

COMPARISON

OF
CHRONOMETERS

1871

38
37

Book No., 1871 & 1872

May 8th to Nov 5th

ASTRONOMICAL RECORDS.

STATIONS:

Chron. Comparisons

Miscellaneous

Engineer Department, U. S. Army.

Geographical Surveys West of 100th Meridian.

Gilbert got small crows
at Lone Pine - Aug 21

Turned over to Hesse at d
W - turned in at Cottonwood

NOTE. — The dates here noted are civil time, and not
Astronomical time. —

Comparison of Chronometers
 Explorations in Nevada, California and Arizona
 U. S. Engineer Dept
 1871.

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron. fast or slow of time			
May 8	1	Halleck	N 1344	20 40.0	3 8 15.5				
			P 47 1821	21 12 24.5	8 57 44.5				
			N 1344	23 30.0	3 8 16.0				
			P 47 1821	15 24.0	8 57 44.0				
			N 1344	24 45.	3 3 7.0				
			H 288	29 21 38.	8 56 53				
				30 58	3 3 8.0				
				27 50	8 56 52				
			9	4	"	N 1344	23 13 44		
						P 47 1821	20 1 44.5	3 11 59.5	
N 1344	23 17 25								
H 288	20 10 31.5	3 6 53 5							
11	2	Carlin	N 1344	23 14 23					
			P 47 1821	19 54 36.5					
			N 1344	23 20 0					
			H 288	20 5 9.5					
12	"	"	N 1344	2 15 43					
			P 47 1821	22 51 25.5					
			N 1344	2 18 10					
			H 288	22 58 49.5					

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron. fast or slow of time
1871 along 13	2	Carlin	N 1344	0 39 50		
			N 1821	20 52 2	3	47 48
			N 1344	0 43 10		
			H 288	21 0 11.5	3	42 58.5
14	4	4	N 1344	1 45 54		
			N 1821	21 54 55	3	51 48.5
			N 1344	1 48 3		
			H 288	22 0 57	3	47 6.
15			N 1344	1 13 16		
			N 1821	21 17 40.5		
			N 1344	1 16 10		
			H 288	21 25 11		
16			N 1344	1 9 0		
			N 1821	21 9 25		
			N 1344	1 11 14		
			H 288	21 16 15		

Date	number of Camp	Station	number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
1871						
May 17	2	Carlin	N 1344	2 ^h 8 56		
			PV # 1821	22 5 12		
			N 1344	2 12 38		
			H 288	22 13 31.5		
18	4	"	N 1344	0 58 12		
			PV # 1821	20 50 45		
			N 1344	1 0 7		
			H 288	20 57 25		
19	"	"	N 1344	0 29 0		
			PV # 1821	20 17 44.5		
			N 1344	0 32 12		
			H 288	20 25 21.5		
20	"	"	N 1344	0 39 20		
			PV # 1821	20 24 0.5		
			N 1344	1 41 31		
			H 288	21 30 29.5		
			N 1344	1 44 34		
			H 288	21 33 32		

Date	Number of Camps	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
1871 Aug 21	2	Carlin	N 1344	1 9 35		
			P 288	20 50 24.5		
			N 1344	1 11 40		
			H 288	20 56 46		
22	4	"	N 1344	2 2 24		
			P 288	21 39 2.5		
			N 1344	2 4 20		
			H 288	21 45 19.5		
23	4	"	N 1344	1 15 4		
			P 288	20 48 0.5		
			N 1344	1 16 24		
			H 288	20 53 32.5		
24	"	"	N 1344	4 17 54		
			P 288	23 46 30		
			N 1344	4 20 16		
			H 288	23 52 53		

Date 1871	number of Camp	Station	number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
May 25	2	Carlin	N 1344	^h 3 ^m 2 ^s 3		
			P 1821	22 26 59		
			N 1344	3 4 27		
			H 288	22 33 19		
26	2	"	N 1344	1 26 45		
			P 1821	20 48 45		
			N 1344	1 29 45		
			H 288	20 54 53.5		
27	2	"	N 1344	0 46 18		
			P 1821	20 3 52		
			N 1344	0 48 29		
			H 288	20 9 45.5		
28	"	"	N 1344	3 12 40		
			P 1821	22 25 58.5		
			N 1344	3 16 36		
			H 288	22 33 28		

