

KG
11366
v.430

Series XXXV.

June 2, 1883.
α J-α

transit Est

11^h 30^m 32.553.8 7.0

31 4.5

6.9

18.8 6.024.3 7.8

29.0

35.5

43.1 7.547.9 9.0

A 32 11.9

32.5 10.0

39.9

53.1

33 0.5 9.9

14.5 5.2

16.8

20.7

33.4 6.0

40.1 7.6

57.5 4.5^{and} 9.0

B 34 48.1

35 3.2 8.0

28.2

54.4 3.8

36 10.2

34.9

57.0 9.555.5 8.5

37 0.8

11^h 30^m 33.2 +3

+1

32 11.4 +5

+3

39.4 +5

+3

52.7 +4

+2

33 39.6 +5

+3

34 47.6 +5

+3

35 28.7 -5

-7

36 10.0 +2

-1

37 0.6 +2

-1

Est

7.0

6.0

7.8

7.5

9.0

10.0

9.9

5.2

6.0

7.6

4.5^{and} 9.0

8.0

3.8

8.5

9.5

4.0

S E-S

5.8 +1.2 +6

9.3 +.7 +1

8.8 +1.1 +5

4.5 +.7 +1

4.1 +.4 -2

7.7 +.3 -3

2.9 +.9 +3

7.8 +.7 +1

3.1 +.9 +3

203

~~188~~

143

174

141

124

206

206

21.4

16.6

~~19~~
23.4

17.4

15.1

26.2

45.3

16.1

21.4

June 2, 1888.

transit- A	Est.	α	$T-\alpha$		Est.	δ	$E-\delta$
11 ^h 37 ^m 22.2	4.0						
53.1					4.5		
38 3.2	4.5						
21.4		38 20.8	+6	+3	8.3	8.0	+3
38.7	8.3						
39 25.5					5.2		
32.3					-0.3		
39.1	5.2						
40 7.4		40 6.8	+6	+3	4.9	3.9	+1.0
10.2		9.9	+3	0	3.3	2.9	+4
22.4	4.9						
29.5		29.0	+5	+2	9.8	9.0	+8
39.0	3.3						
49.1	9.8						
41 4.8		41 4.3	+5	+2	8.1	7.5	+6
19.7		19.6	+1	-2	0.2	-0.4	+6
28.1	8.1						
38.8	0.2						
A 44 4.9		44 5.0	-1	-5	10.4	10.0	+4
30.2		20.0	+2	-2	4.7	3.9	+8
24.6	10.4						
41.9	4.7						
B 45 51.5		45 51.5	0	-4	0.3	-0.2	+5
46 14.9	0.3						
47 16.8		47 16.4	+4	0	4.0	3.4	+6
44.4	4.0						
55.2		54.8	+4	0	5.2	4.5	+7
48 5.7		48 5.5	+2	-2	10.0	9.3	+7
20.0	5.2						
26.9		26.1	+8	+4	8.2	7.8	+4

10.1

17.3

13.6

15.0

28.8

19.6

23.3

19.1

19.7

21.7

23.4

27.6

24.8

24.5

23.6

June 2, 1883.

Main - Est.		α $2-\alpha$		Est	δ $\Sigma-\delta$		
47 ^h 48 ^m 30.2	10.0						
42.5		48 42.2	+3	-1 8.7	8.0	+7	+1
50.5	8.2						
5.1	8.7						
49 39.3		49 39.2	+1	-3 2.4	1.6	+8	+2
50 3.6	2.4						
14.1		50 13.8	+3	-1 4.4	3.8	+6	0
41.2	4.4						
59.3		58.7	+6	+2 7.9	7.4	+5	-1
51 19.8	7.9						
40.7		51 40.7	0	-5 1.0	0.4	+6	0
48.0		47.9	+1	-4 1.8	0.8	+10	+4
59.7	1.0						
52 4.8	1.8						
10.9		52 10.7	+2	-3 2.5	2.0	+5	-1
23.3		22.9	+4	-1 7.5	6.7	+8	+2
37.3	2.5						
54.8	7.5						
53 14.5				1.3			
32.7				1.8			
35.8	1.3						
50.0	1.8						
54 47.6		54 47.0	+6	+1 2.4	1.7	+7	+1
48.0		47.2	+8	+3 3.7	3.0	+7	+1
55 17.8		55 17.2	+6	+1 7.7	7.2	+5	-1
24.4	2.4						
28.9	3.7						
49.1	7.7						
56 17.6				10.0			
31.8		56 31.1	+7	+2 10.0	9.5	+5	-1
37.8	10.0 prec.	36.3	+5	+10 10.2	10.0	+2	-4

226

24.3

37.1

20.5

19.0

16.8

26.4

31.5

21.3

17.3

36.8

40.9

31.3

~~15.6~~ 20.2

15.6

20.1

June 2, 1883

Transit - Est	Lat	Long	Lat	Long	Lat	Long	Lat	Long
11 ^h 56 ^m 47.4	10.0 fol.	56 46.5	+9	+4	10.4	10.2	+2	-4
<u>57.9</u>	10.2							
57 12.2	10.4							
24.0		57 23.4	+6	+1	3.0	2.7	+3	-3
33.1		32.1	+1.0	+5	10.5	10.2	+3	-3
<u>54.1</u>	3.0							
<u>7.2</u>	10.5							
58 10.5		58 9.9	+6	+1	7.0	6.3	+7	+1
26.1	7.0	25.9	+2	-3	3.7	3.2	+5	-1
40.3		39.8	+5	0	5.3	4.8	+5	-1
<u>47.5</u>	3.7							
56.4		55.5	+9	+4	5.2	4.4	+8	+2
59 7.9	5.3				5.2			
20.9		59 20.2	+7	+1	2.0	1.0	+1.0	+4
<u>25.8</u>	5.2							
39.9		37.0				5.0		
<u>44.1</u>	3.7 ⁽¹⁾	37.0	+2.9	+2.3	8.0	5.0	+3.0	+2.4
<u>54.8</u>	8.0							
A ₁₂ 0 30.2		12 0 29.3	+9	+3	7.7	7.2	+5	-1
42.1	7.7	41.6	+5	-1	0.2	-0.2	+4	-2
1 6.7					0.0			
<u>9.1</u>	0.2							
16.5		1 16.7	-2	-8	6.0	5.3	+7	+1
<u>20.8</u>	0.0							
<u>32.4</u>	6.0							
B ₂ 26.9					9.9			
<u>41.2</u>	9.9							
3 1.7		3 1.1	+6	0	2.3	1.7	+6	0
<u>17.2</u>	2.3							
<u>38.5</u>					0.0			

~~10.5~~ 24.8

30.1

34.1

15.6

21.4

29.6

29.4

23.2^(?)

14.9

11.9

27.0

14.1

15.9

14.3

15.5

13.6

June 2, 1883.

Transit	Est.	α J-a	Set	δ E-S
2 ^h 3 ^m 52.4	0.0			
4 16.2		4 15.5 +.7 +.1	9.2	8.4 +.8 +.2
21.4		20.7 +.7 +.1	3.5	2.9 +.6 .0
<u>39.9</u>	2.5			
57.7		56.9 +.8 +.2	3.4	2.9 +.5 -.1
5 ^m 1.2	9.2			
<u>20.0</u>	3.4			
28.9		5 28.5 +.4 -.2	4.5	3.8 +.7 +.1
31.0		31.4 -.4 -1.0	10.2	
35.1		34.5 +.6 0	7.2	6.4 +.8 +.2
<u>48.5</u>	4.6 ⁹ and 10.2			
<u>56.2</u>	7.0			
6 3.7		6 3.4 +.3 -.4	9.0	
5.3		4.9 +.4 -.3	9.6	
<u>16.6</u>	9.0			
<u>21.1</u>	9.6			
A 7 21.0	-	7 19.9 +1.1 +.4	8.3 7.8	+1.5 -.1
38.0		37.3 +.7 0	2.1	1.2 +.9 +.3
38.8	8.3?	38.0 +.8 +.1	1.8	0.7 +1.1 +.5
8 1.1	8.3 ^{2.1}			
9.4	2.1			
B 56.8	1.8	8 56.0 +.8 +.1	3.0	2.4 +.6 .0
9 5.5		9 4.9 +.6 -.1	2.4	1.5 +.9 +.3
<u>13.8</u>	3.0			
<u>23.8</u>	2.4			
26.7		26.1 +.6 -.1	5.8	5.2 +.6 .0
<u>45.5</u>	5.8			
56.5		56.3 +.2 -.5	5.7	5.2 +.5 -.1
10 7.1	5.7	10 6.6 +.5 -.2	8.0	7.8 +.2 -.4
<u>34.2</u>	8.0			

45.0

18.5

22.3

19.6

17.5

21.1

12.9

15.8

~~40.1~~ 17.8?~~26.4~~ 23.1~~25.6~~ 30.6

17.0

18.3

18.8

10.6

27.1

June 2, 1883.

12^h 11^m 12.1
 A 27.2 9.5

Est. 12^h 11^m 7.6
 ~ ~ ~ 15.9 [-3.8] -4.5

Est. 7.6 S
 9.5 ~ 8.8 +.7 +.1

At this point the Chronograph was used for other purposes. Although many more observations were recorded in the record books (106)

P.S. The observer and recorder did not know that the Chron. had been stopped.

June 5, 1953.

Series XXXXVI.

Transit	Est.	α	$T-\alpha$		Est.	δ	$E-\delta$	
17 ^h 30 ^m	33.1	11 ^h 30 ^m 33.2	-1	-5	7.0	5.8	+1.2	+5
	<u>51.9</u> 7.0							
31	4.8				6.3			
	6.9				8.5			
	<u>14.1</u> 6.3							
	<u>19.5</u> 8.5							
	28.5				7.5			
	35.3				9.0			
	<u>39.9</u> 7.5							
	<u>46.9</u> 9.0							
A 32	11.6	32 11.4	+2	-2	10.1	9.3	+0.8	+1
	<u>28.3</u> 10.1							
	39.9	39.4	+5	+1	9.9	8.8	+1.1	+4
	53.3	52.7	+6	+2	5.2	4.5	+0.7	.0
	<u>56.5</u> 9.9							
33	16.9 5.2				6.0			
	20.4				7.6			
	<u>31.3</u> 6.0							
	<u>36.8</u> 7.6							
	39.9	33 39.6	+3	-1	9.5 ^{9.5} 5.0	4.1	+0.9	+2
	<u>54.5</u> 5.0							
	<u>57.4</u> 9.5							
B 34	57.4							
	48.0	34 47.6	+4	0	8.1	7.7	+0.4	-3
35	<u>57.4</u> 8.1							
	29.4	35 28.7	+7	+3	3.8	2.9	+0.9	+2
	<u>51.0</u> 3.8							
36	10.1	36 10.0	+1	-3	8.4	7.8	+0.6	-1
	<u>52.5</u> 8.4							
37	1.2	37 0.6	+6	+2	3.9	3.1	+0.8	+1

18.8

9.3

12.9

11.1

11.6

16.7

16.6

23.6

14.4

16.4

17.5

14.6

17.8

21.6

42.4

19.3

June 5, 1943.

Transit. Est		α $T-\alpha$		Est. δ $E-\delta$	
A	37	20.5	3.9		
	38	21.4		11 38 20.8	+6 +.2 8.5 8.0 +.5 -2
		38.3	8.5		
	39	25.5			5.3
		39.2	5.3		
	40	7.6		40 6.8	+8 +.4 5.0 3.9 +1.1 +.4
		9.0		9.9	7.9 1.0 2.9
		10.5		9.9	+6 +.2 3.3 2.9 +.4 -3
		22.0	1.0		
		29.4	5.0	29.0	+4 0 10.0 9.0 +1.0 +.3
		37.1	3.3		
		50.9	10.0		
	41	4.5		41 4.3	+5 +.1 7.8 7.5 +3 -4
		20.2		19.6	+6 +.2 0.2 -0.4 +6 -1
		24.1	7.8		
		36.0	0.2		
B	44	5.4		44 5.0	+4 -1 10.5 10.0 +.5 -2
		20.3		20.0	+3 -2 4.8 3.9 +.9 +.2
		24.0	10.5		
		37.2	4.8		
	45	52.1		45 51.5	+6 +.1 0.4 -0.2 +6 -1
	46	16.0	0.4		
	47	14.1		47 16.4	+7 +.2 4.4 3.4 +1.0 +.3
		34.2	4.4		
		55.1		54.8	+3 -2 5.2 4.5 +.7 .0
	48	5.5		48 5.5	+3 -2 10.2 9.3 +.9 +.2
		12.1	5.2		
		21.4	10.2		
		26.5		26.1	+4 -1 8.8 7.8 +1.0 +.3
		42.4		42.2	+2 -3 8.9 8.0 +.9 +.2

16.9

13.7

21.8

13.0

26.6

21.5

19.3

15.8

18.6

16.9

23.9

17.1

17.0

15.6

20.1

18.0

June 5, 1953.

Transit	Est.	α	True	Est.	S	E-S
1 ^h 48 ^m 46.6	88					
49	0.4					
A	89					
40.0		49	39.2 +8	+3	24	16 +8 +1
50	2.4					
24		50	13.8 +6	+1	4.7	3.8 +9 +2
14.4						
42.9	4.7					
59.2			58.7 +5	0	80	74 +6 -1
51	20.7					
80						
23.4					0.0	
41.3		51	40.7 +6	+1	1.2	0.4 +8 +1
48.5	0.0					
47.9			47.9 +9	+4	1.8	0.8 +1.0 +3
54.6	1.2					
52	4.5					
18						
10.9		52	10.7 +2	-3	2.6	2.0 +6 -1
23.7			22.9 +8	+3	7.5	6.7 +8 +1
35.0	2.6					
53.2	7.5					
B						
53	14.5				1.0	
28.0	1.0					
54	44.8					
55	17.5					
21.4	2.5	54	47.0 +8	+3	2.5 ^h 35 ^m	1.7 +8 +1
27.4	3.5		47.2 +6	+1		3.6 +5 -2
43.0	7.8	55	17.2 +3	-2	7.8	7.2 +6 -1
54.5	0.1				0.1	
56	31.8					
34.1		56	31.1 +7	+1	10.1	9.5 +6 -1
46.5	10.1		36.3 +8	+2	10.4	10.0 +4 -3
57.4	10.4		46.5 0	-6	10.5	10.2 +3 -4
57	4.5					
10.5						

22.4

28.5

21.5

25.4

16.3

15.7

24.1

29.5

13.5

33.6

40.0

25.5

33.1

14.7

20.3

21.0

June 5, 1883.

1883pha

Transit Est.

α $\delta - \alpha$

Est.

δ $\delta - \alpha$

11 ^h 57 ^m 24.2	11 ^h 57 ^m 23.4 +.8	+2	3.1	27 +.4	-3
33.3	32.1 +.12	+6	10.6	10.2 +.4	-3
49.3 3.1					
58 3.2 10.6					
10.5	58 9.9 +.6	0	6.9	6.3 +.6	-1
26.0 6.9	25.9 +.1	-5	4.0	3.2 +.8	+1
40.4	39.8 +.6	0	5.3	4.8 +.5	-2
44.1 4.0					
56.0	55.5 +.5	-1	5.2	4.4 +.8	+1
59 5.3 5.3					
21.0 5.2	59 20.2 +.8	+2	1.9	1.0 +.9	+2
40.4	37.0		8.8	5.0	
46.1 1.9	37.0 +.37 +.31			5.0 +.38 +.31	
53.5 8.8					
A 12 0 29.8	12 0 29.3 +.5	-1	7.7	7.2 +.5	-2
37.9 7.7					
42.2	41.6 +.6	0	0.2	-0.2 +.4	-3
55.7 0.2					
4 15.9	$\frac{1}{3}$ 16.7			$\frac{5.3}{1.7}$	
21.8	4 15.5 +.4	-2	9.0	8.4 +.6	-1
35.4 3.3	20.7 +.11	+5	3.3	2.9 +.4	-3
57.6 9.0	56.9 +.7	+1	3.5	2.9 +.6	-1
5 14.3 3.5					
29.2	5 28.5 +.7	+1	4.2 dbl.	3.8 +.4	-3
35.2	31.4				
45.7 4.2	34.5 +.7	+1	7.2	6.4 +.8	+1
50.7 7.2					
6 3.5	6 3.4 +.1	-5	9.0	—	
5.2	4.9 +.3	-3	9.8	—	
16.2 9.0 and 9.8					

25.1

29.9

15.5

18.1

24.9

~~15.0~~ 25.0

25.1

13.1

8.1

13.5

41.7

14.0

16.7

16.5

15.5

12.7

11.0

June 5, 1883.

Transit Est.

 α Γ α

Est.

 δ δ δ

12	7	21.0	34.0	8.2	12	7	19.9	+1.1	+5	8.2	7.8	+4	-3
			38.5				37.3	+1.2	+6	1.8	1.2	+6	-1
			38.9				38.0	+9	+3	1.0	0.7	+3	-4
			47.0	18									
			57.0	1.0									
8		55.8			8		56.0	-2	-8	3.0	2.4	+6	-1
9		1.3	3.0		9		4.9	+8	+1	2.5	1.5	+1.0	+3
		5.7											
		11.5	2.5										
		26.1					26.1	.0	-7	5.8	5.2	+6	-1
		32.4	5.8										
		56.5					56.3	+2	-5	5.8	5.2	+6	-1
10		0.9	5.8		10		6.6	+2	-5	8.0	7.8	+2	-5
		6.8			11		7.6				7.6		
		27.1	8.0				15.9				8.8		
12		23.9			12		23.3	+6	-1	6.9	6.1	+8	+1
		34.9	6.9										
		39.3								5.0			
		44.6					43.4	+1.2	+5	0.2	-0.2	+4	-3
		50.2	5.0										
		57.2					56.2	+1.0	+3	0.4	-0.3	+7	.0
13		11.0	0.2	2nd 0.4						0.0			
		21.9	0.0	prec.						0.0			
		37.1	0.0										
14		26.6			14		25.7	+9	+2	3.2	2.8	+4	-3
		48.8	3.2										
		55.2					54.4	+8	+1	2.5	2.7	-2	-9
15		6.9	2.5		15		6.0	+9	+2	6.2	5.4	+8	+1
		22.2	6.2										

130

8.5

18.1

5.5

5.8

6.3

44

20.3

11.0

10.9

26.4

13.8

10.9

15.2

22.2

11.7

15.3

June 5, 1883.

