1874phne.ford.ast587R

KG
11366
v.583

Zone Observations + Reductions

C. 21

From Feb. 11, 1874 to April 6, 1874

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

	h	m	s	°		
621	5	53	19.3	54	41.1	Feb-14
	17	13	37.6	52		Mar. 1
	8	0	28.8(8)	54		Mar. 24

621

From Feb 11 1874 Mar 6 1874

For Constants of ε, see 620.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae..proj..153R

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs

	$T_m - T$	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											

W. H. R. is the observer and I. R. M., the Recorder throughout this book.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

277

Date$_1$ = Feb. 11, 1874 Observer W.A.R.
n = +30. Recorder J.F.M.

278

Date$_2$ = Feb. 12, 1874 Observer W.A.R. 2
n = +35, C = −.04 Recorder J.F.M.

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
5 W	19 34 53.18	7.0			Lost								
	18 12.6 53 17.3	7.3											
	κ												
	((δ) − D) $\frac{\kappa'}{100}$												
	α_1												
		7.7	18 46.5	19 6.5	20.0	18.3	16.8	20.3	6.69	19 13.38		
			58.3							+29.32		ΔT+m
			52.8							+ .46		means
			42.9							− 2		κ
	κ									− 7		c used
	((δ) − D) $\frac{\kappa'}{100}$							+ 29.69		19 43.04		
	α_2									− 55		+4.84
										19 42.52		+3.50
20	51 53.14	9.0	14 56.3		Lost								
19	30.3 53 13.4	8.2	5										
	κ												
	((δ) − D) $\frac{\kappa'}{100}$												
	α_1												
		9.0	19 56.3	20 25.4	28.9	32.3	33.6	39.2	1614	20 32.28		
			57.3							+2932		
			21.2							+ .46		
			58.3							− 2		
	κ									− 7		
	((δ) − D) $\frac{\kappa'}{100}$							+ 29.69		21 1.97		+4.84
	α_2									− 57		+3.38
										21 1.40		
22	41 54.09	9.5			Lost								
21	20.4 54 8.3	9.3											
	κ												
	((δ) − D) $\frac{\kappa'}{100}$												
	α_1												
		9.3	21 41.4	22 17.5	21.0	24.6	28.0	31.6	1227	22 24.54		
			44.0							+29.32		
			46.4							+ .48		
			42.6							− 3		
	κ									− 7		
	((δ) − D) $\frac{\kappa'}{100}$							+ 29.70		22 54.24		+4.90
	α_2									− 61		+3.22
										22 53.63		
23	52 53.10	9.5			Lost								
22	30.7 53 8.8	9.4											
	κ												
	((δ) − D) $\frac{\kappa'}{100}$												
	α_1												
		9.5	22 56.4	23 26.7	30.3	33.8	37.4	40.5	1689	23 33.78		
			59.2							+29.32		
			5.8							+ .46		
			59.5							− 2		
	κ									− 7		
	((δ) − D) $\frac{\kappa'}{100}$							+ 29.69		24 3.47		+4.84
	α_2									− 61		+3.12
										24 2.86		
26	03 54 19	6.6			Lost								
24	42.0 54 ~~54~~ 18.5	6.0											
	κ												
	((δ) − D) $\frac{\kappa'}{100}$												
	α_1												
		6.0	25 5.1	25 38.8	42.3	46.0	49.5	52.0	2296	25 45.72		
			8.0							+29.32		
			18.4							+ .48		
			7.7							− 3		
	κ									− 7		
	((δ) − D) $\frac{\kappa'}{100}$							+ 29.70		26 15.62		+4.91
	α_2									− 65		+2.94
										26 14.97		

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Feb 11. Feb 12

R_{2g} = −7′ 31.45 31.05
+.06 +.06

φ = 42° 22′ 48.35″

3

Runs	$T_m - T$	A	C	Sum	Mean	$\varphi - z$ Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	s	0 ′ 45.0	34.6	′	″				55′		
d											
$((\delta) - D)\frac{d'}{100}$											
δ_1											
	+23.5	0 31.1	20.2	55	2865	53 27 22.70			55	53 19 32.97	+12.40
	1.37107					19 51.65				− .14	
d	9.77609					*19.68				+ 3	
$((\delta) - D)\frac{d'}{100}$	1.26398						20 11.33			+ 11.95	4437
										+ 56	2797
δ_2		19 47.36		19 32.5						−16.40	3-0
										19 28.97	3147
		0 16.9	5.8	0	11.35	53 22 37.00			0		
d											
$((\delta) - D)\frac{d'}{100}$											
δ_1											
	+33.0	0 0.1	50.3	59	5520	53 22 53.15			0	53 14 56.26	+12.14
	1.51851					15 22.10				− .28	
d	9.77694					*25.84				− 1	
$((\delta) - D)\frac{d'}{100}$	1.48223						15 47.94			+ 11.87	
										+ 56	
δ_2		21 6.24		14 55.2						−16.60	
										14 51.80	
		0 16.6	63.9	5	10.25	54 17 38.10			5		
d											
$((\delta) - D)\frac{d'}{100}$											
δ_1											
	+40.9	0 9.2	59.0	5	4.10	54 17 44.24			5	54 9 41.86	+13.08
	1.61172					10 13.19				− .44	
d	9.76747					*31.33				+ 0	
$((\delta) - D)\frac{d'}{100}$	1.49597						10 44.52			+ 12.90	
										+ 62	
δ_2		22 58.53		9 41.4						−16.80	
										9 38.14	
		0 18.5	6.0	5	12.25	53 17 36.10			5		
d											
$((\delta) - D)\frac{d'}{100}$											
δ_1											
	+34.3	0 4.5	54.0	4	9.25	53 17 49.10			5	53 9 51.14	+12.04
	1.53529					10 18.05				− .30	
d	9.77778					+26.91				− 0	
$((\delta) - D)\frac{d'}{100}$	1.42985						10 44.96			+ 11.78	
										+ 56	
δ_2		24 7.70		9 49.8						−16.50	
										9 46.68	
		4 12.4	2.6	54	7.75	54 28 40.60			50		
d											
$((\delta) - D)\frac{d'}{100}$											
δ_1											
	+38.0	4 19.0	9.0	54	14.00	54 28 34.35			50	54 20 34.32	+13.55
	1.57978					21 3.30				− .38	
d	9.76554					+28.98				+ .25	
$((\delta) - D)\frac{d'}{100}$	1.46210						21 32.28			+ 13.12	
										+ .56	
δ_2		26 19.88		20 34.1						−16.70	
										20 31.17	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

277 | 278 | 4

Date$_1$ = Feb. 11, 1874 | Observer W.A.R. / Recorder J.F.M. | Date$_2$ = Feb. 12, 1874 | Observer / Recorder | Ru

π = +.30 | n = +.35 | c = −.04

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
26	27 m 46 s 54.52	8.8	m s	m s	Lost	s	s	s		m s		
25.4	25.4	54 51.4	8.5										
κ													
$((\delta) - D)\frac{\kappa'}{100}$													
α_1													
			8.7	26 8.40	27 21.4	.25.3	28.8	32.4	36.0	1442 27 28.84			
				8.5						+29.32			
				7.9						+ .50			
				7.5						− 3			
										− 7			
									+ 29.72	27 58 56			+4.95
										− 67			+2.78
										27 57.89			
27	29 03 53.47	9.4			Lost								
27	42.4	53 46.8	9.5										
κ			9.0										
$((\delta) - D)\frac{\kappa'}{100}$													
α_1													
			9.3	28 4.6	28 40.5	44.0	47.8	51.0	54.4	2374 28 47.48			
			9.4	7.4						+29.31			
				4.5						+ .48			
				7.8					+ 29.76	− 7 − 3	29 17.24		
				150	41.3	44.8	48.3	51.9	55.2	2418 28 48.30	−.07		+4.88
				38 18.7						+29.31	29 16.57		+2.65
				21.2						+ .48			
				18.3					+ 29.76	− 7 − 3	29 17.99		
30	58 53.25	6.2	30 4.0	30 32.0	35.5	39.0	42.4	45.9		1748 30 38.96	−.67		+4.88
29	36.6	53 24.3	6.3							+28.47	29 17.32		+2.68
κ										+ .40			
$((\delta) - D)\frac{\kappa'}{100}$									+ 28.84	− 3			
α_1										31 7.80			+4.86
										− .71			+2.51
										31 7.09			
			6.3	30 1.9	30 31.0	34.7	38.1	41.4	45.0	1902 30 38.04			
				4.4						+29.31			
κ				6.8						+ .47			
$((\delta) - D)\frac{\kappa'}{100}$				4.4						− 3			
									+ 29.68	− 7			+4.86
α_2										31 7.72			+2.51
										− .69			
										31 7.03			
31	56 53.26	9.0	31 10.2	31 31.0	34.4	37.9	41.3	44.9		1875 31 37.90			
30	34.1	53 25.4	9.1							+28.47			
κ										+ .40			
$((\delta) - D)\frac{\kappa'}{100}$									+ 28.84	− 3			
α_1										32 6.74			+4.86
										− .72			+2.44
										32 6.02			
			8.8	31 8.5	31 30.2	33.6	37.0	40.5	44.0	1853 31 37.06			
				11.4						+29.31			
κ				14.2						+ .47			
$((\delta) - D)\frac{\kappa'}{100}$				11.4						− 3			
									+ 29.64	− 7			+4.86
α_2										32 6.74			+2.44
										− .70			
										32 6.04			
33	10 54.23	9.1	32 17.5	32 48.6	52.2	55.7	59.2	2.7		2784 32 55.68			
31	48.8	54 21.9	9.1							+28.47			
κ				23.9						+ .42			
$((\delta) - D)\frac{\kappa'}{100}$				20.7					+ 28.86	− 3			
α_1										33 24.54			+4.93
										− .75			+2.31
										33 23.79			
			9.1	32 21.4	32 47.1	51.2	54.8	58.3	1.9	2739 32 54.78			
				24.0						+29.31			
κ				21.9						+ .49			
$((\delta) - D)\frac{\kappa'}{100}$				24.1						− 3			
									+ 29.70	− 7			+4.93
α_2										33 24.48			+2.31
										− .73			
										33 23.75			

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Feb 11. Feb 12.

Runs R_{Eq} = -7' 31.45 31.05

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	8	1 39.1	27.6						20		
d											
$((\delta) - D)\frac{d'}{100}$											
δ_1											
	+31.3	1 43.1	32.8	31	37.95	55 1 10.40			20	54 53 15.80	
	1.49554					54 53 39.35				-.25 +14.20	
d	9.75967					-23.55				+.10	
	1.37199m						54 2.90			+13.71	
$((\delta) - D)\frac{d'}{100}$										+.64	
										-16.90	
δ_2		28 2.84		53 15.9						53 13.10	
		2 34.2	22.1						25		
		2 34.2	22.1						25		
d											
$((\delta) - D)\frac{d'}{100}$											
δ_1											
	+39.7	2 22.1	10.4	27	16.25	53 55 32.10			25	53 47 30.37	47 37.86
	1.59879	2 22.1	10.4	27	16.25	53 55 32.10			25	-.42 +12.79	-.23 +12.98
d	9.77130					48 1.05	48 31.73			+.14	+.14
	1.48687m					48 1.05				+12.48	+12.48
$((\delta) - D)\frac{d'}{100}$	+30.0					-30.68				+.59	+.59
	1.47712					-23.19	48 24.24			-16.50	-16.50
δ_2	9.77180	29 21.45		47 29.3						47 26.66	47 34.34
	1.36520m	29 22.45 20		37.0							
	+35.0	4 12.9	0.9	49	6.90	53 33 41.45			45	53 25 42.71	
52	1.54407					26 10.00				-.32 +12.46	
d	9.77507					-27.29				+.25	
	1.43592m						26 39.29			+11.96	
$((\delta) - D)\frac{d'}{100}$										+.57	
										-16.30	
δ_1		31 11.95		25 41.4						25 38.87	
	+33.6	4 15.7	5.0	49	10.35	53 33 38.00			45	8 40.76	
	1.52634					26 6.95				-.29 +12.61	
d	9.77507					-26.19				+.25	
	1.41819m						26 33.14			+12.08	
$((\delta) - D)\frac{d'}{100}$										+.57	
										-16.40	
δ_2		31 11.89		25 39.5						25 36.97	
84	+25.1	3 10.0	59.1	48	4.55	53 34 43.80			45	53 26 52.79	
	1.39967					27 12.35				-.16 +12.57	
d	9.77490					-19.56				+.18	
	1.29135m						27 31.91			+11.98	
$((\delta) - D)\frac{d'}{100}$										+.57	
										-16.30	
δ_1		32 10.88		26 51.5						26 49.06	
	+25.7	3 10.3	59.0	48	4.65	53 34 43.70			45	52.62	
	1.40993					27 12.65				-.17 +12.68	
d	9.77490					-20.03				+.18	
	1.30161m						27 32.68			+12.10	
$((\delta) - D)\frac{d'}{100}$										+.57	
										-16.40	
δ_2		32 10.90		26 51.3						26 48.90	
	+35.0	1 3.7	51.7	44	57.70	54 32 50.65			50	54 24 52.55	Cyprus
50	1.54407			50		25 19.20				3 -.32 +13.33	
d	9.76484					+26.65				+.00	
	1.42569m						25 45.85			+13.03	
$((\delta) - D)\frac{d'}{100}$										+.62	
										3 -16.50	
δ_1		33 28.72		23 51.7						24 49.38	
	+30.4	1 7.0	56.6	51	1.80	54 31 46.55			50	23 52.35	Ist mm
	1.48287					24 15.50				-.23 +13.64	
d	9.76484					-23.15				+.06	
	1.36449m						24 38.65			+13.17	
$((\delta) - D)\frac{d'}{100}$										+.64	
				51.7						-16.60	
δ_2		33 28.68		23 51.0						23 49.59	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.31587R

277

Date$_1$ = Dec. 11, 1874 Observer W.A.R. Recorder J.F.M.

278

Date$_2$ = Dec. 12, 1874 Observer Recorder

6

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
55	23 25	0 7 53.14	8.5	37 18.3	34 41.6	45.2	48.5	52.0	55.5	2428	34 48.56		
	23 45.2	53 13.4	8.5	21.7							+28.47		
				24.3							+ .40		
				21.4					+ 28.84		− 3		
											34 35 17.40		+4.85
											− .75		+2.15
											35 16.65		
			8.5−	34 8.3	34 41.8	44.1	47.5	51.0	54.5	2379	34 47.58		
				11.7							+29.31		
				14.6							+ .47		
				11.5							− 3		
									+ 29.68		− 7		+4.85
											35 17.26		+2.15
											− .73		
											35 16.53		
	36 00	53 45	9.7	36 1.9	36 12.0	15.6	19.0	22.8	26.1	955	36 19.10		
	34 37.6	53 43.7	9.4	4.5							+28.47		
				8.4							+ .41		
				4.9					+ 28.85		− 3		
											36 47.95		
											− .78		
											36 47.17		
			9.8	35 28.5	35 34.7	38.1	41.7	45.2	48.6	2083	35 41.6		
				21.9							+29.31		
				35.3							+ .48		
				21.6					+ 29.69		− 3		
											− 7		+4.88
											36 11.35		+2.07
											− .75		
											36 10.60		
	38 04	52.46	9.1	38 17.3	37 ~~43.5~~ 40.2	~~47.2~~ 43.8	~~50.9~~ 47.3	~~54.5~~ 50.9	~~58.1~~ 54.5	~~2546~~	37 ~~50.72~~ 47.34		
	36 42.2	53 44.8	8.7	20.6							+28.47		
			8.9	~~23.7~~ 20.3							+ .41		
									+ 28.85		− 3	38 16.19	+4.89
				37 1.7	~~45.2~~ 48.8	~~48.4~~	~~52.4~~	~~55.8~~ 59.0	~~59.3~~	~~2516~~	37 ~~52.30~~	− .79	+1.89
	36 47.4	53 43.6		4.1							37 15.40	38	
				6.8							+28.47		+4.89
				4.2					+ 28.85		+ .41	38 21.16	+1.89
			9.3	38 20.2	37 39.3	42.5	46.2	49.9	53.4	2313	37 46.26	− .80	
			8.8	23.6							+29.31	38 20.35	
				28.2					+ 29.69		+ .48		+4.89
				28.7							− 3	38 16.95	+1.89
				37 4.5	44.3	47.9	51.3	55.0	58.6	2370	37 51.40	− .77	
				8.8							+29.31	38 15.18	
				11.6					+ 29.69		+ .48		+4.89
				8.3							− 3	38 21.09	+1.89
	39 15	53.29	8.8	38 45.0	38 51.0	54.4	57.8	1.21	4.8	2892	38 57.84	− .78	
	37 52.0	53 28.0	9.0	48.0							+28.47	38 20.31	
				57.6							+ .40		
				45.2					+ 28.84		− 3	39 26.68	+4.87
												− .80	
												39 25.88	+1.99
			8.7	39 11.2	38 49.7	53.5	57.0	0.3	4.0	2847	38 57.84		
				14.1							+29.31		
				17.3							+ .47		
				14.2					+ 29.68		− 3		
											− 7		+4.87
											39 26.62		+1.99
											− .78		
											39 25.84		
	48 22	54.00	8.9	39 48.8	40 −	0.0	3.7	7.1	10.7	1728	40 3.60		
	39 0.3	53 58.8	8.8	51.9							+28.47		
				54.8							+ .41		
				57.8					+ 28.85		− 3		
											40 32.48		+4.90
											− .82		+1.69
											40 31.66		
			8.7	40 24.4	39 55.7	59.1	2.5	6.3	9.9	3135	40 2.70		
				28.3							+29.30		
				31.9							+ .48		
				28.2							− 3		
									+ 29.68		− 7		+4.90
											40 ~~56.68~~ 32.38		+1.69
											− .80		
											40 31.58		

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs Feb. 11 Feb. 12

R_{eq} = -j 31"45 31"05

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	+27.2	3 56.0	43.9	58	4995	53 23 58.40			55	53 16 5.67	
58	1.43457					16 26.95				− .19	+12.38
d	9.77677					−*21.28				+ .23	
	1.32792							16 48.23		+11.78	
((δ) − D) d'/100										+ .56	
										− 16.20	
δ1		35 21.50		16 4.0						16 1.85	
	+36.1	3 48.2	37.5	58	4285	53 24 5.50			55	6.20	
	1.55751					16 34.45				− .34	+12.34
d	9.77677					−*28.25				+ .22	
	1.45106							17 2.70		+11.90	
((δ) − D) d'/100										+ .56	
										− 16.30	
δ2		35 21.38		16 4.4						16 2.24	
	+14.2	0 8.9	56.0	30	245	53 52 45.90			30	53 45 3.47	
	1.15229					45 14.45				− .05	+12.84
d	9.97181					−*10.98				+ .00	
	1.04078							45 25.43		+12.31	
((δ) − D) d'/100										+ .58	
										− 16.40	
δ1										44 59.91	
	+10.1	0 48.1	36.9	30	42.50	53 52 5.85			30	44 26.99	
	1.00432					44 34.80				− .03	+13.01
d	9.97181					−*7.81				+ .04	
	0.89291							44 42.61		+12.42	
((δ) − D) d'/100										+ .58	
										− 16.50	
δ2		36 15.48		44 25.6						44 23.50	
	~~+34.8~~	0 24.8	12.7	30	18.75	53 52 29.60			30	53 45 23.84	44 20.93
	−33.2	0 24.8	12.7	30	18.75	53 52 29.60			30	− .28	+12.63 − .60 +12.29
d	1.52114					44 58.15		44 32.46		+ 2	+ .02
	9.77181					44 58.15				+ 12.31	+ 12.29
((δ) − D) d'/100	1.40973					+25.69				+ .58	+ .58
	+48.1					−*37.22		45 35.37		− 16.20	− 16.20
δ1	1.68215	38 20.29		45 22.2						45 20.27	44 17.02
	9.77181	1.57074 25.24		44 18.9							
	− 37.4	0 27.2	17.8	30	23.58	53 52 24.85			30	45 22.74	44 20.45
	1.57287	0 29.2	17.8	30	23.58	53 52 24.85			30	− .36	+12.68 − .48 +12.54
d	9.77181					44 53.80		44 ~~24.86~~		+ 2	+ 2
	1.46146					44 53.80				+ 12.44	+ 12.42
((δ) − D) d'/100	+43.1					+28.94				+ .58	+ .58
	1.63448					−*33.35		45 27.15		− 16.30	− 16.30
δ2	9.77181	38 20.07		45 24.0						45 19.12	44 16.69
	1.52307	25.20		44 18.6							
	+9.6	2 7.3	65.1	47	1.20	53 35 47.15			45	53 28 8.22	
50	0.98227					28 15.70				− 3	+12.66
d	9.77473					−*7.48				+ 12	
	0.87378							28 ~~23.18~~		+ 1200	
((δ) − D) d'/100										+ .57	
										− 16.10	
δ1		39 30.75		28 6.6						28 4.78	
	−17.3	2 28.6	17.6	47	23.10	53 35 25.25			45	7.67	
	1.23805					27 54.20				− 8	+12.75
d	9.77473					+13.47				+ 14	
	1.12956							27 ~~40.73~~		+ 12.12	
((δ) − D) d'/100										+ .57	
										− 16.20	
δ2		39 30.71		28 6.0						28 4.22	
	+11.8	0 ~~49.8~~	37.7	15	4375	54 7 4.60			15	53 59 24.07	
93	1.07188					53 59 32.15				− 3	+13.18
d	9.76939					−*9.08				+ 4	
	0.95805							~~59~~ 42.23		+ 12.57	
((δ) − D) d'/100										+ .60	
										− 16.20	
δ1		40 36.56		59 22.7						59 21.05	
	−25.5	1 19.3	8.9	16	14.10	54 6 34.25			15	22.82	
	1.40654					53 59 3.20				− 10	+13.21
d	9.76939					+*19.62				+ 7	
	1.29271							58 ~~43.58~~		+ 12.70	
((δ) − D) d'/100										+ .60	
										− 16.30	
δ2		40 36.48		59 21.4						59 19.73	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

277

Date$_1$ = Feb. 11, 1874 Observer W.A.R. Recorder J.E.M.

278

Date$_2$ = Feb. 12, 1874 Observer Recorder

8

Star.	α	δ	Mag.	T_δ	T_m	T_a	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
41	41	32 53.47	8.7	40 48.6	41 7.4	10.8	14.4	17.8	21.4	718	41 14.36		
40	10.2	53 46.1	9.0	57.6							+28.47		
K				54.7							+ .41		
				57.6					+ 28.85		− .3		
((δ) − D) $\frac{\kappa'}{100}$											41 43.21		
a_1											− .83		+4.89
											41 42.38		+1.59
			8.6	40 57.4	41 6.4	10.0	13.6	16.9	20.7	676	41 13.52		
	42	34		58.6							+29.30		
K				49							+ .48		
				61.1							− .3		
((δ) − D) $\frac{\kappa'}{100}$									+ 29.67		− .7		+4.89
a_2											41 43.20		+1.59
											− .81		
											41 42.39		
44	05	53.58	9.2	43 15.9	43 40.9	44.6	48.1	51.7	55.1	2404	43 48.08		
42	43.1	53 56.9	9.0	22.4							+28.47		
K				25.8							+ .41		
				22.4					+ 28.85		− .3		
((δ) − D) $\frac{\kappa'}{100}$											44 16.93		+4.90
a_1											− .86		+1.37
											44 16.07		
			8.9	43 42.6	43 45.1	43.7	47.2	50.7	54.2	2359	43 47.18		
K				46.0							+29.30		
				44.5							+ .48		
((δ) − D) $\frac{\kappa'}{100}$									+ 29.68		− .3		
a_2											− .7		+4.90
											44 16.86		
											− .84		+1.37
											44 16.02		
45	13	53.26	8.0	44 40.9	44 48.4	52.0	56.3	58.8	2.2	2767	44 55.54		
43	50.7	53 25.5	8.0	43.9							+28.47		
K				47.4							+ .40		
				44.1					+ 28.84		− .3		
((δ) − D) $\frac{\kappa'}{100}$											45 24.18		+4.87
a_1											− .86		+1.27
											45 23.32		
			7.7	44 38.4	44 47.5	51.9	54.3	57.8	1.2	2718	44 54.36		
K				41.4							+29.30		
				48.8							+ .47		
((δ) − D) $\frac{\kappa'}{100}$				44.4					+ 29.67		− .3		
a_2											− .7		+4.87
											45 24.03		+1.27
											− .84		
											45 23.19		
46	12	53.19	8.6	46 8.2	45 45.4	49.0	52.5	56.0	59.5	2624	45 52.48		
44	49.9	53 18.6	8.5	11.8							+28.47		
K				14.0							+ .40		
				11.3					+ 28.84		− .3		
((δ) − D) $\frac{\kappa'}{100}$											46 21.32		+4.86
a_1											− .87		+1.18
											46 20.45		
			8.3	45 36.2	45 44.8	48.4	51.7	54.7	58.4	2582	45 51.64		
K				39.2							+29.30		
				42.7							+ .47		
((δ) − D) $\frac{\kappa'}{100}$				24.4					+ 29.67		− .3		
a_2											− .7		+4.86
											46 21.31		+1.18
											− .85		
											46 20.46		
49	07	53.32	8.8	48 23.3	48 42.4	45.8	49.4	52.8	56.5	2467	48 49.38		
47	45.2	53 31.8	8.7	26.6							+28.47		
K				30.2							+ .40		
				26.7					+ 28.84		− .3		
((δ) − D) $\frac{\kappa'}{100}$											49 18.22		+4.88
a_1											− .91		+0.92
											49 17.31		
			9.0	48 3.1	48 41.6	45.9	48.7	52.1	55.6	2430	48 48.60		
K				8.4							+29.30		
				11.1							+ .47		
((δ) − D) $\frac{\kappa'}{100}$				5.3					+ 29.67		− .3		
a_2											− .7	49 18.27	+4.88
											~~49 18.21~~ − .8		+0.92
											49 17.39		

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eq} = −7 31.45 31.05 — Feb. 11, Feb. 12.

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	δ	3 27.9	19.0	28	24.45	53 54 23.90			25	53 46 34.82	
84	+22.8					46 52.45				− .14	+12.98
d	1.35793					+ 17.68				+ .20	
	9.77147						47 10.08			+ 12.34	
$((\delta) - D)\frac{d'}{100}$	1.24618									+ .58	
										− 16.10	
δ_1		41 47.27		46 33.3						46 31.70	
	+12.4	3 38.7	27.0	28	32.85	53 54 15.50			25	34.86	
	1.09342					46 44.45				− .4	+13.22
d	9.77147					+ 9.59				+ .21	
	0.98167						46 54.04			+ 12.47	
$((\delta) - D)\frac{d'}{100}$										+ .58	
										− 16.20	
δ_2		41 47.28		46 33.5						46 31.88	
90	+25.7	2 37.8	26.0	17	31.90	54 5 16.45			15	53 57 25.44	
	1.40943					53 57 45.00				− .18	+13.10
d	9.76957					+ 19.56				+ .15	
	1.29128						58 4.56			+ 12.53	
$((\delta) - D)\frac{d'}{100}$										+ .60	
										− 16.10	
δ_1		44 20.94		57 23.8x						57 22.44	
	+ 2.7	2 38.9	44.0	17	49.95	54 4 58.40			15	25.27	
	0.43136					53 57 27.35				− .00	+13.43
d	9.76974					+ 2.08				+ .17	
	0.31788						57 29.43			+ 12.66	
$((\delta) - D)\frac{d'}{100}$										+ .60	
										− 16.20	
δ_2		44 20.92		57 23.8						57 22.50	
98	+11.2	4 17.8	8.1	49	13.95	53 33 34.40			45	53 25 54.22	
d	1.04922					26 2.95				− .03	+12.75
	9.77507					+ 8.73				+ .25	
$((\delta) - D)\frac{d'}{100}$	0.94107						26 11.68			+ 11.96	
										+ .57	
										− 15.90	
δ_1		45 28.19		25 52.3						25 51.07	
	+12.5	4 19.2	7.8	49	13.50	53 33 34.85			45	54.06	
d	1.09691					26 3.80				− .4	+12.87
	9.77507					+ 9.74				+ .25	
$((\delta) - D)\frac{d'}{100}$	0.98876						26 13.54			+ 12.09	
										+ .57	
										− 16.00	
δ_2		45 28.06		25 52.2						25 50.93	
84	~~+41.2~~ −18	1 5.98	47.2	56	53.50	53 25 54.85			55	53 18 38.00	
d	1.27416					18 23.40				− .8	+12.41
	9.77643					+ 14.60				+ .11	
$((\delta) - D)\frac{d'}{100}$	1.16737						18 8.80			+ 11.82	
										+ .56	
										− 15.80	
δ_1		46 25.31		18 35.8						18 34.61	
	+12.2	1 36.1	24.3	56	30.20	53 26 18.15			55	37.56 ~~40.47~~	
d	1.08636					18 47.10				− .4	+12.57
	9.77626					+ ~~7.65~~ 9.54				+ .9	
$((\delta) - D)\frac{d'}{100}$	0.~~88~~240 979						18 54.73			+ 11.96	
										+ .56	
										− 16.00	
δ_2		46 25.32		18 36.3						18 ~~43.04~~ 35.13	
	+22.7	2 47.1	35.1	42	42.10	53 40 6.25			40	58 32 17.25	
d	1.35603					32 34.80				− .14	+12.66
	9.77387					+ 17.65				+ .16	
$((\delta) - D)\frac{d'}{100}$	1.24608						32 52.45			+ 12.07	
										+ .57	
										− 15.80	
δ_1		49 22.19		32 15.0						32 14.11	
	+40.3	2 35.4	24.3	42	29.85	53 40 18.50			40	16.12	
d	1.60531					32 47.45				− .42	+12.51
	9.77387					+ 31.33				+ .15	
$((\delta) - D)\frac{d'}{100}$	1.49596						33 18.78			+ 12.21	
										+ .57	
										− 15.90	
δ_2		49 22.27		32 13.6						32 12.73	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

277

Date$_1$ = Feb. 11, 1874 Observer W.A.R Recorder J.F.M

278

Date$_2$ = Feb. 12, 1874 Observer Recorder

10

Star.	α	δ	Mag.	T_δ	T_m	T_a	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
2	50 m 01 s	52.21	9.0	49 m 15.4 s	49 39.4	40.1	44.1	47.5	58.8	2205	49 44.10		
	48 39.2	52 21.0	8.8	17.9							+28.47		
	κ			21.6							+ .89		
				18.3				+ 28.84			− 2,		
	((δ) − D) $\frac{\kappa'}{100}$										−		
											50 12.94		+4.80
	a_1										− .88		+0.85
											50 12.06		
			9.3	49 26.2	49 36.4	39.9	43.0	46.6	57.2	2161	49 43.22		
				29.4							+29.30		
	κ			32.4							+ .45		
				27.4				+ 29.67			− 2		
	((δ) − D) $\frac{\kappa'}{100}$										− 6		
											50 12.89		+4.80
	a_2										− .86		+0.85
											50 12.03		
	51 36	52.49	9.4	38 42.4	51 11.5	15.0	18.5	21.8	25.0	918	51 18.36		
	50 14.3	52 48.4	9.4	45.2							+28.47		
	κ			47.8							+ 89		
				45.1				+ 28.84			− 2		
	((δ) − D) $\frac{\kappa'}{100}$										51 47.20		+4.83
											− .91		+0.71
	a_1										51 46.29		
			9.5	50 43.3	51 10.8	14.4	17.6	21.0	24.4	872	51 17.64		
				45.4							+29.30		
	κ			49.2							+ 46		
				46.1				+ 29.68			− 2		
	((δ) − D) $\frac{\kappa'}{100}$										− 6		+4.83
											51 47.32		+0.71
	a_2										− .89		
											51 46.43		
	52 44	53.31	7.6	51 58.0	52 19.3	22.8	26.1	29.8	33.3	1316	52 26.32		
	51 21.8	53 31.2	7.0	0.4							+28.47		
	κ			3.2							+ .40		
				60.5				+ 28.84			− 3		
	((δ) − D) $\frac{\kappa'}{100}$												
											52 55.09		+4.88
	a_1										− .94		+0.61
											52 54.15 22		
			7.6	51 57.8	52 18.6	22.0	26.5	28.9	32.5	1285	52 25.50		
				53.1							+29.30		
	κ			56.6							+ 47		
				52.7				+ 29.67			− 3		
	((δ) − D) $\frac{\kappa'}{100}$										− 7		+4.88
											52 55.17		+0.61
	a_2										− .92		
											52 54.25		
	53 55	53.33	8.8	52 57.8	53 19.8	23.3	26.8	30.3	43.7	1839	53 36.78		
	52 33.4	53 32.8	8.5	0.2							+28.47		
	κ			8.7							+ .40		
				60.7				+ 28.84			− 3		
	((δ) − D) $\frac{\kappa'}{100}$												
											54 6.625		+4.88
	a_1										− .95		+0.51
											54 4.677		
			8.8	52 57.4	53 29.0	32.1	35.8	39.3	42.7	1772	53 35.84		
		57 56		1.5							+29.29		
	κ			5.0							+ .47		
				61.3				+ 29.67			− 3		
	((δ) − D) $\frac{\kappa'}{100}$										− 7		+4.88
											54 5.50		+0.51
	a_2										− .93		
											54 4.57		
	59 07	52.47	8.9	59 3[illegible]	59 25.5	29.2	32.6	36.0	39.3	1626	59 32.52		
	~~57 45.3~~	~~52 46.5~~	8.4	38.4							+28.47		
	~~58~~ 27.9	49.9		37.8							+ 39		
	κ							+ 28.84			− 2		
	((δ) − D) $\frac{\kappa'}{100}$										00 1.36		
											− .89		+4.83
	a_1										0 0.47		+0.06
			8.9	58 46.7	59 24.6	28.3	31.7	35.0	38.5	1581	59 31.62		
		6 0 30		50.3							+29.29		
	κ			52.9							+ 46		
				50.0				+ 29.67			− 2		
	((δ) − D) $\frac{\kappa'}{100}$										− 6		+4.83
											0 1.29		+0.06
	a_2										− .87		
											0 0.42		

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs Feb. 11 Feb. 12
R_{eq} = −7 31.45 31.05

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	s	3′ 30.9″	18.5″	53′	24.70″	52 29 23.65			50′	52 21 31.59	
	+25.8					21 52 20				− 18	+11,30
d	1.41162					−*20.61	2	+2.81		+ 20	
((δ) − D) $\frac{d'}{100}$	9.78576									+ 10.77	
	1.31416m									+ 57	
δ_1		50 16.86		21 28.2						−15.50	
										21 27.39	
	+13.8	3 39.9	29.3	53	34.60	52 29 13.75			50	31.67	
	1.13988					21 42.70				− 5	+11,55
d	9.78576					*11.05				+ 21	
((δ) − D) $\frac{d'}{100}$	1.04242m						21	53.73		+ 10.88	
										+ .51	
δ_2		50 16.83		21 28.5						−15.60	
										21 27.62	
	+33.3	1 18.8	6.8	26	12.80	52 56 35.55			25	52 48 37.77	
92	1.52244					49 4.10				− .28	+11,60
d	9.78130					*26.33				+ 7	
((δ) − D) $\frac{d'}{100}$	1.42052m						49	30.43		+ 11.27	
										+ .54	
δ_1		51 51.12		48 34.5						−15.60	
										48 33.77	
	+31.3	1 21.6	9.2	26	15.35	52 56 33.00			25	37.04	
	1.49831					49 1.95				− .25	+11.76	
d	9.78130					*24.91				+ 7	
((δ) − D) $\frac{d'}{100}$	1.39639m						49	26.86		+ 11.40	
										+ .54	
δ_2		51 21.26		48 33.9						−15.60	
										48 33.20	
	+25.8	2 52.5	39.8	42	46.15	53 40 2.20			40	53 32 10.69	
82	1.41162					32 30.75				− .18	+12.63	
d	9.77387					*20.06				+ 17	
((δ) − D) $\frac{d'}{100}$	1.30227m						32	50.81		+ 12.07	
										+ .57	
δ_1		52 59.10		32 8.2						−15.70	
										32 7.62	
	+31.8	2 47.2	36.4	42	41.80	53 40 6.55			40	10.78	
	1.50243					32 35.50				− .27	+12.67	
d	9.77387					*24.72				+ .76	
((δ) − D) $\frac{d'}{100}$	1.39308m						33	0.22		+ 12.21	
										+ .57	
δ_2		52 59.13		32 8.3						−15.80	
										32 7.65	
	+36.1	0 59.4	47.7	40	53.55	53 41 54.80			40	53 33 55.30	
54	1.55751					34 23.35				− .34	+12.39	
d	9.77370					*28.05				+ 5	
((δ) − D) $\frac{d'}{100}$	1.44799m						34	51.40		+ 12.11	
										+ .57	
δ_1		54 9.55		33 52.8						−15.76	
										33 51.99	
	+34.5	0 1.3	49.2	40	55.25	53 41 53.10			40	55.24	
	1.53782					34 22.05				− .30	+12.56	
d	9.77370					*26.81				+ 5	
((δ) − D) $\frac{d'}{100}$	1.42830m						34	48.86		+ 12.24	
										+ .57	
δ_2		54 9.45		33 52.8						−15.80	
										33 52.00	
	.7	4 34.0	22.4	24	28.20	52 28 20.15			50	52 30 52.94	
90	−5.3					20 48.70			(20)	− .01	+12.13	
d	0.72428m					+ 4.24				+ 11.33	
((δ) − D) $\frac{d'}{100}$	9.78592						20	44.46		+ 12.43	
	0.62698m									+ .54	
δ_1		0 5.30		50 49.5						−15.60	
										50 49.27	
	+41.6	3 56.7	45.5	23	51.10	52 58 57.25			20	50 53.33	
	1.61909					51 26.20				− .47	+12.76	
d	9.78097					*32.87				+ 23	
((δ) − D) $\frac{d'}{100}$	1.51684m						37	59.07		+ 12.49	
										+ .54	
δ_2		0 5.25		50 50.4						−15.70	
										50 50.39	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.31587R

277

Date$_1$ = Feb. 11, 1874 Observer W. A. R. Recorder J. Fell.

275

Date$_2$ = Feb. 12, 1874 Observer Recorder

12

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	h	m s		
K	01 25	53 50		1 18.3	1 2.6	6.1	9.5	13.0	16.4	1 47.6	1 9.52		
	00 3.3	53 50.2	8.2	21.4							+28.47		
				24.4							+ .41		
((δ) — D) $\frac{\kappa'}{100}$				21.1					+ 28.85		— 3		
											1 38.47		+4.90
a_1											— 1.04		−0.15
											1 37.33		
			8.6	0 55.5	1 1.7	5.3	8.8	12.1	15.7	1 43.6	1 8.72		
K				59.7							+29.29		
				57.6							+ .48		
((δ) — D) $\frac{\kappa'}{100}$									+ 29.67		— 3		
											— 7		
a_2											1 38.39		+4.90
											— 1.02		−0.15
											1 37.37		
K													
((δ) — D) $\frac{\kappa'}{100}$													
a_1													
K													
((δ) — D) $\frac{\kappa'}{100}$													
a_2													

Single Observations.

5	42 34	53.5	9.8	42 29.5	42 53.7	57.0	6.1	4.0	7.4	5 42 30.25	43 0.50		
	41 12.0	53 52.8	9.2	32.5							+29.30		
Feb. 13 K				34.7							+ .48		
((δ) — D) $\frac{\kappa'}{100}$				33.3					+ 29.68		— 3		
											— 7		
a_2											43 30.18		
											— .94		
											43 29.24		
5	57 56	53.08	8.5	57 52.6	57 30.6	34.0	37.0	40.6	44.0	5 57 18.62	57 37.24		
	56 33.8	53 8.5	8.0	52.0							+29.29		
Feb. 12 K				55.5							+ .46		
((δ) — D) $\frac{\kappa'}{100}$				53.0					+ 29.65		— 3		
											— 7		
a_1											58 6.89		+4.86
											— .94		+0.16
											58 5.92		
6	00 30	53.31	9.0	0 4.5	0 5.6	9.2	12.7	16.1	19.7	6 0 63.3	0 42.66		
5	59 8.6	53 30.6	9.0								+29.29		
Feb. 12 K											+ .47		
((δ) — D) $\frac{\kappa'}{100}$									+ 29.66		— 3		
											— 7		
a_2											0 42.32		+4.88
											— 1.00		−0.05
											0 41.32		
K													
((δ) — D) $\frac{\kappa'}{100}$													
a_1													
K													
((δ) — D) $\frac{\kappa'}{100}$													
a_2													
K													
((δ) — D) $\frac{\kappa'}{100}$													
a_1													
K													
((δ) — D) $\frac{\kappa'}{100}$													
a_2													

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs

Feb. 11. Feb. 12
δ_{eq} = −7° 31′.45 31′.05

13

	$T_m - T$	A	C 4.8	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	−11.8	4 16.0	~~11.8~~ ~~5.48~~	24	12.40	53 58 42.95 −5.00			20	53 51 ~~26.45~~ 15	
	1.06446n					51 11.50				− 3	+13.24
80 d	9.77078					~~1~~ 8.95				+ 24	
((δ) − D) $\frac{d'}{100}$	a 0.52021						50 35.85			+ 12.43	
										+ 60	
										− 15.50	
δ_1		1 42.23		51 13.0						51 ~~13.19~~ 13	
	+11.1	3 58.1	46.7	33	52.40	53 58 55.95			20	16.33	
	1.04532					51 24.90				− 3	+13.36
d	9.77078					~~1~~ 8.57				+ 23	
((δ) − D) $\frac{d'}{100}$	0.93288n						51 ~~33.47~~			+ 12.56	
										+ 60	
										− 15.60	
δ_2		1 42.27		51 13.9						51 ~~14.09~~	
d											
((δ) − D) $\frac{d'}{100}$											
δ_1											
	+27.2	2 19.1	8.3	17	13.70	54 5 34.65			15	53 57 42.66	
	1.43457					~~53~~ 58 3.60				− .19	+13.22
d	9.76957					~~1~~ 20.94				+ 13	
((δ) − D) $\frac{d'}{100}$	1.32092n						~~58~~ ~~24.54~~			+ 12.68	
										+ 60	
										− 15.20	
δ_2										57 40.68	
	−15.8	1 26.3	14.9	6	20.60	53 16 27.75			5	53 9 9.10	
	1.89866n					8 56.70				− 7	+12.35
d	9.77795					+ 12.40				+ 8	
((δ) − D) $\frac{d'}{100}$	1.69339n						8 ~~44.30~~			+ 11.78	
										+ .56	
										− 15.60	
δ_1		58 10.78 4		9 6.0						9 5.85	
						8 49.50					
	+8.2	2 4.7	~~33.0~~ 53.0	~~43~~ 42 3	~~48.85~~ 38.85	53 38 ~~59.50~~			40	53 31 ~~32.07~~	
	0.91381					31 ~~28.45~~				− 2	+12.91
d	9.77422					~~1~~ 6.38				+ 17	
((δ) − D) $\frac{d'}{100}$	0.80481n						31 ~~34.83~~			+ 12.19	
										+ .57	
										− 15.50	
δ_2		0 46.20		31 9.4						31 ~~19.48~~ 9.48	
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											

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

279

Date$_1$ = Feb. 14, 1874 — Observer — Recorder J.J.M.

n = +.25

280

Date$_2$ = Feb 17. 1874 — Observer — Recorder

n = +.29

14

Star.	α	C = −10	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
58	45	57	53.33	8.0	45 28.9	48 38.0	31.5	34.9	38.5	43.0	17[illegible]	5 45	24.98	The correction that is applied to 45.14 −17 is for C see S which was omitted.
	44	35.3	53 32.0	8.2	28.4								+31.14	
					26.4								+.34	
					23.5						+31.45	−17	−.3	
												46	6.43	
													−.81	
												46	5.62 −17 = 5.45	
				8.0	45 38.8	45 25.5	29.2	32.6	36.2	39.6	1631	45	32.62	Add +.006 to (27+m) for Feb 17. 45 has been added to sum of constants and to final R.A.
					41.4							+.006	+33.15	
					44.6								+.39	
					41.6						+33.48	+.01	−.3	
												46	6.13	
													−.74	
												46	5.39	
	47	06	53.58	9.2	46 33.4	46 40.3	43.9	47.2	50.7	54.4	2363	46	47.30	
	45	44.0	53 38.1	9.0	34.5								+31.14	
					36.2								+.34	
					34.7						+31.45	−.17	−.3	
												47	18.75	
													−.83	
												47	17.92 −17 = 17.75	
				8.9	46 26.8	46 38.1	41.6	45.0	48.6	52.0	2253	46	45.06	
					28.9								+33.15	
					31.3								+.40	
					28.9						+33.49		−.3	
												47	18.58	
													−.76	
												47	17.79	
	49	22	53.17	9.1	48 27.0	48 53.0	58.5	1.8	5.3	8.8	3094	49	1.88	
	47	59.6	53 17.0	9.4	25.5								+31.14	
					23.9								+.33	
					27.8						+31.44	−.17	−.3	
												49	33.32	
													−.84	
												49	32.48 −17 = 32.31	
				9.2	48 25.0	48 52.7	56.2	59.7	3.0	6.6	2982	48	59.64	
					24.9								+33.15	
					30.1								+.39	
					27.7						+33.48	+.01	−.3	
												49	33.15	
													−.77	
												49	32.38	
	50	37	54.33	8.6	49 37.4	50 14.4	18.0	21.6	25.1	29.0	1081	50	21.62	
	49	15.4	54 33.0	9.0	40.9								+31.14	
					43.4								+.35	
					40.6						+31.46	−.17	−.3	
												50	53.08	
													−.88	
												50	52.20 −17 = 52.03	
				8.7	49 49.8	50 12.1	15.1	19.4	23.0	26.6	968	50	19.36	
					53.2								+33.15	
					55.9								+.41	
					53.0						+33.50		−.3	
												50	52.89	
													−.81	
												50	52.08	
	51	11	54.32	8.7	50 50.4	50 45.1	48.6	52.0	55.6	59.0	2603	50	52.06	
	49	48.8	54 32.4	9.0									+31.14	
													+.35	
											+31.46	−.17	−.3	
												51	23.52	
													−.88	
												51	22.64 −17 = 22.47	
				8.9	50 36.9	50 42.8	46.1	49.6	53.3	57.0	2488	50	47.76	
					40.6								+33.15	
					44.4								+.41	
					40.6						+33.50	+.01	−.3	
												51	23.29	
													−.82	
												51	22.47	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs θ_{eq} = Feb. 14 $-7'31''.15$ + .06 ; Feb. 17 $31''.45$ + .07

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
22	+11.5	3 29.6	26.1	43	24.85	53 39 20.50			40	53 31 40.41	
d	1.06070					31 49.35				− 3	+12.63
((δ) − D) d′/100	9.77405					− * 8.94				+ 21	
+4.88	0.95153	33					31 58.29			+ 11.88	
δ1 +1.20		46 10.53		31 38.0						+ .57	
										−16.20	
										31 36.84	
	−9.0	3 47.0	41.4	43	44.20	53 39 4.15			40	39.70	
d	0.95424					31 32.70				− 2	+12.90
((δ) − D) d′/100	9.77405					+ 7.06				+ .26	
+4.88	0.84507	5					31 25.70			+12.09	
δ2 +1.20		46 10.23		31 37.3						+ .57	
										−16.50	
										31 36.10	
20	+12.6	1 7.8	3.0	16	5.40	54 6 42.95			15	53 59 2.11	
d	1.10037					53 59 11.80				− 4	+13.01
((δ) − D) d′/100	9.76939					* 9.69				+ 7	
+4.91	0.98654	2266					59 21.49			+ 12.38	
δ1 +1.11		47 ~~24.53~~		58 59.9						+ .60	
										−16.30	
										58 58.82	
18	+16.2	1 5.4	5.2	16	2.20	54 6 46.05			15	2.14	
d	1.20952					53 59 14.60				− 7	+13.19
((δ) − D) d′/100	9.76939					* 12.46				+ 7	
+4.91	1.09569	22.					59 27.06			+ 12.57	
δ2 +1.11		47 ~~24.70~~		58 59.8						+ .60	
										−16.60	
										58 58.73	
24	+32.1	2 30.1	27.4	57	28.75	53 25 19.60			55	53 17 23.35	
d	1.50651					17 48.45				− .27	+12.06
((δ) − D) d′/100	9.77643					* 25.10				+ 15	
+4.86	1.39972						18 13.55			+ 11.62	
δ1 +0.91		49 37.17		17 20.2						+ .56	
										−16.10	
										17 19.31	
	+31.9	2 32.7	27.7	57	30.20	53 25 18.15			55	21.75	
d	1.50379					17 46.70				− .27	+12.29
((δ) − D) d′/100	9.77643					* 24.95				+ 18	
+4.86	1.39700						18 11.65			+11.82	
δ2 +0.91		49 37.22		17 18.6						+ .56	
		2								−16.40	
										17 17.64	
26	+41.0	X 4.7	1.2	4X	2.95	54 4X 45.40			40	54 ~~33~~ 43.15	Summ.
d	1.61278					~~33~~ 14.25				− 2 .44	+13.29
((δ) − D) d′/100	9.76324					* 31.10				+ 6	
+4.95	1.49280						34 ~~45.35~~			+ 13.02	
δ1 +0.80		50 56.98		32 41.0						+ .65	
										−16.30	
										32 40.14	
	+26.4	2 19.0	12.0	42	15.50	54 40 32.85			40	32 41.36	2 min
d	1.42160					33 1.40				− .18	+13.84
((δ) − D) d′/100	9.76342					* 20.04				+ .15	
+4.95	1.30180						33 21.44			+ 13.22	
δ2 +0.80		50 57.00		32 39.3						+ .65	
										−16.70	
										32 38.50	
30	+1.7	2 15.8	11.9	42	13.85	54 40 34.50			40	54 33 20.6	
d	0.23045					33 3.35				− .00	+13.78
((δ) − D) d′/100	9.76342					* 1.29				+ 13	
+4.95	0.11065						33 4.64			+ 13.00	
δ1 +0.74		51 27.42		33 0.3						+ .65	
										−16.30	
										32 59.54	
	+9.2	2 12.5	5.0	42	8.75	54 40 39.60			40	33 1.17	
d	0.96379					33 5.15				− 2	+14.01
((δ) − D) d′/100	9.76342					* 6.98				+ .15	
+4.95	0.84399						33 ~~18.13~~			+ 13.23	
δ2 +0.74		51 27.40		32 59.2						+ .65	
										−16.70	
										32 58.48	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

279

Date$_1$ = Feb. 14, 1874 Observer W. A. R. Recorder J. H. M.

