

Carlin Nev Austin Nev
Battle Mountain Nev
Camp Independence Cal
1871

OBSERVATIONS

FOR

LATITUDE.

U. S. ENGINEER OFFICE.

Explorations West of the 100th Meridian.

ASTRONOMICAL DEPARTMENT.

No. /

EDWARD DENNY & CO.
STATIONERS.
Accountbooks Bound and
Pencil in order.
512 SACRAMENTO ST.
Bel. Sansone & Leonard
SAN FRANCISCO.

7/10/11

Observer

Records

Obs'd Times
by Chro.

Culmin.
by Chro.

Red'n to
Merid.

REMARKS.

approximate value of 1^{st} of illicium
~~= 81.005~~ 81.005

Station

B. A. C. Star.	N. S.	Micrometer.		Level.		Level. Cor'n.
		Turns.	Div's.	N.	S.	
3105 3105.5 3973 14 ⁿ 3150.4	N	23 23	84.2 84.2	9.0	22.2	
4010	S	2	76			
4056	S	2	76.3	19.7	11.0	
4108	N					
4123	N	33	84.0			

Observer

Records

Obs'd Times by Chro.	Culmin. by Chro.	Red'n to Merid.	REMARKS.
11 ^h 31' 50			not seen
11 ^h 50' 15			Star out of the field Observations interrupted by Clouds

Station *Carlton Rev May 17th 1871*

B. A. C. Star.	N. S.	Micrometer.		Level.		Level. Cor'n.
		Turns.	Div's.	N.	S.	
4389	N	33	24.0	9.0	10.7	
				12.3	10.3	
4568	N	12	52.2	13.5	10.0	
4594	S	24	66.3	8.0	15.0	-4.5
				<u>21.5</u>	<u>25.0</u>	
4640	S	7	94.7	11.0	12.5	
4684	N	31	72.6	15.0	8.3	+5.2
				<u>26.6</u>	<u>20.8</u>	
4728	N					
58	S					
4804	N	17	35.8	9.8	14.0	
4808	S	15	25.6	14.8	9.2	+1.4
				<u>24.6</u>	<u>23.2</u>	

Observer

Records

Obs'd Times by Chro.	Culmin. by Chro.	Red'n to Merid.	REMARKS.
55.0			
13 ^h 21' 55.0			
13 ^h 31' 13.0			
35' 56.5			
13 ^h 42' 33.5			
14 ^h			

Station

Carlin Nevada May 25. 1871

B. A. C. Star.	N. S.	Micrometer.		Level.		Level. Cor'n.
		Turns.	Div's.	N.	S.	
		12	92,7			
4568	N	12	92,7	17,2	13,0	
4594	S	30 25	08,0	12,4 29,6	18,0 31,0	
4640	S	7	53,0	14,8	15,3	
4684	N	31	30,9	17,0 31,8	13,9 29,2	
4728	N	19	16,9	15,0	18,0	
4758	S	23	16,7	16,8	15,0	
4804	N	18	32,0	16,0	16,2	
4808	S	16	08,2	13,2	18,8	
4825	S					
4821	N					
4885	N					
4897	S					

Station

Carlin, Nevada May 26

	B. A. C.		Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
1	4526	S	11	73.6	17"	10"	
	4540	N	28	74.9	12.2	14.7	
2	4568	N	14 ⁹	59	14.2	12.8	
	4594	S	21	83.2	15.7 29.9	12.5 25.3	+46
3	4640	S	1	45.3	14.8	14."	
	4684	N	20 25	26.9	12.8 27.6	16.3 30.3	27
4	4728	N	16	20.4	13"	16"	
	4758	S	20	65.7	16"	13.9	
5	4804	N	17	52.5	9.8	21	
	4808	S	15	20.8	19	11.8	
6	4825	S	11	91.2	7.2	23.5	
	4841	N	12	88.3	21.3	9.6	
7	4885	N	25	06.7	16.2	15"	
	4897	S	18	53.5	11.3	20.2	
8	4934	N					
	4942	S					

