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In posting the Comet Observations, if the observation has really appeared in the A. N. or A. J. the letters A. N. or A. J. with Vol. and page where printed, are put on the line where obs. is posted.

If obs. has been merely sent to A. N. but has not as yet come out, the letter N. (and in like manner J for Astr. Journal) is put against obs.

If the observation has been copied up in due form for Volume. the letter V is put against it.

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Began using third notation and final letter of Comp. Stars for circumpolar Variables Feb. 10. 1891.

Began underlining the star which was at the right in relative observations of variables and comparison stars, on Feb. 27. 1891.

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~~Meests of Var. and Comp. Stars (faint selection)~~ (filled) " ~~90.~~

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1891. I.

Desig.	Date.	Book.	Page.	Red. Book.	Page.	
Comet a 1891. Barnard Mem. 29.	1891. Sept. 1.	58	1	11	2	(A. N. 127, 298.) (Ast. J. 11. 4.)
"	Sept. 8.	58	6	11	12	" " " " " "
"	Sept. 9.	58	12	11	16	" " " " " "
Wolfe's Per. ≡ (1891. II)	Sept. 9.	59	69	11	44	
" " "	" 10.	59	76	11	52	
" " "	" 12.	59	87	11	56	
" " "	" 14	59	91	11	60	
" " "	" 16	59	97	11	64	
" " "	" 26.	59	137.	11	68	
(Barnard Sept. 27) Comet d 1891.	1891. = 1891 I. Sept. 30	59	152.	11	72 (Ast. J. 11, 56.)	
" " "	Oct. 1.	59	161.	11	78 " " "	
" " "	" 2.	59	165.	11	86 " " "	
" " "	" 3	59	169.	11	90 " " "	
" " "	" 8	59	181	11	94 " " 61.	
" " "	" 9	59	188	11	98 " " "	
" " "	" 24.	60	37.	11	102 " " "	
" " "	" 28.	60	43.	11	110	
" " "	Nov. 2.	60.	63.	11	114	
" " "	Nov. 3.	60.	68.	11	118	
" " "	" 4.	60.	75.	11	122	
" " "	" 6.	60	81.	11	130	

In obs. of Comet 1891 IV (Barnard May 12) on June 27. the C. M. T. should read 9h 30m 18s instead of 9h 22m 44s. (See A. N. Vol. 127, p. 243.)

Error disc. June 12. 1891

In obs. of Comet 1891 I. on Jan. 21. 1889, an error of 1h was made in reducing time of obs. See Ast. Jour. Vol. IX. p. 91. also Ast. Nach. Vol. 123. p. 297. (Notice of error to be sent.)

See also letter on Jan. 24 from C. H. Kelly

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Desig.	Date. 1891.	Book.	Page.	Red. Book.	Page.			
Wolf's Per. ⊂.	Nov. 24.	60	134.	11	126	N.	✓	V.
Comet d 1891.	Nov. 27.	60	144.	11	134	N.	✓	V.
Wolf's Per. ⊂	Dec. 8.	60	174	11	138	N.	✓	V.
" " "	Dec. 28.	60	214	11	142	N.	✓	V.
" " "	1892. Jan. 20.	61	34.	11	146	N.	✓	V.
Swift's ⊂ (a 1892)	=1892 I. Mar. 9.	61	112.	11	172	N. (A. J. 11. 178)	✓	V.
" " " "	Mar. 11.	61	114.	11	176	N. " " "		V.
Comet c 1892	Dennis. =1892 II. Mar. 19.	61	140.	11	184	N.	✓	V.
Comet a 1892.	Mar. 20.	61.	146.	11	190	N.	✓	V.
Comet e 1892.	Mar. 21.	61.	151.	11	194	N.	✓	V.
Comet a "	Mar. 29.	61.	190.	11	200	N.	✓	V.
Comet a "	May 14.	62.	63.	11	210.	N.	✓	V.
" a "	May 24.	62.	67	12	2	N.	✓	V.
" a "	June 14.	62.	86	12	6	N.	✓	V.
" a "	July 20.	62.	134	12	10	N.	✓	V.
" a "	" 23.	"	136.	12	24	N.	✓	V.
d (Aug. 24) = 1892. II. Brooks "	Sept. 1.	"	154.	12	14	N.	✓	V.
" a 1892.	" 2.	"	164.	11	216	N.	✓	V.
d (Aug. 24) Brooks 1892	" 2	"	169.	12	18	N.	✓	V.
" Swift (Mar. 6) a	" 27	63	48	12	28	N.	✓	V.
e Barnard = 1892 V. " 1892	Oct. 19	"	106	12	32	N.	✓	V.
" f 1892 (Holmes)	Nov. 2.	"	142	13	6	N.	✓	V
" " " "	" "	"	145	13	2	N.	✓	V
" " " "	" 10.	"	147	13	10	N.	✓	V
" " " "	" 11.	"	152	13	14	N.	✓	V
" " " "	" 14.	"	157	13	22	N.	✓	V
" " " "	" 16.	"	163	13	26	N.	✓	V
" " " "	" 17.	"	166	13	30	N.	✓	V
" " " "	" 19.	"	172	13	42	N.	✓	V

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	Desig.	Date.	Book.	Page.	Red. Book.	Page.		
V.	Comet f 1892 (Holmes)	Nov. 20.	R. 63.	176	13.	3K. N.	f	V
V.	" g " (Brooks)	" 21.	63.	180	13.	3L.	f	V
V.	" f " (Holmes)	" 22.	"	183	"	V0. N.	f	V
V.	" g " (Brooks)	" 22.	"	182	"	K6.	f	V
V.	" f " (Holmes)	" 23.	"	191	"	V2. N.	f	V
V.	" " " "	" "	"	197	"	6Z. N.	f	V
V.	" g " (Brooks)	" 24	"	204	"	V4.	f	V

Comet obs. all fully reduced for Volume and refraction table brought up to this point.

Comet f 1892 (Holmes)	Dec. 7	"	214		N.	V.
~~" " " 10 " 9~~		~~" 64 9~~				
" " " " 16		"	25		N.	V.
" " " " 22		"	32		N.	V.
" " " " 9 1893.		"	1		N.	V.
" " " Jan. 16		"	82		N.	V.
" " " " 17		"	86		N.	V.
" " " " 19		"	89		N.	V.
" " " " 20		"	106		N.	V.
" " " " 21 1893 II.		"	110		N.	V.
Comet b 1893 (Barnard)	July 10	66	81		N.	V.
" " " " " 10		"	84		N.	V.
" " " " July 11		"	87		N.	V.
" " " " July 11		"	88		N.	V.
" " " " July 11		"	91		N.	V.
" " " " July 13		"	94		N.	V.
" " " " July 13		"	96			
" " " " July 14		"	100		N.	V.
" " " " July 14		"	104		N.	V.

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Desig	Date 1893	Book.	Page	Red. Book.	Page.		
Comet b 1893 (Barnard)	July 19	R.	66	108.		N.	V.
" " " "	" 20	R.	66	106		N.	V.
" c " (Brooks)	Oct. 17.	R.	67	97			

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Experiments to determine how faint comps. + stars for variables can be seen on a given night.

Name of Var.	Book	Page	
R. Urs. Maj.	R. 70.	134.	w.2
T. Urs. Maj.	"	135	t.2
S. Urs. Maj.	"	135	s.2
S. Bootis.	"	136	p.2
R. Camelop.	"	136	star 0.
R. Draconis.	"	137.	o. 2.
~~(S. Cygni.~~	~~"~~	~~139~~	~~m.3)~~
~~(T. Cephei~~	~~"~~	~~140~~	~~m 4.)~~
R. Urs. Maj	"	157	y 1.5
T. Urs. Maj	"	157	x 2
S. Urs. Maj	"	157	t 3.5
S. Bootis	"	158	n 2.5
R. Cam.	"	158	q 2.
R. Draconis	"	158	w 2.5
S. Cygni	"	159	s 2.5
T. Cephei	"	182	
S. Cephei	"	182	r 2
R. Cassiop.	"	195.	z. 3
T. Cassiop	"	196	t. 3
S. Cassiop	"	196	w. 3
S. Persei.	"	196	q . 2
R. Urs. Maj.	"	204	x 1.5
T. Urs. Maj.	"	204	w 2.5
S. Urs. Maj.	"	205	t . 2
R. Camelop.	"	205	q 2.5
R. Draconis.	"	205	w 2
S. Cygni.	"	206	r 3
S. Cephei.	"	206	r 2.5
S. Cephei.	71.	47.	r. 2.5

Name of Var.	Book	Page	
R. Urs. Maj.	71	47	y 1.5
S. Urs. Maj.	"	"	t 3.
T. Urs. Maj.	"	48	x 2
S. Bootis	"	48	n 2
R. Cam.	"	48	q 3.5
R. Draconis	"	~~48~~	w 4.
S. Cygni.	"	"	t .1
R. Cass.	"	"	x 3
T. Cass.	"	50	w 1.5
S. Cass.	"	"	y 1.5

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Measts of Light of Comets.

Desig.	Date.	Book.	Page.	Red. Book.	Page.
1892 Comet f (Holmes)					
"	Nov. 11.	63	151		
"	" 16	"	162		
"	" 22	63	186		
"	" 23	"	196		
"	Dec. 9	64	5		
"	" 10	"	8		
"	" 16	"	28		
"	" 21	"	34		

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1891.

δ Cassiop.	Jan. 3. 10.7	Feb. 13. 11.2		Mar. 16. 11.5		
	Jan. 13. 13.7	Feb. 10. 13.1	Feb. 19. 12.6			
N Cassiop.	Jan. 3. 14.6	Feb. 2. 13.3	Feb. 12. 13.1	Mar. 16. 12.4	Apr. 9. 12.6	
			Feb. 27. 9.7			
S Persei.	Jan. 3. 10.6	Feb. 13. 10.3	Feb. 19. 9.6	Mar. 26. 10.9	Apr. 21. 9.3	
			Feb. 27. 10.9	Mar. 16. 9.4	Mar. 30. 9.6	
T Persei.	Jan. 3. 9.6	Feb. 13. 9.1	Feb. 19. 9.1	Mar. 26. 9.2	Apr. 21. 8.8	
		Feb. 10. 13.7	Feb. 12. 13.3	Mar. 16. 9.1	Mar. 30. 9.0	
R Aurigae.	Jan. 13. 12.9	Feb. 11. 13.7	Feb. 19. 13.4	Mar. 24. 13.2		May 13. 12.5
		Feb. 2. 13.3	Feb. 13. 13.1	Mar. 16. 13.5		
				Feb. 27. 13.7	Mar. 30. 13.4	May 4. 12.9
				Mar. 26. 13.3	Apr. 9. 10.2	
R Lyncis.	Jan. 3. 14.7	Feb. 2. 11.6	Mar. 7. 10.4	Mar. 24. 10.4		
		Feb. 12. 12.3	Mar. 10. 11.7	Mar. 16. 10.7	Mar. 30. 10.5	May 20. 8.6
R Ursae Maj.	Jan. 3. 13.7	Feb. 2. 12.9	Feb. 27. 12.2	Mar. 16. 10.5	Apr. 9. 8.5	May 20. 8.2
T " "	Jan. 12. 9.3	Feb. 13. 8.3		Mar. 16. 8.5	Mar. 30. 9.0	May 20. 12.0
				Mar. 16. 12.0		
N " "	Jan. 12. 9.2	Feb. 13. 10.5		Mar. 11. 11.4	Mar. 30. 12.5	May 25. 8.0
		Feb. 11. 13.7	Feb. 19. 13.6	Mar. 16. 12.8		
S Boötis.	Jan. 12. 12.7	Feb. 13. 13.8	Feb. 12. 13.2	Mar. 26. 12.2		
		Feb. 10. 13.2	Feb. 12. 13.5	Mar. 10. 12.7	Mar. 30. 12.3	
		Feb. 18. 8.4				
R Camelop.	Jan. 13. 8.2	Feb. 11. 8.2		Mar. 17. 8.7	Apr. 9. 9.2	June 1. 10.9
				Mar. 17. 9.4		
R Ursae Min.	Jan. 12. 10.4	Feb. 12. 9.8		Mar. 11. 10.4	Mar. 30. 9.4	
			Feb. 27. 11.9			May 25. 7.6
R Draconis.	Jan. 13. 12.7	Feb. 16. 12.0	Feb. 19. 11.9	Mar. 17. 10.7		May 25. 7.2
	Jan. 12. 12.4					May 25. 7.7
N Cygni.	Jan. 3. 12.6					May 27. 13.1
	Jan. 13. 9.7			Mar. 17. 10.3		May 25. 12.9
T Cephei.	Jan. 12. 9.8	Feb. 12. 8.4		Mar. 16. 8.2	May 23. 7.0	
			Feb. 27. 13.5	Mar. 26. 13.7		May 23. 13.1
N Ephei.	Jan. 3. 12.3	Feb. 12. 12.6	Feb. 19. 12.5	Mar. 16. 13.0	Apr. 27. 13.3	May 13. 13.0
						May 27. 13.3
R Cassiop.	Jan. 3. 6.6	Feb. 11. 6.7	Mar. 5. 7.2	Mar. 16. 7.9		May 20. 9.3
+56° 0		Feb. 10. 14.7	Feb. 19. ?			
New Var. at +54°	Jan. 3. 13.7	Feb. 2. ?	Feb. 12. ?			
	Jan. 16. 8.6					
+62° 596.	Jan. 13. 8.6	Feb. 2. 8.4				
U Sagittarii.	Jan. 8. (See Ledger)					
" "	" 9. "					
" "	" 10. "					
" "	" 12. "					
" "	" 13. "					
" "	" 15. "					
" "	" 16. "					
" "	" 24. "					
" "	" 26. "					
" "	" 30. "					
" "	Feb. 11. "					
" "	Feb. 13. "					
" "	Feb. 19. "					

(Feb. 10. 1891)

Lick R 57. p. 101. Here is the remark "Last night is the first time the 3 1/2" rotation has been used, and it supplants all previous ones.

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1891

June 9. 9.7 | June 24. 9.7 | | July 9. 9.0 | | July 23. 8.8
June 9. 9.2 | June 24. 8.8 | | July 10. 8.6 | | July 25. 8.5
June 9. 8.9 | June 24. 8.7 | | July 9. 8.9 | | July 25. 8.5
June 9. 8.8 | June 24. 9.2 | | July 9. 9.0 | | July 25. 9.1
~~June~~ (Too low) | June 23. 10.8 | June 30. 10.7 | | |
June 8. 8.3 | June 23. 8.5 | June 30. 8.8 | | |
June 8. 8.7 | June 25. 8.8 | | July 6. 9.3 | | 6
| June 23. 8.9 | June 30. 8.9 | July 6. 9.2 | July 13. 9.9 | July 25. 12.9
| June 25. 12.8 | July 1. 13.1 | July 9. 12.9 | July 16. 12.9 | July 23. 12.8
June 8. 12.8 | June 24. 12.8 | June 30. 13.2 | July 6. 12.8 | July 13. 12.9 | July 11. 12.8 | July 17. 12.9
| June 25. 7.8 | | July 10. 8.2 | |
June 8. 8.6 | June 23. 8.1 | June 30. 8.3 | July 6. 8.4 | July 13. 8.1 | July 23. 8.0
June 10. 8.5 | June 23. 8.6 | July 1. 8.6 | July 9. 8.7 | July 13. 8.5 | July 23. 8.8
June 9. 12.4 | June 23. 12.7 | June 30. 13.4 | July 10. 13.4 | July 16. 13.0 | July 25. 12.9
June 12. 9.3 | | | July 6. 13.3 | July 13. 13.1 | July 23. 12.8
June 8. 9.3 | June 23. 9.1 | July 1. 9.3 | July 11. 13.2 | July 17. 13.0
| | | July 10. 9.4 | | July 23. 9.3
June 8. 7.9 | June 23. 8.5 | July 1. 9.1 | July 10. 9.4 | July 11. 9.1 | July 23. 9.2
June 10. 14.4 | | July 1. 14.7 | July 10. 14.1 | July 16. 14.1 | July 23. 14.1
June 8. 14.0 | June 24. 14.7 | June 30. 14.7 | July 9. 14.0 | July 13. 14.1 | July 17. 14.1
June 12. 14.5 | | | July 6. 14.0 | July 11. 14.0 |
June 8. 6.9 | June 24. 6.5 | June 30. 6.5 | | | July 23. 6.4
June 12. 13.0 | | | July 10. 13.0 | July 16. 12.5 | July 25. 12.3
June 8. 13.2 | June 23. 12.5 | June 30. 12.8 | July 9. 12.6 | July 13. 12.5 | July 23. 12.3
| | | July 6. 12.7 | July 11. 12.9 | July 17. 12.5
June 9. 9.4 | June 24. 9.7 | June 30. 9.6 | July 10. 10.2 | | July 23. 10.4

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1891

T Cassiop.		July 31. 8.7		Sept. 4. 8.8		
S Cassiop.				Sept. 4. 9.1		
S Persei.	July 27. 9.0		Sept. 3. 9.4 Sept. 2. 9.2	Sept. 4. 8.8		
T Persei.	July 27. 9.1		Sept. 3. 9.5	Sept. 4. 8.7 Sept. 4. 9.3		
R Aurigae.	July 27. 10.5			Sept. 4. 9.8	Sept. 10. 9.2	
R Lyncis.	July 27. 9.8			Sept. 4. 11.1 Sept. 4. 11.7	Sept. 10. 11.0 Sept. 10. 11.7	
R Ursae Maj.	July 27. 10.5	July 31. 10.3	Sept. 3 11.1	Sept. 4. 11.6 Sept. 4. 10.5	Sept. 9. 11.5	Sept. 12. 11.7
T " "	July 27. 12.9	July 31. 12.4	Sept. 2. 11.6	Sept. 4. 11.2	Sept. 10. 10.3	Sept. 12. 10.2
S " "	July 27. 8.1	July 31. 8.2	Sept. 2. 11.0	Sept. 4. 9.0 Sept. 4. 10.9		
S Boötis.		July 31. 9.7	Sept. 2. 10.8	Sept. 4. 11.3	Sept. 10. 11.1	Sept. 12. 11.0
R Camelop.	July 27. 12.9	July 31. 12.5	Sept. 2. 9.9 Sept. 3. 9.8	Sept. 4. 9.5 Sept. 4. 9.5		
R Urs. Min.	July 27. 9.5	July 31. 9.8	Sept. 2. 9.7 Sept. 3. 12.0	Sept. 4. 9.5 Sept. 4. 12.3	Sept. 10. 12.1	Sept. 14. 12.1
R Draconis.	July 27. 9.8	July 31. 10.8	Sept. 2. 11.9 Sept. 3. v. v.	Sept. 4. 12.0 Sept. 4. <15.1	Sept. 9. 12.3 Sept. 10. <15.0	Sept. 12. 12.5 Sept. 14. v. v. <14.9
S Cygni.	July 27. 15.1	July 31. 15.1	Sept. 2. < 15.1	Sept. 4. v. v.	Sept. 9. <15.1	Sept. 12. v. v. <15.0
T Cephei.		July 31. 6.5				
S "	July 27. 12.5	July 31. 12.2	Sept. 3. 12.9 Sept. 2. 12.8	Sept. 4. 12.5 Sept. 4. 12.9	Sept. 10. 12.3 Sept. 9. 12.5 Sept. 10. 10.8	Sept. 14. 12.1 Sept. 12. 12.0
R Cassiop.		July 31. 10.3		Sept. 4. 10.8	Sept. 9. 10.5	Sept. 12. 10.9
R Pegasi.						
T Herculis.						
R Cygni.						

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1891

Sept. 16. 11.2
Sept. 16. 11.8
Sept. 16. 9.9
Sept. 16. 9.5
Sept. 16. 11.1
Sept. 16. 9.6
Sept. 16. 12.1
Sept. 16. n.v. <14.5
Sept. 16. 12.2

Sept. 19. 11.4
Sept. 19. 12.1
Sept. 19. 11.2
Sept. 19. n.v. <13.7
Sept. 19. n.v. <13.7
Sept. 19. 11.9
Sept. 19. 12.2
Sept. 19. 10.8

Sept. 23. 11.5
Sept. 23. 12.5
Sept. 23. n.v. <14.9
Sept. 21. n.v. <13.8
Sept. 23. 11.8
Sept. 23. 12.[illegible]
Sept. 21. 12.0
Sept. 21. 10.9

Sept. 26. 12.2
Sept. 25. 11.9
Sept. 25. 12.3
Sept. 24. 12.2
Sept. 25. 12.4
Sept. 24. 12.4
Sept. 25. <14.9
Sept. 24. n.v. <15.0
Sept. 25. 11.8
Sept. 24. 11.9
Sept. 26. 10.9
Sept. 24. 10.8
Sept. 26. 7.8
Sept. 24. 12.4

Sept. 24. 12.3
Sept. 24. 12.4
Sept. 26. 12.3
Sept. 24. 12.4
Sept. 26. 12.3
Sept. 24. n.v. <15.0
Sept. 26. n.v. <15.0
Sept. 24. 12.0
Sept. 26. 11.9

Oct. 1. 12.2
Sept. 30. 12.3
Oct. 2. 12.3
Oct. 1. 12.2
Sept. 30. 12.3
Oct. 2. 12.3
Oct. 1. 12.2
Sept. 30. 12.4
Oct. 2. <15.0
Oct. 1. <14.9
Sept. 30. <15.0
Oct. 2. 12.2
Oct. 1. 12.1
Sept. 30. 12.1
Oct. 2. 13.7
Oct. 1. 13.6
Sept. 30. 14.1

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1891

δ Cassiop.						
S Cassiop.						
S Persei.						
T Persei.						
R Aurigae.						
R Lyncis.	Oct. 2. 12.5	Oct. 14. 12.4		Oct. 20. 12.5	Oct. 24. 12.4	
R Urs. Maj.	Oct. 3. 12.6	Oct. 9. 12.5	Oct. 16. 12.5	Oct. 17. 12.6	Oct. 23. 12.4	Oct. 24. 12.7
T " "						
S " "						
S Bootes.	Oct. 2. 12.6 Oct. 3. 12.3	Oct. 14. 12.6 Oct. 9. 12.6	Oct. 16. 12.7 Oct. 15. 12.5	Oct. 20. 12.4 Oct. 17. 12.7	Oct. 24. 13.3 Oct. 23. 13.2	Oct. 24. 13.5
R Camelop.						
R Urs. Min.						
R Draconis.	Oct. 2. 12.3 Oct. 3. 12.3	Oct. 14. 11.7 Oct. 9. 12.2	Oct. 16. 11.7 Oct. 15. 11.4	Oct. 20. 11.5 Oct. 17. 11.6	Oct. 24. 11.6 Oct. 23. 11.5	Oct. 24. 11.6
N Cygni.	Oct. 2. n.v. Oct. 3. n.v.	Oct. 9. 14.7 Oct. 2. n.v.	Oct. 15. 14.5 Oct. 14. 14.4	Oct. 17. ∠ 14.1. Oct. 16. 14.3	Oct. 23. 14.7 Oct. 20. 14.4	Oct. 24. 14.4 Oct. 24. 14.6
T Cephei.						
N "	Oct. 2. 12.1 Oct. 3. 12.3	Oct. 14. 11.7 Oct. 9. 11.8	Oct. 16. 11.5	Oct. 20. 11.5 Oct. 17. 11.6	Oct. 24. 11.4 Oct. 23. 11.7	Oct. 24. 11.5
R Cassiop.						
R Pegasi.						
T Herculis.	Oct. 2. 13.0	Oct. 14. 13.3	Oct. 16. 12.9	Oct. 20. 13.0	Oct. 24. 12.4	
R Cygni.	Oct. 3. 13.5	Oct. 9. 13.3	Oct. 15. 13.3	Oct. 17. 13.0	Oct. 23. 12.9	Oct. 24. 12.5
T Aquarii.		Oct. 9. 10.0				
S Aquarii.					Oct. 24. 13.5 Oct. 24. 13.1	
V Cygni					Oct. 24. 9.3	

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S Bootis.	Nov. 2. 13.4	Nov. 3. 13.5	Nov. 4. 13.4	Nov. 6. 13.4	Nov. 13. 13.5	Nov. 12. 13.5	
R Draconis.	" " 11.5	" " 11.3					
R Cygni.	" " 12.5	" " 12.5	" " 12.5	" " 12.4	" " 12.2	" " 12.1	Nov. 19. 12.1
S Cygni.	" " 14.0	" " 14.1	" " 14.1	" " 13.8	" " 12.8	" " 12.6	" " 12.7
S Cephei.	" " 11.4	" " 11.8					
R Urs. Maj.	" " 12.6	" " 12.6		" " 12.5	" " 12.6		" " 12.3
S Aquarii.		" " 13.6					
V Cygni.		" " 9.3					
U Geminorum.			" " 10.6				

S Aquarii.	Nov. 20. 13.3	Nov. 24. 13.1	Nov. 25. 13.1	Dec. 5. 12.8		
S Bootis.	" " 13.6	" " 13.2	" " 13.1	Dec. 3. 13.2		
				Dec. 5. 11.4	Dec. 11. 11.3	Dec. 16. 11.3
R Cygni.	" " 11.8	" " 11.5	" " 11.7	Dec. 3. 11.4	Dec. 8. 11.3	Dec. 10. 11.2
				Dec. 2. 12.1	Dec. 5. 12.4	Dec. 11. 12.3
S Cygni.	" " 12.5	" " 12.5	" " 12.5	Nov. 27. 12.3	Dec. 3. 12.5	Dec. 10. 12.3
				Dec. 3. 11.8	Dec. 10. 11.3	Dec. 8. 12.5
R Urs. Maj.	" " 12.2	" " 12.0	" " 12.2	Dec. 2. 11.9	Dec. 8. 11.4	Dec. 16. 12.2
V. Cygni.				Nov. 27. 9.7		
+9° 4377.				Dec. 5. 10.0		
Susp. Var.				Dec. 1. 10.0	Dec. 11. 10.1	Dec. 16. 10.1
R Lyncis.				Dec. 3. 14.0	Dec. 8. 13.8	
S Urs. Maj.				Dec. 2. 14.0	Dec. 5. 13.9	
U Cygni.				Dec. 3. 10.6		
					Dec. 10. 8.8	

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	1891		1892				
ν Aquarii.	Dec. 19. 11.4						
ν Aquarii.	Dec. 18. 11.5						
ν Bootis.			Dec. 30. 11.2	Jan. v. 10.7	Jan. 7. 10.6+		
	Dec. 18 10.5		Dec. 30. 9.9	Jan. v. 9.6	Jan. 16. 9.2	Jan. 21. 8.1	
R Cygni.	Dec. 17. 11.9	Dec. 19. 10.0	Dec. 28. 10.0	Jan. 1. 9.8	Jan. 7. 9.6	Jan. 20. 8.2	
	Dec. 18. 12.3		Dec. 30. 12.0	Jan. v. 11.9	Jan. 16. 11.7	Jan. 21. 11.3+	
ν Cygni.	Dec. 17. 12.2	Dec. 19. 12.4	Dec. 28. 12.1	Jan. 1. 12.2	Jan. 7. 12.0	Jan. 20. 11.2	
	Dec. 18. 11.0			Jan. v. 10.5	Jan. 16. 9.5	Jan. 21. 8.7	
R Urs. Maj.	Dec. 17. 11.1	Dec. 19. 11.0	Dec. 30. 10.6	Jan. 1. 10.7	Jan. 7. 10.4	Jan. 20. 8.8	Jan. 26. 8.1
	Dec. 19. 10.3						
ν V. +9° 4777.	Dec. 17. 10.2						
			Dec. 30. 14.5	Jan. v. 14.3	Jan. 16. 14.1	Jan. 21. 13.2+	
R Lyncis.		Dec. 19. 14.1	Dec. 28. 14.1	Jan. 1. 14.2	Jan. 7. 14.4	Jan. 20. 12.9	
R Tauri.		Dec. 19. 11.7	Dec. 30. 10.2	Jan. v. 11.7	Jan. 7. 11.6		
ν Tauri.					Jan. 7. 9.4		
R Cassiop.					Jan. 7. 9.6+		
ν Cassiop.					Jan. 7. 8.5+		
ν Persei.					Jan. 7. 8.6+		
ν Persei.					Jan. 7. 9.1+	Jan. 26. 9.0 Jan. 26. 9.2. Jan. 26, 9.2	Jan 27. 8.1
U. Geminorum.							
~~Capt and Nova~~							

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1892

δ. Cassiop	Feb. 18. 12.8	~~Mar. 5. 12.5~~ Mar. 7 13.1	Apr. 1. 13.4	Apr. 25. 14.7	May 13. <14.9	
			Mar. 16. 13.1	Apr. 6. 13.8	May 4. 14.9	June 20. <14.5
δ. Persei	Feb. 18 8.6+					
ζ. Ursæ Maj.	Feb. 18 12.0	Mar. 7 11.8	Apr. 1. 12.1	Apr. 23. 11.2	May 14. 9.3	
			Mar. 16. 12.3	Apr. 6. 12.1	May 4. 10.4	July 6. 7.9
					May 28. 11.3	
ζ Cassiop.					May 17. 12.1	9
R. Urs. Maj.						July 6, 11.4
S. Urs. Maj						July 6, 11.2
R. Lyncis	Feb. 18. 11.2+					July 6, 8.4
	Feb. 17. 11.3					
R Cancri.		Mar. 15. 9.1				
			Apr. 1. 11.9	Apr. 23. 12.8	May 14. 12.8	
R Aurigæ.			Mar. 16. 11.5	Apr. 6. 12.1	May 4. 12.7	May 28. 13.5
			Mar. 29. 12.4	Apr. 23. 12.6		
R Camelop.			Mar. 16. 12.1	Apr. 6. 12.7	May 17. 10.5	July 6, 8.5
				Apr. 23. <14.9	May 17. <14.2	July 6 <14.8
S Cygni.				Apr. 6. <14.4	May 4. <14.8	June 21. <14.8
						May 28. <14.9
					May 28. 12.7	June 20 <14.5
S Cephei.					May 17. 12.7	July 7, 13.8
					May 28. 13.4	
R Draconis.					May 17. 12.4	July 6, 12.4

Copeland'stora.	Copeland'stora.	Copeland'stora.	Copeland'stora.
Copeland'stora. Feb. 4. 2 est.	Mar. 9. 4 est.	Apr. 1. 11 (+9) 2 est.	May 4. stora. n.v.
" " Feb. 5. 3 "	Mar. 12. 3 "	Apr. 5. 1 "	May 7. " " "
" " Feb. 6. 2 + "	Mar. 14. 4 "	Apr. 6. 1 "	May 13. " " "
" " Feb. 9. 2 + "	Mar. 15. 4 2 "	Apr. 8. 1 "	July 30. " " "
" " Feb. 10. 2 + "	Mar. 16. 4 2 "	Apr. 9. 3 2 "	Sept. 2. " 2 test. + spec.
" " Feb. 12. 4 2 "	Mar. 17. 3 2 "	Apr. 11. 3 + "	" 6 " 2 + " " "
" " Feb. 13. 4 2 "	Mar. 19. 7 4 "	Apr. 12. 2 + "	" 7 " 2 + " " "
" " Feb. 15. 6 + "	Mar. 21. 7 4 "	Apr. 13. 2 + "	" 8 " 2 + " " "
" " Feb. 16. 1 "	Mar. 22. 2 + "	Apr. 16. 6 3 "	" 9 " 2 + " " "
" " Feb. 17. 3 2 "	Mar. 24. 6 3 "	Apr. 18. 1 "	" 12. " 2 + " " "
" " Feb. 18. 6 4 "	Mar. 25. 12 (+10) 2 "	Apr. 19. 2 + "	" 15. " 2 + " " "
" " Feb. 22. 1 "	Mar. 26. 8 (+6) 2 "	Apr. 20. 2 + "	" 16 " 2 + " " "
" " Mar. 4. 6 2 "	Mar. 28. 4 2 "	Apr. 23. 2 + "	" 17 " 2 + " " "
" " Mar. 5. 6 2 "	Mar. 29. 20 (+8) 3 "	Apr. 25. 2 + "	" 21 " 2 + " " "
" " Mar. 6. 4 2 "	Mar. 30. 12 (+6) 2 "	Apr. 26. 2 + "	" 27 " 2 + "
" " Mar. 7. 4 2 "	Mar. 31. 12 (+6) 2 "	Apr. 30. (2) stora n.v.	" 29 " 1 "
			" 30 " 2 + "
			Oct. 1 " 1 "

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S. Bootis	July 6, 13.2	July 27, 13.5	Sept. 1, 12.5	Sept. 17, 10.9	Sept. 29, 9.2	Oct. 19, 10.1
R. Ura. Min.	July 6, 9.3	July 27, 9.6	Sept. 1, 10.4	Sept. 17, 10.2	Sept. 29, 10.2	Oct. 19, 11.2
T. Cephei	July 6, 6.6	July 30, 6.5	Sept. 1, 6.5	Sept. 17, 6.8	Sept. 29, 8.1	Oct. 19, 8.0
R. Cassiop.	July 11, 8.1	July 30, 8.8	Sept. 2, 9.3	Sept. 21, 10.0	Sept. 30, 10.2	Oct. 22. 10.2
T. Cassiop.	July 11, 11.5	July 25, 11.3	Sept 2, 9.9	Sept. 21, 10.1	Sept. 30, 9.8	Oct. 22. 10.8 9.9
S. Cassiop.	July 15, 15.0 July 11, 15.0	July 25, 15.1 July 23, 15.1	Sept. 2. 15.1	Sept 21, 15.0	Sept 30, 14.9 Sept. 27, 14.9	Oct. 19, 13.2
S. Persei	July 11, 9.2	July 30, 9.4	Sept. 2 9.2	Sept. 21, 9.3	Sept. 30, 9.8	Oct. 22. 10.0
T. Persei	July 11, 9.0 July 25, 15.0	July 30, 9.2	Sept. 2 8.9	Sept. 21, 9.1	Sept. 30, 9.1 Oct. 10, 12.9	Oct. 22. 9.1 Oct. 19, 12.1
S. Cygni	July 23, < 15.0	July 30, < 15.0	Sept. 1, 14.8	Sept. 17, 13.5	Sept. 27, 13.3	Oct. 12, 13.0 " 13, 13.0
U. Ura. Maj.		July. 27, 8.3	Sept. 1, 8.8	Sept. 16, 9.2	Sept. 29, 10.3	Oct. 22. 11.4
S. Ura. Maj.		July 27, 9.1	Sept. 1, 8.0	Sept. 16, 7.5	Sept. 29, 7.4	Oct. 22. 8.2
R. Draconis.		July 27, 11.6	Sept. 1, 8.8	Sept. 17, 8.5	Sept. 29, 8.0	Oct. 19, 8.6
R. Ura. Maj.		July 27. 9.6 July 30, 12.0	Sept. 1, 11.8	Sept. 16, 11.9	Sept. 29, 11.7	Oct. 22. 11.0
R. Camelop.		July 30, 8.8	Sept. 2, 9.3	Sept. 17, 9.0	Sept. 29, 9.9	Oct. 22. 10.5
S. Cephei		July 30, 13.1	Sept. 1, 12.8	Sept. 17, 13.1	Sept. 29, 13.6	Oct. 19, 12.9
R. Aurigae	~~July 11.~~ Too low.	July 30, 12.3	Sept. 2, 10.4	Sept. 21, 10.3	Oct. 1, 10.0	Oct. 22. 9.8
R. Lyncis		July 30, 9.3		Sept. 21, 11.0	Oct. 1, 12.0	Oct. 22. 12.8

	1892.	1893.
Nova Aurigae	Oct. 6. 1 est. ✓	March 11 2 est.
" "	Feb. 22. ~~2~~ 4 "	Dec 7 (2 est) (10.9)
" "	Nov. 3, 1 "	1894. Dec. 5, (2 est.)
" "	" 5, 2 "	
" "	Dec. 20, 2	
	1893	
" "	Jan. 21 —	
" "	Feb. 15 4 "	
" "	" 20 4 "	
" "	" 24 2 "	
" "	March. 7 4 "	
" "	" ~~14~~ 13 4 "	
" "	" 20 4 "	

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1893

Apr. 16.	12.7			Sept. 13	8.6			Feb. 24,	11.8		
Mar. 15.	11.5	May 24.	12.5	Sept. 2	8.7	Nov. 10,	11.3	Jan. 25, '94	13.0	Mar. 2,	11.2
				Sept. 13	10.2						
				Sept 2	10.5						
				Sept. 16.	7.7						
Feb. 15.	10.2			Jan. 8, '94	11.9	Jan 13, '94	12.1	Feb. 16,	11.3		
Jan. 27.	10.4	Apr. 11.	6.5	Sept. 16.	9.1	Jan 12, '94,	11.9	Jan. 25.	11.5		
		July 24 '93	11.7	Sept. 16.	11.5	Jan. 25, '94	9.4				
Dec. 28.	10.7			Sept. 9.	11.1	Feb. 6, '94,	15.0				
Dec. 23.	10.6	Jan. 7,	10.4	Sept. 2	10.6	Dec. 4,	13.1	Feb. 24,	14.8		
				Sept. 12	9.8						
				Sept. 12	9.1						
		July 24	<14.9	Sept. 9.	13.4			Mar. 3,	<14.5		
April 18.	14.7(3)	May 9,	<15.0	Sept. 4	13.6	Dec. 7	11.6	~~Feb 24, '94~~	—		
Feb. 15.	9.0			Sept. 11.	13.4	Oct. 16.	10.3				
Jan. 27.	12.0	July 24	12.8	Sept. 2.	12.5	Oct. 10.	11.2	Mar. 2, '94	10.2		
Feb. 15.	10.7										
Jan. 27.	—	Sept. 2	11.8	Sept. 9.	11.7						
Mar. 15.	11.1			Sept. 9.	11.7	Oct. 16.	12.2	Nov. 10,	11.6		
Feb. 24.	12.0	Apr. 11.	9.2	Sept. 2	11.7	Oct. 10.	12.6	Oct. 31.	11.2	Dec. 27,	8.6
		July 11	12.3	Sept. 2	8.7						
Mar. 15.	10.5	May 10.	12.5	July 19,	11.9	~~Feb 2, '94 2 est.~~					
		Sept. 4	13.0	Sept. 16.	13.6						
				Dec. 13,	11.8	Feb. 24, '94,	11.2				
				Sept. 16.	11.5	Jan 1, '94	12.1				
						Oct. 31.	12.9				
		Sept. 4	12.9	Sept. 9.	13.5	Oct. 10.	13.6	Nov. 7,	12.2		
Jan. 27.	13.9	Feb. 24.	12.3	Mar. 13.	11.0	Oct. 31.	12.7	Nov. 9,	12.6	Dec. 4, 13.4	Mar. 3, 11.1
Dec. 23.	12.9	"	13.0	Mar. 7.	11.5	Sept 12	11.0	Nov. 7,	12.6	Nov. 10, 12.5	Feb. 24, '94, 12.1

Susp. Var.
near S Persei 63.127.

