8	34.9	39.0	43.1	47.4	19 12 +30.82	38.24	11.51	33 26.73 +30.72 +.12 −2 = 33 57.55 −0.40 = 33 57.15
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_1													+18.78 −0.32
			8.5	33 27.8	43.8	52.0	56.0	0.2	4.3	27 6.3 +13.45	55.26	11.51	33 43.75 +13.27 +.20 −2 = 33 57.20 −0.02 = 33 57.18
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_2													+18.7 −0.32
	3 32 / 37 15.4	35.7 / 52 37.4	8.0 / 8.9	37 38.1	0.1	8.1	12.3	16.3	20.4	5.72 +30.83	11.44	11.41	38 0.13 +30.73 +.12 −2 = 38 30.86 −0.43 = 38 30.43
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_1													+18.6 −0.33
			8.0	38 51.2	17.0	25.2	29.2	33.2	37.3	14 19 +13.45	28.38	11.41	38 16.97 +13.27 +.20 −2 = 38 30.52 −0.05 = 38 30.37
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_2													+18.6 −0.33
	38 50 / 38 32.9	56.9 / 52 57.3	8.2 / 8.5	38 57.1	39 16.8	24.4	29.0	33.1	37.4	14 12 +30.83	28.24	11.51	39 16.73 +30.73 +.12 −2 = 39 47.56 −0.44 = 39 47.12
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_1				140.									+18.7 −0.33
			8.3	39 [illegible]	33.8	41.9	46.0	50.2	54.3	22 62 +13.45	45.24	11.51	39 23.73 +13.27 +.20 −2 = 39 47.18 −0.07 = 39 47.11
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_2													+18.7 −0.33
	42 46 / 41 29.2	15.0 / 52 17.6	9.1 / 9.2	41 50.0	42 12.7	20.6	24.7	28.7	32.8	11 9.5 +30.83	23.90	11.33	42 12.37 +30.73 +.12 −2 = 42 43.40 −0.45 = 42 42.95
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_1													+18.5 −0.34
			8.9	42 4.2	29.6	37.8	41.8	45.7	49.8	20 4.7 +13.45	40.94	11.33	42 29.61 +13.28 +.19 −2 = 42 43.06 −0.09 = 42 42.97
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_2													+18.5 −0.34
	43 52.8	6.5 / 52 9.2	8.6 / 8.7	44 15.8	38.7	46.7	50.8	54.6	58.7	24 9.7 +30.83	49.94	11.29	44 38.65 +30.73 +.12 −2 = 45 9.48 −0.47 = 45 9.01
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_1													+18.4 −0.35
			8.5	44 34.5	55.8	3.9	07.8	11.8	16.0	33 53 +13.45	67.06	11.29	44 55.77 +13.28 +.19 −2 = 45 9.22 −0.11 = 45 9.11
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_2													+18.4 −0.35

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+18.7 s	0 51.3	48.4	(25)	49.85	56	58.50		25	52 57 6.01	
	1.27184					52 56	5.221			− 9	+11.64
	9.77997					+	13.80			+ .19	
	1.13975									+ 11.14	
										+ .40	
										− 8.90	
((δ) − D) $\frac{d'}{100}$											
+18.78 δ_1		34 15.93		56 36.7						57 8.75	
−0 32.04											
	+16.0	X 52.5	46.0	(28) 1	49.25	556	59.10		25	58 7 5.27	
d	1.20412	0		25		52 556	53.46			− 7	+12.03
	9.78013					+	11.81			+ .41	
	1.07219									+ 11.29	
										+ .40	
										− 10.30	
((δ) − D) $\frac{d'}{100}$											
+18.78 δ_2		34 15.96		56 35.0						56 7.00	
−0 32.04										7	
	+21.1	1 25.59	53.4	(47)	56.65	34	51.70		45	52 35 1.11	
d	1.32428					52 34	45.41			− 12	+11.72
	9.78362					+	15.70			+ .70	
	1.19584									+ 10.74	
										+ .40	
										− 8.70	
((δ) − D) $\frac{d'}{100}$											
+18.64 δ_1		38 49.07		34 30.6						35 4.13	
−0 33.52										7	
	+19.8	3 58.0	51.4	(48)	54.70	38 4	53.65		45	345 2.75	
d	1.29667	2				52 33.4	48.01			− .10	+12.10
	9.78379					+	14.74			+ .90	
	1.16840									+ 10.90	
										+ .40	
										− 10.10	
((δ) − D) $\frac{d'}{100}$											
+18.64 δ_2		38 49.01		34 31.2						34 4.75	
−0 33.52										5	
	+18.8	1 46.2	40.2	26	44.70	56	3.65		25	52 56 11.23	
d	1.27416					52 55	57.36			− 9	+11.84
	9.78013					+	13.87			+ 41	
	1.14223									+ 11.12	
										+ 40	
										− 8.70	
((δ) − D) $\frac{d'}{100}$											
+18.71 δ_1		40 5.83		55 40.4						56 14.37	
−0 33.92											
	−23	1 48.7	42.2	26	45.45	56	2.90		25	~~56 11.89~~ ~~55 52.61~~	
d	0.79934 n	+ 19.7				52 55	57.26			− 1	+12.06
	9.78013	1.29947					~~465~~			+ 39	
	0.66741 n	9.78013				+	14.54			+ 11.28	
		1.16254								+ 40	
										− 10.20	
((δ) − D) $\frac{d'}{100}$										~~55 54.47~~	
+18.71 δ_2		40 5.82		55 39.7						56 13.66	
−0 33.92											
	+22.6	2 48.3	43.9	7	46.10	15	2.25		5	52 15 12.90	
d	1.35411					52 14	55.96			− .14	+11.32
	9.78691					+	16.94			+ .67	
	1.22896									+ 10.39	
										+ .40	
										− 8.40	
((δ) − D) $\frac{d'}{100}$											
+18.59 δ_1		43 1.46		14 41.0						15 15.82	
−0 34.84											
	+25.4	2 51.8	45.9	7	48.85	14	59.60		5	15 13.00	
d	1.40483					52 14	53.96			− .17	+11.42
	9.78691					+	19.04			+ .64	
	1.27968									+ 10.55	
										+ 40	
										− 10.00	
((δ) − D) $\frac{d'}{100}$											
+18.57 δ_2		43 1.48		14 39.6						15 14.42	
−0 34.84											
	+22.8	2 33.3	32.0	17	33.65	5	14.70		15	52 5 25.57	
d	1.35793					52 5	8.41			− .14	+11.09
	9.78853					+	17.16			+ 62	
	1.23440									+ 10.21	
										+ 40	
										− 8.40	
((δ) − D) $\frac{d'}{100}$											
+18.44 δ_1		45 27.45		4 52.7						5 28.26	
−0 35.60											
	+21.3	2 35.9	31.0	17	33.45	5	14.90		15	5 25.29	
d	1.32838					52 5	9.26			− .12	+11.25
	9.78853					+	16.03			+ 60	
	1.20485									+ 10.37	
										+ 40	
										− 9.90	
((δ) − D) $\frac{d'}{100}$											
+18.44 δ_2		45 27.55		4 51.0						5 26.64	
−0 35.60											

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Date$_1$ = 1871 March 14 Observer W.A.R. Recorder A.M. Date$_2$ = Mar 28 Observer W.A.R. Recorder A.M. Run

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
1	57 3	0 54	8.0	50	13.0	28.1	37.0	41.0	45.0	49.3	20 12	40.24	11.28	50 28.96
	49 46.1	52 6.1	8.9								+30.84			+30.74
	κ													+.12
	((δ) — D) $\frac{\kappa'}{100}$													−.2
	α_1													50 59.80
														−0.52
														50 59.28
			8.5	50	23.8	46.0	54.0	58.0	2.2	8.2	28 6 4	57.28	11.28	50 46.00
											+13.45			+13.28
	κ													+.19
	((δ) — D) $\frac{\kappa'}{100}$													−.2
	α_2													50 59.45
														−0.16
														50 59.29
2	52 20	1 4	8.6	51	30.1	46.3	54.2	58.4	2.3	6.4	28 7 6	57.57	11.27	51 46.25
	51 2.9	52 4.1	9.4								+30.84			+30.74
	κ													+.12
	((δ) — D) $\frac{\kappa'}{100}$													−.2
	α_1													52 17.09
														−0.92
														52 16.57
			8.5	51	35.3	3.3	11.3	15.1	19.1	23.3	7 2 1	14.42	11.27	52 3.15
											+13.45			+13.28
	κ													+.19
	((δ) — D) $\frac{\kappa'}{100}$													−.2
	α_2													52 16.60
														−0.17
														52 16.43
3	55 5	30	8.5	54	11.7	34.2	42.3	46.3	50.5	54.5	22 7 8	45.56	11.39	54 34.17
	53 48.9	52 33.3	8.9								+30.84			+30.74
	κ													+.12
	((δ) — D) $\frac{\kappa'}{100}$													−.2
	α_1													55 5.01
														−0.56
														55 4.45
			8.5	54	32.2	51.2	59.2	3.2	7.4	11.4	31 2 4	62.48	11.39	54 57.09
											+13.46			+13.28
	κ													+.20
	((δ) — D) $\frac{\kappa'}{100}$													−.2
	α_2													55 4.53
														−0.20
														55 4.35
4	56 40	29 4	8.2	55	45.3	56 7.2	15.3	19.3	23.2	27.6	9 2 6	18.52	11.39	56 7.13
	55 23.2	52 32.2	9.2								+30.84			+30.74
	κ													+.12
	((δ) — D) $\frac{\kappa'}{100}$													−.2
	α_1													56 37.97
														−0.57
														56 37.40
			8.2	56	0.2	23.8	32.3	36.2	40.2	44.6	17 7 1	35.42	11.39	56 24.03
											+13.45			+13.28
	κ													+.19
	((δ) — D) $\frac{\kappa'}{100}$													−.2
	α_2													56 37.48
														−0.21
														56 37.27
5	57 47	36	8.4	56	57.1	15.0	23.1	27.3	31.4	35.7	13 2 5	26.50	11.42	57 15.08
	56 34.8	52 39.7	8.7								+30.84			+30.74
	κ													+.12
	((δ) — D) $\frac{\kappa'}{100}$													−.2
	α_1													57 45.92
														−0.58
														57 45.34
			8.4	56	4.2	32.2	40.3	44.3	48.3	52.6	21 7 7	43.54	11.42	57 32.12
											+13.47			+13.29
	κ													+.20
	((δ) — D) $\frac{\kappa'}{100}$													−.2
	α_2													57 45.59
														−0.22
														57 45.37

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+120	3 26.2	23.3	18	24.45	4	23.60		15	52 4 26.34	37
d	1.07918					52 4	17.31			+− .4	+11.54
	9.78869					+	9.03			+ .82	
	0.95581									+ 10.19	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 8.20	
+18.36 δ₁		51 17.64		3 52.1						4 29.51	
−0 37.44											
	+222	3 34.3	29.7	18	32.00	4	16.35		15	4 27.42	
d	1.34635					52 4	10.71			+− .13	+11.44
	9.78869					+	16.71			+ .81	
	1.22298									+ 10.36	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 9.85	
+18.36 δ₂		51 17.65		3 51.6						4 29.01	
−0 37.44											
	+162	0 10.2	5.6	20	7.90	2	4045		20	52 2 46.36	
d.	1.20952					52 2	34.16			+− .7	+10.50
	9.78886					+	12.20			+ .12	
	1.08632									+ 10.15	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 8.20	
+18.33 δ₁		52 34.90		2 10.8						2 48.66	
−0 37.84											
	+295	0 18.5	11.0	20	14.75	2	33.60		20	2 48.97	
d	1.44560					52 2	27.96			+− .21	+10.55
	9.78886					+	21.01			+ .5	
	1.32240									+ 10.31	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 9.80	
+18.33 δ₂		52 34.76		2 11.9						2 49.72	
−0 37.84							5190			2	
	+225	1 58.1	54.8	57	56.45	30	59.90		50	52 31 ~~4.37~~	2.37
d	1.35218					52 30	43.61			+− .13	+11.40
	9.78428					+	16.76			+ .46	
	1.22440									+ 10.67	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 8.20	
+18.40 δ₁		55 22.85		30 26.9						31 7.57	
−0 38.68										5	
	+189	1 54.8	42.7	57	51.75	30	~~52.60~~ 56.60		50	31 ~~10.4~~	5.04
d	1.27646					52 30	46.96 50.96			+− .9	+11.59
	9.78428					+	14.08			+ .44	
	1.14868									+ 10.84	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 9.90	
+18.40 δ₂		55 22.75		30 28.0						31 ~~2.3~~ 6.75	
−0 38.68											
	+218	3 20.9	18.1	53	19.50	29	28.85		50	52 29 38.82	
d	1.33846					52 29	22.56			+− .13	+11.70
	9.78461					+	16.26			+ .79	
	1.21101									+ 10.64	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 8.20	
+18.37 δ₁		56 55.77		29 3.2						29 42.32	
−0 39.16											
	238	3 28.5	17.9	53	21.85	29	27.50		50	29 39.61	
d	1.37658					52 29	21.86			+− .15	+11.82
	9.78461					+	17.75			+ .76	
	1.24911									+ 10.81	
((δ) − D) $\frac{d'}{100}$										+ .40	
+18.37										− 9.50	
−0 39.16 δ₂		56 55.64		29 2.4						29 41.53	
	+240	4 51.9	48.2	44	50.05	37	58.30		40	52 38 9.84	
d	1.38021					52 37	52.01			+− .15	+12.19
	9.78313					+	17.83			+ 1.15	
	1.25128									+ 10.79	
((δ) − D) $\frac{d'}{100}$										+ .46	
										− 8.20	
+18.38 δ₁		58 3.72		37 34.3						38 13.83	
−0 39.52											
	+169	4 47.5	41.0	44	44.25	38	4.10		40	38 11.02	
d	1.22784					52 37	58.46			+− .8	+12.38
	9.78313					+	12.56			+ 1.08	
	1.09896									+ 10.98	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 9.90	
+18.38 δ₂		58 3.75		37 34.0						38 13.50	
−0 39.52											

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Date$_1$ = Mar. 14 Observer W.A.R. Recorder S.M. Date$_2$ = Mar 28 Observer W.A.R. Recorder S.M.

Star. α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T	Runs
58 59 42.3	52 45.3	4.3	58 6.0	26.0	34.0	38.2	42.1	46.2	1865 +30.84	37.30	11.31	58 25.99 +30.74 +.12 −2 58 56.83 −0.58 58 56.25	+1827 −039.8
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_1													
		4.7	58 32.8	43.0	51.0	55.0	(58.6) 59.0	3.2	2708 +13.46	54.16 24	11.31	58 42.85 .93 +13.29 +.19 −2 58 56.39 −0.23 58 56.16	+18.2 −039.
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_2													
59 41 58 24.0	52 30.3	8.8 9.4	59 (0.0) 3.0	10.4	18.5	22.5	26.7	30.7	1188 +30.85	21.76	11.38	59 10.38 +30.75 +.12 −2 59 41.23 −0.59 59 40.64	+183. −040.
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_1													
		8.2	59 51.5	(27.3) 30.4	39.6	43.6	47.7		+13.46		11.38	59 27.34 +13.29 +.19 −2 59 40.80 −0.24 59 40.56	+18.3 −040.
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_2													
7 1 00 7 59 43.8	52 33.0	6.5 7.5	0 11.8	27.2	35.4	39.3	43.3	47.5	1927 +30.85	38.54	11.39	0 27.15 +30.75 +.12 −2 0 58.00 −0.60 0 57.40	+183 −040.
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_1													
		6.8	0 34.1	44.0	52.1	56.2	60.6	64.5	2774 +13.47	55.48	11.39	0 44.09 +13.29 +.20 −2 0 57.56 −0.25 0 57.31	+18.30 −040.
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_2													
2 11 0 57.4.9	52 11.2	8.3 8.4	1 22.7	35.5	43.5	47.6	51.6	55.6	2338 +30.85	46.76	11.30	1 35.46 +30.75 +.12 −2 2 6.31 −0.60 2 5.71	+18.2 −040.
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_1													
		5.3	1 36.3	52.4	0.6	4.5	8.6	12.7	3188 +13.46	63.76	11.30	1 52.46 +13.29 +.19 −2 2 5.92 −0.26 2 5.66	+18.21 −040.
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_2													
2 48 2 32.0	52 11.2	8.7 8.8	2 50.5	12.3	20.3	24.4	28.4	32.6	1180 +30.85	23.60	11.30	3 12.30 +30.75 +.12 −2 3 43.15 −0.61 3 42.54	+18.1 −041.
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_1													
		8.6	3 12.6	29.4	37.4	41.4	45.4	49.5	2031 +13.46	40.62	11.30	3 29.32 +13.29 +.19 −2 3 42.78 −0.27 3 42.51	+18.18 −041.
κ													
((δ) − D) $\frac{\kappa'}{100}$													
α_2													

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+20.0	0 11.7	11.1	18	19.50	12	2885		10′	52 12 37.56	
d +	1.301 03					52 12	22.56			± − .11	+10.69
	9.78723					+	15.00			+ 7	
	1.17620									+ 10.33	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 8.10	
+18.27 δ_1		59 14.52		12 0.3						12 40.15	
−0 39.84											
	+10.1	0 16.0	10.0	10	13.00	12	35.35		10	12 37.29	
d	1.004 32					52 12	29.71			± − 3	+10.92
	9.78723					+	7.58			+ 5	
	0.87949									+ 10.50	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 9.80	
+18.27 δ_2		59 14.43		11 58.6						12 38.41	
−0 39.84											
	+7.4	1 14.9	11.8	56	13.35	26	35.00		55	52 26 34.23	
d	0.869 23					52 26	28.71			± − 2	+11.25
	9.78494					+	5.52			+ .29	
	0.74211									+ 10.58	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 8.10	
+18.32 δ_1		59 58.96		25 57.3						26 37.38	
−0 40.04											
	~~+8~~	0 52.0	44.2	53	46.10	27	0.25		55	26 36.55	
	−24.2					52 26	54.61			± − .15	+11.18
d	1.383 82					−	18.06			+ .18	
	9.78494									+ 10.75	
((δ) − D) $\frac{d'}{100}$	1.256 70									+ .40	
										− 9.80	
+18.32 δ_2		59 58.88		25 57.9						26 37.93	
−0 40.04											
	+15.4	1 48.3	47.3	51	47.80	31	0.55		50	52 31 5.73	
d	1.187 52					52 30	54.26			± − 6	+11.44
	9.78428					+	11.47			+ .43	
	1.05974									+ 10.67	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 8.05	
+18.30 δ_1		1 15.70		30 28.6						31 9.12	
−0 40.48											
	~~+9.9~~ 10.0	1 41.3	40.2	51	40.75	31	7.60		50	31 9.41	
d	1.000 00					52 31	1.96			± − 3	+11.60
	9.78428					+	7.45			+ .39	
	0.87222									+ 10.84	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 9.80	
+18.30 δ_2		1 15.61		30 30.7						31 11.21	
−0 40.48											
	+12.8	4 6.3	4.8	14	5.60	8	42.75		10	52 8 46.08	
d +	1.107 21					52 8	36.46			± − .5	+11.59
	9.78788					+	9.62			+ .98	
	0.98303									+ 10.26	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 7.90	
+18.21 δ_1		2 23.92		~~47~~ 8 8.9						8 49.77	
−0 40.84											
	+16.2	4 11.3	5.5	14	8.40	8	39.95		10	8 46.48	
d	1.209 52					52 8	34.31			± − 7	+11.69
	9.78788					+	12.17			+ .94	
	1.08534									+ 10.42	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 9.70	
+18.21 δ_2		2 23.87		8 7.6						8 48.47	
−0 40.84											
	+21.8	4 13.2	11.5	14	12.35	8	36.00		10	52 8 46.69	
d	1.338 46					52 8	29.71			± − .13	+11.53
	9.78788					+	16.38			+ 1.00	
	1.21428									+ 10.26	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 7.70	
+18.18 δ_1		4 0.72		8 8.4						8 49.72	
−0 41.32											
	+16.7	4 11.3	5.5	14	8.40	8	39.95		10	8 46.86	
d	1.222 72					52 8	34.31			± − 8	+11.68
	9.78788					+	12.55			+ .94	
	1.09854									+ 10.42	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 9.70	
+18.18 δ_2		4 0.69		8 7.5						8 48.84	
−0 41.32											

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60 35 Date$_1$ = March 14 Observer W.A.R. Recorder A.M. Date$_2$ = March 28 41 Observer W.A.R. Recorder A.M.