Station

Carlin, Nevada

May 26th

	B. A. C.		Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
9	49.52	N.	15	66.2	9.2	19.8	
	5000	S.	12	99.2	16.9	11.7	
10	50.71	N.	1	62.5	13 ⁴	15.2	
	50.98	S.	26	51.6	13 ⁴	15.4	
11	51.16	N.	33	23.9	17.8	10.5	
	5146	S.	6	18.7	9 ⁴	19.2	
12	5234	S.	20	74.2	17.8	11.2	
	5249	N.	15	20 ⁴	9.7	19.8	
13	5322	S.	32	51.6	13.8	16.	
	5348	N.	3	15.4	15.7	13.9	
14	5385	S.	9	64.8	13.2	16.2	
	5400	N.	28	88.7	13.8	15.2	
15	5432	S.	4	41.7	16.2	13.2	
	5463	N.	36	62.2	7.8	20.8	

Station *Carlin Nevada*

May 27th 1871

	B. A. C.		Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
7	4526	S	6	99.8	22.2	16.2	
	4540	N	24	06.0	17.8	20.5	
8	4568	N	10	09.2	21.2	16.8	
	4594	S	22	22.8	$\frac{15.8}{37.0}$	$\frac{22.7}{37.5}$	
9	4640	S	3	18.5	16.0	23.0	
	4684	N	27 23	08.0 89.5	20.0 36.0	19.5 42.5	
10	4728	N	20	16.9	18.8	20.7	
	4758	S	13	78.9	17.5	22.0	
11	4804	N	13	22.2	18.0	22.0	
	4808	S	10	27.7	18.2	21.8	
12	4825	S	14	09.3	19.0	21.2	
	4821	N	15	12.8	17.0	23.3	
13	4885	N	19	69.4	18.8	22.0	<i>very faint</i>
	4897	S	13	05.0	17.6	22.0	

Station Berlin N.Y. May 27 1871

	B. A. C.	N.	Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
14	4952	N	11	30.0	20,9	20,0	
	5000	S	8	52,9	13,7	—	
15	5071	N	2	76,9	5,0	10,2	
	5098	S	27	51,0	2,3	13,0	
16	5116	N	30	06,0	22,8	13,8	
	5146	S	3	54,7	20,7	21,5	
17	5234	S	14	99,8	13,8	10,8	
	5249	N	9	75,9	0,0	21,0	
18	5322	S	32	87,0	12,0	9,8	
	5348	N	3	58,2	11,2	10,8	
19	5385	S	5	11,1	18,3	15,7	
	5400	N	24	37,4	13,2	20,7	
20	5432	S	4	36,0	14,0	23,0	
	5463	N	31	48,1	21,8	16,2	

Observer

Records

Obs'd Times by Chro.	Culmin. by Chro.	Red'n to Merid.	REMARKS.
			<i>white beyond scale</i>

Station

Battle Mountain New Jersey 6th/₁₁

	B. A. C.	N.	Micrometer.		Level.		Level.	
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.	
	5167	N	26					
	5178	S						
	5210	N	26	22.8	16.8	16.5		
	5286	S	Too faint to be seen					
	5252	S	2	95.5	12	21.2		
	5307	N	30	52.9	^{28.2} Can't Read	5		
x	5452	S	1	4.5	18.2	15.5		
x	5463	N	22	13.9	18.5	15.2		
x	5479	S	2	65.6	18.2	15.8		
✓	5541	S	12	62.2	16.5	16.8		
*	5549	N	18	49.	22.	12.		

Station

Battle Mountain June 7th

	B. A. C.	N.	Micrometer.		Level.		Level.	
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.	
	5210	N	13	94.6	16	15.5		
	5236	S	Too faint to be seen					
x	5252	S	7	48.2	17	15		
x 15	5307	N	35	08.2	18	13.8		
	5385	S	11	72.2	21.8	10.2		
x 16	5400	N	24	59.5	12.8	19.		
	5432	S	13	81.0	15.6	15.0		
x 17	5463	N	34	47.8	20	12.8		
	5479	S	10	19.2	16.3	16.3		
x 18	5541	S	18	53	20.3	13		
	5549	N	22	35.3	18.	15		

