1897phae.proj..4400

KG
11365
439

Posting Book.

Oct. 1, 1897 —

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

1897phate.proj...4100

KG 11365.439

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

1897phae.proj..4100

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

1897phae.proj..440

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

1897phae.proj..4400

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

1897phot..proj..4400

KG-11365.439

HARVARD
UNIVERSITY
LIBRARY
MAY 7 1956

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

1897phae.proj..4400

Index.

Eclipses of Jupiter's Satellites	Page	5.
Phot. Measts. of Var. Stars with Phot. R & T.	"	28.
Rel. Estimates of Var. Stars.	"	36.
Obs. " " " "	"	46
Phot. Measts. Comp. Stars for Vars.	"	56
Rel. Est. " " " "	"	66
Diagrams of " " " "	"	76
Phot. Measts. of Bright Double Stars	"	80
Miscellaneous Objects	"	100
Chronometer Comparisons	"	125
Location of Comp. Stars for Variables by transit	"	132
Phot. Measts. of β Persei, with Phot. V.	"	134.
Cometa.	"	136.
Comp. of *s about ζ Ursæ Majoris, Pleiades etc.	"	140.
Occultations.	"	144

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

1897phae.proj..4400

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date.	W.M.T.	East. Time.	Sat.	Phe.	Remarks.
1897.					
Oct. 18.	17 46 55	17 55 7	I	Dis.	Daylight.
" 27.	17 28 50	17 37 2	III	Dis.	Cloudy.
Nov. 3.	15 36 28	15 44 40	IV	Dis.	Fr. obs. Waite rec.
" "	16 2 39	16 10 51	I	Dis.	" " " "
" 6.	16 30 56	16 39 8	II	Dis.	Cloudy
" 10.	17 56 11	18 4 23	I	Dis.	Daylight.
" 26.	16 11 15	16 19 27	I	Dis.	Cloudy.
Dec. 2.	16 12 7	16 20 19	III	Re.	"
" 3.	18 4 28	18 12 40	I	Dis.	"
" 8.	16 6 56	16 14 6	II	Dis.	"
" 9.	17 16 9	17 24 21	III	Dis.	"
" 12.	14 25 51	14 34 3	I	Dis.	Cloudy.
" 15.	18 40 40	18 48 52	II	Dis.	Daylight + cloudy.
" 19.	16 18 55	16 29 7	I	Dis.	Fr. obs. Waite rec.
" 26.	18 11 56	18 20 8	I	Dis.	Fr. obs. Waite rec.
1898.					
Jan 2.	13 7 39	13 15 51	II	Dis.	Cloudy.
" 4.	14 33 11	14 41 23	I	Dis.	"
" 9.	15 42 50	15 51 2	II	Dis.	Omitted for Sat. IV.
" "	15 43 4	15 51 16	IV	Dis.	Fr. obs. Waite rec.
" "	17 31 12	17 39 24	IV	Re.	" " " "
" 11.	16 26 8	16 34 20	I	Dis.	Cloudy.
" 14.	13 3 35	13 11 47	III	Dis.	"
" "	15 50 55	15 59 7	III	Re.	"
" 16.	18 18 10	18 26 22	II	Dis.	Daylight.
" 18.	18 19 4	18 27 16	I	Dis.	"

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date.	W. M. T.	East. Time	Sat.	Phe.	Remarks.
1898 Jan. 20.	12 47 17	12 55 29	I	Dis.	Cloudy.
" 21.	17 1 46	17 9 58	III	Dis.	"
" 26.	11 17 12	11 25 24	III	Re.	"
" 27.	14 40 16	14 48 28	I	Dis.	W. obs. Waite rec.
Feb. 3.	12 47 42	12 55 54	II	Dis.	W. obs. Waite rec.
" " .	16 33 16	16 41 26	I	Dis.	Cloudy.
" 5.	11 1 31	11 9 43	I	Dis.	Cloudy.
" 10.	15 23 36	15 31 48	II	Dis.	"
" " .	18 26 18	18 34 30	I	Dis.	"
" 12.	12 54 34	13 2 46	I	Dis.	W. obs. Colson rec.
" 17.	17 59 41	18 7 53	II	Dis.	Cloudy.
" 19.	11 33 47	11 41 59	III	Re.	"
" 19.	14 47 42	14 55 54	I	Dis.	"
" 21.	9 15 59	9 24 11	I	Dis.	"
" 26.	12 49 53	12 58 5	III	Dis.	Sunday.
" "	16 40 56	16 49 7	I	Dis.	"
" 28.	9 53 30	10 1 42	II	Dis.	W. obs. Frost rec.
" "	11 9 14	11 17 26	I	Dis.	W. obs. Frost rec.
Mar. 5.	16 47 54	16 56 6	III	Dis.	Sunday.
" 7.	12 29 56	12 38 8	II	Dis.	W. obs. Waite rec.
" " .	13 2 34	13 10 46	I	Dis.	" " " "
" 14.	14 56 2	15 4 14	I	Dis.	W. obs. Waite rec.
" " .	15 6 30	15 14 42	II	Dis.	" " " "
" 16.	9 24 26	9 32 38	I	Dis.	Cloudy.
" 21.	16 49 37	16 57 49	I	Dis.	"
" " .	17 43 11	17 51 23	II	Dis.	"
" 23.	11 18 2	11 26 14	I	Dis.	"
" 25.	7 2 7	7 10 19	II	Dis.	W. obs. Frost rec.

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date.	W. M. T.	East. Time.	Sat.	Phe.	Remarks.
1898 Mar. 25.	9 31 53	9 40 5	II	Re.	W. obs. Frost rec.
" 27.	7 19 22	7 27 34	III	Re.	Cloudy.
" 30.	15 22 8	15 30 20	I.	Re.	"
Apr. 1.	9 50 36	9 58 48	I.	Re.	W. obs. Frost rec.
" "	12 8 20	12 16 32	II	Re.	W. obs. Waite "
" 3.	11 16 23	11 24 35	III	Re.	Cloudy.
" 8.	11 44 28	11 52 40	I	Re.	W. obs. Frost rec.
" "	14 44 52	14 53 4	II	Re.	Omitted.
" 10.	15 13 32	15 21 44	III.	Re.	Cloudy.
" 15.	13 38 26	13 46 38	I.	Re.	"
" 17.	8 6 55	8 15 7	I.	Re.	"
" 22.	15 32 33	15 40 45	I.	Re.	"
" 24.	10 1 4	10 9 16	I.	Re.	"
" 26.	9 15 54	9 24 6	II.	Re.	W. obs. Frost rec.
May. 1.	11 55 21	12 3 33	I.	Re.	Cloudy.
" 3.	11 52 32	12 0 44	II.	Re.	Cloudy.
" 8.	13 49 44	13 57 56	I	Re.	"
" 10.	8 18 20	8 26 32	I.	Re.	Omitted for Schuttkae.
" "	14 29 10	14 37 22	II	Re.	Im horizon. Too low.
" 16.	8 35 36	8 43 48	III.	Dis.	Cloudy.
" "	11 3 23	11 11 35	III.	Re.	"
" 17.	10 12 51	10 21 3	I.	Re.	"
" 23.	12 34 34	12 42 46	III.	Dis.	"
" 24.	12 7 27	12 15 39	I.	Re.	"
" 28.	9 0 50	9 9 2	II.	Re.	"
June 2.	9 30 47	9 38 59	I.	Re.	"
" 4.	11 37 10	11 45 22	II.	Re.	"
" 9.	10 25 32	10 33 44	I.	Re.	W. obs. Frost. rec.

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date.	W. M. T.	East. Time	Sat. Phe.	Remarks.
1898				
June 11.	11 48 14	11 56 26	II Dis.	Cloudy.
" 25.	8 43 59	8 52 11	I. Re.	"
" 28.	8 32 22	8 40 34	III Dis.	"
" "	10 52 52	11 1 4	III Re.	"
" 29.	8 43 6	8 51 18	II Re.	W. obs. Frost rec.
July 2.	10 38 52	10 47 4	I. Re.	Abandoned for γ Cygni.
" 18.	8 57 24	9 5 36	I. Re.	Cloudy.
" 31.	8 22 29	8 30 41	II. Re.	"
Aug. 10.	8 29 44	8 37 56	III Dis.	—
" 26.	7 29 10	7 37 22	I. Re.	—
Nov. 18.	18 12 27	18 20 39	III Re.	Cloudy.
Dec. 9.	17 27 48	17 36 0	II Dis.	"
" 15.	17 18 55	17 27 7	I. Dis.	"
" 31.	15 34 10	15 42 22	I. Dis.	Cloudy.
" ".	16 4 45	16 12 57	III Dis.	"
" ".	17 54 6	18 2 18	III Re.	"
1899.				
Jan. 7	17 27 28	17 35 40	I. Dis.	Sunday ✓
" 10.	16 57 57	17 6 9	II. Dis.	Recorder sick ✓
" 23.	15 42 20	15 50 32	I. Dis.	Cloudy ✓
" 28.	13 38 48	13 47 0	II. Re.	" " ✓
" 30.	17 35 32	17 43 44	I. Dis.	" ✓
Feb. 4.	13 56 26	14 4 38	II. Dis.	Sunday rather cloudy ✓
" ".	16 12 43	16 20 55	II Re.	" " " ✓
" 5.	13 37 32	13 45 44	III. Re.	Cloudy. ✓
" 8.	13 56 57	14 5 9	I. Dis.	W. obs. Cr. & Co. rec. ✓
" 11.	16 30 36	16 38 48	II. Dis.	Cloudy ✓

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

1897phae..proj..4400

Eclipses of Jupiter's Satellites.

Date.	W. M. T.	East. Time.	Sat.	Phe.	Remarks.
1899.					
~~Feb.~~ 12.	15 51 24	15 59 36	III.	Dis.	Cloudy.
" " .	17 34 27	17 42 39	III.	Re.	"
" 15.	15 50 5	15 58 17	I.	Dis.	W. obs. Col. rec. Co. read.
" 22.	17 43 14	17 51 26	I.	Dis.	" " " " " " "
" 24.	12 11 34	12 19 46	I.	Dis.	" " Col. rec.
Mar. 3.	14 4 44	14 12 56	I.	Dis.	Cloudy.
" 8.	13 31 26	13 39 38	II.	Dis.	W. obs. Colson rec.
" 10.	15 57 56	16 6 8	I.	Dis.	Cloudy.
" 12.	10 26 13	10 34 25	I.	Dis.	"
" 15.	16 6 30	16 14 42	II.	Dis.	"
" 19.	12 19 29	12 27 41	I.	Dis.	"
" 20.	11 40 24	11 48 36	III.	Dis.	W. obs. Colson rec.
" " .	13 18 40	13 26 52	III.	Re.	" " " "
" 26.	14 12 48	14 21 0	I.	Dis.	Cloudy.
" 27.	15 38 4	15 46 16	III.	Dis.	Alarm failed.
" " .	17 15 28	17 23 40	III.	Re.	W. obs. Colson rec.
Apr. 2.	10 35 37	10 43 49	II	Dis.	Sunday.
" " .	16 6 12	16 14 24	I.	Dis.	W. obs. Colson rec.
" 4.	10 34 34	10 42 46	I.	Dis.	W. obs. Campbell rec.
" 9.	13 11 31	13 19 43	II.	Dis.	" " Colson "
" 11.	12 28 5	12 36 17	I.	Dis.	" " " "
" 16.	15 47 40	15 55 52	II.	Dis.	Cloudy.
" 18.	14 21 41	14 29 53	I.	Dis.	W. obs. Colson rec.
" 20.	8 50 5	8 58 17	I.	Dis.	Cloudy.
" 25.	9 5 36	9 13 48	III.	Re.	"
" 27.	9 57 14	10 5 26	II.	Re.	W. obs. Campbell rec.
" " .	12 51 2	12 59 14	I.	Re.	" " Colson "
" 29.	7 19 30	7 27 42	I.	Re.	" " Campbell "

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

1897phae..proj..4400

Eclipses of Jupiter's Satellites.

Date.	W. M. T.	East. Time	Sat.	Phe.	Remarks.
1899.					
May 2.	13 3 6	13 11 18	III.	Re.	Cloudy.
" 4.	12 33 50	12 42 2	II.	Re.	W. obs. Colpon rec.
" ".	14 44 50	14 53 2	I.	Re.	" " " "
" 6.	9 13 20	9 21 32	I.	Re.	Cloudy.
" 11.	15 10 37	15 18 49	II.	Re.	Too low.
" 13.	11 7 17	11 15 29	I.	Re.	Cloudy.
" 20.	13 1 21	13 9 33	I.	Re.	Cloudy.
" 29.	9 24 5	9 32 17	I.	Re.	"
" ".	9 43 50	9 52 2	II.	Re.	"
June 5.	11 18 23	11 26 35	I.	Re.	W. obs. Campbell rec.
" ",	12 21 5	12 29 17	II.	Re.	Too cloudy & low. not taken.
" 12.	13 12 47	13 20 59	I.	Re.	" " " " " "
" 14.	11 22 50	11 31 2	III.	Dis.	W. obs. Campbell rec.
" ",	12 52 1	13 0 13	III.	Re.	Too cloudy & low. not taken.
" 21.	9 35 52	9 44 4	I.	Re.	W. obs. Campbell. rec.
" 28.	11 30 25	11 38 37	I.	Re.	Cloudy.
" 30.	9 31 21	9 39 33	II.	Re.	W. obs. Campbell rec.
July 7.	9 53 25	10 1 37	II.	Dis.	Cloudy.
" 14.	9 48 24	9 56 36	I.	Re.	W. obs. Campbell rec.
" 20.	8 44 51	8 53 3	III.	Re.	W. obs. " "
" 30.	8 6 33	8 14 45	I.	Re.	
Aug. 1.	7 4 3	7 12 15	II.	Dis.	
" ".	9 19 22	9 27 34	II.	Re.	
" 8.	9 40 58	9 49 10	II.	Dis.	
" 22.	8 19 39	8 27 51	I.	Re.	
Sept. 6.	7 13 21	7 21 33	III.	Dis.	
Dec. 11.	18 15 17	18 23 29	I.	Dis.	Cloudy.

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date.	W. M. T.	East. Time	Sat.	Phe.	Remarks.
1900 Jan. 3.	18 25 32	18 33 44	I	Dis.	Daylight.
" 11.	18 23 20	18 31 32	II	Dis.	Cloudy.
" 19.	16 41 22	16 49 34	I	Dis.	"
" 22.	16 10 35	16 18 47	III	Re.	W. obs. Colson rec.
" 29.	18 38 56	18 47 8	III	Dis.	Daylight.
Feb. 5.	15 18 17	15 26 29	II	Dis.	W. obs. Colson rec.
" 11.	16 50 32	16 58 44	I	Dis.	Cloudy.
" 12.	17 51 9	17 59 21	II	Dis.	"
" 27.	15 5 45	15 13 57	I	Dis.	
Mar. 2.	14 33 19	14 41 31	II	Re.	
" 6.	14 25 47	14 33 59	III	Dis.	Cloudy.
" " .	15 59 57	16 8 9	III	Re.	"
" " .	16 59 10	17 7 22	I	Dis.	"
" 9.	14 46 45	14 54 57	II	Dis.	"
" " .	17 6 47	17 14 59	II	Re.	Alarm failed.
" 15.	13 20 58	13 29 10	I	Dis.	Cloudy.
" 16.	17 20 3	17 28 15	II	Dis.	W. obs. Colson rec.
" 22.	15 14 23	15 22 35	I	Dis.	" " stands also.
" 29.	17 7 49	17 16 1	I	Dis.	Daylight. Sun ^
Apr. 3.	11 44 6	11 52 18	II	Dis.	W. obs. Colson rec.
" 7.	13 29 36	13 37 48	I	Dis.	W. obs. Colson rec.
" 10.	14 18 4	14 26 16	II	Dis.	Cloudy
" 11.	11 52 0	12 0 12	III	Re.	W. obs. Colson rec.
" 14.	15 23 6	15 31 18	I	Dis.	Sunday.
" 17.	16 52 15	17 0 27	II	Dis.	Cloudy.
" 18.	14 10 28	14 18 40	III	Dis.	"
" " .	15 50 12	15 58 24	III	Re.	"
" 23.	11 45 6	11 53 18	I	Dis.	"

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

1897phae..proj..4400

Eclipses of Jupiter's Satellites.

Date.	W. M. T.	East. Time	Sat.	Phe.	Remarks.
1900 Apr. 30.	13 38 45	13 46 57	I	Dis.	W. obs. Colson rec.
May 5.	11 18 33	11 26 45	II	Dis.	W. obs. " "
" 7.	15 32 27	15 40 39	I	Dis.	Omitted.
" 9.	10 0 51	10 9 3	I	Dis.	W. obs. Campbell rec.
" 12.	13 53 37	14 1 49	II	Dis.	" " Colson. "
" 16.	11 54 40	12 2 52	I	Dis.	Cloudy.
" 23.	13 48 35	13 56 47	I	Dis.	W. obs. Colson rec.
" 24.	9 59 43	10 7 55	III	Dis.	Cloudy.
" 25.	8 17 5	8 25 17	I	Dis.	W. obs. Campbell rec.
" 30.	10 47 9	10 55 21	II	Re.	Cloudy.
" 31.	15 43 44	15 51 56	III	Re.	Clouds + Daylight.
June 1.	12 19 20	12 27 32	I	Re.	Cloudy.
" 6.	13 23 36	13 31 48	II	Re.	W. obs. Colson rec.
" 8.	14 13 28	14 21 40	I	Re.	Cloudy.
" 10.	8 42 0	8 50 12	I	Re.	Sunday.
" 24.	12 30 37	12 38 49	I	Re.	W. obs. Colson rec.
July 1.	10 32 35	10 40 47	II	Re.	Sunday.
" 3.	8 53 42	9 1 54	I	Re.	Cloudy.
" 6.	9 49 21	9 57 33	III	Dis.	W. obs. Campbell rec.
" "	11 41 14	11 49 26	III	Re.	" " Colson "
" 8.	13 10 2	13 18 14	II	Re.	Too low.
" 10.	10 48 15	10 56 27	I	Re.	Cloudy.
" 26.	9 6 12	9 14 24	I	Re.	Cloudy.
Aug. 2.	7 54 51	8 3 3	II	Dis.	
" "	10 22 47	10 30 59	II	Re.	
" "	11 0 55	11 9 7	I	Re.	
" 9.	10 32 27	10 40 39	II	Dis.	
" 11.	7 40 39	7 48 51	III	Re.	

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date.	W. M. T.	Est. Time	Sat.	Phe.	Remarks.
1900					
Aug. 18.	9 19 11	9 27 23	I	Re.	
" ".	9 42 8	9 50 20	III	Dis.	
" 27.	7 35 16	7 43 27	II	Re.	
Sept. 3.	7 37 33	7 45 45	I	Re.	No recorder.
" ".	7 43 40	7 51 52	II	Dis.	" "
" 23.	7 41 55	7 50 7	III	Re.	Sunday.
" 26.	7 50 44	7 58 56	I	Re.	W. obs. Campbell rec.
" 28.	7 26 6	7 34 18	II	Re.	Cloudy.
1901					
Feb. 7	17 53 26	18 01 38	I	Dis.	W. obs. Colson rec.
" 20	17 4 13	17 12 25	III	Dis.	Cloudy.
Mar 2	18 3 17	18 11 29	I	Dis.	"
" 10	16 20 47	16 28 59	II	Dis.	"
" 18	16 19 5	16 27 17	I	Dis.	W. obs. Grace rec.
" 28	15 33 20	15 41 32	III	Re.	Cloudy.
April 3	14 34 55	14 43 07	I	Dis.	"
" 10	16 28 35	16 36 47	I	Dis.	"
" 11	15 49 34	15 57 46	II	Dis.	W. obs. Colson rec.
" 26	14 44 20	14 52 32	I	Dis.	W. " Colson "
" 30	14 6 14	14 14 30	IV	Dis.	Cloudy.
" "	14 52 27	15 00 39	III	Re.	"
May 6	12 46 6	12 54 18	II	Dis.	
" 10	12 42 58	12 51 10	III	Dis.	Cloudy.
" "	15 29 8	15 37 20	III	Re.	"
" 12	13 0 22	13 8 34	I	Dis.	W. obs. Colson rec.
" 13	15 19 41	15 27 53	II	Dis	Omitted.
" 19	14 54 13	15 02 25	I	Dis.	Cloudy.
" 28	11 16 86	11 24 48	I	Dis.	"

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date.	W. M. T.	East. Time	Sat.	Phe.	Remarks.
1901					
June 4	13 10 36	13 18 48	I	Dis.	W. obs. Colson rec.
" 7	12 18 53	12 27 05	II	Dis.	Cloudy.
" 11	15 4 42	15 12 54	I	Dis.	W. obs. Colson, rec.
" 13	9 33 18	9 41 30	I	Dis.	Omitted. Students Leave.
" 14	14 53 29	15 01 41	II	Dis.	W. obs. Colson, rec.
" 20	11 27 30	11 35 42	I	Dis.	Cloudy.
" 22	12 33 42	12 41 50	III	Dis.	
" 27	13 21 47	13 29 59	I	Dis	W. obs. Colson rec.
July 2	12 4 44	12 12 56	II	Re.	W. obs. Colson rec.
" 6	11 57 33	12 05 45	I	Re.	Cloudy.
" 9	14 40 42	14 48 54	II	Re.	"
" 13	13 52 5	14 00 17	I	Re.	Omitted.
" 15	8 20 45	8 28 57	I	Re.	W. obs. Campbell rec.
" 22	10 15 24	10 23 36	I	Re.	W. " " "
" 23	9 54 20	10 02 32	III	Re.	W. " " "
" 27	9 12 8	9 20 20	II	Re.	W. " " "
" 28	11 27 24	11 35 36	III	Re.	Cloudy.
" 29	12 10 8	12 18 20	I	Re.	"
Aug. 3	11 49 5	11 57 17	II	Re.	
" 4	12 28 53	12 37 05	III	Dis.	
" 7	8 33 37	8 41 49	I	Re.	
" 14	10 28 30	10 36 42	I	Re.	
" 21	12 23 26	12 31 38	I	Re.	
" 28	8 59 44	9 07 56	II	Re.	
" 30	8 47 12	8 55 24	I	Re.	
Sept. 2	7 30 58	7 39 10	III	Re.	
" 6	10 42 13	10 50 25	I	Re.	W. H. Campbell rec.
" 9	8 27 2	8 35 14	III	Dis	" " " "

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date.	W.M.T.	East. Time	Sat.	Phe.	Remarks.
1901					
Sept. 15	7 6 1	7 14 13	I	RE.	Cloudy.
" 22	9 1 4	9 9 16	I	RE.	Sunday.
" 28	7 32 5	7 40 17	III	Dis.	W. obs. Campbell rec.
" 29	8 51 35	8 59 47	II	RE.	Cloudy.
Oct. 8	7 19 56	7 28 08	I	RE.	W. obs. Campbell rec.
" 15	7 36 41	7 44 53	III	RE.	W. " " "
" 22	8 26 44	8 34 56	III	Dis.	Cloudy.
" 24	6 5 10	6 13 22	II	RE.	Omitted.
" 31	7 33 40	7 41 52	I	RE	Cloudy.
Nov. 16	5 52 12	6 00 24	I	RE.	"
" 25	3 57 23	6 05 35	II	RE.	"
1902					
Mar 14	17 33 31	17 41 43	I	Dis.	Daylight.
" 30	15 49 47	15 57 59	I	Dis.	
April 19	15 43 4	15 51 16	III	RE.	
" 22	15 59 59	16 08 11	I	Dis.	Cloudy.
" 26	16 14 05	16 22 17	III	Dis.	Cloudy.
May 7	14 46 36	14 54 48	II	Dis.	Cloudy.
" 8	14 16 13	14 24 25	I	Dis.	W. obs. Colson rec.
" 15	16 10 8	16 18 20	I	Dis.	Close to sunrise. Omitted.
" 31	14 26 39	14 34 51	I	Dis.	Sunday.
June 1	12 10 44	12 18 56	III	Dis.	Cloudy.
" "	15 41 21	15 49 33	III	RE	Close to sunrise.
" 6	14 17 59	14 26 11	III	Dis.	W. obs. Colson rec.
" 8	14 18 42	14 36 54	II	Dis.	W. obs. Colson rec.
" "	16 10 11	16 18 23	III	Dis.	After sunrise.
" 16	12 43 16	12 55 28	I	Dis.	Cloudy.

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date. 1902	W. M. T.	East. Time.	Sat.	Phe.	Remarks.
June 23	12 58 31	13 06 43	III	Re	W. obs. Colson rec.
" "	14 37 28	14 45 40	I	Dis	" " " "
July 2	11 00 22	11 08 34	I	Dis	Cloudy.
" 3	11 17 56	11 26 08	II	Dis	W. obs. Campbell rec.
" 9	12 54 44	13 02 56	I	Dis.	Cloudy.
" 10	13 52 20	14 00 32	II	Dis.	W. obs. Colson rec.
" 14	12 08 30	12 16 42	III	Dis.	Missed.
" 16	14 49 13	14 57 25	I	Dis.	W. obs. Colson rec.
" 18	9 17 48	9 26 00	I	Dis.	W. obs. Campbell rec.
" 21	16 09 11	16 17 23	III	Dis.	Cloudy.
" 25	11 12 24	11 20 36	I	Dis.	Cloudy.
" 28	8 19 13	8 27 25	II	Dis.	W. obs. Campbell rec.
Aug. 1	13 07 05	13 15 17	I	Dis.	
" 10	11 46 38	11 54 50	I	Re.	
" 11	16 20 20	16 28 32	II	Re.	
" 17	13 41 30	13 49 42	I	Re.	
" 19	11 43 13	11 51 25	III	Re.	
" 22	8 14 03	8 22 15	II	Re.	
" 26	10 05 10	10 13 22	I	Re.	
" 29	8 52 19	9 00 31	III	Dis.	
" "	10 50 12	10 58 24	II	Re.	
" "	13 34 29	13 42 41	III	Re.	
Sept 2.	12 00 14	12 08 26	I	Re	W. obs. Campbell rec.
" 5	13 26 36	13 34 48	II	Re	W. obs. Colson, rec.
" 9	13 55 23	14 03 35	I	Re.	Cloudy.
" 11	8 24 13	8 32 25	I	Re.	Omitted for U Cephei.
" 15	7 45 01	7 53 13	III	Re.	W. obs. Campbell rec.
" 18	10 19 26	10 27 38	I	Re.	Cloudy.

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date	W. M. T.	East. Time	Sat.	Phe.	Remarks.
1902					
Sept. 23	7 58 41	8 06 53	II	Re.	W. obs. Campbell rec.
" 24	7 49 02	7 57 14	III	Re.	W. obs. " "
" 25	12 14 43	12 22 55	I	Re.	Cloudy.
" 27	6 43 30	6 51 42	I	Re.	"
" 30	10 35 56	10 44 08	II	Re.	"
Oct. 1	8 16 38	8 24 50	III	Dis.	"
" "	11 49 56	11 58 08	III	Re.	"
" 4	8 38 49	8 47 01	I	Re.	"
" 11	10 34 10	10 42 22	I	Re.	"
" 20	6 58 23	7 06 35	I	Re.	Omitted.
" 25	7 47 47	7 55 59	II	Re.	Omitted for U Sagittae.
" 27	8 33 44	9 01 56	I	Re.	Cloudy.
Nov. 1	10 25 49	10 34 01	II	Re.	Omitted for U Sag. & 43° K 101.
" 4	9 36 06	9 44 18	III	Dis.	Cloudy.
" 6	7 57 05	8 05 17	III	Re.	"
" 12	7 13 10	7 21 22	I	Re.	"
" 13	8 25 31	8 33 43	III	Dis.	"
" 19	9 08 27	9 16 39	I	Re.	W. obs. Mac Cullar rec.
" 21	8 31 20	8 39 32	III	Re.	Cloudy.
" 26	7 39 45	7 47 57	II	Re.	"
" 28	5 32 28	5 40 40	I	Re.	W. obs. Mac Cullar rec.
Dec. 5	7 27 38	7 35 50	I	Re	Cloudy.
" 21	5 46 33	5 54 45	I	Re.	"
" 28	7 32 36	7 40 48	II	Re.	" in regions Jup. invis.
1903					
Jan 13	6 00 00	6 08 12	I	Re.	W. obs. Campbell rec. (6.)
May 4	15 46 09	15 54 21	I	Dis.	Cloudy
" 11	16 11 42	16 19 54	III	Re.	Daylight

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date. 1903	W. M. T.	East. Time	Sat.	Phe.	Remarks.
May 24	16 15 44	16 23 56	III	Re.	Daylight
" 27	15 56 43	16 04 55	I	Dis.	"
June 2	14 14 49	14 23 01	II	Dis	Cloudy.
" 12	14 13 25	14 21 37	I	Dis	Cloudy.
" 19	16 07 31	16 15 43	I	Dis	Daylight + cloudy.
" 23	12 53 10	13 01 22	III	Dis.	W. obs. Colson rec.
" "	16 10 36	16 18 48	III	Re.	After sunrise.
" 28	12 30 10	12 38 22	I	Dis	W. obs. Brasch rec. (E.)
July 4	13 50 58	13 59 10	II	Dis	W. obs. Brasch rec. (E)
" 5	14 24 22	14 32 34	I	Dis.	Cloudy.
" 12	16 18 37	16 26 49	I	Dis.	Cloudy + Sunrise.
" 21	12 41 35	12 49 47	I	Dis	Cloudy.
" 28	14 35 59	14 44 11	I	Dis.	"
" 29	10 51 51	11 00 03	II	Dis.	"
" "	12 10 16	12 18 28	III	Re.	"
" 30	13 00 44	13 08 56	IV	Dis.	W. obs. Colson rec,
Aug. 4	16 30 29	16 38 41	I	Dis.	Cloudy.
" 5	12 58 14	13 06 36	III	Dis	"
" "	13 26 28	13 34 40	II	Dis.	"
" "	16 10 17	16 18 29	III	Re.	Daylight + cloudy.
" 6	10 59 03	11 07 15	I	Dis	Cloudy.
" 12	16 01 10	16 09 22	II	Dis	Daylight.
" 13	12 53 41	13 01 53	I	Dis	W. obs. Colson rec.
" 16	10 52 37	11 00 49	IV	Re	Cloudy
" 20	14 48 23	14 56 35	I	Dis	"
" 22	9 17 08	9 25 20	I	Dis.	Cloudy
" 27	16 03 13	16 11 25	I	Dis	Daylight
" 29	11 11 59	11 20 11	I	Dis	Cloudy

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date. 1903	W. M. T.	East. Time	Sat.	Phe.	Remarks.
Aug. 30	10 28 30	10 36 42	II	Dis	Cloudy.
Sept. 5	13 06 57	13 15 09	I	Dis	Cloudy.
" 6	13 03 43	13 11 55	II	Dis	very close to Jupiter omitted. Full moon.
" 7	7 35 41	7 43 53	I	Dis	W. obs. W. rec. (6)
" 10	9 06 07	9 14 19	III	Dis	W. obs. Seagrave rec (6)
" 14	11 44 29	11 52 41	I	Re	W. obs. The Cellar rec.
" 17	7 34 52	7 43 04	II	Re	Cloudy.
" "	16 13 38	16 21 50	III	Re	
" 21	13 39 35	13 47 47	I	Re	W. obs. Colson rec.
" 23	8 08 26	8 16 38	I	Re	W. obs. Campbell rec.
" 24	10 10 20	10 18 32	II	Re.	W. obs. " "
" 28	15 34 47	15 42 59	I	Re	Cloudy.
" 30	10 03 40	10 11 52	I	Re	W. obs. Campbell rec.
Oct. 1	12 46 03	12 54 15	II	Re	Cloudy.
" 5	14 08 26	14 16 38	III	Dis	"
" 7	11 58 59	12 07 11	I	Re.	"
" 9	6 27 46	6 35 58	I	Re.	"
" 14	13 54 23	14 02 35	I	Re.	Omitted
" 16	8 18 44	8 26 56	III	Re.	Cloudy
" "	8 23 11	8 31 23	I	Re.	"
" 19	7 16 18	7 24 30	II	Re	W. obs. Campbell rec.
" 22	8 28 06	8 36 18	III	Dis	W. obs. " "
" "	11 27 43	11 35 55	IV	Re	W. obs. Colson "
" 23	9 19 32	9 27 44	III	Dis	Cloudy
" "	10 18 41	10 26 53	I	Re.	"
" "	12 19 50	12 28 02	III	Re.	"
" 26	9 52 48	10 01 00	II	Re.	W. obs. Campbell rec.
" 30	12 14 13	12 22 25	I	Re.	W. obs. Colson rec.

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date. 1903	W. M. T.	East. Time	Sat.	Phe.	Remarks.
Oct. 30	13 21 44	13 29 56	III	Dis	Cloudy
Nov. 1	6 03 09	6 51 21	I	Re.	Sunday.
" 2	12 29 32	12 37 44	II	Re	Cloudy.
" 8	5 37 42	5 45 54	IV	Re.	Sunday.
" "	8 38 44	8 46 56	I	Re.	"
" 15	10 34 20	10 42 32	I	Re	"
" 20	7 02 25	7 10 37	II	Re	W. obs. Campbell rec (E)
" 24	6 58 50	7 07 02	I	Re	Omitted for variable.
" 27	7 03 57	7 12 09	II	Dis.	Cloudy.
" "	9 39 53	9 48 05	II	Re.	"
" 28	5 32 38	5 40 50	III	Dis	Tripped.
" "	8 26 51	8 35 03	III	Re	W. obs. Campbell rec.
Dec. 1.	8 54 26	9 02 38	I	Re.	Missed.
" 4	9 41 46	9 49 58	II	Dis	W. obs. Campbell rec.
" 5	9 35 44	9 43 56	III	Dis	Cloudy.
" 8	10 50 02	10 58 14	I	Re.	"
" 10	5 18 58	5 27 10	I	Re	"
" 17	7 14 32	7 22 44	I	Re.	W. obs. Campbell rec. (E)
" 22	6 51 54	7 00 06	II	Re.	Omitted for Tercidina.
" 24	9 10 02	9 18 14	I	Re	
" 28	9 57 43	10 05 55	III	Dis.	W. obs. Campbell rec (E)
" 29	9 29 59	9 38 11	II	Re	Cloudy.
1904					
Jan. 2	5 34 19	5 42 31	I	Re.	Cloudy.
" 9	7 29 43	7 37 55	I	Re.	"
" 10	5 48 44	5 56 56	III	Dis.	Sunday.
" 10	8 34 52	8 43 04	III	Re.	"

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date. 1904	W. M. T.	East. Time	Sat.	Phe.	Remarks.
Jan. 14	6 10 53	6 19 05	IV	Re.	Cloudy.
" 23	6 44 14	6 52 26	II	Re.	"
" 25	5 49 4	5 57 16	I	Re.	W. obs. Olson rec.
Feb. 1	7 44 12	7 52 24	I	Re.	Cloudy.
May 15	15 43 54	15 52 06	I	Dis.	Cloudy.
June 7	15 54 60	16 02 52	I	Dis.	Cloudy & Daylight.
" 20	13 51 58	14 00 10	II	Re.	Cloudy.
" 23	14 11 15	14 19 27	I	Dis.	W. obs. Hill rec.
" 27	13 59 57	14 8 09	II	Dis.	Cloudy.
July 14	14 34 41	14 42 53	III	Dis.	W. obs. Hill rec.
" 16	14 21 48	14 30 00	I	Dis.	Cloudy.
" 22	13 31 3	13 39 15	II	Re.	Cloudy
" 23	16 15 52	16 24 04	I	Dis.	"
" 29	13 39 35	13 47 47	II	Dis.	W. obs. Hill rec.
" 29	16 6 2	16 14 14	II	Re.	Daylight.
Aug. 1	12 38 34	12 46 46	I	Dis.	Cloudy.
5	16 14 42	16 22 54	II	Dis.	cloudy
8	14 32 44	14 40 56	I	Dis.	"
15	16 26 57	16 35 09	I	Dis.	"
16	10 33 1	10 41 13	II	Re.	"
17	10 55 28	11 03 40	I	Dis.	"
19	10 41 41	10 49 53	III	Dis.	"
19	12 42 10	12 50 22	III	Re.	"
23	10 42 3	10 50 15	II	Dis.	Campbell Obs. C.D. Campbell Rec.
24	12 49 46	12 57 58	I	Dis.	L.C. Obs C.D.C. Rec.
26	14 42 46	14 50 58	III	Dis.	omitted
26	16 41 45	16 49 57	III	Re.	daylight

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date.	W. M. T.	East. Time	Sat.	Phe.	Remarks.
1904					
Aug. 30	13 16 52	13 25 04	II	Dis	Cldy.
" 31	14 44 9	14 52 21	I	Dis.	Cldy.
Sept. 2	9 12 48	9 21 00	I	Dis.	Cldy.
" 6	15 51 40	15 59 52	II	Dis.	Alarm failed.
" 7	16 38 37	16 46 49	I	Dis.	Daylight.
" 9	11 7 18	11 15 30	I	Dis.	Cloudy.
" 16	13 1 54	13 10 06	I	Dis.	W. obs. Hill rec.
" 23	14 56 37	15 04 49	I	Dis.	Cloudy.
" 24	8 42 57	8 51 09	III	Re.	"
" 24	10 18 46	10 26 58	II	Dis.	"
" 25	9 25 14	9 33 26	I	Dis.	"
Oct. 1	10 51 57	11 00 09	III	Dis	W. obs. Hill rec.
" 1	12 43 33	12 51 45	III	Re.	Reap. on limb;
" 1	12 53 41	13 01 53	II	Dis.	W. obs. Hill rec.
" 2	11 20 5	11 28 17	I	Dis.	Sunday. Rather cloudy.
" 8	14 53 39	15 01 51	III	Dis	Cloudy.
" 8	15 28 42	15 36 54	II	Dis.	"
" 9	13 15 4	13 23 16	I	Dis.	"
" 11	7 43 53	7 52 05	I	Dis.	"
" 16	15 10 10	15 18 22	I	Dis.	Dis. on limb. Not taken.
" 20	6 16 36	6 24 48	I	Re.	Cloudy.
" 25	13 43 2	13 51 14	I	Re.	"
" 26	12 21 7	12 29 19	II	Re.	W. obs. Hill rec.
" 27	8 11 49	8 20 01	I	Re.	W. obs. Campbell rec.
Nov. 1	15 38 21	15 46 33	I	Re.	Too Low.
" 2	14 56 32	15 04 44	II	Re.	Cloudy.
" 6	7 3 3	7 11 15	III	Dis.	"
" 6	8 47 38	8 55 50	III	Re.	"

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date.	G. M. T.	East. Time	Sat.	Phe.	Remarks.
1904					
Nov. 10	12 2 35	12 10 47	I	Re.	Cloudy.
" 12	6 31 32	6 39 44	I	Re.	W. obs. Bosse rec.
" 13	6 49 57	6 58 09	II	Re.	Cloudy.
" 13	11 5 38	11 13 50	III	Dis.	"
" 13	12 48 52	12 57 04	III	Re.	"
" 17	13 58 8	14 06 20	I	Re.	Too low. Cloudy also.
" 19	8 27 5	8 35 17	I	Re.	W. obs. Bosse rec.
" 20	9 25 50	9 34 02	II	Re.	Cloudy.
" 20	15 8 22	15 16 34	III	Dis.	"
" 26	10 22 44	10 30 56	I	Re.	W. obs. Carter rec.
" 27	12 1 53	12 10 05	II	Re.	W. obs. Hill rec.
Dec. 3	12 18 26	12 26 38	I	Re.	Sunday. Omitted.
" 5	6 47 18	6 55 30	I	Re.	Cloudy.
" 12	8 43 4	8 51 16	I	Re.	"
" 15	6 32 51	6 41 03	II	Re.	"
" 19	7 18 43	7 26 55	III	Dis.	"
" 19	8 55 42	9 03 54	III	Re.	"
" 19	10 38 52	10 47 04	I	Re.	W. obs. Carter rec.
" 21	5 7 51	5 16 03	I	Re.	Omitted for Dr. Mac. Rec.
" 22	6 45 17	6 53 29	II	Dis.	Cloudy
" 22	9 9 32	9 17 44	II	Re.	"
" 26	11 22 9	11 30 21	III	Dis.	"
" 26	12 34 41	12 42 53	I	Re.	"
" 28	7 3 40	7 11 52	I	Re.	W. obs. Bowie rec.
" 29	9 22 6	9 30 18	II	Dis.	" " " "
" 29	11 46 35	11 54 47	II	Re.	Cloudy.

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

Date.	W. M. T.	East. Time.	Sat.	Phe.	Remarks.
1905					
Jan. 4	8 59 28	9 07 40	I	Re.	W. obs. Bowie rec.
" 5	11 59 5	12 07 17	II	Dis.	Cloudy
" 11	10 55 15	11 03 27	I	Re.	Cloudy.
" 13	5 24 10	5 32 22	I	Re.	"
" 16	6 19 26	6 27 38	II	Re.	W. obs. Bowie rec.
" 20	7 19 54	7 28 06	I	Re.	" " " "
" 23	6 32 19	6 40 31	II	Dis.	Dis on limb of Jupiter Could not be taken
" 23	8 56 53	9 05 05	II	Re.	Omitted for U Cephei.
" 27	9 15 35	9 23 47	I	Re.	W. obs. Bowie rec.
" 30	9 9 46	9 17 58	II	Dis.	" " " "
" 31	7 35 10	7 43 22	III	Dis.	" " " "
" 31	9 5 39	9 13 51	III	Re.	" " " "
Feb. 12	7 35 44	7 43 56	I	Re.	Cloudy.
" 17	6 8 39	6 16 51	II	Re.	"
" 19	9 31 11	9 39 23	I	Re.	Sunday
" 24	8 46 35	8 54 47	II	Re.	Cloudy
Mar. 7	7 50 40	7 58 52	I	Re.	"
" 15	7 48 52	7 57 04	III	Dis.	"
June 19	15 53 28	16 01 40	I	Dis.	"
" 23	16 4 11	16 12 23	III	Dis	"
July. 12	16 3 38	16 11 50	I	Dis.	Omitted
" 23	13 33 2	13 41 14	II	Dis.	Cloudy.
" 28	14 19 38	14 27 50	I	Dis.	"
" 29	13 28 1	13 36 13	III	Re.	"
" 30	16 9 25	16 17 37	II	Dis.	"
Aug 4	16 34 24	16 42 36	I	Dis.	Vacation
" 5	16 4 46	16 12 58	III	Dis.	"
" 10	10 31 42	10 39 54	II	Re.	"

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

1897phae.proj...4400

Eclipses of Jupiter's Satellites.

Date 1905.	M. M. T.	East. Time	Sat.	Phe.	Remarks.
Aug. 13	12 35 06	12 43 48	I	Dis.	Vacation
" 17	13 7 42	13 15 54	II	Re.	"
" 20	14 29 22	14 37 34	I	Dis.	"
" 24	13 15 33	13 23 45	II	Dis.	"
" 24	15 43 30	15 51 42	II	Re.	"
" 27	16 23 9	16 31 21	I	Dis.	"
" 31	15 51 5	15 59 17	II	Dis.	"
Sept. 5	12 45 22	12 53 34	I	Dis.	"
" 10	12 4 2	12 12 14	III	Dis.	"
" 10	13 30 11	13 38 23	III	Re.	"
" 11	10 12 11	10 20 23	II	Re.	Cloudy
" 12	14 39 13	14 47 25	I	Dis.	"
" 17	16 3 38	16 11 50	III	Dis.	"
" 18	10 19 8	10 27 20	II	Dis.	"
" 18	12 47 29	12 55 41	II	Re.	"
" 19	16 33 7	16 41 19	I	Dis.	"
" 21	11 1 39	11 9 51	I	Dis.	W. obs. Bowie rec.
" 25	12 54 12	13 02 24	II	Dis.	" " " "
" 28	12 55 39	13 03 51	I	Dis.	" " " "
Oct. 2	15 29 10	15 37 22	II	Dis.	Cloudy.
" 5	14 49 44	14 57 56	I	Dis.	Alarm failed
" 7	9 18 14	9 26 26	I	Dis.	Omitted for Navy Algol Var.
" 12	16 43 54	16 52 06	I	Dis.	Cloudy.
" 14	11 12 25	11 20 37	I	Dis.	"
" 16	8 2 29	8 10 41	III	Dis.	W. obs. Bowie rec.
" 16	9 32 49	9 41 01	III	Re.	W. obs. " "
" 20	9 56 16	10 04 28	II	Dis.	Cloudy.
" 21	13 6 48	13 14 55	I	Dis.	Cloudy.

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

1897phae.proj..4400

Eclipses of Jupiter's Satellites.