Star. α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T	Runs
5h 5m 5s	0 2'91	9.2	4	10.6	32.4	40.5	44.6	48.7	52.8	219.0	43.80	11.39	4 32.41
3 49.3	52 02.1	9.1							+30.85			+30.75	
κ												+.12	
((δ) — D) $\frac{\kappa'}{100}$												5 3.26	((δ)
a_1												−0.63	+18.2
												5 2.63	−041.
		9.2	4	35.6	49.5	57.6	1.5	5.6	9.8	304.0	60.80	11.39	4 49.41
										+13.46			+13.29
κ													+.19
((δ) — D) $\frac{\kappa'}{100}$												5 2.87	((δ)
a_2												−0.28	+18.2
												5 2.59	−041
6 36	33 4	9.6	5	42.2	3.7	11.4	15.8	19.8	23.9	741	14.82	11.40	6 33.36
5 20.1	52 36.4	9.4							+30.85	38	76		+30.75
κ													+.12
((δ) — D) $\frac{\kappa'}{100}$												6 34.21	((δ)
a_1												−0.64	+18.2
												6 33.57	−042
		9.4	5	58.7	20.7	28.6	32.8	36.8	40.9	158	31.68	11.40	6 20.58
										+13.47			+13.29
κ													+.20
((δ) — D) $\frac{\kappa'}{100}$												6 34.05	((δ)
a_2												−0.30	
												6 33.785	+18.2 −042
7 21	46	9.0	7	49.8	57.9	2.0	6.1	10.4	302	61.24	11.46	6 49.78	
6 5.0	52 49.3	9.3	7	0.0					+30.85			+30.75	
κ												+.12	
((δ) — D) $\frac{\kappa'}{100}$												7 20.63	((δ)
a_1												−0.65	+18.2
												7 19.98	−042
		9.3	7	55.9	17.7	25.8	30.0	33.7	37.9	158	31.96	11.46	7 20.50
				6.8	20.7	28.6	32.8	36.8	40.9	+13.47			+13.29
κ													+.20
((δ) — D) $\frac{\kappa'}{100}$												7 33.97	((δ)
a_2												−0.31	
												7 33.66	
8 35	1 5	9.2	7	41.6	0.8	8.9	12.9	16.8	21.0	604	12.08	11.26	6 08.2
7 19.1	52 12.0	9.4							+30.85			+30.75	
κ												+.12	
((δ) — D) $\frac{\kappa'}{100}$												8 31.67	((δ)
a_1												−0.64	+18.0
												8 31.03	−042
		9.5	7	55.9	17.7	25.8	30.0	33.7	37.9	141	29.02	11.26	8 18.76
										+13.46			+13.29
κ													+.19
((δ) — D) $\frac{\kappa'}{100}$												8 31.22	((δ)
a_2												−0.31	
												8 30.91	18.08 −042
8 22	5 22	8.8	9	4.0	47.3	55.6	57.6	3.8	7.8	294	58.82	11.49	8 47.33
8 6.3	52 55.6	9.2							+30.85			+30.75	
κ												+.12	
((δ) — D) $\frac{\kappa'}{100}$												9 18.18	((δ)
a_1												−0.67	+18.2
												9 17.51	−042
		9.1	9	18.7	4.4	12.5	16.5	20.7	24.9	790	15.80	11.49	9 4.31
										+13.47			+13.29
κ													+.20
((δ) — D) $\frac{\kappa'}{100}$												9 17.78	((δ)
a_2												−6.33	+18.2
												9 17.45	−042

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+2.58	4 9.2	7.0	54	8.10	28	40.25		50	52 28 50.22	
	1.33846					52 28	33.96			+− .13	+1187
	9.78461					+	16.26			+ .98	
	1.21101									+ 10.62	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 7.90	
+18.24 δ_1		5 20.87		28 12.5						28 54.19	
−041.72											
d	+1.38	4 5.1	0.3	54	2.70	28	45.65		50	28 50.30	
	1.13988					52 28	40.01			+− .5	+12.07
	9.78461					+	10.29			+ .92	
	1.01243									+ 10.80	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 9.80	
+18.24 δ_2		5 20.83		28 10.8						28 52.57	
−041.72											
d	+21.2	4 28.5	25.4	49	27.35	33	21.00		45	52 33 30.49	
	1.32634					52 33	14.71			+− .12	+1204
	9.78395					+	15.78			+ 106	
	1.19823									+ 10.70	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 7.90	
+18.23 δ_1		6 51.86		32 52.5						33 34.63	
−042.16											
d	+21.9	4 29.5	23.8	49	26.65	33	21.70		45	33 32.37	
	1.34044					52 33	16.06			+− .13	+12.16
	9.78395					+	16.31			+ 101	
	1.21233									+ 1088	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 9.80	
+18.23 δ_2		6 51.96		32 52.6						33 34.73	
−042.16											
d	−1.02	2 13.8	1.1	37	12.45	45	35.90		85	52 45 22.05	
	1.00860$_n$					52 45	29.61			+− .3	+1182
	9.78197					−	7.56			+ .53	
	0.87851$_n$									+ 1092	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 7.90	
+18.26 δ_1		7 38.24		44 43.6						45 25.97	
−042.40											
d	+1.37	2 11.5	6.1	39	8.80	45	39.55		25	45 44.06	
	1.13672					52 45	33.91			− .3	+1070
	9.78180					+	10.15			+ .53	+12.00
	1.00646									+ 11.10	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 9.80	
δ_2										45 46.26	
d	+1.92	4 21.1	18.3	24	19.70	58	28.65		20	51 58 36.85	
	1.28330					49 58	22.36			+− .10	+11.42
	9.78967					51 +	14.49			+ 1.03	
	1.16091									+ 1009	
((δ) − D) $\frac{d'}{100}$										+ .46	
										− 7.70	
+18.08 δ_1		8 49.11		57 57.8						58 40.57	
−042.76											
d	+2.19	4 26.0	19.7	24	22.85	58	25.50		80	58 36.38	
	1.34044					49 58	19.86			+− .13	+11.53
	9.78967					51 +	16.52			+ 1.01	
	1.21805									+ 1025	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 9.60	
+18.08 δ_2		8 48.99		57 55.6						58 38.31	
−042.76											
d	−1.67	4 8.8	2.2	29	3.00	53	45.35		25	52 53 26.72	
	1.22272$_n$					50 53	39.06			+− .8	+12.37
	9.78063					52 −	12.34			+ .98	
	1.09129$_n$									+ 11.07	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 7.90	
+18.25 δ_1		9 35.76		52 48.2						53 31.19	
−042.96											
d	−1.44	4 7.8	0.3	29	4.05	53	44.30		25	53 28.02	
	1.15836$_n$					50 53	38.66			+− .5	+12.53
	9.78063$_n$					52 −	10.64			+ .94	
	1.02693$_n$									+ 11.24	
((δ) − D) $\frac{d'}{100}$										+ .40	
										− 7.80	
+18.25 δ_2		9 35.70		52 47.8						53 30.75	
−042.96											

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Date$_1$ = Mar 14 — Observer W.P.R. / Recorder A.M. — Date$_2$ = Mar 28 — Observer W.P.R. / Recorder A.M.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	31m 00s	0° 12′ 6	8.3	30m	13.1s	24.0s	32.1s	36.2s	40.1s	44.4s	176 8	35.36s	11.32s	30m 24.04s
	29 45.4	52 16.0	7.8								+30.87			+30.77
	κ													+ .12
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													30 54.91
														− 0.81
	α_1													30 54.10
	32 16		8.2	30 56.42	30	49.1	53.2	57.3	1.4			11.32	30 41.09
				31 13.8						+13.48			+13.31
	κ													+ .19
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													30 54.57
														− 0.50
	α_2													30 54.07
	34 44	5 33	8.5	33	52.3	34 10.5	18.7	22.7	26.8	31.0	10 97	21.94	11.49	34 10.45
	33 30.3	52 56.8	8.5								+30.87			+30.77
	κ													+ .12
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													34 41.32
														− 0.86
	α_1													34 40.46
			8.4	34 6.8	27.4	35.6	39.6	44.8	48.1	19 55	39.10	11.49	34 (27.61)
										+13.49			+13.31
	κ													+ .20
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													34 41.10
														− 0.54
	α_2													34 40.56
	37 15	0 6	9.4	36	22.4	42.2	50.3	54.3	58.2	2.3	26 78	53.40	11.27	36 42.13
	36 1.6	52 4.1	9.1								+30.87			+30.77
	κ													+ .12
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													37 13.06
														− 0.85
	α_1													37 12.21
			9.3	36 32.1	54.0	07.1	11.2	15.3	19.2	35 18	70.36	11.27	36 52.09
										+13.48			+13.31
	κ													+ .19
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													37 12.54
														− 0.95
	α_2													37 12.02
	38 37	5 37	9.0	37	46.4	5.1	13.1	17.1	21.3	25.3	8 19	16.38	11.42	38 4.96
	37 24.0	52 39.2	9.0								+30.87			+30.77
	κ													+ .12
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													38 35.83
														− 0.88
	α_1													38 34.95
			8.9	38 2.0	22.0	30.0	34.1	38.1	4 24	16 66	33.32	11.42	38 2.190
										+13.49			+13.31
	κ													+ .20
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													38 35.39
														− 0.97
	α_2													38 34.82
	42 38	5 41	9.2	41	41.2	5.0	13.0	17.0	21.0	25.1	8 11	16.22	11.30	42 4.92
	41 24.3	52 12.7	9.1								+30.88			+30.78
	κ													+ .12
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													42 35.80
														− 0.89
	α_1													42 34.91
			9.1	41 56.9	22.0	30.1	34.3	38.2	42.3	16 69	33.38	11.30	42 2.208
			43 08							+13.48			+13.31
	κ		46 31											+ .19
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													42 35.56
														− 0.59
	α_2													42 34.97

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+10.9	0 32.0	30.0	10	31.00	12	17.35		10	52 12 19.24	
	1.03743					52 12	11.06			+- .3	+10.82
d	9.78739					+	6.18			+ .12	
	0.91275									+ 10.33	
$((\delta) - D)\frac{d'}{100}$										+ .40	
										− 7.00	
+17.74 δ_1		31 11.84		11 33.9						12 23.06	
−0 49.16	−32.7										
	~~−3.27~~	4 59.8	53.4	9	56.60	12	51.75		55	12 21.56	
	~~4.51455~~					52 12	46.11			+- .28	+11.75
d	~~2.78734~~					−	2.45			+ 1.13	
	~~0.38988~~						24.54			+ 10.50	
$((\delta) - D)\frac{d'}{100}$	1.51455									+ .40	
	9.78739			35.0						− 9.20	
+17.74 δ_2	1.38988	31 11.81		11 ~~34.9~~						12 24.11	
−0 49.16											
	+18.2	3 36.5	33.0	28	34.75	54	13.60		25	52 54 20.75	
	1.26007					52 54	7.31			+- .8	+12.26
d	9.78047					+	13.44			+ .86	
	1.12848									+ 11.08	
$((\delta) - D)\frac{d'}{100}$										+ .40	
										− 7.10	
+17.80 δ_1		34 58.26		53 35.7						54 25.91	
−0 50.20											
	+17.8	3 30.5	30.8	28	33.30	54	15.05		25	54 22.56	
	1.25042					52 54	9.41			+- .8	+12.41
d	9.78047					+	13.15			+ .83	
	1.11883									+ 11.26	
$((\delta) - D)\frac{d'}{100}$										+ .40	
										− 9.30	
+17.80 δ_2		34 58.26		53 35.5						54 25.67	
−0 50.20											
	+19.8	2 17.4	14.2	22	15.80	0	32.55		20	52 0 41.19	
	1.29667					52 0	26.26			+- .11	+10.96
d	9.78934					+	14.93			+ .55	
	1.17395									+ 10.12	
$((\delta) - D)\frac{d'}{100}$										+ .40	
										− 6.80	
+17.58 δ_1		37 29.73		59 54.5						0 45.35	
−0 50.88											
	+26.0	2 24.2	16.5	22	20.35	0	28.00		20	0 41.96	
	1.41497					52 0	22.36			+- .18	+11.03
d	9.78934					+	19.60			+ .53	
	1.29225									+ 10.28	
$((\delta) - D)\frac{d'}{100}$										+ .40	
										− 8.90	
+17.58 δ_2		37 29.60		59 53.2						0 44.09	
−0 50.88											
	+18.6	2 16.1	12.9	47	14.50	35	33.85		45	52 35 41.39	
	1.26951					52 35	27.56			+- .9	+11.59
d	9.78346					+	13.83			+ .53	
	1.14091									+ 10.75	
$((\delta) - D)\frac{d'}{100}$										+ .40	
										− 6.90	
+17.68 δ_1		38 52.63		34 54.8						35 ~~43.08~~ 46.08	
−0 51.24											
	+19.9	2 17.3	11.0	47	14.15	35	34.20		45	35 43.36	
	1.29885					52 35	28.56			+- .10	+11.72
d	9.78346					+	14.80			+ .51	
	1.17025									+ 10.91	
$((\delta) - D)\frac{d'}{100}$										+ .40	
										− 7.10	
+17.68 δ_2		38 52.50		34 54.7						35 45.98	
−0 51.24											
	+23.7	0 4.1	1.8	2 15	2.70 (5)	Rej: Cant-			15	52 8 43.82	
	1.37475	4 17.1	15.2	2 14	16.05 (5)	tele.			10	+- .15	+11.54
d	9.78788					8	32.30			+ 1.03	
	1.25057					52 8	26.01			+ 10.26	
$((\delta) - D)\frac{d'}{100}$						+	17.81			+ .40	
										− 6.60	
+17.50 δ_1		42 52.41		7 56.4						8 48.76	
−0 52.32											
	+25.2	4 20.8	19.8	14	17.80	8	30.55		10	8 43.84	
	1.40140					52 8	~~24.26~~			+- .16	+11.65
d	9.78788					+	24.91			+ .99	
	1.27722						18.93			+ 10.42	
$((\delta) - D)\frac{d'}{100}$										+ .40	
+17.50										− 8.85	
−0 52.32 δ_2		4 2/52.47		7 54.3						8 46.64	

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Date$_1$ = Mar. 14 Observer W.A.R. Recorder A.M. Date$_2$ = Mar 14. Observer W.A.R. Recorder A.M. Run

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	54 20	52° 48′	90	53	30.4	47.4	55.5	59.4	3.4	7.4	2931	58.62	11.28	53 4734
	53 1.0	52 5.8	4.0								+30.79			+ 3069
	κ													+ .12
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													54 18.13
														− 0.06
	α_1													54 18.07
	55 26	31	92	54	32.4	53.0	1.1	5.0	10.0	12.8	32 49	64.38	11.28	52 5290
	54 7.0	52 4.3	9.2						9.0		+ 30.79			+ 30.69
	κ													+ .12
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													55 23.89 69
														− 0.06
	α_2													55 23.83 63
	57 19	04	90	56	22.3	44.2	52.2	56.2	0.3	4.3	27 72	55.44	11.26	56 4418
	55 59.6	52 1.7	8.8								1 30.79			+ 3069
	κ													+ .12
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													57 14.97
														− 0.08
	α_1													57 14.89
	58 09	53.1	88	57	24.9	35.1	43.0	47.2	51.5	53.6	23 24	46.48	11.49	57 3499
	56 47.7	52 54.5	8.5								+30.80			+ 30.70
	κ													+ .12
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													58 5.79
														− 0.09
	α_2													58 5.70
	59 20	154	85	58	26.8	46.6	54.5	58.7	2.8	6.8	28 94	57.88	11.33	58 4655
	58 1.0	52 46.8	8.5								+30.80			+ 30.70
	κ													+ .12
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													59 17.35
														− 0.10
	α_1													59 17.25
	4 39	4 66	85	3	44.0	57.4	13.4	17.5	21.6	26.0	8 3 9	16.78	11.46 532	4 5.32
	2 20.3	52 47.1 #	90		46.2	57.5	13.5	17.5	21.6	26.1	8 4 2	16.84	11.46 30.70	4 5.38
	κ		7.0								+30.80 30.86		+.12	+30.70
													− 2	+ .12
	((δ) − D) $\frac{\kappa'}{100}$												36.12	− 2
													− 0.15	4 36.18
	α_2												4 35.97	− 6.15
														4 36.03
	5 23	6.6	88	4	56.7	2.8							11.29	4 50.11
	4 4.2	52 8.2	9.0	5	7.2	(30.9)	58.8	2.8	6.8	10.9				+30.70
	κ													+ .12
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													5 21.51
														− 0.15
	α_1													5 21.36
	6 31	16.0	75	5	48.0	57.4	5.5	9.3	13.5	17.6	3433	68.66	11.33	5 57.33
	6 12.3	52 17.6	7.7								+30.80			+30.70
	κ													+ .12
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													6 28.13
														− 0.16
	α_2													6 27.97
	11 41	129	82	11	1.3	25.3	33.3	37.4	41.3	45.4	1427	36.54	11.32	11 2522
	10 39.4	52 14.7	8.5								+30.81			+30.71
	κ										30			+ .12
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													11 56.83
														− 0.20
	α_1													11 56.63
	14 27	570	87	13	33.5	56.0	4.1	8.1	12.5	16.6	3373	67.46	11.51	13 5595
	13 10.3	52 58.8	8.9								+30.81			+30.71
	κ													+ .12
														− 2
	((δ) − D) $\frac{\kappa'}{100}$													14 26.76
														− 0.24
	α_2													14 26.52