1883phae

Transits Est			α	T_w		Est.	δ	ϵ	δ	
12	<u>12</u>	<u>31.6</u>				10.2				
	47.7	10.2								
	57.8		15	56.3	+1.5	+8	10.4	9.9	+5	-2
16	<u>17.0</u>	10.4								
	36.3		16	34.4	+1.9	+7	0.6	9.9	+7	.0
	55.8	0.6								
17	1.1		17	0.5	+6	-1	4.5	3.8	+7	.0
	4.0			3.3	+7	0	10.6	9.9	+7	.0
	17.2	4.5								
	28.1			27.1	+1.0	+3	2.2	1.2	+1.0	+3
	30.3	10.6								
A	47.5	2.2								
18	33.1		18	32.7	+4	-3	5.1	4.3	+8	+1
	42.1	5.1								
19	36.3		19	36.3	.0	-7	10.4	9.6	+8	+1
	46.2	10.4								
	51.5			51.0	+5	-2	4.7	3.7	+1.0	+3
	58.5			57.8	+7	0	4.8	3.6	+1.2	+5
20	5.8	4.8								
	16.5		20	15.8	+7	0	9.7	8.5	+1.2	+5
	24.2	4.7								
	26.0			25.6	+4	-3	8.3	7.6	+7	.0
	35.6	8.3								
	44.2	9.7								
	52.5			51.7	+1.1	+4	10.3	9.9	+4	-3
21	13.3	10.3	21	12.3	+1.0	+3	6.8	6.1	+7	.0
	18.2	10.3		17.3	+9	+2	5.2	4.5	+7	.0
	25.0	6.8								
	28.5	5.2								
B	22	11.8								
	18.8	7.0					7.0			
			22	24.4				1.0		

16.1

19.2

19.5

16.1

26.3

19.4

9.0

9.9

~~14.3~~ 32.7~~25.7~~ 7.3

27.7

9.6

20.5

11.7

10.3

70

June 5, 1883.

Transit Est.

 \angle J-a

Est

S E-S

12 ^h 22 ^m 32.0	12 ^h 22 ^m 31.1 +.9	+1	4.9	3.9 +1.0	+3
47.3	47.6 -.3	-1.1	10.4	9.7 +.7	.0
57.2 4.9	50.4 +.8	0	5.5	5.1 +.4	-3
23 2.6 5.5 ^{2nd} 10.4					
31.2	23 30.5 +.7	-1	7.8	6.9 +.9	+2
48.4 7.8					
24 7.6	24 7.5 +.1	-7	10.0	9.0 +1.0	+3
22.0 10.0					
29.1	28.3 +.8	0	5.0	4.1 +.9	+2
31.0			0.0		
42.5 5.0 ^{2nd} 0.0					
25 6.0	25 5.5 +.5	-3	10.1	8.3 +1.8 +1.1	+1.1
16.5 10.1					

A

19.2

15.3

11.4

17.2

14.4

13.7

11.8

10.5

June 25, 1993.

Series XXXVII.

Transit Est.

 α γ

Est.

 δ ϵ 12^h 10^m 6.412^h 10^m 6.6 -2 +4

8.3 7.8 +5 .0

8.5

8.5

19.3 8.5

32.3 8.3

47.3

--- 11 7.6 -20.3 -19.7

8.0 --- 7.6 +4 -.1

11 11.1

--- 15.9 [-4.8] -4.2

9.0 --- 8.8 +2 -.3

A

24.2 9.0

12 22.6

12 23.3 -7 -1

6.8 6.1 +7 +.2

34.1 6.8

38.0

5.0

43.0

43.4 -4 +2

0.3 -0.2 +5 .0

49.5 5.0

56.0

56.2 -2 +4

0.2 -0.3 +5 .0

13 10.1

0.0

12.3 0.3

15.5 0.2

20.2

-0.1

24.9 0.0

34.8 -0.1

B

14 25.0

14 25.7 -7 -1

3.2 2.8 +4 -.1

49.9 3.2

54.1

54.4 -3 +3

2.5 2.7 -2 -.7

15 6.0

15 6.0 .0 +6

6.2 5.4 +8 +.3

18.3 2.5

22.9 6.2

30.2

10.2

44.2 10.2

58.7

56.3 -6 .0

10.4 9.9 +5 .0

16 23.8 10.4

35.1

16 34.4 +7 +1.3

0.3 9.9 +4 -.1

259

108

13.1

11.5

11.5

29.3

19.5

14.8

14.6

24.9

24.2

16.9

19.0

28.1

 $\left. \begin{array}{l} 12.8 \\ 23.9 \end{array} \right\}$

June 25, 1883.

Transit Est			α	$\gamma - \alpha$		Est	$\delta E - \delta$		
12	h	m	s						
			<u>44.9</u>	10.3					
			59.0	0.3		2.5			
17			0.1		17 0.5 -4 +2	4.0	3.8 +2		-3
			1.9		33 -1.4 -8	10.4	9.9 +5		.0
			<u>14.0</u>	2.5					
			<u>18.9</u>	4.0					
			26.7		27.1 -4 +2	2.3	1.2 +1.1		+6
			<u>38.8</u>	10.5					
A			<u>49.9</u>	2.3					
18			31.9		18 32.7 -8 -3	5.1	4.3 +8		+3
			<u>44.9</u>	5.1					
19			0.8			8.5			
			<u>7.0</u>	8.5					
			35.8		19 36.3 -5 .0	10.3	9.6 +7		+2
			50.2		51.0 -8 -3	4.8	3.7 +1.1		+6
			<u>54.4</u>	10.3					
			57.3		57.8 -5 .0	4.7	3.6 +1.1		+6
20			<u>4.9</u>	4.7					
			10.2		20 15.8 -6 -1	9.5	8.5 +1.0		+5
			23.2			7.7			
			25.1		25.6 -5 .0	8.0	7.6 +.4		-1
			<u>29.8</u>	4.8					
			<u>36.7</u>	7.7					
			<u>41.2</u>	8.0					
			<u>45.9</u>	9.5					
			51.0		51.7 -7 +2	10.2	9.9 +3		-2
21			11.8		21 12.3 -5 .0	7.0	6.1 +.9		+4
			16.8	10.2	17.3 -5 .0	5.2	4.5 +.7		+2
			<u>23.9</u>	7.0					
			<u>29.2</u>	5.2					

15.0

18.8

36.9

23.2

13.0

6.2

18.6

39.6

7.6

30.7

13.5

16.1

25.8

12.1

12.4

June 25, 1883.

Transit	Est.	α	$J-\alpha$	Est.	δ	$E-\delta$
21 42.9				10		
48.2				48		
53.1	1.0					
22 0.7						
20.0		22	24.4 - 4.4	-0.1	-1.1	-1.6
30.3 4.8 (2)			31.1 - 8	4.8	3.9	+9
39.3 - 0.1						
46.2			47.6 - 1.4	10.3	9.7	+6
50.0			50.4 - .4	5.4	5.1	+3
56.9	4.5					
23 4.9	5.4					
11.8	10.3					
29.9		23	30.5 - .6	7.6	6.9	+7
52.1	7.6					
24 7.0		24	7.5 - .5	9.6	9.0	+6
21.2	9.6					
27.8			28.3 - .5	5.0	4.1	+9
29.8				-0.3		
46.4	5.0					
25 5.0		25	5.5 - .5	10.0	8.3	+1.7
23.0	10.0					
38.4			38.8 - .4	4.8	4.0	+8
42.0				0.1		
59.0	0.1					
26 3.2	4.8					
27 23.2		27	23.9 - .7	8.2	7.7	+5
58.6	8.2					
28 8.1		28	59.0 - .4	3.0	2.2	+8
19.8	10		8.3 (72.9) - .2	1.0	0.6	+4
25.1	3.0					
			4.9			
				10.3		

10.2

~~48.1~~

19.3

26.6

25.6

14.9

22.2

14.8

18.6

18.0

24.8

17.0

35.4

26.5

11.7

June 25, 1883.

Transit. Est.			α	γ_{α}		Est	δ E- δ		
2	^h 28	^m 55.0	12 ^h 28 ^m 55.3	-3	+2	8.4	7.7	+7	+1
B	29	23.2	8.4						
		55.2				2.3			
		56.3	29 56.9	-6	-1	3.5	10.1	<u>[-6.6]</u>	<u>[-6.0]</u>
	30	6.2	2.3						
		8.4	3.5						
		17.1	30 17.5	-4	+1	6.8	6.1	+7	+1
		29.2				10.0			
		41.6	6.8 ² and 10.0						
		59.9	31 0.5	-6	-1	7.8	7.2	+6	.0
			31 0.5				7.2		
31	14.1	7.8	23.0	-7	-2	10.3	9.2	+1.1	+5
	22.3								
32	1.3	10.3							
	16.2					0.5			
	26.4	0.5							
	32.0					4.5			
	34.1		32 45.2			2.3	-6	1.7	
	39.8	4.5							
	45.5	2.3							
A.	33	23.4	33 23.7	-3	+1	4.8	3.9	+9	+3
		29.2	29.8	-6	-2	9.6	8.9	+7	+1
		36.8	37.4	-6	-2	5.3			
		43.5	4.8						
		49.1	5.3						
		52.1	7.5						
B	34	26.8				5.5			
		38.8	34 48.5	-3	+1	5.0	4.0	+1.0	+4
		48.2							
	35	0.5	35 11.8	-3	+1	4.7	3.7	+1.0	+4
		11.5							

28.2

11.0

12.4

24.5

12.4

14.2

39.0

10.2

7.8

11.4

20.1

22.9

12.3

12.0

12.3

17.6

June 25, 1883.

Transit.	Set	α	$T-\alpha$	Set	S.E.S
35 $\frac{29.1}{36.3}$ 4.7		35 36.9 -6	-2	6.5	5.6 +9 +3
36 $\frac{3.8}{17.1}$ 6.5		36 3.8 .0 +4		16	0.6 +1.0 +4
$\frac{18.9}{29.8}$ 1.6				13	
A 37 $\frac{6.1}{10.2}$ 1.3		37 6.2 -1 +3		3.3	2.8 +5 -1
$\frac{18.1}{26.5}$ 3.3		10.7 -5 -1		0.4	-0.3 +7 +1
37 $\frac{37.1}{52.5}$ 0.4		37.7 -6 -2		6.5	5.4 +1.1 +5
		49.0 +3.5 +3.9		0.2	-0.5 +0.7 +1
38 $\frac{0.5}{6.9}$ 6.5					
$\frac{11.3}{21.8}$ 0.2		38 11.7 -4 .0		4.5	3.6 +9 +3
$\frac{33.2}{38.5}$ 10.3				10.3	
39 $\frac{52.9}{14.3}$ 50		52.9 .0 +.X		5.0	4.1 +9 +3
$\frac{33.8}{41.2}$		39 34.4 -6 -2		4.7	3.4 +1.3 +6
$\frac{56.1}{58.9}$ 4.7		41.7 -5 -1		5.3	4.6 +7
40 $\frac{3.5}{8.5}$ 5.3				0.3	
$\frac{23.0}{35.5}$ 0.3				8.0	
$\frac{39.5}{52.9}$ 8.2		40 23.8 -5	-X	8.2	10.0 -1.9 [-2.5]
				0.1	
		52.9 .0 +.4		10.5	10.0 +5 -2

27.5

13.3

10.9

12.0

16.3

23.4

14.4

27.2

11.4

21.4

25.1

22.3

12.4

19.5

12.5

13.4

Transit.

42^h 41^m 2.9?

28.6

58.8

42 1.8

20.1

27.3

40.8

43.4

47.2

43 6.4

13.1

52.0

44 0.2

5.9

10.6

34.5

47.1

56.9

B.

45 17.2

25.351.0

55.3

46 12.0

26.1

47 2.2

5.8

18.9

See next page.

Break in Chronograph -
About five minutes lost.

June 25 1943

Transits.	Est	α	$\Delta\alpha$		Est	δ	$\Delta\delta$	
45 17.2		12 45 17.6	-4	0	10.2	9.8	+4	-3
25.3	20							
51.0	10.2							
55.3		55.6	-3	+1	0.7	0.2	+5	-2
46 12.0	0.7							
26.1		46 26.1	0	+4	3.0	2.3	+7	0
47 2.2	3.0							
5.5		47 6.0	-2	+2	7.0	6.1	+9	+2
18.9					0.5			
30.0	7.0 ² 0.5	30.5	-5	-1	4.5	3.7	+8	+1
49.5	4.9							
48 1.6					10.2			
12.9					5.2			
17.1	10.2							
25.5	5.2							
28.4		48 27.8	+6	+4	0.0	0.9	-9	-7.6
40.8		41.1	-3	0	4.3	3.0	+1.3	+6
54.9	4.3							
59.3					4.7			
49 7.4	4.7							
11.6	0.0							
35.1		49 35.9	-8	-5	3.0	2.2	+8	+1
36.1		36.9	-8	-5	2.5	1.9	+6	-1
49.1	3.0							
53.9	2.5							
50 55.1		50 55.4	-3	0	6.0	5.0	+1.0	+2
51 16.7	6.0							
33.1		51 33.5	-4	-1	9.8	8.7	+1.1	+3
49.9		50.3	-4	-1	7.8	7.1	+7	-1
57.8	9.8							

33.8

16.7

36.1

24.2

11.1

19.8

15.5

12.9

43.2

14.1

18.1

14.0

17.8

21.6

24.7

27.2

June 25, 1953

Transits Est.		12 52 22 α 7-2		Est.	2.9 δ 2-8	
A	53 ^m 13.8			8.9		
	17.1	7.8				
	23.8	8.9				
	53	2.0	12 53 2.2 -2 +1	4.0	2.9 +1.1 +1.3	
B	6.0			0.5		
	17.8	40 ^m 0.5				
	42.0	53 42.2 -2 +1		0.3	-0.5 +.8 .0	
	49.5	50.4 -9 -6		3.8		
v-4	3.7	3.8				
	10.4	0.2				
	15.3	54 15.6 -3 .0		9.5	8.4 +1.1 +.3	
	32.8	9.5				
A.	55	34.9	55 35.6 -7 -.4	6.7	5.7 +1.0 +.2	
	45.9	46.0 -1 +2		9.8	8.7 +1.1 +.3	
	53.5	6.7				
	56	5.2	9.8			
v-4	21.4	56 29.2 -4 -1		7.7	7.0 +.7 -.1	
	44.1	7.7				
	14.8	57 15.1 -3 .0		7.0	6.1 +.9 +.1	
	22.0	22.3 -3 .0		11.0	10.3 +.7 -.1	
v-4	34.0	7.0	34.1 -1 +2	9.8		
	49.8	9.8				
	59.2			-0.2		
	58	17.2 +.4 +.7		10.3	9.6 +.7 -.1	
v-4	23.2	23.6 -4 -1		9.4	8.2 +1.2 +.4	
	26.7	26.7 .0 +.3		4.3		
	42.0	10.3 ^m 9.4				
	46.0	45.8 +2 +5		10.8	9.9 +.9 +.1	
v-4	51.5	4.0				
	18.5			-0.7		

10.0

15.8

11.8

28.4

~~24.2~~ 14.2

17.5

18.6

19.3

15.3

19.2

15.8

24.4

18.8

24.8

June 25. 1953

1883phae

Transits Est

α J-2

Est

δ E-8

13 ^h 0 ^m 11.9		13	0	12.1	-2	+1	22	1.1	+1.1	+2
26.3				26.5	-2	+1	0.7	7.8 -0.2	+9	.0
36.7	2.2									
47.2	0.7						0.5			
1 11.5	0.5									
2 44.2		2	44.8	-6		-4	7.7	6.7	+1.0	+1
3 2.2		3	2.7	-5		-3	5.6	4.7	+9	.0
10.9	7.7									
15.5	5.6									
21.4			21.6	-2		.0	7.0	5.8	+1.2	+3
31.3			31.6	-3		-1	7.3	6.0	+1.3	+4
35.2	7.0									
44.5	7.3									
5 32.0		5	32.3	-3		-1	7.4	6.3	+1.1	+2
44.5			44.5	.0		+2	2.6	1.9	+7	-2
54.9	7.4									
6 0.3	2.6									
6.9		6	7.2	-3		-1	2.3	1.2	+1.1	+2
16.7			17.1	-4		-2	8.4	7.6	+8	-1
26.5	2.3									
36.4	8.4									
7 1.4		7	1.9	-5		-3	5.3	4.2	+1.1	+2
14.2			14.8	-6		-4	4.0	2.7	+1.3	+4
36.2	5.3									
40.8	4.0									
50.5			50.2	+3		+5	1.5 dbl.	0.5	+1.0	+1
8 2.8							10.2			
6.5		8	6.7	-2		.0	2.8	2.2	+6	-4
10.5	1.5									
16.5	10.2									

24.8

20.9

24.3

26.7

13.3

13.8

13.2

22.9

15.8

19.6

19.7

34.8

26.6

20.0

13.7

14.3

June 25, 1953

Transits				α J-2				Est			
h	m	s	Est							δ	$E-\delta$
13	8	20.8	2.8								
B	9	32.2						7.3			
		42.8	7.3								
		57.9		9	57.9	0	+2	6.3	5.2	+1.1	+1
10	10.0			10	10.2	-2	0	2.5	1.6	+9	-1
	14.8				15.1	-3	-1	7.8	7.1		
	19.2							5.3			
	25.3	3.0									
	29.8	5.3	6.0								
	41.8			41.8	0	+2		2.5	1.3	+1.2	+2
	44.8	7.0									
	55.5			55.7	-2	0		2.7	1.8	+9	-1
11	3.5	2.5									
	7.8							0.0			
	16.7	0.0	2.7								
	50.2			11	50.7	-5	-3	6.3	5.0	+1.3	+3
12	13.9	6.3									
	33.1			12	33.0	+1	+3	4.0	4.9	-9	-1.9
	45.0							0.0			
	48.0	4.0									
	57.5	0.0									
A.	13	21.1		13	21.1	0	+2	6.0	5.0	+1.0	0
	34.2	6.0									
	42.0							9.0			
	59.1	9.0									
14	1.0			14	1.0	0	+2	5.5	4.4	+1.1	+1
	20.9				11.2	0	+2	0.6	10.2		
	31.7			20.9	0	+2		-0.4	+1.0	0	
	35.2	5.6						5.1			
	40.2	0.1									

10.6

31.9

15.3

30.0

10.6

21.7

21.2

8.9

23.7

14.9

12.5

17.1

17.1

34.2

19.3

11.3

June 25, 1913.