		March 13	14.7	Apr. 11	8.3						
R. Persei.		March 7	14.7	March. 15	14.6 (?)						
		March 16	14.5	March 21	14.8						
R. Cornae		March 13	13.2	March. 20	14.8						
		March 18	12.4			Dec. 13,	12.6				
R. Tauri.		March 13	13.1	Apr. 11	12.5	Dec 7,	13.0	Mar. 7, '94, 1 est. (10.5)			
		March 16	11.3								
R. Gem.		March 13	13.0	Apr. 11	8.0						
		March 16	11.4								
T. Hydrae.		March 15	11.3	Apr 11	12.9(?)	Mar. ~~Apr~~ 23, '94,		11.5(?)			
T. Virginis.		March 20	12.1								
		Oct. 25.	2 est.	Nov. 1. 4 est.		Nov. 3 (3 est.)		Nov. 7 (6 est.)		Nov. 10 (8 est.)	
χ Cygni.		Oct. 24.	3 "	Oct. 31. 6 "		Nov. 2 (3 est.)		Nov. 6 (12 est.)		Nov. 9 (6 est.)	Nov. 11 (8 est.)
V Cygni.		Nov. 11,	10.6								
R Pescium.		Nov. 11,	10.5	Dec. 13,	10.8						
+62° 596.		Nov. 1. 4 est.									
		Nov. 6,	2 est.	Nov. 10	1 est.	Dec. 2 (2 est.)	(8.6)	Dec. 6 (1 est.)	8.7	Dec. 13 (2 est.)	8.7
e beti		Nov. 3,	2 est.	Nov. 7,	2 est.	Nov. 28,	1 est.	Dec. 4 (2 est.)	8.8	Dec. 7 (2 est.)	8.

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Var. Stars. (Relative Ests.)

χ Cygni.	Nov. 24. (11 est.)	Dec. 2, (4 est) ~~Dec. (1 est)~~		July 28, '96 (2 est.)		
	Nov. 18 (8 est.)	Nov. 25 (4 est.)	Dec. 4 (4 est)	Dec. 11, (1 est)	Sept. 15, '96 (2 est.)	
	~~Apr. 5, '94 (4 est.)~~	~~April 7, '94 (4 est.)~~				
+62° v96.	Apr. 3, '94 (9.1)	Apr. 9, '94 (4 est.)	Dec. 5, '94 (2 est.)			
I. Cassiopeiae	Sept. 6, '94 (10.6)	Dec. 16, '95 (2 est.)	Jan. 18, '96 (4 est.)	Mar. 9, '96 (2 est.)		
S Cassiopeiae	Sept. 6, '94 (9.8)	Dec. 17, '95 (1 est.)	Apr. 10, '96 (2 est.)	Apr. 16, '96 (1 est.)	Sept. 4, '96 (4 est.)	
	July 5, '94 (11.5)	Oct. 18, '95 (1 est.)	Jan. 18, '96 (4 est.)	Mar. 9, '96 (1 est.)	July 21, '96 (2 est.)	
	Sept. 11, '96 (4 est.)					
I Persei	Sept. 11, '94 (9.1)					
	Apr. 11, '96 (2 est.)					
S Persei.	Sept. 11, '94. (9.3)					
		Jan. 17, '95, 2 est.	Mar. 23, '95 (1 est.)	Mar. 9, '96 (2 est.)	May 7, '96 (1 est.)	
R Aurigae	Sept. 6, '94 (10.8)	Jan. 2, '95 4 est.	Mar. 14, '95 (2 est.)	Dec. 6, '95 (1 est.)	Apr. 10, '96 (2 est.)	May 27, '96 (2 est.)
	Feb. 4, '95 (2 est.)	Dec. 19, '95 (2 est.)	Mar. 9, '96 (2 est.)	May 12, '96 (4 est.)		
R Lyncis	Sept. 21, '94 (11.3)	Dec. 6, '95 (2 est.)	Jan. 4, '96 (2 est.)	Apr. 10, '96 (4 est.)	May 16, '96 (4 est.)	
R Ursae Majoris	Sept. 11, '94. (8.0)	Oct. 18, '95 (2 est.)	Apr. 10, '96 (1 est.)	Dec. 24, '96 (2 est.)		
	July 19, '94 (8.0)	Jan. 17, '95 (2 est.)	Dec. 19, '95 (2 est.)	Dec. 1, '96 (2 est.)		
	Sept. 11, '94 (8.0)	Dec. 27, '95 (1 est.)	Apr. 10, '96 (2 est.)	Mar. 4, '97 (2 est.)		
S Ursae Majoris	July 19, '94 (8.2)	Dec. 4, '94. 2 est. (11.0)	Jan. 2, '95, 2 est.	July 21, '96 (2 est.)		
	Dec. 27, '95 (1 est.)	Apr. 10, '96 (4 est.)				
S Ursae Majoris	Sept. 11, '94. (8.5)	Dec. 4, '94 (12.0) (rect.)	Dec. 1, '96 (2 est.)			
	Oct. 6 '94. (14.2)	Jan. 16, '96 (2 est.)	June 19, '96 (4 est.)	Dec. 3, '96 (1 est.)		
S Böötis	Sept. 6, '94 (12.5)	Jan. 23, '95 (2 est.)	Apr. 10, '96 (1 est.)	Sept. 4, '96 (4 est.)	Dec. 26, '96 (2 est.)	
	Jan. 11, '95 (2 est.)	Apr. 20, '95 (2 est.)	Oct. 18, '96 (2 est.)	Mar. 9, '96 (4 est.)	Dec. 1, '96 (4 est.)	
R Canis Minoris	Sept. 21, '94 (8.7)	Mar. 14, '95 (2 est.)	Apr. 23, '95 (4 est.)	Dec. 6, '95 (2 est.)	Jan. 11, '96 (1 est.)	
	Dec. 27, '95 (2 est.)	Jan. 11, '96 (4 est.)				
R Ursae Minoris	Sept. 6, '94 (9.5)	Mar. 9, '96 (4 est.)				
	Sept. 6, '94 (8.0)					
R Draconis	July 9, '94 (12.0)	Dec. 17, '94 (10.8) (2 est.)	Mar. 14, '95 (12.5)	Mar. 30, '95 (4 est.)	Oct. 18, '95 (2 est.)	Dec. 6, '96 (2 est.)
		Sept. 6, '94. (10.7)	Nov. 27, '94. 2 est.	Jan. 2, '95 2 est.	Apr. 23, '95 (2 est.)	Oct. 23, '95 (2 est.)
S Cygni	July 9, '94 (14.0)	July 23, '94 (12.9)	Nov. 27, '94 (13.4)	Dec. 4, '94. (2 est.)	Apr. 11, '95 (2 est.)	Oct. 21, '95 (2 est.)
	Dec. 27, '95 (1 est.)	Apr. 11, '96 (1 est.)				
I Cephei	Sept. 21, '94. (5.7)	Feb. 11, '95 (7 est.)				
	Sept. 11, '94. (9.1)	Dec. 17, '94 (10.7)	Jan. 29, '95 (5 est.)	Feb. 6, '95 (2 est.)	Feb. 13, '95 (8 est.)	Feb. 20, '95 (6 est.)
S Cephei	~~Sept. 6, '94 ( )~~	~~Oct. 6, '94 (7.0)~~	Jan. 23, '95 (3 est.)	Feb. 5, '95 (4 est.)	Feb. 11, '95 (6 est.)	Feb. 16, '95 (4 est.)
	May 13, '95 (2 est.)	Sept. 4, '96 (4 est.)				
R Cassiopeiae	Sept. 11, '94 (7.0)	July 21, '96. (2 est.)				
R. Cygni	Nov. 18. 13.7					
	~~Dec 13 11.7~~					
S. Cancri	Nov. 18. 13.2					
	~~1894~~					
ζ Cephei	Jan. 3, 4 est. (8.1)	Jan. 19, 4 est. (7.8)	Jan 30, 4 est.	Feb. 5, 4 est. (7.8)	Feb. 8, 4 est. (7?)	Mar. 3, 6 est.
Standard.	Jan. 8, 4 est. (8.2)	Jan. 17, 4 est. (7.8)	Jan. 25, 4 est. (8.2)	Feb. 2, 4 est.	Feb. 6, 4 est.	Feb. 24, 1 est.
	Jan. 17. 1 est.					
~~Standard Weber~~	Jan 13.94 (1 est.)	Jan. 25, 1 est.				
S Arietis	Mar. 7, 94 14.0					
R "	Mar. 7, '94. 2 est. (9.7)					
R Cephei	Mar. 7, '94, 1 est. (9.0)					
I Cancri	Mar. 7, '94, 1 est. (13.0)					
R Arietis	Mar. 10, '94, 1 est. (12?)					
R Geminorum	Mar. 10, '94, 0 est. (11.5)					
R Canis Min.	Mar. 16, '94 —	Mar. 26, '94 (est. (4?))	Mar. 11, '97 (1 est.)			
Weller's Star (+0°.31 +17°.8)	Mar. 12, '96 (2 est.)					

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est.)	Sept. 4, '96 (2 est.)					
(2 est)	July 21, '96 (2 est.)	Mar. 4, '97 (2 esta.)				
2 est.)	Mar. 9, '96 (1 est.)	Apr. 10, '96 (2 est.)	May 12, '96 (2 est.)	Sept. 4, '96 (2 est.)	Dec. 26, '96 (2 est.)	
1 est.)	Jan. 4, '96 (N.S.)	Apr. 30, '96 (2 est.)	May 7, '96 (2 est.)	June 19, '96 (2 est.)	Dec. 24, '96 (2 est.)	
(best)	Mar. 14, '95 (3 est.)	Apr. 11, '95 (4 est.)	May 13, '95 (2 est.)	Apr. 11, '96 (4 est.)	May 12, '96 (4 est.) (6 est. comp. ★'s)	
4 est.)	Mar. 9, '95 (6 est.)	Apr. 10, '95 (6 est.)	Apr. 20, '95 (2 est.)	Mar. 12, '96 (4 est.)	May 7, '96 (4 est.) (2 est. comp. ★'s)	
4, 2 est.	Nov. 27, '94 (2 est.)	Dec. 3, '94 (2 est.)	Dec. 5, '94. (2 est.)	Dec. 13, '94 (2 est.)	Dec. 17, '94 (2 est.)	
Est.	Nov. 28, '94 (9.04 2 est.)	Dec. 1, '94 (2 est.)	Dec. 4, '94. (2 est.)	Dec. 6, '94. (2 est.)	Dec. 15, '94 (2 est.)	~~Manuscript~~



Cont. on page 34.

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Var. Stars. (Absolute Ests.)

δ Cassiopeiae — Dec. 4, '94. est. (12.0), Feb. 15, '95 (2 est.), Dec. 16, '95 (2 est.) (11.8), Jan. 18, '96 (11.1), Mar. 9, '96 (11.3)
Apr. 10, 196 (13.5), Apr. 16, '96 ([13.5]), July 21, '96 (10.6), Sept. 4, '96 (8.7)

β Cassiopeiae — Feb. 15, '95 (2 est.), Oct. 18, '95 (15.0), Dec. 17, '95 (15.0), Jan. 18, '96 (14.9), Mar. 9, '96 (14.8)

ι Persei — Apr. 11, '96 (8.5)

δ Persei — Apr. 11, '96 (8.8)

R Aurigae — Apr. 10, '96 (13.8), May 7, '96 (12. 2)
Jan. 2, '95 (13.0), Jan. 17, '95 (12.9), Mar. 14, '95 (9.0), Dec. 6, '95 (10.6), Mar. 9, '96 (14.4)

R Lyncis — Apr. 10, '96 (10.2), May 12, '96 (9.4), May 16, '96 (8.8)
Jan. 4, '95 (13.5), Dec. 6, '95 (13.6), Dec. 19, '95 (12.8), Jan. 4, '96 (13.7), Mar. 9, '96 (10.9)

R Ursae Majoris — Dec. 24, '96 (8.8)
June 13, '94 (10.4), Jan. 17, '95 (12.7), Oct. 18, '95 (11.7), Dec. 19, '95 (12.1), Dec. 1, '96 (10.2)
Mar. 4, '97 (12.5)

ι Ursae Majoris — May 7, '94 (12.4), June 13, '94 (11.2), Jan. 2, '95 (12.3), Apr. 10, '96. (11.5), July 21, '96 (2.2).

δ Ursae Majoris — June 13, '94 (8.8), Apr. 10, '96 (8.5), Dec. 1, '96 (8.9)

δ Böötis — June 16, '96 (10.6), June 19, '96 (9.4)
July 30, 94 (10.6), Apr. 10, '96 (12.2), Sept. 4, '96 (9.1)

R Canelopardi — Apr. 20, '95 (10.8), Apr. 23, '95 (10.5), Oct. 18, '95 (10.7), Dec. 6, '95 (14.0)
June 13, '94. (12.8), July 25, 94. (10.7), July 28, '94. (10.8), Apr. 11, '95 (10.7), Mar. 9, '96 (9.3)

R Ursae Minoris — Mar. 9, '96 (9.8), Apr. 10, '96 (8.9)

R Draconis — Apr. 10, '96 (10.4), May 12, '96 (11.2), May 16, '96 (11.1), July 21, '96 (10.8), Sept. 4, '96 (8.6)
June 13, '94. (12.6), May 30 '95 (10.1), Apr. 11, '95. (10.1), Oct. 18, '95 (13.0), Dec. 6, '95 (10.3)

δ Cygni — Apr. 23, '95 (14.9), Oct. 21, '95 (13.7), Oct. 23, '95, (13.8), Dec. 6, '95 (15.0)
June 14, '94. (<12.5?), July 25, '94 (13.5). July 30, '94 (13.3), Nov. 27, '94. (13.4)

ι Cephei — Apr. 11, '96 (10.4)
Feb. 20, '95 (10.8), Feb. 26, '95 (11.5), ~~Mar. 9, '95~~, Mar. 14, '95 (12.5), Apr. 20, '95 (11.8), May 13, '95 (11.7)

δ Cephei — Jan. 23, '95 (10.2), Jan. 29, '95 (10.6), Feb. 5, '95. (10.6), Feb. 6, '95 (10.6), Feb. 13, '95 (10.5), Feb. 16, '95 (10.

R Cassiopeiae — May 13, '95 (11.5), July 21, '96 (11.8), Sept. 4, '96 (10.1)

Z Virginis — Mar. 16, '94 —

T. Virginis — Mar. 26, '94 (14.1), May 9, '94. (<14.1), Mar. 11, '97 (13.9)

γ Virginis — Mar. 26, '94 (11.0)

R. Geminorum — Apr. 3, '94 (14.0), May 9, '94. (8.5)

U. Leonis. — Apr. 3, '94 (< 13.5?). May 22, '94. (<13.0)

T. Geminorum — Apr. 3, '94 (<13.?), May 21, '94. (10.2)

R. Serpentis. — Apr. 25, '94 (13.0), May 21, '94. (12.5), July 24, '94 (9.3)

T. Herculis — Apr. 25, '94 (9.5 ±), July 25, '94 (12.6), July 26, '94 (11.0)

R. Cygni. — Apr. 25, '94 (10.2 ±), May 9, '94 (8.8)

R. Colvi — Apr. 26, '94. (10.7). May 8, '94 (9.3), May 10, '94 (9.5)

T. Leonis — May 8, '94 (14.5)

R. Scorpii — May 8, '94. (14.0?), May 22, '94. (13.0?)

S. " — May 8, '94 (14.0?), May 22, '94 (13.8?). July 24, '94 (11.4?)

T. " — ~~May 8, '94 (—)~~

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R. Coronae July 24, '94 (9.3)
U. Librae July 24, '94 (9.0)
T. Serpentis. July 24, '94 (14.0)
T. Ophiuchi July 24, '94 (8.7?)
T. Aquarii July 24, '94 (8.9)
X Scorpii July 26, '94 (13.8)
X Librae July 26, '94 (14.3)
Z Sagittarii July 26, '94 (11.0?)
ν Capricorni July 28, '94 (< 13.0)
Hartwig's Nov Vul (+15° 3311) Sept. 20, '94
Jan. 9, '96 (< 14.7), Apr. 10, '96 (14.0) Apr. 30, '96 (12.1) May 7, '96 (12.5)
S. Cygni Dec. 4, '94 (13.8), Jan 2, '95 (14.7), Apr. 11, '95 (14.9) Jan. 4, '96 (14.9)
S. Virginis Apr. 23 '95 (12.4)
Sept. 25, '96 (10.3)
S. Cephei Jan. 12, '96 (8.7) ~~June 19, '96 (9.0)~~ Apr. 11, '96 (8.6), May 7 '96 (10.5) May 12, '96 (10.1)
Nov. 27, '96 (11.5)
S. Cygni May 12, '96 (11.5), June 19, '96 (9.7) Dec. 1, '96 (14.8?) Dec. 24 '96 (14.2) Dec. 26, '96 (14.8) Sept. 4, '96 (13.7), Nov. 24, '96. (< 13.0)?
X Cygni July 28, '96 (12.8)
W Bootis Aug. 7, '96 (12.7)
T. Librae Aug. 11, '96 (9.6)
S. Ophiuchi Aug. 17, '96 (10.3)
R. Camelop. Dec. 1, '96 (9.1)
R. Draconis Mar. 4, '97 (12.2)
Y. Virginis Mar. 11, '97 (12.8)
R. Coronae Mar. 11, '97 (< 13.9)

(Con. on page 36.)

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1895.

Var. Stars (Relative Ests.)

Ceti.	Jan. 24, '95 (3 est.)	Jan. 27, '95 (4 est.)	Feb. 5, '95 (6 est.)	Feb. 11, '95 (4 est.)	Feb. 15, '95 (6 est.)	Feb.
	Jan. 23, '95 (8 est.)	Jan. 25, '95 (7 est.)	Jan. 29, '95 (4 est.)	Feb. 6, '95 (1 est.)	Feb. 13, '95 (4 est.)	Feb.
S. T. (-7° 2873)	Apr. 3, '95 (10 est.)	Apr. 5, '95 (4 est.)	Apr. 11, '95 (2 est.)	Apr. 17, '95 (8 est.)	Apr. 19, '95 (4 est.)	Apr.
	Mar. 30, '95 (7 est.)	Apr. 4, '95 (6 est.)	Apr. 10, '95 (10 est.)	Apr. 16, '95 (6 est.)	Apr. 18, '95 (4 est.)	
W. P. 899.	Apr. 5, '95 (2 est.)	Apr. 11, '95 (5 est.)	Oct. 23, '95 (2 est.)	Nov. 27, '95 (6 est.)	[Nov. 21. 6 est.]	
	Apr. 4, '95 (1 est.)	Apr. 10, '95 (7 est.)	Oct. 21, '95 (2 est.)	Oct. 24, '95 (2 est.)		
S. Virginis.	Apr. 23, '95 (1 est.)					
R. Coronae Bor.	Apr. 25 '95 (1 est.)					
Var in Urs Min.	Apr. 29, '95					
Var. dis. by photography.	May 12, '95 (2 est.)	June 11, '95 (2 est.)	Oct. 22, '95 (2 est.)	Oct. 24, '95 (3 est.)	Nov. 4, '95 (7 est.)	Nov
	May 10 '95 (1 est.)	May 16, '95 (2 est.)	Oct. 21, '95 (2 est.)	Oct. 23, '95 (4 est.)	Oct. 25, '95 (6 est.)	Oct
					Oct. 1, 95 (8 est.)	
T Andromedae.	Sept. 14. 9v. (4 est.)	Sept. 20. 9v. (10 est.)	Sept. 23. 9v. (10 estts)	Sept. 24. 9v. (10 est.)		
	Sept. 13. 9v (4 est.)	Sept. 14. 9v. (4 est.)	Sept. 21. 9v. (10 est.)			
Nova Aurigae.	Sept. 18, '97 (1 est.)					
	Sept. 23. 9v. (1 est.)					
o Ceti.	Oct. 23, '95 (2 est.)	Oct. 25. '95	Dec. 12 '96 (1 est.)			
Var. spr. (-1° 475)	Oct. 22, '95 (2 est.)	Nov. 4, '95 (2 est.)	Dec. 7, '96 (6 est.)			
B Lyrae	Nov. 21, '95 (2 est.)					
	Dec. 17, '95 (3 est.)	Dec. 20, '95 (6 est.)	Dec. 31, '95 (12 est.)	Jan. 3, '96 (3 est.)	Jan. 5, '96 (7 est.)	
Well's Var. (20:31 +17°.7)	Dec. 14, '95 (8 est.)	Dec. 18, '95 (2 est.)	Dec. 22, '95 (6 est.)	Jan 2, '96 (3 est.)	Jan. 4, '96. (3 est.)	
	May 19, '96 (1 est.)					
A. G. C. 5253	Jan. 3, '96 (4 est.)					
o Librae (S. V.)	May 30, '96 (2 est.)	June 2, '96 (6 est.)	June 5, '96 (2 est.) (compare 2 est.)	June 9, '96 (4 est.)		
	May 19, '96 (7 est.)	June 1, '96 (5 est.)	June 4, '96 (4 est.)	June 10, '96. (12 ests.)	June 27, '96 (4 est.)	
Nova Centauri	June 1, '96 (2 est.)					
T. Herculis.	July 28, '96 (4 est.)					
T. Librae.	Aug. 11, '96 (1 est.)					
S. Ophiuchi.	Aug. 17, '96 (1 est.)					
S. Cephei.	Mar. 30, '97 (4 est.)	Apr. 1, '97 (4 est.)	Apr. 3, '97 (4 est.)	Apr. 13, '97 (3 est.)	Apr. 20, '97 (4 ests.)	
	Sept. 26, '96 (6 est.)	Mar. 31, '97 (4 est.)	Apr. 2, '97 (4 est.)	Apr. 12, '97 (3 est.)	Apr. 17, '97 (3 est.)	
B Lyrae	Oct. 7, '96 (5 est. with comp.'s)					
Mars.	Nov. 10, '96 (4 est.)					
T. Virginis.	Mar. 11, '97 (1 est.)					
Q. Virginis.	Mar. 11, '97 (1 est.)					
S. Cephei.	May 29, '97 (4 ests.)	June 1, '97 (4 ests.)	June 12, '97 (3 ests.)	June 15, '97 (3 ests.)	June 21, '97 (3 ests.)	
	May 22, '97 (3 est.)	May 31, '97 (4 ests.)	June 2, '97 (4 ests.)	June 14, '97 (4 ests.)	June 18, '97 (3 ests.)	
S. Cephei.	July 30, '97 (4 ests.)	Sept. 7, '97 (2 ests.)	Sept. 10, '97 (2 ests.)	Sept. 14, '97 (4 ests.)		
	July 21, '97 (4 ests.)	July 31, '97 (4 ests.)	Sept. 9, '97 (2 ests.)	Sept. 13, '97 (4 ests.)		
S. Cephei.	Sept. 6, '97 (2 ests.)	Sept. 28, '97 (4 ests.)	Sept. 29, '97 (4 ests.)	Sept. 30, '97 (8 ests.)		
S. Cygni.	July 31, '97 (2 ests.)	Sept. 27, '97 (4 ests.)	Sept. 28, '97 (4 ests.)	Sept. 29, '97 (4 ests.)		

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Feb. 20, 95 (4 est.) Feb. 16, 95 (4 est.) Apr. 21, 95 (2 est.) Apr. 20, 95 (4 est.)
Feb. 22, 95 (6 est.) Feb. 21, 95 (4 est.) Apr. 25, 95 (2 est.) Apr. 23, 95 (3 est.)
Feb. 26, 95 (1 est.) Feb. 23, 95 (4 est.) Apr. 26, 95 (2 est.)
Sept. 20. Gr. (1 est.) Mar. 14, 95 (2 est.)
Oct. 21, 95 (3 est.) Sept. 21. Gr. (2 est.)

Nov. 7, 95 (3 est.)
Nov. 6, 95 (6 est.)
Oct. 17, 95 (4 est.)
Oct. 5, 95 (4 est.)
Oct. 21, 95 (2 est.)
Oct. 18, 95 (3 est.)
Oct. 23, 95 (4 est.)

Apr. 24, 97 (4 esta.)
Apr. 22, 97 (3 esta.)
Apr. 29, 97 (4 esta.)
Apr. 28, 97 (3 esta.)
May 4, 97 (3 esta.)
Apr. 30, 97 (4 esta.)
May 7, 97 (4 esta.)
May 5, 97 (3 esta.)
May 17, 97 (4 esta.)
May 8, 97 (3 esta.)
May 19, 97 (4 esta.)
May 18, 97 (4 esta.)

June 23, 97 (3 esta.)
June 22, 97 (3 esta.)
June 25, 97 (4 esta.)
June 24, 97 (3 esta.)
June 28, 97 (3 esta.)
June 26, 97 (4 esta.)
July 8, 97 (3 esta.)
June 30, 97 (3 esta.)
July 16, 97 (4 esta.)
July 9, 97 (3 esta.)

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1895.-6

Var. Stars. (Absolute Ests.)

Var. Star (-1°475) Nov. 21, '95 (13.0)
T. Herculis. July 25, '96 (9.0)

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Observations with Phot. R. to extend Photometric Scale.
— Also relative estimates of Lewis.

Desig.	1893.	Phot. Measts.		Rel. Estimates. 1894		
T Cassiop.	Feb. 6'94.	Feb. 8, '94	Mar. 1, '94	—	—	—
S Cassiop.	Feb. 6'94	Mar. 1, '94	Mar. 3, '94	[Feb. 6]	Mar. 1. '94	Mar. 3, '94
T Persei.						
S Persei.	Sept. 13. Sept. 16.	Oct. 11.	Oct. 14.	Mar. 2, '94	Mar. 3, '94	Mar. 6, '94
R Aurigæ	Sept. 8.	Sept. 9.	Sept. 11.	—	—	—
R Leporis.	Oct. 11.	Oct. 14.	Sept. 13.	Nov. 7	Nov. 9	Nov. 10
R Urs. Maj.	1894. Feb. 2.	Feb 5, '94	Feb. 8, '94	Feb. 2 '94	Feb. 5, '94	Feb. 8, '94
T Urs. Maj.	Sept. 6.	Sept. 11.	Sept. 12.	Mar. 2, '94	Mar. 3, '94	Mar 6, '94
S Urs. Maj.	Sept. 8.	Sept. 9.	Sept. 11.	Nov. 9	Feb. 5, '94	Mar. 1. '94
W Bootis.	Oct. 17.	Oct. 18.	Sept. 13. Oct. 17.	Mar. 2, '94	Feb 3, '94	Mar. 6, '94
R Canol.	Oct. 11.	Oct. 12.	Oct. 14.	—	—	—
R Urs. Min.	1894. Feb. 2.	Feb. 5, '94	Feb. 8, '94	Feb. 5, '94	Feb. 8, '94	Mar. 1, '94
R Draconis.	Sept. 8.	Sept. 9.	Sept. 11.	—	—	—
S Cygni.	Nov. 1.	Nov. 3	Nov. 6	Nov. 7	Nov. 9	Nov. 10
T Cephei.	1894. Jan. 1.	Jan. 2.	Jan. 8	—	—	—
S Cephei.	" " " " "		Jan. 3.	—	—	—
R Cassiop.	" Jan. 8.	Jan. 12.	Jan. 13.	—	—	—

A dash in "Rel. Est." column indicates that both the faint star selected to extend scale and the star photometrically measured with it, are comparison stars, and so already estimated relatively.

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Values of Phot. Measts.			Values of Rel. East.		
4.20					
~~5.00~~	4.20	4.15			
-5.00	-5.12	-5.04	g 3 ft ×, ft × 1.5 l	g 3 ft ×, ft × 1 l	g 2.5 ft, ft 1 l.
-3.96	-4.16	-4.25	ft = 0	ft. = 0	n 3 ft, ft 1 0
-3.00	-2.87	-2.90			
-2.96	-2.98	-3.02	ft = p.	0 4 ft., ft 1 p	0 4 ft, ft 1 p.
-3.98	4.02	4.02	s 3 ft ×, ft × 3 t	s 3 ft. ×, ft × 3 t	s 2.5 ft ×, ft × 2.5 t
-5.28	-5.30	-5.26	t 2 ft, ft 1.5 u	t 2 ft, ft 1 u	t 2 ft, ft. 1 u
-3.60	-3.64	-3.74	q 1 ft, ft. 3 l	q 2 ft, ft. 2.5 l	q 2 ft., ft. 2 l
-4.75	-4.76	-4.75	n 3 ft., ft 1 0	n 2.5 ft, ft 1 0	n 3 ft, f 1 0
-3.67	-3.76	-3.63			
1.20	1.25	1.28	h 2.5 ft, ft 2 k	h 2.5 ft ×, ft × 2 k	h 3 ft ×, ft × 2 k
-4.05	-3.95	-4.10			
-2.86	-2.86	-2.98	o 3 ft, ft 1.5 p	o 3 ft., ft. 1 p	o 3 ft., ft. 1 p
+2.10	+2.12	+2.10			
+2.12	+2.15	+2.12			
2.84	2.82	2.86			

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Phot. measts. of Light of Comets. – also other Phenomena of Comets, as diam. – abs. est. – length of tail &c, &c.