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Runs have 14-0 629

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	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+16.9	3 54.2	53.9	8 stat	55.55	3	52.80		15	52 3 59.23	
	1.227869			4		52 3	46.57			×− 8	+11.43
d	9.78869					+	12.72			+ .94	
	1.10452									+ 10.17	
((δ) − D) $\frac{d'}{100}$										× 40	
										− 9.30	
+18.96											
−0 18.92 δ_1		54 37.03		4 42.4						45 1.36	
	+20.8	4 57.3	54.0	19	55.65	2	52.70		15	52 3 26.50	
	1.315977					52 2	47.06 46.41			×− .12	+11.63
d	9.78886					+	15.59 .44			+ 1.18	
	1.19242									+ 10.17	
((δ) − D) $\frac{d'}{100}$	1.18855									+ 40	
										− 9.20	
+18.94										3 5.08 4.93	
−0 19.28 δ_2		55 42.57		2 45.6							
	+21.9	3 32.8	28.2	23	31.80	59	17.35		20	51 59 27.57	
	1.340444					51 59	11.06			×− .13	+11.23
d	9.78950					+	16.51			+ .84	
	1.21788									+ 10.12	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 9.20	
+18.92										59 29.60	
−0 19.88 δ_1		57 33.81		59 9.7	.165						
	+10.1	0 1.3	57.3	29	59.30	52	49.05		30	52 52 50.87	
	1.002432					52 52	43.41			×− 3	+11.20
d	9.78062					+	7.46			×× 0	
	0.87289									+ 10.83	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 9.40	
+19.13										52 52.67	
−0 20.20 δ_2		58 24.83		52 32.5							
	+17.8	3 43.8	40.5	8	42.15	14	6.20		30	52 14 13.26	
	1.250442					52 13	59.96			×− 9	+11.55
d	9.78707					+	13.35			+ .84	
	1.12543									+ 10.35	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 9.20	
+18.96										14 15.61	
−0 20.60 δ_1		59 36.21		13 55.0							
	+21.3	2 20.9	17.4	37	19.15	45	29.20		30	52 45 39.85	45 36.31
	+1.92					52 45	23.56 22.91			×− .12	+11.75 ×− 8 +11.79
d	1.328538					+	15.79			+ .55	+ 55
	9.78197									+ 10.92	+ 1092
((δ) − D) $\frac{d'}{100}$	1.19829									+ 40	+ 40
+19.04	1.23553						+ 12.75			− 9.30	− 9.30
−0 22.10	9.78197									45 41.80	45 38.80
	1.10544	4 55.08 55.07		45 19.4 16.4							
	−16.5	1 5.0	1.8	16	3.40	6	44.95		15	52 6 26.25	
	1.217488					52 6	38.66			×− 7	+10.82
d	9.78821					−	12.41			+ .26	
	1.09363									+ 10.23	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 9.10	
+18.88										6 27.97	
−0 22.64 δ_1		5 40.24		6 5.3	.165						
	+9.3	2 21.5	18.0	7	20.25	15	28.10		30	52 15 29.43	
	0.966848					52 15	22.46 21.81			×− 3	+11.31
d	9.78691					+	6.97			+ .55	
	0.84333									+ 10.39	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 9.10	
+18.91										15 31.64	
−0 23.04 δ_2		6 46.88		15 8.6							
	+23.9	4 25.7	23.2	9	24.45	13	23.90		30	52 13 35.54	
	1.378402					52 13	17.61			×− .15	+11.66
d	9.78723					+	17.93			+ 1.06	
	1.25357									+ 10.35	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 9.02	
+18.85										13 38.20	
−0 24.88 δ_1		12 14.68		13 13.3	.165						
	+22.4	1 4.3	1.3	26	2.80	56	45.55		25	52 56 56.44	
	1.350025					52 56	39.71 .26			×− .13	+11.63
d	9.77997					+	16.53			+ .24	
	1.21816									+ 11.12	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 9.50	
+19.00										56 58.57	
−0 25.68 δ_2		14 45.52		56 32.9							

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Date$_1$ = Mar 14 28 Observer W.A.R. Recorder A.M. Date$_2$ = Mar 14 28 Observer W.A.R. Recorder A.M. Run

Star. α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
14 31.9 K	52 56.8	9.1	14 54.0	15 18.0	26.3	30.3	34.4	38.6	1476 +30.81	29.52	11.51	15 18 01 +30.71 +.12 −.2 15 48.82 −0.25 15 48.57
((δ) − D) $\frac{\kappa'}{100}$												
a_1												
16 29.3 K	52 38.2	8.7	16 52.7	17 13.6	21.8	25.8	29.8	34.2	1252 +30.81	25.04	11.42	17 13 62 +30.91 +.12 −.2 17 44.43 −0.26 17 44.17
((δ) − D) $\frac{\kappa'}{100}$												
a_2												
19 25.2 K	52 17.3	9.0	19 48.4	20 14.0	21.9	26.1	30.3	34.3	1266 +30.81	25.32	11.33	20 13 99 +30.71 +.12 −.2 20 44.80 −0.28 20 44.52
((δ) − D) $\frac{\kappa'}{100}$												
a_1												
20 8.8 K	52 55.9	8.7	20 58.4 21 20.1	(51.11	20 59.3	3.3	7.5	11.6	+30.81		11.50	20 87 06 +30.71 +.12 −.2 21 21,87 −0.29 21 21.58
((δ) − D) $\frac{\kappa'}{100}$												
a_2												
21 13.7 K	52 55.4	9.0	21 42.8	22 8.6	14.7	11.0	14.9	19.1	3503 +30.82	70.06	11.49	21 85 57 +30.72 +.12 −.2 22 29.39 −0.30 22 29.09
((δ) − D) $\frac{\kappa'}{100}$												
a_1												
23 14.8 K	52 14.3	8.4	23 39.8	24 5.0	7.0	11.2	15.3	19.5	3520 +30.82	70.40	11.31	23 89 09 +30.72 +.12 −.2 24 29.91 −0.31 24 29.60
((δ) — D) $\frac{\kappa'}{100}$												
a_2												
24 15.8 K	52 30.4	8.2	24 45.5	25 06	8.7	12.7	16.6	20.6	5922 +30.82	11,84	11.38	25 90 46 +30.72 +.12 −.2 25 31.28 −0.32 25 30.96
((δ) — D) $\frac{\kappa'}{100}$												
a_1												
Mar 14 31 K 2.2	52 33.7	8.7	31 23.4	42.3	57.3	54.4	58.5	2.4	2679 +30.82	53.58	11.34	31 42 19 +30.72 +.12 −.2 32 13.01 −0.83 32 12.18
((δ) — D) $\frac{\kappa'}{100}$												
a_2												
Mar 28 42 34.7	52 54.3	6.8	8 43 16.5	29.9	38.0	42.2	46.3	50.3	2067 +1350	41.34	11.48	43 29 86 +13.32 +.20 −.2 43 43.36 −0.62 43 42.74
((δ) — D) $\frac{\kappa'}{100}$												
a_1												
45 58.3 Mar 28 K	52 20.1	9.0	45 51.8	46 17.3	25.4	29.3	33.3	37.4	1427 +13.49	28.54	11.33	46 17 21 +13.32 +.19 −.2 46 30.70 −0.63 46 30.07
((δ) — D) $\frac{\kappa'}{100}$												
a_2												

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+24.0	6 [illegible]	[illegible]	25	54.05	56	54.30		25	52 57 5.78	
d	1.38021					52 56	48.01			+− .15	+11.61
	9.77997					+	17.71			+ .22	
	1.24812									+ 11.14	
((δ) − D) $\frac{d'}{100}$										+ .40	
+18.99										− 9.52	
−0 26.12 δ_1		16 7.56		56 41.8						57 7.89	
	+20.9	0 40.3	36.9	45	36.60	37	11.75		4.5	52 37 21.00	
d	1.32015					52 37	5.46			+− .12	+11.20
	9.78329					+	15.54			+ .14	
	1.19138									+ 10.78	
((δ) − D) $\frac{d'}{100}$										+ .40	
+18.88										− 9.10	
−0 26.80 δ_2		18 3.05		36 56.3						37 23.10	
	+25.6	2 14.6	10.7	4	12.45	15	35.90		5	52 15 48.79	
d	1.40824					52 15	29.61			+− .17	+11.15
	9.78674					+	19.18			+ .53	
	1.28292									+ 10.39	
((δ) − D) $\frac{d'}{100}$										+ .40	
+18.77										− 8.90	
−0 27.76 δ_1		21 3.29		15 23.3						15 51.04	
										3 59.79	
− 29.0	(−.78)	3 22.1	19.6	28	20.85	54	27.50		25	52 54 [illegible]	
1.46240	2.86332					52 54	21.21			+− .19	+12.25/08
9.78047	9.78047					−	5.39			+ .49	
1.33081	0.73173					−	2.142			+ 11.08	
((δ) − D) $\frac{d'}{100}$										+ .40	
+18.92										− 9.10	
−0 28.00 δ_2		21 40.50		53 31.8						54 18.97 2.77	
	+15.8	3 22.1	19.6	28	20.85	54	27.50		25	52 54 32.88	
d	1.19866					52 54	21.21			+− .7	+12.20
	9.78047					+	11.67			+ .49	
	1.06407									+ 11.08	
((δ) − D) $\frac{d'}{100}$		47.99								+ .40	
+18.90										− 9.10	
−0 28.36 δ_1		22 10.19		54 7.6			28.85			54 35.98	
	+19.3	0 21.7	12.3	10	19.50	12	38.55		10	52 12 39.04	39.04
d	1.28556					52 12	24.56	22.56		+− .10	+10.70
	9.78739					+	14.48			+ .7	
	1.16089									+ 10.33	
((δ) − D) $\frac{d'}{100}$										+ .40	
+18.72										− 8.80	
−0 29.00 δ_2		24 48.32		12 9.9						12 40.24	38.84
	+15.0	3 57.8	5.52	5.3	56.50	28	67.85		50	52 28 56.75	
d	1.17609					52 28	45.56			+− .6	+11.91
	9.78461					+	11.19			+ .94	
	1.04864									+ 10.63	
((δ) − D) $\frac{d'}{100}$										+ .40	
+18.77										− 8.90	
−0 29.36 δ_1		25 49.73		28 30.4						28 59.76	
	+18.8	2 3.0	5.96	5.2	1.30	30	47.05		50	52 30 54.77	
d	1.24416					52 30	40.76			+− .10	+11.44
	9.78428					+	14.01			+ .48	
	1.14638									+ 10.66	
((δ) − D) $\frac{d'}{100}$										+ .40	
+17.77										− 8.80	
−0 49.52 δ_2		32 29.95		30 9.6						30 59.11	
	+13.4	0 44.9	37.8	30	42.35	52	60.00		30	52 52 10.26	
d	1.12710					52 52	0.36			+− .5	+11.74
	9.78080					+	9.90			+ .16	
	0.99584									+ 11.23	
((δ) − D) $\frac{d'}{100}$										+ .40	
+17.62										− 9.00	
−0 52.64 δ_1		44 0.36		51 20.4						52 13.00	
	+25.4	1 38.3	32.3	6	35.30	16	13.05		5	52 16 26.49	
d	1.40483					52 16	7.41			+− .17	+11.18
	9.78674					+	19.08			+ .37	
	1.28051									+ 10.58	
((δ) − D) $\frac{d'}{100}$										+ .40	
+17.45										− 8.80	
−0 53.32 δ_2		46 17.52		15 15.6						16 28.87	

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Date$_1$ = Mar 28. Observer NPR. Recorder DM. Date$_2$ = Mar 28 Observer NPR. Recorder DM.

Star.	α	δ	Mag.	T_δ'	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T	Run
	48 5.9	1.82	8.8	9 48 25.7	45.7	53.8	58.0	2.0	6.4	285.9	57.18	11.47	48 45.71	
	47 45.5	52 51.9	8.8							+13.50			+13.32	
	K												+ .20	
	((δ) — D) $\frac{\kappa'}{100}$												— 2	
	c_1												48 59.21	+17.5
													— 0.66	
													48 58.55	−0 54.
	53 05	28.8	9.8	9 52 23.7	49.4	57.4	61.4	65.6	69.7	303.5	60.70	11.39	53 2.31	
	51 52.2	52 32.2	7.4							+13.49			+13.32	
	K												+ .19	
	((δ) — D) $\frac{\kappa'}{100}$												— 2	
	α_2												53 2.80	+17.3
													— 0.68	−0 55.
													53 2.12	
	54 46	5.7	9.0	9 54 3.9	30.6	38.5	42.7	46.6	50.7	209.1	41.82	11.29	54 30.53	
	53 32.8	52 9.7	9.0							+13.49			+13.32	
	K												+ .19	
	((δ) — D) $\frac{\kappa'}{100}$												— 2	
	α_1												54 44.02	+17.2
													— 0.69	−0 55.
													54 43.33	
	58 9	8.9 ?	7.8	57 43.4	51.0	58.9	3.0	7.0	11.0	310.9	62.18	11.29	57 50.89	
	56 56.8	52 12.7	7.3							+13.49			+13.32	
	K												+ .19	
	((δ) — D) $\frac{\kappa'}{100}$												— 2	
	α_2												58 4.38	
													— 0.71	+17.1
													58 3.67	−0 56.
	59 50	8.0	8.0	59 13.9	32.7	40.6	44.6	48.6	52.8	219.3	43.86	11.30	59 32.56	
	58 37.8	52 11.8	8.0							+13.50			+13.33	
	K												+ .19	
	((δ) — D) $\frac{\kappa'}{100}$												— 2	
	α_1												59 46.06	
													— 0.73	+17.1
													59 45.33	−0 56.
	0 5.2	−1.0 −2.0	8.9	0 28.5	45.3	53.3	57.3	1.3	5.0	282.2	56.44	11.26	0 45.18	
	59 40.9	52 7.9	8.9							+13.50			+13.33	
	K 49.2	0.6											+ .19	
	((δ) — D) $\frac{\kappa'}{100}$												— 2	
	α_2												0 58.68	
													— 0.73	+17.1
													0 57.95	−0 57.
	2 3	4.5	9.2	3 38.5	5.5	13.6	17.5	21.6	25.7	83.9	16.78	11.28	4 5.50	
	3 11.4	52 8.4	9.1							+13.50			+ 13.33	
	K												+ .19	
	((δ) — D) $\frac{\kappa'}{100}$												— 2	
	α_1												4 19.00	
													— 0.76	+17.0
													4 18.24	−0 57.
	17 24	20.1	9.4	11 38.5	7.9	16.0	20.0	24.1	28.2	96.21	19.24	11.39	12 7.85	
	11 12.2	52 34.2	9.4							+13.52			+13.34	
	K												+ .20	
	((δ) — D) $\frac{\kappa'}{100}$												— 2	
	α_2												12 21.37	
													— 0.76	+16.9
													12 20.61	−0 59.
	K													
	((δ) — D) $\frac{\kappa'}{100}$													
	α_1													
	K													
	((δ) — D) $\frac{\kappa'}{100}$													
	α_2													

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+20.0	0 28.9	34.0	35	26.45	47	21.90		35	52 47 31.07	
	1.30103					52 47	16.26			+- .11	+11.51
	9.78163					+	14.81			+ 9	
	1.17060									+ 11.13	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 8.90	
+17.50 δ₁		49 16.05		46 39.7						47 33.68	
−0 54.00											
d	+25.6	4 31.3	26.7	54	29.00	28	19.35		50	52 28 32.81	
	1.40824					52 28	13.71			+- .18	+12.05
	9.78478					+	19.10			+ 103	
	1.28096									+ 1080	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 8.70	
+17.36 δ₂		53 19.48		27 41.1						28 36.16	
−0 55.04											
d	+26.6	0 49.1	43.5	10	45.80	4	2.55		15	52 4 16.91	
	1.42488					52 6	56.91			+- .20	+10.79
	9.78821					+	20.00			+ .18	
	1.30103									+ 1041	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 8.50	
+17.25 δ₁		55 0.58		6 23.7						7 19.20	
−0 55.48											
d	+7.5	4 16.0	9.8	14	12.90	8	3.545		10	52 8 35.44	
	0.87506					52 8	29.81			+- 2	+11.76
	9.78788					+	5.63			+ 97	
	0.75088									+ 1042	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 8.40	
+17.19 δ₂		58 20.86		4 42.5						8 38.81	
−0 56.32											
d	+18.7	0 39.0	33.2	10	36.10	4	12.25		15	52 4 20.67	
	1.27184					52 4	6.61			+- .10	+10.85
	9.78821					+	14.06			+ 14	
	1.14799									+ 1041	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 8.30	
+17.15				6						7 23.22	
−0 56.72 δ₁		0 2.48		7 26.5							
d	+15.7	0 54.1	47.0	25	50.55	56	57.80		25	51 57 40.1	
	1.19590					51 56	52.16			+- 7	+10.74
	9.78983					+	11.85			+ .18	
	1.07367									+ 10.23	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 8.30	
+17.10 δ₂		1 15.05		56 9.4						57 6.45	
−0 57.00											
d	+27.0	3 34.2	28.1	18	31.15	4	17.20		15	52 4 31.88	
	1.43136					52 4	11.56			+- .19	+11.37
	9.78869					+	20.32			+ 80	
	1.30799									+ 10.36	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 8.20	
+17.04 δ₁		4 35.28		3 37.2		29				4 35.05	
−0 57.80										27	
d	+29.3	4 2.8	19.4	51	22.60	31	25.75		50	52 31 41.94	
	1.46687					52 31	20.11			+- .22	+11.34
	9.78428					29 +	21.83			+ 32	
	1.33909									+ 1084	
((δ) − D) $\frac{d'}{100}$										+ 40	
										− 8.00	
+16.94 δ₂		12 37.55		28 45.5						31 45.28	
−0 59.76										29	
d											
((δ) − D) $\frac{d'}{100}$											
δ₁											
d											
((δ) − D) $\frac{d'}{100}$											
δ₂											

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Date$_1$ = Mar 29 1871 — Observer A.H. — Recorder W.A.R. — 51° n = +.23

Date$_2$ = Apr. 4 1871 — Observer W.A.R. — Recorder A.H. — n = +.23

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
1	5 6 40	0 2 58	4.3	55 8.4	18.8	24.5	28.6	32.6	36.6	139 1	27.82	11.12	16.70
	55 37.1	51 30.4	9.3							+13.56			+13.29
	κ												+ .29
	((δ) — D) $\frac{\kappa'}{100}$												— 2
													55 30.26
													— 1.08
	α_1 54 29												55 29.18
	53												
54	26		4.2	~~56~~ ~~55.6~~	13.0	~~20.9~~	~~24.8~~	~~28.9~~	~~32.9~~				
	Apr. 5			56 6.8	22.8	30.6	34.3	38.5	42.4	216 86 33.72		11.12	56 22.60
	κ									+18.~~54~~ 64			+18.~~20~~ 37
	((δ) — D) $\frac{\kappa'}{100}$												+ .29
													— 2
	α_2												56 41.07
													— 0.97
													56 40.27
57	2 6	342	7.7	54	13.0	20.9	24.8	28.9	32.9	12 05	24.10	11.16	57 12.94
56	23.4	51 38.8	7.5	55.6						+13.56			+13.29
	κ												+ .29
	((δ) — D) $\frac{\kappa'}{100}$												— 2
													57 26.50
	α_1												— 1.10
													57 25.40
	Apr. 5		7.8	56. 58.6	7.8	15.7	19.7	23.6	27.7	945	18.90	11.16	57 7.74
	κ									+18.~~47~~ 64			+18.~~20~~ 37
	((δ) — D) $\frac{\kappa'}{100}$												+ .29
													— 2
	α_2												57 26.21
													— 0.98
													57 25.40
16	0 50	283	7.6	0	23.1	36.6	44.6	48.5	52.6	56.6	23 89	47.78	11.13
9	59 48.4	51 32.9	7.1								+13.56		0 8665
	κ												+13.29
	((δ) — D) $\frac{\kappa'}{100}$												+ .29
													— 2
	α_1												0 50.21
													— 1.12
													0 49.09
	Apr. 5		8.0	0 14.8	31.4	39.3	43.4	47.3	51.3	21 27	42.54	11.13	0 31.41
	κ										+18.~~48~~ 64		+18.~~21~~ 37
	((δ) — D) $\frac{\kappa'}{100}$												+ .29
													— 2
	α_2												0 49.89
													— 0.99
													0 49.06
1	3 4	388	8.0	1 ~~21.9~~	~~29.8~~	~~33.8~~	~~37.8~~	41.8	45.5	19 07	38.14	11.18	1 (~~26.96~~)
0	31.7	51 43.4	9.1	48.6	21.9	29.8	33.8	37.8	41.8	+13.56			21.84
	κ												+13.29
	((δ) — D) $\frac{\kappa'}{100}$												+ .29
													— 2
	α_1												1 35.40
													— 1.13
													1 34.27
	Apr. 5		—	1. 29.3.	16.8	24.8	29.0	32.8	36.8	140 2	28.04	11.18	1 16.86
	κ									+18.~~48~~ 64			+18.~~21~~ 37
	((δ) — D) $\frac{\kappa'}{100}$												+ .29
													— 2
	α_2												1 35.34
													— 1.01
													1 34.49
22	10 ~~45~~	39.9	7.5	21 ~~40.0~~	57.8	5.8	9.6	13.6	17.7	344	56 8.9	11.18	21 58.72
21	10.5	51 44.7	6.10	40.0						+13.57			+13.30
	κ												+ .29
	((δ) — D) $\frac{\kappa'}{100}$												— 2
													22 10.29
	α_1												— 1.25
													22 ~~9.04~~ 10.04
	Apr. 5		—	21. 38.2	52.6	0.4	4.5	8.5	12.6	31 86	63.72	11.18	21 52.54
	κ									+18.54	65		+18.~~24~~ 38
	((δ) — D) $\frac{\kappa'}{100}$												+ .29
													— 2
	α_2												22 11.05
													— 1.14
													22 10.05