1883phae.1

Transits				Est.				Est.				S E-S			
α	δ	μ	σ	α	δ	μ	σ	α	δ	μ	σ	α	δ	μ	σ
14	43.0	5.0		13	14	43.0	0	+2	8.3	7.6	+7				-3
15	4.9	8.3													
	21.1					15	23.0	-1.9		9.0	10.4	-1.4			-2.8
	40.0	9.0													
16	5.0			16	5.7	-7		-5	7.0	6.0	+1.0				-1
	9.3								10.0						
	15.4	7.0													
	25.8	10.0													
	29.8					30.2	-4		-2	6.8	5.8	+1.0			-1
	45.0	6.8													
17	4.8			17	4.9	-1		+1	7.3	5.8	+1.5				+4
	15.2					15.7	-5		-3	8.5	7.8	+7			-4
	25.8					22.5				10.4	9.4	+1.6			-1
	29.0	7.3													
	33.5	8.5													
	40.1	10.4													
18	32.0			18	32.5	-5		-4	6.7	5.5	+1.2				+1
	39.3								8.0						
	45.4	6.7													
	52.8	8.0													
19	2.2			19	2.3	-1		0	6.5	5.1	+1.4				+3
	14.8					15.2	-4		-3	1.8	0.5	+1.3			+2
	14.5	6.5													
	30.0	1.8													
20	13.9								-0.6						
	16.3			20	16.3	0		+1	4.9	3.5	+1.4				+3
	31.0	4.9													
	36.0					36.5	-5		-4	11.3	10.4	+9			-2
21	8.0			21	7.9	+1		+2	11.5	10.4	+1.1				0
	45.5					45.6	-1		0	2.8	6.9	[-4.1]			[-5.2]

21.9

18.9

10.4

16.5

15.2

24.2

18.3

14.3

13.4

13.5

15.3

15.2

14.7

17.3

June 25 1883.

Transits	Est	α	T_{α}		Est	S	G-S	
13 ^h 21 ^m <u>12.5</u>	2.8							
22	4.0	22	4.2	-2	-1	1.7 nd	7.6	0.7 +1.0 -1
	<u>20.9</u>							
	7.6							
	<u>36.3</u>		36.0	+3	+4	6.5	5.0	+1.5 +4 -4
	<u>47.3</u>							
	6.5 nd 1.7							
23	13.9	23	13.9	.0	+1	44	3.0	+14 +2 -3
	<u>32.0</u>							
	4.4							
25	29.3	25	29.5	-2	-1	6.6	5.2	+14 +2
	<u>45.8</u>		45.8	.0	+1	3.1	1.8	+13 +1
	6.6							
	<u>54.3</u>							
26	<u>6.1</u>							
	3.1							
	<u>16.0</u>		26	16.0	.0	+1	4.2	2.9 +1.3 +1
	4.2							
	<u>40.6</u>							
	53.7		53.7	.0	+1	0.9	-0.4	+1.3 +1
27	1.9	27	1.7	+2	+3	0.2 nd 1.1	-0.5	+0.7 -5
	<u>9.2</u>		9.2	.0	+1	2.6	1.5	+1.1 -1
	0.9							
	<u>14.0</u>							
	0.2, 1.1 nd 2.0							
	<u>31.2</u>							
	37.3		37.4	-1	.0	7.7	7.2	+5 -7
28	0.9	28	0.8	+1	+2	8.0	7.6	+4 -8
	<u>5.2</u>							
	7.7							
	<u>14.4</u>							
	8.0							
	<u>30.0</u>		30.0	.0	+1	9.9	8.4	+1.5 +3
	38.8		38.8	.0	+1	7.7	6.4	+1.3 +1
	<u>44.5</u>							
	9.9							
29	<u>5.2</u>							
	7.7							
	<u>26.8</u>		29	26.8	.0	+1	1.8	0.4 +1.4 +2
	1.8							
	<u>41.0</u>							
	7.5							
	<u>44.7</u>							

43.3nd 16.9

11.0

18.1

25.0

20.3

24.6

20.3

29.3

22.0

27.9

16.8

14.5

26.4

14.2

12.5

June 25, 1943.

Transits Est.		α J- α		Est.	δ E- δ	
13 ^h 29 ^m 54. ^s		13 29 55.5	-1.0	-9	10.8	9.8 +1.0 -2
30 12.8		30 13.2	-4	-3	6.9	5.3 +1.6 +3
	32.1 6.9	20.7				
	50.5					
	50.8	51.0	-2	-1	7.7	6.5 +1.2 -1
31 2.1		31 2.1	.0	+1	6.0	4.8 +1.2 -1
	12.8 7.7					
	19.2 6.0					
	26.3	26.5	-2	-1	9.4	7.8 +1.6 +3
B	42.7	43.1	-4	-3	10.3	9.3 +1.0 -3
	53.1 9.4					
32 0.8	10.3	32 15.1	-1	.0	7.5	6.3 +1.2 -1
	15.0	43.4			0.0	9.2
	31.0 7.5					
34 26.8						
	49.0 0.0					
A.	35 29.4	35 43.3	+6	+6	8.4	7.2 +1.2 -1
	43.9	44.8	-1	-1	7.0	6.2 +.8 -5
	44.7	47.5	+4	+4	5.5	4.9 +.6 -7
	47.9					
	52.0 0.2					
36 2.0	5.5 ^a 7.4					
	5.2 8.0					

19.3

22.0

17.1

26.8

18.1

16.0

22.2

22.6

24.3

17.3

14.1

June 30, 1913.

Transit		Est.		Est.		S E-S	
		α	$T-\alpha$				
A.	12 ^h 19 ^m 51.0	12 ^h 19 ^m 51.0	.0	+1		3.7	
	57.7	57.8	-1	.0	8.8	3.6	
	20 25.2	25.6	-4	-3	7.6	8.5	+3 .0
	36.9 7.6					7.6	.0 -3
	46.8 8.8						
	51.8	51.7	+1	+2	10.2	9.9	+3 .0
	21 0.4				10.1		
	9.0 10.1						
	12.2	21 12.3	-1	.0	6.5	6.1	+4 +1
	15.3 10.2						
B.	17.2	17.3	-1	.0	4.8	4.5	+3 .0
	28.3 6.5						
	32.9 4.8						
	22 31.1	22 24.4					
	37.3	31.1	.0	+1	4.1	1.0	
	44.0 9.7				9.7	3.9	+2 -1
	48.0				24		
	50.3	47.6	+4	+5	10.0	9.7	+3 .0
	54.5 2.4	50.4	-1	.0	5.0	5.1	-1 -4
	23 1.5 5.0						
A.	9.8 10.0						
	30.3	23 30.5	-2	-1	7.3	6.9	+4 +1
	51.7 7.3						
	24 7.2	24 7.5	-3	-2	9.4	9.0	+4 +1
	22.7 9.4						
	25.0	28.3	-3	-2	4.3	4.1	+2 -1
	47.5 4.3						
	25 2.3				10.3		
	5.5	25 5.5	.0	+1	9.7	8.3	+14 +11
	13.2 10.3						

11.7

23.5

8.6

16.1

15.7

6.7

10.5

21.8

11.2

21.4

15.5

19.5

10.9

17.5

June 30, 1883.

Transits		Est.	α T_{α}		Est.	δ $E-\delta$	
A.	25 ^m	23.0	9.7				
	38.8			12 25 38.8 .0 +.1	3.9	4.0	-1 -4
	49.4				5.0		
	56.6				0.1		
B.	26	5.7	0.5 ^{2nd} 5.0				
		9.4	3.9				
			0.1				
	27	23.8		27 23.9 -1 .0	7.7	7.7	.0 -3
	49.9	7.7					
	59.0			59.0 .0 +.1	2.4	2.2	+2 -1
	28	3.4		28 3.5 -1 .0	10.3	10.0	+3 .0
	8.3			5.2 8.3 [+3.1] .0 +.1	0.8	0.6	+2 -1
	22.8	0.8					
	25.5	2.4					
	29.0	10.3					
	41.8			41.9 -1 .0	10.4	10.3	+1 -2
	47.8				6.2		
	55.3			55.3 .0 +.1	7.9	7.7	+2 -1
	29	2.0	6.2				
		11.2	10.4				
		26.0	7.9				
A.		57.0		29 56.9 +1 +.1	3.3	10.1	[-6.8] [-6.5]
	30	11.1	3.3				
	17.5			30 17.5 .0 .0	6.3	6.1	+2 -1
	29.3				9.9		
	41.0	6.3					
	44.0	9.9					
	31	0.5		31 0.5 .0 .0	7.6	7.2	+4 +1
		15.0	7.6				
		23.0		23.0 .0 .0	9.7	9.2	+5 +2
	32	3.0	9.7	32 45.2			

16.3

12.8

26.1

26.5

25.6

14.5

29.4

14.2

30.7

14.1

23.5

~~26.5~~ 14.7

14.5

40.0

June 30, 1883.

1883phae.

Transits. Est.

$\propto I_{\alpha}$

Est.

$\delta E-S$

12 33 1.1

10.1

15.0 10.1

23.5

33 23.7 -2 -2

4.2

3.9 +3 .0

30.1

29.8 +3 +3

9.0

8.9 +1 -2

37.4

37.4 .0 .0

5.1

44.0 4.2

49.3 5.1

52.4 9.0

B

34 44.7

34 48.5 +2 +2

4.5

4.0 +5 +2

35 3.0 4.5

35 11.8 +2 +2

4.0

3.7 +3 .0

12.0

24.2 4.0

36.4

36.9 -1 -1

5.8

5.6 +2 -1

59.0 5.8

36 3.4

36 3.8 -4 -4

0.7

0.6 +1 -2

14.4 0.7

19.4

0.5

24.1 0.5

A.

37 5.5

37 6.2 -7 -7

3.0

2.8 +2 -1

10.6

10.7 -1 -1

0.1

-0.3 +4 +1

14.4 3.0

29.4 0.1

37.7

37.7 .0 .0

5.4

5.4 .0 -3

53.0

49.0 [+4.0] +4.0

-0.2

-0.5 +3 .0

57.4

6.0

52.5 5.4

38 4.7 6.0

38 11.7 .0 .0

3.8

3.6 +2 -1

11.4

22.0

10.0

39.0 3.8 ^{end} 10.0

13.9

20.5

22.6

11.9

14.3

16.2

22.2

11.4

8.7

13.3

19.2

20.8

9.0

27.3

17.0

June 30, 1953.

Transits.	Est.	α	δ	Est.	δ	$\delta - \delta$
38	53.0	12	38	52.9	+1	+1
39	2.0					
	13.5					
	14.0					
	5.3 ^{2nd} 4.7					
	24.8					
	0.3					
	33.2					
	34.4	39	34.4	.0	.0	
	41.9					
	5.0					
	41.7					
	+2					
	55.6					
	4.7 ^{2nd} 5.1					
40	3.9					
	22.7					
	7.4					
	31.0					
	7.6					
	42.5					
	10.2					
	52.5					
	52.9					
	-1					
	-1					
	10.3					
	10.0					
	+3					
	.0					
41	21.6					
	10.3					
	52.1					
	41					
	52.0					
	+1					
	+1					
	0.9					
	0.9					
	.0					
	-3					
	53.9					
	.0					
	.0					
	-2					
42	7.5					
	1.2					
	21.2					
	0.9					
	34.7					
	42					
	37.7					
	.0					
	.0					
	-2					
	41.8					
	.0					
	-1					
	53.6					
	54.2					
	-4					
	-4					
	8.5					
	—					
43	4.3					
	8.5 ^{2nd} 5.1					
	11.0					
	8.1					
	47.0					
	53.9					
	56.5					
	7.5					
44	7.1					
	2.8					
	29.0					
	32.3					
	44					
	28.8					
	+2					
	+2					
	6.8					
	6.3					
	6.3					
	4.2					
	+5					
	+2					

24.0

9.0

11.0

17.1

25.4

16.7

18.8

15.3^{2nd} 19.8

28.8

29.1

13.6

33.3

22.5

10.5

11.5

13.2

24.1

9.4

June 30, 1883.

1883phae1

Transits Est.				Est				Est			
12	44	41.7	6.3	12 ^h 44 ^m 41.5	+2	+2		1.0	0.9	+1	-2
		53.1	68								
	45	17.9		45	17.6	+3	+3	9.9	9.8	+1	-2
		27.0	1.0								
		55.7	2.9 (29.9)		55.6	+7	+7	0.6	0.2	+4	+1
	46	16.2	0.6								
		26.1		46	26.1	.0	.0	2.6	2.3	+3	.0
B.	47	1.2	2.6								
		6.1		47	6.0	+1	+1	6.8	6.1	+7	+4
		19.3						0.1			
		25.5	6.8								
		30.7			30.5	+2	+2	4.4	3.7	+7	+4
		36.2	0.1								
		40.7	4.4								
	48	2.2						10.0			
		13.0						4.8			
		19.5	10.0								
		25.0	4.8								
		28.0		48	27.8	+2	+1	1.5	0.9	+6	+3
		41.2			41.1	+1	.0	3.2	3.0	+2	-1
		45.6	1.5								
		55.3	3.2								
A. End of 1st sheet.				Series XXXIX							
12	40	24.0		40	23.8	+2	-1	10.0	10.0	.0	+1
		39.5	10.0								
		53.1			52.9	+2	-1	10.0	10.0	.0	+1
	41	19.1	10.0								
		52.5		41	52.0	+5	+2	0.8	0.9	-1	.0
		54.4			53.9	+5	+2	1.2	1.1	+1	+2
	42	6.1	1.2								
		19.6	0.8								

45.3

Perhaps 37.8

20.5

35.1

19.4

16.9

18.0

17.3

12.0

17.6

14.1

15.5

26.0

27.1

11.7

June 30, 1943

1883phae

Transits Est.			α $\delta-\alpha$			Est	δ $\delta-\delta$				
12 ^h	42 ^m	35.0	12 ^h	42 ^m	37.7	+3	.0	7.6	8.0	-4	-3
		41.8			41.8	.0	-3	5.0	5.0	.0	+1
		47.7						10.7			
		54.0			54.2	-2	-5	7.8	—		
43	3.0	5.0									
	8.3	7.6 ^{end} 7.8									
	47.2							7.2			
	54.2							2.5			
	55.5	7.2									
A. 44	2.7	2.5									
	29.2		44	28.8	+4	+1	6.0	6.3	-3	-2	
	33.0						5.4				
	42.0	5.4		41.5	+5	+2	0.8	0.9	-1	.0	
	52.1	6.0									
45	18.1		45	17.6	+5	+2	9.7	9.8	-1	.0	
	24.1	0.8									
	51.4	9.7									
	55.1			55.6	-5	-8	0.2	0.2	.0	+1	
46	15.0	0.2									
	26.8		46	26.1	+7	+3	2.3	2.3	.0	+1	
B. 47	6.7	2.3	47	6.0	+7	+3	6.0	6.1	-1	.0	
	23.0	6.0									
	31.0			30.5	+5	+1	3.7	3.7	.0	+1	
	47.0	3.7									
48	2.3						9.5				
	14.1						4.3				
	19.0	9.5									
	24.9	4.3									
	28.5		48	27.8	+7	+3	0.7	0.9	-2	-1	
	41.5			41.1	+4	.0	3.0	3.0	.0	+1	

30.3

21.2

14.3

11.3

8.5

22.9

9.0

42.1

33.3

19.9

39.9

16.3

16.0

16.7

10.8

17.2

12.0

June 30, 1953.

1883phae

Transits Est.		α J- α		Est	δ E-S			
10 ^h 48 ^m	<u>45.7</u> 0.7							
	<u>53.5</u> 3.0							
A.								
49	36.1	49 35.9	+2	-2	2.3	2.2	+1	+2
	37.2	36.9	+3	-1	2.0	1.9	+1	+2
	<u>50.2</u> 2.3							
	<u>55.3</u> 2.0							
50	<u>55.8</u>	50 55.4	+4	.0	5.1	5.0	+1	+2
51	<u>19.0</u> 5.1							
	34.0	51 33.5	+5	+1	8.3	8.7	-4	-3
	50.5	50.3	+2	-2	7.2	7.1	+1	+2
	<u>54.2</u> 8.3	52 2.2				2.9		
52	14.4				7.8			
	<u>15.5</u> 7.2							
	<u>24.2</u> 7.8							
B								
53	2.4	53 2.2	+2	-2	2.8	2.9	-1	-1
	<u>17.7</u> 2.8							
	42.4	53 42.2	+2	-2	-0.2	-0.5	+3	+3
	50.5	50.4	+1	-3	2.9	—		
54	<u>3.5</u> 2.9							
	16.0	54 15.6	+4	.0	8.0	8.4	-4	-4
	<u>32.5</u> 8.0							
A.								
55	14.1				6.0			
	22.0				5.0			
	<u>28.0</u> 6.0							
	<u>31.2</u> 5.0							
	36.0	55 35.6	+4	.0	5.6	5.7	-1	-1
	44.0	46.8			8.2	8.7		
	46.8	46.0	+8	+4	8.0	8.7	-1	-1
	<u>51.6</u> 5.6							
	<u>56.0</u> 8.2							
56	<u>3.7</u> 8.0							

14.1

18.1

23.2

20.2

28.3

9.8

15.3

13.3

16.5

13.9

9.2

15.6

12.0

16.9

June 30, 1A+3.

Transit Est.

	α	$\tilde{\alpha}$	α	Est	S	E-S
12 ^h 56 ^m 29.8	12	56	29.2 +.6 +.1	7.0	7.0	.0 .0
43.5 7.0						
57 15.0	57	15.1 -.1 -.6	6.3	6.1	+2	+2
22.9		22.3 +.6 +.1	10.3	10.3	.0	.0
34.5		34.1 +.4 -.1	9.0			
36.4 6.3						
45.0 9.0						
54.0 10.3						
58.1				7.7		
58 11.0 7.7						
17.9	58	17.2 +.7 +.2	9.8	9.6	+2	+2
24.2		23.6 +.6 +.1	8.1	8.2	-.1	-.1
27.5		26.7 +.8 +.3	2.9	3.3	-.4	-.4
41.3 9.8						
46.2		45.8 +.4 -.1	10.0	9.9	+1	+1
49.0 8.0						
56.5 2.9						
59 10.8 10.0						
21.1				10.0		
28.1				4.0		
37.6 4.0 and 10.0						
55.3				9.0		
B 13 0 7.9 9.0						
12.6	13	0 12.1 +.5 .0	1.0	1.1	-.1	-.1
17.1			8.0			
19.4			2.3			
24.0			1.0			
27.1		26.5 +.6 +.1	0.0			
29.1 9.0						
35.0 1.0 per, 2d 8.3 (2)						

-0.2 +0.2
~~9.8~~ ~~-9.8~~ +.2

13.7

21.4

31.1

13.5

12.9

23.4

24.8

29.0

24.6

16.5

9.5

12.6

22.4

12.0

15.3

16.0

20.9

June 30, 1953.

Transits Est				Est S E-S			
13	0 ^m	40.0	1.0 fol.				
		48.0	0.0				
48.0							
2		45.3		2	44.5	+5	0
		52.2			6.8	6.7	+1 +1
3		0.6	2.3		2.3		
		3.5		3	2.7	+8	+3
		8.6	6.8		5.0	4.7	+3 +3
		15.0	5.0				
		17.6			5.6	5.4	-3 -3
		23.0			5.5		
		27.5	5.6				
		32.5			31.6	+9	+4
		38.2	5.5		5.7	6.0	-3 -3
		44.6	5.7				
A	5	32.9		5	32.3	+6	.0
		45.0			44.5	+5	-1
		53.5	6.7		6.7	6.3	+4 +3
		56.6			2.0	1.9	+1 .0
6		3.9	2.0	6			
		8.0			1.8		
		12.5	1.8				
		17.5			7.2	+8	+2
		24.0	1.7		17.1	+4	-2
		33.5	7.6		7.6	7.6	.0 -1
B	7	2.5		7	1.9	+6	.0
		3.1			4.7	4.2	+5 +4
		11.3	5.5		5.5		
		15.5					
		34.0	4.7 and 2.7		2.7	2.7	.0 -1

23.3

84

11.5

9.9

15.2

12.1

22.6

18.9

15.9

19.0

16.0

34.5

8.2

~~11.5~~ 21.5

June 30, 1883.