Comet.	Rec. Book.	Page.	Phenomena.	
Wolfius' Comet f. 1892.	R 63.	151	Phot. meas. of light.	Nov. 11, 1892
" " "	R. 63	154	transit of f'st pt. of light.	
" " "	R. 63	162	relative estimate.	
" " "	R. 63	168	" "	
" " "	R. 63	175	" "	
" " "	R. 63	178	Diam. of Comet Nov. 20.	
" " "	R 63	179	relative estimate.	
Comet Brooks	R. 63	182	Absolute est. 10.5–11 mag.	
Comet f 1892	R. 63	186	relative estimate.	
" " "	R. 63	186	Phot. meas. of light.	Nov. 22
" Brooks	R. 63	190	diam. of comet.	
" f. 1892	R. 63	192	diameter of coma.	
" " "	R. 63	196	Phot. meas. of light.	Nov. 23
" " "	R. 63	199	Relative estimate.	
" Brooks.	R 63	205	diameter of comet.	
" f 1892	R. 64	4	" " "	
" " "	R. 64	4	length of tail.	
" " "	" "	5	Phot. meas of light of comet + coma adjacent.	Dec. 9.
" " "	" "	8	" " " " of nucleus.	Dec. 10
" " "	" "	27	diameter of comet + coma.	
" " "	" "	28	Phot. meas. of light.	Dec. 16.
" " "	" "	33	diameter of coma.	
" " "	" "	34	length of tail.	
" " "	" "	34	Phot. meas. of light	Dec. 22
" " "	" "	38	" " " "	
" " "	" "	83	Absolute est. 8.	
" " "	" "	83	diameter of comet.	
" " "	" "	87	diameter of Coma.	
" " "	" "	90	diameter of Coma.	

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Phot. measts. of light of Comets and also other phenomena of comets, as diam, - abs. est - length of tail etc. etc.

Desig.	Rec. Book.	Page.	Phenomena.
Comet f 1892.	R. 64	91	Phot meas. of light. Jan. 19 1893
" " "	R. 64	105	" " " " " 20
" " "	" "	107	diameter of Coma.
" " "	" "	110	Phot. mens. of light. Jan. 21.
" " "	" "	111	diameter of coma.
" " "	" "	137	diameter of comet.
" " "	" "	137	absolute est. 11.5-12.0
" " "	" "	140	Phot. meas. of light. Feb. 15.
" " "	" "	141	Diameter of comet.
" " "	" "	148	Phot. meas. of light. Feb. 20
" " "	" "	169	Phot. meas of light. March 6.
" b 1893 (Rordame)	" 66	83.	" " " " July 20, 1893.
" " " "	" 66	82	Absolute est. 3.5 magn.
" " " "	" 66	102	Diameter of Coma.
" " " "	" 66	86	length of tail.
" " " "	" 66	103	Phot. meast. of of light. July 14, 1893.
" " " "	" 66	105	length of tail.
~~" " " " " " 66~~		~~106~~	~~Position of comet (approx.)~~
" " " "	" 66	111	Phot. meast of light.
~~" " " " " " 66~~		~~123~~	~~Position of Comet (approx.)~~

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Photometric Wedge Zones.

Desig.	Date.	Book.	Page.
+29° Ser. 74.	Jan. 26, 1891.	V7.	21.
+9° Ser. 75	May 23. "	5A.	73.
+19° Ser. 76.	June 15. "	V8.	116.
+19° Ser. 77.	July 13 "	V8.	179.
+19° Ser. 78.	July 16 "	5A.	187.
+19° Ser. 79.	July 17. "	V8.	194.
+19° Ser. 80.	Sept. 19. "	V9.	106.
+9° Ser. 81.	Oct. 16 "	V9.	205.
+19° Ser. 82.	Oct. 17. "	60	3.
+9° Ser. 83.	Oct. 20. "	60	14.
+9° Ser. 84	Oct. 21. "	60	22.
+9° Ser. 85.	Nov. 13. "	60	93.
+9° Ser. 86.	Nov. 14. "	60	101.
+9°. Ser. 87.	Nov. 18. "	60	110.
+9°. Ser. 88.	Nov. 18 "	60	113.
+9°. Ser. 89.	Nov. 20. "	60	124.
+19° Ser. 90.	Dec. 11. "	60	186.
+29° Ser. 91.	Dec. 17. "	60	198.
+29° Ser. 92.	Dec. 18 "	60	202.
+29° Ser. 93.	Jan. 16 1892.	61	33.
+19° Ser. 94.	Apr. 13. "	62	7.
+19 Ser. 95.	Sept. 6 "	62.	171.
+19 Ser. 96.	Sept. 8 "	62	191.
+19 Ser. 97.	Sept. 9. "	62	200.
+19 Ser. 98.	Sept. 10. "	62	209.
+19 Ser. 99.	" " "	62	211.
+19 Ser. 100.	Sept. 12. "	63	1.
+19 Ser. 101.	Sept. 15. "	63	7.
+19 Ser. 102.	Nov. 3. "	63	127.
+19 Ser. 103.	Nov. 5. "	63	135.

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Photometric Hodge Lines.

Decl.	Date.	Book.	Page.
+9° Lr. 104.	Dec. 29.	R. 64.	K9.
+9° " 105.	Dec. 30	"	V3.
+9° " 106	1893. Jan. 3.	"	6V.
+9° " 107	" 25	"	115
+9° " 108	" 27	"	123
+9° " 109	Feb. 3	"	129
+9° " 110	" 27	"	156
+19° " 111	Mar. 1.	"	163
+ 9° " 112	Apr. 25	R. 65	68
+9° " 113.	Apr. 26.	"	79.
+9° " 114.	May 2.	"	92.
+9° " 115.	May 10.	"	113.
+19° " 116.	May 11.	"	126.
+19° " 117	" 20	"	152.
+19° " 118	" 24	"	164
+19° " 119	June 1	"	183
+19° " 120	" 5	"	192
+9° " 121	" 10	"	210
+9° " 122	" 19	R 66	10
+9° " 123	" 20	"	14
+9° " 124	" 26	"	26
+9° " 125	" 29	"	36
+9° " 126	July 1.	"	56
+9° " 127	" 6	"	66
+9° " 128	" 7	"	76
+9° " 129	" 20	"	118
+19° " 130	" 21	"	123
+19° " 131	" 24	"	127
+19° " 132	" 27	"	133
+19° " 133	" 29	"	145

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Photometric Wedge Zones.

Desig.	Date. 1893	Book	Page.
+19° Series 134	July 29	R. 66.	147.
+19° " 135	" 29	" "	148
+9° " 136	Sept. 19	" 67	7.
+19° " 137	Sept. 19.	" "	8.
+9° " 138	Sept. 20.	" "	16.
+9° " 139	" "	" "	17.
+19° " 140	" "	" "	18.
+19° " 141	" 20	" "	26.
+19° " 142	" "	" "	28.
+19° " 143	Oct. 7.	" "	46.
+19° " 144	" 9.	" "	49.
+9° " 145.	" "	" "	50.
+9° " 146.	" 10.	" "	59.
+19° " 147.	" 17.	" "	96.
+19° " 148.	" 18.	" "	104.
+19° " 149.	" 21.	" "	116.
+19° " 150	Nov. 18.	" "	199.
+19° " 151	Dec. 20	" 68	85
+19° " 152	~~Dec. 22~~	" 68	~~215~~.
+9° " 153	Dec. 26	" 68	109
+9° " 154	" 27	" "	116
+9° " 155	" 29	" "	127
+9° " 156	1894 Jan. 19	" "	179
+9° " 157	" "	" "	180
+19° " 158	" "	" "	182
+9° " 159	" 20	" "	189
+19° " 160	" "	" "	190
+9° " 161	" 22	" "	196
+19° " 162	" "	" "	197
+19° " 163	" 25	" "	217
+19° " 164	Feb. 16	" 69	56

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Photometric Wedge Zones.

Designation			Date	Book	Page
+19°	Series	165	Mar. 19 1894	R 69	135
+ 9°	"	166	"	"	138
+19	"	167	23	"	159
+ 9°	"	168	24	"	167
+19°	"	169	"	"	173
+ 9°	"	~~169~~ 170	Apr. 2	"	199.
+19°	"	171	" 5	"	212.
+19°	"	172	" 17	70	6.
+19°	"	173	" 17	"	11
+19°	"	174	" 23	"	14.
+19°	"	175	" 26	"	28
+19°	"	176	May 7.	"	40.
+ 9°	"	177	" 8.	"	45
+ 9°	"	178	" 9.	"	52
+19°	"	179	" 11.	"	65.
+ 9°	"	~~179~~ 180	" 12.	"	71.
+19°	"	181	" 12.	"	72
+ 9°	"	182	" 22	"	84.
+19°	"	183	" 22	"	85.
+19°	"	184	July 14.	71.	3.
+ 9°	"	185	" 14	"	4.
+ 9°	"	186	Sept. 11.	"	57

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Selection of Comp. Stars for Var.

Book.	Page.	
59	125.	Faint stars for R Pegasi.
"	127.	" " " R Cygni.
"	130.	" " " T Herculis.
"	131.	" " " R Cygni. (reëx.)
"	135.	" " " T Herculis. "
"	135.	" " " R Cygni. "
"	136.	" " " R Pegasi "
"	147.	" " " R Cygni "
"	190	" " " R Cygni "
"	191	" " " T Aquarii
60	41	" " " T Aquarii
"	47	" " " " " " reëx.
"	49	" " " V Cygni.
"	73	" " " T Aquarii. "
"	74.	" " " V Cygni. "
"	120.	" " " Var. in Lacerta. (selection of pt. Comp. Stars,
"	216.	" " " R Tauri. (" " " " " "
61	1.	" " " " " " "
"	45.	Provis. Selection of Comp. Stars for U Gem.
61	49.	Comp. Stars for Copeland's Nova. (bright)
"	52.	" " " " " " (faint)
"	55.	" " " " " " (")
"	56.	" " " " " " (Final list to about 12.5 mags.)
"	147 +194	" " " " " " (Beyond 12.5 mags.)

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Examinations and Selections of Comp. Stars for Var.

Book.	Page.	
61	98.	Exam. of D M. Comp. Stars for 11 Bruceis to . D M. +19° 1110 and +20° 1104 (already used in list sent to Aschenbrichten) inserted. Selection otherwise obtained as made.
"	104.	Exam. of D M. Comps. Stars for S Can. min. Interval between a and b a little large.
"	109.	Exam. of D M. Comps. Stars for S Can. min. Same remark as above.
"	131.	" " " " " " " R Cancri. Star a is about 7.5 magn. but the Var. comes up to 6.0 at max., so more stars are wanted. Interval between e and f rather large.
"	137.	Exam. of D M. Comp. Stars for V Cancri. One or two brighter stars wanted in order to bring series up to a half mag. brtr. than var. at max. Interval between b and c large. Should be another star inserted. Rest of series very good to g inch.
"	143.	Exam. of remainder of D M. Comp. Stars for V Cancri to n inch. Interval between m and n perhaps a little large, though not bad. Perhaps D M. +18° 1923 could be inserted with advantage.
"	196.	Examination of D M. Comp. Stars for S Hydrae. One star put in at the beginning and one inserted between g and h.
"	202	Examination of D M Comp. Stars for T Hydrae. One insertion made.

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Examination and Election of Comp. Stars for Var.

Book.	Page.	
61	207.	Examination of 2 hr. Comp. Stars for R Leonis. No changes made.
61	211.	Exam. of 2 hr. Comp. Stars for T Virginis. Some changes made.
62	15	Exam. of 2 hr. Comp. Stars for R Leonis Minoris. Some changes made.
62	25.	Examination of Comp. Stars for X Virginis. 2 changes made.
62	36.	Examination of Comp. Stars for R Coronæ. 1 change made.
62	41.	Examination of Comp. Stars for R Corvi.
62.	45.	" " " " " Y Virginis.
62.	47.	" " " " " U Virginis.
62.	48.	" " " " " G " with 6 in.
62.	59.	" " " " " R "
62.	60.	" " " " " W "
62.	65.	" " " " " V "
62.	66.	" " " " " S "
62	71.	" " " " " R Boötis.
62.	71.	" " " " " R Hydræ.
62.	76.	" " " " " S Virginis.
62.	76.	" " " " " R Can. Ven.
62.	76.	" " " " " S Librae.
62.	80.	" " " " " R Herculis.
62.	82.	" " " " " S Serpentis.
62.	82	" " " " " R Coronæ.
62	84.	" " " " " U Herculis.
62	84.	" " " " " U "
62	87.	" " " " " T "
62	91.	" " " " " T Scorpii.
62	91	" " " " " T "

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1891phae.proj..461W

Examination and Selection of Comp. Stars for Var.

Book.	Page.	
62	117	Exam. of Comps. Stars for R Cygni.
62	117.	" " " " " R Delphini.
62	119.	" " " " " " "
"	120.	" " " " " S Aquarii.
"	121.	" " " " " U Cygni.
"	122.	" " " " " V "
"	125.	" " " " " S Librae.
"	"	" " " " " T Herculis.
"	127	" " " " " T "
"	128	" " " " " R Scuti.
"	132	" " " " " " "
"	133.	" " " " " T Aquarii
"	134.	" " " " " " "
"	213.	" " " " " R Pegasi.
63	39	" " " " " R. Pegasi
"	77	" " " " " R. Pegasi
"	"	" " " " " S. Aquarii
"	80	" " Faint " " " S. Aquarii
"	"	" " " " " S. Ceti
"	82	" " " " " S. Ceti
63	142	" " " " " R. Vulpeculae
"	156	" " " " " " "
63	171	" " " " " R. Aquarii
"	206	" " " " S. Pegasi
"	211	" " " " R. Androm.
"	212	" " " " " "
"	"	" " " " R. Piscium
"	213	" " " " R. Piscium
64	6	" " " " R. Ceti
"	29	" " " " R. Ceti
"	30	" " " " " "

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1891phae.proj..461W

Exam. and Selection of Comp. Stars for Var.

Book.	Page.							
64	35.	Exam. of	Comp.	Stars.	for	R. Tauri.	B. 64, p. 35	
"	36.	"	"	"	"	o Ceti	" " " 36	
"	39.	"	"	"	"	R Gem.	" " " 39.	
"	42.	"	"	"	"	o Ceti.	" " " 42.	
"	"	"	"	"	"	R. Gem.		
"	45.	"	"	"	"	U Ceti.		
"	79	"	Interpolated	"	"	o Ceti.		
"	80	"	"	"	"	R. Gem.		
"	81	"	"	"	"	R. Gem.		
"	81	"	" faint	"	"	R. Androm.		
"	85	"	" faint.	"	"	R. androm.		
"	85	"	"	"	"	S. Ceti.		
"	92	"	"	"	"	S Canis Minoris.		
"	109	"	" faint	"	"	R. Andromeda.		
"	133	"	"	"	"	U Orionis.		
"	133	"	"	"	"	V Cancri.		
"	170	"	"	"	"	R. Persei		
"	171	"	"	"	"	R. Tauri.		
~~"~~	~~174~~	~~"~~	~~"~~	~~"~~	~~"~~	~~R. Persei.~~		
"	174	"	"	"	"	R. Tauri.		
~~"~~	~~178~~	~~"~~	~~"~~	~~"~~	~~"~~	~~R. Persei.~~		
~~"~~	~~179~~	~~"~~	~~"~~	~~"~~	~~"~~	~~R. Persei.~~		
~~"~~	~~180~~	~~"~~	~~"~~	~~"~~	~~"~~	~~R. Cornae.~~		
~~"~~	~~181~~	~~"~~	~~"~~	~~"~~	~~"~~	~~R. Tauri.~~		
"	182	"	"	"	"	R. Gem. (star g. added)		
~~"~~	~~185~~	~~"~~	~~"~~	~~"~~	~~"~~	~~R. Persei.~~		
"	187	"	"	"	"	T. Hydrae.		
189		"	"	"	"	T. Hydrae.		
190		"	"	"	"	R. Cornae.		
191		"	"	"	"	R. Gem.		

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1891phae.proj..461W

Exam. & Selection of Comp. Stars for Var.

Book.	page.	
R. 64	193	Exam. of faint comp. Stars for R. Tauri.
~~64~~	~~195~~	~~" " " " " R. Cornae~~ nothing done.
~~64~~	~~196~~	~~" " " " " S. Cygni.~~
" "	197	" " " " " R. Cornae.
" "	198	" " " " " T. Virginis.
" "	199	" " " " " V Virginis.
~~" "~~	~~202~~	~~" " " " " R. Cornae.~~
" "	203	" " " " " T. Virginis.
~~" 65~~	~~31~~	~~" " " " " R. Tauri.~~
~~" "~~	~~32~~	~~" " " " " R. Persei.~~
~~" "~~	~~33~~	~~" " " " " T. Hydrae.~~
~~" "~~	~~34~~	~~" " " " " R. Gem.~~
R. 78	p. 169	Selection of comp. stars for Bell's Var. ($20^h 31^m + 17°.7$).
" "	" 186	" " " " " " " " " " " " .
" "	" 217	" " " " " " " " " " " " .
" 82.	" 24.	" " " " " Var. in Ursa Min.)
" "	" 30.	Rest. " " " " " " " " " " .
" "	" 45.	" " " " " " " " " " " .

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Selection of comp. class for var. at time of var. star obs. and location of same by transits.

Book.	Page.	Variable.
69	177	T. Virginis. Sel. & Tr.
69	179.	R. Coronæ. Sel. & Tr.
69	181.	T. Virginis. Sel & Tr.
69	204	R. Geminorum. Sel. & Tr.
69	205	U. Leonis. Sel.
69	206.	T. Geminorum. Sel.
70	26.	R. Serpentis. Sel.
70	~~44~~	~~T. Ursæ Maj. Sel.~~
70	79	R. Serpentis. Sel. & Tr.
70	80.	T. Geminorum Sel. & Tr.

Book.	Page.	Variable.

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Hedges measts. of Variables and Comp. Stars.

262° 96.	1887.	June 13.	R. 44.	p. 79.	
"	"	Sept. 5.	"	"	" 130.
"	"	Sept. 8.	"	"	" 133.
"	"	Sept. 10.	"	"	" 142.
"	"	Sept. 15.	"	"	" 148.
"	"	Oct. 12.	"	"	" 172.
"	1890	Oct. 21.	"	96	" 143
"	"	Nov. 26.	"	"	" 206
"	1891	Feb. 2.	"	97	" 91
~~"~~	~~1893~~	~~June 10~~	~~"~~	~~65~~	~~" 208~~
"					

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Phot. measts. of Bright Double Stars.

No.	Desig.	Rec. Book.	Page.
234	ζ Cephei.	R. 63.	160.
64	14 Aurigae.	" 64	205
56	88 Tauri	" "	208
57	τ Tauri	" "	209
59	ω Aurigae	" "	210
45	ℓ Persei	" "	212
60	11, 12 Camelop.	" "	213
61	19 H Camelop.	" "	214
102	ι Cancri	" "	215
56	88 Tauri	" 65	1
45	ℓ Persei	" "	2
57	τ Tauri	" "	4
59	ω Aurigae	" "	5
60	11, 12 Camelop.	" "	6
61	19, H. Camelop	" "	7
102	ι Cancri	" "	8
45	ℓ Persei	" "	10
56	88 Tauri	" "	11
57	τ Tauri	" "	12
59	ω Aurigae	" "	13
60	11, 12 Camelop.	" "	14
61	19 H. Camelop.	" "	15
64	14 Aurigae	" "	16
81	26 Aurigae	" "	17
91	ε Geminorum	" "	18
102	ι Cancri	" "	19
63	ρ Orionis	" "	22
63	ρ Orionis	" "	23
69	δ Orionis	" "	24.

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Phot. measts. of Bright Double Stars

No.	Desig.	Rec. Book.		Page.
88	8 Monocerotis	R	65	25
91	ε Geminorum	"	"	26

(Con. on next page)

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Phot. measts. of Bright Double Stars.

Ledger.

No.	Σ No.	Name.	Book.	Page.	Book.	Page.	Book.	Page.	Diff. magn.	Mean diff. magn.	Results.		Av. Dev.
			74	61	74	67	74	77	R.74 R.85				
238	58'	δ Cephei.	R63	160.	R68	5	R.70	127					
64	653	14 Aurigae	" 64	205	" 65	16	R.65	400	-2.73 -2.78 -2.95	-2.82	.09	0.4 .13	.09
56		88 Tauri.	" "	208	" 65	1	" 65	11	-3.08 -3.20 -3.18	-3.15	.07	.05 .03	.05
57		τ Tauri.	" "	209	" 65	4	" "	12	-2.78 -2.70 -2.82	-2.77	.01	.07 .05	.04
59	616	ω Aurigae	" "	210	" "	5	" "	13	-2.65 -2.72 -2.82	-2.73	.08	.01 .09	.06
45	431	o Persei	" "	212	" 65	2	" 65	10	-4.95 -4.92 -5.08	-4.98	.03	.06 .10	.06
60	13'	11,12 Camelop.	" 81	14									
			" 64	213	" "	6	" "	14	-0.45 -0.58 -0.65	-0.56	.11	.02 .09	.07
61	634	19 H. Camelop.	" "	214	" "	7	" "	15	-3.42 -3.32 -3.45	-3.40	.02	.08 .05	.05
102	1268	i Caneri.	" "	215	" "	8	" 87	205					
							" 65	19	-2.25 -2.38 -2.22	-2.28	.03	.10 .06	.06
81	753	26 Aurigae	" 65	17	" "	52	78	10	-3.00 -2.88				
91		ε Geminorum	" "	18	" 65	26	" "	9	-6.45 -6.15 -6.04	-6.21	.24	.06 .17	.16
			" "	22					[3.48]				
63	654	ρ Orionis.	" "	23	80	211			-3.85				
69	14'	δ Orionis.	" "	24	" 65	47	" 72	40	-4.35 -4.28				
88	(900)	8 Monocerotis	" "	25	" "	49	" 69	140	-1.98 -1.88				
95	1068	δ Gem.	" "	42	" "	61	" 65	23	-4.58 -4.47 -4.50	-4.52	.06	.05 .02	.04
108	6m	λ Leonis	" "	43	" "	55	" "	66	-6.25 -5.55 -6.95 -6.46	-			
116		83 Leonis.	" "	45	" "	119	" "	132	-0.95 -0.95 -1.14	-1.01	.06	.06 .13	.08
94	1061	λ Gemin.	" "	50					-6.22				
							" 86	142					
97	1110	α Gemin.	" "	51	" "	63	" 65	73	-7.34 -7.14 -7.22 -7.06				
96			" "	52	" "	64	" "	74	-1.00 -0.94 -0.95	-0.96	.04	.02 .01	.02
99		κ Geminorum			" "	87	" "	91					
100	1135	π Gemin.	" "	53					-5.55				
78		λ Orionis											
101	1196	ζ Caneri.	" "	76	" "	105			-0.76 -0.87				
107	1351	23 Ura. Maj.	" "	77	" "	97	" "	103	-5.58 -5.58 -5.33	-5.50	.10	.05 .15	.10
110	78'	ζ Leonis.	" "	99	" "	199	81	80	-2.48				
							81	202					
168	3127	d Herculis.	" "	105	" "	142	" 65		-5.46 -5.35				
171	35'	ν Draconis	" "	107	" "	147	" "	166	-0.20 +0.02 -0.14 -0.12	-0.12	.08	.14 .02 .06	.08
146	28'	μ Boötes.	" "	110	" "	123			-1.88 -2.25				
153	2010	κ Herculis.	" "	111	" "	124	" "	139	-1.23 -1.22 -1.22	-1.22	.01	.00 .00	.00
116		23 Leonis.	" "	119									
117	19'	ε Leonis.	" "	121	" "	133	" "	201	-2.48 -2.42 -2.34	-2.41	.07	.01 .07	.05
							89	142					

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1891phae.proj..46IW

No.	Σ no	Desig.	Book.	Page	Book.	Page	Book	Page	Diff. magn.	Mean Diff. magn.
144.	27	ρ Boötis.	R 66	135	80	205	91	174	-4.25	
141.		α Librae.	"	137					-2.27	
~~143.~~		~~K Herculis~~	"	139						
190.	38	ζ Lyrae.	"	140	65	154	R 70	152	-1.32 -1.34 -1.25 -1.30	-.02 -.04 +.05 ±.04
160.	(30 31)	17 Draconis.	"	144	66	159	82	28	+0.10 -0.22	
161.	(207 A)	" "	"	146	85	6	91	208	-1.02	
149.	2383	ε Lyrae.	"	149					+0.1	
114	17 II	93 Leonis.	"	171	65	189	66	34	-4.32 -4.14 -4.02 -4.16	-.16 +.02 +.16 ±.11
173	2241	ψ Draconis.	"	173	65	175	91 66	216 169	-1.18 -1.25 -1.18 -1.20	+.02 -.05 +.02 ±.03
112	1487	K Leonis.	"	147	66	33	66	44	-1.62 -1.68 -1.76 -1.69	.07 .01 .07 .05
~~118~~		~~93~~ "	"	149					~~4.44~~	
119	21	17 Com. Ber.	"	203	66	25	91 66	97 44	-1.34 -1.32 -1.25 -1.30	.04 .02 .05 .04
121	1667	24 " "	R 66 [65]	22 [205]	66	30	66	47	-1.44 -1.42 -1.42 -1.53	.01 .09 .11 .07
175	2264	95 Herculis.	R 66 74	1 62	R 70 74	145 73	91 74	200 84		
192	39	β Lyrae.	R. 66.	5	R 67.	120.	R 70	151	74	88
196	2420	ο Draconis.	R. 66. 82	6. 86	82	70	82	82		
194	2487	η Lyrae.	R. 66. 84	8. 98	82	94	82	155		
125	1692	12 Com. Ven.	" 66 80	31. 189	66	42	66	10	-2.38 -2.53 -2.46 -2.46	.08 .07 .00 .05
135	1821	K Boötis.	" 66	1.	66	62	82	154	-1.47 -1.90	
123	1687	13 Com. Ber.	" 66	4.					-4.67	
131	1744	ζ Urs. Maj.	" 66	60.	80	190	82	153	-1.62	
Σ	1561	290 Ursae Maj.	" 66	64	88	9			-1.62	
Σ	1495	H. V. III.	" 66	71	R 70	75	81	81	-1.64	
Σ	20	65 Ursae Maj. free following	" 66	72	87	80	88	10	-1.45	
Σ	1622	2 Comae Ven.	" 66	74	87	81	88	32	-2.98	
Σ	48	P. XIX. 320, 321	" 66	143	70	140	70 71	201 186	-0.24	
Σ	1962	178 Librae B.	" 66	156	89	171	90	69	[0.00]	
Σ	2063	H IV 62	" 66	157	81	171	82	29	[-3.0]	
Σ	2096	19 Ophiuchi.	" 66	164	84	96	91	107	-3.18	
~~Σ 30'~~		~~16. 17~~								

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No.	Desig.	Book.	Page.	Book.	Page.	Book.	Page.	Diff.	Mean Diff.	Results.	Av. Dev.
Σ 1470.	——	R66	165	R80	192	R80	203.	-0.50			
						90	68				
Σ 1919.	N. Gr. 62.	" 66	166	80	204	84	104	-0.76			
Σ 2280	100 Herculis	" 67	10	R70	132	R70	144				
				91	215	90	162				
Σ 31	36. 37 Herculis.	" "	21.	81	187	89	173				
						80	46.				
Σ 524	χ Tauri.	" "	71.	" 69	18	" 69	146.				
Σ 2342	νν Tauri.	" "	124	R70	138	" 70	184				
Σ 2417	θ Serpentis.	" 70	171	R70	167	R70	163.				
		67	" 124	R70	154	R70	184				
						75	208				
Σ 11	1 Pegasi.	" "	130.	"	209	R71	22				
						" "	41				
Σ 2922	8 Lacertæ	" "	217	"	217	R. 71.	10.				
Σ 58	δ Cephei	" 68	5								
Σ 2893	——	" "	6.	" 68	24	"	31				
				83	40	83	39				
Σ 2840	1473 Cephei	" "	8	" 68	22	R. 71	13.				
Σ 2806	β Cephei	" "	21.	" 71	12						
Σ 430	39 Tauri β	R72 "	3	" 68, 186		R 68,	202				
						R70	172				
Σ 2979	5 Aquilæ.	" 67	119	R 70	150.	R70.	160				
				79	90	79	56				
Σ 100	ζ Piscium	" 68	99	" 68	128	71	66.				
Σ 1	P.O. 175, 176	" "	101	" 78	207	86	151				
Σ 88	ψ Prie.	" "	103	" 71	65	78	208				
		68	209				209				
Σ 231	66 Ceti	" "	111	" 68,	185	87	37				
Σ 3	37 Ceti	" "	118	" 71.	68	" 76	85				
				" 73		" 73	67				
Σ 289	33 Arietis	" "	187	" 78,	200	" 78,	211				
Σ 90	77 Piscium	" 68,	207	" 72	137	" 78	210.				
						87	60				
Σ 307	η Persei	" 68,	204	" 76	88	77	163				
Σ 401		" "	212	72	43	74	17				
						87	74				
Σ 924	20 Gem.	" 69,	142	" 68	154	72	105				
						77	109				
Σ 485		" "	144	74	19	74	28				
				149	168	72	68				
Σ 532	H II. 72	" "	147	" 72	19	72	60.				
Σ 552	H II. 44	" "	149	" 74	22	74	30.				
						88	44				
Σ 550	1 Camel.	" "	151	74	20	78					

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No.	Design.	Book	Page	Book	Page	Book	Page	Diff. Magn.	Mean diff. Magn.	Resid's	Av. Dev.
Σ 764 ✓	H U. 75	78 R 69	8 152	77	177	77 88	205 193				
Σ 1245 ✓	P. VIII. 108.	R. 70	19	R 70	58	72 88	177 211				
Σ 1062 ✓	19 Lyn.	"	64	72	174	74	208				
Σ 1065 ✓	20 Lyn.	"	69	79	46	87	48				
Σ 1627 ✓	P XII 327 33	"	82.	90	161						
Σ 2166		82 81	35 203	82	22	82	32				
Σ 34' ✓	53 Ophiuchi	82 70	36 97	70	110	81	195.				
Σ 2202 ✓	61 Ophiuchi	"	109.	"	131	82	23.				
Σ 2276 ✓	P. XVII 362.	"	125	91	201	92	44				
Σ 2594. ✓	57 Aquilae	"	142.	79	176	R 71 84	17. 162				
Σ 43' ✓	β Cygni	"	146	"	168	R 70	173				
Σ 2580 ✓	17 Cygni	"	148	"	175	72	73.				
Σ 2429 ✓	11 Aquilae	"	155	84	120	"	202				
Σ 2727 ✓	γ Delphini	"	164	79	187	"	192				
Σ 2585 ✓	ε Sagittae	"	180	82	198.	86	38.				
Σ 2637 ✓	δ Sagittae	"	190	R. 71.	18	72	74				
Σ 2758 ✓	61 Cygni.	"	193.	" 70	208	R 71.	6.				
Σ 56' ✓	3 Aquarii.	"	211	72	77	72 82	103 132				
Σ 2894	P XXII 65.	"	215	R. 71	32	75 87	151 64				
Σ 3053		71	42.	86	86.	86	174				
Σ 2863	ξ Cephei.	"	45	83	44	83 (Hagstrom)	87.				
Σ 117	(W 2) (R.) Piscium.	"	63.	86	165	86	175.				
Σ 331	P II 220.	72.	1.	87	92	87	100				
Σ 627		72.	6.	72	45	72.	61				
Σ 696	23 Orionis	72	30.	72	39	72.	63.				
Σ 590	55 Eridani	72	38	73	65						
Σ 747	133 Orionis B.	80 72	213 65	79	159	80	55				
Σ 855		72	66.	88	179	88	190.				
Σ 46'	16 Cygni.	72	70.	75	101	75	106				
Σ 2998	94 Aquarii.	72	76								

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No.	Desig.	Bk.	Page.	Bk.	Page.	Bk.	Page.	Diff. Magn.	Inter. Diff. Magn.	Resids.	Or. der.
Σ 180	γ Arietis.	72	135	86	176.	87	89				
						88	136				
~~Σ 1183~~	———	72	176	73	8	80	218.				
Σ 16′	02 Orionis.	73	212	88	21						
Σ ———	———	74	15.								
Σ 730		74	23.	88	20	88	174.				
						89	173				
Σ 1972	π¹ Ursæ. Min.	74	79.	74	87	81	158				
				75	159	75	109				
Σ 2743	59 f¹ Cygni.	74	182.	74	191	75	73				
		81	69	81	83	81	91				
Σ 1193	176 Cam. B.	74	215.	77	164	80	220.				
Σ 2838	100 Aquar. B.	75	147	86	42.	91	127				
Σ 2809	34 : III 38?	75	152	77	219	85	14.				
Σ 2960	16 Lacertæ.	75	167.	87	86.						
Σ 2873	180 Cephei B22	75 (½ sect)	183.	82	92	82	131.				
Σ 12II	γ Aquarii	76	82								
Σ 2998	94 Aquarii	76	83								
~~Σ 485~~		~~77~~	~~109~~								
		80	13								
Σ 12′	323 Tauri B	77	156	77	164	77	176				
Σ 634	Camel 19 Hev.	77	157								
Σ 318	20 Per.	77	170								
Σ 390	Camel 4 Hev.	77	178	79	157	87	103.				
Σ 872		77	207	80	51.	88	180				
		80	12								
Σ 548.		79.	158	80	197.	80	209.				
Σ 8′	7 Pleiad.	80	46.	80	199.	80	207.				
Σ 921.		80	54.	88	191.	88	201				
~~Σ 441~~	~~133 Orionis~~	~~80~~	~~55.~~								
Σ 1678.		80	187.	91	20						
Σ 23′	32, 33 Com. Ber.	80	188.	88	137	91	49				
						89	93				
Σ 3II	λ Cam. H.V. 22.	80	200.	80	213.	81	16.				
Σ 752	i Orionis.	80	214.								
Σ 1415	H.V. 145	81	79.	87.	76.	88	134				
Σ 1193	176 Cam. B.	81	139								

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No.	Desig.	Bk.	Page.	Bk.	Page.	Bk.	Page.	Huff. Magn.	Mean Diff. Mag.	Reidan	Cor. Mer.
Σ 1560	29 Num. Maj.	81	193.	87	78						
Σ 36'	39 Draconis.	82 82	59 33.	82	48.	82	51				
Σ 2308	40,41 Draconis	82	47.	82	52	82	58.				
Σ 2348	19 Draconis B.	82 82	124 73.	82	85.	82	95				
Σ 44'		82	83	82	144.	82	187.				
Σ 2806	β Cephei.	82	91.								
Σ 2486	6 Cygni B.	82	125.	82	156	82	189.				
Σ 2404		82	143.								
Σ 2675	μ Cephei.	82	213.	83.	30.	86	(¼ext) 89				
Σ 2220	ν Herculis	84 (¼graph)	93.	85	23.	91	199				
Σ 2190	P. XVII 163	84	97.	85	8.	85	22.				
Σ 45'	151 Aquilae B.	84	100								
Σ 1965	ξ Coronae	84	105	89	168						
Σ 2382	ε Lyrae	84.	119								
Σ 2082	42 Herculis	85	7.	92	36						
Σ 53'	{48 Cygni. P XX 243.	85.	13.	83	112.	86	26				
Σ 57'	{121, 123 Cephei B.	85 85	115 15.	85	32.	85	33				
Σ 2161.	Herculis	85	20.	91	198	91	210				
Σ 2822	μ Cygni.	85	114.	86	41.						
Σ 2726	52 Cygni.	86	28.	86	39	86	(¼ext) 79				
Σ 36	51 Piscium	86.	149.	86	161	87	18				
Σ 79.	Andr. 164 B.	86.	155.								
Σ 4'	56 Andromedae.	86	166.	87 86	67 178.	87 87	55 38				
Σ 60'		86	173.	87	53.	87	87.				
Σ 46.	55 Piscium	87.	36.								
Σ 205	γ Andromedae.	87	57	87	68	87 87	98 91.				
Σ 279	H.W. 47.	87.	58.								
Σ 296.	θ Persei.	87.	59.	87	69	87.	99.				
Σ 1615		87	82	88	31	90	160				
Σ 6'	Ceti 499 B.	87.	93	87	101.						