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Mar. 29 – 0' Rev. 4.93 M. +.22 Rms. "
Runs Apr. 5 5.82 59 R. .22

71

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	+8.3	2 24.2	14.8	57	22,00	25	26.35	55		51 25 27.76	
d	0.91908					51 25	21.42			+– 2	+10.50
	9.99494					+	6.34			+ .53	
	0.80196									+ 9.64	
((δ) – D) $\frac{d'}{100}$										+ .35	
										– 6.30	
δ_1										25 31.96	diff II
	+15.8	2 10.3	4.5	57	7,40	25	40.95	55		25 47.25 42	
d	1.19866					51 25	35.28.36			+– 7	+10.20
	9.99478					+	12.06			+ .46	
	1.08138									+ 9.51	
((δ) – D) $\frac{d'}{100}$				2.11 41.2 D						+ .30	
+15.72 δ_2		56 55.99		25 31.2						– 7.55	
–18.92										25 47.94	diff II
										50.07	
	+17.3	0 24.8	21.4	50	23,10	32	25.25	50		51 32 33.50 89.2	
d	1.23805					51 32	20.32			+– 8 41.1	+10.11
	9.79383					+	13.18			+ 9	
	1.11982									+ 9.75	
((δ) – D) $\frac{d'}{100}$										+ .35	
+15.72 δ_1		57 41.12		31 28.2						– 6.30	
–19.08										32 37.31	
	+9.1	0 17.5	11.1	50	14,30	32	34.05	50		32 34.26 35.39	
d	0.95904					51 32	28.33.46			+– 3	+.993
	9.79383					+	6.93			+ 4	
	0.84081									+ 9.62	
((δ) – D) $\frac{d'}{100}$										+ .30	
+15.72 δ_2		57 41.12		31 28.7						– 7.50	
–19.08										32 36.69 +113 378	
	+13.5	0 56.7	52.4	55	53,55	26	54.80	55		51 27 0.17	
d	1.13033					51 26	49.87			+– 5	+10.17
	9.79463					+	10.30			+ .20	
	1.01290									+ 9.67	
((δ) – D) $\frac{d'}{100}$										+ .35	
+15.62 δ_1		1 4.71		25 54.6						– 6.10	
–19.64										27 4.24	
	+16.6	0 56.8	57.2	55	54,00	26	54.35	55		27 1.30	
d	1.22011					51 26	48.63.76			+– 8	+.996
	9.79463					+	12.67			+ .20	
	1.10268									+ 9.54	
((δ) – D) $\frac{d'}{100}$										+ .30	
+15.62 δ_2		1 4.68		25 54.2						– 7.40	
–19.64										27 3.86	
	–2.8	3 50.4	46.8	43	48,60	38	59.75	40		51 38 35.22	
d	1.41162n					51 38	54.82			+– 18	+10.87
	9.79272					–	19.60			+ .84	
	1.29228n									+ 9.86	
((δ) – D) $\frac{d'}{100}$										+ .35	
+15.62 δ_1		1 49.89		37 30.2						– 6.10	
–19.80										38 39.99	
	–12.4	3 58.1	52.8	43	55,45	38	52.90	40		38 37.76	
d	1.09342n					51 38	47.18.31			+– 4	+10.85
	9.79272					–	9.42			+ .86	
	0.97408n									+ 9.73	
((δ) – D) $\frac{d'}{100}$										+ .30	
+15.62 δ_2		1 50.11		37 31.4						– 7.40	
–19.80										38 41.71	
	+16.7	3 58.5	49.2	43	51,50	38	36.85	40		51 39 5.37 4.61	
d	1.22272	17.7				51 38	51.92			+– 8	+11.01
	9.79272	1.24797				+	12.69			+ .86	
	1.10388	9.79272					13.45			+ 9.88	
((δ) – D) $\frac{d'}{100}$		1.12863								+ .35	
+15.08 δ_1		22 25.12		37 58.2						– 5.10	
–13.04										39 10.57 11.28	
	+14.3	3 48.8	44.2	43	46,50	39	1.85	40		39 6.99	
d	1.15534					51 38	56.13.26			+– 5	+10.85
	9.79272					+	10.86			+ .84	
	1.03600									+ 9.75	
((δ) – D) $\frac{d'}{100}$										+ .30	
+15.08 δ_2		22 25.13		37 58.2						– 6.60	
–13.04										39 11.23	

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Date$_1$ = Mar 29 42 Observer A M. Recorder MR Date$_2$ = Apr. 5 Observer W.R.R Recorder A.M. Run

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
K	h m s	° ′ ″	m	m s	s	s	s	s	s	s	s	m s	m s
	2 28 58	0 1 43	5.4	28 26.7	49.0	56.9	1.0	5.0	9.2	301.1	60.22	11.10	28 49.12
	27 58.5	51 24.2	8.8							+13.57			+13.30
													+.29
													−2
$((\delta) - D)\frac{\kappa'}{100}$													29 2.64
													−1.28
c_1													29 1.41
K	Apr-5		9.5	28. 17.0	44.1	52.0	56.0	59.9	4.0	276	55.20	11.10	28 44.10
										+18.52	64		+18.26 39
													+.29
													−2
$((\delta) - D)\frac{\kappa'}{100}$													29 2.63
													−1.18
c_2													29 1.58
K	35 0.3	288	6.5	34 35.4	49.7	57.5	1.5	5.6	9.6	3039	60.78	11.14	34 49.64
	34 4.4	51 32.8	6.5							+13.57			+13.30
													+.29
													−2
$((\delta) - D)\frac{\kappa'}{100}$													35 3.21
													−1.32
α_1													35 1.89
K	Apr-5		7.3	34. 28.6	44.6	52.5	56.4	0.3	4.5	27 83	55.66	11.14	34 44.52
										+18.52	67		+18.27 40
													+.29
													−2
$((\delta) - D)\frac{\kappa'}{100}$													35 3.06
													−1.22
α_2													35 1.97
K	38.23	184	8.8	38 51.8	39 10.0	18.0	21.8	25.7	29.8	1053	21.06	11.09	39 9.97
	38 25.0	51 23.4	9.0							+13.57			+13.30
													+.29
													−2
$((\delta) - D)\frac{\kappa'}{100}$													39 23.54
													−1.33
α_1 43 5.2													39 22.21
K	Apr-5		7.4	38. 41.0	39. 4.8	12.7	16.8	20.7	24.6	796	15.92	11.09	39 4.83
										+18.52	67		+18.27 40
													+.29
													−2
$((\delta) - D)\frac{\kappa'}{100}$													39 23.37
													−1.24
α_2													39 22.26
K	44 26	−3.3	6.7	43 22.0	41.4	49.2	53.3	57.1	1.1	262	52.42	11.01	43 41.41
~~43 22.1~~										+13.56			+13.30
42 54.8		51 1.8 .7	6.2										+.28
													−2
$((\delta) - D)\frac{\kappa'}{100}$													43 54.97
													−1.34
α_1													43 53.63
K			5.6	~~44. 21.4~~								11.01	
$((\delta) - D)\frac{\kappa'}{100}$													
α_2													
				44 29.2	44								
				~~48 16.8~~									
				~~42~~									
K	45 3.1	421	8.8		16.9	24.7	28.6	32.6	36.6	1394	27.88	11.19	(44) 16.69
	44 33.8	51 47.2	8.9							+13.57			+18.30
													+.29
													−2
$((\delta) - D)\frac{\kappa'}{100}$													44 30.26
													−1.37
α_1													44 28.89
K	Apr-5		9.0	44. 21.4	44. 11.8	19.6	23.5	27.3	31.3	1135	22.70	11.19 1151	44 11.51
										+18.52	67	+18.27 40	
												+.29	
	Apr-5			45. 26.5	45. 14.3	22.5	26.6	30.6	34.8	1288	25.76	11.19 −2	45 14.57
$((\delta) - D)\frac{\kappa'}{100}$												44 30.06	45 33.12
												− 1.29	− 1.29
α_2												44 28.89	45 31.95

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+224	8 18.7	13.8	3	16,25−	19	32,10		0 ′	51 19 44.31	
d	1.35025					51 19	27.17			+− .13	+10.48
	9.79573					+	17.14			+ .73	
((δ) − D) $\frac{d'}{100}$	1.23392									+ 9.53	
										+ .35	
+14.86			18 36.1							− 4.70	
−1 14.00 δ_1		29 16.27	19 49.0							19 50.09	
	+221	8 14.8	14.3	3	17,05−	19	31.30		0	19 46.31	
d	1.43297					51 19	25.58.			+− .19	+10.24
	9.79573					+	20.73			+ .43	
((δ) − D) $\frac{d'}{100}$	1.31664									+ 9.40	
										+ .30	
+14.86										− 6.20	
−1 14.00 δ_2		29 16.44		18 36.4						17 50.35	
	+142	4 40.4	36.0	54	38,20	28	10.15		50	51 28 16.05	
d	1.15229					51 28	5.22			+− 5	+11.01
	9.79447					+	10.83			+ 1.01	
((δ) − D) $\frac{d'}{100}$	1.03470									+ 9.70	
										+ .35	
+14.72										− 4.50	
−1 14.80 δ_1		35 16.61		27 7.8						28 22.56	
	+159	4 38.2	38.3	54	35,75−	28	12.60		50	28 19.01	
d	1.20140					51 28	6.88			+− 7	+10.81
	9.79447					+	12.13			+ 1.01	
((δ) − D) $\frac{d'}{100}$	1.08381									+ 9.57	
										+ .30	
+14.72										− 6.00	
−1 14.80 δ_2		35 16.69		27 9.0	x 11					28 23.82	
	+182	0 7.4	2.1	3−	4,75−	17	43.60		5−	51 17 51.60	
d	1.26007					51 17	38.67			+− 9	+9.78
	9.79605					+	13.93			+ .2	
((δ) − D) $\frac{d'}{100}$	1.14406									+ 9.50	
										+ .35	
+14.58										− 4.20	
−1 15.32 δ_1		39 36.79		16 41.9						17 57.18	
	+23.8	0 10.2	4.3	3−	7,25−	17	41.10		5−	17 53.60	
d	1.37658					51 17	35.38			+− .15	+9.34
	9.79605					+	18.22			+ .2	
((δ) − D) $\frac{d'}{100}$	1.26057									+ 9.37	
										+ .30	
+14.58										− 5.72	
−1 15.32 δ_2		39 36.84		16 42.1						17 57.42	
0.	+194	0 37.0	32.7	25−	34,85−	57	13.50		25−	50 57 23.54	
d	1.28760					50 57	8.57			+− .10	+10.55
	9.79934					+	14.97			+ .13	
((δ) − D) $\frac{d'}{100}$	1.17508									+ 10.22	
										+ .30	
+1443										− 3.90	
−1 15.92 δ_1		41 8.06		[56 14.3]						57 30.19	
		0 35.8	31.9	25−	33,85−	57	14.50		25	57 23.28	
d						50 57	8.78				
((δ) − D) $\frac{d'}{100}$											
δ_2											
	stel-									57.83	
	−12.5	0 58.1	54.1	40	56,10	41	52.25		40	51 41 39.83	
d	1.09691 m					51 41	47.32			+− 4	+10.45
	9.79224	−9.3				−	4.49 − 9.49			+ .21	
((δ) − D) $\frac{d'}{100}$	0.97709 m	9.30105 m					0.15			+ 9.93	
		9.79224								+ .35	
+14447		9.78121 m								− 4.00	
−1 16044 δ_1			44 43.86	40 28.2						41 44.38 44.28	
										51.42	
14.57	−95	0 37.3	32.0	40	34,65−	42	13.70		40	42 04.7	41 58.95
+18.28 40						51 42	7.98 8.11			+− .3	1018 +− 4 +10.17
d 29	0.99364 m	0.87582 m				−	4.51			+ .13	+ .13
− 2	9.79224									+ 9.78	+ 9.78
	− 119									+ .30	+ .30
((δ) − D) $\frac{d'}{100}$	1.07555 m									− 5.60	− 5.50
+1447	9.79224					−	9.03				
δ_2 −1 1604	0.95573 m	45 46.42		40 47.6						42 5.05	42 3.62

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Date$_1$ = Mar 29 Observer A.M. Recorder N.A.R. Date$_2$ = Apr. 5 Observer N.A.R. Recorder A.M.

Star. α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
h m s	° ′		m s	s	s	s	s	s		s	s	m s
46 37.8	51 41.2	8.2									11.16	
κ												
((δ) — D) $\frac{\kappa'}{100}$												
α_1												
Apr. 5		8.2	46. 58.8	47. 18.0	26.1	30.1	33.9	38.1	14 62 +18.55 67	29.24	11.16	47 18.08 +18.28 40 +.29 −2
κ												47 36.63 −1.30
((δ) — D) $\frac{\kappa'}{100}$												47 35.45
α_2												
49 20	128	8.8									11.28	
48 23.5	51 17.9	9.5.										
κ												
((δ) — D) $\frac{\kappa'}{100}$												
α_1												
Apr. 5		8.8	48. 42.7	49. 3.0	10.8	14.6	18.8	22.8	7 00 +18.54 66	14.04	11.28	49 2.72 +18.28 40 +.28 −2
κ												49 21.26 −1.30
((δ) — D) $\frac{\kappa'}{100}$												49 20.08
α_2												
50 25	243	8.0									11.12	
49 28.7	51 29.4	9.0										
κ												
((δ) — D) $\frac{\kappa'}{100}$												
α_1												
Apr. 5		8.6	49. 56.8	50. 10.5	18.5	22.4	26.3	30.4	10 81 +18.55 68	21.62	11.12	50 10.50 +18.28 41 +.29 −2
κ												50 29.05 −1.31
((δ) — D) $\frac{\kappa'}{100}$												50 27.87
α_2												
51 3.3	41.1	8.0									11.18	
50 36.8	51 46.2	9.0										
κ												
((δ) — D) $\frac{\kappa'}{100}$												
α_1												
Apr. 5		8.6	51. 4.0	17.0	25.0	29.0	33.0	37.1	14 11 +18.56 68	28.22	11.18	51 17.04 +18.29 41 +.29 −2
κ												51 35.60 −1.33
((δ) — D) $\frac{\kappa'}{100}$												51 34.39
α_2												
55 24	42	8.0	55 56 25			25.4	29.5	33.5	+13 58		11.01	55 13.72 +13.31 +.29 −2
54 27.6	51 1.0	9.3										55 27.30 −1.39
κ												55 25.91
((δ) — D) $\frac{\kappa'}{100}$												
α_1			Sum 44									
Apr. 5		8.1	54. 46.4	55. 8.8	16.5	20.5	24.5	28.5	9 88 +18.56 68	19.76	11.01	55 [illegible] +18.29 41 +.29 −2
κ												55 27.34 43 −1.33
((δ) — D) $\frac{\kappa'}{100}$												55 26.42 10
α_2												

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	s	1, 53.2	50.1	1	11				41		
d											
$((\delta) - D)\frac{d'}{100}$											
δ_1											
	+07	1 54.8	48.7	46	51,75	35	56.60		48	51 36 5.56	
	493					51 35	50.88 51.01			− .10	+1034
d	1.28556					+	14.68			+ 42	
	9.79319									+ 9.72	
$((\delta) - D)\frac{d'}{100}$	1.16669									+ 30	
+14.38										− 5.30	
δ_2		47 49.83		34 54.3						36 10.60	
		00181	14.0						10		
d											
$((\delta) - D)\frac{d'}{100}$											
δ_1											
	+20.0	0 17.5	13.1	10	15,30	12	33.05		10	51 12 42.67	
	1,30103					51 12	27.37 46			− .11	+9.55
d	9.79684					+	15.34			+ 7	
	1.18581									+ 9.29	
$((\delta) - D)\frac{d'}{100}$										+ 30	
+14.30										− 5.20	
δ_2		49 34.38		11 30.5						12 47.02	
		4 0.7	−4.1						5		
d											
$((\delta) - D)\frac{d'}{100}$											
δ_1											
	+137	3 53.0	49.4	58	52,20	23	56.15		53	51 24 0.70	
	1,13672					51 23	50.43 56			− .05	+1062
d	9.79510					+	10.47			+ .86	
	1.01976									+ 9.51	
$((\delta) - D)\frac{d'}{100}$										+ 30	
+14.28										− 5.20	
δ_2		50 42.15		22 49.8						24 6.32	
		2 28.4	22.2						40		
d											
$((\delta) - D)\frac{d'}{100}$											
δ_1											
	+130	2 27.3	20.9	42	25,00	40	23.35		40	51 40 27.50	
	1,11394					51 40	17.63 76			− 5	+1057
d	9.79256					+	9.87			+ 53	
	0.99444									+ 9.79	
$((\delta) - D)\frac{d'}{100}$										+ 30	
+14.27										− 5.20	
δ_2		51 48.66		39 16.2						40 32.87	
										43.21	
	−48.8	−95 X 2 47	20.4	27	22,55	55	25.80		25	50 55 44.31	
	1.68842	0.92942n				50 56	20.87			− 5.61	+9.79
d	9.79950	9.79765				−	6.56			+ 53.31	4.07
	1.57586	0.81701n					−37.66			+ 9.09	
$((\delta) - D)\frac{d'}{100}$										+ 30	
+14.12										− 3.30	
δ_1		55 40.03		54 31.9						55 20.71	
−17.08										49.00	
	4 1221	2 17.3	13.2	27	15.25	55	33.10		25	55 44.90	
	+22.7					50 55	27.38 51			− 12	+9.67
d	1.35603					+	17.52			+ 50	
	9.79965									+ 8.99	
$((\delta) - D)\frac{d'}{100}$	1.24362									+ 30	
+14.12										− 3.90	
δ_2		55 40.22		54 33.6						55 50.67	
−17.08											

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Date$_1$ = Mar. 29 — Observer A.M. / Recorder W.A.R. — Date$_2$ = Apr. 5 — Observer W.A.R. / Recorder A.M.