Transits.	Est.	α	T_{α}		Est	δ	$\delta-\delta$	
12 7 ^m	49.2	13	7	50.2 -1.0	-1.6	0.5	0.5	0 -1
	54.1					2.5		
8	7.2 0.5	8	6.7	+5 +1		2.4	2.2	+2 +1
	11.7 2.5							
	22.2 24							
9	32.4					6.4		
	45.2 64							
	58.7	9	57.9	+8 +2		5.3	5.2	+1 .0
10	10.9	10	10.2	+7 +1		2.0	1.6	+4 +3
	15.8		15.1	+7 +1		7.4	7.	
	20.5					4.7		
	26.5 5.3, 20, and 4.7							
	42.5		41.8	+7 +1		1.5	1.3	+2 +1
	44.4 6.0							
	56.5		55.7	+8 +2		2.0	1.8	+2 +1
a								
11	6.2 1.5							
	14.3 2.0							
	43.3					4.8		
	44.6					7.0		
	51.5	11	50.7	+8 +2		5.2	5.0	+2 +1
	54.3 4.8 and 7.0							
B								
12	20.4 5.2	12	33.0	+5 -1		2.6	4.9	[2.3] (-2.4)
	33.5							
	45.0 2.6							
13	21.5	13	21.1	+4 -2		5.2	5.0	+2 +1
	35.7 5.2							
	43.5					7.8		
	56.6 7.8							
14	1.8	14	1.0	+8 +1		4.8	4.4	+4 +2
	11.9		11.2	+7 .0		10.1	10.2	-1 -3

18.0

13.6

15.0

12.8

27.8

15.6

28.6

6.0

23.7

17.8

11.0

9.7

28.9

14.5

14.2

13.1

30.6

20.5

June 30, 1883.

1883phae.

Transits. Est.				α	$\gamma - \alpha$	Est.	S					
15	14	20.2		13	14	20.9	-7	-1.4	10.2	9.6	+6	+4
		32.4	4.8, 10.1 and 10.2						4.0			
		43.6	40			43.0	+6	-1	7.5	7.6	-1	-3
a.	15	2.0	7.5						7.6			
		32.0										
		23.7		15	23.0	+7	.0		10.3	10.4	-1	-3
		35.0	7.6									
		44.5	10.3									
	16	10.5		16	5.7				9.2			
		26.8	9.2									
		30.9		16	30.2	+7	.0		5.8	5.8	0	-2
		44.4	5.8									
a	17	5.3		17	4.9	+4	-3		6.2	5.8	+4	+2
		7.6							1.0			
		16.2	1.0		15.7	+5	-2		7.8	7.8	0	-2
		22.2	6.1		22.5					9.4		
		27.0			22.5	[+4.5]	[+3.8]		9.8	9.4	+4	+2
		34.5	7.5									
		42.5	9.8									
B	18	12.0							7.7			
		22.0	7.7									
		33.3		18	32.5	+8	+1		5.6	5.5	+1	-1
		39.5							7.7			
		46.4	5.6									
		51.5	7.7									
a.	19	3.1		19	2.3	+8	+1		5.2	5.1	+1	-1
		15.9			15.2	+7	.0		0.4	0.5	-1	-3
		23.0	5.2									
		30.0	0.4									
		35.5							6.0			

12.2

11.2

18.4

13.0

20.8

16.3

13.9

16.9

8.6

18.3

15.5

10.0

13.1

12.0

19.9

14.1

13.2

June 30, 1953.

Transits. Est.		α	Est	δ
19	42.6		5.2	
	48.7 6.0			
	<u>53.5</u> 5.2			
B				
20	15.5		4.5	
	17.0	13 20 16.3 +.7	4.3	3.6 +.7 +.5
	<u>22.3</u> 4.5			
	<u>32.5</u> 4.3			
	37.7	36.5 +1.2 +.5	10.5	10.4 +.1 -.1
21	3.3		6.5	
	8.5	21 7.9 +.6 -.1	10.6	10.4 +.2 .0
	<u>11.7</u> 6.0 ² and 10.5			
	<u>35.3</u> 10.6			
	46.3	45.6 +.7 .0	2.0	6.9 [-4.9] (-4.7)
	<u>56.8</u> 2.0			
22	4.5	22 4.2	7.3	0.7
	5.0	22 4.2 +.8 +.1	0.4	0.7 -.3 -.5
	19.0 7.3			
	36.8	36.0 +.8 +.1	5.1	5.0 +.1 -.1
	<u>50.5</u> 0.4			
	<u>52.9</u> 5.1			
23	14.5	23 13.9 +.6 -.1	3.2	<u>3.0</u> +.2 .0
	<u>35.0</u> 3.2			

10.9

6.8

15.5

34.0

8.4

26.8

10.5

14.5

45.5

16.1

20.5

Completed on page 76.
June 30, 1953.

Transits. Est.

∞

Est S

Not to be used

June 30, 1883.

Transits. Est.

α

Est

δ

Not to be used.

July 3, 1943.

Series XL.

Transits. Est.		α		Est.		δ	
15 ^b	20 ^m 15.9	13 20	16.3 -4	+1	38	3.6 +.2	+2
	<u>28.8</u> 38						
	36.1		36.5 -4	+1	10.4	10.4 .0	0
21	7.0 10.4	21	7.9 -9	-4	10.5	10.4 +.1	+1
	<u>38.3</u> 10.5						
22	3.2	22 4.56	22 4.2 -1.0	-5	7.3 10.5	6.9 0.7	+4 -2
	<u>20.0</u> 7.3						
	35.4		36.0 -6	-1	5.0	5.0 .0	-1
	44.5 45.2 and 5.0						
23	12.0				10.4		
	12.5	23	13.9 -1.4	-9	26	3.0 -4	-5
	<u>26.1</u> 10.4						
	<u>32.8</u> 26						
24	35.0				7.5		
	<u>45.9</u> 7.5						
25	28.8	25	29.5 -.7	-2	5.2	5.2 .0	-1
	45.0		45.8 -.8	-3	23	1.8 +.5	+4
	<u>50.3</u> 5.2						
26	<u>4.3</u> 2.3						
	15.4	26	16.0 -.6	-1	28	2.9 -.1	-2
	<u>37.1</u> 2.8						
	46.9				6.8		
	<u>55.5</u> 6.0		53.7 +1.8 +2.3		8.0	-0.4 [+4.6]	
27	0.9	27	1.7 -8	-3	-0.3	-0.5 -.2	-3
	8.7		9.2 -5	.0	1.5	1.5 .0	-1
	<u>32.5</u> 1.5						
	36.8		37.4 -.6	-1	7.4	7.2 +.2	+1
28	0.2	28	0.8 -.6	-1	7.8	7.6 +.2	+1
	<u>3.3</u> 7.4						
	<u>15.3</u> 7.8						

12.9

30.9

31.3

16.8

41.3

9.1

14.1

20.3

10.9

21.5

19.3

21.7

8.6

23.8

26.5

15.1

July 3, 1883.

Transits. Est.		α		Est		δ	
1883	28 ^m 29 ^h	13 28	30.0 -9	-K	8.2	8.4 -2	-3
	35.2		388 -6	-1	6.9	6.4 +.5	+4
	40.9 8.2						
A.	29 4.5 6.9						
	26.4	29	26.8 -4	+1	0.6	0.4 +.2	+1
	32.0				6.7		
	42.5 0.6 ^{2nd} 6.7						
	54.9		55.5 -6	-1	10.0	9.8 +.2	+1
30	12.8 10.0	30	13.2 -4	+1	5.8	5.3 +.5	+3
	30.8 6.0		20.7				
	50.3		51.0 -7	-2	7.0	6.5 +.5	+3
31	1.8	31	2.1 -3	+2	5.0	4.8 +.2	.0
	5.2 6.5						
	10.8 7.0 ^{2nd} 5.0						
	17.3 6.0						
	26.0		26.5 -5	.0	7.8	7.8 .0	-2
	42.8		43.1 -3	+2	9.5	9.3 +.2	.0
	52.3 7.8						
	59.3 9.5						
B.	32 14.2	32	15.1 -9	-4	6.5	6.3 +.2	.0
	27.5 6.5						
	42.8		43.4 -6	-1	9.5	9.2 +.3	+1
	57.0 9.5						
34	12.3				6.1		
	24.5 6.1						
	52.8				7.8		
A.	35 5.0 7.8						
	43.1	35	43.3 -2	+3	7.8	7.2 +.6	+4
	44.4		44.8 -1	+4	5.8	6.2 -4	-6
	47.0		47.5 -5	.0	4.3	4.9 -6	-8

118

26.3

16.1

10.5

17.9

18.0

20.5

9.0

26.3

16.5

13.3

14.2

12.2

12.2

21.7

16.1

10.0

July 3, 1883.

Transits	Est.		Est.	δ	
35 ^m 57.0	4.3				
36 0.8	5.8	36 1.3 - .5	.0 5.0	5.8 - .8	-1.0
4.8	7.8				
10.0	5.0				
26.0			9.5		
32.2		32.7 - .5	.0 3.7	4.4 - .4	-1.9
36.8			7.5		
40.3	8.0				
44.3	7.5				
37 5.2		37 5.7 - .5	.0 1.5	1.8 - .3	-1.5
8.8	3.7	9.5 - .4	-1.2 3.5	3.4 + .1	-1
21.3	3.5		5.2		
30.5	1.5				
36.6	5.2				
49.5		50.0 - .5	.0 2.5	2.0 + .5	+1.3
38 6.0	2.5				
8.8		38 10.1 -1.3	+1.8 10.5	10.1 + .4	+1
17.4		38 10.1		10.1	
22.8		17.7 - .3	+1.2 5.0	4.5 + .5	+1.2
30.5	2.6	22.6 + .2	+1.7 2.6	2.5 + .1	-1.2
38.9	5.0				
42.0	10.5				
54.3		54.9 - .6	-1 2.4	2.1 + .3	.0
39 21.7	2.4				
46.3		39 46.9 - .6	-1 7.8	7.5 + .3	.0
40 2.3		40 3.2 - .9	-1.4 7.4	6.9 + .5	+1.2
11.0	7.8				
20.6	7.4				
28.0			1.5		
38.4	1.5	38.8 - .4	+1.0 10.2	9.8 + .4	+1

9.2

14.3

36.6

10.5

25.3

12.5

15.3

16.5

33.2

21.5

12.7

27.4

24.7

23.3

10.4

23.2

July 3, 1953.

Transits.	Est.		Est	δ
13 40 44.2		13 40 44.7 -5	.0 48	4.4 +4 +1
41 1.6 10.2 ^{2nd} 4.8				
4.0		41 7.8 -8	-3 9.6	9.2 +.4 +1
21.2 9.6				
47.5		48.2 -7	-2 10.6	10.4 +.2 -1
59.8			3.1	
42 8.3 10.6				
14.4 3.1				
31.0		42 31.5 -5	.0 2.3	1.8 +.5 +.2
32.7		33.1 -4	+1 2.5	2.4 +.1 -2
41.4 2.3				
46.4 2.5				
43 12.9		43 13.4 -5	.0 5.6	5.4 +.2 -1
19.5		19.8 -3	+2 3.3	2.9 +.4 +1
34.5 56 ^{2nd} 3.3				
44 6.6			-0.3	
13.0			5.5	
21.5 5.5				
45 20.0		45 20.9 -9	-4 1.2	2.6 -1.4 -1.8
32.5 1.2				
38.8			0.8	
49.2 0.8				
46 15.3		46 15.9 -6	-1 6.2	5.8 +.4
29.0		29.6 -6	-1 2.5	1.8 +.7 +.3
34.2 6.2				
44.8 2.5				
47 1.7		47 2.2 -5	.0 6.6	5.9 +.7 +.3
18.2 6.6				
28.0		28.2 -2	+3 5.7	4.0 +1.7 +1.3
52.3 5.7				

17.4

14.2

20.8

14.6

10.4

13.7

21.6

15.0

8.5

12.5

10.4

18.9

15.8

16.5

24.3

July 3, 1883.

Transits.	Est	Est	δ
10 48 ^m 18.0	13 48 18.3 -3 +2	73 78	67 +7 +3
30.4			
38.4 7.3			
45.2 78			
52.3	52.7 -4 +1	97	9.1 +6 +2
49 8.0 9.7			
23.5	49 24.2 -7 -2	10.7	10.4 +3 -1
39.9	40.1 -2 +3	27	2.2 +5 +1
43.5 10.7			
55.4			
50 8.5 2.7			
52.3	50 52.6 -3 +2	68	5.8 +10 +6
51 8.0 6.8			
45.2	51 45.7 -5 .0	9.4	8.7 +7 +3
52.1		45	
52 3.2 4.5			
6.2 9.4			
14.0	52 14.5 -5 .0	80	7.8 +2 -3
31.9 8.0			
53 7.5			
2.5	53 30 -5 .0	45	3.8 +7 +2
17.8 4.5			
22.0	22.4 -4 +1	56	5.1 +5 .0
32.4	32.7 -3 +2	68	6.0 +8 +3
45.3 5.6 2 6.8			
57.0	57.5 -5 .0	43	3.6 +7 +2
54 9.0 4.3			
27.7	54 28.0 -3 +2	23	1.4 +9 +4
38.5		22	
43.4 2.3			

20.4

14.8

15.7

20.0

28.6

15.7

21.0

11.1

17.9

15.3

23.3

12.9

12.0

15.7

10.7

Transits Est

July 3, 1883.

2

Est

5

13^h 54^m 49.^s 22

53.5

54 53.8 - .3 + .2

54

4.7

+ .7

+ .2

55 ~~54~~

26.1

55 26.9 - .8

- .3

3.2

2.8

+ .4

- .1

31.9 5.4

39.2 3.2

38.4

13.1

1983phae.proj.1434

July 6, 1953.

Transits, Est.				Est. J			
13	30	13.3		13	30	13.2 +.1	-4
		20.7				5.5	5.3 +.2
		30.5	5.5				
		51.0	+.3			7.0	6.5 +.5
31	2.5			31	2.1 +.7	5.0	4.8 +.2
	6.3					6.0	
	13.3	7.0					
	14.5	6.0 and 5.0					
	26.5					7.8	7.8 .0
	43.7					9.5	9.3 +.2
	56.5	7.8					
32	2.4	9.5		32	15.1 +.2	6.7 and 9.3	6.3 +.4
	15.3						
	27.2	9.3					
	31.1	6.7					
	43.6					9.7	9.2 +.5
33	1.1	9.7					
34	13.5					6.2	
	29.0	6.2					
	53.5					7.8	
35	11.5	7.8		35	43.3 +.1	7.5	7.2 +.3
	43.4					5.5	6.2 -.7
	45.4					4.0	4.9 -.9
	47.7					5.1	5.8 -.7
36	1.5			36	1.3 +.5		
	3.5	4.0 and 7.5					
	6.3	5.5					
	15.6	5.1					
	26.9					9.5	
	33.2					3.9	4.4 -.5
	35.1					7.3	

22.2

22.0

14.7

11.2

29.7

18.7

15.8 }
11.9 }

17.5

15.5

18.0

20.4

22.9

16.1

13.8

17.9

36.9

14.5

July 6, 1883

Transits Est
 1^h 36^m 44.8 9.5
 52.6 7.3

34 6.2
 10.1 3.9
 18.4
 19.4
 22.5

27.3 3.0

37.3 1.2

39.9 5.1

50.6

38 9.2 2.5

14.2

15.3

23.4

26.4 7.5

40.0 2.8

42.1 10.6 and 5.0

55.6

39 30.0 2.5

42.4 4.2

44.4

40 3.5

14.1

24.0

39.4

45.3

41 5.0 10.2

8.4

11.5

4.9

37 5.7 +.5

9.5 +.6

50.0 +.6

38 10.1 -9

17.7 +.6

22.6 +.8

54.9 +.7

39 46.9 +.5

40 3.2 +.3

38.8 +.6

44.7 +.6

41 7.8 +.6

Est

δ

12

40

2.8

3.0

5.1

2.5

10.6

7.4

5.0

2.8

2.5

4.2

7.9

7.5

10.2

4.9

9.5

1.8 -6

3.4 +.6

2.0 +.5

10.1 +.5

4.5 +.5

2.5 +.3

2.1 +.4

7.5 +.4

6.9 +.6

9.8 +.4

4.4 +.5

9.2 +.3

~~1.1~~
~~1.1~~
~~1.1~~

~~1.0~~
~~1.0~~
~~1.0~~

~~1.0~~
~~1.0~~
~~1.0~~

~~1.3~~
~~1.3~~
~~1.3~~

~~1.5~~
~~1.5~~
~~1.5~~

~~1.1~~
~~1.1~~
~~1.1~~

~~1.2~~
~~1.2~~
~~1.2~~

31.1

7.9
17.4

18.6

32.9

12.5

23.8

16.6

34.4

12.4

26.7

23.5

25.6

26.2

17.9

July 6, 1883.

Transits.	Est	α	Est	δ
1 ^N 41 ^m 26.3	9.5			
45.0		41 48.2 -2	-7 11.0	10.4 +6 +1
42 0.7			3.6	
15.4 3.6			5.5	
25.3 5.5				
32.6		42 31.5 +11 +6	2.4	1.8 +6 +0
33.5		33.1 +4 -1	2.8	2.4 +4 +2 -2
42.0 2.8				
53.0 2.4			7.5	
43 6.0 7.5				
14.0		43 13.4 +6 +1	5.9	5.4 +5 +3 -1
20.6		19.8 +8 +3	3.3	2.9 +4 +2 -2
33.4 3.3				
34.3 5.9				
44 ^v 21.6		45 20.9 +7 +2	1.3	2.6 -1.3 -1.9
32.5			1.0	
39.5 1.3 2.0 1.0			0.8	
49.6 0.8				
54.1			2.0	
46 6.9 2.0				
16.1		46 15.9 +3 -3	6.5	5.8 +7 +1
30.6		29.6 +10 +5	24.2 5.2	1.8 +6 +0
38.2 6.5				
42.2 5.2				
45.1 2.4				
47 2.8		47 2.2 +6 +1	6.8	5.9 +9 +3
20.2 6.8				
29.1		28.2 +9 +4	4.7	4.0 +7 +1
56.5 4.7				
48 18.9		48 18.3 +6 +1	7.3	6.7 +6 +0

14.7
9.9

20.4
8.5

13.0

23.3
12.8

18.2

7.3
9.8

12.8

22.1

17.5^{and}
11.6

17.4

27.4

21.1

July 6, 1953.