Date 1871	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
May 29	2	Carlin	N 1344	3 27 20		
			P 1821	22 26 43.5		
			N 1344	3 28 48		
			H 288	22 31 40.5		
31	3	Battle down town	N 1344	2 41 10		
			P 1821	21 42 49.5		
			N 1344	2 43 36		
			H 288	21 48 39.5		
June 1	"	"	N 1344	2 3 16		
			P 1821	21 5 12.5		
			N 1344	2 8 22		
			H 288	21 9 35.5		
2	"	"	N 1344	2 54 30		
			P 1821	21 48 25.5		
			N 1344	2 48 9		
			H 288	21 55 17		

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron. fast or slow of time
3	3	Battle Mountain	N 1344	7 31 14		
			P 1821	2 20 35		
			N 1344	7 37 15		
			H 288	2 29 41.5		
4	3	"	N 1344	2 44 3		
			P 1821	21 30 14.5		
			N 1344	2 46 23		
			H 288	21 35 39		
5	3	"	N 1344	4 42 53		
			P 1821	23 24 45.5		
			N 1344	4 44 13		
			H 288	23 29 11		
6	3	"	N 1344	2 40 34		
			P 1821	21 18 47.5		
			N 1344	2 43 15		
			H 288	21 24 36.5		

Date 1871	Number of Camps	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
June 7	3	Battle Mountain	N 1344	2 40 40		
			P 1821	21 14 54.5		
			N 1344	2 44 53		
			H 288	21 22 18.5		
8	"	"	N 1344	3 21 25		
			H 288	4 54 50		
			N 1344	3 25 6		
			P 1821	21 55 16		
9	"	"	N 1344	3 58 10		
			P 1821	22 24 24		
			N 1344	4 0 0		
			H 288	22 29 19.5		
10	"	"	N 1344	3 11 12		
			P 1821	21 33 40		
			N 1344	3 12 35		
			H 288	21 38 7.5		

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
1871 June 14	4	Austin	N 1344	4 23 39		
			P 288 P 1821	22 30 30		
			N 1344	4 26 10		
			H 288	22 36 44		
15	"	"	N 1344	5 35 12		
			P 288 P 1821	23 38 15		
			N 1344	5 37 43		
			H 288	23 43 1		
16	"	"	N 1344	4 50 28		
			P 288 P 1821	22 49 35		
			N 1344	4 51 47		
			H 288			
			P 288 P 1821	22 53 16.5		
17	"	"	N 1344	7 18 5		
			H 288	1 15 22		
18	"	"	N 1344	6 26 44		
			P 288 P 1821	0 17 50.5		
			N 1344	6 28 39		
			H 288			
			P 288 P 1821	0 22 10.5		

Date 1871	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
June 19	4	Austin	N 1344	4 39 53		
			P 1824	22 27 28.5		
			N 1344	4 42 55		
			H 288	22 32 47		
22	4	"	N 1344	4 52 59		
			P 1821	22 29 0.5		
			N 1344	4 54 32		
			H 288	22 32 37		
23	"	"	N 1344	4 36 20		
			P 1821	22 8 35.5		
			N 1344	4 39 15		
			H 288	22 13 25		
24	"	"	N 1344	6 6 12		
			H 288	23 36 11		
			N 1344	6 8 10		
			P 1821	23 36 11		

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
1871 June 28	4	Austin	N 1344	12 35		
			PT # 1821	19 25 21.5		
			N 1344	2 16 5		
			JL 288	19 30 50		
29	"	"	N 1344	3 26 46		
			PT # 1821	20 35 31.5		
			N 1344	3 29 4		
			JL 288	20 39 38.5		
July 8			N 1344	12 6 57		
			JL 288	4 41 28.5		
			N 1344	12 10 10		
			JL 288	4 44 41		
22		Camp Independence	N 1344	5 41 7		
			JL 288	21 22 14.5		
			N 1344	5 54 40		
			PT # 1821	21 33 44		