Star. α	δ	Mag.	T_δ	T_m	T_o	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
9 58 20 s	0 8 13	8.6	57	50.8	9.5	17.8	21.4	25.3	29.5	10 3 5	20.70	11.14	58 9.56
57 24.3	57 36.5	8.5							+13.58			+13.31
κ												+ .29
((δ) — D) $\frac{\kappa'}{100}$												— 2
												58 23.14
a_1												— 1.43
												58 21.71
Apr-5.		8.1	57.42.1	58.4.3	12.5	16.3	20.3	24.4	7 78	15.576	11.14	58 442
									18.5768			+18.3041
κ												+ .29
((δ) — D) $\frac{\kappa'}{100}$												— 2
												58 22.99
a_2				3		3	✓					— 1.37
												58 21.73
59 47	49 8	9.3	59	13.0	35.X	43.2	47.X	51.X	53.3	23 79	46.38	11.22	59 35.76
Mar 29	51 55.0	9.5								+13.58		+13.31
58 51.8 κ												+ .29
((δ) — D) $\frac{\kappa'}{100}$												— 2
												59 48.74
a_1				✓	3			1				— 1.45
												59 47.29
Apr-5.		8.8	59.9.0	30.X	38.X	42.2	46.1	50.X	20 72	41.44	11.22	59 30.22
									+18.5768			+18.3041
κ												+ .29
((δ) — D) $\frac{\kappa'}{100}$												— 2
												59 48.79
a_2												— 1.38
												59 47.46
9 51 64	13 9	8.0	51	29.4	42.1	50.0	54.0	58.2	2.0	26 63	53.26	11.08	51 42.18
Mar 29	51 18.5	8.6								+13.56		+13.29
50 51.3 κ												+ .29
((δ) — D) $\frac{\kappa'}{100}$												— 2
												51 55.74
a_1												— 1.06
												51 54.68
9 53 24	7 0	8.0	52	54.6	53 15.1	23.0	27.1	34.1	34.9	13 10	26.20	11.05	6B 15.15
Mar 29	51 11.6	7.5								+13.58		+13.29
52 26.3 κ												+ .28
((δ) — D) $\frac{\kappa'}{100}$												— 2
												53 28.70
a_2												— 1.06
												53 27.72
10 43 52	3 4	8.0									11.00	
Mar 29	51 1.7	8.3										
42 54.8 κ												
((δ) — D) $\frac{\kappa'}{100}$												
a_1												
10 42 45												
κ												
((δ) — D) $\frac{\kappa'}{100}$												
a_2												
κ												
((δ) — D) $\frac{\kappa'}{100}$												
a_1												
κ												
((δ) — D) $\frac{\kappa'}{100}$												
a_2												

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+188	2 11.8	6.4	5 2	9.10	30	39 25		5 0	51 30 48.64	
	1.27416					51 30	34 32			+- .10	+ 1045
	9.79299					+	14.32			+ .48	
	1.15609									+ 9.72	
((δ) — D) $\frac{d'}{100}$										+ 35	
+14.07 δ₁										− 3.20	
−1 17.28		58 35.78		29 38.6						30 55.89	
d	+223	2 5.9	4.1	52	7.00	30	41.35		v 0	30 52.67	
	1.34830					51 30	35.63 .76			+- .13	+ 1024
	9.79399					+	16.99			+ .46	
	1.23023									+ 9.69	
((δ) — D) $\frac{d'}{100}$										+ 30	
+14.07 δ₂										− 4.82	
−1 17.28		58 35.80		29 40.8						30 58.04	
d	+222	4 48.2	3.9 4	34	4 1.30	48	7.05		8 0	51 48 18.93	
	1.34635					51 48	2.12			+- .13	+ 11.35
	9.79128					+	16.81			+ 1.03	
	1.22557									+ 10.05	
((δ) — D) $\frac{d'}{100}$										+ .40	
+14.05 δ₁										− 3.20	
−1 17.48		0 1.42		47 9.6						48 27.08	
d	+212	4 41.1	3.6 2	34	38.65	48	9.70		8 0	48 20.93	
	1.32634					51 48	3.98 4.11			+- .12	+ 11.13
	9.79128					+	16.05			+ 1.01	
	1.20556									+ 9.94	
((δ) — D) $\frac{d'}{100}$										+ 30	
+14.05 δ₂										− 4.80	
−1 17.48		0 1.51		47 8.9						48 26.36	
d	+128	4 2.4	−1.8	9	0.30	13	48.05		5 0	51 13 52.93	
	1.10721					51 13	43.12			+- .5	+ 10.59
	9.79668					+	9.81			+ .98	
	0.99183									+ 9.42	
((δ) — D) $\frac{d'}{100}$										+ .30	
+15.81 δ₁										− 6.40	
−1 8.04		52 10.49		12 49.1						13 57.12	
d	+206	2 8.8	2.8	17	6.30	5	42.05		1 5 0	51 5 52.96	
	1.31387					51 5	37.12			+- .12	+ 9.91
	9.79793					+	15.84			+ .46	
	1.19974									+ 9.27	
((δ) — D) $\frac{d'}{100}$										+ .30	
+15.76 δ₂										− 6.30	
−1 8.36		53 43.48		4 48.21						5 56.57	
		1 50.0	46.1						2 5 0		
d											
((δ) — D) $\frac{d'}{100}$											
δ₁											
d											
((δ) — D) $\frac{d'}{100}$											
δ₂											
d											
((δ) — D) $\frac{d'}{100}$											
δ₁											
d											
((δ) — D) $\frac{d'}{100}$											
δ₂											

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Date$_1$ = Nov. 5 1871 n = +.23 Observer A.M. Recorder W.A.R.

Date$_2$ = Nov. 6. n = +.19 33/46 Observer W.A.R. Recorder A.M.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T	Runs
8	8m 85s	52 1′	4.5	8m 8s 1.6	12.6	20.5	24.5	28.5	32.8	1189 +18.61 45	2378	11.26	8 12.52 +18.34 18 +.29 −2	
7	19.1	52′ 2.0	9.4										8 31.13 −0.10	((δ)
	κ												8 30.87	+18.0 −0.42
	((δ) − D) $\frac{\kappa'}{100}$													
	a_1													
13	41	172	4.5	8.7.4	8.34.4	42.3	46.3	50.4	54.5	2379 −3.47 45	4758	11.26	8 34.32 −3.68 +.24 −2	
	κ												8 30.85 −0.07	((δ)
	((δ) − D) $\frac{\kappa'}{100}$		8633										8 30.78	+18.0 −0.42
	a_2													
13	41	172	9.7	13.1.9	19.8	28.3	32.6	36.6	40.6	1579 +18.63 47	3158	11.34	13 20.24 +18.39 19 +.2930 −2	
12	25.8	52′ 20.3	9.4										13 38.84 −0.14	((δ)
	κ												13 38.57	+18.0 −0.44
	((δ) − D) $\frac{\kappa'}{100}$													
	a_1													
			9.5	13.2.3	42.2	50.2	54.3	58.1	.02.3	2671 −3.46	5342	11.34	13 42.08 −3.68 +.24 −2	
	κ												13 38.62 −0.12	((δ)
	((δ) − D) $\frac{\kappa'}{100}$												13 38.50	+18.0 −0.44
	a_2													
16	5.9	199	8.0	16.20.0	36.4	44.5	48.7	52.4	56.6	2386 +18.63 47	4772	11.35	16 36.37 +18.38 19 +.30 −2	
15	43.4	52′ 23.0	9.1										16 55.00 −0.17	((δ)
	κ												16 54.67	+18.0 −0.45
	((δ) − D) $\frac{\kappa'}{100}$													
	a_1													
			5.8	16.41.5	58.3	6.3	10.4	14.3	18.4	477 −3.44 45	954	11.35	16 58.19 −3.68 +.25 −2	
	κ												16 54.75.09 −0.15	((δ)
	((δ) − D) $\frac{\kappa'}{100}$												16 54.59	+18.0 −0.45
	a_2													
19	2.9	2.9	8.0	18.47.1	19.7.9	15.9	19.8	23.8	27.9	953 +18.63 47	1906	11.28	19 7.78 +18.36 19 +.30 −2	
18	14.0	52′ 6.1	9.8										19 26.41 −0.20	((δ)
	κ												19 26.05	+17.9 −0.45
	((δ) − D) $\frac{\kappa'}{100}$													
	a_1													
			8.1	19.5.8	29.8	37.8	41.8	45.8	49.7	2051 −3.49 3.46	4102	11.28	19 29.74 −3.68 +.24 −2	
	κ												19 33.10.29 −0.17	((δ)
	((δ) − D) $\frac{\kappa'}{100}$												19 26.11	+17.9 −0.45
	a_2													
19	25.5	52 39.9	9.4	20.15.5	30.2	38.1	42.3	46.1	50.6	2073 +18.63 47	4146	11.42	20 30.04 +18.36 19 +.30 −2	
	κ												20 48.64 −0.21	((δ)
	((δ) − D) $\frac{\kappa'}{100}$												20 48.30	+18.0 −0.45
	a_1													
			9.4	20.33.8	52.0	0.0	4.0	8.1	12.3	864 −3.44 45	1728	11.42	20 53.86 −3.68 +.25 −2	
	κ												20 48.42.70 −0.18	((δ)
	((δ) − D) $\frac{\kappa'}{100}$												20 48.23	+18.0 −0.45
	a_2													

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Reg. Rs

Apr. 5 – 0 – 5.65 Rs. +.22
Runs 6 7.13 R. 22

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	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+10.5	4′ 16.2	12.0	24	13.60	58	34.75		21	51 58 37.27	
d	1.03743					51 58	29.10			+ 3	+11.25
	9.78697					+	8.17			+ .92	
	0.91234									+ 10.06	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 10.30	
+1808 δ_1		8 48.95		57 55.9						58 38.22	
–04236											
	+26.9	4 25.4	2.1	24	22.75	58	25.60		20	58 38.64	
d	1.42975					51 58	18.47			+ .19	+11.15
	9.78697					+	20.17			+ .97	
	1.30466									+ 10.07	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 10.40	
+1808 δ_2		8 48.86		57 57.0						58 39.39	
–04236											
	+18.3	0 38.2	33.2	5	35.70	17	12.65		5	52 17 20.71	
d	1.26245					52 17	7.00			+ 9	+10.72
	9.78658					+	13.71			+ .13	
	1.13697									+ 10.38	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 10.40	
+1806 δ_1		13 56.63		16 36.8						17 21.03	
–04424											
	+18.5 19.0	0 37.1	31.4	5	34.25	17	14.10		5	17 21.20	
d	1.27875					52 17	6.97			+ .16	+10.72
	9.78658					+	14.23			+ .13	
	1.15327									+ 10.39	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 10.45	
+1806 δ_2		13 56.56		16 37.2						17 21.47	
–04424											
	+16.4	3 25.4	21.4	3	23.40	19	24.95		0	52 19 31.58	
d	1.21484					52 19	19.30			+ 7	+11.41
	9.78625					+	12.28			+ .75	
	1.08903									+ 10.43	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 10.30	
+1801 δ_1		17 12.68		18 47.5						19 32.69	
–04520											
	+16.7	3 25.8	19.4	3	22.45	19	25.90		0	19 31.27	
d	1.22272					52 19	18.77			+ 8	+11.40
	9.78625					+	12.50			+ .75	
	1.09691									+ 10.43	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 10.40	
+1801 δ_2		17 12.60		18 47.1						19 32.27	
–04520											
	+20.7	4 3.0	0.5	19	2.75	3	45.60		15	52 3 55.53	
d	1.31597					52 3	39.95			+ .12	+11.19
	9.78869					+	15.58			+ .88	
	1.19260									+ 10.13	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 10.30	
+17.91 δ_1		19 43.96		3 10.5						3 56.42	
–04592											
	+23.9	4 5.3	0.6	19	2.65	3	45.70		15	3 56.56	
d	1.37840					52 3	38.57			+ .15	+11.16
	9.78869					+	17.99			+ .88	
	1.25503									+ 10.13	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 10.30	
+17.91 δ_2		19 44.02		3 11.5						3 57.42	
–04592											
	+14.5	1 6.4	0.5	46	3.45	36	44.90		45	52 36 50.03	
d	1.16137					52 36	39.25			+ 5	+11.21
	9.78329					+	10.78			+ .24	
	1.03260									+ 10.72	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 10.40	
+1800 δ_1		21 6.30		36 4.9						36 50.84	
–04592											
	+18.1	1 6.1	0.2	46	3.15	36	45.20		45	36 51.53	
d	1.25768					52 36	38.07			+ 8	+11.18
	9.78329					+	13.46			+ .24	
	1.12891									+ 10.72	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 10.40	
+1800 δ_2		21 6.23		36 6.4						36 52.31	
–04592											

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80 44

Date$_1$ = Mar. 5 / 1871 Observer A.M. Recorder W.A.R.

Date$_2$ = Mar. 6 / 1871 Observer W.A.R. Recorder A.M.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	24 25	1 45	88	23.42.2	24.4.9	12.9	16.9	20.4	28.2	8 08	16.16	11.34	24 482
	23 10.2	52 21.8	9.3							+18.64 48			+18.36 20
	κ												+ .30
	((δ) — D) $\frac{\kappa'}{100}$												− 2
	c_1												24 23.46
													− 0.24
													24 7006
													6306
			81	24.7.6	26.9	34.8	38.8	42.8	47.3	190 6	38.12	11.34	24 2678
	κ									−3.44			− 3.67
	((δ) — D) $\frac{\kappa'}{100}$												+ .25
	c_2												− 2
													24 23.34
													− 0.21
													24 2313
25 24	24 19.8	176	92	24.57.7	25.16.1	24.3	28.2	32.4	36.5	137 5	27.50	11.34	25 1616
	κ	52 20.9	9.3							+18.64 48			+18.36 20
	((δ) — D) $\frac{\kappa'}{100}$												+ .30
	c_1												− 2
													25 34.80
													− 0.25
													25 3439
			93	25.18.8	37.9	46.0	50.0	54.0	58.2	24 61	49.22	11.34	25 3788
	κ									−3.44			− 3.67
	((δ) — D) $\frac{\kappa'}{100}$												+ .25
	c_2												− 2
													25 34.44
													− 0.22
													25 3422
26 25	45 30.8	368	88	26.8.5	23.4	31.6	35.5	39.6	45.7	17 38	34.76	11.42	26 2334
	κ	52 40.1	9.1							+18.64 48			+18.36 20
	((δ) — D) $\frac{\kappa'}{100}$												+ .30
	c_1												− 2
													26 41.98
													− 0.26
													26 41.56
			87	26.26.4	45.3	53.4	57.5	1.5	5.7	283 4	56.68	11.42	26 4526
	κ									−3.44			− 3.67
	((δ) — D) $\frac{\kappa'}{100}$												+ .25
	c_2												− 2
													26 41.70.82
													− 0.24
													26 4158
28 27	16 1.7	293	75	27-37-0	54.2	2.3	6.3	10.4	14.5	32 77	6.5.54	11.39	27 5415
	κ	52 32.6	9.7							+16.56 48			+18.37 20
	((δ) — D) $\frac{\kappa'}{100}$												+ .30
	c_1												− 2
													28 12.80
													− 0.28
													28 12.35
			68	27.55.0	54.8	16.0	24.0	28.2	32.2				
				or	16.0	24.0	28.2	32.2	36.3	13 67	27.34	11.39	28 1595
	κ			26.54.8						−3.44			− 3.67
	((δ) — D) $\frac{\kappa'}{100}$												+ .25
	c_2												− 2
													28 12.52
													− 0.25
													28 1226
30 29	50 35.3	146	40	30.8.3	+2.4	+6.4	20.3	28.4				11.33	30 2850
	κ	52 17.9	9.2	wantons	30.28.4	36.3	40.5	44.5	(48.6)	+18.05 48			+18.37 20
	((δ) — D) $\frac{\kappa'}{100}$												+ .30
	c_1												− 2
													30 47.15
													− 0.29
													30 4669
			95	30.30.4	60.3	586	2.4	6.4	10.7	30 84	61.68	11.33	30 5035
	κ									−3.44 45			− 3.67
	((δ) — D) $\frac{\kappa'}{100}$												+ .24
	c_2												− 2
													30 46.91
													− 0.27
													30 4663

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+22.8	4′ 33.6	24.4	4	31,50	18	16.85		0′	52 18 28.12	
d	1.35411					52 18	11.20			+- .14	+11.55
	9.78642					+	16.92			+ .99	
	1.22847									+ 10.40	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 10.20	
+17.88 δ₁		24 40.94		17 42.2	1′					18 29.47	
−0 47.32											
	+19.2	4 29.3	24.4	4	26,85	18	21.50		0	18 ~~29.75~~	
d	1.28330					52 18	14.37			+- .10	+11.57
	9.78642					+	14.38			+ .97	
	1.15766									+ 10.40	
((δ) — D) $\frac{d'}{100}$										+ .30	
+17.88										− 10.30	
−0 47.32 δ₂		24 41.01		17 43.7						18 31.02	
	+18.5	4 46.3	45.0	4	46,65	18	1.70		0	52 18 9.90	
d	1.26417					52 17	58.05			+- .9	+11.67
	9.78642					+	13.85			+ 1.06	
	1.14153									+ 10.40	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 10.20	
+17.85 δ₁		25 52.24		17 23.7						18 11.37	
−0 47.68											
	+19.1	4 47.6	41.1	4	44,35	18	4.00		0	18 11.17	
d	1.28103					52 17	56.87			+- .10	+11.63
	9.78642					+	14.30			+ 1.03	
	1.15539									+ 10.40	
((δ) — D) $\frac{d'}{100}$										+ .30	
+17.85 δ₂										− 10.30	
−0 47.68		25 52.07		17 24.8						18 12.50	
	+14.8	0 24.4	18.4	45-	21,40	37	26.95		45-	52 37 32.30	
d	1.14026					52 37	21.30			+- 6	+11.07
	9.78329					+	11.60			+ 9	
	1.04149									+ 10.74	
((δ) — D) $\frac{d'}{100}$										+ .30	
+17.90 δ₁										− 10.30	
−0 48.00		26 59.46		36 45.1						37 33.07	
	+18.9	0 26.2	21.0	45-	23,60	37	24.75		45-	37 31.67	
d	1.27646					52 37	17.62			+- 9	+11.04
	9.78329					+	14.05			+ 9	
	1.14769									+ 10.74	
((δ) — D) $\frac{d'}{100}$										+ .30	
+17.90 δ₂										− 10.40	
−0 48.00		26 59.48		36 44.3						37 32.31	
	+17.2	4 14.5	10,0	54	12,25	28	36,10		50	52 28 43.28	
d	1.23553					52 28	30.45			+- .8	+11.73
	9.78461					+	12.83			+ .92	
	1.10808									+ 10.59	
((δ) — D) $\frac{d'}{100}$										+ .30	
+17.84 δ₁										− 10.20	
−0 48.48		28 30.19		27 56.4						28 44.81	
	+20.9	4 15.8	10.4	54	13,10	28	35.25		50	28 43.70	
d	1.32015					52 28	28.12			+- .12	+11.69
	9.78461					+	15.58			+ .92	
	1.19270									+ 10.59	
((δ) — D) $\frac{d'}{100}$										+ .30	
+17.84 δ₂										− 10.30	
−0 48.40		28 30.10		27 56.7						28 45.09	
		3 22.3	14.1	8	20,70	~~52~~ 14	27.65		45-		
d											
((δ) — D) $\frac{d'}{100}$											
+17.75 δ₁		31 4.44									
−0 49.12											
	+20.0	3 23.4	17.2	8	20,30	14	28.05		45-	52 14 35.92	
d	1.30103					52 14	20.92			+- .11	+11.23
	9.78707					+	15.00			+ .73	
	1.17604									+ 10.31	
((δ) — D) $\frac{d'}{100}$										+ .30	
+17.75										− 10.20	
−0 49.12 δ₂		31 4.38		13 47.8						14 36.95	

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Date$_1$ = Apr. 5 1871 Observer A.M. Recorder H.A.R.

Date$_2$ = Apr. 6 1871 Observer H.A.R. Recorder A.M.