	Date.	W. M. T.	East. Time.	Sat.	Phe.	Remarks.
	1905 Oct. 23	7 35 21	7 43 33	I	Dis.	Fr. obs. Bowie rec.
	" 23	12 3 0	12 11 12	III	Dis.	" " " "
	" 23	13 34 18	13 42 30	III	Re.	" " " "
	" 27	12 31 0	12 39 12	II	Dis.	Cloudy.
	" 28	15 1 8	15 9 20	I	Dis.	Sunday. Rather cloudy
	" 30	9 29 48	9 38 00	I	Dis.	Fr. obs. Bowie rec.
	" 30	16 2 58	16 11 10	III	Dis.	Dawn fog and cloud
	" 30	17 35 17	17 43 29	III	Re.	Daylight also. " " "
	Nov. 3	15 5 44	15 13 56	II	Dis.	Cloudy
	" 4	16 55 41	17 03 53	I	Dis.	Sunday.
	" 6	11 24 23	11 32 35	I	Dis.	Fr. obs. Bowie rec.
	" 10	17 40 29	17 48 41	II	Dis.	Daylight.
	" 13	13 19 6	13 27 18	I	Dis.	Cloudy.
	" 14	6 57 54	7 06 06	II	Dis.	Fr. obs. Bowie rec.
	" 15	7 47 44	7 55 56	I	Dis.	Cloudy.
	" 20	15 13 58	15 22 10	I	Dis.	Omitted.
	" 21	9 32 42	9 40 54	II	Dis.	Fr. obs. Bowie rec.
	" 22	9 42 38	9 50 50	I	Dis.	Cloudy.
	" 28	9 40 21	9 48 33	III	Re.	"
	" 28	14 37 28	14 45 40	II	Re.	Long "running" notes water on object glass.
	" 29	13 46 10	13 54 22	I	Re.	water on object glass.
	Dec. 1	8 15 1	8 23 13	I	Re.	Omitted for variable.
	" 5	13 42 9	13 50 21	III	Re.	Fr. obs. Bowie rec.
	" 5	17 12 38	17 20 50	II	Re.	Too cloudy, & low.
	" 6	15 41 23	15 49 35	I	Re.	Cloudy.
	" 8	10 10 17	10 18 29	I	Re.	Fr. obs. Bowie rec.
	" 9	6 30 15	6 38 27	II	Re.	Cloudy.
	" 12	16 5 30	16 13 42	III	Dis.	"

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

1897phare.proj...44660

Eclipses of Jupiter's Satellites.

(Con. on p. 118).

Date.	W. M. T.	East. Time.	Sat.	Phe.	Remarks.
1905					
Dec. 15	12 5 40	12 13 52	I	Re.	Cloudy.
" 16	9 5 34	9 13 46	II	Re.	"
" 17	6 34 30	6 42 42	I	Re.	Sunday.
" 22	14 1 10	14 9 22	I	Re.	Cloudy.
" 23	11 40 59	11 49 11	II	Re.	W. obs. W. rec.
" 24	8 30 1	8 38 13	I	Re.	Sunday.
" 30	14 16 32	14 24 44	II	Re.	W. obs. Stark rec.
" 31	10 25 38	10 33 50	I	Re.	Cloudy.
1906					
Jan. 3	5 50 17	A 58 29	III	Re.	"
" 7	12 21 20	12 29 32	I	Re.	W. obs. Stark rec.
" 9	6 50 20	6 58 32	I	Re.	W. obs. Bowie rec.
" 10	6 10 4	6 18 16	II	Re.	" " " "
" 10	8 A 11	A 16 23	III	Dis.	" " " "
" 10	9 52 19	10 00 31	III	Re.	" " " " (having gr
" 14	14 17 6	14 25 18	I	Re.	Cloudy: also close to h
" 16	A 46 6	A 54 18	I	Re.	W. obs. Bowie rec.
" 17	A 45 54	A 54 06	II	Re.	" " " "
" 17	12 9 29	12 17 41	III	Dis.	" " " " (Also
" 17	13 54 57	14 03 09	III	Re.	Cloudy. - Close to horizon.
" 23	10 41 55	10 50 07	I	Re.	Cloudy.
" 24	11 21 53	11 30 05	II	Re.	W. obs. Bowie rec.
" 30	12 37 45	12 45 57	I	Re.	Omitted.
Feb. 1	7 6 39	7 14 51	I	Re.	Cloudy.
" A	9 2 29	9 10 41	I	Re.	"
" 15	6 4 4A	6 13 00	III	Re.	"
" 15	10 58 19	11 06 31	I	Re.	W. obs. Bowie rec.
" 18	A 28 45	A 36 54	II	Re.	Sunday.
" 22	A 14 30	A 22 46	III	Dis.	W. obs. Bowie rec.
" 22	10 6 49	10 15 01	III	Re.	" " Con. on p. 118.

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

1897phae.proj..4400

Phot. Measts. of Variable Stars.

(Photo. R. + T.)

Note: The number of individual settings are posted below.

Desig.				
S.S. Cygni.	Oct. 2, '97 (32 setts)	Oct. 6, '97 (32 setts)	Oct. 13, '97 (32 setts)	Dec. 2, '97 (64 setts)
	Oct. 1, '97 (32 setts.)	Oct. 4, '97 (32 setts)	Oct. 9, '97 (32 setts)	Nov. 30, '97 (304 setts)
	Oct. 24, '98. (16 setts.)			
Nova Aurigae.	Oct. 2, '97 (32 setts)			
	Oct. 9, '97 (32 setts)	Nov. 4, '97 (32 setts)		
S. Cephei.	Oct. 5, '97 (32 setts)	Oct. 13, '97 (32 setts)	Nov. 10, '97 (32 setts.)	
W. Delphini.	Oct. 15, '97 (160 setts)	Nov. 6, '97 (32 setts)	Dec. 2, '97 (160 setts.)	Jan. 24, '98 (96 setts)
	Oct. 5, '97 (400 setts)	Nov. 3, '97 (160 setts)	Nov. 27, '97 (208 setts.)	Dec. 21, '97 (208 setts)
M.P. 441.	Nov. 6, '97 (32 setts)	Feb. 3, '98 (32 setts)	Apr. 6, '98 (32 setts)	Sept. 29, '98 (40 setts.)
	Oct. 6, '97 (32 setts)	Jan. 8, '98 (32 setts)	Mar. 8, '98 (32 setts)	Sept. 28, '98. (32 setts.)
o Ceti.	Oct. 13, '97 (32 setts)	Oct. 23, '97 (32 setts)	Nov. 6, '97 (32 setts)	Dec. 11, '97 (32 setts.)
	Oct. 9, '97 (32 setts)	Oct. 14, '97 (32 setts)	Oct. 30, '97 (32 setts)	Nov. 23, '97 (32 setts)
S. Mrae Inn.	Nov. 6, '97 (32 setts)	Jan. 8, '98 (32 setts)		
	Oct. 9, '97 (32 setts)	Dec. 11, '97 (32 setts)	Mar. 9, '98 (32 setts)	
U. Pegasi.	Oct. 29, '97 (304 setts)	Dec. 30, '97 (144 setts)	Jan. 3, '98 (288 setts)	Jan. 7, '98 (416 setts)
	Oct. 18, '97 (518 setts)	Dec. 28, '97 (644 setts)	Jan. 1, '98 (312 setts)	Jan. 5, '98 (272 setts)
U. Cephei.	Oct. 26, '98. (80 setts.)	Dec. 9, '98. (80 setts.)		
	Oct. 26, '97 (60 setts)	Oct. 25, '98. (60 setts.)		
S.S. Cygni.	Dec. 11, '97 (48 setts)			
	Dec. 6, '97 (64 setts)	Jan. 18, '98 (32 setts)		
T. Androm.	Dec. 10, '97 (32 setts)	Dec. 21, '97 (32 setts)	Dec. 24, '97 (32 setts)	Jan. 3, '98 (32 setts)
	Dec. 11, '97 (32 setts)	Dec. 18, '97 (32 setts)	Dec. 23, '97 (32 setts)	Dec. 27, '97 (32 setts)
o Ceti.	Dec. 21, '97 (32 setts)	Dec. 24, '97 (32 setts)	Jan. 8, '98 (32 setts)	Jan. 19, '98 (32 setts)
	Dec. 16, '97 (32 setts)	Dec. 23, '97 (32 setts)	Dec. 27, '97 (64 setts)	Jan. 10, '98 (32 setts)
T. Androm.	Jan. 8, '98 (32 setts)	Jan. 19, '98 (32 setts)	Jan. 27, '98 (32 setts)	Feb. 3, '98 (32 setts)
	Jan. 5, '98 (32 setts)	Jan. 18, '98 (48 setts)	Jan. 24, '98 (32 setts)	Jan. 28, '98 (32 setts)
S. Cancri.	Jan. 28, '98 (32 setts)	Mar. 5, '98 (48 setts)	Mar. 18, '98 (160 setts)	Apr. 6, '98 (48 setts)
	Jan. 17, '98 (400 setts)	Feb. 3, '98 (48 setts)	Mar. 6, '98 (64 setts)	Mar. 24, '98 (96 setts)
o Ceti.	Feb. 3, '98 (32 setts)	Feb. 17, '98 (32 setts)	Feb. 26, '98 (32 setts)	Mar. 11, '98 (32 setts)
	Jan. 28, '98 (32 setts)	Feb. 4, '98 (32 setts)	Feb. 25, '98 (32 setts)	Mar. 8, '98 (48 setts)
R. Can. Maj.	Mar. 8, '98 (64 setts)	Mar. 10, '98 (368 setts)	Mar. 14, '98 (240 setts)	Mar. 18, '98 (216 setts)
	Feb. 4, '98 (256 setts)	Mar. 9, '98 (224 setts)	Mar. 11, '98 (48 setts)	Mar. 17, '98 (272 setts)
T. Androm.	Feb. 28, '98 (32 setts)	Oct. 31, '98. (32 setts)	Dec. 2, '98. (32 setts)	Dec. 23, '98. (32 setts)
	Feb. 8, '98 (2 setts)	Oct. 26, '98. (36 setts)	Nov. 1, '98 (16 setts.)	Dec. 15, '98. (32 setts.)
o Ceti.	Sept. 28, '98 (18 setts)	Oct. 28, '98 (32 setts)	Nov. 2, '98. (32 setts.)	Nov. 12, '98. (32 setts)
	Mar. 14, '98 (32 setts)	Oct. 24, '98 (32 setts)	Nov. 1, '98. (32 setts)	Nov. 8, '98. (32 setts)
R. Can. Maj.	Mar. 26, '98 (160 setts)	Apr. 4, '98 (64 setts.)	Apr. 7, '98 (240 setts)	Apr. 21, '98 (176 setts.)
	Mar. 19, '98 (16 setts)	Apr. 1, '98 (32 setts.)	Apr. 6, '98 (64 setts)	Apr. 8, '98 (240 setts)
S. Antliae.	Apr. 6, '98 (48 setts)	May 7, '98. (138 setts)	May 10, '98 (96 setts.)	
	Apr. 1, '98 (160 setts)	Apr. 26, '98 (112 setts)	May 9, '98. (64 setts.)	May 21, '98 (8 setts.)
S. Cancri.	May 2, '98 (16 setts)			
	May 1, '98. (192 setts)	June 9, '98. (17 setts.)		
	Apr. 9, '98. (48 setts.)	Apr. 21, '98. (96 setts.)	May 7, '98. (80 setts.)	May 13, '98. (64 setts.)
β Lyrae.	Apr. 8, '98 (48 setts)	Apr. 18, '98. (48 setts.)	Apr. 26, '98. (96 setts.)	May 10, '98. (48 setts.)
	May 10, '98. (80 setts.)	May 14, '98. (80 setts.)	May 22, '98. (80 setts.)	
Y. Aquilae.	May 9, '98. (80 setts.)	May 13, '98. (80 setts.)	May 21, '98. (80 setts.)	
	May 17, '98. (16 setts.)	June 7, '98. (48 setts.)	June 11, '98. (48 setts.)	June 17, '98. (48 setts.)
β Lyrae.	May 14, '98. (48 setts.)	May 21, '98. (48 setts.)	June 9, '98. (36 setts.)	June 14, '98. (48 setts.)
	June 14, '98. (32 setts.)	June 21, '98. (32 setts.)	July 6, '98. (32 setts.)	July 16, '98. (32 setts.)
Iapetus.	May 21, '98. (32 setts.)	June 15, '98. (32 setts.)	June 22, '98. (48 setts.)	July 15, '98. (32 setts.)
	June 14, '98. (32 setts.)	June 21, '98. (32 setts.)	July 16, '98. (32 setts.)	
Titan.	June 7, '98. (32 setts.)	June 15, '98. (32 setts.)	July 15, '98. (32 setts.)	
	June 23, '98. (64 setts.)	June 30, '98. (80 setts.)	July 6, '98. (48 setts.)	July 11, '98. (48 setts.)
β Lyrae.	June 22, '98. (48 setts.)	June 24, '98. (64 setts.)	July 1, '98. (64 setts.)	July 9, '98. (48 setts.)
	June 30, '98. (80 setts.)	July 5, '98. (336 setts.)	July 6, '98. (160 setts.)	
Y. Aquae.	June 29, '98. (234 setts.)	July 2, '98. (136 setts.)	July 7, '98. (192 setts.)	
	July 6, '98. (80 setts.)			
δ Librae.	July 1, '98. (112 setts.)			

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

1897phae.proj...4400

Phot. Measts. of Variable Stars.
(Photo. R. & T.)

Desig.				
Bdyrae.	July 15, '98. (48 setts.)	Sept. 17, '98. (240 setts.)	Sept. 30, '98. (144 setts.)	
	July 14, '98. (48 setts.)	July 16, '98. (48 setts.)	Sept. 29, '98. (144 setts.)	Oct. 1, '98. (48 setts.)
	July 22, '98. (32 setts.)			
Iapetus.	July 20, '98. (32 setts.)			
(N. Vulpeculae)	Sept. 6, '98. (57 setts.)	Sept. 9, '98. (80 setts.)	Sept. 13, '98. (80 setts.)	Sept. 17, '98. (80 setts.)
B.D. +20° 4200	Sept. 3, '98. (80 setts.)	Sept. 8, '98. (34 setts.)	Sept. 12, '98. (80 setts.)	Sept. 14, '98. (80 setts.)
	Sept. 30, '98. (80 setts.)	Oct. 3, '98. (80 setts.)	Oct. 6, '98. (80 setts.)	Oct. 12, '98. (80 setts.)
S. T. Cygni.	Sept. 16, '98. (80 setts.)	Oct. 1, '98. (80 setts.)	Oct. 5, '98. (80 setts.)	Oct. 8, '98. (80 setts.)
Nr. in Androm.	Sept. 20, '98. (32 setts.)			
N. Vulpeculae.	Oct. 12, '98. (80 setts.)	Oct. 17, '98. (80 setts.)	Oct. 28, '98. (80 setts.)	
	Oct. 1, '98. (80 setts.)	Oct. 13, '98. (80 setts.)	Oct. 27, '98. (80 setts.)	Nov. 3, '98. (80 setts.)
Planet D. 2.	Sept. 6, '98. (72 setts.)	Sept. 9, '98. (66 setts.)	Sept. 13, '98. (66 setts.)	Sept. 24, '98. (96 setts.)
	Sept. 5, '98. (97 setts.)	Sept. 8, '98. (6 setts.)	Sept. 12, '98. (78 setts.)	Sept. 14, '98. (79 setts.)
Planet D. 2.	Nov. 7, '98. (90 setts.)	Nov. 11, '98. (63 setts.)	Nov. 16, '98. (30 setts.)	
	Sept. 28, '98. (110 setts.)	Nov. 8, '98. (25 setts.)	Nov. 12, '98. (10 setts.)	
S. T. Cygni.	Oct. 15, '98. (38 setts.)	Oct. 24, '98. (80 setts.)	Oct. 27, '98. (80 setts.)	Dec. 7, '98. (80 setts.)
	Oct. 13, '98. (80 setts.)	Oct. 17, '98. (80 setts.)	Oct. 25, '98. (80 setts.)	Oct. 31, '98. (160 setts.)
W. Delphini.	Dec. 2, '98. (16 setts.)			
	Oct. 15, '98. (80 setts.)			
	Nov. 23, '98. (32 setts.)	Dec. 1, '98. (16 setts.)		
M. P. 441.	Oct. 31, '98. (32 setts.)	Nov. 29, '98. (32 setts.)		
	Nov. 4, '98. (192 setts.)	Dec. 8, '98. (133 setts.)		
Sawyer's New Var.	Nov. 3, '98. (80 setts.)	Dec. 7, '98. (96 setts.)		
	Nov. 4, '98. (80 setts.)	Nov. 16, '98. (1 sett.)	Nov. 23, '98. (30 setts.)	Nov. 25, '98. Conf.* (48 setts.)
Parkhurst's New Var.	Nov. 3, '98. (80 setts.)	Nov. 15, '98. (55 settings)	Nov. 21, '98. (80 setts.)	Nov. 25, '98. (80 setts.)
	Nov. 8, '98. (56 setts.)	Nov. 21, '98. (80 setts.)	Dec. 1, '98. (80 setts.)	
N. Vulpeculae	Nov. 7, '98. (36 setts.)	Nov. 11, '98. (80 setts.)	Nov. 23, '98. (80 setts.)	Dec. 9, '98. (80 setts.)
R. Cygni.	Nov. 12, '98. (6 setts.)			
	Nov. 16, '98. (22 setts.)	Nov. 28, '98. (32 setts.)	Dec. 2, '98. (32 setts.)	Dec. 15, '98. (32 setts.)
o Cet.	Nov. 15, '98. (32 setts.)	Nov. 21, '98. (32 setts.)	Dec. 1, '98. (32 setts.)	Dec. 13, '98. (32 setts.)
	Dec. 14, '98. (80 setts.)			
Parkhurst's New Var.	Nov. 27, '98. (48 setts.)	Dec. 2, '98. (64 setts.)		
	Dec. 23, '98. (32 setts.)			
o Cet.	Dec. 17, '98. (32 setts.)			

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

1897phae.proj..4400

Phot. Measts. of Variable Stars.

(Photo. R. & T.) + Vr.

Oct. 1, 1898 to Oct. 1, 1899.

Desig.				
U Vulpeculae.	Oct 3, '98 (F0 setts)	Oct. 12 98 (F0 setts)	Oct. 17, '98 (F0 setts.)	Oct. 28, '98 (F0 setts)
S.T. Cygni.	Oct. 1, 1898 (F0 setts)	Oct. 5 98. (F0 setts)	Oct. 18, 98 (F0. setts.)	Oct. 27. 98 (F0 setts)
	Oct. 5 98 (F0 setts)	Oct. 13 98 (F0 setts)	Oct. 17. 98 (F0 setts)	Oct. 26 98 (F0 setts)
	Oct 1, 1898 (F0 setts)	Oct. 12 98 (F0 setts)	Oct. 15 98 (35 setts)	Oct. 24 98 (F0 setts)
β Lyrae.	Jan. 1, 99 (96 setts)	June 2, 99 (225 setts)	June 2, 99 (145 setts)	June 30 99 (145 setts)
	Oct. 11, 98 (145 setts)	Jan. 12. 99. (144 setts)	June 3, 99 (32 setts)	June 29. 99 (145 setts)
W Delphini	Dec. 2, 98 (16 setts)			
	Oct. 13, 98 (F0 setts)	July 21 '99 (32 setts)		
U Cephei.	Oct. 25. 98 (F0 setts)	Dec. 29. 98 (F0 setts)	Jan. 99 (96 setts)	Feb. 2. '99 (F0 setts)
	Oct. 20, 98 (F0 setts)	Dec. 9 98 (F0 setts)	Jan. 3, 99 (40 setts.)	Jan. 16, 99 (F0 setts)
Nova Aurigae.	Febr. 4, '99 (32 setts)	Mar. 1, 99 (32 setts)		
	Oct. 24. 98 (16 setts)	Feb. 9 98 (16 setts)	Apr. 5. '99 (32 setts)	
	Oct. 25. 98 (16 setts)	Nov. 2, 98 (32 setts)	Nov. 12 98 (32 setts)	Nov. 16. '98 (32 setts)
O Ceti.	Oct. 24, 98 (32 setts)	Nov. 1. 98 (32 setts.)	Nov. 5 98 (32 setts)	Nov. 13 98 (32 setts)
	Oct. 31, 98 (32 setts)	Dec. 2 98 (32 setts)	Dec. 23, 98 (32 setts)	Dec. 29. 98 (32 setts)
T. Andromedae	Oct. 20, 98 (32 setts)	Nov. 1, 98 (16 setts)	Dec. 13, 98 (32 setts)	Dec. 28. 98 (32 setts)
	Oct. 31, 98 (160 setts)			
S.T. Cygni.	Oct. 27 98 (F0 setts)			
		Dec. 7 98 (F0 setts)		
	Nov. 23. 98 (32 setts)	Dec. 1, 98 (16 setts)	Feb. 25, '99 (32 setts)	July 1 '99 (32 setts)
M.P. 441.	Oct. 31 98 (32 setts)	Nov. 29 98 (32 setts)	Dec. 28 98 (32 setts)	Mar. 24, 99 (32 setts)
	Nov. 4, 98 (192 setts)	Dec. 5. 98 (133 setts)		
Sawyer's Variable	Nov. 3, 98 (F0 setts)	Dec. 7. 98 (96 setts)		
	Nov. 7 98 (37 setts)	Nov. 11 98 (F0 setts)	Nov. 23. 98 (F0 setts)	Dec. 9. 98 (F0 setts)
U. Vulpeculae.	Nov. 3 98 (F0 setts)	Nov. 8 98 (F0 setts)	Nov. 21, 98 (F0 setts)	Dec. 1, 98 (F0 setts)
	Nov. 4 98 (F0 setts)	Nov. 21. 98 (F0 setts)	Nov. 25. 98 (F0 setts)	Dec. 1. 98 (F0 setts)
Parkhurst's Var.	Nov. 3 98 (F0 setts)	Nov. 15 98 (55 setts)	Nov. 23. 98 (30 setts)	Nov. 29. 98 (F0 setts)
	Jan. 15. 99. (16 setts)	Mar. 17, 99 (16 setts)		
Eros.	Nov. 11. 98 (32 setts)	Jan. 19, 99 (32 setts)		
R. Cygni.	Nov. 12 98 (16 setts)			
	Nov. 25, 98 (32 setts)	Dec. 2. 98 (32 setts)	Dec. 13 98 (32 setts)	Dec. 17 98 (32 setts)
O ceti.	Nov. 21. 98 (32 setts)	Dec. 1, 98 (32 setts)	Dec. 10, 98 (16 setts)	Dec. 15, 98 (32 setts)
Parkhurst's Var.	Dec. 2, 98 (64 setts)			
	Dec. 25 98 (32 setts)	June 3. 99, (32 setts)	Jan. 10 '99. (32 setts)	Jan. 7. '99 (32 setts)
O Ceti.	Dec. 23, 98. (32 setts)	Dec. 29, 98 (64 setts)	Jan. 7. 99 (32 setts)	Jan. 11, 99. (32 setts)
	Jan. 2. 99 (32 setts)	Sept. 14 99 (32 setts)		
T. Andromedae.	Jan. 3, 99. (32 setts)	Jan. 15. 99. (32 setts)	Sept. 15 99 (32 setts)	
	Jan. 19. 99, (32 setts)	Jan. 25. 99 (32 setts)	Feb. 4, 99 (32 setts)	Feb. 14, 99 (32 setts)
O ceti.	Jan. 15, 99 (32 setts)	Jan. 21, 99 (32 setts)	Feb. 2 99 (32 setts)	Feb. 9 '99 (32 setts)
	Jan. 25. 99. (224 setts)	Jan. 27. 99 (256 setts)	Feb. 20, 99 (320 setts)	Feb. 24 99 (224 setts)
R Can Maj.	Jan. 21, 99. (48 setts)	Jan. 26 99. (240 setts)	Feb. 14, 99 (240 setts)	Feb. 23, 99 (320 setts)
	Feb. 1, 99, (20 setts)	Feb. 10, 99 (160 setts)	Mar. 1 99 (240 setts)	Mar. 20 99 (192 setts)
S. Cancri.	Jan. 30. 99. (F0 setts)	Feb. 4, 99 (F0 setts)	Feb. 24, 99 (F0 setts)	Mar. 1 99 (272 setts)
	Feb. 23 98 (32 setts)	Feb. 27, 99 (32 setts)	Mar. 6, 99 (32 setts)	Sept. 5 99 (32 setts)
ℓ Ceti.	Feb. 20 99 (32 setts)	Feb. 25 99 (32 setts)	Mar. 7 99 (32 setts)	Aug. 16, 99 (32 setts)
	Feb. 27, 99 (96 setts)			
R Can Maj.	Feb. 28 99 (256 setts)	Mar. 24, 99 (192 setts)		
	Apr. 9, 99 (32 setts)	June 2, 99 (32 setts)	Sept. 7, 99 (32 setts)	
Nova Sagittarii	Mar. 1, 99 (32 setts)	Apr. 1 99 (32 setts)	July 13, 99 (32 setts)	
	Mar. 27, 99 (192 setts)			
U Cephei	Mar. 25. 99. (256 setts)	Apr. 15 99 (56 setts)		
	Apr. 1 99 (400 setts)	May 6, 99 (74 setts)	June 13, 99 (32 setts)	
S Cancri.	Mar. 29. 99 (336 setts)	Apr. 27 99 (200 setts)	May 25, 99 (144 setts)	

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

1897phae..proj..4400

Phot. Measts. of Variable Stars.
(Plotts. R. & T.)

Desig.				
U Coronae.	apr. 21,99 (22 setts)	Apr. 24 99 (32 setts)	may. 12 '99 (50 setts)	may. 31,99 (50 setts)
	Apr. 19, 99 (50 setts)	apr. 22, 99 (20 setts)	apr. 26, 99 (32 setts)	May. 2, 99 (50 setts)
δ Librae.	apr 22,99 (44 setts)	Apr. 29. 99 (48 setts)	May. 10,99 (160 setts)	May 23 99 (23 setts)
	Apr. 21, 99 (112 setts)	Apr. 26, 99 (224 setts)	May 3, 99 (256 setts)	May 15 99 (28 setts)
L. L. Cygni.	May 4, 99 (32 setts)			
	May. 10 99 (50 setts)	June 1, 99. (50 setts)	June 16, 99 (12 setts)	June 27 99 (50 setts)
U. Virginis.	May 9, 99 (50 setts)	May. 26, 99 (50 setts)	June 10, 99 (50 setts)	June 21, 99 (50 setts)
	May 15 99 (32 setts)	May. 30 99 (32 setts)	June 6, 99 (32 setts)	June 13, 99 (48 setts)
Iapetus.	May. 12 99 (32 setts)	May. 17, 99 (32 setts)	June 1, 99 (16 setts)	June 10, 99 (20 setts)
	May. 17, 99 (32 setts)	June 1, 99 (32 setts)	June 3 99 (32 setts)	June 19 99 (32 setts)
Titan.	May. 15 99 (32 setts)	May. 30 99 (32 setts)	June 6 99 (32 setts)	June 16, 99 (32 setts)
	May 25, 99 (75 setts)	May. 30 99. (12 setts)	June 5. 99 (60 setts)	June. 12 99 (12 setts)
δ Librae	May 24 99 (255 setts)	May. 29 99 (19 setts)	May 31, 99 (240 setts)	June 6, 99 (50 setts)
	June 5 99 (50 setts)	June 17, 99 (101 setts)	July. 1. 99 (64 setts)	July. 19 99 (125 setts)
Cerasbis Var.	June 3, 99 (272 setts)	June 5. 99 (272 setts)	June 26, 99 (344 setts)	July 10, 99 (176 setts)
	June 21, 99 (50 setts)	July 15, 99 (48 setts)		
R. S. Sagattarii	June 13, 99 (48 setts)	July 1. 99 (48 setts)		
δ Librae.	June 12, 99 (62 setts)			
	June 19. 99 (48 setts)	June 30, 99 (32 setts)	July. 15 99 (32 setts)	Sept. 13 99 (32 setts)
X Cygni.	June 16, 99 (48 setts)	June 23 99 (32 setts)	July 14 99 (32 setts)	July 17 99 (32 setts)
	June 19, 99 (32 setts)	June 29 99 (32 setts)	July 3, 99 (32 setts)	July 11, 99. (32 setts)
Iapetus.	June 16, 99 (32 setts)	June 27 99 (32 setts)	June 30, 99 (32 setts)	July 10, 99 (32 setts)
	June 27. 99 (16 setts)	June 30 99 (32 setts)	July 3 99 (32 setts)	July 11, 99 (32 setts)
Titan.	June 21, 99. (32 setts)	June 29, 99 (32 setts)	July 1, 99 (32 setts)	July 10, 99 (32 setts)
	June 3, 99 (50 setts)	July 14 99 (50 setts)	July. 15 99 (64 setts)	July 24, 99 (50 setts)
W Virginis	June 29 99 (50 setts)	July 5, 99 (20 setts)	July 13, 99 (50 setts)	July 21, 99 (32 setts)
	July 9 99 (48 setts)			
B. Lyrae.	July 3, 99 48 setts	July. 11, 99 (48 setts)		
	July. 14 99 (32 setts)	July. 15, 99 (32 setts)	July 27. 99 (32 setts)	July. 31, 99 (32 setts)
Iapetus.	July. 13 99 (32 setts)	July. 15 99 (32 setts)	July. 26 99 (32 setts)	July. 25, 99 (32 setts)
	July 14 99 (32 setts)	July. 15 99 (32 setts)	July 27. 99 (32 setts)	July. 31, 99 (32 setts)
Titan	July. 13 99 (32 setts)	July. 15, 99 (32 setts)	July 26, 99 32 setts	July. 25, 99 (32 setts)
	July 22 99 (52 setts)	Sept. 9. 99 (32 setts)	Sept. 14 99 (32 setts)	Sept. 16 99 (64 setts)
(New Phs Var. DM +2° 333 F.)	July 20, 99 (48 setts)	aug. 17 99 (32 setts)	Sept. 13 99 (32 setts)	Sept. 15 99 (64 setts)
W Virginis.	July. 27. 99 (50 setts)	July. 31, 99 (50 setts)	aug. 5. 99 (48 setts)	
	July. 26, 99 (50 setts)	July 25, 99 (48 setts)	aug. 7. 99 (48 setts)	Sept.
	Sept. 21, 99 (144 setts)			
Cerasbis Var.	July 25. 99 (134 setts)			
	Aug. 14. 99 (32 setts)	Sept. 4, 99 (32 setts)	Sept. 6 99 (32 setts)	Sept. 13 99 (16 setts)
Iapetus.	aug. 5 99 (32 setts)	aug. 17. 99 (32 setts)	Sept. 5. 99 (32 setts)	Sept. 7, 99 (32 setts)
	Aug. 14. 99 (32 setts)	Sept. 4. 99 (32 setts)	Sept. 6 99 (32 setts)	Sept. 13 99 (32 setts)
Titan	aug. 5 99 (32 setts)	aug. 17. 99 (32 setts)	Sept. 5. 99 (32 setts)	Sept. 7. 99 (32 setts)
	Sept. 16, 99 (176 setts)	Sept. 30 99 (192 setts)		
U Coronae	Sept. 6, 99 (176 setts)	Sept. 23 99 (160 setts)		
	Sept. 14, 99 (32 setts)	Sept. 16, 99 (32 setts)	Sept. 22 99 (32 setts)	
o Ceti.	Sept. 9. 99 (32 setts)	Sept. 15, 99 (32 setts)	Sept. 20, 99 (32 setts)	Sept. 25, 99 (32 setts)
M. P. 4441.	Sept 12 99 (32 setts)			
Pandora.	~~Sept 14 99 (32 setts)~~			
	Sept. 15, 99 (32 setts)	Sept. 20, 99 (32 setts)		
X Cygni.	Sept. 14, 99 (32 setts)	Sept. 16 99 (32 setts)	Sept. 26, 99 (32 setts)	
	Sept. 15 99 (32 setts)			
L. Ursa minoris.	Sept. 20, 99 (64 setts)	Sept. 23 99 (160 setts)	Sept. 25 99 (144 setts)	
DM. 42° 333 F	Sept. 14 99 (48 setts)	Sept. 22 99 (128 setts)	Sept. 27 99 (144 setts)	Sept. 30, 99 (96 setts)

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

1897phae.proj..4400

Phot. Measts. of Variable Stars.
(Phots. K. & T.) & W.
Oct. 1, 1899 – Oct. 1, 1900

Desig.				
DM 42° 3338	Oct. 3,99 (64 setts)	Oct 5, 99 (48 setts)	Oct 16,99 (128 setts)	Oct 26,99 (96 setts)
	Oct. 2, 99 (96 setts)	Oct 4,99 (288 setts)	Oct 10,99 (192 setts)	Oct 19,99 (128 setts)
	Oct 3,99 (32 setts)	Oct 12,99 (32 setts)	Oct 20,99 (32 setts)	Oct 30,99 (16 setts)
o Ceti.	Oct 2,99 (32 setts)	Oct 7,99 (32 setts)	Oct 16,99 (32 setts)	Oct 26,99 (32 setts)
	Oct. 12,99 (32 setts)	Oct 25,99 (16 setts)	Nov. 13,99 (32 setts)	Nov. 29,99 (32 setts)
χ Cygni (C09(3062)	Oct. 3,99 (32 setts)	Oct 20,99 (32 setts)	Nov. 7,99 (32 setts)	Nov. 29,99 (32 setts)
Cerasbio Variable	Oct. 14,99 (192 setts)	Nov. 6,99 (112 setts)	Dec. 26,99 (48 setts)	Jan 27,00 (64 setts)
	Oct. 5,99 (48 setts)	Oct 23,99 (112 setts)	Nov. 24,99 (256 setts)	Jan 9,00 (64 setts)
U Coronae	Oct 14,99 (144 setts)	Nov. 7,99 (64 setts)		
	Oct 7,99 (208 setts)	Oct 21,99 (160 setts)		
Nova Sagatarii	Oct 22,00 (32 setts)			
	Oct 10,99 (16 setts)			
U Cephei.	Dec. 23,99 (80 setts)	Jan 2,99 (64 setts)	Apr. 4,00 (80 setts)	Apr 19,00 (64 setts)
	Oct 19,99 (128 setts)	Dec. 28,99 (96 setts)	Mar. 20,00 (16 setts)	Apr 14,00 (80 setts)
	Jan 16,00 (32 setts)	July 10,00 (32 setts)		
M.P. 441	Oct 19,99 (32 setts)	Mar 16,00 (32 setts)	Sept. 7,00 (32 setts)	
	Nov. 10,99 (80 setts)			
W Delphini	Oct 20,99 (80 setts)			
	Nov. 7,99 (48 setts)	July 13,00 (32 setts)		
γ Cygni	Oct 20,99 (80 setts)	July 10,1900 (48 setts)		
	Nov. 17,99 (112 setts)	Dec. 26,99 (80 setts)	June 25,00 (112 setts)	July 21,00 (32 setts)
β Lyrae	Nov. 4,99 (208 setts)	Dec 13,99 (144 setts)	June 14, 1900 (80 setts)	July 9,00 (80 setts)
	Nov. 13,99 (32 setts)	Nov. 17,99 (32 setts)	Nov. 25,99 (32 setts)	Dec 2,99 (64 setts)
o Ceti	Nov. 6,99 (32 setts)	Nov. 16,99 (32 setts)	Nov. 20,99 (32 setts)	Nov. 29,99 (64 setts)
	Nov. 9,99 (96 setts)	Nov. 20,99 (144 setts)	Dec 21,99 (112 setts)	Dec. 30,99 (64 setts)
DM 42° 3338	Nov. 8,99 (48 setts)	Nov. 21,99 (144 setts)	Dec. 4,99 (144 setts)	Dec. 29,99 (128 setts)
	Dec. 13,99 (80 setts)	Jan 10,00 (80 setts)	Jan. 31,00 (96 setts)	
α Tauri.	Nov. 9,99 (48 setts)	Dec 15,99 (80 setts)	Jan. 27, 00 (96 setts)	
	Nov. 20,99 (32 setts)	Dec. 6,99 (32 setts)		
SS Cygni.	Nov. 21,99 (32 setts)	Dec. 2,99 (16 setts)		
	Mar. 29,00 (32 setts)			
Nova Aurigae	Dec. 2,99 (32 setts)	Mar 21, 00 (32 setts)		
	Dec. 5, 99 (32 setts)	Dec. 9, 99 (32 setts)	Dec 10,99 (32 setts)	Dec 20,99 (16 setts)
o Ceti	Dec. 4,99 (64 setts)	Dec 6,99 (32 setts)	Dec 14,99 (32 setts)	Dec. 16,99 (32 setts)
	Jan 3,00 (32 setts)	May 21,00 (32 setts)	June 3,00 (32 setts)	June 23,00 (32 setts)
χ Cygni.	Dec 9,99 (32 setts)	Jan 22, 00 (16 setts)	May 20,00 (32 setts)	June 15, 1900 (32 setts)
	Dec. 23,99 (32 setts)	Jan 22, 00 (32 setts)	Feb. 19,00 (32 setts)	Mar 3,00 (32 setts)
R Ursae Min.	Dec. 19,99 (32 setts)	Dec. 30,99 (32 setts)	Feb. 5,00 (32 setts)	Mar. 2,00 (32 setts)
	Dec. 26,99 (32 setts)	Dec. 29,99 (32 setts)	Jan 1,00 (32 setts)	Jan 8,00 (32 setts)
o Ceti.	Dec 22.99 (32 setts)	Dec. 28,99 (32 setts)	Jan. 1,00 (32 setts)	Jan 6,00 (32 setts)
	Dec 26,99 (32 setts)	Dec. 29,99 (48 setts)	Jan 1,00 (32 setts)	Jan 3,00 (32 setts)
T. Monocerotis.	Dec. 23,99 (32 setts)	Dec. 28,99 (48 setts)	Dec. 30,99 (32 setts)	Jan 2,00 (48 setts)
	Dec. 28,99 (32 setts)	Jan 29,00 (32 setts)	Feb. 27,00 (32 setts)	Mar. 17,00 (32 setts)
T Persei	Dec. 26,99 (32 setts)	Jan 6,00 (32 setts)	Feb. 14,00 (32 setts)	Mar 8,00 (32 setts)
	Jan 6,00 (48 setts)	Jan 9,00 (64 setts)	Jan 16,00 (48 setts)	Jan 22,00 (32 setts)
T. Monocerotis	Jan 4,00 (32 setts)	Jan 8,00 (48 setts)	Jan. 10,00 (64 setts)	Jan. 19,00 (32 setts)
	Jan 27,00 (48 setts)	Jan 30,00 (48 setts)	Feb. 1, 00 (32 setts)	Feb. 3,00 (32 setts)
T. Monocerotis	Jan 23,00 (80 setts)	Jan 29,00 (32 setts)	Jan 31,00 (32 setts)	Feb. 2, 00 (32 setts)
	Feb. 6.00 (32 setts)	Feb. 10,00 (32 setts)	Feb. 14,00 (32 setts)	Feb. 19,00 (48 setts)
T. Monocerotis	Feb. 5, 00 (32 setts)	Feb 7,00 (48 setts)	Feb. 13,00 (32 setts)	Feb. 15, 00 (32 setts)
	Feb. 23, 00 (32 setts)	Feb 27,00 (48 setts)	Mar 3,00 (32 setts)	Mar. 7, 00 (112 setts)
T. Monocerotis	Feb. 20, 00 (32 setts)	Feb. 26,00 (48 setts)	Mar. 2,00 (32 setts)	Mar. 5, 00 (32 setts)
	May 19,00 (80 setts)	June 4,00 (48 setts)	Sept. 27,00 (96 setts)	
DM 42° 3338	Jan 8, 00 (128 setts)	May 31, 00 (80 setts)	June 13,00 (80 setts)	
	Jan 10, 00 (32 setts)	Jan 22, 00 (32 setts)	Jan 30,00 (48 setts)	Feb. 2,00 (32 setts)
o Ceti	Jan 9,00 (32 setts)	Jan 16,00 (32 setts)	Jan 27,00 (32 setts)	Feb. 1,00 (32 setts)
T. Andromedae	Feb. 5,00 (16 setts)			

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

1897phae.proj..4400

Phot. Measts. of Variable Stars.
(Photo. R. + T.)

Desig.				
o Ceti.	Feb. 14, 00 (32 setts)	Feb. 27, 00 (32 setts)	Mar. 14, 00 (32 setts)	July 31, 00 (32 setts)
	Feb. 6, 00 (32 setts)	Feb. 20, 00 (32 setts)	Mar. 3, 00 (32 setts)	Mar. 17, 00 (16 setts)
R Camelop.	Feb. 16, 00 (32 setts)	Feb. 27, 00 (32 setts)	Mar. 10, 00 (32 setts)	apr. 10, 00 (32 setts)
	Feb. 13, 00 (32 setts)	Feb. 20, 00 (32 setts)	Mar 3, 00 (16 setts)	Mar. 24, 00 (32 setts)
T. Cassiop.	Mar. 7, 00 (32 setts)	Mar 24, 00 (32 setts)	Apr. 10, 00 (32 setts)	
	Mar. 5, 00 (16 setts)	Mar. 16, 00 (32 setts)	Apr. 5, 00 (32 setts)	Apr. 20, 00 (32 setts)
	Mar. 7, 00 (32 setts)	Mar. 19, 00 (48 setts)	Mar 4, 00 (64 setts)	Mar. 17, 00 (48 setts)
S Monocerotis	Mar. 5, 00 (32 setts)	Mar. 8, 00 (32 setts)	Mar. 3, 00 (32 setts)	Mar. 16, 00 (48 setts)
	Mar. 8, 00 (32 setts)	Mar. 13, 00 (16 setts)	Mar 23 00 (32 setts)	Apr. 11, 00 (32 setts)
X Herculis	~~Mar 11, 00 (32 setts)~~	Mar. 10, 00 (32 setts)	Mar 14, 00 (32 setts)	Mar 28, 00 (32 setts)
	Mar. 9, 00 (16 setts)	Mar 11, 00 (32 setts)	Mar. 13, 00 (48 setts)	Mar. 17, 00 (32 setts)
T. Monocerotis	Mar 8, 00 (96 setts)	Mar. 10, 00 (96 setts)	Mar. 12, 00 (32 setts)	Mar 16, 00 (32 setts)
	Mar 27, 00 (32 setts)	Apr 20, 00 (32 setts)	May 7, 00 (32 setts)	May 14, 00 (32 setts)
R Ursae Min.	Mar. 3, 00 (32 setts)	Apr. 9, 00 (48 setts)	Apr. 30, 00 (32 setts)	May 9, 00 (32 setts)
	Apr 7, 00 (64 setts)	April 4, 00 (16 setts)	May 11, 00 (32 setts)	May 16, 00 (32 setts)
Y Bootis	Mar 17, 00 (32 setts)	Apr. 11, 00 (32 setts)	May 6, 00 (32 setts)	May 12, 00 (32 setts)
	Mar. 21, 00 (32 setts)	Mar 23, 00 (48 setts)	Mar 27, 00 (48 setts)	Mar 29, 00 (32 setts)
T. Monocerotis	Mar. 20, 1900 (32 setts)	Mar. 22, 00 (48 setts)	Mar 24, 00 (48 setts)	Mar 28, 00 (48 setts)
	Apr. 1, 00 (48 setts)	April 3, 00 (32 setts)	Apr. 5, 00 (48 setts)	April 7, 00 (64 setts)
T. Monocerotis	Mar. 31, 00 (48 setts)	Apr. 2, 00 (48 setts)	Apr. 4, 00 (48 setts)	Apr. 6, 00 (48 setts)
	Apr. 16, 00 (32 setts)			
S. Monocerotis	Mar. 31, 00 (32 setts)			
	April 3, 00 (32 setts)	Apr 10 00 (48 setts)		
U. Geminorum	April 2, 00 (32 setts)	Apr. 4, 00 (32 setts)	Apr. 1, 00 (16 setts)	
T. Persei	Apr. 6, 00 (32 setts)			
	Apr. 9, 00 (16 setts)	Apr 11, 00 (32 setts)	Apr 13, 00 (32 setts)	Apr. 19, 00 (48 setts)
T Monocerotis	Apr. 8, 00 (32 setts)	Apr. 10, 00 (32 setts)	Apr 14, 00 (32 setts)	Apr 16, 00 (32 setts)
	May 2, 00 (48 setts)	May 10, 00 (48 setts)	May 23, 00 (32 setts)	May 29, 00 (32 setts)
X Herculis	Oct. 14, 00 (16 setts)	May 7, 00 (32 setts)	May 12, 00 (32 setts)	May 23, 00 (32 setts)
	Apr 23, 00 (32 setts)	Apr. 29, 00 (32 setts)		(May 26, 00 (32 setts.)
T. Monocerotis	Apr. 24, 00 (48 setts)	Apr. 26, 00 (32 setts)	May 1, 00 (32 setts)	
	May 5, 1900 (32 setts)			
R Camelopardi	Apr. 26, 00 (32 setts)	May 2, 00 (32 setts)		
	May 29, 00 (80 setts)	May 8, 00 (64 setts)	Sept. 18, 00 (96 setts)	
U Cephei	May 4, 00 (48 setts)	June 18, 1900 (48 setts)	Sept. 13, 00 (112 setts)	
	July 22, 00 (32 setts)	June 9, 00 (32 setts)	June 23, 00 (32 setts)	July. 5, 00, (16 setts)
Titan	May 7, 00 (32 setts)	June 4, 00 (32 setts)	June 20, 00 (32 setts)	June 30, 00 (32 setts)
	July 13, 00 (32 setts)	July 27, 00 (32 setts)	Sept. 12, 00 (32 setts)	
Titan	July 7, 00 (32 setts)	July 19, 00 (32 setts)	July 30, 00 (32 setts)	Sept. 23, 00 (32 setts)
	May 29, 00 (32 setts)	June 9, 00 (32 setts)	June 23 00 (32 setts)	June 5, 00 (16 setts)
Iapetus	May 7, 00 (32 setts)	June 4, 00 (32 setts)	June 20, 00 (32 setts)	June 30, 00 (32 setts)
	July 13, 00 (32 setts)	July 27, 00 (32 setts)	Sept. 12, 00 (32 setts)	
Iapetus	July 7, 00 (32 setts)	July 19, 00 (32 setts)	July 30, 00 (32 setts)	Sept. 23, 00 (32 setts)
	June 29, 00 (32 setts)	July 17, 00 (32 setts)	Sept 5, 00 (32 setts)	
U Ophiuchi	May 1, 00 (32 setts)	July 2, 00 (32 setts)	Sept 4, 00 (144 setts)	
	May 28, 00 (80 setts)	June 2, 00 (80 setts)	June 11, 00 (96 setts)	June 21, 00 (80 setts)
Z Herculis	May 2, 00 (48 setts)	June 5, 00 (144 setts)	June 9, 00 (112 setts)	June 16, 00 (80 setts)
	May 22, 00 (32 setts)	June 9, 00 (32 setts)		
Y Bootis	May 21, 00 (16 setts)	May 28, 00 (32 setts)		
	June 6, 00 (32 setts)	June 20 00 (32 setts)	July 28, 00 (32 setts)	Sept 5, 00 (32 setts)
R Ursae min.	May 21, 00 (32 setts)	June 8, 00 (32 setts)	July 13, 00 (32 setts)	Aug 21, 00 (32 setts)
	May 26, 00 (32 setts)	June 6, 00 (32 setts)	June 13, 00 (32 setts)	June 16, 1900 (32 setts)
R Lyrae	May 23, 00 (32 setts)	June 1, 00 (32 setts)	June 7, 00 (32 setts)	June 14, 1900 (32 setts)
	May 31, 00 (32 setts)			
Z Herculis	May 30, 00 (16 setts)	June 4, 00 (32 setts)		
R Lyrae	June 20, 00 (8 setts)			

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

1897phae.proj..4400

Phot. Measts. of Variable Stars.
(Phots. R & T.)
1899 – 1900 cont.