Station

Battle Mountain June 8th 1871

	B. A. C.	N.	Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
3	4568	N	11	10.0	12	10.5	x
	4594	S	29	47.0	12	10.5	x
	4605	N	22	55.8	10.7	12	d
4	4640	S	12	88.8	10.2	12.2	x
	4684	N	29	50.3	13	10.2	x
5	4694	S	26	51.0	15.5	8.	x
	4701	N	14	83.6	8.	16	x
6	4723	S	23	28.0	12.6	11.8	x
	4752	N	5	48.9	14.	10.3	x
7	4804	N	9	84.1	11.3	13.	
	4808	S	18	8.4	out beyond the site		
8	4825	S	23	27.9	14.8	10	>
	4841	N	17	78.8	14	10.5	x
	4863	S	28	28.0	24	10	x
10	5026	S	24	1.0	22.5	11.2	
	5033	N					

Station *Battle Mountain June 8th 1871*

	B. A. C.	N.	Micrometer:		Level.		Level. Cor'n.
	Star.	S.	Turns.	Div's.	N.	S.	
12	5072	S	24	9.1	11.8	11.8	x
	5113	N	11	63.6	12.8	11.8	x
13	5157	N	32	29.5	15	9.5	x
	5178	S	4	65.3	10	14.8	x
15	5252	S	7	91.0	15	10	x
	5307	N	35	67.0	10	15	x
16	5385	S	8	97.8	13	12.5	x
	5400	N	26	90.5	14.8	11	x
17	5432	S	13	76.8	15.8	10	x
	5463	N	34	43.5	12.8	13	x
	5479	S	10	01.6	15.8	10	x
18	5541	S	18	16.2	9.5	16.8	x
	5549	N	21	98.9	21	2 5	x
19	5596	N	25	79.9	12	14	x
	5604	S	14	51.0	17 5	8 8	x

Station *Battle Mountain June 8th 1871*

	B. A. C.	N.	Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
20	5629	N	22	3 0	16.3	10	x
	5658	N	38	88.0	16.2	10	x
	5677	S	01	7.5	14	12	x
	5714	S	31	18.7	15.	11.8	x
21	5752	N	23	64.8	17.8	9.2	x
	5798	S ^{direct to right}	23	88.8	17.	10.2	x

Station

Battle Mountain June 9th 1871

	B. A. C.	N.	Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
3	4568	N	9	86.2	12	11	x
	4594	S	28	82.0	8	15.8	x
	4605	N					
4	4640	S	10	87.9	13.5	10.3	x
	4684	N	28	79.0	4.	20.8	x
5	4694	S	26	40.2	6.2	18.8	(
	4701	N	14	80.0	17.	8.	x
6	4723	S	25	68.9	11.2	13.5	x
	4752	N	5	93.8	11.2	13.2	x
7	4804	N	12	78.2	12.	13.	x
	4808	S	16	67.7	13.	12.2	,
8	4825	S	22	94.2	14.	11.8	x
	4841	N	17	56.7	12.8	13.2	x
	4863	S	27	92.5	16.	10.5	x
10	4952	N	20	42.5	19.2	7.8	x
	5000	S	24	28.5	13.	15	x

Station

Battle Mountain June 9th 1877

	B. A. C.	N.	Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
12	5072	S	23	56.7	14.	14	x
	5113	N	10	87.0	20 8	7 2	x
13	5157	N	33	32.8	10.2	18	x
	5178	S	5	90.8	22.	6.5	x
15	5252	S	8	35.4	19.2	9.2	x
	5307	N	35	91.0	17.2	11.3	x
16	5385	S	18	99.5	14	15	x
	5400	N	26	48.5	24.5	5	x
17	5432	S	14	48.0	22.	17.3	x
	5463	N	34	94.4	17.6	12.0	x
	5479	S	10	80.0	22.	7.2	x
18	5541	S	18	60.7	15	14	x
	5549	N	22	28.4	23	6	x
19	5596	N	25	54.6	17.3	11.6	x
	5604	S	14	52.5	25.	4.5	x

Station

Battle Mountain June 9th 1871

	B. A. C.	N.	Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
20	5628	N	21	46.8	19.4	9.8	
	5658	N	38	39.4	18.8	10.5	our ✓
	5677	S	0	85.0	22.8	6.8	x
	5714	S	31	9.0	23.8	6.	x
21	5752	N	23	93.3	15.2	14.8	x
	5798	S	24	3.0	18.5	12.	x

C. P. Austin Observer

Records

Obs'd Times
by Chro.

Culmin.
by Chro.

Red'n to
Merid.

REMARKS.