Star.	α	δ	Mag.	T_a	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	h m s	° ′ ″		m s	s	s	s	s	s		s	s	m s
κ	31 2.2	52 33.7	8.7	31-36.6	54.2	2.2	6.2	10.5	14.5	3276 +18.65	65.52 48	11.39	31 54.13 +18.37 20 +.30 −2
$((\delta) - D)\frac{\kappa'}{100}$													32 12.78 −0.31
a_1													32 12.30
κ			8.7	31.54.3	32.15.9	23.9	28.8	32.8	36.2	1360 −3.59	27.20 44	11.39	32 15.87 −3.667 +.25 −2
$((\delta) - D)\frac{\kappa'}{100}$													32 12.38 −0.28
a_2													32 12.09
κ	42 34.7	52 54.3	6.8	43-11.3	24.8	33.0	37.0	41.2	45.3	1813 +18.67	36.26 49	11.48	43 24.78 +18.37 21 +.30 −2
$((\delta) - D)\frac{\kappa'}{100}$													43 43.45 −0.37
a_1													43 42.85
κ			6.3	43-24.5	46.7	54.8	59.0	3.0	7.2	2907 +3.42	58.14 43	11.48	43 46.66 −3.656 +.25 −2
$((\delta) - D)\frac{\kappa'}{100}$													43 43.24 −0.39
a_2													43 42.84
κ	43 4.0	52 0.3	7.3	44-23.2	(55.7) 44.3.8		7.5	11.7	15.8	348 +18.66	6.96 48	11.25	43 55.67 +18.37 21 +.29 −2
$((\delta) - D)\frac{\kappa'}{100}$													44 14.33 −0.41
a_1													44 13.78
κ			9.5	44-27.8	(17.9) 44.25.8		29.8	33.8	37.9	1414 −3.43	28.96	11.25	44 17.71 −3.65 +.24 −2
$((\delta) - D)\frac{\kappa'}{100}$													44 14.34 −0.38
a_2													44 13.90
κ	48 16.3	52 32.7	8.0	48.49.1	49-6.5	15.0	18.8	22.9	27.2	904 +18.68	18.08 50	11.39	49 66.9 +18.40 22 +.30 −2
$((\delta) - D)\frac{\kappa'}{100}$													49 25.37 −0.46
a_1													49 24.73
κ			8.4	49-41.0	49.28.5	36.8	40.6	44.7	48.4	1995 −3.42	39.90	11.39	49 28.51 −3.65 +.25 −2
$((\delta) - D)\frac{\kappa'}{100}$													49 25.09 −0.43
a_2													49 24.66
κ	52 25.1	52 45.5	8.5	52.54.7	53 52.15.5	23.7	28.0	32.0	36.0	1352 +18.69	27.04 51	11.44	53 15.60 +18.41 23 +.30 −2
$((\delta) - D)\frac{\kappa'}{100}$													52 34.29 −0.49
a_1													52 33.62
κ			8.0	53-13.2	37.5	45.6	49.7	53.9	58.0	2447 −3.41	48.94	11.44	53 37.50 −3.64 +.25 −2
$((\delta) - D)\frac{\kappa'}{100}$													53 34.09 −0.47
a_2													53 33.62

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
d	+17.5	2 1.0	4.7	51	58.15	30	50.20		50	52 30 57.59	
	1.24304					52 30	44.55			+ .8	+11.28
	9.78428					+	13.04			+ .44	
((δ) — D) $\frac{d'}{100}$	1.11526									+ 1062	
										+ .30	
										− 10.20	
+17.77 δ_1		32 30.67		30 9.2						30 58.67	
−0 49.52											
d	+21.5	2 1.6	56.1	51	58.85	30	49.50		50	30 58.39	
	1.33244					52 30	42.37			+ .12	+11.24
	9.78428					+	16.02			+ .44	
((δ) — D) $\frac{d'}{100}$	1.20466									+ 1062	
										+ .30	
										− 10.30	
+17.77 δ_2		32 29.92		30 9.8						30 59.33	
−0 49.52											
d	+13.5	0 44.0	59.0	30	41.50	52	6.85		30	52 52 11.18	
	1.13033					52 52	1.20			+ .5	+11.41
	9.78080					+	9.98			+ .15	
((δ) — D) $\frac{d'}{100}$	0.99904									+ 11.01	
										+ .30	
										− 10.10	
+17.62 δ_1		44 0.47		51 19.8						52 12.49	
−0 52.64											
d	+22.2	0 48.3	42.1	30	45.20	52	3.15		30	52 12.43	
	1.34635					52 51	56.02			+ .13	+11.36
	9.78080					+	16.41			+ .18	
((δ) — D) $\frac{d'}{100}$	1.21509									+ 11.01	
										+ .30	
										− 10.20	
+17.62 δ_2		44 0.46		51 21.0						52 13.59	
−0 52.64											
d	~~−22.5~~ −27.5	1 40.2	35.0	26	39.60	56	10.75		25	51 55 44.34	
	1.43933n					51 56	5.10			+ .20	+10.45
	9.78999					−	20.76			+ .35	
((δ) — D) $\frac{d'}{100}$	1.31425n									+ 1000	
										+ .30	
										− 9.80	
+17.43 δ_1		44 31.21		54 52.2						55 44.99	✓
−0 52.76										6	
d	−10.0	1 30.2	44.2	26	47.20	56	1.15		25	55 ~~48.47~~ 48.3	
	1.00000n					51 55	5.02			+ .3	+10.67
	9.78999					−	4.55			+ .40	
((δ) — D) $\frac{d'}{100}$	0.87793n									+ 1000	
										+ .30	
										− 9.90	
+17.43 δ_2		44 30.33		54 54.5						55 ~~47.24~~ 47.24	✓
−0 52.76											
d	+17.6	3 5.0	1.3	5.3	3.15	29	45.20		50	52 29 52.67	
	1.24551					52 29	39.55			+ .9	+11.50
	9.78445					+	13.12			+ .68	
((δ) — D) $\frac{d'}{100}$	1.11790									+ 10.61	
										+ .30	
										− 9.80	
+17.43 δ_1		49 42.16		29 0.2						29 54.37	
−0 54.12											
d	−12.5	2 41.1	37.0	5.2	39.05	30	9.30		60	29 52.85	
	1.09691n					52 30	2.17			+ .4	+11.46
	9.78445					−	9.32			+ .59	
((δ) — D) $\frac{d'}{100}$	0.96930n									+ 1061	
										+ .30	
										− 10.00	
+17.43 δ_2		49 42.09		29 0.2						29 54.31	
−0 54.12										42 31.50	
d	−3.9	4 28.5	24.9	39	26.70	43	21.65		35	52 ~~42 47.00~~	
	1.59218n					52 43	16.00			+ ~~.40~~ .99	~~+11.73~~ 12.01
	9.78230	+20.9				−	~~29.00~~			+ 10.86	
	1.46212n	1.32015				+	15.50			+ .30	
((δ) — D) $\frac{d'}{100}$		9.78230								− 9.90	
		1.19039								~~42 48.83~~	
+17.38 δ_1		53 51.00		42 38.4						43 33.61	
−0 55.16											
d	+24.3	4 30.3	25.0	39	27.65	43	20.70		85	43 31.59	
	1.38561					52 43	13.57			− .15	+12.00
	9.78230					+	18.02			+ 0.99	
((δ) — D) $\frac{d'}{100}$	1.25585									+ 10.86	
										+ 30	
										− 10.00	
+17.38 δ_2		5								43 33.57	
−0 55.16		53 ~~51~~ 41.00		42 38.4							

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Date$_1$ = Am. 5 — Observer A. M. / Recorder NAR. — Date$_2$ = Am. 6 — Observer NAR. / Recorder A. M.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	54 46	0 59	8.6	54. 10.4	25.8	33.5	37.6	41.6	45.7	1842	36.84	11.29	54 2555
	53 33.8	52 13.7	9.0							+18.64 51			+18.71 23
	κ												+ .30
	((δ) — D) $\frac{\kappa'}{100}$												− 2
	a_1												54 4424
													− 0.50
													54 43.56
			8.9	54.30.4	47.2	55.3	59.4	3.2	7.4	29 25	58.30	11.29	54 47.21
	κ									−3.42			−3.64
	((δ) — D) $\frac{\kappa'}{100}$												+ .24
	a_2												− 2
													54 43.79
													− 0.47
													54 43.32
55	23	188	9.0	55.24.8	55.1.9	10.0	14.2	18.2	22.1	664	13.28	11.34	55 194
54	10.2	52 22.6	9.4							+18.69 51			+18.71 23
	κ												+ .30
	((δ) — D) $\frac{\kappa'}{100}$												− 2
	a_1												55 2063
													− 0.51
													55 [illegible] 4
			9.2	55.43.5	[illegible]	32.0	36.1	39.9	43.5			11.34	55 23.74
	κ									−3.41			−3.64
	((δ) — D) $\frac{\kappa'}{100}$												+ .25
	a_2												− 2
													55 20.33
													− 0.48
													55 1985
58	09	89	7.0	57.29.0	45.9	54.0	57.9	2.1	6.1	286.0	57.20	11.30	57 4590
56	56.8	52 12.7	7.3							+18.69 51			+18.71 23
	κ												+ .30
	((δ) — D) $\frac{\kappa'}{100}$												− 2
	a_1												58 4.59
													− 0.53
													58 3.88
			6.8	57.46.5	58.7.8	15.9	19.9	23.9	28.0	955	19.10	11.30	58 7.80
	κ									−3.42			−3.64
	((δ) — D) $\frac{\kappa'}{100}$												+ .24
	a_2												− 2
													58 4.38
													− 0.50
8	59 58	52 11 58.0											58 3.88
9	6 53	Apus −1.0	8.8	59. 14.0	59.27.8	35.7	39.6	43.8	47.8	14 47	38.94	11.26 2768	59 2768
8	59 40.9	Aps 6		59 32.8	49.4	57.5	1.5	5.5	9.6	2035	60.70	11.26	59 49.44
	κ	52 2.9	8.9							+18.66 −3.42 50			+18.71 23
	((δ) — D) $\frac{\kappa'}{100}$	5		0. 14.2	32.7	40.5	44.5	48.7	52.8	21 92	43.84	11.26	+ .29
	a_1									+18.68 50			− 3.64
													− 2
													59 46.02
													− 0.52
													59 45.50
		6	9.1	0 41.6	54.5	2.5	6.4	10.3	14.6	32 83	65.16	11.26	0 5440
	κ									−3.42			− 3.64
	((δ) — D) $\frac{\kappa'}{100}$												+ .24
	a_2												− 2
													0 50.98
													− 0.52
													0 50.46
9	44	307	9.0	9. 5.4	27.8	36.0	40.2	44.4	48.5	1969	39.38	11.40	9 2798
8	37.7	52 34.7	9.0							+18.71 52			+18 [illegible] 24
	κ												+ .30
	((δ) — D) $\frac{\kappa'}{100}$												− 2
	a_1												9 46.69
													− 0.63
													9 4587
			9.2	9.28.0	44.4	58.0	1.7	6.0	10.2	3058	61.16	11.40	9 4976
	κ									−3.40			− 3.63
	((δ) — D) $\frac{\kappa'}{100}$												+ [illegible] 026
	a_2												− 2
													9 46.36
													− 0.60
													9 45.76

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+15.2	0 37.8	22.0	16-	35.40	7	12.95		15	52 7 18.73	
	1.181844					52 7	7.30			+- 6	+10.60
d	9.788219					+	11.43			+ .13	
	1.057999									+ 10.23	
((δ) — D) $\frac{d'}{100}$										+ .30	
										— 9.60	
+17.25 δ1		55 0.81		6 24.2						7 19.73	
−0 55.48											
	+16.8	0 37.8	32.1	15-	34.95-	7	13.40		15-	7 18.90	
	1.225531					52 7	6.27			+- 8	+10.54
d	9.788219					+	12.63			+ .13	
	1.101469									+ 10.19	
((δ) — D) $\frac{d'}{100}$										+ .30	
										— 9.80	
+17.25 δ2		55 0.57		6 24.2						7 19.64	
−0 55.48											
	−22.9	837.4	33.2	3	35.30	19	13.05		0	52 18 50.26	
	1.359844m					52 19	7.40			+- .14	+11.37
d	9.786259					−	17.14			+ .79	
	1.234039m									+ 10.42	
((δ) — D) $\frac{d'}{100}$										+ .30	
										— 9.70	
+17.28 δ1		55 37.22		17 56.3						18 51.93	
−0 55.64											
	−19.8	3 88.5	32.7	3	35.60	19	12.75		0	18 ~~50.80~~ 53.29	
	1.296674m					52 19	5.62			+- .11	+11.36
d	9.786259					−	~~12.33~~			+ .79	
	1.079086m						14.82			+ 10.38	
((δ) — D) $\frac{d'}{100}$										+ .30	
										— 9.80	
+17.28 δ2		55 37.13		17 56.7						18 ~~54.85~~ 52.36	
−0 55.64											
	+16.9	4 20.9	16.8	14	18.85-	8	29.50		10	52 8 36.55	
	1.227899					52 8	23.85-			+- .8	+11.41
d	9.788055					+	12.70			+ .95	
	1.103885									+ 10.24	
((δ) — D) $\frac{d'}{100}$										+ .30	
										— 9.60	
+17.19 δ1		58 21.07		7 42.0						8 38.36	
−0 56.32											
	+21.3	92 1.6	17.3	14	19.45-	8	28.90		10	8 37.78	
	1.328388					52 8	21.77			+- .12	+11.33
d	9.788055					+	16.01			+ .95	
	1.204377									+ 10.20	
((δ) — D) $\frac{d'}{100}$										+ .30	
										— 9.70	
+17.19 δ2		~~58~~ 21.07		7 43.1						8 39.41	
−0 56.32											
						7	18.85				
3250 1.136722	+13.9	~~8 20.7~~	~~15.5~~	~~23~~	~~24.95~~	~~59~~	~~27.60~~		~~15~~	52 7 ~~22~~ 16.50 1st Hrs	7 20.65 1st Hrs Apr6
+18.4 9.788219	+1.66	0 33.2	27.8	15	30.50	52 7	12.80			+- 5	10.59 +- 8 +10.54
+17 1.012287	1.220111	0 33.8	32.3	15	33.05	+	10.30		15	+ .11	+ .13
− 1.122011	+18.4	0 2.79		6 26.9	1	7	15.30			+ 10.23	+ 10.19
(δ) — D $\frac{d'}{100}$ 9.788219		2.65		6 24.89		52 7	8.17			+ .30	+ .30
1.09626	1.264822					+	12.48			− 9.50	− 9.60
+17.15 δ1	9.789507	3 22.7	18.8	23	20.75	59	27.60		20	7 ~~17.59~~ 23 2nd #	7 21.59 2nd #
−0 56.72	1.142265					51 59	21.95		20	51 59 35.83 1st Hrs	59 36.17 1st Hrs Apr6
	+12.8	3 17.2	12.2	23	14.70	57	13.88			+- 9	+- 5
+17.10	1.107219					59	33.65			+ 7.3	+ 7.0 +11.00
−0 57.09 d	9.789507					51 59	26.52			+ 10.29	+ 10.05
	0.984654	~~7.63~~				+	9.65			+ 30	+ 30
(δ) — D $\frac{d'}{100}$										− 9.50	− 9.70
+17.10		1 7.63		58 40.4						59 37.36	59 60 37.57
−0 57.00 δ2		1 7.56		58 40.6							
	+22.6	2 4.1	58.1	52	1.10	30	47.25		50	52 30 58.44	
	1.354111					52 30	41.60			+- .14	+11.24
d	9.784284					+	16.84			+ 44	
	1.226333									+ 10.64	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 9.40	
+17.00 δ1		10 2.87		30 1.1						31 0.248	
−0 59.16											
	+21.8	2 0.1	57.8	51	57.45-	30	50.90		50	31 0.01	
	1.338466					52 30	43.77			+- .13	+11.21
d	9.784284					+	16.24			+ 44	
	1.210682									+ 10.60	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 9.50	
+17.00 δ2		10 2.76		30 2.6						31 1.72	
−0 59.16											

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Date$_1$ = 4h.5 Observer A.M. Recorder W.R. Date$_2$ = 4h.6 Observer W.R. Recorder A.M.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	12 23	30 1	6.2	11. 40.3	12.30	11.0	15.0	19.1	23.2	7 1 3	14.26	11.39	12 9.87
	11 12.2	52 34.2	9.4							+18.77 52			+18.73 24
κ													+ .30
((δ) — D) $\frac{\kappa'}{100}$													— .2
a_1													12 28.58
													— 0.65
													12 27.74
			9.4	11. 56.7	12.24.7	32.8	36.7	40.9	44.8	17 99	35.98	11.39	12 24.59
										-3.40			— 3.63
κ													+ .25
((δ) — D) $\frac{\kappa'}{100}$													— .2
a_2													12 21.19
													— 0.62
													12 20.57
16 0 3		79	7.5	15. 22.8	40.3	48.4	52.8	56.4	0.4	25 7 8	51.56	11.30	15 40.26
14 52.3		52 12.0	6.7							+18.72 52			+18.44 24
κ													+ .30
((δ) — D) $\frac{\kappa'}{100}$													— .2
a_1													15 58.08
													— 0.67
													15 57.41
			6.2	15. 38.8	16.2.2	10.0	14.0	18.1	22.2	6 6 8	13.38	11.30	16 2.08
										-3.40			— 3.62
κ													+ .24
((δ) — D) $\frac{\kappa'}{100}$													— .2
a_2													15 58.60
													— 0.65
													15 57.95
20 41		65	8.6	19. 58.1	20.20.0	28.0	32.0	36.0	40.1	15 61	31.22	11.29	20 19.93
19 30.7		52 10.7	8.9							+18.72 53			+18.44 25
κ													+ .30
((δ) — D) $\frac{\kappa'}{100}$													— .2
a_1 4 21 19													20 38.65
													— 0.71
													20 37.95
			8.7	20. 15.0	41.9	49.9	53.7	57.8	1.9	26 52	53.04	11.29	20 41.75
										-3.40			— 3.62
κ													+ .24
((δ) — D) $\frac{\kappa'}{100}$													— .2
a_2													20 38.35
													— 0.69
													20 37.66
29 48		28	9.5	29. 8.0	28.1	36.0	40.2	44.4	48.4	19 71	39.42	11.28	29 28.14
28 39.2		52 8.2	9.5							+18.74 53			+18.46 25
κ													+ .30
((δ) — D) $\frac{\kappa'}{100}$													— .2
a_1													29 46.88
													— 0.79
													29 45.88
			8.8	29. 34.2	50.1	58.0	2.2	6.0	10.1	30 64	61.28	11.28	29 50.00
										-3.39			— 3.62
κ													+ .24
((δ) — D) $\frac{\kappa'}{100}$													— .2
a_2													29 46.61
													— 0.76
													29 45.85
30 3 2		54.3	8.3	30. 41.4	58	30. 9.5	13.8	17.8	22.0			11.50	30 1.38
29 12.6		52 58.7	8.0		(1.3)					+18.74 53			+18.46 25
κ													+ .30
((δ) — D) $\frac{\kappa'}{100}$													— .2
a_1													30 20.12
													— 0.81
													30 19.10
			8.6	30. 44.0	30 —	30. 31.4	35.4	39.7	43.7			11.50	30 23.18
					(2.7.2)					-3.38			— 3.61
κ													+ .25
((δ) — D) $\frac{\kappa'}{100}$													— .2
a_2													30 19.80
													— 0.78
													30 19.02

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+29.6	8 18.2	11.1	5-3	16.65-	29	31.70		5-0	52 29 48.12	
	1.44129					52 29	26.05			×− .24	+11.42
d	9.78461					+	22.07			+ .73	
	1.34384									+ 10.63	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 9.30	
δ₁										29 50.24	diff #
	+27.9	8 22.1	16.7	5-3	19.40	29	28.95		5-0	29 42.62	
	1.44560					52 29	21.82			×− .21	+11.41
d	9.78461					+	20.80			+ .73	
	1.31815									+ 10.59	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.94										− 9.30	
−0 59.76 δ₂		12 37.51		28 44.8						29 44.53	diff #
	+17.5	0 28.2	24.2	15	26.20	7	22.15		15-	52 7 29.66	
	1.24304					52 7	16.50			×− .9	+10.53
d	9.78821					+	13.16			+ .9	
	1.11919									+ 1023	
((δ) − D) $\frac{d'}{100}$		16 1485								+ .30	
+16.80		15 41.25								− 9.10	
−1 0.60 δ₁				6 30.5						7 31.09	
	+23.2	0 31.1	25.8	16-	24.45-	7	19.90		15-	7 30.21	
	1.36549					52 7	12.77			×− .14	+10.46
d	9.78821					+	17.44			+ .11	
	1.24164									+ 10.19	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.80										− 9.30	
−1 0.60 δ₂		16 14.77		6 30.8						7 31.37	
	+21.8	1 30.2	24.9	16	27.55-	6	20.80		15-	52 6 31.55	
	1.33846					52 6	15.15			×− .13	+10.71
d	9.78837					+	16.40			+ .33	
	1.21477									+ 1021	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.68										− 9.00	
−1 1.64 δ₁		20 54.43		5 31.6						6 33.26	
	+26.8	1 32.7	26.1	16	29.40	6	18.95		15-	6 31.98	
	1.42813					52 6	11.82			×− .19	+10.61
d	9.78837					+	20.16			+ .33	
	1.30444									+ 10.17	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.68										− 9.10	
−1 1.64 δ₂		20 54.34		5 31.8						6 33.49	
	+20.1	(X) 5 9.5	53.1	(19)	57.20	×3	51.05		15-	52 34 0.50	[illegible]
	1.30320	3		18		52 ×3	45.40			×− .11	+11.44
d	9.78886					+	15.10			+ 1.10	
	1.17900									+ 10.15	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.46										− 8.70	
−1 3.64 δ₁		30 2.34		2 59.6						34 3.24	✓
	+15.8	(X) 5 8.3	50.4	1.(18)	53.15-	3	55.20		15-	3 59.96	[illegible]
1/	1.19866					52 3	48.07			×− .7	+11.20
d₁	9.78869					+	11.89			+ .86	
	1.07529									+ 10.11	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.46										− 8.80	
−1 3.64 δ₂		30 2.31		2 58.7						4 2.36	✓
~~54~~	~~2.0~~	5 8.9	50.3	27	52.10	54	56.25		30-	52 54 21.07	
	−40.01					52 54	50.60			×− .42	+11.59
d	1.60206m					−	29.53			+ .64	
	9.78030									+ 11.07	
((δ) − D) $\frac{d'}{100}$	1.47030m									+ .36	
+16.58										− 8.90	
−1 3.76 δ₁		30 35.68		53 20.0						54 23.76	
	−90.8	3 8.5	2.9	28	5.35	54	43.00		25-	54 20.51	
	1.31806m					52 54	35.87			×− .12	+11.88
d	9.78030					−	15.36			+ .68	
	1.18630m									+ 11.02	
((δ) − D) $\frac{d'}{100}$										+ .30	
+16.58										− 9.00	
−1 3.76 δ₂		30 35.60		53 19.6						54 23.39	

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Date$_1$ = Apm. 5 1871 Observer A.M. Recorder W.A.R. Date$_2$ = Apm. 6 1871 Observer W.A.R. Recorder A.M.