Desig.				
g. Herculis	June 26, 00 (48 setts)	June 29, 00 (96 setts)	July 24, 00 (32 setts)	July 27, 00 (64 setts)
	June 23, 00 (96 setts)	June 27, 00 (96 setts)	July 11, 00 (64 setts)	July 16, 00 (32 setts)
	July 13, 00 (48 setts)	July 23, 00 (96 setts)	July 31, 00 (32 setts)	Aug. 19, 00 (32 setts)
χ Cygni	July 9, 1900 (32 setts)	July 19, 00 (32 setts)	July 28, 00 (32 setts)	Aug. 9, 00 (32 setts)
	Sept. 7, 1900 (112 setts)	Sept. 27, 00 (80 setts)		
ζ Herculis	July 29, 00 (96 setts)	Sept. 16, 00 (48 setts)		
	Sept. 3, 00 (32 setts)	Sept. 24, 00 (32 setts)		
Eros	July 27, 00 (32 setts)	Sept. 4, 00 (64 setts)	Sept. 26, 1900 (64 setts)	
Nova in Aquila	July 28, 00 (32 setts)			
	Sept. 13, 00 (32 setts)			
χ Cygni	Aug. 3, 00 (32 setts)			
	Sept. 5, 00 (32 setts)	Sept. 7, 00 (32 setts)	Sept. 18, 00 (32 setts)	
ο Ceti	Aug. 19, 00 (32 setts)	Sept. 12, 00 (32 setts)	Sept. 14, 00 (32 setts)	Sept. 23, 00 (32 setts)
β Persei	Sept. 15, 00 (32 setts)			

Oct. 1, 1900 to Oct. 1, 1901

R Ursae Min.	Oct. 4, 1900	48	Oct. 15, 1900	32	Oct. 22, 1900	32	Nov. 2, 1900	32
	Oct. 8, 1900	64	Oct. 15, 1900	64	Oct. 29, 1900	32	Nov. 2, 1900	64
Eros.	Oct. 4, 1900	64	Oct. 11, 1900	64	Oct. 19, 1900	64	Oct. 24, 1900	64
	Oct. 5, 1900	44	Oct. 17, 1900	32	Oct. 24, 1900	32	Nov. 5, 1900	44
ο Ceti.	Oct. 4, 1900	48	Oct. 15, 1900	32	Oct. 19, 1900	32	Nov. 2, 1900	32
	Oct. 17, 1900	112						
ζ Herculis	Oct. 5, 1900	80	Oct. 23, 1900	48				
	Nov. 23, 1900	80	Dec. 17, 1900	80				
W Delphini	Oct. 11, 1900	64	Nov. 28, 1900	16				
	Nov. 5, 1900	32	Dec. 8, 1900	32	Apr. 26, 1901	32	May 31, 1901	32
χ Cygni	Oct. 11, 1900	32	Nov. 10, 1900	32	Dec. 26, 1900	32	May 16, 1901	32
Nova Sagittarii	Oct. 15, 1900	32						
	Nov. 5, 1900	32	Feb. 6, 1901	32	Sept. 27, 01	32		
M. P. 441	Oct. 16, 1900	32	Jan. 3, 1901	32	June 29, 01	32		
Nova Aquilae	Oct. 17, 1900	32						
	Jan. 2, 1901	48						
D M +42° 3338	Oct. 23, 1900	96						
	Nov. 2, 1900	80	Nov. 12, 1900	80	Dec. 12, 1900	80	May 3, 1901	80
U Cephei.	Oct. 23, 1900	80	Nov. 7, 1900	48	Dec. 7, 1900	80	Dec. 22, 1900	80
	Oct. 24, 1900	64	Nov. 6, 1900	32	Nov. 9, 1900	32	Nov. 12, 1900	32
SS Cygni.	Oct. 23, 1900	32	Nov. 2, 1900	16	Nov. 7, 1900	32	Nov. 10, 1900	32
	Nov. 9, 1900	64	Nov. 14, 1900	32	Nov. 24, 1900	32	Dec. 1, 1900	16
ο Ceti	Nov. 6, 1900	32	Nov. 10, 1900	64	Nov. 16, 1900	32	Nov. 20, 1900	64
	Nov. 10, 1900	32	Nov. 14, 1900	32	Nov. 21, 1900	16	Nov. 24, 1900	32
Eros	Nov. 6, 1900	32	Nov. 12, 1900	32	Nov. 27, 1900	32	Nov. 23, 1900	32
	Nov. 14, 1900	32	Feb. 18, 1901	64	Mar. 7, 1901	128		
β Persei.	Nov. 6, 1900	32	Feb. 12, 1901	160	Feb. 18, 1901	96		
	Nov. 21, 1900	32	Dec. 28, 1900	32	Jan. 18, 1901	32	Feb. 2, 1901	32
R Ursae Min	Nov. 10, 1900	32	Dec. 8, 1900	32	Jan. 7, 1901	32	Jan. 25, 1901	32
	Nov. 15, 1900	32	Nov. 21, 1900	32	Dec. 24, 1900	32	Dec. 27, 1900	32
SS Cygni.	Nov. 14, 1900	32	Nov. 16, 1900	32	Nov. 23, 1900	32	Dec. 26, 1900	32
	Dec. 2, 1900	64	Dec. 14, 1900	64	Dec. 18, 1900	32	Dec. 28, 1900	32
ο Ceti	Dec. 5, 1900	32	Dec. 10, 1900	32	Dec. 15, 1900	64	Dec. 24, 1900	32
	Dec. 8, 1900	32	Dec. 14, 1900	32	Dec. 20, 1900	32	Dec. 26, 1900	32
Eros.	Dec. 7, 1900	32	Dec. 11, 1900	32	Dec. 17, 1900	32	Dec. 22, 1900	32

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

1897phae.proj..4400

Phot. Measts. of Variable Stars.
(Phots. R. & T.)

Oct. 1, 1900 to Oct. 1, 1901.

Desig.	Date	Sett'	Date	Sett'	Date	Sett'	Date	Sett'
U Geminorum	Dec. 16, 1900	32	Dec. 22, 1900	32				
	Dec. 18, 1900	32	Dec. 20 1900	32				
	Jan. 5, 1901	64	June 5, 1901	80				
Ceraskis Var.	Dec. 27, 1900	64	Jan. 19, 1900	64	July 16, 1901	80		
	Dec. 29, 1900	32	Jan. 2, 1901	32	Feb. 6, 1901	32	Feb. 8, 1901	32
SS Cygni.	Dec. 28, 1900	32	Jan. 1, 1901	32	Feb. 2, 1901	32	Feb. 7, 1901	32
	Dec. 29, 1900	32	Jan. 2, 1901	32	~~Jan. 5, 1901~~	32	Jan. 16, 1901	16
Eros.	Dec. 28, 1900	32	Jan. 1, 1901	32	Jan. 4, 1901	32	Jan. 7, 1901	32
	Jan. 3, 1901	48	Jan. 8, 1901	32	Jan. 16, 1901	32	Jan. 24, 1901	32
α Ceti	Jan. 1, 1901	32	Jan. 5, 1901	32	Jan. 12, 1901	32	Jan. 19, 1901	64
	Jan. 19, 1901	32	Feb. 1, 1901	16	Feb. 6, 1901	32	Feb. 8 1901	16
Eros	Jan. 18, 1901	32	Jan. 29 1901	32	Feb. 2, 1901	16	Feb. 7 1901	32
	Feb. 1, 1901	32	Feb. 11, 1901	32	Feb. 27, 1901	32	Aug 15 1901	32
α Ceti	Jan. 26, 1901	32	Feb. 6, 1901	32	Feb. 19, 1901	32	Mar. 6, 1901	32
	Feb. 11, 1901	32	May 7, 1901	32	May 15, 1901	32		
SS Cygni.	Feb. 9, 1901	16	Feb. 13, 1901	16	May 8 1901	32	May 21, 1901	32
	Feb. 19, 1901	32	Mar 6, 1901	48	Mar 19, 1901	112	May 6, 1901	160
Eros.	Feb. 11, 1901	16	Feb. 27, 1901	32	Mar. 12, 1901	176	Apr. 12, 1901	240
	Feb 28, 1901	32	Apr 11, 1901	32	May 6, 1901	32	May 31, 1901	32
R Ursæ Min.	Feb. 19, 1901	32	Mar. 14, 1901	48	Apr. 26, 1901	32	May 17, 1901	32
	Feb. 24, 1901	32	Feb. 27, 1901	32				
Vesta	Feb. 21, 1901	64	Feb. 26, 1901	32	Feb. 28, 1901	32		
	Feb. 24, 1901	32	Feb. 26, 1901	32	Feb 28, 1901	32	Mar. 6, 1901	32
Nova Persei	Feb. 22 1901	48	Feb. 25, 1901	64	Feb. 27, 1901	32	Mar. 1, 1901	64
	Mar. 16, 1901	32	Mar 19, 1901	32	Mar. 23. 1901	32	Mar. 27, 1901	32
Nova Persei	Mar. 14, 1901	32	Mar. 18, 1901	32	Mar 22, 1901	32	Mar 25 1901	24
	Mar 30, 1901	64	Apr. 2, 1901	32	Apr. 19, 1901	32	Apr. 27, 1901	48
Nova Persei	Mar 29, 1901	32	Apr. 1, 1901	32	Apr. 13, 1901	32	Apr. 26, 1901	32
	May 1901	32	May 8, 1901	32	July 24 1901	32	Sept 12, 1901	32
Nova Persei	Apr. 28, 1901	32	May 3, 1901	32	July 12, 1901	32	Sept 4, 1901	32
	May 17, 1901	48						
Eros	May 7, 1901	128	June 8 1901	64				
	May 23 1901	80	Sept 27, 01	80				
U Cephei	May 8, 1901	80	Sept. 7, 01	48				
	May 15, 1901	80						
Tercidinia	May 14, 1901	64	May 16, 1901	80				
	June 3, 1901	32	June 5 1901	32				
R Lyrae	May 31, 1901	32	June 4 1901	32	June 6, 01	32		
	June 4, 1901	32	June 4, 1901	32	June 10, 01	48	June 12, 1901	32
δ Serpentis	June 3, 1901	32	June 4 1901	32	June 8 01	48	June 11, 1901	32
	June 27, 1901	32	July 2, 1901	32	Aug 2, 1901	32	Sept 16 1901	32
χ Cygni	June 19, 01	32	July 13, 1901	32	Aug 13, 1901	48	Sept. 5, 1901	32
	July 3, 01	32	Aug 11, 1901	16	Aug 27, 1901	32	Sept 14, 1901	32
R Ursæ Min.	June 19, 01	32	July 13, 1901	32	Aug 13, 1901	32	Sept. 6, 1901	32
						80		
19h 37m +33° 10.2	June 29 01	32						
	Sept 7, 01	48	Sept 19, 01	32	Sept 24 01	32	Sept 30, 01	32
ο Ceti	Aug 27, 01	32	Sept 16, 01	32	Sept 23 01	32	Sept 26 01	32
R Ursæ Min.	Sept 21, 01	32						
	Sept 24 01	32	Sept 26, 01	64	Sept 30, 01	64		
~~7.3.1901 Start~~	~~Sept 23, 01~~	32	Sept 25, 01	32	Sept 27, 01	32		
Nova Persei	Sept 23, 01	48	Sept 27, 01	32				
χ Cygni	Sept 25, 01	32						

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

1897phae.proj..4400

Relative Estimates of Variable Stars.

Desig.				
S. S. Cygni.	Oct. 2, '97 (8 estz)	Oct. 5, '97 (4 estz.)	Oct. 9, '97 (4 estz)	Nov. 10, '97 (2 estz)
	Oct. 1, '97 (8 estz)	Oct. 4, '97 (3 estz.)	Oct. 6, '97 (4 estz.)	Oct. 13, '97 (2 estz.)
S. S. Cygni.	Nov. 23, '97 (1 est.)	Nov. 27, '97 (2 estz)	Dec. 6, '97 (4 estz)	Dec. 16, '97 (2 estz.)
	Nov. 18, '97 (6 estz.)	Nov. 24, '97 (2 estz.)	Nov. 30, '97 (2 estz.)	Dec. 11, '97 (2 estz.)
U. Ophiuchi.	Oct. 23, '97 (6 estz)	Dec. 27, '97 (5 estz)		
	Dec. 18, '97 (2 estz)	Dec. 24, '97 (7 estz)		
S. S. Cygni.	May 20, '98. (4 estz.)			
	May 14, '98. (2 estz.)			
R. Bootis.	June 9, '98. (2 estz.)			
	Oct. 10, '98. (3 estz.)	Oct. 20, '98. (3 estz.)	Oct. 25, '98. (3 estz.)	Nov. 2, '98. (4 estz.)
o Ceti.	Oct. 9, '98. (2 estz.)	Oct. 12, '98. (4 estz.)	Oct. 24, '98. (3 estz.)	Oct. 28, '98. (2 estz.)
S. Cygni.	Nov. 2, '98. (2 estz.)			
R. Aurigae.	Nov. 2, '98. (2 estz.)			
R. Cassiop.	Dec. 15, '98. (2 estz.)			
	Nov. 2, '98. (2 estz.)			
o Ceti.	Nov. 8, '98 (4 estz.)	Nov. 13, '98. (4 estz.)		
	Nov. 3, '98. (4 estz.)	Nov. 11, '98. (4 estz.)	Nov. 21, '98. (3 estz.)	
R. Lyncis.	Dec. 15, '98. (2 estz.)			
S. Ceti.	Dec. 16, '98. (2 estz.)			
χ Ceti.	Dec. 16, '98. (2 estz.)			

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

1897phae.proj..4400

Relative Estimates of Variable Stars.

Desig.

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

1897phae.proj..4400

Relative Estimates of Variable Stars

Oct. 1, 1898 to Oct. 1, 1899.

Desig.				
O Ceti	Oct 18, 98 (3 ests.) Oct 9, 98 (2 ests.)	Oct 26, 98 (3 ests.) Oct 12, 98 (4 ests.)	Oct 25, 98 (3 ests.) Oct. 24 98 (3 ests.)	Nov. 2 '98 (4 ests. Oct. 25 '98 (2 ests.)
S Cygni.	Nov. 2, 98 (2 ests.)			
R. Aurigae.	Nov. 2, 98 (2 ests. Dec. 15, 98 (2 ests.)			
R. Cassiop.	Nov. 2, 98. (2 ests.)			
O Ceti.	Nov. 8. 98 (4 ests.) Nov. 3. 98 (4 ests.)	Nov 12 '98 (4 ests.) Nov. 11, 98 (4 ests.)	Nov. 21. 98 (3 ests.)	
R. Lyncis.	Dec. 15 98 (2 ests.)			
~~Dec. 16, 98 (2 ests.)~~				
S Ceti.	Dec. 16, 98 (2 ests.)			
X Ceti.	Dec. 16, 98 (1 est.)			
Eros.	Jan. 15 '99. (2 ests.) Jan. 17. 99. (2 est.)	Mar. 20, 99 (2 est.) Jan. 20. 99 (1 est.)	May 4 '99 (2 est.) Apr. 1, 99 (2 ests.)	
Nova Aurigae.	Feb. 4, '99. (1 est.)			

Oct. 1, 1899 to Oct. 1, 1900.

S Cygni.	Nov. 2, 99 (2 ests.) Oct 30 99 (1 est.) Dec 28. 99 (2 ests.)	Apr. 25, 00 (2 ests.) Feb. 3, 00 (2 ests.) July 30, 00 (2 ests.)	June 18, 00 (2 ests.) May 5, 00 (2 ests.)	July 31, 00 (1 est.)
S Bootis	Nov. 2, 99 (2 ests.) Dec. 4, 99 (2 ests.)	Jan 8, 00 (2 ests.)		
T. Cassiop	Nov. 4, 99 (2 est.) Nov. 29, 99 (2 ests.)			
S Cassiop.	Nov. 20, 99 (2 est.) Dec. 2, 99 (2 est.)	Jan 30 00 (1 est.)		
R Aurigae	Nov. 29, 99 (1 est.)	Jan 9, 00 (2 ests.)		
S Persei.	Dec. 5, 99 (2 est. Dec 2, 99 (2 ests.)			
T. Persei.	Dec. 5, 99 (2 ests.) Dec 2, 99 (2 ests.) Dec. 28, 99 (2 ests.)			
R Draconis	Dec. 4, 99 (2 ests.) Jan 2, 1900 (2 ests.)	July 30, 00 (2 ests.) Feb 20, 00 (2 ests.)		
R Ursae Maj.	Dec 9, 99 (2 ests.) Dec. 25, 99 (2 ests.)	Feb. 2, 00 (2 ests.) July 31, 00 (2 ests.)		
T Ursae Maj.	Dec 9, 99 (2 ests.) Jan 10, 00 (2 ests.)	Jan 2, 00 (2 ests.) Mar. 21, 00 (2 ests.)	June 15, 00 (1 est. May 10, 00 (2 ests.)	July 8, 00 (4 ests.)
R Lyncis.	Dec. 12, 99 (2 ests.) Jan 1, 00 (2 ests.)	Feb. 2, 00 (2 ests.) Feb. 3, 00 (2 ests.)	Apr. 20, 00 (2 ests.)	May 7. 00 (2 ests.)
R Cassiop.	Dec. 27. 99 (2 ests.)	Jan 19, 00 (2 ests.)	Mar. 20. 00 (2 ests.)	
R Ursae Min	Jan. 3, 00 (2 est.)			
R Tauri.	Feb. 3, 00 (2 ests.)			
V Cancri.	Feb. 3, 00 (1 est.)			
R Leminonum	Feb. 5, 00 (1 est.)			
T. Virginis	May 7. 00 (2 ests.)			

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

1897phae..proj..4400

Relative Estimates of Variable Stars.

Desig.							
U Virginis	May 7, 00/2 ests.						
S Urs. Maj.	July 14, 00/2 ests.						
R Canes Ven.	July 14, 00/2 ests.						
		Oct. 1, 1900 to Oct. 1, 1901					
	Dec 14, 1900	2	Feb 13, 1901	2			
S Cassiop.	Oct. 16, 1900.	2	Jan 29, 1901	1			
	Nov 23, 1900	2	Apr. 27, 1901	1/2	Sept. 9, 1901	1	
S Cygni.	Oct. 16, 1900.	2	Feb. 26, 1901	2	June 6, 1901	1	
	Dec 14, 1900	2					
R Ursae Maj.	Nov. 23, 1900	2	Sept. 9, 1901	2			
S Tauri.	Dec. 17, 1900	2					
	Feb. 1, 1901	2					
R Tauri.	Dec. 17, 1900	2					
X Cygni.	Dec. 20, 1900	1					
T. Herculis.	Dec. 22, 1900	2					
S Aquarii	Dec. 22, 1900	1					
	Sept 21, 1901	2					
R Delphini.	Dec. 23, 1900	2					
	Feb. 7, 1901	2					
R Cygni.	Dec. 24, 1900	2	~~Sept~~				
	May 3, 1901	2					
S W Cygni.	Jan 18, 1901	2					
	Feb. 26, 1901	2					
R Aurigae	Jan. 29, 1901	2					
R Gemini.	Feb. 8, 1901	2					
R Pegasi.	Feb. 11, 1901	1					
	Feb. 27, 1901	1	May 14 1901	4			
Nova Persei.	Feb 24, 1901	2	Feb. 28, 1901	2			
	June 8, 01	2					
S Bootis	Apl. 26, 1901						
	June 10, 1901	2					
T Ursae Maj.	Apr. 27, 1901	2					
R Lyncis	Apr. 27, 1901	2					
R Leo. Minn	May 23, 1901	2					
U Virginis	June 6 01	2					
R Coronae	June 6, 01	1					
	Sept 24 01	2					
V Cygni	June 6, 01	2					
R Cassiop	June 8, 01	1					

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

1897phae.proj..4400

Relative Estimates of Variable Stars.

1900 1901
Oct. 1, ~~1899~~ — Oct. 1, 1900.

Desig.

γ Virginis	June 10, 01	2						
W Herculis	June 11 1901	2						
R Scorpii	June 11, 1901	1						
R Arietis	~~June~~ Sept 21, 1901	2						
S Coronae	Sept 24, 1901	2						

Oct. 1, 1901 — Oct 1, 1902.

R Ceti	Oct. 7, 1901	2						
	Nov. 20, 1901	2	Sept 10, 02	2				
S Aquarii	Oct. 7, 1901	2	Dec 18, 1901	2				
	Sept 10, 1902	2						
R Aquarii	Oct 8, 1901	2						
	Sept 19, 1902	2						
R Arietis	Oct 8, 1901	2						
	Oct 31, 1901	2	June 28, 02	2				
V Cygni	Oct 8, 1901	2	Nov. 30, 1901	2	Sept 11, 1902	2		
	Oct 31, 1901	2	Jan. 3, 1902	2	July 28, 02	2		
R Delphini	Oct 11, 1901	2	Nov. 30, 1901	2	June 28, 02	2	Sept 8, 1902	2
	Nov. 2, 1901	2	July 28, 02	2				
R Mus. Maj.	Oct 15 1901	2	July 1, 1902	2				
	July 10, 02	2	Sept. 8, 02	1				
R Herculis	Oct. 16, 1901	2	July 31, 1902	2				
S Coronae	Oct. 16, 1901	2						
	Nov. 2 1901	2	Dec. 31, 1901	2	Jan 28, 1902	2		
R Tauri	Oct. 16, 1901	2	Nov. 30, 1901	2	Feb. 14, 1902	2		
	Nov 2. 1901	2	Dec. 31, 1901	2				
S Tauri	Oct. 16, 1901	2	Nov. 30, 1901	2				
	Jan. 17, 1902	2						
U Orionis	Nov 2, 1901	2						
R Draconis	Nov. 30, 1901	2	Jan. 17, 1902	2	July 31, 1902	2		
	Nov. 6, 1901	2	Dec. 31, 1901	2	July 11, 1902	2		
S Herculis	Nov. 20, 1901	2						
	Sept 18, 1902	2						
R Camelop	Dec 6, 1901	2						
	Jan 13, 1902	2	Feb. 14, 1902	2				
S Bootis	Dec. 6, 1901	2	Feb. 3, 1902	2	Sept. 23, 1902	2		
R Vulpeculae	Dec. 18, 1901	2						
	Jan. 18, 1902	2	Feb. 14, 1902	2				
T Mus. Maj.	Dec. 31, 1901	2	Jan. 27, 1902	2				
	June 24, 02	2						
R Leonis Min	Dec. 31, 1901	2						
S Can. Min	Dec. 31, 1901	2						
R Cancri	Dec. 31, 1901	2						
	Jan 29, 1902	2						
T Hydrae	Dec 31, 1901	2	Feb. 15, 1902	2				

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

1897phae.proj..4400

Relative Estimates of Variable Stars.

Desig.									
S Cygni.	Feb. 5, 1902	2	April 14, 1902	2	June 17, 1902	2	July 20, 02	2	
	Jan. 13, 1902	2	Mar. 31, 1902	2	May 6, 1902	2	June 28, 02	2	
R Leon.	Mar. 1, 1902	2	apr. 28, 1902	2					
R Pegasi	Jan. 13, 1902	2	Apl. 2, 1902	2					
R Piscium	Jan. 30, 1902	2							
R Canae Ven.	Feb. 14, 1902	2							
	Feb. 3, 1902	1	Apl. 3, 1902	2					
R Bootis	April 3, 1902	2	mar. 14, 1902	1	May 5, 02	2			
	Feb. 27, 1902	2							
T Virginis	Mar. 3, 1902	2							
R Ceti	Mar. 1, 1902	2							
	Mar. 3, 1902	2							
R Aurigae	April 2, 1902	2	May 29, 1902	2					
	Mar 10, 1902	2	May 5, 1902	2	July 11, 1902	2			
R Lyrae	April 24, 1902	2	July 17, 02	2					
	March 14, 1902	2	May 3, 1902	2					
Y Virginis	Mar 10, 1902	2							
R Arietis	Mar. 25, 1902	2							
	May 3, 1902	2							
V Virginis	Mar. 31, 1902	2							
	apr. 15, 1902	2							
S "	Mar. 31, 1902	2	May 5, 02	2					
	May 5, 1902	2							
W Herculis	Apl. 2, 1902	2							
S Hydrae	May 8, 1902	2							
T Herculis	May 8, 1902	2							
R Cygni	May 8, 1902	2							
X Cygni	May 13, 1902	2							
	July 30, 02	2							
S Cassiop	June 29, 02	2	Sept 8, 1902	2					
	July 28, 02	2							
R Cassiop	June 28, 02	2							
	Sept 10, 02	2							
S Scorpii	July 1, 02	2							
U Virginis	July 8, 02	2							
U Her.	July 10, 02	2							
R Ophiuchi	Sept 1, 1902	1							
	July 30, 02	2							
R Androm	Sept 10, 02	2							
Nova Sag.	July 30, 02	2							
R Scorpii	Sept. 6, 02	2							
	Sept 10, 02	2							

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

1897phae.proj..4400

Relative Estimates of Variable Stars

Desig.

S Pegasi.	Sept. 10, 02.	2							

Oct. 1, 1902 to Oct. 1, 1903

S Cassiop	10-25	1	12-9	2	12-19	2	1-23	2	
	10-9	1							
	10-31	2	12-18	2					
V Cygni	10-9	2	12-9	2	A-15	1			
	10-28	2	A-24	2					
S Tauri	10-9	1	12-18	2					
	A-13	2							
T Herculis	10-28	2	A-24	2					
	12-18	2							
R Tauri	10-28	2	A-24	2					
	7-27	2							
T Ursæ Maj.	10-28	2							
	12-18	2	A-15	2					
S Cygni	12-9	2	5-23	2					
V S Can. Min.	12-9	2							
							A-24	2	
S Boötis	12-23	2	6-26	2	A-3	2	A-14	2	
	1-1	2	1-8	1	1-10	2	1-13	2	
20. 1902	12-31	17	1-5	2	1-9	14	1-12	11	
	1-19	2	1-21	2	1-23	2	1-30	2	
20, 1902	1-16	2	1-20	2	1-22	2	1-26	2	
	2-6	2							
S Hydræ	1-26	2							
T Androm	1-30	2							
20. 1902	1-31	9							
R Geminorum	2-20	2	A-24	2					
R Can. Ven.	2-20	2							
	5-13	1							
R Comæ	2-20	1							
S Virginis	5-15	1							
Y "	5-19	2							
R Lyncis	5-20	2	A-24	2					
R Gem.	5-20	2							
R Cygni	5-23	2	A-13	2					
Y Cygni	5-25	2							
R Her.	5-25	2	A-14	2					
R Cassiop.	6-1	2	A-3	2	A-14	2			
	A-13	2							
S Her	7-27	2							

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

1897phae.proj..4400

Relative Estimates of Variable Stars.

Aug.

R Ursae Maj	d-3	2					
	d-21	2					
R Canum	d-3	2					
R Delphini	d-3	2	d-14	2			
R Coronae	d-7	2					
S Ursae Maj	d-7	2					
	d-17	2	d-21	2	d-1	2	
S Z Cygni	d-10	2	d-18	2	d-24	2	
	d-21	2					
R Scorpii	d-10	2					
	d-21	2					
S Scorpii	d-10	1					
R Sagittarii	d-13	2					
U Herculis	d-13	2					
W Herculis	d-14	2					
	d-21	2					
R Ophiuchi	d-14	2					
	d-24	2					
S Coronae	d-14	2					
S Cephei	d-14	2					
	d-21	2					
R Aquarii	d-14	2					
R Virginis	d-15	2					
S Librae	d-10	2					
R Serpentis	d-17 finder	2					
	d-21	2					
S Pegasi	d-18	2					
R Andromedae	d-18	1					
	d-21	2					
S Aquarii	d-18	2					
	d-21	2					
R Arietis	d-18	2					
S Persei	d-18	2					
	d-21	2					
R Piscium	d-18	2					
R Aurigae	d-18	2					
U Persei	d-21	2					
R Trianguli	d-21	2					
S Cephei	d-21	2					

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

1897phae.proj..4400

Relative Estimates of Variable Stars.

Desig.								
o Ceti		f-24	2					
R Ceti		f-24	2					
U Ceti		f-24	2					
Neptune		f-24	2					
Vesta		f-24	2					
U Orionis		f 24	2					
Nova Persei		f-24	2					
SS Cygni		9-1	2					
U U Cygni		9-1	2					

Oct 1, 1903 to Oct 1, 1904

R Bootis	(c)	f-6	2	f-25	2					
R Delphi.	c	f-f	2							
R Vir	C	f-9	2							
U "	C	f-9	2							
V "	C	f-9	2							
S "	C	f-9	2							
R Comae	c	f-9	2							
S Librae	C	f-9	2	f-26	2					
R Her.	C	f-9	2	f-25	2					
U "	C	f-9	2	f-25	2					
U Serp.	c	f-9	2	f-24	2					
T Oph.	C	f-9	2							
S "	C	f-9	2	f-31	R					
S Sag	c	f-9	2	f-24	2					
RT Vir.	C	f-11	2							
R S "	C	f-11	2							
Ceres	C	f-11	2	f-23	2	f-24	1	f-26	2	
Ceres	C	f-27	2							

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

1897phae.proj..4400

Relative Estimates of Variable Stars.

Desig.					
R R Vulp.	C	A-11	2		
U Bootis	C	A-4	2	A-25	2
Z Sagit.	C	A-11	2	A-26	2
R Aquil.	C	A-11	2		
W Her.	C	A-11	2		
T Andron	C	A-11	2	A-30	2
T Librae	C	A-18	2		
X "	C	A-18	2		
RR "	C	A-18	2		
U "	C	A-18	2	A-26	2
Z "	C	A-18	N	A-26	2
Z Scorpii	C	A+18	2	A-26	2
X "	C	A-18	2	A-26	2
W "	C	A-18	2	A-26	N
T Delph.	C	A+18	2		
R Capric.	C	A-18	1		
W "	C	A-18	2		
U "	C	A-18	1	A-30	
X "	C	A-18	2		
Y "	C	A+18	N	A-30	1
T "	C	A-18	2		
U Aquarii	C	A-18	2		
S Pegasi	C	A-18	2		
V Delph	C	A-18	1		
S Aquarii	C	A-18	2		
S Rise.	C	A-18	2		
U Pisc	C	A-18	2		
R "	C	A-18	2		
S Arietis	C	A-CA	N		

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

1897phae.proj..4400

Absolute Estimates of Variable Stars.

Orig.

R. Orionis	Dec. 18, '97 (10.7)
R. Aurigae.	Nov. 2, '98. (12.0)
R. Cassiop.	Dec. 15, '98. (13.1)
R. Lyncis.	Nov. 2, '98. (13.0)
S. Ceti.	Dec. 16, '98. (14.4)

Relative Est of Variables cont. from page 45.

U Arietis	C	A-18	1
e Ceti	C	A-18	2
R "	C	A-18	2
U "	C	A-18	1
R Tauri	C	A+18	2
S "	C	A-18	2
V "	C	A-18	1
U Orion.	C	A-18	2
R Aurigae	C	A-21	2
S Cancelop.	C	A-21	2
R Lyncis	C	A-21	2
V Aurigae	C	A-21	3
S "	C	A-21	2
U "	C	A-21	2
T Her.	C	A-21	2
X Cygni	C	A-21	2
Z "	C	A-21	2
R "	C	A-21	2
Juno	C	A-23	2
S Her.	C.	A-23	2

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

1897phae.proj...4400

~~Absolute~~ Relative Estimates of Variable Stars.

Desig.				
R Sagittae	A-24	2		
E.C. Pr Var	A-24	2		
N Serpentis	A-24	2		
N Coronae	A-24	1		
V Coronae	A-24	2		
R Sagittarii	A-24	2	A-25	2
R W "	A-24	2		
X Oph.	A-26	2		
T Sagittarii	A-26	2		
V Cygni	A-26	2		
N "	A-27	2		
W Her.	A-27	2		
T Sagittarii	A-27	2		
R Vulpec.	A-29	2		
N. Cephei	A-29	2		
T Pegasi	A-30	2		
V Ceti	A-30	2		
R Cassiop.	A-30	2		
R Androm.	A-30	2		
U Cassiop.	A-30	2		
Z Oph.	A-31	2		
R N. Aquilae	A-31	2		
W Aquarii	A-31	2		
V Pegasi	A-31	2		

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

1897phae.proj..4400

Absolute Estimates of Variable Stars.

Oct. 1, 98 to Oct. 1, 99.

Desig.		
R. Aurigae	Nov 29 F (12.0)	
	Dec. 15, 98 (13.1	
R. Cassiop.	Nov. 2. 98 (13.0.)	
R. Lyncis.	Dec. 15, 98 (12.6)	
S. Ceti.	Dec. 16, 98 (11.4)	

Oct. 1, 1899 – Oct. 1, 1900

T. Cassiop	Nov. 4, 99 (11.9)	
S Cassiop.	Nov. 20, 99 (12.0)	
S Cassiop	Nov. 29, 99 (11.4)	
S Persei.	Dec. 2, 99 (10 ?)	
R Aurigae	Dec. 2, 99 (13.3)	
	Jan 2, 00 (11.4)	
T Mus. maj.	Dec. 23, 99 (11.9)	
	Jan 10, 00 (12.7)	Mar. 29, 00 (12.7)
R Cassiop.	Dec. 27, 99 (12.3)	Feb. 3, 00 (13.0)
R Draconis	Dec 28, 99 (11.0)	
	Jan. 8. 00 (10.6)	
S Bootis.	Dec. 28, 99 (11.8)	
	Feb 20, 00 (12.6)	
R Mus. Maj.	Jan 2, 00 (13.3)	
R Lyncis	Mar 21, 00 (14.2)	

Oct 1, 1901 – Oct 1, 1902

Oct 1, 1902 – Oct 1, 1903

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

1897phae.proj..4400

Absolute Estimates of Variable Stars.

Oct. 1, 1900 to Oct. 1, 1901

Desig.

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

1897phae.proj..4400

Absolute Estimates of Variable Stars.

Desig.

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

1897phae.proj..4400

Absolute Estimates of Variable Stars.

Algol.

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

1897phae.proj..4400

Absolute Estimates of Variable Stars.

Berig.

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

1897phae.proj..4400

Absolute Estimates of Variable Stars.

Desig.

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

1897phae.proj..4400

Absolute Estimates of Variable Stars.

Desig.

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

1897phae.proj..4400

Absolute Estimates of Variable Stars.

Desig.

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

1897phae.proj..4400

Phot. Measts. of Comparison Stars for Variables

(Photo. R + T.)

Desig.			
R. Aquarii.	Oct. 2, '97 (80 setts.)	Oct. 23, '97 (80 setts.)	
S. S. Cygni.	Oct. 1, '97 (32 setts.)	Oct. 4, '97 (128 setts.)	Oct. 25, '97 (48 setts.)
R. Piscium.	Oct. 25, '97 (112 setts.)	Nov. 3, '97 (16 setts.)	~~Dec. 11, '97 (48 setts.)~~
S. Ceti.	Oct. 23, '97 (96 setts.)	Oct. 30, '97 (112 setts.)	Dec. 6, '97. (64 setts.)
W. Delphini.	Oct. 26, '97 (48 setts.)	Oct. 29, '97 (16 setts.)	
R. Ceti.	Oct. 25, '97 (48 setts.)	Oct. 27, '97 (48 setts.)	Oct. 30, '97 (32 setts.)
U. Ceti.	Nov. 23, '97 (128 setts.)	Jan. 13, '98 (16 setts.)	
o Ceti.	Nov. 4, '97 (80 setts.)	Nov. 24, '97 (64 setts.)	
M. P. 441.	Nov. 6, '97 (64 setts.)		
T. Andromed.	Dec. 18, '97 (96 setts.)	Dec. 27, '96 (16 setts.)	
R. Ceti.	Nov. 24, '97 (48 setts.)	Dec. 24, '97 (64 setts.)	Jan. 18, '98 (16 setts.)
V. Cygni.	~~Dec. 11, '97 (32 setts.)~~		
T. Andromed.	Dec. 18, '97 (32 setts.)	Dec. 24, '97 (64 setts.)	Feb. 10, '98 (48 setts.) Feb. 17, '98 (32 setts.)
R. Ceti.	~~Dec. 11, '97 (32 setts.)~~	Dec. 23, '97 (32 setts.)	Dec. 27, '97 (64 setts.) Feb. 12, '98 (48 setts.)
T. Hydrae.	Feb. 24, '98 (32 setts.)	Dec. 5, '98 (32 setts.)	Dec. 10, '98. (32 setts.)
U. Cancri.	Jan. 24, '98 (64 setts.)	Feb. 25, '98 (16 setts.)	Dec. 8, '98. (32 setts.)
V. Androm.	Jan. 27, '98 (32 setts.)		
T. Hydrae.	~~Feb. 24, '98 (96 setts.)~~		
U. Cancri.	Feb. 17, '98 (96 setts.)		
R. Can. Maj.	Feb. 28, '98 (80 setts.)	Mar. 25, '98 (32 setts.)	
S. Ursæ Min.	Feb. 26, '98 (64 setts.)	Mar. 3, '98 (64 setts.)	
R. Leonis	Mar. 14, '98 (64 setts.)		
S. Cassiop.	Mar. 5, '98 (48 setts.)	Mar. 17, '98 (64 setts.)	
V. Cancri	Apr. 15, '98 (96 setts.)		
Y. Aquilæ.	Mar. 31, '98 (64 setts.)	May 9, '98. (32 setts.)	
R. Corvi.	Apr. 9, '98 (32 setts.)		
R. Leo. Min.	Mar. 31, '98 (32 setts.)	Apr. 11, '98 (	
S. Virginis.	Apr. 16, '98 (64 setts.)		
Saturn (Saturnus)	Apr. 9, '98 (64 setts.)		
R. Bootis.	May 13, '98. (32 setts.)	May 17, '98. (32 setts.)	
V. Virginis.	Apr. 15, '98 (32 setts.)	May 14, '98. (80 setts.)	May 21, '98. (16 setts.)
T. Scorpii.	May 9, '98. (80		
R. Sagitt.	June 15, '98. (96 setts.)	June 22, '98. (16 setts.)	
S. Sagittæ	June 14, '98. (16 setts.)	June 17, '98. (64 setts.)	June 23, '98. (16 setts.)
R. Leo. Min.	June 15, '98. (32 setts.)	June 17, '98. (32 setts.)	June 22, '98. (1 sett.) July 6, '98. (16 setts.)
S. Virginis.	June 14, '98. (32 setts.)	June 16, '98. (16 setts.)	June 21, '98. (48 setts.) June 23, '98. (16 setts.)
Saturn (Saturnus)	June 23, '98. (48 setts.)	July 14, '98. (32 setts.)	
R. Bootis.	June 21, '98. (48 setts.)	July 9, '98. (32 setts.)	
V. Virginis.	July 6, '98. (32 setts.)		
T. Scorpii.	June 30, '98. (32 setts.)		
R. Sagitt.	July 14, '98. (96 setts.)		
S. Sagittæ	July 7, '98. (64 setts.)	July 15, '98. (32 setts.)	
S. Coronæ.	July 20, '98. (32 setts.)		
	July 14, '98. (64 setts.)		
	July 22, '98. (48 setts.)		
	~~Sept. 14, '98. (80 setts.)~~		
	Sept. 13, '98 (80 setts.)		
	Sept. 21, '98 (80 setts.)		
	Oct. 3, '98. (48 setts.)		
	Sept. 21, '98 (48 setts.)		

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

1897phae.proj..4400

Phot. Measts. of Comparison Stars for Variables.
(Photo. K & T.)

Desig.		
S. Serpentis.	Oct. 8, '98. (80 setts.)	
	Oct. 6, '98. (80 setts.)	
R. Coronae.	Oct. 8, '98. (32 setts.)	Oct. 11, '98. (16 setts.)
	Oct. 6, '98. (48 setts.)	Oct. 10, '98. (64 setts.)
R. Cygni.	Oct. 11, '98. (32 setts.)	Nov. 2, '98. (48 setts.)
	Oct. 10, '98. (32 setts.)	Nov. 1, '98. (80 setts.)
R. Serpentis.	Oct. 13, '98. (64 setts.)	Oct. 20, '98. (16 setts.)
	Oct. 12, '98. (48 setts.)	Oct. 17, '98. (32 setts.)
	Dec. 22, '98 (32 setts.)	
X. Ceti.	Dec. 16, '98. (64 setts.)	

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

1897phae.proj..4400

Phot. Measrs. of Comparison Stars for Variables.

(Photr. R. & T.)

Oct 1, 1898 to Oct 1, 1899.

Desig.				
S Cordae	Oct 3,'98 (H F setts)			
	Oct. 5, '98 (F 0 setts)			
S Herculis	Oct. 6,'98 (F 0 setts)			
	Oct. 8 '98 (32 setts)	Oct. 10,'98 (16 setts)		
R Coronae	Oct. 6,'98 (H F setts)	Oct. 10,'98 (64 setts)		
	Oct. 11'98 (32 setts)	Nov. 2,'98 (H F setts)		
R. Cygni	Oct. 10,'98 (32 setts)	Nov. 1,'98 (F 0 setts)		
	Oct. 13,'98 (64 setts)	Oct. 20,'98 (16 setts)		
R. Herculis	Oct. 12,'98. (H F setts)	Oct 17,'98 (32 setts)		
	Dec. 5, '98 (32 setts)			
R. Ceti	Dec 5,'98 (32 setts)	Dec. 10,'98 (16 setts)		
	Dec. 23,'98 (32 setts)	Jan. 10,'99 (16 setts)		
χ Ceti	Dec. 16,'98 (64 setts)	Jan. 7,'99. (H F setts)		
W Cancri	Jan. 17,'99 (32 setts)	Jan. 19,'99 (H F setts)	Feb. 4,'99 (16 setts)	
	Jan. 12,'99 (16 setts)	Jan. 18,'99 (H F setts)	Feb. 2,'99. (H F setts)	
U. Puppis	Mar. 1,'99 (16 setts)	Mar. 5,'99. (F 0 setts)		
	Feb 27,'99 (H F setts)	Mar. 6,'99. (64 setts)	Mar. 16,'99. (16 setts)	
V Can. Minoris	Mar 7,'99 (F 0 setts)			
	Mar. 16,'99 (32 setts)	Mar. 30,'99. (H F setts)		
- Can Minoris	Apr. 3,'99 (64 setts)	Apr. 5,'99 (32 setts)		
	Apr. 1,'99 (64 setts)	Apr. 4,'99 (32 setts)		
R. Leptantis	Apr. 6,'99 (H F setts)	Apr. 18,'99 (16 setts)	Apr. 25,'99 (32 setts)	
	Apr. 5,'99. (64 setts)	Apr. 13,'99. (H F setts)	Apr. 19,'99 (20 setts)	Apr. 29,'99. (16 setts)
	Apr 11,'99 (32 setts)			
U Puppis.	Apr. 10,'99 (112 setts)	Apr. 13,'99. (64 setts)		
	Apr. 11'99 (32 setts)	Apr. 19. '99 (32 setts)		
S. Ursa Min.	Apr. 10,'99. (H F setts)	Apr. 18,'99 (16 setts)	Apr. 25,'99 (32 setts)	
	May. 4,'99. (H F setts)	May 9,'99 (16 setts)		
Y. Hydral.	Apr. 29,'99 (32 setts)	May. 5,'99 (64 setts)	May. 12,'99 (32 setts)	
V Virginis.	May. 10,'99 (16 setts)			
Iapetus & Titan	Sept. 15,'99. (64 setts)			
	Sept. 14,'99 (64 setts)			

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

1897phae.proj..4400

Phot. Measts. of Comparison Stars for Variables.