280

Date$_2$ = Feb. 17, 1874 Observer Recorder

16

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
52	44	53 31	6.5	51 45.4	52 16.8	20.4	23.7	27.3	30.8	1197	52.2	2380	
51	21.8	53 31.2	7.0	48.9								+31.14	
κ				51.4								+ 34	
((δ) — D) $\frac{\kappa'}{100}$				48.8						+ 31.45	-17	− 3	
α_1											52	55.25	
												− 87	
											52	54.38 -17 = 54.21	
			7.0	51 48.2	52 14.5	18.0	21.5	25.0	28.4	1074	52	2148	
				47.6								+33.18 4	
κ				50.3								+ 39	
((δ) — D) $\frac{\kappa'}{100}$				47.7						+ 33.50		− 3	
α_2											52	65.00	
												−81	
											52	54.17	
54 19		53.50	9.0	53 31.2	53 53.0	56.6	0.2	3.6	7.1	300.5	54	010	
52 57.1		53 49.7	9.0	34.5								+31.14	
κ				28.4								+ .34	
((δ) — D) $\frac{\kappa'}{100}$				24.7						+ 31.45	-17	− 3	
α_1											54	31.55	
												− 89	
											54	30.66 -17 = 30.49	
			9.2	53 21.9	53 50.9	54.3	57.9	1.4	5.0	279.5	53	5790	
				20.8								+33.18 4	
κ				29.1								+ .40	
((δ) — D) $\frac{\kappa'}{100}$				25.3						+ 33.57	+01	− 3	
α_2											54	31.43	
												−84	
											54	30.59 8	
56 49		54.41	9.0	55 45.3	56 24.3	28.0	31.6	35.0	38.7	1576	56	31.52	
~~52 19.3~~		54 41.1	~~8.5~~	47.5								+31.14	
55 κ 27.2				51.3								+ .35	
((δ) — D) $\frac{\kappa'}{100}$				48.0						+ 31.46	-17	− 3	
α_1											57	2.98	
												−.95	
											54	2.03 -17 = 1.86	
			8.8	55 50.6	56 22.0	25.6	29.0	32.5	36.2	1453	56	29.06	
				52.9								+33.18 4	
κ				53.6								+ .41	
((δ) — D) $\frac{\kappa'}{100}$				57.0						+ 33.52		− 3	
α_2											57	2.60	
												−.88	
											57	1.70	
57 37		54.28	8.9	57 23	57 13.1	16.4	20.2	23.4	27.3	1010	57	2020	
56 14.7		54 28.2	8.8	5.0								+31.14	
κ				7.1								+ .35	
((δ) — D) $\frac{\kappa'}{100}$				5.1						+ 31.46	-17	− 3	
α_1											57	51.66	
												−.96	
											57	50.70 -17 = 50.53	
			8.8	56 55.7	57 10.7	14.3	17.8	21.2	25.0	890	57	1780	
				58.5								+33.18 4	
κ				1.7								+ .41	
((δ) — D) $\frac{\kappa'}{100}$				58.6						+ 33.52	+01	− 3	
α_2											57	51.34	
												−.89	
											57	50.48 4	
58 48		52.25	8.6	57 59.1	58 20.9	24.3	27.6	31.1	34.5	1384	58	2768	
57 26.8		52 25.3	8.5	1.4								+31.14	
κ				2.5								+ .32	
((δ) — D) $\frac{\kappa'}{100}$				61.3						+ 31.44	-16	− 2	
α_1											58	59.12	
												−.92	
											58	58.20 -16 = 58.04	
			8.7	58 0.6	58 18.4	22.0	25.3	28.9	32.0	1269	58	2538	
				3.6								+33.18 4	
κ				6.6								+ .38	
((δ) — D) $\frac{\kappa'}{100}$				2.6						+ 33.50		− 2	
α_2											58	58.90	
												−.84	
											58	58.04	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs

Feb 14 Feb 17
$R_{eq} = -7'31''.15$ 31.45

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	s	2′ 40″.9	36″.4	42″	38″.65	53 40 9.70			40″	53 32 11.34	
34	+35.0					32 38.55				− 32	+12.30
d	1.54407					−*27.21				+ 16	
	9.77387						33	5.76		+ 11.89	
((δ) − D) $\frac{d'}{100}$	1.43472$_n$									+ 57	
										− 16.00	
+4.88 δ_1		52 59.09		32 8.2						32 7.64	
+0.61											
	+33.8	2 44.1	37.3	42	40.70	53 40 7.65			40	996	
d	1.52829					32 36.20				− 30	+12.55
	9.77387					−*26.24				+ 19	
((δ) − D) $\frac{d'}{100}$	1.41894$_n$						33	2.44		+ 12.09	
										+ 57	
+4.88 δ_2		52 59.05		32 6.7						− 16.40	
+0.61										32 6.11	
20	+35.4	4 48.9	45.3	24	47.10	53 58 1.25			20	53 50 2.76	
d	1.54900					50 30.10				− 32	+12.48
	9.77095					−*27.34				+ 29	
((δ) − D) $\frac{d'}{100}$	1.43673$_n$						50	5.744		+ 12.22	
										+ 59	
+4.90 δ_1		54 35.39		49 59.9						− 16.10	
+0.47										49 59.44	
	+32.6	4 53.2	47.9	24	50.55	53 54 54.80			20	50 1.17	
d	1.51322					50 26.35				− 28	+13.08
	9.77095					−*25.18				+ 34	
((δ) − D) $\frac{d'}{100}$	1.40095$_n$						50	5.153		+ 12.43	
										+ 59	
+4.90 δ_2		54 35.48		49 58.3						− 16.40	
+0.47										49 57.85	
	+43.5	2 53.1	47.1	32	51.10	54 49 57.25			30	54 41 53.21	
46	1.63849					42 26.10				− 48	+13.54
d	9.76182					−*32.89				+ 17	
((δ) − D) $\frac{d'}{100}$	1.51709$_n$						42	5.899		+ 13.18	
										+ 67	
+4.96 δ_1		57 6.82		41 50.8						− 16.20	
+0.25										41 50.55	
	+36.1	3 0.2	53.3	32	56.75	54 49 51.60			30	52.85	
d	1.55751					42 20.15				− 33	+13.94
	9.76182					−*27.30				+ 21	
((δ) − D) $\frac{d'}{100}$	1.43611$_n$						42	4.745		+ 13.39	
										+ 67	
+4.96 δ_2		57 6.66		41 50.4						− 16.60	
+0.25										41 50.19	
	+15.1	0 29.0	25.9	45	27.45	54 37 20.90			45	54 29 38.28	
40	1.17898					29 49.75				− 6	+13.58
d	9.76395					−*11.47				+ 3	
((δ) − D) $\frac{d'}{100}$	1.05971$_n$						30	1.22		+ 12.96	
										+ 65	
+4.94 δ_1		57 55.47		29 35.9						− 16.10	
+0.18										29 35.76	
	+19.2	0 29.7	23.7	45	26.70	54 37 21.65			45	35.61	
d	1.28330					29 50.20				− 9	+13.96
	9.76395					−*14.59				+ 3	
((δ) − D) $\frac{d'}{100}$	1.16403$_n$						30	4.79		+ 13.17	
										+ 65	
+4.94 δ_2		57 55.38		29 33.05	×.40					− 16.50	
+0.18										29 32.87	
	+26.4	3 50.6	47.7	48	49.15	52 33 59.20			45	52 26 6.59	
30	1.42160					26 28.05				− .18	+11.26
d	9.78510					−*21.06				+ 23	
((δ) − D) $\frac{d'}{100}$	1.32348$_n$						26	4.911		+ 10.69	
										+ 52	
+4.81 δ_1		59 2.85		26 2.4	+1					− 15.50	
+0.08										26 2.35	
	+21.8	3 56.4	51.9	48	53.65	52 33 54.70			45	486	
d	1.33846					26 22.25				− .13	+11.53
	9.78510					−*17.39				+ 27	
((δ) − D) $\frac{d'}{100}$	1.24034$_n$						26	3.964		+ 10.87	
					6					+ 52	
+4.81 δ_2		59 2.85		26 0.8						− 15.90	
+0.08										26 0.49	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

279 | 280 | 18

Date$_1$ = Feb. 14, 1874 | Observer W.A.R. | Recorder J.F.M. | Date$_2$ = Feb. 17, 1874 | 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
58	5 9 49	52.50	9.0	59 1.3	59 22.0	26.7	30.0	33.2	36.7	1496	5 59	2992	-.04
	58 27.9	52 49.7	8.9	3.4								+ 31.14	
	κ			6.7								+ .33	
	((δ) — D) $\frac{\kappa'}{100}$			3.9						+ 31.45	-.16	2	
	α_1										0	1.37	
											0	- .94	
												0.43-16=0.23	
			9.0	58 59.6	59 20.8	24.2	27.7	31.0	34.5	1382	59	2764	
				3.2								+ 33.134	
	κ			6.7								+ .38	
	((δ) — D) $\frac{\kappa'}{100}$			63.2						+ 33.50	+.01	2	
	α_2										0	1.17	
											0	- .86	
												0.289	
6	00 39	54.51	8.9	59 54.0	0 14.0	17.7	21.4	24.9	28.5	1065	6 0	2130	
5	59 17.2	54 51.2	9.0	56.7								+ 31.14	
	κ			57.7								+ .36	
	((δ) — D) $\frac{\kappa'}{100}$			56.7						+ 31.47	-.17	- 3	
	α_1										0	52.77	
											0	-1.00	
												51.77-17=51.60	
			8.6	59 57.0	0 12.0	16.4	19.0	22.5	26.0	949	0	1898	
				59.4								+ 33.134	
	κ			1.9								+ .41	
	((δ) — D) $\frac{\kappa'}{100}$			59.5						+ 33.52		- 3	
	α_2										0	52.53	
											0	- .93	
												51.57	
	01 45	54.46	8.3	0 58.8	1 20.1	23.8	27.3	31.0	34.5	1367	1	2734	
	00 22.8	54 45.6	8.5	1.9								+ 31.14	
	κ			5.5								+ .35	
	((δ) — D) $\frac{\kappa'}{100}$			62.1						+ 31.46	-.17	- 3	
	α_1										1	58.80	
											1	-1.01	
												57.79-17=57.62	
			8.6	1 0.3	1 17.9	21.5	25.0	28.6	32.1	1251	1	2502	
				2.8								+ 33.134	
	κ			5.6								+ .41	
	((δ) — D) $\frac{\kappa'}{100}$			2.4						+ 33.52	+.01	- 3	
	α_2										1	58.57	
											1	-.93	
												57.64	
	03 07	54.43	8.2	2 4.8	2 40.9	44.5	48.0	51.7	55.3	2404	2	4808	
	01 44.8	54 42.7	8.4	7.5								+ 31.14	
	κ			10.3								+ .35	
	((δ) — D) $\frac{\kappa'}{100}$			7.4						+ 31.46	-.17	- 3	
	α_1										3	19.54	
											3	-1.02	
												18.52-17=18.35	
			8.6	2 4.8	2 38.6	42.1	45.7	49.3	52.9	2286	2	4572	
				7.9								+ 33.134	
	κ			11.4								+ .41	
	((δ) — D) $\frac{\kappa'}{100}$			8.1						+ 33.52		- 3	
	α_2										3	19.27	
											3	-.93	
												18.31	
	04 13	51.11	7.0			Lost							
	02 58.3	51 11.5	8.5										
	κ		8.3										
	((δ) — D) $\frac{\kappa'}{100}$												
	α_1												
	2 20.4	51 11.9	6.5	3 21.6	3 9.7	12.9	16.3	19.8	23.0	817	3	1634	
			8.8	25.3								+ 33.134	
	κ			28.2								+ .37	
	((δ) — D) $\frac{\kappa'}{100}$			22.0						+ 33.48	+.01	- 2	3 49.80
				3 31.4	46.7	50.1	53.3	56.7	0.0	2668	3	5336	-.88
	2 58.3	51 11.5		34.4								+ 33.134	3 48.945
	α_2			36.6								+ .36	
				34.1						+ 33.48	+.01	- 2	4 26.87
													4 -.887
													4 25.983

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs Feb. 14 Feb. 17
$R_2 = -7'\ 31''.15$ 3145

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+26.8	4 4.9	1.1	24	30	52 58 45.35			20	52 50 53.95	
	1.41497					57 14.20				− .18	+11.75
28 d	9.78097					−* 20.55				+ 24	
	1.31277						51 34.75			+ 11.15	
((δ) − D) $\frac{d'}{100}$										+ 54	
+4.83										− 1560	
−.01 δ_1		0 5.06		50 50.1						50 50.10	
	+24.4	4 9.1	2.2	24	5.65	52 58 42.70			20	51.97	
	1.38739					51 11.25				− .15	+12.01
d	9.78097					−* 19.28				+ 29	
	1.28514						51 30.53			+ 11.33	
((δ) − D) $\frac{d'}{100}$										+ 54	
+4.83										− 16.00	
−.01 δ_2		0 5.12		50 48.0	−1					50 47.98	
	+24.4	3 11.5	7.7	23	9.60	52 59 39.75			20	54 51 50.23	
32	1.38739					52 8.60				− .15	+14.08
d	9.76003					−* 18.37				+ .19	
	1.26420						52 26.97			+ 13.36	
((δ) − D) $\frac{d'}{100}$										+ .68	
+4.97										− 16.10	
−.08 δ_1		0 56.54		51 48.1						51 48.21	
	+19.5	3 18.0	10.9	23	14.45	54 59 33.90			20	47.77	
	1.29003					52 2.45				− .09	+14.39
d	9.76003					−* 14.68				+ .23	
	1.16684						52 17.13			+ 13.57	
((δ) − D) $\frac{d'}{100}$		56.								+ .68	
+4.97										− 16.50	
−.08 δ_2		0 ~~57~~ 54.1		51 45.6						51 45.66	
	+25.2	4 24.8	21.0	29	22.90	54 53 25.45			25	54 45 35.28	
32	0.40140					45 54.30				− .16	+14.01
d	9.76111					−* 19.02				+ .26	
	1.27929						46 18.32			+ 13.23	
((δ) − D) $\frac{d'}{100}$										+ .68	
+4.96										− 16.20	
−0.18 δ_1		2 2.58		45 32.9						45 33.09	
	+22.1	4 30.7	24.0	29	27.35	54 53 21.00			25	32.87	
	1.34439					45 49.55				− .12	+14.32
d	9.76111					−* 16.68				+ .31	
	1.22228						46 6.23			+ 13.45	
((δ) − D) $\frac{d'}{100}$				4						+ .68	
+4.96										− 1660	
−0.18 δ_2		2 2.59		45 30.5						45 30.59	
	+40.7	1 55.3	51.8	31	53.55	54 50 54.80			30	54 42 52.82	
36	1.60959					43 23.65				− .43	+13.54
d	9.76164					−* 30.83				+ .11	
	1.48901						43 54.48			+ 13.19	
((δ) − D) $\frac{d'}{100}$										+ .67	
+4.96										− 1600	
−0.29 δ_1		3 23.31		42 50.1						42 50.36	
	+37.7	1 59.9	52.9	31	56.40	54 50 51.95			30	52.01	
	1.57634					43 20.50				− .37	+13.84
d	9.76164					−28.49				+ .14	
	1.45476						43 48.99			+ 13.40	
((δ) − D) $\frac{d'}{100}$										+ .67	
+4.96										− 16.40	
−0.29 δ_2		3 23.27		42 49.2						42 49.45	
		3 16.9	14.1						0		
		3 16.9	14.1						0		
d											
((δ) − D) $\frac{d'}{100}$											
δ_1											
	−*8.7	3 15.4	10.5	3	12.95	51 19 35.40			0	51 12 11.08	11 48.13
+4.73 d	0.93952 n	3 16.4	10.5	3	12.95	51 19 35.40			0	− 2 +9.08	− .10 +9.00
−0.40	9.79699					12 3.95	11 56.82			+ 22	+ 22
((δ) − D) $\frac{d'}{100}$	0.85329 n					12 3.95				+8.42	+8.42
	+19.3					+7.13				+ 46	+ 46
+4.73	1.28556					−* 15.82	12 19.77			− 1540	− 15.40
−0.40 δ_2	9.79699	3 53.65		12 4.4						12 4.76	11 41.73
	1.19938 n	4 30.70		11 41.3							

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

279

Date$_1$ = Feb. 14, 1874 Observer W. A. R. Recorder J. E. M.

280

Date$_2$ = Feb. 17, 1874 Observer Recorder

20

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
6	05 54	53.50	9.1	4 52.2	5 28.4	32.0	35.7	39.0	42.6	1774	6 5	35.48	
	04 32.5	53 50.2	8.3	54.8								+ 31.14	
	κ			56.1								+ .34	
	((δ) — D) $\frac{\kappa'}{100}$			55.0						+ 31.45 -17		— 3	
	α_1										6	6.93	
												— 1.03	
											6	5.90 -17 = 5.73	
			9.4	4 56.6	5 26.5	29.8	33.3	36.7	40.3	1666	5	33.32	
				58.6								+ 33.184	
	κ			2.4								+ .40	
	((δ) — D) $\frac{\kappa'}{100}$			57.2						+ 33.51		— 3	
	α_2										6	6.86	
												— .96	
											6	5.87	
	07 41	53.42	7.3	6 44.1	7 14.6	18.0	21.4	~~26.0~~ 25.0	28.6	1090	7	2250	
	06 19.3	53 41.8	7.5	46.1								+ 31.14	
	κ			49.0								+ 34	
	((δ) — D) $\frac{\kappa'}{100}$			46.4						+ 31.45 -17		— 3	
	α_1										7	52.94	
												— 1.05	
											7	51.92 -17 = 51.75	
			7.8	6 48.4	7 12.2	15.7	19.3	22.8	26.2	962	7	1924	
				51.0								+ 33.184	
	κ			54.0								+ .39	
	((δ) — D) $\frac{\kappa'}{100}$			51.1						+ 33.50 +01		— 3	
	α_2										7	52.77	
												— .98	
											7	51.79	
	08 37	54.14	9.2	8 5.2	8 13.8	17.2	20.8	24.3	27.9	1040	8	2080	
	07 15.2	54 13.7	9.0	7.3								+ 31.14	
	κ			11.3								+ .35	
	((δ) — D) $\frac{\kappa'}{100}$			7.9						+ 31.46 -17		— 3	
	α_1										8	52.26	
												— 1.08	
											8	51.18 -17 = 51.01	
			8.8	8 14.4	8 11.4	15.0	18.6	22.0	25.5	925	8	1850	
				17.1								+ 33.184	
	κ			20.8								+ .40	
	((δ) — D) $\frac{\kappa'}{100}$			17.4						+ 33.51		— 3	
	α_2										8	52.04	
												— 1.00	
											8	51.01	
	09 47	54.18	8.5	9 14.0	9 2.5	6.0	9.6	13.1	16.6	478	1	956	
	08 ~~24.7~~ 6.0	54 18.3 .2	7.0	17.1								+31.14	
	κ		7.5	19.5								+ .35	
	((δ) — D) $\frac{\kappa'}{100}$			16.4						+ 31.46 -17		— 3	9 41.02
	8 24.7 α_1	54 18.3		9 33.7	21.0	24.5	28.1	31.7	35.3	1406	9	2812	— 1.08
				34.0								+31.14	9 39.94 -17 = 39.77
				46.6								+ .35	
				37.1						+ 31.46 -17		— 3	9 59.58
			8.8	9 2.5	9 0.3	3.8	7.3	10.7	14.3	364	1	728	— 1.08
			6.8	6.0								+33.184	9 58.50 -17 = 58.33
	κ			9.2								+ .40	
	((δ) — D) $\frac{\kappa'}{100}$			5.9						+ 33.51 +01		— 3	9 40.83
	α_2			9 23.9	18.7	22.4	26.0	29.4	33.0	1295	9	2590	— 1.06
				31.5								+33.184	9 39.78
				33.1								+ .40	
				29.4						+ 33.51 +01		— 3	9 69.45
	21 33	54.52	8.2	20 48.0	21 10.6	14.3	18.0	21.5	25.2	896	21	1792	— 1.00
	20 11.9	54 52.1	8.1	48.0								+31.14	9 58.4
	κ			51.8								+ .36	
	((δ) — D) $\frac{\kappa'}{100}$			47.9						+ 31.47 -17		— 3	
	α_1										21	49.39	
												— 1.22	
											21	48.17 -17 = 48.00	
			8.5	20 57.2	21 8.6	12.0	15.8	19.1	22.0	785	21	1570	
				0.8								+33.184	
	κ			4.4								+ .41	
	((δ) — D) $\frac{\kappa'}{100}$			6.0						+ 33.52		— .3	
	α_2										21	49.26	
												— 1.16	
											21	48.06	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Feb 14 Feb. 17.

Runs R_{eq} = −7′31″.15 31.45

21

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+40.5	4′ 43.6	39.8	24	41.70	53 58 6.65			20	53 50 4.24	
26	1.60746					50 35.50				− 42	+12.67
d	9.77078					*31.26				+ 28	
	1.49502						51 6.76			+ 12.22	
((δ) − D) $\frac{d'}{100}$										+ .59	
										− 15.70	
+4.90 δ₁		6 10.63		50 0.7						50 1.21	
−0.54											
	+34.1	4 51.5	45.0	24	48.25	53 58 0.10			20	2.33	
	1.53275					50 28.65				− .30	+13.06
d	9.77078					*26.32				+ 34	
	1.42031						50 54.97			+ 12.43	
((δ) − D) $\frac{d'}{100}$										+ .59	
										− 16.00	
+4.90 δ₂		6 10.77		49 58.8						49 59.39	
−0.54											
	+35.1	2 7.1	3.8	32	5.45	53 50 42.90			30	53 42 44.57	
28	1.54531					43 11.75				− 82	+12.48
d	9.77216					*27.18				+ .13	
	1.43425						43 38.93			+ 12.09	
((δ) − D) $\frac{d'}{100}$										+ .58	
+4.89		6								− 15.60	
−0.69 δ₁		7 58.64		42 40.8						42 41.85	45
	+28.1	2 16.0	9.1	32	12.55	53 50 35.80			30	42.59	
	1.44871					43 4.35				− .20	+12.82
d	9.77216					*21.76				+ .15	
	1.33765						43 26.11			+ 12.29	
((δ) − D) $\frac{d'}{100}$										+ .58	
										− 15.90	
+4.89 δ₂		7 56.66		42 38.8						42 39.51	
−0.69											
	+12.9	2 21.1	17.9	2	19.50	54 20 28.85			0	54 12 47.83	
30	1.11059					12 57.70				− 5	+13.36
d	9.76695					*9.87				+ 14	
	0.99432						13 7.57			+ 12.65	
((δ) − D) $\frac{d'}{100}$										+ .62	
				4.						− 15.70	
+4.92 δ₁		8 55.93		12 42.7						12 43.49	
−0.77											
	+1.1	2 33.1	26.0	2	29.55	54 20 18.80			0	46.50	
d	0.04139					12 47.35				− .00	+13.63
	9.76695					*0.85				+ 17	
	9.93012						12 48.20			+12.84	
((δ) − D) $\frac{d'}{100}$										+ .62	
										− 16.00	
+4.92 δ₂		8 55.93		12 43.4						12 44.13	
−0.77											
	−7.3	2 25.8	21.2	57	23.50	54 25 24.85			55	54 17 59.27	18 0.57
28	0.86332	2 25.8	21.2	57	23.50	54 25 24.85			55	− 2	+13.49 − 2 +13.49
32 d	9.76607					17 53.70	17 48.13			+ 14	+ 14
	0.76617					17 53.70				+12.74	+12.74
((δ) − D) $\frac{d'}{100}$	−9.0					+5.87				+ .63	+ .63
	0.95424					+6.87	17 46.83			− 15.70	− 15.70
+4.93 δ₁	9.76607	9 44.70		17 56.2						17 57.04	17 58.36
−0.87	0.83709	10 3.256		57.5							
	+1.4	2 21.5	14.3	57	17.90	54 25 30.45			55	17 57.93	18 1.67
+4.93	0.14613	2 21.5	14.3	57	17.90	54 25 30.45			55	− .00	+13.73 − .01 +13.72
−0.87 d	9.76607					17 59.00	18 0.07			+ .16	+ .16
	0.02898					17 59.00				+ 12.94	+ 12.94
((δ) − D) $\frac{d'}{100}$	−3.5					*1.07				+ .63	+ .63
	0.54407	44.73				+2.67	17 56.23			− 15.60	− 15.60
+4.93	9.76607	9 43.93									
−0.87 δ₂	0.42692	10 3.35		17 55.2						17 56.06	17 59.79
				56.9							
22	+30.0	2 10.1	6.8	22	8.45	55 0 39.90			20	54 52 46.17	
	1.47712					54 53 8.75				− 23	+13.97
d	9.75985					−*22.58				+ 13	
	1.35375						53 31.33			+ 13.38	
((δ) − D) $\frac{d'}{100}$										+ .69	
										− 15.40	
+4.96 δ₁		21 52.96		52 42.8						52 44.74	
−1.91											
	+14.9	2 25.1	17.1	22	21.10	55 0 27.25			20	44.58	
	1.17319					54 52 55.80				− 6	+14.39
d	9.75985					−*11.22				+ .16	
	1.04982						53 7.02			+13.60	
((δ) − D) $\frac{d'}{100}$										+ .69	
										− 15.90	
+4.96 δ₂		21 53.02		52 41.2						52 43.07	
−1.91											

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.31587R

279

Date$_1$ = Feb. 14, 1874 — Observer W.A.R. — Recorder J.H.M.

280

Date$_2$ = Feb. 17, 1874 — Observer — Recorder

22

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
Gr	23 m 00	54.34	9.0	22 m 70 s	22 34.1	37.7	41.6	45.0	48.5	2068	6 22	4136	
	21 38.3	54 34.3	9.0	10.5								+ 31.14	
	κ			14.0								+ .35	
				10.5						+ 31.46	.17	− 3	
	((δ) − D) $\frac{\kappa'}{100}$										23	12.82	
	α_1										23	−1.22	
												11.60 − 17 = 11.43	
			9.0	22 50	22 32.0	35.6	39.1	42.8	46.5	1960	22	3920	
				3.2								+ 33.18	
	κ			5.9								+ .41	
				3.0						+ 33.52	.01	− 3	
	((δ) − D) $\frac{\kappa'}{100}$										23	12.77	
	α_2										23	−1.17	
												11.56	
	24 42	54.10	8.5	23 39.4	24 15.7	19.5	22.8	26.4	30.4	1148	24	2296	
	23 19.9	54 10.4	8.0	42.3								+ 31.14	
	κ			44.6								+ .34	
				43.1						+ 31.45	.17	− 3	
	((δ) − D) $\frac{\kappa'}{100}$										24	54.41	
	α_1										24	−1.24	
												53.17 − 17 = 53.00	
			8.5	23 43.5	24 18.5	17.2	20.7	24.2	27.8	1034	24	2068	
				46.0								+ 33.18	
	κ			48.8								+ .40	
				46.1						+ 33.57		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										24	54.24	
	α_2										24	−1.17	
												53.07	
	25 15	54.42	8.6	24 45.8	24 49.2	52.6	56.5	59.9	3.5	2817	24	5634	
	23 52.7	54 41.6	8.3	48.2								+ 31.14	
	κ			51.0								+ .35	
				48.3						+ 31.46	.17	− 3	
	((δ) − D) $\frac{\kappa'}{100}$										25	27.80	
	α_1										25	−1.25	
												26.55 − 17 = 26.38	
			8.1	24 40.8	24 47.2	50.7	54.2	57.8	1.8	2702	24	5404	
				42.2								+ 33.18	
	κ			41.5								+ .41	
										+ 33.52	.01	− 3	
	((δ) − D) $\frac{\kappa'}{100}$										25	27.81	
	α_2										25	−1.19	
												26.57	
	26 52	53.35	8.4	25 57.6	26 33.8	28.8	32.3	35.9	39.4	1617	26	3234	
	25 29.9	53 35.2	8.0	59.9								+ 31.14	
	κ			42								+ .34	
				60.6						+ 31.45	.17	− 3	
	((δ) − D) $\frac{\kappa'}{100}$										27	3.79	
	α_1										27	−1.24	
												2.55 + 17 = 2.38	
			8.3	25 57.3	26 33.0	26.3	30.1	33.5	37.0	1499	26	2998	
				0.4								+ 33.18	
	κ			3.0								+ .39	
				60.2						+ 33.50		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										27	3.53	
	α_2										27	−1.18	
												2.30	
	28 41	54.02	9.0	27 52.3	28 16.7	20.2	23.6	27.1	30.8	1184	28	2368	
	27 18.8	54 1.6	8.8	55.5								+ 31.14	
	κ		8.9	55.0								+ 34	
				53.3						+ 31.45	.17	− 3	
	((δ) − D) $\frac{\kappa'}{100}$			28 53.1	32.8	36.3	40.0	43.5	47.0	1996	28	5522	
	27 36.5	54 8.6		55.0								+ 31.14	
	α_1			53.7						+ 31.45	.17	+ 34	
				53.8							29	− 3	
												11.87	
			8.8	27 35.3	28 14.5	18.0	21.7	25.0	28.8	1080	28	2160	
			8.5−	34.9						+ 33.52	.01	+ 33.18	
	κ			28.3 41.6								+ .43	
				0.6	30.7	34.2	37.8	41.2	45.0	1889	28	3778	
	((δ) − D) $\frac{\kappa'}{100}$			0.3								+ 33.18	
	α_2			52.2						+ 33.52	.01	+ 40	
				61.3							29	− 3	
												11.34	
											29	−1.21	
												10.13	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs Feb. 14 Feb. 17

Eq = −7′ 31″.15 31.45

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+30.9	1 12.4	8.1	41	10.25	54 41 38.10			40	54 33 43.51	
16 d	1.48996					34 6.95				− 25	+13.50
	9.76324					−*23.44				+ 7	
((δ) − D) $\frac{d'}{100}$	1.36998n						84 30.39			+ 13.63	
										+ 65	
+4.94 δ_1										− 15.20	
−2.03		23 16.34		33 39.78						33 41.81	
	+36.2	1 11.2	2.3	41	6.75	54 41 41.60			40	4269	
d	1.55871					34 10.15				− 34	+13.64
	9.76324					−*27.46				+ 8	
((δ) − D) $\frac{d'}{100}$	1.43873n						34 37.61			+ 13.25	
										+ 65	
+4.94 δ_2										− 1560	
−2.03		23 16.50		33 38.7						33 40.73	
	+40.9	3 23.0	19.9	3	21.45	54 19 26.90			0	54 11 24.44	
28 d	1.61172					11 55.75				− 44	+12.99
	9.76712					−*31.31				+ 20	
((δ) − D) $\frac{d'}{100}$	1.49562n						12 27.06			+ 12.61	
		57.91								+ 62	
+4.91 δ_1		24 58.08		11 20.2						− 1510	
−2.17										11 22.33	
	+34.6	3 29.7	22.1	3	25.90	54 19 22.45			0	2446	
d	1.53908					11 51.00				− 31	+13.38
	9.76712					−*26.54				+ 24	
((δ) − D) $\frac{d'}{100}$	1.42398n						12 17.54			+ 12.83	
										+ 62	
+4.91 δ_2										− 1550	
−2.17		24 57.93		11 20.2						11 22.34	
	+8.0	4 12.2	9.1	34	10.65	54 48 37.70			30	54 41 0.50	
12 d	0.90309					41 6.55				− 2	+14.04
	9.76200					−*6.05				+ 25	
((δ) − D) $\frac{d'}{100}$	0.78187n						41 12.60			+ 13.14	
										+ 67	
+4.95 δ_1										− 1520	
−2.23		25 31.33		40 57.1						40 59.34	
	+12.7	4 10.9	4.0	34	7.45	54 48 40.90			30	40 59.84	
d	1.10380					41 9.45				− 4	+14.30
	9.76200					−*9.61				+ 29	
((δ) − D) $\frac{d'}{100}$	0.98258n						41 19.06			+ 13.38	
										+ 67	
+4.95 δ_2										− 1560	
−2.23		25 31.53		40 56.3						40 58.54	
	+31.7	0 26.0	21.6	40	23.75	53 42 24.60			40	53 34 28.83	
36 d	1.50106					34 53.45				− 2	+12.26
	9.77353					−*24.62				+ 2	
((δ) − D) $\frac{d'}{100}$	1.39137n						35 18.07			+ 11.94	
				23.9						+ 57	
+4.87 δ_1										− 1480	
−2.36		27 7.25		34 24.09						34 26.29	
	+26.8	0 26.6	20.0	40	24.20	53 42 24.05			40	29.45	
d	1.47422					34 52.60				− 24	+12.52
	9.77353					−*23.15				+ 3	
((δ) − D) $\frac{d'}{100}$	1.36453n						35 15.75			+ 12.16	
+4.87										+ 57	
−2.36 δ_2		27 7.17		34 24.4						− 1520	
										34 26.77	
	+28.4	2 58.3	53.9	12	56.10	54 9 52.25			10	54 1 59.27	2 51.26
08 d	1.45332	2 40.2	36.1	12	38.15	54 10 10.20			10	− 20	+13.02 − 7 +13.15
+4.90	9.76887					2 21.10	2 42.93			+ 17	+ 16
−2.52 14	1.33897n					2 39.05				+ 12.45	+ 12.46
((δ) − D) $\frac{d'}{100}$	−15.9					−*21.83				+ 60	+ 60
	1.20140n					+12.21	2 26.84			− 14.80	− 14.80
+4.90 δ_1	9.76870	28 58.61 3		1 55.0						1 57.49	2 49.61
−2.52	1.08688n	29 14.88 3		2 47.1							
	+43.3	2 48.8	40.3	12	44.55	54 10 3.80			10	1 59.09	2 50.40
+4.90	1.63649	2 48.8	40.3	12	44.55	54 10 3.80			10	− .48	+12.97 − .14 +13.32
−2.52 d	9.76870	1.52197n				2 32.35	3 5.61			+ .19	+ .19
−23.5						2 32.35				+ 12.66	+ 12.67
((δ) − D) $\frac{d'}{100}$	1.37107n					−*33.26				+ .60	+ .60
+4.90	9.76870					+ 18.05	2 14.80			− 1520	− 15.20
−2.52 δ_2	1.25655n	28 58.82		1 54.3						1 56.86	2 48.52
		29 15.00		2 46.0							

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

279

Date$_1$ = Feb. 14, 1874 Observer K. A. R. Recorder J. Z. M.

280

Date$_2$ = Feb. 17, 1874 Observer Recorder

24

Star.	α	δ	Mag.	T_a	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
6	30 m 44 s	53. 31	8.3	m s	m s					1131	6 m 50 s	22 54	
	29 21.8	53 31.0	7.6	29 41.4	30 13.6	17.0	22.5	36.1	29.5			+31.14	
	κ			45.5								+ .34	
	((δ) — D) $\frac{\kappa'}{100}$			48.1						+ 31.45	-.17	- 3	
				46.0							30	53.99	
	a_1										30	-1.27	
												52.72 -17 = 52.55	
			6.9	29 45.2	30 13.2	16.8	20.2	23.7	27.4	1013	30	2026	
				47.9								+33.195	
	κ			51.5								+ .39	
	((δ) — D) $\frac{\kappa'}{100}$			44.2						+ 33.51		- 3	
											30	53.81	
	a_2										30	-1.21	
												52.56	
	32 00	53. 01	9.4	31 12.8	31 —	—	40.5	43.5	47.0		31	40.25	
	30 38.2	53 1.6	9.0	16.7								+31.14	
	κ			18.7								+ .33	
	((δ) — D) $\frac{\kappa'}{100}$			15.8						+ 31.44	-.17	- 3	
											32	11.69	
	a_1										32	-1.27	
												10.42 -17 = 10.25	
			8.8	31 57.6	31 31.0	34.6	38.0	41.3	44.8	1897	31	37.74	
				9.2								+33.195	
	κ			11.8								+ .38	
	((δ) — D) $\frac{\kappa'}{100}$			8.4						+ 33.50	+.01	- 3	
											32	11.48	
	a_2										32	-1.21	
												10.284	
	33 13	54.00	9.5	32 36.5	32 58.2	53.6	57.0	0.7	4.3	2858	32	57.16	
	31 51.4	54 0.2	9.0	38.8								+31.14	
	κ			43.2								+ .34	
	((δ) — D) $\frac{\kappa'}{100}$			37.5						+ 31.45	-.17	- 3	
											33	28.61	
	a_1										33	-1.32	
												27.29 -17 = 27.12	
			9.2	32 26.3	32 49.9	51.4	54.8	58.4	1.9	2744	32	54.88	
				29.1								+33.20.15	
	κ			34.1								+ .40	
	((δ) — D) $\frac{\kappa'}{100}$			29.8						+ 33.52		- 3	
											33	28.46	
	a_2										33	-1.26	
												27.14	
	34 56	55 00	9.2	34 9.7	34 30.5	34.0	37.4	41.2	45.0	1884	34	37.68	
	33 34.3	54 59.7	8.9	14.1								+31.14	
	κ			17.4								+ .36	
	((δ) — D) $\frac{\kappa'}{100}$			12.7						+ 31.47	-.17	- 3	
											35	9.15	
	a_1										35	-1.37	
												7.78 -17 = 7.61	
			8.9	33 51.9	34 28.3	32.0	35.3	39.0	42.5	1771	34	36.42	
				53.6								+33.20.15	
	κ			56.6								+ .41	
	((δ) — D) $\frac{\kappa'}{100}$			53.7						+ 33.53	+.01	- 3	
											35	9.00	
	a_2										35	-1.31	
												7.645	
	See p 38 for Feb 14. 635												
	κ												
	((δ) — D) $\frac{\kappa'}{100}$												
	a_1												
	κ												
	((δ) — D) $\frac{\kappa'}{100}$												
	a_2												

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eq} = −7ʰ31ᵐ15ˢ Feb. 14 — 31.45 Feb. 17

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
26 d	+37.6	4′ 18.1	13.9	44	16.00	53 38 32.35			40′	53 30 31.95	
	1.57519					31 1.20				− 37	+12.32
	9.77422					−* 29.25				+ .26	
	1.46619$_n$						31 30.45			+ 11.86	
										+ .57	
((δ) − D) $\frac{d'}{100}$										− 14.60	
+4.86 −2.69 δ_1		30 57.41		30 27.0						30 29.67	
	+32.1	4 24.0	16.0	44	20.00	53 38 28.35			40	31.92	
	1.50651					30 56.90				− 27	+12.67
d	9.77422					−* 24.98				+ .36	
	1.39751$_n$						31 21.88			+ 12.07	
										+ .57	
((δ) − D) $\frac{d'}{100}$										− 15.00	
+4.86 −2.69 δ_2		30 57.42		30 26.9						30 29.59	
31	+24.3	3 22.8	18.9	13	20.85	53 9 27.50			10	53 1 37.23	
	1.38561					1 56.35				− .15	+11.96
d	9.77913					−* 19.12				+ .20	
	1.28152$_n$						2 15.47			+ 11.36	
										+ .55	
((δ) − D) $\frac{d'}{100}$										− 14.40	
+4.83 −2.81 δ_1		32 15.08		1 32.0						1 34.79	
	+29.0	3 21.7	14.6	13	17.65	53 9 30.70			10	36.43	
	1.46240					1 59.25				− .22	+12.11
d	9.77913					−* 22.82				+ .23	
	1.35831$_n$						2 22.07			+ 11.55	
										+ .55	
((δ) − D) $\frac{d'}{100}$										− 14.80	
+4.83 −2.81 δ_2		32 15.07		1 30.9						1 33.74	
28	+17.7	0 29.4	25.6	15	27.50	54 7 20.85			15	53 59 36.09	
	1.24797					53 59 49.70				− 8	+12.97
d	9.76922					−* 13.61				+ 3	
	1.13397$_n$						0 3.31			+ 12.42	
										+ .60	
((δ) − D) $\frac{d'}{100}$										− 14.60	
+4.96 −2.92 δ_1		3 33 12.08		59 31.5						59 34.46	
	+25.1	0 26.3	18.5	15	22.40	54 7 25.95			15	35.20	
	1.39967					53 59 54.50				− .16	+13.09
d	9.76922					−* 19.30				+ 3	
	1.28567$_n$						0 +3.80			+ 12.62	
										+ .60	
((δ) − D) $\frac{d'}{100}$										− 15.00	
+4.96 −2.92 δ_2		33 32.10		59 30.4						59 33.29	
	+24.0	1 17.1	14.2	16	15.95	55 6 32.40			15	54 58 43.23	
26 d	1.38021					54 59 1.25				− .15	+14.13
	9.75877					−* 18.02				+ 8	
	1.25576$_n$						59 +9.27			+ 13.50	
										+ .70	
((δ) − D) $\frac{d'}{100}$										− 14.80	
+4.96 −3.07 δ_1		35 12.57		58 39.5						58 42.56	
	+41.7	1 6.8	58.1	16	2.45	55 6 45.90			15	43.14	
	1.62014					54 59 14.45				− .45	+14.04
d	9.75877					−* 31.31				+ 7	
	1.49869$_n$						59 45.76			+ 13.72	
										+ .70	
((δ) − D) $\frac{d'}{100}$										− 15.20	
+4.96 −3.07 δ_2		35 12.61		58 38.9						58 41.78	
d											
((δ) − D) $\frac{d'}{100}$											
δ_1											
d											
((δ) − D) $\frac{d'}{100}$											
δ_2											

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Date$_1$ = Feb. 18, 1874 — Observer R. A. K. — Recorder J. F. M. — n = +.28

Date$_2$ = Feb. 24, 1874 — Observer — Recorder — n = +.21

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
38	38m 33s	53.59	8.4	38m 33.7	37m 4.0	7.6	11.0	14.8	18.1	5.55	5m 37s	11.10	Add +.016 to (ΔT + m) for Feb. 18. 2t has been added to sum of constants and to final R.A.
37	9.6	53 57.9	8.5	37.0							+.016	−26.178	
				40.5								+ .38	
				37.1						− 25.83	+.01	− .3	
κ												.762	
((δ) − D) $\frac{\kappa'}{100}$											38	45.28	+4.9
a_1											38	− .64	+1.8
											38	44.684	
			8.5	38 39.6	38 59.2	2.7	6.1	9.7	13.3	33.10	39	6.20	
κ												−21.178	
												+ .29	
((δ) − D) $\frac{\kappa'}{100}$										− 20.92		− .3	
a_2											38	45.34	+4.9
												− .49	
											38	44.79	+1.8
40	34	53.27	9.0	40	41 2.5	0.8	4.2	13.0	16.4	4.69	41	9.38	
39	11.7	53 26.5	9.0	28.4								−26.178	
				32.0								+ .38	
				28.7						− 25.83	+.02	− .3	
κ											40	43.56	
((δ) − D) $\frac{\kappa'}{100}$												− .66	+4.8
a_1											40	42.890	+1.6
			9.0	40 33.1	40 57.3	0.9	4.5	8.0	11.7	2.24	41	4.48	
				33.3								−21.178	
				32.0								+ .28	
κ				35.7						− 20.93		− .3	
((δ) − D) $\frac{\kappa'}{100}$											40	43.61	
a_2												− .50	+4.8
											40	43.105	+1.6
41	32	53.47	8.7	41 38.7	42 2.0	0.5	4.2	12.5	15.9	4.57	42	9.14	
40	10.2	53 46.1	9.0	42.0								−26.178	
				46.6								+ .38	
κ				43.5						− 25.83	+.01	− .3	
((δ) − D) $\frac{\kappa'}{100}$											41	43.20	
a_1												− .67	+4.8
											41	42.533	+1.8
			8.4	41 41.3	41 57.0	0.5	3.8	7.5	11.0	1.98	42	3.96	
				44.0								−21.178	
				48.3								+ .29	
κ				44.5						− 20.92		− .3	
((δ) − D) $\frac{\kappa'}{100}$											41	43.10	
a_2												− .52	+4.8
											41	42.52	+1.5
42	39	53.17	9.2	42 43.8	43 7.0	10.3	13.8	17.3	20.9	6.93	43	13.86	
41	16.7	53 16.3	9.3	47.1								−26.17	
				44.4								+ .37	
κ				46.9						− 25.83	+.02	− .3	
((δ) − D) $\frac{\kappa'}{100}$											42	48.03	
a_1												− .68	+4.8
											42	47.387	+1.5
			9.2	42 43.5	43 1.7	5.7	9.0	12.4	16.6	4.44	43	8.88	
				48.0								−21.178	
				33.3								+ .28	
κ				46.6						− 20.93		− .3	
((δ) − D) $\frac{\kappa'}{100}$											42	48.01	
a_2												− .52	+4.8
											42	47.43	+1.5
44	05	53.58	9.0	44 3.4	44 35.8	39.2	42.8	46.1	49.7	21.34	44	42.72	
42	43.1	53 56.9	9.0	6.9								−26.17	
				10.6								+ .38	
κ				6.9						− 25.82	+.01	− .3	
((δ) − D) $\frac{\kappa'}{100}$											44	16.90	
a_1												− .70	+4.9
											44	16.201	+1.3
			9.0	44 4.0	44 30.7	34.0	37.5	41.1	44.6	18.79	44	37.58	
				1.7								−21.178	
				11.8								+ .29	
κ				7.8						− 20.92		− .3	
((δ) − D) $\frac{\kappa'}{100}$											44	16.71	
a_2												− .60	+4.9
											44	16.11	+1.3

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eq} = Feb. 18 $-7^{s}30^{s}.16$ +.07 Feb. 24 $31^{s}.43$ +.07

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
4.90 d	+34.0	0 50.2	43.0	15	46.60	54 7 1.75			16	53 59 5.44	
	1.53148					53 59 31.59				− .30	+13.06
	9.76922					−*26.15				+ 6	
	1.41748						59 57.74			+ 12.70	
((δ) − D) $\frac{d'}{100}$										+ .60	
+4.90										− 17.00	
+1.85 δ_1		38 49.54		59 3.4						59 1.50	
d	+30.6	0 48.9	44.3	15	46.60	54 7 1.75			15	6.78	
	1.48572					53 59 30.32				− .25	+13.14
	9.76922					−*23.54				+ 6	
	1.37172						59 53.86			+ 12.73	
((δ) − D) $\frac{d'}{100}$										+ .60	
+4.90										− 17.40	
+1.85 δ_2		38 49.69		59 4.4						59 2.52	
90 d	+40.7	3 2.06	12.4	48	1700	53 34 31.35			40	53 26 29.47	
	1.60959					27 1.19				− .44	+12.45
	9.77490					−*31.72				+ 23	
	1.50127						29 32.91			+ 12.09	
((δ) − D) $\frac{d'}{100}$										+ .57	
+4.87										− 16.80	
+1.68 δ_1		40 47.78		26 26.8						26 25.12	
d	+28.6	3 27.7	23.0	48	2535	53 34 23.00			45	29.28	
	1.45637					26 51.57				− .22	+12.74
	9.77490					−*22.29				+ .24	
	1.34805						27 13.86			+ 12.12	
((δ) − D) $\frac{d'}{100}$		47.								+ .60	
+4.87										− 17.30	
+1.68 δ_2		40 48.92		26 26.4						26 24.72	
06 d	+26.5	3 26.2	18.7	28	2195	53 54 26.40			25	33 46 35.75	
	1.42325					46 56.24				− .18	+13.12
	9.77147					−*20.49				+ 23	
	1.31150						47 16.73			+ 12.48	
((δ) − D) $\frac{d'}{100}$										+ .59	
+4.89										− 16.80	
+1.59 δ_1		41 47.42		46 33.27						46 32.07	
d	+19.5	3 28.0	23.2	28	2560	53 54 22.75			25	36.25	
	1.29003					46 51.32				− 9	+13.25
	9.77147					−*15.07				+ 24	
	1.17828						47 6.39			+ 12.50	
((δ) − D) $\frac{d'}{100}$										+ 60	
+4.89										− 17.30	
+1.59 δ_2		41 47.41		46 33.8						46 32.20	
58 d	+27.0	2 22.9	13.6	87	1825	53 25 30.10			55	53 17 38.83	
	1.43136					17 59.94				− .19	+12.48
	9.77643					−*21.11				+ .16	
	1.32457						18 11.05			+ 11.95	
((δ) − D) $\frac{d'}{100}$										+ .56	
+4.86										− 16.70	
+1.50 δ_1		42 52.23		17 36.1						17 34.61	
d	+20.3	2 23.9	18.8	87	2135	53 25 27.00			55	39.69	
	1.30750					17 55.57				− .10	+12.63
	9.77643					−*15.88				+ .16	
	1.20071						18 11.45			+ 11.97	
((δ) − D) $\frac{d'}{100}$										+ .60	
+4.86										− 17.20	
+1.50 δ_2		42 52.29		17 36.6						17 35.12	
10 d	+35.8	2 30.6	23.0	17	2680	54 5 21.55			15	53 57 23.83	
	1.55388					53 57 51.39				− .34	+13.10
	9.76957					−*27.56				+ .17	
	1.44023						58 18.95			+ 12.67	
((δ) − D) $\frac{d'}{100}$										+ .60	
+4.90										− 16.80	
+1.37 δ_1		44 21.11		57 21.5						57 20.13	
d	+29.8	2 34.7	26.1	17	2840	54 5 19.95			15	25.58	
	1.47422					53 57 48.52				− .23	+13.24
	9.76957					−*22.94				+ .17	
	1.36057						58 11.46			+ 12.70	
((δ) − D) $\frac{d'}{100}$										+ .60	
+4.90										− 17.30	
+1.37 δ_2		44 21.01		57 22.9						57 21.52	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Date$_1$ = Feb. 18, 1874 Observer W.A.R. Recorder J.A.M.