Con. on p. 81.

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~~Location of Comp. Stars for Var. by transits.~~

Desig.	Book.	Page.
7 Cassiop.	A 57	135.
S "	" "	136.
R "	" "	137.
S Cephei	" "	140.

Experiments in estimating differences in magnitude of pairs of stars, with head in different positions. (Upper star always called "a")

A. 57. p. 193. 5 pairs.
" " " 197. 10 "
" 59. " 195. 4 "

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1891phae.proj..461w

No.	Desig.	Bk.	Page.	Bk.	Page.	Bk.	Page.
Σ 1223	Cat. cri.	87	203	89	166.		
Σ 1625		88	33.	91	48		
Σ 518	40 Erid.	88	40.				
Σ 9'	K'K² Tauri.	88	41.	88	188.	88	196.
Σ 10'	O'O² Tauri.	88	42.	88	189.	88	197.
Σ 471	G Per	88	186.	92	46		
Σ 464	ξ Per	88	187.				
Σ 470		88	195.				
Σ 716	168 Tauri	88	198.	88	206		
Σ 738	λ Orionis.	88	200.	88	207		
Σ 1138		88	202				
Σ 1224	5 Cam.	88	203				
Σ 919	11 Monoc.	88	208				
Σ 845	41 Aur.	88	209				
Σ 1864	π Bootis	89	8.	91	118		
Σ 753		89	113.				
Σ 1970.		89	169.	91	106		
Σ 1835.		90	66.	91	94		
Σ 1904.		91	53.	91	105	91	120
Σ 2762		91	74.				
Σ 1888		91	87.	91	119		
Σ 25'		91	91.	91	128		
Σ 1694		91	92				
Σ 24'		91	93				
Σ 2115		91	196	92	40		
Σ 2140		91	197	92	42		
Σ 2021		91	206	92	29		
Σ 2103		91	207				
Σ 2130		91	209	92	43		
Σ 2323		91	211				

Continued on page 83

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Exam. of Regions about Cir. Var. for 11th and 13th mag. stars to be meas. phot. with Brit. M. P. Stars, to obtain value of grade.

Book.	Page.	Var.
62.	70.	S Persei.
"	71.	R Aurigæ.
"	72.	R Lyncis.
"	82.	R Draconis.
"	83.	R Urs. Min.
"	83.	S Cygni.
"	103	T Cephei.
"	104	S Cephei.
"	104	R Urs. Maj.
"	105	T Urs. Maj.

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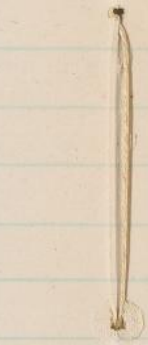
1891phae.proj..461w

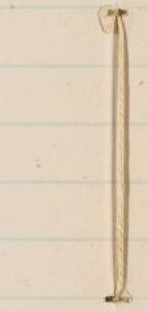
E 33'

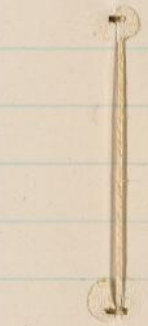
92 31 92 41

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Rel. Est. of 11th and 13th mags. stars as per schemes on p. 42 ff. with standard comp. stars of my selection.

Book.	Page.	Var.
63	87	S Persei.
"	92	" "
"	94	R Leo. Min.
"	97	S Persei.
~~"~~	~~103~~	~~T Cephei.~~

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Phot. measts. of 11th and 13th mags. as selected on p. 82 ff.

Book.	Page.	Var.
63	82	ν Persei.
"	82	R Urs. Min.
"	90	ν Persei.
"	93	R Urs. Min.
"	95	ν Persei.
"	97	R Urs. Min.
"	98	S Cygni.
"	121.	T Cephei.

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Rel. est. of discordant Dredge Tone cases.

x Discordant Obs.	Rec. Book.	Page.	Rel. Est.	Rel. Est.	Rel. Est.
19 h. +19° 3706	70	61	$\underline{a}$ 2(3706), (3706) 2.5 $\underline{b}$		
" " 3708	"	62	$\underline{a}$ 2.6(3708), (3708) 2.5 $\underline{b}$		
" " 3751	"	"	$\underline{a}$ 2(3751), (3751) 2.5 $\underline{b}$		

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Photometric ~~Data~~ Insects of Variables and Comp. Stars (finish selection)

(See Sec 1st book of Eph. p. 194, in red)

Desig.	Book	Page.		
δ Böötis.	57	94		
" "	"	103		
" "	"	112		
δ Persei.	"	131.		
R Aurigae	"	149.		
R Lyncis	"	194.		
R Aurigae	"	204.		

Capeland's Area 61		51.	1892 Feb.	4.
" " "		54.	" "	5.
" " "		63 " "	" "	6.
" " "		72.	" "	9.
" " "		81.	" "	13.
" " "		84.	" "	15.
" " "		87	" "	16
" " "		89	" "	17
" " "		93	" "	18.
" " "		96	" Mar.	4.
" " "		100	" "	5.
" " "		105.	" "	7.
" " "		110.	" "	9.
" " "		120.	" "	12.
" " "		122. (A series of 192 settings)	" "	14.
" " "		132.	" "	15.
		(1 setting)	" "	16
" " "		144.	" "	19
" " "		149.	" "	21
" " "		153.	" "	21
" " "		156. (10 series of 240 settings.)	" "	24
" " "		169	" "	25
" " "		172	" "	25

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	Series.	Book	Page.		
	Copeland's Nova	61	174.	1892	Mar. 26.
	" "	61	176.	"	" 26.
	" "	61.	182.	"	" 28.
	" "	61.	184.	"	" 29.
	" "	61.	187.	"	" 29.
	" "	61.	193.	"	" 30.
	" "	61.	195.	"	" 30.
	" "	61.	199.	"	" 31.
Ch. 4.	" "	61.	201.	"	" 31.
5.	" "	62.	167.	"	Sept. 21.
6.	" "	62.	182.	"	" 6.
9.	" "	62.	182.	"	" "
13.	" "	62.	189.	"	" 7.
15.	" "	62.	197.	"	" 8.
16	" "	62.	206.	"	" 9.
17	" "	63	56	"	" 29
18.	" "	63.	60.	"	" 30
4.	" "	63.	119.	"	Oct. 22.
5.	" "	64	112	1893	Jan. 21.
	" "	"	143	"	Feb. 15.
7.	" "	"	146	"	" 20.
9.	" "	"	151	"	" 24.
12.	" "	"	176	"	Mar. 7.
14.	" "	"	182	"	" 13.
15.	" "	"	200	"	" 20.
16 19	" "	65	35	"	Apr. 11.
21					
21					
24					
25					
25					

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92

Phot. Measts. of 11th + 13th mags. stars. about Variables.

Book 63 | Page. | Var.
S Persei.

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Rel. Est. of 11$^{th}_{m}$ + 13$^{th}_{m}$ magn. stars about Variables.

Book.	Page.	Var.
63		S Persei.

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Rel. Estimates of Variables + Comp. Stars (final selection).

Desig.	Book.	Page.
R Lyncis.	57	194.
R Aurigæ	57	204.
R Cygni	60	167.
R Tauri	61	19.

Copeland's Nova. 61. 80. (Rel. est. of faint comp. stars.)
" " 61. 135. " " " comp. Stars, a to K incl.
" " 61. 178 " " " " " " a " K "
" " 61. 186. " " " " " a " K "
" " 61. 215 " " " last of series (Moonlight) Part. Part.
" " 62. 2 " " " " " " " " " "
" " 62. 5 " " " a few faint comp. stars.
" " 62. 18 " " " last of series (sky Link)
" " 62. 23 " " " " " " " " "
" " 62. 32 " " " " " " " " "
" " 62. K0. " " " a few faint comp. stars.
" " 62. K3. " " " " " " " " "
" " 62. K7. " " " " " " " " "
" " 62. K7. " " " " " a " " "
" " 62. K0. " " " " " " " " "
" " 62. K1. " " " " " " " " "
R. Tra. May. 73 72 " " " comp. stars, h to o incl.
T. Cephei. 73 73 " " " " " , f to k " .

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~~Extension of Photometric Scale to faint mags.~~

~~Faint Stars near Circumpolar Variables.~~

~~Circumpolar Stars~~	~~Book~~	~~Page~~	~~Book~~	~~Page~~	~~Book~~	~~Page~~
~~δ. Ursæ Maj.~~	~~R. 66~~	169	R. 66	201	R. 66	208
~~ε. Ursæ Maj.~~	~~R. 66~~	181	R. 66	189	R. 66	203
~~κ. Draconis~~	~~R. 66~~	185	R. 66	191	R. 66	204
~~β. Aurigæ~~	~~R. 66~~	186	R. 66	193	R. 66	206
~~ξ. Persei~~	~~R. 66~~	216				
~~δ. Bootis~~	~~R. 66~~	217				
~~κ. Cygni~~	~~R. 66~~	221				

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Phot. measts. of Variable Stars with Photometer on East Equatorial.

1893.

Desig.						
χ Cygni.	Oct. 21. 1 ser.	Oct. 27. 2 ser.	Oct. 31. 1 ser.	Nov. 3, 1 ser.	Nov. 7, 1 ser.	Nov. 10, 1 ser.
+62° 596.	Oct. 20. 1 ser.	Oct. 24. 1 series.	Oct. 28. 1 ser.	Nov. 2, 2 ser.	Nov. 6, 1 ser.	Nov. 9, 1 series
o Ceti.	Nov. 1, 1 ser.	Nov. 10. 1 series	[Jan. 13 1 ser.]	Feb. 16. 1 ser.	Mar 16, 1 ser.	Apr. 5, '94 24 settings
Nova Aurigæ	June 10. 1 ser.	Nov. 9, 1 series	Jan. 12, '94, 1 ser.	Feb. 5, '94 1 ser.	Mar. 2, 1 ser.	Apr. 3, '94. 24 settings
	Nov. 2, 1 ser.	Nov. 6 1 series	Nov. 9, 1 series	Nov. 11, 1 ser.	Nov. 22 (1 ser.)	Nov. 25. (2 ser.)
	Oct. 21. 1 ser.	Nov. 3, 1 series	Nov. 7, 1 series	Nov. 10, 1 ser.	Nov. 18 (1 ser.)	Nov. 24 (1 ser.)
	Dec. 7 1 ser.	Dec. 29, 1 ser.	Feb. 24, '94 1 ser.	Oct. 11, '94, 1 ser.	Jan 4, '95 (1 ser.)	Mar. 28, 195 (1 ser.)
	Dec. 6, 1 ser.	Dec 11, 1 ser.	Jan. 30, '94, 1 ser.	May 7, '94 24 settings	Dec. 5, '94 (1 ser.)	Mar. 16, '95 (1 ser.)
	Dec. 23, 1 ser.	Dec. 27, 1 ser.	Dec. 15, '94. 1 ser.	Apr. 19, '95 (1 ser.)	Apr. 23, '95 (1 ser.)	May 2, '95 (24 setts.)
χ Cygni	Dec. 20, 1 ser.	Dec. 26, 1 ser.	Dec. 29, 1 ser.	Apr. 17, '95 (1 ser.)	Apr. 20, '95 (1 ser.)	Apr. 25, '95 (1 ser.)
o Ceti	Jan. 13 1 ser.	Jan. 19, 1 ser.	Jan. 22 1 ser.	Jan. 25, 1 ser.	Feb. 2 1 ser.	Feb. 6, 1 ser.
	Jan. 12, '94 1 ser.	Jan. 17, 1 ser.	Jan. 20 1 ser.	Jan. 23, 1 ser.	Jan 30, 1 ser.	Feb. 5, 1 ser.
	Jan. 17 1 ser.					
Anderson's New Var.	Jan. 8, '94 1 ser.					
ε Bootis	Mar. 30, '94. 224 settings	Sept. 22, '94., 24 settings	Sept. 25, '94, 10 settings	Sept. 29, '94, 48 settings	Oct. 5, '94, 1 ser.	Oct. 11, '94. 1 ser.
	Feb. 23, 94. 7 ser.	Sept. 21, '94. 24 settings	Sept. 24, '94. 24 settings	Sept. 27, '94. 48 settings	Oct. 1, '94, 28 settings	Oct. 9, '94. 1 ser.
o Ceti	Sept. 20, '94 1 ser.	Sept. 28, '94. 24 settings	Oct. 02, '94. 16 settings	Oct. 18, '94, 1 ser.	Nov. 16, '94, 1 ser.	Nov. 20, '94 3 ser.
	Mar. 24, 94 ½ ser.	Sept. 24, '94. 24 settings	Oct. 11, '94. 1 ser.	Oct. 15, '94, 1 ser.	Nov. 15, '94, 1 ser.	Nov. 19, '94, 1 ser.
U. Ophiuchi.	May 29, '94. 64 settings	June 4, '94, 216 settings	July 15 '95 (148 setts.)			
(+15° 3311)	May 28, '94. 20 settings	June 1, '94. 160 settings	June 8, '95 (208 setts.)	July 25, '95 (174 setts.)		
Harting's New Var.	Sept. 20, '94. 48 settings					
η Cephei.	Jan. 17, '95 (1 ser.)	Jan. 22, '95 (1 ser.)	Jan. 24, '95 (1 ser.)	Jan. 29, '95 (1 ser.)	Feb. 5, '95 (1 ser.)	Feb. 11, '95. (1 ser.)
o Ceti.	Jan. 14, '95 (1 ser.)	Jan. 19, '95 (1 ser.)	Jan. 23, '95 (1 ser.)	Jan. 25, '95 (1 ser.)	Jan. 31, '95 (1 ser.)	Feb. 6, '95 (1 ser.)
R. Ursæ Maj.	Jan. 17, '95 (1 ser.)					
R. Cassiop.	Feb. 5, '95. (1 ser.)					
T. Cassiop.	Feb. 5, '95. (1 ser.)	Feb. 6, '95 (1 ser.)	Feb. 8, '96 (16 setts.)			
T. Cephei.	Feb. 6, '95 (1 ser.)					
T. Andromedæ.	July 30, '95 (12 setts.)	July 31, '95 (32 setts.)	Aug. 5, '95 (24 setts.)	Aug. 10, '95 (24 setts.)	Aug. 14, '95 (24 setts.)	Aug. 16 '95 (24 setts.)
	Feb. 20, '95 (1 ser.)	Feb. 21, '95 (1 ser.)	Feb 22, '95 (1 ser.)	Feb. 23, '95 (1 ser.)	Feb. 26, '95 (1 ser.)	July 29, '95 (32 setts.)
S. S. (−7° 2783)	Apr. 5, '95 (2 ser.)	Apr. 17, '95 (2 ser.)	Apr. 19, '95 (1 ser.)	May 9, '95 (24 setts.)	May 29, '95 (24 setts.)	
New Var. star in Ursa. min.	Apr. 4, '95 (1 ser.)	Apr. 16, '95 (9 ser.)	Apr. 18, '95 (1 ser.)	Apr. 29, '95 24 setts.	May 18, '95. (24 setts.)	June 11, '95 (24 setts.)
	Apr. 23, '95 (1 ser.)	Apr. 26, '95 (1 ser.)	May 9, '95 (24 setts.)	July 23, '95 (24 setts.)	Apr. 29, '95 (16 setts.)	Apr. 29, '96 (16 setts.)
β Lyræ	Apr. 20, '95, (1 ser.)	Apr. 25, '95 (1 ser.)	Apr. 21, '95 (24 setts.)	June 7, '95 (24 setts.)	June 16 '95 (16 setts.)	May 23, '96 (16 setts.)
	May 6, '95 (24 setts.)	May 9, '95. (24 setts.)	May 11, '95 (24 setts.)	May 1, '95 (24 setts.)	June 17, '95 (24 setts.)	Nov. 4, '95 (24 setts.)
δ Cephei.	May 3, '95 (24 setts.)	May 7, '95 (24 setts.)	May 10, '95 (24 setts.)	May 13, '95 (24 setts.)	June 6, '95 (24 setts.)	July 6, '95 (24 setts.)
	May 7, '95 (24 setts.)	May 10, '95 (24 setts.)	May 13, '95 (24 setts.)	June 7, '95 (24 setts.)	July 6, '95 (24 setts.)	July 11, '95 (24 setts.)
Var. discovered by Miss Leavitt.	May 6, '95 (24 setts.)	May 9, '95 (24 setts.)	May 11, '95 (24 setts.)	May 16, '95 (24 setts.)	June 17, '95 (24 setts.)	July 10, '95 (24 setts.)
	May 11 '95 (24 setts.)	May 16, '95 (24 setts.)				
	May 10, '95 (24 setts.)	May 13, '95 (24 setts.)	June 11, '95 (24 setts.)			
8 Librae	June 18, '95 (324 setts.)	July 2, '95 (300 setts.)				
	July 22, '95 (32 setts.)	July 26, '95 (560 setts.)				
Z Herculis.	July 18, '95 (372 setts.)	July 23 '95 (96 setts.)	Sept. 12 '95 (240 setts.)	Sept. 24. 9v. (240 setts.)	Oct. 2, '95 (224 setts.)	
	Sept. 13, '95 (144 setts.)	Feb. 16, '96 (16 setts.)	Sept. 10 '95 (240 setts.)	Sept. 14 9v (360 setts.)	Sept. 30. 9v. 3v 2	
+62° 596.	July 29, '95. (24 setts.)	Jan. 6, '96 (16 setts.)	Apr. 27, '96 (16 setts.)	June 19, '96 (16 setts.)	July 30, '96 (16 setts.)	Sept. 26, '96 (16 setts.)
	Sept. 21. 9v. (24 setts.)		Mar. 12, '96 (16 setts.)	May 18, '96 (16 setts.)	June 20 '95 (32 setts.)	Sept. 4, '96 (16 setts.)
o Ceti.	Sept. 20. 9v. (24 setts.)		Oct. 23, '95 (24 setts.)	Nov. 4, '95 (24 setts.)	Nov. 21, '95 (24 setts.)	Dec. 1, '95 (16 setts.)
	(Oct. 1, '95 (12 setts.)	Oct. 5, '95 (24 setts.)	Oct. 21, '95 (48 setts.)	Oct. 26, '95 (24 setts.)	Nov. 7 '95 (24 setts.)	Nov. 27, '95 (24 setts.)
T. Andromedæ.	Sept. 28. 9v. (24 setts.)		Oct. 17 '95 (24 setts.)	Oct. 19, '95 (24 setts.)	Oct. 22, '95 (24 setts.)	Oct. 24, '95 (24 setts.)
			Oct. 11, '95 (48 setts.)	Oct. 18, '95 (48 setts.)	Oct. 21, '95 (24 setts.)	Oct. 23, '95 (36 setts.)
Vesta	Oct. 5, '95 (256 setts.)					
Chandler's New Var.	Nov. 16, '95 (176 setts.)					
	Nov. 15, '95 (24 setts.)	Nov. 30, '95 (240 setts.)				
T. Coronæ	Nov. 27, '95 (16 setts.)					

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Nov. 22 1 ser. | Nov. 28, 1 ser. | Dec. 2, 1 ser. | Dec 7, 1 ser. | Dec. 12, 1 ser. | Dec. 17, 1 ser.

Nov. 11, 1 series | Nov. 18. 1 ser. | Nov. 25, 1 ser. | Nov. 24. 1 ser. | Nov. 29, 1 ser. | Dec 4, 1 ser. | Dec. 11, 1 ser. | Dec. 18, 1 ser.

Apr. 17, '94. 24 settings | Sept. 28 '94, 24 settings | Oct. 18, '94 1 ser. | Dec. 5, '94 2 ser. | Jan. 4, '95 (1 ser.) | May 6, '93 (24 setts) | June 7, '95 (24 setts)

Apr. 9, '94. 24 settings | June 1, '94, 24 settings | Sept. 29, '94, 24 settings | Nov. 16, '94 1 ser. | Dec. 15, '94 (1 ser.) | Mar. 28, '95 (1 ser.) | May 7, '95 (24 setts)

Dec. 2, 1 ser. | Dec 6, 1 ser. | Dec. 11, 1 ser. | Dec. 17, 1 ser. | Dec. 23, 1 ser. | Dec 27, 2 ser. | Jan. 8, '94 1 ser.

Nov. 28 1 series | Dec 4, 1 ser. | Dec. 7 1 ser. | Dec. 13, 1 ser. | Dec. 20, 1 ser. | Dec. 26, 1 ser. | Dec. 29, 1 ser.

Dec. 6, '95 (16 setts) | Mar. 9, '96 (16 setts) | Dec. 14, '96 (16 setts) | Apr. 1, '97 (16 setts) | Sept. 25, '97 (16 setts)

Sept 23, '95 (24 setts.) | Jan 11, '96 (16 setts) | Apr. 29 '96 (16 setts.) | Dec. 31, '96 (16 setts) | Jan. 28, '97 (16 setts.)

May 16, '95 (24 setts)

May 3, '95 (24 setts.) | Nov. 6, '95 (24 setts)

Feb. 16, 1 ser. | Feb. 24, 1 ser. | Mar. 1, 1 ser | Mar. 3, 1 ser. | Mar. 7, 1 ser. | Mar 16, ½ ser. | Mar. 23, ⅔ ser.

Feb. 8, 1 ser | Feb. 23, 1 ser. | Feb. 28, ⅓ ser. | Mar. 2, 1 ser. | Mar. 6, 1 ser | Mar. 14, ⅙ ser. | Mar. 19, 1 ser.

Oct. 15, '94, 1 ser. | Oct. 17, '94. 1 ser. | Oct. 18, '94, 2 ser. | Dec. 5, '94, (12 setts) | June 19, '95 (208 setts) | Oct. 24, '95 (272 setts) | Dec. 3, '95 (452 setts)

Oct. 12, '94, 1 ser. | Oct. 15, '94. 10 setts (1 ser.) | Oct. 17, '94, 16 setts (1 ser.) | Nov. 16, '94, 12 setts | Dec. 15, '94 (2 ser.) | Oct. 19, '95 (8 setts.) | Nov. 18, '95 (80 setts.)

Nov. 28, '94, 1 ser. | Dec. 3, '94 (1 ser.) | Dec. 5, '94. (1 ser.) | Dec. 13, '94 (1 ser.) | Dec. 17, '94 (1 ser.) | Dec. 29, '94 (1 ser.) | Jan 4, '95 (1 ser.)

Nov. 27, '94, 1 ser. | Dec. 1, '94 (1 ser.) | Dec. 14, '94. (1 ser.) | Dec. 6, '94 (1 ser.) | Dec. 15, '94 (1 ser.) | Dec. 20, '94 (1 ser.) | Jan. 2, '95 (1 ser.)

Feb. 15, '95 (2 ser.) | Feb. 20, 195 (1 ser.) | Feb. 22, '95 (2 ser.) | Feb. 26, '95 (1 ser.) | Mar. 5, '95 (1 ser.) | Mar. 11, '95 (1 ser.) | Mar. 16, '95 (1 ser.)

Feb. 13, '95 (1 ser.) | Feb. 16, '95 (1 ser.) | Feb. 21, '95 (1 ser.) | Feb. 23, '95 (1 ser.) | Feb. 27, '95 (1 ser.) | Mar. 9, '95 (1 ser.) | Mar. 14, '95 (1 ser.)

Sept. 5, '95 (24 setts) | Sept. 13, '95 (No setts) | Sept. 17. 9r. (24 setts.) | Sept. 21. 9r. (120 setts.) | Sept. 24. 9r. (72 setts.)

Aug. 21, '95 (24 setts) | Sept. 12, '95 (24 setts) | Sept. 14. 9r (48 setts.) | Sept. 20. 9r. (96 setts.) | Sept. 23. 9r. (72 setts.)

May 29, '96 (32 setts) | Dec. 12, '96 (16 setts.) | July 16, '97 (16 setts)

May 23, '96 (16 setts.) | June 20, '96 (16 setts.) | Dec. 14, '96 (16 setts) | Sept. 8, '97 (32 setts)

Apr. 29, '96 (16 setts.) | June 20, '96 (32 setts)

Apr. 11, '96 (16 setts.) | May 23, '96 (56 setts.)

July 29, '95 (48 setts)

July 12 '95, (24 setts) | July 31, '95 (24 setts) | Nov. 4, '95 (24 setts)

Oct. 10, '95 (352 setts) | Oct. 30, '95 (336 setts.)

Oct. 8, '95 (256 setts) | Oct. 14, '95 (416 setts) | Nov. 7, '95 (32 setts)

Oct. 23, '96 (16 setts.) | Jan. 1, '97 (16 setts) | Feb. 11, '97 (16 setts) | May 17, '97 (32 setts) | July 8, '97 (32 setts)

Oct. 19, '96. (32 setts) | Dec. 14, '96 (32 setts) | Jan. 16, '97 (16 setts) | Mar. 13, '97 (32 setts) | June 22, '97 (32 setts) | Sept. 6, '97 (32 setts)

Dec. 14, '95 (16 setts) | Dec. 17, '95 (16 setts) | Jan. 1, '96 (16 setts) | Jan. 4, '96 (16 setts) | Jan. 8, '96 (16 setts) | Jan. 14, '96 (16 setts) | Jan. 16, '96 (16 setts.)

Dec. 6, '95 (16 setts) | Dec. 16, '95 (16 setts.) | Dec. 19, '95 (16 setts) | Jan. 3 '96 (16 setts) | Jan. 6, '96 (16 setts) | Jan. 11, '96 (16 setts) | Jan. 15, '96 (16 setts.)

Oct. 26, '95 (48 setts) | Nov. 4, '96 (48 setts) | Dec. 6 '95 (12 setts) | Jan. 3, '96 (24 setts) | Feb. 14, '96 (32 setts) | Sept. 1, '96 (16 setts) | Sept. 26, '96 (32 setts)

Oct. 25, '95 (28 setts.) | Oct. 28, '95 (48 setts) | Nov. 27, '95 (24 setts) | Dec. 16, '95 (24 setts) | Feb. 12, '96 (32 setts) | July 31, '96 (32 setts) | Sept. 7, '96 (16 setts)

Continued on P. 104.

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Location of Comp. Stars for Circumpolar Variables by transits with square bar micrometer.

Name.	Book.	Page.
T Cassiop.	57	135.
S Cassiop.	57	136.
R Cassiop.	57	137.
S Cephei	57	140.
S Cassiop. (cor.)	57	144.
St T Persei.	57	145.
R Aurigae	57	147.
R Lyncis.	57	150.
R Ursæ Maj.	57	154.
T Ursæ Maj.	57	157.
S Boötis	57	160.
S Ursæ Maj.	57	163.
R Draconis.	57	166.
R Ursæ Min.	57	167.
T Cephei.	57	170.
R Draconis.	57	174.
R Cassiop.	57	176.
S Cygni.	57	177.

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Location of faint stars used in extending Photometric Scale to faint mags.

Circumpolar.

Desig:	Book.	Page.
7 Ursae Maj.	R. 66	170.
S Ursae Maj.	R. 66	183
R. Draconis.	R. 66	184
S. Persei.	R. 66	210
S. Bootis.	R. 66	219
R. Lyncis	R. 66	222.

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Rel. Est. of Comp. Stars for Circumpolar Variables.
(Exceptional Cases.)

Star.	Ac. star-no.	Cook.	Page.
δ Persei.	4 star.	R. 57.	p. 203.

Southern A. G. C. stars obs. with Phot. R.

A.G.C. 24407 Sept. 21, '94. 24 settings.
" 25157 Sept. 22, '94, 24 settings.
" 25157 Sept. 24, '94. 24 settings.
" 25157 Sept. 26, '94. 24 settings.
" 24407. Sept. 27, '94. 24 settings.
" 24407 Sept. 28, '94. 24 settings.

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Continued from P. 99.

Phot. Measts. of Variable Stars with Photometers R. + T. on East Equatorial.

1895-6.

Draig.

H.P. 899.	Nov. 27, '95 (16 setts.)					
	Dec. 16, '95 (104 setts.)	Dec. 19, '95 (100 setts.)	Dec. 22, '95 (80 setts.)	Jan 3, '96 (32 setts.)	Jan. 5, '96 (96 setts.)	Jan
Nell a Pa. (20:31 +17°8)	Dec. 14, '95 (96 setts.)	Dec. 17, '95 (132 setts.)	Dec. 20, '95 (32 setts.)	Dec. 31, '95 (256 setts.)	Jan. 4, '96 (32 setts.)	
o Ceti.	Jan. 30, '96 (16 setts.)	Feb. 10, '96 (16 setts.)	Feb. 16, '96 (32 setts.)	Feb. 22, '96 (16 setts.)	Feb. 25, '96 (16 setts.)	Feb
	Jan. 18, '96 (16 setts.)	Feb. 8, '96 (16 setts.)	Feb. 14, '96 (16 setts.)	Feb. 20, '96 (16 setts.)	Feb. 24, '96 (16 setts.)	
D.M. +59°2810	Jan. 30, '96 (16 setts.)	Mar. 21, '96 (16 setts.)				
	Jan. 18, '96 (16 setts.)	Mar. 10, '96 (16 setts.)	Mar. 27, '96 (16 setts.)			
U. Cephei.	Jan. 27, '96 (144 setts.)	Feb. 11, '96 (144 setts.)	Mar. 7, '96 (444 setts.)	Apr. 29, '96 (48 setts.)	May 27, '96 (80 setts.)	Oct
	Jan. 22, '96 (496 setts.)	Jan. 30, '96 (80 setts.)	Feb. 21, '96 (308 setts.)	Mar. 17, '96 (320 setts.)	May 25, '96 (80 setts.)	Jun
U. Pegasi.	Feb. 25, '96 (64 setts.)					
	Feb. 27, '96 (64 setts.)					
β Aquarii.	Feb. 25, '96 (96 setts.)					
	Apr. 22, '96 (32 setts.)	Apr. 30, '96 (32 setts.)	May 11, '96 (32 setts.)	May 29, '96 (32 setts.)	June 10, '96 (64 setts.) (32 setts.)	
Sagittæ.	Apr. 15, '96 (32 setts.)	Apr. 24, '96 (32 setts.)	May 7, '96 (64 setts.)	May 16, '96 (32 setts.)	June 4, '96 (32 setts.)	Jun
Pisces.	Apr. 30, '96 (32 setts.)	June 10, '96 (32 setts.)	June 23, '97 (32 setts.)			
	Apr. 22, '96 (32 setts.)	May 11, '96 (32 setts.)	June 15, '97 (32 setts.)	Aug. 13, '97 (32 setts.)		
R.M. +15°3317 -27	May 13, '96 (32 setts.)					
Imagine near 2840.	July 23, '96 (48 setts.)					
	Sept. 30, '96 (366 setts.)	Oct. 24, '96 (384 setts.)	Nov. 22, '96 (336 setts.)	July 1, '97 (224 setts.)	July 30, '97 (208 setts.)	
W. Delphini.	Sept. 25, '96 (48 setts.)	Oct. 22, '96 (80 setts.)	Oct. 26, '96 (80 setts.)	Dec. 11, '96 (32 setts.)	July 30, '97 (112 setts.)	Sep
	Nov. 24, '96 (48 setts.)	Dec. 5, '96 (16 setts.)	Dec. 12, '96 (64 setts.)	Dec. 24, '96 (32 setts.)	Jan. 11, '97 (28 setts.)	Jan
o Ceti.	Nov. 11, '96 (32 setts.)	Nov. 27, '96 (32 setts.)	Dec. 10, '96 (16 setts.)	Dec. 17, '96 (32 setts.)	Jan. 8, '97 (32 setts.)	Jan
R.S. Cygni.	Dec. 5, '96 (16 setts.)					
	Jan. 23, '97 (32 setts.)	Sept. 30, '97 (32 setts.)				
T. Andromedæ.	Dec. 31, '96 (16 setts.)	Sept. 18, '97 (32 setts.)				
	Feb. 10, '97 (64 setts.) (64 setts.)	Feb. 13, '97 (32 setts.) (64 setts.)	Feb. 19, '97 (224 setts.)	May. 10, '97 (304 setts.)	Mar. 30, '97 (80 setts.)	Ap
S. Cancri.	Feb. 9, '97 (48 setts.)	Feb. 11, '97 (32 setts.) (64 setts.)	Feb. 18, '97 (48 setts.)	Feb. 28, '97 (240 setts.)	Mar. 29, '97 (304 setts.)	Ma
	Mar. 4, '97 (48 setts.)	Mar. 11, '97 (32 setts.)	Mar. 15, '97 (160 setts.)			
o Ceti.	Feb. 23, '97 (32 setts.)	Mar. 10, '97 (32 setts.)	Mar. 13, '97 (32 setts.)	Sept. 15, '97 (32 setts.)		
S. Cephei.	Mar. 31, '97 (32 setts.)	Apr. 2, '97 (32 setts.)	Apr. 12, '97 (32 setts.)	Apr. 19, '97 (32 setts.)	Apr. 22, '97 (16 setts.)	Ap
	Mar. 30, '97 (32 setts.)	Apr. 1, '97 (32 setts.)	Apr. 3, '97 (32 setts.)	Apr. 17, '97 (32 setts.)	Apr. 20, '97 (32 setts.)	Ap
U. Cephei.	Apr. 21, '97 (160 setts.)	June 11, '97 (160 setts.)	June 21, '97 (160 setts.)			
	Apr. 16, '97 (272 setts.)	May 22, '97 (160 setts.)	June 16, '97 (320 setts.)	Sept. 21, '97 (160 setts.)		
S. Cephei.	May 31, '97 (32 setts.)	June 2, '97 (32 setts.)	June 14, '97 (32 setts.)	June 18, '97 (32 setts.)	June 22, '97 (32 setts.)	Jun
	May 29, '97 (32 setts.)	June 1, '97 (32 setts.)	June 12, '97 (32 setts.)	June 15, '97 (32 setts.)	June 21, '97 (32 setts.)	Jun
Sagittæ.	June 22, '97 (32 setts.)	June 24, '97 (32 setts.)	June 26, '97 (32 setts.)	July 7, '97 (32 setts.)	July 15, '97 (32 setts.)	Jul
	June 21, '97 (32 setts.)	June 23, '97 (32 setts.)	June 25, '97 (32 setts.)	July 6, '97 (32 setts.)	July 8, '97 (48 setts.)	Jun
U. Cephei.	Sept. 8, '97 (32 setts.)	Sept. 10, '97 (32 setts.)	Sept. 14, '97 (32 setts.)			
	July 31, '97 (32 setts.)	Sept. 9, '97 (32 setts.)	Sept. 13, '97 (32 setts.)			
S. Cygni.	Sept. 28, '97 (64 setts.)	Sept. 29, '97 (48 setts.)				
	Sept. 27, '97 (336 setts.)	Sept. 25, '97 (48 setts.)	Sept. 30, '97 (64 setts.)			