Not 5658' another being closer

Station

Austin Nevada June 15th 1871

	B. A. C.	N.	Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
1	4847	S	12	9.1	14	11.8	
	4874	N	20	61.6	12.2	13.6	
2	4905	S	26	80.8	14	12	
	4918	N	5	12.5	13.2	22.5	
3	4965	N					
	5000	S					
4	5075	S	16	41.2	13.3	13.0	
	5113	N	19	25.6	12.5	13.8	
5	5181	N	11	53.2	7.6	19	
	5236	S			22.2	4.3	
6	5259	S					
	5271	N					
7	5319	S	13	80.2	13.8	13.0	
	5388	N	14	21.0	12	15	
8	5426	S	25	88.2	10.5	16.8	
	5489	N	15	76.7	15	12	

Station

Austin Nevada June 13th 1871

	B. A. C.	N.	Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
9	5480	S	19	95.5	13.3	14.2	
	5497	N	19	36.2	12.2	15.4	
10	5568	N	24	99.9	12.5	15.7	
	5604	S	13	19.5	14	14.4	
11	5628	N	34	57.9	11.8	16.8	
	5647	S	5	50.3	16.	12.5	
12	5693	S	8	75.0	14.5	13.8	
	5706	N	22	49.2	18.8	9.3	
13	5740	N	12	18.2			
	5745	N	16	48.1	16.8	11.	
	5753	S	18	48.5			
	5757	S	16	93.4	6.5	21.5	
14	5785	N	12	69.7	16.8	12.5	
	5798	S	15	38.0	11.5	16.5	
15	5863	S	18	41.1	12.8	15.7	
	5871	N	17	27.4	14.2	14.0	

S. P. Austin Observer

Records

Obs'd Times
by Chro.

Culmin.
by Chro.

Red'n to
Merid.

REMARKS.

2 stars observed the first

Station

Austin Nevada June 15th 1871

	B. A. C.		Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor n.
16	5900	S	20	10.6	13	15	
	5918	N	21	22.4	14.5	14.0	
17	5957	N	3	91.0	13	15	
	5967	S	34	45.5	15	13.5	
18	6021	S	11	19.6	13.5	15	
	6052	N	27	67.7	13.	15.6	
19	6087	S	15	27.5	14	14.8	
	6129	N	29	49.6	11.2	17.2	
20	6162	N	7	45.0	12.5	16.2	
	6235	S	28	60.0	16.5	12.8	

Station

Austin Nevada June 17th 1877

	B. A. C.		N.		Micrometer.		Level.		Level. Cor'n.
	Star.	S.	Turns.	Div's.	N.	S.			
1	4847	S	11	61.0	6.8	8			
	4874	N	27	62.0	6.	9.			
2	4905	S	26	3.7	14	12			
	4918	N	4	77.6	9	17			
3	4980	N	33	38.7	13.8	12.8			
	5001	S	6	60.6	15.3	10.8			
4	5075	S	16	98.4	2	25			
	5113	N	19	51.5	22	5.2			
5	5181	N	11	37.2	13.8	14			
	5236	S							
6	5259	S							
	5271	N							
7	5319	S	13	63.6	13	15.8			
	5388	N	14	7.8	12	17.2			
8	5426	S	26	81.0	15.2	12.8			
	5459	N	16	71.8	11.5	17.8			

C. P. Austin Observer

Records

Obs'd Times by Chro.	Culmin. by Chro.	Red'n to Merid.	REMARKS.
			<i>2 Stars, the following one taken</i>
			<i>Very faint</i>
			<i>Too faint</i>
			<i>Can't see it</i>

16 10. 5

Station Austin Nevada June 17th 1871

	B. A. C.		Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
9	5480	S	20	15.2	13.8	16	
	5497	N	19	59.5	13.7	15.6	
10	5558	N	24	22.3	15.5	14.2	
	5604	S	12	27.9	15	14	
11	5628	N	34	42.7	8.5	21.2	
	5647	S	5	15.5	20.2	9.3	
12	5693	S	8	66.0	15	15	
	5706	N	23	01.7	10.3	19.4	
13	5740	N	11	61.0			
	5745	N	15	92.5	13	16.9	
	5753	S	18	10.2			
	5757	S	16	56.3	16	513.5	
14	5785	N	13	36.7	14	15.8	
	5798	S	15	94.4	13.7	16.3	
15	5863	S	19	39.4	17	12.8	
	5871	N	18	30.0	12.3	17.2	