Transits.	Est			Est			
15 48 ^m 31.0 ⁿ				8.0			
33.7				5.0			
35.1				5.1			
40.0 6.0							
46.6 7.0, 5.0 and 5.1							
53.4	48 52.7 +.7	+2		9.4	9.1 +3	10 -3	
49 10.8 9.4							
15.7	49 24.2			2.3	10.4		
24.9 2.3							
40.4	40.1 +.6	+1		2.8	2.2 +.6	2.3 -1	
Ar. 50 19.4 2.8					+7.4		
26.8				7.0			
32.5				3.0			
39.1 3.0							
41.9 7.0							
53.0	50 52.6 +.4	-1		6.6	5.8 +.8	5.8 +1	
51 13.7 6.6							
16.4				5.0			
30.1 5.0							
B. 45.8	51 45.7 +.1	-4		9.6	8.7 +.9	8.7 +2	
53.0				4.8			
52 5.6 4.8							
10.5 9.6							
15.0	52 14.5 +.5	.0		8.3	7.8 +.5	7.8 -2	
39.8 8.3							
53 3.9	53 3.0 +.9	+4		4.7	3.8 +.9	3.8 +2	
22.9 4.7	22.4 +.5	.0		5.8	5.1 +.7	5.1 +2	
33.0	32.7 +.3	-2		6.3	6.0 +.3	6.0 +4	
52.0 6.3 and 5.8							
58.2	57.5 +.7	+2		4.0	3.6 +.4	3.6 -3	

15.6

12.9

11.5

17.4

9.2

38.7

15.1

6.6

20.7

13.7

24.7

12.6

24.8

19.0

29.1

19.0

22.2

25.9

19.9

39.0

13.7

19.2

13.0

28.6

22.1

19.8

10.5

22.7

17.4

21.2

14.2

17.0

July 6, 1883.

Transits. Est.		∞		Est.		5	
14 ^h 0 ^m 26.4		14 ^h 0 ^m 26.5	+4	-1	24	16 +8	1.0 1.2
<u>35.0</u>	8.2						
<u>52.0</u>	2.4						
a. 1 2.2		1 1.4	+8	+3	4.0	2.2 +1.8	+1.9 1.3
6.4		6.2	+5	.0	3.5	2.6 +.9	1.0 1.1
10.1		7.8			9.2	2.5	
<u>13.9</u>	4.0						
<u>31.9</u>	9.2						
42.2					7.5		
<u>45.4</u>	3.5						
<u>56.2</u>	7.5						
2 5.3		2 4.5	+8	+2	3.4	2.7 +.7	1.2 1.3 -2
12.4		11.4	+10	+4	1.8	0.6 +1.2	1.3 1.7
17.2					4.8		
<u>20.6</u>	3.4						
26.4					1.9		
<u>35.5</u>	18 ^{and} 3.0						
<u>54.4</u>	1.9	53.8	+6	.0	7.3	6.2 +1.1	1.2 1.6
3 2.7					9.4		
10.5		3 14.6	-1	+7	7.4	6.3 +1.1	1.2 1.6
<u>20.1</u>	9.4	16.7				4.6	
31.0					4.5		
<u>33.0</u>	7.3						
<u>39.0</u>	7.4						
<u>45.3</u>	4.5						
<u>50.7</u>		50.0	+7	+1	5.5	4.6 +.9	1.0 1.1
4 8.5					9.8		
17.8		4 17.4	+4	-2	7.9	7.1 +.8	1.3 1.4 -1
<u>23.4</u>	9.9						
<u>24.4</u>	6.5						

25.6

11.7

42.0

21.8

14.0

15.3

23.1

38.6

17.4

11.1 28.5

14.3

37.0?

14.9

21.9

July 6, 1883.

Transits. Est.

 α Est. δ

14^h 4^m 39.7 7.8
43.4

8.0

5 41.6
46.2
53.1

5 41.8 -2

-8

11.0

10.1 +.9

~~7.3~~

46.2

45.7 +.5

-1

10.2

9.4 +.8

~~7.2~~ -1

53.1

49.3
52.7 +.4

-2

10.3

9.2
9.5 +.8

~~7.2~~ -1

6 3.6 10.2

6 24.2

9.8

10.6

14.9 10.3

27.0 +.6

.0

8.9 +.9

~~7.2~~

22.2 11.0

33.6 +.5

-1

6.8

5.8 +1.0

~~7.4~~

27.6

34.1

35.5

45.7 6.5

50.6 9.8

55.4

50.3 +.3

-3

6.6

4.4 [+2.2]

~~7.0~~ [+1.3]

54.6 +.5

+2

7.9

7.0 +.9

~~7.4~~

7 4.1 6.9

7 2.8

10.6

14.1 6.8

22.0 8.0

42.0

41.3 +.7

+1

5.5

4.5 +1.0

~~7.0~~

44.4

43.7 +.7

+1

10.3

9.3 +1.0

~~7.0~~

47.5

46.7 +.8

+2

8.5

8.0 +.5

~~7.5~~

8 1.0 10.3

13.7 8.5

18.0 5.5

31.7 0.0

36.9

48.0 5.0

54.0

8 52.5 +1.2

+9

2.3

2.2

~~7.4~~

54.5

53.1 +0.4

+0.9

6.3

1.2 +1.1

~~7.4~~ +1

57.6

53.8 +0.7

+1

5.2

5.5 +.8

~~7.4~~ -2

9 1.0 -3.4

-4.0

4.5 +.7

~~7.4~~ -3

13.0

40.6

17.4

21.8

23.0

~~40.0~~ 30.0

10.2

~~73.5~~ 23.5

26.6

36.0

16.6

26.2

18.0

11.1

19.1

(39.9?)

27.3

7i

July 6, 1953.

Transits. Est.
~~14~~ 9^m 13.1 2.0
 16.3
 24.9 5.2
 34.4 5.8 (6.0?)
 42.1 0.8
 56.1
 58.0
 10 9.4
 11.6 0.2
 18.0 4.8
 24.0 5.0
 28.0
 40.4
 45.4 1.5
 48.1 2.0
 51.4 2.1
 59.6
 11 10.5
 15.0 7.7
 24.0
 31.0
 35.0 5.2
 39.1 5.1
 44.5 8.8
 55.6
 58.5
 12 11.6 7.8
 18.0
 22.0 0.5
 23.2

~~14~~ 9^m 10
 15.6 +.7 +.1
 57.2 +.8 +.2
 10 8.5 +.9 +.3
 23.0 +1.0 +.4
 27.0 +1.0 +.4
 11 10.1 +.4
 54.8 +.8 +.2
 12 2.6 [-3.8]
 17.5 +.5

Est. S
~~4.5~~
 56 4.3 +1.3 +.3
 0.8
 0.2
 4.8 3.8 +1.0 +.0
 50 4.3 +.7 +.1
 2.0 -0.2 +2.2 +1.2
 1.5 0.5 +1.0 +.0
 2.1
 7.7
 5.2 4.4 +.8 +.2
 5.1
 8.8
 7.8 6.7 +1.1 +.1
 0.5 0.9 +.4 +.4
 2.3 1.0 +1.3 +.3
 5.8

18.1

7.7

15.5

20.0

21.4

23.7

11.3

15.4

24.5

15.1

13.5

~~12.0~~ 16.0

23.2

20.0

14.8

July 6, 1883.

Transits. Est.

12^m 38.0 58 and 2.3

13 6.5

20.9

30.0 6.0

14 1.1 3.5

5.9 0.7

45.1

52.0

15 5.6 3.3

14.2 2.4

17 5.0

20.0

21.7

35.4 5.8

35.3 7.6

44.1 5.1

19 12.1

24.6

30.5 6.2

19.2 6.6

20 35.0

21 4.9 5.9

13.0

41.4 7.6

46.0

22 7.2

11.0 6.8

26.4

30.8

34.4 7.5

 α

13 6.3 +.2

20.5 +.4

29.4 +.6

14 44.5 +.6

51.3 +.7

15 40.6 too far north.

17 7.4 +.6

~~21.2~~ ~~-1.2~~

21.2 +.5

19 11.5 +.6

24.1 +.5

20 34.5 +.5

21 12.8 +.2

45.5 +.5

22 6.6 +.6

25.8 +.6

30.1 +.7

Est δ -4 6.0 5.2 +.8 ~~7.1~~ ^{1.0} ~~-1.3~~-2 0.7 -0.3 +.4 ~~7.3~~ ^{1.0} ~~-1.1~~.0 3.5 2.2 +.13 ~~7.6~~ ^{1.0} ~~+2.2~~.0 3.3 2.4 +.9 ~~7.2~~ ^{1.0} ~~-2.2~~2.4 1.1 +.13 ~~7.6~~ ^{1.0} ~~+2.2~~10.2 4.7 +.11 ~~7.3~~ ^{1.0} ~~-1.3~~.0 5.8 ~~3.9~~ ~~7.6~~ ^{1.0} ~~+2.2~~

-1 5.1 3.9 +.12 +.1

.0 6.2 4.8 +.14 ~~7.3~~ ^{1.0} ~~-1.3~~-1 6.6 5.1 +.15 ~~7.7~~ ^{1.0} ~~+2.2~~-1 5.9 4.4 +.15 ~~7.7~~ ^{1.0} ~~+2.2~~-4 7.6 6.2 +.14 ~~7.5~~ ^{1.0} ~~+2.2~~-1 6.8 5.3 +.15 ~~7.6~~ ^{1.0} ~~+2.2~~.0 7.5 6.0 +.15 ~~7.6~~ ^{1.0} ~~+2.2~~.0 5.1 3.6 +.15 ~~7.6~~ ^{1.0} ~~+2.2~~5.3 3.9 +.14 ~~7.6~~ ^{1.0} ~~+2.2~~

-3
-1
23.5

45.0

31.1

-2
20.5

22.2

27.4

18.3

22.4

7
18.4

34.6

29.9

28.4

25.0

27.2

35.7

31.3

14.4

19.6

20.7

13.1

27.3

23.6

26.2

16.1

14.7

19.8

12.9

16.6

24.5

40.5

37.7

33.1

July 6, 1883.

Transits. Est.

Est δ

4 ^h	29 ^m 20.5 ^s 15								
	40.6	29	39.9	+7	+1	5.0	3.3	+1.7	+3
	46.1 10.4								
	56.2 5.0								
30	32.7					0.5			
	39.3					0.0			
	52.8 0.5								
	31 2.2 0.0								
a.	36.9 4.0	31	36.3	+6	.0	4.0	2.4	+1.6	+2
	52.5 4.0								
	32 5.4	32	4.8	+6	.0	9.5	6.9	[+2.6]	+1.2
	25.8 9.5								
	30.0					8.0			
	43.4 8.0								
	48.0		47.4	+6	.0	4.7	2.9	+1.8	+3
	33 16.4 4.7								
	23.1	33	22.8	+3	-3	10.3	8.6	+1.7	+2
	51.1					9.8			
	53.5 10.3		53.1	+4	-2	2.0	0.4	+1.6	+1.8
	34 8.7 9.8								
	18.1 2.0								
	20.4	34	20.0	+4	-2	5.2	3.8	+1.4	+2
	36.0		36.7	-7	-1.3	11.0	9.6	+1.4	+3
	39.6 5.2								
B	35 15.0 11.0								
	37 2.8	37	2.0	+8	+1	5.2	3.5	+1.7	+2
	8.0		7.6	+4	-3	7.9	6.1	+1.8	+3
	21.3		20.9	+4	-3	3.3	1.8	+1.5	+1.0
	26.9 5.2 and 7.9								
	30.0		29.8	+2	-5	9.5	8.0	+1.5	+1.0

15.6

20.1

22.9

15.6

20.4

13.4

28.4

30.4

17.6

24.6

19.2

39.0

24.1

18.9

21.0

27.1

July 6, 1883.

Transits. Est		α		Est.		δ	
14 ^h 37 ^m 40. ^s 4		14 37	39.9 + .5	-2	82	6.6 + 1.6	+1.8 +1.4
42.3	3.3						
54.1	9.5 and 8.2						
38 32.7		38	32.1 + .6	-1	96	8.0 + 1.6	+1.0 +1.4
44.6					1.6		
49.8			49.1 + .7	.0	5.0	3.2 + 1.8	+1.2 +1.4
54.4	9.6						
39 4.0		39	3.4 + .6	-1	7.5	5.7 + 1.8	+1.2 +1.6
6.2	1.6				4.9		
11.5	5.0						
21.0	4.9						
30.5	7.0						
51.0			50.5 + .5	-2	34	1.7 + 1.7	+1.1 +1.5
40 5.0		40	4.3 + .7	.0	6.9	5.0 + 1.9	+1.3 +1.7
26.0	3.4						
38.4			38.0 + .4	-3	8.8	7.2 + 1.6	+1.0 +1.4
40.9	6.9		48.3			11.0	
41 1.5	8.8						
20.6					7.8		
33.4		41	32.9 + .5	-2	6.0	4.3 + 1.7	+1.1 +1.5
38.0	7.8						
49.0	6.0						
42 3.0		42	2.3 + .7	.0	2.6	1.3 + 1.3	+1.0 +1.4
5.3			4.3 + 1.0	+3	3.0	1.6 + 1.4	+1.2 +1.6
15.6			14.2 + 1.4	+7	10.6	9.0 + 1.6	+1.4 +1.8
19.8			19.3 + .5	+8	7.5	5.7 + 1.8	+1.1 +1.5
26.2					4.0		
34.3	2.6 and 3.0		33.6 + .7	.0	8.0	6.7 + 1.3	+1.1 +1.5
45.0	10.0, 6.0 and 4.0						
54.7	8.0						

16.7

21.7

21.6

21.7

26.5

14.8

35.0

35.9

23.4

17.2

15.6

31.3

29.0

29.4

25.2

18.8

23.4

July 6, 1883.

Transits. Est.		Est. δ	
17 ^h 43 ^m 32.3 ^s	14 ^h 43 ^m 31.7 ^s +.6	-1 7.2	5.4 +1.8 +1.5 ⁺¹
54.0	53.3 +.7 .0	7.4	5.2 +2.2 +1.9 ⁺⁵
58.9 7.2			
44 11.7 7.4			
45 13.9	45 13.5 +.4	-3 7.6	5.9 +1.7 +1.3 ^{+1.0}
31.3	30.9 +.4	-3 8.0	6.4 +1.6 +1.2 ^{+1.1}
37.8 7.6			
48.0		3.0	
52.0 8.0		7.0	
46 4.0		1.0	
6.7 3.0			
10.5 7.0			
16.7 1.0			
23.2	46 22.5 +.7	.0 9.2	7.4 +1.8 +1.4 ⁺¹
46.1 9.2	30.3	7.6	
55.7	55.3 +.4	-3 8.5	6.9 +1.6 +1.2 ^{+1.1}
57.4	56.8 +.6	-1 7.2	5.1 +2.1 +1.7 ^{+1.4}
47 12.1 7.2			
17.0 8.0			
19.7	47 18.6 +1.1 +.4	2.0	-0.2 +2.3 +1.8 ^{+1.4}
34.1		0.3	
54.0	53.3 +.7 .0	5.5	3.6 +1.9 +1.5 ⁺¹
56.6 2.0 2.0 0.3			
48 20.4 5.5	48 48.6 +.4	-3 9.9	7.9 +2.0 +1.6 ^{+1.2}
49.0	49 6.1 +.8 +.1	4.8	2.6 +2.2 +1.8 ^{+1.4}
6.9			
17.4 9.9			
25.5 4.8			
55.3	54.7 +.6	-1 5.1	3.1 +2.0 +1.6 ^{+1.2}
50 9.0 5.1			

26.6

17.7

23.9

20.7

18.7

18.5

12.7

22.9

21.3

14.7

36.9

22.5

26.4

28.4

18.6

13.7

July 6, 1883.

Transits. Est		α		Est.		δ	
14	$\sqrt{0.0}$	14	50 49.2 +.8 +.1	9.3	7.4 +1.9	7.4	+1
$\sqrt{1}$	12.9 9.3						
	18.5	51	17.9 +.6 -.1	5.5	3.6 +1.9	7.4	10 +1.9
	46.4		45.8 +.6 -.1	2.9	1.0 +1.9	7.4	10 +1.9
	$\sqrt{1.1}$ 5.3						
B $\sqrt{2}$	16.4 2.9						
	38.0	52	37.1 +.9 +.2	4.2	2.0 +2.2	7.4	+3
	$\sqrt{9.5}$ 4.2						
$\sqrt{3}$	3.8						
	3.8	53	3.2 +.6 -.1	6.0	4.2 +1.8	7.4	10 +1.8
	8.3			7.8			
	18.5 6.0						
	25.1 7.8			0.8			
	30.8			2.5			
	42.4 0.5						
	45.4 2.5						
$\sqrt{4}$	0.1	53	59.5 +.6 -.1	6.8	4.5 +2.3	7.4	+2.3
	14.6 6.0	54	19.8		9.8	7.4	
	34.1	30.5			9.5	7.4	+2.3
	$\sqrt{1.4}$ 2.0	33.3 +.8 +.1		2.0	-0.3 +2.3	7.4	+2.3
a. $\sqrt{5}$	26.5						
	39.0 9.2	55	36.3	9.2	10.3		
	$\sqrt{2.0}$						
	$\sqrt{4.0}$			4.0			
				10.2			
$\sqrt{6}$	4.0 4.0						
	12.7 10.2	56	17.1		9.5		
	34.1	33.4 +.7 .0		4.0	2.1 +1.9	7.4	-1
	$\sqrt{3.5}$ 4.0						
B $\sqrt{8}$	18.0	58	17.4 +.6 -.1	3.5	1.6 +1.9	7.4	-1
	28.0	27.2 +.8 +.1		11.0	9.1 +1.9	7.4	-1

22.9

32.6

30.0

21.5

14.7

16.8

17.3

14.6

14.5

17.3

12.5

12.0

15.7

19.4

23.0

21.1

July 6, 1953.