Date$_2$ = Feb. 24 1874 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
45	16	53.26	8.9	45 27.7	45 46.5	47.8	53.3	57.0	0.5	2671	5 53.42	53.42	
43	54.3	53 25.0	9.0	31.0							45	−26.18	
κ				23.0								+ 38	
((δ) − D) $\frac{\kappa'}{100}$				30.6						− 25.82	+02	− 3	
α_1											45	27.61	
												− .71	+4.8
											45	26.79	+1.2
			8.8	45 21.5	45 41.2	45.2	48.5	52.0	58.5	2431	48.62	48.62	
				24.5							45	−21.18	
κ				23.7								+ 28	
((δ) − D) $\frac{\kappa'}{100}$				25.2						− 20.93		− 3	
α_2											45	27.74	
												− .55	+4.3
											45	27.14	+1.2
46	36	54.44	8.7	46 35.2	47 4.0	12.4	15.9	18.3	23.2	798	15.96	15.96	
45	14.4	54 43.0	8.8	39.0							47	−26.18	
κ				43.0								+ 39	
((δ) − D) $\frac{\kappa'}{100}$				39.1						− 25.81	+01	− 3	
α_1											46	50.16	
												− .74	+4.2
											46	49.42	+1.2
			8.5	46 31.2	47 3.9	7.5	11.1	14.8	18.3	556	47	11.12	
				34.7								−21.18	
κ				37.2								+ 30	
((δ) − D) $\frac{\kappa'}{100}$				34.4						− 20.91		− 3	
α_2											46	50.26	
												− .59	+4.9
											46	49.67	+1.1
47	02	54.49	8.8	47 24.0	47 33.5	37.1	40.7	44.3	48.0	2036	47	40.72	
45	40.2	54 48.0	9.0	48 33.3								−26.18	
κ				36.0								+ .40	
((δ) − D) $\frac{\kappa'}{100}$				31.9						− 25.80	+02	− 3	
α_1				34.1							47	14.93	
												− .75	+4.9
											47	14.19	+1.1
			9.0	47 42.0	47 28.6	32.2	35.8	39.4	42.7	1789	47	35.78	
				51.5								−21.18	
κ				37.4								+ 30	
((δ) − D) $\frac{\kappa'}{100}$				37.6						− 20.91		− 3	
α_2											47	14.92	
												− .59	+4.9
											47	14.28	+1.1
48	59	54.15	3.5	48 53.0	47 29.0	32.5	35.8	39.4	43.2	1800	49	36.00	
47	37.0	54 15.4	4.0	33.7								−26.18	
κ				37.9								+ 39	
((δ) − D) $\frac{\kappa'}{100}$				33.5						− 25.81	+01	− 3	
α_1											49	10.18	
												− .76	+4.3
											49	9.42	+0.2
			5.0	48 53.0	47 23.8	27.4	31.0	34.5	37.8	1545	49	30.90	
				38.5								−21.18	
κ				1.4								+ 29	
((δ) − D) $\frac{\kappa'}{100}$				58.3						− 20.92		− 3	
α_2											49	10.03	
												− .61	+4.9
											49	9.37	+0.5
50	01	54.49	9.1	50 14.0	50 31.9	35.5	39.0	42.7	46.3	1954	50	37.08	
48	38.7	54 48.7	8.7	18.3								−26.18	
κ				21.6								+ .40	
((δ) − D) $\frac{\kappa'}{100}$				18.0						− 25.80	+02	− 3	
α_1											50	13.29	
												− .79	+4.9
											50	12.50	+0.8
			9.0	50 8.2	50 27.0	31.0	34.7	37.7	41.4	1705	50	34.20	
				11.2	41			4.1	4.4			−21.18	
κ				15.4								+ 30	
((δ) − D) $\frac{\kappa'}{100}$				11.6						− 20.91		− 3	
α_2											50	13.29	
												− .64	+4.9
											50	12.65	+0.8

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Feb 18. Feb 24

Runs R_y = −7 8016 31.43

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	∞	4′ 41.0″	33.8	49′	37.40	53 33 10.95			45′	53 25 23.02	
	+22.8					25 40.79				− .14	+12.83
d	1.35793					−*17.77				+ .32	
	9.77507						25 58.56			+ 12.08	
((δ) − D) $\frac{d'}{100}$	1.24978$_n$									+ .57	
										− 16.70	
+4.87 δ$_1$		45 31.78		25 20.4						25 19.15	
	+23.4	4 37.0	31.9	49	34.45	53 33 13.90			45	24.23	
	1.36922					25 42.47				− .14	+12.88
d	9.77507					−*18.24				+ .32	
	1.26107$_n$						26 0.71			+ 12.10	
((δ) − D) $\frac{d'}{100}$										+ .60	
										− 17.20	
+4.87 δ$_2$		45 32.01		25 21.2						25 19.91	
	+36.9	0 1.3	52.6	29	57.45	54 52 50.90			30	54 43 52.96	
84	1.56703			30		45 20.74				− .35	+13.90
d	9.76129					−*27.78				+ .00	
	1.44510$_n$						45 48.61			+ 13.58	
((δ) − D) $\frac{d'}{100}$										+ .67	
										− 17.00	
+4.96 δ$_1$ +1.15		46 54.38		43 51.0						43 49.86	
	+36.7	0 54.8	51.0	30	52.90	54 51 53.415			30	43 56.30	
	1.56467					44 24.02				− .34	+13.99
d	9.76129					−*27.72				+ .00	
	1.44274$_n$						44 51.74			+ 13.60	
((δ) − D) $\frac{d'}{100}$										+ .67	
										− 17.50	
+4.96 δ$_2$ +1.15		46 54.58		43 53.9						43 52.79	
	+35.6	1 25.4	16.9	26	21.15	54 56 27.20			25	54 49 16.19	
94	−25.4					48 57.04				− .16	+14.26
d	1.40483$_n$					+19.15				+ .09	
	9.76057						48 37.89			+ 13.65	
((δ) − D) $\frac{d'}{100}$	1.28218$_n$									+ .68	
										− 17.00	
+4.96 δ$_1$ +1.11		47 19.15		49 14.6						49 13.45	
	+44.2	1 16.1	11.9	26	14.00	54 56 34.35			25	14.83	
	−30.8					49 2.92				− .07	+14.36
d	1.19866$_n$					+11.91				+ .08	
	9.76057						48 51.01			+ 13.67	
((δ) − D) $\frac{d'}{100}$	1.07601$_n$									+ .68	
										− 17.50	
+4.96 δ$_2$ +1.11		47 19.24		49 12.87						49 11.69	
	+40.5	3 28.2	20.7	58	24.45	54 24 23.90			55	54 16 22.80	
10	1.60746					16 58.74				− .42	+13.48
d	9.76625					−*30.94				+ .24	
	1.49049$_n$						17 24.68			+ 13.03	
((δ) − D) $\frac{d'}{100}$										+ .63	
										− 16.80	
+4.93 δ$_1$ +0.94		49 14.35		16 20.4						16 19.48	
	+32.6	3 30.9	26.4	58	28.65	54 24 19.70			55	23.37	
	1.51322					16 48.27				− .28	+13.65
d	9.76625					−*24.90				+ .24	
	1.39625$_n$						17 13.17			+ 13.06	
((δ) − D) $\frac{d'}{100}$										+ .63	
										− 17.30	
+4.93 δ$_2$ +0.94		49 14.30		16 20.7						16 19.72	
	+21.1	1 9.7	1.0	26	5.35	54 56 43.00			25	54 48 56.93	Eq sum
78	1.32428					49 12.84				− .11	+14.32
d	9.76057					−*15.91				+ .08	
	1.20162$_n$						49 26.75			+ 13.67	
((δ) − D) $\frac{d'}{100}$										+ .68	
										− 16.50	
+4.97 δ$_1$ +0.85		50 17.48		48 53.6						48 54.75	
	+22.76	1 3.1	58.8	25	0.98	54 54 47.40			25	48 58.56	94 eq sum
	1.35603411					49 52 15.97				− .14	+14.23
d	9.76039					−*17.11				+ .00	
	1.23228						03 50 33.08			+ 13.65	
((δ) − D) $\frac{d'}{100}$										+ .68	
										− 17.00	
+4.97 δ$_2$ +0.85		50 17.62		48 57.0						48 56.14	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

281 | 282 | 30

Date$_1$ = Feb. 18, 1874 | Observer W. A. R. / Recorder J. F. M. | Date$_2$ = Feb. 24, 1874 | 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
51	11^s	54.32	8.9	57^m 8.5	57^m 11.6	15.2	18.8	22.3	26.9	938	6^s 57	1876	
49	48.8	54 32.7	8.6									−26.187	
κ	15.4	33.0	9.0							−25.81 +01		+ 33	
												− 3	
$((\delta) - D)\frac{\kappa'}{100}$				52 14	57 42.0	46.6	49.3	52.7	56.3	2459	51	1978	50 52.96
49	48.8	54 32.4		4.3								−26.187	−.79
α_1				8.1						−25.81 +01		+ 33	50 52.167
				4.7								− 3	
													51 23.38
			9.0	50 56.0	57 7.0	10.3	13.7	17.5	20.8	693	51	1386	−.79
			8.8	58.5								−21.188	51 22.38
κ				5.0						−20.92		+ 29	.59
				57.8								− 3	50 52.99
$((\delta) - D)\frac{\kappa'}{100}$				57 53.0	57 37.0	40.5	44.2	47.8	51.3	2208.	51	4416	−.64
				58.5								−21.188	50 52.35
α_2				2.5						−20.92		+ 29	
				58.7								− 3	51 23.29
													−.64
52	56	53.12	9.2	52 51.6	53 24.8	30.3	33.5	37.0	40.4	1680	53	3360	51 22.65
51	34.2	53 11.9	9.1	54.2								−26.187	
κ				57.0								+ .37	
				54.3						−25.83 +02		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											53	7.78	
												−.79	
α_1											53	7.00	
			9.2	52 56.3	53 21.6	25.2	28.6	32.0	35.5	1429	53	2858	
				59.5								−21.188	
κ				3.6								+ .28	
				59.8						−20.93		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											53	7.70	
												−.64	
α_2											53	7.06	
53	55	53.33	8.4	54 2.0	54 24.1	27.8	31.3	34.7	38.2	1564	54	3128	
52	33.4	53 32.8	8.0	5.4								−26.187	
κ				9.5								+ .38	
				6.7						−25.82 +01		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											54	5.47	
												−.81	
α_1											54	4.66	
			8.7	54 4.3	54 19.3	23.0	26.3	29.8	33.4	1318	54	2636	
				7.0								−21.188	
κ				9.6								+ .28	
				7.0						−20.93		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											54	5.48	
												−.66	
α_2											54	4.77	
54	41	54.25	9.1	55 2.0	55 12.4	16.3	19.9	23.3	26.9	988	55	1976	
53	19.3	54 25.0	9.3	6.4								−26.187	
κ				9.7								+ .38	
				6.4						−25.82 +02		− 3	
$((\delta) - D)\frac{\kappa'}{100}$												53.95	
												−.83	
α_1											56 4	53.12	
			9.1	54 55.7	55 7.8	11.4	15.2	18.5	22.3	752	55	1504	
				57.0								−21.188	
κ				2.6								+ .29	
				57.1						−20.92		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											54	54.17	
												−.68	
α_2											54	53.44	
57	09	54.56	8.6	57 34.1	57 0.5	4.1	7.8	11.3	15.0	387	58	774	
56	6.8	54 55.8	8.2	36.8						79		−26.156	
κ				40.0								+ .40	
				36.9						−25.73 +01		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											57	41.96	
												−.87	
α_1											57	41.089	
			8.5	57 29.0	57 55.7	59.3	3.0	6.6	10.0	3146	58	292	
				21.6								−21.188	
κ				26.3								+ .30	
				22.4						−20.91		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											57	42.06	
												−.72	
α_2											57	41.29	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eq} = −/ 30.16 Feb. 18 31.43 Feb. 24.

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′	
50	+10.5	2 33.0	24.3	42	28.65	54 40 19.70			40	54 32 41.75	33 1.30	
	1.02119	2 33.0	24.3	42	28.65	54 40 19.70			40	− 3	− 6	+14.11
+4.95 d	9.76342					32 49.54	32 57.33			+ 17	+ 17	
+0.74	0.89139n					32 49.54				+ 13.35	+ 13.36	
((δ) − D) $\frac{d'}{100}$	− 155					* 7.79				+ .65	+ .65	
	1.19033n					+11.76	32 31.78			− 16.80	− 16.80	
+4.95 δ₁	9.76342	50 57.12		32 39.8						32 39.09	32 58.61	
+0.74	1.07053n	51 27.54		33 9.4								
02	+14.1	2 26.4	22.1	42	24.25	54 40 24.10			40	32 41.97	33 3.67	
	1.14922	2 26.4	22.1	42	24.25	54 40 24.10			40	− 5	− 5	+14.14
+4.95 d	9.76342					32 52.67	33 3.37			+ 17	+ 17	
+0.74	1.02942n					32 52.67				+ 13.34	+ 13.34	
((δ) − D) $\frac{d'}{100}$	− 14.5					* 10.70				+ 65	+ 65	
	1.16137n					+ 11.00	32 41.67			− 17.40	− 17.40	
+4.95 δ₂	9.76342	50 57.25		32 39.4						32 38.71	33 0.41	
+0.74	1.04157n	51 27.55		33 1.2								
02	+39.3	2 42.1	34.0	2	38.05	53 20 10.30			0	53 12 9.35		
	1.59439					12 40 14				− .40	+12.17	
d	9.77728					* 30.79				+ .18		
	1.48848n						12 10.93			+11.83		
((δ) − D) $\frac{d'}{100}$										+ .56		
+4.86										−16.40		
+0.60 δ₁		53 11.86		12 5.7						12 5.12		
	+28.8	2 48.1	42.4	2	45.50	53 20 2.85			0	12 8.87		
	1.45939					12 31.42				− .22	+12.42	
d	9.77728					* 22.55				+ .19		
	1.35315n						12 5.97			+11.85		
((δ) − D) $\frac{d'}{100}$										+ .60		
+4.86										−17.00		
+0.60 δ₂		53 11.87		12 4.9						12 4.29		
52	+25.4	1 6.7	59.4	41	3.05	53 41 45.30			40	53 33 55.40		
	1.40483					34 15.14				− .16	+12.72	
d	9.77370					* 19.74				+ 7		
	1.29531n						34 34.88			+ 12.24		
((δ) − D) $\frac{d'}{100}$										+ 57		
+4.88										−16.50		
+0.51 δ₁		54 9.54		33 52.1						33 51.62		
	+19.4	1 6.9	1.4	41	41.5	53 41 44.20			40	57.70		
	1.28780					34 12.77				− 9	+12.84	
d	9.77370					* 15.07				+ 7		
	1.17828n						34 27.84			+ 12.26		
((δ) − D) $\frac{d'}{100}$										+ .60		
+4.88										−17.00		
+0.51 δ₂		54 9.65		33 54.0						33 53.54		
	+13.4	0 40.3	32.2	80	36.25	54 32 12.10			50	54 24 31.74		
	1.12710					24 41.94				− 5	+13.82	
d	9.76484					* 10.20				+ 4		
	1.00872n						24 52.14			+ 13.19		
((δ) − D) $\frac{d'}{100}$										+ .64		
+4.94										−16.70		
+0.44 δ₁		54 58.07		24 29.3						24 28.86		
	+15.9	0 33.0	28.4	80	30.98	54 32 17.40			50	33.86		
	1.20740					24 45.94				− 7	+13.81	
d	9.76484					+ 12.11				+ 3		
	1.08302n						24 58.08			+ 13.21		
((δ) − D) $\frac{d'}{100}$										+ .64		
+4.94										− 17.20		
+0.44 δ₂		54 58.38		24 30.9						24 30.47		
82	+30.8	4 28.4	20.4	19	24.65	55 3 23.70			15	54 55 30.39		
	1.48855					54 55 53.54				− .25	+14.53	
d	9.75931					* 23.15				+ 31		
	1.36464n						56 14.69			+ 13.78		
((δ) − D) $\frac{d'}{100}$										+ .69		
+4.98										− 16.80		
+0.19 δ₁		57 46.07		55 28.3						55 28.12		
	+30.5	4 24.1	21.0	19	23.05	55 3 25.30			15	30.94		
	1.48430					54 55 53.87				− .24	+14.56	
d	9.75931					* 22.93				+ .31		
	1.36039n						56 16.80			+13.80		
((δ) − D) $\frac{d'}{100}$										+ .69		
+4.98										−17.30		
+0.19 δ₂		57 46.27		55 28.4						55 28.20		

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.31587R

281

Date$_1$ = Feb. 18, 1874 Observer W. A. R. Recorder J. F. M.

282

Date$_2$ = Feb. 24, 1874 Observer Recorder

32

Star.	α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	h m s	° ′ ″		m s	m s						h m		
	00 05	54.03	8.8	57 58.0	0 34.3	37.9	41.4	44.9	48.3	2068	6 0	4136	
	58 43.2	54 2.9	8.9	03								−26.156	
				5.0								+ .38	
				61.2								− .3	
	κ									− 25.81	+02		
	((δ) − D) $\frac{\kappa'}{100}$										0	15.56	
												− .89	
	c_1										0	14.66	68
			9.0	57 58.0	0 29.2	32.6	36.3	39.6	43.3	1810	0	36.20	
				58.7								−21.137	
				2.6								+ .29	
				58.8								− .3	
	κ									− 20.91			
	((δ) − D) $\frac{\kappa'}{100}$										0	15.33	
												− .74	
	a_2										0	14.55	
	02 22	54.00	8.9	2 23.0	2 32.9	37.4	1.0	4.5	7.6	30.44	3	0.88	
	01 0.5	54 0.0	8.9	36.0								−26.156	
				29.0								+ .38	
				26.0								− .3	
	κ									− 25.81	+01		
	((δ) − D) $\frac{\kappa'}{100}$										2	35.08	
												− .91	
	a_1										2	34.167	
			9.0	2 13.8	2 46.9	52.7	56.0	59.5	2.9	2800	3	8.00	
				18.0								−21.137	
				21.0								+ .29	
				17.6								− .3	
	κ									− 20.91			
	((δ) − D) $\frac{\kappa'}{100}$										2	35.13	
												− .76	
	a_2										2	34.33	
	03 20	54.09	8.7	3 27.1	3 52.8	56.2	59.8	3.3	7.0	2991	3	59.82	
	01 38.4	54 8.9	9.0	29.5								−26.156	
				33.0								+ .38	
				29.4								− .3	
	κ									− 25.81	+02		
	((δ) − D) $\frac{\kappa'}{100}$										3	34.02	
												− .92	
	a_1										3	33.10	
			8.8	3 35.0	3 47.5	51.3	54.9	58.7	2.0	2744	3	54.88	
				38.5								− 21.137	
				40.6								+ .29	
				43.2								− .3	
	κ									− 20.91			
	((δ) − D) $\frac{\kappa'}{100}$										3	34.01	
												− .77	
	a_2										3	33.24	
	05 52	54.05	8.8	5 39.7	6 24.0	27.0	30.6	34.0	37.6	1532	6	20.41	
	04 29.7	54 4.6	8.5	42.0								−26.156	
				46.0								+ .38	
				42.6								− .3	
	κ									− 25.81	+01		
	((δ) − D) $\frac{\kappa'}{100}$										6	4.85	
												− .95	
	a_1										6	3.889	
			8.8	5 49.1	6 18.6	22.3	25.8	29.3	32.8	1288	6	5.76	
				54.0								−21.137	
				57.0								+ .29	
				53.4								− .3	
	κ									− 20.91			
	((δ) − D) $\frac{\kappa'}{100}$										6	4.89	
												− .80	
	a_2										6	4.05	
	08 03	53.41	5.0	8 27.5	8 11.5	16.0	18.5	22.0	25.6	926	8	18.52	
	06 44.4	53 41.2	7.2	29.0								−26.156	
	κ 193		9.0	31.5						− 25.81	+02	+ .38	
				29.3								− .3	
	((δ) − D) $\frac{\kappa'}{100}$			7 57.8	8 34.8	38.5	41.8	45.1	48.7	2089	8	41.78	7 52.73
	(6 41.4)			59.8								−26.156	−.95
	a_1			5.0						− 25.81	+02	+ .38	7 51.68
				60.9								− .3	
			7.8	8 16.2	8 7.2	10.8	14.5	17.8	20.7	712	8	14.24	8 15.99
			9.0	15.6								−21.137	−.96
				17.4								+ .29	8 15.043
	κ									− 20.91		− .3	
	((δ) − D) $\frac{\kappa'}{100}$			7 42.1	8 30.0	33.2	36.6	40.2	44.3	1843	8	36.86	7 58 47.36
				43.8								−21.137	−.82
	a_2			43.8								+ .29	7 52.51
				47.3								− .3	
				44.8						− 20.91			
											8	15.98	
											8	−.82	
												15.13	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs Feb 18. Feb 24.

Reg = −7′30″16 31.43

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+40.2	1′ 31.0	23.3	11′	27.15	54 11 21.20			10′	54 3 20.17	
d	1.60423					3 51.04				− 42	+13.07
	9.76852					− 30.87				+ .10	
((δ) − D) $\frac{d'}{100}$	1.48953						4 21.91			+ 12.79	
										+ .60	
+4.91 δ₁ −0.03		0 19.59		3 16.7						−16.50	
										3 16.74	
	+37.4	1 27.6	23.3	11	25.45	54 11 22.90			10	22.75	
d	1.57287					3 51.47				− 36	+13.15
	9.76852					− 28.72				+ .10	
((δ) − D) $\frac{d'}{100}$	1.45817						4 20.19			+ 12.81	
										+ .60	
+4.91 δ₂ −.003		0 19.46		3 18.8						−17.10	
										3 18.80	
88	+34.9	4 50.3	42.0	14	46.15	54 8 2.20			10	54 0 5.21	
d	1.54283					0 32.04				− 32	+13.34
	9.76904					− 26.83				+ .33	
((δ) − D) $\frac{d'}{100}$	1.42865						0 58.87			+ 12.73	
										+ .60	
+4.91 δ₁ −0.23		2 39.08		0 1.9						− 16.40	
										0 2.15	
	+38.4	4 44.7	40.4	14	42.55	54 8 5.80			10	4.85	
d	1.58433					0 34.37				− 38	+13.30
	9.76904					− 29.52				+ .33	
((δ) − D) $\frac{d'}{100}$	1.47015						+ 8.89			+ 12.75	
										+ .60	
+4.91 δ₂ −0.23		2 39.24		0 1.0						− 16.90	
										0 1.25	
44	+29.9	2 6.0	57.4	7	1.70	54 15 46.65			5	54 7 53.57	
d	1.47567					8 16.49				− 23	+13.40
	9.76782					− 22.92				+ .14	
((δ) − D) $\frac{d'}{100}$	1.36027						8 39.41			+ 12.88	
				50.3						+ .61	
+4.92 δ₁ −0.31		3 38.03		7 56.3						−16.40	
										7 56.57	
	+15.6	2 12.2	8.0	7	10.10	54 15 38.25			5	54.86	
d	1.19312					8 6.82				− 6	+13.60
	9.76782					− 11.96				+ .15	
((δ) − D) $\frac{d'}{100}$	1.07772						8 18.78			+ 12.90	
										+ .61	
+4.92 δ₂ −0.31		3 38.12		7 51.2						−17.00	
										7 51.46	
88	+48.0	0 13.5	6.8	10	9.65	54 12 38.70			10	54 4 31.70	
d	1.68124					5 8.54				− .60	+12.83
	9.76835					− 36.84				+ .1	
((δ) − D) $\frac{d'}{100}$	1.56637						5 45.38			+ 12.81	
										+ .61	
+4.92 δ₁ −0.53		6 8.81		4 27.8						− 16.20	
										4 28.13	
	+22.4	0 20.3	15.5	16	17.90	54 12 30.45			10	34.15	
d	1.51055					4 59.02				− 27	+13.20
	9.76835					− 24.87				+ .2	
((δ) − D) $\frac{d'}{100}$	1.39568						5 28.89			+12.84	
										+ .61	
+4.92 δ₂ −0.53		6 8.97		4 29.9						−16.90	
										4 30.45	
	42	2 48.2	39.7	32	43.95	53 50 4.40			30	5X 42 42.60	42 2.57
	−10.8	2 48.2	39.7	32	43.95	53 50 4.40			30	− 3	+10.82 − .45 +10.38
+4.89 δ d	1.03342	0.92236				42 34.24	42 25.88			+ 19	+ .19
	+40.9					42 34.24				+ 10.18	+ 10.16
((δ) − D) $\frac{d'}{100}$	1.61172					+ 8.36				+ .48	+ .48
+4.89 δ₁ −0.73	9.77216					− 31.67	43 5.91			− 16.10	− 16.10
	1.50066	7 56.67		42 36.6						42 37.32	41 56.85
		8 19.92		41 56.1							
	2	2 35.9	32.8	32	33.35	53 50 15.00			30	42 46.05	42 3.23
	−3.2	2 35.9	30.8	32	33.35	53 50 15.00			30	− .01	+10.87 − .72 +10.14
+4.89 d	0.50515					42 43.57	42 41.09			+ 18	+ .18
−0.73	9.77216	0.39409				42 43.57				+ 10.20	+ 10.18
((δ) − D) $\frac{d'}{100}$	+52.1					+ 2.48				+ .50	+ .50
	1.71684					− 40.34	43 29.91			−16.70	− 16.70
+4.89 δ₂ −0.73	9.77216	7 57.40		42 39.5						42 46.22	41 56.67
	1.60578	8 20.02		41 55.9							

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

281 282 34

Date$_1$ = Feb. 18, 1874 Observer W. A. R. Recorder J. Tuck. Date$_2$ = Feb. 24, 1874 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
6	09 28 54.18		9.0	9m 24.3	9h 39.4	53.0	6.4	10.2	18.7	3.27	6h 10m	6.546	
	08 6.0	54 18.2	7.0	24.3						− 25.80 +01		−26.1 x 6	
	κ		8.9	40.7								+ 39	9 40.76
				37.4								− 3	10 14.24
	((δ) − D) $\frac{\kappa'}{100}$			9 57.8	X 10 180	21.5	28.2	28.6	22.3	1256	X 10	2513	− .99
	8 24.7	54 18.3								− 25.80 +01		−26.1 x 6	9 39.76
	a_1											+ 39	
												− 3	8 59.34
			8.8	9 21.2	9 34.5	38.3	1.6	5.3	9.0	0.87	10	174	− .99
			6.6	28.3								−21.1 x 7	8 58.34
	κ			32.4						− 20.91		+ 29	
				32.6								− 3	9 40.86
	((δ) − D) $\frac{\kappa'}{100}$			9 31.0	X 10 18.4	16.8	20.3	24.1	27.3	1019	9 10	2038	− .85
												−21.1 x 7	9 39.98
	a_2									− 20.91		+ 29	
												− 3	8 59.50
	11 12 54.30		9.1	11 12.8	11 43.0	46.6	50.2	53.7	57.1	2506	11	5012	− .85
	09 49.5	54 30.2	8.9	16.0	46.6							−26.1 x 6	8 58.62
	κ			19.4						− 25.80 +02		+ 39	
				16.1								− 3	
	((δ) − D) $\frac{\kappa'}{100}$										11	24.34	
	a_1										11	− 1.02	
												24.30 23.32	
			8.8	11 [illegible]	11 38.4	41.8	45.5	49.1	52.6	2274	11	4548	
				7.5								−21.1 x 7	
	κ			10.6						− 20.91		+ 29	
				7.5								− 3	
	((δ) − D) $\frac{\kappa'}{100}$										11	24.60	
	a_2										11	− .87	
												23.73	
	12 22 54.08		8.9	12 27.5	12 51.8	55.3	58.9	2.5	6.0	2945	12	5890	
	10 59.2	54 6.4	9.0	30.0								−26.1 x 6	
	κ			32.9						− 25.81 +01		+ 38	
				30.1								− 3	
	((δ) − D) $\frac{\kappa'}{100}$										12	33.11	
	a_1										12	− 1.02	
												32.09	
			9.0	12 26.7	12 47.1	50.3	54.0	57.5	1.1	2700	12	5400	
				30.3								−21.1 x 7	
	κ			32.4						− 20.91		+ .29	
				24.8								− 3	
	((δ) − D) $\frac{\kappa'}{100}$										12	33.12	
	a_2										12	− .88	
												32.21	
	13 05 54.00		8.6	13 29.6	13 36.5	40.0	43.6	47.0	50.6	2177	13	4354	
	11 42.8	54 0.4	8.9	32.6								−26.1 x 6	
	κ			35.7						− 25.81 +02		+ 38	
				32.6								− .3	
	((δ) − D) $\frac{\kappa'}{100}$											+ 2	
	a_1										13	17.75	
											13	− 1.03	
												16.72	
			9.0	13 15.2	13 31.4	35.0	38.5	42.2	45.7	1728	13	3456	
				14.5								−21.1 x 7	
	κ			12.5						− 20.91		+ .29	
				17.4								− 3	
	((δ) − D) $\frac{\kappa'}{100}$										13	17.68	
	a_2										13	− .89	
												16.76	
	15 20 54.36		9.2	15 13.9	15 53.0	56.6	0.1	3.8	7.4	3009	16	[illegible]	
	13 57.8	54 35.9	9.0	19.5								−26.1 x 6	
	κ			21.9						− 25.79 +01		+ 34	
				14.1								− 3	
	((δ) − D) $\frac{\kappa'}{100}$										15	34.48	
	a_1										15	− 1.06	
												33.42	
			8.8	15 14.8	15 48.1	51.7	55.1	58.5	2.1	2755	15	5510	
				17.8								−21.1 x 7	
	κ			21.4						− 20.91		+ 29	
				18.0								− 3	
	((δ) − D) $\frac{\kappa'}{100}$										15	34.22	
	a_2										15	− .92	
												33.27	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs Feb. 18 Feb. 24 35

Reg = −7 30″16 31″43

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+29.1	X2 1.7	52.2	56	56.95	54 24 51.40			55	54 18 59.03	18 0.40
+4.93 +0.76	1.46389	X2 1.7	52.2	56	56.95	54 26 51.40			55	− 22	18 46.20
d	9.76590					198 21.24	19 43.45			+1360	− 19.28 +13.48
	1.34657m					198 21.24				+ 13	+ 13 13.63
+27 (δ) − D) d′/100	32.7					− 22.21				+ 13.86	+ 13.06
1.43616	1.51455m					24.86	18 57.28			+ .63	+ .63
9.76607	976590	9 44.69		17 55.4		− 2.084				− 16.20	− 16.20
1.31904m	1.39723	10 3.27		54.1						18 56.37	17 43.48
										56.43	57.83
	+33.1	1 54.8	50.0	56	52.40	54 25 55.95			55	17 59.25	18 1.20 47.88
+4.93 +0.76	1.51983	1 54.8	50.0	56	52.40	54 25 55.95			55	− .28 +13.56	− .25 +13.59
d	9.76607					18 24.52	18 49.79			+ .13	+ .13
	1.40268m					18 24.52				+ 13.08	+ 13.08
+2.94 (δ) − D) d′/100	−30.6					− 25.27				+ .63	+ .63
1.46835	1.48572m	9 44.91		17 55.2		+ 23.86	18 1.16			− 16.80	− 16.80
9.76607	9.76607	9 44.91		17		− 2.245				17 56.01	18 44.67
1.35128m	1.36857m	10 3.50		58.1							17 58.86
64	+34.0	0 2.3	54.0	44	54.15	54 37 50.20			45	54 29 54.21	
d	1.53148					30 20.04				− .30 +13.65	
	9.76395					− 25.83				+ .00	
	1.41211m						30 47.87			+ 13.30	
(δ) − D) d′/100										+ .65	
+4.94 δ1		11 28.26		29 50.7						− 16.20	
−1.00										29 51.66	
	+38.0	4 53.7	48.8	44	51.85	54 37 56.50			40	56.20	
d	1.57978					30 25.07				− .38 +13.93	
	9.76395					− 28.87				+ .34	
	1.46051m						30 53.74			+ 13.32	
(δ) − D) d′/100										+ .65	
+4.94 δ2		11 28.64		29 52.3						− 16.80	
−1.00										29 53.33	
50	+28.8	1 6.0	56.8	6	1.40	54 16 46.95			5	54 8 54.72	
d	1.45939					9 16.79				− 22 +13.36	
	9.76765					− 2.207				+ .7	
	1.34382m						9 38.86			+ 12.90	
(δ) − D) d′/100										+ .61	
+4.92 δ1		12 37.00		8 50.8						− 16.00	
−1.10										8 52.08	
	+24.2	1 3.1	59.0	6	1.05	54 16 47.30			5	57.33	
d	1.38382					9 15.87				− .15 +13.45	
	9.76765					− 2.18.54				+ .7	
	1.26825m						9 34.41			+ 12.92	
(δ) − D) d′/100										+ .61	
+4.92 δ2		12 37.13		8 59.0						− 16.70	
−1.10										8 54.08	
98	+10.9	3 49.4	41.2	13	45.30	54 9 3.05			10	54 1 24.51	
d	1.03743					1 32.89				− .3 +13.58	
	9.76887					− 8.38				+ 26	
	0.92308m						+ 41.27			+ 12.75	
(δ) − D) d′/100										+ .60	
+4.91 δ1		13 21.65		1 21.0						− 15.90	
−1.17										1 22.19	
	+21.2	3 35.9	31.9	13	33.90	54 9 14.45			10	26.73	
d	1.32634					1 43.02				− .11 +13.52	
	9.76887					− 16.29				+ .25	
	1.21199m						+ 59.31			+ 12.78	
(δ) − D) d′/100										+ .60	
+4.91 δ2		13 21.67		1 22.5						− 16.60	
−1.17										1 23.65	
	+41.1	4 17.8	9.2	39	13.50	54 43 34.85			35	54 35 33.54	
08	1.61384					36 4.69				− .44 +13.91	
d	9.76289					− 31.15				+ .29	
	1.49351m						36 35.84			+ 13.40	
(δ) − D) d′/100										+ .66	
+4.95 δ1		15 38.30		35 30.1						− 16.00	
−1.36										35 31.45	
	+37.1	4 15.0	11.7	39	13.35	54 43 35.00			35	35.45	
d	1.56937					36 3.57				− .34 +14.01	
	9.76289					− 28.12				+ .29	
	1.44904m						36 31.69			+ 13.42	
(δ) − D) d′/100										+ .66	
+4.95 δ2		15 35.22		35 31.4						− 16.70	
−1.36										35 32.76	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

281

Date$_1$ = Feb. 18, 1874 Observer W. A. R. Recorder J. H. M.

282

Date$_2$ = Feb. 24, 1874 Observer Recorder

36

Star.	α	δ	Mag.	T_δ	T_m	T_a	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
6	16 m 56 s	53.00	8.7	16 m 41.2 s	17 23.2	28.5	32.0	35.3	38.9	1599	6 h	17 m 31.98 s	
	15 33.7	53 0.1	9.1	43.0								−26.135	
	κ			43.7								+ 37	
	((δ) — D) $\frac{\kappa'}{100}$			43.3						−25.81	+02	− 3	
	c_1											17 6.19	
												− 1.04	
												17 5.185	
	κ		9.0	16 50.0	17 20.4	23.9	27.3	30.7	34.2	1365		17 27.30	
				53.7								−21.147	
	((δ) — D) $\frac{\kappa'}{100}$			57.2								+ .28	
	c_2			53.6						−20.92		− 3	
												17 6.41	
												− .90	
												17 5.48	
7	17 44	54.57	8.5	18 0.0	18 13.3	18.0	22.4	26.0	29.8	1125		18 22.50	
	16 21.8	54 57.1	8.7	3.6								−26.135	
	κ			6.6								+ .40	
	((δ) — D) $\frac{\kappa'}{100}$			3.4						−25.78	+01	− 3	
	a_1											17 56.74	
												− 1.10	
												17 55.683	
	κ		8.8	18 2.0	18 10.4	14.0	17.6	21.2	24.6	878		18 17.56	
				5.8								−21.147	
	((δ) — D) $\frac{\kappa'}{100}$			11.2								+ .30	
	a_2			6.7						−20.90		− 3	
												17 56.69	
												− .95	
												17 55.71	
8	18 45	54.24	8.7	18 57.0	19 17.0	20.4	24.0	27.6	31.2	1202		19 24.04	
	17 23.2	54 23.6	9.0	56.2								−26.135	
	κ			59.9								+ .39	
	((δ) — D) $\frac{\kappa'}{100}$			56.7						−25.79	+02	− 3	
	a_1											18 58.27	
												− 1.10	
												18 57.177	
	κ		9.1	18 53.6	19 12.1	15.7	19.1	22.6	26.3	958		19 19.16	
				52.2								−21.147	
	((δ) — D) $\frac{\kappa'}{100}$			2.2								+ .29	
	a_2			54.0						−20.91		− 3	
												18 58.28	
												− .96	
					5.0							18 57.29	
9	20 08	54 58		20 [illegible]	20 8.5	12.0	15.6	19.0		601		20 [illegible]	
	19 35.9	54 58.1	8.0	4.0								−26.135	
	κ			4.7								+ .38	
	((δ) — D) $\frac{\kappa'}{100}$			24.1						−25.80	+01	− 3	
	a_1			27.2								19 46.24	
				30.7								− 1.09	
				27.3								19 45.184	
	κ		8.6	20 2.0	20 0.0	3.7	7.1	10.5	14.2	355		20 [illegible]	
												−21.147	
	((δ) — D) $\frac{\kappa'}{100}$											+ .29	
	a_2									−20.91		− 3	
												19 46.22	
												− .96	
												19 45.26	
10	21 44	54.56	8.9	21 33.8	22 7.9	11.6	15.1	18.4	22.1	751		22 15.02	
	20 [illegible]	54 [illegible]	7.8	38.8								−26.125	
	κ 11.0	52.1		42.3								+ .40	
	((δ) — D) $\frac{\kappa'}{100}$			38.9						−25.78	+02	− 3	
	a_1											21 49.27	+4.96
												− 1.14	−.192
												21 48.132	
	20 21.7	54 56.5	7.5	21 53.0	22 10.1	13.9	17.7	21.0	24.7	873		22 [illegible]	
	κ			58.3								−21.147	
	((δ) — D) $\frac{\kappa'}{100}$			2.0								+ .30	
	a_2			58.4						−20.89		− 3	
												21 56.60	+4.97
												− 1.01	−.192
												21 55.58	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs $R_{eq} = -\frac{1}{3016}$ Feb 18 Feb 24 31.43

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
68	0	0 ′ 55.0	45.9	15	30.48	53 6 57.90			15	52 58 49.37	Eq min
d	+47.7					52 59 27.74				− 6.3	+ 1159
	1.68453					−*38.37	0 · 6 11			+ 6	
((δ) − D) $\frac{d'}{100}$	9.77963									+ 11.61	
	1.58394 m									+ .55	
+4.84										− 15 60	
−1.41 δ₁		17 9.99		58 44.0						58 45.36	
	+33.7	0 2.5	58.2	15 16	0.35	53 6 48.00			15	58 50.03	
d	1.52763					0 16.57				− 30	+ 11.93
	9.77946					−*26.54	0 43.11			+ 11.63.00	
((δ) − D) $\frac{d'}{100}$	1.42387 m									+ 9.40	
										+ .60	
+4.84										− 16.20	
−1.41 δ₂		17 10.32		58 44.4						58 45.76	
54	+19.1	2 5.5	57.7	17	1.60	55 5 46.75			15	54 58 2.24	
d	1.28103					54 58 16.59				− 9	+14.56
	9.75895					−*14.35	58 30.94			+ 14	
((δ) − D) $\frac{d'}{100}$	1.15676 m									+13.82	
		18								+ .69	
+4.97		+17 10.60		57 59.1						− 16.10	
−1.57 δ₁										58 0.70	
	+10.9	2 8.6	3.7	17	6.15	55 5 42.20			15	2.58	
d	1.03743					54 58 10.77				− 13	+14.65
	9.75895					−*8.19	58 18.96			+ 15	
((δ) − D) $\frac{d'}{100}$	0.91316 m									+ 13.84	
										+ .69	
+4.97										− 16.80	
−1.57 δ₂		18 0.68		57 58.9						58 0.43	
88	+27.3	1 15.0	6.1	21	10.55	54 31 37.80			50	54 23 46.85	
d	1.43616					24 4.64				− .19	+13.71
	9.76501					−*20.79	24 28.43			+ 8	
((δ) − D) $\frac{d'}{100}$	1.31795 m									+ 13.18	
										+ .64	
+4.93										− 15.90	
−1.66 δ₁		19 2.10		23 43.0						23 44.66	
	+20.2	1 15.7	10.5	27	13.10	54 31 35.25			50	48.43	
d	1.30535					24 3.82				− 10	+13.82
	9.76501					−*15.39	24 29.21			+ 8	
((δ) − D) $\frac{d'}{100}$	1.18714 m									+ 13.20	
										+ .64	
+4.93										− 16.58	
−1.66 δ₂		19 2.22		23 44.1						23 45.75	
52	+46.7	4 41.0	31.7	19	36.45	54 3 11.90			15	53 55 53.52	
d	−*15.3					53 55 41.74				− 6	+13.50
	1.18469 m					+*11.78	55 29.96			+ 82	
((δ) − D) $\frac{d'}{100}$	9.76991									+ 12.65	
	1.07138 m									+ .59	
										− 15.70	
δ₁										55 51.32	
	+4.1	4 ~~19.4~~	0.7	20	2.90	54 2 45.45			20	55 11.86	Eq
d	0.61278	0 5.1				53 55 14.02				− .01	+13.25
	9.77009					−*3.16	55 17.18			+ 10	
((δ) − D) $\frac{d'}{100}$	0.49965 m									+ 12.66	
										+ .60	
										− 16.40	
δ₂										55 8.71	
	+36.1	2 11.0	1.0	22	6.00	55 0 42.35			20	54 52 45.02	Eq
d	1.55751					54 53 12.19				− 33	+14.23
	9.75985					−**27.17	53 39.36			+ 14	
((δ) − D) $\frac{d'}{100}$	1.43414 m									+13.73	
										+ 69	
										− 15.90	
δ₁		21 53.08		52 41.4						52 43.35	
	+19.1	3 35.1	31.0	18	33.05	55 4 15.30			15	56 29.52	Eq
d	1.28103					54 56 43.87				− 09	+14.67
	9.75913					−*14.35	56 58.23			+ 25	
((δ) − D) $\frac{d'}{100}$	1.15694 m									+13.82	
										+ 69	
										− 16 60	
δ₂		22 0.55		56 25.7						56 27.59	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Date$_1$ = Feb. 18, 1874 Observer W. A. K. Date$_2$ = Feb. 24, 1874 Observer
n = +.28 Recorder J. F. M. n = +.21 Recorder

Feb 14

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
6	36 26	54.28	8.7	36 11.8	36 37.5	1.0	4.6	8.3	11.8	2.32	6 37	464	
35	4.4	54 29.1	8.8	14.9								−26.1X4	
κ				12.4						−25.78+01		+ .39	
36.14			9.0	14.7								− 3	
((δ) − D) $\frac{\kappa'}{100}$				35 28.0	36 0.6	4.1	7.6	11.4	14.9	3.86	36	772	36 38.89
				31.0								+31.14	−1.29
c_1				33.5								+ 35	36 37.57
				30.8						+ 3.146		− 3	36 39.18
			8.8	36 14.6	36 32.8	56.5	0.0	3.4	7.3	30.00	37	000	−1.29
				14.8								−21.1X5	36 37.89
κ				21.3								+ 29	
				17.4						− 20.90		− 3	
((δ) − D) $\frac{\kappa'}{100}$											36	39.11	
												−1.15	
c_2											36	37.95	
44	35	54.47	9.0	44 31.0	45 9.7	13.4	16.8	20.6	24.1	8.46	45	1692	
43	14.0	54 48.3	8.5	33.7								−26.1X4	
κ				36.9								+ 40	
				33.9						− 25.77+02		− 3	
((δ) − D) $\frac{\kappa'}{100}$											44	51.18	
												−1.38	
α_1											44	49.7X9	
			8.8	44 20.7	45 5.0	8.5	12.1	15.6	19.2	6.04	45	1208	
				23.6								−21.1X5	
κ				26.5								+ .30	
				23.6						− 20.88		− 3	
((δ) − D) $\frac{\kappa'}{100}$											44	51.19	
												−1.26	
α_2											44	49.94	
45	54	54.24	9.1	45 47.1	46 26.2	29.5	32.1	36.8	40.2	16.88	46	1816	
44	33.2	54 24.9	8.9	49.6								−26.1X4	
κ				53.0								+ .39	
				49.9						− 25.78+01		− 3	
((δ) − D) $\frac{\kappa'}{100}$											46	742	
												−1.38	
α_1											46	6.021	
			9.0	45 41.6	46 21.6	25.0	28.7	32.0	35.6	14.29	46	2588	
				44.3								−21.1X5	
κ				48.6								+ .29	
				44.8						− 20.89		− 3	
((δ) − D) $\frac{\kappa'}{100}$											46	7.68	
												−1.26	
α_2											46	6.43	
46	46	54.27	8.4	47 6.6	47 18.3	22.0	25.5	29.0	32.6	12.74	47	2548	
45	25.5	54 27.7	8.0	7.0								−26.1X4	
κ				12.0								+ .39	
				9.2						− 25.78+02		− 3	
((δ) − D) $\frac{\kappa'}{100}$											46	59.74	
												−1.39	
α_1											46	58.353	
			8.3	46 54.3	47 13.5	17.2	20.7	24.4	27.8	10.36	47	2072	
				55.1								−21.1X5	
κ				2.6								+ .29	
				58.7						− 20.89		− 3	
((δ) − D) $\frac{\kappa'}{100}$											46	59.82	
												−1.27	
α_2											46	58.56	
47	45	54.39	8.9	48 4.0	48 18.0	21.6	25.4	29.0	32.6	13.66	48	2532	
46	23.9	54 39.9	8.8	6.4								−26.1X3	
κ				10.5								+ .39	
				6.7						− 25.77+01		− 3	
((δ) − D) $\frac{\kappa'}{100}$											47	59.58	
												−1.41	
α_1											47	58.175	
			9.0	48 5.0	48 13.6	17.0	20.7	24.0	27.6	10.29	47	2058	
				8.3								−21.1X5	
κ				14.1								+ .29	
				9.1						− 20.89		− 3	
((δ) − D) $\frac{\kappa'}{100}$											47	59.68	
												−1.29	
α_2											47	58.40	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs | Feb. 18 | Feb. 24 | Feb. 14

R_{Eq} = | −7′ 30.16 | 31.43 | 31.15

														Feb. 14
	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z				δ′
64	+49.9	2′ 32.0	22.7	47	27.35	54 35 21.00			45	54 27 12.84				27 13.04
d	1.69810					27 50.84				− .65	+13.41			− .36
	9.76431					− 37.95	28 28.79			+ 17				+ 16
+4.92	1.57919 m	2 38.3	33.9	47	36.10	54 35 12.25			45	+ 13.25				+ 12.93
−3.19 ((δ) − D) $\frac{d'}{100}$	+36.9					27 41.10				+ .64				+ .64
	1.56703					− 28.06				− 15.20				− 15.20
+4.92 δ_1	9.76431	36 42.50		27 7.9			28 9.16			27 11.10				27 11.21
−3.19	1.44812 m	42.81		8.0										
	+42.1	2 34.9	28.9	47	31.90	54 35 16.45			45	13.00				
d	1.62428					27 48.02				− .46	+13.63			
	9.76431					− 32.02	28 17.04			+ .18				
((δ) − D) $\frac{d'}{100}$	1.50537 m									+ 13.27				
+4.92										+ .64				
−3.19 δ_2		36 42.87		27 7.6						− 15.80				
										27 10.83				
84	+42.0	3 27.0	17.9	28	22.45	54 54 25.90			25	54 46 22.61				
d	1.63347					46 55.74				− .47	+14.06			
	9.76093					− 33.13				+ .23				
((δ) − D) $\frac{d'}{100}$	1.52018 m						47 28.87			+ 13.62				
+4.93										+ .68				
−3.90 δ_1		44 54.72		46 17.9						− 14.90				
										46 23.77				
	+48.5	3 19.5	15.2	28	17.35	54 54 31.00			25	22.97				
d	1.68574					46 59.57				− .59	+13.96			
	9.76093					− 36.60				+ .23				
((δ) − D) $\frac{d'}{100}$	1.56345 m						47 36.17			+ 13.64				
				173						+ .68				
+4.93 δ_2										− 15.70				
−3.90		44 54.87		46 783						46 27.23				
	+43.3	1 13.0	2.9	57	7.95	54 31 40.40			50	54 23 37.26				
d	1.63649					24 10.24				− .48	+13.42			
	9.76507					− 32.98				+ .8				
((δ) − D) $\frac{d'}{100}$	1.51828 m						24 43.22			+ 13.18				
										+ .64				
+4.90 δ_1										− 14.70				
−4.01		46 10.91		23 32.0						23 35.98	✓			
	+43.8	1 9.8	4.9	50 51	7.35	54 32 41.00			50	23 36.23				
d	1.64147					25 4 9.57				− .50	+13.35			
	9.76484					− 33.34				+ .1				
((δ) − D) $\frac{d'}{100}$	1.52299 m						25 42.91			+ 13.20				
										+ .64				
+4.90 δ_2										− 15.50				
−4.01		46 11.33		23 30.1						24 34.08	✓			
										23				
96	+16.3	3 42.9	41.3	48	45.60	54 34 2.75			45	54 26 20.19				
d	1.21219					26 32.59				− .7	+14.06			
	9.76448					− 12.40				+ .26				
((δ) − D) $\frac{d'}{100}$	1.09348 m						26 44.99			+ 13.23				
										+ .64				
+4.90 δ_1										− 14.70				
−4.08		47 3.23		26 15.5						26 19.55				
	+22.0	3 42.1	38.0	48	45.05	54 34 8.30			45	20.13				
d	1.34242					26 36.87				− .13	+14.02			
	9.76448					− 16.74				+ .26				
((δ) − D) $\frac{d'}{100}$	1.22368 m						26 53.61			+ 13.25				
										+ .64				
+4.90 δ_2										− 15.50				
−4.08		47 3.46		26 14.6						26 18.65				
74	+18.4	4 32.7	24.0	34	28.35	54 48 20.00			30	54 40 35.92				
d	1.26482					40 49.84				− .8	+14.40			
	9.76200					− 13.92				+ .31				
((δ) − D) $\frac{d'}{100}$	1.14360 m						41 3.76			+ 13.50				
										+ .67				
+4.91 δ_1										− 14.70				
−4.17		48 3.06		40 31.4						40 35.62				
	+11.5	4 36.4	32.4	34	34.40	54 48 13.95			30	33.84				
d	1.06070					40 42.52				− .8	+14.48			
	9.76200					− 8.68				+ .32				
((δ) − D) $\frac{d'}{100}$	1.93898 m						40 51.20			+ 13.52				
+4.91										+ .67				
−4.17 δ_2		48 3.31		40 28.6						− 15.50				
										40 32.82				

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

281 | 282 | 40

Date$_1$ = Feb. 18, 1874 | Observer Z. A. R. | Recorder J. F. M.