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Jan. 11, '96 (64 setts, comp. stars)
Jan. 6, '96 (32 setts)
Mar. 5 '96 (16 setts.)
Feb. 27, '96 (16 setts)

Mar. 7, '96 (176 setts, comp. stars)
Jan. 14 '96 (48 setts)
Mar. 12, '96 (32 setts.)
Mar. 9, '96 (16 setts)

June 2, 96 (48 setts)
May 4, '96 (172 setts)
Mar. 21, '96 (16 setts)
Mar. 14, '96 (16 setts)

June 26, '96 (48 setts)
June 16, '96 (32 setts)
Sept. 7, '96 (16 setts)
Sept. 4, '96 (16 setts.)

Sept. 1, '96 (448 setts)
July 25, '96 (400 setts)
Oct. 19. (16 setts.)
Sept. 23, '96 (16 setts.)

Sept. 11, '96 (452 setts)
Sept. 7, '96 (80 setts.)
Nov. 2, '96 (16 setts)
Oct. 22, 96. (16 setts

Oct. 26, 96. (240 setts)
June 23, '96 (80 setts)

Nov. 16, '96 (160 setts.)
Oct. 27, '96 (304 setts)

Dec. 19, 96 (80 setts)
Dec. 17, '96 (80 setts)

Jan. 30, 97 (160 setts)
Jan. 25, '97 (240 setts)

Feb. 9, '97 (160 setts)
Feb. 4, '97 (160 setts)

Feb. 24, 97 (160 setts)
Feb. 19, '97 (160 setts)

June 30, '96 (32 setts)
June 18, '96 (32 setts)

July 21, '96 (32 setts)
July 9, '96 (48 setts)

July 31, 96 (96 setts)
July 30, 96. (64 setts)

June 12, 97 (24 setts)
May 29, '97 (32 setts)

June 15, 97 (32 setts)
June 14, 97 (32 setts)

June 18, '97 (48 setts)
June 16, '97 (32 setts)

Sept. 11, '97 (400 setts)
Jan. 16, '97 (32 setts)
Jan. 12, '97 (32 setts)

Jan. 19, 97 (32 setts)
Jan. 18, '97 (32 setts)

Jan. 29, 97 (64 setts)
Jan. 26, '97 (32 setts)

Feb. 5, '97 (32 setts)
Feb. 3, '97 (32 setts)

Feb. 11, 97 (32 setts)
Feb. 10, '97 (19 setts)

Feb. 16, 97 (32 setts)
Feb. 13, '97 (32 setts)

Apr. 12, 97 (80 setts)
Mar. 31, '97 (80 setts)

Apr. 26, 97 (96 setts)
Apr. 17, 97 (208 setts)

May 25, 97 (224 setts)
May 6, 97 (400 setts)

Apr. 28, 97 (32 setts.)
Apr. 24, '97 (32 setts.)

Apr. 30, 97 (32 setts.)
Apr. 29, '97 (32 setts.)

May 5, '97 (32 setts.)
May 4, 97 (32 setts.)

May 8, 97 (32 setts)
May 7, 97 (32 setts.)

May 18, '97 (32 setts.)
May 17, '97 (32 setts.)

May 22, 97 (32 setts)
May 19, '97 (32 setts)

June 24, 97 (32 setts)
June 23, '97 (32 setts)
July 21, '97 (32 setts)
July 16, '97 (64 setts)

June 26, 97 (32 setts)
June 25, '97 (32 setts)
July 31, '97 (48 setts)
July 30, '97 (8 setts)

June 30, 97 (32 setts)
June 28, '97 (32 setts.)
Sept. 2, 97 (32 setts.)
Aug. 13, 97 (48 setts.)

July 9, 97 (32 setts)
July 8, 97 (32 setts)
Sept. 6, 97 (32 setts)
Sept. 3, 97 (32 setts)

July 16, 97 (32 setts)
July 15, '97 (32 setts)
Sept. 14, '97 (64 setts)
Sept. 9, 97 (16 setts.)

July 30, 97 (32 setts)
July 21, '97 (32 setts)
Sept. 17, 97 (16 setts)
Sept. 15, '97 (32 setts)

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" "	60	164.			" e, f, g, h,
U Cygni.	60	178.			" o, p, q, r, s.
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New Var. Approx. (21h 37m.0 +42° 55')	84	122			" var.

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Eclipses of Jupiter's Satellites.

Date	W.M.T.	East. Time.	Sat.	Rec.	
1892.					
Jan. 5.	7 20 38	7h 20m 50s.	II	Re.	16 P. obs. Ft. rec.
" 7	8 47 37	8 55 49	I	Re.	16 Ft. obs. Howe rec. Powe read.
" 16	5 11 42	5 19 54	I	Re.	17 Ft. obs. Atwill rec.
" 23	7 6 54	7 15 6	I	Re.	18 Ft. obs. Howe rec.
~~" 30~~	~~9 2 1~~	~~9 10 13~~	~~I~~	~~Re.~~	Rej. Invisible.
Feb. 6	7 12 9	7 20 21	II	Re.	1 P. obs. Ft. rec.
" 8	5 25 49	5 34 1	I	Re.	Cloudy.
" 9	5 44 59	5 53 11	IV	Dis.	14 P. obs. Ft. rec.
" 15	7 20 44	7 28 56	I	Re.	Too low.
Apr. 20	16 49 11	16 57 23	I	Dis.	" "
May. 6	15 6 3	15 14 15	I	Dis	" "
" 21	16 43 49	16 52 1	III	Re.	Cloudy.
" 29	15 16 45	15 24 57	I	Dis.	"
June 9	14 34 2	14 42 14	II	Dis.	"
" 21	15 27 10	15 35 22	I	Dis.	"
July 3	14 16 30	14 24 42	III	Dis.	"
" "	16 42 47	16 50 59	III	Re.	Sunrise.
" 4	11 40 40	11 48 52	II	Dis.	On horizon.
" "	14 12 36	14 20 48	II	Re.	Cloudy.
" 7	13 43 40	13 51 52	I	Dis.	1 Ft. obs. Powe rec.
X " 11	14 16 31	14 24 43	II	Dis.	2 Ft. obs. Powe rec.
" 14	15 37 41	15 45 53	I	Dis.	Cloudy.
" 23	12 0 13	12 8 25	I	Dis.	3 Ft. obs., Davis rec.
" 29	11 15 37	11 23 49	II	Re.	Cloudy.
" 30	13 54 19	14 2 31	I	Dis.	"
August 5	11 20 55	11 29 7	II	Dis.	
" "	13 50 26	13 58 38	II	Re.	
" 6	15 48 28	15 56 40	I	Dis.	
" 8	10 17 4	10 25 16	I	Dis	

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Date. 1892.	W. M. T.	East. Time.	Sat.	Phe.	
Aug. 8.	10h 22m 12s.	10 30 24	III.	Dis.	
" "	12 41 19	12 49 31	III	Re.	
" 12	13 56 10	14 4 22	II	Dis.	
" "	16 25 10	16 33 22	II	Re.	
" 15	12 11 19	12 19 31	I	Dis.	
" "	14 23 40	14 31 52	III	Dis.	
" "	16 41 20	16 49 32	III	Re.	
" 19	16 31 20	16 39 32	II	Dis.	
" 22	14 5 38	14 13 50	I	Dis.	
" 29	16 0 3	16 8 15	I	Dis.	
" 31	10 28 36	10 36 48	I	Dis.	
Sept. 6	10 59 3	11 7 15	II	Dis.	4 W. obs. Davis rec.
" 7	12 23 6	12 31 18	I	Dis.	5 W. obs. Fowle rec.
" 13	8 41 48	8 50 0	III	Re.	P Cloudy.
" 13	13 34 8	13 42 20	II	Dis.	"
" 14	14 17 48	14 26 0	I	Dis.	"
" 16	8 46 32	8 54 44	I	Dis.	6 W. obs. Davis rec.
" 20	10 31 34	10 39 46	III	Dis.	P P. obs. Davis rec.
" "	12 42 0	12 50 12	III	Re.	P P. " Fowle rec.
" "	16 9 14	16 17 26	II	Dis.	7 W. " Fowle "
" 21	16 12 34	16 20 46	I	Dis.	W. " " "
" 23	10 41 21	10 49 33	I	Dis.	P Cloudy.
" 27	14 33 54	14 42 6	III	Dis.	W "
" 30	12 36 17	12 44 29	I	Dis.	W W. obs. P
Oct. 1	8 1 59	8 10 11	II	Dis.	P P. obs. W. rec.
" 2	7 5 0	7 13 12	[redacted]	Dis.	P P. " Davis "
" 7	14 31 20	14 39 32	I	Dis.	W Cloudy.
" 8	10 37 0?	10 45 12?	II	Dis.	P "
" 9	9 0 5	9 8 17	I	Dis.	P "

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Date. 1892.	W.M.T.	East Time.	Sat.	Phe.		
Oct. 15	15 37 31	15 45 43	II	Re.	W	Cloudy.
" 16	13 4 38	13 12 50	I	Re.	W	"
" 18	7 33 20	7 41 32	I	Re.	P	"
" 23	14 59 55	15 8 7	I	Re.	W	Missed
" 25	9 28 49	9 37 1	I	Re.	P	Cloudy.
" 26	7 30 13	7 38 25	II	Re.	W P	"
" "	8 46 37	8 54 49	III	Re.	P	"
Nov. 2	10 5 33	10 13 45	II	Re.		"
" "	10 45 35	10 53 47	III	Dis.		"
" "	12 47 29	12 55 41	III	Re.		"
" 3	5 53 2	6 1 14	I	Re.		Missed.
" 8	13 19 46	13 27 58	I	Re.		Cloudy.
" 9	12 41 2	12 49 14	II	Re.		"
" "	14 48 5	14 56 17	III	Dis.		"
" 10	7 48 36	7 56 48	I	Re.		"
" 15	15 15 24	15 23 36	I	Re.		"
" 16	15 16 40	15 24 52	II	Re.		Just below horizon.
" 17	9 44 15	9 52 27	I	Re.	P 5	P. obs. Fr. rec.
" 24	11 39 58	11 48 10	I	Re.	P 6	P. obs. Fr. rec.
" 26	6 8 57	6 17 9	I	Re.		Cloudy.
" 27	7 10 29	7 18 41	II	Re.		"
Dec. 1	13 35 45	13 43 57	I	Re.		"
" 3	8 4 45	8 12 57	I	Re.		P. obs. Fr. rec.
" 4	9 46 33	9 54 45	II	Re.		Cloudy.
" 8	7 0 23	7 8 35	III	Dis.		"
" "	8 55 28	9 3 40	III	Re.		"
" 10	10 0 35	10 8 47	I	Re.	P 7	P. obs. Fr. rec.
" 11	12 22 46	12 30 58	II	Re.	W 10	Fr. obs. Last rec.
" 15.	11 3 5	11 11 17	III	Dis.	W 11	Fr. obs. Last rec.

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Date.	W.M.T.	East. Time.	Sat.	Rte.	
1892					
Dec. 15	12 √6 √2	13 √ 4	III	Re.	Too low.
" 17	11 √6 26	12 4 38	I	Re.	Cloudy.
" 19	6 25 22	6 33 34	I	Re.	"
" 26	8 21 14	8 29 26	I	Re.	No recorder.
" 29	6 √4 √	7 2 17	II	Re.	P. obs. Fr. rec.
1893.					
Jan. 2	10 17 4	10 25 16	I	Re.	P. obs. Fr. rec.
" √	7 10 0	7 18 12	II	Dis.	Cloudy.
" "	9 30 √2	9 39 4	II	Re.	"
" 11	6 41 √√	6 √0 7	I	Re.	P. obs. Fr. rec.
" 12	9 47 14	9 55 26	II	Dis. w	Cloudy.
" 18	8 37 42	8 45 54	I	Re.	"
" 20	7 18 16	7 26 28	III	Dis. w	Fr. obs. Clymer rec.
" "	9 √ 42	9 ~~23~~ 13 54	III	Re. w	" " " "
" 30	6 40 38	6 48 50	II	Re.	Cloudy.
Feb. 3	6 √7 56	7 6 8	I	Re.	"
" 10	8 53 30	9 1 42	I	Re.	"
" 26	7 13 14	7 21 26	I	Re.	Missed.
Mar. 3	6 30 1	6 38 13	II	Re.	Cloudy.
" 4	7 33 29	7 41 41	III	Dis.	"
" 21	7 27 30	7 35 42	I	Re.	Too low.
Alt. 6.0 June 10	15 16 √8	15 25 10	I	Dis.	Cloudy.
" 12	15 √4 32	16 2 44	III	Dis.	"
July 3	15 27 10	15 35 22	I	Dis.	"
" √	14 15 24	14 23 36	II	Dis.	"
" 18	13 24 √3	13 33 5	III	Re.	"
" 19	13 43 12	13 √1 24	I	Dis.	Fr. obs. Fowle rec.
" 25	15 √7 19	16 5 31	III	Dis.	Cloudy.
" 26	15 36 √7	15 45 9	I	Dis.	"

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Date	W.M.T.	East. Time.	Sat.	Rle.	
1893.					
July 30.	13 39 26	13 47 38	II	Re.	
August 6	14 1 18	14 9 30	II	Dis.	
" "	16 15 45	16 23 57	II	Re.	
" 11	13 52 50	14 1 2	I	Dis.	
" 13	16 37 35	16 45 47	II	Dis.	
" 18	15 46 35	15 54 47	I	Dis	
Alt. 3.° " 24	10 45 33	10 53 45	II	Re.	
" 27	12 8 52	12 17 4	I	Dis.	
" 30	11 57 46	12 5 58	III	Dis.	
" "	13 25 53	13 34 5	III	Re.	
" 31	11 7 14	11 15 26	II	Dis.	
" "	13 21 20	13 29 32	II	Re.	
Sept. 3	14 2 41	14 10 53	I	Dis.	Cloudy.
" 6	15 57 46	16 5 58	III	Dis.	Missed.
" 7	13 42 57	13 51 9	II	Dis.	Fr. obs. Fr. rec.
" "	15 56 59	16 5 11	II	Re.	" " " "
" 10	15 56 33	16 4 45	I	Dis.	" " " "
" 12	10 25 0	10 33 12	I	Dis.	P. obs. Fr. rec.
" 14	16 18 31	16 26 43	II	Dis.	Cloudy.
" 19	12 18 56	12 27 8	I	Dis.	Fr. obs. Clymer rec.
" 25	10 25 38	10 33 50	II	Re.	Cloudy.
" 26	14 12 57	14 21 9	I	Dis.	Fr. obs., Clymer rec.
Oct. 2	10 46 59	10 55 11	II	Dis.	Cloudy.
" 5	9 28 27	9 36 39	III	Re.	Fr. obs. Jansen rec.
" "	10 35 39	10 43 51	I	Dis.	P. obs. Fr. rec.
" 9	13 22 8	13 30 20	II	Dis.	Fr. obs. Clymer rec.
" 12	11 58 59	12 7 11	III	Dis.	" " " "
" "	12 29 54	12 38 6	I	Dis	" " " "
" "	13 28 47	13 36 59	III	Re.	" " " "

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Date 1893.	W.M.T.	East. Time.	Sat.	Phe.		
Oct. 16.	15 57 14	16 5 26	II	Dis.		Omitted.
" 19	14 24 16	14 32 28	I	Dis.		Cloudy.
" 19	15 59 10	16 7 22	III	Dis.		"
" 19	17 29 25	17 37 37	III	Re.		"
" 21	8 52 49	9 1 1	I	Dis.		P. obs. Tr. rec.
" 26	16 18 46	16 26 58	I	Dis.		Cloudy.
" 27	7 49 47	7 57 59	II	Dis.		"
" 28	10 47 21	10 55 33	I	Dis.		Tr. obs. Jawson rec.
Nov. 2.	18 13 24	18 21 36	I	Dis.		Sunrise.
" 3	10 24 49	10 33 1	II	Dis.		P. obs. Tr. rec.
" 4	12 42 0	12 50 12	I	Dis		Cloudy.
" 6	7 10 46	7 18 58	I	Dis.	P	P. obs. Tr. rec.
" 10	12 59 52	13 8 4	II	Dis.	W	No recorder.
" 11	14 36 49	14 45 1	I	Dis.	W	Cloudy.
" 13	9 5 36	9 13 48	I	Dis.		"
" 17	8 2 20	8 10 32	III	Dis.	W	"
" "	9 34 58	9 43 10	III	Re.	W	"
" 20	13 8 36	13 16 48	I	Re.	W	Tr. obs. Clymer rec.
" 21	7 6 28	7 14 40	II	Re.		Cloudy.
" 22	7 37 20	7 45 32	I	Re.		Tr. obs. Jawson rec.
" 24	13 36 16	13 44 28	III	Re.	W	Tr. obs. Clymer rec.
" 27	15 3 47	15 11 59	I	Re.	W	Cloudy.
" 28	9 41 40	9 49 52	II	Re.		P. obs. Tr. rec.
" 29	9 32 33	9 40 45	I	Re.		Cloudy.
Alt. 7.° Dec. 4	16 59 6	17 7 18	I	Re.	W	Omitted.
" 5	12 16 57	12 25 9	II	Re.	W	Cloudy.
" 6	11 27 54	11 36 6	I	Re.	W	"
" 8	5 56 49	6 5 1	I	Re.		"
" 12	14 52 19	15 0 31	II	Re.	W	Omitted.

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Date	W.M.T.	East. Time	Sat.	Phe.		
1893						
Dec 13	13 23 23	13 31 35	I	Re.	W	Fr. obs. Clymer rec.
" 15	7 52 20	8 0 32	I	Re.		Cloudy.
" 16	4 10 2	4 18 14	II	Re.		"
" 20	15 18 58	15 27 10	I	Re.	W	Fr. obs. Clymer rec.
" 22	9 47 56	9 56 8	I	Re.		Cloudy.
" 23	4 7 23	4 15 35	III	Dis.		Omitted. Not taken.
" "	5 43 56	5 52 8	III	Re.		Too much moisture. "
" "	6 45 32	6 53 44	II	Re.		Fr. obs. Jewson rec.
" 24	4 16 47	4 24 59	I	Re.		Omitted.
" 29	11 43 39	11 51 51	I	Re.	W	Fr. obs. Clymer rec.
" 30	8 8 44	8 16 56	III	Dis.		Cloudy.
" "	9 21 7	9 29 19	II	Re.		"
" "	9 46 12	9 54 24	III	Re.		"
" 31	6 12 31	6 20 43	I	Re.		Omitted.
1894						
Jan. 5	13 39 26	13 47 38	I	Re.		Cloudy.
" 6	11 56 49	12 5 1	II	Re.		"
" "	12 10 16	12 18 28	III	Dis.		"
" "	13 48 44	13 56 56	III	Re.		"
" 7	8 8 18	8 16 30	I	Re.		Omitted.
" 13	12 17 36	12 25 48	II	Dis.		Cloudy.
" 14	10 4 10	10 12 22	I	Re.		Omitted.
" 21	12 0 4	12 8 16	I	Re.		"
" 23	6 29 5	6 37 17	I	Re.		" (Sunday)
" 24	6 26 30	6 34 42	II	Re.		Cloudy.
" 30	8 25 0	8 33 12	I	Re.		Fr. obs. Jewson rec.
" 31	6 47 2	6 55 14	II	Dis.		Fr. obs. Waite. rec.
" "	9 2 33	9 10 45	II	Re.		Fr. obs. Jewson rec.

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Date 1894	W.M.T.			East Time.				Sat.	Rle.	
Feb. 4	√	57	33	6	5	45	III	Re.	Cloudy.
" 6	10	20	√4	10	29	6	I	Re.	Tr. obs. Jauson rec.
" 7	9	22	√7	9	31	9	II	Dis.	Cloudy.
" "	11	38	42	11	46	54	II	Re.	Tr. obs. Clymer rec.
" 11	8	16	54	8	25	6	III	Dis.	Cloudy.
" "	10	0	35	10	8	47	III	Re.	"
" 14	11	58	√7	12	7	9	II	Dis.	Cloudy.
" 15	6	45	43	6	√3	√√	I	Re.	"
" 21	8	41	34	8	49	46	I	Re.	"
" 25	6	9	33	6	17	45	II	Re.	"
Mar. 1	10	37	21	10	45	33	I	Re.	Cloudy.
" 4	6	29	22	6	37	34	II	Dis.	Cloudy.
" "	8	46	4	8	54	16	II	Re.	"
" 10	7	2	4	7	10	16	I	Re.	Tr. obs. Jauson rec.
" 11	9	√	42	9	13	54	II	Dis.	Cloudy.
" 17	8	√7	43	9	5	55	I	Re.	"
" 26	8	22	√7	8	31	9	III	Dis.	
Apr. 2	7	17	33	7	25	45	I	Re.	Tr. obs. Tracts rec.
" 5	8	31	34	8	39	46	II	Re.	Tr. obs. Davidson "
Alt. 2.√ " 9	9	12	√4	9	21	6	I	Re.	Tried but could not take eclipse. Too low.
" 25	7	32	5	7	40	17	I	Re.	Tr. obs. Jacobson rec.
July 6	16	14	√1	16	23	3	II	Dis.	Cloudy.
August 7.	15	28	8	15	36	20	I	Dis.	
" "	16	2	9	16	10	21	II	Dis.	
" 9	14	34	19	14	42	31	III	Re.	
" 16	16	17	2	16	25	14	III	Dis.	
" 23	13	43	28	13	√1	40	I	Dis.	
" 30	15	36	√3	15	45	5	I	Dis.	

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	Date. 1894.	U. M. T.	East. Time.	Dist.	Phe.	
	Sept. 1.	13 10 8.	13 18 20	II	Dis.	Cloudy.
	" "	15 36 34	15 44 46	II	Re.	"
Alt. 4.5°	" 8	11 58 36	12 6 48	I	Dis.	"
	" "	15 46 37	15 54 49	II	Dis.	"
	" 15	13 51 58	14 0 10	I	Dis.	"
	" 21	12 10 18	12 18 30	III	Dis.	Fr. obs. Clymer rec.
	" "	14 34 30	14 42 42	III	Re.	" " " "
	" 22	15 45 20	15 53 32	I	Dis.	Sunday.
	" 26	12 45 24	12 53 36	II	Re.	Cloudy.
	" 28	16 8 30	16 16 42	III	Dis.	"
	Oct. 1	12 7 2	12 15 14	I	Dis.	Fr. obs. Clymer rec.
	" 3	12 53 42	13 1 54	II	Dis.	Cloudy.
	" "	15 21 45	15 29 57	II	Re.	"
	" 8	14 0 25	14 8 37	I	Dis.	"
	" 10	15 29 32	15 37 44	II	Dis.	Omitted (sickness)
	" "	17 57 56	18 6 8	II	Re.	" "
	" 15	15 53 52	16 2 4	I	Dis.	Cloudy.
	" 17	10 22 18	10 30 30	I	Dis.	Fr. obs. Cram rec.
	" 22	17 47 22	17 55 34	I	Dis.	Cloudy.
	" 24	12 15 48	12 24 0	I	Dis.	"
	" 27	10 34 19	10 42 31	III	Re.	Fr. obs. Cram rec.
	" 31	14 9 23	14 17 35	I	Dis.	Cloudy.
	Nov. 2	8 37 46	8 45 58	I	Dis.	Fr. obs. Cram rec.
	" 3	12 2 7	12 10 19	III	Dis.	Sunday
	" 4	14 34 19	14 42 31	III	Re.	"
	" 4	12 33 47	12 41 59	II	Dis.	"
	" 7	16 3 4	16 11 16	I	Dis.	Cloudy.
	" 9	10 31 27	10 39 39	I	Dis.	"
	" 10	16 0 32	16 8 44	III	Dis.	Sunday omitted.
	" 11	15 9 10	15 17 [illegible]	II	Dis.	"

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Date	U. M. T.	East Time	Sat.	Phe.	
1894.					
Nov. 14	17 √6 √1	18 √ 3	I	Dis.	Daylight.
" 16	12 25 17	12 33 29	I	Dis.	Fr. obs. Clymer rec.
" 18	17 44 27	17 52 39	II	Dis.	Cloudy.
Mt. 3.1 " 22	7 2 14	7 10 26	II	Dis.	Too low.
" 23	14 19 13	14 27 25	I	Dis.	Cloudy.
" 25	8 47 45	8 √5 57	I	Dis.	"
" 29	9 37 23	9 45 35	II	Dis.	"
" 30	16 13 18	16 21 30	I	Dis.	Cloudy.
Dec. 2	10 41 √2	10 √0 4	I	Dis.	"
" 6	12 12 29	12 20 41	II	Dis.	Fr. obs. Clymer rec.
" 7	18 7 31	18 15 43	I	Dis.	Cloudy.
" 9	7 √7 1	8 √ 13	III	Dis	Cloudy.
" "	12 36 8	12 44 20	I	Dis.	"
" 11	7 4 40	7 12 52	I	Dis.	"
" 13	14 47 33	14 55 45	II	Dis.	Fr. obs. Clymer rec.
" 16	11 √6 21	12 4 33	III	Dis.	Cloudy.
" 16	14 30 33	14 38 45	I	Dis.	"
" 18	8 59 6	9 7 18	I	Dis.	Fr. obs. Clymer rec.
" 20	17 22 35	17 30 47	II	Dis.	Very low and in fog.
" 24	6 40 3	6 48 15	II	Dis.	Cloudy.
" 25	13 √ 42	13 13 √4	I	Re.	Fr. obs. Clymer rec.
" 27	7 34 28	7 42 40	I	Re.	Fr. obs. Crawe rec.
" 31	9 √5 5	9 23 17	II	Dis	Cloudy.

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Date. 1895.	W.M.T.			East. Time			Sat.	Phe.	
Jan. 1.	15	0	36	15	8	48	I	Re.	Alarm failed.
" 3.	9	29	25	9	37	37	I	Re.	Cloudy.
" 7.	14	22	36	14	30	48	II	Re.	"
" 8.	16	55	38	17	3	50	I	Re.	"
" 10.	11	24	29	11	32	41	I	Re.	"
" 12.	5	53	14	6	1	26	I	Re.	"
" 14.	6	39	32	6	47	44	III	Re.	H. obs. Clymer rec.
" 17.	13	19	42	13	27	54	I	Re.	H. obs. " "
" 18.	6	15	37	6	23	49	II	Re.	Cloudy.
" 19.	7	48	29	7	56	41	I	Re.	H. obs. Crane rec.
" 21.	7	54	35	8	2	47	III	Dis.	Cloudy.
" "	10	40	48	10	49	00	III.	Re.	"
" 24.	15	15	2	15	23	14	I.	Re.	Clymer sick - omitted.
" 25.	8	50	58	8	59	10	II.	Re.	H. obs. Crane rec.
" 26.	9	43	51	9	52	3	I	Re.	Cloudy.
" 28.	11	55	19	12	3	31	III	Dis.	"
" "	14	42	45	14	50	57	III	Re.	"
Feb. 1.	11	26	19	11	34	31	II.	Re.	"
" 2.	11	39	20	11	47	32	I.	Re.	No recorder.
" "	14	17	10	14	25	22	IV.	Dis.	Sunday. No recorder.
" "	15	28	38	15	36	50	IV.	Re.	" " "
" 4.	6	8	16	6	16	28	I	Re.	Cloudy.
" 8.	14	1	41	14	9	53	II	Re.	"
" 9.	13	34	54	13	43	6	I	Re.	
" 11.	8	3	51	8	12	3	I	Re.	H. obs. Crane rec.
" 18.	9	59	30	10	7	42	I	Re.	Cloudy.
" 19.	5	54	46	6	2	58	II	Re.	"

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Date. 1895.	W. M. T.			East. Time.			Sat.	Rec.	
Feb. 19.	8	15	6	8	23	18	IV.	Dis.	Tr. obs. Cram rec.
" ".	9	50	40	9	58	52	IV.	Rec.	Cloudy.
" 25.	11	55	13	12	3	25	I.	Rec.	"
" 26.	6	48	2	6	56	14	III.	Rec.	Tr. obs. Cram rec.
" ".	8	30	10	8	38	22	II.	Rec.	" " "
" 27.	6	24	4	6	32	16	I,	Rec.	" " "
Mar. 5.	7	56	28	8	4	40	III.	Dis.	" " "
" "	10	49	47	10	57	59	III.	Rec.	" " "
" "	11	5	35	11	13	47	II.	Rec.	" " "
" 6.	8	19	49	8	28	1	I	Rec.	Cloudy.
" 12.	11	56	57	12	5	9	III.	Dis.	"
" 13.	10	15	34	10	23	46	I,	Rec.	"
" 20.	12	11	19	12	19	31	I.	Rec.	———
" 22.	6	40	19	6	48	31	I.	Rec.	———
" 29.	8	36	2	8	44	14	I.	Rec.	Cloudy.
" 30.	8	9	42	8	17	54	II.	Rec.	Tr. obs. Cram rec.
Apr. 5.	10	31	44	10	39	56	I.	Rec.	Tr. obs. Cram. rec.
" 6.	10	45	14	10	53	26	II.	Rec.	No recorder.
" 10.	6	57	29	7	5	41	III.	Rec.	Missed.
" 14.	6	56	14	7	4	26	I.	Rec.	Cloudy.
" 17.	7	58	34	8	6	46	III.	Dis.	Tr. obs. Cram rec.
" ".	10	58	31	11	6	43	III.	Rec.	Tr. obs. Cram rec.
" 21.	8	51	47	8	59	59	I.	Rec.	Sunday.
" 27.	8	21	46	8	29	58	IV.	Dis.	Cloudy.
May 1.	7	49	54	7	58	6	II.	Rec.	Tr. obs. Cram rec.
" 14.	9	6	51	9	15	3	I,	Rec.	Cloudy.

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1891phae.proj...461w

Date. 1895.	W. M. T.	East. Time.	Sat.	Phe.	
Aug. 19.	15 6 30	15 14 42	I.	Dis.	Vacation.
Sept. 2.	14 37 28	14 45 40	II.	Dis.	
" 7.	15 43 8	15 51 20	III.	Dis.	Cloudy.
" 9.	17 13 46	17 21 58	II.	Dis.	
" 11.	15 15 21	15 23 33	I	Dis.	Cloudy.
" 18.	17 8 38	17 16 50	I	Dis.	"
" 27.	13 30 10	13 38 22	I	Dis.	
Oct. 4.	14 21 21	14 29 33	II.	Dis.	Cloudy.
" "	15 23 20	15 31 32	I.	Dis.	"
" 11.	16 57 38	17 5 50	II.	Dis.	"
" "	17 16 26	17 24 38	I	Dis.	"
" 13.	14 55 2	15 3 14	III.	Re.	"
" 20.	13 37 45	13 45 57	I.	Dis.	"
" "	15 31 10	15 39 22	III.	Dis.	"
" 27.	15 30 48	15 39 00	I.	Dis.	"
" 28.	14 34 16	14 42 28	IV.	Dis.	Fr. obs. Colour rac.
" 29.	11 27 36	11 35 48	II.	Dis.	Cloudy
Nov. 3.	17 23 50	17 32 2	I.	Dis.	Fr. obs. Colour rac.
" 5.	11 52 6	12 00 18	I.	Dis.	Cloudy.
" "	14 3 45	14 11 57	II.	Dis.	"
" 12.	13 45 9	13 53 21	I.	Dis.	Out of town. Omitted.
" "	16 39 51	16 48 3	II.	Dis.	" " " "
" 14.	12 45 39	12 53 51	IV.	Re.	Cloudy. do.
" 18.	10 46 48	10 55 00	III	Re.	Omitted for Var. Star.
" 19.	15 38 15	15 46 27	I.	Dis.	Cloudy
" 21.	10 6 31	10 14 43	I.	Dis.	Fr. obs. Com rac.