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
1871 July 24	.	Independence	N. 1344	7.. 18.. 45.0		
			H. 288	20.. 51.. 43.5		
			N. 1344	7.. 44.. 50.0		
			P.F. 1821	23.. 15.. 38.5		
26 th		..	N. 1344	12.. 3.. 0		
			H. 288	2.. 27.. 24		
			N. 1344	11.. 18.. 29.5		
			P.F. 1821	2.. 40.. 55		
27 th		..	N. 1344	10.. ^{59.. 51.0} 20.. 19.5		
			H. 288	20.. 19.5		
			N. 1344	11.. 21.. 34.0		
			P.F. 1821	2.. 40.. 5.5		
28		..	N. 1344	7.. 39.. 25		
			H. 288	20.. 51.. 31		
			N. 1344	7.. ^{55.. 54.0} 46.. 45.0		
			P.F. 1821	23.. ^{2.0} 11.. 55.5		

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow time
July 29 th		Camp Independence	N. 1344	h..m..s 8..8..0		
			H. 288	23..21..5		
			N. 1344	8..18..59.0		
			P.F. 1821	23..30..12.0		
31	"	"	N. 1344	7..36..21		
			H. 288	22..41..39		
			N. 1344	7..40..57		
			P.F. 1821	22..44..16.5		
Aug. 1.			N. 1344	8..8..59.0		
			H. 288	23..10..15.0		
			N. 1344	8..15..25.0		
			P.F. 1821	23..14..40.0		
2			N. 1344	8..6..50		
			H. 288	23-4..11 $\frac{1}{2}$		
			N. 1344	8..19..39.0		
			H. 288	23..14..55.0		

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow time
Aug 3		Camp Independence	N. 1344	8.. 38 42.0		
			H. 288	23.. 27 55.0		
			N. 1344	8-59-4		
			P.F. 1821	23-50-14.5		
4		" "	N. 1344	8.. 19.. 43		
			H. 288	23.. 9.. 10		
			N. 1344	8.. 26.. 13		
			P.F. 1821	23.. 13. 31.5		
5		" "	N. 1344	7.. 22.. 3.0		
			H. 288	22.. 7.. 44.5		
			N. 1344	7.. 25.. 13		
			N. 1344	7.. 25.. 13.0		
			P.F. 1821	22.. 8.. 44.0		
6		" "	N. 1344	7.. 13.. 12.0		
			H. 288	21.. 54.. 58.0		
			N. 1344	7.. 9.. 0.0		
			P.F. 1821	21.. 48. 34.5		

21, '8

H 288 slow of
Independence all 3 time
E = 14^m 33 rate

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time	Chart 0.52 losing
8		Camp Independence	N. 1344	10..1..38.0			
			H. 288	0..35..5.0			
			N. 1344	10..4..25			
			P.F. 1821 H. 288	0..35..35			
9		"	N. 1344	7..4..1			
			H. 288	21..34..0			
			N. 1344	7.. 2 .. 45.0 21..00.0			
			P.F. 1821	21..33..26.0 48..38.5			
				4..10.. ⁰⁵ 27 19..15.. ²⁷ 45			
10 th		"	N. 1344	4..43..1			
			H. 288	19..9..27			
			N. 1344	4..49..5.0			
			P.F. 1821	19..13..10.5			
			H. 28				
11	1	Gene River Omens river	H. 288	7-13-00			
			Ann. P.F. 1821	7-6-20.5 00-6-39.2			
				pm			
			H. 288	7-41-			
			P.F. 1821	7-34-28.0 00-6-35.1			

Date	Number of Camps	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
Aug 12	2	Foot of Lake	H 288 P.F. 1821	8-39-00 8-31-19	7-45!	
" 13	3	Korr Springs	H 288 P.F. 1821	8-50. 8-42.177	7-42.3	
" 14	4	Indian Wells	H. 288 P.F. 1821	7-47-0 7-35-219	11-38.1	
15	5	Desert Wells	H-288 P.F. 1821	8-27 8-14.442	12-15.3	
16	6	—	H-288 P.F. 1821	8-50-8.2 8-38-00	+12-8.2	
17	8	Mosquito Spys	H-288 P.F. 1821	8-27-596 8-15-07	12-59.6	
18	7	Dry Camp	H 288 P.F. 1821	6-11-00 6-57-347		
19	8	Granite Wells	Negns. 1344 H. 288	1. 48. 33 2. 35. 57		