(Photos. R. & T.)

Oct 1, 1900 to Oct 1, 1901.

Desig.		
T Herculis.	Nov. 14, 1900	(8 setts)
U Ceti.	Feb. 21, 1901	(32 setts)
~~R Coronae~~	~~June 6, 01. test.~~	

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

1897phae.proj..4400

Phot. Measts. of Comparison Stars for Variables.
(Photo. R. 4T.)

Oct. 1, 1899 to Oct. 1, 1900

Desig.

S Cassiop. Nov. 9, 99 (16 sette)

~~R Hydrae Mirae. Feb. 19, 00 (32 sette)~~

Oct. 1, 1900 to Oct. 1, 1901.

	Mar. 30, 1901	(10 sette)	Apr. 27, 1901	(6 sette)					
Nova Persei.	Mar. 18, 1901	(16 sette)	Apr. 14, 1901	(20 sette)					
	June 21, 1901	(32)	July 19, 1901	(64 sette)	July 30, 01	(48)			
R Scorpii	June 11, 1901	(32)	July 16, 1901	(48 sette)	July 26, 01	(16)	Sept. 4, 01	32	
S Serpentis	June 26, 1901	(48)							
	June 25, 1901	(32)							
	July 12, 1901	48	July 15, 1901	16					
U Virginis	June 27, 1901	32	July 13, 1901	32					
	July 15, 1901	96							
S Librae	July 13, 1901	80							
	July 22, 1901	(64)	July 25, 1901	(16)	July 27, 01	(16)			
U Herculis	July 20, 1901	(32)	July 23, 1901	(32)	July 26, 01	(32)			
	July 27, 1901	(32)	Sept. 5, 1901	(48)					
R Can. Ven.	July 26, 1901	48	Sept. 4, 1901.	(80)					
	Sept. 1, 1901	(80)							
R Ophiuchi	Sept 6, 1901	(20)	Sept 14, 1901	(32)					

Oct 1, 1901 — Oct 1, 1902

	Nov. 7, 1901	48							
Nova Persei	Nov. 6, 1901	16							
χ Cygni	Sept. 23, 1902	32							
	Sept. 15, 1902	32							
	Sept. 24, 1902	32							
T Persei	Sept. 20, 1902	32							

Oct 1, 1902 to Oct 1, 1903

	Oct. 7								
X Persei	Oct. 6, 1902	32	Oct. 9, 1902	32					
	Oct. 14, 1902	32							
U Coronae	Oct. 10, 1902	32							
Z Herculis	Oct 23, 1902	32	Oct 28, 1902	32					
	Oct 31								
X Cancri	Oct ~~25~~, 1902	32	Nov. 1, 1902	32					
	Jan. 19, 1903	16							
20. 1902 Cyg	Dec. 30, 1902	32							
	Apr. 17, 1903	96	Apr. 20, 1903	128	Apr. 25, 1903	32			
Nova Aur	Mar. 31, 1903	96	Apr. 18, 1903	128	Apr. 21, 1903	48			
Fuchsia	June 13, 1903	32	June 26, 1903	32					

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

1897phae.proj..4400

Phot. Measts. of Comparison Stars for Variables.
(Phots. R. & T.)

Desig.

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

1897phae.proj..4400

Phot. Measts. of Comparison Stars for Variables.
(Photel. R. + D.)

Desig.

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

1897phae.proj..4400

Phot. Measts. of Comparison Stars for Variables.
(Photo. R. & T.)

Desig.

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

1897phae.proj..4400

Phot. Measts of Comparison Stars for Variables.
(Photo. R. + T.)

Berg.

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

1897phae.proj..4400

Phot. Measts. of Comparison Stars for Variables.
(Photo. R. & T.)

Desig.

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

1897phae.proj..4400

Relative Estimates of Comparison Stars for Variables.

Date.	Desig.	Bk.	p.	No Estr.
1897 Oct. 2.	R. Agdarii.	92	172	6
" 4.	" "	92	191	3
" 6.	S.S. Cygni.	92	228	15
" 13.	" " "	93	23	15
" 19.	R. Aquarii	93	77	3
" 23.	R. Piscium	93	91	9
" 25	" "	93	101	12
" "	S.S. Cygni.	93	112	15
" 26.	R. Piscium	93	113	13
" 27.	" "	93	128	4
" 30.	S. Ceti.	93	156	11
Nov. 3.	S. Ceti.	93	174	12
" 4.	" "	93	183	12
" "	U. Ceti.	93	189	7
" 23.	S. Ceti.	94	3	2
" 24.	U. Ceti.	94	19	7
Dec. 16.	" "	94	95	4
" "	T. Androm.	94	96	7
" 18.	U. Ceti.	94	99	7
" "	T. Androm.	94	106	9
" 21.	" "	94	128	9
" 23.	" "	94	137	2
" 27.	U. Ceti.	94	163	2
" "	T. Androm.	94	170	2
Jan. 1898 10	U. Ceti.	95	102	2
" 18.	" "	95	137	2
" 18.	T. Androm.	95	143	5
" 19.	" "	95	146	7

Date.	Desig.	Bk.	p.	No Estr.
1898 February 10.	T. Androm.	95.	217	8.
" 12.	" "	96	1.	6.
" 12.	T. Hydrae.	96.	5.	12
" 17.	T. Androm.	96.	12.	6.
" 17.	T. Hydrae.	96.	14.	11.
" 24.	" "	96.	23	11.
Mar. 3.	V. Canesi.	96.	93.	6.
" 3.	T. Hydrae.	96.	94.	1.
" 11.	V. Canesi.	96.	188.	11.
" 25.	" "	97.	69.	12
" 31.	R. Leonis.	97.	86.	5
Apr. 9.	" "	97.	166.	5,
" 11.	" "	97	176.	5.
" 11.	V. Canesi.	97	177.	12.
" 16.	" "	97.	189.	2.
" 16.	R. Leonis.	97.	190.	3.
" 18.	" "	97.	191.	3.
June 7.	S. Virginis	98.	147.	7.
" 7.	R. Bootis.	98.	148.	5.
" 9.	" "	98.	162.	9.
" 11.	R. Cygni.	98.	168.	10.
" 14.	R. Corvi.	98.	174.	10.
" 14.	R. Leo. Min.	98.	176.	9.
" 15.	R. Corvi.	98.	186.	11.
" 15.	R. Leo. Min.	98.	193.	9.
" 16.	" " "	98.	201.	9.
" 16.	R. Bootis.	98.	203.	9.
" 17.	R. Corvi.	98.	212.	11.
" 21.	S. Virginis	98.	220.	8.

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

1897phae..proj..4400

Rel. Ests. of Comp. Stars for Variables.

Date. 1898.	Desig.	Hk.	p	No. ests.	Date.	Desig.	Hk.	p.	No. ests.
June 22,	R. Corbi.	99.	6.	1.	Oct. 10, '98.	R. Coronae.	101	15	7.
June 23.	S. Virginis.	99.	17.	8.	Oct. 10, '98.	S Herculis.	101	15	7.
" 24.	" "	99.	26.	8.	Oct. 11, '98.	R. Herculis.	101.	20.	3.
July 7,	R. Bootis.	99.	125.	4.	" 12, '98.	S Serpentis.	101.	24.	7.
" 15,	V. Virginis.	99.	166.	11.	" 12, '98.	R. Herculis.	101.	24.	6.
" 16.	" "	99.	176.	11.	" 13, '98.	" "	101.	40.	6.
" 16.	S. Librae.	99	181.	6.	" 13, '98.	S. Serpentis.	101.	42.	7.
" 20.	V. Virginis.	99.	186.	11.	" 15, '98.	R. Herculis.	101.	53.	6.
" 20.	S. Librae.	99.	189.	6.	" 17, '98.	R. Can. Ven.	101.	64.	6.
" 20.	T. Scorpii.	99.	190	7.	" 20, '98.	T. Herculis.	101	76	8.
" 22.	S. Librae.	99.	194.	6.	Nov. 1, '98.	" "	101	138.	8.
" 22.	T. Scorpii.	99.	195.	9.	" 2, '98.	" "	101	148	8
Sept. 9.	R. Sagitt.	100	16.	5.	" 12, '98.	" "	101	220.	8.
" 12,	" "	100	32.	5.	Dec. 15, '98.	χ Ceti.	102	188	7
" 20.	S. Coronae	100.	107	7.	" " "	T. Camelop.	102	191	6.
" 20.	R. Cygni.	100.	108.	10.	" 16, '98	S. Ceti.	102	195	2
" 21.	S Serpentis.	100.	109.	7.	" " "	χ. Ceti.	102	195	13.
" 21.	S. Coronae.	100.	115.	6.	Dec. 17, "	S. Ceti.	102	200	2
" 21.	R. Cygni.	100.	119.	12.	" " "	χ. Ceti.	102	202	10.
" 23.	S. Serpentis.	100.	120.	7.	Dec. 23, '98.	S. Ceti.	102	204	2
" 23.	S. Coronae.	100.	121.	6.	" " "	χ. "	102	204	10.
Oct. 3.	S. Coronae.	100.	182.	6.					
" 6.	S. Herculis	100	198	7.					
" 6.	R. Coronae	100.	204	7.					
" 6.	S. Coronae	100.	208	6.					
" 6.	R. Cygni.	100.	208.	12.					
" 8.	S. Herculis.	100.	220.	7.					
" 8.	R. Coronae	101.	3.	7.					
" 8.	R. Cygni.	101.	3.	13.					

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

1897phae.proj..4400

Rel. Ests. of Comp. Stars for Variables.

Oct 1, 1895 to Oct. 1, 1899.

Date.		Desig.	Bk.	Page	No ests.	Date.	Desig.	Bk.	Page	No ests.
Oct. 1895	3.	S Coronae	100	182	6	Dec. 25.	S Ceti.	103	3	2
Oct.	6.	S Herculis.	"	195	7	" 25	X Ceti.	"	3	10
"	"	R Coronae	"	204	7	1899. Jan. 7.	X ceti.	"	37	3
"	"	S Coronae	"	205	6	" 7	S Ceti.	"	37	2
"	"	R Cygni	"	205	12	" 10	X Ceti.	"	45	3
"	5	S Herculis.	"	220	7	" 10	V Can Min.	"	51	6
"	"	R Coronae	101	3	7	" 12.	W Cancri.	"	74	9
"	"	R Cygni.	"	3	12	" 17	W Cancri.	"	53	9
"	10	R Coronae	"	15	7	" 19	W Cancri.	"	111	9
"	"	S Herculis.	"	15	7	Feb. 10	- Can Min.	104	3	6
"	11	R Herculis.	"	20	3	" 14	Nova Aurigae	"	29	6
"	12	S Serpentis.	"	24	7	" 27	U Puppis.	"	125	6
"	"	R Herculis.	"	24	6	Mar. 1.	U Puppis	"	135	9
"	13	R Herculis.	"	40	6	" 6	U Puppis.	"	156	5
"	"	S Serpentis	"	42	7	" 5	U Puppis.	"	164	5
"	15	R Herculis.	"	53	6	" 16	U Puppis.	"	200	5
"	17	R Can Ven.	"	60	6	" 16	V Can Min.	"	202	10
"	20	T. Herculis.	"	76	5	" 17	V Can Min.	"	209	10
Nov.	1.	T. Herculis.	"	135	5	" 20	V. Can Maj.	"	215	10
"	2.	T. Herculis	"	145	5	" 30	T. Camel.	105	93	5
"	12	T. Herculis.	"	220	5	Apr. 1.	- Can Min.	105	101	6
Dec.	15	X Ceti.	102	185	7	" 4	- Can Min.	"	114	6
"	15	T. Camelop.	"	191	6	" 6	U Puppis.	"	134	4
"	16	X Ceti.	"	195	13	" 10	U Puppis	"	145	7
"	17	X Ceti.	"	202	10	" 13	- Can Min.	"	167	6
"	17	S Ceti.	"	200	2	" 13	U Puppis.	"	165	5
"	23	S Ceti.	"	204	2	" 15	R Leptantis	"	212	10
"	23	X ceti.	"	204	10	" 19	R Leptantis	106	3	10

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

1897phae.proj..4400

Rel. Ests. of Comps. Stars for Variables.

Date. 1899	Desig	Blk.	Page.	No. Est.
Apr. 27	R Lyncantis	106	103	.10
May. 30	W Hydrae	107	56	7

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

1897phae.proj..4400

Rel. Ests. of Comp. Stars for Variables.

Oct. 1, 1899 – Oct. 1, 1900

Mar 27, 1901	Nova Persei	B 123 P 97	9 ests	
After				
June 6, 1901	R Coronae	124, 195	1	
" " "	V Cygni	124, 197	1	
" 21 "	R & S Scuti	125, 37	8	
" 28 "	R Delphini	125, 90	4	
" 29 "	R Delphini	125, 97	5	
July 12 "	S Librae	125, 140	5	
" 13 "	" " "	152	5	
" 15 "	" " "	166	5	
" 16 "	R Ophiuchi	" 176	8	
" 19 "	U Herculis	" 184	7	
" 20 "	" " "	" 188	6	
" 22 "	R Can Ven	" 194	12	
" 22 "	U Herculis	" 198	6	
" 23 "	R Can Ven	" 211	12	
" 25 "	" " "	218	12	
" " "	~~X~~ S Serpentis	" 219	4 5	
" 26 "	" " "	126 3	4	
" 27 "	" " "	126 15	4	
Sept 5 "	R Ophiuchi	" 71	8	
" 6 "	" " "	" 80	8	
" 6 "	R Sagittarii	" "	3	
" 7 "	R Oph.	" 89	8	
" 7 "	R Sag.	" 93	3	
" 9 "	" "	" 98	3	
" 11 "	R Delphini	" 108	5	
" 11 "	R Vulpeculae	" 109	2	

Sept 13, 1901	R Vulpeculae	126	113	(2)
" 14 "	" "	"	120	(2)
" 16 "	V Cygni	"		(1)
" ~~16~~ "	R "	"		(9)
" 19 "	V "	"		(1)
" 19 "	R "	"		(14)
" 21 "	R "	"		(14)
" 21 "	S Aquarii	"		(6)
" 23 "	" "	"	155	(6)
" 23 "	R Cygni	"	155	(10)
" 24 "	R Cygni	"	161	(10)
" 24 "	S Aquarii	"	161	(6)
" 25 "	R Cygni	"	169	(10)
" 25 "	U Her	"	166	(2)
" 25 "	W "	"	166	(4)
" 26 "	R Can Ven	"	174	2
" 26 "	U Her	"	174	(4)
" 26 "	W Her	"	174	(4)
" 26 "	X Cygni	"	174	2
" 26 "	R Cygni	"	175	(10)
" 26 "	R Delp.	"	175	(6)
" 27 "	R Can Ven	"	185	(2)
" 27 "	U Her	"	"	(4)
" 27 "	W Her	"	"	(4)
" 27 "	R Delp	"	186	(6)
" 27 "	X Cygni	"	190	(2)
" 28 "	R Delp	"	197	(6)
" 28 "	X Cygni	"	197	(2)
" 30 "	R Oph	"	201	(2)
" 30 "	R Boot	"	201	(2)

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

1897phae..proj..4400

Rel. Ests. of Comp. Stars for Variables.

~~Sept~~ 30 01	R Can Ven	126, 201	(2)
" " "	R Androm	" 206	(4)
" " "	S Ceti	" 207	(2)

Oct 1, 1901 to Oct 1, 1902

Oct 1, 1901	R Oph.	126 213	2	
" " "	R Bootis	" "	2	
" " "	R Androm	" "	4	
" " "	S Ceti	" "	2	
" " "	R Arietis	" 214	4	
" " "	R Vulpec.	" "	2	
" " "	R Pegasi	" 215	2	
" " "	S Pegasi	" "	2	
" 3 "	R Oph.	" 217	2	
" " 4	R Vulpec	" "	2	
" " "	R Androm	" "	4	
" " 4	R Pegasi	" 218	2	
" 4 "	S Pegasi	" "	2	
" " "	S Ceti	" "	2	
" " "	R Arietis	" 219	4	
" 4 "	R Pegasi	127 9	2	
" " "	S Pegasi	" "	2	
" " "	R Arietis	" "	4	
" " "	R Ceti	" 10	2	
" 5 "	R Ceti	" 24	2	
" " "	R Tauri	" 24	16	
" 7 "	R Ceti	" 37	2	
" 7 "	R Tauri	" 41	14	
" 8 "	R Tauri	" 47-48	12	
Nov. 20, 1901	S Herculis	128 ~~70~~ 20	4	
" " "	S Hydrae	" 84	2	
" " "	R Leo. Min	" "	4	
" 21 "	S Herculis	" ~~84~~ 84	4	
" 21 "	R Leo. Min	" 96	4	
" 21 "	S Hydrae	" 96	2	
" 22 "	S Herculis	" 97	4	
" 22 "	R Leo. Min	" 108	4	
" 22 "	S Hydrae	" 108	2	

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

1897phae.proj..4400

Rel. Estn. of Comps. Stars for Variables.

Oct 1, 1901 – Oct 1, 1902

R Hercules July 10, 1902 2

Oct 1, 1902 – Oct 1, 1903

~~S Cassiop.~~												
20. 1902	1 – 1	3	1 – 21	3								
Nova Aquil	12 – 31	3	1 – 19	3								
	~~4 – 27~~	6	4 – 28	8	4 – 29	7	4 – 30	7	5 – 1	7	5 – 15	8

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

1897phae.proj..4400

Rel. Ests. of Comp. Stars for Variables.

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

1897phae.proj..4400

Rel. Esta. of Comp. Stars for Variables.

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

1897phae.proj..4490

Rel. Cata. of Comp. Stars for Variables

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

1897phae.proj..4400

Diagrams.

Desig.	1898.	
T. Hydrae.	Feb. 10.	Bk. 95. p. 220.
V. Cameri.	Mar. 3.	Bk. 96, p. 93.
R. Coron.	May 14.	Bk. 98. p. 92.
R. Sagitt.	Sept. 9.	Bk. 100. p. 16.
S. Coronae.	Sept. 20.	Bk. 100. p. 107.
Planet D. 2.	Sept. 5.	Bk. 99. p. 214.
" " "	Sept. 6.	Bk. 100. p. 1.
" " "	Sept. 8.	Bk. 100. p. 11.
" " "	Sept. 9.	Bk. 100. p. 17.
" " "	Sept. 12.	Bk. 100. p. 33.
" " "	Sept. 13.	Bk. 100. p. 51.
" " "	Sept. 14.	Bk. 100. p. 67.
" " "	Nov. 7.	Bk. 101, p. 191.
T. Camelop.	Dec. 15.	Bk. 102. p. 191.

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

1897phae.proj..4400

Diagrams.

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

1897phae.proj..4400

Diagrams.
Oct. 1, 1896. to Oct. 1, 1899.

Designation				
Eros.	Nov. 7. '96	Blk.	101.	Pg. 191.
T. Camelop.	Dec. 15. '96	"	102	" 191
N. Cameri.	Jan. 11, '99.	"	103	" 61
Eros.	Jan. 17. 99	"	103	" 78
Eros.	Jan. 18. 99.	"	103	" 85
N Can Min.	Feb. 2, 99.	"	103	" 202
- Can Min.	Feb. 10, 99.	"	104	" 3
N Puppis.	Feb 27, 99	"	104	" 126
Eros.	Mar. 17, 99	"	104	" 207
- Can Min.	Mar. 17. 99	"	104	" 215
Eros.	Mar 20, 99	"	104	" 217
T. Camelop.	Mar 30, 99.	"	105	" 93
Eros.	Apr. 11, 99.	"	105	" 157
Eros.	Apr. 25, 99.	"	106	" 100
Eros.	May 5. 99.	"	106	" 147.
Iapetus (comp star)	May 30, 99.	"	107	" 61

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

1897phae.proj..4400

Diagrams.

Oct. 1, 1899 - Oct. 1, 1900

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

1897phae.proj..4400

Phot. Measts. of Bright Double Stars.

Note: Each observation of a double star consists of 16 phot. settings unless otherwise stated.

Σ No.	Desig.	Bk.	p.	Bk.	p.	Bk.	p.	Bk.	p.
2308		92	166	92	224				
2130		92	225						
79		93	3						
318		93	4						
2349		93	15						
2521		93	16						
90		93	25.						
331		93	29						
528		93	30						
45'		93	79						
2486		93	80						
2580		93	81						
2637.		93	82						
2675.		93	117						
2838		93	208						
2909		93	209						
2758		93	212						
2822		93	(½ grey) 214						
57'		93	215						
2873.		93	216						
2960.		93	219						
60.		94	91.						
1415.		94	141.						
281.		95	92						
6'.		95	104						
401.		95	149						
16'.		95	177						
?		97	(3 grey) 141						
525.		98.	50.						

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

1897phae.proj..4400

Phot. Measts. of Bright Double Stars.

Σ No.	Desig.	Obs.	p.	Obs.	p.	Obs.	p.	Obs.	p.
2348.		98.	91.						
2010.		98.	107.	98	108.				
1268.		98.	115.						
2264.		98.	153.						
2140.		98.	163.						

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

1897phae.proj..4400

Phot. Measts. of Bright Double Stars.

Oct. 1, 1898 to Oct. 1, 1899.

Σ No.	Desig.	Bk.	p.	Bk.	p.	Bk.	p.	Bk.	p.	
12 6F		103	114.							
F 72		105	155							
		Oct. 1, 1899 - to Oct. 1, 1900								
46		113,	93							
281		113,	95							
518		113,	98							
1138		113,	192	113.	210					
16'		114	14							
		Oct. 1, 1900 to Oct. 1, 1901.								
590		120,	221							
702		120,	222	121,	164					
	+38° 434 438 444	121,	60							
	+5° 613, 614	121,	124	121,	140	121,	152			✓
	−10° 958, 959	121,	125	121,	141	121,	160			✓
	+20° 156, 157	124,	128							
	+24° 375, 376	121,	129	121,	142	121,	153			✓
655		121,	161							
46		121,	165							
60		121,	166							
518		121,	177							
452		121,	185	121,	202					
	H. P. 308	124,	186							
3'		124,	195							
	2 Arietis	123,	53	122,	62					
	41 Arietis	123,	54							

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

1897phae..proj..4400

Phot. Measts. of Bright Double Stars.

Σ No.	Desig.	Bk.	p.	Bk.	p.	Bk.	p.	Bk.	p.	
Σ 45		122	195							
762	4.0 – 7.2	122	219							
762	4.0 – 7.5	122	220							
	+84° 289, 290	123	99	123	221	124,	8			✓
	−19° 3879–3880	123	212	123	222	124,	8			✓
	−15° 2049–2052	123	218	124	6	124,	58			✓
	−25° 3914, 3914	124	2	124	14					
	−25° 4821, 4824	124	3	124	15					
	a.Gc.19997, 19998	124	10	124	59	124	121			✓
	−20° 4536, 4537	124	11	124	63	124	123			✓
	+65° 935, 936	124	72	124	139	124,	164			✓
Σ 1625		124	82							
	+55° 1122	124	120	124	126	124	146			✓
	−19° 4307, 4308	124	122	124	127	124,	138			✓
Σ 28		124	146							
ν Serpentis		124,	152							
Σ 1724 (II)		124,	156	124,	166	124	179			✓
Σ 1724		124,	157							
	+20° 3458, 3459	124,	160	125,	116	126,	131	126	142	✓
	a.Gc.21584, 21587	124,	163	124,	173	125,	167			✓
~~43 Herculis~~	43 Herculis	124,	167							
Σ 1965		124,	191							
Σ 1864		124,	192							
	α Librae	124	200,	124	211					✓
		125,	4	125,	38	120,	78			
	43 Herculis	124,	212	125,	3	125,	2, 30	125,	33	✓
Σ 1823		125,	2	125,	113					
	α Herculis	125,	32							
Σ 1835		125,	42							

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

1897phae.proj..4400

Phot. Measts. of Bright Double Stars.

Σ No.	Desig.	Bk.	p.	Bk.	p.	Bk.	p.	Bk.	p.	
~~26 & 45~~		125	47							
1669		125	52	125	111					
	V Serpentis	125	54	125	185					
44′		125	60							
Σ 23~~28~~		125	61							
	24 Cygni	125	66	125	71	125	77			✓
24′		125	72	125	130					
57′		125	88	125	93					
1543		125	89	125	94					
46′		125	102							
Σ 2424		125	104							
52′		125	106	125	119	126	24			✓
2532		125	117							
33		125	124							
37′		125	125	125	134	125	156			✓
1678	12h 39m +15° 0	125	128							
50′		125	179	126	193	125	203			✓
~ ~ ~ ~	- - - -	125	186							
~ ~ ~ ~	~ ~ ~ ~	125	215							
41′		125	217							
2838		126	25							
	Σ Sagittae	126	26							
	-21° 16980, 16981 +22°	126	125	126	140	126	148			✓

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

1897phae..proj..4400

Phot. Measts. of Bright Double Stars.

Oct. 1, 1901 — Oct 1, 1902.

Σ No.	Desig	Obs.		Obs.		Obs.		Obs.	
2308		127, 54							
	ε Sagittae	127, 5556							
60		127, 125							
471		127, 127							
121		127, 133							
470		127, 136		129, 108					
~~411~~	41 Arietis	127, 138		127, 145					
281		127, 140		127, 146					
	ω Eridani	127, 147		127, 182		128, 146			✓
53′		127, 167							
2726		127, 168		127, 179					
2943		127, 169		127, 181		127, 188			✓
	ε Sagittae	127, 180							
12 II		127, 189		128, 121		129, 152			✓
2777		128, 6		128, 49					
50 I		128, 28							
2982		128, 55		128, 174					
10′		128, 83							
~~84~~		128, 84		129, 74					
79		128, 98		129, 92					
422		129, 8		129, 56		129, 56			
	ε Pegasi	129, 66		133, 99					
59′		129, 68		129, 151					
	α Cassi.	129, 71							
145		129, 72		129, 80					
131		129, 83							
452	30 Tauri.	129, 84		129, 189		104, 43			
2998		129, 86							
Σ 36	~~51~~ Ceti	129, 87							

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

1897phae.proj..4400

Phot. measts. of Bright Double Stars.

Σ No.	Desig.	Obs.	p.	Obs.	p.	Obs.	p.	Obs.	p.	
Σ 93	ζ Ursæ Min.	129, 107		129, 110						
	π Androm	129, 114		129, 154		130, 17				✓
	f Eridani	129, 110								
982		129, 135		130, 96		130, 174		130, 198		✓
61	61 Piscium	129, 196								
	κ Puppis	129, 198		130, 44		130, 54				✓
	f Leporis ?	130, 35		130, 45		130, 53				✓
1138		130, 66								
919		130, 93								
Δ55 III		130, 95								
3		130, 103								
Η71	ε Persei	130, 104								
716	118 Tauri	130, 139								
762	40" double	130, 141		130, 209		~~130,~~				✓
762	18" "	130, 210		131, 1		131, 63				✓
762	70-100	131, 19		131, 34		131, 59				✓
65 II I		131, 45								
24		131, 64		131, 82 ?						
25 I		131, 65								
3124 ?		131, 66		131, 90		131, 96		131, 142		✓
2032		131, 67	&	131, 93						
	δ Cervi	131, 69		131, 92		131, 143				
30		131, 95								✓
1669 I		131, 98								
29		~~131, 99~~		~~131, 174~~		131, 177		131, 198		132, 4 | 132, 13 | ✓
	α Librae	131, 100								✓
1821		131, 103								✓
1972		131, 114								

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

1897phae..proj...4400

Phot. Measts. of Bright Double Stars.

Σ No.	Desig.	22h.	p.	23h.	p.	24h.	p.	25h.	p.
1226		131, 116							
23 F		131, 117							✓
28 I		131, 161							
2308		131, 204							
1919		132, 23							✓
33		132, 43		132, 152					✓
1962		132, 57							✓
1904		132, 70							✓
	ν Scorpii	132, 80		132, 195					✓
2202		132, 112							✓
53 I		132, 141							✓
2394		132, 183							✓
57 I		132, 187							✓
63 I		132, 200							✓
2325		133, 20							✓
60 I		133, 77							✓
2960		133, 98							

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

1897phae.proj..4400

Phot. Measts. of Bright Double Stars.

Oct. 1, 1902 to Oct 1, 1903.

Σ No.	Desig	hk.	p.	hk	p	hk	p	hk.	p.	
Σ 60		134	99							L.
Σ 10		135	153							L.
Σ 668		135	209	136	77					L.
Σ 6	II	136	45							L.
Σ 1540		136	60							L.
Σ 1495		136	110							L.
Σ 25	I	136	108							L.
Σ 4	I	136	114							L.
Σ 1065	20 Lyncis	136	201							L.
~~Σ 1162~~	~~19 Lyncis~~	~~137~~	~~60~~							

Oct 1. 1903 to Oct 1. 1904.

	Arietis	142	140				L.
5	17.7	-24 52	143	6	143	21	L.
9	26.5	-31 24	144	181	144	190	L.
8	50.6	-7.36	144	182	144	199	L.
10	24.9 25	-30.6	144	182	144	209	L.
11	27.3	-28 43	144	184	144	207	L.
13	8.1	-18 13	144	185	144	217	L.
13	46	-32.5	144	186	145	8	145	30	L.
14	~~51.5~~	~~-20 9~~ -20 56	144	187	144	218			L.
)	30.1	-23 15	144	188	144	197			L.
9	5.7	-29 57	144	189					L.
15	27	-24.2	145	46	145	54			L.
16	3	-32.4	146	67	146	30			L.
16	13	-30.7	146	69	146	101			L.
16	18	-29.5	146	71	146	94			L.
16	9	-25.2	146	79					L.
16	14	-33.8	146	102	146	135			L.

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

1897phae..proj..4400

Phot. Measts. of Bright Double Stars.

Σ No.	Desig	Bk.	p.	Bk.	p.	Bk.	p.	Bk.	p.	
	17 53 -30.2	146, 103		146, 115						L.
	20 24 -10.9	146, 128		146, 134						L.
	20 59 - 6.2	~~146, 136~~		147 81		147-87				L.
	22 21 -17.2	146, 137		147-18						L.
	21 6 +22.1	147-77		146-136						L.
	21 57 -17.4	147-83		147-90						L
	23 49 - 27 36	147-84		147-91						L
Σ 3050	23 54 +33.2	147-88								L

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

1897phae.proj.,4400

Phot. Measts. of Bright Double Stars.

Σ No.	Desig.	24h.	p.	24h.	p.	24h	p.	24h.	p.

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

1897phae..proj...4400

Phot. Measts. of Bright Double Stars.

Σ No.	Desig.	mk.	p	mk.	p	mk.	p	mk.	p

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

1897phae.proj.,4400

Phot. Measts. of Bright Double Stars.

Σ No.	Desig.	Bk.	P.	Bk.	P.	Bk.	P.	Bk.	P.

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

1897phae.proj..4400

Phot. Measts. of Bright Double Stars.

Σ No.	Desig.	Bk.	P.	Bk.	P.	Bk.	P.	Bk.	D

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

1897phae.proj.,4400

Phot. Measts. of Bright Double Stars.

Σ No.	Desig.	☌	p.	☌	p.	☌	p.	☌	p.

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

1897phmc..10j..44900

Phot. Measts. of Bright Double Stars.

E. No.	Desig.	Bk.	P.	Bk.	P.	Bk.	P.	Bk.	P.

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

1897phae.proj.4400

Phot. measts. of Bright Double Stars.

Σ No.	Design.	2k.	2.	2k.	2.	2k.	2.	2k.	2.

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

1897phmc..0103..4400

Phot. Measts. of Bright Double Stars.

Σ No.	Desig.	Bk.	p.	Bk.	p.	Bk.	p.	Bk.	p.

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

1897phae.proj..4400

Phot. Measts. of Bright Double Stars.

Σ No.	Desig.	Wk.	p.	Wk.	p.	Wk.	p.	Wk.	p.

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

1897phae.proj..4469

Phot. Measts. of Bright Double Stars.

Σ No.	Desig.	Bk.	P.	Bk	P.	Bk.	P.	Bk	P.

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

1897phae.proj.44000

Miscellaneous Objects.

Examination of Nebula in Orion for new star	Bk. 93, p. 12.
Experiments with Phot. H.	Bk. 93, p. 24.
Explanation to students of meteor observations.	Bk. 93, p. 210.
Change in Phot. K.	Bk. 93, p. 211.
Description of observation with new modification of Phot. K.	Bk. 93. p. 213
Observation of Meteors (Nov. 13, 1897)	Bk. 93, p. 217.
Phot. H. on $\underline{o}$ Ceti.	Bk. 94, p. 15
Examination of region near Pole.	Bk. 94, p. 39
Experiments with prisms of Phot. R.	Bk. 94, p. 155
" " " " " "	Bk. 94. p. 159.
" " " " " "	Bk. 94. p. 161.
Looked for transit of object across sun.	Bk. 95, p. 213.
Bright Meteor.	Bk. 95, p. 217.
Measurement of Parkhurst's Stars.	Bk. 96, p. 30.
Fine Aurora.	Bk. 96, p. 203.
Change in Phot. T.	Bk. 97, p. 108.
Explanation of and practice with photometer.	Bk. 99, p. 201-4.
" " " " " "	Bk. 99, p. 205
Exam. of Gt. Cluster in Hercules.	Bk. 100, p. 192.

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

1897phae..proj...4400

Miscellaneous Objects.

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

1897phae.proj.44400

Miscellaneous Objects.

Oct. 11, 1898 to Oct. 1, 1899.

	Looked for Dr. Chase Comet.	Bk. 102 P. 37.
(HF setts)	Meas. of a star 3' north of Parkhurst's Var. 0.12s preceding.	Bk. 102 P. HH.
	Identification of 2 stars in connection with lunar eclipse	Bk 103. P. 46
(32 setts)	Meas of star near Nova Sagittarii. (7.5 0 9.0)	Bk 104 P. 194
	Identification of stars near N. Coronae.	Bk 106 P. 132
	Auroral arch.	106 P. 141.
	Showed seniors moon, Jupiter with explanations	" 106 P. 212.
	Explained instruments to Mr. Edmunds class of ladies.	" 107 P. F2
(32 setts)	Meas. of star I with comp. stars for Mc Cerachio Var.	" 107 P. 124-125
(F0 setts)	Meas. of Sup. I & Sup. II for var. in relative light.	" 109 P. 24-25
(F0 setts)	" " " " " " " " " " " "	" 109 P. 35-39
(F0 setts)	" " " " " " " " " " " "	" 109 P. 49-53
	~~Exam of comp stars for T Cephei~~	~~110. P. 9-12~~
	~~" " " " T. Cephei.~~	~~110 P. 23-24~~

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

1897phae..proj..4400

Miscellaneous Objects.

Oct. 1, 1899 - Oct. 1, 1900

(32 sets)	Photometric meas. of Charlois asteroid	Book 112, P. 50-51
(32 sets)	" " " " "	" 112 P. 59-60
	Looked at Charlois's Asteroid	" 112 P. 63-65
	" " "	" 112 P. 72-74
(24 sets)	Experiments with phot. T. on X Tauri	" 112 P. 75
	Looked at Charlois's Asteroid	" 112 97-99
	" " "	" 112 109
	" " "	" 112 120-126
(7 sets)	Experiments with phot T. on T. Monocerotis	" 112 137-138
(14 sets)	" " " T " T. Monocerotis	" 112 147
(8 sets)	" " " T " T	" without cap. 113 219
(32 sets)	Meas of Star g near R Hya Mic (suspected of Variability)	" 114 25-26
(32 ")	" " " g " " " " " " "	" 114 55-56
(36 ")	" " " g " " " " " " "	" 114 63-64
	Selection of standards in Region near S Orionis & U Puppis.	114 66-67
	Selection of a comp star for X Herculis.	114 76
	Experiments with phot X	114 121
	Selection of Standards near U Puppis (Phot X)	Bk 114 p. 169
	Selection of Standards near T. Hydrae	114 176
	" " " T. Virginis	114 177
	" " " W Leonis	114 182
	" " " V Cancri	114 182
	" " " R Geminorum	114 196
~~(36 sets)~~	~~Phot meas of Nova Aurigae 2 of its comp stars with phot X~~	~~114 198-5~~
	Selection of Standards near T. Hydrae	115 1
	" " " R Geminorum	115 44
	" " " W Leonis	115 53
	" " " V Cancri	115 59

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

1897phae.proj.4400

Miscellaneous Objects.

Selection of standards near T Virginis B 115 - P. 68
" " " " S Virginis 115 — 69
Selection of comp. Stars for Standards near R Geminorum 115 - 75
" " " " " " " T Cancri 115 - 75
" " " " " " " W Leonis 115 - 75
" " " " " " " U Virginis 115 - 76
" " standards near U Virginis 115 - 86
" " " " " R Serpentis 115 - 87
" " comp. Stars for Stand. " R Serpentis 115 - 100
" " standards near U Virginis 116 - 105
" " " " R Serpentis 116 - 78
" " " " S Herculis 116 - 7
" " " " R R Librae 116 - 8
Confirmation " " R R Librae 116 - 46
Looked for Eros on May 11, see Page 59 Rec. Book 116.
Confirmation (final) of standards near R R Librae B. 116 P 115
Selection of Standard stars near R Aquilae B. 116 - 191
June 13, 1900. Dr J. Fisher & Son visited the Ob. showed them Jupiter, ε Lyrae, ζ Lyrae & β Cygni. B. 117 P. 37
June 16, 00. Showed Jupr. & Saturn to about 200 ± students of Harvard College.
32 cases. June 23, 00. Meas. of a star near Capella R. 117. P. 110-111
June 25, 00 Identification of a faint star near S Cassiop B. 117-127
" " " Selection of Standards 14th magn. R Serpentis B 117-127
" " " " " S Herculis B 117-127
32 cases) June 30, 00. Meas of a star near Capella - R. 117. 172-173
July 1, 1900 Sel. of Standard 16th magn. R Aquilae R 117 P 179
July 2, 1900 Revision of 14th Standards for R Serpentis. R 117. P 190
July 5, 1900. Looked up region near ζ Ophiuchi R. 117. P 194
July 9, 1900 " " " " " " " R 118. P. 1

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

1897phae..proj...4400

Miscellaneous Objects.

Examination of supposed Nova and determination of its Position. 40 transits. B. 118. P. 4 to end.

Identification of Iapetus. B 118 P. 145-

Exam. of new object seen July 29 by Prof E.C. Pickering in twelve inch horizontal telescope (July 30, 1900) B. 118. P. 146-147.

32 sets July 30, 1900. Meas. of star near Iapetus B 118. P. 157-162

32 " Aug. 4, 1900 Meas of Comet b 1900 B. 118. P. 171-172

32 " Aug. 9, 1900 " " " " " B 118 P. 178-179

Experiments with Phot X by Profs. W. & Swasey B 118 P. 181-182

Selection of 14th Standards for S Herculis B. 119. P. 54

" " " of 14th mag Stand. for X Cygni B 119. P. 55-

Revision of 12th magn Stand for R Aquilae B 119. P. 38

Selection of 12th & 14th mag. Stand. for Z Sag. B. 119. P. 67

" " " " " " " V. Capricorni B 119 P. 68.

Ests. of 14th Magn Standards for Z Sag. B 119. P. 77.

" " " " " " S Herculis. B 119. P. 77

Rev. & ests of 14th Mag. Stand. for V. Capricorni. B 119 P. 78.

Select. of 12th & 14th magns. & Ests of latter for R Vulp. B 119. P. 79-80

" " " " " for R Pegasi. B 119. P. 90

" " " " " S Aquarii B 119 P. 91.

Revision & ests of 14th Magn. Stand. for S Aquarii B. 119. P. 96-97.

Selection of Stand. near R Camelop. B. 119. P. 100.

" " " (12th) R Camelop. B 119. P. 101.

Prov. Select. of 12th magn. Stand near W Herculis. B. 119. P. 101.

" " " " " " " R Leonis. B 119 P. 102.

" " " " " " " S Ceti. B 119. P. 102

" " " " " " " R Lacertae B 119 P. 103.

Exam of 12th Magn Stand near R Camelop. B 119. P. 104

" " " " " " R Lacertae B 119. P. 105

" " " " " " S Ceti. B 119 P. 111.

" " " " " " R Lacertae B 119 P. 123

" " " " " " W Herculis B 119 P. 123

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

1897phae.proj..4400

Miscellaneous Objects.

October 1, 1900 to October 1, 1901.

Finial	Exam. of 12th magn. Stand. near W Herculis	B 119	P. 128
Prov.	Selection " " " " "	S Piscium	B 119	P. 129
"	" " " " " "	R Persei	B 119	P. 139
	Selection " " " " " "	R Persei	B 119	P. 197
	" " " " " "	S Piscium	B 119	P. 197
	Finial exam of 12th magn near S Piscium	B 119	P. 206
	Prov. Selection of 12th mag near U Arietis	B 119	P. 206
	Finial exam. of 12th magn. near S Piscium	B 119	P. 211
	Prov. selection " 16th " " " "	B 119	P. 211
	" " " 12th " " S Cassiop.	B 119	P. 211
	" " " " " " U Arietis	B 119	P. 212
	" " " " " " V Tauri	B 119	P. 212
	Revision " " " " S Cassiop.	B 120	P. 1
	Prov. selection " " " " R Ceti	B 120	P. 62
	" " " " " U Cassiopeiae	B 120	P. 64
	" " " " " R Ceti	B 120	P. 119
	" " " " " U Cassiopeiae	B 120	P. 127
	Reexam " " " " R Ceti	B 120	P. 134
	Reexam " " " " U Arietis	B 120	P. 134
	" " " " V Tauri	B 120	P. 135
	" " " " V Tauri	B 120	P. 144
	Selection " " " " V Aurigae	B 120	P. 144
	" " " " S Orionis	B 120	P. 165
	Finial " " " " V Tauri	B 120	P. 154
	" " " " V Aurigae	B 120	P. 154
	Prov. " " " " S Orionis	B 120	P. 165
	Finial " " " " S Orionis	B 120	P. 166
	Prov. " " " " R Draconis	B 120	P. 180
	Finial " " " " R Draconis	B 120	P. 196
	Prov. " " " " T. Urs. Maj.	B 120	P. 199

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

1897phae.proj..4400

Miscellaneous Objects.

Prov. Selection of Stand (12th magn) near S Bootis B121 P. 15
Exam. of 12th magn Stand. near T. Ursa Maj. B121 P. 15
Selection of a comp * for H. P. 104
Prov. Sel. of 12th mag. near S Bootis. B121. P33
" " " " " " R Leo. Min. B121 P. 51
Exam of Comp *'s for T. Cassiop. (n, s o) B121 P59.
Prov. Selection of 12th magns near U Ruffis B121 P59
Final " " " " " R Draconis B121 P. 68
Recovery " " 14th " " S Piscium B121 P68
Final Exam " " " S Piscium B121 P. 82
Selection of the 12th " " R Leonis Min B121 P. 94
" " " 12th " " T. Ursae Maj. B121 P. 95.
" " " 12th " " U Ruffis. B121 P. 96.
Final Select. of the 12th " " T. Ursae Maj. B121 102
" " " " " " R Leonis Min. B121 103
" " " " " " U Ruffis. B121 104
" " " " " " S Bootis B121 114
" " " " " " U Ruffis. B121 114
Exam. of Star No 22 near T. Ursae Maj. B121 P. 113
" " " " " T. " " B121 P. 113
Looked at S S Cygni but found it probably faint. B121 P207
Diagram of S S Cygni region for Seagraves sup. van B121 P214
Prov. Selection of 14th magns for R Ceti B121 P. 218
" " " " " " U Arietis B121 P. 218
" " " " " " U Cassiop B122 P 9
Final " " " " " S Ceti B122 P15
" " " " " " R Pegasi B122 P15
Prel. " " " " " R Lacertae B122 P16
Final " " " " " U Cassiop. B122 P16
" " " " " " R Lacertae B122 P. 20

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

1897phae.proj..4400

Miscellaneous Objects.