Transits. Est.		α	δ	$\delta - \alpha$	Est.	δ	$\delta - \alpha$
h	58 ^m 30 ^s	14 58 28.7	+13	+6	10.9	9.0	+1.9
	34.8	34.1	+7	.0	2.0	-0.3	+2.3
	41.0 3.0						
	49.1 11.0						
	55.2 10.9						
	59.5 2.0						
vg	46.2	59 16.1			2.6	9.9	
	48.5	45.5	+7	.0	1.8	0.6	+2.0
15	0 8.0 2.6						
	12.4 1.8						
a.	1 7.5				8.5		
	14.4	15 1 16.9	+5	-2	7.4	5.1	+2.3
	23.1 8.5						
	30.7	30.0	+7	.0	5.2	3.0	+2.2
	32.6 7.4				5.5		
	46.4				7.5		
	49.4 5.5						
	54.2 5.2						
2	1.5 7.5	2 11.7				10.8	
	28.1				2.0		
	40.5 2.0	40.8				10.4	
	49.5				6.5		
	57.0				7.6		
	59.6				0.8		
3	4.5 6.5						
	7.7 7.6						
	14.5 0.8						
	18.0				0.0		
B	33.7 0.0						
	41.2				8.0		

25.2

24.7

21.8

23.9

15.6

15.2

23.5

16.8

15.1

12.4

15.0

10.7

14.7

15.7

13.6

July 6, 1953

Transits. Est
 3^m 54.8 8.0
 4 3.0
 9.3
 15.7 5.0
 27.6
 30.0 9.9
 42.1
 57.8 10.2 α 10.3
 5 11.4 2.5

α I_{α}
 4 8.4 +.9 +.2
 27.4 +.2
 32.5 ~~32.5~~ ~~5.2~~
 32.5
 50.9 +.9 +.2

Est δ ϵ - δ
 5.0
 9.9 7.4 +2.5 +.2
 10.2 8.3 +1.9 +.1
 1.0 5.9 ~~4.9~~
 10.3 5.9
 2.5 0.8 +1.7 +.6

12.7

20.7

21.8

9.7

19.6

July 9, 1883.

1883phae.1

Transits. Est.	α	Est. δ	δ										
13 ^h	50 ^m	52.0			13 ^h	50 ^m	52.6	-6	+3	5.7	5.8	-1	+2
a	51	12.0	5.7			51	45.7	-1.2	-3	8.2	8.7	-5	-2
		44.5											
	52	7.1	8.2			52	14.5	-1.0	-1	7.6	7.8	-2	.0
		13.5											
		38.5	7.6										
	53	2.4				53	3.0	-6	+3	3.3	3.8	-5	-3
		21.7	3.3				22.4	-7	+2	5.0	5.1	-1	+1
		32.0					32.7	-7	+2	5.9	6.0	-1	+1
		47.3	5.9										
		51.1	5.0										
		56.7					57.5	-8	+1	3.1	3.6	-5	-3
	54	0.2								9.0			
		14.3	3.1										
		18.0	9.0										
		27.3				54	28.0	-7	+2	1.2	1.4	-2	.0
		37.7								1.0			
B		50.1	1.2										
		53.8					53.8	.0	+9	4.3	4.7	-4	-2
		56.5	1.0										
	55	26.0				55	26.9	-9	.0	2.6	2.8	-2	.0
		30.5	4.3										
		40.2	2.6										
	56	9.5				56	10.4	-9	.0	8.8	9.2	-4	-2
		35.3											
a		57	16.0			57	16.8	-8	+1	5.0	5.1	-1	+1
		17.7					18.8	-11	-2	2.8	3.5	-7	-5
		23.8					24.5	-7	+2	4.0	4.3	-3	-1
		27.0					28.4	-14	-5	1.5	1.6	-1	+1
		35.8	1.5 2nd 5.0										

20.0

23.6

25.0

19.3

29.4

15.3

17.6

17.8

22.8

18.8

36.7

14.2

19.8

23.8

22.5

8.8

July 9, 1883.

Transits. Est.		α		Est. δ	
15	$\sqrt{4}$ 41.5 3.0			92	
	46.3 4.0	57	47.8		-0.5
B	$\sqrt{3.9}$ 9.2				
	$\sqrt{8}$ 46.2	58	47.2 -1.0	-1	99 9.8 +.1 +.2
	$\sqrt{2.2}$	53.0 -8	+1		5.2 5.3 -.1 .0
	$\sqrt{9}$ 5.0 9.9				
	16.5 5.2				
	19.3				
	41.3				
	43.0	59	44.7 -1.7	-8	10.4 10.6 -2 -.1
	$\sqrt{5.3}$ 2.7				
14	0 4.5 10.4				
	14.9	14	0 17.9 -9	.0	10.0 7.5 -.5 -.4
	17.0	26.0 -10	-1		16 1.6 .0 +.1
	25.0 10.0				
	29.8 7.0				
	49.3 1.6				
1	$\sqrt{5.3}$				
	6.3				
	7.9				
	25.1 2.4				
	30.1 7.8				
	42.0 2.5				
2	10.5	2	4.5		
	25.8 1.0	11.4 -9	.0	10	2.7 0.6 +.4 +.3
	$\sqrt{3.0}$	53.8 -8	+1	6.2	6.2 .0 +.1
3	9.3	3	10.6 -13	-4	6.3 6.3 .0 +.1
	24.4 6.2	16.7		6.2	4.6
	31.8 6.3			6.3	
	49.2	50.0 -8	+1	4.8	4.6 +.2 +.3
4	16.2	4	17.4 -1.2	-3	7.3 7.3 .0 .0

12.4

18.8

24.3

~~36.0~~

14.0

24.5

10.1

12.8

24.3

36.7

18.8

22.2

15.3

35.8

22.5

36.0

24.0

July 9, 1883.

Transits.	Est.	α	Est.	δ
4 ^m 25.2	4.8			
40.2	7.3			
40.8		5 41.8 -1.0	-1 10.2	10.1 +1 +1
44.2		45.7 -1.5	-6 9.3	9.4 -1 -1
50.8		49.3 +1.5 +2.4		9.2
51.5		52.7 -1.2	-3 9.7	9.5 +2 +2
6 4.1 9.3				
14.0 9.7				
22.8 10.2		6 24.2 -1.4	-5 10.4	10.6 -2 -2
26.0		27.0 -1.0	-1 8.3	8.9 -6 -6
32.5		33.6 -1.1	-2 5.6	5.8 -2 -2
49.4 8.0		50.3 -9	.0 5.3	4.4 +9 +9
53.5 10.4		54.6 -1.1	-2 7.0	7.0 .0 .0
7 2.2			5.5	
4.0 5.6		7 7.8 -8 +1	10.4	10.6 -2 -2
13.1 5.3				
18.1 5.5 and 7.0				
36.2 10.4				
40.2		41.3 -1.1	-2 4.7	4.5 +2 +2
43.1		43.7 -6 +3	9.3	9.3 .0 .0
46.0		46.7 -7 +2	7.9	8.0 -1 -1
8 1.3 9.5				
9.4 7.3				
14.0 4.8				
52.0		8 52.5 +1.5	10.2	2.2 +1.2
53.1		53.1 -1.1	-2 1.0	1.2 -2 -2
56.5		53.8 -7 +2	5.5	5.5 .0 .0
9 14.9		9 1.0 [-4.5] -3.6	4.0	4.5 -5 -5
16.5 1.0		15.6 -7 +2	4.5	4.3 +2 +1
19.9 4.0				

42.0

19.9

22.5

30.7

2. 23.4

34.5

23.7

0. 24.6

15.9

2. 29.2

33.8

18.2

23.8

23.4

36.0

23.4

17.8

July 9, 1943.

Transits.	Est.	α J- α	Est. δ E- δ
4 ^b 9 ^m 29.1^a 32.8 26.6 56.5 9.3 42.5 5.0 7.9 7.0 110.4 18.0 22.5 26.5 34.3 43.5 51.0	5.5 4.5 3.8 7.0 10.4 0.0 0.8	9 57.2 -7 +2 9 57.2 10 8.5 -6 +3 23.0 -5 +4 27.0 -5 +4	38 3.8 .0 -1 3.8 4.3 10.4 0.8 0.0 0.5 -5 -6 4.7 4.4 +3 +2 4.8 7.6
11 9.0 22.1 29.3 34.0 39.2 43.0 53.4	 4.3 4.5 7.8 53.4	11 10.1 -1.1 -2 54.8 -1.1 -2 12 2.6 -1.1 -2	4.7 4.4 +3 +2 4.8 7.6 6.8 6.7 +1 .0 7.5 0.9 [+66] [+6.5]
12 11.5 12.0 14.4 16.3 39.3	7.5 6.8 1.0 10	17.5 -12 -3 13 6.3 -8 +1 20.5 -13 -4 29.4 -11 -2	1.0 1.0 .0 -1 5.3 5.2 +1 .0 0.2 -0.3 +1 .0 2.3 2.2 +1 .0
B 13 11.5 19.2 28.3 0.6 4.9 43.5 50.2	5.3 5.3 -0.2 2.3 50.2	14 44.5 -7 +2 51.3 -1.1 -2	2.5 2.4 +1 .0 1.3 1.1 +2 +1

21.5

~~26.1~~

23.9

28.5

17.3

25.0

~~25.0~~

17.1

13.7

20.7

10.5

23.0

22.8

41.4

36.6

23.4

23.5

July 9, 1883.

Transits.	Est.	α	Est.	δ
15 ^h 15 ^m 4.2	2.5			
a. 13.7	13			
39.1		15 40.6 -1.5	-6	103 10.2 +1 -1
16 6.9	10.3			
18 6.3		17 7.4 -1.1	-2	5.0 4.7 +.3 +.1
19.0				6.8
20.3		21.2 -.9	.0	3.8 3.9 -.1 -.3
34.3	5.0			
37.6	3.8			
39.7	6.8			
19 10.8		19 11.5 -.7 +.2		5.0 4.8 +.2 .0
23.2		24.1 -.9 .0		5.3 5.1 +.2 .0
28.4	5.0			
a. 54.3	5.3			
20 33.5		20 34.5 -1.0	-1	4.7 4.4 +.3 .0
21 4.6	4.7			
11.9		21 12.8 -.9	.0	6.8 6.2 +.6 +.3
29.0				10.0
37.0				7.6
44.4	5.0	45.5 -1.1	-2	5.8 5.3 +.5 +.2
52.1	10.0			
58.0	9.5			
22 5.9		22 6.6 -.7 +.2		6.2 6.0 +.2 -1
12.3	5.3			
24.9		25.8 -.9 .0		3.9 3.6 +.3 .0
29.1		30.1 -1.0	-1	4.4 3.9 +.5 +.2
34.4	7.0			
54.3				6.5
23 3.3	3.9 and 4.4			
13.0	6.5			

27.8

28.0

207

17.5

176

34.1

31.1

22.5?

23.1

21.0

279

28.5?

~~7#~~

38.4

34.2

14.7

July 9, 1883.

	Transits.	Est.	α	γ	δ	Est.	δ	ϵ	δ
18 ^h	23 ⁻	19.7				7.2			
	30.3		23	31.3	-1.0	-1	5.0	4.6	+4 +1
	35.1	7.2							
	46.7					5.0			
	49.1	5.0 prec.							
	59.7		---	24	0.7 -1.0	-1	9.9	- - 9.5	+4 +1
24	3.9	5.0 fol.							
	7.9		8.3	-4	+5	10.3	10.2	+1	-2
B	30.3	9.5							
	35.3	10.3							
	53.7					9.3			
25	5.0	9.3							
	36.3		25	37.1	-8 +1	28	2.6	+2	-2
	45.7					2.7			
	47.6		49.1	-1.3	-4	9.5	9.3	+2	-2
	54.2		55.5	-1.3	-4	4.0	3.8	+2	-2
	59.2	2.7							
26	2.8	2.8							
	13.2	4.0							
	18.9	9.5							
a	27	4.4	27	5.7	-1.3	-4	2.2	1.6	+6 +2
	27.6	2.2							
	34.3					10.0			
	51.2	10.0							
28	9.9		28	10.7	-8 +1	1.3	0.8	+5	+1
	16.6		18.8	[-2.2]	-1.3	9.5	9.1	+4	.0
	29.7	1.3							
	37.7		38.6	-9	.0	2.0	1.4	+6	+2
	43.0	9.5							
	49.3		50.3	-1.0	-1	0.5	-0.1	+6	+2

18.4

18.8

17.2

30.6
~~20.6~~

27.4

14.3

26.5

13.5

31.1

19.0

23.4

16.9

19.8

26.4

38.8

41.2

July 9, 1883.

Transits. Est.				Est.			
1883phae.p	29 ^m	10.5		14 29	11.6 - .8	+ .1	98 9.2 + .6 + .2
	<u>16.5</u>	2.0					
	<u>30.5</u>	0.5					
	39.2			39.9	- .7	+ .2	3.3 3.3 .0 - .4
	<u>48.2</u>	9.8					
	<u>56.5</u>	3.3					
32	4.0			31 36.3			8.0 2.4
	<u>23.6</u>	8.0		32 4.8 - .8	+ .1		6.9 + .11 + .6
	46.5			47.4	- .9	.0	3.2 2.9 + .3 - .2
33	21.9	3.2		33 22.8	- .9	.0	9.4 8.6 + .8 + .3
	<u>50.2</u>	9.4					
	<u>52.4</u>			53.1	- .7	+ .2	1.1 0.4 + .7 + .2
34	19.1	1.1		34 20.0	- .9	.0	4.0 3.8 + .2 - .3
	35.9			36.7	- .8	+ .1	10.2 9.6 + .6 + .1
	<u>43.2</u>	4.0					
a	35	<u>14.7</u>	10.2				
	37	1.4		37 2.0 - .6	+ .3		4.0 3.5 + .5 - .1
	6.5			7.6	- .8	+ .1	6.8 6.1 + .7 + .1
	20.0			20.9	- .9	.0	2.4 1.8 + .6 .0
	29.0	6.0		29.8	- .8	+ .1	8.0 8.0 .0 - .6
	<u>35.4</u>	4.0					
	39.0	2.4		39.9	- .9	.0	7.0 6.6 + .4 - .2
	<u>56.6</u>	8.0					
35	<u>1.0</u>	7.0					
	20.0						
	31.1			38 32.1 - .10		- .1	3.8 8.3 8.0 + .3 - .3
	<u>37.7</u>	3.8					
	43.0						
	45.1			49.1	- .10	- .1	0.5 3.7 3.2 + .5 - .1
	<u>53.9</u>	8.3					

37.4

17.3

19.6

35.4

28.3

26.7

24.1

42.8

34.0

22.2

19.0

27.6

22.0

17.7

22.8

21.4

27.9

36.4

July 9, 1883.

Transits. Est.		α		Est δ	
39 ^m	2.6	14	39 3.4 - .8 +.1	6.5	5.7 +.8 +.2
4.4	0.5			3.8	
16.0	4.0				
24.5	3.8				
28.8	6.0				
33.6				5.0	
46.7	5.0				
49.2		50.5 - 1.3	-4	2.5	1.7 +.8 +.2
40 3.4		40 4.3 - .9	.0	6.0	5.0 +.10 +.3
22.3	2.5				
36.6	5.0	38.0 - 1.4	-5	7.5	7.2 +.3 - .4
37.6		38.0 48.3 Not the same.		10.3 had the pen	7.2 11.0 - .7 - 1.4
54.8	10.3				
58.2	7.5				
41 19.8				7.5	
31.8		41 32.9 - 1.1	-2	5.1	4.3 +.8 +.1
38.5	7.5				
45.4	5.1				
42 1.4		42 2.3 - .9	.0	2.0	1.3 +.7 0
3.8		4.3 - .5 +.4		2.4	1.6 +.8 +.1
13.3		14.2 - .9 .0		9.8	9.0 +.8 +.1
18.1		19.3 - 1.2 - .3		6.5	5.7 +.8 +.1
25.0				2.8	
32.3	2.0 ^{2nd} 2.4	33.6 - 1.3 - .4		7.5	6.7 +.8 +.1
42.1	2.8				
46.0	9.0 ^{2nd} 6.0				
56.6	7.5				
43 31.0		43 31.7 - .7 +.2		6.2	5.4 +.8 +.1
36.4				9.3	
48.6	9.3				

26.2

20.1

13.1

33.1

33.2

21.6

17.2

18.7

13.6

30.9

28.5

32.7

27.9

17.1

24.3

25.9

12.2

July 9, 1883.

Transits.	Est.	α	Est.	δ
43 ^m 52.4		14 43 53.3 - .9	61	52 + .9 + .2
56.9 6.2				
44 9.1 6.1				
45 11.6		45 13.5 - .9	6.8	5.9 + .9 + .1
30.0		30.9 - .9	7.5	6.4 + .11 + .3
36.4 6.8				
46.4			2.5	
50.8 7.5				
46 3.1			0.0	
10.4 2.5				
14.8			8.0	
21.5		46 22.5 - .7	8.0 7.4	7.4 + .6 - .2
29.4		30.3 - .9	10.4	9.6 + .8 .0
34.9 8.0 prec.				
45.7 8.0 fol.				
55.0 10.4		55.3 - .3	7.8	6.9 + .9 + .1
56.8		56.8 .0	6.0	5.1 + .9 + .1
47 8.7 6.0 ^{and} 7.8				
15.0		47 18.6 - .6	1.8	- 0.2 + 1.0 + .2
40.0 0.8				
52.2		53.3 - .11	4.5	3.6 + .9 + .1
48 18.8 4.5			4.5	

Clouds interrupted and gone ended.

16.7

24.8

20.8

24.0

20.1

23.9

25.6

13.7

11.9

22.0

26.6

July 10, 1953.

Transits. Est		α				Est S					
14	40 ^m 4.3	14	40	4.3	0	+1	50	50	0	+1	
	37.8 50			38.0	-2		-1	7.3	7.2	+1	+2
	48.4			48.3	+1	+2		11.0	11.0	0	+1
	54.6 7.3										
41	21.0 110										
	32.8	41	32.9	-1	.0		4.3	4.3	0	+1	
	44.7 4.3										
42	2.3	42	2.3	0	+1		1.8	1.3	+5	+6	
	4.3		4.3	0	+1		2.2	1.6	+6	+7	
	14.4		14.2	+2	+3		9.0	9.0	.0	+1	
	19.2		19.3	-1	.0		5.5	5.7	-2	-1	
	22.2 1.8										
	25.2						2.3				
	27.9 2.2										
	33.5		33.6	-1	.0		8.8	6.7	+1	+2	
	38.5 2.3										
	43.7 5.5										
	48.3 9.0										
	55.9 6.8										
43	31.2	43	31.7	-5	-4	5.3	5.4	-1	.0		
	53.2		53.3	-1	.0	5.2	5.2	0	+1		
	56.3 5.3										
44	9.7 5.2										
45	13.5	45	13.5	0	+1	6.2	5.9	+3	+3		
	30.7		30.9	-2	-1	6.8	6.4	+4	+4		
	34.7 6.2										
	44.1						2.0				
	48.9 6.8										
46	8.0 2.0										
	22.8	46	22.5	+3	+4	7.5	7.4	+1	+1		

33.5

16.8

32.6

11.9

19.9

23.6

33.9

24.5

13.3

22.4

25.1

16.5

21.2

18.2

20.9

20.3

July 10, 1883.