Date$_2$ = Feb. 24, 1874 | Observer | Recorder

Star.	α	δ	Mag.	T_a	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
64	48 50	54 16	8.8	47 48	49 22.5	26.0	29.7	33.2	37.0	1484	49	2968	
	47 29.4	54 17.4	8.9	7.8								−26.183	
	κ			11.6								+ .39	
	((δ) − D) $\frac{\kappa'}{100}$			8.1						− 25.77 +02		− 3	
	a_1										49	3.94	
											49	−1.412	
												2.582	
			8.8	48 56.3	49 17.8	21.3	24.8	28.4	32.0	1243	49	2486	
				59.6								−21.185	
	κ			3.1								+ .29	
	((δ) − D) $\frac{\kappa'}{100}$			59.7						− 20.89		− 3	
	a_2										49	3.96	
											49	−1.28	
												2.68	
49 48	56 35.4	54.37 54 38.1	8.7 8.5	50 12.4	50 29.3	33.1	36.7	40.4	44.0	1835	50	3670	
	κ			16.3								−26.183	
	((δ) − D) $\frac{\kappa'}{100}$			20.7						− 25.77 +01		+ .39	
	a_1			16.8								− 3	
											50	10.96	
											50	−1.43	
												9.531	
			8.7	48 49.7	50 24.7	28.4	31.8	35.3	39.0	1594	50	3188	
				54.0								−21.185	
	κ			57.6								+ .29	
	((δ) − D) $\frac{\kappa'}{100}$			53.8						− 20.89		− 3	
	a_2										50	10.98	
											50	−1.31	
												9.67	
51 49	14 52.8	54.22 54 23.7	9.1 8.8	51 26.0	51 45.6	49.3	52.9	56.3	59.9	2640	51	5280	
	κ			28.9								−26.083	
	((δ) − D) $\frac{\kappa'}{100}$			32.4						− 25.77 +02		+ .39	
	a_1			27.4								− 3	
											51	27.07	
												−1.441	
											51	25.629	
			8.7	50 55.3	51 40.8	44.3	47.9	51.5	55.1	2896	51	4792	
	κ			57.3								−21.185	
	((δ) − D) $\frac{\kappa'}{100}$			0.3						− 20.89		+ .29	
	a_2			57.7								− 3	
											51	27.02	
												−1.32	
											51	25.71	
52 51	36 14.9	54.13 54 14.4	8.1 7.5	52 24.0	53 8.6	12.2	15.8	19.3	23.0	789	53	1578	
	κ			24.4								−26.093	
	((δ) − D) $\frac{\kappa'}{100}$			40.7						− 25.77 +01		+ .39	
	a_1			27.4								− 3	
											52	50.05	
											52	−1.445	
												48.605	
			7.7	52 28.3	53 0.8	7.2	10.8	14.5	18.2	545	53	1090	
	κ			31.7								−21.185	
	((δ) − D) $\frac{\kappa'}{100}$			34.6						− 20.89		+ .29	
	a_2			31.5								− 3	
											52	50.00	
											52	−1.31	
												48.70	
56 54	04 42.7	54.27 54 28.6	9.2 9.0	56 7.3	56 36.7	40.2	43.6	47.1	50.8	9884	56	4768	
	κ			10.2								−26.093	
	((δ) − D) $\frac{\kappa'}{100}$			14.6						− 25.77 +02		+ .39	
	a_1			10.7								− 3	
											56	17.95	
											56	−1.494	
												16.456	
			8.8	56 1.3	56 31.5	35.2	38.6	42.5	46.0	1938	56	3876	
	κ			3.6								−21.175	
	((δ) − D) $\frac{\kappa'}{100}$			7.8						− 20.89		+ .29	
	a_2			4.2								− 3	
											56	17.85	
												−1.37	
											56	16.50	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eq} = Feb. 18 −7′ 30.16 Feb. 24 31.43

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
82	+21.6	3′ 54.1	44.1	58	49.10	54 23 59.25			55	54 16 12.54	
d	1.33445					16 29.09				− .13	+13.82
	9.76625					−*16.50				+ .27	
((δ) − D) $\frac{d'}{100}$	1.21748m						16 45.59			+ 13.05	
+4.89										+ .63	
−4.26 δ_1		49 7.41		16 7.6						− 14.60	
										16 11.81	
	+25.2	3 48.9	43.7	58	46.20	54 24 2.05			55	11.37	
d	1.40140					16 30.62				− .16	+13.80
	9.76625					−*19.25				+ .26	
((δ) − D) $\frac{d'}{100}$	1.28443m						16 49.87			+ 13.07	
+4.89										+ .63	
−4.26 δ_2		49 7.58		16 5.5						− 15.40	
										16 9.77	
82	+19.9	2 14.9	6.8	37	10.85	54 45 37.50			35	54 37 52.27	
d	1.29885					38 7.34				− .10	+14.18
	9.76253					−*15.07				+ .15	
((δ) − D) $\frac{d'}{100}$	1.17816m						38 22.41			+ 13.47	
+4.91										+ .66	
−4.36 δ_1		50 14.42		37 47.5						− 14.60	
										37 51.85	
	+38.1	1 57.7	32.3 52.35	36	44.70 55.10	54 46 53.25			35	38 52.96	
d	1.58092					38 23.82				−7 .38	+13.89
	9.76253					−*28.86				+ .12	
((δ) − D) $\frac{d'}{100}$	1.46023m						39 0.68			+ 13.49	
+4.91										+ .66	
−4.36 δ_2		50 14.59		37 47.1						− 15.40	
										37 51.45	
88	+23.4	2 11.3	2.1	82	6.70	54 30 41.65			50	54 22 53.66	
d	1.36922					23 11.49				− .14	+13.83
	9.76519					−*17.83				+ .15	
((δ) − D) $\frac{d'}{100}$	1.25119m						25 29.32			+ 13.18	
+4.89										+ .64	
−4.47 δ_1		51 30.50		22 48.6						− 14.40	
										22 53.09	
	+50.2	1 49.0	44.0	57	46.50	54 31 1.85			50	52.17	
d	1.70070					23 30.42				− .65	+13.31
	9.76519					−*38.25				+ .12	
((δ) − D) $\frac{d'}{100}$	1.58267m						24 8.67			+ 13.20	
+4.89										+ .64	
−4.47 δ_2		51 30.60		22 45.4						− 15.30	
										22 50.18	
88	+38.4	1 20.6	11.0	1	16.80	54 21 32.55			0	54 13 33.02	
d	1.58433					14 2.39				− .38	+13.33
	9.76677					−*29.37				+ .9	
((δ) − D) $\frac{d'}{100}$	1.46788m						14 31.76			+ 13.00	
+4.88										+ .62	
−4.58 δ_1		52 53.46		13 27.7						− 14.10	
										13 32.25	
	+39.4	1 16.3	11.4	1	18.85	54 21 34.50			0	32.94	
d	1.59550					14 3.07				− .40	+13.32
	9.76677					−*30.13				+ .8	
((δ) − D) $\frac{d'}{100}$	1.47905m						14 33.20			+ 13.02	
+4.88										+ .62	
−4.58 δ_2		52 53.58		13 26.7						− 15.00	
										13 31.26	
52	+33.0	2 28.0	17.5	47	22.75	54 35 25.60			45	54 27 30.34	
d	1.51851					27 55.44				− .28	+13.80
	9.76431					−*25.10				+ .17	
((δ) − D) $\frac{d'}{100}$	1.39960m						28 20.54			+ 13.27	
+4.89										+ .64	
−4.88 δ_1		56 21.33		27 25.0						− 14.30	
										27 29.84	
	+34.6	2 23.6	18.5	47	21.05	54 35 27.30			45	29.56	
d	1.53908					27 55.84				− .32	+13.77
	9.76431					−*26.31				+ .16	
((δ) − D) $\frac{d'}{100}$	1.42017m						28 22.18			+13.29	
+4.89										+ .64	
−4.88 δ_2		56 21.39		27 23.3						− 15.20	
										27 28.13	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

283 — 264 — 42

Date$_1$ = May 1, 1874 — Observer W.A.R. — Recorder J. Fidl. — n = +.20

Date$_2$ = May 2, 1874 — Observer — Recorder — n = +.12

Star.	α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
6ᴷ	18ᵐ 45ˢ	52.12	7.8	18ᵐ 44ˢ	19ᵐ 4.0	7.4	10.8	14.2	17.5	539	19ᵐ 10.78		
17	23.4	52 13.4	8.0	46.2							−17.35		
	κ			49.5							+ .26		
				46.7					− 17.01		− 2		
	((δ) — D) $\frac{\kappa'}{100}$									18	53.77		
											− .79		
	a_1									18	52.98		+4.79 −1.66
			7.9	18 26.5	19 8.5	6.9	10.0	13.5	16.8	507	19 10.14		
				23.6							−16.49		
	κ			32.1							+ .15		
				29.4					− 16.36		− 2		
	((δ) — D) $\frac{\kappa'}{100}$									18	53.78		+4.79
											− .77		
	a_2									18	53.01		−1.66
	20 16	52.51	8.0	20 15.8	20 37.3	40.7	44.0	47.6	51.0	1206	20 44.12		
18	54.2	52 52.3	7.7	17.9							−17.25		
	κ			21.3							+ .26		
				18.3					− 17.01		− 2		
	((δ) — D) $\frac{\kappa'}{100}$									20	27.11		
											− .82		+4.83
	a_1									20	26.29		−1.79
			8.4	20 4.8	20 36.5	40.0	43.4	47.0	50.4	2173	20 43.46		
				7.5							−16.49		
	κ			10.0							+ .16		
				7.4					− 16.35		− 2		
	((δ) — D) $\frac{\kappa'}{100}$									20	27.11		
											− .80		+4.83
	a_2									20	26.31		−1.79
	21 33	54.52	8.3	21 32.5	21 39.0	2.6	6.2	9.7	13.3	908	22 06.16		
20	11.0	54 52.1	8.1	33.3							−17.25		
	κ			38.6							+ .29		
				35.5					− 16.99		− 3		
	((δ) — D) $\frac{\kappa'}{100}$									21	49.17		
											− .89		+4.96
	a_1									21	48.28		−1.91
			8.7	21 34.2	21 38.3	2.0	5.6	9.3	12.8	2802	22 50.10		
				37.8							−16.49		
	κ			40.9							+ .17		
				37.6					− 16.35		− 3		
	((δ) — D) $\frac{\kappa'}{100}$									21	49.25		
											− .87		+4.96
	a_2									21	48.38		−1.91
	23 18	54.10	8.9	23 16.1	23 22.8	43.3	46.8	50.4	53.9	2342	23 46.84		
21	55.8	54 10.2	8.9	19.9							−17.25		
	κ			22.8							+ .28		
				19.6					− 17.00		− 3		
	((δ) — D) $\frac{\kappa'}{100}$									23	29.84		
											− .92		+4.91
	a_1									23	28.92		−2.05
			9.0	23 18.3	23 39.1	42.6	46.4	49.9	53.4	2314	23 46.28		
				28.3							−16.49		
	κ			25.8							+ .17		
				22.8					− 16.35		− 3		
	((δ) — D) $\frac{\kappa'}{100}$									23	29.93		+4.91
											− .89		−2.05
	a_2									23	29.04		
	25 11	52.04	8.0	24 53.7	25 32.3	35.6	39.0	42.4	45.8	1951	25 39.02		
23	49.6	52 5.0	7.7	58.7							−17.25		
	κ			1.6							+ .26		
				58.6					− 17.01		− 2		
	((δ) — D) $\frac{\kappa'}{100}$									25	22.01		
											− .86		+4.78
	a_1									25	21.15		−2.21
			7.8	25 10.6	25 31.6	35.1	38.4	41.7	45.0	1918	25 38.36		
				13.6							−16.49		
	κ			16.3							+ .15		
				13.5					− 16.36		− 2		
	((δ) — D) $\frac{\kappa'}{100}$									25	22.00		
											− .83		+4.78
	a_2									25	21.17		−2.21

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs — Mar. 1 Reg = −7′ 30.″44 +.07 — Mar. 2 30.″48 +.07

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+24.1	2′ 55.8	52.9	2′	54.35	52 19 54.00			0′	52 12 4.23	
	1.38202					12 23.56				− 15	+10.91
64 d	9.78739					−* 19.33				+ .20	
	1.28619m						12 42.89			+ 10.30	
((δ) − D) d′/100										+ .56	
										− 16.40	
δ1		18 57.77		11 57.1						11 54.74 / 58.74	
	+40.7	2 38.4	38.2	2	38.30	52 20 10.05			0	12 6.94	
	1.60959					12 39.57				− .45	+10.54
d	9.78723					−* 32.63				+ .18	
	1.51360m						13 12.20			+ 10.25	
((δ) − D) d′/100										+ .56	
										− 16.50	
δ2		18 57.80		11 59.3						12 0.98	
	+25.8	1 37.5	33.8	21	35.65	53 1 12.70			20	52 53 21.90	
	1.41162					52 53 42.26				− 18	+11.57
66 d	9.78047					−* 20.36				+ 11	
	1.30887m						54 2.62			+ 11.04	
((δ) − D) d′/100										+ .60	
										− 16.60	
δ1		20 31.12		53 15.1						53 16.87	
	+36.1	1 28.8	25.9	21	25.85	53 1 22.50			20	23.53	
	1.55751					52 53 52.02				− .34	+11.35
d	9.78047					−* 28.49				+ .10	
	1.45476m						54 20.51			+ 10.99	
((δ) − D) d′/100										+ .60	
										− 16.70	
δ2		20 31.14		53 16.4						53 18.18	
	+30.7	2 9.1	6.1	22	7.60	55 0 40.75			20	54 52 46.07	
	1.48714					54 53 10.31				− .25	+13.79
d	9.78063					−* 24.24				+ .15	
	1.38455m						53 34.55			+ 13.20	
((δ) − D) d′/100										+ .69	
										− 17.20	
δ1		21 53.24		52 40.8						52 42.66	
	+28.0	2 8.3	8.3	22	8.30	55 0 40.05			20	47.46	
	1.44716					54 53 9.57				− .20	+13.78
d	9.78063					−* 22.11				+ .15	
	1.34457m						53 31.68			+ 13.12	
((δ) − D) d′/100										+ .69	
										− 17.30	
δ2		21 53.34		52 42.0						52 43.94	
	+27.2	4 8.2	4.9	4	6.55	54 18 41.80			0	54 10 50.53	
	1.43457					11 11.36				− .19	+13.16
56 d	9.76730					−* 20.83				+ .29	
	1.31865m						4 32.19			+ 12.44	
((δ) − D) d′/100										+ .62	
										− 16.90	
δ1		23 33.83		10 44.7						10 46.79	
	+23.5	4 9.7	8.7	4	9.20	54 18 39.15			0	50.67	
	1.37107					11 8.67				− .14	+13.16
d	9.76730					−* 18.00				+ .29	
	1.25515m						11 26.67			+ 12.39	
((δ) − D) d′/100										+ .62	
										− 17.00	
δ2		23 33.95		10 44.8						10 46.83	
	+40.4	0 29.7	26.2	10	27.95	52 12 20.40			10	52 4 17.48	
	1.60638					4 49.96				− .42	+10.32
66 d	9.78853					−* 32.48				+ .3	
	1.51169m						5 22.44			+ 10.16	
((δ) − D) d′/100										+ .55	
										− 16.20	
δ1		25 25.93		4 9.4						4 11.60	
	+25.2	0 38.7	38.5	10	38.60	52 12 9.75			10	19.01	
	1.40140					4 39.27				− .17	+10.53
d	9.78853					−* 20.26				+ .4	
	1.30671m						4 59.53			+ 10.11	
((δ) − D) d′/100										+ .55	
										− 16.30	
δ2		25 25.95		4 11.0						4 13.24	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

283 | 284 | 44

Date$_1$ = Mar. 1, 1874 | Observer W. A. R. | Recorder J. F. M. | Date$_2$ = Mar. 2, 1874 | 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
6	27 m 42 s	0 ′ 50.11	9.0	29 m 36.5	28 m 7.2	10.5	12.7	17.0	20.1	6.85	28 m	13.70	
	26 26.8	50 11.4	8.9	39.4								−17.24	
	κ			41.8								+ .24	
				39.2						− 17.02		− 2	
	((δ) − D) $\frac{\kappa'}{100}$										27	56.68	
												− .85	
	a_1										27	55.83	
			9.1	27 31.6	28 6.6	9.9	13.0	16.2	19.7	6.54	28	13.08	
				35.1								−16.49	
	κ			37.5								+ .14	
				34.7						− 16.37		− 2	
	((δ) − D) $\frac{\kappa'}{100}$										27	56.71	
												− .83	
	a_2										27	53.88	
	28 20	52.23	9.4	29 12.6	28 40.5	43.9	47.3	50.6	54.0	2363	28	4726	
	26 58.3	52 24.6	8.8	13.6								−17.24	
	κ		8.6	12.1								+ 26	
										− 17.00		− 2	
	((δ) − D) $\frac{\kappa'}{100}$										28	30.26	
												− .90	
	a_1										28	29.36	
			9.3	28 38.7	28 32.8	43.2	46.7	50.0	53.3	2330	28	4660	
			8.8									−16.49	
	κ											+ .15	
										− 16.36		− 2	
	((δ) − D) $\frac{\kappa'}{100}$										28	30.24	
												− .87	
	a_2										28	29.37	
	29 15	54.07	9.0	29 37.0	29 37.2	40.7	44.4	47.8	51.4	2215	29	4430	
	27 52.8	54 7.5	9.0	2.0								−17.24	
	κ			5.0								+ .27	
				62.0						− 17.00		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										29	27.30	
												− .94	
	a_1										29	26.36	
			9.1	29 53.1	29 36.6	40.5	43.8	47.3	50.3	2185	29	4370	
				57.6								−16.48	
	κ			55.3								+ .17	
										− 16.34		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										29	27.36	
												− .92	
	a_2										29	26.44	
	31 36	52.41	9.0	31 55.4	32 4.2	7.5	10.9	14.3	17.6	545	32	1040	
	30 17.4	52 41.5	9.0	39.5								−17.24	
	κ			42.3								+ .26	
				39.1						− 17.00		− 2	
	((δ) − D) $\frac{\kappa'}{100}$										31	53.90	
												− .94	
	a_1										31	52.96	
			9.3	31 38.0	32 3.4	7.0	10.3	13.5	16.9	511	32	1022	
				41.4								−16.48	
	κ			44.9								+ .16	
				41.4						− .16.34		− 2	
	((δ) − D) $\frac{\kappa'}{100}$										31	53.88	
												− .92	
	a_2										31	52.96	
	33 27	52 15	8.8	33 17.0	33 51.5	54.9	58.3	1.6	5.0	293	33	5826	
	32 8.3	52 15.5	8.9	23.2								−17.24	
	κ			25.3								+ .26	
				22.2						− 17.00		− 2	
	((δ) − D) $\frac{\kappa'}{100}$										33	41.26	
												− .95	
	a_1										33	40.31	
			8.8	33 24.9	33 58.8	54.2	57.6	0.9	4.4	279	33	5758	
				28.3								−16.48	
	κ			40.2								+ .15	
				31.8						− 16.35		− 2	
	((δ) − D) $\frac{\kappa'}{100}$										33	41.23	
												− .93	
	a_2										33	40.30	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eq} = −7′30.44 30.48 Mon. 1 Mon. 2

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
62	+34.5	2′ 50.7	48.6	2′	49.65	50 19 58.70			0′	50 11 59.37	
	1.53782					12 28.26				− 31	+8.54
d	9.80610					− 28.89				+ 22	
	1.46070$_m$						+2 −57.15			+ 8.17	
((δ) − D) $\frac{d'}{100}$										+ .46	
+4.66										− 15.60	
−2.44 δ_1		28 0.49		11 49.9						11 52.31	
	+38.4	2 45.2	45.9	2	45.55	50 20 2.80			0	12 0.17	
	1.58433					12 32.32				− 39	+8.39
d	9.80610					− 32.15				+ .19	
	1.50721$_m$						+3 −447			+ 8.13	
((δ) − D) $\frac{d'}{100}$										+ .46	
+4.66										− 15.70	
−2.44 δ_2		28 0.54		11 50.4						11 52.86	
	~~+34.2~~	1 40.4	36.9	57	38.65	52 31 9.70			50	52 23 59.86	
	−2.58	1 40.4	36.9	57	38.65	52 31 9.70			50	− .18	+11.02
d	1.41162$_m$					23 39.26				+ 11	
	9.78543					23 39.26				+10.52	
((δ) − D) $\frac{d'}{100}$	1.31383$_m$					+20.60				+ .57	
+4.79							23 ~~+8.66~~			−16.20	
−2.49 δ_1		28 34.15		23 52.2						23 54.68	
	+7.9	1 10.9	10.2	57	10.55	52 31 37.80			50	24 1.01	
	0.89763	1 10.9	10.2	57	10.55	52 31 37.80			50	− 2	+11.10
d	9.78543					24 7.32				+ .8	
	0.79984$_m$					24 7.32				+ 10.47	
((δ) − D) $\frac{d'}{100}$						− 6.31				+ .57	
+4.79							24 ~~+13.63~~			− 16.30	
−2.49 δ_2		28 34.16		23 53.3						23 55.81	
60	~~+5.3~~	3 50.1	45.0	8	47.58	54 14 0.80			5	54 6 44.90	
	−17.7					6 30.36				− 8	+13.17
d	1.24797$_m$					+14.54				+ 27	
	9.76800						6 ~~+5.82~~			+12.37	
((δ) − D) $\frac{d'}{100}$	1.13275									+ .61	
+4.90										− 16.70	
−2.57 δ_1		29 31.26		6 38.8						6 41.37	
	−11.6	3 42.3	40.9	8	41.60	54 14 6.75			5	45.17	
	1.06446$_m$					6 36.27				− 4	+13.15
d	9.76800					+ 8.90				+ 26	
	0.94924						6 ~~+27.37~~			+ 12.32	
((δ) − D) $\frac{d'}{100}$										+ .61	
+4.90										− 16.80	
−2.57 δ_2		29 31.34		6 39.0						6 41.52	
68	+31.8	4 36.1	31.9	34	34.00	52 48 14.35			30	52 40 18.69	
	1.50243					40 43.91				− 27	+11.43
d	9.78263					− 25.22				+ .32	
	1.40184$_m$						~~+41~~ ~~−9.13~~			+ 10.80	
((δ) − D) $\frac{d'}{100}$										+ .58	
+4.81										− 16.20	
−2.78 δ_1		31 57.77		40 11.1						40 13.92	
	+28.8	4 36.4	36.1	34	36.50	52 48 11.85			30	18.52	
	1.45939					40 41.37				− .24	+11.41
d	9.78263					− 22.85				+ .32	
	1.35880$_m$						~~+1~~ ~~−4.22~~			+ 10.75	
((δ) − D) $\frac{d'}{100}$		57.77								+ .58	
+4.81										− 16.30	
−2.78 δ_2		31 ~~57.77~~		40 10.8						40 13.63	
65	+36.1	4 26.0	23.0	59	24.50	52 23 23.85			65	52 15 24.50	
	1.55751					15 53.41				− 34	+10.90
d	9.78674					− 28.91				+ .31	
	1.46103$_m$						~~+6~~ 22.32			+ 10.37	
((δ) − D) $\frac{d'}{100}$										+ .56	
+4.78										− 16.00	
−2.94 δ_1		33 45.09		15 16.5						15 19.~~20~~ 40	
	+19.8	4 36.9	36.8	69	36.85	52 23 11.50			55	25.17	
	1.29667					15 41.02				− 11	+11.09
d	9.78674					− 15.85				+ .32	
	1.20019$_m$						~~+5~~ 56.87			+ 10.32	
((δ) − D) $\frac{d'}{100}$										+ .56	
+4.78										− 16.10	
−2.94 δ_2		33 45.08		15 17.2						15 20.16	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

283 — Date$_1$ = Mar. 1, 1874 — Observer W. A. R. — Recorder J. F. M.

284 — Date$_2$ = Mar. 2, 1874 — Observer — Recorder

46

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	m s	s	s	s	s		m	s	
	36 42	54 15	9.2	36 25.4	37 3.9	7.4	11.0	14.6	18.0	549	37	1098	
	35 19.8	54 15.9	9.1	27.7								−17.24	
				31.0								+ 28	
				28.0						− 16.99		− 3	
											36	5.99	
												− 1.03	
											36	52.96	
			9.0	36 34.1	37 3.2	6.7	10.4	13.9	17.3	513	37	1026	
				34.2								−16.48	
				44.5								+ 17	
				27.3						− 16.34		− 3	
											36	53.92	
												− 1.01	
											36	52.91	
	38 07	52.16	8.8	38 42	38 31.3	35.0	38.4	41.6	45.0	1915	38	3830	
	36 47.7	52 16.5	8.8	6.9								−17.24	
				9.7								+ .26	
				6.1						− 17.00		− 2	
											38	21.30	
												−1.00	
											38	20.30	
			8.6	38 30	38 30.9	34.1	37.5	40.9	44.4	1878	38	3756	
				4.8								−16.48	
				7.6								+ .15	
				1.8						− 16.35		− 2	
											38	21.21	
												− .98	
											38	20.23	
	39 29	54.23	8.7	39 26.3	37 52.3	55.8	59.4	3.0	6.5	2970	39	5940	
	38 8.2	54 24.5	8.8	29.0								−17.24	
				31.8								+ .28	
				26.0						− 16.99		− 3	
											39	42.41	
												−1.07	
											39	41.34	
			8.5	39 31.4	39 51.7	55.1	58.4	2.3	5.7	2937	39	5874	
				34.3								−16.47	
				38.0								+ .17	
				34.6						− 16.33		− 3	
											39	42.41	
												− 1.04	
											39	41.37	
	40 36	54.33	7.7	40 20.6	41 1.2	4.8	8.3	11.9	15.3	417	41	834	
	39 15.9	54 34.6	7.8	22.0								−17.24	
				26.0								+ .28	
				23.2						− 16.99		− 3	
											40	51.35	
												−1.09	
											40	50.26	
			7.8	40 40.4	41 0.6	4.2	7.6	11.2	14.7	883	41	766	
				43.5								−16.47	
				47.0								+ .17	
				43.6						− 16.33		− 3	
											40	51.33	
												− 1.06	
											40	50.27	
	42 00	54.10	7.5	41 47.1	42 26.9	29.8	33.2	36.9	40.4	1663	42	3326	
	40 40.4	54 10.9	8.5	49.9								−17.24	
				53.2								+ .28	
				50.1						− 16.99		− 3	
											42	16.27	
												− 1.09	
											42	15.18	
			7.7	42 24	42 25.5	29.0	32.7	36.1	39.6	1629	42	3258	
				5.5								−16.49	
				8.1								+ 17	
				4.3						− 16.33		− 3	
											42	16.13	
												− 1.07	
											42	15.18	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eq} = Mar. 1 −7′30″44 Mar. 2 30.″48

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+43.0	1′ 10.″9	6.2	1′	8.″58	54 21 39.80			0′	54 13 36.47	
62 d	1.63347					14 9.36				− .48	+12.71
	9.76677					✱ 32.89				+ .8	
((δ) − D) $\frac{d'}{100}$	1.51702 m						14 42.25			+ 12.49	
										+ .62	
+4.90										− 16.50	
−3.21 δ_1		36 57.86		13 29.5						13 32.68	
	+23.0	1 16.0	13.9	1	14.45	54 21 33.90			0	38.18	
d	1.51851					14 3.42				− .28	+12.87
	9.76677					✱ 25.24				+ .8	
((δ) − D) $\frac{d'}{100}$	1.40206 m						14 28.66			+ 12.45	
										+ .62	
+4.90										− 16.60	
−3.21 δ_2		36 57.81		13 31.2						13 34.45	
	+31.4	3 52.1	48.8	88	50.45	52 23 57.90			55	52 16 2.32	
74 d	1.49693					16 27.46				− .25	+10.97
	9.78674					✱ 25.14				+ .27	
((δ) − D) $\frac{d'}{100}$	1.40045 m						16 52.60			+ 10.39	
										+ .56	
+4.78										− 15.90	
−3.34 δ_1		38 25.08		15 54.0						15 57.39	
	+32.8	3 48.3	47.9	88	48.10	52 24 0.25			55	3.50	
d	1.51587					16 29.77				− .29	+10.88
	9.78674					✱ 26.27				+ .27	
((δ) − D) $\frac{d'}{100}$	1.41939 m						16 56.04			+ 10.34	
										+ .56	
+4.78										− 16.00	
−3.34 δ_2		38 25.01		15 55.0						15 58.38	
	+30.4	0 44.8	40.1	5.0	42.45	54 32 5.90			50	54 24 12.31	
66 d	1.48287					24 35.46				− .23	+13.15
	9.76484					✱ 23.15				+ .5	
((δ) − D) $\frac{d'}{100}$	1.36449 m						24 58.61			+ 12.69	
										+ .64	
+4.91										− 16.40	
−3.46 δ_1		39 46.25		24 5.6	,49					24 9.06	
	+24.1	0 46.7	45.1	50	45.90	54 32 2.45			50	14.84 10	
d	1.38202					24 31.97				− .15	+13.17
	9.76484					✱ 17.13				+ .5	
((δ) − D) $\frac{d'}{100}$	1.26364 m					18.35	24 49.10			+ 12.68	
										+ .64	
+4.91										− 16.50	
−3.46 δ_2		39 46.28		24 7.3						24 11.51 10.78	
	+45.1	1 6.2	1.9	41	4.05	54 41 44.30			40	54 33 39.65	
68 d	1.65418					34 13.86				− .53	+13.06
	9.76324					✱ 34.21				+ .7	
((δ) − D) $\frac{d'}{100}$	1.53420 m						34 48.07			+ 12.87	
										+ .65	
+4.92										− 16.40	
−3.56 δ_1		40 55.18		33 32.8						33 36.31	
	+24.1	1 20.0	18.7	41	19.35	54 41 29.00			40	40.24	
d	1.38202					33 58.52				− .15	+13.40
	9.76324					✱ 18.28				+ .9	
((δ) − D) $\frac{d'}{100}$	1.26204 m						34 16.80			+ 12.81	
										+ .65	
+4.92										− 16.50	
−3.56 δ_2		40 55.19		33 33.6						33 37.14	
	+43.2	3 27.0	22.0	3	24.50	54 19 28.85			0	54 11 20.34	
68 d	1.63548					11 53.41				− .48	+12.83
	9.76712					✱ 33.07				+ .24	
((δ) − D) $\frac{d'}{100}$	1.51938 m						+2 26.48			+ 12.45	
										+ .62	
+4.89										− 16.30	
−3.67 δ_1		42 20.07		11 13.2						11 16.87	
	+27.3	3 36.4	35.1	3	35.75	54 19 12.60			0	21.22	
d	1.43616					11 42.12				− .19	+13.08
	9.76712					✱ 20.90				+ .25	
((δ) − D) $\frac{d'}{100}$	1.32006 m						+2 3.02			+ 12.40	
										+ .62	
+4.89										− 16.40	
−3.67 δ_2		42 20.07		11 14.2						11 17.90	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Date$_1$ = Mar. 1, 1874 (283) Observer W.A.R. Recorder J.F.M. Date$_2$ = Mar 2, 1874 (284) Observer Recorder

Star.	α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	h m s	° ′ ″		m s	m s	s	s	s	s			m	s
	43 00	52 38	8.8	43 0.1	43 23.8	27.1	30.5	34.0	37.3	1527	30.54	43	30.54
	41 41.0	52 38.5	8.8	2.4								−	17.24
				6.9								+	.26
				3.7								−	2
											− 17.00	43	13.54
												−	1.06
												43	12.48
			9.0	43 1.1	43 23.0	26.6	29.8	33.3	36.2	1489	29.78	43	29.78
				4.1								−	16.47
				7.1								+	.16
				4.1								−	2
											− 16.33	43	13.45
												−	1.04
												43	12.41
	44 26	54.25	8.9	43 58.7	44 48.4	52.3	56.6	59.2	2.1	2788	55.76	44	55.76
	43 4.9	54 25.9	9.0	1.5								−	17.24
				4.3								+	.28
				6.5								−	3
											− 16.99	44	38.77
												−	1.12
												44	37.65
			8.8	44 13.5	44 47.8	51.6	55.0	58.5	2.0	2749	54.98	44	54.98
				16.9								−	16.47
				20.2								+	.17
				16.9								−	3
											− 16.33	44	38.65
												−	1.10
												44	37.55
	46 46	50.07	9.0	46 30.3	47 11.7	15.2	18.4	21.6	24.8	919	18.38	47	18.38
	45 32.0	50 10.0	8.8	33.1								−	17.24
			9.4	56.3								+	24
				52.2							− 17.02	47	1.36
				47 23.2	19.5	22.7	26.0	29.0	32.3	1295	2590	−105 47	2590
	45 39.5	50 11.3										−	17.24
											− 17.02	−105 47	8.82
			9.2	46 38.7	47 11.5	14.7	17.7	21.0	24.0	886	17.72	47	17.72
			9.0	4.3								−	16.47
				4.2								+	14
				4.7							− 16.35	47	1.37
				47 12.5	18.8	22.1	25.3	28.6	31.8	1266	2532	47	25.32
												−	16.47
												+	14
											− 16.35	47	8.99
	47 45	54.39	8.6	48 8.3	48 9.4	12.9	16.4	19.9	23.5	821	16.42	48	16.42
	46 23.9	54 39.9	8.8	6.8								−	17.24
				10.0								+	.28
				6.7								−	3
											− 16.99	47	59.43
												−	1.17
												47	58.26
			8.8	48 7.3	48 8.8	12.3	15.8	19.3	22.9	791	15.82	48	15.82
				10.2								−	16.47
				13.2								+	.17
				10.2								−	3
											− 16.33	48	0.51
												−	1.15
												47	58.34
	58 51	54.13	8.0	58 50.9	59 14.3	18.0	21.6	25.0	28.5	1074	21.48	59	21.48
	57 30.7	54 14.3	8.0	54.1								−	17.23
				56.9								+	28
				57.0								−	3
											− 16.98	59	4.50
												−	1.21
												59	3.29
			8.0	58 47.2	59 13.9	17.2	20.8	24.2	27.9	1040	20.80	59	20.80
				50.4								−	16.46
				53.1								+	17
				50.2								−	3
											− 16.32	59	4.48
												−	1.19
												59	3.29

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs $R_{eq} = -7'30.''44$ Mar. 1 30.''48 Mar. 2

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	s	1′ 33.''0	28.''0	36′	30.''50	52 46 17.85			35′	52 38 26.14	
76 d	+26.8					38 47.41				− .19	+11.29
	1.42813					−*21.27				+ 11	
	9.78296						39 8.68			+ 10.79	
((δ) − D) $\frac{d'}{100}$	1.32787 m									+ .58	
+4.79										− 15.80	
−3.76 δ_1		43 17.27		38 17.9						38 21.63	
	+25.7	1 30.9	30.0	36	30.45	52 46 17.90			35	27.02	
d	1.40993					38 47.42				− .18	+11.25
	9.78296					−*20.40				+ 11	
((δ) − D) $\frac{d'}{100}$	1.30967 m						39 7.82			+ 10.74	
+4.79										+ .58	
−3.76 δ_2		43 17.20		38 18.6						− 15.90	
										38 22.37	
78	+54.3	4 22.0	17.8	49	19.90	54 33 29.45			45	54 25 17.68	
d	1.73480					25 59.01				− .75	+12.90
	9.76466					−*41.33				+ .30	
((δ) − D) $\frac{d'}{100}$	1.61624 m						26 40.34			+12.71	
+4.90										+ .64	
−3.89 δ_1		44 42.55		25 10.5						− 16.20	
										25 14.38	
	+38.1	4 32.8	31.1	49	31.95	54 33 16.40			45	16.92	
d	1.58092					25 45.92				− .38	+13.21
	9.76466					−*29.00				+ .30	
((δ) − D) $\frac{d'}{100}$	1.46236 m						26 14.92			+ 12.65	
+4.90										+ .64	
−3.89 δ_2		44 42.45		25 9.9						− 16.30	
										25 13.83	
66	+25.2	0 13.8	9.9	5	11.85	50 17 36.50			5	50 9 44.94	10 3.80
d	1.40140	0 13.8	9.9	5	11.85	50 17 36.50			5	− 17	+8.46 − .01 +8.62
	9.80656					10 6.06	10 27.18			+ 2	+ 2
+4.64	1.32474 m					10 6.06				+ 8.15	+ 8.15
−4.08 ((δ) − D) $\frac{d'}{100}$	+2.7					−*21.12				+ .46	+ .46
	0.43136					−*2.26	10 8.32			− 14.90	− 14.90
+4.64 δ_1	9.80656	47 4.95		9 34.4						9 38.50	9 57.52
−4.08	0.35470 m	12.47		53.4							
	+35.8	0 2.2	2.7	5	2.45	50 17 45.90			5	45.41	4.69
58 d	1.55388	0 2.2	2.7	5	2.45	50 17 45.90			5	− .35	+8.23 − .05 +8.53
+4.64	9.80656					10 15.42	10 45.43			+ .00	+ .00
−4.08 ((δ) − D) $\frac{d'}{100}$	1.47722 m					10 15.42				+8.12	+ 8.12
	+12.8					−*30.01				+ .46	+ .46
+4.64 δ_2	110721					−*10.73	10 26.15			− 15.00	− 15.00
−4.08	9.80656	47 4.99		9 34.6						9 38.64	9 58.22
	1.03055 m	12.54		54.1							
	+9.7	4 34.8	30.3	34	32.55	54 48 15.80			30	54 40 38.02	
60 d	0.98677					40 45.36				− .03	+13.99
	9.76200					−*7.34				+ .36	
((δ) − D) $\frac{d'}{100}$	0.86555 m						40 52.70			+12.99	
+4.91										+ .67	
−4.17 δ_1		48 3.17		40 31.6						− 16.20	
										40 35.81	
	+5.6	4 35.1	34.9	34	35.00	54 48 13.35			30	38.63	
d	0.74819					40 42.87				− .01	+13.95
	9.76200					−*4.24				+ .36	
((δ) − D) $\frac{d'}{100}$	0.62697 m						40 47.11			+12.93	
+4.91										+ .67	
−4.17 δ_2		48 3.25		40 32.1						− 16.30	
										40 36.28	
	+27.5	1 38.9	34.2	1	36.53	54 21 11.80			0	54 13 20.33	
68 d	1.43933					13 41.36				− .19	+13.04
	9.76677					−*21.03				+ .11	
((δ) − D) $\frac{d'}{100}$	1.32288 m						14 2.39			+ 12.50	
+4.86										+ .62	
−5.11 δ_1		59 8.15		13 12.7						− 15.60	
										13 17.77	
	+30.6	1 38.0	33.2	1	34.10	54 21 14.25			0	20.37	
d	1.48572					13 43.77				− .25	+12.93
	9.76677					−*23.40				+ .11	
((δ) − D) $\frac{d'}{100}$	1.36927 m						14 7.17			+ 12.45	
+4.86										+ .62	
−5.11 δ_2		59 8.15		13 12.5						− 15.70	
										13 17.60	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

283 | 284 | 50

Date$_1$ = Mar 1, 1874 | Observer W. A. R. | Recorder J. F. M. | Date$_2$ = Mar 2, 1874 | 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
	h m s	° ′ ″		m s	m s	s	s	s	s		m s		
	00 17	54 35	8.4	0 56.6	0 41.3	45.0	48.5	52.0	55.6	2424	7 0	4848	
	58 56.6	54 35.9	8.5	8.9								−17.23	
	κ			11.6								+ .28	
	((δ) — D) $\frac{\kappa'}{100}$			8.7						− 16.98		− 3	
											0	31.50	
	α_1											−1.30	+4.
											0	30.20	−5.
			8.7	59 58.0	0 40.7	44.2	47.8	51.4	54.9	2390	0	4780	
				10								−16.46	
	κ			8.7								+ 17	
	((δ) — D) $\frac{\kappa'}{100}$			60.7						− 16.32		− 3	
											0	31.48	
	α_2											−1.28	+4
											0	30.20	−5
7	01 18	53.59	9.2	1 30.3	1 42.0	45.5	49.0	52.6	56.0	2421	1	4902	
6	59 58.4	54 0.5	9.0	33.4								−17.23	
	κ			36.9								+ 27	
	((δ) — D) $\frac{\kappa'}{100}$			33.2						− 16.99		− 3	
											1	32.03	
	α_1											−1.30	+4
											1	30.73	−5
			9.1	1 14.4	1 41.3	44.9	48.5	52.0	55.4	2421	1	4902	
				17.5								84	
	κ			20.0								−16.46	
	((δ) — D) $\frac{\kappa'}{100}$			17.3						− 16.82		+ 17	
												− 3	
											1	32.10	
	α_2											−1.28	+
											1	30.82	−
7	02 06	54.07	8.7	2 14.3	2 31.3	34.9	38.4	41.9	45.5	1920	2	3840	
	01 46.2	54 8.0	8.8	16.9								−17.23	
	κ			17.6								+ 27	
	((δ) — D) $\frac{\kappa'}{100}$			14.9						− 16.99		− 3	
											2	21.41	
	α_1											−1.31	+4.
											2	20.10	−5
			8.7	2 21.1	2 20.6	34.3	37.7	41.2	44.7	1885	2	3770	
	κ			24.0								−16.46	
	((δ) — D) $\frac{\kappa'}{100}$			27.3						− 16.32		+ 17	
				24.1								− 3	
											2	21.38	
	α_2											−1.29	+4
											2	20.09	−5
	02 43	54.41	6.9	3 22.9	3 6.7	10.5	13.9	17.6	21.1	698	3	1396	
	01 22.7	54 42.2	6.8	26.2								−17.23	
	κ			29.3								+ 28	
	((δ) — D) $\frac{\kappa'}{100}$			26.1						− 16.98		− 3	
											2	56.98	
	α_1											−1.34	+4
											2	55.64	−5
			6.8	3 12.5	3 6.0	9.7	13.2	16.8	20.4	661	3	1322	
	κ			13.9								−16.46	
	((δ) — D) $\frac{\kappa'}{100}$			12.2						− 16.32		+ 17	
												− 3	
											2	56.90	
	α_2											−1.31	+4
											2	55.59	−5
	03 51	54.09	8.9	3 58.6	4 16.3	19.8	23.3	26.9	30.3	1166	4	2332	
	02 30.9	54 10.4	9.0	1.6								−17.23	
	κ			5.0								+ .27	
	((δ) — D) $\frac{\kappa'}{100}$			61.7						− 16.99		− 3	
											4	633	
	α_1											−1.33	+4.
											4	5.00	−5
			9.0	3 56.8	4 15.7	19.2	22.8	26.3	29.7	1137	4	2274	
	κ			59.8								−16.46	
	((δ) — D) $\frac{\kappa'}{100}$			2.9						− 16.32		+ 17	
				57.8								− 3	
											4	642	
	α_2											−1.31	+4.
											4	5.11	−5

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eq} = −7′30.″44 (Mar. 1) 30.48 (Mar. 2.)

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
68	+39.5	0′ 30.″5	26.5	40	28.″80	54 42 20.35			40	54 34 19.73	
d	1.59988					34 49.91				− .42	+13.14
	9.76307					−*30.18				+ .4	
((δ) − D) $\frac{d'}{100}$	1.47973n						.85	20.09		+ 12.87	
+4.89										+ .65	
−5.23 δ_1		0 35.09		34 12.0						− 15.60	
										34 17.27	
	+46.9	0 21.7	20.6	40	21.15	54 42 27.20			40	21.15	
d	1.67117					34 56.72				− .57	+12.95
	9.76307					−*35.57				+ .3	
((δ) − D) $\frac{d'}{100}$	1.55102n						.35	32.29		+ 12.84	
+4.89										+ .65	
−5.23 δ_2		0 35.09		34 13.2						− 15.70	
										34 18.40	
69	+15.8	1 13.1	9.7	16	11.40	54 6 36.95			15	53 58 54.35	
d	1.19866					53 59 6.51				− .7	+12.84
	9.76939					−*12.16				+ .8	
((δ) − D) $\frac{d'}{100}$	1.08483n						.59	18.67		+ 12.23	
+4.84										+ .60	
−5.32 δ_1		1 35.57		58 46.5						− 15.40	
										58 51.79	
	+31.1	0 5.8	57.5	13	58.70	54 6 49.65			15	55.24	
d	1.49276					53 59 19.17				− .25	+12.62
	9.76939					−*23.93				+ .7	
((δ) − D) $\frac{d'}{100}$	1.37893n						.59	43.10		+ 12.20	
+4.84										+ .60	
−5.32 δ_2		1 35.66		58 47.0						− 15.50	
										58 52.36	
70	+21.5	3 12.2	6.9	8	9.05	54 14 39.30			5	54 6 52.37	
d	1.33244					7 7.86				− .11	+13.10
	9.76800					−*16.49				+ .22	
((δ) − D) $\frac{d'}{100}$	1.21722n						.7	25.35		+ 12.38	
+4.85										+ .61	
−5.39 δ_1		2 24.95		6 44.7						− 15.40	
										6 50.07	
	+13.6	3 14.3	13.0	8	13.65	54 14 34.70			5	53.79	
d	1.13354					7 4.22				− .5	+13.13
	9.76800					−*10.43				+ .22	
((δ) − D) $\frac{d'}{100}$	1.01832n						.7	14.65		+12.35	
+4.85										+ .61	
−5.39 δ_2		2 24.94		6 46.0						− 15.50	
										6 51.42	
74	−12.1	3 31.1	27.0	33	29.05	54 49 19.30			30	54 41 58.01	
d	1.08279n					41 48.86				− .4	+13.88
	9.76182					+*9.15				+ .24	
((δ) − D) $\frac{d'}{100}$	0.96139						.41	39.71		+ 13.01	
+4.89										+ .67	
−5.44 δ_1		3 0.53		41 51.0						− 15.50	
										41 56.39	
	+0.0	3 19.5	18.6	33	19.05	54 49 29.30			30	41 57.87	
d	0.00000					41 58.82				− .10	+13.88
	9.76182					+*0.95				+ .23	
((δ) − D) $\frac{d'}{100}$	9.87860n						.41	59.77		+12.98	
+4.89										+ .67	
−5.44 δ_2		3 0.48		41 50.6						− 15.70	
										41 56.05	
58	+21.6	0 27.6	23.8	5	26.70	54 17 22.65			5	54 9 35.66	
d	1.33445					9 52.21				− .13	+12.94
	9.76747					−*16.55				+ .3	
((δ) − D) $\frac{d'}{100}$	1.21870n						.10	8.76		+ 12.42	
+4.85										+ .62	
−5.53 δ_1		4 9.85		9 27.8						− 15.30	
										9 33.30	
	+22.9	0 24.9	23.7	5	24.30	54 17 24.05			5	36.03	
d	1.35984					9 53.57				− .14	+12.90
	9.76747					*17.54				+ .3	
((δ) − D) $\frac{d'}{100}$	1.24409n						.10	11.11		+ 12.39	
+4.85										+ .62	
−5.53 δ_2		4 9.96		9 27.9						− 15.50	
										9 33.43	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phad.proj.1587R

283

Date$_1$ = Mar. 1, 1874 Observer W. A. R. Recorder J. Z. M.