Final Exam. of 14th Magn. Standards near R Ceti B 122 P. 35.
" " " " " " " U Cassiop " "
" " " " " " " U Arietis " "
Final " " " " " " " U Arietis " P 41
Prel. Selection " " " " " " R Persei " 122 96
Exam. of Faint Comp. Stars for near R Piscium (transits) B 122 P. 160
Prel Selection of 14th Magn. Stand. for S Orionis B 122 174
" " " " " " " V Tauri B 122 174
Prov. Selection of comp *'s for Nova Persei. B 123 P. 61.
Examination of Comp. Stars near U Orionis B 123 P. 86
~~Rosetta Meas~~ " " " " U Orionis B 123 P. 120
Rosetta Meas of Comp Stars for V Tauri for checking not found B. 123 P. 171
Search for Comet (not found) B 123 201
" " " " " B 123 214–216
Ident of Error 124, 168
June 12, 1901 Showed H. C. Students several Objects 125, 14
" 13, 1901 " " " " " " 125, 19
" 14, 1901 " " " " " " 125, 19
Prel. Selection of 12th Magn. Standards for R Scorpii 120, X19
~~Exam~~ Search for Error but not found 125, 35
Exam of region of X Cygni for 14th Magns 125, 36
Final Selection of 12th Magns. for R Scorpii 125, 36
Re Exam of region of R Vulpec. to recalant V 125, 58
" " " " R Hydrae for Comp *s 125, 67
" " " " ~~R~~ V Virginis " " *s 125, 68
" " " " R Delph. " " 125, 90
" " " " S Herculis " " " 91
" " " " R Coronae " " " "
" " " " R Delphini " " " 90
Sel. of a comp * for B.D. 12° 5202 " 105

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

1897phae.proj..4400

Miscellaneous Objects.

Location of comp ★'s for	R Virginis	B 125,	136
" " " "	U "	B 125,	136.
Selection " " " "	S Librae	"	140
Selection of comp. stars for	U Herculis	"	184
Loc. of comp ★s for	X Virginis	"	187
" " " "	R Scorpii	"	187
Exam of " " "	R Can Ven.	"	194
Selection of fainter ★s for	R Ophiuchi	126	91
Loc. of comp ★s for	W Herculis	"	72
" " " " "	R Aquarii	"	72
" " " " "	S Aquarii	"	93
" " " " "	R Vulpeculae	"	109
" " " " "	U Cygni.	"	110
" " " " "	" "	"	114
" " " " "	S Aquarii.	"	115
" " " " "	RS Cygni.	"	121
" " " " "	R Cygni	"	136
" " " " "	R Cygni.	"	145
" " " " "	S Aquarii	"	145
Loc. of extra ★s for	U Herculis	"	166
" " " "	W. "	"	166
" " " "	R Cygni.	"	167

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

1897phae.proj..4400

Miscellaneous Objects.
Oct. 1, 1901 – Oct. 1, 1902

Selection of a comp. star for M. 15. B127. P.81.

80 setts. Meas. of standards in M 15. B127. P.88-92

80 " " " " " " " " B92-107

Experiments with electric lights of Plot X B128. P.109.

32 " Experimental obs of 93. 1901 Sagittae " P. 113, 114

Observations of Parhelia of 46 Aquilae on Jan. 23, 1902. B. 129. P. 179

80 " Experimental meas. of U Cephei B129. PP. 208-212

April 15, 1902 Looked for Brooks Supp. Comet. but not found.

Pred. Sel. 14th Magns. for V Aurigae B131 P.118

" " " " " R Gem. " P. 120

Selection " " " V Aurigae " P126

Exam " " " R Gem " P129

Note concerning Electric signals from clock. see page 99 Book 132

Selection 14th Magns. For W Leonis B137 p.114

" " " " R Leo Min B137 p 116

" " " " " " p. 182

" " " " R Scorpii " p 213

" " " " S Virginis B133 p 5.

Final Exam " " " R Scorpii " p 6

Selection " " " R Serpentis " p. 7

Final Exam 14th Magns. S Virginis B133, p 21

Selection " " U " " "

" " " R R Librae " 23

" " " T Ursae Maj. " 24

32 setts Experimental Obs. B Lyrae with Plot T. B133 P. 14, 19

32 " " " " " " T. " P. 26, 27

Revision of 14th Magns. for R.R. Librae B133, P. 31

32 Experimental obs. of B Lyrae with Plot T. P. 36-37

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

1897phae.proj..4400

Miscellaneous Objects.

	Re-exam of R R Librae 14th magns.		B. 133, p. 43
	Prel. selec. 14th magns. T Urs. Maj.		B 133 p. 93
	Re-exam of T. Urs Maj. 14th		B 133. P. 105
	Prel. Select. 14th magns.	S Bootis	B 133. P. 117
	" " " "	W Herculis	B 133. P. 130
	" " " "	R Draconis	B 133 P. 131
	Final Select " "	W Herculis	B 133 P 144
	" " " "	R Draconis	B 133 P 145
	Prel. " " "	S Cassiop.	B 133 P 146
	Final " " "	S Bootis	B 133 P. 157
	Prel " " "	S Cassiop.	B 133, P. 158
	" " " "	R Persei	B 133 P. 165
	" " " "	R Camelop	B 133 P. 166
	Final " " "	S Bootis	B 133, P. 214
	Examination " "	R Persei	B 133, P. 216.
9 settings.	Measurements of Comet b. 1902 Perrine:		B. 133, P. 221.
9 "	" " " " "		B 134, P. 7
	Exam. of 14th magns. for	R Persei / R Camelop	B 134. P. 8
	~~Revision~~	~~R Camelop~~	~~B 134 P 21~~
	~~Location of f t stars for Nova Sagittarii~~		~~B 134 P. 36~~
	~~Exam of 14th f~~		

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

1897phae.proj.4400

Miscellaneous Objects.

Oct. 1, 1902 to Oct 1, 1903.

Oct. 2, 1902. Exam. of Comet b 1902. B. 134 p. 11.
Oct 6, 1902 Revision of 14th s. for R Camelop. B 134 P. 21
Oct 7, 1902 Exam " " " " " P. 38
" Location of ff stars for Nova Sagittarii B 134 P. 36
12 8 setts. Oct. 14, 02. Meas. of star while comet passes over it. B 134 P. 81
Oct. 16 02 Attempted of occultations during total eclipse of the moon. B. 134. P. 105
Reselection of 12th mags R Vulpec. B. 134 P. 118
Final Exam of 14th mags R Persei B 134, P. 128
" " " " " R Camelop B 134 P. 134
32 setts Settings on comp ts for R aquarii for identification B 134, P. 140
Selection (Prel) of 14th s. for V Tauri. B 134, P. 143
" " " " " S Orionis B 134 P. 144
Final Exam of 14 thos for R Persei B. 134, P. 149
Prel Select. of " " S Orionis B. 134. P. 150
Prel " " " " S Orionis B 134. P 158
Exam " " " S Orionis B 134 P. 175
Looked at Comet b, 1902 B 134, P. 176
192 & setts Meas. of stars in Pleiades. Nov. 20, 1902 B. 135 P. 35–46
160 setts " " " " " Nov. 28, 1902 " P. 54–63
64 " " " " " " Nov. 29, 1902 " P. 68–71
96 " " " " " " Dec. 1, 1902 " P. 74–78
160 " " " " " " Dec. 5, 1902 " P. 83–94
160 " " " " " " Dec. 6, 1902 " P. 95–104
64 " " " " " " Dec. 8, 1902 " P. 107–108
Final Exam. 14th mags. for S Orionis B. 135 P. 125
Prel. Select " " " V Cancri B 135 P 132
" " 2 " " " R Leo. Min " P. 134
Examination " " " V Cancri " P. 145
" " " " R Leo. Min " P 146

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

1897phae.proj...4400

Miscellaneous Objects.

Selection of 14th Magns for V Cancri. B 135. P. 160
Prel. Selection 14th Magns. for V Tauri B 135. P. 166
Re-Selection " " " R Leo Min. B 135 P 167
Examination " " " V Cancri B 135 P 168
" " " " V Cancri B 135 P 171
" " " " R Leo Min. B 135 P. 175
" " " " V Tauri B 135 P 176
" " " " V Cancri B 135 P 176b
Examination of Region of star l N Bootis B 136 P. 3
Prel. Select. 14th Magns. for T Hydrae B 136 P. 4
" " " " " U Ruffus B 136 P. 5
Exam of star l for N Bootis B 136 P 11
Re-selection of 14th Magns for T Hydrae B. 136, P. 23
" " " " " " U Ruffus B. 136, P. 24
Exam " " " " U Ruffus B 136 P. 28
" " " " " T Hydrae B 136 P. 29
Final Selection " " " " U Ruffus B 136 P. 33
" " " " " " T Hydrae B 136. P. 34
(96) Plot T. Meas. of Polar Standards. B 136 P. 36-41
U Leonis looked for but not seen. B 136. P. 104
96 Plot T. Meas. Polar Stands. B 136 P. 117-122
U Leonis not found. B 136 P. 124
Prov. Select. 14th Magns for T Virginis B 136 P. 126
(30) Experimental Meas. Plot X Stands Pleiades B 136 P. 129
(48) Meas. Plot X Stands Pleiades B 136 P. 136-139
Selection final of T Virginis 14th Mag B 136 P. 140-141
(60) Meas Plot X Stands Pleiades B 136. P. 150-153
(56) " " " " B 136 P. 204-206
(52) " " " " B 137 P. 3-5
(32) " " " " B 137 P. 10-11

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

1897phae.proj.4400

Miscellaneous Objects

April 1, 1903	Location of stars in cluster of Hercules.	B. 137. P. 57-59
Prov.	Selection comp. stars for Nova Persei	B. 137 P. 126
	Exam. of 14 mag. stars for S. Bootis	B 138 P. 88
64	Meas. Phot. T. Stars in M 15.	B 138. P. 207-210
24	Exp. with Phot R. on Doubles. C. Obs.	B. 139 P. A-9
48	" " " " " " "	B. 139 P. 14-16
80	" " " " " " "	B 139 P. 17. P. 20-23
112	" " " " " " "	B 139. P. 24-32
64	" " " " " " "	B 139 P. 39-43
11	" " " X. C Observer.	B 139. P. 46
32	" " " R on ζ Ursæ Maj. "	B 139 P. 47-49
32	" " " R " α Herculis "	B 139 P. 53-54
32	" " " R " ζ Ursæ Maj. "	B 139 P. 55-56
32	" " " R " α Herculis "	B 139 P. 75-76
32	" " " R. ζ Ursæ Maj. "	B 139 P. 77-78
8	" " " X on faint stars "	B 139 P. 74.
12	" " " X on Region of R Sag. C. Obs.	B 139. P. 83
24	" " " X " " " " "	B 139 P. 88-89
	August 21. Notice of Aurora C. Obs.	B 139 P. 100
32	Meas. of ζ Ursæ Maj. Phot R. by L. Campbell	B 139 P. 111-112
32	Meas. of ζ 1821 Phot R by L Campbell	B 139 P. 119-120
16	Meas of α Cassiop. " " "	B 139 P. 122
16	" " 43 Her. " " "	B 139 P. 124
32	" " ζ Ursæ Maj. " " "	B 139 P. 126-127
48	Exp. with Nats IV & I Phot R. C. Obs.	B 139 P. 128-129-130

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

1897phae..proj...4400

Miscellaneous Objects.

Oct. 1, 1903 to Oct 1, 1904.

16	Eff. on β Persei. using shade glass.		B. 140. P. 161
	Remarks on Aurora	Oct. 31, 1903	B 141 P. 17
	Dec. 11, Looked for Tercidinia		B 141
	Dec. 14 Looked for & found Tercidinia		B 142 P 10
	" 15 " " " "		B 142 P 18
	" 16 " " " "		B. 142 P. 21
	" 22 Confirmation of Iris		B 142 P
	Feb. 8 Ident. of Iris.		B 143 P. 51
	" 9 " " "		" P. 59
	" 10 " " "		" P 68
	" 11 " " "		" P 78
	" 16 " " "		" P. 96
	" 17 " " "		" P. 99
32	Mar 6. Meas. of supposed Hyden.		" P. 154-155
32	Mar. 12. Meas. of +18.2346 with +18.2349		B. 143 P. 185-186
48	Apr. 2. " " & anigae with +43.1177		B 144. P 49-51
	April 4. Search for Hertha		B 144 P. 54
96	April 4. Meas. of a supposed Iris.		B 144 P 59-64
	Apr. 11. Search for Iris.		B 144.
	May 7. Search for Iris (found)		B 145.
	June 17 Confirmation of Aquitania for Campbell's Obs.		B 145 P. 164-165
	Aug 23. Exam of Plato (moon) by E.C.P.	Asst R.T.	B 146 P. 197
144	Aug 24. Meas. of Jup's Satellites C Obs.		B 146 P. 199-207
96	Aug 26 " " " " " "		B 146 P. 248 & B 147-4
28	Aug 27 Meas. of Comp. Stars for Eres. C Obs.	Experimental Plate IX	B 147. P 6-7
40	Aug 27 Meas. of Jup's Satellites C Obs.	Plate R.T.	B 147 P. 10-14
96	" 29 " " " " " "		B 147 P. 16-21
44	" 30 Meas. Comp. Stars for Eres. C Obs.		B 147 P. 22-27
48	" 31 " " " " " "		B 147 P. 28-30

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

1897phae.proj..4400

Miscellaneous Objects.

Sep 31 (64) Meas. Dists. Jupiter - Phot R & T. Obs B 147 P. 33 - 36
(32) Effer. with Reed Phot. Vol Obs. B. 147 P 59 - 61
(64) " " " " " B 147 P 62 - 66
Effer with Reed Photometer. B 147 P. 79.
64 " " " " & Phot T. B 147 P 121 - 125

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

1897phae.proj..4400

Miscellaneous Objects.

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

1897phae.proj..4400

(Con. from p. 27.)

Eclipses of Jupiter's Satellites.

Date.					E.S.T. Time			Sat.	Phe.	Remarks
1906										
J Feb.	24	7	23	6	7	31	18	I	Re.	W. obs. Bowie rec.
"	25	8	31	45	8	39	57	II	Dis.	Cloudy.
"	25	11	5	15	11	13	27	II	Re.	"
Mar.	3	9	18	51	9	27	3	I	Re.	"
"	10	11	14	32	11	22	44	I	Re.	Leaving alog bad, too low. Abandoned.
"	19	7	39	1	7	47	13	I	Re.	Cloudy.
"	22	8	14	0	8	22	12	II	Re.	Omitted for R. W. Trouble.
"	26	9	34	32	9	42	44	I	Re.	Cloudy.
J April	6	8	19	9	8	27	21	III	Dis.	W. obs. Bowie rec. Rather cloudy also.
"	11	7	54	12	8	2	24	I	Re.	Omitted for Eucbo's Ver.
"	23	8	1	3	8	9	15	II	Re.	Cloudy.
J May	4	8	8	14	8	16	26	I	Re.	W. obs. Bowie rec.
July	15	16	14	51	16	23	3	III	Dis.	Cloudy.
"	24	15	27	41	15	35	53	II	Dis.	"
"	24	15	52	56	16	1	8	I	Dis.	"
Aug.	9	14	8	36	14	16	48	I	Dis.	Vacation.
"	16	16	2	7	16	10	19	I	Dis.	"
"	20	14	37	14	14	45	26	III	Re.	"
"	25	15	14	3	15	22	15	II	Dis.	"
"	27	16	7	21	16	15	33	III	Dis.	"
Sept.	1	14	17	24	14	25	36	I	Dis.	"
"	8	16	10	48	16	19	0	I	Dis.	Sunday, Cloudy also.
"	17	12	32	29	12	40	41	I	Dis.	Too low & cloudy.
"	19	12	20	50	12	29	2	II	Dis.	Cloudy.
J "	24	14	25	50	14	34	2	I	Dis.	W. obs. Bowie rec.
"	26	14	56	53	15	5	5	II	Dis.	Cloudy.
Oct.	1	16	19	12	16	27	24	I	Dis.	"
J "	2	11	59	14	12	7	26	III	Dis.	W. obs. Bowie rec.

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

Date 1906		W. M. T.			East Time			Sat.	Phe.	Remarks.
Oct.	2	14	35	41	14	43	~~53~~ 57	III	Re.	Cloudy.
"	3	17	32	48	17	41	~~0~~ 4	II	Dis.	" and daylight.
"	9	15	58	3	16	6	~~15~~ 19	III	Dis.	Cloudy.
"	10	12	40	57	12	49	~~9~~ 13	I	Dis.	Clouds in region. Omitted.
"	17	14	34	23	14	42	~~35~~ 39	I	Dis.	Cloudy.
"	21	12	2	16	12	10	~~28~~ 32	II	Dis.	Cloudy.
"	24	16	27	52	16	36	~~4~~ 8	I	Dis.	
"	26	10	56	12	11	4	~~24~~ 28	I	Dis.	W. obs. Bowie rec.
"	28	14	37	40	14	45	~~52~~ 56	II	Dis.	Cloudy.
Nov.	2	12	49	46	~~12~~	~~57~~	~~58~~ 2	I	Dis.	"
"	4	17	12	57	17	21	~~9~~ 13	II	Dis.	Sunday night. Omitted,
"	7	10	34	3	10	42	~~15~~ 19	III	Re.	W. obs. Bowie rec.
"	9	14	43	25	14	51	~~37~~ 41	I	Dis.	Cloudy.
"	11	9	11	54	9	20	~~6~~ 10	I	Dis.	Cloudy.
"	14	11	50	8	11	58	~~20~~ 24	III	Dis.	W. obs. Bowie rec.
"	14	14	34	26	14	42	~~38~~ 42	III	Re.	Rather cloudy
"	15	9	5	30	9	13	~~42~~ 46	II	Dis.	Cloudy.
"	16	16	37	10	16	45	~~22~~ 26	I	Dis.	Omitted. W. sick.
"	18	11	5	40	11	13	~~52~~ 56	I	Dis.	Cloudy.
"	21	15	48	54	15	57	~~6~~ 10	III	Dis.	Cloudy.
"	22	11	40	34	11	48	~~46~~ 50	II	Dis.	Cloudy.
"	25	12	59	34	13	7	~~46~~ 50	I	Dis.	W. obs. W. rec. (Vis.)
"	27	7	28	1	7	36	~~13~~ 17	I	Dis.	Cloudy.
"	29	14	15	35	14	23	~~47~~ 51	II	Dis.	W. obs. W. rec. (Vis.)
Dec.	2	14	53	35	15	1	~~47~~ 51	I	Dis.	Cloudy.
"	4	9	22	4	9	30	~~16~~ 20	I	Dis.	W. obs. Bowie rec.
"	6	16	50	32	16	58	~~44~~ 48	II	Dis.	Cloudy. D. S. Saved after
"	9	16	47	44	~~16~~	~~55~~	~~56~~ 00	I	Dis.	Cloudy. not to be taken
"	11	11	16	16	11	34	~~28~~ 32	I	Dis.	Dome frozen. Ecl. could

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

1897phae.proj...4400

Date	W. M. J.	East. Time	Sat.	Phe.	Remarks.
1906 Dec. 17	8 42 56	8 51 ~~8~~ 12	II	Dis.	Cloudy.
" 18	13 10 36	13 18 ~~48~~ 52	I	Dis.	W. obs. Bowie rec.
" 20	7 39 15	7 47 ~~27~~ 31	I	Dis.	Raining.
" 20	7 44 33	7 52 ~~45~~ 49	III	Dis.	"
" 21	18 6 22	18 14 ~~34~~ 38	IV	Dis.	Cloudy.
" 24	11 17 48	11 26 ~~6~~ 1 4	II	Dis.	"
" 25	15 5 7	15 13 ~~19~~ 23	I	Dis.	" Snowing also at intervals.
" 27	11 43 45	~~11 51 57~~ 11 52 01	III	Dis.	Cloudy. Stormy.
" 31	16 37 8	16 45 ~~20~~ 24	II	Re.	" "
1907 Jan. 3	13 41 21	13 49 37	I	Re.	" "
" 4	✓ ✓4 37	6 2 ✓3	II	Re.	W. obs. W. rec.
" ✓	2 10 0	2 12 16.	I	Re.	W. obs. Bowie rec.
" 7	12 2 32	12 10 ✓4	IV	Dis.	Cloudy.
" "	13 41 ✓0	13 ✓0 6.	IV	Re.	"
" 10	1✓ 36 12	1✓ 44 34.	I	Re.	"
" 11	2 29 36	2 37 ✓2	II	Re.	W. obs. Bowie rec.
" 12	10 ✓ 0	10 13 16	I	Re.	Cloudy.
" 14	11 4 36	11 12 ✓2	II	Re.	"
" 19	12 0 9	12 2 2✓	I	Re.	"
" 21	6 29 1	6 37 17	I	Re.	W. obs. Bowie rec.
" 24	6 1 32	6 9 48	IV	Dis.	W. obs. Bowie rec.
" "	7 ✓9 17	2 7 33	IV	Re.	" " "
" 2✓	6 39 32	6 47 ✓4	III	Re.	Cloudy.
" "	13 39 39	13 47 ✓✓	II	Re.	"
" 26	13 ✓✓ 24	14 3 40	I	Re.	"
" 28	2 24 12	2 32 34	I	Re.	W. obs. Bowie rec.

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

1897phae.proj..4400

Date.	W. M. T.	East. Time.	Sat.	Phen.	Remarks.
Feb. 1.	7h 42m 53s	7 51 9	III	Dis.	Cloudy. (Stormy).
" "	10 40 26	10 48 42	III	Re.	" "
" "	16 14 43	16 22 59	II	Re.	" "
" 2	1h 50 47	1h 59 3	I	Re.	Practically set. Cloudy. also.
" 4	10 19 42	10 27 58	I	Re.	Cloudy.
" 8	11 42 44	11 51 0	III	Dis.	W. obs. Bowie rec.
" "	14 41 24	14 49 40	III	Re.	Cloudy.
" 11	12 1h 12	12 23 28	I	Re.	Omitted. Very cold. + Glowy. + W. sick.
" 12	8 7 23	8 1h 39	II	Re.	W. obs. Bowie rec.
" 13	6 44 3	6 52 19	I	Re.	Cloudy.
" 18	14 10 46	14 19 2	I	Re.	"
" 19	10 42 33	10 50 49	II	Re.	Cloudy.
" 20	8 39 38	8 47 54	I	Re.	"
" 26	13 17 47	13 26 1	II	Re.	"
" 27	10 35 16	10 43 32	I	Re.	W. obs. Bowie rec. could not be taken.
Mar. 6	12 30 57	12 39 13	I	Re.	Shutter stuck. Omitted.
" 8	6 59 56	7 8 12	I	Re.	Cleared suddenly.
" 9	6 47 30	6 55 46	III	Re.	W. obs. Bowie rec.
~~" 13~~	~~14 26 39~~		I	Re.	
" 15	8 55 38	9 3 54	I	Re.	W. obs. Bowie rec.
" "	12 7 3	12 15 19	IV	Dis.	Cloudy.
" 16	7 44 35	7 52 51	III	Dis.	W. obs. Bowie rec.
" "	7 55 57	7 54 13	II	Re.	Omitted.
" "	10 48 38	10 56 54	III	Re.	W. obs. Bowie rec.
" 22	10 51 19	10 59 35	I	Re.	Cloudy.
" 23	10 21 19	10 29 35	II	Re.	Cloudy.
" "	11 44 33	11 52 49	III	Dis.	"
" 29	12 47 0	12 55 16	I	Re.	"
" 31	7 15 51	7 24 7	I	Re.	"

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

1897phae..proj...4400

Miscellaneous Objects.

Date.	W. M. T.	Est. Time	Alt.	Phen.	Remarks.
1907 Apr. 1.	9h 2m 3s	9h 10m 1s	IV	Re.	Cloudy.
" 7.	9 11 29.	9 19 41.	I	Re.	Cloudy.
" 14.	11 7 s.	11 1s 17.	I	Re.	"
" 17.	7 2s 31.	7 33 43.	II	Re.	W. obs. Bowie rec.
" 23.	7 31 31.	7 39 43.	I	Re.	Cloudy.
" 24.	10 1 7.	10 9 19.	II	Re.	W. obs. Bowie rec.
" 28.	7 46 6.	7 s4 1a.	III	Dis.	Cloudy.
" "	10 s6 1	11 4 13.	III	Re.	"
" 30	9 26 s2	9 3s 10.	I	Re.	"
May 16	7 46 22	7 s4 34.	I	Re.	"
June 2	2 0 1s	2 2 27.	I	Re.	"
1907 Oct. 2	16 44 23	16 s2 3s	IV	Re.	Alarm did not go off.
" 6	14 2 3	14 10 1s	I	Dis.	Cloudy (raining)
" 13	1s ss 9	16 3 21	I	Dis.	Cloudy.
" 20	17 40 13	17 s6 2s	I	"	Cloudy + Daylight.
" 22	13 34 34	13 42 46	II	"	W. obs. Shaw rec.
" 24	14 42 40	14 s0 s2	III	Re.	W. obs. " "
" 29	14 9 32	14 17 44	I	Dis.	Cloudy.
" 29	16 10 4s	16 1a s7	II	"	"
" 31	1s 13 29	1s 21 41	III	"	W. obs. Shaw rec.
Nov. 5	16 2 34	16 10 46	I	"	Cloudy.
" 12	17 ss 36.	2a 3 4a	I	"	Cloudy + Daylight.
" 14	12 23 s1.	12 22 3	I	"	W. obs. Shaw rec.
" 21	14 16 s6.	14 2s 8	I	"	Cloudy.
" 23	13 16 1a.	13 24 30	II	"	"
" 28	16 10 3	16 1a 1s	I	"	"
" 29	10 33 s7	10 42 9	III	Re	"
" 30	10 3a 20	10 46 32	I	Dis.	"
" 30	1s s2 10	16 0 22	II	"	Cloudy.

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

1897phae.proj..4400

Miscellaneous Objects.

Date.	W. M. T.	East Time.	Sat	Plen.	Remarks.
1907 Dec. 5.	18h 3m 14s.	18h 11m 26s.	I	Dis.	Daylight.
" 6	11 2 1.	11 10 13.	III	Dis.	Cloudy.
" "	14 32 10.	14 40 22.	III	Re.	
" 7	12 31 32.	12 39 44.	I	Dis.	H. obs. Shaw rec.
" "	18 27 08.	18 36 10.	II	Dis.	Daylight.
" 8	12 29 8.	12 37 20.	IV	Dis.	H. obs. Shaw rec.
" "	16 09 14.	17 7 26.	IV	Re.	Cloudy.
" 13	14 09 07.	15 8 9.	III	Dis.	Cloudy.
" "	18 30 20.	18 38 40.	III	Re.	" + Daylight.
" 14	14 24 49.	14 33 1.	I	Dis.	Cloudy. Rain.
" 18	10 21 04.	10 30 6.	II	Dis.	H. obs. H. rec. (Vis.)
" 21	16 18 12.	16 26 24.	I	Dis.	Cloudy
" 23	10 46 32	10 54 44	I	Dis.	"
" 25	11 2 15	11 10 27	IV	Re.	H. obs. Shaw rec.
" 25	12 07 30	13 05 42	II	Dis.	Cloudy.
" 28	18 11 42	18 19 54.	I	Dis.	"
" 30	12 40 4	12 48 16.	I	Dis.	Cloudy.
1908 Jan. 1	15 33 2	15 41 14	II	Dis.	Cloudy.
" 6	14 33 44	14 41 56.	I	Dis.	"
" 8	9 2 13	9 10 25.	I	Dis.	H. obs. Rowe rec.
" "	18 08 32	18 16 44	II	Dis.	Cloudy.
" 12	7 26 0	7 34 12	II	Dis.	"
" 13	16 27 32	16 35 44	I	Dis.	"
" 15	10 06 4	11 4 16	I	Dis.	H. obs. H. rec. (Visual)
" 18	10 01 31	10 09 43	III	Dis.	H. obs. Rowe rec.
" 19	10 1 28	10 9 40	II	Dis.	Sunday.
" 20	18 21 30	18 29 42	I	Dis.	Cloudy + Daylight.
" 22	12 00 4	12 08 16	I	Dis.	Cloudy.
" 24	7 18 34	7 26 46	I	Dis.	"

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

1897phae.proj..4400

Miscellaneous Objects.

Date.	H. M. S.	East. Time.	Sat.	Obsr.	Remarks.
1900 Jan. 25.	14h 50m 10s.		III	Dis.	Cloudy.
" 26.	12 36 54		II	Dis.	Raining.
" 27.	16 30 31		IV	Dis.	Daylight. Blue stars
" 29.	14 44 14		I	Dis.	Omitted. Very cold &
" 31.	11 24 27		I	Re.	Cloudy.
Feb. 2.	5 57 4		I	Re.	Cloudy.
" "	16 3 45		II	Re.	Daylight.
" 6	7 21 30		II	Re.	Cloudy.
" 7	13 22 53		I	Re.	Omitted.
" 9	7 51 33		I	Re.	Cloudy.
" 13	9 56 39		II	Re.	Cloudy.
" "	17 12 57		IV	Re.	"
" 14	15 17 29		I	Re.	"
" 16	6 20 49		III	Re.	"
" "	9 46 11		I	Re.	"
" 20	12 31 46		II	Re.	Omitted. Cloudy.
" 23	10 20 24		III	Re.	" "
" "	11 40 50		I	Re.	" "
" 27	15 6 51		II	Re.	W. obs. Shaw rec.
Mar. 1	6 34 33		IV	Dis.	Cloudy.
" "	11 17 15		IV	Re.	"
" "	13 35 52		I	Re.	"
" "	14 19 40		III	Re.	"
" 3	8 4 34		I	Re.	Omitted for R Z Cassiop.
" 8	15 30 55		I	Re.	Cloudy.
" 9	6 59 23		II	Re.	"
" 10	9 59 37		I	Re.	W. obs. Rowe rec.
" 16	9 34 24		II	Re.	usually. See R. 166. 23. Very cloudy but obs. vis-

(Con. on p. 125.)

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

1897phae.proj..4400

Chronometer Comparisons.

Date.	Chronometer	compared with	Time by Chronometer h.	m.	sec.	Time by Clock h.	m.	sec.	Chronometer Error.	h.	m.	sec.	
1897. Nov. 3.	Bond 236.	Bond 394	12.	39.	44.5	9.	31.	00					
" "	A & D 958	" "	9	35	40.0	9	33	00	fast	2	40.0		
" "	A & D 958	" "	17	05	42.3	17	03	00	fast	2	42.3	Waite's Comp. for Eclipse.	
Nov. 4	A & D 958	" "	0	9	43.5	0	7	00	fast	2	43.5		
Nov. 5	Bond 236 set to correct time.												
Nov. 8	A & D 958	Bond 394	9	9	58.0	9	7	00	fast	2	58.0		
Nov. 12	A & D 958	Bond 394	12	36	8.0	12	36	00	fast	0	8.0	Altered to correct time just before comparison	
Nov. 12	A & D 958	Bond 394	11	44	10.5	11	44	00	fast	0	10.5		
Nov. 13	A & D 958	Bond 394	8	10	11.0	8	10	00	fast	0	11.0	Meteoric Shower.	
" "	B & C. 1182	Bond 394	8	19	34.0	8	19	00	fast	0	34.0		
" "	A & D 958	Bond 394	18	16	11.0	18	16	00	fast	0	11.0		
" "	B & C. 1182	Bond 394	18	15	44.0	18	15	00	fast	0	44.0		
Nov. 22.	A & D 958	Bond 394	9	30	12.0	9	30	00	fast	0	12.0		
" "	Bond 236	Bond 394	13	51	8.8	9	31	00					
Nov. 25	Bond 236	Bond 394	15	30	33.8	10	44	00					
" "	A & D 958	Bond 394	22	43	34.0	22	43	00	fast	0	34.0		
Dec. 6	A & D 958	Bond 394	1	19	48.3	1	19	00	fast	0	48.3		
" "	Bond 236	Bond 394	18	30	53.0	1	18	00					
" "	" "	" "	was altered so that final comparison is										
" "	Bond 236	Bond 394	18	47	54.6	1	29	00					
Dec. 12.	Bond 236	F 1327	17.	19.	57.0	17.	22.	00	slow	2.	3.0	F 1327 is 1m 40 sec. fast	
" "	A & D. 958	B 394	23	38	8.0	23	37	00	fast	1	8.0		
Dec. 19.	A & D 958	B 394	11	45	23.0	11	44	00	fast	1	23.0		
" "	Bond 236	F 1327	17	59	19.4	18	04	00	slow	4	40.6	F 1327 is 2m 14s fast.	
Dec. 26.	A & D 958	B 394	23	18	40.3	23	17	00					
" "	B 236 was found run down and set so that comparison is												
" "	Bond 236	F 1327	18	8	50.0	18	12	00					
1898. Jan. 3	A & D 958	B 394	1	13	59.5	1	12	00					
" "	Bond 236	F 1327	20	20	59.0	20	26	00					

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

1897phae.proj..4400

Chronometer Comparisons

Date.	Chronometer	Compared with	Time by chronometer. h. m. sec.	Time by clock h. m. sec.	Chronometer. Error h. m. sec.	
1895. Jan. 10	Bond 236.	was found to be			4 30.8	fast and was altered to
" "	" "	F 1327	21 11 12.5	21 12.00		F 1327 is 2m 16.5s fast
" "	A & D 958	B 394	1 21 18.9	1 19 00		
Jan. 16.	Bond 236	F 1327	17.36.32.0	17.39.00		F 1327 is 2m 17.5s fast
" "	A & D 958	B 394	21 36 34.2	21 34 00		
Jan. 24.	Bond 236	F 1327	21 00 49.8	21 05 00		F 1327 is 2m 16.0s fast
" "	A. and D 958	Bond 394	0 26 6.0	0 27 00		
Jan. 31.	A. and D 958	Bond 394	0 48 22.4	0 49 00		
" "	Bond 236	F 1327	21 48 52.0	21 55 00		F 1327 is 2 20.4 fast
Feb. 7.	Both Bond 236, and A and D 958 ran down last week.					
" "	Bond 236	F 1327	21 21 20.4	21 23 00		
" "	A and D 958	Bond 394	23 43 8.0	23 43 00		
Feb. 21	Both Chronometers ran down and were set approximately.					
" "	A and D 958	Bond 394	0 17 12.0	0 17 00		
" "	Bond 236	F 1327	22 42 6.5	22 45 00		
1900.						H.R
May 22	B & C 1182	was reset on this date.				
" "	B & C 1182	Bond 394	6 54 16.5	6 54 0.0	+0 0 16.5	+0.5s
" 23	Bond 236	Bond 394	17 51 18.6	13 30 0.0		
" "	Bond 236	Bond 394	18 30 18.0	14 9 0.0		
" 25	B & C. 1182	Bond 394	7 08 58.7	7 08 0.0	+0 0 58.7	+0.3s
" 26	B & C 1182	" "	7 13 2.8	7 12 0.0	+0 1 2.8	+0.3s
" 27	B & C 1182	" "	21 24 17.0	21 23 0.0	+0 1 17.0	+0.4s Bond 236 Ran down & reset
" "	Bond 236	" "	2 05 32.5	2 27 0.0		
" "	Bond 236	F 1327	2 29 48.4	2 30 01.0	-0 0 12.9	
" "	Bond 236	Bond 394	2 33 37.5	21 55 0.0		
" 28	B & C. 1182	Bond 394	7 7 13.2	7 06 0.0	+0 1 13.2	-0.1s Bond 236 stopped just before this comparison was made
" "	Bond 236	Bond 394	11 47 07.8	7 08 0.0		
" "	Bond 236	F 1327	11 49 31.5	11 50 01.0	-0 0 29.5	-.9s

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

1897phae.proj..4400

Chronometer Comparisons

\+ = fast
\- = slow

Date.	Chronometer	Compared with	Time by Chronometer. h m sec.	Time by Clock. h m sec.	Chronometer Error. h m sec.	Hourly Rate.
1900. May 28.	Bond 236	Bond 394	14 59 20.2	10 19 0.0		
" "	Bond 236	F. 1327	15 02 28.5	10 03 01.0	-0 0 32.5	-1.27
" "	Bond 236	Bond 394	15 53 53.7	21 12 0.0		
" "	Bond 236	F. 1327	15 56 14.6	15 56 01.0	-0 0 46.4	-1.26
" "	B&C 1182	Bond 394	21 17 11.8	21 16 0.0	+0 1 11.8	-0.23 s
" 29	Bond 236	Bond 394	11 03 19.2	7 10 0.0		
" "	Bond 236	F. 1327	11 06 02.0	11 5 70 1.0	-0 0 59.0	-0.74
" "	B&C. 1182	Bond 394	7 15 09.5	7 14 0.0	+0 1 09.5	0.0
" "	Bond 236	Bond 394	14 25 42.2	9 42 0.0		
" "	Bond 236	F. 1327	14 29 00.0	14 30 01.0	-0 1 01.0	
" 30	B&C. 1182	Bond 394	7 01 09.5	7 00 0.0	+0 1 09.5	-0.17 s
" "	B&C. 1182	Bond 394	21 07 07.0	21 06 0.0	+0 1 07.0	+0.39 s
" "	Bond 236	random down so it was reset just before this comparison.				
" "	Bond 236	F. 1327	2 09 58.3	2 10 01.0	-0 0 02.7	-1.14
" "	Bond 236	Bond 394	12 32 21	22 0.0		
" 31	B&C. 1182	Bond 394	7 06 10.9	7 05 0.0	+0 1 10.9	+0.8 s
" "	B&C. 1182	Bond 394	8 41 12.2	8 40 0.0	+0 1 12.2	+0.2 s
" "	B&C. 1182	Bond 394	10 06 12.5	10 05 0.0	+0 1 12.5	+0.4 s
" "	B&C 1182	Bond 394	21 09 17.0	21 08 0.0	+0 1 17.0	+0.73 s
" "	Bond 236	Bond 394	2 05 01.4	21 11 0.0		
" "	Bond 236	F. 1327	2 06 31.8	2 07 1.0	-0 0 29.2	
June 1	B&C. 1182	Bond 394	21 00 34.5	20 59 0.0	+0 1 34.5	+0.84 s
" 3	B&C 1182	Bond 394	21 12 15.0	21 10 0.0	+0 2 15.0	0.0 s
" 3	Bond 263	was wound & reset just before the following comparisons				
" "	Bond 236	Bond 394	2 20 28.8	21 14 0.0		
" "	Bond 236	F. 1327	2 21 10.8	21 01.0	+0 0 9.8	-1.34 s
" 4	B&C. 1182	Bond 394	7 7 15.0	7 05 0.0	+0 2 15.0	-0.10
" "	B&C 1182	Bond 394	9 7 14.8	9 05 0.0	+0 2 14.8	+0.35
" "	B&C 1182	Bond 394	22 7 19.4	22 05 00	+0 2 19.4	-0.54

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

1897phae.proj..4400

Chronometer Comparisons.

Date.	Chronometer.	Compared with	Time by Chronometer.	Time by Clock.	Chronometer Error.	Hourly Rate.	
1900 June 4	Bond 236	Bond 394	3 16 00.0	22 06 00			
" "	Bond 236	F 1327	3 17 37.4	3 18 01.0	-0 0 23.6	-1.07	
" 5	B&C. 1182	Bond 394	7 07 14.5	7 05	-0.0 +0 2 14.5	-0.14	
" "	"	"	8 30 14.3	8 28 0.0	+0 2 14.3	-0.11	
" "	"	"	11 14 14.0	11 12 0.0	+0 2 14.0	+0.30	
" "	"	"	21 09 17.0	21 07 00	+0 2 17.0	+0.48	
" "	Bond 236	Bond 394	2 21 22.0	21 08 0.0			
" "	" "	F 1327	2 23 12.8	2 24 01.0	-0 0 48.2		
" 6	B&C 1182	Bond 394	7 10 21.8	7 08 0.0	+0 2 21.8	+0.45	
" "	" "	" "	13 12 24.5	13 10 0.0	+0 2 24.5	-1.06	
" "	" "	" "	14 4 16.0	14 2 0.0	+0 2 16.0	+0.34	
" "	" "	" "	21 22 18.5	21 20 00	+0 2 18.5	+0.54	
" "	Bond 236	" "	2 41 17.5	21 23 0.0			B.236 Ran down & reset.
" "	" "	F 1327	2 44 08.0	2 44 01.0	+0 0 07.0		
" 7	B&C. 1182	Bond 394	7 10 24.0	7 08 00	+0 2 24.0	+0.31	
" "	"	"	8 49 24.5	8 47 0.0	+0 2 24.5	+0.54	
" "	"	"	11 14 25.8	11 12 0.0	+0 2 25.8	+0.47	
" "	"	"	21 11 30.5	21 09 0.0	+0 2 30.5	+0.71	
" "	Bond 236	"	2 33 35.0	21 12 0.0			<B.236 stopped for a few sec. when winding.
" "	"	F 1327	2 35 31.5	2 36 01.0	-0 0 29.5		
" 8.	B&C. Bond 1182	Bond 394	21 11 49.5	21 09 0.0	+0 2 49.5	+1.01	
" "	Bond 236	ran down and reset just before comparison.					
" "	"	Bond 394	2 38 00.1	21 12 0.0			
" "	"	F 1327	2 39 59.9	2 40 01.0	-0 0 01.1		
" 9.	B&C. 1182	Bond 394	7 06 59.5	7 04 00	+0 2 59.5	+0.25	
" "	Bond 236	" "	12 33 28.8	7 06 00			
" "	" "	F 1327	12 36 50.5	2 37 01.0	-0 0 10.5		
" "	B&C. 1182	Bond 394	11 04 00.5	11 01 0.0	+0 3 00.5		
" 11	All the Chron. ran down and were reset						

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

1897phae.proj..4400

Chronometer Comparisons.

Date.	Chronometer	Compared with	Time by Chronometer	Time by Clock.	Chronometer Error.	Hourly Rate
June 11,	B&C 1182	Bond 394	8 16 13.5	8 16 0.0	+0 0 13.5	+1.10 s
" "	" "	" "	9 30 14.8	9 30 0.0	+0 0 14.8	+1.22 s
" "	" "	" "	11 24 15.6	11 24 0.0	+0 0 15.6	+1.54 s
" "	" "	" "	21 29 21.1	21 29 0.0	+0 0 21.1	+1.62 s
" "	Bond 236	Bond 394	2 07 40.6	21 30 0.0		
" "	" "	F. 1327	2 09 48.5	2 10 01.0	-0 0 12.5	-1.77 s
" 12	B&C 1182	B. 394	7 00 27.0	7 00 0.0	+0 0 27.0	+1.59 s
" 12	" "	" "	21 20 35.5	21 20 0.0	+0 0 35.5	-1.10 s
" "	B. 236	F. 1327	3 02 30.0	3 03 01.0	-0 0 31.0	-1.38 s
" 13	B&C 1182	Bond 394	7 04 34.5	7 04 0.0	+0 0 34.5	+1.02 s
" "	" "	" "	11 38 34.6	11 38 00	+0 0 34.6	+1.47 s
" "	" "	" "	22 33 39.7	22 33 0.0	+0 0 39.7	+1.29 s
" "	Bond 236	F. 1327	4 18 55.0	4 20 01.0	-0 1 06.0	-1.77 s
" 14	B&C 1182	B. 394	10 39 43.2	10 39 0.0	+0 0 43.2	+1.40 s
" "	" "	" "	21 25 47.5	21 25 0.0	+0 0 47.5	
	Bond 236 was reset just before comp.					
" "	Bond 236	F. 1327	3 20 04.2	3 20 01.0	+0 0 03.2	
" 15	B&C 1182	B. 394	7 08 03.7	7 07 0.0	+0 1 03.7	
" "	Bond 236	F. 1327	12 58 48.0	12 59 01.0	-0 0 13.0	
" "	B&C 1182	B. 394	21 23 19.0	21 22 0.0	+0 1 19.0	
" "	Bond 236	F. 1327	3 17 30.0	3 18 01.0	-0 0 31.0	
" 16	B&C 1182	B. 394	7 11 22.5	7 10 0.0	+0 1 22.5	
" 17	B&C 1182	B. 394	21 11 48.7	21 10 0.0	+0 1 48.7	
" 17	Bond 236 ran down & reset.					
" "	Bond 236	F. 1327	3 13 17.5	3 13 01.0	+0 0 16.5	
" 18	B&C 1182	B. 394	7 16 50.5	7 15 0.0	+0 1 50.5	
" "	" "	" "	21 14 54.7	21 13 0.0	+0 1 54.7	
" "	B. 236	F. 1327	3 19 57.0	3 20 01.0	-0 0 10.0	

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

1897phae.proj..4400

Chronometer Comparisons.