C. P. Austin Observer

Records

Obs'd Times by Chro.	Culmin. by Chro.	Red'n to Merid.	REMARKS.
			doubtful
			2 stars observed the first

Station *Austin Nevada June 17th 1871*

	B. A. C.	N.	Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
16	5900	S	21	13.8	15	.8	14.8
	5918	N	22	31.6	11	.8	17.8
17	5951	N	4	73.4	15		14
	5967	S	35	22.4	13	.3	16
18	6021	S	11	41.3	11	.2	17.2
	6052	N	27	84.8	15	.8	12.8
19	6087	S	14	61.7	13		15
	6129	N	28	87.9	11	.2	16.2
20	6162	N	6	89.4	12	.2	14.6
	6235	S	27	92.7	9	.8	16.5

Station *Adelton Nevada June 21st 1871*

	B. A. C.	N.	Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
			2				
10	5568	cr	24	75.3	14.8	17.8	
	5604	S	17	97.6	17.2	15.5	
11	5628	cr	34	59.7	11.7	21.2	
	5647	S	5	40.2	21.2	11.5	
12	5693	S	9	37	16.8	16.0	
	5706	cr	23	29.1	15.0	17.7	
13	5740	cr	12	83.3	14.7	18.0	
	5745	cr	17	2.9			
	5753	S	19	27.4	18.1	15.0	
	5757	S	17	69.7			
14	5788	cr	13	57.2	15.7	17.2	
	5798	S	16	21.3	16.2	17.0	
15	5863	S	18	91.4	16.0	17.2	
	5871	cr	17	81.9	14.9	18.5	
16	5906	cr	22	20.0	16.4	17.0	
	5918	cr	23	35.9	14.7	18.7	

Station *Austin Nevada June 21st 1871*

	B. A. C.	N.	Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
17	5951	N	4	81.0	17.0	16.5	
	5967	S	34	71.4	16.8	17.0	
18	6021	S	11	34.5	17.5	16.1	
	6052	N	27	75.1	14.0	19.6	
19	6087	S	14	62.7	17.5	16.3	
	6129	N	28	78.7	15.9	18.0	
20	6162	N	7	73.0	15.9	18.1	
	6235	S	28	95.0	19.8	14.0	

Station *Austin Nevada June 23rd 1871*

	B. A. C. Star.	N. S.	Micrometer.		Level.		Level. Cor'n.
			Turns.	Div's.	N.	S.	
5	5181	N	11	00.5	13.0	19.0	
	5236	S					
6	5259	S	16	85.5	15.5	16.0	
	5271	N	20	65.4	15.2	17.0	
7	5319	S	13	86.7	14.5	18.0	
	5388	N	14	31.9	14.2	19.0	
8	5426	S	26	49.9	12.8	20.5	
	5459	N	16	45.5	17.5	15.5	
9	5480	S	20	86.2	20.8	12.5	
	5497	N	20	38.4	8.8	24.5	
10	5568	N	25	29.5	16.5	17.0	
	5604	S	13	47.9	12.0	21.0	
11	5628	N	34	25.0	13.8	19.5	
	5647	S	5	04.1	14.5	18.8	

Station *Camp Independence Cal. July 26th 71*

No Pair	B. A. C. Star.	N. S.	Micrometer.		Level.		Level. Cor'n.
			Turns.	Div's.	N.	S.	
1.	5512	N.	21	22.3	10.0	8.4	
	5532	S.	18	00.9	4.8	14.0	
2.	5560	N.	17	04.5	4.1	14.8	
	5587	S.	20	30.0	11.3	7.8	
3.	5647	S.	27	33.6	5.9	13.8	
	5717	N.	10	00.7	11.2	9.0	
4.	5776	N.	28	16.7	10.2	9.8	
	5798	S.	15	27.2	5.0	15.0	
5.	5917	N.	29	20.9	7.8	13.2	
	5939	S.	17	57.5	8.5	12.5	
6.	5975	N.	27	71.7	10.0	10.6	
	5988	S.	8	63.8	16.5 3.5?	9.5 16.5?	
7.	6036	N.	20	97.9	10.3	9.5	
	6073	S.	23	49.5	-0.3	20.3	
9.	6178	S.	14	73.6	11.2	8.8	
	6203	N.	22	43.8	9.8	10.0	