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Date.	W. M. T.			East. Time.			Sat.	Phe.	
1895.									
Nov. 25.	11	20	36	11	28	48	III.	Dis.	Cloudy.
" "	14	45	46	14	53	58	III.	Re.	"
" 26.	17	31	23	17	39	35	I.	Dis.	"
" 28.	11	59	40	12	7	52	I.	Dis.	W. obs. Waite rec.
" 30.	11	10	20	11	18	32	II.	Dis.	Omitted for Variable.
Dec. 2.	15	18	24	15	26	36	III.	Dis.	W. obs. Waite rec.
" ".	18	44	7	18	52	19	III.	Re.	Daylight.
" 5.	13	52	54	14	1	6	I	Dis.	Cloudy.
" 7.	13	46	14	13	54	26	II.	Dis.	"
" 12.	15	46	12	15	54	24	I	Dis.	"
" 14.	10	14	35	10	22	47	I	Dis.	W. obs. Cram. rec.
" "	16	22	4	16	30	16	II	Dis.	Omitted. Sunday.
" 19.	17	39	37	17	47	49	I.	Dis.	Omitted for S. C. v2 v3,
" 21.	12	8	2	12	16	14	I.	Dis.	Cloudy.
" 25.	8	15	23	8	23	35	II.	Dis.	"
" 28.	14	1	36	14	9	48	I.	Dis.	"
" 30.	8	29	59	8	38	11	I.	Dis.	"
1896.									
Jan. 1.	10	51	9	10	59	21	II.	Dis.	W. obs. Cram rec.
" 3.	14	33	28	14	41	40	IV.	Dis.	W. obs. Waite rec.
" 4.	15	55	18	16	3	30	I.	Dis.	Sunday
" 6.	10	23	43	10	31	55	I.	Dis.	W. obs. Rich rec.
" 7.	11	9	3	11	17	15	III.	Dis.	Cloudy.
" 8.	13	26	53	13	35	5	II	Dis.	"
" 11.	17	49	9	17	57	21	I.	Dis.	Sunday.
" 13.	12	17	36	12	25	48	I.	Dis.	
" 14.	15	8	8	15	16	20	III	Dis.	W. obs. Waite rec.

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1891phae.proj..461w

Date.	W. M. T.			East. Time.			Sat.	Phs.	
1896									
Jan. 15.	6	46	7	6	54	19	I.	Dis.	W. obs. Stewart + Rich recorders.
" "	16	2	35	16	10	47	II.	Dis.	Omitted.
" 20.	8	34	15	8	42	27	IV.	Dis.	Cloudy.
" ".	14	11	39	14	19	51	I.	Dis.	"
" 22.	8	40	13	8	48	25	I.	Dis.	Omitted for U Cephei.
" 26.	10	46	31	10	54	43	II.	Re.	Cloudy.
" 29.	12	49	54	12	58	6	I.	Re.	"
" 31.	7	18	28	7	26	40	I.	Re.	"
Feb. 2.	13	22	5	13	30	17	II.	Re.	W. obs. Waite rec.
" 5.	6	34	1	6	42	13	III.	Re.	Cloudy.
" ".	14	44	24	14	52	36	I.	Re.	"
" 6.	7	8	34	7	16	46	IV.	Re.	"
" 7.	9	13	00	9	21	12	I.	Re.	"
" 9.	15	57	36	16	5	48	II.	Re.	"
" 12.	10	33	22	10	41	34	III.	Re.	Omitted for other work.
" ".	16	39	3	16	47	15	I.	Re.	Cloudy.
" 14.	11	7	41	11	15	53	I.	Re.	W. obs. Rich. rec.
" 19.	14	33	26	14	41	38	III.	Re.	W. obs. Waite rec.
" 20.	7	50	42	7	58	54	II.	Re.	W. obs. Rich rec.
" 21.	13	2	31	13	10	43	I.	Re.	
" 23.	7	31	18	7	39	30	I.	Re.	Cloudy.
" 27.	10	26	7	10	34	19	II.	Re.	W. obs. Rich rec.
" 28.	14	57	29	15	5	41	I.	Re.	Cloudy.
Mar. 1.	9	26	18	9	34	30	I.	Re.	Cloudy.
" 5.	13	1	28	13	9	40	II.	Re.	W. obs. Waite rec.
" 8.	11	21	24	11	29	36	I.	Re.	Sunday (Cloudy)
" 10.	14	41	12	14	49	24	IV.	Dis.	Cloudy.

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Date. 1896.	W. M. T.	East. Time.	Sat.	Rhe	
Mar. 15.	13 16 36	13 24 48	I.	Re.	Cloudy.
" 17.	7 45 23	7 53 35	I.	Re.	Omitted for U Cephei.
" 19.	6 33 14	6 41 26	III.	Re.	Cloudy.
" 23.	7 29 36	7 37 48	II.	Re.	"
" 24	9 40 42	9 48 54	I.	Re.	Fr. obs. Rich rec.
" 26.	7 0 43	7 8 55	III.	Dis.	Cloudy.
" "	10 33 00	10 41 12	III.	Re.	"
" 27.	8 44 51	8 53 3	IV.	Dis.	W. obs. Rich rec.
" ".	13 24 52	13 33 4	IV.	Re.	Omitted. (Jup. low.)
" 30.	10 4 42	10 12 54	II.	Re.	Cloudy.
" 31.	11 36 5	11 44 17	I.	Re.	Omitted. Sickness.
Apr. 2.	11 0 25	11 8 37	III.	Dis.	" "
" 6.	12 39 44	12 47 56	II.	Re.	Cloudy.
" 7.	13 31 30	13 39 42	I.	Re.	"
" 9.	8 0 25	8 8 37	I.	Re.	Fr. obs. Colson rec.
" 13.	7 30 6	7 38 18	IV.	Re.	Fr. obs. Colson "
" 16.	9 55 52	10 4 4	I.	Re.	Fr. obs. Waite "
" 23.	11 51 20	11 59 32	I.	Re.	Cloudy.
May 1.	9 41 50	9 50 2	II.	Re.	Fr. obs. Colson. rec.
" 2.	8 15 36	8 23 48	I.	Re.	Cloudy.
" 8.	10 34 6	10 42 18	III.	Re.	"
" 9.	10 11 3	10 19 15	I.	Re.	"
" 15.	11 00 10	11 8 22	III.	Dis.	Too low.
" 25.	8 30 44	8 38 56	I.	Re.	Fr. obs. Sawyer. rec.
June 1.	10 26 2	10 34 14	I.	Re.	Too low.
" 2.	8 57 56	9 6 8	IV.	Dis.	Fr. obs. Sawyer rec.
" "	9 17 46	9 25 58	II.	Re.	Omitted for Sat. IV.

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1891phae.proj..461w

Date.	W. Mn. T.	East. Time	Sat.	Phen.	
1896					
June 17.	8 45 10	8 53 22	I.	Re.	Cloudy.
" 19.	7 47 8	7 55 20	IV.	Re.	W. obs.
July 4.	8 53 17	9 1 29	II.	Re.	Cloudy.
Sept. 29.	16 35 37	16 43 49	I.	Dis.	"
Oct. 4.	15 35 32	15 43 44	II.	Dis.	"
" 15.	14 50 43	14 58 55	I.	Dis.	Omitted.
" 22.	16 43 57	16 52 9	I.	Dis.	W. obs. Colson rec.
Nov. 3.	14 3 33	14 11 45	III.	Re.	W. obs. Cram rec.
" 5.	15 14 33	15 22 45	II.	Dis.	Cloudy.
" 7.	14 58 28	15 6 40	I.	Dis.	"
" 10.	14 29 57	14 38 9	III.	Dis.	Cloudy.
" "	18 1 13	18 9 25	III.	Re.	"
" 12.	17 50 23	17 58 35	II.	Dis.	Daylight + clouds.
" 14.	16 51 28	16 59 40	I.	Dis.	Cloudy.
" 17.	18 27 17	18 35 29	III.	Dis.	Cloudy - Daylight also.
" 23	13 12 39	13 20 51	I.	Dis.	Cloudy.
" 30.	15 5 34	15 13 46	I.	Dis.	W. obs. Waite rec.
Dec. 3.	15 3 38	15 11 50	IV.	Dis.	W. obs. Waite rec.
" 7.	14 56 20	15 4 32	II.	Dis.	Alarm did not go off.
" "	16 58 28	17 6 40	I.	Dis.	" " " " "
" 14.	17 32 19	17 40 31	II.	Dis.	W. obs. Waite rec.
" 16.	13 19 35	13 27 47	I.	Dis.	Cloudy.
" "	13 46 44	13 54 56	III.	Re.	"
" 20.	13 36 44	13 44 56	IV.	Re.	W. obs. Waite rec.
" 23.	14 14 46	14 22 58	III.	Dis.	Cleared to 2 to get to obs. Clouded to end daily.
" "	15 12 30	15 20 42	I.	Dis.	Omitted for next get.
" "	17 43 56	17 52 8	III.	Re.	W. obs. Waite rec.
" 30.	17 5 28	17 13 40	I.	Dis.	W. not well.
" "	18 12 40	18 20 52	III.	Dis.	"

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Date. 1897	W. M. T.	East. Time Sat.		Phe.	
Jan. 1.	11 33 42	11 41 54	I.	Dis.	W. obs. Waite rec.
" "	12 1 56	12 10 8	II.	Dis.	Cloudy.
" 8.	13 26 44	13 34 56	I.	Dis.	W. obs. Waite rec.
" "	14 38 6	14 46 18	II.	Dis.	W. obs. Waite rec.
" 15.	15 19 52	15 28 4	I.	Dis.	Cloudy.
" "	17 14 20	17 22 32	II.	Dis.	"
" 17.	9 48 9	9 56 21	I.	Dis.	"
" 22.	17 13 4	17 21 16	I.	Dis.	"
" 24.	11 41 23	11 49 35	I.	Dis.	Sunday.
" 26.	9 9 17	9 17 29	II.	Dis.	W. obs. Terbush rec.
" 28.	10 2 51	10 11 3	III.	Dis.	Cloudy.
" 31.	13 34 44	13 42 56	I.	Dis.	W. obs. Waite rec.
Feb. 2.	8 3 8	8 11 20	I.	Dis.	Cloudy.
" "	11 45 36	11 53 48	II.	Dis.	"
" 4.	14 1 25	14 9 37	III.	Dis.	W. obs. Waite rec.
" 7.	15 28 14	15 36 26	I.	Dis.	Omitted. W. not well.
" 8.	15 0 25	15 8 37	IV.	Dis.	Cloudy.
" 9.	9 56 39	10 4 51	I.	Dis.	"
" "	14 21 57	14 30 9	II.	Dis.	W. obs. Waite rec.
" 11.	17 59 40	18 7 52	III.	Dis.	Cloudy.
" 14.	17 21 51	17 30 3	I.	Dis.	"
" 16.	11 50 19	11 58 31	I.	Dis.	W. obs. Waite rec.
" "	16 58 20	17 6 32	II.	Dis.	" " " "
" 25.	10 27 2	10 35 14	I.	Re.	Cloudy.
" "	13 22 2	13 30 14	IV.	Re.	W. obs. Waite rec.
" 27.	11 40 40	11 48 52	II.	Re.	W. obs. Terbush rec.

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Date.	W. M. T.			East. Time.			Sat.	Phe.	
1897.									
Mar. 2.	17	52	33	16	00	45	I.	Re.	Cloudy.
" 4.	12	21	2	12	29	14	I.	Re.	W. obs. Waite rec.
" 5.	9	19	15	9	27	27	III.	Re.	Cloudy.
" 6.	6	49	33	6	57	45	I	Re.	"
" "	14	16	44	14	24	56	II.	Re.	Sunday.
" 11.	14	15	10	14	23	22	I.	Re.	Cloudy.
" 12.	13	17	16	13	25	28	III.	Re.	W. obs. Waite rec.
" 13.	8	43	44	8	51	56	I.	Re.	W. obs. Waite rec.
" "	16	52	46	17	00	58	II.	Re.	Too low. Cloudy.
" 14.	7	19	39	7	27	51	IV.	Re.	Cloudy.
" 18.	16	9	28	16	17	40	I.	Re.	"
" 20.	10	38	4	10	46	16	I.	Re.	"
" 24.	8	47	2	8	55	14	II.	Re.	W. obs. Terbrush rec.
" 27.	12	32	33	12	40	45	I.	Re.	Cloudy.
" 29.	7	1	9	7	9	21	I.	Re.	Omitted for N. Cancri.
" 31.	11	22	56	11	31	8	II.	Re.	W. obs. Terbrush rec.
Apr. 3.	14	27	9	14	35	21	I.	Re.	Sunday.
" 5.	8	55	46	9	3	58	I.	Re.	Cloudy.
" 7.	13	58	44	14	6	56	II.	Re.	"
" 12.	10	50	31	10	58	43	I.	Re.	Missed.
" 17.	9	10	33	9	18	45	III.	Re.	W. obs. Terbrush rec.
" 19.	12	45	21	12	53	33	I.	Re.	W. obs. Waite rec.
" 21.	7	14	8	7	22	20	I.	Re.	Omitted. for U Cephei
" 24.	9	48	40	9	56	52	III.	Dis.	W. obs. Terbrush rec.
" "	13	9	00.	13	17	12	III.	Re.	Low + Cloud. Omitted.
" 25.	8	27	42	8	35	54	II.	Re.	Sunday. Cloudy.
" 28.	8	9	5	9	17	17	I.	Re.	W. obs. Terbrush rec.

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Date.	W. M. T.			East. Time.			Sat.	Phe.	
1897.									
May 1.	13	48	1	13	56	13	III.	Dis.	Cloudy.
" 2.	11	3	10	11	11	22	II.	Re.	"
" 3.	9	10	7	9	18	19	IV.	Dis.	"
" "	13	12	59	13	21	11	IV.	Re.	"
" 5.	11	4	6	11	12	18	I.	Re.	28 W. ds. Ter. rec.,
" 21.	9	23	3	9	31	15	I.	Re.	Cloudy.
" 27.	8	6	19	8	14	31	II.	Re.	"
" 28.	11	18	12	11	26	24	I.	Re.	"
" 30.	9	4	15	9	12	27	III.	Re.	"
June 3.	10	41	10	10	49	22	II.	Re.	"
" 6.	9	46	43	9	54	55	III.	Dis.	"
" 13.	9	37	22	9	45	34	I.	Re.	"
July 12.	8	57	16	9	5	28	III.	Re.	"
" 22.	8	10	15	8	18	27	I.	Re.	"
Oct. 18.	17	46	55	17	55	7	I.	Dis.	
" 27.	17	28	50	17	37	2	III.	Dis.	
Nov. 3.	15	36	28	15	44	40	IV.	Dis.	
" "	16	2	39	16	10	51	I.	Dis.	
" 6.	16	30	56	16	39	8	II.	Dis.	
" 10.	17	56	11	18	4	23	I.	Dis.	
" 26.	16	11	15	16	19	27	I.	Dis.	
Dec. 2.	16	12	7	16	20	19	III.	Re.	
" 3.	18	4	28	18	12	40	I.	Dis.	
" 8.	16	5	56	16	14	8	II.	Dis.	
" 9.	17	16	9	17	24	21	III.	Dis.	
" 12.	14	25	51	14	34	3	I.	Dis.	
" 15.	18	40	40	18	48	52	II.	Dis.	

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Date. 1897.	W. M. T.			East. Time.			Sat.	Phe.
Dec. 19.	16	18	55	16	27	7	I.	Dis.
" 26.	18	11	56	18	20	8	I.	Dis.

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Chronometer Comparisons.

Date. 1891	Chron.	Comp. with.	Time by Chron.	Time by Clock.	Chron. Error.
Jan. 6	B & B 1182	B 394	0 30 37.7	0 31 00	0m 22.3 s slow
"	B 236	" "	19 48 58.5	0 34 00	4m 31.3 s slow
B & B 1182 ran down between above comparison and the one last preced. it.					
Jan. 12 11 Sct. Time	B & B 1182	B 394	23 45 54.5	23 48 00	2m 5.5 s.
"	B 236	"	19 33 33.2	23 51 00	0m 29.6 s
B 236 ran down before above comparison.					
Jan. 16. B & B 1182 is out of order and does not go.					
Jan. 18 18 Sct. Time	B 236	B 394	17 21 19.5	21 12 0	0m 6.5 s.
B 236 ran down					
Jan. 20 19 Sct. Time	B 236	B 394	19 21 32.3	23 8 00	0m 55.9 s.
" 28	"	"	22 32 59.6	1 48 00	1m 27.2 s.
Feb. 2	"	"	22 7 16.2	1 3 00	1 45.9 s.
B 236 ran down					
" 9	B 236	B 394	23 13 48.0	1 40 00	0m 3.6 s.
" 17 16 Sct. Time	"	"	21 14 24.3	23 10 00	0 27.8 s.
Mar. 16 15 Sct. Time	"	"	22 45 5.2	22 56 00	2m 42.2 s slow
" 30	"	"	1 29 42.7	0 46 0	3m 3.4 s slow
Apr. 1	"	"	10 37 55.7	9 45 00	3 12.0 "
" 5	"	"	0 33 40.6	23 23 00	3m 27.7 s "
" 8	"	"	9 18 48.4	7 59 00	3m 37.7 s "
" 9	"	"	9 20 40.4	7 57 00	3m 42.0 s "
" 13	"	"	23 19 33.6	21 42 00	3m 53.9 s "
" 12	"	"	0 33 44.6	22 50 0.0	B. 236 altered. 2m 4.9 s fast.
" 20	"	"	3 52 28.1	1 41 0.0	1m 43.5 s "
" 23	"	"	23 51 21.5	21 25 0.0	1m 33.8 s "
" 29	"	"	2 55 13.7	0 9 0.0	1 16.3 "
B 236 ran down					
May 5	B 236	B 394	3 20 10.7	0 10 00	1m 33.9 s fast
" 18	"	"	5 7 57.1	1 7 00	0 55.6 "

B 236 ran down

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May	25	B 236	B 394	5	44	11.7	1 15 00		1m 32.8f.
June	7	"	"	3	5	6.9	21 43 00		0m 8.5 a.
"	15	"	"	7	48	1,6	1 58 0.0		0 31.6 a
"	21	"	"	4	47	38.5	22 31 0,0		0m 56.4 a.
"	26	"	"	19	45	34.1	13 11 0,0		1m 11.6 a.
July	2	"	"	4	43	22.5	21 44 0.0		1m 26.9 a
		B 236 ran down							
July	6	B 236	B 394	18	57	5.7	11 42 0.0		8.8 f
"	13	"	Ballon 103	8	19	28.7	0 39 0.0		15.2 a.
"	20	"	"	10	32	6.5	2 25 00		40.6 2.5
"	"	"	"	5	17	7.7	21 7 0.0		37.3 5
"	"	A+D 958	"	10	0	31.8	10 0 0.0		31.8 f.
"	27	B 236	B 394	6	17	15.8	21 39 0,0		1m 6.3 a.
"	"	B+C 1182	"	21	43	11.9	21 43 0.0		11.9 f.
"	"	A+D 958	"	21	47	25.5	21 47 0.0		25.5 f.
Aug	2	B 236	"	7	20	39.3	22 19 0.0		1m 29.1 a.
"	"	B+C 1182	"	22	41	27.2	22 41 0.0		27.2 f
"	"	A+D 958	"	22	51	21.4	22 51 0.0		21.4 a.
Sept.	6	B+C 1182	Ballon 103	15	44	18.7	15 49 0.0		4m 41.3 a
"	"	B. 236.	Ballon 103.	9	53	39.6	22 23 0.0		0 29.6
"	"	B.+C. 1182.	" "	10	15	15.8	22 20 0.0		4 44.2 a
"	8	"	"	17	20	17.7	17 25 0.0		4 42.3 a
"	9	"	"	17	32	9.0	17 37 0.0		4 51.0 a
"	10	"	"	17	45	12.2	17 49 0.0		3 47.8 a
"	14	B.+C. 1182	B. 394.	0	52	9.3	0 54 0.0		5 0.7 5
"	"	B. 236.	" "	12	35	15.5	0 56 0.0		0 52.4 5
"	3	B.+C. 1182	Ballon 103	13	57	1.0	14 1 0.0		3 59.0 a
"	3	" "	" "	15	56	59.0	16 1 0.0		4 1.0 5
"	5	" "	" "	15	59	30.3	16 5 0.0		4 29.7 5
"	9	B. 236.	" "	22	59	35.5	11 29 0,0		0 36.2 a.
"	10	"	" "	23	27	31.0	11 53 0.0		0 40.3 a

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Date. 1891.	Chron.	Comp. with.	Time by Chron.	Time by Clock.	Chron. Error.
Sept. 11.	B.+C. 11+2.	B. 394.	11h 47m 6.0s	11h 52m 0.0s	4 52.0
" "	"	"	13 35 57.7	13 50 0.0	4 54.3 R.
" 12	B. 236.	"	0 59 33.0	13 17 0.0	0 45.2 R.
" "	B.+C. 11+2.	"	13 52 47.2	13 58 0.0	5 12.8 R.
" 14.	B. 236.	"	23 6 57.5	11 17 0.0	0 54.0 R.
" 15	B+C 1182	"	16 48 38.6	16 55 0.0	6 21.4 R.
" 21	B 236	"	12 44 22.7	0 29 0.0	1 18.23 R.
" "	B+C 1182	"	12 23 24.6	12 31 0.0	7 35.4 R.
" 26	B 236	"	0 30 38.3	11 54 0.0	1 37.86 R.
" 27d. 21¾h	B. +C. 11+2 changed.				
" 28	B 236	"	12 19 34.0	0 37 0.0	1 44.03 R.
" "	B+C 1182	"	0 48(24) 2.3	0 39 0.0	0 56.7 R.
" 30.	B. 236	"	0 57 9.0	11 59 0.0	1 57.2 s.
Oct. 5.	B.+C. 11+2.	"	0 47 54.4	0 49 0.0	1 5.6 s.
" "	B. 236.	"	14 6 58.3	0 57 0.0	2 0.8 s.
" 12h+	"	"	15 14 7.7	1 37 0.0	2 31.8 s.
" 12h+	B.+C. 11+2	"	1 37 26.1	1 39 0.0	1 33.9 s.
B+C. 11+2 gained some 3m somehow between the preced. + fol. date.					
" 19.	" "	"	0 27 40.5	0 27 0.0	0 40.5 f.
" 19.	B. 236.	"	14 33 5.6	0 29 0.0	2 5.6 s.
Nov. 19.	B.+C. 11+2.	"	0 42 53.5	0 50 0.0	7 6.5 s.
" "	B. 236.	"	17 17 25.5	1 9 0.0	0 52.0 s.
(B+C. 11+2 altered just previous to comparison below)					
" 26	B 236.	B. 394.	16 32 46.2	23 54 0.0	1 58.0 s.
" "	B.+C. 11+2.	"	23 57 42.5	23 57 0.0	0m 42.5 f.
" 29.	B. 236.	"	15 13 54.5	22 24 0.0	2 20.6 s.
" "	B.+C. 11+2.	"	22 26 8.5	22 26 0.0	0m 8.5 f.
Dec. 7.	" "	"	0 29 10.5	0 30 0.0	0 49.5 s.
" "	B. 236.	"	17 49 6.9	0 32 0.0	3m 8.9s

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Date. 1891.	Chron.	Comp. with.	Time by Chron.	Time by Clock.	Chron. Error.
Dec. 13.	B. 236.	B. 394.	17h 6m 38.1s	23m 23m 0.0s	4m 1.2s.
" "	B+C. 1182. (B. 236 altered just before comp. below)	"	23 22 50.5	23 25 0.0	2 9.5s.
" 14.	B. 236	"	16 32 50.5	0 43 0.0	1 56.1f.
" 21.	"	"	16 53 14.2	22 37 0.0	2 57.1s.
" "	B. + C. 1182.	"	22 38 42.1	22 38 0.0	3 17.9s.
" 27	" "	"	21 50 54.4	21 56 0.0	5 1.2s.
" "	B. 236.	"	16 37 6.5	21 54 0.0	0 28.3f.
1892.					
Jan. 4.	Chronometers run down				
" 5.	Rewound and reset.				
" 5.	B. 236.	B. 394.	18 49 23.2 (5.)	23 38 0.0	2 43.2f.
" "	B. + C. 1182.	"	23 39 44.5	23 40 0.0	0 5.5s.
" 17	B. 236	B 394	18 29 15.5	22 28 0.0	4 15.5s. / 1 42.3f.
" "	B + C 1182	"	22 18 28 3.5	22 32 0.0	3 56.5s.
" 25	B + C 1182	"	12 16 38.0	24 22 0.0	5 22.0s.
" "	B. 236	"	20 49 31.0	24 21 0.0	4 54.5s.
" 31	B 236	"	19 16 2.5	22 21 0.0	5 38.7s.
" "	B + C 1182	"	10 17 0.5	22 24 0.0	6 59.5s.
Feb. 7	" "	"	9 53 24.0	22 3 0.0	9 36.0s.
" "	B 236	"	19 18 55.0	21 57 0.0	6 18.0s.
" 14.	"	"	20 18 50.5	22 20. 0.0	7 37.5s. / 3.7s.
" "	B + C 1182	"	10 20 42.5	22 32 0.0	11 17.5s.
" 15	B 236	"	22 43 13.5	0 54 0.0	7 44.5s.
" 22.	"	"	20 7 18.5	21 48 0.0	8 1.1s.
" "	B + C 1182	"	9 35 52.5	21 49 0.0	13 7.5s.
" 29	" "	"	12 9 59.0	0 26 0.0	16 1.0s.
" "	B 236	"	23 4 50.0	0 22 0.0	8 34.1s.
March 1	"	"	23 2 37.5	0 7 0.0	0 17.8f.
" "	B + C 1182	"	12 11 39.0	0 9 0.0	2 39.0f.

Before the above comparisons on Feb. 29 and March 1, both chronometers were changed.

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Date. 1892	Chron.	Comp. with.	Time by Chron.	Time by Clock.	Chron. Error.
Mar. 6.	B. 236.	B. 394.	21 49 24.0	22 31 0.0.	0m 19.1s
" "	B. & C 1182	"	10 34 38.0	22 34 0.0.	0m 38.0s
" 13	" "	"	10 11 56.0	22 13 0.0	1 4.0
" "	B. 236	"	21 56 11.5	22 11 0.0	1m 41.5
" 27	" "	"	22 24 49.5	21 46 0.0	2 33.5
" "	B & C 1182	"	9 43 40.0	21 48 0.0	4 20.0
April 3	" "	"	11 38 24.4	23 45 0.0	6 35.6
" "	B. 236	"	0 49 3.5	23 43 0.0	3 14.5
" 10	" "	"	0 33 48.5	23 1 0.0	3 58.5
" "	B & C 1182	"	10 56 51.0	23 6 0.0	9 9.0
" 18	" "	"	12 24 32.5	0 36 0.0	11 27.5
" "	B 236	"	2 33 57.6	0 34 0.0	4 40.2
B & C 1182 altered Apr. 19. 22h 50m					
" 19	B & C 1182	"	11 1 1.5	22 59 0.0	2 1.5
" 24	" "	"	10 51 49.5	22 52 0.0	0m 10.5s
" "	B 236	"	1 1 34.0	22 49 0.0	5 22.5
May 1	" "	"	1 33 23.8	22 40 0.0	6 6.9
" "	B. & C. 1182	"	10 38 57.5	22 41 0.0	2 2.5
" 8	" "	"	10 17 25.5	22 21 0.0	3 34.5
" "	B. 236	"	1 39 31.6	22 19 0.0	6 31.5
" 10	" " changed.	"	3 55 42.5	0 22 0.0	2 21.5
" 15	" "	"	1 35 16.0	21 39 0.0	1 42.5
" "	B & C 1182	"	9 35 12.5	21 41 0.0	5 47.5
" 22	" "	"	10 21 3.5	22 29 0.0	7 56.5
" "	B 236	"	2 50 27.5	22 27 0.0	1 10.5
" 30	" "	"	2 41 11.0	21 47 0.0	0 27.5
" "	B & C. 1182	"	9 38 9.0	21 49 0.0	10 51.0
(B & C. 1182 altered just previous to comparison below.)					
June 5	"	"	10 42 30.5	22 38 0.0	
" "	B. 236	"	3 53 27.5	22 36 0.0	

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1892.

Date	Chron.	Comp with.	Time by Chron.	Time by Clock.	Chron Error.
June 13	B.236.	B.394.	5 44 28.0	23 56 0.0	
" "	B+C.1182	"	12 1 47.5	24 00 0.0	
" 19	" "	"	9 52 56.5	21 54 0.0	
" "	B.236	"	4 3 12.0	21 52 0.0	
" 26	"	"	5 2 10.0	22 24 0.0	
" "	B+C.1182	"	10 22 18.5	22 26 0.0	
July 4	"	"	11 54 55.5	23 55 0.0	
" "	B 236	"	7 3 42.5	23 53 0.0	
" 10	"	"	6 5 42.0	22 42 0.0	
" "	B+C.1182	"	10 38 31.0	22 43 0.0	
" 11	B 236	"	6 24 34.5	22 47 0.0	1m 57s 76 slow
" 25	B 236	394	9 26 4.5	9 27 1.0	
" "	B+C.1182	"	1 2 29.7	9 28 1.0	
Sept. 4	" "	394	9 54 38.0	21 55 0.0	
" "	B 236	"	9 7 0.5	21 53 0.0	
" 11	"	"	9 48 2.5	22 8 0.0	
" 11	B+C.1182	"	10 5 13.5	22 11 0.0	
" 18	" "	"	9 24 9.5	21 35 0.0	
" "	B.236	"	9 29 50.5	21 23 0.0	
" 21.	B. + C. 1182. was set ahead so as to be fast of B. 394 in the forenoon of this date.				
" 26	B 236	"	11 3 40.5	22 26 0.0	5m 14.3 slow
" "	B+C.1182	"	10 28 22.0	22 27 0.0	
Both chronometers ran down.					
Oct. 9.	B.236.	B.394.	12 37 3.0	23 6 0.0	
" "	B+C.1182.	" "	23 4 53.0	23 7 0.0	
Both chronometers ran down.					
" 11.	B.236.	B.394.	14 59 43.5	1 23 0.0	
" "	B+C.1182.	" "	1 25 21.5	1 25 0.0	

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1892.

Date	Chron.	comp. with	Time by Chron.	Time by Clock	Error
Dec. 22	B. 236	B394	16 38 57.0	22 17 0.0	4m 1.0 s.
" "	B+C. 1182	"	10 12 6.7	22 19 0.0	
" 26	" "	"	9 27 58.5	21 26 0.0	0m 1.5
" "	B236	"	16 4 59.5	21 24 0.0	0 36.6
" 29.	B. + C. 1182.	"	6 41 25.0	6 42 0.0	0m 35.s s.
" "	" "	"	7 22 24.4	7 23 0.0	0m 35.6 s.
1893.					
Jan. 2.	" "	"	10 8 16.1	10 10 0.0	1m 43.9 s.
" "	" "	"	10 47 15.5	10 47 0.0	1m 44.5 s.
" 11.	" "	"	6 23 47.4	6 28 0.0	4m 14.6 s.
" "	" "	"	7 1 44.7	7 6 0.0	4m 15.3 s.
" 16.	B. 236	F. 1327.	7 26 57.0	7 27 1.0	0m 7.5 s. f 1327.
" 17.	" "	" "	7 42 46.5	7 43 1.0	0m 13.5 s. f 1327
" 19.	" "	" "	7 53 30.5	7 54 1.0	0m 30.5 s. f 1327
" 20.	B. + C. 1182.	B. 394.	6 43 23.2	6 47 0.0	1m 36.8 s.
" "	" "	" "	7 39 22.5	7 41 0.0	1m 37.5 s.
" "	" "	" "	8 57 22.0	8 59 0.0	1m 38 s.
" "	" "	" "	9 37 21.7	9 37 0.0	1m 38.3 s.
" "	B. 236.	Fr. 1327.	7 34 22.0	7 35 1.0	0m 39.5 s. f 1327
" 21.	" "	" "	6 58 14.0	6 59 1.0	0m 47.5 s. f 1327.
" 25.	B. + C. 1182.	B. 394.	0 25 47.0	0 27 0.0	1m 56 s.
" "	B. 236.	" "	21 11 27.9	0 37 0.0	1m 7 s.
" 29	B 236	" "	18 11 0.6	21 18 0.0	2m 37.4 s.
" "	B+C 1182	" "	9 18 7.5	21 21 0.0	2m 52.5 s
Feb. 5	B+C 1182	" "	9 5 4.5	21 9 0.0	3m 55.5 s.
" "	B. 236	" "	18 25 41.5	21 7 0.0	4m 36.0 s
" 12	B. + C 1182	" "	8 59 49.5	21 6 0.0	6m 10.5 s
" 12	B 236	" "	18 54 28.0	21 8 0.0.	4m 19.6 s
" 19	B + C 1182	" "	8 56 18.6	21 4 0.0	7m 41.4 s.
" "	B. 236	" "	19 19 21.5	21 6 0.0	5m 1.5 s

Both Chronometers altered.

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1893.