Date.	Chronometer	Compared with	Time by Chronometer	Time by Clock.	Chronometer Error.
1897 June 19.	B&C. 1182	B. 394	7 09 48.8	7 08 0.0	+0 1 48.8
" "	" "	" "	21 10 56.0	21 09 0.0	+0 1 56.0
" "	Bond 236 ran down & reset before comparison				
" "	Bond 236	F. 1327	9 20 45.5	3 20 0.0	+0 0 45.5
" 20	B&C. 1182	B. 394	5 01.8	5 30.0	+0 2 01.8
" "	B&C 1182	" "	22 5 09.6	22 3 0.0	+0 2 09.6
" "	Bond 236	F. 1327	5 10 10.0	5 10 0.0	+0 0 9.0
" 21	B&C. 1182	B. 394	7 12 09.3	7 10 0.0	+0 2 09.3
" "	" "	" "	11 45 08.8	11 43 0.0	+0 2 08.8
" "	" "	" "	21 38 11.1	21 36 0.0	+0 2 11.1
" "	Bond 236	F. 1327	3 54 46.3	3 53 01.0	-0 0 14.7
" 22	B&C. 1182	B. 394	21 09 25.1	21 07 0.0	+0 2 25.1
" 23	B&C. 1182	" "	7 16 23.5	7 14 0.0	+0 2 23.5
" "	" "	" "	10 16 22.7	10 14 0.0	+0 2 22.7
" 24	" "	" "	12 7 23.0	12 5 0.0	+0 2 23.0
" "	" "	" "	13 3 17.6	13 1 0.0	+0 2 17.6
" "	" "	" "	21 17 18.5	21 15 0.0	+0 2 18.5
" "	Bond 236 ran down & reset just before comp.				
" "	Bond 236	F. 1327	9 47 35.2	3 47 01.0	+0 0 34.2
" 25	B&C. 1182	B. 394	7 15 16.3	7 13 0.0	+0 2 16.3
" 26	" "	" "	7 38 28.5	7 36 00	+0 2 28.5
" "	" "	" "	21 56 43.0	21 54 00	+0 2 43.0
" "	Bond 236 ran down & reset.				
" "	Bond 236	F. 1327	4 32 25.0	4 32 01.0	-0 0 24.0
" 27	B&C. 1182	B. 394	7 36 52.1	7 34 00	+0 2 52.1
" "	" "	" "	11 35 54.5	11 33 0.0	+0 2 54.5
" "	" "	" "	21 22 02.0	21 19 00	+0 3 02.0
" "	Bond 236	F. 1327	4 02 04.6	4 03 0.0	-0 0 56.4

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

1897phae.proj..4400

Chronometer Comparisons.

Date. 1902	Chronometer	Compared with	Time by Chronometer	Time by Clocks.	Chronometer Error.	
June 28.	B&C. 1182	B. 394	21 07 59.1	21 05 00.0	+0 2 59.1	
" "	Bond 236	F. 1327	3 54 28.2	3 54 01.0	+0 0 27.2	B. 236 ran down & reset.
" 29.	B&C. 1182	B. 394	7 39 57.1	7 37 00.0	+0 2 57.1	
" "	"	"	11 17 57.0	11 15 00.0	+0 2 57.0	
" "	"	"	21 18 57.2	21 16 00	+0 2 57.2	
" "	B. 236	F. 1327	4 07 03.0	4 07 01.0	+0 0 02.0	
" 30.	B&C. 1182	B. 394	7 47 49.0	7 45 00.0	+0 2 49.0	
July 1.	B&C. 1182	B. 394	23 11 29.5	23 09 00	+0 2 29.5	
" "	B. 236 ran down & reset.					
" "	B. 236	F. 1327	6 6 32.6	6 07 01.0	−0 0 28.8	
" 2.	B&C. 1182	Bond 394	7 37 37.4	7 35 00.0	+0 2 37.4	
" "	B&C 1182	Bond 394	23 05 38.5	23 03 0.0	+0 2 38.5	
" "	B. 236	F. 1327	6 04 59.0	6 05 01.0	−0 0 02.0	
" 4	B&C. 1182	B. 394	21 07 13.4	21 04 00	+0 3 13.4	
" "	Bond 236 ran down & reset.					
" "	B. 236	F. 1327	4 15 02.0	4 15 01.0	+0 0 1.0	
" 5.	B&C. 1182	B. 394	7 45 27.3	7 42 00.0	+0 2 27.3	
" "	B&C. 1182	B. 394	21 47 41.0	21 44 00.0	+0 3 41.0	
" "	B. 236	F. 1327	4 58 28.2	4 59 01.0	−0 0 31.8	
" 6.	B&C. 1182	B. 394	9 35 45.2	9 32 00.0	+0 3 45.2	
" "	" "	"	10 13 44.2	10 10 00.0	+0 3 44.2	
" "	" "	"	11 25 44.0	11 22 00	+0 3 44.0	
" "	" "	"	12 44 34.6	12 41 00	+0 3 34.6	
" "	" "	"	21 26 36.5	21 23 00	+0 3 36.5	
" 6	B. 236	F. 1327	4 40 54.8	4 42 01.0	−0 1 06.2	
" 8	B&C. 1182	B. 394	7 45 11.0	7 42 00.0	+0 3 11.0	
" 8.	" "	"	21 17 05.8	21 14 00.0	+0 3 05.8	
	B. 236 ran down & reset.					
" "	B. 236	F. 1327	4 42 12.6	4 42 01.0	+0 0 11.6	

cont. on page 160

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

1897phae.proj..4400

Location of Comp. Stars for Variables, by transit.

Desig.	Book.	Page.	Transits.
S.S. Cygni.	94	11	72
" " "	94	22.	64
Planet D.2.	101	207-10	60.
" " "	102	11-13.	56.5

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

1897phae.proj..4400

Location & Comp. Stars.
for Var. by Transits.
Oct. 1, 1898 to Oct 1, 1899.

Desig.	Bk.	Page	Transits.
Eros.	101	207-10	60
Eros.	102	11-13	56
Eros.	103	76-77.	20
Eros.	103	84-85.	14
Eros.	103	102.	15
Eros.	103	217-219.	25
Eros.	104	137-138	20
Eros.	104	154-155	17
Nra Sagittarii	104	196-197.	30
Eros.	104	216-217	16
Eros.	105	95-96.	27
Eros.	108	157-158	10
Eros.	106	99-100	12
T. Cephei.	110	9-12	34
T. Cephei.	110	23-24	16

Oct. 1, 1899 to Oct 1, 1900.

T. Cassiop.	110	164-167	48
R Urs. Min.	110	188-191	30
T Cassiop	110	197-198	18
S Cassiop	110	199-201	16
R Ursae Min.	112	12-13	22
S Cygni.	111	76-77	24
S Bootis	111	86-87	24
S Cygni.	111	88-89	12
R Camelop.	111	89-90	8
R Camelop.	111	107-108	14
R Cassiop	111	116-117	26
S Cygni.	111	118-119	24
T Urs. Maj.	111	122	1
S Bootis	111	123	6

Carton page 148

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

1897phae.proj..4400

Phot. Measts. of β Persei with Phot. V.

Feb. 26, '98 (16 cells)
Mar. 1, '98. (27 cells)
Mar. 3, '98 (64 cells)
Mar. 8, '98 (48 cells)
Mar. 18, '98 (16 cells)
Apr. 16, '98 (64 cells)

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

1897phae.proj..4400

Phot Measts. of β Persei
with Phot. V.

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

1897phae.proj..4400

Cometa.

Coddington's Comet.	Tau	June 14, '98.	Bk. 98.	p. 184-5.
Chase's "	"	Nov. 23, '98.	" 102.	p. 37.
"	" (40.)	Dec. 7, " .	" "	p. 111-4.

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

1897phae.proj..4400

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

1897phae.proj..4400

Comets.
Oct. 1, 1898 to Oct. 1, 1899.

Trans.
Chase's Comet. 40. Dec 7.98 (Bk. 102. P. 111)

Oct. 1, 1900 to Oct. 1, 1901.

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

1897phae..proj..4400

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

1897phae.proj..4400

Comp. of *s about λ Aur. Trin, Pleiades etc.

	Nov. 28, '98 (32 setta.)	
λ with 9.5	Nov. 25, '98. (32 setta.)	
	Nov. 28, '98. (32 setta.)	
9.5 " 8.0	Nov. 25, '98. (32 setta.)	
	Dec. 7, '98 (32 setta.)	
λ with 8.0	Nov. 28, '98. (32 setta.)	
	Dec. 7, '98. (32 setta.)	
9.5 " 11.0	Nov. 28, '98. (32 setta.)	
	Dec. 9, '98. (	
13.0 " 9.5	Dec. 8, '98. (32 setta.)	
	Dec. 9, '98. (32 setta.)	
12.0 " 9.5	Dec. 8, '98. (32 setta.)	
Pleiadrs.	Dec. 14, '98. (32 setta.)	
m with f.	Dec. 13, '98 (32 setta.)	
	Dec. 14, '98. (32 setta.)	
l with f.	Dec. 13, '98. (32 setta.)	~~Dec. 14, '98. (32 setta.)~~
	Dec. 14, '98. (32 setta.)	
k " f.	Dec. 13, '98. (32 setta.)	
	Dec. 14, '98. (32 setta.)	
j " f.	Dec. 13, '98. (32 setta.)	
	Dec. 14, '98. (32 setta.)	
g " f.	Dec. 13, '98 (32 setta.)	
m " f.	Dec. 13, '98 (32 setta.)	
	Dec. 14, '98 (32 setta.)	
h " f.	Dec. 13, '98. (32 setta.)	
	Dec. 14, '98. (32 setta.)	
x " f.	Dec. 13, '98 (32 setta.)	
	Dec. 14, '98. (32 setta.)	
y " f.	Dec. 13, '98 (32 setta.)	

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

1897phae..proj..4400

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

1897phae.proj..4400

Comp. of Stars about χ Ursæ min for Standards of Magns
(Oct. 1, 1898 to Oct. 1, 1899.)

χ	comp. with	9.5 — Nov. 28, 98 (32 setts.)
		Nov. 28, 98 (32 setts.)
		Nov. 28, 98 (32 setts.)
9.5	" "	8.0 — Nov. 28, 98 (32 setts.)
		Dec. 7, 98 (32 setts.)
λ	" "	8.0 — Nov. 28, 98 (32 setts.)
		Dec. 7, 98 (32 setts.)
9.5	" "	11.0 — Nov. 28, 98 (32 setts.)
		Dec. 9, 98 (32 setts.)
13.0	" "	9.5 — Dec. 5, 98 (32 setts.)
		Dec. 9, 98 (32 setts.)
12.0	" "	9.5 — Dec. 5, 98 (32 setts.)

Comp. of Stars in Pleiades for Standards of Magn.

m	Comp. with	f — Dec. 14, 98 (32 setts.)
		Dec. 13, 98 (32 setts.)
d	" "	f — Dec. 14, 98 (32 setts.)
		Dec. 13 98 (32 setts.)
k	" "	f — Dec. 14, 98 (32 setts.)
		Dec. 13, 98 (32 setts.)
		Dec. 14, 98 (32 setts.)
j	" "	f — Dec. 13, 98 (32 setts.)
		Dec. 14, 98 (32 setts.)
g	" "	f — Dec. 13, 98 (32 setts.)
n	" "	f — Dec. 13, 98 (32 setts.)
		Dec. 14, 98 (32 setts.)
h	" "	f — Dec. 13, 98 (32 setts.)
		Dec. 14, 98 (32 setts.)
x	" "	f — Dec. 13, 98 (32 setts.)
		Dec. 14, 98 (32 setts.)
y	" "	f — Dec. 13, 98 (32 setts.)

Comp. of Stars in M 13 (Hercules) for Standards of Magn.

t	Comps. with	f — Sept. 28, 99 (16 setts.)
		Sept. 4, 99 (16 setts.)
		Sept. 5, 99 (16 setts.)
u	" "	f — Sept. 4, 99 (16 setts.)
		Sept. 9, 99 (16 setts.)
w	" "	f — Sept. 5, 99 (16 setts.)
		Sept. 9, 99 (16 setts.)
x	" "	f — Sept. 5, 99 (16 setts.)
		Sept. 27, 99 (16 setts.)
y	" "	k — Sept. 5, 99 (16 setts.)
		Sept. 9, 99 (16 setts.)
f	" "	k — Sept. 5, 99 (16 setts.)
		Sept. 13, 99 (16 setts.)
g	" "	k — Sept. 9, 99 (16 setts.)
		Sept. 13, 99 (16 setts.)
h	" "	k — Sept. 9, 99 (16 setts.)

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

1897phae..proj...4400

Oct 1, 1899 to Oct 1, 1900

Comp of stars for Standards following χ Pegasi.

a comp with	(9.2)	Jan 3,00 (16 setts) Jan 2,00 (16 setts)	Jan 6,00 (16 setts)
b comp with	(9.2)	Jan 3,00 (16 setts) Jan 2,00 (16 setts) Jan 3,00 (16 setts)	Jan 6,00 (16 setts)
c " "	(9.2)	Jan 2,00 (16 setts) Jan 3,00 (16 setts)	Jan 6,00 (16 setts)
d " "	(9.2)	Jan 3,00 (16 setts)	Jan 6,00 (16 setts)
e " "	(9.2)	Jan 4,00 (16 setts)	
~~e'~~ " "	(9.2)		
f " "	(9.2)	Jan 6,00 (16 setts) Jan 4,00 (16 setts)	
g " "	(9.2)	Jan 4,00 (16 setts) Jan 3,00 (16 setts)	
h " "	(9.2)	Jan 4,00 (16 setts) Jan 3,00 (16 setts)	

Comp of Stars for Standards following ε Arietis.

e comp with	×	Jan 29,00 (16 setts) Jan 22,00 (16 setts) Jan 30,00 (16 setts)	Jan 30,00 (16 setts)
e' " "	×	Jan 29,00 (16 setts) Jan 23,00 (16 setts)	Feb. 1,00 (16 setts)
f " "	×	Jan 22,00 (16 setts) Jan 29,00 (16 setts)	Jan 29,00 (16 setts)
g " "	×	Jan 23,00 (16 setts) Jan 29,00 (16 setts)	Feb. 1,00 (16 setts)
h " "	×	Jan 22,00 (16 setts)	Feb. 1,00 (16 setts)
a " "	×	Feb. 6,00 (32 setts)	

Meas.

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

1897phae.proj..4400

Occultations.

Dec. 27, 1898. Bk 102. Jr. 211. Occultations of 15 stars by moon (eclipsed).

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

1897phae..proj..4400

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

1897phae.proj.,4400

Occultations
(Oct. 1, 1898 to Oct. 1, 1899.)

Dec. 27, '98. Bk. 102 P. 211 Occultations of 15 stars by moon (eclipsed)

Oct. 1, 1899 to Oct 1, 1900

Dec 16, '99 Bk. 112 P. 110-113. Occultations of 7 stars by moon (eclipsed)

Oct. 1, 1900. to Oct. 1, 1901.

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

1897phae..proj..4400

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

1897phae.proj..4400

Location of comp stars
for Variables. 133
continued from page ~~148~~

Desig	Book	Page	Transits.
T Cassiop	111	134	
S Cassiop	111	139-140	16

Oct. 1, 1900 to Oct. 1, 1901.

U Cet.	B122	131-134	42
~~R Virginis~~	~~125~~	~~136~~	

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

1897phae..proj..4400

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

1897phae.proj.44400

Photometric Measurements with phot. X.
(for Standards & Magnitude.)

36 settgs on Nova Aurigae and 2 of its comp stars. B114 P193-5.
36 settgs on Meas. of comp stars, d, k. & z. for R. Camelop. B114 P206-6
72 settgs on " " " " g m & z for R Camelop - B114 P212-205
72 settgs on " " " " g, m, & z " " " B115 P1-5
72 " " " " " g, m, z, k, v, & z, " " B115 P10-13

Oct. 1, 1900 to Oct. 1, 1901.

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

1897phae..proj..4400

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

1897phae.proj.4400

Eclipses Jupiter's Satellites.

Con. from p. 124.

	Date.		G. M. T.			Sect. Time			Sat.	Phen.	Remarks.
	1902 Mar.	17.	11h	54m	46s				I	Re.	Cloudy.
	"	23.	12	9	21.				II	Re.	Cloudy.
✓	"	24.	13	0	3.				I	Re.	W. obs. Bowie rec.
✓	"	26.	8	18	6.				I	Re.	W. obs. W. rec. (Obs. visually).
✓	Apr.	2.	10	14	16				I	Re.	W. obs. Rowe rec.
✓	"	6.	10	19	2				III	Re.	W. obs. Rowe rec.
✓	"	9.	12	9	40	12	17	2.	I	Re.	W. obs. Bowie rec.
✓	"	13.	10	4	2	10	3	14.	III	Dis.	W. obs. Rowe rec.
✓	"	17.	9	11	19	9	19	31.	II	Re.	W. obs. Rowe rec.
	"	18.	8	33	5	8	42	7.	I	Re.	Cloudy.
✓	"	20.	12	44	11	12	2	23.	IV	Dis.	W. obs. Bowie rec.
	"	24.	11	46	4	11	4	16.	II	Re.	Omitted.
	"	25.	10	29	22	10	37	34.	I	Re.	Cloudy.
	May	2	12	24	49.				I	Re.	"
	"	7	11	34	44				IV	Re.	Raining.
✓	"	11	8	49	10				I	Re.	W. obs. Rowe rec.
✓	"	18	10	44	34				I	Re.	W. obs. Rowe rec.
✓	"	19	8	47	26				II	Re.	W. obs. Rowe rec.
	"	"	10	18	37				III	Re.	Cloudy.
	"	26	10	44	29				III	Dis.	Cloudy.
✓	June	3	9	3	5				I	Re	W. obs. Thompson rec.
	"	20	8	23	13				II	Re.	Omitted for ν Herculis.
	"	26	9	18	11				I	Re.	Omitted - too low.

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

1897phae..proj..4400

Eclipses Jupiter's Satellites.

Date.	W. m. S.	East. Time.	Sat.	Phen.	Remarks.
1908. Nov. 21.	17 36 42.		III	Re.	Sunday.
" 23.	14 27 2.		II	Dis.	Cloudy.
" 28.	18 7 ∨8.		III	Dis.	Sunday.
" 30.	17 2 ∨4.		II	Dis.	Cloudy.
Dec. 2.	13 43 17.		I	Dis.	Overcast.
" 9	1∨ 36 9.		I	Dis.	Cloudy.
" 16	17 29 1.		I	Dis.	"
" 18	11 33 17.		II	Dis.	Cloudy.
" "	11 ∨7 1∨.		I	Dis.	"
" 2∨	13 ∨0 9.		I	Dis.	"
" "	14 9 17.		II	Dis.	"
" 27	13 21 ∨4.		III	Re.	Sunday.
1909. Jan. 1.	1∨ 43 ∨		I	Dis.	Cloudy.
" "	16 4∨ 17		II	Dis.	"
" 3	13 ∨∨ 31		III	Dis.	"
" "	17 18 37		III	Re.	"
" 8	17 36 4		I	Dis.	W. obs. Bowie rec.
" 10	12 4 18		I	Dis.	Cloudy.
" "	17 ∨3 21		III	Dis.	"
" 13	12 ∨8 38		IV	Dis.	" stormy.
" "	17 17 ∨8		IV	Re.	" "
" 17	13 ∨7 23		I	Dis.	Cloudy.
" 19	11 14 ∨2.		II	Dis.	"
" 24	1∨ ∨0 34		I	Dis.	"
" 26	10 18 ∨2		I	Dis.	W. obs. Rowe rec.
" "	13 ∨0 ∨8		II	Dis.	W. obs. Bowie rec.
" 30	11 13 12		IV	Re.	Cloudy.
" 31	17 43 ∨1		I	Dis.	"

Con on p. 154.

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

1897phae.proj..4400

Oct. 1, 1899 to Oct 1, 1900.

Phot. T.

Meas. of Standards near T. Hydrae

Hagen No. 24 with Hagen No. 14	April 2,00 (16 setts) mar. 29,00 (16 setts) apr. 2,00 (16 setts.	apr. 3,00 (16 setts)	
" " 30 " " " 14	mar 29,00 (16 setts) April 3,00 (16 setts)	apr. 3,00 (16 setts)	
" " 29 " " " 14	April 2,00 (16 setts) April 3,00 (16 setts)	apr. 19,00 (16 setts)	
" " 27 " " " 14	apr. 2,00 (16 setts) April 3,00 (16 setts)	Apr. 19,00 (16 setts)	
" " 25 " " " 14	Apr. 2,00 (16 setts)	Apr. 19,00 (16 setts)	

Meas. of Standards near V Leonis.

Hagen No. 22 with Hagen 9	apr. 24,00 (16 setts) apr. 20,00 (16 setts) apr. 24,00 16 setts	apr. 25,00 (16 setts)	
" " 27 " " 9	apr. 20,00 (16 setts) apr. 24,00 (16 setts	apr. 25,00 (16 setts)	
" " 23 " " 9	apr. 20,00 (16 setts) apr. 24,00 (16 setts)	apr. 25,00 (16 setts)	
" " 24 " " 9	apr. 20,00 (16 setts) apr. 24,00 16 setts	Apr. 25,00 (16 setts)	
" " 20 " " 9	Apr. 20,00 16 setts)	Apr. 25,00 (16 setts)	

Meas. of Standards near V Cancri

Hagen No. 24 with Hagen 8.	may 1,00 (16 setts) apr. 27,00 (16 setts)	may 22,00 16 setts	
" " 26 " " 8	may 1,00 16 setts apr. 27,00 (16 setts)	May 22,00 (16 setts)	
" " 27 " " 8	may 1,00 (16 setts) apr. 27,00 (16 setts)	may 25,00 (16 setts)	
" " 38 " " 8	may 1,00 (16 setts) apr. 27,00 16 setts	may 22,00 (16 setts)	
" " 39 " " 8	may 1,00 (16 setts) apr. 27,00 16 setts	may 22, 00 (16 setts	

Meas. of Standards near T. Virginis

Hagen No. 18 with Hagen 10	may 4,00 (16 setts apr 27,00 (16 setts)	June 30,00 16 setts	
" " 19 " " 10	may 28,00 16 setts may 1,00 (16 setts	may 29,00 (16 setts)	
" " 22 " " 10	may 28,00 (16 setts may 1,00 (16 setts	June 30,00 (16 setts	
" " 23 " " 10	may 29,00 (16 setts) may 1,00 (16 setts	June 30,00 (16 setts	
" " 24 " " 10	may 29,00 (16 setts) may 1,00 (16 setts	June 30,00 (16 setts	

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

1897phae..proj..4400

Phot. T.

Meas. of standards near S Herculis.

Hagen No.	17	comp. with No.	7	June 6,00/16 settn (May 5.00 (16 settn)	Sept 13.00/16 settn
"	18	"	7	June 6,00 (16 settn) May 5,00 (16 settn)	Sept 14.00/16)
"	16	"	7	June 6.00/16 settn May 7.00 (16 settn)	Sept 7.00/16)
"	15	"	7	June 6,00/16 settn May 7.00 (16 settn)	Sept 13,00 (16 settn
"	21	"	7	June 6,00 (16 settn) May 7.00/16 settn)	Sept 14.00/16)

Meas of standards near R Serpentis.

Hagen No.	15	comp with No.	7	July 24.00/16 settn	
"	16	"	7	June 26,0 d/16 settn) June 26,0 d/16 settn) June 4,00/16 settn	July 24. 16 settn
"	17	"	7	July 24.00 (16 settn. June 26,00/16 settn	
"	20	"	7	July 24.00 (16 settn June 26,00/16 settn)	
"	21	"	7	June 26.0 d/16 settn) June 4,00/16 settn	

Meas. of Standards near U Virginis.

Hagen	15	comp with No.	9	July 2,00/16 settn June 29,00/16 settn)	July 27.00/16 settn
"	16	"	9	July 2.00/16 settn June 29.00/16 settn) July 27.00/16 settn)	July 29.00/16 settn
"	17	"	9	July 2,00/16 settn)	July 27.00/16 settn
"	18	"	9	July 2.00/16 settn June 30.00 (16 settn	July 27.00/16 settn
"	19	"	9	July 2.00/16 settn June 30,00/16 settn	Aug 9.00/16 settn

Meas of Standards near S Virginis

Hagen No.	18	Comp with No.	6	July 8.00/16 settn) July 18.00/16 settn)	July 19.00/16 settn
"	19	"	6	July 17.00/16 settn) July 2.00/16 settn July 18.00/16 settn)	July 8/16 settn
"	20	"	6	July 17.00/16 settn) July 18.00 (16 settn)	July 19.00/16 settn
"	22	"	6	July 2.00/16 settn July 18,00/16 settn	July 7.00/16 settn
"	26	"	6	July 17,00/16 settn)	July 19.00/16 settn

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

1897phae.proj..4400

Phot T.

Meas. of 12 th mag. Standards near R R Librae. ✓

Hagen No. 17	comp with No 6	July 17, 00 (16 sett's) July 14, 00 (16 sett's) July 16, 00 (16 sett's)	July 15, 00 (16 sett's)
" " 18	" " 6	July 14, 00 (16 sett's) July 17, 04 (16 sett's)	July 17, 04 (16 sett's)
" " 19	" " 6	July 16, 00 (16 sett's) July 17, 00 (16 sett's)	July 15, 00 (16 sett's)
" " 21	" " 6	July 14, 00 (16 sett's) July 17, 00 (16 sett's)	July 15, 00 (16 sett's)
" " 22	" " 6	July 16, 00 (16 sett's)	July 15, 00 (16 sett's)

Oct. 1, 1900 to Oct 1, 1901.

Meas of 12 th mag Stand. near S Piscium.

Hagen No 12	comp with No 10	Oct 24, 1900 16 sett's
" " 13	" " " 10	Oct 24, 1900 16 sett's
" " 14	" " " 10	Oct. 23, 1900 16 sett's
" " 15	" " " 10	Oct. 23, 1900 16 sett's
" " 16	" " " 10	Oct. 23, 1900 16 sett's

Meas of 12 th mag Stand near R Draconis.

No 1 Nov. 28, 1900 (16 sett's)

No 2 Nov. 28, 1900 (16 sett's)

Meas of 12 th mag. Stand. near R Scorpii

Hagen No 26	comp with star 2	June 21, 01 June 18, 01 (16)
" " 27	" " " "	
" " 29	" " " "	June 18, 01 (16)
" " 35	" " " "	June 19, 01 (16) June 11, 01 (16)
" " 38	" " " "	June 18, 01 (16)

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

1897phae..proj..4400

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

1897phae.proj.4400

Ecl. Jup. Sats.

Con. from p. 157.

Date.	G. M. T.	East. Time.	Sat.	Phen.	Remarks.
1909.					
Feb. 2.	12h 12m 11s	12 20 23	I	Dis.	W. obs. Campbell rec.
" 2.	16 27 57	16 35 17.	II	"	Omitted.
" 2.	9 45 25.	9 53 37.	III	"	W. obs. Rowe rec.
" 9.	14 57 38.	14 13 50.	I	"	Cloudy.
" 11.	2 34 0	2 42 12.	I	"	W. obs. Rowe rec.
" 13.	2 21 43	2 29 55.	II	"	W. obs. " "
" 15.	13 43 16	13 51 28.	III	"	Cloudy.
" 16.	15 59 13.	16 7 25.	I	"	"
" 18.	10 27 37	10 35 49	I	"	W. obs. Rowe rec.
" 20.	10 57 51	11 6 3.	II	"	W. obs. Rowe rec.
" 22.	17 41 20.	17 49 32.	III	"	Omitted
" 23.	17 52 57.	18 1 9.	I	"	Cloudy.
" 25.	12 21 23.	12 29 35.	I	"	W. obs. Bowie rec.
" 27.	6 49 53	6 57 5.	I	"	Cloudy.
" "	13 33 52.	13 42 10.	II	"	"
Mar. 4	16 29 25	16 37 37.	I	Re.	"
" 6	10 57 52	11 6 10	I	"	W. obs. Rowe rec.
" 10	2 15 26	2 23 38	II	"	Cloudy.
" 13	12 52 4	13 0 16	I	"	"
" 15	7 20 35	7 28 47	I	"	W. obs. Rowe rec.
" 16	2 54 35	9 2 47	III	"	Cloudy.
" 17	10 51 15	10 59 27	II	"	W. obs. Rowe rec.
" 20	14 46 20	14 54 32	I	"	Omitted (Sunday)
" 21	13 1 25	13 9 37	IV	Dis.	W. obs. Bowie rec.
" 22	9 14 53	9 23 5	I	Re.	W. obs. Rowe rec.
" 23	12 52 44	13 0 56	III	Re.	W. obs. Bowie rec.
" 24	13 27 2	13 35 14	II	Re.	Cloudy.
" 29	11 9 19	11 17 31	I	Re.	W. obs. Rowe rec.
" 31	16 2 45	16 10 57	II	Re.	Omitted.

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

1897phae..proj...4400

	Date.	K. M. T.	East. Time	Sat.	Obsr.	Remarks.
	1909 Apr. V	13 3 V4.	13 12 6	I	Re.	Cloudy.
	" 7	7 4 18.	7 12 30	IV	Dis.	"
	" "	7 32 3V.	7 40 47.	I	Re.	
✓	" "	10 V2 40.	11 6 V2.	IV	Re.	W. obs. 1st Rowe rec.
	" 11	7 V6 24.	2 4 36.	II	Re.	Sunday.
	" 12	14 V2 36.	2V 6 42.	I	Re.	Permitted.
	" 14	9 27 19.	9 3V 31.	I	Re.	Cloudy.
	" 18	10 31 V4.	10 40 6.	II	Re.	"
	" 21	11 22 9.	11 30 21.	I	Re.	"
	" 2V	13 7 19.	13 1V 31.	II	Re.	Sunday (Cloudy)
✓	" 28	2 44 V3.	2 V3 V.	III	Re.	W. obs. Rowe rec.
	" "	13 17 V.	13 2V 17.	I	Re.	Cloudy.
	" 30	7 4V 46.	7 V3 V2.	I	Re.	"
✓	May V	9 33 18.	9 41 30	III	Dis.	W. obs. Rowe rec.
	" "	12 44 13.	12 V2 2V	III	Re.	Cloudy.
	" 7	9 40 46.	9 49 0.	I	Re.	"
	" 13	7 3V 21.	7 43 33.	II	Re.	"
	" 14	11 3V V3.	11 44 V.	I	Re.	"
	" 20	10 10 24.	10 18 36.	II	Re.	"
	" 23	7 V9 V2.	2 2 4.	I	Re.	"
	" 30	9 VV 1	10 3 13.	I	Re.	Sunday.
	June 10	2 37 V2	2 46 4.	III	Re.	Cloudy.
	" 13	10 46 7	10 V4 19.	IV	Re.	Cloudy.
✓	" 1V	2 14 10	2 22 22.	I	Re.	W. obs. Hegarty rec.
	" 17	9 31 2	9 39 20.	III	Dis.	Cloudy.
	" 21	9 46 38	9 V4 V0.	II	Re.	"
	" 22	10 9 20	10 17 32.	I	Re.	"

(Con. on p. 212)

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

1897phae.proj..4400

Chronometer Comparisons

Date.	Chronometer	Compared with.	Time by Chronometer	Time by Clock.	Chronometer Error.	Hourly Rate
July 9.	B&C. 1182	B. 394	22 30 15.1	22 27 00.0	+0 3	15.1
" "	Bond 236	F. 1327	5 5 6 45.0	5 7 01.0	-0 0	16
" 10	B&C. 1182	B. 394	10 49 30.1	10 46 0.0	+0 3	30.1
" 10	"	"	11 10 32.5	11 07 0.0	+0 3	32.5
" "	"	"	21 17 40.5	21 14 0.0	+0 3	40.5
" "	Bond 236	F. 1327	4 46 22.2	4 47 01.0	-0 0	38.8
" 11	B&C. 1182	B. 394	7 43 48.7	7 40 0.0	+0 3	48.7
" "	"	"	10 13 50.0	10 10 0.0	+0 3	50.0
" "	"	"	21 14 56.5	21 11 0.0	+0 3	56.5
" "	Bond 236	F. 1327	4 48 00.8	4 49 01.0	-0 1	00.2
" 12	B&C 1182	B. 394	21 10 09.5	21 06 0.0	+0 4	09.5
" "	Bond 236 ran down & reset just before comparison					
" "	Bond 236	F. 1327	4 51 28.0	4 51 01.0	+0 0	27.0
" 13	B&C 1182	B. 394	7 39 08.9	7 35 0.0	+0 4	08.9
" 11	B&C. 1182	B. 394	23 13 08.2	23 09 0.0	+0 4	08.2
" "	B 236	F. 1327	6 54 10.9	6 52 01.0	+0 0	9.9
" 14	B&C 1182	B. 394	7 40 07.6	7 36 0.0	+0 4	07.6
" 15	All Chron. ran down & reset.					
" "	B&C. 1182	B. 394	21 37 02.0	21 37 0.0	+0 0	02.0
" "	B 236	F. 1327	5 38 05.0	5 33 01.0	+0 0	04.0
" 16.	B&C. 1182	B. 394	7 36 09.6	7 36 0.0	+0 0	9.6
" "	"	"	21 13 14.1	21 13 0.0	+0 0	14.1
" "	B. 236	F. 1327	5 11 41.2	5 12 01.0	-0 0	19.8
" 17	B&C. 1182	B. 394	7 30 23.0	7 30 0.0	+0 0	23.0
" "	"	"	21 18 30.0	21 18 0.0	+0 0	30.0
" "	B 236	F. 1327	5 19 19.5	5 20 01.0	-0 0	41.5
" 18	B&C. 1182	B. 394	7 33 34.5	7 33 0.0	+0 0	34.5
" 18	"	"	21 09 39.0	21 09 0.0	+0 0	39.0
" 18	B. 236	F. 1327	5 13 26.3	5 15 01.0	-0 1	34.7

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

1897phae..proj...4400

Date.	chronometer	comp. with.	Time by chronometer	Time by clock.	chronometer error	Hourly Rate
July 19.	B&C. 1182	B. 394	7 34 49.0	7 34 0.0	+0 0 49.0	
" "	"	"	22 44 55.0	22 44 0.0	+0 0 55.0	
" "	Bond 236	F. 1327	6 52 04.5	6 54 01.0	-0 1 56.5	
" 20	B&C 1182	B. 394	7 33 58.6	7 33 0.0	+0 0 58.6	
" 20	" "	"	21 08 03.0	21 07 0.0	+0 1 03.0	
" 20	Bond 236	F. 1327	5 18 43.2	5 21 01.0	+0 2 17.8	
" 22	B&C 1182	B. 394	21 14 15.8	21 12 0.0	+0 2 15.8	
" "	Bond 236 ran down & reset.					
" "	B. 236	F. 1327	5 31 47.5	5 32 01.0	-0 0 13.5	
" 23	B&C. 1182	B. 394	21 14 03.3	21 13 0.0	+0 1 03.3	B. 236 ran down & reset
" "	Bond 236	F. 1327	5 48 51.0	5 50 01.0	+0 0 50.0	
" 24	B&C 1182	B. 394	7 35 03.5	7 33 0.0	+0 2 03.5	
" "	" "	"	22 10 10.5	22 08 0.0	+0 2 10.5	
" "	B. 236	F. 1327	6 40 14.5	6 40 01.0	+0 0 13.5	
" 25	B&C 1182	B. 394	21 02 32.1	21 00 0.0	+0 2 32.1	
" "	Bond 236 ran down & reset.					
" "	Bond 236	F. 1327	5 34 59.5	5 35 01.0	-0 0 01.5	
" 26	B&C. 1182	B. 394	21 04 23.2	21 02 0.0	+0 2 23.2	
" "	Bond 236 ran down & was reset.					
" "	Bond 236	F. 1327	5 40 43.5	5 40 01.0	+0 0 42.5	
" 27.	B&C. 1182	B. 394	7 22 03.0	7 20 0.0	+0 2 03.0	
" 28	" "	" "	7 33 40.4	7 31 0.0	+0 2 40.4	
" "	B. 236 ran down & reset.					
" "	B. 236	F. 1327	16 15 16.5	16 15 01.0	+0 0 15.5	
" 29	B&C 1182 ran down & reset.					
" "	B&C 1182	B. 394	7 45 00.2	7 45 0.0	+0 0 00.2	
" "	" "	" "	21 04 12.5	21 04 0.0	+0 0 12.5	
" "	Bond 236 ran down & reset.					
" "	Bond 236	F. 1327	5 54 03.5	5 54 01.0	+0 0 02.5	

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

1897phae.proj..4400

Chronometer Comparisons

+ = fast
− = slow

Date 1900.	Chronometer	Compared with	Time by Chronometer h m s	Time by clock h m s	Chronometer Error h m s	Hr. Rate
July 30	B&C 1182	Bond 394	7 30 14.1	7 30 0.0	+0 0 14.1	
" "	" "	" "	21 00 19.5	21 00 0.0	+0 0 19.5	
Sept. 12.	Wound & reset Chronometers					
" "	B&C 1182	Bond 394	21 11 56.7	21 12 00	−0 0 03.3	
" "	Bond 236	F. 1327	8 56 43.1	8 56 01.0	+0 0 42.1	
" 13	B&C 1182	B. 394	6 58 30.2	6 59 0.0	−0 0 9.8	
" "	" "	" "	21 05 41.5	21 06 0.0	−0 0 18.5	
" 14	" "	" "	6 59 43.5	7 00 0.0	−0 0 16.5	
" "	" "	" "	20 59 41.2	21 01 0.0	−0 1 18.8	
" 15	" "	" "	6 42 03.0	6 44 0.0	−0 1 03.0	
" 16	" "	" "	21 03 14.7	21 04 0.0	−0 0 45.3	
" 18.	" "	" "	7 04 08.0	7 04 0.0	+0 0 8.0	
" "	" "	" "	21 04 04.6	21 04 0.0	+0 0 4.6	
" 19	" "	" "	7 05 06.3	7 05 0.0	+0 0 6.3	
" "	" "	" "	21 15 02.4	21 14 0.0	+0 1 2.4	
" 21	" "	" "	21 05 52.1	21 07 0.0	−0 1 7.9	
" 23	" "	" "	21 10 45.6	21 11 0.0	−0 0 14.4	
" 24	" "	" "	7 05 11.3	7 06 0.0	−0 0 48.7	
" 25	" "	" "	7 00 36.5	7 02 0.0	−0 1 23.5	
" 26	" "	" "	6 57 11.5	6 59 0.0	−0 1 48.5	
" "	" "	" "	7 27 12.0	7 29 0.0	−0 1 48.0	
" "	" "	" "	8 03 12.6	8 05 0.0	−0 1 47.4	
" 27	" "	" "	7 00 10.0	7 02 0.0	−0 1 50.0	
" "	" "	" "	21 03 01.2	21 05 0.0	−0 1 58.8	
" 28	" "	" "	9 11 17.0	9 13 0.0	−0 1 43.0	
Oct. 1	" "	" "	6 58 30.2	6 58 0.0	+0 0 30.2	
" 2	" "	" "	7 00 46.2	7 00 0.0	+0 0 46.2	
" 4	" "	" "	7 00 18.0	6 59 0.0	+0 1 18.0	
" 5	" "	" "	6 57 42.7	6 56 0.0	+0 1 42.7	

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

1897phae..proj..4400

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

1897phae.proj..4400

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

1897phae..proj..4400

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

1897phae.proj.r4400

Chronometer Comparisons

Dec 1, 1900 to Dec 22 1900. + = fast
− = slow.

Date 1900	Chronometer	Clock.	Time by chron.	Time by clock	chron. error.	Rt.
Dec. 1	B&C 1182	B 394	7 21 39.0	7 21 0.0	+0 0 39.0	
" 3	"	"	6 22 54.5	6 22 0.0	+0 0 54.5	
" 4	"	"	21 01 46.1	21 01 0.0	+0 0 46.1	
" 5	"	"	21 05 00.0	21 04 0.0	+0 1 0.0	
" 6	"	"	21 10 21.2	21 09 0.0	+0 1 21.2	
" 7	"	"	7 33 17.6	7 32 0.0	+0 1 17.6	
" 7	"	"	11 05 14.7	11 04 0.0	+0 1 14.7	
" 7	"	"	21 08 19.5	21 07 0.0	+0 1 19.5	
" 8	"	"	7 52 07.6	7 51 0.0	+0 1 07.6	
" 9	"	"	21 09 09.0	21 08 0.0	+0 1 09.0	
" 10	"	"	7 02 04.0	7 01 0.0	+0 1 04.0	
" 10	"	"	21 10 59.0	21 10 0.0	+0 0 59.0	
" 11	"	"	9 37 58.0	9 37 0.0	+0 0 58.0	
" 12	"	"	7 00 59.4	7 00 0.0	+0 0 59.4	
" 12	"	"	9 44 57.2	9 44 0.0	+0 0 57.2	
" 13	"	"	21 12 13.1	21 11 0.0	+0 1 13.1	
" 14	"	"	7 01 30.0	7 0 0.0	+0 1 30.0	
" 14	"	"	21 10 34.5	21 09 0.0	+0 1 34.5	
" 15	"	"	7 04 40.0	7 03 0.0	+0 1 40.0	
" 16	"	"	21 14 53.1	21 13 0.0	+0 1 53.1	
" 17	"	"	7 05 57.1	7 04 0.0	+0 1 57.1	
" 17	"	"	9 44 50.9	9 43 0.0	+0 1 50.9	
" 18	"	"	6 51 56.4	6 50 0.0	+0 1 56.4	
" 19	"	"	7 11 59.8	7 10 0.0	+0 1 59.8	
" 20	"	"	6 59 47.5	6 57 0.0	+0 2 47.5	
" 20	"	"	21 51 50.5	21 49 0.0	+0 2 50.5	
" 21	"	"	21 14 59.5	21 12 0.0	+0 2 59.5	
" 22	"	"	5 14 56.5	5 12 0.0	+0 2 56.5	
" 22	"	"	7 51 59.5	7 49 0.0	+0 2 59.5	

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

1897phae.proj...4400

Dec. 23, 1900 to January 14, 1901.

Date.	Chronometer	Clock.	Time by Chron. h m s	Time by Clock. h m s	Error of Chron. h m s	R.
Dec 23	B&C 1182	B. 394	21 16 19.1	21 13 0.0	+0 3 19.1	
" 24	"	"	7 06 24.4	7 03 0.0	+0 3 24.4	
" 25	"	"	21 06 38.5	21 03 0.0	+0 3 38.5	
" 26	"	"	7 04 47.2	7 01 0.0	+0 3 47.2	
" 27	"	"	7 06 57.8	7 03 0.0	+0 3 57.8	
" 28	"	"	7 06 57.2	7 03 0.0	+0 3 57.2	
" 29	"	"	7 03 50.4	7 00 0.0	+0 3 50.4	
" 30	"	"	20 51 39.7	20 48 0.0	+0 3 39.7	
" 31	"	"	20 09 32.3	20 06 0.0	+0 3 32.3	
Jan. 1, 1901	Reset B&C 1182.					
" 1,	B&C 1182	B. 394	7 02 58.8	7 03 0.0	-0 0 01.2	
" 1,	"	"	21 09 03.8	21 09 00	+0 0 03.8	
" 2,	"	"	7 03 12.8	7 03 0.0	+0 0 12.8	
" 3,	"	"	7 04 11.6	7 04 0.0	+0 0 11.6	
" 4,	"	"	8 43 58.5	8 44 0.0	-0 0 01.5	
" 4,	"	"	21 39 59.6	22 00 0.0	-0 0 00.4	
" 5,	"	"	6 50 03.8	6 50 0.0	+0 0 03.8	
" 6,	"	"	21 08 16.6	21 08 0.0	+0 0 16.6	
" 7,	"	"	7 05 19.6	7 05 0.0	+0 0 19.6	
" 7,	"	"	21 57 17.3	21 57 0.0	+0 0 17.3	
" 8,	"	"	7 06 13.5	7 06 0.0	+0 0 13.5	
" 9,	"	"	7 02 19.0	7 02 0.0	+0 0 19.0	
" 9,	"	"	21 10 22.0	21 10 0.0	+0 0 22.0	
" 10,	"	"	21 10 10.6	21 10 0.0	+0 0 10.6	
" 11,	"	"	21 04 09.8	21 04 0.0	+0 0 09.8	
" 12,	"	"	7 00 04.0	7 00 0.0	+0 0 04.0	
" 13,	"	"	21 15 57.5	21 15 0.0	+0 0 57.5	
" 14	"	"	7 07 38.0	7 07 00	+0 0 38.0	
" 14	"	"	21 10 05.3	21 09 0.0	+0 1 05.3	

over

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

1897phae.proj.:4400

Chronometer Comparisons

cont. from previous page.

Jan. 15, 1901.