E. P. Austin Observer

Records

Obs'd Times by Chro.	Culmin. by Chro.	Red'n to Merid.	REMARKS.
16.. 26.. 28.7 30.. 50.6			
34.. 52.2 39.. 10			
, 47 53.4 53.. # 56.. 30.2			
17.. 5.. 40.5 10.. 0.0			Diaphragm wire interferes with comet reading.
28.. 18.0 32.. 42.3			
37.. 41.5 40.. 42			probably wrong; the obs. overcorrects himself 3.1" Obj. 1"
47.. 57.5 54.. 30.0 H.. 21.6			
18.. 11.. 21.6 15.. 54.3			

July 26th 1871

Station Camp Independence Cal

	B. A. C.	N.	Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
10	6231	S	9	66.9	11.2	8.2	
	6246	N	30	34.9	9.2	10.2	
12	6368	N	30	13.8	11.0	9.5	
	6397	S	8	07.7	10.0	10.	
14	6542	S	14	76.5	11.0	11.0	
	6579	N	14	57.9	12.3	10.0	
16	6635	N	21	69.0	12.0	11.5	
	6654	S	22	31.5	11.0	13.0	

A R Marvin Observer

Records

Obs'd Times by Chro.	Culmin. by Chro.	Red'n to Merid.	REMARKS.
18. 19. 8.5 21. 11.0			E. P Austin observer
40 17.5 45-36.5			A R Marvin observer
19 5 32 13 1.5			
21 3 24 6			poor

Station *Camp Independence, Cal. Aug. 5th 71*

	B. A. C.	N.	Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
5	5917	N.	28	18.4	10.2	12.8	
	5939	S.	16	71.9	15.2	7.8	
6	5975	N.	26	89.3	16.0	6.9	
	5988	S.	8	63.1	7.8	15.0	
7	6036	N.	20	43.5	14.0	8.7	
	6073	S.	23	39.0	10.8	12.2	
8	6091	N.	19	76.7	12.0	10.6	
	6134	S.	21	91.4	11.9	11.0	

E. P. Austin Observer

A. R. M. Recorder

Obs'd Times by Chro.	Culmin. by Chro.	Red'n to Merid.	REMARKS.
17. 28. 25.5 32. 44.1			
37. 38.0 40. 6.7			
48. 2.3 54. 34.0			
57. 56.9 4. 57.5			

Station Camp Independence Cal. Aug. 6th '71

	B. A. C.		Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
1.	5512	N	21	26.0	9.0	10.0	
	5532	S	17	27.5	11.8	7.0	
2.	5560	N	16	01.3	10.0	9.2	
	5587	S	19	39.3	7.8	11.0	
3.	5647	S	27	11.5	9.2	10.0	
	5717	N	9	58.7	12.4	7.0	
4.	5776	N	28	68.9	13.2	5.5	
	5798	S	16	04.3	6.0	13.0	
5.	5917	N.	27	62.8	8.8	10.0	
	5939	S.	16	22.3	10.3	8.2	
6.	5975	N.	27	05.1	8.8	10.0	
	5988	S.	8	24.0	10.5	8.0	
7.	6036	N.	20	52.2	10.0	9.0	
	6073	S.	24	55.8	13.0	6.2	

E. P. Austin Observer

A. R. M. Recorder

Obs'd Times by Chro.	Culmin. by Chro.	Red'n to Merid.	REMARKS.
16 26 40			E. P. A. eye tear
30 54			
35 1			
39 12			
47.. 57.2			
56.. 38.6			
17.. 5.. 48.2			
10.. 4.0			
28.. 26.0			
32.. 46.3			
37.. 38.5			
40.. 12.5			
48.. 3.0			
54.. 33.5			

Station

Aug. 6th continued.