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
21	9	Leach Point	H 288	9-41-0		
			P.F. 1821	9-27-11	13-48.9	* A.M.
21	9	" "	H. 288	7-57-08		
			P.F. 1821	7-43-15.7	13 ^m -44.3 ^s	
22	9	" "	H 288	8-35-00		
			P.F. 1821	8-21-26.3	13-33.7	
23	9	" "	H 288	6-32-0		A.M.
			P.F. 1821	6-18-20.6	13-33.4	
23	9	_____	H-288	8-18-29.6		P.M.
			P.F. 1821	8-05-	13-29.6	
24	9	_____	H-288	5-31-29.3		
			P.F. 1821	5-18	13 ^s -29.3	
24	9	" "	<u>N. 1344</u>	19-43-47		
			H. 288	6-33-18		
			H. 288	6-38-0		
			P.F. 1821	6-24-34		

Difference of

32.2
42.4
52.2
62.0
12.2

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
25	10	Lunatoga Spring	H 288 P.F. 1821	9-37-00 9-05, 37.7	21-22.3	done d-d circums cannot make it out
26	"	"	H 288 P.F. 1821	5-36-00 5-14, 41.4	21-18.6	AM
26	11	Kingston	H 288 P.F. 1821	8-48 8-26, 40.7	21-19.3	PM
27	"	"	H 288 P.F. 1821	5-53 5-31, 44.2	21-15.2	AM
28	12	Trampah	H 288 P.F. 1821	7-48-00 7-26, 05.2	21-54.8	P.M.
29	13	Good Spr.	H. 288 P.F. 1821	7-4-0 6-41-56.7	0-22-3.3	PM
31	14	Cottonwood Springs	H 288 P.F. 1821	9-41-00 9-18-39.6	22-20.4	AM
Sept 1	13	"	H 288 P.F. 1821	4-20-00 3-57-48.1	22-11.9	AM

57.0 42.5
 2.4 52.8
 12.2 2.8
 22.
 42.6
 52.8
 8.2
 13.
 22.6
 32.8

12.7
 13.1
 -4

52.5

30 - 26.7
 36.9
 46.7
 56.9
 6.9
 10.6
 20.6
 44.1 24.1
 24.2

8-49
 8-27-20.6

28.7

8-36 37
 10-09-

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
Sept. 1	1	Cottonwood Spr	H 288	6-8-0		d.m.
			P 7 1821	5-45-49.0	22-11	
Sept	1	" "				
Sept	2	Cottonwood Spr	H 288	9-18-00		Am
	"	" "	P 7 1821	8-56-12.9	21-47.1	
"	3	" "	H 288	9-6-00		
				8-44-12.2	21-47.8	
"	4	" "	H 288	8-49-00		
			1821	8-27-20.6		
"	5	Cottonwood	H 288	8-36-00		
			P 7 1821	10-09-24.1	26-38.9	
6	6	" "	H 288	10-38-15		
			P 7 1821	10-11-28.7	26-31.3	
9	9	Cottonwood	H 288	9-39-00		
			P 7 1821	9-17-52.5	21-07.5	
10		" "	H 288	12-51-30		Pm
			P 7 1821	12-30-27.9	21-02.1	

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time		
Sept 11	-	Cottonwood	H 288	9-12				
			P.F. 1821	8-46-02	23-39.8	?	Am	
12.		"	H. 288	8-54				
			P.F. 1821	8-33-032	25-56.8		Am	
12		"	H 288	8-29-0			PM	
			P.F. 1821	8-08-55	20-57.2			
13		"	H 288	7-12-00				
			P.F. 1821	6-46-31.7	25-38.3	?		
14	"	"	H 288	7-48-00			Am	
			P.F. 1821	7-28-25.3	19-38.7			
15	"	"	H 288	6-28-30			Am	
			P.F. 1821	6-07-59.3	20-30.7		to 2 Left camp	
			from Cottonwood 2 days					
16	1	Las Vegas	H 288	8-89-00			Am	
			P.F. 1821	8-18-34.5	25-25.5			
			H 288	11-33-00				
17	1	"	P.F. 1821	11-22-46.5	20-13.5		Am	