Date. 1901.	Chronometer	clock.	Time by chronometer	Time by Clock	Error of chronometer
January 15	B&C 1182	B. 394	21 10 32.1	21 09 0.0	+0 1 32.1
" 16	" "	"	8 14 42.3	8 13 0.0	+0 1 42.3
" 17	" "	"	21 11 13.1	21 09 0.0	+0 2 13.1
" 18	" "	"	7 04 20.0	7 02 0.0	+0 2 20.0
" 19	" "	"	6 04 45.0	6 02 0.0	+0 2 45.0
" 20	" "	"	21 03 21.3	21 00 0.0	+0 3 21.3
" 21	" "	"	21 05 51.0	21 04 0.0	+0 1 51.0
Reset B & C 1182.					
January 22	B&C 1182	B 394	6 01 04.5	6 01 0.0	+0 0 4.5
" 23	" "	"	21 10 39.5	21 10 0.0	+0 0 39.5
" 24	" "	"	7 06 41.8	7 06 0.0	+0 0 41.8
" 24	" "	"	21 07 55.4	21 07 0.0	+0 0 55.4
" 25	" "	"	7 03 57.7	7 03 0.0	+0 0 57.7
" 25	" "	"	21 30 02.9	21 29 0.0	+0 1 02.9
" 26	" "	"	7 05 05.0	7 04 0.0	+0 1 05.0
" 27	" "	"	21 09 08.2	21 08 0.0	+0 1 08.2
" 28	" "	"	21 14 17.7	21 13 0.0	+0 1 17.7
" 29	" "	"	7 06 13.6	7 05 0.0	+0 1 13.6
" 29	" "	"	21 11 14.0	21 10 0.0	+0 1 14.0
" 30	" "	"	21 24 20.5	21 23 0.0	+0 1 20.5
" 31	" "	"	21 16 14.9	21 15 0.0	+0 1 14.9
Feb. 1.	" "	"	7 06 14.7	7 05 0.0	+0 1 14.7
" 1.	" "	"	22 08 20.3	22 07 0.0	+0 1 20.3
" 2	" "	"	6 19 27.7	6 18 0.0	+0 1 27.7
" 3	" "	"	21 19 56.1	21 18 0.0	+0 1 56.1
" 4	" "	"	21 07 04.3	21 05 0.0	+0 2 04.3
" 5	" "	"	21 16 02.1	21 14 0.0	+0 2 02.1
" 6	" "	"	7 07 03.5	7 05 0.0	+0 2 03.5
" 6	" "	"	21 06 57.2	21 05 0.0	+0 1 57.2

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

1897phae.proj..4400

Date	Chronom.	Clock.	Time by Chron.	Time by Clock.	Error of Chron.		
Feb. 7	B&C 1182	B. 394	7 01 41.5	7 00 00	+0	1	41.5
" 7	" "	"	18 7 35.5	18 06 0.0	+0	1	35.5
" 7	" "	"	21 15 37.0	21 14 0.0	+0	1	37.0
" 8	" "	"	6 58 42.5	6 57 0.0	+0	1	42.5
" 8	" "	"	21 41 58.7	21 41 0.0	+0	0	58.7
" 9	" "	"	9 08 07.4	9 07 0.0	+0	1	07.4
" 10	" "	"	21 11 36.8	21 10 0.0	+0	1	36.8
" 11	" "	"	6 13 30.9	6 12 0.0	+0	1	30.9
" 11	" "	"	21 09 13.0	21 08 00	+0	1	13.0
" 12	" "	"	7 06 19.1	7 05 0.0	+0	1	19.1
" 12	" "	"	11 34 21.0	11 33 0.0	+0	1	21.0
" 12	" "	"	21 14 26.1	21 13 0.0	+0	1	26.1
" 13	" "	"	7 18 27.0	7 17 0.0	+0	1	27.0
" 13	" "	"	21 16 32.5	21 15 0.0	+0	1	32.5
" 14	" "	"	6 47 49.0	6 46 0.0	+0	1	49.0
" 15	" "	"	7 03 59.3	7 02 0.0	+0	1	59.3
" 15	" "	"	21 16 50.7	21 15 0.0	+0	1	50.7
" 16	" "	"	7 12 53.7	7 11 0.0	+0	1	53.7
" 17	" "	"	21 12 08.1	21 10 0.0	+0	2	08.1
" 18	" "	"	7 05 11.6	7 03 0.0	+0	2	11.6
" 18	" "	"	21 54 17.7	21 52 0.0	+0	2	17.7
" 19	" "	"	7 07 09.5	7 04 0.0	+0	3	09.5
" 19	" "	"	21 17 41.1	21 14 0.0	+0	3	41.1
" 20	" "	"	21 15 02.8	21 11 0.0	+0	4	02.8
" 21	" "	"	6 51 13.5	6 47 0.0	+0	4	13.5
Wound & reset B&C 1182 Feb. 24, 1901.							
Feb 24	B&C	B394	6 02 37.2	6 03 0.0	-0	0	22.8
" 25	"	"	6 53 31.0	6 53 0.0	-0	0	29.0
" 26	"	"	7 09 38.8	7 10 00	-0	0	21.2
" 26	"	"	21 68 38.2	21 66 0.0	-0	0	21.8

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

1897phae.proj..4400

1901

Date	Chronom.	Clock.	Time by Chron.	Time by Clock	Error of Chron.
~~Feb. 26, 1901~~	~~B&C 1182~~	~~B. 394~~	~~7 09 38.8~~	~~7 10 0.0~~	~~-0 0 21.2~~
Feb. 27	B&C 1182	B 394	6 47 42.0	6 48 0.0	-0 0 18.0
" 27	" "	"	21 16 41.6	21 17 0.0	-0 0 18.4
" 28	" "	"	7 03 46.2	7 04 0.0	-0 0 13.8
Mar. 1	" "	"	11 30 56.0	11 31 0.0	-0 0 04.0
" 1	" "	"	21 43 02.5	21 43 0.0	+0 0 02.5
" 2	" "	"	7 53 15.2	7 53 0.0	+0 0 15.2
" 3	" "	"	21 13 29.5	21 13 0.0	+0 0 29.5
" 4	" "	"	21 18 51.0	21 18 0.0	+0 0 51.0
" 5	" "	"	21 20 15.5	21 19 0.0	+0 1 15.5
" 6	" "	"	7 08 20.2	7 07 0.0	+0 1 20.2
" 6	" "	"	11 16 21.5	11 15 0.0	+0 1 21.5
" 6	" "	"	21 17 19.1	21 16 0.0	+0 1 19.1
" 7	" "	"	6 57 29.1	6 56 0.0	+0 1 29.1
" 7	" "	"	11 05 28.2	11 04 0.0	+0 1 28.2
" 7	" "	"	21 11 32.0	21 10 0.0	+0 1 32.0
" 8	" "	"	21 11 42.1	21 10 00	+0 1 42.1
" 10	" "	"	21 11 01.2	21 09 0.0	+0 2 01.2
" 11	" "	"	21 10 40.1	21 08 00	+0 2 40.1
" 12	" "	"	7 07 57.6	7 05 00	+0 2 57.6
" 12	" "	"	11 52 54.0	11 50 00	+0 2 54.0
" 12	" "	"	22 55 56.0	22 53 00	+0 2 56.0
" 13	" "	"	21 11 09.6	21 08 00	+0 3 09.6
" 14	" "	"	8 56 17.5	8 53 00	+0 3 17.5
" 14	" "	"	21 17 20.6	21 14 00	+0 3 20.6
" 15	" "	"	7 17 21.0	7 14 00	+0 3 21.0
" 15	" "	"	21 16 24.8	21 13 00	+0 3 24.8
" 16	" "	"	9 48 20.0	9 45 00	+0 3 20.0
" 17	" "	"	21 18 58.4	21 15 00	+0 0 01.6

Reset B&C before comp.

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

1897phae.proj..4400

1901

Date	Chronom.	Clock.	Time by Chr.	Time by Clock.	Error of Chr.
Mar. 18	B&C 182	B 394	7 40 05.0	7 40 00	+0 0 05.0
" 18	" "	"	15 45 28.5	16 8 00	−0 22 41.5
" 18	" "	"	16 29 29.3	16 52 00	−0 22 46.7
" 18	" "	"	20 48 26.5	21 11 00	−0 22 43.5
" 19	Reset B&C 182.				
" 19	B&C 182	B 394	7 06 57.5	7 07 00	−0 0 2.5
" 19	" "	"	21 08 43.5	21 10 00	−0 1 16.5
" 20	" "	"	21 09 56.7	21 11 00	−0 1 3.3
" 21	" "	"	21 07 06.8	21 09 00	−0 1 53.2
" 22	" "	"	6 59 12.6	7 00 00	−0 0 47.4
" 22	" "	"	11 51 12.5	11 52 00	−0 0 47.5
" 22	" "	"	21 40 20.2	21 41 00	−0 0 39.8
" 23	" "	"	6 46 25.6	6 47 00	−0 0 34.4
" 24	" "	"	21 9 05.6	21 9 00	+0 0 5.6
" 25	" "	"	6 58 57.6	6 59 00	−0 0 2.4
" 25	" "	"	21 12 58.5	21 13 00	−0 0 1.5
" 26	" "	"	21 01 02.6	21 01 00	+0 0 2.6
" 27	" "	"	11 20 15.6	11 20 00	+0 0 15.6
" 27	" "	"	21 06 18.5	21 06 00	+0 0 18.5
" 28	" "	"	7 4 23.0	7 04 00	+0 0 23.0
" 28	" "	"	15 32 15.0	15 32 00	+0 0 15.0
" 28	" "	"	21 11 14.8	21 11 00	+0 0 14.8
" 29	" "	"	7 01 27.4	7 01 00	+0 0 27.4
" 29	" "	"	21 15 27.5	21 15 00	+0 0 27.5
" 30	" "	"	6 56 36.5	6 56 00	+0 0 36.5
" 31	" "	"	21 10 37.5	21 10 00	+0 0 37.5
April 1	" "	"	6 56 44.0	6 56 00	+0 0 44.0
" 1	" "	"	21 11 51.6	21 11 00	+0 0 51.6

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

1897phae.proj.4400

Factor = +15m 27.8s.67

Date	Chron.	Clock	Time by chron.	Time by clock	Error of Chron
Apr. 2	B&C 1&2	B 394	21 17 03.5	21 16 00	+0 1 03.5
" 2	F. 3451	F. 1327	22 18 05.1	22 18 00	+0 0 05.1
" 3	B&C 1&2	B 394	21 12 33.0	21 11 00	+0 1 33.0
" 4	" "	" "	21 14 44.5	21 13 00	+0 1 44.5
" 5	" "	" "	21 15 50.9	21 14 00	+0 1 50.9
" 7	" "	" "	21 18 48.1	21 16 00	+0 2 48.1
" 7	F 3451	F 1327	22 40 03.0	22 40 01.0	+0 0 02.0
" 8	B&C 1&2	B 394	21 15 16.4	21 12 00	+0 3 16.4
" 9	" "	" "	21 16 36.7	21 13 00	+0 3 36.7
" 10	F. 3451	"	22 41 43.5	21 10 00	+0 0 7.8 of true S.T.
" 10	B&C	"	21 19 38.5	21 16 00	+0 3 38.5
" 11	" "	"	15 35 51.5	15 32 00	+0 3 51.5
" 11	" "	"	16 15 49.0	16 12 00	+0 3 49.0
	B&C restarted before fol. comps.				
" 11	F. 3451	"	22 20 06.2	22 17 00	+0 3 06.2
" 12	B. & C.	"	7 03 04.7	7 00 00	+0 3 04.7
" 12	" "	"	12 22 05.9	12 19 00	+0 3 05.9
" 12	" "	"	21 51 09.6	21 48 00	+0 3 09.6
" 13	" "	"	6 51 10.8	6 48 00	+0 3 10.8
" 14	" "	"	21 07 30.5	21 04 00	+0 3 30.5
" 14	Reset 3451				
" 14	F 3451	"	22 54 51.5	21 07 00	+0 0 13.8 of T.S.T.
" 15	"	"	23 06 48.0	21 15 00	+0 0 12.5
" 15	B&C	"	21 16 40.6	21 13 00	+0 3 40.6
" 16	"	"	21 14 49.0	21 11 00	+0 3 49.0
" 17	"	"	21 12 02.5	21 08 00	+0 4 02.5
" 17	F 3451	"	23 05 39.6	21 06 00	+0 0 12.5 of True S.T.
" 19	B&C	B 394	10 44 56.0	10 41 00	+0 3 56.0
" 19	"	"	21 22 00.4	21 18 00	+0 4 00.4

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

1897phae.proj...4400

Date	Chron.	clock.	Time by Chron.	Time by Clock.	Error of Chron.	
~~Apr 21~~	~~F3451~~	~~B394~~	~~23 23 20.9~~	~~21 10 0.0~~		
" 21	B&C1182	"	21 16 57.5	21 13 00	+0 3 57.5	
" 21	F.3451	"	23 49 24.5	21 34 0.0	+0 0 6.6	of True S.T.
" 22	B&C1182	"	21 13 19.9	21 09 00	+0 4 19.9	
" 22	F3451	"	24 17 22.5	21 34 00	+0 0 4.1	of True S.T.
" 23	"	"	23 30 10.0	21 07 00	+0 0 3.4	" " " "
" 23	B&C1182	"	21 14 19.5	21 10 0.0	+0 4 19.5	
" 24	" "	"	21 08 43.6	21 04 00	+0 4 43.6	
" 24	F 3451	"	23 33 03.9	21 06 00	+0 0 0.9	of True S.T.
" 25	"	"	23 31 38.6	21 01 00	−0 0 0.1	" " " "
" 25	B&C1182	"	21 17 52.0	21 13 0.0	+0 4 52.0	
" 26	B&C1182	"	7 09 52.0	7 05 00	+0 4 52.0	
" 26	" "	"	15 13 52.2	15 9 0.0	+0 4 52.2	
" 26	F.3451	"	23 38 55.0	21 04 00	−0 0 0.8	of True S.T.
" 26	B&C1182	"	21 12 53.5	21 08 00	+0 4 53.5	
" 27	B&C1182	"	7 7 57.5	7 03 0.0	+0 4 57.5	
" 28	F 3451	"	23 46 47.0	21 04 00	−0 0 1.8	of True S.T.
" 28	B&C1182	"	21 13 42	21 08 00	+0 5 42	
" 28	B&C1182	Reset B&C1182 "	21 10 00.4	21 10 00	+0 0 0.4	
" 29	B&C1182	"	7 03 14.5	7 03 00	+0 0 14.5	
" 29	F3451	"	24 05 46.6	21 19 00	−0 0 1.2	of True S.T.
" 29	B&C1182	"	21 24 29.5	21 24 00	+0 0 29.5	
" 30	F.3451	"	23 52 40.1	21 02 00	−0 0 1.1	of True S.T.
" 30	B&C1182	"	21 05 42.0	21 05 00	+0 0 42.0	
May 1	B&C1182	"	7 00 50.6	7 00 00	+0 0 50.6	
" 1	F3451	"	23 54 35.5	21 00 00	−0 0 2.3	of True S.T.
" 1	B&C1182	"	21 7 58.0	21 7 00	+0 0 58.0	
" 2	F3451	"	24 00 31.1	21 02 00	−0 0 3.6	of True S.T.
" 2	B&C1182	"	21 07 05.0	21 06 00	+0 1 05.0	

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

1897phae.proj.4400

Facta = +15m 27.67

Date.	Chron.	Clock	Time by Chron.	Time by Clock	error of Chron.
May 3	B&C1182	B 394	6 50 09.0	6 49 00	+0 1 09.0
" 3	F 3451	"	24 19 29.0	21 17 00	+0 0 47
" 3	B&C1182	"	21 21 13.2	21 20 00	+0 1 13.2
" 4	B&C1182	"	7 06 19.5	7 05 00	+0 1 19.5
" 5	F 3451	"	24 16 17.9	21 06 00	-0 0 7.1
" 5	B&C1182	"	21 10 26.0	21 09 00	+0 1 26.0
" 6	B&C1182	"	7 06 38.5	7 05 00	+0 1 38.5
" 6	" "	"	13 6 36.2	13 5 00	+0 1 36.2
" 6	F 3451	"	24 39 17.0	21 25 00	-0 0 7.7
" 6	B&C1182	"	21 29 41.5	21 28 00	+0 1 41.5
" 7	" "	"	7 00 49.6	6 59 00	+0 1 49.6
" 7	F3451	"	24 26 10.1	21 08 00	-0 0 8.2
" 7	B&C1182	"	21 15 00	21 13 00	+0 2 00.0
" 8	" "	"	6 59 03.7	6 57 00	+0 2 03.7
" 8	F3451	"	24 34 07.0	21 12 00	-0 0 8.7
" 8	B&C1182	"	21 14 59.5	21 15 00	-0 0 00.5
" 9	B&C1182	"	6 54 06.5	6 54 00	+0 0 06.5
" 9	F3451	"	24 31 00.6	21 05 00	-0 0 10.5
" 9	B&C1182	"	21 08 20.6	21 08 00	+0 0 20.6
" 10	F3451	"	24 39 57.5	21 10 00	-0 0 12.4
" 10	B&C1182	"	21 16 29.0	21 16 00	+0 0 29.0
" 11	" "	"	7 08 34.2	7 08 00	+0 0 34.2
" 12	" "	"	12 37 53.0	12 37 00	+0 0 53.0
" 12	" "	"	13 25 51.1	13 25 00	+0 0 51.1
" 12	" "	"	22 31 56.9	22 31 00	+0 0 56.9
" 12	F3451	"	26 06 01.0	28 28 00	
" 13	B&C1182	"	7 07 05.5	7 06 00	+0 1 05.5
" 13	" "	"	21 21 55.8	21 21 00	+0 1 55.8
" 13	F3451	"	25 04 07.5	21 23 00	

peace B&C

peace F3451

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

1897phae.proj...4400

Date	Chron.	Clock.	Time by Chron	Time by Clock.	error of chron
May 14	B&C1182	B394	7 10 57.5	7 09 00	+0 01 57.5
" 14	F3451	"	24 57 00.5	21 12 00	
" 14	B&C1182	"	21 15 02.2	21 13 00	+0 02 02.2
" 15	" "	"	6 57 00	6 55 00	+0 02 00.0
" 15	F3451	"	24 53 53.8	21 05 00	
" 15	B&C1182	"	21 10 06.0	21 08 00	+0 02 06.0
" 16	" "	"	7 10 07.5	7 08 00	+0 02 07.5
" 16	F3451	"	25 01 50.0	21 09 00	
" 16	B&C1182	"	21 16 17.0	21 14 00	+0 02 17.0
" 17	" "	"	7 12 22.0	7 10 00	+0 2 22.0
" 17	F3451	"	25 04 46.0	21 08 00	
" 17	B&C1182	"	21 13 29.5	21 11 00	+0 2 29.5
" 19	F3451	"	24 12 35.5	21 08 00	
" 19	B&C1182	"	21 16 14.0	21 13 00	+0 3 14.0
" 20	F3451	"	25 17 31.0	21 09 00	
" 20	B&C1182	"	21 16 48.1	21 13 00	+0 3 48.1
" 21	"	"	7 15 48.0	7 12 00	+0 3 48.0
" 21	"	"	21 04 53.4	21 01 00	+0 3 53.4
" 21	F3451	"	25 14 25.6	21 02 00	
" 22	B&C1182	"	7 16 59.0	7 13 00	+0 3 59.0
" 22	F3451	"	25 27 22.7	21 11 00	
" 22	B&C1182	"	[illegible]		
" 22	B&C1182	B394	21 15 07.0	21 15 00	+0 0 7.0
" 23	"	"	7 10 12.0	7 10 00	+0 0 12.0
" 23	F3451	"	25 40 21.0	21 20 00	
" 23	B&C1182	"	21 23 18.5	21 23 00	+0 0 18.5
" 24	F3451	"	25 32 16.0	21 08 00	
" 24	B&C1182	"	21 10 50.0	21 10 00	+0 0 50.0

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

1897phae.proj..4400

1901

Date	Chron.	Clock	Time by Chron.	Time by Clock	Error of Chron
May 26	F3451	B394	25 39 08.5	21 07 00	
" 26	B&C1182	"	21 12 59.5	21 11 00	+0 1 59.5
" 27	F3451	"	25 39 02.5	21 03 00	
" 27	B&C1182	"	21 06 20.5	21 04 00	+0 2 20.5
" 28	F3451	"	25 40 58.0	21 05 00	
" 28	B&C1182	"	21 12 32.8	21 10 00	+0 2 32.8
" 30	" "	"	21 17 40.0	21 15 00	+0 2 40.0
" 30	F3451	"	26 04 57.2	21 17 00	
" 31	B&C1182	"	7 09 42.5	7 07 00	+0 2 42.5
" 31	F3451	"	26 00 45.1	21 09 00	
" 31	B&C1182	"	21 14 46.4	21 12 00	+0 2 46.4
June 2	F3451	"	26 06 37.3	21 07 00	
" 2	B&C1182	"	21 12 30.5	21 10 00	+0 2 33.5
" 3	F3451	"	26 17 35.3	21 14 00	
" 3	B&C1182	"	21 19 38.0	21 17 00	+0 2 38.0
" 4	"	"	7 12 36.5	7 10 00	+0 2 36.5
" 4	"	"	12 44 46.0	12 42 00	+0 2 46.0
" 4	"	"	13 32 39.5	13 30 00	+0 2 39.5
" 4	F3451	"	26 16 31.0	21 09 00	
" 4	B&C1182	"	21 15 42.1	21 13 00	+0 2 42.1
" 5	"	"	7 13 49.7	7 11 00	+0 2 49.7
" 5	F3451	"	26 38 29.0	21 27 00	
" 5	B&C1182	"	21 33 57.2	21 31 00	+0 2 57.2
" 6	"	"	7 14 01.0	7 11 00	+0 3 01.0
" 6	F3451	"	26 20 21.5	21 05 00	
" 6	B&C1182	"	21 11 08.5	21 08 00	+0 3 08.5
" 7	F3451	"	26 26 20.0	21 07 00	
" 7	B&C1182	"	21 12 36.6	21 09 00	+0 3 36.6
" 8	"	"	7 09 49.2	7 06 00	+0 3 49.2

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

1897phae..proj..4400

1901

Date	Chron.	Clock.	Time by Chron.	Time by clock.	error of Chron.	
June 9	F345-1	B394	26 30 11.5	21 03 00		
" 9	B&C1182	"	21 09 13.0	21 05 00	+0 4 13.0	
" 10	" "	"	7 13 22.6	7 09 00	+0 4 22.6	
" 10	F345-1	"	26 47 08.8	21 06 00		
" 10	B&C1182	"	21 30 30.6	21 26 00	+0 4 30.6	
" 11	B&C1182	"	7 13 37.0	7 09 00	+0 4 37.0	
" 11	" "	"	14 44 41.0	14 40 00	+0 4 41.0	
" 11	" "	"	15 34 37.5	15 30 00	+0 4 37.5	
" 11	F345-1	"	26 55 05.6	21 20 00		
" 11	B&C1182	"	21 27 39.5	21 23 00	+0 4 39.5	
" 12	" "	"	7 14 47.0	7 10 0.0	+0 4 47.0	
" 12	F345-1	"	26 48 01.3	21 09 00		
" 12	B&C1182	"	21 19 57.0	21 15 00	+0 4 57.0	
" 13	" "	"	7 18 09.0	7 18 00	+0 0 09.0	Run B&C.
" 13	F345-1	"	26 50 58.1	26 08 00		
" 13	B&C1182	"	21 09 28.5	21 09 00	+0 0 28.5	
" 14	" "	"	7 33 33.7	7 33 00	+0 0 33.7	
" 14	" "	"	15 19 2.0	15 18 00	+0 1 02.0	
" 14	F345-1	"	26 48 54.5	26 02 00		
" 14	B&C1182	"	21 05 11.0	21 04 00	+0 1 11.0	
" 16	F3451	"	27 04 45.8	21 10 00		
" 17	"	"	27 11 43.8	21 13 00		
" 18	"	"	27 37 43.0	21 35 00		
" 19	B394	"	7 07 04.0	7 0 00	+0 2 04.0	
" 19	F3451	"	27 13 34.0	21 07 00		
" 20	"	"	27 26 32.0	21 16 00		
" 21	"	"	27 32 31.5	21 18 00		
" 23	"	"	27 33 18.6	21 11 00		
" 24	"	"	27 35 12.9	21 09 00		
" 25	"	"	27 26 [illegible]	21 16 00		

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

1897phae.proj..4400

1901

Date	Chron.	Clock	Time by Chron.	Time by clock	Error of Chron.
June 26	F3451	B394	27 47 02.8	21 13 00	
" 27	"	"	27 +3 45 05.78	21 08 00	
" 27	B&C1182	"	21 15 21.5	21 15 00	+0 0 21.5
" 28	"	"	7 33 38.8	7 33 00	+0 0 38.8
" 28	F3451	"	27 46 05.30	21 05 00	
" 28	B&C1182	"	21 09 56.5	21 09 00	
" 29	"	"	7 36 12.8	7 35 00	+0 1 12.8
" 30	F3451	"	27 50 43.8	21 01 00	
" 30	B&C1182	"	21 04 00	21 02 00	+0 2 00
July 1	"	"	7 16 14.1	7 14 00	+0 2 14.1
" 1	F3451	"	28 10 42.0	21 17 00	
" 1	B&C1182	"	21 23 32.1	21 21 00	+0 2 32.1
" 2	[illegible]	"	11 59 56 13.5	11 56 00	+0 3 13.5
" 2	"	"	12 45 10.8	12 42 00	+0 3 10.8
" 2	F3451	"	28 06 36.6	21 09 00	
" 3	B&C1182	"	7 17 37.3	7 14 00	+0 3 37.3
" 4	F3451	"	28 16 27.5	28 11 00	
" 4	B&C	"	21 19 20.8	21 15 00	+0 4 20.8
" 5	"	"	7 36 37.2	7 32 00	+0 4 37.2
" 7	F3451	"	28 20 15.3	21 03 00	X
" 7	B&C	"	21 09 16.5	21 04 00	+0 5 16.5
" 8	"	"	7 21 28 02.1	7 21 00	+0 0 02.1
" 8	F3451	"	28 26 10.1	21 05 00	
" 8	B&C	"	21 07 02	21 07 00	+0 0 02
" 9	"	"	21 03 17.0	21 03 00	+0 0 17.0
" 9	F3451	"	28 29 07.2	21 04 00	
" 10	B&C	"	7 25 21.5	7 25 00	+0 0 21.5
" 10	"	"	21 00 28.0	21 00 00	+0 0 28.0
" 10	F3451	"	28 31 03.0	21 02 00	

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

1897phae..proj..4400

1901

Date	Chron	Clock	Time by Chronom.	Time by Clock	Error of Chron.
July 11	F3451	B394	28 42 00	21 09 00	
" 11	B&C	"	21 10 26.2	21 10 00	+0 0 26.2
" 12	"	"	7 24 31.0	7 24 00	+0 0 31.0
" 12	F3451	"	29 25 02.0	21 47 00	
" 12	B&C	"	21 51 30.0	21 50 00	+0 1 30.0
" 13	"	"	7 35 24.0	7 34 00	+0 1 24.0
" 14	F3451	"	28 55 48.5	21 11 00	
" 14	B&C	"	21 15 21.5	21 14 00	+0 1 21.5
" 15	"	"	7 32 23.5	7 31 00	+0 1 23.5
" 16	"	"	8 45 22.8	8 44 00	+0 1 22.8
" 16	"	"	7 26 40.5	7 25 00	+0 1 40.5
" 19	"	"	7 29 40.0	7 27 00	+0 2 40.0
" 20	"	"	7 32 03.5	7 30 00	+0 2 03.5 reset B&C
" 22	"	"	7 29 45.2	7 30 00	-0 0 14.8
" 22	"	"	10 00 47.5	10 01 00	-0 0 12.5
" 22	"	"	10 38 48.1	10 39 00	-0 0 11.9
" 23	"	"	9 42 56.6	9 42 00	-0 0 3.4
" 23	"	"	10 24 57.3	10 25 00	-0 0 2.7
" 25	"	"	7 30 26.8	7 30 00	+0 0 26.2
" 26	"	"	7 32 16.5	7 34 00	+0 1 16.5
" 27	"	"	7 29 17.1	7 28 00	+0 2 17.1
" 27	"	"	9 05 17.9	9 03 00	+0 2 17.9
" 27	"	"	9 43 13.0	9 41 00	+0 2 13.0
" 30	"	"	7 35 31.8	7 32 00	+0 3 31.8
Oct 1, 1901	B&C 182	Ball 103	11 ~~07 00.0~~ 11 26.6	11 07 00	+0 4 26.6
" 2	"	"	21 17 54.0	21 13 00	+0 4 54.0
" 3	"	"	8 14 00.5	8 09 00	+0 5 00.5
" 4	"	"	7 06 58.2	7 02 00	+0 4 58.2

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

1897phae.proj..4400

1901

+ = fast
− = slow

Date.	Chron.	Clock.	Time by chron.	Time by clock.	Error of Chron.
Oct 5	B8C1182	Ball 103	6 54 01.0	6 49 00	+0 5 01.0
" 6	"	"	21 14 42.0	21 09 00	+0 5 42.0
" 7	"	"	7 10 49.0	7 05 00	+0 5 49.0 Fast B8C.
" 8	"	"	7 00 48.1	7 01 00	−0 0 11.9
" 8	"	"	7 44 48.5	7 45 00	−0 0 11.5
" 9	"	"	21 10 23.6	21 10 00	+0 0 23.6
" 10	"	"	7 01 23.0	7 01 00	+0 0 23.0
" 11	"	"	7 04 30.1	7 04 00	+0 0 30.1
" 15	"	"	7 01 24.0	7 00 00	+0 1 24.0
" "	"	"	8 18 25.0	8 10 00	+0 1 25.0
" 16	"	"	6 44 42.0	6 43 00	+0 1 42.0
" 18	"	"	7 04 08.0	7 02 00	+0 2 08.0
" 19	"	"	7 30 02.0	7 28 00	+0 2 02.0
" 21	"	"	6 52 45.1	6 50 00	+0 2 45.1
" 23	"	"	7 07 00.5	7 04 00	+0 3 00.5
" 22	"	"	8 03 31.8	8 01 00	+0 2 31.8
" 23	"	"	7 07 03.2	7 04 00	+0 3 03.2
		Reset B8C 1182			
" 24	"	"	7 01 26.0	7 02 00	−0 0 34.0
" 25	"	"	5 50 41.8	5 51 00	−0 0 14.2
" 26	"	"	7 02 41.3	7 04 00	+0 1 18.7
		Reset B8C 8 8341			
" 28	"	"	7 05 44.5	7 06 00	−0 0 15.5
" 29	"	"	7 02 01.5	7 02 00	+0 0 01.5
" 30	"	"	6 52 17.5	6 52 00	+0 0 17.5
" 31	"	"	6 53 36.4	6 53 00	+0 0 36.4
Nov. 1	"	"	12 13 03.0	12 12 00	+0 1 03.0
" 2	"	"	11 32 59.5	11 32 00	+0 0 59.5
" 4	"	"	5 41 33.0	5 41 00	+0 0 33.0
" 5	"	"	6 53 53.5	6 53 00	+0 0 53.5

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

1897phae.proj..4400

1901

Date	Chron.	Clock.	Time by Chron.	Time by Clock	Error of Chronom.
Nov. 6	B&C 1182	Ball 103	7 16 04.6	7 15 00	+0 1 04.6
" 7	"	"	7 02 21.0	6 57 00	+0 7 21.0
" "	Ball 103 is 6m 18.2 slow of true time due to a kink in the running gear of the clock.				
" 9	B&C 1182	Ball 103	6 58 33.2	6 57 00	+0 1 33.2
" 14	"	"	9 14 01.5	9 11 00	+0 3 01.5
	Reset B&C 1182.				
" 14	B&C 1182	Ball 103	11 32 03.5	11 32 00	+0 0 03.5
" 14	"	"	17 51 06.8	11 51 00	+0 0 06.8
" 15	"	"	7 05 15.5	7 05 00	+0 0 15.5
" 15	"	"	11 17 18.2	11 11 00	+0 0 18.2
" 15	"	"	17 11 22.0	17 11 00	+0 0 22.0
" 17	Reset B&C 1182				
" 17	B&C 1182	Ball 103	21 08 00.7	21 08 00	+0 0 00.7
" 20	"	"	5 49 34.0	5 50 00	−0 0 26.0
" 21	"	"	7 08 46.0	7 09 00	−0 0 46.0
" 22	"	"	7 17 53.5	7 18 00	−0 0 06.5
" 25	"	"	7 14 42.5	7 14 00	+0 0 42.5
" "	F 3451	"	13 43 43.0	21 09 00	
" 26	"	"	13 37 37.0	21 09 00	
" 27	B&C 1182	"	7 08 24.0	7 07 00	+0 1 24.0
" 28	"	"	7 09 59.5	7 09 00	+0 1 59.5
" "	F 3451	"	13 59 31.7	21 13 00	
" 29	"	"	13 53 27.4	21 03 00	
" 29	B&C 1182	"	21 07 14.8	21 05 00	+0 2 14.8
" 30	"	"	7 05 26.5	7 03 00	+0 2 26.5
Dec. 1	F 3451	"	14 06 22.4	21 08 00	
" 1	B&C 1182	"	21 11 46.8	21 09 00	+0 2 46.8

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

1897phae.proj..4400

1901 Dec.

Date	Chron	Clock	Time by chronom.	Time by clock.	Error of Chron
1901 12 2	B&C 1182	Ball 103	6 55 47.5	6 58 00	+0 2 47.5
" "	"	"	10 59 47.0	10 57 00	+0 2 47.0
" "	F 3451	"	14 12 18.5	21 10 00	
" 3	"	"	14 21 16.2	21 18 00	
" 4	B&C 1182	"	7 02 59.0	7 00 00	+0 2 59.0
" 5	"	"	6 30 10.6	6 27 00	+0 3 10.6
" 5	F 3451	"	14 27 08.5	21 13 00	
" 6	B&C 1182	"	6 30 04.5	6 27 00	+0 3 04.5
" 6	"	"	11 08 55.6	11 05 00	+0 2 55.6
" 6	F 3451	"	21 02 00.0	14 20 01.0	Fresh Bat.
" 6	B&C 1182	"	21 03 57.3	21 04 00	-0 0 02.7
" 7	"	"	7 03 55.5	7 04 00	-0 0 04.5
" 8	F 3451	"	14 35 54.4	21 10 00	
" 9	B&C 1182	"	6 09 55.5	6 10 00	-0 0 04.5
" 9					
10	F 3451	"	14 38 56.4	21 09 00	
" 10	B&C 1182	"	7 03 10.0	7 03 00	+0 0 10.0
" 10	F 3451	"	14 40 66.2	21 07 0.0	
" 11	B&C 1182	"	7 01 26.0	7 01 00	+0 0 26.0
" 11	F 3451	"	14 45 41.5	21 08 00	
" 12	B&C 1182	"	7 04 37.5	7 04 00	+0 0 37.5
" 12	F 3451	"	14 45 36.5	21 04 00	
" 16	B&C 1182	"	5 10 47.0	5 09 00	+0 1 47.0
" 16	F 3451	"	14 57 19.4	21 00 00	
" 16	B&C 1182	"	21 02 47.6	21 01 00	+0 1 47.6
" 17	F 3451	"	15 11 16.0	21 10 00	
" 18	B&C 1182	"	7 04 10.0	7 02 00	+0 2 10.0
" 18	F 3451	"	15 15 10.8	21 10 00	
" 19	F 3451	"	15 19 05.7	21 10 00	
20 19	F 3451	"	15 22 01.0	21 09 00	

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

1897phae.proj..4400

Dec. 1901 — Jan 1902

Date	Chron	Clock	Time by chronom	Time by clock.	Error of chron.
01 12 20	B&C1182	Ball 103	21 13 09.0	21 10 00	+0 3 09.0
12 21	"	"	5 31 19.2	5 28 00	+0 3 19.2
12 22	F3451	"	15 30 52.6	21 10 00	
12 24	Reset B&C 1182 0m 1.5 fast at 6:00				
12 25	F3451	Ball 103	15 38 40.0	21 06 00	
12 26	"	"	15 07 36.6	21 15 00	
12 27	B&C1182	"	5 36 00	5 36 00	0 00 00
12 27	F3451	"	15 49 30.5	21 09 00	
12 30	B&C 1182	"	9 44 59.7	9 44 00	+0 00 59.7
12 30	F3451	"	14 01 15.7	21 09 00	
12 31	B&C1182	"	7 04 12.2	7 03 00	+0 1 12.2
02 1 1	"	"	5 47 32.6	5 46 00	+0 1 32.6
02 1 1	F3451	"	16 15 07.2	21 15 00	
1 2	B&C1182	"	7 05 43.6	7 04 00	+0 1 43.6
1 3	"	"	5 36 31.0	5 35 00	+0 1 31.0
1 3	F3451	"	16 19 57.5	21 12 00	
1 4	B&C1182	"	8 39 49.0	8 38 00	+0 1 49.0
1 5	"	"	5 27 20.0	5 25 00	+0 2 20.0
1 5	F3451	"	16 26 50.0	21 11 00	
1 5	B&C1182	"	21 14 34.7	21 12 00	+0 2 34.7
1 6	"	"	6 01 37.5	6 59 00	+0 2 37.5
1 6	F3451	"	16 30 45.5	21 11 00	
1 7	"	"	16 34 41.2	21 11 00	
1 8	"	"	16 34 36.0	21 07 00	
1 8	B&C1182	"	21 10 56.8	21 08 00	+0 2 56.8
1 9	Reset B&C 1182				
1 9	B&C1182	Ball 103	6 08 05.0	6 09 00	-0 0 55.0
1 9	F3451	"	16 35 30.8	21 04 00	

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

1897phae.proj..4400

Jan 1902 — 1902

	Chron	Clock	Time by Chron.	Time by Clock.	Error of Chron.
~~1902 Jan. 10~~	~~F 3451~~	~~Ball 103~~			
1902 Jan. 10	F 3451	Ball 103	16 43 27.0	21 08 00	
" 12	"	"	16 52 18.6	21 09 00	
" 12	B&C 1182	"	21 11 19.2	21 10 00	
" 13	"	"	6 23 10.8	6 22 00	+0 1 10.8
" 13	F 3451	"	15 57 14.5	21 10 00	
" 14	B&C 1182	"	9 12 41.0	9 12 00	+0 0 41.0
" 14	"	"	9 22 40.5	9 22 00	+0 0 40.5
" 14	F 3451	"	14 48 09.3	21 07 00	
" 15	B&C 1182	"	7 03 43.5	7 03 00	+0 0 43.5
" 16	"	"	8 44 49.6	8 44 00	+0 0 49.6
" 16	F 3451	"	16 56 54.5	20 54 00	
" 17	B&C 1182	"	7 06 45.5	7 06 00	+0 0 45.5
" 19	F 3451	"	17 16 43.0	21 06 00	
" 20	"	"	17 21 43.0	21 07 00	
" 20	B&C 1182	"	21 12 08.5	21 10 00	+0 2 08.5
" 21	F 3451	"	17 23 39.0	21 05 00	
" 22	B&C 1182	"	7 46 27.5	7 44 00	+0 2 27.5
" 22	F 3451	"	17 30 35.6	21 08 00	
" 23	B&C 1182	"	7 08 40.5	7 06 00	+0 2 40.5
" 23	F 3451	"	18 26 40.0	22 00 00	
" 23	"	F 1327	18 28 27.1	18 29 00	
" 23	F 1327 is	(6 sec slower	of these	Sid. Times.	
" 24	B&C 1182	Ball 103 Reset	7 05 ~~55.5~~ 13 & Clock	7 03 00	+0 2 55.5
" 25	"	"	7 00 ~~00.7~~ 00.75	7 00 00	+0 0 07.5
" 27	"	"	7 03 44.5	7 03 00	+0 0 44.5
" 28	"	"	7 05 57.0	7 05 00	+0 0 57.0
" 29	F 3451	"	17 54 01.6	21 04 00	
" 29	B&C 1182	"	21 05 59.2	21 05 00	+0 0 59.2
" 30	"	"	7 05 13.0	7 04 00	+0 1 13.0

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

1897phae.proj..4400

Date			Time by Chron.	Time by Clock	Error of Chron.
Feb. 3, 1902	B&C 1182	Ball 103	7 06 28.2	7 04 00	+0 2 28.2
5 "	"	"	7 04 04.8	7 01 00	+0 3 04.8
5 "	F 3451	"	18 27 32.8	21 10 00	
6 "	B&C 1182	"	7 06 17.5	7 03 00	+0 3 17.5
6 "	F 3451	"	18 28 27.5	21 06 00	
7 "	B&C 1182	"	7 05 23.0	7 02 00	+0 3 23.0
7 "	F 3451	"	18 31 23.0	21 06 00	
9 "	"	"	18 42 15.5	21 09 00	
9 "	B&C 1182	"	21 13 34.0	21 10 00	+0 3 34.0
10 "	"	"	7 04 30.7	7 01 00	+0 3 30.7
10 "	F 3451	"	18 44 11.0	21 07 00	
11 "	B&C 1182	"	7 02 45.5	6 59 00	+0 3 45.5
11 "	F 3451	"	18 41 05.1	21 00 00	
12 "	B&C 1182	"	7 08 50.6	7 05 00	+0 3 50.6
13 "	F 3451	"	16 58 57.0	21 10 00	
14 "	Reset B&C 1182				
17 "	B&C	Ball	7 05 08.0	7 05 00	+0 0 08.0
18 "	F 3451	"	19 09 39.2	21 05 00	
18 "	B&C	"	8 48 50.6	8 48 00	+0 0 50.6
19 "	"	"	7 05 02.0	7 02 00.0	+0 1 02.0
20 "	"	"	7 05 10.0	7 04 00	+0 1 10.0
20 "	F 3451	"	17 25 24.9	21 09 00	
23	Reset B&C & F 3451				
23	B&C	Ball	21 01 00.8	21 01 00	+0 0 00.8
23	F 3451	F 1327	19 36 00.8	19 36 01.0	−0 0 00.2
23	F 3451	Ball	19 37 18.0	21 08 00	
24	B&C	"	7 05 04.5	7 05 00	+0 0 04.5
26	F 3451	"	19 44 03.3	21 03 00	
27	B&C	"	21 06 10.0	21 05 00	+0 1 10.0

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

1897phae.proj..4400

Feb. 27, 1902 to Mar. 18 inclus.

		chron.	clock	chron.	clock	error
Feb	27	B&C 1182	Ball 103	7 06 19.5	7 05 00	+0 01 19.5
	27	F 3451	"	19 48 59.0	21 04 00	
Mar.	1	Reset B&C 1182				
	1	B&C 1182	Ball 103	6 59 38.5	0.0 00	-0 0 21.5
	3	"	"	7 00 47.7	7 01 00	-0 0 12.3
	3	"	"	10 20 48.0	10 21 00	-0 0 12.0
	3	F 3451	"	20 02 37.5	21 02 00	
	4	B&C 1182	"	7 03 59.4	7 04 00	-0 0 00.6
	4	F 3451	"	20 07 32.5	21 03 00	
	5	"	"	20 20 28.5	21 12 00	
	6	B&C	"	7 03 51.1	7 04 00	+0 0 51.1
	6	F 3451	"	20 22 24.2	21 10 00	
	9	"	"	20 25 09.6	21 01 00	
	9	B&C 1182	"	21 04 44.5	21 02 00	+0 2 44.5
	10	"	"	7 00 57.0	6 57 00	+0 2 57.0
	10	F 3451	"	20 32 05.5	21 04 00	
	11	B&C 1182	"	7 19 16.5	7 16 00	+0 3 16.5
	11	F 3451	"	20 30 09.5	21 03 00	
	12	"	"	20 39 55.5	21 04 00	
	12	B&C 1182	"	21 11 59.0	21 08 00	+0 3 59.0
	13	F 3451	"	20 49 52.0	21 09 00	
	13	B&C 1182	"	21 14 02.5	21 10 00	
	14	Reset B&C 1182				
	14	B&C 1182	Ball 103	7 00 06.0	7 00 00	+0 00 06.0
	15	"	"	6 46 17.5	6 46 00	+0 00 17.5
	16	F 3451	"	20 59 40.0	21 08 00	
	18	B&C 1182	"	7 04 12.0	7 03 00	+0 1 12.0
	18	B&C 1182	"	9 39 40.0	9 38 00	+0 1 40.0
	18	F 3451	"	21 02 31.0	21 03 00	
	18	B&C 1182	"	21 06 46.2	21 05 00	+0 1 46.2

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

1897phae.proj..4400

1902

March 19	H 3451	Ball 103	21 08 26.0	21 05 00	
" 20	"	"	21 03 19.0	20 56 00	
" "	B & C 1182	"	21 00 39.8	20 59 00	+0 1 39.8
" 21	H 3451	"	21 14 15.6	21 03 00	
" 21	B & C 1182	"	21 06 31.5	21 05 00	+0 1 31.5
" 22	"	"	7 01 39.5	7 00 00	+0 1 39.5
" 23	H 3451	"	21 16 05.5	20 57 00	
" 23	B & C 1182	"	21 01 16.0	20 59 00	+0 2 16.0
" 24	"	"	6 49 27.5	6 47 00	+0 2 27.5
" 24	H 3451	"	21 26 01.3	21 03 00	
" 25	B & C 1182	"	6 51 37.0	6 49 00	+0 2 37.0
" 25	H 3451	"	21 29 57.0	21 03 00	
" 26	B & C 1182	"	7 01 17.4	6 58 00	+0 3 17.4
" 26	H 3451	"	21 35 53.0	21 05 00	
" 27	"	"	21 34 48.0	21 00 00	
" 27	B & C 1182	"	21 05 54.0	21 02 00	+0 03 54.0
" 28	H 3451	"	21 43 45.5	21 07 00	
" 29	"	"	21 49 38.0	21 03 00	
" 31	B & C 1182	"	7 13 33.5	7 08 00	+0 5 33.5