	B. A. C. Star.	N. S.	Micrometer.		Level.		Level. Cor'n.
			Turns.	Div's.	N.	S.	
8.	6091	N.	19	36.5	10.8	9.0	
	6134	S.	21	42.5	9.8	10.7	
9.	6178	S.	14	07.2	10.0	10.2	
	6203	N.	21	74.4	12.0	7.6	
10.	6231	S.	7	56.3	10.2	9.0	
	6246	N.	28	20.8	9.0	10.4	
12.	6368	N.	29	52.0	10.3	9.5	
	?	N.	16	94.3	10.3	9.8	
	6397	S.	7	34.9	10.2	10.0	
13.	6427	S.	23	98.0	12.3	8.0	
	6473	N.	15	98.1	8.2	12.0	
14.	6542	S.	30	38.0	9.0	11.8	
	6579	N.	30	22.0	11.2	8.8	
15.	6589	S.	34	33.7	5.0	14.8	
	6623	N.	6	31.9	14.0	6.0	

Observer

Records

Obs'd Times by Chro.	Culmin. by Chro.	Red'n to Merid.	REMARKS.
17.. 58.. 00 .0			
18.. 4.. 57,3			
11.. 24.6			
16.. 1.0			Apparently very close double. -
19.. 12.3			
21.. 17,5			
40.. 20.0			very faint, poor. 1 st mix.
43.. 16,5			
45.. 41.6			
49.. 26.0			
55.. 7.0			
19.. 5.. 37.0			
13 9,5			(uncorp taken.) double, distinctly separated
15.. 1.7			
18.. 30.6			

Aug. 6th concluded:

Station

	B. A. C.		Micrometer.		Level.		Level.
	Star.	N. S.	Turns.	Div's.	N.	S.	Cor'n.
16.	6635	N.	21	91.6	10.0	10.0	
	6654	S.	22	73.9	7.0	12.8	
17.	6676 ²	S.	8	56.1	10.4	8.3	
	6717	N.	21	10.7	7.2	12.2	
18	6748	N.	27	27.0	10.0	10.0	
	6794	S.	18	62.2	off scale		
20	6898	N.	38	72.0	9.8	10.0	
	6912	S.	8	70.7	9.7	10.0	
21	6943	S.	24	65.1	10.9	9.2	
	6983	N.	21	21.9	8.5	11.7	
22	7029	S.					
	7041	N.					

Observer

Records

Obs'd Times by Chro.	Culmin. by Chro.	Red'n to Merid.	REMARKS.
19.. 21 .. 8.5° 24.. 10.5°			
28.. 6.5°			Star preceding 6676. — Observed on 4 th wire.
34.. 32.0			
40 13			not the star ?
47 59.5			not the star ?
20 2 6.5°			
5 43			
10 46			
10 46			
15 53			

Station *Camp Independence, Cal. Aug. 7th 1871*

	B. A. C.		Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
5.	5917	N.	28	18.6	8.8	10.5	
	5939	S.	16	82.3	10.2	9.0	
6.	5975	N.	26	94.6	12.2	6.7	
	5988	S.	8	19.0	7.2	12.0	
7.	6036	N.	19	75.7	8.5	10.0	
	6073	S.	22	53.7	10.0	9.0	
8.	6091	N.	19	52.3	11.8	7.2	
	6134	S.	21	68.7	6.3	12.7	
9.	6178	S.	14	27.8	8.5	10.1	
	6203	N.	21	81.2	11.7	7.2	
10.	6231	S.	9	47.9	8.5	10.8	
	6246	N.	30	19.2	9.2	9.7	
11.	6251	S.	23	70.0	7.0	11.8	
	6335	N.	20	79.1	11.8	7.0	
12.	6368.	N.	28	95.3	8.7	10.6	
	6397	S.	6	78.4	10.0	9.2	

E. P. Austin Observer

A. R. M. Recorder

Obs'd Times by Chro.	Culmin. by Chro.	Red'n to Merid.	REMARKS.
17.. 28.. 26.2 32.. 48.1			
37.. 39.1 40.. 10.3			
48.. 3.0 54.. 35.2			
17.. 58.. 0.5 18.. 4.. 57.9			
11.. 26.3 16.. 0.5			
19.. 14.0 21.. 16.0			
22.. 34.8 33.. 37.4			
40.. 24.6 46.. 43.5			very faint.

Station

Aug. 7th continued.