Star. α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
9 32 40	0 42 4	7.2	32.7.0	21.2	29.4	33.4	37.5	41.7	16 32	32.64	11.44	32 21.20
31 32.2	52 46.9	8.2							+18.74 53			+18.46 25
κ												+ .30
((δ) − D) $\frac{\kappa'}{100}$												− 2
a_1												32 39.94
												− 0.83
												32 38.90
		8.1	32.23.4	43.0	51.3	55.3	59.4	3.5	27 25	54.50	11.44	32 43.06
κ									−3.08 38			− 3.61
((δ) − D) $\frac{\kappa'}{100}$												+ .25
a_2												− 2
												32 39.98
												− 0.80
												32 39.18 38.86
35 5	3.0	8.8	35.14.5	30.3	38.3	42.4	46.3	50.6	20 79	41.58	11.25	35 30.33
Apm. 5									+18.74 53			+ 24
34 42.2	52 1.5	9.0										− 2
κ												35 49.07
((δ) − D) $\frac{\kappa'}{100}$												− 0.83
a_1												35 48.03
Apm 6		8.5	30.31.9	52.3	(50.3)	4.2	8.2	12.3			11.25	35 52.21
κ									−3.38			− 3.60
((δ) − D) $\frac{\kappa'}{100}$												+ 24
a_2												− 2
												35 48.83
												− 0.80
												35 48.03
9 21 19	45.0	8.0	19.58.1 21.5.2	13.3	17.4	21.5	25.6		8 30	16.60	11.46	21 5.14
Apm.5									+18.82 53			+ 18.74 25
20 44.2	52 49.2	9.0	20.58.4									+ 30
κ												− 2
((δ) − D) $\frac{\kappa'}{100}$												21 23.86
a_1												− 0.74
												21 22.93
8 6 33	44.8	7.8	8.6.14.2	32.8	40.9	45.0	49.1	53.2	22 10	44.20	11.46	86 32.74
Apm. 6									−3.45 44			6 − 3.68 9
5 17.2	52 47.8	7.7										+ 25
κ												− 2
((δ) − D) $\frac{\kappa'}{100}$												86 29.29
a_2												− 0.07
												86 29.21
9. 37. 2.	28.6	9.0	36.28.2	41.4	49.5	53.6	57.7	1.9	26 41	52.82	11.39	36 1.43
35 53.3	28.6								−3.37 38			− 8.68 1
Apr 6												+ .25
κ	52 33.2	9.0										− 2
((δ) − D) $\frac{\kappa'}{100}$												36 38.06
a_1												− 0.82
												36 37.23
		8.6										
κ												
((δ) − D) $\frac{\kappa'}{100}$												
a_2												
apr 6		10 41 1										
κ		5-41 2										
((δ) − D) $\frac{\kappa'}{100}$		7 27										
a_1		9 55										
κ												
((δ) − D) $\frac{\kappa'}{100}$												
a_2												

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+14.2	1 11	11	1	11				40	52 41 47.89	
	1.152229	1 7.5	3.2	41	5.35	41	43.00			+ − 5	+11.34
d	9.782466					52 41	37.35			+ .24	
	1.022695					+	10.54			+ 10.85	
										+ .30	
										− 8.80	
((δ) − D) $\frac{d'}{100}$											
+16.49 δ_1		32 55.39		40 46.2						41 50.43	
−14.28											
	+15.7	1 9.4	3.9	41	6.85	41	41.70		40	41 49.19	
	1.294447					52 41	34.57			+ − .10	+11.25
d	9.782466					+	14.62			+ .24	
	1.164869									+ 10.81	
										+ .30	
										− 8.90	
((δ) − D) $\frac{d'}{100}$											
+16.49 δ_2		32 55.37		40 47.3						41 51.54	
−14.28											
	+15.8	0 59.7	54.5	285	57.10	56	51.25		25	51 56 57.53	
	1.198666					51 56	45.60			+ − 7	+10.47
d	9.789999					+	11.93			+ .22	
	1.076594									+ 10.02	
										+ :30	
										− 8.40	
((δ) − D) $\frac{d'}{100}$											
+16.30 δ_1		36 4.33		55 54.7						56 59.60	
−14.92											
	+20.3	1 1.3	55.2	285	58.25	56	50.10		25	56 58.30	
	1.307750					51 56	42.97			+ − .11	+10.40
d	9.789999					+	15.33			+ .22	
	1.185431									+ 9.99	
										+ .30	
										− 8.60	
((δ) − D) $\frac{d'}{100}$											
+16.30 δ_2		36 4.33		55 55.2						57 0.10	
−14.92						43	23.15			43 22.44	
	+6.7	4 ~~2.12~~	~~23.2~~	~~24~~	(~~22.20~~	58	26.15		20	52 ~~58~~ 25.44	
	0.826074	2 7.2	1 ~~0.0~~	39	~~25.20~~	52 43	17.50		35	+ − 2	+12.40
d	9.779860					+	4.94			+ .97	
	0.693814									+ 11.15	
										+ .30	
										− 8.30	
((δ) − D) $\frac{d'}{100}$										~~57 29.54~~	
+16.77 δ_1		21 39.70		42 24.7						43 26.54	
−1.180											
	+8.5	4 2.8	57.2	39	0.0	43	48.35		35	52 43 54.94	
	1.267179					52 43	41.22			+ − 8	+11.95
d	9.782133					+	13.72			+ .88	
	1.137241									+ 10.85	
										+ .30	
										− 10.60	
((δ) − D) $\frac{d'}{100}$											
+18.27 δ_2		6 47.48		43 14.1						43 56.29	
−0.42.16											
	+132	~~3.05~~	~~56.5~~	~~52~~	~~55.57~~	~~55~~ 29	~~44.85~~ 50.50		50.	52 29 53.21	
	1.120557	3 0.2	55.5	52	57.85	52 29	43.37			+ − .5	+11.50
d	9.784455					+	9.84			+ .66	
	0.992962									+ 10.59	
										+ .30	
										− 8.70	
((δ) − D) $\frac{d'}{100}$											
δ_1										29 56.01	
		3.02	55.5						50.		
d											
((δ) − D) $\frac{d'}{100}$											
δ_2											
d											
((δ) − D) $\frac{d'}{100}$											
δ_1											
d											
((δ) − D) $\frac{d'}{100}$											
δ_2											

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Date$_1$ = Apr. 6. n = +.19 — Observer A.M. — Recorder W.A.R.

Date$_2$ = Apr. 17. n = -.02 — Observer W.A.R. — Recorder A.M.

Star.	α	δ	Mag.	T_δ	T_m	T_o	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
20	10.51	2.7	6.5	70.40.7	61.0	59.0	3.0	7.0	11.0	31 10	62.20	11.28	10 50.92
	9 40.9	52 7.7	6.7							−3.47			−3.69
	κ												+.24
			9 10 14										−2
	((δ) − D) $\frac{\kappa'}{100}$		9 12 23										10 47.45
			16 25										−1.07
	α_1		21 19										10 46.38
			29 48										
			31 20										
			7.0 32.6	10.37.8	57.2	59.2	3.2	7.3	11.4	31 23	62.46	11.28	10 51.18
			−36.0							−4.01 02			−4.01 03
	κ												+3
													−2
	((δ) − D) $\frac{\kappa'}{100}$		52 34										10 47.17
			53 31										−0.85
	α_2		54 14										10 46.31
			58 40										
	14.4	5.8	8.0	13.51.0	14.4.6	12.8	16.8	20.8	24.8	7 98	15.96	11.29	14 4.07
	12 57.0	52 10.9	8.5							−3.47			−3.69
	κ												+.24
													−2
	((δ) − D) $\frac{\kappa'}{100}$												14 1.20
													−1.09
	α_1												14 0.11
			8.7	13.44.3	14.6.1	13.0	17.2	21.0	25.2	8 15 16	18.30	11.29	14 5.01
										−4.01 02			−4.01 03
	κ												+3
													−2
	((δ) − D) $\frac{\kappa'}{100}$												14 3.00
													−0.87
	α_2												14 0.12
	15.55	34.4	9.2	15.46.0	57.0	5.0	9.2	13.4	17.5	34 21	68.42	11.41	15 57.01
	14 50.5	52 39.5	9.0							−3.46			−3.69
	κ												+.25
													−2
	((δ) − D) $\frac{\kappa'}{100}$												15 53.55
													−1.12
	α_1												15 52.43
			9.0	15.34.4	57.5	5.5	9.6	13.7	17.9	34 42	68.84	11.41	15 57.43
										−4.01 02			−4.01 03
	κ												+3
													−2
	((δ) − D) $\frac{\kappa'}{100}$												15 53.42
													−0.90
	α_2												15 52.51
	17.14	49.0	9.3	16.59.4	17.15.0	23.0	27.0	31.2	35.4	13 16	26.32	11.48	17 14.84
	16 9.6	52 54.1	9.0							−3.45			−3.68
	κ												+.25
													−2
	((δ) − D) $\frac{\kappa'}{100}$												17 11.39
													−1.13
	α_1												17 10.26
			9.5	16.57.3	17.15.1	23.3	27.5	31.6	35.6	13 31	26.62	11.48	17 15.14
										−4.00 02			−4.00 03
	κ												+3
													−2
	((δ) − D) $\frac{\kappa'}{100}$												17 11.14
													−0.91
	α_2												17 10.21
	30.35	6.0	9.5	30.18.2	27.4	45.5	49.5	53.6	57.8	24 38	48.76	11.29	30 37.47
	29 32.6	52 11.2	9.3							−3.45			−3.67
	κ												+.24
													−2
	((δ) − D) $\frac{\kappa'}{100}$												30 34.02
													−1.20
	α_1												30 32.82
			9.8	30.13.8	37.8	45.8	49.8	53.8	58.0	24 32	49.04	11.29	30 37.75
										−4.00 01			−4.01 02
	κ												+3
													−2
	((δ) − D) $\frac{\kappa'}{100}$												30 33.75
													−1.00
	α_2												30 32.73

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Runs Apr 6 – 0 Ref. 6.62 M. +.22
17 7.14 R. .20

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+10.5	4.56.6	53.2	19	54,90	2	53.45		15	52 2 54.51	
	1.05860					52 2	46.83			✱ – .3	+11.41
d	9.78886					+	7.68			+ 1.08	
	0.88540									+ 10.06	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 7.40	
+1543 δ_1		11 1.81		1 47.2						2 58.52	
–1 11.32											
	+13.4	4.56.4	52.5	19	54,45	2	53.90		15	2 56.85	
	1.12410					52 2	46.76			✱ – .5	+11.26
d	9.78886					+	10.09			+ .98	
	1.00390									+ 10.03	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 9.30	
+1543 δ_2		11 1.74		1 47.5						2 58.81	
–1 11.32											
	+13.7	3.31.0	28.3	18	29,65	4	18.70		15	52 4 22.39	
	1.13672					52 4	12.08			✱ – .5	+11.12
d	9.78869					+	10.31			+ .77	
	1.01335									+ 10.10	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 7.20	
+1535 δ_1		14 15.46		3 14.5						4 26.31	
–1 11.80										25.09	
	+22.7	3 32.6	30.8	18	31.70	4	16.65		15	4 ~~26.60~~	
	1.35603					52 4	9.51			✱ – .14	+10.93
d	9.78869	20.7				+	~~17.09~~			+ .70	
	1.23266	1.31597					16.88			+ 10.07	
((δ) – D) $\frac{d'}{100}$		9.78869								+ .30	
		1.19260								– 9.20	
+1535 δ_2		14 15.47		3 15.0						4 ~~28.33~~	
–1 11.80										26.82	
	+11.0	3.48.9	43.0	28	45,95	34	2.40		45	52 34 3.97	
	1.04139					52 33	55.78			✱ – .3	+11.74
d	9.78279					+	8.19			+ .84	
	0.91312									+ 10.63	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 7.30	
+1535 δ_1		16 7.78		32 56.3						34 8.41	
–1 12.12											
	+28.0	3. 53.0	50.1	48	51,55	33	56.80		45	34 6.78	
	1.36173					52 33	49.66			✱ – .14	+11.56
d	9.78379					+	17.12			+ .78	
	1.23346									+ 10.62	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 7.25	
+1535 δ_2		16 7.86		32 57.0						34 9.09	
–1 12.12											
	+15.4	3.23.4	19.8	33	21.60	49	26.75		30 –	52 49 31.53	
	1.18752					52 49	20.13			✱ – .6	+11.90
d	9.78130					+	11.40			+ .75	
	1.05676									+ 10.91	
((δ) – D) $\frac{d'}{100}$										+ .30	
+1534										– 7.25	
–1 12.32 δ_1		17 25.60		48 23.9						49 36.18	
	+17.8	3.22.4	20.5	33	21.45	49	26.90		30 –	49 32.93	
	1.25042					52 49	19.76			✱ – .8	+11.78
d	9.78130					+	13.17			+ .68	
	1.11966									+ 10.88	
((δ) – D) $\frac{d'}{100}$										+ .30	
										– 9.25	
+1534 δ_2		17 25.55		48 23.1						49 35.46	
–1 12.32											
	+19.3	1 45.7	41.1	16	43,40	6	4.95		15 –	52 6 12.85	
	1.28556					52 5	58.33			✱ – .10	+ 10.71
d	9.78837					+	14.52			+ .37	
	1.16187									+ 10.14	
((δ) – D) $\frac{d'}{100}$										+ .30	
+14.90										– 6.50	
–1 14.20 δ_1		38 47.72		5 2.9						6 17.06	
	+24.0	1.43.3	41.4	16	42,35	6	6.40		15 –	6 16.91	
	1.38021					52 5	58.86			✱ – .15	+10.60
d	9.78837					+	18.05			+ .34	
	1.25652									+ 10.11	
((δ) – D) $\frac{d'}{100}$										+ .30	
+14.90										– 8.60	
–1 14.20 δ_2		38 47.63		5 4.7						6 18.91	

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Date$_1$ = 1871 Apr. 6 — Observer A.M. / Recorder W.A.R. — Date$_2$ = Apr. 17 — Observer W.A.R. / Recorder A.M.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
δ. 33	3 59	0 16.8	9.2	34.31.1	34 4.4	12.4	16.5	20.6	24.6	7 85 −3.44	1.570	11.34	39 4.36
32	57.0	52 22.1	9.0										−3.67
κ													+ 25
													− 2
((δ) − D) $\frac{\kappa'}{100}$													34 0.92
													− 1.23
α_1													33 59.69
			9.5	33.32.0	34.4.6	12.9	16.9	21.0	25.2	8 06 −3.99 4.01	16.12	11.34	34 4.78
κ													− 4.00
													+ 3
													− 2
((δ) − D) $\frac{\kappa'}{100}$													34 0.79
													− 1.63
α_2													33 59.74
39.0		27.2	9.0	38.42.0	39.0.8	9.0	13.0	17.1	21.2	6 11 −3.43	12.22	11.38	39 0.84
37	58.0	52 33.5	9.0										−3.66
κ													+ 25
													− 2
((δ) − D) $\frac{\kappa'}{100}$													38 57.41
													− 1.26
α_1													38 56.15
			9.0	38.36.2	39.1.6	9.5	13.6	17.6	21.6	6 38 −3.99 4.00	12.76	11.38	39 1.38
κ													− 4.00
													+ 3
													− 2
((δ) − D) $\frac{\kappa'}{100}$													38 57.39
													− 1.08
α_2													38 56.31
													56.30
40.11		28.7	9.0	39.57.2	40.12.5	20.3	24.6	28.5	32.8	11 87 −3.43	23.74	11.39	40 12.35
39	9.0	52 34.0	9.3										−3.66
κ													+ 25
													− 2
((δ) − D) $\frac{\kappa'}{100}$													40 8.92
													− 1.27
α_1													40 7.65
			9.3	39.52.4	40.12.9	20.9	25.0	29.0	33.2	12 10 −3.99 4.00	24.20	11.39	40 12.81
κ			4458										− 4.00
													+ 3
													− 2
((δ) − D) $\frac{\kappa'}{100}$													40 8.82
													− 1.09
α_2													40 7.72
46.35		0.0	9.0	46.17.5	39.2	47.1	51.1	55.2	59.3	25 19 −3.44 43	58.38	11.26	46 39.12
45	34.0	52 5.4	9.0										−3.665
κ													+ .24
													− 2
((δ) − D) $\frac{\kappa'}{100}$													46 36.68
													− 1.36
α_1													46 35.39
			9.3	46.11.9	39.6	47.6	(51.5)	55.6	59.7	−3.99 4.00		11.26	46 39.54
κ													− 4.00
													+ 3
													− 2
((δ) − D) $\frac{\kappa'}{100}$													46 35.55
													− 1.12
α_2													46 34.42
47.21		48.2 7.8	7.8	47.14.7	23.3	31.3	35.7	39.8	43.8	17 41 −3.42	34.82	11.47	47 23.35
46	20.1	52 53.6	7.8										−3.65
κ													+ 25
													− 2
((δ) − D) $\frac{\kappa'}{100}$													47 19.93
													− 1.33
α_1													47 18.60
			8.4	47.37.9	47.23.8	31.9	36.0	40.0	44.0	17 57 −3.99 4.00	35.14	11.47	47 23.67
κ													− 4.00
													+ 3
													− 2
((δ) − D) $\frac{\kappa'}{100}$													47 19.68
													− 1.14
α_2													47 18.53