6-07-30.9

5-29-54.9

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
18	1	St. Marys	H 288	8-07-00		am
			P.F. 1821	7-40-55.1	20-04.9	
18			A 288	8-15-00		
18	1	"	P.F. 1821	6-55-00	19-59.3	pm
19	1	"	H. 288	9-05-00		
			P.F. 1821	8-45-05.5	19-54.5	a.m.
20	1	"	A 288	2-07-24		pm
				1-48-00	19-42.4	23
22 th	3	St Thomas	A 288	7-42-00		pm
			P.F. 1821	7-21-56.7	20-53.3	
23 ^d	4	Jingm Hill	A 288	5-16-00		pm
			P.F. 1821	4-54-27.9	21-43 2.1	very hot day
				10-20-00		am
25	3	Beaver Dam		9-38-44	42-13.3	change on road not very accurate
				6-01-00		improvement
26	5	"		5-19-54.9	41-51	am

Date	Number of Camps	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fast or slow of time
26	6	St George Noyon near	H 288	4 - 36	41 - 33.6	For 45 min at Camp
			P.F. 1821	3 - 44 - 26.4		
27 th		St George Tom Hall.	N. 1344 ^{sid}	12..34..19.0		
			H. 288	0..42..35.0		
			N. 1344 ^{sid}	12..37..24.0		
			P.F. 1821	23..53..18.0		
28 th		" " "	N. 1344	13..14..57		
			H. 288	1..19..8 $\frac{1}{2}$		
			N. 1344	13..19..17		
			P.F. 1821	H. 288 1..31..19		
29 th		" " "	N. 1344	12 ^h ..26..28		
			H. 288	0..26..30		
			N. 1344	12..39..42		
			P.F. 1821	23..48..25		
Oct 1 st	1	from St George.	N. 1344	18..32..13		
			H. 288	5..39..5		

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chroni fast or slow of time
Oct. 1	1	South of St George	H. 288	5. 46. 0		
			PTF. 1821	4. 51. 17.8		
			N. 1344	18. 42. 56		
			PTF. 1821	4. 55. 4		
Oct 2	2	Rocky pocket (?) from St George	N. 1344	20. 50. 10.0		
			H. 288	7. 53. 5.5		
			N. 1344	20. 46. 12		
			PTF. 1821	6. 46. 9.5		
			H. 288	7. 56. 00		
			PTF. 1821	6. 53. 1.3		
Oct 3	3 from St George	Pahkoon	N. 1344	18. 59. 46		
			H. 288	5. 59. 17.5		
			N. 1344	19. 2. 8.0		
			PTF. 1821	4. 58. 39.5		
			H. 288	6. 4. 0.0		
			PTF. 1821	5. 1. 0.2		

Date	Number of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron fast or slow of time
Oct 4 th		Pah-Koon	22	20.2		
			H. 284	9.20.25		
			22	23.25		
			P.F. 1821	8.15.30.5		
Oct 7		Tinecan Springs	N. 1344	19.56.38		
			H. 288	6.40.20		
			N. 1344	19.58.53		
			P.F. 1821	5.39.57		
Oct 8		Canon Springs	N. 1344	20.1.30		
			H. 288	6.41.55.5		
			N. 1344	20.7.33.0		
			P.F. 1821	5.45.8.0		
Oct 9		New Creek	N. 1344	20.59.38.0		
			H. 288	7.35.23.5		
			N. 1344	21.2.56.0		
			P.F. 1821	6.36.31.5		
			H. 288	7.41.00		
			P.F. 1821	6.33.50.6		