Transits. Est.		α		Est		δ	
17	46 ^m 30.0 ^s	14	46 30.3 -3	-2	9.7	9.6 +1	+1
	43.1 7.5						
	50.2 9.7						
	55.0		55.3 -3	-2	7.4	6.9 +.5	+5
	56.3		56.8 -5	-4	5.1	5.1 0	0
47	8.5 5.1						
	16.0 7.4						
	18.2	47	18.6 -4	-3	0.0	-0.2 -0.2	-2
	26.0				9.5		
	37.5 9.5						
	49.2 0.0						
	53.2		53.3 -1	0	3.5	3.6 -1	-1
B	48 20.4 3.5						
	48.3	48	48.6 -3	-2	7.9	7.9 0	0
49	6.2	49	6.1 +1 +2		2.7	2.6 +1	0
	17.4 7.9						
	23.3 2.7						
	54.0		54.7 -7	-6	3.0	3.1 -1	-2
50	2.9 3.0						
	38.2				5.1		
	49.0 5.1	50	49.2 -2	-1	7.6	7.4 +2	+1
51	8.7 7.6						
	18.0	51	17.9 +1 +2		3.7	3.6 +1	0
	45.8		45.8 0 +1		1.7	1.0 +7	+6
	44.5 3.7						
a	52 13.8 1.7						
	37.2	52	37.1 +1 +2		2.3	2.0 +3	+2
	58.4 2.3						
53	3.2	53 3.2	0 +1		4.0	4.2 -2	-4
	7.0				6.1		

20.2

21.0

12.2

31.0

11.5

27.6

29.1

17.1

8.9

10.8

19.7

30.5

28.0

21.2

8.7

12.0

July 10, 1883.

Transits.	Est.	α	Est	δ
17 ^h v3 ^m 11.9	40			
19.0	61			
59.3		14 53 59.5 -2	-1 4.9	4.5 +4 +2
v4 9.6		54 9.8 -2	-1 10.0	9.8 +2 .0
16.0	49			
30.3		30.5 -2	-1 9.9	9.5 +4 +2
33.4	10.0	33.3 +1 +2	0.0	-0.3 -3 -5
v2.1	0.0			
v6.6	9.9			
B v5 36.6		55 36.3 +3 +4	10.5	10.3 +2 .0
51.1			2.5	
v6 3.5	2.5			
10.5	10.5			
14.0		56 17.1 -1	.0 9.9	9.5 +4 +2
33.2		33.4 -2	-1 2.5	2.1 +4 +2
40.4	9.9			
44.9	2.5			
a. v7 54.4			9.9	
v8 10.4	9.9			
14.4		58 17.4 .0 +1	2.2	1.6 +6 +3
24.0		27.2 -2	-1 9.8	9.1 +7 +4
28.1		28.7 -6	-5 9.7	9.0 +7 +4
34.1		34.1 .0 +1	0.0	-0.3 -3 -6
34.3	9.8			
40.0	2.2			
v3.5	0.0 ^{2nd} 9.7			
B v9 16.1		59 16.1 .0 +1	10.2	9.9 +3 .0
39.9	10.2			
45.2		45.5 -3	-2 1.0	0.6 +4 +1
44.8			-0.1	

16.7

23.8

26.5

18.7

33.9

12.4

23.4

14.7

16.3

22.6

10.3

25.4

19.4

23.8

15.7

19.6

July 10, 1883.

Transits.		Est.			Est	S	
h	0 ^m	0.9	1.0				
		7.4	-0.1				
1	16.6			15 1 16.9 -3	-2 5.3	5.1 +2	-1
	30.1			30.0 +1	+2 3.0	3.0 .0	-3
	31.5	5.3			3.8		
	41.9	3.8					
	49.0	3.0					
a	2	12.0		2 11.7 +3	+4 11.3	10.8 +.5	+1
	36.6	11.3					
	40.8			40.8 .0	+1 10.7	10.4 +.3	-1
	53.4	10.7					
4	8.4			4 8.4 .0	+1 7.8	7.4 +.4	.0
	27.0			27.4 -4	-3 8.5	8.3 +.2	-2
	28.6				-0.1		
	32.4	7.8		32.5 -1	.0 6.5	5.9 +.6	+2
	40.5				9.0		
	44.0	60 ² 28.0					
	46.8				10.0		
	51.0			50.9 +1	+2 1.0	0.8 +.2	-2
	53.7	5.8					
5	3.7	10.0					
	10.0			5 9.8 +2	+3 10.0	9.5 +.5	+1
	16.8			12.3	5.8	6.9 -1.1	(1.5)
	19.0			17.3 +1.7	+1.8 0.0	5.3 [v.3]	
	35.1	5.8					
	40.6	0.0					
	43.6	10.0					
a	6	16.3		6 16.3 0	+1 7.6	6.8 +.8	+3
	42.7	7.6					
7	12.4			7 12.5 -1	.0 4.4	3.6 +.4	+3
	49.8			49.9 -1	.0 5.7	5.0 +.7	+2

14.9

18.9

10.4

24.6

12.6

24.0

17.0

11.6

16.9

33.6

18.3

21.6

26.4

41.0

13.1

July 10, 1883.

Transits. Est.		α		Est δ	
5 ^h	4 ^m 3.4 4.4				
	8 2.9 5.7				
	14.9			80	
	32.2 8.0				
	41.2	8 41.4 -2	-1	4.3	3.5 +.8 +.3
	53.8			-0.3	
9	30.9 4.3	9 30.9 0	.0	4.5	3.8 +.7 +.2
	46.0 4.5			48	
10	3.7				
	13.5 4.8				
	23.6	10 24.1 -5	-5	44 nd 80	3.5 +.9 +.3
	39.4 8.0				
	44.5 4.4				
	46.8	47.2 -4	-4	0.8	0.1 +.7 +.1
B 11	7.0 0.8	11 42.3	7.8	6.0	6.2 -.2 -.8
	41.4	11 42.3 +.1	+1	6.8	6.2 +.6 .0
	42.4				
	51.5 6.0				
	54.7 6.8				
12	3.8	12 3.9 -.1	-.1	4.5	3.7 +.8 +.2
	22.0 4.5				
	31.2	31.4 -2	-2	5.7	5.0 +.7 +.1
	34.0	33.6 +.4	+4	8.3	7.8 +.5 -1
	55.0 5.7				
13	0.8 8.3	13 1.3 -5	-5	1.0	0.5 +.5 -1
	4.5			8.7	
	13.1	13.2 -.1	-.1	3.0	2.9 +.1 -5
	18.2 8.0	18.2 .0	.0	4.5	3.9 +.6 .0
	24.0 1.0 nd 3.0				
	39.8 4.5				

17.3

49.7

15.1

9.8

20.9^{and} 15.8

20.2

10.1

12.3

18.2

23.8

26.8

23.2

13.7

10.9

21.6

July 10, 1883.

Transits. Est.		α		Est. δ	
13 ^m	49.8	15	13 49.6 +.2	5.2	4.4 +.8 +.2
14	7.9	14	8.1 -.2	0.3	-0.0 +.3 -.4
	8.6 5.0		8.9 -.3	10.5	10.1 +.4 -.3
	19.1		19.3 -.2	8.0	6.8 +.2 +.5
	29.0 0.0				
	33.8 10.5				
	39.1 8.0				
a.	48.5		48.4 +.1	9.7	8.8 +.9 +.2
15	3.5 9.7	15	53.5 -.1	8.8	8.0 +.8 +.1
	53.4				
16	37.3 8.8				
17	0.5	17	0.5 .0	0.7	-0.1 +.8 +.1
	14.1		13.9 +.2	3.2	2.6 +.6 -.1
	18.4 0.7				
	25.4 3.2				
	53.9		53.8 +.1	10.4	9.7 +.7 .0
18	16.5 10.4				
	25.2			0.0	
	42.0	18	42.1 -.1	10.0	9.1 +.9 +.1
	45.9 0.0				
	58.4		57.7 +.7	10.3	9.7 +.6 -.2
19	0.1	18	59.9 +.2	9.3	8.5 +.8 .0
	6.1 10.0				
	12.7	19	12.6 +.1	9.0	8.0 +.10 +.2
	16.4 9.3 ^{2nd} 10.3				
	44.1 9.0				
20	7.5	20	7.3 +.2	5.2	4.3 +.9 +.1
	8.7		8.7 .0	6.3	5.5 +.8 .0
	26.8 6.3 ^{2nd} 5.2				
	38.0		37.9 +.1	9.8	8.6 +.2 +.4

18.8

21.1

25.2

20.0

15.0

43.9

17.9

11.3

22.6

20.7

24.1

18.0

16.3

31.4

19.3

18.1

16.4

July 10, 1883.

Transits. Est.

Est. S

18 20^m 54.4 9.8

21 23.7

27.0

27.5

32.6 9.049.0 9.556.5 5.8

22 12.3

15.8

29.5 5.631.5 5.3

42.4

a 23 4.0 6.6

25.5

44.1

54.4 7.057.1 9.0

24 4.6

20.1

28.1 0.840.2 7.8

47.5

48.4

25 3.6 9.013.4 5.0

34.7

38.0

47.1 6.9

48.7

56.8 7.4

21 26.7 +.3 +.3

33.5

22 12.4 -.1 -.1

15.7 +.1 +.1

42.4 .0 .0

23 25.5 .0 .0

44.6 -.5 -.5

24 4.6 +.2 +.2

20.0 +.1 +.1

48.1 -.6 -.6

~~48.1~~

25 37.8 +.2 +.2

47.4 -.3 -.3

48.7 -.2 -.2

9.0

5.8 +5.0 +.8 -.1

9.5

~~50.10.1~~

5.6 4.8 +.8 -.1

5.3 ~~4.4~~ ~~10.4~~ ~~[+2.2]~~ +.9 .06.6 ~~4.4~~ ~~[+2.2]~~ +.1

7.0 5.9 +.11 +.2

9.0 8.1 +.9 .0

0.8 -0.0 +.8 -.1

7.8 6.8 +.10 +.1

5.0 4.0 +.10 +.1

9.0 ~~4.0~~

6.9

7.4 6.3 +.11 +.2

2.4 1.5 +.9 .0

7.3 5.8 +.15 +.6

8.9
29.5
21.5

17.2
15.7

21.6

29.2
13.0

23.3
20.1

25.9
15.2

12.4
18.8
12.3
15.9

July 10, 1883.

Transits.	Est.				Est.	δ
25 ^m 59.4	24					
26 4.6	73					
19.3		26 18.9	+4	+4	4.2	3.0 +1.2 +2
36.6	42					
44.4		48.5	-1	-1	2.6	1.7 +.9 -1
55.1		55.0	+1	+1	3.5	2.4 +1.1 +1
27 5.1	26					
9.5	35					
29.4		27 29.2	+2	+2	8.3	7.5 +.8 -2
53.4	83					
56.4		56.2	+2	+2	18	0.4 +1.4 +4
28 8.0		28 7.9	+1	+1	5.1	4.0 +1.1 +1
16.2	18					
21.1	51					
32.0		31.7	+3	+3	2.2	0.9 +1.3 +3
54.2	22					
29 17.0					9.0	
27.3	9.0					
34.0		29 33.7	+3	+3	8.9	10.3 -2.4
47.6	8.9					
30 4.6		30 4.6	0	0	8.0	7.2 +.8 -3
30.8	(8.0)				(4.0)	
31.5	^	31.6	-1	-1	(2.8)	2.8 +1.2 +1
56.0	^	56.1	-1	-1	(4.0)	1.9 +.9 +2
31 10.5		31 10.4	+1	+1	2.4	0.9 +1.5 +4
14.1	2.8					
26.2	2.4					
42.6		42.4	+2	+2	7.8	6.5 +1.3 +2
46.6		46.6	0	0	2.0	0.5 +1.5 +4
49.3					5.1	

17.3

16.7

14.4

24.0

19.8

13.1

22.2

10.3

13.6

~~26.2~~ 26.9~~24.6~~ 24.5

18.1

15.7

14.9

15.1

15.8

July 10, 1883.

Transits. Est.		α		Est. δ	
31	<u>57.5</u> 7.8				
32	<u>1.7</u> 2.0	32	2.5		9.9
	<u>5.1</u> 5.1			-0.2	
	<u>21.0</u> -0.2				
	29.1	29.0	+1	+1	2.3 0.8 +1.5 +.4
	43.0				2.8
	<u>50.2</u> 2.3				
	<u>56.2</u> 2.8				
33	<u>53.4</u>	33	42.7		9.8
		53.5	-1	-2	5.2 4.0 +1.2 +.1
34	<u>7.4</u> 5.2				
	34.2				3.7
	<u>43.4</u> 3.7				
	<u>51.4</u>				7.5
	52.9	34	52.8 +1	1.0	5.5 4.8 +.7 -.5
35	<u>1.5</u> 7.5				
	27.4	35	27.4 .0	-1	3.3 2.5 +.8 -.4
	<u>37.0</u> 5.5				
	<u>45.6</u> 3.3				
36	<u>2.9</u>	36	3.5 -6	-7	7.9 6.8 +1.1 .1
	<u>14.8</u> 7.9				
	22.4	22.3	+1	.0	8.8 7.5 +1.3 +.1
	<u>46.2</u> 8.8				
	<u>54.0</u>				10.2
37	<u>2.4</u>				7.5
	<u>12.7</u> 10.2				
	<u>16.9</u> 7.5				
	27.6				6.8
	40.2				6.9
	<u>42.8</u> 6.8				
	<u>52.8</u> 6.9				

15.9

21.1

13.2

14.0

9.2

10.1

44.1

18.2

11.9

23.8

15.7

14.5

15.2

13.2

July 10, 1883.

Transits. Est.

37^m 53.4 6.9~~54.4~~

38 6.3

34.5 6.2

55.0

39 6.2 4.1

~~77.8~~~~51.8~~ 7.8~~54.4~~

40 11.7

21.5 7.8

36.4

49.9

50.7

~~56.0~~

56.5 10.0

41 6.2 9.0^{2nd} 10.0

24.3 0.3

48.7

52.5

42 9.5 10.0^{2nd} 9.7

14.4

22.5

27.5

34.9 1.5

38.6 10.0

43.3

47.4 9.9

51.4

43 0.7 4.3

38 8.1 +.2

+.1

35.7

55.2 -.2

55.2

- not at 40 14.4 [2.7]

36.2 +.2

+.1

48.5

50.5 +.2

+.1

52.7

41 48.6 +.1

.0

52.7 +.1

.0

42 14.2 +.2

+.1

51.3 +.1

.0

Est S

6.2 4.8 +1.4 +.1

4.1 9.9 2.8 +1.3 .0

2.8

~~7.8~~

7.5

7.8 10.2 [2.4] [2.7]

7.5 6.0 +1.5 +.2

10.0

9.0 7.6 +1.4 +.1

~~9.0~~

0.3

10.0 8.4 +1.6 +.2

9.7 8.3 +1.4 .0

1.5 -0.1 +1.6 +.2

10.0

9.9

4.3

8.5 7.4 +1.1 -.3

26.2

13.2

9.8

6.6

15.5

27.8

20.8

16.7

20.5

16.1

19.9

17.4

24.1

F64

July 10, 1883.

Transits. Est.		α				Est. δ			
h	43 ^m 11.0	15	43	10.9	+1	.0	7.5	5.8	+1.7 +3
	<u>15.5</u> 8.5								
a	<u>25.5</u> 7.5								
44	11.5	44	11.0	+5	+4	7.0	5.6	+1.4	-1
	20.5		20.7	-2		-3	7.1	5.7	+1.4 -1
	23.4						1.0		
	<u>26.1</u> 7.0								
	<u>39.2</u> 7.1								
	<u>45.2</u> 1.0								
46	41.4	46	41.1	+3	+2	6.3	4.4	+1.9	+4
47	<u>12.0</u> 6.3								
	34.4	47	34.2	+2	+1	7.4	5.5	+1.9	+4
	35.0		44.7			2.3	10.3		
	53.1 2.3					5.0			
	55.1 7.4		57.9	+2	+1	3.0	1.3	+1.7	+2
48	<u>6.7</u> 5.0								
	<u>18.3</u> 3.0								
	30.2	48	30.0	+2	+1	5.6	4.0	+1.6	.0
	56.4		57.1	-7		-8	10.5	9.0	+1.5 -1
49	<u>1.5</u> 5.6								
	8.1	49	7.8	+3	+2	7.5			
	10.1		9.7	+4	+3	8.5			
	11.1		11.5	-4		-5	5.3		
	12.0					6.0			
	<u>27.8</u> 7.5								
	<u>29.9</u> 10.0 and 5.3								
	<u>39.4</u> 6.0 and 8.0								
B	50 9.0	50	9.2	-2		-3	4.2		
	37.1 4.2						0.7		
	<u>56.4</u> 0.7								

17.8

14.6

18.7

24.8

30.6

23.7

18.1

13.6

20.2

31.6

19.7

29.3

18.8

27.4

28.1

19.3

July 10, 1883.

Transits.	Est.					Est.	δ		
$\sqrt{1}$ 16.4		15 51 12.8				8.3	10.2		
22.9		16.2 +.2	+1			10.5			
<u>33.0</u>	8.3	23.3 -.4			-5				
$\sqrt{2.6}$		52.4 +.2	+1			9.9	8.0	+1.9	+2
$\sqrt{3.5}$		53.8 -.3			-4	9.8	5.0	+4.8	+3.1
$\sqrt{2}$ 0.2	10.5	57.5				9.9	5.9	-1	-10
<u>14.2</u>	9.8								
<u>21.6</u>	9.9								
35.7		52 35.6 +.1	.0			5.8	4.0	+1.8	+1
$\sqrt{3}$ 0.5	5.8								
$\sqrt{0}$		53 4.9 +.1	.0			6.5	4.6	+1.9	+2
22.4						1.3			
<u>28.0</u>	6.5					8.5			
34.0									
<u>40.9</u>	1.3								
<u>51.4</u>	8.5								
$\sqrt{4}$ 12.9		54 12.7 +.2	+1			7.8	6.0	+1.8	+1
20.4		20.2 +.2	+1			7.8	5.9	+1.9	+2
22.5		22.4 +.1	.0			3.0	1.7	+1.3	-4
<u>32.6</u>	7.8 free.								
$\sqrt{3.0}$	7.8 fol. and 30					4.5			
$\sqrt{5}$ 2.9		55 2.5 +.4	+3			7.0	5.0	+2.0	+2
<u>10.2</u>	4.5								
20.6		20.5 +.1	.0			7.1	5.0	+2.1	+3
<u>32.0</u>	7.0								
<u>40.5</u>	7.1								
$\sqrt{6}$ 34.5		45.0				11.0	9.6		
44.5		56 33.9 +.6	+5			1.8	9.3	+1.7	-1
<u>54.5</u>	11.0								
$\sqrt{4}$ 9.3	1.8					0.3			

156

37.3

29.0

20.7

24.8

23.0

18.5

17.4

19.7

32.6

30.5

17.2

29.1

19.9

20.0

20.8

29.6

July 10, 1883.