284

Date$_2$ = Mar. 2, 1874 Observer Recorder

52

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
02	39	52.46	7.0	4m 50.0	5m 1.8	5.3	8.6	12.0	15.5	432	7h 5m	8.64	
03	20.3	52 47.1	7.0	53.5								−17.23	
κ				56.3								+ .26	
((δ) — D) $\frac{\kappa'}{100}$				53.3						− 16.99		− 2	
a_1											4	51.65	
												−1.29	
											4	50.36	
			7.0	4 45.5	5 1.1	4.5	7.9	11.4	14.8	397	5	7.94	
				48.6								−16.45	
κ				51.2								+ .16	
((δ) — D) $\frac{\kappa'}{100}$				48.4						− 16.31		− 2	
a_2											4	51.63	
												−1.27	
											4	50.36	
06	37	54.30	8.5	6 27.0	7 0.7	4.1	7.7	11.3	15.0	388	7	7.76	
05	17.3	54 30.9	6.6	31.0								−17.23	
κ				32.6								+ .28	
((δ) — D) $\frac{\kappa'}{100}$				30.2						− 16.98		− 3	
a_1											6	50.78	
												−1.37	
											6	49.41	
			8.3	6 26.0	6 59.9	3.6	7.0	10.7	14.2	384	7	7.08	
				29.5								−16.45	
κ				32.2								+ .17	
((δ) — D) $\frac{\kappa'}{100}$				29.2						− 16.31		− 3	
a_2											6	50.77	
												−1.35	
											6	49.42	
07	28	52.20	6.7	7 31.0	7 57.6	54.7	58.4	1.7	5.0	2916	7	5.832	
06	9.8	52 22.1	6.2	33.0								−17.23	
κ				33.8								+ .26	
((δ) — D) $\frac{\kappa'}{100}$				33.3						− 16.99		− 2	
a_1											7	41.33	
												−1.31	
											7	40.02	
			6.0	7 32.8	7 57.0	54.3	57.7	1.0	4.4	2884	7	5.768	
κ				35.1								−16.45	
((δ) — D) $\frac{\kappa'}{100}$				38.1						− 16.32		+ .15	
a_2				35.3								− 2	
											7	41.36	
												−1.29	
											7	40.07	
09	38	54.16	8.8	9 40.5	10 4.2	7.8	11.4	15.0	18.5	569	10	11.38	
08	18.8	54 17.2	8.8	44.2								−17.23	
κ				47.1								+ .28	
((δ) — D) $\frac{\kappa'}{100}$				43.9						− 16.98		− 3	
a_1											9	54.40	
												−1.41	
											9	52.99	
			9.0	9 32.8	10 8.7	7.2	10.7	14.3	17.7	536	10	10.72	
κ				35.3								−16.45	
((δ) — D) $\frac{\kappa'}{100}$				38.2						− 16.31		+ .17	
a_2				35.3								− 3	
											9	54.41	
												−1.38	
											9	53.03	
10	54	54.45	9.1	10 47.0	11 21.0	24.8	28.4	32.0	35.5	1417	11	28.34	
09	34.3	54 46.2	9.0	50.2								−17.23	
κ				53.3								+ .28	
((δ) — D) $\frac{\kappa'}{100}$				50.2						− 16.98		− 3	
a_1											11	11.36	
												−1.43	
											11	9.93	
			9.3	10 41.0	11 21.6	24.1	27.7	31.3	34.8	1385	11	27.70	
κ				41.2								−16.45	
((δ) — D) $\frac{\kappa'}{100}$				41.3						− 16.31		+ .17	
a_2				44.2								− 3	
											11	11.39	
												−1.40	
											11	9.99	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eq} = −7 30.44 (Mar. 1) 30.48 (Mar. 2)

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
70 d	+15.3	4′ 42.4	37.7	29′	40.05	52 53 8.30			25″	52 45 27.31	
	1.18469					45 37.86				− 6	+11.76
	9.78180					−10.55				+ 33	
	1.08327 m						45 48.41			+ 10.91	
((δ) − D) $\frac{d'}{100}$										+ .58	
+4.76 δ_1		4′ 55.12		45 18.5						− 15.00	
−5.60										45 24.07	
	+19.5	4 36.5	35.4	29	35.95	52 53 12.40			25	26.48	
	1.29003					45 41.92				− 9	+11.69
	9.78180					−15.44				+ 32	
	1.18861 m						45 57.36			+ 10.88	
((δ) − D) $\frac{d'}{100}$										+ .58	
+4.76 δ_2		4′ 55.12		45 17.5						− 15.10	
−5.60										45 23.07	
68 d	+37.6	4 58.0	53.9	44	58.95	52 37 52.40			40	54 29 53.39	
	1.57519					30 21.96				− 37	+13.42
	9.76395					−28.57				+ .34	
	1.45592 m						30 50.53			+ 12.80	
((δ) − D) $\frac{d'}{100}$										+ .65	
+4.87 δ_1		6 54.28		29 45.7						− 15.30	
−5.77										29 51.51	
	+37.9	4 56.6	55.0	44	58.80	54 37 52.55			40	53.27	
	1.57864					30 22.07				− .38	+13.38
	9.76395					−28.80				+ .34	
	1.45937 m						30 50.84			+ 12.77	
((δ) − D) $\frac{d'}{100}$		29								+ .65	
+4.87 δ_2		6 54.70		29 45.5						− 15.40	
−5.77										29 51.25	
64 d	+25.0	3 54.7	54.5	53	62.60	52 28 55.75			50	52 21 5.33	
	1.39794					21 25.31				− .17	+11.13
	9.78592					−29.98				+ .27	
	1.30064 m						21 45.29			+ 10.47	
((δ) − D) $\frac{d'}{100}$										+ .56	
+4.73 δ_1		7 44.75		20 55.9						− 14.70	
−5.84										21 1.76	
	+22.5	3 55.2	53.8	53	54.50	52 28 53.85			50	5.39	
	1.35218					21 23.37				− .13	+11.14
	9.78592					−17.98				+ .27	
	1.25488 m						21 41.35			+10.44	
((δ) − D) $\frac{d'}{100}$										+ .56	
+4.73 δ_2		7 44.80		20 55.9						− 14.80	
−5.84										21 1.73	
66 d	+27.5	4 13.8	10.1	59	11.95	54 23 36.40			55	54 15 44.94	Eq sum
	1.43933					16 59.6				− 19	+13.29
	9.76642					−21.02				+ 12.56	
	1.32253 m						16 26.98			+ .63	
((δ) − D) $\frac{d'}{100}$										− 15.10	
+4.84 δ_1		9 4 57.63		15 37.1 9						15 43.13	
−6.02											
	+35.4	8 6.5	4.9	58	5.70	54 24 42.65			55	15 45.13	
	1.54900					18 2.14				− 32	+13.06
	9.76625					−27.04				+ .22	
	1.43203 m						17 39.21			+ 12.53	
((δ) − D) $\frac{d'}{100}$										+ .63	
+4.84 δ_2		9 57.87		15 36.9						− 15.30	
−6.02										15 42.89	
64 d	+38.1	4 33.9	28.9	29	31.40	54 53 16.95			25	54 45 17.75	
	1.58092					45 46.51				− 38	+13.68
	9.76111					−28.76				+ .32	
	1.45881 m						46 15.27			+ 13.07	
((δ) − D) $\frac{d'}{100}$										+ .67	
+4.87 δ_1		11 14.80		45 10.1						− 15.20	
−6.13										45 16.23	
	+43.5	4 26.4	25.0	29	25.70	54 53 22.65			25	19.33	
	1.63849					45 52.17				− .48	+13.54
	9.76111					−32.84				+ .31	
	1.51638 m						46 25.01			+ 13.04	
((δ) − D) $\frac{d'}{100}$										+ .67	
+4.87 δ_2		11 14.56		45 11.4						− 15.30	
−6.13										45 17.57	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.31587R

Date$_1$ = Mar. 1, 1874 Observer W. A. R. Recorder J. Z. M.

Date$_2$ = Mar 2 1874 Observer Recorder

Ru

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
W	11m 32s	52.29	8.2	11m 51.0	11m 57.4	0.6	4.2	7.6	11.0	208	7h 12m	46	
	10 13.8	52 30.4	8.6	53.4								−17.23	
κ				56.8								+ .26	
				52.7						− 16.99		− 2	
((δ) − D) $\frac{\kappa'}{100}$											11	47.17	
												−1.36	
c_1											11	45.81	+4 −6
			8.7	11 48.4	11 56.7	0.0	3.5	6.9	10.3	174	12	348	
				57.8								−1645	
κ				54.2								+ .16	
				51.5						− 16.31		− 2	
((δ) − D) $\frac{\kappa'}{100}$											11	47.17	
												−1.33	
c_2											11	45.84	+4 −6
	13 51	54.47	8.4	13 45.7	14 16.0	17.7	23.2	26.9	30.7	1162	14	2324	
	12 31.8	54 48.2	8.8	48.2								−17.23	
κ				37.8								+ .27	
				40.9						− 16.98		− 2	
((δ) − D) $\frac{\kappa'}{100}$											14	6.26	
												−1.47	
a_1											14	4.79	+4 −6
			8.8	13 38.9	14 15.3	19.1	22.5	26.3	29.7	1129	14	2258	
				31.0								−16.45	
κ				34.6								+ .16	
				31.5						− 16.31		− 2	
((δ) − D) $\frac{\kappa'}{100}$											14	6.27	
												−1.44	
a_2											14	4.83	+4 −6
	14 54	52.08	6.0	14 50.7	15 18.7	22.3	25.7	29.0	32.4	1283	15	2566	
	13 37.8	53 9.8	6.1	53.6								−17.23	
κ				50.5								+ .26	
										− 16.99		− 2	
((δ) − D) $\frac{\kappa'}{100}$											15	8.67	
												−1.39	
a_1											15	7.28	+4 −6
			6.0	14 59.4	16 18.4	21.5	25.0	28.3	31.7	1249	15	2498	
				56								−16.45	
κ				54								+ .15	
				62.5						− 16.32		− 2	
((δ) − D) $\frac{\kappa'}{100}$											15	8.66	
												−1.36	
a_2											15	7.30	+4 −6
	15 48	52.57	9.0	15 54.3	16 14.4	17.8	21.3	24.6	28.0	1061	16	2122	
	14 31.9	52 58.8	9.1	57.4								−17.23	
κ				0.3								+ .26	
				57.3						− 16.99		− 2	
((δ) − D) $\frac{\kappa'}{100}$											16	4.23	
												−1.43	
a_1											16	2.80	+4 −6
			9.0	15 53.0	16 13.8	17.1	21.5	23.9	24.3	1026	16	2052	
				56.5								−16.44	
κ				59.0								+ .16	
				52.7						− 16.30		− 2	
((δ) − D) $\frac{\kappa'}{100}$											16	4.22	
												−1.40	
a_2											16	2.82	+4 −6
	17 46	52.36	8.9		18 9.8	13.5	16.8	20.1	23.6	838	18	1676	
	16 29.3	52 38.2	8.7									−17.22	
κ												+ .26	
										− 16.48		− 2	
((δ) − D) $\frac{\kappa'}{100}$											17	59.78	
												−1.44	
a_1											17	58.34	+4 −6
			8.7	17 39.2	18 9.4	12.9	16.2	19.6	22.9	810	18	1620	
				42.4								−16.44	
κ				45.0								+ .16	
				42.2						− 16.30		− 2	
((δ) − D) $\frac{\kappa'}{100}$											17	59.90	
												−1.42	
a_2											17	58.48	+4 −6

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs

Mar. 1 Mar. 2.
R_{eq} = −7′30″44 30″48

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
64	+10.5	0′ 3.1″	58.3	~~46~~ 46	0.70	52 37 47.65			45	52 ~~29~~ 30 8.85	
d	1.02119					~~37~~ 17.21				− 3	+11.18
	9.78445					+ 8.36				+ 00	
((δ) − D) $\frac{d'}{100}$	0.92242m						30 2557			+ 10.64	
										+ 57	
+4.73 δ_1		11 50.54		28 59.4 ~~45~~						− 14.50	
−6.18										~~30~~ 29 5.53	
	+12.0	0 0.2	59.4	~~44~~	59.80	52 37 48.55			45	29 8.51	
d	1.07918					~~30~~ 18.07				− 4	+11.14
	9.78445					~~29~~ + 9.56				+ 00	
((δ) − D) $\frac{d'}{100}$	0.98041m						30 2763			+ 10.61	
										+ 57	
+4.73 δ_2		11 50.57		28 58.8						− 14.70	
−6.18										~~30~~ 29 4.95	
66	+34.3	3 7.9	3.2	28	3.55	54 54 42.80			25	54 46 46.48	
d	1.53529					47 12.36				− .30	+13.69
	9.76093					−+25.88				+ .21	
((δ) − D) $\frac{d'}{100}$	1.41300m						47 38.24			+ 13.10	
										+ .68	
+4.87 δ_1		14 9.66		46 38.8						− 15.20	
−6.38										46 45.17	
	+51.1	2 5.3.1	51.5	27	52.30	54 54 56.05			25	47.01	
d	1.70842					47 25.57				− .67	+13.28
	9.76093					−+38.56				+ .20	
((δ) − D) $\frac{d'}{100}$	1.58613m						~~48~~ 41.3			+ 13.07	
										+ .68	
+4.87 δ_2		14 9.70		46 38.7						− 15.20	
−6.38										46 45.09	
68	+35.2	2 5.5	0.9	7	3.20	52 15 45.15			5	52 7 46.44	
d	1.54654					8 14.71				− .32	+10.61
	9.78805					−+28.27				+ .14	
((δ) − D) $\frac{d'}{100}$	1.45137m						8 42.98			+ 10.24	
		11.								+ .55	
+4.69 δ_1		15 ~~11.9~~ 7		7 36.3						− 14.30	
−6.46										7 42.75	
	+22.5	2 13.1	11.7	7	12.40	52 15 35.95			5	47.40	
d	1.35218					8 5.47				− .13	+10.78
	9.78805					−+18.07				+ .15	
((δ) − D) $\frac{d'}{100}$	1.25701m						8 23.54			+ 10.21	
										+ .55	
+4.69 δ_2		15 11.99		7 37.3						− 14.40	
−6.46										7 43.78	
70	+23.9	3 8.5	4.1	18	6.30	53 4 42.05			15	52 56 52.77	
d	1.37840					52 57 11.61				− .15	+11.79
	9.77997					−+18.84				+ .22	
((δ) − D) $\frac{d'}{100}$	1.27515m						57 34.45			+ 11.12	
										+ .60	
+4.75 δ_1		16 7.55		56 43.6						− 14.40	
−6.53										56 50.16	
	+24.3	3 6.1	5.0	18	5.55	53 4 42.80			15	53.16	
d	1.38561					52 57 12.32				− .15	+11.75
	9.77997					−+19.16				+ .21	
((δ) − D) $\frac{d'}{100}$	1.28236m						57 ~~31.18~~			+ 11.09	
										+ .60	
+4.75 δ_2		16 7.57		56 43.8						− 14.60	
−6.53										56 50.31	
		2 ~~42.5~~	~~38.1~~	~~37~~	40.20	52 45 8.05			35		
56						~~37~~ 37.61					
d											
((δ) − D) $\frac{d'}{100}$											
										~~14.30~~	
+4.72 δ_1		18 3.06									
−6.70											
	+34.0	2 47.5	46.0	37	46.75	52 45 1.60			35	52 37 4.11	
d	1.53148					37 31.12				− .30	+11.21
	9.78329					−+27.01				+ .20	
((δ) − D) $\frac{d'}{100}$	1.43155m						37 58.13			+ 10.73	
										+ .58	
+4.72 δ_2		18 3.20		36 54.2						− 14.40	
−6.70										37 0.72	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj:1587R

283 | 284 | 56

Date$_1$ = Mar. 1, 1874 | Observer W. A. R. | Recorder J. H. M. | Date$_2$ = Mar. 2, 1874 | Observer | Recorder | Ru

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	m s	s	s	s	s		h m	s	
	18 58 54.21		9.0	18 34.3	19 21.3	24.9	28.3	31.9	35.4	1418	28 36	2836	
	17 38.1	54 22.5	9.2	47.0							19	−17.22	
	κ			0.0								+ 27	
	((δ) — D) $\frac{\kappa'}{100}$			57.1						− 16.98		− 3	
	α_1										19	11.38	
												− 1.57	
											19	9.84	
			9.1	18 49.0	19 20.7	24.1	27.6	31.1	34.7	1382	27 44	2764	
				52.0							19	−16.44	
	κ			53.5								+ .17	
	((δ) — D) $\frac{\kappa'}{100}$			52.2						− 16.30		− 3	
	α_2										19	11.34	
												− 1.49	
											19	9.85	
	21 06	54.47	8.7	20 48.2	21 29.9	33.6	37.2	40.7	44.3	1857	21	3714	
	19 45.8	54 48.7	9.0	31.8								−17.22	
	κ			33.7								+ .28	
	((δ) — D) $\frac{\kappa'}{100}$			31.2						− 16.97		− 3	
	α_1										21	20.17	
												− 1.53	
											21	18.64	
			9.0	21 57.1	21 29.5	32.9	36.5	40.0	43.7	1826	21	3652	
				8.7								−16.44	
	κ			12.1								+ .17	
	((δ) — D) $\frac{\kappa'}{100}$			8.6						− 1630		− 3	
	α_2										21	20.22	
												− 1.57	
											21	18.41	
	22 43	54.01	8.9	22 20.4	23 0.5	9.1	12.5	16.0	17.5	626	23	1252	
	21 23.4	54 1.6	9.0	22.6								−17.22	
	κ			23.9								+ .27	
	((δ) — D) $\frac{\kappa'}{100}$			23.4						− 16.98		− 3	
	α_1										22	55.54	
												− 1.53	
											22	54.01	
			9.0	22 36.7	23 5.0	8.5	12.0	15.5	18.8	598	23	1196	
				40.1								−16.43	
	κ			42.6								+ .17	
	((δ) — D) $\frac{\kappa'}{100}$			39.8						− 16.29		− 3	
	α_2										22	55.67	
												− 1.51	
											22	54.16	
	κ												
	((δ) — D) $\frac{\kappa'}{100}$												
	α_1												
	κ												
	((δ) — D) $\frac{\kappa'}{100}$												
	α_2												
	κ	+.035											
	((δ) — D) $\frac{\kappa'}{100}$												
	α_1												
	κ												
	((δ) — D) $\frac{\kappa'}{100}$												
	α_2												

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs

Mar. 1 Mar. 2

$R_{Eq} = -7'30''.44$ 30''.48

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+31.3	4 31.6	26.0	54	28.″75	54 28 19.60			50	54 20 25.23	
72	1.49554					20 49.16				− 25	+13.31
d	9.76554					+ 23.93				+ .31	
	1.37886 m						21 13.09			+ 12.62	
((δ) − D) $\frac{d'}{100}$										+ .63	
+4.82										− 14.60	
−6.79 δ_1		19 14.69		20 17.2						20 23.94	
	+35.4	4 25.9	23.9	54	24.90	54 28 23.45			50	25.97	
	1.54900					20 52.97				− .32	+13.22
d	9.76554					+ 27.00				+ .32	
	1.43132 m						21 19.97			+ 12.59	
((δ) − D) $\frac{d'}{100}$										+ .63	
+4.82										− 14.80	
−6.79 δ_2		19 14.67		20 17.6						20 24.39	
62	+45.9	2 49.9	46.0	27	47.45	54 53 0.90			25	54 46 55.85	Equinox
	1.66181					47 30.46				− .54	+13.46
d	9.76057					+ 34.61				+ .20	
	1.53916 m						48 5.07			+ 13.12	
((δ) − D) $\frac{d'}{100}$										+ .68	
+4.85										− 14.70	
−6.96 δ_1		21 23.49		46 47.6						46 54.61	
	+27.9	2 2.2	1.2	27	1.20	54 54 47.15			25	46 55.63	
	1.44560	3		28		47 48 16.67				− 20	+13.71
d	9.76057					+ 21.04				+ .14	
	1.32295 m						48 37.71			+ 13.09	
((δ) − D) $\frac{d'}{100}$										+ .68	
+4.85										− 14.80	
−6.96 δ_2		21 23.56		46 47.6						46 54.54	
	+49.6	4 15.8	11.7	14	13.75	54 8 34.60			10	54 0 26.03	
56	1.69548					1 4.16				− .65	+12.49
d	9.76904					+ 38.13				+ .25	
	1.58130 m						+ 42.29			+ 12.25	
((δ) − D) $\frac{d'}{100}$										+ .60	
+4.79										− 14.40	
−7.10 δ_1		22 58.80		0 17.0						0 24.12	
	+32.2	4 27.9	26.2	14	27.05	54 8 21.30			10	26.07	
	1.50786					0 50.82				− .27	+12.86
d	9.76904					+ 24.75				+ .31	
	1.39368 m						+ 15.57			+ 12.22	
((δ) − D) $\frac{d'}{100}$										+ .60	
+4.79										− 14.50	
−7.10 δ_2		22 58.95		0 17.3						0 24.43	
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											

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

285

Date$_1$ = Mar. 4, 1874 — Observer W.A.R. — Recorder G.F.M.

n = +.04

286

Date$_2$ = Mar. 5, 1874 — Observer W.A.R. — Recorder G.F.M.

n = +.13

58

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
62 Aquilae	27 26 / 26 4.5	53 38 / 53 38.1	8.8 / 8.8	27m 21.9 / 25.3 / 24.9 / 23.0	27m 48.8	52.0	55.4	59.0	2.5	2774	6h 27m	5648 −15.11 +.95 −3	
κ										−15.09	27	40.29 −84	
((δ) − D) $\frac{\kappa'}{100}$											27	39.55	
a_1													
1838 20 1 / 20 51 / 23 6 / 24 42 / 25 51													
κ			8.6	27 21.6 / 24.8 / 27.6 / 24.7	27 47.7	57.2	54.7	58.2	1.6	2734	27	5468 −14.46 +.14 −3	
((δ) − D) $\frac{\kappa'}{100}$										−14.32	27	40.36 −81	
a_2											27	39.55	
	28 59 / 27 ~~36.5~~ 18.8	54.04 / 54 ~~2.6~~ 1.6	8.8 / 8.7 / 8.8	28 31.6 / 34.5 / 34.7 / 34.6	29 2.0	6.4	9.8	13.5	17.0	497	27	994 −15.11 +.06 −3	
κ										−15.08	28	64.86 −86	
((δ) − D) $\frac{\kappa'}{100}$	27 36.5	54 3.6		29 37.7 / 6.4 / 3.6 / 6.6	19.2	23.8	26.2	29.8	33.3	1313	29	2626 5480 −15.11 +.06 −3	
a_1										−15.08	29	11.18 −86	
			8.7 / 9.0	28 24.0 / 24.0 / 29.8 / 26.9	29 2.2	5.8	9.2	12.7	15.9	458	28	916 16.32 −14.46 +.18 −3	
κ										−14.31	28	54.185 −84	
((δ) − D) $\frac{\kappa'}{100}$				29 48.8 / 52.2 / 55.6 / 52.2	18.5	22.0	25.5	29.0	32.5	1275	28	2550 5481 −14.46 +.18 −3	
a_2										−14.31	29	11.19 −84	
	31 04 / 29 42.0	54.09 / 54 8.6	7.9 / 8.8	31 0.2 / 2.7 / 5.5 / 2.8	31 26.4	~~28.0~~	33.5	36.9	40.5	1673	31	3346 10.35 −15.11 +.06 −3	
κ										−15.08	31	18.38 −89	
((δ) − D) $\frac{\kappa'}{100}$											31	17.49	
a_1													
			9.0	30 54.3 / 57.7 / 6.8 / 57.6	31 25.7	29.0	32.8	36.4	39.9	1638	31	3276 −14.46 +.18 −3	
κ										−14.31	31	18.45 −96	
((δ) − D) $\frac{\kappa'}{100}$											31	17.49	
a_2													
	32 05 / 30 50.9	49.55 / 49 56.1	9.0 / 9.2	32 13.7 / 16.4 / 19.3 / 16.5	32 28.7	31.8	35.0	38.2	41.4	1751	32	3502 −15.11 +.05 −2	
κ										−15.08	32	19.94 −84	
((δ) − D) $\frac{\kappa'}{100}$											32	19.10	
a_1													
			9.0	32 12.2 / 15.1 / 18.0 / 15.1	32 37.9	31.0	34.4	37.4	40.7	1714	32	3428 −14.46 +.15 −2	
κ										−14.33	32	19.95 −92	
((δ) − D) $\frac{\kappa'}{100}$											32	19.03	
a_2													
	33 42 / 32 20.1	54.50 / 54 50.2	9.0 / 9.0	33 40.1 / 44.2 / 47.5 / 44.0	34 2.9	6.6	10.2	13.7	17.3	507	34	1014 −15.10 +.06 −3	
κ										−15.07	33	55.07 −94	
((δ) − D) $\frac{\kappa'}{100}$											33	54.13	
a_1													
			9.0	33 45.0 / 47.8 / 50.0 / 47.4	34 2.0	5.8	9.3	12.8	16.6	475	34	~~9~~ 9.30 −14.45 +.18 −3	
κ										−14.30	34	~~0.15~~	
((δ) − D) $\frac{\kappa'}{100}$											33	55.20 −91	
a_2											33	54.09	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs

Mar. 4 Mar. 5

ν_{E_p} = −7′ 30.83 30.56

+.07 +.07

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′	
	s	2 45.3	46.4	37	45.85	53 45 2.50			35	53 37 8.01		
	+30.5					37 31.67				− .24	+12.00	
60 d	1.48430					−*23.66				+ .20		
	9.77302						37	55.33		+ 11.44		
((δ) − D) $\frac{d'}{100}$	1.37410n									+ .60		
										− 16.90		
+4.87 δ_1		27 44.42		37 0.7						37 3.11		
−2.42												
	+30.0	2 50.7	47.1	37	48.90	53 44 59.45			35	5.61		
	1.47712					37 28.89				− .24	+12.64	
d	9.77302					−*23.28				+ .20		
	1.36692n						37	52.17		+ 12.08		
((δ) − D) $\frac{d'}{100}$										+ .60		
										− 17.00		
+4.87 δ_2		27 44.42		36 58.8						37 1.25		
−2.42												
	+35.3	2 46.1	49.7	12	48.90	54 9 59.45			10	54 1.49	2 54.98	
78	1.54777	2 46.1	49.7	12	48.90	54 9 59.45			10	− .32	+12.34 − .30	+12.37
d	9.76887					2 28.62	2	55.75		+ .20	+ .20	
76	1.43342n					2 28.62				+ 11.86	+ 11.87	
+4.90 ((δ) − D) $\frac{d'}{100}$	+35.7					−*27.13				+ .60	+ .60	
−2.55	−3.43	28 58.90		1 54.3		+26.36	2	22.6		− 17.00	− 17.00	
	1.53529	29 15.22		2 47.8						18 56.83	2 50.35	
δ_1 +4.90	9.76887n	1.42094										
−2.55												
	+42.3	2 46.4	44.8	12	46.60	54 10 1.75			10	1 58.69	2 51.71	
	1.62634	2 46.4	44.8	12	46.60	54 10 1.75			10	− .46	+12.87 − .19	+13.15
d	9.76887					2 31.19	3	3.69		+ .19	+ .19	
	1.51199n					2 31.19				+ 12.54	+ 12.53	
((δ) − D) $\frac{d'}{100}$	−*26.7					−*32.50				+ .60	+ .60	
	1.42651n					+20.52	2	10.67		− 17.10	− 17.10	
+4.90 δ_2	9.76887	28 58.91		1 51.9						1 54.46	2 47.76	
−2.55	1.31216	29 15.25		2 45.2								
	+30.7	1 45.3	47.2	6	46.35	54 16 2.00			5	54 8 7.63		
	1.48714					8 31.17				− .25	+12.46	
70 d	9.76782					−*23.54				+ .12		
	1.37174n						8	54.71		+ 11.98		
((δ) − D) $\frac{d'}{100}$										+ .61		
										− 16.90		
+4.90 δ_1		31 22.39		8 0.5						8 3.19		
−2.73												
	+35.2	1 47.9	43.9	6	45.90	54 16 2.45			5	4.90		
	1.54654					8 31.89				− .32	+13.06	
d	9.76782					−*26.99				+ .12		
	1.43114n						8	58.88		+ 12.65		
((δ) − D) $\frac{d'}{100}$										+ .61		
										− 17.00		
+4.90 δ_2		31 22.39		7 58.2						8 0.96		
−2.73												
	+18.5	4 41.1	45.7	19	43.10	50 3 5.25			15	49 55 18.84		
74	1.26717					49 55 34.42				− .9	+8.29	
d	9.80867					−*15.58				+ .33		
	1.19262n						55	50.00		+ 7.60		
((δ) − D) $\frac{d'}{100}$										+ .45		
										− 16.00		
+4.64 δ_1		32 23.74		55 8.3						55 11.13		
−2.82												
	+19.2	4 45.8	44.3	19	45.05	50 3 3.30			15	16.57		
	1.28380					49 55 32.74				− .10	+8.81	
d	9.80867					−*16.17				+ .33		
	1.20875n						55	48.91		+ 8.13		
((δ) − D) $\frac{d'}{100}$										+ .45		
										− 16.10		
+4.64 δ_2		32 23.67		55 6.5						55 9.28		
−2.82												
	+26.1	3 28.3	30.3	23	29.30	54 59 19.05			20	54 51 28.57		
84	1.41664					51 48.22				− .17	+13.51	
d	9.76003					−*19.65				+ .25		
	1.29345n						52	7.87		+ 12.74		
((δ) − D) $\frac{d'}{100}$		33 59.								+ .69		
										− 17.10		
+4.95 δ_1		34 0.08		51 22.0						51 24.98		
−2.96												
	+21.9	3 38.0	34.1	23	36.05	54 59 12.30			20	25.25		
	1.34044					51 41.74				− .12	+14.27	
d	9.76003					−*16.49				+ .25		
	1.21725n						57	58.23		+ 13.45		
((δ) − D) $\frac{d'}{100}$										+ .69		
										− 17.20		
+4.95 δ_2		33 54.04		51 19.4						51 22.32		
−2.96												

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

285 — Date$_1$ = Mar. 4, 1874 — Observer W. A. R. / Recorder J. F. M.

286 — Date$_2$ = Mar. 5, 1874 — Observer / Recorder

60

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
35	35m 05s	54° 28′	8.2	35m 1.4	35m 26.5	30.1	33.6	37.1	40.7	1680	6h 35m 3s	1360	
33	43.9	54 28.7	8.5	4.3								−15.10	
κ				4.2								+ .06	
((δ) − D) $\frac{\kappa'}{100}$				4.3						− 15.07		− 3	
a_1											35	18.53	
												− .94	
											35	17.59	
			8.2	35 4.9	35 25.7	29.3	33.0	36.7	39.9	1643	35	3286	
				8.2								−14.45	
κ				10.7								+ .18	
((δ) − D) $\frac{\kappa'}{100}$				7.7						− 14.30		− 3	
a_2											35	1856	
												− .92	
											35	17.64	
36	40	53.40	8.9	36 4.0	37 1.2	4.7	8.2	11.5	15.0	406	37	819	
35	17.9	53 41.0	8.9	4.0								−15.10	
κ				4.2								+ .05	
((δ) − D) $\frac{\kappa'}{100}$				4.7						− 15.08		− 3	
a_1											36	53.04	
												− .95	
											36	52.09	
			9.1	36 4.2	37 0.3	3.8	7.2	10.7	14.1	361	37	729	
				4.6								−14.45	
κ				5.0								+ .18	
((δ) − D) $\frac{\kappa'}{100}$				5.6						− 14.30		− 3	
a_2											36	52.92	
												− .92	
											36	52.00	
				37 5.6									
38	11	53.16	9.1	38 2.1	38 30.5	33.9	37.5	41.0	44.4	1873	38	3746	
36	48.6	53 16.5	9.1	4.9								−15.10	
κ				6.1								+ .05	
((δ) − D) $\frac{\kappa'}{100}$										− 15.08		− 3	
a_1											38	22.38	
												− .95	
											38	21.43	
			9.0	38 6.6	38 29.8	33.2	36.8	40.1	43.6	1835	38	3670	
				9.5								−14.45	
κ				13.0								+ .18	
((δ) − D) $\frac{\kappa'}{100}$				9.7						− 14.31		− 3	
a_2											38	22.39	
												− .92	
											38	21.47	
39	21	53.10	8.3	39 8.2	39 41.0	44.4	48.0	51.3	54.8	2395	39	4790	
37	59.2	53 11.0	9.7	11.0								−15.10	
κ				13.9								+ .05	
((δ) − D) $\frac{\kappa'}{100}$				11.6						− 15.08		− 3	
a_1			7.8	39 20.3							39	32.82	
				21.3								− .96	
				20.2							39	31.86	
			7.0	39 3.7	39 41.3	43.7	47.3	50.5	54.0	2358	39	4716	
			9.8	6.2								−14.45	
κ				9.2								+ .167	
((δ) − D) $\frac{\kappa'}{100}$				6.4						− 14.31		− 3	
a_2				39 14.6	42.7	46.2	49.2	52.8	56.3	2472	39	−32.85 −.94 31.91	
				18.6								4944	
				23.0								−14.45	
				18.4						− 14.31		+ .167	
											39	− 35.13 −.94 34.19	
40	56	50 44	8.7	40 30.5	40 56.8	0.0	3.2	6.4	9.8	1.62	40	324	
39	~~40.9~~	50 ~~44.9~~	9.4	33.9								−15.10	
κ	18.3	46.4		36.0								+ 05	
((δ) − D) $\frac{\kappa'}{100}$				33.5						− 15.07		− 2	
a_1											40	48.17	
												− .92	
											40	47.25	
			9.0	40 33.3	40 59.7	59.2	2.4	5.9	9.0	1.24	40	248	
				36.5								−14.45	
κ				39.3								+ .146	
((δ) − D) $\frac{\kappa'}{100}$				36.7						− 14.31		− 2	
a_2											40	48.17	
												− .90	
											40	47.27	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj,1587R

Runs 10^2_{29} = Mar. 4, Mar. 5,
−7′ 30.83 30.56

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+29.3	1′ 48.0	50.3″	46′	49.15″	54 35 59.20			45′	54 28 6.09	
74	1.46687					28 28.37				− .22	+12.93
d	9.76431					−+14.68				+ .15	
	1.34796n					−22.28	28 43.05			+ 12.35	
((δ) − D) d′/100										+ .65	
										−16.90	
+4.92 δ1		35 22.51		27 59.0						28 2.12	
−3.08											
	+25.0	1 57.4	55.5	46	58.45	54 35 52.90			45	3.33	
	1.39794					28 22.34				− .16	+13.65
d	9.76431					−+19.01				+ .13	
	1.27903n						28 41.35			+ 13.03	
((δ) − D) d′/100										+ .65	
										−17.00	
+4.92 δ2		35 22.56		27 56.9						27 59.98	
−3.08											
	+24.4	3 24.0	25.4	38	24.70	53 49 23.65			30	53 41 33.92	
90	1.38739					41 52.82				− .15	+12.22
d	9.77233					−+18.90				+ .24	
	1.27650n						42 11.72			+ 11.53	
((δ) − D) d′/100										+ .60	
										−16.70	
+4.87 δ1		36 56.96		41 26.2						41 29.44	
−3.21											
	+16.6	3 37.1	32.9	33	35.00	53 49 13.35			30	29.93	
	1.22011					41 42.49				− .17	+12.95
d	9.77233					−+12.86				+ .25	
	1.10922n						42 55.65			+ 12.17	
((δ) − D) d′/100										+ .60	
										−16.70	
+4.87 δ2		36 56.87		41 23.0						41 26.18	
−3.21											
	+35.6	3 24.5	26.7	58	25.60	53 24 22.75			55	53 16 24.07	
76	1.55145					16 51.92				− .34	+11.59
d	9.77660					−+27.85				+ .24	
	1.44483n						17 19.77			+ 11.09	
((δ) − D) d′/100										+ .60	
										−16.50	
+4.84 δ1		38 26.27		16 15.8						16 19.16	
−3.36											
	+27.0	3 37.6	34.3	58	35.95	53 24 12.40			55	20.72	
50	1.43136					16 41.84				− .19	+12.36
d	9.77660					−+21.12				+ .25	
	1.32474n						17 2.96			+ 11.70	
((δ) − D) d′/100										+ .60	
										−16.60	
+4.84 δ2		38 26.31		16 13.1						16 16.48	
−3.35											
	+36.9	4 32.0	35.4	4	34.20	53 18 14.15			0	53 10 14.39	
	1.56703	4 33.0	35.4	4	34.20	53 18 14.15			0	− .36	+11.54
d	9.77761					10 43.32				+ .32	
	1.46142n					10 43.32				+ 10.98	
((δ) − D) d′/100						−+28.93	11 12.26			+ .60	
+4.83										−16.40	
−3.44 δ1		39 36.69		10 6.1						10 9.53	
	+40.8	4 35.0	31.0	4	33.00	53 18 15.35			0	12.80	10 20.48
74	1.61066	4 86.0	31.0	4	33.00	53 18 15.35			0	− .44	+12.07 − .25 +12.26
d	9.77761					10 44.79	11 16.78			+ .32	+ .32
+4.83	1.50505n					10 44.79				+ 11.59	+ 11.59
−3.44 ((δ) − D) d′/100	+31.0					−+31.99				+ .60	+ .60
	1.49136					−+24.31	11 9.10			−16.50	−16.50
+4.83 δ2	9.77761	39 36.74		10 4.9						10 8.37	10 14.24
−3.44	1.38575n										
	+29.7	4 27.4	30.7	29	29.30	50 53 19.05			25	50 45 23.64	
76	1.47276					45 48.22				− .24	+9.01
d	9.80105					−+24.58				+ .31	
	1.39059n						46 12.80			+ 8.46	
((δ) − D) d′/100				134						+ .48	
+4.68										−15.70	
−3.58 δ1		40 51.93		45 12.9						45 16.95	
	+26.1	4 35.6	33.3	29	34.40	50 53 13.95			25	21.79	
	1.41664					45 43.39				− .18	+9.58
d	9.80105					−+21.60				+ .32	
	1.33443n						46 4.99			+ 8.96	
((δ) − D) d′/100										+ .48	
+4.68										−15.90	
−3.55 δ2		40 51.95		45 11.9						45 15.47	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.11587R

285

Date$_1$ = Mar. 4, 1874 Observer W. A. R. Recorder J. Z. M.

286

Date$_2$ = Mar 5, 1874 Observer Recorder

62

Run

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
6 h	m s	° ′ ″		m s	m s	s	s	s	s		h m s		
	41 50	52 08	8.5	41 38.4	43 11.4	13.7	17.1	20.3	23.7	852	6 42	17.04	
	40 30.6	52 8.5	8.0	40.9								−15.10	
κ				43.6								+ .05	
((δ) − D) $\frac{\kappa'}{100}$				40.9						− 15.07		− 2	
											42	1.97	
a_1												− 96	
											42	1.01	+4.17
													−3.6
			8.4	41 45.8	42 9.6	12.9	16.4	19.6	22.0	815	42	163.0	
				48.5								−14.45	
κ				51.2								+ .167	
((δ) − D) $\frac{\kappa'}{100}$				48.5						− 14.30		− 2	
											42	2.00	
a_2												− .94	
											42	1.06	
	42 37	52.50	9.5	42 [illegible]	42 55.3	58.9	2.4	5.6	9.1	1.13	43	2.26	
	41 18.5	52 56.3	8.7	60.0								−15.10	
κ			8.2	58.3						− 15.07		+ .05	
((δ) − D) $\frac{\kappa'}{100}$				42.8								− 2	
				42 [illegible]	57.1	1.0	4.4	7.8	11.1	2.20	43	1.40	42 47.19
a_1												−15.10	42 46.20
										− 15.07		+ 5	42 49.33
												− 2	
			9.3	42 [illegible]	42 54.5	57.6	1.5	4.7	8.3	0.66	43	1.32	
			8.7						8.3			−14.45	42 48.34
κ										− 14.30		+ .167	
((δ) − D) $\frac{\kappa'}{100}$				42 48.6	56.4	0.1	3.5	7.0	10.4	1.74	43	3.48	42 47.02
				53.0								−14.45	42 46.06
a_2				53.7						− 14.30		+ .167	
				51.5								− 2	42 49.18
	43 48	53.31	9.0	43 [illegible]	44 7.9	11.5	15.0	18.5	21.9	7.48	44	14.96	
	42 23.9	53 32.7	9.0	50.0								−15.10	42 48.22
κ				52								+ .05	
((δ) − D) $\frac{\kappa'}{100}$				57.1						− 15.07		− 2	
											43	59.89	
a_1												−1.02	
											43	58.87	
			8.7	44 38.7	44 6.9	10.5	14.2	17.6	21.0	702	44	14.04	
				41.2								−14.45	
κ				44.3								+ .167	
((δ) − D) $\frac{\kappa'}{100}$				41.4						− 14.30		− 2	
											43	59.74	
a_2												−1.00	
											43	58.74	
	45 44	53.36	8.8	45 34.0	46 2.0	5.5	9.0	12.3	15.9	447	46	8.94	
	44 22.0	53 37.6	8.9	37.0								−15.09	
κ				39.8								+ .05	
((δ) − D) $\frac{\kappa'}{100}$				36.7						− 15.07		− 3	
											45	53.87	
a_1												−1.04	
											45	52.83	
			8.8	45 34.3	46 1.3	4.6	8.1	11.5	15.0	405	46	8.10	
				39.6								−14.44	
κ				40.8								+ .167	
((δ) − D) $\frac{\kappa'}{100}$				37.6						− 14.30		− 3	
											45	53.80	
a_2												−1.02	
											45	52.78	
	47 10	53.00	8.8	47 14.3	47 3.0	34.3	37.6	41.3	44.6	1888	47	37.76	
	45 49.2	53 1.6	8.6	16.7								−15.09	
κ				20.2								+ .5	
((δ) − D) $\frac{\kappa'}{100}$				17.0						− 15.07		− 3	
											47	22.69	
a_1												−1.04	
											47	21.65	
			8.8	47 1.0	47 3.1	33.5	37.0	40.4	43.8	1848	47	36.96	
				4.3								−14.44	
κ				6.3								+ .167	
((δ) − D) $\frac{\kappa'}{100}$				3.1						− 14.30		− 3	
											47	22.66	
a_2												−1.02	
											47	21.64	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eg} = −7′ 30.83 (Mar. 4) 30.56 (Mar. 5)

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+36.1	1′ 39.1″	41.7″	6′	40.40″	52 16 7.95			5″	52 8 8.14	
74	1.55751					8 37.12				− .34	+10.26
d	9.98788					−* 28.98				+ .12	
	1.46217 m						9 6.10			+ 9.92	
((δ) − D) d′/100										+ .56	
										−16.00	
+4.76										8 2.40	
−3.66 δ₁		42 5.47		7 58.7							
	+27.8	1 51.2	47.4	6	49.20	52 15 59.05			5	6.17	
	1.44404					8 28.49				− .21	+10.95
d	9.98788					−* 22.32				+ .13	
	1.34870 m						8 50.81			+ 10.47	
((δ) − D) d′/100										+ .56	
+4.76										−16.10	
−3.66 δ₂		42 5.82		7 57.4						8 1.02	
										47.19	4.58
113	+12.5	0 20.7	22.1	25	21.40	52 57 26.95			25	52 49 46.24	49 39.92
9.44 1.05305	1.09691	0 20.7	22.1	25	21.40	52 57 26.95			25	− .04	+11.22 − .10 +11.16
92	9.78113					49 56.12	50 6.00			+ .2	+ .2
	0.99482 m					49 56.12				+ 10.65	+ 10.65
+4.80 ((δ) − D) d′/100	+21.5					−* 9 88.93				+ .59	+ .59
−3.73	1.31175					−* 16.20	50 12.32			−16.20	− 16.20
	9.78113	42 51.00		49 38.5		14.84				47 34.88	49 34.88 ✓
	1.20966 m	53.14		32.8						4221	36.54
+4.80	+6.2	0 28.2	23.9	25	26.05	52 57 22.30			25	46.84	42.49
−3.73	0.79239	0 28.2	23.9	25	2605	52 57 22.30			25	− .01	+11.84 − .04 +11.81
d	9.78113					49 51.74	49 56.64			+ .3	+ .3
	0.69030 m					49 51.74				+ 11.23	+ 11.23
+4.80 ((δ) − D) d′/100	+11.7					−* 4.90				+ .59	+ .59
−3.73	1.06819					−* 9.25	50 0.99			−16.30	− 16.30
δ₂	9.78113	42 50.86		49 38.6						49 42.38	49 38.00
+4.80	0.96610 m	53.02		34.3							
−3.73	+19.9	2 45.8	48.8	42	48.80	53 40 2.55			40	53 32 17.80	
92	1.25285					32 31.72				− .08	+ 12.09
d	9.77387					−* 13.92				+ .19	
	1.14350 m						32 45.64			+ 11.38	
((δ) − D) d′/100										+ .60	
+4.85										−16.30	
−3.83 δ₁		44 3.72		32 9.8						32 13.59	
	−27.4	3 26.1	21.3	43	23.70	53 39 24.65			40	15.39	
	1.43775 m					31 54.09				− .19	+12.65
d	9.77387					+21.30				+ .24	
	1.32840 m						31 32.79			+12.00	
((δ) − D) d′/100										+ .60	
+4.85										−16.40	
−3.83 δ₂		44 3.59		32 7.8						32 11.64	
	+32.0	3 1.0	3.0	85	2.00	53 44 46.35			35	53 36 50.68	
84	1.50515	4		9		38 15.52				− .27	+12.01
d	9.77319					−* 24.84				+ .21	
	1.39512 m						37 40.36			+ 11.47	
((δ) − D) d′/100										+ .60	
+4.85										−16.30	
−3.99 δ₁		45 57.68		35 42.4						36 46.41	
	+30.5	4 8.0	3.3	89	6.65	53 43 42.70			35	35 48.46	
	1.48430					36 12.14				− .24	+12.86
d	9.77336					−* 23.68				+ .29	
	1.37444 m						36 35.82			+ 12.21	
((δ) − D) d′/100										+ .60	
+4.85										−16.50	
−3.99 δ₂		45 57.63		35 40.8						35 44.82	
	+20.8	4 36.0	37.2	14	36.10	53 8 12.25			10	53 0 25.05	
80	1.31806					0 41.42				− .12	+11.63
d	9.77930					−* 16.37				+ .32	
	1.21414 m						0 57.79			+ 10.83	
((δ) − D) d′/100										+ .60	
+4.81										−16.10	
−4.11 δ₁		47 26.46		0 16.5						0 20.58	
	+33.1	4 30.8	26.8	14	28.80	53 8 19.55			10	22.93	
	1.51983					0 48.99				− .28	+12.05
d	9.77930					−* 26.06				+ .31	
	1.41591 m						+ 15.05			+ 11.42	
((δ) − D) d′/100										+ .60	
+4.81										−16.20	
−4.11 δ₂		47 26.45		0 14.7						0 18.78	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

285 286 64

Date$_1$ = Mar. 4 1874 Observer W. A. R. Recorder G. F. M. Date$_2$ = Mar. 5. 1874 Observer Recorder

Star.	α	δ	Mag.	T_δ	T_m	T_o	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
6h	49m 20s	54° 53′	9.0	49m 26.8	49m 40.9	48.6	52.0	55.4	59.3	2605	49m 52.10		
	47 59.2	54 54.2	8.8	30.0								−15.09	
	κ			33.3								+ .06	
				30.0						− 15.06		− 3	
	((δ) — D) $\frac{\kappa'}{100}$										49	37.04	
												−1.12	
	α_1										49	35.92	+4.9
													−4.2
			8.9	49 25.9	49 44.1	44.7	51.3	54.9	58.5	2565	49	51.30	
				30.2								−14.44	
	κ			32.6								+ .19	
				32.6						− 14.28		− 3	
	((δ) — D) $\frac{\kappa'}{100}$			29.5							49	37.02	
												−1.09	
	α_2										49	35.93	+4.7
													−4.2
	50 54	53.15	9.0	50 53.8	51 12.7	16.0	19.4	22.8	26.4	973	51	1946	
	49 32.7	53 16.9	8.6	56.7								−15.09	
	κ			59.8								+ .05	
				56.7						− 15.07		− 3	
	((δ) — D) $\frac{\kappa'}{100}$										51	4.39	
52 34												−1.09	
	α_1										51	3.30	+4.8
													−4.4
			—	50 57.4	51 11.9	15.3	18.7	22.1	25.5	935	51	1870	
				54.4								−14.44	
	κ			56.9	Single Observations.							+ 16.7	
				54.3						− 14.30		− 3	
	((δ) — D) $\frac{\kappa'}{100}$										51	4.40	
												−1.07	
	α_2										51	3.33	+4.7
													−4.2
6	18 38	52.42	9.0	18 22.0	18 58.5	1.8	5.1	8.5	12.1	260	19	520	
	17 16.7	52 42.4	9.0	24.8								−15.11	
Mar. 4	κ			26.9								+ .05	
				24.6						− 15.08		− 2	
	((δ) — D) $\frac{\kappa'}{100}$										18	50.12	
												−.72	
	α_1										18	49.40	+4.8
													−1.6
6	20 01	50.59	9.3	19 46.9	20 24.7	28.1	31.4	34.7	38.2	1571	20	3142	
	18 45.7	50 59.5	9.3	52.3								−15.11	
Mar. 4	κ			52.6								+ .05	
				49.9						− 15.08		− 2	
	((δ) — D) $\frac{\kappa'}{100}$										20	16.34	
												−.71	
	α_2										20	15.63	+4.7
													−1.9
6	20 51	53.51	8.0	21 1.0	21 12.5	16.0	19.5	23.0	26.5	975	21	1980	
	19 29.4	53 51.1	7.9	4.0								−15.11	
Mar. 4	κ			6.9								+ .06	
				4.0						− 15.07		− 2	
	((δ) — D) $\frac{\kappa'}{100}$										21	4.43	
												−.77	
	α_1										21	3.66	+4.7
													−1.8
6	23 06	53.44	8.6	22 46.1	23 24.9	28.4	31.8	35.3	38.7	1591	23	3182	
	21 44.2	53 44.3	9.0	49.7								−15.11	
Mar. 4	κ			51.9								+ .05	
				47.2						− 15.09		− 3	
	((δ) — D) $\frac{\kappa'}{100}$										23	16.73	
												−.79	
	α_2										23	15.94	+4.8
													−2.0
6	24 42	54.10	8.3	24 38.0	25 2.0	6.5	9.0	12.7	16.1	453	25	906	
	23 19.9	54 10.4	8.0	41.0								−15.11	
Mar. 4	κ			42.8								+ .06	
				40.7						− 15.08		− 3	
	((δ) — D) $\frac{\kappa'}{100}$										24	53.98	
												−.81	
	α_1										24	53.17	+4.9
													−2.0
6	25 51	49.58	8.3	25 38.7	26 14.4	17.6	20.8	23.9	27.1	1038	26	2076	
	24 36.3	49 58.7	7.5	41.5								−15.11	
Mar. 4	κ			44.2								+ .05	
6.	52 34	50.51	9.0	42.5						− 15.08		+ 2	
	((δ) — D) $\frac{\kappa'}{100}$		8.8	52 28.2	52 57.2	1.6	3.8	7.0	10.4	190	53	380	26 5.68
51	20.3	50 51.8	8.5	31.0								−15.09	− .75
				34.1								+ .05	26 4.93
Mar. 4	α_2			31.1						− 15.06		− 2	
													52 48.74
													− 1.05
													52 47.69

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs Mar. 4 Mar. 5 $R_{eq} = -7'30.83$ 30".56