Date.	Chron.	Comp. with.	Time by Chron.	Time by Clock.	Error.
Feb. 19	B + C 1182	B 394	11 19 17.6	23 16 0.0	3m 17.6 F.
" "	B. 236	" "	21 40 42.7	23 19 0.0	2m 55.7 F.
" 27	B + C. 1182	" "	9 27 19.0	21 26 0.0	1m 19.0 F.
" "	B 236	" "	20 21 55.6	21 29 0.0	2m 55.1 F.
March 5	B + C 1182	" "	8 56 33.5	20 56 0.0	33.5 F.
" "	B. 236	" "	20 17 47.5	21 3 0.0	1m 12.1 F.
" 12	B + C 1182	" "	8 55 54.0	20 56 0.0	6.0 S.
" "	B. 236	" "	20 39 34.2	20 58 0.0	24.1 F.
" 19	B. + C. 1182	" "	9 1 21.5	21 2 0.0	38.5 S.
" "	B. 236	" "	21 12 19.0	21 4 0.0	28.0 S.
" 26	B + C 1182	" "	9 4 41.4	21 7 0.0	2m 18.6 S.
" "	B. 236	" "	21 43 10.6	21 8 0.0	1m 12.8 S.
April 2.	B + C 1182	" "	8 57 0.4	21 1 0.0	3m 59.6 S.
" "	B. 236	" "	22 3 57.6	21 2 0.0	2m 0.6 S.
" 9	B. + C. 1182	" "	8 45 7.7	20 51 0.0	5m 52.3 S.
" "	B. 236	" "	22 22 49.1	20 54 0.0	2m 43.5 S.
" 16	B + C 1182	" "	8 56 27.5	21 4 0.0	7m 32.5 S.
" "	B. 236	" "	23 0 41.1	21 5 0.0	3m 29.0 S.
" 23	B + C 1182	" "	8 48 48.4	20 57 0.0	8m 11.6 S.
" "	B. 236	" "	23 21 26.6	20 59 0.0	4m 18.3 S.
"	Both chronometers ran down.				
May. 1.	B + C 1182	B. 394	9 5 8 22.5	21 54 0.0	4m 22.5 F.
" "	B 236	" "	0 53 9.6	21 55 0.0	0m 17.6 S.
" 7	B + C 1182	" "	9 1 57.6	20 54 0.0	1m 57.6 F.
" 7	B 236	" "	0 22 0.8	21 1 0.0	0m 56.8 S.
" 14	B + C 1182	" "	9 18 51.0	21 18 0.0	0m 51.0 F.
" "	B. 236	" "	1 10 17.2	21 22 20.0	1m 39.7 S.
" 23	B + C 1182	" "	11 42 46.5	23 44 0.0	1m 9.5 S.
" "	B. 236	" "	4 7 54.1	23 45 0.0	2m 10.1 S.

cont. on Page 159

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1892.

Casual Chronometer Comparisons.

Date.	Chron.	Comp. with	Time by Chron. hr.	min.	sec.	Time by clock hr.	min.	sec.	error.
Nov 16	B+C 1182	B. 394	14	49	19.0	15	08	0.0	18m 41.0s S.
" "	B 236	" "	7	23	22.1	15	23	0.0	2m 32.0s S
" 17	B. 236	" "	0	1	27.4	7	58	0.0	2m 10.3s S.
" 17	B+C 1182	" "	10	3	46.5	10	2	0.0	1m 46.5s F.
" 19	B. 236	" "	3	20	37.5	11	9	0.0	2m 24.6s S.
" 20	B. 236	" "	7	25	5.0	15	9	0.0	2m 28.9s S
" 21	B. 236	" "	9	33	13.0	17	13	0.0	2m 41.6s S.
" 22	B. 236	" "	1	6	40.5	8	38	0.0	2m 46.8s S
" "	B 236	" "	8	51	54.6	16	28	0.0	2m 49.5s S
" 23	B 236	" "	3	8	47.8	10	42	0.0	2m 56.0s S.
" 24	B+C 1182	" "	11	34	22.0	11	34	0.0	0m 22.0s F.
" 24	B+C 1182	" "	12	9	21.1	12	9	0.0	0m 21.1s F
" "	B. 236	" "	9	3	30.0	16	30	0.0	1m 7.8s S.
Dec. 3	B. 236	" "	0	52	35.5	7	46	0.0	2m 5.1s S
" "	B+C. 1182	" "	8	27	25.5	8	29	0.0	1m 34.5s S.
" 7	B. 236	" "	2	8	5.0	8	46	0.0	2m 31.6s S.
" 9	B. 236	" "	2	6	46.5	8	37	0.0	2m 41.2s S
" 10	B+C 1182	" "	9	56	42.5	10	0	0.0	3m 17.5s S
" "	B+C 1182	" "	10	21	42.0	10	25	0.0	3m 18.0s S
" 11	B+C 1182	" "	11	58	26.5	12	2	0.0	3m 33.5s S
" "	B+C 1182	" "	12	58	25.2	13	2	0.0	3m 34.8s S
" 15	B+C 1182	" "	10	31	18.4	10	35	0.0	4m 41.6s S
" "	B+C 1182	" "	11	33	17.3	11	38	0.0	4m 42.7s S
" 16	B 236	" "	2	11	37.5	8	15	0.0	3m 23.0s S.

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1893.

Date.	Chron.	Comp. with	Time by Chron.			Time by Clock			error
~~May 30.~~		B. & C. ran down + was reset.							
May 30	B & C. 1182	B. 394	9	47	32.7	21	45	0.0	2m. 32.s7 F.
" "	B. 236	" "	2	37	25.5	21	47	10.0	2m. 30.s2 S.
June 4	B & C 1182	" "	9	15	45.0	21	14	40.0	1m. 5.s0 F.
"	B 236	" "	2	24	41.4	21	15	20.0	3m. 1.s8 S.
" 11	B & C 1182	Ballou 103.	9	3	21.4	21	4	0.0	0m. 39.s0 S. ~~0m. 38.s6 S.~~
" 11	B 236	" "	2	41	11.1	21	5	0.0	3m. 46.s8 S. ~~3m. 46.s2 S.~~
		Both chronometers ran down & were reset.							
June 18	B & C 1182	Ballou 103.	10	42	54.5	22	44	0.0	1m. 5.s5 S.
" "	B. 236	" "	4	53	43.7	22	47	0.0	0m. 16.s7 S.
" 26	B & C 1182	" "	9	23	7.5	21	26	0.0	2m. 52.s5 S.
" "	B. 236	" "	4	5	18.0	21	28	0.0	1m. 51.s8 S.
July 2.	B & C 1182	" "	8	53	50.0	21	3	0.0	4m. 50.s0 S.
" "	B 236	" "	4	4	16.5	21	4	0.0	2m. 29.s5 S.
" 9	B & C 1182	" "	9	36	21.5	21	42	0.0	5m. ~~38.s5 S.~~ 40.s5 S.
" 9	B 236	" "	5	10	19.4	21	43	0.0	3m. ~~1.s4 S.~~ 19.s9 S.
" 10	B 236	Bond 394	16	54	9.3	9	25	0.0	3m. 10.s0 S.
" "	B 236	F. 1327	18	54	14.5	18	56	0.0	3m. 14.s8 S.
" 11	B 236	" "	14	47	9.0	14	49	1.0	3m. 17.s4 S.
" 11	B 236	" "	16	40	8.5	16	42	1.0	3m. 18.s0 S.
" 11	B 236	" "	17	33	8.0	17	35	1.0	3m. 18.s4 S.
" 11	B 236	" "	18	24	7.7	18	26	1.0	3m. 18.s7 S.
" 13	B 236	" "	15	6	54.6	15	9	1.0	3m. 30.s6 S.
" 13	B 236	" "	17	16	54.0	17	19	1.0	3m. 31.s2 S.
" 13	B 236	" "	18	34	53.5	18	37	1.0	3m. 31.s7 S.
" 14	B 236	" "	14	56	47.1	14	59	1.0	3m. 37.s5 S.
" 14	B 236	" "	17	9	46.5	17	12	1.0	3m. 38.s1 S.
" 14	B 236	" "	18	33	46.0	18	36	1.0	3m. 38.s5 S.
" 16	B 236	" "	4	53	28.5	4	56	1.0	3m. 54.s7 S.
" 16	B & C 1182	" "	8	53	1.4	4	57	1.0	7m. 25.s0 S.

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1893.

Date.	Chron.	Comp. with.	Time by Chron.			Time by clock.			Error.	
July 23.	B. 236	F 1327	6	26	45.3	6	30	1.0	4m	35.9 S.
" 23	B+C 1182	B. 394	9	59	51.9	22	9	0.0	9m	8.1 S.
" 19	B 236	F 1327	15	26	14.7	15	29	1.0	4m.	7.3 S.
" 19	B 236	F 1327	17	36	14.0	17	39	1.0	4m.	8.0 S.
" 19	B+C 1182	B. 394	~~12~~ 1	34	58.3	13	43	0.0	8m.	1.7 S
" 19	B+C 1182	B 894	2	0	57.7	14	9	0.0	8m.	2.3 S
" 20	B 236	F. 1327	15	23	7.7	15	26	1.0	4m	14.6 S.
" 20	B. 236	F. 1327	17	12	7.1	17	15	1.0	4m	15.2 S.
" 30	B. 236	F. 1327	6	13	58.2	6	18	1.0	5m.	1.8 S.
" 30	B+C. 1182	B. 394	9	16	59.4	21	28	0.0	11m.	0.6 S
Sept. 3	B. 236	F 1327	8	5	45.5	8	5	1.0	0m.	12.3 S.
" 7	B. 236	" "	0	48	18.1	0	48	1.0	0m.	36.1 S.
" 7	B 236	" "	2	13	17.6	2	13	1.0	0m	36.6 S.
" 7	B 236	" "	2	55	17.5	2	55	1.0	0m.	36.6 S.
" 7	B 236	" "	4	2	17.0	4	2	1.0	0m	37.1 S.
" 10	B. 236	" "	3	11	53.4	3	12	1.0	0m.	59.0 S.
" 10	B 236	" "	4	11	53.2	4	12	1.0	0m.	59.2 S
" 10	B. 236	F 1327	8	50	51.6	8	51	1.0	0m	59.4 S.
" 12	B. 236	F 1327	21	48	40.0	21	49	1.0	1m	11.7 S.
" 12	B. 236	" "	22	21	39.9	22	22	1.0	1m.	11.8 S.
" 16	B. 236	" "	9	15	8.2	9	16	1.0	1m.	44.7 S.
Oct. ~~1~~ 2	B 236	" "	11	16	14.0	11	19	37.8	3m.	23.8 S.
" ~~2~~ 3	B 236	" "	11	1	29.4	11	5	38.7	4m.	9.3 S.
" ~~15~~ 16	B 236	" "	11	25	39.8	11	30	~~1.0~~ 38.1	4m	52.3 S.

B. 236 reset Oct. 19. at 1h E.T. so as to be a little over one half minute fast.

Oct. 22	B 236	B 394	11	44	36.0	21	~~20~~ 19	~~0.0~~ 59.2	0m	14.5 f.
Chron. B. 236 ran down. Reset and started.										
" 26	B 236	F 1327	12	3	19.0	12	3	~~1.0~~ 37.6	0m	18.6 S
" 29	B 236	F 1327	12	32	58.0	12	33	~~1.0~~ 37.6	0m	39.6 S

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Date	Chron.	Comp. with	Time by Chron	Time by block	Error.
Nov. 5	B 236	B 394	13 h 1 m 59.0 s	21 h 43 m 0.0 s	48.0 s sl.
" 12	B 236	B 394	13 0 36.3	21 16 0.2 ~~0.0~~	2 m 32.9 s slow
	Chronometer B. 236 ran down.				
" 20	B 236	B 394	13 28 13.3	21 10 0.2 ~~0.0~~	27.7 s slow
" 26	B 236	B 394	14 14 10.6	21 3 2 58.2 ~~0.0~~	31.4 s slow
Dec. 3	B 236	B 394	14 31 54.6	21 ~~24~~ 23 58.0 ~~0.0~~	2 m 1.4 s slow
" 10	" "	" "	15 10 39.5	21 ~~36~~ 35 58.7 ~~0.0~~	2 m 54.9 s sl.
" 14	B+6 1182	" "	22 37 52.0	22 38 0.6 ~~0.0~~	8.6 s sl.
" 16	" "	" "	0 24 52.7	0 25 2.2 ~~0.0~~	9.6 s sl.
" 17	" "	" "	8 40 55.1	8 41 3.6 ~~0.0~~	8.5 s sl.
" 17	" "	" "	21 25 54.8	21 26 4.8 ~~0.0~~	9.2 s sl.
" "	B 236	" "	15 28 30.6	21 27 0.0	3 m 39.4 s sl.
" 18	B+6 1182	" "	21 40 50.6	21 ~~41~~ 40 58.8 ~~0.0~~	8.2 s sl.
" 19	" "	" "	21 21 52.6	21 ~~22~~ 21 59.4 ~~0.0~~	6.8 s sl.
" 20	" "	" "	22 17 51.1	22 ~~18~~ 17 58.1 ~~0.0~~	7.0 s sl.
" 22	" "	" "	0 8 49.0	0 ~~9~~ 8 56.4 ~~0.0~~	7.4 s sl.
" 22	" "	" "	21 56 50.2	21 ~~57~~ 56 56.8 ~~0.0~~	6.6 s sl.
" 25	" "	" "	21 27 0.2	21 27 4.5 ~~0.0~~	4.3 s sl.
" "	B 356	" "	16 2 8.5	21 3 0 4.5 ~~0.0~~	4 m 38.9 s sl.
" 26	B+6 1182	" "	21 31 58.0	21 ~~32~~ 31 58.5 ~~0.0~~	3.5 s sl.
" 27	" "	" "	21 41 56.5	21 ~~42~~ 41 59.5 ~~0.0~~	3.0 s sl.
" 28	" "	" "	21 16 58.5	21 17 0.1 ~~0.0~~	1.6 s sl.
" 30	" "	Balloon 103	0 58 0.5	0 ~~57~~ 58 1.9 ~~59.0~~	1.4 s sl.
" 31	" "	" "	1 55 57.5	1 ~~56~~ 55 0.9 59.0	3.4 s sl.
" 31	" "	" "	23 36 54.7	23 36 57.6 ~~59.4~~	2.9 s sl.
1894 Jan. 1	" "	" "	23 27 53.1	23 27 57.6 ~~59.4~~	4.5 s sl.
" 2	Chronometer B 236 was set.				
" "	B 236	Balloon 103	16 30 30.6	21 21 57.2 ~~59.0~~	18.6 s fast
" "	B+6 1182	" "	21 20 53.2	21 20 57.2 ~~59.0~~	4.0 s sl.

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Date	Chron.	Comp with	Time by Chron.			Time by Clock			Error	
January 4	B+6 1182	Balloon 103	0	59	55.1	0	59	58.2 / 59.0		3.1 sl.
" 4	" "	" "	21	12	56.9	21	12	59.8	2	2.3 sl.
" 5	" "	B 394	21	18	58.4	21	18	59.5 / 00.0		1.1 sl.
" 7	" "	" "	1	55	59.5	1	56	00.8	1	1.6 sl.
" 7	" "	" "	21	42	0.6	21	42	00.8	6	0.0
" 7	B 236	" "	17	11	44.3	21	44	00.8	6	17.5 sl.
" 8	B+6 1182	" "	21	16	1.6	21	16	00.8	6	1.0 fast
" 9	" "	" "	21	45	58.2	21	45 / 46	58.5 / 00.0		0.3 sl.
" 10	" "	" "	22	0	57.7	22	X	58.7 / 00.0		1.0 sl.
" 11	" "	" "	23	8	58.0	23	X	59.7 / 00.0		1.7 sl.
" 12	" "	" "	21	22	56.1	21	23	00.8	6	4.5 sl.
" 14	" "	" "	1	53	55.7	1	54	00.8	3	4.6 sl.
" 14	" "	" "	22	1	54.5	22	8	59.9 / 00.0		5.4 sl.
" 14	B 236	" "	17	.58	29.8	22	8	59.9 / 00.0		1m 10.3 sl.
" 15	B+6 1182	" "	22	1	55.6	22	2	00.8	4	4.8 sl.
" 16	" "	" "	21	18	56.1	21	19	00.8	6	4.5 sl.
" 17	" "	" "	21	7	56.5	21	8	00.0	1.1	4.6 sl.
" 18	" "	" "	23	57	55.6	23	58	00.8	7	5.1 sl.
" 19	" "	" "	22	51	56.7	22	52	00.0	1.6	4.9 sl.
" 21	" "	" "	1	52	52.9	1	53	00.0	1.1	8.2 sl.
" 21	" "	" "	23	49	51.5	23	50	00.8	7	9.2 sl.
" "	B 236	" "	20	12	33.6	23	51	00.8	7	2m 1.1 sl.
" 22	B+6 1182	" "	23	0	52.5	23	1	00.0	1.0	8.5 sl.
" 23	" "	" "	22	42	53.1	22	43	00.0	1.1	8.0 sl.
" 25	" "	" "	0	47	53.1	0	48	00.0	0.2	7.1 sl.
" 26	" "	" "	0	41	49.8	0	41	00.0	58.6	8.8 sl.
" 28	" "	" "	1	46	49.8	1	47	00.0	58.5	8.7 sl.
" 28	" "	" "	23	48	48.8	23	48	00.0	57.1	8.3 sl.
" 28.	B 236	" "	20	38	14.5	23	50	00.0	57.1	2m 41.9 sl.

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Date	Chron.	Comp. with	Time by chron.			Time by clock			Error.
Jan. 29	B+6. 1182	B 394	23	44	53.3	23	45	00.8	7.5 sl.
" 30	" "	" "	8	55	53.5	8	56	1.5	8.0 sl.
" 31	" "	" "	7	7	53.6	7	8	00.3	6.7 sl.
" 31	" "	" "	22	53.	51.8	22	53	57.0 00.0	7.2 sl.
Feb. 1	" "	" "	21	38	50.5	21	37	57.8 00.0	7.3 sl.
" 2	" "	" "	22	5	51.4	22	5	59.1 00.0	7.7 sl.
" 4	" "	" "	1	56	53.7	1	57	1.2 00.0	7.5 sl.
" 4	" "	" "	21	42	52.5	21	42	59. 00.0	7.5 sl.
" 4	B 236	" "	19	5	42.0	21	50	00.0	2m 43.5 sl.
" 5	B+6 1182	" "	21	29	51.9	21	30	59.8 00.0	7.9 sl.
" 6	" "	" "	21	23	49.1	21	24	58.6 00.0	9.5 sl.
" 7	" "	" "	21	18	48.9	21	18	59.7 00.0	10.8 sl.
" 8	" "	" "	21	12	51.0	21	13	0.3 00.0	9.3 sl.
" 9	" "	" "	21	13	51.5	21	14	59.9 00.0	8.4 sl.
" 11	" "	" "	1	56	54.1	1	57	0.3 00.0	6.2 sl.
" 11	" "	" "	22	13	54.7	22	14	0.5 00.0	5.8 sl.
" 11	B 236	" "	19	58	31.0	22	17	0.5 00.0	4m 34.9
" 12	B+6 1182	" "	21	49	55.5	21	50	1.3 00.0	5.8 sl.
" 13	" "	" "	21	28	54.5	21	29	0.5 00.0	6.0 sl.
" 14	" "	" "	21	43	52.2	21	44	0.2 00.0	8.0 sl.
" 15	" "	" "	21	39	52.3	21	40	0.2 00.0	7.9 sl.
" 16	" "	" "	21	8	50.7	21	8	58.9 00.0	8.2 sl.
" 18	" "	" "	1	52	53.0	1	53	1.0 00.0	8.0 sl.
" 18	" "	" "	21	41	55.2	21	42	2.7 00.0	7.5 sl.
" 18	B 236	" "	19	51	13.2	21	43	2.7 00.0	5m 25.1 sl.
" 19	B+6 1182	" "	21	28	53.2	21	29	0.1 00.0	6.9 sl.
" 20	" "	" "	22	9	50.6	22	9	57.8 00.0	9.2 sl.
" 22	" "	" "	22	36	57.3	22	37	0.7 00.0	9.4 sl.
" 22	B 236	" "	21	3	38.8	22	40	0.7 00.0	5m 52.9 sl.

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Date	Chronometer	Comp. with	Time by Chron.			Time by Clock		Error.
Feb. 23	B+C 1182	B 394	22	4	47.6	22	5	0.7 ~~0.0~~ − 13.1
" 25	" "	" "	1	56	44.0	1	57	0.1 ~~0.0~~ − 16.1
" 25	" "	" "	21	49	41.1	21	~~50~~ 49	~~58.7~~ 0.0 − 17.6
" 25	B 236	" "	20	28	53.2	21	~~54~~ 50	~~58.7~~ 0.0 − 6m 18.1
" 26	B+C 1182	" "	23	57	38.1	23	~~58~~ 57	~~56.2~~ 0.0 − 18.1
" 27	"	"	22	51	41.3	22	~~52~~ 51	~~58.9~~ 0.0 − 17.6
" 28	"	"	21	41	42.5	21	~~42~~ 41	~~59.6~~ 0.0 − 17.1
Mar. 1	"	"	23	1	43.6	23	2	0.0 ~~0.0~~ − 16.5
" 2	"	"	23	40	43.2	23	~~41~~ 40	~~59.8~~ 0.0 − 16.6
" 3	"	"	21	59	43.7	22	0	0.0 − 16.3
" 4	"	"	22	20	44.7	22	21	0.6 ~~0.0~~ − 15.9
" "	B 236	"	21	23	32.6	22	22	0.6 ~~0.0~~ − 7m 21.3
" 6	B+C 1182	"	0	53	45.6	0	54	0.3 ~~0.0~~ − 14.7
" 7	"	"	0	44	47.6	0	45	1.0 ~~0.0~~ − 13.4
" 8	"	"	0	35	47.0	0	~~36~~ 35	~~59.7~~ 0.0 − 12.7
" A.M. 9	Found both B+C. 1182 and B 236 run down. Found and reset them.							
" 8	B 236	B 394	20	57	39.5	21	~~33~~ 32	~~59.7~~ 0.0 + 7.0
" 8	B+C 1182	"	21	32	28.6	21	~~32~~ 31	~~59.7~~ 0.0 + 28.9
" 9	"	"	21	27	28.2	21	~~27~~ 26	~~57.7~~ 0.0 + 28.5
" 11	"	"	2	00	29.0	~~2~~ 1	~~00~~ 59	~~59.9~~ 0.0 + 29.1
" 11	"	"	23	43	29.8	23	43	0.2 ~~0.0~~ + 29.6
" 11	B 236	"	23	20	26.3	23	44	0.2 ~~0.0~~ − 17.8
" 12	B+C 1182	"	21	47	19.2	21	~~47~~ 46	~~59.9~~ 0.0 + 19.3
" 13	"	"	23	54	18.6	23	~~54~~ 53	~~59.8~~ 0.0 + 18.8
" 15	"	"	0	25	18.8	0	~~26~~ 24	~~59.8~~ 0.0 + 19.0
" 16	"	"	0	37	19.8	0	~~37~~ 36	~~59.6~~ 0.0 + 20.2
" 16	"	"	23	36	20.5	23	36	0.0 + 20.5
" 18	"	"	1	54	21.9	1	54	0.0 + 22.5

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Date	Chronometer	Comp. with	Time by chron.			Time by clock			Error
Mar. 19	B 236.	B 394	0	50	20.5	0	47	00.0	
" "	B+C 1182	"	0	46	23.4	0	46	00.0	+24.5
" "	"	"	22	56	23.9	22	56	00.0	
" 21	"	"	0	40	24.0	0	40	00.0	+24.6
" "	"	"	23	27	24.5	23	27	00.0	
" 22	"	"	22	20	25.5	22	20	00.0	+27.0
" 24	"	"	0	21	22.0	0	21	00.0	+20.4
" 25	"	"	1	55	19.9	1	55	00.0	+15.8
" 26	"	"	0	1	17.7	0	1	00.0	+11.3
" "		"	slow 6.5.						
" "	B 236	"	0	31	44.8	0	2	00.0	
~~Sept.~~ Sept. 31	B. 236	"	22	31	14.0	21	35	00.0	
" "	B.+C. 1182	"	21	33	23.7	21	33	00.0	+24.7
" 4	Chronometers found run down. Wound + reset.								
" "	B 236	B 394	22	37	16.5	21	27	00.0	
" "	B.+C. 1182	"	21	27	34.2	21	29	00.0	−85.5
" ~~5~~ 6.	B. 236	"	0	27	48.2	23	2	00.0	
" "	B.+C 1182	"	23	2	37.5	23	4	00.0	−84.8
" 16.	B 236	"	2	10	42.8	0	18	00.0	
" "	B.+C.1182	"	0	14	37.0	0	16	00.0	−82.3
" 23.	B. 236	"	~~2~~ 3	16	5.2	0	54	00.0	
" "	B.+C 1182	"	0	56	16.5	0	56	00.0	+14.7
" ~~30~~ 29	B 236	"	0	48	21.0	22	0	00.0	
" "	B+C 1182	"	22	2	20.5	22	2	00.0	+20.3
~~May~~ 7	Chronometers found run down, wound + reset.								
May 7	B 236	"	3	58	9.0	0	42	00.0	
" "	B.+C. 1182	"	0	43	19.5	0	44	00.0	
" ~~14~~ 13.	B 236.	"	0	43	17.4	21	1	00.0	
" "	B+C. 1182.	"	21	2	21.5	21	3	00.0	
" 21	B 236.	"	4	38	37.5	0	29	00.0	
" "	B+C. 1182	"	0	30	99.0	0	31	00.0	

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Date	Chronometer	Comp. with	Time by Chron.	Time by Clock.	Error.
May 27	B 236	B 394	1h 49m 10s.7	21 13	00.0
" "	B+C 1182	"	21 14 43.5	21 15	00.0
June 3	B 236	"	2 14 55.5	21 12	00.0
" "	B+C. 1182	"	21 13 31.3	21 14	00.0
" 11	B 236	"	2 35 4.5	21 1	00.0
" "	B+C 1182	"	21 2 56.2	21 3	00.0
" 14.	Chrons. found run down. Wound + reset.				
" "	B 236	B 394.	5 9 35.5	23 20	00.0
" "	B+C 1182.	"	23 21 59.5	23 22	00.0
" 19	B 236	"	10 13 37.2	4 8	00.0
" "	B+C 1182	"	4 10 2.0	4 10	00.0
July 1.	B 236	"	6 18 48.5	23 24	00.0
" "	B+C. 1182.	"	23 26 31.0	23 26	00.0
" 8	B 236.	Ballon 103	6 47 29.4	23 26	00.0
" "	B+C. 1182	" "	23 28 47.1	23 28	00.0
" 13.	Chrons. found run down. Wound + reset.				
" 13.	B 236	B 394	9 12 53.2	1 31	00.0
" 13	B+C 1182	"	1 32 23.1	1 33	00.0
" 15	B 236	"	7 10 1.5	23 17	00.0
" "	B+C. 1182	"	23 18 32.2	23 19	00.0
" 31	Chrons. found run down. Wound + reset.				
" "	B 236	B 394.	10 1 41.1	1 9	00.0
" "	B+C 1182.	"	1 6 7.0	1 7	00.0
Aug. 6.	B 236.	"	10 32 45.5	1 17	00.0
" "	B+C 1182	"	1 14 36.5	1 15	00.0
" 12.	B 236.	"	7 12 56.5	21 31	00.0
" "	B.+C. 1182.	"	21 33 3.8	21 33	00.0
" 19	B 236.	"	7 36 51.5	21 28	00.0
" 19	B+C. 1182.	"	21 30 51.1	21 30	00.0

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1894

Date	Chronometer	Comp. with	Time by Chron.			Time by Clock.			Error.
Aug. 26.	B. 236	B 394.	8	20	38.8	21	45	00.0	
" "	B + C. 1182	"	21	48	30.0	21	47	00.0	
Sept. 17.	B 236	"	9	18	32.0	21	19	00.0	
" "	B + C. 1182	"	21	24	24.2	21	21	00.0	
	Chron. set Sept. 19.								
Sept. 19.	B 236	B 394.	14	1	1.2	1	49	00.0	
" "	B + C. 1182	"	1	50	27.5	1	51	00.0	
" 24	B 236	"	9	33	4.0	20	59	00.0	
" "	B + C 1182	"	21	1	3.7	21	1	00.0	
Sept. 25.	Above comp. made accidentally with B 394 when Ballon was the standard								
" "	B 236	Ballon 103	13	5	38.5	0	31	00.0	
" "	B + C 1182	" "	0	33	5.5	0	33	00.0	
Sept. 30.	B 236.	" "	10	12	56.0	21	16	00.0	
" "	B + C 1182.	" "	21	18	32.7	21	18	00.0	
Oct. 7.	B 236.	" "	10	37	30.0	21	14	00.0	
" "	B + C 1182.	" "	21	17	15.8	21	16	00.0	
" 14.	B 236.	" "	11	1	2.7	21	11	00.0	
" "	B + C 1182.	" "	21	14	50.5	21	13	00.0	
" 21	B 236	" "	11	14	50.2	20	58	00.0	
" "	B + C 1182	" "	21	2	29.1	21	00	00.0	
" 24.	Chron. wound and reset.								
" "	B 236.	Ballon 103	13	54	28.5	22	23	00.0	
" "	B + C 1182	" "	22	24	51.8	22	25	00.0	
" 28	B 236	B 394	12	5	29.0	21	19	00.0	− 35.4
" "	B + C 1182	"	21	21	13.9	21	21	00.0	

1901phae.proj.461w

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1894.

Date.	Chronometer	Comp. with	Time by Chron.	Time by Clock.	Error.
Nov. 4.	B 236.	B. 394.	12 17 13.0	21 4	00.0
" "	B+C 1182.	"	21 6 56.2	21 6	00.0
Nov. 6.	B 236.	"	15 11 15.2	23 50	00.0
" "	B+C 1182.	"	23 53 7.5	23 52	00.0
Nov. 7.	B 236	"	13 34 47.2	22 10	00.0
" "	B+C. 1182.	"	22 13 12.3	22 12	00.0
" "	Fr. 3451	"	22 10 46.0	22 14	00.0
Nov. 11.	B 236.	"	21 24 40.0	21 18	00.0
" "	B+C 1182	"	21 20 22.0	21 20	00.0
" "	B 236.	Fr. 1327.	21 28 55.3	13 4	00.0
" "	B+C 1182	" "	21 25 36.3	13 7	00.0
" "	Fr. 3451	B 394.	21 45 30.0	21 38	00.0
" "	A+D 958	"	21 40 11.5	21 40	00.0
" "	Fr. 3451	Fr. 1327.	21 49 42.0	13 24	00.0
" "	A+D 958	" "	21 44 22.5	13 26	00.0
" "	A 1678	B 394.	21 49 55.0	21 50	00.0
" "	Richard	"	21 51 54.8	21 52	00.0
" "	A 1678	Fr. 1327.	21 54 4.0	13 36	00.0
" "	Richard	" "	21 56 4.5	13 38	00.0
" "	A 1678 and Richard chrons. ran down, and were reset before above comparisons.				
Nov. 13.	Reset B 236 after Transit of Mercury.				
" ".	B 236	B 394	13 15 18.0	21 26	00.0
Nov. 18.	Fr. 3451.	"	14 56 59.0	22 47	00.0
" ".	B 236.	"	14 57 41.5	22 49	00.0
" ".	B+C. 1182.	"	22 52 1.5	22 51	00.0
Nov. 25.	B 236.	"	14 30 19.2	21 55	00.0
" "	B+C. 1182	"	21 58 36.5	21 57	00.0

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1991phae.proj..461W

1894.

Date.	Chronometer.	Comp. with.	Time by Chron.	Time by Clock.	Error.
Dec. 2.	B 236.	B 394.	14 30 59.0	21 29	00.0
" "	B + C 1182.	B 394.	21 33 9.8	21 31	00.0
Dec. 9.	B 236.	"	14 46 43.0	21 18	00.0
" "	B + C. 1182	"	21 22 43.5	21 20	00.0
Dec. 16.	B 236.	"	16 4 39.3	22 9	00.0
" "	B + C 1182	"	22 14 23.0	22 11	00.0
Dec. 30	B 236	Ballon 103	15 58 58.0	21 10	00.0
" "	B + C. 1182	"	23 43 40.5	23 44	00.0
1895 Jan. 7.	B 236.	"	20 28 20.7	1 12	00.0
" "	A. + D 958	"	1 14 32.8	1 14	00.0
Jan. 13.	B 236	"	17 30 36.5	21 48	00.0
" "	A + D 958.	"	21 50 51.8	21 50	00.0
Jan 20.	B 236	Bond 394.	18 47 26.0	22 38	00.0
" "	A + D 958	"	22 41 11.5	22 40	00.0
Jan. 27	B 236	"	20 14 23.8	23 38	00.0
" "	A. + D. 958	"	23 41 29.1	23 40	00.0
Jan. 31.	B + C. 1182.	"	22 8 21.5	22 8	00.0
" "	B + C. Returned to-day.		Reset.		
Feb. 3.	B 236	Bond 394.	20 39 9.0	23 36	00.0
" "	A + D. 958	"	23 39 46.2	23 38	00.0
" "	B + C. 1182.	"	23 40 14.9	23 40	00.0
Feb. 13.	B 236	"	15 54 24.1	17 59	00.0
" "	A + D. 958	"	18 3 9.3	18 1	00.0
" "	B + C 1182.	"	18 3 43.0	18 3	00.0
Feb. 25	B 236	"	17 16 19.5	18 35	00.0
" "	A + D 958	"	18 44 40.5	18 42	00.0
" "	B + C 1182	"	18 45 28.8	18 44	00.0

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1895.

Date.	Chron.	Comp. with	Time by Chron	Time by Clock.	Error.
May 20.	A+D	Bal. 103.	0 15 26.0	0 12	00.0
" "	B 236.	" "	4 16 15.5	0 13	00.0
" "	Fr. 3424.	" "	0 15 42.5	0 15	00.0
" "	B+C. 1182	" "	0 21 36.3	0 16	00.0
June 21.	A+D 958	" "	18 42 59.0	18 38	00.0
" "	B+C 1182	" "	18 47 59.0	18 39	00.0
" "	B 236	" "	0 49 51.5	18 41	00.0
" "	Fr. 3451.	" "	1 00 22.2	18 42	00.0
July 14.	B 236.	" "	5 58 31.5	22 13	00.0
" "	Fr. 3424	" "	22 13 9.0	22 14	00.0
" "	B+C 1182	" "	22 19 5.8	22 17	00.0
" "	A+D 958	" "	16 51 13.5	22 18	00.0
" "	Fr. 3451	" "	18 8 36.8	22 19	00.0
July 21.	Fr. 3424	" "	21 48 2.3	21 49	00.0
" "	B 236.	" "	6 2 12.0	21 50	00.0
" "	B+C 1182	" "	21 54 0.5	21 51	00.0
" "	A+D 958.	" "	16 27 33.2	21 54	00.0
" "	Fr. 3451.	" "	6 12 5.5	21 55	00.0
Aug. 15.	B 236.	" "	3 15 10.5	17 28	00.0
" "	Fr. 3424.	" "	17 27 20.0	17 29	00.0
" "	A+D. 958	" "	12 4 40.5	17 30	00.0
" "	B+C 1182.	" "	17 38 1.3	17 32	00.0
" "	Fr. 3451	" "	3 27 43.2	17 33	00.0
Aug. 27.	B+C. 1182.	" "	17 45 36.0	17 45	00.0
" "	A+D. 958.	" "	17 47 2.8	17 46	00.0
" "	Fr. 3424.	" "	17 46 53.5	17 47	00.0
" "	B 236.	" "	4 28 44.0	17 49	00.0
" "	Fr. 3451	" "	4 29 58.2	17 50	00.0

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1895.