	B. A. C. Star.	N. S.	Micrometer.		Level.		Level. Cor'n.
			Turns.	Div's.	N.	S.	
13.	6427	S.	24	34.1	11.0	8.5	
	6427 ²	N.	25	83.4	9.3	10.0	
	6473	N.	16	38.5	9.5	10.0	
14.	6542	S.	29	90.5	11.0	9.0	
	6579	N.	30	00.8	4.2	15.5	
15.	6589	S.	34	13.9	9.4	10.5	
	6623	N.	6	09.8	12.2	7.5	
16.	6635	N.	20	60.4	7.8	12.0	
	6654	S.	21	47.8	12.3	7.8	
17.		S.	8	25.1	8.8	11.2	
	6717	N.	20	41.4	18.0	1.8	
18.	6748 (2)	N.	27	18.2	10.5	9.5	
	6794	S.	19	49.3	10.0	10.2	
20.	6895	N.	37	78.0	6.3	14.3	
	6912	S.	7	71.5	14.5	6.2	

Observer

Records

Obs'd Times by Chro.	Culmin. by Chro.	Red'n to Merid.	REMARKS.
18 " 49 " 35.7			
52 " 21.9			
18 " 53 " 7.6			
19 " 8 " 38.2			
13 " 9.4			Double. - mean taken.
15 " 4.1			
18 " 30.0			
21 " 9.0			
24 " 12.5			
27 " 44.0			preceding star to 6676
34 " 32.0			
40 " 49.5			not the star? Bisected at 4 th wire.
47 " 38.5			
20 " 2 " 5.0			
5 " 45.6			

Station

Aug. 7th Concluded.

	B. A. C.	N.	Micrometer.		Level.		Level.
	Star.	S.	Turns.	Div's.	N.	S.	Cor'n.
21.	6943	S.	23	44.8	7.4	13.5	
	6983	N.	19	84.5	17.5	4.3	
22	7029	S.	24	95.7	9.4	13.0	
	7041	N.	11	86.1	15.0	7.2	

Observer

Records

Obs'd Times by Chro.	Culmin. by Chro.	Red'n to Merid.	REMARKS.
20. 10. 48.5 15. 52.0			
24. 57.5 25. 35.0			Bisection at 5 th wire past 3 ^d (middle) wire.

Observations for determining the value of the

Station Camp Independence, Cal. July 26th 71
 Object = Polaris.

Times	B. A. C.		N.	Micrometer.		Level.		Level. Cor'n. Remarks
	h.	m.		S.	Turns.	Div's.	N.	
19 ^h 40 ^m 15 ^s	15	22	51.3	1.8	23.0			
41 ^m 35.1	19	22	14.0	22.7 22.7	2.0			
42 ^m 45.0	21	22	46.3	22.8	2.2			
43 ^m 58.4	25	23	51.7	1.3	23.8			
44 ^m 53.8	28	23	76.0	1.3	23.8			
45 ^m 6.3	32	23	26.6	24.6	0.2			
47 ^m 12.9	37	23	63.2	23.5	1.5			
48 ^m 24.6	42	24	67.8	0.8	24.5			
49 ^m 24.7	47	24	96.1	0.5	24.8			
50 ^m 57.7	55	24	60.2	25.4	-0.2			
52 ^m 9.1	62	25	02.1	22.0	3.2			
53 ^m 45.0	71	26	12.0	1.7	23.8			
55 ^m 8.5	81	26	49.5	1.6	23.8			
56 ^m 45.0	92	26	9.3	$\sqrt{-1}$				out of range
57 ^m 47.0	10.0	26	50.0	21.9	3.7			
59 ^m 35.8	11.6	26	99.8	22.0	3.8			*
20 ^h 0	51.0	12.7	27	93.3	2.2	23.6		
1 ^m 59.0	13.8	28	26.2	2.2	23.6			
3 ^m 8.7	14.9	27	90.3	21.5	4.5			
4 ^m 46.5	16.7	28	87.3	21.5	4.5			
6 ^m 22.1	18.5	29	37.8	4.1	22.0			
7 ^m 7.0	19.4	29	56.2	4.1	22.0			
9 ^m 58.7	20.7	29	10.9	23.7	2.5			

Level Divisions for Zenith Telescope

S. P. Austin Observer W. M. Recorder

Obs'd Times by Chro.	Merom. Culmin. Div by Chro.	Red. to level cap. S	REMARKS.
20 9 52.5	29. 73.4	24.0 2.4	A R Mannine observer
11 56.5	31 06.9	2.0 24.8	
13 7.	31 35.4	2.1 24.4	
14 49.5	31 00.0	22.5 4.0	
15 57.5	31. 48.0	22.5 4.3	
17 26.5	32 30.4	4.0 22.0	
19 19.	32 70.9	4 23.0	
20 54	32 55.5	23.5 3.5	