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
.80 d	+22.1	1 ′ 50.0 ″	57.1	21 ″	53.55	55 0 57.80			20 ″	54 53 10.34	
	1.34439					54 53 26.97				− .12	+13.52
	9.75985					−* 16.63				+ .13	
	1.22102						53 43.60			+ 12.82	
((δ) − D) $\frac{d'}{100}$										+ .69	
+4.93 δ_1		49 40.85		53 3.0						− 16.50	
−4.31										53 7.36	
	+21.8	1 88.0	50.7	21	52.85	55 0 55.50			20	8.53	
	1.33846					54 53 24.94				− .12	+14.22
d	9.75985					−* 16.41				+ .13	
	1.21509						53 41.35			+ 13.52	
((δ) − D) $\frac{d'}{100}$										+ .69	
+4.93 δ_2		49 40.86		53 1.8						− 16.60	
−4.31										53 6.15	
76	+22.8	4 6.3	9.8	59	9.05	53 23 39.30			65	53 15 50.63	
	1.35793					16 8.47				− .14	+11.87
d	9.77677					−* 17.84				+ .29	
	1.25148						16 26.31			+ 11.12	
((δ) − D) $\frac{d'}{100}$										+ .60	
+4.82 δ_1		51 8.12		15 42.1						− 16.00	
−4.44										15 46.60	
	+24.4	4 12.6	8.1	69	10.35	53 23 38.00			65	48.34	
	1.38739					16 7.44				− .15	+12.46
d	9.77677					−* 19.10				+ .29	
	1.28094						16 26.54			+ 11.97	
((δ) − D) $\frac{d'}{100}$										+ .60	
+4.82 δ_2		51 8.15		15 40.4						− 16.00	
−4.44										15 44.80	
	+40.6	2 45.8	46.1	32	46.95	52 50 1.40			30	52 41 58.38	
	1.60853					42 30.57				− .44	+10.81
d	9.78246					−* 32.19				+ .20	
	1.50777						43 2.76			+ 10.47	
((δ) − D) $\frac{d'}{100}$										+ .58	
+4.82 δ_1		18 54.22		41 50.6						− 16.90	
−1.65										41 52.29	
	+41.5	0 32.5	34.2	18	33.35	51 7 15.00			15	50 59 10.00	
	1.61805					50 59 44.17				− .45	+8.78
d	9.77887					−* 31.17				+ .4	
	1.53370						51 0 15.34			+ 8.69	
((δ) − D) $\frac{d'}{100}$										+ .50	
+4.71 δ_2		20 20.34		59 0.7						− 16.30	
−1.78										59 2.48	
	+15.5	3 36.4	36.9	23	36.65	53 59 11.70			20	53 51 28.91	
	1.19033					51 40.87				− .06	+12.46
d	9.77061					−* 31.96				+ .25	
	1.07772						51 52.83			+ 11.67	
((δ) − D) $\frac{d'}{100}$										+ .60	
+4.89 δ_1		21 8.55		51 22.3						− 17.20	
−1.84										51 24.17	
	+42.6	0 38.9	39.7	30	39.30	53 52 9.05			30	53 44 5.26	
	1.62941					44 38.22				− .48	+11.71
d	9.77181					−* 32.96				+ .5	
	1.51800						45 11.18			+ 11.54	
((δ) − D) $\frac{d'}{100}$										+ .60	
+4.88 δ_2		23 20.82		43 57.9						− 17.00	
−2.04										43 59.97	
	+28.2	3 27.1	26.9	3	28.00	54 19 20.35			0	54 11 27.94	
	1.45025					11 49.52				− .20	+12.69
d	9.76712					−* 21.58				+ .24	
	1.33415						12 11.10			+ 12.03	
((δ) − D) $\frac{d'}{100}$										+ .62	
+4.91 δ_1		24 58.08		11 21.4						− 17.10	
−2.17										11 23.53	mar. 4.
	+39.3	0 55.7	58.0	15	56.85	50 6 51.50			15	49 58 47.60	50 49 41.67
	1.59439					49 59 20.67				− .41	−780 − .29 +8.80
	9.80822					−* 33.07	54 53.74			+ 7	+ 1
+4.65 d	1.51939	0 7.0	9.5	25	8.25	49 57 40.10			25	+ 7.69	+ 8.59
−2.28 ((δ) − D) $\frac{d'}{100}$	+32.7	0 1.0	9.5	25	8.25	49 57 40.10			25	+ .45	+ .49
	1.51455					50 9.27				− 15.90	− 15.20
δ_2	9.80957	26 9.58		58 37.2		50 9.27	50 36.87		→	58 39.50	49 50.76 35.27
+4.67	1.44090	52 52.36		49 36.7		−* 27.60					
−4.58											

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

286 — 288 — 66

Date$_1$ = Mar. 5, 1874 — Observer W. A. R. — Recorder J. Fitz.
n = +.13

Date$_2$ = Mar. 22, 1874 — Observer — Recorder
n = +.09

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
7 h	06 m 31 s	52.16	7.8	6 m 21.0 s	6 50.9	54.1	57.6	1.0	4.3	2879	7 h	6 m 57.58 s	
	05 12.3	52 17.6	7.7	31.4								−14.43	
	κ			33.2								+ .17	
				30.5						− 14.28		− ½	
	((δ) − D) $\frac{\kappa'}{100}$										6	43.30	
↑ 6	5316 − 7 5	a_1 23									6	−1.21	
											6	42.09	+41 −6
			7.6	6 22.7	6 38.2	41.6	44.7	48.2	51.7	2246	6	44.72	
				24.4								− 2.14	
	κ			27.0								+ .12	
				24.8						− 2.04		− 2	
	((δ) − D) $\frac{\kappa'}{100}$										6	42.88	
	a_2											− .78	
											6	42.10	+4 −5
	08 11	53.33	8.8	8.6.0	8 28.7	32.2	35.6	39.0	42.6	1781	8	35.62	
	06 50.4	53 34.4	8.8	8.4								−14.43	
	κ			11.7								+ .17	
				8.7						− 14.29		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										8	21.33	
	a_1											−1.26	
											8	20.07	+4 −5
			8.7	8 02	8 16.0	19.5	22.8	26.4	29.9	1146	8	22.92	
				3.4								− 2.14	
	κ			6.3								+ .12	
				3.3						− 2.05		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										8	20.87	
	a_2											− 82	
											8	20.05	+4 −6
	09 25	52.10	7.8	9 21.6	9 45.7	49.1	52.6	56.0	59.3	2627	9	52.54	
	08 6.8	52 12.2	8.0	25.2								−14.43	
	κ			28.3								+ .17	
				25.0						− 14.28		− 2	
	((δ) − D) $\frac{\kappa'}{100}$										9	38.26	
	a_1											−1.23	
											9	37.03	+4 −6
			7.8	9 8.7	9 33.1	36.5	39.8	43.2	46.4	1990	9	39.80	
				11.6								− 2.14	
	κ			14.9								+ .12	
				11.7						− 2.04		− 2	
	((δ) − D) $\frac{\kappa'}{100}$										9	37.76	
	a_2											− .81	
											9	36.95	+4 −6
	10 37	52.03	8.9	10 23.0	10 56.4	59.8	3.1	6.5	9.7	154	11	308	
	09 18.0	52 4.5	8.7	26.4								−14.42	
	κ			29.1								+ .17	
				26.7						− 14.27		− 2	
	((δ) − D) $\frac{\kappa'}{100}$										10	48.83	
	a_1											−1.25	
											10	47.56	+4 −6
			9.0	10 18.1	10 43.8	47.0	50.6	53.7	57.0	2521	10	50.42	
				21.1								− 2.14	
	κ			23.7								+ .12	
				21.0						− 2.04		− 2	
	((δ) − D) $\frac{\kappa'}{100}$										10	48.38	
	a_2											− 82	
											10	47.56	+4 −6
	κ			Single Observations.									
	((δ) − D) $\frac{\kappa'}{100}$												
	a_1												
6	53 16	53.36	7.5	51 57.0	52 29.5	32.0	36.3	39.9	43.3	1820	6	52 36.40	
Mar 5	51 ~~58.5~~	53 ~~37.5~~	9.0	39.9								−14.43	
	κ 50 53.2	34.6		2.4								+ .18	
	((δ) − D) $\frac{\kappa'}{100}$			57.7						− 14.28		− 3	
	a_2										52	22.12	
												−1.09	+4.84
											52	21.03	−4.55

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs $R_{eq} = -7\ 30.56$ (Mar. 5) $+.07$; 29.55 (Mar. 22) $+.04$

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	+27.1	4 41.1	36.4	59	38.45	52 23 9.60			55	52 15 17.34	
	1.43297					15 39.04				− .19	+11.32
12.66 d	9.78674					−*21.70				+ .32	
	1.33649 m						+6 0.74			+ 10.63	
((δ) − D) $\frac{d'}{100}$										+ .56	
										− 15.30	
+4.73											
−5.76 δ_1		6 46.82		15 7.6						15 13.36	
	+20.1	4 43.6	42.5	59	43.00	52 23 5.35			55	19.70	
	1.30320					15 35.80				− .11	+10.98
d	9.78674					−*16.10				+ .19	
	1.20672 m						15 51.90			+ 10.28	
((δ) − D) $\frac{d'}{100}$										+ .62	
+4.73										− 16.80	
−5.76 δ_2		6 46.83		15 8.1						15 13.88	
	+26.9	2 30.0	24.7	42	27.35	53 40 21.00			40	53 32 29.53	
70	1.42975					32 50.44				− .15	+12.63
d	9.77387					−*20.91				+ .17	
	1.32040 m						33 11.25			+ 12.65	
((δ) − D) $\frac{d'}{100}$										+ .60	
+4.80					+.10					− 15.60	
−5.90 δ_1		8 24.87		32 20.7						32 26.56	
	+18.6	2 31.8	31.1	42	31.45	53 40 16.90			40	32.11	
	1.27226					32 47.35				− .10	+ 12.36
d	9.77387					−*15.24				+ .10	
	1.18291 m						33 2.59			+ 11.66	
((δ) − D) $\frac{d'}{100}$										+ .70	
+4.80										− 17.10	
−5.90 δ_2		8 24.85		32 21.4						32 27.27	
	+27.5	3 20.0	15.7	3	17.88	52 19 30.50			0	52 11 37.89	
74	1.43933					11 59.94				− .19	+11.16
d	9.78739					−*22.05				+ .23	
	1.34350						12 21.99			+ 10.56	
((δ) − D) $\frac{d'}{100}$										+ .56	
										− 15.10	
+4.71											
−6.00 δ_1		9 41.74		11 28.0						11 33.95	
	+28.1	3 15.1	14.8	3	14.95	52 19 33.40			0	41.31	
	1.44871					12 3.85				− .21	+10.76
d	9.78739					−*22.54				+ .13	
	1.35288 m						12 26.39			+ 10.22	
((δ) − D) $\frac{d'}{100}$										+ .62	
										− 16.70	
+4.71											
−6.00 δ_2		9 41.66		11 29.4						11 35.37	
						5.90					
	~~−23.1~~	1 ~~46.8~~ 44.1	~~46.1~~ 40.8	11	~~46.45~~ 42.45	52 11 ~~1.90~~			10	52 3 ~~1.66~~	5.66
66	+36.9					3 ~~31.34~~ 35.34				− .36	+10.72
d	1.56703					−*29.68				+ .12	
	9.78869						4 1.02			~~+~~ 10.41	
((δ) − D) $\frac{d'}{100}$	1.47250 m	10 52.26								+ .55	
		46.8	46.1	2 55.3	46.45	1.90				− 15.00	
+4.70										3 2 ~~57.38~~	1.38
−6.10 δ_1											
	+29.4	1 ~~44.1~~	~~46.1~~	11	~~42.45~~	52 11 ~~5.90~~			10	3 ~~12.70~~	8.70
	1.46835					3 ~~36.35~~ 32.35				− .22	+10.52
d	9.78869					−*23.65				+ .7	
	1.37382 m						~~7~~ 0.00			+ 10.67	
((δ) − D) $\frac{d'}{100}$										+ .60	
+4.70										− 16.60	
−6.10 δ_2		10 52.26		2 56.5						3 ~~16.2~~	2.62
d											
((δ) − D) $\frac{d'}{100}$											
δ_1											
					+.10						
	+36.5	1 20.1	15.1	41	17.60	53 41 30.75			40	53 33 31.73	
	1.56229					~~34~~ 0.19				− .34	+12.41
d	9.77370					−*28.36				+ 9	
	1.45277 m						~~34~~ 28.55			+ 12.06	
((δ) − D) $\frac{d'}{100}$										+ .60	
										− 16.00	
										33 28.14	
δ_2		52 25.87		33 23.6							

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae..proj..1587R

Single Observations.

Date$_1$ = Mar. 5. 1874 — Observer W. A. R. / Recorder J. F. M.

Date$_2$ = Mar. 22, 1874 — 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
6	54 m 19 s	50. 08	9.0	53 m 49 s 8	54 10.1	13.3	16.6	19.7	23.1	828	6 54	1456	
	53 4.9	50 9.0	9.0	52.1								−14.43	
Mar. 5	κ			54.9								+ .15	
	((δ) — D) $\frac{\kappa'}{100}$			53.3						− 14.56		− 2	
											54	1.26	
	α_1										54	−1.02	
												1.24	
6	55 52	53. 48	8.7	55 45.4	56 12.6	16.1	19.6	23.0	26.5	978	56	1956	
	54 31.2	53 49.5	8.8	42.9								−14.43	
Mar. 5	κ			33.0								+ .18	
	((δ) — D) $\frac{\kappa'}{100}$			45.8						− 14.28		− 3	
											56	5.28	
	α_2										56	−1.14	
												4.14	
6	56 40	53. 16	8.7	56 40.8	56 09.3	2.7	6.2	9.6	13.0	308	57	616	
	55 19.3	53 15.8	8.8	44.1								−14.43	
Mar. 5	κ			47.8								+ .17	
	((δ) — D) $\frac{\kappa'}{100}$			44.2						− 14.29		− 3	
											56	51.87	
	α_1										56	−1.13	
												50.74	
6	57 31	53. 41	9.0	57 45.0	57 50.4	53.7	57.0	0.4	3.9	2854	57	5708	
	56 9.7	53 41.8	8.5	47.8								−1443	
Mar. 5	κ			57.6								+ 18	
	((δ) — D) $\frac{\kappa'}{100}$			48.1						− 14.28		− 3	
											57	42.80	
	α_2										57	−1.16	
												41.64	
6	58 34	53. 18	8.6	58 00.1	58 55.2	58.4	2.2	5.7	9.1	7.11	58	222	
	57 13.3	53 19.7	8.9	52.2								−14.43	
Mar. 5	κ			55.8								+ 17	
	((δ) — D) $\frac{\kappa'}{100}$			52.1						− 14.29		− 3	
											57.8	47.93	
	α_1										57.8	−1.14	
												46.79	
6	59 59	53. 41	9.3	59 54.5	0 20.3	24.0	27.4	30.8	34.3	1368	7 0	2736	
	58 37.7	53 42.8	9.0	56.6								−14.43	
Mar. 5	κ			0.2								+ .18	
	((δ) — D) $\frac{\kappa'}{100}$			57.1						− 14.28		− 3	
											0	13.08	
	α_2										0	−1.18	
												11.90	
7	00 43	53. 24	9.0	0 54.0	1 3.3	7.2	10.5	13.8	17.1	519	1	1038	
6	59 22.5	53 25.3	9.0	56.4								−14.43	
Mar. 5	κ			59.6								+ .17	
	((δ) — D) $\frac{\kappa'}{100}$			56.7						− 14.29		− 3	
											0	56.09	
	α_1										0	−1.18	
												54.91	
7	02 21	53. 10	9.5	2 16.8	2 39.3	42.8	46.3	49.6	53.2	2312	2	4624	
	01 0.5	53 11.3	9.4	19.8								−14.43	
Mar. 5	κ			23.1								+ .17	
	((δ) — D) $\frac{\kappa'}{100}$			19.7						− 14.29		− 3	
											2	31.95	
	α_2										2	−1.19	
												30.76	
7	03 30	52. 57	9.3	3 45.0	3 57.1	54.7	58.2	1.5	4.9	2905	3	5808	
	02 11.4	52 58.9	9.4	46.0								−14.43	
Mar. 5	κ			46.6								+ .17	
	((δ) — D) $\frac{\kappa'}{100}$			47.2						− 14.28		− 2	
											3	43.80	
	α_1										3	−1.20	
												42.60	
7	04 27	53. 49	9.1	4 32.0	4 46.2	49.7	53.3	56.7	0.4	2663	4	5326	
	03 5.9	53 50.9	9.3	35.4								−14.43	
Mar. 5	κ			39.1						− 14.28		+ .18	
7	05 23	52. 07	9.0	43.3								− 3	4 38.98
	((δ) — D) $\frac{\kappa'}{100}$	52 8.2	9.0	5 26.8	5 44.3	47.5	50.9	54.3	57.6	2546	5	5092	4 − 1.23
	04 4.2			30.8								−14.43	4 37.75
Mar. 5	α_2			33.0								+ .17	5 36.64
				27.7						− 14.28		− 2	− 1.19
													5 35.45

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs θ_{eq} = Mar. 5 −7° 30′ 56″

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	s	1′ 55.7	56.9	1′	56.20	50 20 52.05			0′	50 13 1.14	
	+24.3					13 21.49				− 15	+8.84
3.00 d	1.38561					−*20.35				+ .13	
	9.80610						13 41.84			+ 8.40	
((δ) − D) $\frac{d'}{100}$	1.30849									+ .46	
										−15.10	
δ₁										12 54.88	
	+30.8	1 46.1	42.8	26	44.45	53 56 3.90			25	53 48 9.54	
	1.48855					48 33.34				− 25	+12.80
d	9.77130					−*23.80				+ .12	
	1.37663						48 57.14			+ 11.93	
((δ) − D) $\frac{d'}{100}$										+ 12.53	
										+ .60	
+4.84		9								− 16.00	
−4.84 δ₂		56 8.48		48 1.5						48 6.334	
	+22.0	4 20.3	16.6	89	18.45	53 23 29.90			55	53 15 42.12	
52	1.34242					15 59.34				− 13	+12.51
d	9.77677					−*17.22				+ 30	
	1.23597						16 16.56			+ 11.74	
((δ) − D) $\frac{d'}{100}$										+ .60	
+4.81										− 15.80	
−4.93 δ₁		56 55.55		15 33.9						15 38.83	
	+9.0	4 58.1	53.9	84	56.00	53 47 52.35			30	53 40 14.81	
	0.95424					40 21.79				− 2	+13.11
d	9.77268					−*6.98				+ 34	
	0.84370						40 25.77			+ 11.85	
((δ) − D) $\frac{d'}{100}$										+ 12.10	
										+ .60	
+4.83										− 15.90	
−5.00 δ₂		57 46.47		40 7.0						40 12.02	
	−50.5	3 34.4	29.1	88	31.75	53 24 16.60			55	53 16 38.61	
	+9.5					16 46.04				− 2	+12.58
d	0.97772					−*7.43				+ 25	
	9.77660						16 53.47			+ 11.75	
((δ) − D) $\frac{d'}{100}$	0.87110									+ .60	
										− 15.80	
+4.81 δ₁										16 35.39	
−5.09		58 51.60		16 30.3							
	+30.3	3 18.1	13.1	83	15.60	53 49 32.75			30	53 41 38.72	
	1.48144					42 2.19				− 23	+12.81
d	9.77233					−*23.47				+ 25	
	1.37055						42 25.66			+ 12.31	
((δ) − D) $\frac{d'}{100}$										+ .60	
										− 15.70	
+4.83 δ₂		0 16.73		41 30.6						41 35.83	
−5.21											
	+13.6	1 58.3	53.1	87	55.70	53 30 52.65			50	53 23 1.48	
	1.13354					23 22.09				− 5	+12.55
d	9.77558					−*10.61				+ 13	
	1.02590						23 32.70			+ 11.87	
((δ) − D) $\frac{d'}{100}$										+ .60	
										− 15.80	
+4.81 δ₁		0 59.72		23 3.0						23 8.23	
−5.21											
	+26.3	0 4.2	59.3	8	1.75	53 17 46.60			5	53 9 55.41	
	1.41996					10 16.04				− .18	+12.05
d	9.77778					−*20.63				+ 00	
	1.31452						10 36.67			+ 11.63	
((δ) − D) $\frac{d'}{100}$										+ .60	
										− 15.70	
+4.79 δ₂		2 35.55		9 46.4						9 51.76	
−5.40											
	+10.9	2 15.9	11.8	17	13.85	53 5 34.50			15	52 57 55.35	
	1.03743					52 58 3.94				− 3	+12.13
d	9.77980					−*8.59				+ 15	
	0.73401						58 12.53			+ 11.41	
((δ) − D) $\frac{d'}{100}$										+ .60	
										− 17.20	
+4.77 δ₁		3 47.34		57 44.8						57 50.28	
−5.51											
	+17.8	0 57.0	51.9	25	54.45	53 56 53.90			25	53 49 9.59	52 6 13.81
	1.25042					49 23.34				− 8	+12.93 − 12 +11.17
d	9.77112					−*13.75	49 37.09			+ 6	+ 27
+4.83	1.13832	3 48.8	46.4	8	47.10	52 14 1.25			5	+ 12.35	+ 10.46
−5.58 ((δ) − D) $\frac{d'}{100}$	+21.0					6 30.69				+ .60	+ .56
	1.32222					−*16.88	6 47.59		→	− 17.40	− 16.80
δ₂	9.78837	4 42.58		48 59.5						49 5.12	6 8.18
+4.72	1.22737	5 40.17		6 2.5							
−5.66											

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.31587R

Date$_1$ = Mar. 22, 1874 (n = +.09) 288 — Observer W.A.R. — Recorder J.F.M.
Mar. 21 287 (n = +.04)

Date$_2$ = Mar. 24, 1874 (n = +.12) 289 — Observer — Recorder

Star.	α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
Tau	13m 22s	54° 21′	8.3	13m 3.5s	13m 30.5s	34.0	37.6	41.0	44.6	1877	13m	27.54	
Mar. 22	12 2.4	54 21.6	8.0	7.5								−2.14	
	κ			10.9								+ .12	
				7.3						− 2.05		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										13	35.49	
												− 90	
	a_1										13	34.59	+4 −6
Mar 23			8.5	13 9.0	13 29.9	33.7	36.9	40.6	44.0	1848	13	3.96	
		↑ 9 25		12.9								− 1.44	
	κ	10 37		15.4								+ .17	
				12.4						− 1.30		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										13	35.66	
												− 87	
	a_2	14 33									13	34.79	+4 −6
	15 49	53 26	9.2			Lost							
	14 28.6	53 27.8	9.3										
	κ												
Mar. 21	((δ) − D) $\frac{\kappa'}{100}$		9.1	15 40.0	15 55.5	39.0	2.5	6.0	9.5	1.25	16	2.50	
				43.2								−2.62	
				46.2								+ .06	
	a_1			43.1						− 2.59		− 3	
											15	59.91 −.94	58.97 +4 −6
			9.3	15 39.4	15 54.2	57.8	1.2	4.8	8.3	0.63	16	2.6	
				41.8								−1.44	
	κ			44.9								+ .18	
				42.0						− 1.31		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										15	59.95	
												− 88	
	a_2										15	59.07	+4 −6
	16 36	53.02	8.5			Lost							
	15 15.4	53 3.7	8.9										
	κ												
	((δ) − D) $\frac{\kappa'}{100}$												
	a_1												
			9.0	16 39.6	16 41.5	44.8	48.2	51.5	55.0	2410	16	4.20	
				40.0								−1.44	
	κ			43.8								+ .16	
				40.5						− 1.31		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										16	46.89	
												− 88	
	a_2										16	46.01	+4 −6
	17 37	53.45	8.9			Lost							
	16 16.2	53 47.3	8.4										
	κ												
	((δ) − D) $\frac{\kappa'}{100}$												
	a_1												
			8.8	17 26.6	17 43.8	47.2	50.7	54.1	57.6	2496	17	4.92	
				29.9						2839		50.68	
	κ			33.6								−1.44	
				30.0								+ .16	
	((δ) − D) $\frac{\kappa'}{100}$									− 1.31		− 3	
											17	49.33	
	a_2											− 92	
											17	48.45	+4 −6
	18 33	53.27	8.4			Lost							
	17 12.4	53 28.5	8.9										
	κ												
	((δ) − D) $\frac{\kappa'}{100}$												
	a_1												
7 24	7 — 34 03		8.6	18 24.6	18 38.2	41.6	45.1	48.6	52.0	2255	18	4.10	
				27.9								−1.44	
	κ			31.0								+ .16	
				27.5						− 1.31		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										18	43.79	
												− 92	
	a_2										18	42.87	+4 −6

20 11
21 37
22 35
24 7
25 17
26 44
29 5
30 12
31 38

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae..pf oj .1587R

The correction +51 which is applied to final δ is for a change in Rag from Mar 23 to page 75. after that it is done

Runs		$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	R_{eq} =	Mar. 21. −729.45 +.04	Mar. 22. 29.55 +.04	Mar. 23. 29.78 47 +.03								
58		+30.2	0 8.0	4 7.3	55	7.65	54 27 40.70			55	54 19 48.11	
	d	1.48001					20 11.15				− .23	+12.98
		9.76572					* 23.04				+ .00	
	((δ) − D) $\frac{d'}{100}$	1.36251$_n$						30 34.19			+ 12.51	
											+ .70	
+4.84											−17.20	
−6.33	δ_1		1339.43		19 37.6						19 43.89	
		+24.6	0 12.9	9.0	53	10.95	54 27 37.40			55	48.65	
	d	1.39094					20 7.42				− .16	+13.45
		9.76572					± 18.77				+ .01	
	((δ) − D) $\frac{d'}{100}$	1.27344$_n$						20 26.19			+12.90	
					39.0						+ .70	
+4.84											−17.30	
−6.33	δ_2		13 39.63		19 35.5						19 44.80	+51
		.4	4 52.4	51.1						45	53 25 5.62	
	d										− .09	+12.23
											+ .20	
	((δ) − D) $\frac{d'}{100}$	+19.4	4 57.4	58.9	49	58.15	53 32 50.20			45	+11.42	
		1.28780					25 20.75				+ .70	
		9.77524					−*15.13	25 35.88			−16.80	
+4.78	δ_1	1.17982$_n$	16 3.75		24 54.5						259 1.05	
−6.53							2					
		+19.3	4 59.7	55.2	49	57.45	53 31 50.90			60	24 5.86	Eq sum
	d	1.28556					25 20.92			45	5 .09	+1242
		9.77541					−*15.06				+ .3	
	((δ) − D) $\frac{d'}{100}$	1.17775$_n$						24 35.98			+11.78	
+4.78											+ .70	
−6.53	δ_2		16 3.85		24 55.4						−16.90	
											1.38	+51
			3 38.0	37.0						10	5	
	d											
	((δ) − D) $\frac{d'}{100}$											
	δ_1											
		+7.7	3 46.1	42.8	13	44.45	53 9 3.90			10	53 1 27.86	
	d	0.88649					1 33.92				− .02	+12.25
		9.77913					−*6.06				+ .11	
	((δ) − D) $\frac{d'}{100}$	0.78240$_n$						+ 39.98			+11.46	
											+ .70	
+4.75											−16.80	
−6.60	δ_2		16 50.76		1 17.2						1 23.71	+51
			4 31.9	30.9						25		
	d											
	((δ) − D) $\frac{d'}{100}$											
	δ_1											
		+20.7	4 41.2	37.8	29	39.50	53 53 8.85			25	53 45 22.86	
	d	1.31597					45 38.87				− .11	+12.98
		9.77164					−*16.01				+ .14	
	((δ) − D) $\frac{d'}{100}$	1.20439$_n$						45 54.88			+12.25	
											+ .70	
+4.79											−17.00	
−6.68	δ_2		17 53.24		45 12.7						45 18.84	+51
			2 49.7	47.7						45		
	d											
	((δ) − D) $\frac{d'}{100}$											
	δ_1											
		+17.3	2 57.3	47.9	47	49.60	53 34 58.75			45	53 27 15.29	
	d	1.23805					27 25.77				− .8	+12.63
		977490					−*13.48				+ .8	
	((δ) − D) $\frac{d'}{100}$	1.12973$_n$						27 42.25			+ 11.93	
											+ .70	
+4.77											−16.90	
−6.76	δ_2		18 47.64		27 4.8						27 10.02	+51

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Date$_1$ = Mar. 22, 1874 (288) Observer W.A.R. Recorder J.F.M.

Date$_2$ = Mar. 23, 1874 (289) 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
	m s	° ′		m s	m s	s	s	s	s		m	s	
	35 44	53 14	9.4	34 37.5	35 37.4			1.8	6.2	2920	35	58.40	
	34 25.0	53 16.0	9.4	34.5		55.0	57.6					−2.13	
	κ			34.8						− 2.04		± .13	35 56.36
Mar. 21			9.5	35 22.0	35 37.2	55.4	58.7	2.3	5.6	2940	35	58.80	− 1.13
	((δ) − D) $\frac{\kappa'}{100}$			21.4								− 2.62	35 55.23
				28.9						− 2.60		± 5	
	α_1			22.8								± 3	
											35	56.20	−1.15
			9.2	36 14.0	35 30.4	54.0	57.7	1.4	4.1	2876	35	57.52	55.05
				16.9								− 2.43	
	κ			19.7						− 1.30		+ .16	
	((δ) − D) $\frac{\kappa'}{100}$			16.4								− 3	
											35	56.22	
	α_2											−1.10	
											35	55.12	
	38 26	53 29	8.9	38 14.6	38 22.4	36.2	39.6	43.0	46.6	1980	38	39.60	
	37 7.3	53 21.2	8.9	17.3								− 2.13	
	κ			20.8						− 2.04		+ .12	
			9.0	17.6								− 3	38 37.56
Mar. 21	((δ) − D) $\frac{\kappa'}{100}$			38 17.3	38 33.2	36.6	40.0	43.4	47.0	2002	38	40.04	− 1.16
21 9m.				11.3								− 2.62	38 36.40
39 38	α_1			14.0						− 2.59		± 5	
				12.4								− 3	38 37.45
			9.0	38 5.0	38 32.0	35.5	38.9	42.3	45.7	1944	38	38.88	− 1.19
				8.2								− 1.43	38 36.26
	κ			11.0						− 1.30		+ .16	
				8.1								− 3	
	((δ) − D) $\frac{\kappa'}{100}$										38	37.58	
	α_2											−1.14	
											38	36.44	
	40 58	54.05	8.7	39 37.9	39								
	39 39.3	54 6.0	9.0	44.4	41 5.2	8.6	12.2	15.6	19.2	608	41	12.16	
	κ			44.0								− 2.13	
				40 39.3						− 2.04		+ .12	
	((δ) − D) $\frac{\kappa'}{100}$			40.6								− 3	
				43.3							41	12.12	
	α_1			40.1								−1.22	
											41	8.90	
			8.8	40 45.1	41 4.5	8.0	11.5	15.2	18.5	575	41	11.50	
				48.7								− 1.42	
	κ			51.2						− 1.28		+ .17	
				45.3								− 3	
	((δ) − D) $\frac{\kappa'}{100}$										41	10.22	
												−1.19	
	α_2										41	9.03	
	42 59	53 56	9.6	42 48.3	43 6.5	10.0	13.4	17.1	20.6	676	43	13.52	
	41 39.8	53 58.5	9.3	05.8								− 2.13	
	κ			52.0						− 2.04		+ .12	
				48.7								− 3	
	((δ) − D) $\frac{\kappa'}{100}$										43	11.48	
												− 1.22	
	α_1										43	10.26	
			9.2	43 55.8	43 8.7	8.9	(12.5)	(16.8)	19.9		43	12.66	
				55.9								− 1.42	
	κ			59.8						− 1.28		+ .17	
				55.8								− 3	
	((δ) − D) $\frac{\kappa'}{100}$										43	11.38	
												−1.20	
	α_2										43	10.18	
	43 52	53.06	7.9	43 47.9	43 5.4	1.2	4.6	8.0	11.4		44	14.58	
	42 33.3	53 8.7	8.5	51.0								−2.13	
	κ			53.9						− 2.04		+ .12	
				50.1								− 3	
	((δ) − D) $\frac{\kappa'}{100}$										44	2.54	
												−1.22	
	α_1										44	1.32	
			8.0	44 30.2	43 5.2	0.3	3.8	7.2	10.6	1.91	44	3.82	
				24.7								−1.42	
	κ			26.8						− 1.29		+ .16	
				23.1								− 3	
	((δ) − D) $\frac{\kappa'}{100}$										44	2.53	
												−1.19	
	α_2										44	1.34	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eq} = −7′ 29.45 (Mar 21) 29.55 (Mar 22) 29.47 (Mar 23)

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	Mar 21
	8	1′ 29.7	27.1	1′	28.40″	53 21 19.95			0′	53 13 32.00	13 31.15
+40	+23.5					13 50.40				− 14	+11.96 − 28 +11.69
−88 d	1.37107	1.26496				−*18.40	14	8.80		+ 6	+ 5
	+33.0	1 21.9	21.9	1	21.90	53 21 26.45			0	+ 11.34	+ 11.22
((δ) − D) $\frac{d'}{100}$	1.51851					13 57.00				+ .70	+ .70
	9.77711					−*25.85	14	22.85		−16.10	− 16.10
+4.71	1.41240	35 59.94		13 19.7						13 27.86	13 26.74
−8.15 δ_1		59.76		18.6							
+4.71	−19.4	2 7.6	2.7	2	5.15	53 20 43.20			0	28.42	
−8.15	1.28780					13 13.22				− 9	+12.36
d	9.77728					+ 15.20				+ 6	
	1.18186						12	58.02		+11.69	
((δ) − D) $\frac{d'}{100}$										+ .70	
+4.71										−16.20	
−8.15 δ_2		35 59.83		13 16.9						13 24.58	+.51
	+22.0	1 32.6	30.5	46	31.55	53 36 16.80			45	53 28 30.12	28 29.44
44	1.34242					28 47.25				− .13	+12.24 − 22 +12.03
72 d	9.77456					−*17.13	29	4.38		+ 6	+ .6
	1.23376	1 26.4	27.2	46	26.80	53 36 21.55			45	+ 11.61	+ 11.49
((δ) − D) $\frac{d'}{100}$	+29.1					28 52.10				+ .70	+ .70
+4.71	1.46389					−*22.66	29	14.76		−16.10	− 16.00
−8.37 δ_1	9.77456	38 41.11		28 17.9						28 26.26	28 25.47
	1.35523	40.97		16.1							
+4.71	+30.8	1 28.5	24.0	46	26.25	53 36 22.10			45	28.14	
−8.37	1.48855					28 52.12				− 25	+12.46
d	9.77456					−*23.98				+ 4	
	1.37989						29	16.10		+ 11.97	
((δ) − D) $\frac{d'}{100}$										+ .70	
+4.71										− 16.20	
−8.37 δ_2		38 41.15		28 16.5						28 24.40	+.51
	+31.8	1 38.7	28.8	11	29.75	54 11 18.60			10	54 3 24.63	
66	1.50243					3 49.05				− 27	+12.72
d	9.76852					−*24.42				+ 6	
	1.38773						4	13.47		+ 12.23	
((δ) − D) $\frac{d'}{100}$										+ .70	
+4.74										− 16.20	
−8.57 δ_1		41 13.64		3 12.6						3 21.15	
	+23.2	1 39.7	35.1	11	37.40	54 11 10.95			10	23.16	
d	1.36549					3 40.97				− 14	+13.23
	9.76852					−*17.81				+ 5	
	1.25079						3	58.78		+12.62	
((δ) − D) $\frac{d'}{100}$										+ .70	
+4.74										−16.30	
−8.57 δ_2		41 13.77		3 12.0						3 20.069	+.51
	+24.8	4 7.2	6.1	19	6.65	54 3 41.70			15	53 55 53.05	
86	1.39445					53 56 12.15				− .16	+12.80
d	9.76991					−*19.10				+ 16	
	1.28114						56	31.25		+ 12.10	
((δ) − D) $\frac{d'}{100}$										+ .70	
+4.72										−16.10	
−8.73 δ_1		43 14.98		55 41.0						55 49.75	
	+16.9	4 15.8	11.3	19	13.53	54 3 34.80			15	51.80	
d	1.22789					53 56 4.82				− 7	+13.24
	9.76991					−*13.02				+ 13	
	1.11458						56	17.84		+ 12.48	
((δ) − D) $\frac{d'}{100}$										+ .70	
+4.72										−16.62	
−8.73 δ_2		43 14.90		55 40.6						55 48.84	+.51
	+13.7	84 2.7	0.8	89	1.95	53 14 46.60			5	53 16 6.29	Ex mm.
76	1.13672					7 17.05				− 5	+11.98
d	9.77829					−*10.76				+ 12	
	1.03179						7	27.81		+ 11.21	
((δ) − D) $\frac{d'}{100}$										+ .70	
+4.67										−15.80	
−8.80 δ_1		44 5.99		5 53.7						16 2.47	5.767
	−20.1	4 30.9	26.1	9	28.50	53 13 19.85			5	6 5.66	
	1.30320					5 49.87				− .10	+12.29
d	9.77846					+15.79				+ 13	
	1.19844						5	34.08		+ 11.56	
((δ) − D) $\frac{d'}{100}$										+ .70	
+4.67										− 15.90	
−8.80 δ_2		44 6.01		5 53.8						6 2.05	+.51

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

288

Date$_1$ = Mar. 22, 1874 — Observer W. A. K. — Recorder J. J. M.

n = +.09

287

Date$_2$ = Mar. 23, 1874 — Observer — Recorder

n = +.12

74

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
κ	46m 13s	54 05	8.8	46m 8.0	46 20.6	24.3	27.8	31.1	34.7	138.5	27m 70	27m 70	
	44 53.8	54 6.6	9.0	11.6							46	− 2.13	
				14.4								+ .12	
				11.3						− 2.04		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											46	25.66	
												− 1.27	
α_1											46	24.39	
κ			8.5	46 8.5	46 20.0	23.5	27.0	30.4	33.9	1348	46	2696	
				11.2								− 1.42	
				13.4								+ .17	
				11.0						− 1.28		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											46	25.68	
												− 1.25	
α_2											46	24.43	
					22.6								
κ	48 16	53.13	8.9	48 15.8	48 26.0	29.4	32.9	36.3		1672	48	3344	
	46 56.3	53 16.1	8.8	18.6								29.41	
				21.6								− 2.13	
				18.7						− 2.04		+ .12	
$((\delta) - D)\frac{\kappa'}{100}$												− 3	
49 52											48	2740	
α_1												− 1.27	
											48	26.13	
κ			8.8	48 3.5	48 21.8	25.5	28.9	32.1	35.7	1444	48	2888	
				6.8								− 1.42	
				9.5								+ .16	
				6.6						− 1.29		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											48	27.59	
												− 1.24	
α_2											48	26.35	
κ	51 02	53.20	9.0	50 53.2	51 7.2	10.8	14.2	17.8	21.0	710	51	1420	
	49 42.7	53 22.9	9.1	58.9								− 2.13	
				1.7								+ .12	
				58.6						− 2.04		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											51	12.16	
												− 1.30	
α_1											51	10.86	
κ			9.2	50 4.2	51 6.6	10.2	13.5	16.8	20.5	676	51	1352	
				00.7								− 1.42	
				59.1								+ .16	
				58.7						− 1.29		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											51	12.23	
												− 1.28	
α_2											51	10.95	
κ	53 11	53.31	9.5	52 6.3	52 17.2	20.7	24.0	27.4	31.2	1208	52	2416	
	50 52.1	53 34.4	9.3	9.0								− 2.12	
				12.6								+ .12	
				7.3						− 2.03		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											52	22.13	
												− 1.33	
α_1											52	20.80	
κ			9.5	51 59.0	52 16.6	20.0	23.4	27.0	30.4	1174	52	2348	
				2.6								− 1.42	
				5.8								+ .16	
				6.5						− 1.29		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											52	22.19	
												− 1.30	
α_2											52	20.89	
κ	53 28	53.51	9.4	53 8.3	53 35.2	38.7	42.0	45.6	49.2	2107	53	4214	
	52 9.3	53 53.7	9.3	11.1								− 2.12	
				14.7								+ .12	
				11.4						− 2.03		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											53	40.11	
												− 1.35	
α_1											53	38.76	
κ			9.0	53 5.6	53 34.4	38.0	41.4	45.0	48.5	2073	53	4146	
				8.6								− 1.42	
				13.0								+ .17	
				8.7						− 1.28		− 3	
$((\delta) - D)\frac{\kappa'}{100}$											53	40.18	
												− 1.32	
α_2											53	38.86	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs | R_{eq} = Mar. 22 −4′29.55 +.04 | Mar. 23 29.88 47 +.03

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
		0′ 19.9	18.1″	10′	19.08	54 12 29.35			10′	54 4 47.21	
	+16.4					4 59.80				− 7	+12.92
74 d	1.21484					−* 12.59				+ 1	
	9.76835						5 12.39			+ 12.28	
((δ) − D) $\frac{d'}{100}$	1.09997$_n$									+ .70	
										− 16.00	
+4.72 δ_1		46 29.11		4 35.2						4 44.13	
−8.98											
	+16.0	0 22.9	18.4	10	20.65	54 12 27.70			10	+ 45.44	
	1.20412					4 57.72				− 7	+13.30
d	9.76835					−* 12.28				+ 1	
	1.08926$_n$						5 10.00			+ 12.66	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 16.10	
+4.72 δ_2		46 29.15		4 34.2						4 43.15	
−8.98											
	+10.7	1 37.0	36.0	1	36.00	53 21 12.35			0	53 13 34.42	
	1.02938					13 42.80				− 3	+12.09
56 d	9.77711					−* 8.38				+ 6	
	0.92327$_n$						13 51.18			+ 11.36	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 15.70	
+4.66 δ_1		48 30.79		13 21.7						13 30.81	
−9.14											
	+22.3	1 30.0	26.4	1	27.70	53 21 20.65			0	33.20	
	1.34830					13 50.67				− 13	+12.32
d	9.77711					−* 17.47				+ 4	
	1.24219$_n$						14 8.14			+ 11.71	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 15.80	
+4.66 δ_2		48 30.97		13 21.1						13 30.23	
−9.14											
	+15.6	3 46.6	44.9	53	46.75	53 29 2.60			50	53 21 20.87	
68	1.19312					21 33.05				− 7	+12.26
d	9.77575					−* 12.18				+ 15	
	1.08865$_n$						21 45.23			+ 11.48	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 15.50	
+4.66 δ_1		51 15.52		21 8.3						21 17.63	
−9.36											
	+22.8	3 45.1	39.8	53	42.45	53 29 5.90			50	18.12	
	1.35793					21 35.92				− 14	+12.52
d	9.72575					−* 17.80				+ 11	
	1.25046$_n$						21 53.72			+ 11.85	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 15.70	
+4.66 δ_2		51 15.61		21 6.9′						21 15.45	
−9.36											
	+14.9	3 44.9	42.0	43	43.45	53 39 4.90			40	53 31 23.76	
68	1.17319					31 35.35				− 6	+12.45
d	9.77405					−* 11.59				+ 15	
	1.06402$_n$						31 46.94			+ 11.66	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 15.50	
+4.67 δ_1		52 25.47		31 11.3						31 20.71	
−9.45											
	+21.0	3 41.3	36.2	43	38.75	53 39 9.60			40	23.29	
	1.32222					31 39.62				− 12	+12.73
d	9.77405					−* 16.33				+ 11	
	1.21305$_n$						31 55.95			+ 12.04	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 15.70	
+4.67 δ_2		52 25.56		31 11.4						31 20.83	
−9.45											
	+31.7	3 2.0	57.7	234	0.85	53 59 46.50			20	53 51 53.26	
68	1.48414					52 16.95				− 25	+12.60
d	9.77061					−* 23.69				+ 12	
	1.37453$_n$						52 40.64			+ 12.03	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 15.60	
+4.68 δ_1		53 43.44		50 40.7						51 50.26	
−9.55											
	+32.8	3 2.0	59.0	238	1.00	53 59 47.35			35	51 26 51.91	
	1.51587			28		52 17.37			20	− 28	+12.92
d	9.77319					−* 25.46				+ 09	
	1.40584$_n$						37 42.83			+ 12.41	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 15.70	
+4.68 δ_2		53 43.54		50 40.1						51 49.64	
−9.55											

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

288

Date$_1$ = Mar. 22, 1874 Observer W. A. K. Recorder J. F. M.

287

Date$_2$ = Mar. 23, 1874 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
7 N	54 37	54.02	7.0	54 15.5	54 45.0	48.8	52.3	55.7	59.3	2611	7 54	5222	
	53 19.3	54 4.1	7.0	19.4								−2.12	
	κ			21.4								+.12	
				18.8						− 2.03		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										54	50.19	
	α_1											−1.36	
											54	48.83	
			7.5	54 9.6	54 44.4	48.1	51.4	55.1	58.5	2575	54	5150	
				13.8								−1.42	
	κ			16.5								+.17	
				13.3						− 1.28		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										54	50.22	
	α_2											−1.34	
											54	48.88	
	56 25	54.17	9.0	56 22.6	56 32.3	36.0	39.5	43.0	46.4	1972	56	3944	
	55 6.8	54 19.3	9.1	26.0								−2.12	
	κ			28.0								+.12	
				23.5						− 2.03		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										56	37.41	
	α_1											−1.39	
											56	36.02	
			8.8	56 5.8	56 31.4	35.1	38.6	42.2	45.6	1929	56	3858	
				8.6								−1.42	
	κ			11.2								+.17	
				5.6						− 1.28		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										56	37.30	
	α_2											−1.37	
											56	35.93	
	57 24	53.40	9.0	57 18.7	57 34.0	37.7	41.0	44.6	48.0	2053	57	4106	
	56 8.6	53 42.9	8.9	21.4								−2.12	
	κ			23.4								+.12	
				21.3						− 2.03		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										57	39.03	
	α_1											−1.39	
											57	37.64	
			8.8	57 15.2	57 33.4	37.1	40.5	43.7	47.3	2020	57	4040	
				19.4								−1.42	
	κ			23.5								+.17	
				17.0						− 1.28		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										57	39.12	
	α_2											−1.36	
											57	37.76	
	57 30	54.34	8.3	57 23.6	57 37.3	41.0	44.5	48.0	51.5	2223	57	4446	
	58 11.7	54 41.5	8.7	29.1								−2.12	
	κ			31.5								+.13	
				25.7						− 2.02		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										59	42.44	
	α_1											−1.44	
											59	41.00	
			8.8	57 12.4	57 36.6	40.1	43.7	47.4	51.8	2189	57	4378	
				16.6								−1.42	
	κ			19.6								+.17	
				16.2						− 1.28		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										59	42.50	
	α_2											−1.41	
											59	41.09	
8 7	00 59	23 54.10	8.6	0 25.5	30.5	34.1	37.6	41.2	44.7	1881	8 0	3762	
	5.2 54 11.6		8.9	28.5								−2.12	
	κ			31.2								+.13	
				28.1						− 2.02		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										0	35.56	
	α_1											−1.43	
											0	34.17	
			8.7	0 10.7	0 29.9	33.4	36.9	40.6	44.0	1848	0	3696	
				14.2								−1.42	
	κ			17.0								+.17	
				14.0						− 1.28		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										0	35.68	
	α_2											−1.41	
											0	34.27	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs Mar. 22 Mar. 23

R_{eq} = -7 29.55 29.[illegible]47

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	δ	3 ′ 6.5 ″	4.0 ″	13 ″	4.75″	54 9 43.60			10 ′	54 1 48.38	
	+33.4					2 14.05				− .28	+12.77
72	1.52375					−* 25.67				+ .12	
d	9.76887						2 ~~39.72~~			+ 12.23	
((δ) — D) d′/100	1.40940n									+ .70	
										− 15.60	
+4.69 δ₁		54 53.52		1 35.9						1 45.55	
−9.64										+ ~~0.51~~	
	+38.2	3 6.5	0.6	13	3.05	54 9 45.30			10	~~52.00~~	45.96
	1.58206					2 15.32				− .38	+13.03
d	9.76887					−* ~~23.52~~				+ 9	
((δ) — D) d′/100	1.46771n					29.36	2 ~~35.64~~			+ 12.62	
										+ .70	
+4.69 δ₂		54 53.57		1 34.2						− 15.70	
−9.64										1 ~~49.84~~	43.80
	+13.9	3 6.1.0	49.2	58	30.10	54 23 58.25			65	54 16 18.08	
86	1.14301					16 28.70				− 5	+13.28
d	9.76625					−* 10.62				+ 15	
((δ) — D) d′/100	1.02604n						16 ~~39.32~~			+ 12.48	
										+ .70	
+4.69 δ₁		56 40.41		16 6.0						− 15.60	
−9.77										16 15.76	
	+30.0	3 41.3	36.5	68	38.90	54 24 9.45			55	16.55	
	1.47712					16 39.47				− .23	+13.47
d	9.76625					−* 22.92				+ .11	
((δ) — D) d′/100	1.36015n						17 ~~2.39~~			+ 12.88	
										+ .71	
+4.69 δ₂		56 40.62		16 5.1						− 15.70	
−9.77										16 14.83	
	+19.8	0 16.3	13.9	35	15.70	53 47 33.25			35	53 39 48.35	
66	1.29667					40 3.70				− .10	+12.44
d	9.77268					−* 15.35				+ 1	
((δ) — D) d′/100	1.18613n						~~40~~ ~~19.05~~			+ 11.83	
										+ .70	
+4.65 δ₁		57 42.29		39 35.9						− 15.00	
−9.85										39 45.79	
	+21.4	0 17.8	13.1	35	15.45	53 47 32.90			35	46.33	
	1.33041					40 2.92				− .11	+12.81
d	9.77268					−* 16.59				+ 1	
((δ) — D) d′/100	1.21987n						~~40~~ ~~19.51~~			+ 12.21	
										+ .70	
+4.65 δ₂		57 42.41		39 34.4						− 15.40	
−9.85										39 44.25	
	+15.8	1 53.9	52.3	36	5.310	54 45 55.25			36	54 38 13.73	
68	1.19866					38 25.70				− 7	+13.58
d	9.76253					−* 11.97				+ 8	
((δ) — D) d′/100	1.07797n						~~38~~ ~~37.67~~			+ 12.87	
										+ .70	
+4.70 δ₁		59 45.70		38 1.8						− 15.50	
−10.01										38 11.81	
	+27.6	1 48.0	43.0	36	48.50	54 46 2.85			36	11.97	
	1.44091					38 32.87				− .20	+13.87
d	9.76253					−* 20.90				+ 5	
((δ) — D) d′/100	1.32022n						~~38~~ ~~53.77~~			+ 13.29	
										+ .73	
+4.70 δ₂		59 45.79		38 0.6						− 15.70	
−10.01										38 10.65	
	+9.5	1 48.4	46.1	6	47.25	54 16 1.10			5	54 8 24.27	
66	0.97772					8 31.55				− 5	+13.07
d	9.76765					−* 7.28				+ 7	
((δ) — D) d′/100	0.86215n						~~8~~ ~~38.83~~			+ 12.33	
										+ .70	
+4.67 δ₁		0 38.84		8 12.0						− 15.30	
−10.08										8 22.04	
	+23.0	1 41.0	36.0	6	38.00	54 16 10.35			5	22.74	
	1.36173					8 40.37				− .14	+13.34
d	9.76765					−* 17.63				+ 5	
((δ) — D) d′/100	1.24616n						~~8~~ ~~55.00~~			+ 12.73	
										+ .70	
+4.69 δ₂		0 38.94		8 11.1						− 15.40	
−10.08										8 21.19	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

288 289 78

Date$_1$ = Mar. 22, 1874 Observer W.A.K. Recorder J. Z. M.