Date	Number of Camps	Station	Number of Chronometer	Reading of Chronometer	Difference	Chron: fact of or slow time
Oct- 11.		Troyton Lpys	H 288	9-50-00		
			P.T. 1821	8-55-7.71-01	32.3	
13	-	"	H 288	10-17		
		"	P.T. 1821	9 25-20.31-1-	3 2.7	
14	-	"	H 288	8-45-35.2		
		"	P.T. 1821	8-44-35.21-00-	21.8	
15	"	"	H 288	8-54-00		Cant make it out.
		"	P.T. 1821	8-52-43.21-01-	16.8	
16	-	—	H 288	8-5-00		
			P.T. 1821	7-4-51.91-1-	08.0	
17		—	H 288	9-56-		
			P.T. 1821	9-54-58.71-1-	01.3	<i>[Signature]</i>
17			H 288	7-38-00		
			P.T. 1821	7-37-01-01-		<i>[Signature]</i>
22 degree		Troyton	H 288	8-44-		
			P.T. 1821	6-56-50.51-47-	9.4	

Oct	23	Imperial	1268	6-1-0
			H 288	7-36-48.4
dv	dv	dv	1268	6-8-34.9
			1283	0 51-10.
dv	24	dv	H 288	7-52.0
			P.T. 1821	6-4-3.4
Nov	3 ^d	Inscott	H 288	8-9-10
			P.T. 1821	1-30 29.2
Nov.	5 th	Astronomical Sta at Fort Whipple	Sidereal N. 1344	15 " 55 " 50.0
			Solar H. 288	4 " 11 " 33.5
			Sid. N. 1344	16 " 16 " 10.5
			P.T. 1821	0 " 53 " 57.5
			Sid N. 1344	16 " 4 " 41.0
			N. 1268	1 " 11 " 40.5
			Sid N. 1344	16 " 11 " 36.0
			N. 1283	5 " 47 " 9.5

was stopped

was stopped. started in...

Date	no. of Camp	Station	No. of Chron.	Reading Chronomet.	
Nov.	6 ¹⁵	astronomical sta. Fort. Whipple	N. 1344 sidereal	14 ^h 33 ^m 54 ^s	A.M. Nov. 5, astronom. 26 hrs. day.
			H. 288 m. solar	2 ^m 46 ^s 49	
			N. 1344 sidereal	14 ^m 36 ^s 56.5	
			P. 1821 m. solar	23 ^m 11 ^s 45	
			N. 1344 sidereal	14 ^m 46 ^s 14.0	slow about 1 ^m 26.17 at noon.
			N. 1268 m. solar	23 ^m 49 ^s 31.5	
			N. 1344 sidereal	14 ^m 43 ^s 5.0	
			N. 1283 m. solar	4 ^m 15 ^s 2.0	28 hrs.
Nov.	7 ¹⁵	"	N. 1344 sidereal	15 ^m 18 ^s 10.0	
			H. 288	3 ^m 25 ^s 56.5	
			N. 1344	15 ^m 32 ^s 10.0	
			P. 1821	0 ^m 2 ^s 21.5	
			N. 1344	15 ^m 24 ^s 36.0	
			N. 1268	0 ^m 23 ^s 50.5	
			N. 1344	15 ^m 22 ^s 28.0	
			N. 1283	4 ^m 50 ^s 27.0	

Comparison of Chronometers - Standard - M. S. Chron. 1268 by Regas -

Date	No. of Camp	Station	Number of Chronometers		Reading of Chronometer	Difference	Remarks
			M. S. Chron.	A. M.			
1871.							
Nov. 14.			1268		8 ^h -58 ^m -47.5 ^s		Lyle M. S. Chron. 1283 had stopped and was started about 7 ^h -10 ^m A.M. Cause of stoppage, concussion on iron & canvas belt & struck Chron. case on ground. Beats, coincident.
			1283		7-16-20.0 + 1 ^h -39 ^m -27.5 ^s		
Nov. 15			1268		10-45-49.5		Lyle Beats, not coincident.
			1283		9-06-20.0 + 1-39-29.5		
Nov. 16		Midway Valley	1268		6-37-17.5		Lyle
			1283		4-58-00.0 + 1-39-17.5		
Nov. 17.		Below Beaver Creek	1268		7-06-08.0		"
			1283		5-27-00.0 + 1-39-08.0		
Nov. 18		Lutee Long Fork	1268		6-59-00.0		"
			1283		5-19-58.5 + 1-39-01.5		
Nov. 19		Edge of Jolito Basin	1268		7-29-00.0		"
			1283		5-50-05.5 + 1-38-54.5		
Nov. 20.		Mesa Camp (Punta Basin)	1268		7-33-00.0		A. Huber
			1283		5-54-09.4 + 1-38-50.6		
Nov. 21.		Cañon Creek	1268		6-46-00.0		Lyle
			1283		5-07-15.5 + 1-38-44.5		