Date.	Chron.	Comp. with	Time by Chron.	Time by Clock.	Error.
Sept. 4.	B 236.	Bal. 103.	6 39 33.0	19 29	00.0
" "	B+C. 1182.	"	19 31 38.0	19 30	00.0
" "	A.+D. 958.	"	19 32 25.8	19 31	00.0
" "	Fr. 3424.	"	19 32 37.6	19 33	00.0
" "	Fr. 3451.	"	18 45 47.0	19 34	00.0
Sept. 13.	Fr. 3424	"	18 19 14.7	18 20	00.0
" "	B 236.	"	6 5 47.0	18 21	00.0
" "	A+D. 958.	"	18 23 52.0	18 22	00.0
" "	Fr. 3451	"	18 11 7.2	18 24	00.0
" "	B+C. 1182.	"	18 27 47.5	18 25	00.0
Nov. 25.	B 236	Bond 394.	10 29 8.0	17 55	00.0
" "	B+C 1182.	"	17 50 14.3	17 56	00.0
" "	A+D. 958.	"	17 57 16.7	17 57	00.0
" "	Fr. 3451	"	10 34 44.5	17 59	00.0
" "	Fr. 3424	"	9 49 11.7	18 00	00.0
Dec. 8.	B 236.	Bal. 103.	12 12 49.5	18 49	00.0
" "	A+D. 958.	"	18 00 21.5	18 50	00.0
" "	B+C. 1182.	"	18 53 38.3	18 52	00.0
" "	B. 3451.	"	9 28 30.5	18 54	00.0
Dec. 23.	B 236.	"	13 47 1.3	19 21	00.0
" "	B+C 1182.	"	19 16 12.5	19 22	00.0
" "	A+D 958.	"	19 24 58.2	19 24	00.0
" "	B 3451	"	11 21 20.5	19 25	00.0

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1896.

Date.	Chron.	Compared with	Time by Chron.	Time by Clock	Error.
Jan. 6.	B+C. 1182	Ballou 103	17 9 41.0	17 29 00.0	
" "	B 3451.	" "	14 9 49.0	18 49 00.0	
" "	A+D 958	" "	18 50 17.2	18 50. 00.0	
Jan. 15.	A+D. 958.	" "	16 18 4.6	16 18 00.0	
" ".	B 236.	" "	15 22 53.5	19 27 00.0	
" ".	Fr. 3451	" "	12 45 27.0	19 29 00.0	
Feb. 2.	A+D. 958	" "	13 50 44.0	13 50 00.0	
Feb. 6.	B 236.	" "	17 00 54.3	19 41 00.0	
" ".	Fr. 3451	" "	17 04 36.9	19 43 00.0	
Feb. 19.	A+D. 958.	" ".	14 23 18.5	14 23 00.0	
Mar. 5.	A+D. 958.	" ".	13 26 57.2	13 26 00.0	
" ".	B 236.	" ".	18 55 30.5	19 42 00.0	
" ".	Fr. 3451	" ".	16 14 09.3	19 43 00.0	

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Invests. of Faint Comp. Stars for Variable with Plat. I on East Equatorial.

Book.	Page.	Date. 1894.	Series.
72	13	Oct. 27.	Polar Sequence.
"	32	Nov. 3.	" "
"	36.	Nov. 6.	" "
"	46.	Nov. 7.	" "
"	95.	Nov. 19.	" "
"	109	Nov. 22.	" "
"	116.	Nov. 27.	" "
"	121.	Nov. 27.	S. Cygni.
"	123.	Nov. 28.	Polar Sequences.
"	128.	Nov. 28.	S. Cygni.
"	139	Dec. 3.	Polar Sequences.
"	143	Dec. 3.	S. Cygni.
"	151	Dec. 4.	S. Cygni.
"	192	Dec. 17.	R. Draco.
"	195	Dec. 17.	S. Cephei.
"	203	Dec. 18.	χ Cygni.
"	213	Dec. 19.	χ Cygni.
"	216.	Dec. 19.	R. Draco.
"	219.	Dec. 19.	S. Cephei.
73	3.	Dec. 20,	S. Cephei.
"	11.	Dec. 22,	χ. Cygni.
"	15	Dec. 22.	R. Urs. Min.
"	19	Dec. 22.	T. Cephei.
"	28.	Dec. 29.	R. Urs. Min.
"	30.	Dec. 29.	T. Cephei.
"	31.	Dec. 29.	S. Cephei.
"	36.	1895. Jan. 1.	R. Draconis.
"	39.	Jan. 1.	R. Urs. Min.
"	40.	Jan. 1.	T. Cephei.

Book.	Page.	Date. 1895	Series.
73	43	Jan. 2.	R. Cass.
"	54	" 4.	R. Cass.
"	82	" 19	R. Urs. Maj.
"	92	" 23	R. Urs. Maj.
"	94	" 24	R. Urs. Maj.
"	97	" 24	R. Draconis.
"	109	" 29	S. Cephei.
"	135	Feb. 11.	S. Cephei.
"	140.	Feb. 13.	S. Cephei.
"	150	Feb. 16.	S. Cephei.
"	152.	Feb. 16.	R. Urs. Min.
"	169.	Feb. 20.	S. Cephei.
"	172.	Feb. 20.	R. Urs. Min.
"	177.	Feb. 21.	S. Cephei.
"	189.	Feb. 23.	S. Cephei.
"	192.	Feb. 23,	R. Urs. Min.
"	207.	Feb. 26,	S. Cassiop.
74	39	Mar. 16,	S. Cassiop.
"	55	Mar. 30,	S. Cassiop.
76	103	June 20,	S. Cassiop.
"	110	June 26,	S. Cassiop.
"	140	July 10,	S. Cassiop.
"	160	July 12,	S. Cassiop.
"	180	July 15,	S. Cassiop.
"	211	July 23,	S. Cassiop.
78	170 (144)	Dec. 20,	R. Cassiop.
79	80 (144)	1896 Jan. 15,	" "
"	94. (80)	Jan. 16,	T. Cassiop.
"	103 (96)	Jan. 18.	" "
"	208 (48)	Feb. 12,	S. Cephei.

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Meast. of Fault Comp. Slits for Variables with Plat. I and I' on East Equatorial.

Ledger.

Dozen.								
107 Cassiop.	Jan. 18, '96	Jan. 16, '96.						
K32 N "	July 23, '95 Feb. 26, '95	Mar. 16, '95	Mar. 30, '95	June 20, '95	June 26, '95.	July 10, '95.	July 12, '95.	July 15, '95.
793 N Persei.								
814 N Persei.	July 28, '96	July 31, '96.						
1022 R Aurigae.	July 17, '96	July 30, '96.						
2472 R Lyncis.	Apr. 30, '96.	Jan. 22, '96	May 1, '96.					
3422 R Ursæ Maj.	Apr. 16, '96.	Jan. 15, '96						
4511 N " "	July 2, '96	Jan. 19, '95	Jan. 23, '95	Jan. 24, '95	July 1, '96.			
4577 N " "	July 9, '96.	July 10, '96	July 11, '96					
5157 N Bootis.	June 30, '96	June 29, '96	July 1, '96.					
5190 R Cancri.	May 7, '96.	May 1, '96.						
5944 R Ursæ Min.	July 16, '96	July 17, '96						
5955 R Draconis.	Mar. 13, '96. R	Mar. 14, '96 R						
7220 N Cygni.	Dec. 22, '94	Dec. 29, '94	Jan. 1, '95 R	Feb. 16, '95	Feb. 22, '95,	Feb. 23, '95.,	Mar. 5, '96.	Mar. 10, '96.
7609 N Cephei.	Dec. 17, '94	Dec. 19, '94	Jan. 1, '95	Jan. 24, '95	Mar. 14, '96.	Mar. 17, '96.	Mar. 21, '96.	Apr. 8, '96.
7779 N "	Nov. 27, '94	Nov. 28, '94	Dec. 3, '94	Dec. 4, '94.	June 27, '96.	June 29, '96.		
8600 R Cassiop.	Dec. 22, '94	Dec. 29, '94	Jan. 1, '95	July 14, '96.	July 15, '96	July 16, '96.		
7120 X Cygni.	Feb. 20, '95	Feb. 21, '95	Feb. 23, '95	Feb. 12, '96	Feb. 14, '96	Feb. 16, '96.		
	Dec. 17, '94	Dec. 19, '94	Dec. 20, '94	Dec. 29, '94.	Jan. 29, '95,	Feb. 11, '95,	Feb. 13, '95,	Feb. 16, '95.
	Jan. 2, '95	Jan. 4, '95	Dec. 20, '95 R	Jan. 15, '96.				
	Dec. 18, '94	Dec. 19, '94	Dec. 22, '94	Sept. 15, '96.	Sept. 28, '96.			

Above posting transferred to p. 178.

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Measts. of Ft. Comp. Stars for Variables. with Phots. 8 & 9. on East Equatorial.

Book.	Page.	Date. 1896	Obsvr.
79 (96)	215.	Feb. 14.	S. Ceplher.
80 (40)	6.	Feb. 16.	" " .
80 (40)	83	Mar. 5.	R. Mus. Min.
80 (1F)	140.	Mar. 10.	" " " .
80 (40)	145.	Mar. 12.	" " " .
80 (40)	155.	Mar. 14.	" " " .
80 (40)	160.	Mar. 14.	R. Draconis.
80. (10)	185.	Mar. 17.	" " .
80 (32)	201	Mar. 21.	" " .
81 (40)	18	Apr. 8.	" " .
81 (40)	42.	Apr. 15.	R. Lyncis.
81 (40)	49.	Apr. 16.	" " .
81. (40)	58.	Apr. 22.	R. Aurigae.
81. (40)	92	Apr. 30.	" " .
81. (40)	102.	May 1.	S. Bootis.
81. (32)	111.	May 1.	R. Aurigae.
81. (96)	127	May 7.	S. Bootis.
82 (40)	127	June 27.	S. Cygni.
82 (40)	134	June 29.	S. Cygni.
82 (32)	140.	June 29.	S. Mus. Maj.
82 (96)	147.	June 30.	" " " .
82 (96)	158	July 1.	" " " .
82 (40)	164	July 1.	R. Mus. Maj.
82 (40)	171	July 2.	" " " .
82 (4A)	183.	July 9.	T. Mus. Maj.
82 (96)	190.	July 10.	" " " .
82 (96)	199.	July 11.	" " " .
82 (40)	214	July 14.	T. Ceplher.
83 (16)	3	July 15.	" "

2 vv 2.

Book.	Page.	Date. 1896	Obsvr.
83 (40)	16.	July 16.	T. Ceplher.
83 (96)	10.	July 16.	R. Camelop.
83 (96)	19.	July 17.	" "
83 (40)	25.	July 17.	S. Persei.
83 (4A)	79.	July 28.	" "
83 (32)	99.	July 30.	" "
83 (32)	115.	July 31.	" "
84. (4A)	85.	Sept. 15.	χ Cygni.
84 (40)	126	Sept. 28.	" "
84 (31A)	159	Oct. 1.	W. Herculis.
84 —	166.	Oct. 3.	" "
84 (5ests)	172.	Oct. 7.	" "
84 —	177.	Oct. 7.	χ Cygni.
84. —	179	Oct. 7.	R. Delphini.
84. —	183.	Oct. 8.	W. Herculis.
84. (4ests)	187.	Oct. 8.	T. Aquarii.
84. —	192.	Oct. 8.	R. Delphini.
84. (5ests)	195.	Oct. 9.	T. Aquarii.
84. —	202.	Oct. 9.	R. Delphini.
84. (5ests)	208.	Oct. 10.	T. Aquarii.
84. (6ests)	213.	Oct. 10.	R. Delphini.
85. (6ests)	122.	Oct. 31.	" " .
85. —	127.	Oct. 31.	U. Cygni.
85. (6ests)	129.	Oct. 31.	" "
85. (6ests)	136.	Nov. 2.	R. Delphini.
85. (7ests)	138.	Nov. 2.	U. Cygni.
85. (6ests)	152.	Nov. 3.	" " .
85. (5ests)	160.	Nov. 3.	R. Vulpeculae.
85. (7ests)	174.	Nov. 6.	U. Cygni.

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Measts. of Ft. Comp. Stars for Variables, with Photo. I + T. on East Equatorial.

Book.	Page	Date. 1896	Desig.
85. (5esta)	175	Nov. 6.	R. Vulpeculae.
85. (6esta)	182.	Nov. 6.	V. Cygni.
85. —	195.	Nov. 7.	R. Vulpeculae.
85. —	196.	Nov. 7.	V. Cygni.
85. (6esta)	197.	Nov. 7.	V. Cygni.
85. (7esta)	203.	Nov. 7.	R. Pegasi.
85. (8esta)	209.	Nov. 9.	V. Cygni.
85. (8esta)	214.	Nov. 9.	R. Pegasi.
86. (2esta)	1.	Nov. 10.	V. Cygni.
86. (6esta)	2.	Nov. 10.	R.S. Cygni.
86. (6esta)	9.	Nov. 10.	R. Pegasi.
86. (6esta)	11.	Nov. 11,	R.S. Cygni.
86. (3esta)	29.	Nov. 14,	R. Vulpeculae.
86. (2esta)	30.	Nov. 14.	V. Cygni.
86. (2esta)	31.	Nov. 14.	R. Pegasi.
86. (7esta)	31.	Nov. 14.	R.S. Cygni.
86. (2esta)	98.	Dec. 1.	" " "
86. (1est)	101.	Dec. 1.	R. Pegasi.
86. (2esta)	103.	Dec. 3.	R. Vulpeculae.
86 (2esta)	103.	Dec. 3.	R.S. Cygni.
86. —	104.	Dec. 3.	R. Pegasi.
86. —	115.	Dec. 5.	" "
86. —	118.	Dec. 5.	R.S. Cygni.
86. (7esta)	122.	Dec. 7.	S. Pegasi.
86. (7esta)	126.	Dec. 7.	R. Androm.
86. (7esta)	133.	Dec. 11.	S. Pegasi.
86. (7esta)	134.	Dec. 11.	R. Andromed.
86. (7esta)	135.	Dec. 12.	S. Pegasi.
86. (7esta)	136.	Dec. 12.	R. Androm.

Book.	Page.	Date. 1896	Desig.
86 —	198	Dec. 26.	S. Pegasi.
86 —	205.	Dec. 28.	" "
86 (10esta)	209.	Dec. 28.	R. + S. Tauri.
86 (7esta)	212	Dec. 30.	R. Cati.
86 (10esta)	213	Dec. 30.	R. + S. Tauri.
86 (7esta)	217	Dec. 31,	R. Cati,
86 (7esta)	218 (6=total)	1897	" " Camelop.
87. (7esta)	1	Jan. 1,	R. Cati
87. (10esta)	1.	Jan 1,	R. Tauri.
87. —	19.	Jan. 5,	R. + S. Tauri.
87. —	23.	Jan. 6,	R. Androm.
87. —	29.	Jan. 7,	" "
87. (9esta)	33.	Jan. 7,	R. Arietis.
87 (9esta)	47.	Jan. 9,	" "
87 (9esta)	109	Jan. 23	" "
87 —	126.	Jan. 25,	" "
87 (2esta)	131.	Jan. 26,	" "
87. (2esta)	144.	Jan. 29.	" "
87. (9esta)	144.	Jan. 29.	R. Androm.
87. (2esta)	148.	Jan. 30,	R. Arietis.
87. (9esta)	157.	Jan. 30,	R. Androm.
87. (2esta)	166.	Feb. 1,	R. Arietis.
87, (10esta)	166.	Feb. 1,	S. Cam. Tauri.
87. (9esta)	167.	Feb. 1,	R. Androm.
87. —	174.	Feb. 3,	" "
87, (10esta)	175.	Feb. 3,	S. Cam. Tauri.
87. (10esta)	189.	Feb. 4,	" " "
88 (11esta)	74.	Feb. 23,	R. Cancri.
88. (9esta)	87.	Feb. 24,	" "
88. (11esta)	99.	Feb. 27,	" "

Con. on page 181.

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1891phae.proj..461W

Masts. of Faint Comps. Stars for Variables, with Phots. I and T. on East Equatorial.

Orig.	Jan. 18, '96. (96 setts.)					
1007 T. Cassiop.	Jan. 16, '96. (80 setts.)					
	Jan. 16, '95	June 20, '95.	July 10, '95.	July 15, '95.		
432 S. " "	Feb. 26, '95.	Mar. 30, '95.	June 26, '95.	July 12, '95.	July 23, '95.	
793 T. Persei.						
	July 28, '96. (48 setts.)	July 31, '96 (32 setts.)				
814 S. Persei.	July 17 '96 (80 setts.)	July 30, '96. (32 setts.)				
	Feb. 30, '96 (80 setts.)					
1855 R. Camelop.	Feb. 22, '96. (80 setts.)	May 1, '96 (32 setts.)				
	Apr. 16, '96 (80 setts.)					
2478 R. Lyncis.	Feb. 15, '96. (80 setts.)					
	Jan. 23, '95.	July 1, '96. (80 setts.)				
3825 R. Ursæ Maj.	Jan. 19, '95.	Jan. 24, '95.	July 2, '96. (80 setts.)			
	July 12, '96. (96 setts.)					
4511 T. " "	July 9, '96. (48 setts.)	July 11, '96. (96 setts.)				
	June 30 '96. (96 setts.)					
4557 S. " "	June 29, '96. (32 setts.)	July 1, '96. (96 setts.)				
	May 7, '96. (96 setts.)					
5157 S. Bootis.	May 1, '96. (80 setts.)					
	July 17, '96. (96 setts.)					
5190 R. Camel.	July 16, '96. (96 setts.)					
	Dec. 29, '94.	Feb. 16, '95.	Feb. 23, '95.	Mar. 10, '96. (144 setts.)	Mar. 14, '96. (80 setts.)	
5948 R. Ursæ Min.	Dec. 22, '94.	Jan. 1, '95.	Feb. 20, '95.	Mar. 5 '96. (80 setts.)	Mar. 12, '96. (80 setts.)	
	Dec. 19, '94.	Jan. 24, '95.	Mar. 1, '96. (10 setts.)	Apr. 8, '96. (80 setts.)		
5955 R. Draconis.	Dec. 17, '94.	Jan. 1, '95.	Mar. 14, '96. (80 setts.)	Mar. 21, '96. (16 setts.)		
	Nov. 28, '94.	Dec. 4, '94.	June 29, '96. (80 setts.)			
7220. S. Cygni.	Nov. 27, '94.	Dec. 3, '94.	June 27, '96. (80 setts.)			
	Dec. 29, '94.	July 14, '96. (80 setts.)	July 16, '96. (80 setts.)			
7609. T. Cephei.	Dec. 22, '94.	Jan. 1, '94.	July 15, '96. (16 setts.)			
	Dec. 19, '94.	Dec. 29, '94.	Feb. 11, '95.	Feb. 16, '95.	Feb. 21, '95.	Feb. 12, '96 (48 setts.) Feb.
7779. S. " "	Dec. 17, '94.	Dec. 20, '94.	Jan. 29, '95.	Feb. 13, '95.	Feb. 20, '95.	Feb. 23, '95. Feb
	Jan. 4, '95.	Jan. 15, '96. (144 setts.)				
8600 R. Cassiop.	Jan. 2, '95.	Dec. 20, '95. (144 setts.)				
	Dec. 19, '94.	Sept. 15, '96. (48 setts.)	Oct. 7, '96 (32 setts.)			
7120 χ Cygni.	Dec. 18, '94.	Dec. 22, '94.	Sept. 28, '96. (80 setts.)			
	Oct. 3, '96 (48 setts.)	Oct. 8 '96 (64 setts.)	Sept. 13, '97 (32 setts.)			
W. Herculis.	Oct. 1, '96 (48 setts.)	Oct. 7 '96 (80 setts.)	Sept. 6, '97 (16 setts.)	Sept. 17, '97 (16 setts.)		
	Oct. 8 '96 (16 setts.)	Oct. 10 '96 (96 setts.)	Nov. 2, '96 (32 setts.)			
R. Delphini.	Oct. 4 '96 (16 setts.)	Oct. 9 '96 (80 setts.)	Oct. 31, '96 (80 setts.)			
	Oct. 9 '96 (96 setts.)	Sept. 15, '97 (16 setts.)	Sept. 18, '97 (32 setts.)			
T. Aquarii.	Oct. 8, '96 (80 setts.)	Oct. 10 '96 (80 setts.)	Sept. 17, '97 (48 setts.)			
	Nov. 2, '96 (128 setts.)	Nov. 6 '96 (16 setts.)	Nov. 10, '96 (16 setts.)			
U. Cygni.	Oct. 31, '96 (64 setts.)	Nov. 3, '96 (128 setts.)	Nov. 7, '96 (16 setts.)			
R. Trifoeculae.	Nov. 6, '96 (96 setts.)					
	Nov. 3, '96 (80 setts.)	Nov. 7, '96 (16 setts.)				
	Nov. 4 '96 (80 setts.)					
T. Cygni.	Nov. 6 '96 (80 setts.)	Nov. 9 '96 (48 setts.)				
	Nov. 9 '96 (48 setts.)	Dec. 3, '96 (80 setts.)	Sept. 25, '97 (32 setts.)			
R. Pegasi.	Nov. 4 '96 (16 setts.)	Nov. 10 '96 (16 setts.)	Dec. 5, '96 (48 setts.)	Sept. 27, '97 (32 setts.)		
	Nov. 11, '96 (48 setts.)	Dec. 1, '96 (32 setts.)				
R. S. Cygni.	Nov. 10 '96 (96 setts.)	Nov. 14, '96 (48 setts.)	Dec. 5, '96 (16 setts.)			
	Dec. 26 '96 (80 setts.)					
S. Pegasi.	Dec. 29 '96 (80 setts.)	Dec. 28, '96 (80 setts.)				
	Dec. 30, '96 (64 setts.)	Jan. 5, '97 (48 setts.)				
R. + S. Vulpi.	Dec. 28 '96 (64 setts.)	Jan. 1, '97 (80 setts.)				
	Jan. 7, '97 (80 setts.)	Sept. 24, '97 (32 setts.)				
R. Andromedæ.	Jan. 6, '97. (80 setts.)	Sept. 21, '97 (8 setts.)				
	Jan. 25, '97 (32 setts.)					
R. Arietis.	Jan. 23, '97 (80 setts.)	Jan. 26, '97 (64 setts.)				
	Jan. 30, '97 (80 setts.)	Apr. 3 '97 (48 setts.)				
U. Orionis.	Jan. 27, '97 (32 setts.)	Feb. 1, '97 (80 setts.)	Mar. 12, '97 (48 setts.)			

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(48 sets) Feb. 16, '96. (80 setts.)
Feb. 14, '96. (96 setts.)

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Measts. of Faint Comp. Stars for Variables; with Phots. I and T. on East Equatorial

Desige	Feb. 4, '97 (80 setts)		
Cam. Min.	Feb. 3, '97 (80 setts)		
R. Canori.	Feb. 24, '97 (80 setts)	Mar. 31, '97 (32 setts)	
	Feb. 23, '97 (80 setts)	Mar. 30, '97 (32 setts)	
S. Hydrae.	Mar. 4, '97 (80 setts)		
	Feb. 27, '97 (80 setts)	Mar. 6, '97 (32 setts)	
R. Comæ	Apr. 1, '97 (112 setts)		
	Mar. 25, '97 (80 setts)	Apr. 2, '97 (32 setts)	
R. Hydrae.	Apr. 28, '97 (112 setts)		
	Apr. 3, '97 (64 setts)	May 4, '97 (48 setts)	
R. Geni.	Apr. 20, '97 (96 setts)		
R. Geni.	Apr. 21, '97 (96 setts)		
T. Virginis.	May 4, '97 (112 setts)	May 7, '97 (16 setts)	
	Apr. 30, '97 (32 setts)	May 5, '97 (96 setts)	June 1, '97 (32 setts)
X. Virginis.	May 29, '97 (96 setts)		
	May 19, '97 (96 setts)		
R. Virginis	June 18, '97 (112 setts)		
	June 2, '97 (112 setts)		
Z. Virginis	June 26, '97 (112 setts)		
	June 23, '97 (112 setts)		
R. Virginis	June 26, '97 (32 setts)		
SS. Cygni	July 31, '97 (48 setts)		
S. Cygni	Sept. 24, '97 (64 setts)	Sept. 27, '97 (64 setts)	
	Sept. 21, '97 (32 setts)	Sept. 25, '97 (48 setts)	Sept. 28, '97 (64 setts)
R. Cygni	Sept. 30, '97 (64 setts)		
	Sept. 29, '97 (64 setts)		

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Measts. of Faint Comp. Stars for Variables. with Phots. I and T. on East Equatorial.

Book.	Page.	Date.	Desig.
88 (7esta)	100.	Feb. 1892 27,	S. Hydrae.
88. (6esta)	105	Feb. 27,	R. Cancri.
88 (7esta)	124	Mar. 4,	S. Hydrae.
88 (7esta)	140	Mar. 6,	" " .
88 (7esta)	161	Mar. 11.	R. Comae.
88 (7esta)	215	Mar. 24,	" " .
89 (7esta)	7	Mar. 25,	" " .
89 (4esta)	37	Mar. 30,	R. Cancri.
89 (4esta)	42	Mar. 31,	" " .
89 (4esta)	53.	Apr. 1,	" " .
89 (1est.)	61 ~~54~~	Apr. 1,	R. Comae.
89 (1est.)	67.	Apr. 2,	" " .
89 (12esta)	68.	Apr. 2,	R. Hydrae.
89 (2esta)	74.	Apr. 3,	N. Orionis.
89 (1est.)	75	Apr. 3,	R. Comae.
89 (12esta)	75	Apr. 3,	R. Hydrae.
89 (2esta)	80	Apr. 12,	N. Orionis.
89 (2esta)	92	Apr. 13,	" " ,
89 (10esta)	140	Apr. 20,	R. Gem.
89. (12esta)	146.	Apr. 20,	R. Hydrae.
89 (11esta.)	160	Apr. 21,	R. Gem.
89 (11esta.)	177	Apr. 24,	R. Gem.
89 (11esta.)	211	Apr. 30,	T. Virginis.
89 (11esta.)	217.	May 4,	T. Virginis.
89 (8esta.)	223	May. 4,	S. Virginis.
90 (11esta.)	3	May. 5,	T. Virginis.
90. (8esta.)	54	May 18,	R. Virginis.
90. (8esta.)	58	May 19,	" " .
90. (9esta.)	65	May 19,	Y. Virginis.

Book.	Page.	Date.	Desig.
90 (9esta.)	95	May 25. 1892	Y. Virginis.
90 (9esta.)	105	May 29	R. Virginis.
90 (9esta.)	106	May 29	Y. Virginis
90 (2esta.)	110	May 31.	R. Virginis.
90 (2esta.)	118	June 1,	" " .
90 (7esta.)	119	June 1,	R. Virginis.
90 (7esta.)	122	June 2,	" " .
90. (9esta.)	130	June 2,	Y. Virginis.
90. (7esta)	186.	June 18,	R. Virginis.
90 (4esta)	203.	June 21,	U. Virginis.
90 (7esta.)	215	June 22,	" " .
90 (7esta.)	215	June 22,	R. Virginis
91 (—)	3	June 23,	Y. " .
91 (9esta)	10	June 23,	S. " .
91 (7esta)	20	June 24,	U. " .
91 (10esta)	22	June 25,	" " .
91 (10esta)	36	June 26,	" " .
91 (10esta.)	44	June 28,	" " .
91 (9esta)	162	July 31,	S. S. Cygni.
91 (7esta)	175	Sept. 2,	U. Cass.
91 (7esta)	176	Sept 2,	W. Herculis.
91 (11esta)	185	Sept. 6,	" " .
91 (10esta)	187	Sept. 6,	T. Aquarii.
91 (1est)	190	Sept. 6,	S. S. Cygni.
92 (7esta)	49	Sept. 15,	W. Herculis.
92 (8esta)	51	Sept. 15,	T. Aquarii.
92 (5esta.)	57	Sept. 17,	W. Herculis.
92 (8esta.)	59	Sept. 17,	T. Aquarii.
92 (8esta.)	63	Sept. 17,	R. Pegasi.

Continued on p. 185

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Phot. Measts. of Var. Stars with Photo. R. mounted horizontally.

1896.

Desig.						
β Lyrae.	July 25, '96 (96 setts.)	July 28, '96 (64 setts.)	July 14, '96 (32 setts.)	July 28, '96 (36 setts.)	July 30, '96 (32 setts.)	
β Lyrae.	July 2, '96 (32 setts.)	July 11, '96 (104 setts.)	July 14, '96 (64 setts.)	July 16, '96 (64 setts.)	July 21, '96 (48 setts.)	
β Lyrae.	Aug. 21, '96 (20 setts.)	Aug. 25, '96 (48 setts.)	Aug. 27, '96 (112 setts.)	Aug. 29, '96 (112 setts.)	Sept. 1, '96 (16 setts.)	
β Lyrae.	Aug. 20, '96 (48 setts.)	Aug. 22, '96 (16 setts.)	Aug. 26, '96 (58 setts.)	Aug. 28, '96 (96 setts.)	Aug. 31, '96 (64 setts.)	
β Persei.	Oct. 26, '96 (64 setts.)	Nov. 6, '96 (48 setts.)	Nov. 10, '96 (32 setts.)	Nov. 16, '96 (64 setts.)		
	Sept. 30, '96 (16 setts.)	Oct. 27, '96 (48 setts.)	Nov. 9, '96. (16 setts.)	Nov. 11, '96 (64 setts.)		
	Oct. 28, '96 (32 setts.)	Oct. 31, '96 (16 setts.)	Nov. 3, '96 (48 setts.)	Nov. 7, '96 (64 setts.)	Nov. 14, '96 (48 setts.)	
β Lyrae.	Oct. 27, '96 (32 setts.)	Oct. 31, '96 (32 setts.)	Nov. 2, '96. (48 setts.)	Nov. 6, '96. (32 setts.)	Nov. 9, '96 (48 setts.)	

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July 31, '96 (64 sctts)	Aug. 4, '96 (48 sctts)	Aug. 8, '96 (32 sctts)	Aug. 10, '96 (64 sctts)	Aug. 12, '96 (35 sctts)	Aug. 17, '96 (80 sctts)	Aug. 19, '96 (112 sctts)		
July 30, '96 (66 sctts)	Aug. 3, '96 (80 sctts)	Aug. 7 '96 (96 sctts)	Aug. 9, '96 (5 sctts)	Aug. 11, '96 (144 sctts)	Aug. 16, '96 (5 sctts)	Aug. 18, '96 (80 sctts)		
Sept. 26, '96 (32 sctts)	Sept. 30, '96 (4 sctts)	Oct. 3, 96 (16 sctts)	Oct. 2 '96 (16 sctts)	Oct. 16, '96 (16 sctts)	Oct. 24, '96 (6 sctts)	Oct. 26, '96 (32 sctts)		
Sept. 4, '96 (32 sctts)	Sept. 28, '96 (32 sctts)	Oct. 1, '96 (10 sctts)	Oct. 4, '96 (48 sctts)	Oct. 10, '96 (7 sctts)	Oct. 22, '96 (6 sctts)	Oct. 25, '96 (48 sctts)		
Nov. 17, '96 (16 sctts)								
Nov. 16, '96 (32 sctts)	Nov. 19, '96 (5 sctts)							

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Measts. of Faint Comp. Stars for Variables, with Phots. I and I' on East Equatorial.

~~Desig.~~ Book	Page	Date 1891	Desig.
92 (7esta)	64	Sept. 18	T. Cygnarii.
92 (1est)	66	Sept. 18,	W. Herculis.
92 (12esta)	69	Sept. 18,	S. Cygnarii.
92 (2esta)	71	Sept. 21,	W. Herculis.
92 (12esta)	72	Sept. 21,	S. Cygnarii.
92 (2esta)	74	Sept. 21,	R. Andromedæ.
92 (2esta)	87	Sept. 24,	W. Herculis.
92 (2esta)	89	Sept. 24,	R. Andromedæ.
92 (14esta)	93	Sept. 24	S. Cygnarii.
92 (2esta)	95	Sept. 25.	R. Andromedæ.
92 (2esta)	96	Sept. 25	W. Herculis.
92 (3esta)	102	Sept. 25.	S. Cygnarii.
92 (1est)	105	Sept. 27,	R. Pegasi.
92 (1est)	106	Sept. 27,	S. Cygnarii.
92 (1est.)	140	Sept. 28.	R. Pegasi.
92 (6esta)	140	Sept. 28,	R. Cygnarii.
92 (1est)	147	Sept. 29.	R. Pegasi.
92 (7esta)	147	Sept. 29.	R. Cygnarii.
92 (10esta)	157	Sept. 30.	R. Cygnarii.

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Expts. in measuring red variable stars through colored glass, with Phot. R.

Date. 1894	Book.	Page.	Descr.
Nov. 20.	72	101	0 Etc.

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Diagrams of Harv. Comp. Obs. about Variables.

Nova Aurigae.	Bk. 61, pp. 49, 52, 55, 56
χ Cygni	" 72, " 202
Well's Star	" 78. " 185.

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