Date$_2$ = Mar 23, 1874 Observer Recorder

Ru

Star. α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
8h			m s	m s	s	s	s	s		h m	s	
01	14	6.7	0 58.2	1 23.1	24.4	30.0	34.6	38.2	1549	1	3078	
59	56.3	6.7	0.9								−2.12	
κ			0.5								+ .13	
			60.6						− 2.02		− 3	
((δ) − D) $\frac{\kappa'}{100}$										1	28.96	
											−1.47	
α_1										1	27.49	
		6.6	1 11.6	1 23.1	26.7	30.7	33.8	37.5	1515	1	3030	−.07
			14.7								− 1.42	
κ			15.1								+ .17	
			14.8						− 1.28		− 3	
((δ) − D) $\frac{\kappa'}{100}$										1	29.02	
											−1.45	
α_2										1	27.57	
02	27 54.39	9.5	2 12.3	2 37.1	41.4	44.8	48.4	51.8	2241	2	4482	
01	10.0 54 41.8	9.5	16.0								−2.12	
κ			19.1								+ .13	
			15.8						− 2.02		− 3	
((δ) − D) $\frac{\kappa'}{100}$										2	42.80	
											−1.47	
α_1										2	41.33	
		9.4	2 22.8	2 36.9	40.5	44.0	47.6	51.0	2200	2	4400	
			25.3								− 1.42	
κ			24.2								+ .17	
			23.8						− 1.28		− 3	
((δ) − D) $\frac{\kappa'}{100}$										2	42.72	
											−1.45	
α_2										2	41.27	
03	47 53 38	9.4	3 27.0	3 53.4	57.0	0.5	3.8	7.4	0.21	4	0.42	
02	29.1 53 40.9	9.4	30.2								−2.12	
κ			33.2								+ .12	
			30.1						− 2.03		− 3	
((δ) − D) $\frac{\kappa'}{100}$										3	58.39	
											−1.45	
α_1										3	56.94	
		9.2	3 41.4	3 52.8	56.3	0.0	3.3	6.7	29.91	3	87.82	
			48.3								−1.42	
κ			48.1								+ .16	
			43.1						− 1.29		− 3	
((δ) − D) $\frac{\kappa'}{100}$										3	58.53	
											−1.43	
α_2										3	57.10	
03	10 53 19	8.7	4 47.2	5 14.2	17.6	21.0	24.4	27.8	1050	5	2100	
03	52.2 53 22.1	8.5	51.2								− 2.12	
κ			53.9								+ .12	
			50.5						− 2.03		− 3	
((δ) − D) $\frac{\kappa'}{100}$										5	18.97	
											−1.45	
α_1										5	17.52	
		8.8	4 55.0	5 13.4	16.8	20.4	23.6	27.2	1014	5	2028	
			58.2								− 1.41	
κ			1.5								+ .16	
			58.2						− 1.28		− 3	
((δ) − D) $\frac{\kappa'}{100}$										5	19.00	
											−1.43	
α_2										5	17.57	
06	40 54.29	8.5	6 27.5	6 48.9	52.6	56.0	59.5	3.1	2801	6	5602	
05	22.9 54 31.9	8.3	33.4								− 2.12	
κ			35.4								+ .13	
			32.7						− 2.02		− 3	
((δ) − D) $\frac{\kappa'}{100}$										6	54.00	
											−1.51	
α_1										6	52.49	
		8.6	6 26.7	6 48.1	51.8	55.3	58.8	2.2	2762	6	5524	
			29.8								− 1.41	
κ			34.3								+ .17	
			30.3						− 1.27		− 3	
((δ) − D) $\frac{\kappa'}{100}$										6	53.97	
											−1.49	
α_2										6	52.48	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs

Mar. 22 Mar. 23

$R_{eq} = -7\ 29.55$ 29.98 47

79

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
61 d	+30.4	0′ 13.1	10.9	20′	12.50	55 2 36.35			20′	54 54 43.94	
	1.48287					54 55 6.80				− .23	+13.66
	9.75949					−* 22.86				+ .1	
	1.35914 m						55 27.66			+ 13.18	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 15.50	
+4.71 δ_1		1 32.20		54 32.0						54 42.10	
−10.14										+ 0.51	
	+15.5	0 29.0	24.0	20	26.50	55 2 21.85			20	40.21	
	1.19033					54 54 51.87				− 6	+14.30
d	9.75949					−* 11.66				+ .1	
	1.06660 m						55 3.53			+ 13.61	
((δ) − D) $\frac{d'}{100}$										+ .74	
		.26								− 15.60	
+4.71 δ_2		1 32.28		54 29.3						54 39.42	
−10.14										38	
	+29.0	0 0.0	57.8	34.5	28.90	54 47 49.45			35	54 38 57.95	Eq mm
62	1.46240			Eq		40 19.90				− .22	+13.41
d	9.76218					−* 21.95				+ .04	
	1.34136 m						40 41.85			+ 12.89	
((δ) − D) $\frac{d'}{100}$										+ .70	
					+.51					− 15.80	
+4.69 δ_1		2 46.02		38 45.8						38 56.06	
−10.23							3874			38	
	+18.2	1 10.3	7.8	36	9.10	54 46 39.25			35	38 55.49	+13.99
d	1.26007					39 9.27				− .8	
	9.76236					−* 13.78				+ .3	
((δ) − D) $\frac{d'}{100}$	1.13921 m						39 23.05			+ 13.31	
										+ .73	
+4.69 δ_2		2 45.96		38 43.8						− 15.50	
−10.23										38 58.98	
60	+30.3	1 2.0	2.40	36	25.00	53 46 23.35			35	53 38 30.30	
d	1.48144					38 53.80				− .23	+12.33
	9.77285					−* 23.50				+ .6	
((δ) − D) $\frac{d'}{100}$	1.37107 m						39 17.30			+ 11.80	
										+ .70	
+4.63 δ_1		4 1.57		38 17.3						− 15.00	
−10.33										38 27.63	
	+14.7	1 ~~42.8~~	~~37.8~~	36	39.20	53 46 9.05			35	27.67	
d	1.16732	42.0	36.6			38 39.07				− 6	+12.87
	9.77285					−* 11.40				+ 5	
((δ) − D) $\frac{d'}{100}$	1.05695 m						38 50.47			+12.18	
										+ .70	
+4.63 δ_2		4 1.73		38 15.6						− 15.10	
−10.33										38 25.75	
	+30.2	0 42.9	40.4	53	41.65	53 27 6.70			55	53 19 13.55	
72	1.48001					19 37.15				− .24	+11.94
d	9.77609					−* 23.60				+ 3	
	1.37288 m						20 0.75			+ 11.45	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 14.90	
+4.60 δ_1		5 22.12		19 0.2						19 10.59	
−10.43											
	+22.1	0 52.0	46.7	55	49.35	53 26 59.00			55	11.75	
d	1.34439					19 29.02				− .13	+12.41
	9.77609					−* 17.27				+ 2	
((δ) − D) $\frac{d'}{100}$	1.23726 m						19 46.29			+11.82	
										+ .70	
+4.60 δ_2		5 22.17		18 59.2						− 15.00	
−10.43										19 9.67	
	+23.3	2 39.0	32.8	47	38.00	54 35 10.35			45	54 27 23.08	
78	1.36736					27 40.80				− .14	+13.34
d	9.76431					−* 17.72				+ .10	
((δ) − D) $\frac{d'}{100}$	1.24845 m						27 58.52			+ 12.68	
										+ .70	
+4.66 δ_1		6 57.15		27 10.7						− 15.20	
−10.54										27 21.22	
	+24.9	2 40.5	36.1	47	38.30	54 35 10.05			45	21.13	
d	1.39620					27 40.07				− .16	+13.74
	9.76431					−* 18.94				+ .8	
((δ) − D) $\frac{d'}{100}$	1.27729 m						27 59.01			+ 13.10	
										+ .72	
+4.66 δ_2		6 57.14		27 9.5						− 15.30	
−10.54										27 20.08	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae..proj..1587R

Single Observations.

Date$_1$ = Mar. 22, 1874 (287) Observer W. A. K. Recorder J. F. M.

Date$_2$ = Mar 23 1874 (288) Observer Recorder

(80)

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
8	7h 24m 07s	53.51'	9.0	23h 57m	24s 14.4	17.7	21.2	24.5	28.1	1057	24m	21.14	
7	22 46.2	53 52.7	8.5	58.3								−2.62	
Mar. 21	κ			57.6								+ 6	
				54.5						−2.59		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										24	18.55	
												−1.02	
	c_1										24	17.53	
7	25 17	54 37	9.2	25 23.8	25 25.7	29.5	32.8	36.5	41.1	1647	25	32.94	
	23 56.7	54 38.8	9.0									−2.62	
Mar. 21	κ											+ 6	
										−2.59		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										25	30.39	
												−1.05	
	c_2										25	29.30	
7	26 50	54 41	8.0	26 21.7	36 57.7	1.3	4.8	8.3	12.0	2.41	27	482	
	25 29.6	54 42.0	7.9	24.2								−2.62	
Mar. 21	κ			26.9								+ 6	
				23.7						−2.59		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										27	228	
												−1.07	
	a_1										27	1.16	
7	27 44	53 38	8.6	27 28.8	27 50.7	54.3	57.6	1.0	4.5	2881	27	5762	
	26 23.5	53 44.3	8.7	31.4								−2.62	
Mar. 21	κ			33.0								+ 6	
				31.7						−2.60		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										27	55.02	
												−1.06	
	a_2										27	53.96	
7	29 05	53.43	9.0	28 50.7	29 13.6	17.3	20.7	24.1	27.6	1033	29	2066	
	27 44.5	53 44.9	9.0	54.0								−2.62	
Mar. 21	κ			57.3								+ 6	
				54.1						−2.59		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										29	18.07	
												−1.07	
	a_1										29	17.00	
7	30 12	53 50	8.3	29 53.1	30 19.1	22.6	26.0	29.4	33.0	1301	30	2602	
	28 51.4	53 51.8	8.7	57.1								−2.62	
Mar. 21	κ			59.9								+ 6	
				56.7						−2.59		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										30	23.43	
												−1.09	
	a_2										30	22.34	
7	31 38	53.28	8.4	31 24.1	31 46.0	49.4	53.0	56.6	59.9	2649	31	5298	
	30 18.9	53 38.2	8.2	28.3								−2.62	
Mar. 21	κ			31.0								+ 5	
				27.8						−2.60		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										31	50.38	
												−1.09	
	a_1										31	49.29	
7	32 39	54.55	8.8	32 19.8	32 41.7	57.6	55.2	58.6	2.3	2756	32	5512	
	31 19.7	54 56.6	8.7	24.4								−2.62	
Mar. 21	κ			29.2								+ 6	
				25.8						−2.59		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										32	52.53	
												−1.11	
	a_2										32	51.42	
7	34 03	53.33	9.0	33 50.3	34 11.8	15.4	18.8	22.1	25.7	938	34	1876	
	32 44.4	53 35.1	9.1	53.9								−2.62	
Mar. 21	κ			56.6						−2.60		+ 3	
				53.5							34	16.16	−1.12
	((δ) − D) $\frac{\kappa'}{100}$			39 15.9	39 48.4	52.0	55.4	58.8	2.3	2769	39	5538	15.04 OK
Mar 21				19.9								−2.61	
	a_1			22.4						−2.59		+ 3	
				17.4							39	52.70	−1.18 OK
7	39 38	53 53	9.2	39 37.1	54.8	57.5	1.4.8	5.3	8.9	2743	39	5481	51.61
	38 19.5	53 54.7	9.1	34.0								−2.61	
Mar. 21	κ			46.0								+ 6	
				40.8						−2.58		− 3	
	((δ) − D) $\frac{\kappa'}{100}$										39	52.28	
												−1.20	
	a_2									Reject	39	51.08	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs

Mar. 21
$R_{\mathfrak{Y}}$ = −j 29.45

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	s	3′ 32.9″	33.4″	23′	33.15″	53 59 15.20			20′	53 51 25.23	
	+26.6					51 45.75				− .19	+12.54
d	1.42488					± 20.52				+ .14	
	9.77061						52 6.27			+ 11.89	
((δ) − D) $\frac{d'}{100}$	1.31227 m									+ .70	
										−16.70	
+4.78 δ_1		24 22.31		51 13.9						51 21.07	
−7.21										~~0.51~~	
	+10.1	3 44.8	47.7	38	46.25	54 44 2.10			35	54 36 25.00	
	1.00432					36 32.65				− .3	+13.52
d	9.76271					± 7.65				+ .15	
	0.88381 m						36 40.80			+ 12.70	
((δ) − D) $\frac{d'}{100}$										+ .70	
										−16.80	
+4.82 δ_2		25 34.82		36 14.4						36 21.72	
−7.31											
	+40.9	0 0.8 ✱	3.0	35	1.90	54 47 46.45			35	54 39 46.05	
	1.61172					40 17.00				− .43	+13.03
d	9.76218					± 30.95				+ .00	
	1.49068 m						40 47.95			+ 12.76	
((δ) − D) $\frac{d'}{100}$										+ .70	
										−16.80	
+4.82 δ_1		27 5.98		39 34.8						39 42.28	
−7.44											
	+25.9	1 56.1	56.4	36	56.25	53 45 52.10			35	53 38 2.55	
	1.41330					38 22.65				− .18	+12.25
d	9.77302					± 20.10				+ .8	
	1.30310 m						38 42.75			+ 11.65	
((δ) − D) $\frac{d'}{100}$										+ .70	
										−16.40	
+4.75 δ_2		27 58.71		37 50.9						37 58.40	
−7.50											
	+26.6	2 36.9	36.2	32	37.55	53 50 10.80			30	53 42 20.75	
	1.42488					42 41.35				− .19	+12.46 35
d	9.77216					± 20.60				+ .10	
	1.31382 m						43 7.95			+ 11.74	
((δ) − D) $\frac{d'}{100}$										+ .70	
										−16.40	
+4.75 δ_1		29 21.75		42 9.1						42 16.70	
−7.62											
	+29.3	0 38.2	38.1	25	38.15	53 57 10.20			25	53 49 18.12	
	1.46687					49 40.75				− .22	+12.36
d	9.77095					± 22.63				+ .2	
	1.35460 m						50 3.38			+ 11.86	
((δ) − D) $\frac{d'}{100}$										+ .70	
										−16.50	
+4.76 δ_2		30 27.10		49 6.3						49 13.98	
−7.71											
	+25.2	2 12.2	12.9	47	12.55	53 35 35.80			45	53 27 46.72	
	1.40140					28 6.35				− .16	+12.11
d	9.77473					± 19.63				+ .9	
	1.29291 m						28 25.98			+ 11.48	
((δ) − D) $\frac{d'}{100}$										+ .70	
										−16.30	
+4.73 δ_1		31 54.02		27 34.7						27 42.53	
−7.82											
	+31.3	✱ 21	25	20	3.30	55 ~~3~~ 45.05			20	54 ~~5~~ 52.06	
	1.49554					54 ~~55~~ 15.60				~~3~~ 25	+13.48
d	9.75949					± 23.54				+ .00	
	1.37181 m						55 39.14			+ 13.03	
((δ) − D) $\frac{d'}{100}$										+ .70	
										−16.60	
+4.82 δ_2		32 56.24		53 41.0						~~54~~ 48.94	
−7.91										3	
	+25.3	1 55.3	56.1	41	55.70	53 40 52.65			40	53 33 3.53	
	1.40312					33 23.20				− .16	+12.19
d	9.77387					± 19.67				+ .8	
	1.29377 m						33 42.87			+ 11.57	
((δ) − D) $\frac{d'}{100}$	+36.0			41	55.70	53 40 52.65				+ .70	
	1.55630					33 23.20				− 16.20	
δ_1	9.77387	34 19.77		32 51.5		± 27.99	33 51.19		→	32 59.52	
+4.73	1.44695	5.39 56.34									
−8.47											
	+14.1	2 19.0	18.9	22	18.95	54 0 29.40			20	53 52 49.08	
	1.14922					53 52 59.95				− .9	+12.37
d	9.77045					± 10.87				+ .9	
	1.03643 m					− 27.99	53 10.82			+ 11.92	
((δ) − D) $\frac{d'}{100}$										+ .70	
										−16.10	
δ_2				52 19.8						52 45.64	

Mar. 21

53 32 55.21
− .34 +12.01
+ .8
+ 11.57
+ .70
− 16.60
32 51.22

52 31.96
− .34 +12.37
+ .9
+ 11.92
+ .70
− 16.10
52 28.23

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Single Observations.

288

Date$_1$ = Mar. 22/1874 Mar. 21 — Observer W. A. R. — Recorder J. H. M.

289

Date$_2$ = Mar. 23/1874 — Observer — Recorder

82

Star. α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
~~7 h 48 m 17 s~~	~~53 13~~	~~8.9~~										
~~Mar. 22~~ κ												
((δ) — D) $\frac{\kappa'}{100}$												
h α_1 m s	′ ″		m s	m s	s	s	s	s		h m s		
7 49 52	53 42	8.6	49 39.5	50 0.0	3.4	7.0	10.4	14.0	3.48	7 50	6.96	
48 33.3	53 44.9	8.7	38.8								−2.13	
Mar 22 κ			45.8								+ .12	
			42.6								− 3	
((δ) — D) $\frac{\kappa'}{100}$									− 2.04			
α_2										50	4.92	
											−1.29	
										50	3.63	
7 09 25	53 10	8.8	9 23.7	9 32.4	36.0	39.3	42.6	45.8	1961	7 9	39.22	
08 6.8	52 12.2	8.0	37.5								−1.44	
Mar. 23 κ			29.6								+ .15	
			24.7						− 1.31		− 2	
((δ) — D) $\frac{\kappa'}{100}$										9	37.91	
α_1											−.80	
										9	37.11	
7 10 37	52.03	9.2	10 31.0	10 43.0	46.4	49.4	52.0	55.5	2486	10	47.72	
09 18.0	52 45	8.7	33.3								−1.44	
Mar. 23 κ			35.0								+ .15	
			34.2						− 1.31		− 2	
((δ) — D) $\frac{\kappa'}{100}$			34.1							10	48.41	
α_2											−.82	
										10	47.59	
7 14 33	54.55	8.8	14 32.4	14 40.7	44.4	47.9	51.4	55.0	2394	14	47.88	
13 12.9	54 56.5	8.7	35.9								−1.44	
Mar. 23 κ			38.8								+ .17	
			36.7						− 1.30		− 3	
((δ) — D) $\frac{\kappa'}{100}$										14	46.58	
α_1											−.93	
										14	45.65	
7 20 11	53.09	9.0	20 5.9	20 15.8	19.5	22.8	26.3	29.9	1173	20	22.86	
18 50.1	53 10.7	9.0	9.1								−1.44	
Mar. 23 κ			12.3								+ .16	
			9.1						− 1.31		− 3	
((δ) — D) $\frac{\kappa'}{100}$										20	21.55	
α_2											−.95	
										20	20.60	
7 21 37	53.56	9.1	21 36.6	21 43.1	46.3	49.8	53.4	56.9	2995	21	44.40	
20 16.2	53 57.6	9.0	30.4								−1.43	
Mar. 23 κ			33.0								+ .17	
			30.0						− 1.29		− 3	
((δ) — D) $\frac{\kappa'}{100}$										21	48.61	
α_1											−.99	
										21	47.62	
7 22 35	53.15	9.2	22 19.7	22 39.4	43.2	46.5	50.0	53.5	2326	22	46.52	
21 14.2	53 17.2	9.3	22.4								−1.43	
Mar. 23 κ			24.7								+ .16	
			22.3						− 1.30		− 3	
((δ) — D) $\frac{\kappa'}{100}$										22	45.22	
α_2											−.98	
										22	44.24	
7 24 07	58.51	8.7	23 53.7	24 12.7	16.3	19.8	23.5	26.8	991	24	1782	
22 46.2	53 52.7	8.5	56.6								−1.43	
Mar. 23 κ			54.6								+ .17	
			53.6						− 1.29		− 3	
((δ) — D) $\frac{\kappa'}{100}$										24	18.58	
α_1											−1.01	
										24	17.52	
7 25 17	54 37	9.3	25 18.2	25 24.7	28.3	32.1	35.5	39.0	1596	25	3192	
23 56.7	54 38.8	9.0	21.7								−1.43	
Mar. 23 κ			25.5								+ .17	
			21.4						− 1.29		− 3	
((δ) — D) $\frac{\kappa'}{100}$										25	30.63	
α_2											−1.04	
										25	29.59	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eq} = −7 29.55 Mar. 22 29.9847 Mar. 23.

	$T_m - T$	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	s	′ ″	″	″	″				′		
	+24.4	2 19.7	17.2	32	18.45	53 50 29.90			30	53 42 41.76	
d	1.38739					43 0.65				− 15	+12.52
	9.77216					+ 18.89				+ 9	
$((\delta) - D)\frac{d'}{100}$	1.27633						43 19.54			+ 11.88	
										+ .70	
+4.69 δ_2		50 8.32		42 29.3						− 15.70	
−9.27					×10					42 38.58	
										+ 0.51	
	+12.3	3 29.1	26.6	3	27.85	52 19 20.50			0	52 11 40.66	
d	1.08991					11 50.52				− .04	+11.26
	9.78739					+ 9.86				+ 10.60	
$((\delta) - D)\frac{d'}{100}$	0.99468						12 0.38			+ 12.27	
										+ .66	
+4.71 δ_1		9 41.82		11 29.6						− 16.70	
−6.00										11 36.63	
										+ 0.51	
	+15.6	X 0.1	57.9	10	59.00	52 1 49.35			10	52 [illegible] 6.82	
d	1.19312			11		3 19.37				3 7	+11.00
	9.78869					+ 12.55				+ 3	
$((\delta) - D)\frac{d'}{100}$	1.09859						4 31.92			+ 10.39	
										+ .65	
+4.70 δ_2		10 52.29		2 55.5						− 16.70	
−6.10										3 4 1.63	
										+ 0.51	
	+12.2	0 0.1	57.0	19	58.55	55 2 49.80			20	54 55 10.65	
d	1.08636					54 55 19.82				− 4	+14.39
	9.75949					+ 9.17				+ 15	
$((\delta) - D)\frac{d'}{100}$	0.96263						55 28.99			+ 13.54	
										+ .74	
+4.87 δ_1		14 50.52		55 1.7						− 17.40	
−6.43										55 8.15	
										+ 0.51	
	+13.8	1 18.1	14.6	6	16.35	53 16 32.00			5	53 8 51.17	
d	1.13988					9 3.02				− 5	+12.28
	9.77795					+ 10.83				+ 4	
$((\delta) - D)\frac{d'}{100}$	1.03461						9 12.85			+ 11.59	
										+ .70	
+4.75 δ_2		20 25.35		8 40.4						− 16.70	
−6.89										8 47.28	
										+ 0.51	
	+19.9	0 36.9	33.1	20	35.00	54 2 13.35			20	53 54 28.03	
d	1.29885					53 54 43.37				− .10	+13.05
	9.77009					+ 15.34				+ 2	
$((\delta) - D)\frac{d'}{100}$	1.18572						54 58.71			+ 12.43	
										+ .70	
+4.79 δ_1		21 52.41		54 17.4						− 17.20	
−7.01										54 24.39	
										+ 0.51	
	+24.2	0 59.9	57.0	8.9	58.45	53 21 49.90			0	53 14 0.97	
d	1.38382					14 19.92				− .15	+12.27
	9.77711					+ 18.95				+ .3	
$((\delta) - D)\frac{d'}{100}$	1.27771			14			14 38.87			+ 11.69	
										+ .70	
+4.75 δ_2		22 48.99		×3 49.7						− 17.00	
−7.09										13 56.75	
							12.35			+ 0.51	
	+23.2	3 38.0	34.0	23	57.00	53 59 57.35			20	53 52 9.47	24.47
d	1.36549				36.00	58 27.37	4237			51 .14	+13.02
	9.77061				.57	+ 17.90				+ .8	
$((\delta) - D)\frac{d'}{100}$	1.25288						52 45.27			+ 12.38	
										+ .70	
+4.78 δ_1		24 22.30		51 13.5						− 16.80	
−7.21										51 51 6.20	20.69
										+ 0.51	
	+10.0	3 50.0	46.0	38	48.00	54 44 0.35			35	54 36 22.79	
d	1.00000					36 30.37				− 3	+14.01
	9.76289					+ 7.58				+ .11	
$((\delta) - D)\frac{d'}{100}$	0.87967						86 37.95			+ 13.20	
										+ .73	
+4.82 δ_2		25 34.41		36 13.0						− 17.00	
−7.31										36 20.31	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Single Observations

Date₁ = Mar. 22, 1874 Observer W. A. R. Recorder J. F. M. Date₂ = Mar. 23, 1874 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
7ʰ	26ᵐ 50ˢ	54.41	7.7	26ᵐ 30.4ˢ	26 56.6	0.0	3.6	7.2	10.7	1.81	27	3.62	
	25 29.6	54 42.0	7.9	33.4							/	−1.43	
Mar. 23 κ				36.0								+ 17	
				33.3						−1.29		− 3	
((δ) — D) $\frac{\kappa'}{100}$											27	2.33	
												−1.06	
α_1											27	1.27	
7	27 44	53.38	8.8	28 27.0	27 49.7	53.1	56.5	59.9	3.4	28.26	27	56.52	
	26 23.5	53 40.3	8.7	31.6							/	−1.43	
Mar. 23 κ				35.3						− 1.27		+ 16	
((δ) — D) $\frac{\kappa'}{100}$				31.3							27	55.25	
												−1.04	
α_2											27	54.21	
7	29 05	53 43	8.8	29 1.5	29 12.7	16.3	19.5	22.9	26.4	9.78	29	19.56	
	27 44.5	53 44.9	9.0	3.9							/	−1.43	
Mar. 23 κ				6.6								+ 16	
				4.0						− 1.30		− 3	
((δ) — D) $\frac{\kappa'}{100}$											29	18.26	
												−1.06	
α_1											29	17.20	
7	30 12	53.50	8.8	30 20.1	30 17.9	21.3	25.0	28.3	31.9	12.44	30	24.88	
	28 51.4	53 51.8	8.7	25.6								−1.43	
Mar. 23 κ				27.2								+ 17	
				24.3						− 1.29		− 3	
((δ) — D) $\frac{\kappa'}{100}$											30	23.59	
												−1.08	
α_2											30	22.51	
7	31 38	53.28	8.8	31 ~~17.8~~ 19.8	~~31 42.8~~	~~46.8~~	~~49.6~~	~~53.3~~	~~56.8~~	24.88	31	~~49.76~~	51.78
	30 18.9	53 30.2	8.2	~~20.2~~ 22.2	31 −	48.3	51.6	55.3	58.8			−1.43	
Mar. 23 κ				~~24.0~~ 25.9						1		+ 16	
				20.7 22.6			51.8			− 1.30		− 3	
((δ) — D) $\frac{\kappa'}{100}$							51.6				31	~~48.46~~	50.48
							51.8					−1.09	
α_1							51.9				31	~~47.37~~	49.39
κ													
((δ) — D) $\frac{\kappa'}{100}$													
α_2													
κ													
((δ) — D) $\frac{\kappa'}{100}$													
α_1													
κ													
((δ) — D) $\frac{\kappa'}{100}$													
α_2													
κ													
((δ) — D) $\frac{\kappa'}{100}$													
α_1													
κ													
((δ) — D) $\frac{\kappa'}{100}$													
α_2													

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

1874phae.proj.1587R

Mar. 23.

Runs R_{eg} = -7' 29.984

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	s	0' 13.8"	10.1"	35"	11.95"	54 47 36.40			35'	54 39 43.49	
	+30.3					40 6.42				+ 0.51	
d	1.48144					−* 22.93				− 23	+13.76
	9.76218						40 29.35			+ .00	
((δ) − D) $\frac{d'}{100}$	1.36040									+ 13.26	
										+ .73	
										− 17.00	
+4.82 δ_1		27 6.09		39 33.3						39 40.76	
−7.44										+ 0.51	
	+25.2	2 47.7	42.8"	37	48.25"	53 45 3.10			35	53 38 0.01	
	−34.8					*7 33.12				− 32	+12.59
d	1.54158					+26.89				+ .8	
	9.77130						47 6.23			+ 12.23	
((δ) − D) $\frac{d'}{100}$	1.42966									+ .70	
										− 16.60	
+4.75 δ_2		27 58.96		37 49.0						37 56.51	
−7.50										+ 0.51	
	+15.6	2 48.7	44.4	32	46.55	53 50 1.80			30	53 42 19.74	
	1.19312					42 31.82				− 7	+12.91
d	9.77253					−* 12.08				+ .8	
	1.08223						42 43.90			+ 12.20	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 16.90	
+4.75 δ_1		29 21.95		42 8.6		6				42 16.26	
−7.62										+ 0.51	
	+0.6	2 2.2	58.1	25.6	0.16"	53 57 48.20			25	53 50 17.76	
	9.77815					49 50 18.22				49 00	+13.06
d	9.77095					−* 0.46				+ .00	
	9.66588						50 18.68			+ 12.36	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 16.60	
+4.76 δ_2		30 27.27		49 7.0						49 50 14.73	
−7.71										+ 0.51	
	+29.1	2 14.0	11.0	47	12.80	53 35 35.83			45	53 27 43.20	
	1.46389					28 5.87				− 22	+12.49
d	9.77473					−* 22.69				+ 7	
	1.35540						28 28.54			+ 11.94	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 16.40	
+4.73 δ_1		31 ~~55.21~~ 54.12		27 32.0						27 39.80	
−7.82											
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											

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

290

Date$_1$ = Mar. 24, 1874 Observer W. A. R.
n = +.18 Recorder J. F. M.

291

Date$_2$ = Mar. 30, 1874 Observer
n = +.04 Recorder

86

Star.	α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	h m s	° ′ ″		m s	m s	s	s	s	s		h m s		
1	35 44	53 14	9.5		35 49.8	52.3	56.8	5.1	3.7	2837	7 35	56.74	
	34 25.0	53 16.0	9.4									− 0.75	
	κ											+ .24	
	((δ) − D) $\frac{\kappa'}{100}$									− 0.54		− 3	
											35	56.20	
	α_1											−1.07	
											35	55.13	
			9.7	25 11.4	35 45.3	48.9	52.1	55.6	59.1	2610	35	5220	
				14.3								+ 3.87	
	κ			17.6								+ 5	
	((δ) − D) $\frac{\kappa'}{100}$			14.4						+ 3.89		− 3	
											35	56.09	
	α_2											−.91	
											35	55.18	
	39 21	52 .01	8.9	39 14.8	39 26.7	30.2	33.4	36.7	40.2	1672	39	3344	
	38 4.3	52 3.1	8.8	18.5								− 0.74	
	κ			21.7								+ .23	
	((δ) − D) $\frac{\kappa'}{100}$			18.4						− 0.53		− 2	
											39	32.91	
	α_1											−1.08	
											39	31.83	
			8.7	39 0.1	39 22.1	25.6	28.8	32.3	35.6	1444	39	2888	
				3.1								+ 3.88	
	κ			6.7								+ 5	
	((δ) − D) $\frac{\kappa'}{100}$			3.3						+ 3.91		− 2	
											39	32.79	
	α_2											−.92	
											39	31.87	
	40 59	54 .27	7.2	41 36	41 44.4	4.7	11.2	14.8	18.2	563	41	1126	
	39 40.3	54 28.7	6.3	8.0								− 0.74	
	κ			10.2								+ .25	
	((δ) − D) $\frac{\kappa'}{100}$			7.3						− 0.52		− 3	
											41	10.74	
	α_1											−1.17	
											41	9.57	
			6.8	40 42.7	40 57.7	3.2	6.7	10.2	13.8	336	41	672	
				46.3								+3.88	
	κ			49.0								+ 6	
	((δ) − D) $\frac{\kappa'}{100}$			46.0						+ 3.91		− 3	
											41	10.63	
	α_2											−1.00	
											41	9.63	
	42 57	53 56	9.7	42 42.5	43 4.9	8.3	11.9	15.3	19.0	594	43	1188	
	41 39.8	53 58.5	9.3	46.7								− 0.74	
	κ			50.0								+ .25	
	((δ) − D) $\frac{\kappa'}{100}$			46.4						− 0.52		− 3	
											43	11.36	
	α_1											−1.17	
											43	10.19	
			9.7	42 44.5	43 8.3	3.8	7.2	10.8	14.3	364	43	728	
				46.9								+3.88	
	κ			50.5								+ 6	
	((δ) − D) $\frac{\kappa'}{100}$			47.3						+ 3.91		− 3	
											43	11.19	3.48
	α_2											−1.01	
											43	10.18	
	44 12	53 .09	9.2	43 55.6	44 16.6	20.0	23.2	26.7	30.0	1165	44	2330	
	42 52.8	53 11.7	9.3	58.4								− 0.74	
	κ			1.9								+ 24	
	((δ) − D) $\frac{\kappa'}{100}$			59.7						− 0.53		− 3	
											44	22.77	
	α_1											−1.17	
											44	21.60	
			9.5	43 42.9	44 11.8	15.2	18.7	22.2	25.3	932	44	1864	
				43.8								+ 3.88	
	κ			48.9								+ 5	
	((δ) − D) $\frac{\kappa'}{100}$			47.8						+ 3.90		+ 3	
											44	22.54	44.78
	α_2											−1.01	
											44	21.53	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eq} : Mar. 24 $-7'$ 29.03 + .03 ; Mar. 30 28.67 + .02

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	s	2′ 22.9	13.9	2	18.05	53 20 30.30			0′		
						13 1.27					
						29.61					
4.54 d										−16.30	
((δ) − D) $\frac{d'}{100}$											
+4.71 δ_1		35 59.84									
−8.15											
	+37.8	1 17.9	17.4	1	17.65	53 21 30.70			0	53 13 32.42	
	1.57749					14 2.03				− 38	+11.59
d	9.77711					−*29.61				+ 2	
	1.47138						14 31.64			+ 11.25	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 16.70	
+4.71 δ_2		35 59.89		13 19.2						13 27.31	
−8.15											
	+15.0	3 4.5	5.7	13	0.80	52 9 47.55			10	52 2 6.45	
	1.17609					2 18.52				− 6	+11.22
.56 d	9.78902					+12.07				+ 9	
	1.08189						2 30.59			+ 10.54	
((δ) − D) $\frac{d'}{100}$										+ .65	
										− 15.80	
+4.62 δ_1		39 36.45		1 53.4						2 1.87	
−8.44											
	+25.6	2 51.9	51.3	12	51.60	52 9 56.75			10	7.47	
	1.40824					2 28.08				− 18	+10.52
d	9.78902					+*20.61				+ .6	
	1.31404						2 48.69			+ 9.99	
((δ) − D) $\frac{d'}{100}$										+ .65	
										− 16.20	
+4.62 δ_2		39 36.49		1 53.4						2 1.79	
−8.44											
	+4.0	3 52.2	42.1	48	47.15	54 34 1.20			45	54 26 29.13	
.54	0.60206					26 32.17				− .01	+14.06
d	9.76448					−* 3.04				+ .11	
	0.48332						26 35.21			+ 13.24	
((δ) − D) $\frac{d'}{100}$										+ .72	
										− 16.40	
+4.76 δ_1		41 14.33		26 18.2						26 26.79	
−8.57											
	+20.7	3 32.9	31.3	48	32.10	54 34 16.25			45	31.83	
	1.31597					26 47.58				− .11	+13.25
d	9.76448					−* 5.75				+ .7	
	1.19723						27 3.33			+ 12.55	
((δ) − D) $\frac{d'}{100}$										+ .74	
										− 16.90	
+4.76 δ_2		41 14.39		26 19.6						26 28.18	
−8.57											
	+25.5	4 12.3	2.9	19	7.60	54 3 40.75			15	53 55 52.08	
.60	1.40654					53 56 11.72				− .16	+13.32
d	9.76991					−* 19.64				+ 12	
	1.29323						56 31.36			+ 12.66	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 16.20	
+4.72 δ_1		43 14.91		55 40.5						55 49.20	
−8.73											
	+20.0	4 12.1	10.9	19	11.50	54 3 36.85			15	52.77	
	1.30103					53 56 8.18				− .10	+12.68
d	9.76991					−* 15.41				+ .8	
	1.18772						56 23.59			+ 12.00	
((δ) − D) $\frac{d'}{100}$										+ .70	
+4.72										− 16.70	
−8.73 δ_2		43 14.90		55 40.0						55 48.75	
	+24.6	0 3.9	54.9	4	59.40	53 17 48.95			5	53 10 0.62	
.66	1.39094					10 19.92				− .15	+12.51
d	9.77778					−* 19.30				+ .15	
	1.28550						10 39.22			+ 11.81	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 15.90	
+4.67 δ_1		44 26.27		9 48.4						9 57.23	
−8.82											
	+32.8	4 52.5	51.7	4	52.10	53 17 56.25			0	1.85	
	1.51587					10 27.58				− .28	+11.71
d	9.77778					−* 28.73				+ .10	
	1.41043						10 53.31			+ 11.79	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 16.40	
+4.67 δ_2		44 26.20		9 48.3						9 57.16	
−8.82											

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

290 | 291 | 88

Date$_1$ = Mar. 24, 1874 | Observer W. A. R. | Recorder J. F. M.

Date$_2$ = Mar. 30, 1874 | Observer | Recorder

Star.	α	δ	Mag.	T_s	T_m	T_o	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	h m	° ′		m s	m s	s	s	s	s	s	m	° ′	
	46	85	53.19	9.3	45 33.9	46 10.2	13.6	16.9	20.5	23.8	850	46 17.00	
	44	45.9	53 21.7	9.2	38.0							−0.74	
					41.0							+ .24	
					37.6						− 0.53	− 3	
												46 16.47	
												−1.19	
												46 15.28	
			9.0		45 49.4	46 5.5	9.0	12.4	15.8	19.4	621	46 12.42	
		48 27			55.1							+ 3.88	
					55.8							+ .05	
					53.4						+ 3.90	− 3	
												46 16.32	
												−1.03	
												46 15.29	
	49	2.2	49.51	8.5	49 12.0	49 31.2	34.3	37.4	40.6	44.0	1875	49 37.50	
	48	10.0	49 53.7	8.0	15.5							−0.74	
					17.9							+ .21	
					13.1						− 0.55	− 2	
												49 36.95	
												−1.17	
												49 35.78	
			8.3		49 12.3	49 26.4	29.6	32.8	36.0	39.1	1639	49 32.78	
					16.1							+ 3.88	
					18.6							+ X5	
					15.7						+ 3.91	− 2	
												49 36.75	
												−1.02	
												49 35.67	
	50	48	51°.00	8.8	50 33.1	50 56.5	59.5	2.9	6.2	9.6	147	51 29.4	
	49	35.8	51 3.3	8.5	34.1							−0.74	
					36.8							+ .22	
					34.7						− 0.54	− 2	
												51 2.40	
												−1.18	
												51 1.22	
			8.7		50 29.8	50 51.8	55.1	58.3	1.7	4.9	2918	51 5836	
					28.0							+ 3.88	
					30.0							+ 5	
					27.8						+ 3.91	− 2	
												51 2.27	
												−1.03	
												51 1.24	
	52	45	52 15	9.2	52 24.9	52 50.2	53.7	56.9	0.4	3.7	2849	52 56.98	
	51	28.2	52 17.7	9.0	24.8							−0.74	
					20.9							+ .23	
					27.4						− 0.53	− 2	
												52 56.45	
												−1.23	
												52 55.22	
			9.0		52 29.8	52 45.7	49.1	52.5	55.8	59.3	3624	52 57.68	
					33.5							+ 3.89	
					36.2							+ 5	
					33.2						+ 3.92	− 6 2	
												52 57.40	
												−1.08	
												52 55.32	
	53	45	53 33	8.5	53 35.3	53 50.4	53.9	57.4	1.1	4.3	2867	53 57.34	
	52	26.9	53 35.8	8.7	39.0							−0.74	
					41.3							+ .24	
					38.5						− 0.53	− 3	
												53 56.81	
												−1.28	
												53 55.53	
			8.0		53 36.6	53 45.7	49.2	52.7	56.3	59.6	2635	53 52.70	
					40.4							+ 3.89	
					43.0							+ 5	
					40.0						+ 3.91	+ 3	
												53 56.61	
												−1.13	
												53 55.48	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eq} = Mar. 24, −7 29.03 ; Mar. 30, 28.67

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
56	+39.4	0 34.2	24.2	58	29.20	53 27 19.15			55	53 19 19.33	
d	1.59550					19 50.12				− .40	+12.29
	9.77609					−* 30.79				+ 1	
((δ) − D) $\frac{d'}{100}$	1.48837n						20 20.91			+ 11.98	
										+ .70	
+4.68										− 15.90	
−8.97 δ_1		46 19.96		19 6.45 8						19 15.72	
	+20.0	0 44.8	43.2	85	44.00	53 27 4.35			55	20.05	
d	1.30103					19 35.68				− .10	+11.97
	9.77609					−* 15.63				+ 1	
((δ) − D) $\frac{d'}{100}$	1.19390n						19 51.31			+ 11.36	
										+ .70	
+4.68										− 16.40	
−8.97 δ_2		46 19.97		19 6.6						19 15.62	
	+22.3	4 43.9	35.9	24	39.90	49 58 8.45			20	49 50 20.60	
72 d	1.34830					50 39.42				− .13	+8.80
	9.80942					−* 18.82				+ 14	
((δ) − D) $\frac{d'}{100}$	1.27450n						50 58.24			+ 8.29	
										+ .50	
+4.48		26								− 15.00	
−9.22 δ_1		49 40.46		50 5.2						50 14.40	
	+17.1	4 44.0	44.5	24	44.25	49 58 4.10			20	21.00	
d	1.23300					50 35.43				− .08	+8.37
	9.80942					−* 14.43				+ 9	
((δ) − D) $\frac{d'}{100}$	1.15920n						50 49.86			+ 7.86	
										+ .50	
+4.48				6						− 15.50	
−9.22 δ_2		49 40.15		50 4.7						50 13.87	
	+26.2	4 35.9	27.6	14	31.75	51 8 16.60			10	51 0 26.00	
58 d	1.41830					0 47.57				− .18	+9.89
	9.79872					−* 21.57				+ .13	
((δ) − D) $\frac{d'}{100}$	1.33380n						+ 9.14			+ 9.39	
										+ .55	
+4.53										− 15.00	
−9.34 δ_1		51 5.75		0 11.6						0 20.89	
	+30.6	4 26.5	26.0	14	26.25	51 8 22.10			10	28.24	
d	1.48572					0 53.43				− .26	+9.29
	9.79872					−* 25.19				+ 9	
((δ) − D) $\frac{d'}{100}$	1.40122n						+ 18.62			+ 8.91	
										+ .55	
+4.53										− 15.50	
−9.34 δ_2		51 5.77		0 12.7						0 22.03	
	+29.1	0 4.9	55.8	0	0.35	52 22 48.00			0	52 14 55.66	
50 d	1.46389					15 18.97				− .22	+11.22
	9.78691					−* 23.31				+ .04	
((δ) − D) $\frac{d'}{100}$	1.36758n						15 42.28			+ 10.78	
										+ .66	
+4.59										− 15.30	
−9.49 δ_1		52 5.9.81		14 42.1						14 51.578	
	+19.3	0 8.1	7.0	0	7.55	52 22 40.80			0	56.67	
d	1.28556					15 12.13				− .10	+10.78
	9.78691					−* 15.46				+ 00	
((δ) − D) $\frac{d'}{100}$	1.18925n						15 27.59			+ 10.22	
										+ .66	
+4.59										− 15.80	
−9.49 δ_2		52 5.9.91		14 42.2						14 51.65	
	+18.8	1 45.7	36.0	41	40.85	53 41 7.50			40	53 33 23.86	
64 d	1.27416					33 38.47				− .09	+12.90
	9.77370					−* 14.61				+ 5	
((δ) − D) $\frac{d'}{100}$	1.16464n						33 53.08			+ 12.24	
										+ .70	
+4.66										− 15.60	
−9.57 δ_1		54 0.19		33 11.6						33 21.16	
	+12.7	1 45.0	43.1	41	44.05	53 41 4.30			40	25.76	
d	1.10380					33 35.63				− 5	+12.28
	9.77370					−* 9.87				+ 3	
((δ) − D) $\frac{d'}{100}$	0.99428n						33 45.50			+ 11.60	
										+ .70	
+4.66										− 16.10	
−9.57 δ_2		54 0.14		33 12.4						33 21.94	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

290

Date$_1$ = Mar. 24, 1874 Observer W. A. R. Recorder J. F. M.