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	−26.8	4. 6.4	3.0	4	4.70	18	43.65		0′	52 18 17.04	
d	1.426519					52 18	37.03			52 18 5702	
	9.78642					−	19.99			+ .19	+11.36
	1.30087									+ .90	
((δ) − D) $\frac{d'}{100}$										+ 10.35	
										+ .30	
										− 6.40	
+14.82 δ_1		34 14.51		17 7.3						18 22.00	
−1 14.68											
	+32.8	4 48.3	44.9	4	46.60	18	1.75		0-	18 19.17	
d	1.651587					52 17	54.61			+ .29	+11.29
	9.78642					+	24.56			+ .96	
	1.39023									+ 10.32	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 8.30	
+14.82 δ_2		34 14.56		17 7.3						18 21.96	
−1 14.68											
	+18.8	0.21.2	17.2	53-	19.20	27	29.15		53-	52 27 36.56	
d	1.274416					52 27	22.53			+ .10	+10.78
	9.78494					+	14.03			+ 7	
	1.14704									+ 10.51	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 6.20	
+14.70 δ_1		39 10.85		26 25.9						27 41.14	
−1 15.28											
	+25.2	0.23.1	20.0	53-	21.55	27	26.80		53-	27 38.47	
d	1.401140					52 27	19.66			+ .17	+10.67
	9.78494					+	18.81			+ 6	
	1.27428									+ 10.48	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 8.40	
+14.70 δ_2		39 11.00		26 25.5						27 40.74	
−1 15.28											
	+15.2	3.59.7	57.2	53	58.45	28	49.90		50-	52 28 54.61	
d	1.18184					52 28	43.28			+ .6	+11.66
	9.78461					+	11.33			+ .88	
	1.05439									+ 10.54	
((δ) − D) $\frac{d'}{100}$										+ .30	
+14.66										− 6.20	
−1 15.40 δ_1		40 22.31		27 44.7						29 0.07	
	+20.4	4.0.0	58.0	53	59.00	28	49.35		50-	28 57.42	
d	1.30963					52 28	42.21			+ .11	+11.50
	9.78461					+	15.21			+ .80	
	1.18218									+ 10.57	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 8.35	
+14.66 δ_2		40 22.38		27 45.2						29 0.57	
−1 15.40										55.81	
	+23.6	2. 4.7	59.7	22	2.20	0	46.15		20.	52 0 5656	
d	1.354411	21.6				52 0	39.53			+ .143	+10.634
	9.78918	1.33445				+	17.03			+ .44	
	1.23123	9.78918					16.28			+ 10.03	
((δ) − D) $\frac{d'}{100}$		1.21157								+ .30	
+14.44										− 5.80	
+17.48 δ_1		46 48.83		59 43.2						1 +.37	
										0.65	
	+27.6	2. 3.9	1.3	22	2.60	0	45.75		20.	0 59.41	
d	1.441091					52 0	38.61			+ .20	+10.50
	9.78918					+	20.80			+ 40	
	1.31803									+ 10.80	
((δ) − D) $\frac{d'}{100}$										+ .30	
										− 8.70	
+14.44 δ_2		46 48.86		59 44.4						1 1.91	
−1 17.48											
	+18.7	4.26.3	23.6	34	24.95	48	23.40		30.	52 48 23.22	
d	0.93952					52 48	16.78			+ .2	+12.14
	9.78147					+	6.44			+ .97	
	0.80893									+ 10.89	
((δ) − D) $\frac{d'}{100}$										+ .30	
+14.48										− 5.90	
−1 16.24 δ_1		47 33.08		47 13.2						48 29.46	
	−5.8	4 7.1	6.7	34	6.90	48	41.45		30.	48 23.77	
d	−14.2					52 48	34.31			+ .5	+11.93
	1.152294					−	10.54			+ .82	
	9.78147									+ 10.86	
((δ) − D) $\frac{d'}{100}$	1.022704									+ .30	
+14.48										− 8.10	
−1 16.24 δ_2		47 33.01		47 11.4						48 27.60	

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Date$_1$ = 94 47 Am.6 — Observer A. M. / Recorder W. R. — Date$_2$ = Am.14 50 — Observer W. R. / Recorder A. M.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	10. 49. 08.	53.6	8.0	48.58.2	49.11.1	19.3	23.2	27.6	31.7	11 29	22.58	11.49	49 11.09
	48 7.0	52 58.0	7.5							-3.42			-3.65
													+.25
													-2
													49 7.67
													-1.34
													49 633
			8.2	49.24.1	49.11.6	19.8	23.8	27.8	32.0	11 50	23.00	11.49	49 11.51
										-3.99 4.00			-4.00 1
													+3
													-2
													49 7.52
													-1.16
													49 635
	50. 23.-	9.7	7.0	50.12.0	25.4	33.3	37.5	41.4	45.5	18 31	36.62	11.30	50 25.32
	49 22.0	52 14.8	7.8							-3.43			-3.65
													+.24
													-2
													50 21.89
													-1.32
													50 20.57
			7.5	50.13.4	25.7	33.7	37.7	41.7	45.9	18 47	36.94	11.30	50 25.64
										*3.99			-4.00
										-			+3
													-2
													50 21.65
													-1.15
													50 20.50
	51. 42	34.5	6.0	57.30.5	44.8	52.8	56.9	1.0	5.0	28 05	56.10	11.41	51 44.69
	50 42.0	52 39.9	6.0							-3.42			-3.65
													+.25
													-2
													51 41.27
													-1.35
													51 39.92
			5.5	57.23.6	45.1	53.3	57.3	1.4	5.5	28 26	56.52	11.41	51 45.11
										-3.99			-4.00
													+3
													-2
													51 41.12
													-1.17
													51 39.95
	52. 53.-	10.3	6.5	52.48.2	54.5	2.6	6.7	10.5	14.9	32 92	65.84	11.31	52 54.53
	51 52.6	52 15.8	6.3							-3.43			-3.65
													+.24
													-2
													52 51.10
													-1.34
													52 49.76
			6.0	52.40.7	54.8	3.0	7.0	11.0	15.0	33 08	66.16	11.31	52 54.85
										-3.98 99			-3.99 4.00
													+3
													-2
													52 50.87
													-1.17
													52 49.69
	53. 56.-	52.8	9.2	53.43.9	54.8	8.0	12.1	16.1	20.2	35 62	71.24	11.49	53 59.75
	52 56.2	52 58.2	9.0							-3.42			-3.65
													+.25
													-2
													53 56.33
													-1.37
													53 54.96
			9.0	53.44.2	54.0.0	8.4	12.3	16.6	20.8	5 81	11.62	11.49	54 0.13
										-3.98 9.99			-3.99 4.00
													+3
													-2
													53 56.15
													-1.20
													53 54.94

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
d	+12.9	6.43.7	39.8	30	41.75	52	6.60		30	52 52 9.52	
	1.11059					52 51	5.98			+ 5	+11.36
	9.78080					+	9.54			+ .15	
	0.97933									+ 10.96	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 5.80	
+14.43 δ_1	1	49 20.76		50 58.6						52 15.08	
−1 16.44											
d	−12.6	0.21.5	18.8	30	20.15	52	28.20		30	52 11.75	
	1.10037					52 52	21.06			+ 5	+11.24
	9.78080					−	9.31			+ 6	
	0.96911									+ 10.93	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 8.10	
+14.43 δ_2		49 20.78		50 58.4						52 14.89	
−1 16.44											
d	+13.3	4.9.4	6.0	14	9.70	8	40.65		10	52 8 44.02	
	1.12385					52 8	34.03			+ 5	+11.30
	9.78788					+	9.99			+ .90	
	0.99967									+ 10.175	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 5.60	
+14.34 δ_1		50 34.91		7 33.2						8 49.72	
−1 16.56											
d	+12.2	4.4.0	6.7	14	8.35	8	43.00		10	8 45.03	
	1.08636					52 8	35.86			+ 4	+11.22
	9.78788					+	9.14			+ .82	
	0.96218									+ 10.14	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 7.80	
+14.34 δ_2		50 34.84		7 31.9						8 48.45	
−1 16.56											
d	+14.2	3.39.1	35.1	48	37.10	34	11.25		45	52 34 15.20	
	1.15229					52 34	4.63			+ 5	+11.65
	9.78379					+	10.57			+ .79	
	1.02402									+ 10.61	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 5.60	
+14.34 δ_1		51 54.26		33 4.6						34 21.25	
−1 16.68											
d	+21.5	3.42.8	39.9	48	41.35	34	7.00		45	34 15.86	
	1.33244					52 33	5.86			+ 12	+11.52
	9.78379					+	16.00			+ .74	
	1.20417									+ 10.60	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 7.90	
+14.34 δ_2		51 54.29		33 2.8						34 19.48	
−1 16.68											
d	+9.3	1.18.4	14.1	11	16.25	11	32.10		10	52 11 32.46	
	0.96848					52 11	25.48			+ 3	+10.77
	9.78756					+	6.98			+ .29	
	0.84398									+ 10.21	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 5.50	
+14.27 δ_1		53 4.03		10 20.9						11 37.73	
−1 16.80											
d	+14.1	1.18.4	16.4	11	17.65	11	30.70		10	11 34.15	
	1.14922					52 11	23.56			+ 5	+10.71
	9.78756					+	10.59			+ .26	
	1.02472									+ 10.20	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 7.70	
+14.27 δ_2		53 3.96		10 20.4						11 37.16	
−1 16.80											
d	+15.9	0.26.8	22.3	30	24.55	52	23.80		30	52 52 28.93	
	1.20140					52 52	17.18			+ 7	+11.25
	9.78080					+	11.75			+ 4	
	1.07014									+ 10.943	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 5.60	
+14.29 δ_1		54 9.25		51 17.7						52 34.58	
−1 16.92											
d	+15.9	0.23.0	22.2	30	22.60	52	25.75		30	52 30.36	
	1.20140					52 52	18.61			+ 7	+11.23
	9.78080					+	11.75			+ 8	
	1.07014									+ 10.92	
((δ) — D) $\frac{d'}{100}$										+ .30	
										− 7.85	
+14.29 δ_2		54 9.23		51 16.8						52 33.74	
−1 16.92											

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Date$_1$ = Apr. 6 (96 47) Observer A. Zn. Recorder W. N. R.

Date$_2$ = Apr. 17 (50) Observer W. N. R. Recorder A. Zn.

Star. α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
10. 59. 36 s 58 36.6 κ	−2.2 52 3.2	7.8 8.3	57 0.2.0	(36.2)	59. 44.3	48.1	52.0	56.3	−3.42		11.26	59 36.12 −3.64 +.24 −2 59 32.76 −1.37 59 31.39
((δ) − D) $\frac{\kappa'}{100}$												
α_1												
		8.1	59. 21.3	36.5	44.7	48.7	52.6	56.8	23 93 −3.98	47.86	11.26	59 36.60 −3.99 4.00 +3 −2 59 32.62 −1.21 59 31.40
κ												
((δ) − D) $\frac{\kappa'}{100}$												
α_2												
11. 1. 53 0 54.6 κ	4.4 52 9.8	7.5 7.2	1. 36.1	53.8	2.0	5.9	9.8	14.0	32 55 −3.42	65.10	11.28	1 53.82 −3.64 +.24 −2 1 50.40 −1.39 1 49.01
((δ) − D) $\frac{\kappa'}{100}$												
α_1												
		6.5	1. 33.1	(54.2)	2.3	6.2	10.2	14.4	−3.98 99		11.28	1 54.18 −3.99 4.00 +3 −2 1 50.20 −1.23 1 48.96
κ												
((δ) − D) $\frac{\kappa'}{100}$												
α_2												
4. 28. 3 28.8 κ	48.0 52 53.4	8.3 8.5	4. 14.3	28.8	37.0	41.0	45.2	49.4	20 14 −3.41	40.28	11.47	4 28.81 −3.64 +.25 −2 4 25.40 −1.43 4 23.97
((δ) − D) $\frac{\kappa'}{100}$												
α_1												
		8.4	4. 8.7	29.3	37.4	41.5	45.6	49.7	20 35 −3.98	40.70	11.47	4 29.23 −3.99 +3 −2 4 25.25 −1.27 4 23.98
κ												
((δ) − D) $\frac{\kappa'}{100}$												
α_2												
10. 41. 41− Apr. 6. 3 κ 35.3	7.8 52 12.7	7.5 7.3	4. 26.7	41.8	49.8	53.9	57.8	2.0	26 53 −3.47	53.06	11.30	4 41.76 −3.69 +.24 −2 4 38.29 −1.02 4 37.27
((δ) − D) $\frac{\kappa'}{100}$												
α_1												
10. 5. 42. April 6. 4 κ 36.3	−3.2 52 1.8	9.3 9.1	5. 37.4	40.1	53.3	57.1	1.2	5.2	28 19 −3.47	56.38	11.28	5 45.13 −3.69 +.24 −2 5 41.66 −1.03 5 40.63
((δ) − D) $\frac{\kappa'}{100}$												
α_2												
10. 7. 27. Apr. 6. 6 κ 41.4	45.1 52 50.1	9.2 9.0	7. 12.3	29.0	37.0	41.2	45.4	49.5	20 21 −3.46	40.42	11.46	7 29.96 −3.69 +.25 −2 7 25.50 −1.06 7 24.44
((δ) − D) $\frac{\kappa'}{100}$												
α_1												
10. 9. 55 Apr. 6 8 κ 49.8	26.4 52 31.4	8.0 8.0	9. 43.4	56.2	4.5	8.5	12.6	16.7	33 85 −3.46	67.70	11.37	9 56.33 −3.69 +.25 −2 9 52.87 −1.07 9 51.82
((δ) − D) $\frac{\kappa'}{100}$												
α_2												

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	−25.6	4.49.2	46.7	24	47.45	58	0.90		20′	51 57 34.74	
	1.413300					51 57	54.28			± .18	+11.14
d	9.78967					−	19.54			+ 1.06	
	1.29091									+ 9.98	
$((\delta) - D)\frac{d'}{100}$										+ .30	
										− 5.10	
+14.07 δ_1		59 45.40		56 23.3						57 40.78	
−1 17.44											
	+15.3	0.17.4	14.1	25	15.75	57	32.60		25	57 37.00	
	1.18469					51 57	25.46			± 6	+10.25
d	9.78967					+	11.54			+ 6	
	1.06230									+ 9.95	
$((\delta) - D)\frac{d'}{100}$										+ .30	
										− 7.40	
+14.07 δ_2		59 45.47		56 22.4						57 39.85	
−1 17.44											
	+17.7	3 25.4	21.8	18	23.60	4	24.75		15	52 4 31.45	
	1.24797					52 4	18.13			± 9	+11.04
d	9.78869					+	13.32			+ .75	
	1.12460									+ 10.08	
$((\delta) - D)\frac{d'}{100}$										+ .30	
										− 5.00	
+14.01 δ_1		2 3.02		3 19.8						4 37.49	
−1 17.68											
	+21.1	3 24.2	22.2	18	23.20	4	25.15		15	4 33.89	
	1.32428					52 4	18.01			± .12	+10.93
d	9.78869					+	15.88			+ .68	
	1.20091									+ 10.07	
$((\delta) - D)\frac{d'}{100}$										+ .30	
										− 7.30	
+14.01 δ_2		2 2.97		3 19.8						4 37.52	
−1 17.68											
	+14.5	0.0.7	−2.9	34	5.90	47	49.45		35	52 47 53.56	
	1.16134					52 47	42.83			± .5	+11.10
d	9.78147					+	10.73			± 0	
	1.03078									+ 10.95	
$((\delta) - D)\frac{d'}{100}$										+ .30	
										− 5.00	
+13.98 δ_1		4 37.95		46 41.8						47 59.66	
−1 17.88											
	+20.5	0.2.0	−0.9	33	0.53	47	47.80		35	47 55.84	
	1.31195					52 47	40.66			± .10	+11.04
d	9.78147					+	15.18			± 0	
	1.18116									+ 10.84	
$((\delta) - D)\frac{d'}{100}$										+ .30	
										− 7.40	
+13.98 δ_2		4 37.96		46 41.6						47 59.48	
−1 17.88											
	+5.1	1.12.2	7.5	16	9.83	6	38.50		15	52 6 43.23	
	1.17898					52 6	31.85			± 6	+10.64
d	9.78821					+	11.35			+ 26	
	1.05513									+ 10.14	
$((\delta) - D)\frac{d'}{100}$										+ .30	
+15.60 δ_1		4 52.87		5 36.0						− 7.60	
−1 10.32										6 46.27	
	+17.7	1.7.7	3.1	26	5.40	56	42.95		25	51 56 41.14	
	0.86649					51 56	36.33			± .2	+10.48
d	9.78983					+	5.81			+ .24	
	0.76426									+ 9.96	
$((\delta) - D)\frac{d'}{100}$										+ .30	
+15.55 δ_2		5 56.18		56 33.6						− 7.50	
−1 10.48										56 44.12	
	+16.7	3.28.1	35.8	38	36.95	44	11.40		35	52 44 17.16	
	1.22292					52 44	4.78			± .8	+11.82
d	9.78213					+	12.38			+ .79	
	1.09279									+ 10.81	
$((\delta) - D)\frac{d'}{100}$										+ .30	
+15.60 δ_1		7 40.04		43 10.7						− 7.65	
−1 10.60										44 21.33	
	+12.9	0.57.8	48.8	56	52.35	26	58.30		55	52 27 1.31	
	1.11089					52 26	51.68			± 5	+10.94
d	9.78494					+	9.63			+ .18	
	0.98344									+ 10.51	
$((\delta) - D)\frac{d'}{100}$										+ .30	
+15.50 δ_2		10 7.30		25 53.6						− 7.60	
−1 14.6										27 4.75	

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Date$_1$ = Observer / Recorder — Date$_2$ = Observer / Recorder

Star. α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
9.58.42 Apr.17 57 κ 53.2	47.5 52 52.4	8.8 9.2	58.22.6	41.1	49.3	53.3	57.5	1.5	26 27 −4.03	52.54	11.47	58 41.07 −4.04 +3 −2 58 37.06 −0.76 58 36.28
$((\delta) - D)\frac{\kappa'}{100}$												
α_1												
10.44.58 Apr.17 43 κ 57.0	44.4 52 49.8	6.8 6.5	44.45.8	45.0.1	8.3	12.4	16.4	20.7	5 79 −3.99 4.00	11.58	11.45	45 0.13 −4.01 +3 −2 44 56.14 −1.13 44 55.00
$((\delta) - D)\frac{\kappa'}{100}$												
α_2												
10.58.22 Apr.17 57 κ 22.2	32.8 52 38.2	8.9 9.0	57.59.4	58.2.3	32.4	36.5	40.6	44.7	17 85 −3.98 99	35.70	11.40	58 24.30 −3.99 4.00 +3 −2 58 20.32 −1.22 58 19.09
$((\delta) - D)\frac{\kappa'}{100}$												
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												

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Runs

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+18.5′	0. 58.3	56.7	33-	57,50	46	50.85		33-	52 46 57.26	
d	1.262245					52 46	43.71			− 9	+11.23
	9.78163					+	13.55			+ 20	
((δ) − D) $\frac{d'}{100}$	1.13202									+ 1082	
										+ 30	
+15.84 δ_1		58 52.12		45 49.4						− 9.85	
−19.28										46 58.64	
	+14.3	2.36.3	34.7	37	35,50	45	12.86		35-	52 45 16.31	
d +	1.155344					52 45	5.91			− 5	+11.57
	9.78197					+	10.60			+ 52	
((δ) − D) $\frac{d'}{100}$	1.02525									+ 1080	
										+ 30	
+14.54 δ_2		45 9.54		44 3.4						− 8.20	
−15.96										45 19.68	
	+24.9	0.1.7	0.1	50	0.90	32	47.45		50	52 32 58.85	
d′	1.396208					52 32	40.31			− 16	+10.70
	9.78395					+	18.54			+ 0	
((δ) − D) $\frac{d'}{100}$	1.26809									+ 1056	
										+ 30	
+14.14 δ_1		58 33.23		31 44.8						− 7.55	
−17.24										33 42.00	
d											
((δ) − D) $\frac{d'}{100}$											
δ_2											
d											
((δ) − D) $\frac{d'}{100}$											
δ_1											
d											
((δ) − D) $\frac{d'}{100}$											
δ_2											
d											
((δ) − D) $\frac{d'}{100}$											
δ_1											
d											
((δ) − D) $\frac{d'}{100}$											
δ_2											
d											
((δ) − D) $\frac{d'}{100}$											
δ_1											
d											
((δ) − D) $\frac{d'}{100}$											
δ_2											

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Date$_1$ = Observer / Recorder — Date$_2$ = Observer / Recorder

Star.	α	δ	Mag.	T_δ	T_m	T_a	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
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													
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													

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