Date	No. of Camp	Station	Number of Chronometer	Reading of Chronometer	Difference	Remarks
Nov. 22			M.S. Chron: 1268	A.M. 7 ^h -39 ^m -00.0		Lgt
			1283	6-00-22.2	+1 ^h -38 ^m -37.8	
Nov. 23			1268	6-47-00.0		"
			1283	5-08-35.0	+1-38-25.0	
Nov. 24			1268	7-06-00.0		Trail rough, steep & rocky - Chron. jarred.
			1283	5-27-24.3	+1-38-35.7	
Nov. 25			1268	7-35-00.0		Lgt
			1283	5-56-26.9	+1-38-33.1	
			M.S.	A.M.		
Oct. 15		River Camp 26-	1268	6-28-00.0		
			1283	4-49-05.4	+1-38-54.6	Wholes
Oct. 21		Diamond River	1268	7-05-00.0		
			1283	5-26-19.5	+1-38-40.5	
" "		" "	1268	7-06-00.0		Negs - Hutton.
			288	8-17-05.6	-1-11-05.6	

Date	No. of Camp	Station	Wickets of Chron. M. Solar	Reading of Chron.	Difference	Remarks
1871 Aug 30		Ash Meadows Sta.	1268	A.M. 4-15-30		
			1283	2-36-26.2	1-39-03.8	
Sept 1.		Pahrump Springs	1268	A.M. 6-36-15		
			1283	4-57-19.9	1-38-55.1	
Sept 12		Stamp Spring	1268	P.M. 2-28-00		check: round to 1.30 P.M.
			1283	12-47-59	1-30-01.	
Sept 3.		Mountain Spring	1268	P.M. 5-41-45		check: round 1.30 P.M.
			1283	4-01-47.4	1-39-57.6	
1872						
Sept 28		Fremont's Pass	1501	12-17-6.4		
			8544	8-40-00	3-37-6.4	
Sept 29		Bear Cr. Cañon	1501	10-31-8.3		
			8544	6-37-0	3-54-8.3	!
Oct 29		Mountain Meadows	1501	11-46-58.7		
			8544	7-37-30	4-9-28.7	
" 20		" "	1501	10-39-24.3		
			8544	6-30-00	4-9-24.3	

Oct 21/72	Mountain Meadows	15-01	11-36-19.3		
		85-44	7-27-00	4-9-19.3	
Nov 1/72	" "	15-01	11-32-15.3		
		85-44	7-43-00	4-9-15.3	
Nov 2/72	" "	15-01	11-56-09.7		
		85-44	7-47-00	4-9-9.7	
Nov 3/72	" "	15-01	11-53-48		
		85-44	7-44-00	4-9-4.8	
Nov 4/72	Hebron	15-01	6-52-00		
		85-44	11-00-57.5	4-8-57.5	
Nov 5/72	Desert Springs	15-01	12-16-52.3		
		85-44	8-08-00	4-8-52.3	
Nov 9/72	" "	15-01	11-24-31.8		
		85-44	7-16-00	4-8-31.8	
Nov 11/72	" "	15-01	11-15-22.4		
		85-44	7-7-00	4-8-22.4	

Nov 12/72	Mammoth Mill	15-01	1-29-17.5-		
		85-44	9-31-00	4-8-17.5-	

" 13/72	"	15-01	11-11-13.5-		
		85-44	7-3-00	4-8-13.5-	

" 14/72	Mill Station	15-01	13-13-8.5-		
		85-44	7-5-00	4-8-8.5-	

" 15/72	San Francisco Spr	15-01	12-00-0.3		
		85-44	7-52-00	4-8-00.3	

7-44 - 2513
7-28 - 2513

2513

9 - 27
9 - 5 37.7

5 - 25 - 00
5 - 17 - 41.4

5 - 53 - 0
5 - 31 - 44.2

7 - 4 - 0
6 - 41 - 56.7

7 - 48

7 - 26 - 5.2