291

Date$_2$ = Mar 30, 1874 Observer Recorder

90

Star.	α	δ	Mag.	T_a	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
	55m 09	54° 36'	8.2	54m 51.0	55m 16.5	19.8	22.9	26.2	29.4	1148	7m 55s	22.96	
	53 57.4	50 38.9	8.0	56.0								−0.74	
	κ			57.4								+ .22	
	((δ) − D) $\frac{\kappa'}{100}$			57.3						− 0.54		− 2	
	α_1										55	22.42	
											55	− 1.21	
												21.21	
			7.8	54 38.5	55 11.8	15.0	18.3	21.6	24.9	916	5s	1832	
				42.4								+ 3.89	
	κ			44.3						+ 3.92		+ 5	
	((δ) − D) $\frac{\kappa'}{100}$			41.7								− 2	
	α_2										55	22.24	
											55	− 1.07	
												21.17	
	58 21	51 41	9.3	38 15.6	38 30.6	34.0	37.4	40.5	44.0	1865	58	37.30	
	57 9.3	51 50.0	9.1	14.7								−0.74	
	κ			14.8						− 0.53		+ .23	
	((δ) − D) $\frac{\kappa'}{100}$			14.4								− 2	
	α_1										58	36.77	
											58	− 1.28	
												35.49	
			9.0	38 1.9	38 26.3	29.5	32.8	36.1	39.4	1641	58	32.83	
				5.1								+ 3.89	
	κ			8.9						+ 3.92		+ 5	
	((δ) − D) $\frac{\kappa'}{100}$			5.5								− 2	
	α_2										58	36.74	
											58	− 1.13	
												35.61	
	59 32	54 02	8.5	59 23.5	59 39.2	42.8	46.3	49.8	53.4	2315	59	4630	
	58 14.4	54 3.6	8.4	24.3								−0.74	
	κ			25.6						52		+ 25	
	((δ) − D) $\frac{\kappa'}{100}$			26.5						− 0.96		− 3	
	α_1										59	45.78	
											59	− 1.37	
												44.41	
			8.6	59 15.0	59 34.8	38.3	41.8	45.2	48.9	2040	59	4180	
				19.1								+ 3.89	
	κ			21.7						+ 3.92		+ 6	
	((δ) − D) $\frac{\kappa'}{100}$			18.5								− 3	
	α_2										59	45.72	
											59	− 1.20	
				Nv. 54°								44.52	
8	01 04	54 37	8.3	0 48.3	1 8.7	12.1	15.8	19.3	22.8	787	1	1874	
	~~00 2.8~~	~~54 39.9~~		48.8								−0.74	
7	59 46.4	54 40.3		51.2								+ .25	
	((δ) − D) $\frac{\kappa'}{100}$			45.4						− 0.52		− 3	
	α_1										1	15.22	
											1	− 1.41	
												13.81	
			8.0	0 34.7	1 4.1	7.5	11.2	14.6	18.4	558	1	1116	
				38.3								+ 3.89	
	κ			41.1						+ 3.92		+ 6	
	((δ) − D) $\frac{\kappa'}{100}$			35.0								− 3	
	α_2										1	15.08	
											1	− 1.25	
												13.83	
	02 27	54 39	9.6	2 19.0	2 36.1	39.6	43.0	46.7	50.2	2156	2	4312	
	01 10.0	54 41.8	9.5	21.8								−0.74	
	κ			25.2						− 0.52		+ .25	
	((δ) − D) $\frac{\kappa'}{100}$			23.0								− 3	
	α_1										2	42.60	
											2	− 1.42	
												41.18	
			9.2	2 14.3	2 31.3	35.0	38.6	42.1	45.6	1926	2	3852	
				10.9								+ 3.89	
	κ			14.1						+ 3.92		+ 6	
	((δ) − D) $\frac{\kappa'}{100}$			10.8								− 3	
	α_2										2	42.44	
											2	− 1.26	
												41.18	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs

α_{eq} = Mar. 24 −7 29.03 Mar. 30 28.67

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
64 d	+28.5	4 30.8	22.3	39	26.55	50 43 21.80			35	50 35 29.10	
	1.45484					35 52.77				− .21	+9.39
	9.80259					* 23.67				+ .13	
	1.37421 m						36 16.44			+ 8.94	
((δ) − D) d′/100										+ .53	
+4.50										− 14.70	
−9.68 δ1		55 25.71		35 14.1						35 23.79	
				39		43					
	+36.6	4 20.2	18.4	44	19.55	50 38 28.80			40	35 29.68	
	1.56348					36 37 0.13				− .37	+8.73
d	9.80336					* 30.45				+ .9	
	1.48362 m						37 30.58			+ 8.48	
((δ) − D) d′/100										+ .53	
+4.50										− 15.20	
−9.68 δ2		55 25.67		35 13.5						35 23.21	
	+22.9	3 5.9	56.9	28	1.40	51 54 46.95			25	51 46 59.38	
	1.35984					47 17.92				− .14	+10.84
48 d	9.79144					* 18.54				+ .9	
	1.26806 m						47 36.46			+ 10.26	
((δ) − D) d′/100										+ .63	
+4.55										− 15.20	
−9.93 δ1		58 40.04		46 45.1						46 58.02	
	+27.3	3 57.4	56.8	27	57.35	51 54 51.00			25	47 0.23	
	1.43616					47 22.33				− .19	+10.25
d	9.79144					* 22.10				+ .8	
	1.34438 m						47 44.43			+ 9.73	
((δ) − D) d′/100										+ .63	
+4.55										− 15.70	
−9.93 δ2		58 40.96		46 44.8						46 54.78	
	+19.5	3 50.4	40.7	13	40.55	54 9 2.80			10	54 1 18.79	
50 d	1.29003					1 33.77				− .09	+13.48
	9.76887					* 14.98				+ .11	
	1.17568 m						+ 48.75			+ 12.76	
((δ) − D) d′/100										+ .70	
+4.67										− 15.60	
−10.01 δ1		59 49.08		1 6.7						1 16.67	
	+23.0	3 42.9	40.7	13	41.80	54 9 6.55			10	20.20	
	1.36173					1 37.88				− .14	+12.73
d	9.76887					* 17.68				+ .7	
	1.24738 m						+ 55.56			+ 12.10	
((δ) − D) d′/100										+ .70	
+4.67										− 16.10	
−10.01 δ2		59 49.19		1 6.8						1 16.83	
	+27.3	3 49.7	40.5	28	45.10	54 44 3.25			35	54 36 13.54	
58 d	1.43616					36 34.22				− .19	+14.07
	9.76271					* 20.68				+ .11	
	1.31565 m						36 54.90			+ 13.42	
((δ) − D) d′/100										+ .73	
+4.70										− 15.70	
−10.15 δ1		1 18.51		36 1.8						36 11.91	
	+33.2	3 39.4	38.1	38	38.75	54 44 9.60			35	15.78	
	1.52114					36 40.93				− .28	+13.28
d	9.76271					* 25.15				+ .7	
	1.40063 m						37 6.08			+ 12.73	
((δ) − D) d′/100										+ .76	
+4.70										− 16.30	
−10.15 δ2		1 18.53		36 2.6						36 12.76	
	+21.1	1 10.9	1.5	36	6.20	54 46 42.15			35	54 38 57.15	20 min
60 d	1.32428					39 13.12				− .11	+14.13
	9.76236					* 15.97				+ .03	
	1.20342 m						39 29.09			+ 13.48	
((δ) − D) d′/100										+ .73	
+4.69										− 15.60	
−10.23 δ1		2 45.87		38 45.4						38 55.68	
	+27.7	1 8.4	58.4	345	59.40	54 47 48.95			35	38 59.32	20 min
	1.44248					40 20.28				− .20	13.42
d	9.76218					* 20.96				+ .8	
	1.32144 m						40 41.24			+ 12.78	
((δ) − D) d′/100										+ .76	
+4.69										− 16.20	
−10.23 δ2		2 45.87		38 46.3						38 56.54	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

290 291 92

Date$_1$ = Mar. 24, 1874 Observer W. A. R. Recorder J. F. M. Date$_2$ = Mar. 30, 1874 Observer Recorder Ru

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	m s	s	s	s	s		h m	s	
2	03 47	53 38	9.2	3 38.5	3 51.8	55.3	58.9	2.3	0.8	2941	8 3	58.82	
	02 29.1	53 40.9	9.4	41.3								−0.74	
	κ			45.0								+ .25	
	((δ) — D) $\frac{\kappa'}{100}$			41.3						− 0.52		− 3	
											3	58.30	
	α_1											−1.40	
											3	56.90	
			9.2	3 30.4	3 47.3	50.9	54.4	57.7	1.1	2714	3	58.28	
		20 18		33.0								+ 3.90	
	κ	21 48		36.1								+ 6	
	((δ) — D) $\frac{\kappa'}{100}$	22 59		33.4						+ 3.93		− 3	
		23 34									3	58.21	
	α_2											−1.25	
											3	56.96	
25	43	52 38	7.8	25 28.9	25 48.5	52.0	55.5	58.8	2.2	2770	25	55.40	
24	28.5	52 41.2	7.5	32.0								− 0.74	
	κ			34.1								+ .23	
	((δ) — D) $\frac{\kappa'}{100}$			31.7						− 0.53		− 2	
											25	54.87	
	α_1											−1.59	
											25	53.28	
			7.7	25 19.5	25 44.1	47.5	50.8	54.3	57.5	2542	25	55.84	
				23.4								+ 3.91	
	κ			24.2								+ 5	
	((δ) — D) $\frac{\kappa'}{100}$			22.0						+ 3.94		− 2	
											25	54.78	
	α_2											−1.45	
											25	53.33	
27	36	53.03	8.5	27 8.6	27 39.7	42.6	46.0	49.3	52.7	2298	27	45.96	
26	19.2	53 6.0	8.8	11.2								− 0.73	
	κ			14.4								+ .24	
	((δ) — D) $\frac{\kappa'}{100}$			11.4						− 0.52		− 3	
											27	45.44	
	α_1											−1.62	
											27	43.82	
			8.7	27 7.9	27 34.6	37.8	41.3	44.7	48.3	2067	27	41.34	
				11.9								+ 3.91	
	κ			14.9								+ 5	
	((δ) — D) $\frac{\kappa'}{100}$			11.6						+ 3.93		− 3	
											27	45.27	
	α_2											−1.48	
											27	43.79	
28	48	53.58	6.2	28 29.0	28 52.2	55.8	59.3	2.7	6.1	2961	28	59.22	
27	31.1	53 52.9	6.8	33.0								− 0.73	
	κ			35.4								+ .25	
	((δ) — D) $\frac{\kappa'}{100}$			32.5						− 0.51		− 3	
											28	58.71	
	α_1											−1.67	
											28	57.04	
			6.2	28 18.0	28 47.5	51.1	54.5	58.1	1.5	2727	28	54.84	
				21.8								+ 3.92	
	κ			24.3								+ 6	
	((δ) — D) $\frac{\kappa'}{100}$			21.4						+ 3.95		− 3	
											28	58.49	
	α_2											−1.52	
											28	56.97	
29	49	53 10	6.7	29 36.3	29 52.2	55.6	59.0	2.4	5.9	2951	29	59.02	
28	31.6	53 12.7	6.4	40.1								− 0.73	
	κ			43.0								+ .24	
	((δ) — D) $\frac{\kappa'}{100}$			39.8						− 0.52		− 3	
											29	58.50	
	α_1											−1.65	
											29	56.85	
			7.4	29 38.0	29 47.5	50.9	54.4	57.8	1.2	2718	29	54.36	
				41.2								+ 3.92	
	κ			43.9								+ 5	
	((δ) — D) $\frac{\kappa'}{100}$			41.0						+ 3.94		− 3	
											29	58.30	
	α_2											−1.51	
											29	56.79	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs O_{eg} = −7 29.03 Mar. 24 28.67 Mar. 30

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	s	1′ 42.0	31.9	36	36.95	53 46 11.40			35	53 38 28.80	
	+17.5					38 42 37				− 08	+13.01
54 d	1.24304					−*13.57				+ 5	
	9.77285						38 55.94			+ 12.34	
((δ) − D) $\frac{d'}{100}$	1.13267$_m$									+ .70	
										− 15.30	
+463 δ_1 −1033		4 1.53		38 16.2						38 26.51	
	+20.9	1 35.0	31.9	36	33.45	53 46 14.90			35	30.02	
	1.32015					38 46 23				− 12	+12.30
d	9.77285					−*16.21				+ 3	
	1.09978$_m$						39 2.44			+ 11.69	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 15.80	
+463 δ_2 −1033		4 1.59		38 16.2						38 26.52	
	+23.7	2 16.8	6.9	37	11.85	52 45 36.50			35	52 37 48.65	
	1.37475					38 7.47				− 15	+11.80
56 d	9.78313					−*18.82				+ 6	
	1.27466$_m$						38 26.29			+ 11.21	
((δ) − D) $\frac{d'}{100}$										+ .68	
										− 13.90	
+448 δ_1 −11.93		2 55 7.76		37 34.6						37 46.55	
	+28.8	2 6.8	6.0	37	6.40	52 45 41.95			35	50 41	
	1.45939					38 13.28				− 22	+11.15
d	9.78313					−*22.87				+ 4	
	1.35930$_m$						38 36.15			+10.65	
((δ) − D) $\frac{d'}{100}$										+ 68	
										− 14.50	
+448 δ_2 −1193		2 55 7.81		37 35.1						37 47.06	
	+34.6	2 23.0	13.7	12	18.35	53 10 30.00			10	53 2 33.75	
	1.53908					3 0.97				− 32	+12.12
62 d	9.77896					−*27.22				+ 7	
	1.43482$_m$						3 28.19			+ 11.67	
f((δ) − D) $\frac{d'}{100}$										+ .70	
										− 13.90	
+449 δ_1 −12.05		2 7 48.31		2 19.9						2 31.97	
	+29.7	2 21.1	14.9	12	20.00	53 10 28.35			10	3 26.32	
	1.47276					2 59.68				− 24	+11.61
d	9.77896					−*23.36				+ 5	
	1.36850$_m$						3 +3.04			+ 11.10	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 14.60	
+449 δ_2 −12.05		2 7 48.28		2 21.33						2 33.33	
	+26.7	4 45.2	36.3	19.24	40.75	54 3 7.60			35	53 50 18.00	Eq Winter
	1.42651					53 55 38.57				− .19	
68 d	9.76991					−*20.57				+ .06	+13.17
	1.31320$_m$						55 59.14			+12.60	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 14.10	
+453 δ_1 −12.14		29 1.54		50 4.9						50 17.07	
	+33.1	4 34.2	32.9	24	33.55	53 58 14.80			20	50 +3.96	
	1.51983					50 46 13				− .28	+12.44
d	9.77078					−*22.17				+ .9	
	1.40739$_m$					25.5	51 18.30			+ 11.98	
((δ) − D) $\frac{d'}{100}$		.50								+ .70	
+4.53 δ_2 −12.14		29 1.70		50 4.6						− 13.80	
										50 +2.60	
										19.22	
	+19.2	4 4.1	54.3	4 5	59.20	53 17 49.15			5	53 10 5.06	
	1.28330			3		10 20.12				− .09	+12.42
66 d	9.77778					−*15.06				+ 00	
	1.17786$_m$						10 35.18			+11.81	
((δ) − D) $\frac{d'}{100}$										+ .70	
										− 13.50	
+449 δ_1 −12.21		30 1.34		8 51.8						10 3.98	
	+13.4	2 2.9	0.5	3	0.70	53 17 47.65			5	9 8.47	
	1.12710					10 9.98				− 5	+11.88
d	9.77778					−*10.51				+ 00	
	1.02166$_m$						10 28.49			+ 11.23	
((δ) − D) $\frac{d'}{100}$				3						+ .70	
										− 14.30	
+449 δ_2 −12.21		30 1.28		8 52.8						10 6.05	
										9	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

290 291 94

Date$_1$ = Mar. 24, 1874 Observer W. A. H. Recorder J. F. M. Date$_2$ = Mar 30, 1874 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
37	12 50	50 1.17	9.7	31 6.5	31 21.4	25.0	28.0	31.0	34.4	1388	31	27.96	
30	2.8	50 20.5	8.3	9.5						0.54		−0.73	
κ				12.2						−0.94		+21	
((δ) − D) $\frac{\kappa'}{100}$				9.4								+2	
α_1											31	27.42	
												−1.55	
											31	25.87	
			9.4	30 45.3	31 17.0	20.2	23.4	26.5	29.8	1169	31	23.38	
				50.1								+392	
κ				52.4								+5	
((δ) − D) $\frac{\kappa'}{100}$				49.3						+ 3.95		−2	
α_2											31	27.33	
												−1.42	
											31	25.91	
32 08		53 14	9.0	32 38	32 14.8	17.9	21.5	24.9	28.4	1075	32	21.50	
30	52.4	53 17.5	9.2	6.9								−0.73	
κ				9.9								+24	
((δ) − D) $\frac{\kappa'}{100}$				6.7						− 0.52		−3	
α_1											32	20.98	
												−1.67	
											32	19.31	
			9.0	31 48.4	32 10.9	13.4	16.9	20.4	23.7	844	32	16.88	
κ				52.4								+3.92	
((δ) − D) $\frac{\kappa'}{100}$				55.3								+5	
α_2				52.0						+ 3.94		−3	
											32	20.82	
												−1.53	
											32	19.29	
36 12		53.09	9.0	35 52.3	36 14.9	18.5	21.8	25.0	28.7	1089	36	21.78	
34	65.9	53 11.6	8.8	56.2								−0.73	
κ				58.6								+24	
((δ) − D) $\frac{\kappa'}{100}$				55.4						− 0.52		−3	
α_1											36	21.26	
												−1.72	
											36	19.54	
			9.0	32 44.8	36 10.3	13.8	17.1	20.6	24.1	859	36	17.18	
κ				48.0								+3.92	
((δ) − D) $\frac{\kappa'}{100}$				51.1								+5	
α_2				48.0						+ 3.94		−3	
											36	21.12	
												−1.57	
											36	19.55	
37 12		53.32	8.7	37 6.3	37 13.8	17.2	20.8	24.2	27.6	1036	37	20.72	
35	55.8	53 34.7	9.0	9.5								−0.73	
κ				12.3								+24	
((δ) − D) $\frac{\kappa'}{100}$				7.4						− 0.52		−3	
α_1											37	20.20	
												−1.74	
											37	18.46	
			9.0	36 50.1	37 9.2	12.6	16.0	19.5	22.0	803	37	16.06	
κ				54.0								+3.92	
((δ) − D) $\frac{\kappa'}{100}$				56.4								+5	
α_2				55.6						+ 3.94		−3	
											37	20.00	
												−.59	
											37	18.41	
40 10		49.56	8.5	39 24.5	39 46.2	49.3	52.5	55.6	58.9	2625	39	52.50	
~~39~~ ~~38~~		~~49 59.8~~	9.3	27.9								−0.73	
κ				31.2								+21	
38 25.8		49 58.2		27.8						− 0.54		−2	
((δ) − D) $\frac{\kappa'}{100}$											39	51.96	
α_1												−1.66	
											39	50.30	
			8.0	39 23.7	39 41.4	44.6	47.8	51.0	54.3	2391	39	47.82	
κ				36.5								+393	
((δ) − D) $\frac{\kappa'}{100}$				39.1								+5	
α_2				36.4						+ 3.96		−2	
											39	51.78	
												−1.53	
											39	50.25	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eg} = −7′ 29.03 Mar. 24 28.67 Mar. 30

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
58	S +18.6	3′ 23.9	15.5	58	19.70	50 24 28.65			55	50 16 44.07	
d	1.269 51					16 59 62				− .10	+9.11
((δ) − D) $\frac{d'}{100}$	9.805 50					−* 15.55	17 15.17			+ .10	
	1.191 79n									+ 8.60	
+4.34 δ_1		31 30.21		16 28.1						+ .51	
−12.31				8		4				−12.80	
										163 40.38	
	+34.1	2 3 6.0	4.7	58	5.35	50 25 43.00			55	17 45.83	Ex min
	1.532 75					+8 17 14.33				− .31	+8.42
d	7.805 34					−* 28.50	18 42.83			+ .4	
((δ) − D) $\frac{d'}{100}$	1.454 87n									+ 8.18	
+4.34 δ_2		31 30.25		16 28.3						+ .51	
−12.31										−13.60	
										167 40.65	
	+14.8	1 6.9	56.9	1	1.40	53 21 46.95			0	53 14 6.33	
62	1.170 26					14 17 92				− 6	+12.55
d	9.777 11					−* 11.59	11 29.51			+ 3	
((δ) − D) $\frac{d'}{100}$	1.064 15n									+ 11.88	
				5.28						+ .70	
+4.48 δ_1		32 23.79		13 5.30	+1″					−13.70	
−12.37						4				14 5.18	
	+24.9	0 53.9	51.0	0	52.45	53 21 55.90			0	14 .673	
	1.396 20					14 27.23				− .16	+11.86
d	9.777 11					−* 19.50	11 46.73			+ 2	
((δ) − D) $\frac{d'}{100}$	1.290 09n									+11.30	
+4.48 δ_2		32 23.74		13 51.8						+ .70	
−12.37										−14.40	
										14 4.19	
	+26.1	12 2.7	52.4	86	57.55	53 16 50.80			5	53 8 1.29	
60	1.416 64					9 21.77				− .18	+12.34
d	9.777 95					−* 20.48	9 42.25			+ 3	
((δ) − D) $\frac{d'}{100}$	1.311 37n									+ 11.79	
+4.46 δ_1		36 24.00		7 47.2						+ .70	
−12.65										−13.80	
										8 59.83	
	+29.2	1 53.9	51.9	6	52.40	53 15 55.95			5	8 4.37	Ex min
	1.465 38					8 27.28				− .22	+11.73
d	9.777 95					−* 22.91	8 50.19			+ 4	
((δ) − D) $\frac{d'}{100}$	1.360 11n									+ 11.21	
+4.46 δ_2		36 24.01		7 48.8						+ .70	
−12.65										−14.60	
										8 1.50	
	+11.3	0 1.9	51.7	44	56.80	53 38 51.55			45	53 30 13.72	
66	1.052 08					30 22.52				− 3	+13.00
d	9.774 78					−* 8.80	28 31.32			+ 15	
((δ) − D) $\frac{d'}{100}$	0.944 59n									+ 12.18	
+4.47 δ_1		37 22.93		30 0.1						+ .70	
−12.71										−13.90	
										30 12.82	
	+22.5	4 46.5	44.1	44	45.30	53 38 3.05			40	30 16.87	
	1.352 18					30 34.38				− .13	+12.25
d	9.774 22					−* 17.51	30 51.89			+ .09	
((δ) − D) $\frac{d'}{100}$	1.243 18n									+ 11.59	
+4.47 δ_2		37 22.88		30 1.8						+ .70	
−12.71										−14.60	
										30 14.52	
	+24.7	0 58.1	49.7	20	53.90	50 21 54.45			20	49 54 4.60	Ex min
68	1.392 70					49 54 25.42				− 15	+8.69
d	9.805 97					−* 20.82	54 46.24			+ .2	
((δ) − D) $\frac{d'}{100}$	1.318 45n									+ 8.32	
+4.29 δ_1		39 54.59		53 47.9						+ .50	
−12.92						1				−12.50	
										54 0.79	
	+11.4	8 4.9	3.0	20	3.95	50 8 44.40			20	54 55 6.13	
	1.056 90					49 58 15.73				− 3	+8.36
d	9.805 82					−* 9.60	55 25.33			+ .00	
((δ) − D) $\frac{d'}{100}$	0.982 50n									+ 7.89	
+4.29										+ .50	
δ_2 −12.92		39 54.54		53 48.3						−13.30	
										54 1.19	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

290 291 96

Date$_1$ = Mar. 24, 1874 Observer W.A.R. Recorder J.T.M. Date$_2$ = Mar. 30, 1874 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
8	42 m 26	53 01	9.0	42 13.3	42 29.9	33.2	36.6	40.7	43.4	183.3	8h 42m	36.64	
41	9.9	53 2.2	9.0	16.4								−0.72	
κ				16.4								+ .24	
((δ) − D) $\frac{\kappa'}{100}$				16.4						− 0.51		− 3	
α_1											42	36.13	
												−1.77	
											42	34.36	+4.4 −13
			8.8	42 05	42 25.1	28.6	32.0	35.3	38.7	159.7	42	31.94	
				3.4								+ 3.93	
κ				6.0								+ 5	
((δ) − D) $\frac{\kappa'}{100}$				2.4						+ 3.95		− 3	
α_2											42	35.89	
												−1.63	
											42	34.26	+4.4 −13
43	38	50 51	8.7	43 44.7	44 5.6	9.1	12.3	15.5	18.9	61.6	44	12.28	
42	+9.1	50 54.5	8.9	48.3								−0.72	
κ 4				57.4								+ .22	
((δ) − D) $\frac{\kappa'}{100}$				48.1						− 0.52		− 2	
α_1											44	11.76	
												−1.70	
											44	10.06	+4.4 −13.
			9.0	43 39.2	44 1.1	4.3	7.6	10.8	14.1	37.9	44	7.58	
				43.1								+3.93	
κ				45.4								+ 5	
((δ) − D) $\frac{\kappa'}{100}$				42.6						+ 3.96		− 2	
α_2											44	11.54	
												−1.57	
											44	9.97	+4.4 −13.
44	15	50 51	9.4	44 39.0	44 53.5	26.8	30.0	33.2	36.5	150.0	44	30.00	
43	6.7	50 54.0	9.3	41.9								−0.72	
κ				44.9								+ 22	
((δ) − D) $\frac{\kappa'}{100}$				41.9						− 0.52		− 2	
α_1											44	29.48	
												−1.70	
											44	27.78	+4.4 −13.
			9.4	44 33.2	44 48.9	22.1	25.3	28.6	32.0	126.9	44	35.38	
				34.4								+ 3.93	
κ				41.3								+ 5	
((δ) − D) $\frac{\kappa'}{100}$				27.4						+ 3.96		− 2	
α_2											44	29.34	
												−1.57	
											44	27.74	+4.4 −13
45	40	53 18	7.7	45 27.4	45 41.2	44.7	48.1	51.5	54.9	240.4	45	48.08	
44	24.2	53 21.0	7.3	31.6								−0.72	
κ				34.0								+ 24	
((δ) − D) $\frac{\kappa'}{100}$				31.1						− 0.51		− 3	
α_1											45	47.57	
												−1.81	
											45	45.76	+4.4 −13.
			7.0	45 20.1	45 36.6	40.1	43.5	46.9	50.3	217.4	45	40.48	
				24.2								+ 3.93	
κ				27.2								+ 5	
((δ) − D) $\frac{\kappa'}{100}$				23.8						+ 3.95		− 3	
α_2											45	47.43	
												−1.68	
											45	45.75	+4.4 −13.
46	54	53 33	8.0	46 18.1	47 −	—	—	6.4	9.9		47	2.98	
45	37.6	53 36.1	8.5	21.8								−0.72	
κ				24.5								+ .24	
((δ) − D) $\frac{\kappa'}{100}$				21.3						− 0.51		− 3	
α_1											47	2.44	
												−1.83	
											47	0.61	+4.4 −13.
			8.7	46 15.6	46 31.4	35.0	38.8	42.0	45.5	212.7	46	58.54	
				19.4								+ 3.93	
κ				21.6								+ 5	
((δ) − D) $\frac{\kappa'}{100}$				18.7						+ 3.95		− 3	
α_2											47	2.49	
												−1.70	
											47	0.79	+4.4 −13.3

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs Mar 24 Mar. 30

R_{eq} = -7 29.03 28.67

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	+20.2	1 10.9	0.9	16	3.90	53 +6 42.45			15	52 58 57.51	
	1.30535					52 59 13.42				− .10	+12.22
.72 d	9.77963					− 15.91				+ .3	
	1.20176n						59 29.33			+ 11.60	
((δ) − D) d'/100										+ .69	
										− 12.90	
+4.42 δ1		42 38.78		58 43.8						58 56.83	
−13.06											
	+28.5	0 54.8	56.1	15	55.45	53 6 52.90			15	58.98	
	1.45484					52 59 24.23				− .21	+11.53
d	9.77963					− 25.25				+ .2	
	1.40225n						59 49.48			+ 11.03	
((δ) − D) d'/100										+ .69	
										− 13.70	
+4.42 δ2		42 38.68		58 43.8						58 56.81	
−13.06											
	+24.2	3 2.7	53.7	22	58.20	50 59 50.15			20	50 57 1.13	
	1.38382			23		52 1 21.12				− .15	+9.71
74 d	9.80012					− 19.99				+ .12	9.74
	1.30072n						52 41.41			+ 9.23	
((δ) − D) d'/100										+ .54	
										− 12.30	
+4.31 δ1		44 14.37		50 45.4						50 58.547	
−13.17											
	+25.0	3 56.1	54.9	23	55.50	50 58 52.85			20	51 3.53	
	1.39794					51 24.18				− .17	+9.23
d	9.80027					− 20.65				+ .8	
	1.31499n						51 44.83			+ 8.78	
((δ) − D) d'/100										+ .54	
				6						− 13.10	
+4.31 δ2		44 14.28		50 45.5						50 59.66	
−13.17											
	−11.9	0 25.8	16.8	25	21.30	50 57 27.05			25	50 50 7.85	
62	1.07555n					50 49 58.02				− .04	+9.73
d	9.80043					+ 9.83				+ 1	
	0.99276						49 48.19			+ 9.22	
((δ) − D) d'/100										+ .54	
										− 12.20	
+4.31 δ1		44 32.09		49 52.2						50 5.38	
−13.19											
	−12.5	0 20.7	16.4	25	19.55	50 57 28.80			25	10.46	
	1.09691n					50 0.13				− .04	+9.28
d	9.80043					+ 10.33				+ 1	
	1.01412						49 49.80			+ 8.77	
((δ) − D) d'/100										+ .54	
										− 13.00	
+4.31 δ2		44 32.08		49 53.6						50 6.74	
−13.19											
	+17.0	3 56.5	47.2	58	51.85	53 23 56.50			55	53 16 14.16	
60	1.23045					16 27.47				− 8	+12.66
d	9.77677					− 13.31				+ 11	
	1.12400n						16 40.78			+ 11.93	
((δ) − D) d'/100										+ .70	
										− 12.80	
+4.41 δ1		45 50.14		16 0.4						16 14.02	
−13.28											
	+19.7	3 47.2	47.2	58	48.20	53 24 0.15			55	16.06	
	1.29447					16 31.48				− .10	+12.04
d	9.77677					− 15.42				+ 8	
	1.18802n						16 46.90			+ 11.36	
((δ) − D) d'/100										+ .70	
										− 13.60	
+4.41 δ2		45 50.16		16 1.2						16 14.50	
−13.28											
	−18.6	3 26.8	17.5	43	17.15	53 39 31.20			40	53 32 16.63	
	1.26951n					32 2.17				− 9	+12.94
d	9.77405					+ 14.46				+ 10	
	1.16034						31 47.71			+ 12.23	
((δ) − D) d'/100										+ .70	
										− 12.80	
+4.42 δ1		47 5.03		31 58.4						32 11.77	
−13.36											
	+39.6	2 35.0	32.2	47/2	33.60	53 40 35.14.75			45	32 15.24	M stroke
	1.59770					28 46.08				− 42	
d	9.77456					− 30.84				+ 11.66	
	1.48904n						29 16.92			+ 8	+12.02
((δ) − D) d'/100										+ .70	
										− 13.60	
+4.42 δ2		47 5.21		32 0.3						32 13.66	
−13.36											

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.11587R

Date$_1$ = Mar. 24, 1874 Observer W. A. R. Recorder J. F. M. Date$_2$ = Mar. 30, 1874 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
8 h	m s	° ′ ″		m s	m s	s	s	s	s		m s	s	
	48 42	53 11	9.4	48 21.8	48 45.6	49.1	52.5	56.1	59.5	9628	48	52.56	
	47 26.1	53 13.8	9.4	25.5								−0.72	
	κ			28.5								+ 24	
				25.1						− 0.51		− 3	
	((δ) — D) $\frac{\kappa'}{100}$										48	52.05	
	α_1											−1.85	
											48	50.20	
			9.6	48 29.7	48 41.0	44.6	47.9	51.5	54.8	2398	48	47.96	
				32.2								+ 3.93	
	κ			36.7								+ 5	
				32.7						+ 3.95		− 3	
	((δ) — D) $\frac{\kappa'}{100}$										48	51.91	
	α_2											−1.71	
											48	50.20	
	50 59	53 49	8.3	50 38.2	51 2.4	5.9	9.4	12.9	16.4	470	51	9.40	
	49 42.9	53 53.4	7.9	42.4								−0.72	
	κ			44.6								+ .25	
				41.7						− 0.50		− 3	
	((δ) — D) $\frac{\kappa'}{100}$										51	8.90	
	α_1											−1.88	
											51	7.02	
			8.1	50 34.3	50 57.6	1.2	4.7	8.3	11.8	236	51	4.72	
				38.5								+ 3.94	
	κ			40.8								+ 6	
				37.7						+ 3.97		− 3	
	((δ) — D) $\frac{\kappa'}{100}$										51	8.69	
	α_2											−1.75	
											51	6.94	
	κ												
	((δ) — D) $\frac{\kappa'}{100}$			Single Observations.									
	α_1												
7	48 27	51 32	10.0	48 8.5	48 32.9	36.4	39.5	42.8	46.1	1977	48	34.54	
	47 16.0	51 34.2	9.5	11.1								+ 3.88	
Mar. 30	κ			13.1								+ .05	
				10.7						+ 3.91		− 2	
	((δ) — D) $\frac{\kappa'}{100}$										48	43.45	
	α_2											−1.02	
											48	42.43	
8	20 18	51.04	9.2	20 17.0	20 22.2	25.4	28.7	32.0	35.3	1436	20	28.72	
	19 7.0	51 7.4	8.4	20.4								+ 3.91	
Mar. 30	κ			22.7								+ 5	
				20.6						+ 3.94		− 2	
	((δ) — D) $\frac{\kappa'}{100}$										20	32.66	
	α_1											−1.42	
											20	31.24	
8	21 48	53.33	8.0	21 36.4	21 45.9	49.4	52.8	56.3	59.8	2642	21	52.84	
	20 30.8	53 36.4	8.5	39.9								+ 3.91	
Mar. 30	κ			43.6								+ 5	
				39.6						+ 3.94		− 2	
	((δ) — D) $\frac{\kappa'}{100}$										21	56.78	
	α_2											−1.43	
											21	55.35	
8	22 59	53.32	6.8	22 21.1	22 56.1	59.5	3.0	6.4	9.9	1.49	23	2.98	
	21 41.6	53 35.4	6.4	24.4								+ 3.91	
Mar. 30	κ			26.9								+ 5	
				24.1						+ 3.93		− 3	
	((δ) — D) $\frac{\kappa'}{100}$										23	6.91	
	α_1											−1.44	
											23	5.47	
8	23 34	51.50	9.0	23 22.5	23 41.7	44.0	47.3	50.7	54.0	2367	23	47.34	
	22 23.3	51 53.4	9.1	24.9								+ 3.91	
Mar. 30	κ			21.6								+ 5	
				25.0						+ 3.94		− 2	
	((δ) — D) $\frac{\kappa'}{100}$										23	51.28	
	α_2											−1.41	
											23	49.87	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs $\theta_{eq.}$ = Mar 24 −7° 29'03 Mar. 30 28.67

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
	s	0′ 26.0	16.1	5′	21.05	53 17 27.30			5′	53 9 36.70	
60	+27.5					9 58.27				− .19	+12.33
d	1.43933					− 21.57				+ 1	
	9.77778						+0 19.84			+ 11.81	
((δ) − D) $\frac{d'}{100}$	1.33389 n									+ .70	
+4.39										− 12.70	
−13.48 δ_1		48 54.59		9 22.8						9 36.33	
	+14.1	0 30.2	28.5	5	2935	53 17 19.00			5	38.49	
	1.17898					9 50.33				− 6	+11.89
d	9.77778					+ 11.84				+ 1	
	1.07354 n						+0 2.17			+ 11.24	
((δ) − D) $\frac{d'}{100}$										+ .70	
+4.39										−13.50	
−13.48 δ_2		48 54.59		9 23.4						9 36.88	
68	+27.7	0 58.7	48.1	25	5340	53 56 54.95			25	53 49 4.52	
d	1.44248					49 25.92				− .20	+13.07
	9.77112					+ 21.40				+ 3	
((δ) − D) $\frac{d'}{100}$	1.33038 n						49 47.32			+ 12.54	
+4.41										+ .70	
−13.63 δ_1		51 11.43		48 51.4						−12.60	
										49 4.99	
	+26.8	0 53.3	50.1	25	5170	53 56 56.65			25	7.28	
d	1.42813					49 27.98				− .19	+12.49
	9.77112					+ 20.70				+ 2	
((δ) − D) $\frac{d'}{100}$	1.31603 n						49 48.68			+ 11.96	
+4.41										+ .70	
−13.63 δ_2		51 11.35		48 52.6						−13.50	
										49 6.27	
d											
((δ) − D) $\frac{d'}{100}$											
δ_1											
	+28.6	3 28.0	28.0	43	2800	51 39 20.35			40	51 31 28.40	
d	1.45637					31 51.68				− .20	+9.92
	9.79383					+ 23.28				+ 7	
((δ) − D) $\frac{d'}{100}$	1.36698 n						22 14.96			+ 9.45	
+4.57										+ 60	
−9.16 δ_2		48 47.00		31 16.2						−13.00	
										31 25.32	
	+8.7	0 11.9	10.9	10	1140	51 12 36.95			10	51 5 1.13	
d	0.93952					5 8.28				− 2	+9.55
	9.79809					+ 7.15				+ 60	
((δ) − D) $\frac{d'}{100}$	0.85439 n						5 15.43			+ 9.01	
+4.42										+ 56	
−11.54 δ_1		20 35.66		4 44.8						−14.30	
										4 56.38	
	+13.2	2 35.5	34.0	42	34.75	53 40 13.60			40	53 32 34.67	
d	1.12057					32 44.93				− 5	+12.32
	9.77387					+ 10.26				+ 5	
((δ) − D) $\frac{d'}{100}$	1.01122 n						32 55.19			+ 11.62	
+4.55										+ .70	
−11.65 δ_2		21 59.90		32 20.3						−15.60	
										32 31.989	
	+38.9	2 25.0	22.7	42	2388	53 40 24.50			40	53 32 25.59	
d	1.58995					32 55.83				− .40	+11.96
	9.77387					+ 30.24				+ 5	
((δ) − D) $\frac{d'}{100}$	1.48060 n						33 26.07			+ 11.61	
+4.54										+ .70	
−11.73 δ_1		23 10.01		32 10.8						−15.00	
										32 22.55	
	+22.3	4 55.1	54.3	24	54.70	51 57 53.65			20	51 50 6.95	
d	1.34830					50 24.98				− .13	+10.40
	9.79095					+ 18.03				+ 10	
((δ) − D) $\frac{d'}{100}$	1.25603 n						50 43.04			+ 9.82	
+4.45										+ .63	
−11.78 δ_2		23 54.32		49 51.2						−14.40	
										50 2.95	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.01587R

292

Date$_1$ = Apr. 2, 1874 Observer W. A. R.
n = +.08 Recorder J. F. M.

293

Date$_2$ = Apr. 6, 1874 Observer
n = +.08 Recorder

100

Star.	α	δ	Mag.	T_δ	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
8h	23m 34s	51.50	9.0	23m 13.5s	23m 38.0	41.5	44.8	48.2	51.6			m	s
	22 23.3	51 53.4	9.1	18.4								23	44.82
	κ			21.8									+6.3942
				18.6									+ 10
													− 2
	((δ) − D) $\frac{\kappa'}{100}$											23	51.29
													−1.33
	α_1											23	49.96
													52.00
			9.1	23 19.9	23 38.0	41.4	44.8	48.2	51.6	Add +.015 to (4I+m) Apr 6. It has been added to sum of constants +.015 and to final R.A.			
	κ			28.6									
				26.0									
				28 55.7	28 54.7	57.9	41.3	44.6	47.9			23	41.28
				57.0									+9.6X3
				46.7									+ 10
				38.5									− 2
	((δ) − D) $\frac{\kappa'}{100}$										+ 9.71+01	23	50.94
													−1.23 49.76
	α_2												
25	43	52 38	7.8	25 18.1	25 41.5	45.0	48.3	51.7	55.0			25	48.30
24	26.5	52 41.2	7.5	21.4									+6.3942
	κ			23.8									+ 10
				21.1									− 2
	((δ) − D) $\frac{\kappa'}{100}$										+ 6.50+02	25	54.74
													−1.38
	α_1											25	53 43.4
			8.0	25 19.9	25 38.0	41.4	44.8	48.2	51.6			25	4480
	κ			23.6									+9.6X3
				26.0									+ 10
				28.2									− 2
	((δ) − D) $\frac{\kappa'}{100}$										+ 9.71+02	25	54.49
													−1.27
	α_2											25	53.246
26	45	52.37	9.1	26 23.6	26 42.1	46.6	49.9	53.3	56.7			26	49.92
25	30.8	52 40.1	9.1	27.2									+6.4X2
	κ			25.9									+ 10
				26.4									− 2
	((δ) − D) $\frac{\kappa'}{100}$										+ 6.50+01	26	56.40
													−1.38
	α_1											26	55.045
			9.0	26 13.8	26 39.6	43.0	46.5	49.9	53.2			26	4644
	κ			19.8									+9.6X3
				20.2									+ 10
				17.3									− 2
	((δ) − D) $\frac{\kappa'}{100}$										+ 9.71+01	26	56.13
													−1.28
	α_2											26	54.858
28	02	53 10	9.1	27 49.6	28 6.5	2.9	7.2	10.6	14.1			28	7.26
26	45.4	53 13.3	9.1	52.4									+6.4X2
	κ			56.4									+ 10
				52.8									− 3
	((δ) − D) $\frac{\kappa'}{100}$										+ 6.49+02	28	13.73
													−1.42
	α_1											28	12.385
			9.0	27 26.1	27 47.0	0.4	3.8	7.2	10.8			28	3.84
	κ			29.1									+9.68X3
				32.0									+ 10
				29.3									− 3
	((δ) − D) $\frac{\kappa'}{100}$										+ 9.70+02	28	13.53
													−1.31
	α_2											28	12.285
29	31	53 22	7.0	29 26.6	29 45.6	49.0	52.5	56.1	59.8			29	32.54
28	14.0	53 24.8	6.6	6.7									+6.482
	κ			26.6									+ 11
				26.6									− 3
	((δ) − D) $\frac{\kappa'}{100}$										+ 6.51+01	29	39.02
													−1.34
	α_1											29	37.681
			6.9	28 49.8	29 12.2	25.6	29.2	32.6	36.0			29	29.12
	κ			46.0									+9.683
				52.4									+ 11
													− 3
	((δ) − D) $\frac{\kappa'}{100}$										+ 9.71+01	29	38.82
													−1.33
	α_2											29	37.581

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs Eq = −7 2906 + 00 28.97 −01 Aug. 2 Aug. 6

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ'
	∞	4 54.1	51.8	24	52.95	51 57 55.40			20	57 50 5.16	
54 d	+26.2					50 26.34				− 18	+10.42
	1.41830					−* 21.18				+ 00	
((δ) − D) $\frac{d'}{100}$	979095						50	47.52		+ 9.97	
	1.32603 m.									+ 63	
+4.45 δ_1		23 54.45		49 49.2						− 1460	
−11.78										50 0.98	
		0 9.6	10.1	25	9.85	51 57 38.50			25	7.27	
d						50 9.53				− 01	+10.53
	+ 2.8					−* 2,26				+ 00	
((δ) − D) $\frac{d'}{100}$	0.44716						50	11.79		+ 9.90	
	9.79095									+ 64	
+4.45 δ_2	0.35489 m	23 54.22		49 51.0						− 1500	
−11.78										50 2.80	
	+27.2	2 9.1	6.1	37	7.60	52 45 40.75			35	52 37 50.09	
50 d	1.43457					38 11.69				− 18	+11.32
	9.78313					−* 21.60				+ 00	
((δ) − D) $\frac{d'}{100}$	1.33448 m						38	33.29		+ 10.83	
										+ 68	
+4.48 δ_1		25 57.92		37 34.7						− 14.80	
−11.93										37 46.61	
	+21.6	2 12.3	12.1	37	12.15	52 45 36.20			35	50.08	
	1.33445					38 7.23				− 13	+11.29
d	9.78313					−* 17.15				− 2	
((δ) − D) $\frac{d'}{100}$	1.23436 m						38	24.38		+10.76	
										+ 68	
+4.48 δ_2		25 57.74		37 34.2						− 1520	
−11.93						44				37 46.17	
	+23.0	2 2.4	59.3	37	0.85	52 45 47.50			35	52 38 0.17	Grimm
48 d	1.36173					38 18.44				− 14	+11.36
	9.78313					−* 18.27				+ 00	
((δ) − D) $\frac{d'}{100}$	1.26164 m						38	36.71		+ 10.82	
										+ 68	
+4.47 δ_1		26 59.52		36 44.6						− 14.90	
−12.00						44 3				36 56.63	
	+29.1	2 45.9	54.6	37	50.25	52 45 54.10			35	37 1.01	
	1.46389					37 28.13				− 22	+11.18
d	9.78329					−* 23.12				− 3	
((δ) − D) $\frac{d'}{100}$	1.36396 m						37	52.25		+10.75	
										+ 68	
+4.47 δ_2		26 59.35		36 44.9						− 15.30	
−12.00										36 56.89	
	+14.5	0 44.0	40.0	5	42.00	53 17 6.35			5	53 9 25.91	
42 d	1.16137					9 37.29				− 5	+12.06
	9.77778					−* 11.38				+ 00	
((δ) − D) $\frac{d'}{100}$	1.05593 m						9	48.67		+11.40	
										+ 71	
+4.49 δ_1		28 16.84		9 11.0						− 14.90	
−12.08										9 23.07	
	+34.5	0 26.1	25.2	5	25.65	53 17 22.70			5	26.67	
	1.53782					9 53.73				− 30	+11.74
d	9.77778					−* 27.06				+ 00	
((δ) − D) $\frac{d'}{100}$	1.43238 m						10	20.79		+ 11.33	
										+ 71	
+4.49 δ_2		28 16.74		9 11.0						− 1530	
−12.08										9 23.11	
	+25.9	3 8.1	4.7	53	6.40	53 29 41.95			50	53 21 52.67	
	1.41330					22 12.89				− 18	+12.17
d	9.77575					−* 30.22				+ 00	
((δ) − D) $\frac{d'}{100}$	1.30583 m						22	33.11		+ 11.63	
										+ 72	
+4.50 δ_1		29 42.11		21 37.6						− 1500	
−12.19										21 49.84	
	+36.2	2 59.1	57.2	52	57.15	53 29 50.20			50	52.97	
	1.55871					22 21.23				− 34	+11.91
d	9.77575					−* 28.26				− 3	
((δ) − D) $\frac{d'}{100}$	1.45124 m						22	49.49		+ 11.56	
										+ 72	
+4.50 δ_2		29 42.01		21 37.3						− 15.40	
−12.19										21 49.48	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.11587R

292 293 102

Date$_1$ = Apr. 2, 1874 Observer F. A. R. Recorder J. F. K. Date$_2$ = Apr. 6, 1874 Observer Recorder

Star.	α	δ	Mag.	T_s	T_m	T_e	T_f	T_g	T_h	Sum	Mean	Red. to T_m	T
31	31 12	50 17	9.2	30 43.3	31 14.3	17.8	21.0	24.0	27.2			m 31	20 s 86
30	2.8	50 20.5	9.3	46.4									+6.48 2
κ				48.2									+ 10
				46.3									− 2
((δ) − D) $\frac{\kappa'}{100}$											+ 6.50	+02	31 27.34
a_1													−1.35
												31	26.0 3
			9.2	30 44.5	31 10.9	14.1	17.4	20.4	23.8			31	17.2 32
κ				48.4									+9.6 3
				51.4									+ 10
				48.1							+ 9.71	+02	− 2
((δ) − D) $\frac{\kappa'}{100}$													31 26.96
a_2													−1.26
												31	25.7 79
32	33	53 47	8.9	32 15.5	32 28.2	31.8	35.0	38.7	42.2			32	35.18
31	17.0	53 50.4	8.8	21.5									+6.48 2
κ				20.2									+ 11
				21.7									− 3
((δ) − D) $\frac{\kappa'}{100}$											+ 6.50	+01	32 41.66
34 15													−1.48
a_1												32	40.28
			8.6	32 0.0	32 24.8	28.3	31.8	35.2	38.9			32	31.80
κ				3.1									+9.62 3
				6.2									+ 11
				3.1							+ 9.71	+01	− 3
((δ) − D) $\frac{\kappa'}{100}$													32 41.60
a_2													−1.38
												32	40.18 4
36	24	54 24	8.4	35 37.4	36 21.8	25.2	28.8	32.3	36.0			36	28 82
35	8.0	54 26.8	8.5	1.2									+6.4 2
κ				4.3									+ 11
				6.1							+ 6.50	+02	− 3
((δ) − D) $\frac{\kappa'}{100}$													36 35.31
37 12													−1.55
38 15												36	33.79
a_1													
			8.4	36 39.7	36 18.4	21.9	25.5	28.8	32.8			36	25.48
κ				43.0									+9.62 3
				47.7									+ 11
				43.5							+ 9.71	+02	− 3
((δ) − D) $\frac{\kappa'}{100}$													36 35.18
a_2													−1.44
												36	33.74 7
39	16	53 24	8.3	38 46.0	39 11.0	14.5	18.0	21.4	25.0			39	17.98
38	0.2	53 27.5	8.3	48.3									+6.4 3
κ				47.4									+ 11
				48.6							+ 6.57	+01	− 3
((δ) − D) $\frac{\kappa'}{100}$													39 24.47
a_1													−1.54
												39	22.9 6
			8.5	38 39.0	39 7.7	11.2	14.5	18.0	21.5			39	14.58
κ				43.0									+9.62 4
				45.8									+ 11
				42.9							+ 9.72	+01	− 3
((δ) − D) $\frac{\kappa'}{100}$													39 24.28
a_2													−1.44
												39	22.88 7
40	10	49 56	9.5	39 51.9	40 11.5	14.7	17.8	21.2	24.4			40	17.92
39	0.8	49 59.8	9.3	54.6									+6.4 3
κ				57.8									+ 9
				53.1							+ 6.50	+02	− 2
((δ) − D) $\frac{\kappa'}{100}$													40 24.40
a_1													−1.43
												40	22.99 23.01
			9.5	39 54.1	40 8.0	11.1	14.4	17.6	21.9			40	14.60
κ				56.3									+9.62 4
				55.5									+ 9
				56.6							+ 9.71	+02	− 2
((δ) − D) $\frac{\kappa'}{100}$													40 24.29
a_2													−1.35
												40	22.98

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

Runs R_{eq} = −7 29.06 Apr. 2 Apr. 6 28.97

	$T_m - T$	A	C	Sum	Mean	Red. to m. wire	Red. to h. wire	Red. runs	Stroke	z	δ′
		3 7.1	4.4	58	0.25	50 24 43.10			55	50 16 45.11	
	+34.6					17 14.04				− 31	+8.52
d	1.53908					−* 28.93				− .00	
	9.80550							17 42.97		+ 8.32	
((δ) − D) $\frac{d'}{100}$	1.46136n									+ .51	
										−13.90	
+4.34 δ_1		31 30.37		16 27.4						16 39.73	
−12.31											
	+29.2	3 9.0	8.8	58	8.90	50 24 39.45			55	46.07	
	1.46538					17 10.48				− .23	+8.53
d	9.80550					−* 24.41				− .3	
	1.38766n							17 34.87		+ 8.26	
((δ) − D) $\frac{d'}{100}$										+ .53	
										−14.40	
+4.34 δ_2		31 30.13		16 27.9						16 40.20	
−12.34											
	+13.6	3 36.0	31.5	28	33.75	53 54 14.60			25	53 46 35.10	
	1.13033					46 45.54				− 5	+12.76
d	9.77147					−* 10.44				+ .00	
	1.01855n							46 55.98		+12.07	
((δ) − D) $\frac{d'}{100}$										+ .74	
										−14.80	
+4.51 δ_1		32 44.72		46 20.7						46 33.06	
−12.40											
	+28.7	3 20.9	21.0	28	20.95	53 54 27.40			25	36.19	
	1.45788					46 58.43				− .22	+12.49
d	9.77147					−* 22.24				− .3	
	1.34713n							47 20.67		+12.00	
((δ) − D) $\frac{d'}{100}$										+ .74	
										−15.30	
+4.51 δ_2		32 44.65		46 21.0						46 33.38	
−12.40											
	+27.7	2 44.1	40.0	52	42.05	54 30 6.30			50	54 22 16.13	
	1.44248					22 37.24				− .20	+13.29
d	9.76519					−* 21.11				+ .00	
	1.32445n							22 58.35		+12.72	
((δ) − D) $\frac{d'}{100}$										+ .77	
										−14.80	
+4.52 δ_1		36 38.31		22 2.0						22 14.62	
−12.67											
	−18.0	3 15.6	15.9	58	15.75	54 29 32.60			50	17.35	
	1.25527n					22 3.63				− .8	+13.30
d	9.76537					+13.72				− .3	
	1.13742n							21 49.91		+12.64	
((δ) − D) $\frac{d'}{100}$										+ .77	
										−15.30	
+4.52 δ_2		36 38.29		22 2.7						22 15.35	
−12.67											
	+29.4	1 30.3	26.8	51	28.55	53 31 19.80			50	53 23 27.80	
	1.46835					23 50.74				− .22	+12.15
d	9.77541					−* 22.94				+ .00	
	1.36054n							24 13.68		+11.65	
((δ) − D) $\frac{d'}{100}$										+ .72	
+4.45										−14.40	
−12.86 δ_1		39 27.41		23 12.7						23 25.55	
	+31.7	1 26.0	24.1	51	28.05	53 31 23.30			50	29.60	
	1.50106					23 54.33				− .27	+12.01
d	9.77541					−* 24.73				− .1	
	1.39325n							24 19.06		+11.57	
((δ) − D) $\frac{d'}{100}$										+ .72	
+4.45										−14.80	
−12.86 δ_2		39 27.32		23 14.0						23 26.81	
	+22.8	4 17.0	14.9	19	15.95	50 3 32.40			15	49 55 44.14	
	1.35793					49 56 3.34				− .14	+8.37
d	9.80867					−* 19.20				+ .00	
	1.28338n							56 22.54		+ 8.01	
((δ) − D) $\frac{d'}{100}$										+ .50	
										−13.50	
+4.29 δ_1		40 27.30		55 26.1						55 39.01	
−12.92											
	+18.0	4 20.8	20.4	19	20.60	50 3 27.75			15	43.62	
	1.25527					49 55 58.98				− .09	+8.33
d	9.80867					−* 15.16				− .4	
	1.18072n							56 12.94		+ 7.96	
((δ) − D) $\frac{d'}{100}$										+ .50	
										−14.10	
+4.29 δ_2		40 27.27		55 24.9						55 37.85	
−12.92											

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

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
κ													
$((\delta) - D)\frac{\kappa'}{100}$													
c_1													
κ													
$((\delta) - D)\frac{\kappa'}{100}$													
a_2													
κ													
$((\delta) - D)\frac{\kappa'}{100}$													
a_1													
κ													
$((\delta) - D)\frac{\kappa'}{100}$													
a_2													
κ													
$((\delta) - D)\frac{\kappa'}{100}$													
a_1													
κ													
$((\delta) - D)\frac{\kappa'}{100}$													
a_1													
κ													
$((\delta) - D)\frac{\kappa'}{100}$													
a_2													
κ													
$((\delta) - D)\frac{\kappa'}{100}$													
a_1													
κ													
$((\delta) - D)\frac{\kappa'}{100}$													
a_2													

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1874phae.proj.1587R

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System