Reset B & C 1182

Apr. 1.	B & C 1182	Ball 103	6 52 47.0	6 53 00	-0 0 13.0
" 2	" "	"	6 54 36.7	6 55 00	-0 0 23.3
" 2	" "	"	11 04 58.5	11 05 00	-0 0 1.5
" 3	" "	"	7 06 01.0	7 06 00	+0 0 01.0
" 4	" "	"	6 48 07.5	6 48 00	+0 0 07.5
" 8	" "	"	21 09 27.0	21 09 00	+0 0 27.0
" 9	" "	"	21 01 59.6	21 01 00	+0 0 59.6
" 10	" "	"	21 05 57.8	21 04 00	+0 1 57.8
" 11	" "	"	7 20 07.6	7 18 00	+0 2 07.6
" 11	" "	"	21 12 22.2	21 10 00	+0 2 22.2
" 14	" "	"	7 04 36.7	7 02 00	+0 2 36.7

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

1897phae.proj..4400

April 15, 1902 —

+ = fast
− = slow

Date	Chron.	Clock	Time by Chronom.	Time by clock	Corrections to Chronom.
April 15	B&C1182	Ball 103	7 10 52.5	7 08 00	+0 2 52.5
" 16	"	"	7 10 04.5	7 07 00	+0 3 04.5
" 17	"	"	7 06 19.4	7 03 00	+0 3 19.4
" 18	"	"	7 04 28.1	7 01 00	+0 3 28.1
" 18	"	"	11 28 29.0	11 25 00	+0 3 29.0
" 19	"	"	7 28 27.0	7 25 00	+0 3 27.0
" 23	"	"	7 09 51.4	7 06 00	+0 3 51.4
" 24	"	"	7 11 04.4	7 07 00	+0 4 04.4
	Reset Chr. 11 h 2				
" 24	"	"	7 21 08.4	7 21 00	+0 0 08.4
" 24	"	"	11 18 07.8	8 " 18 00	+0 0 07.8
" 25	"	"	7 59 19.2	7 59 00	+0 0 19.2
" 26	"	"	7 04 48.0	7 04 00	+0 0 48.0
" 28	"	"	7 06 21.1	7 05 00	+0 1 21.1
May 1	"	"	7 04 53.8	7 03 00	+0 1 53.8
" 2	"	"	7 04 13.9	7 02 00	+0 2 13.9
" 3	"	"	10 08 46.0	10 06 00	+0 2 46.0
" 5	"	"	7 04 32.0	7 01 00	+0 3 32.0
" 6	"	"	8 35 08.0	8 31 00	+0 4 08.0
" 7	"	"	7 08 34.0	7 04 00	+0 4 34.0
" 8	"	"	7 10 49.0	7 06 00	+0 4 49.0
" 8	"	"	14 38 49.0	14 34 00	+0 4 49.0
" 9	"	"	7 08 57.0	7 04 00	+0 4 57.0
" 9	"	"	11 58 59.1	11 54 00	+0 4 59.1
" 10	"	"	8 20 11.0	8 15 00	+0 5 11.0
" 12	"	"	7 09 15.0	7 03 00	+0 6 15.0
" 15	"	"	7 08 07.5	7 01 00	+0 7 07.5
" 15	"	"	11 55 08.5	11 48 00	+0 7 08.5

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

1897phae..proj...4400

June 6, 1902

May 16	B&C 1182	Ball. 03	7 09 05.5	7 02 0.0	+0	7 05.5
" 16	"	"	12 03 04.4	11 56 00	+0	7 04.4
" 17	"	"	7 11 06.0	7 04 0.0	+0	7 06.0
" 17	"	"	11 52 06.2	11 46 0.0	+0	7 06.2
			Reset B&C 1182			
" 20	"	"	7 08 49.5	7 03 00	+0	0 49.5
" 20	"	"	11 01 55.5	11 01 00	+0	0 55.5
" 21	"	"	7 04 03.5	7 03 00	+0	1 03.5
" 22	"	"	7 07 7.0	7 06 00	+0	1 07.0
" 24	"	"	7 19 42.5	7 18 00	+0	1 42.5
" 26	"	"	8 21 41.5	8 19 00	+0	2 41.5
" 26	"	"	12 13 47.0	12 11 00	+0	2 47.0
" 28	"	"	7 26 36.0	7 23 00	+0	3 36.0
" 28	"	"	12 04 41.5	12 01 00	+0	3 41.5
" 29	"	"	7 27 01.8	7 23 00	+0	4 01.8
" 29	"	"	12 40 04.8	12 36 00	+0	4 04.8
" 30	"	"	7 32 22.0	7 28 00	+0	4 22.0
" 30	"	"	14 35 27.8	14 31 00	+0	4 27.8
" 31	"	"	7 27 46.1	7 23 00	+0	4 46.1
" 31	"	"	11 41 47.1	11 37 00	+0	4 47.1
June 1	"	"	11 55 55.8	11 51 00	+0	4 55.8
" 2	Reset B&C 1182					
" 2	B&C	Ball	7 23 08.0	7 23 00	+0	0 08.0
" 4	"	"	7 25 00.5	7 24 0.0	+0	1 00.5
" 5	"	"	7 20 16.0	7 19 00	+0	1 16.0
" 5	"	"	12 14 15.4	12 13 00	+0	1 15.4
" 6	"	"	7 26 49.2	7 25 00	+0	1 49.2
" 6	"	"	10 58 49.6	10 56 00	+0	2 49.6
" 6	"	"	13 36 51.5	13 35 00	+0	1 51.5
" 6	"	"	14 46 36.5	14 45 00	+0	1 36.5
" 6	"	"	21 13 42.5	21 12 00	+0	1 42.5

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

1897phae.proj..4400

Photometric Measurements of

Oct. 1, 1901 —— to

Variable								
~~Oct 4, 1901~~	128							
d Serpentis	Oct 1, 1901	32						
	Oct. 16, 1901	32	Oct 24, 1901	32	Nov. 20, 1901	48	Dec. 11, 1901	32
R Mrs. Min.	Oct 3, 1901	32	~~Oct 19, 1901~~	32	Oct 31, 1901	32	Dec. 4, 1901	32
	Oct 5, 1901	32	Oct. 21, 1901	32	Oct. 26, 1901	32	Oct. 31, 1901	32
o Ceti	Oct 4, 1901	16	Oct. 12, 1901	32	Oct 24, 1901	32	Oct. 29, 1901	32
	Oct 5, 1901	96	Oct. 8, 1901	16	Oct. 11, 1901	32	Oct. 16, 1901	32
7 Sc. 1901 Scuti	Oct 4, 1901	128	Oct 7, 1901	48	Oct. 10, 1901	32	Oct 15, 1901	32
	Dec 24, 1901	96						
+42° 3338	Oct 5 1901	80	Jan. 14, 1902	16				
	Oct 22, 1901	80	Nov. 21, 1901	80	Dec. 21, 1901	80	Mar. 18, 1902	80
U Cephei	Oct 7, 1901	96	Nov. 6, 1901	80	Dec. 6, 1901	80	Mar. 3, 1902	96
	Oct. 19, 1901	32	Nov. 4, 1901	32	Nov. 27, 1901	32	Dec. 21, 1901	32
χ Cygni	Oct 7, 1901	32	Oct 28, 1901	32	Nov. 15, 1901	32	Dec. 4, 1901	32
	Oct 16, 1901	32	Oct. 21, 1901	32	Oct 26, 1901	32	Oct 30, 1901	32
78. 1901 Cygni	Oct. 15, 1901	64	Oct. 18, 1901	112	Oct 25, 1901	64	Oct 29, 1901	32
	Nov. 4, 1901	80	Dec. 27, 1901	80	June 17, 1902	48		
U Delphini	Oct. 16, 1901	80	Nov. 9, 1901	80	Jan 1, 1902	80	Sept. 12, 1902	32
	Oct 21, 1901	96	Oct 25, 1901	128	Oct 30, 1901	32	Nov. 6, 1901	96
79. 1901 Scuti	Oct. 18, 1901	32	Oct 24, 1901	32	Oct 28, 1901	32	Oct. 2, 1901	64
	Oct 30, 1901	32	Dec. 10, 1901	32	Feb. 5, 1902	32	Mar 15, 1902	32
Nova Persei	Oct. 21, 1901	32	Nov. 7, 1901	32	Jan. 23, 1902	32	Feb. 15, 1902	32
	Dec 27, 1901	32	Feb 18, 1902	32	Sept. 18, 1902	32	June 23, 1902	32
W. P. 4461.	Oct 26, 1901	32	Jan. 23, 1902	32	Mar. 25, 1902	32	May 22, 1902	32
	Nov. 1, 1901	176	Dec 2, 1901	80				
78. 1901 Cygni	Oct 31, 1901	32	Nov. 15, 1901	160	Jan 9, 1902	32		
	Nov. 4, 1901	32	Nov. 9, 1901	32	Nov. 22, 1901	32	Dec. 2, 1901	48
o Ceti	Nov. 2, 1901	32	Nov. 6, 1901	32	Nov. 20, 1901	32	Nov 27, 1901	32
	Nov. 22, 1901	48	Feb 20, 1902	80	Mar 2, 1902	80	Mar 26, 1902	64
B Persei.	Nov. 6, 1901	16	Feb 18, 1902	48	Mar. 6, 1902	176	Mar 15, 1902	80
73. 1901 Scuti	Nov. 7, 1901	16						
	Dec. 5, 1901	80						
+45° 3062	Nov. 21, 1901	80						
ζ Sagittae	Nov. 26, 1901	80	Dec. 4, 1901	32	Dec 11, 1901	32	May 26, 1902	96
93. 1901 =	Nov. 27, 1901	32	Nov. 30, 1901	48	Dec 5, 1901	32	Jan. 5, 1902	32
	Dec. 12, 1901	32						
SS Cygni.	Dec. 4, 1901	32	Dec. 18, 1901	32				
	Dec. 10, 1901	32	Dec. 16, 1901	32	Dec. 20, 1901	32	Dec. 24, 1901	32
o Ceti	Dec 5, 1901	32	Dec. 12, 1901	32	Dec. 18, 1901	32	Dec. 21, 1901	32
	Dec. 20, 1901	48	Dec. 24, 1901	16				
+40° 4393	Dec. 18, 1901	48	Dec 21, 1901	32	Jan. 24, 1902	32	Jan. 31, 02	48
	Dec 27, 1901	48	Jan. 30, 1902	32	Feb 27, 1902	32	Mar 14, 1902	32
R Ure. Min.	Dec. 21, 1901	32	Jan. 13, 1902	48	Feb. 14, 1902	48	Mar 14, 1902	32
	Dec. 30, 1901	32	Jan. 3, 1902	32	Jan. 6, 1902	216	Jan. 14, 1902	32
o Ceti	Dec 27, 1901	32	Jan. 4, 1902	32	Jan. 4, 1902	32	Jan. 9, 1902	48
	Jan. 1, 1902	32	June 9, 1902	32	July 10, 02	32	July 23, 1902	32
χ Cygni.	Jan. 3, 1902	32	May 13, 1902	48	June 23, 02	32	July 11, 02	32
	Jan. 14, 1902	32	Jan. 29, 1902	32	Jan. 23, 1902	32	Jan 25, 1902	32
o Ceti	Jan. 19, 1902	32	Jan. 18, 1902	32	Jan. 22, 1902	32	Jan. 24, 1902	32
	Jan. 20, 1902	32	Jan 24, 1902	32	Jan 27, 1902	32	Jan. 30, 1902	32
X Cancri.	Jan. 17, 1902	32	Jan. 23, 1902	32	Jan. 25, 1902	32	Jan 28, 02	32
	Jan. 29, 1902	32	Jan. 25, 1902	32	Jan. 28, 1902	32	Feb. 3, 02	32
X Persei.	Jan. 20, 1902	32	Jan. 24, 1902	32	Jan. 27, 1902	32	Jan 30, 02	32
	Jan. 24, 1902	32	Feb. 3, 1902	32	Feb 6, 1902	32	Feb 10, 1902	48
o Ceti	Jan. 27, 1902	48	Jan 30, 1902	32	Feb 5, 02	32	Feb 7, 1902	32
	Feb. 5, 1902	32	Feb 10, 1902	32	Feb 11, 1902	32	Feb 14, 1902	32
X Cancri.	Feb. 3, 1902	32	Feb 6, 1902	32	Feb 10, 1902	32	Feb 14, 1902	32
X Persei.	Feb 6, 1902	32						
	Feb 5, 1902	32						

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

1897phae.proj...4400

Variables Photo. T. R. W. — Oct 1, 1902.

	Feb. 12, 1902	32	Feb. 15, 1902	32	Feb. 24, 1902	32	May 1, 1902	32	Mar. 10, 02	48			
ε Ceti	Feb. 11, 1902	32	Feb. 14, 1902	32	Feb. 19, 1902	32	Feb. 27, 02	32	Mar. 3, 02	32			
X Cancri	Feb. 24, 1902	32	Mar. 1, 1902	32	June 10, 1902	32	Mar. 25, 02	48	Apr. 2, 02	32			
T Persei	Feb. 20, 1902	32	Feb. 27, 1902	32	Mar. 3, 1902	32	Mar. 14, 02	48	Mar. 24, 02	32			
	Mar. 26, 02	32											
	Mar. 9, 902	32											
20 Hya Ceti	Mar. 18, 02	16											
	Jan. 14, 02	32	Sept. 12, 1902	32									
	May 2, 02	32	Sept. 15, 02	32									
Nova Persei	Mar. 25, 02	32	May 13, 02	32									
	Apr. 4, 02	48	Apr. 24, 02	48									
β Persei	Apr. 6, 02	16	Apr. 16, 02	48									
	April 17, 02	80	May 17, 1902	64									
U Ophei	Apr. 2 02	16	May 2, 02	80	Sept. 11, 02	80							
	Apr. 14, 1902	32	May 5, 1902	32									
X Cancri	Apr. 3, 1902	32	April 15, 1902	32	May 20, 02	32							
	Apr. 24, 02	32											
R Coronae	Apr. 3, 02	32	May 15, 1902	32									
	May 8, 02	32	July 16, 1902	32	Aug. 17, 02	32	Sept. 6, 02	32					
R Mus. Min.	Apr. 14, 02	32	June 14, 1902	32	July 31, 02	32	Aug. 27, 02	16					
U Geminorum	Apr. 17, 02	32											
	Apr. 20, 1902	32	May 8, 1902	32	May 21, 1902	32	June 5, 02	32	June 17, 02	48			
β Lyrae	Apr. 16, 1902	32	May 1, 1902	32	July 13, 1902	32	May 24, 02	32	June 6, 02	32			
	May 9, 1902	160	May 17, 1902	32	May 26, 02	32	June 6, 02	32					
δ Librae	Apr. 24, 02	32	May 16, 1902	112	May 22, 02	32	May 30, 02	64	June 20, 02	112			
Hag 4 N Sem.	May 1, 02	32											
	May 17, 02	32	May 22 1902	32	July 16, 02	96							
U Oph.	May 15, 02	160	May 20, 1902	64	May 31, 02	64							
X Herculis	May 21, 1902	32											
R Lyrae	May 21, 1902	48											
X Virginis	May 24, 1902	32											
	May 29, 1902	32	May 31, 02	32	June 27, 02	32	June 29, 02	32	July 30, 02	48			
+43.4101	May 26, 1902	32	May 30, 02	80	June 27, 02	32	June 28, 02	32	July 4, 02	32			
	Sept. 15, 02	48											
u Herculis	June 2, 02	16											
	July 2 02	208											
ν Sagittae	June 5, 02	176	Sept. 11, 1902	192									
	June 19, 02	32	June 24, 02	32	July 2, 02	32							
9 Lyrae	June 18, 02	32	June 23, 02	32	July 1, 02	32							
	June 19, 02	96											
Y Cygni	June 18, 02	32	July 24, 02	16									
	July 5, 02	32											
T Cygni	July 7, 02	32											
δ Lyrae	July 11, 02	32											
	July 14, 02	32											
ν Ophei	Aug. 5, 02	32	Sept. 2, 02	32	Sept 24, 02	32							
χ Cygni	July 30, 02	32	Aug. 26, 02	32	Sept 6, 02	48							
43.4101	July 31, 02	32											
U Camelop.	Sept 12, 02	32											

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

1897phae..proj...4400

Oct. 1, 1902 – Oct 1, 1903

Comet b, 1902	10-3	12	10-4	16	10-6	16	10-7	16	10-8	16	10-9	16	10-10	32		
	10-8	80	1-21	112	2-10	80	5-1	80	9-25	96						
U Cephei	10-6	160	11-5	96	2-5	96	4-21	80	5-27	80	9-30	208				
	10-20	48	12-9	48	8-18	32	9-29	32								
X Cygni	10-7	32	11-7	32	7-23	16	9-21	32								
	10-21	32	11-28	32	1-10	32	8-20	16	9-24	32						
o Ceti	10-7	32	11-7	32	12-18	32	2-6	48	9-3	32						
	10-25	32	11-1	208												
U Sagittae	10-8	208	10-25	64												
	10-31	32	12-8	32	2-12	32	4-27	32	6-2	32						
R Mus. Min	10-9	32	11-14	32	1-10	32	3-11	32	6-12	32						
	10-17	32														
Comet b, 1902	10-15	12	10-21	16												
U Coronae	10-15	32														
	1-17	32	2-12	32												
+51°.762	10-17	32	2-7	32	3-13	32										
	11-14	32	1-13	13	5-22	32	6-13	32	9-19	32						
T Cygni	10-17	32	12-12	16	5-9	32	6-1	32	6-30	32						
	11-8	32	1-9	28	2-14	32	6-2	32								
u Cephei	10-17	32	12-8	32	2-7	32	5-11	32	8-1	16						
	1-13	32														
U Camelop.	10-20	32	2-7	32												
	11-10	32	3-13	32												
+30°.1014	10-21	32	2-13	32												
+14.1902 Per.	10-29	112														
	11-1	64	11-3	32	12-19	32	1-17	32								
+43°.4101	10-31	32	11-2	48	11-10	64	12-24	16	5-8	32						
	12-14	32														
Nova Persei	11-19	32	9-29	32												
	12-20	16	3-6	32												
+28°.707	11-19	32	2-12	32	3-11	48										
	1-16	32	3-14	32												
+21°.1146	12-20	32	2-13	32												
	1-13	32														
+26.1117	12-24	32	2-28	32												
20.1902 Cygni	12-27	48														
	1-17	32														
+3°.1958	1-12	32	2-12	48												
	1-23	32	1-30	32												
U Gem	1-21	32	1-26	32												
	7-9	16														
S Can. Ven.	2-7	32	9-11	32												
X Canes	2-9	32														
	9-24	32														
X Persei	2-9	32														
— Persei	2-9	32														
	3-13	32	9-4	32	9-12	48	9-15	32	9-21	32						
+67.350	2-13	32	3-14	32	9-11	32	9-14	48	9-19	32	9-22	32				
	2-17	32														
+26°.2563	2-14	32	2-24	32												
	3-3	32	5-30	48												
+1.2694	3-2	32	5-18	32												
+56°1405	3-12	204														
	3-20	48	3-26	192	4-1	176										
H 1903 Orac.	3-19	240	3-25	80	3-31	32	5-26	96								

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

1897phae.proj..4400

R Coronae	4-3	32	4-30	32	5-8	32	5-11	32	5-13	32	5-16	32	5-19	32		
Nova Sgr.	3-26	16	4-29	32	5-6	32	5-9	32	5-12	32	5-15	32	5-18	32		
	3-31	32	4-11	16	4-18	32	4-21	16	4-25	48	4-28	48	4-30	32		
Nova Sgr.	3-29	32	4-10	32	4-17	32	4-20	32	4-24	16	4-27	32	4-29	32		
	4-3	32														
+27.2413	3-6	32														
	4-30	32	5-6	32	5-11	32	5-17	32	6-1	32	9-3	32	9-7	32		
u Herculis	4-25	32	5-1	32	5-8	48	5-13	32	5-21	32	9-2	16	9-4	48		
Nova Sgr.	5-2	32	5-8	32	5-11	32	5-13	32	5-20	32	5-22	16	5-25	32		
	5-1	32	5-6	16	5-9	32	5-12	32	5-15	32	5-21	32	5-23	32		
R Coronae	5-21	32	5-23	32	6-18	16										
	5-20	32	5-22	48	5-25	32										
S S Cygni	9-8	16	9-11	16	9-14	16	9-18	16	9-21	16	9-23	16	9-25	16		
	5-20	32	9-10	16	9-12	16	9-15	16	9-19	16	9-22	16	9-24	16		
Nova Sgr.	5-27	16														
	5-26	32														
	5-30	32														
*d. (T Her)	5-27	16	6-1	16												
	7-7	48														
130802	6-2	32														
	7-2	112	7-6	80												
Z Her.	6-27	112	7-3	32												
	7-3	32														
ι Librae	6-30	32	7-17	32												
	7-9	16	7-11	16	9-12	32	9-15	32	9-22	64						
V Aquilae	7-1	32	7-10	16	9-8	32	9-14	32	9-21							
	9-2	32														
S Scuti	7-3	32	9-7	48												
	7-7	16	7-10	16	7-15	16	7-17	16	7-24	16	8-1	16				
Comet c, 1903	7-6	16	7-9	16	7-11	16	7-16	16	7-23	16	7-27	16	8-14	16		
R T Virg.	7-8	32														
R S Oph.	9-8	16														
	7-15	32														
Y Cygni	7-16	32														
	8-17	16	8-21	16												
W Z Cygni	8-10	32	8-18	16	8-24	16										
	9-3	32														
ρ Cassiop	9-2	32	9-24	16												
181315	9-3	32														
	9-7	16	9-11	32	9-14	16	9-19	16								
U U Cygni	9-4	32	9-8	32	9-12	32	9-15	16								
	9-11	32	9-22	32												
U Herculis	9-8	32	9-12	32												
T Lyrae	9-23	32														
	9-24	16														
R Cassiop.	9-26	32	9-29	32												
	9-26	32														
R X Cygni	9-25	32														
	9-28	16														
S S Cygni	9-26	16	9-29	32												

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

1897phae.proj..4400

Oct 1, 1203 to Oct 1, 1207

with New Agol	9-27	32	9-28	96	9-30	32																
R Cassiopeiae	10-3	32	10-19	16	10-21	16	10-26	16														
	10-2	32	10-14	32	10-20	16	10-22	16	10-28	16												
	10-21	32	10-27	16	10-30	32	11-3	144	11-7	32	11-12	32	11-19	64								
u Herculis	10-2	32	10-24	16	10-29	16	10-31	80	11-4	80	11-9	96	11-14	80								
S S Cygni	10-14	48	10-27	32	10-29	16	11-20	32	11-24	32	11-28	32										
	10-2	16	10-26	32	10-28	12	11-19	32	11-21	32	11-25	32										
	10-13	16	10-30	16	11-14	32	11-21	32	11-28	32	12-8	32	1-15	32								
04 4068 - Candef	10-3	32	10-29	16	11-9	32	11-20	16	11-24	32	12-1	32	12-23	16								
U Sagittae	10-3	32																				
	10-19	32	11-19	32	12-10	32	1-1	32	1-27	48	2-25	32	9-6	16								
o Ceti	10-3	32	11-7	32	11-30	32	12-23	32	1-18	32	2-10	163-4		48								
	10-13	32																				
Wolf's star of Oct. 5, '03	10-6	16	10-19	48																		
	10-13	32																				
star near Wolf's star	10-6	16																				
	10-15	32	10-27	32	11-9	48	11-28	32	12-14	32	1-4	32										
X Cygni	10-6	32	10-21	32	10-31	32	11-19	32	12-4	32	12-22	32										
U 21 Cygni	10-14	32																				
	10-24	32	11-30	32	5-27	16																
R X Cygni	10-14	32	11-21	32	4-25	32																
	10-20	80	11-4	64	11-10	48	11-12	48	2-10	96	4-4	80										
U Cephei	10-15	80	10-30	32	11-9	32	11-11	32	1-30	64	7-20	144										
	11-7	32																				
+ 28.707	10-20	32	9-28	32																		
X Persei	10-20	32																				
	10-31	32	7-11	16	7-13	16																
T Cygni	10-22	32	6-13	48			9-26	48														
	11-20	32	1-4	32	6-9	48			9-27	16												
u cephei	10-24	32	12-4	32	1-27	48	7-12	16	9-7	16												
	12-8	32																				
T Persei	10-26	32																				
	10-27	32																				
β Persei (eclip)	10-26	16	10-28	32																		
	10-30	48	12-7	80																		
RR Lyrae	10-29	64	11-24	80	12-2	48																
	12-1	32																				
2000 36	11-3	32																				
0 033451	2-17	32																				
+51.762	11-10	32	9-6	16																		
	11-14	32	12-15	32	5-4	32	7-21	32														
U 3 Cygni	11-12	32	12-16	48	12-2	48	6-3	48														
	11-21	32	11-28	48	9-10	96																
u Herculis	11-20	48	11-25	64	4-25	32																
	12-1	32	12-10	32	12-14	32	12-18	32	12-26	32												
3 Lyrae	11-30	96	12-4	64	12-11	32	12-16	32	12-19	32												
	12-19	32	12-23	32	12-26	32	1-1	32	1-16	32	1-27	32	2-1	32								
ρ Cassiop.	12-1	32	12-21	16	12-24	32	12-30	32	1-4	32	1-18	32	1-30	32								
	3-30	16																				
+21.1146	12-7	16																				
	12-11	32	12-19	32																		
2 Gem.	12-10	32	12-14	16																		
	12-16	16																				
Susp. var. of W.	12-13	16	12-19	32																		
	12-22	192																				
Tercidina	12-18	176																				
	12-28	48	12-31	80	1-7	160	1-14	32	1-25	192	2-4	160	3-16	32								
Iris	12-26	64	12-30	64	1-5	128	1-15	32	1-19	160	2-3	32	2-5	96								

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

1897phae..qroj...4400

o Ceti	9-17	32											
04h06m P	1-27	32	2—1	32	2—5	32	2—10	48	2—17	32			
—Camelop	1-18	32	1-30	32	2—3	16	2-8	32	2-11	32			
	2-9	32	2-11	32	2-22	48	3-2	16	3-8	16			
P Cassiop.	2-8	32	2-10	32	2-27	32	2-26	16	3-4	32			
04h06m P	3-4	48	3-29	16	4-2	16	5-28	32	9-27	16			
—Camelop	2-22	32	3—8	16	3-30	16	4-25	32	9-7	16			
	2-22	16											
Chaldea	2-20	96											
	9-26	48											
Vesta	2-25	48	3-29	160									
	3-4	32											
+3, 1958	~~3-17~~	~~32~~											
	~~3-5~~	~~32~~	3-18	112									
Hides	3-10	16											
Flora	3-9	128	3-12	128									
	3-26	144	4-12	192	4-14	160	5-12	96	5-16	64			
Iris	3-23	144	4-5	160	4-13	176	4-16	160	5-13	32			
	4-2	48											
P Cassiop	3-30	32	9-7	48									
	4-2	16											
E amigae	4-22	16	5-4	16									
Comet d 04	4-21	32	4-23	16	5-6	32							
	4-22	128											
Pallas	4-21	80	4-23	128									
Var.	5-3	96	5-6	32	5-21	32	6-9	176	6-14	32			
+7° 3404 dyol.	5-2	32	5-4	32	5-7	96	6-3	16	6-13	32			
	5-21	32	5-27	32	6-11	32							
V Hrs. Maj	5-20	32	5-24	32	5-31	16	6-17	32					
	5-23	16	6-10	48	6-23	32	6-27	32	7-6	16			
L Librae	5-21	32	6-3	32	6-18	32	6-24	32	7-4	48			
	6-27	48											
130802	5-23	16											
	5-27	32	6-13	32	6-23	32	7-27	32					
V Aquilae	5-26	32	5-28	64	6-15	32	7-14	32	9-6	16			
T Lyrae	6-15	32	9-17	16									
	5-26	32	9-7	16									
+47° 3031 (7.3)	5-27	16											
	5-28	32											
122001	6-11	48											
Aquitania	6-10	48	6-12	32									
	6-18	32	6-26	48	7-2	48	7-9	64	7-12	16			
R Sct Oph.	6-14	16	6-23	48	7-1	32	7-8	112	7-11	96			
	6-17	48											
+7° 3404	6-15	32	6-18	48									
S Can Ven.	6-27	16											
	6-8	16											
L Librae	7-8	32											
R Sct Oph.	7-14	32	9-6	48									
	7-10	112	7-19	32									
	7-19	48	7-26	48									
Ceres	7-16	32	7-29	96	7-27	32							
	9-17	32											
S Sct	9-10	32											
	9-27	32											
R Sct Capic.	9-10	32											

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

1897phae.proj..4400

Chronometer Comparisons.

T = fast
− = slow

Date	Chron.	Clock	Time by chron	Time by Clock	Error.	
1902 6 8	BBC 118 2	Ball 103	14 17 40.2	14 15 00	+0 2 40.2	19
6 8	"	"	14 46 37.2	14 42 00	+0 2 37.2	
6 9	"	"	7 29 41.0	7 27 00	+0 2 41.0	
6 10	"	"	8 54 35.0	8 52 00	+0 2 35.0	
6 18	Reset BBC.					
6 18	BBC 118 2	Ball 103	7 38 55.4	7 39 00	−0 0 4.6	
6 18	"	"	10 31 00.4	10 31 00	+0 0 0.4	
6 19	"	"	7 32 06.0	7 32 00	+0 0 06.0	
6 19	"	"	11 07 04.0	11 07 00	+0 0 04.0	
6 20	"	"	7 32 27.5	7 32 00	+0 0 27.5	
6 20	"	"	11 37 28.5	11 37 00	+0 0 28.5	
6 23	"	"	7 37 25.0	7 35 00	+0 2 25.0	
6 23	"	"	12 8 24.5	12 6 00	+0 2 24.5	
6 23	"	"	13 38 13.0	13 36 00	+0 2 13.0	
6 23	"	"	14 21 2.0	14 19 00	+0 2 2.0	
6 23	"	"	15 12 51.5	15 11 00	+0 1 51.5	
6 24	"	"	7 31 52.5	7 30 00	+0 1 52.5	
6 26	"	"	7 32 09.0	7 30 00	+0 2 09.0	
6 27	"	B. 394	7 39 32.0	7 37 00	+0 2 32.0	
6 28	"	"	7 30 49.0	7 28 00	+0 2 49.0	
6 29	"	"	10 42 52.0	10 40 00	+0 2 52.0	
" "	"	"	12 0 49.5	11 58 00	+0 2 49.5	
7 1	"	"	7 32 55.1	7 30 00	+0 2 55.1	
7 2	"	"	7 31 06.5	7 28 00	+0 3 06.5	
7 3	"	"	7 38 15.0	7 35 00	+0 3 15.0	
7 3	"	"	11 06 17.5	11 03 00	+0 3 17.5	
7 3	"	"	11 34 17.7	11 31 00	+0 3 17.7	
7 7	"	"	7 30 52.5	7 27 00	+0 3 52.5	
	Reset BBC 1182					
7 8	BBC 1182	B 394	7 30 48.5	7 31 00	−0 0 11.5	

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

1897phae.proj..4400

				Chron.	Clocks
1902 July	9	BOC 182	Ball 103	7 32 04.0	7 32 00
	10	"	"	7 25 32.5	7 25 00
	10	"	"	13 27 35.0	13 27 00
	10	"	"	14 13 30.5	14 13 00
	11	"	"	7 25 36.5	7 25 00
	12	"	"	7 35 30.4	7 35 00
	12	"	"	11 55 54.6	11 55 00
	14	"	"	7 27 33.6	7 26 00
	16	"	"	7 33 32.4	7 31 00
	16	"	"	14 38 34.5	14 36 00
	16	"	"	15 27 26.0	15 25 00
	17	"	"	7 36 35.5	7 34 00
	18	"	"	7 35 46.5	7 33 00
	18	"	"	9 03 47.0	9 01 00
	18	"	"	9 33 45.0	9 31 00
"	23	"	"	7 36 18.0	7 32 00
"	24	Reset BOC 182			
"	24	BOC 182	Ball 103	7 28 25.0	7 29 00
"	28	"	"	7 33 56.0	7 33 00
"	28	"	"	8 31 55.5	8 31 00
"	29	"	"	9 10 21.0	9 09 00
"	30	"	"	7 15 39.5	7 14 00
"	31	"	"	7 36 09.5	7 32 00
			Reset BOC 182		
Aug	16	"	B. 394	12 32 43.0	12 33 00
"	"	"	"	15 6 44.5	15 7 00
			Reset BOC 182		
"	17	"	"	11 39 2.0	11 39 00
"	"	"	"	13 19 39.6	13 20 00
			Reset BOC 182		
"	26	"	"	13 33 14.6	13 33 00
"	27	"	"	12 22 30.5	12 22 00
			Reset BOC 182		
Sept	1	"	Ball 103	21 07 04.0	21 07 00

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

1897phae.proj..4400

1902

Date	Chron.	Clock	Time by chronom.	Time by clock	Error of Chron (± fast / slow)
Sept 2	B&C 182	Ball 103	7 06 02.0	7 06 00	+0 0 02.0
" 2	" "	" "	11 43 02.5	11 43 00	+0 0 02.5
" 2	" "	" "	12 24 02.0	12 24 00	+0 0 02.0
" 3	"	Bond 396	7 11 10.0	7 11 00	+0 0 10.0
" 5	"	Ball 103	7 01 31.3	7 01 00	+0 0 31.3
" 6	"	"	7 05 24.0	7 05 00	+0 0 24.0
" 8	"	"	7 07 28.0	7 05 00	+0 2 28.0
" 10	"	"	7 05 33.0	7 03 00	+0 2 33.0
" 11	"	"	7 04 39.8	7 02 00	+0 2 39.8
" "	"	"	23 06 43.4	23 04 00	+0 2 43.4
" 12	"	"	7 03 58.5	7 01 00	+0 2 58.5
" 12	"	" Reset B&C.	12 10 50	12 7 00	+0 3 05.0
" 15	"	"	7 06 09.0	7 06 00	+0 0 09.0
" 15	"	"	8 13 08.9	8 13 00	+0 0 08.9
" 17	"	"	7 05 16.0	7 05 00	+0 0 16.0
" 22	"	"	7 07 35.5	7 06 00	+0 1 35.5
" 23	"	"	7 05 53.0	7 04 00	+0 1 53.0
" 23	"	"	7 39 53.0	7 38 00	+0 1 53.0
" 23	"	"	8 22 53.0	8 21 00	+0 1 53.0
" 24	"	"	8 25 02.5	8 23 00	+0 2 02.5
Oct. 3	" (reset B&C)	"	7 04 38.5	7 05 00	−0 0 21.5
" 4	"	"	7 02 54.0	7 03 00	−0 0 6.0
" 6	"	"	7 03 34.0	7 03 00	+0 0 34.0
" 7	"	"	7 04 27.0	7 04 00	+0 0 27.0
" 8	"	"	7 05 43.0	7 05 00	+0 0 43.0
" 9	"	"	7 01 21.5	7 00 00	+0 1 21.5
" 10	"	"	7 12 42.6	7 11 00	+0 1 42.6
" 14	"	"	6 35 36.0	6 32 00	+0 3 36.0
" 15	"	"	7 00 39.0 reset B&C	6 57 00	+0 3 39.0
" 16	"	"	7 05 40.0	7 06 00	−0 0 12.0

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

1897phae.proj..4400

Date	Chron.	Clock.	Time by Chron.	Time by Clock	Error.
02 10-17	B&C 1182	Ball 103	7 05 47.5	7 06 00	-0 00 12.5
10-20	" "	"	7 03 33.5	7 04 00	-0 00 26.5
10-21	" "	"	7 01 49.0	7 02 00	-0 00 11.0
10-22	" "	"	7 03 22.0	7 03 00	+0 00 22.0
10-23	" "	"	7 05 38.5	7 06 00	+0 1 38.5
10-25	" "	"	7 04 15.0	7 02 00	+0 2 15.0
10-28	" "	"	7 50 30.7	7 48 00	+0 2 30.7
10-29	" "	"	7 06 51.5	7 06 00	+0 2 51.5
10-31	" "	"	7 02 21.0	6 59 00	+0 3 21.0
11-1	" "	"	5 59 31.8	5 56 00	+0 3 31.8
11-2	" "	"	~~9 57 04~~ 10 00 36.2	9 57 00	+0 3 36.2
11-3	" "	"	7 07 00.0	7 04 00	+0 4 00.0
		~~Reset B&C 1182.~~			
02 12-30	" "	"	6 58 48.5	6 59 00	-0 0 11.5

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

1897phae.proj.,4400

Photometric measurements of Var.
with Plate X.
Oct 1. 1902 - 1903 Oct 1.

20. 1902	Cygni	1-12	40	2-3	30

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

1897phae.proj..4400

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

1897phae.proj.4400

Eclipses Jup. Sats.

(Con. from p. 1891.

Date.	W. M. T.	East. Time.	Sat.	Phen.	Remarks.
No Eclipses recd. this opp. before that of Feb. 14. 1910, below.					
1910 Feb. 14.	11 31 47.		I	Dis.	W. obs. Rowe rec.
" 21.	11 ∨∨ 7.		II	"	Cloudy.
" "	13 24 ∨1.		I	"	"
" 28	14 31 16.		II	"	"
" "	1∨ 18 1.		I	"	"
Mar. 2	9 46 18.	9 ∨4 30.	I	"	Cloudy.
" "	11 2 ∨6.	11 11 8.	III	Re.	"
" 7	17 7 31.	17 1∨ 43.	II	Dis.	"
" "	17 11 17.	17 19 29.	I	"	"
" 9	11 39 36.	11 47 44.	I	"	W. obs. Bowser rec.
" "	12 3∨ 16.	12 43 28.	III	"	" " "
" 16	13 33 0.	13 41 12.	I	"	Cloudy.
" "	16 33 9.	16 41 21.	III	"	"
" 18	18 1 21.	18 9 33.	I	"	W. obs. Rowe rec.
" "	9 1 34.	9 9 46.	II	"	" " "
" 23	1∨ 26 31.	1∨ 34 43.	I	"	Omitted, Rather cloudy.
" 25	9 ∨4 ∨4.	10 3 6.	I	"	W. obs. Rowe rec.
" "	11 38 7.	11 46 19.	II	"	" " "
Apr. 1	13 ∨8 30.	14 6 42	I	Re.	Omitted.
" "	16 ∨3 ∨∨.	17 2 7.	II	"	"
" 3	18 26 ∨6.	18 3∨ 8.	I	"	Sunday
" 8	1∨ ∨2 16.	16 0 28.	I	"	Cloudy.
" 10	10 20 44.	10 28 ∨6.	I	"	W. obs. W. rec.
" 12	18 49 12.	18 ∨7 24.	II	"	W. obs. Rowe rec.
" 14	10 4∨ 18.	10 ∨3 20.	III	"	W. obs. Rowe rec.
" 17	12 14 41.	12 22 ∨3.	I	"	Cloudy.
" 19	11 2∨ 44.	11 33 ∨6.	II	"	"

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

1897phae.proj..4400

Eclipses Jup. Sats.

Date. 1910.	W. M. T.	East. Time.	Sat.	Phen.	
Apr. 21.	14 43 2.	14 51 20	III	Re.	Cloudy.
" 24.	14 2 46.	14 16 52.	I	"	"
" 26.	2 37 20.	2 45 32.	I	"	"
" "	14 2 17.	14 10 29.	II	"	"
May 3	10 31 35.	10 39 47	I	"	"
" 10	12 25 50.	12 34 10	I	"	"
" 14	2 33 11.	2 41 23.	III	"	W. obs. Rowe rec.
" 19	2 49 4.	2 57 16.	I	"	W. obs. Corcoran rec.
" 21	11 9 32.	11 17 50.	II	"	Cloudy.
" 26	10 43 40.	10 51 52.	I	"	W. obs. J. S. Corcoran rec.
" 27	2 22 1.	2 30 13.	III	Dis.	W. obs. M. Corcoran rec. (Cloudy Vis.)
" "	10 32 14.	10 40 27.	III	Re.	Cloudy.
June 2	12 38 22.	12 46 34.	I	"	W. obs. J. S. Corcoran rec.
June 3	12 21 34.	12 29 46.	III	Dis.	Cloudy.
" 11	9 1 51.	9 10 3.	I	Re.	Cloudy.
" 15	2 16 46.	2 24 58.	II	Re.	W. obs. J. S. Corcoran rec.
" 18	10 56 42.	11 4 54.	I	"	Cloudy.
" 22	10 52 42.	11 0 54.	II	"	"
July 4	9 15 14	9 23 26.	I	"	Overcast.
" 9	2 19 2	2 27 20.	III	Dis.	W. obs. J. S. Corcoran rec.
" "	10 21 40	10 29 52.	III	Re.	Too low. Sats invisible.
" 17	7 57 7	8 5 19.	II	Re.	W. obs. W. rec.
" 27	9 28 57	9 37 9	I	Re.	

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

1897phae.proj.4400

Eclipses Jup. Sats.

	Date.	W. m. T.	East. Time.	Sat.	Phen.	Remarks.
	No eclipses observed this year before those indicated below.					
	1911.					
	Mar. 21.	10h 7m 1s		I	Dis.	Cloudy.
	" 26.	12 32 10.		II	Dis.	
	" 28.	12 50 16.		I	Dis.	
	" 31.	11 27 0		III	Dis.	
	" "	12 50 50		III	Re.	
	Apr. 2	15 7 50		II	Dis.	
	" 4	14 43 36		I	Dis.	
	" 6	9 11 56	9 20 8	I	Dis.	Rather cloudy.
	" 7	15 25 9		III	Dis.	Cloudy probably
	" "	16 48 25		III	Re.	" "
	" 11	16 37 0		I	Dis.	
	" 13	11 5 22		I	Dis.	
	" 20	9 38 30		II	Dis.	
	" 20	12 58 54		I	Dis.	
	" 27	12 14 56		II	Dis.	
	" 27	14 52 33		I	Dis.	(to ecl. taken before this)
✓	" 29	9 20 58		I	Dis.	W. obs. Tabbetts rec.
✓	May 6	8 38 12.	8 46 24.	III	Re.	W. obs. Tabbetts rec,
	" "	13 21 50.	13 30 2.	I	Re.	Omitted.
	" 8	7 50 17.	7 58 29.	I	Re.	Cloudy.
	" 13	11 15 50.	11 24 2.	III	Dis.	Sat III not visible
	" "	12 36 47.	12 44 59.	III	Re.	Omitted.
	" "	15 15 42.	15 23 54.	I	Re.	"
✓	" 15	9 19 22.	9 27 34.	II	Re.	W. obs. Tabbetts rec.
✓	" "	9 44 11.	9 52 23.	I	Re.	W. obs. " "
	" 20	15 14 23.	15 22 35.	III	Dis.	Omitted

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

1897phae.proj..4400

Eclipses Jup. Sats.

	Date, 1911	H. M. S.	East. Limit.	Sat.	Phen.	Remarks.
✓	May 22	11 L 3A 13		I	Re.	H. obs. Tebbutt rec.
	" "	11 ∨6 22		II	Re.	Sat. I. omitted - too low to
	" 29	13 32 21.		I	Re.	Omitted
	" "	14 33 29.		II	Re.	"
	" 31	A 0 ∨∨.		I	Re.	Cloudy.
✓	June 7	9 ∨∨ 11.		I	Re.	H. obs. rec. Colloch rec.
	" 14	11 49 33.		I	Re.	Cloudy.
✓	" 16	9 7 9		II	Re.	H. obs. rec. Colloch rec.
	" 18	A 20 26		III	Re.	Sunday (Omitted).
✓	" 23	A 12 41		I	Re.	H. obs. rec. Colloch rec.
	" "	11 44 27		II	Re.	Cloudy.
	" 25	11 7 39		III	Dis.	Sunday.
	" "	12 27 10		III	Re.	" Cloudy.
✓	" 30	10 7 ∨∨		I	Re.	H. obs. rec. Colloch rec.
	July 7	12 1 ∨4		I	Re.	Close to hor. Abandoned
✓	" 16	A 2∨ ∨∨		I	Re.	H. obs. rec. Colloch rec.
✓	" 18	A ∨4 19.		II	Re.	H. obs. rec. Colloch rec.
	" 23	10 20 1.		I	Re.	Cloudy.
✓	" 31	A 22 32		III	Re.	H. obs. rec. Colloch rec.
✓	Sept. 12	6 ∨7 36	7 ∨ 40.	III	Dis.	H. obs. Brandt rec.
	" 16	7 10 6.	7 18 18.	I	Re.	Too low + foggy to observe.

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

1897phae.proj..4400

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

1897phae..proj...4400

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

1897phae.proj..4400

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

1897plate..proj..4460

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

1897phae..proj...4400

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