Transits. Est.		α		Est S	
a.	γ 38.9 0.3				
	$\sqrt{6.1}$			9.0	
	$\sqrt{8}$ 13.1 9.0				
	44.0	15	58 43.8 +2 +1	10.3	8.3 +2.0 +1
	$\sqrt{9}$ 12.0 10.3			7.0	
	26.2 7.0				
	36.1	59	35.9 +2 +1	6.8	4.1 +2.9 +1.0
	$\sqrt{8.5}$ 6.8				
16	0 18.0	16	0 17.5 +5 +3	2.2	0.3 +1.9 +1.0
	19.0			8.5	
	20.3			1.5	
	34.5 1.5 and 8.5				
	45.8 2.2				
	$\sqrt{0.5}$	50.5	.0 -2	9.0 and 10.3	6.8 +2.2 +3
1	10.9 10.3				
	18.1 9.0				
	24.0	1	23.8 +2 .0	10.1 and 7.5	8.0 +2.1 +2
	27.1		26.2 +9 +7	2.5	0.2 +2.3 +4
	39.5 7.5				
	$\sqrt{3.0}$ 2.5				
2	3.4			9.5	
a	6.9 10.1				
	20.2 9.5				
	30.4				
	41.1	2	41.3 -2 -4	2.7	
	57.8 2.5			10.8	8.9 +1.9 -1
3	10.5 10.8			10.2	
	19.8	3	19.6 +2 .0	30.2 and 5.0	0.7 +2.3 +3
	24.7		25.0 -3 -5	6.5	4.2 +2.3 +3
	32.0 10.2 and 5.0				

17.0

28.0

14.2

22.4

27.8

15.5

14.2

27.6^{and} 20.442.9^{and} 15.5

25.9

16.8

21.4

29.4

21.5

27.7^{and} 12.2

22.8

July 10, 1943.

Transits. Est.

B 3^m 47.5 3.0 and 6.0

4 24.6 7.5

30.0

35.0

45.5 5.2

52.4

54.4 7.058.6 7.4

✓ 12.5 3.4

45.2 8.5 α

16 3 47.3 +.2 .0

4 24.3 +.3 +.1

29.8 +.2 .0

34.7 +.3 +.1

5 12.1 +.4 +.2Est. δ

7.5 5.3 +2.2 +.2

5.2 3.1 +2.1 +.1

7.0 4.4 +2.6 +.6

7.4 4.9 +2.5 +.5

3.4

8.5 6.7 +1.8 -.2

37.1

20.9

24.4

23.6

20.1

32.7

July 11, 1883.

Transits	Oct.	α		δ					
h	1 ^m	16.5	15	1	16.9 -1 +3	4.3	5.1	-.8	+1
	<u>25.0</u>	43							
	30.0			30.0	.0 +4	2.2	3.0	-.8	+1
	<u>42.7</u>	22							
	50.5					11.0			
2	11.2		2	11.7	-.5 -1	10.0	10.8	-.8	0
	<u>14.9</u>	11.0							
	<u>32.0</u>	10.0							
	40.5			40.8	-.3 +1	9.8	10.4	-.6	+2
a.	<u>47.5</u>	9.8							
4	7.9		4	8.4	-.5 -1	6.8	7.4	-.6	+2
	27.2	6.8		27.4	-.2 +2	7.6	8.3	-.7	+1
	32.0			32.5	-.5 -1	5.0	5.9	-.9	-1
	39.6	7.6				7.8			
	46.5	5.0				8.3			
	50.5			50.9	-.4 .0	0.0	0.8	-.8	.0
	<u>54.5</u>	6.0							
	<u>59.3</u>	8.0							
v	<u>4.5</u>	0.0							
	9.5		5	9.8	-.3 +1	8.3	9.5	-.2	-4
	16.5			12.3			6.9		
				17.3	-.5 -1	4.5	5.3	-.8	.0
	<u>31.3</u>	4.5							
	39.5	8.3							
B	15.5		6	16.3	-.5 -1	6.2	6.8	-.6	+1
	<u>42.9</u>	6.2							
7	12.1		7	12.5	-.4 .0	2.9	3.6	-.7	.0
	49.2			49.9	-.7 -.3	4.2	5.0	-.8	-1
	<u>53.5</u>	2.9							
8	<u>1.5</u>	4.2							
	<u>44.0</u>					7.0			

8.2

12.7

24.4

20.8

7.0

19.3

13.4

14.5

14.9

12.8

14.3

30.0

14.5

27.1

41.4

12.3

July 11, 1883.

Transits. Est.		α		Est δ	
h	m 14.4			7.0	
	31.5				
	41.0	15	8 41.4 -4		
9	31.9		9 30.9 +1.0		
	44.0				
10	22.7	10	24.1 -1.4		
	30.6				
	37.4				
	46.5				
11	41.8		47.2 -7		
	53.9	11	42.3 -5		
	5.7				
12	3.0	12	3.9 -9		
	18.8				
	31.0		31.4 -4		
	33.1		33.6 -5		
	49.0				
13	0.2	13	1.3 -11		
	3.8				
	18.0		13.2		
	22.1		18.2 -2		
	38.4				
	49.4		49.6 +1		
14	7.0	14	8.1 -11		
	8.5		8.9 -4		
	18.4		19.3 -9		
	31.5				
	37.6				
	48.0		48.4 -4		
15	6.9				
	8.0				
	2.0				
	70.0				
	80				
	100				
	100				
	100				

17.1

—

12.1

13.9 ^{2nd} 14.7

—

12.1

15.8

18.0

27.1

—

18.3

20.4

18.8

—

23.0

19.2

20.0

14.5

July 11, 1883.

Transits. Est.

x

Est. 8

A	15	22.5	10.0						
		53.2							
	16	37.5	7.6						
		59.9							
	17	13.7							
		18.4							
		22.6	2.3						
		34.0	10.2						
		53.6							
	18	15.1	8.5						
B		41.6							
		54.5							
		59.5							
	19	5.2	8.3						
		12.4							
		15.9	7.8 and 9.5						
		44.5	7.7						
	20	7.2							
		8.4							
		26.8	3.8 and 5.1						
		37.4							
		52.1	8.0						
	21	23.2							
		26.0							
		27.3							
		32.7	6.0						
		41.6	7.7						
		53.9	4.8						
		54.5	10.2						
	22	11.9							
	15	53.5	-3	+1		7.6	8.0	-4	+1
	17	0.5	-6		-2	-0.3	-0.1	-2	+3
		13.9	-2	+2		2.3	2.6	-3	+2
						10.2			
		53.8	-2	+2		8.5	9.7	-1.3	-7
	18	42.1	-5		-1	8.3	9.1	-8	-4
		57.7	-2	+2		9.5	9.7	-2	+2
		59.9	-4	.0		7.8	8.5	-7	-3
	19	12.6	-2	+2		7.7	8.0	-3	+1
	20	7.3	-1	+2		3.8	4.3	-5	-1
		8.7	-3	.0		5.1	5.5	-4	.0
		37.9	-5		-2	8.0	8.6	-6	-2
	21	26.7	-7		-4	7.7	4.8	5.0	-2
						8.0			
		33.5	-8		-5	10.2	10.4	-2	+2
	22	12.4	-5		-2	4.7	4.8	-1	+2

44.3

—

8.9

15.6

21.5

23.6

18.4

16.4

32.1

19.6

18.4

14.7

18.4

27.9

25.1

15.5

July 11, 1883.

Transits.	Est.	α	Est.	S.
18 ^h 22 ^m 15.1		15 22 15.7 16	-3 4.2	4.4 ^{4.4} 10.4 ⁻² 6.2 ⁺¹
27.4 4.7				
31.4 4.2				
42.2		42.4 - 2 +.1	5.0	7.4 7.1 ⁺⁹ 1.8
23 2.4 5.0				
25.3		23 25.5 - 2 +.1	5.6	5.9 - .3 .0
44.1		44.6 - 5 - .2	8.0	8.1 - .1 +.2
45.7 5.6				
55.9 8.0				
24 4.4		24 4.6 - 2 +.1	-0.1	10.0
19.8		20.0 - 2 +.1	6.8	6.8 0 +.3
23.8 - 0.1				
36.9 6.8				
47.8		48.1 - 3 .0	3.4 ² 7.6	4.0 - .6 - .3
59.5 7.6				
25 8.8 3.4				
34.8			5.0	
37.2		25 37.8 - 6 - .3	6.0	6.3 - .3 .0
47.1 5.0		47.4 - 3 .0	1.0	1.5 - .5 - .2
48.1		48.9 - 8 - .5	5.5	5.8 - .3 .0
55.7 6.0 ² and 10				
26 2.5 5.5				
19.0		26 18.9 + 1 +.4	2.8	3.0 - .2 .0
38.0 2.8				
48.3		48.5 - 2 +.1	1.8	1.7 +.1 +.3
27 4.7 1.8		55.0		2.4
28.8		27 29.2 - 4 - .1	7.4	7.5 - .1 +.1
51.6 7.4				
55.8		56.0 - 4 - .1	0.1	0.4 - .3 .0
28 7.5		28 7.9 - 4 - .1	3.4	4.0 - .6 - .4

16.3

20.2

23.4

11.8

19.4

17.1

21.0 and 11.7

12.3

18.5

8.6

14.4

19.0

16.4

22.8

15.3

11.6

July 11, 1883.

Transits.	Est.					Oct.	S.		
h 28 ^m 11.1	0.1								
19.1	3.4								
31.5		28	31.7	-2	+1	0.7	0.9	-2	0
48.3	0.7								
29 33.1		29	33.7	-6	-3	10.2 ^{2nd} 7.8	10.3	-1	+1
44.7	7.8								
50.3	10.2								
30 4.0		30	4.6	-6	-3	10.2	7.2	[+3.0]	
24.0	7.2								
31.4			31.6	-2	+1	2.5	2.8	-3	-2
56.0			56.1	-1	+2	2.3	1.9	+4	+5
54.6	2.5								
31 10.2	2.3	31	10.4	-2	+1	1.0	0.9	+1	+2
23.1	1.0								
42.4			42.4	0	+3	6.6	6.5	+1	+2
46.6			46.6	0	+3	0.3	0.5	-2	-1
49.9						3.8			
56.8	3.8								
32 2.1	6.0 ^{2nd} 1.0	32	2.5	-4	-1	10.0	9.9	+1	+2
28.9			29.0	-1	+2	0.8	0.8	0	+1
35.4	10.0								
43.0						1.7			
44.4	0.8								
53.4	1.7								
33 42.2		33	42.7	-5	-2	9.9	9.8	+1	+1
53.1			53.5	-4	-1	4.1	4.0	+1	+1
34 4.4	4.1 ^{2nd} 9.9								
52.7		34	52.8	-1	+2	4.5	4.5	0	0
35 27.2		35	27.4	-2	+1	2.5	2.5	0	0
37.7	4.5								

16.8

17.3 and 11.6

26.2

14.2

13.9

19.7

15.5

6.9

33.3

18.9

10.4

22.2

11.3

45.0

17.2

July 11, 1883.

Transits. Oct.

36 3.2

14.3 7.0

22.2

44.4 7.7

56.6

37 12.9 8.8

27.6

39.9 5.5

54.1 5.8

B 38 8.0

35.3

38.7 5.0

55.1

39 0.8 10.011.0 2.7

40 14.0

31.8 10.2

36.0

50.4

55.1 6.0a. 41 5.4 7.7

46.0

52.3

42 8.4 8.1^{2nd} 8.4

14.2

27.4

32.5 0.142.1 8.3

51.1

36 3.5 -3 .0

22.3 -1 +.2

38 8.1 -1 +.2

35.7 -4 -.1

55.2 -1 +.2

40 14.4 -4 -.2

36.2 -2 .0

50.5 -1 +.1

41 48.6 -6 -.4

52.7 -4 -.2

42 14.2 ~~0~~ ~~7~~ +.2

51.3 -2 .0

Oct 1

7.0 6.8 +.2 +.2

7.7 7.5 +.2 +.2

8.8

5.5

5.8

5.0 4.8 +.2 +.1

10.1 9.9 +.2 +.1

2.7 2.8 -.1 -.2

10.2 10.2 .0 -.1

6.0 6.0 .0 -.1

7.7 7.6 +.1 .0

8.4 8.4 .0 -.2

8.1 8.3 -.2 -.4

0.1 ~~7.9~~ ^{-0.1} +.2 .0

8.3

7.7 7.4 +.3 +.1

11.1

25.5

16.3

12.3

14.2

30.7

25.5

15.9

17.8

19.1

15.0

20.4

16.1

18.3

14.7

23.9

July 11, 1883.

Transits. Oct.		L				Oct. S.			
43	10.7	43	10.9	-2	.0	6.3	5.8	+5	+3
	<u>15.0</u> 7.7								
	<u>26.3</u> 6.3								
44	11.0	44	11.0	0	+2	6.0	5.6	+4	+1
	20.7		20.7	0	+2	6.2	5.7	+5	+2
	23.2					-0.2			
	<u>27.4</u> 6.0								
	<u>37.6</u> 6.2								
46	41.1	46	41.1	0	+2	5.0	4.4	+6	+3
47	5.5 5.0								
	33.7	47	34.2	-5	-3	6.0	5.5	+5	+2
	34.6	47	34.2	+6	+8	0.5	5.5	[-5.0]	
	<u>50.7</u> 0.5		44.7				10.3		
	<u>52.9</u> 6.0								
	54.6		57.9	-3	-1	1.8	1.3	+5	+2
48	18.1 1.8								
	30.0	48	30.0	0	+2	4.7	4.0	+7	+3
	57.0		57.1	-1	+1	9.5	9.0	+5	+1
49	0.5 4.7								
	7.4	49	7.8	-4	-2	6.0			
	9.5		9.7	-2	.0	7.6			
	11.5		11.5	0	+2	4.8			
	<u>26.3</u> 7.0								
	<u>28.9</u> 9.0								
	<u>35.3</u> 5.0								
	<u>39.7</u> 7.6								
50	9.1	50	9.2	-1	+1	2.8			
	<u>33.5</u> 2.8								
51	11.6	51	12.8	-12	-10	10.6	10.2	+4	.0
	15.5		16.2	-7	-5	7.4			

15.6

16.4

17.1

27.4

19.2

15.9

20.5

30.5

31.9

18.9?

30.2

23.8

24.4

25.2

13.2

July 11, 1883.

Transits. Oct.		L		Oct. S.	
h	v-1 ^m	23.0	51 23.3 -3	-1	9.5
	<u>28.7</u>	7.4			
	<u>36.8</u>	10.6			
	52.2		52.4 -2	.0	8.3 8.0 +3 -1
	v3.3		53.8 -5	-.3	8.2 5.0 7.9 7.7 +3.2 +2.8 (-2.1)
	v7.2		57.5 -3	-.1	10.4 9.9 5.0 5.4 +.5 - +.1
	<u>v9.8</u>	9.5			
v2	<u>9.6</u>	8.2			
	<u>19.0</u>	8.3			
	35.6		52 35.6 0	+2	4.5 4.0 +.5 .0
	<u>41.3</u>	10.4			
v3	<u>1.0</u>	4.5			
	4.9		53 4.9 0	+2	5.2 4.6 +.6 +.1
	<u>24.2</u>	5.2			
v4	12.5		54 12.7 -2	.0	7.0 6.0 +1.0 +.5
	19.9		20.2 -3	-.1	6.9 5.9 +1.0 +.5
	22.3		22.4 -1	+1	2.3 1.7 +.6 +.1
	<u>29.3</u>	7.0			
	<u>v2.2</u>	6.9 ^{and} 2.3			
v5	2.4		55 2.5 -1	+1	5.6 5.0 +.6 .0
	20.2		20.5 -3	-.1	5.5 5.0 +.5 -.1
	<u>35.1</u>	5.6			
	<u>39.2</u>	5.5			
	44.1		45.0 -9	-.7	10.2 10.2 9.6 +.6 .0
v6	<u>7.4</u>	10.2			
	13.4				9.6
	<u>26.5</u>	9.6			
	33.5		56 33.9 -4	-.2	10.1 ^{and} 10.3 9.3 +.8 +.2
	48.4	10.3			0.1
	<u>53.6</u>	10.1			

36.8

26.8

16.3

47.1

25.4

19.3

16.8

32.3

29.9

32.7

23.3

13.1

20.1^{and} 14.9

17.9

18.4

12.1

23.6

10.8

18.9

25.7

19.4

27.4^{and} 15.1

33.0

23.1

14.8

15.9

23.5

21.5

11- 19.0

July 11, 1883.

1883phae1

Transits. Oct.		Oct. 2					
1 ^h 3 ^m 24.6	3	25.0 - 4	-3	5.0	4.2	+8	.0
31.8 8.0							
38.0 1.8							
42.6 5.0							
47.4		47.3 +1	+2	6.4	5.3	+1.1	+3
4 16.5 6.4							
24.3	4	24.3 0	+1	3.9	3.1	+8	.0
29.8		29.8 0	+1	5.3	4.4	+9	+1
35.0		34.7 +3	+4	6.0	4.9	+11	+3
43.1 3.9							
49.9 5.2							
52.0				1.8			
56.0 6.0							
5 9.5 1.8							
12.1	5	12.1 0	+1	7.5	6.7	+8	-1
17.1				10.1			
27.0		27.1 -1	.0	7.3	6.2	+11	+2
39.3 10.0							
46.6 7.5 ^{2nd} 7.3		54.1		1.0	10.6		
a. 6 4.4 1.0	6	30.1		2.5	10.8		
42.3							
58.1 2.5							
7 7.6	7	7.8 -2	-1	2.4	1.4	+10	+1
35.4		35.5 -1	.0	2.3	1.0	+13	+4
40.0 2.4							
55.5 2.3							
f 2.3	8	2.5 -2	-1	4.2	3.2	+10	.0
15.5 4.2							
B 53.4		53.5 -1	.0	7.5 ^{2nd} 6.6	+9		-1
9 9.8 8.8							

18.0

29.1

18.8

20.1

21.0

17.5

34.5

22.2

19.6

17.8

15.8

32.4

20.1

13.2

20.1 and 16.4

192

July 11, 1853.

Transits. Est.		L		Est. S.	
10 ^h 9 ^m	<u>13.5</u> 7.5	9	46.1 -1 .0	90	5.1 +.9 -.1
	46.0				
a 10	<u>18.1</u> 90				
11	21.7	11	21.7 0 +.1	2.8	1.8 +1.0 .0
	33.0		29.2	7.4	10.8
	<u>50.0</u> 74				
	<u>54.5</u> 2.8				
12	<u>5.3</u>	12	5.3 0 +.1	2.5	1.5 +1.0 -.1
	<u>21.2</u> 2.5				
13	31.2			9.7	
	31.9			1.0	
	<u>43.0</u> 1.0				
	<u>47.0</u> 9.7				
	54.4	13	54.4 0 +.1	9.0	7.9 +1.1 .0
14	17.8			6.0	
	<u>33.7</u> 6.0				
	41.6	14	41.9 -3 -.2	5.5	4.2 +1.3 +.2
	44.0 9.0			9.5	
15	5.0 9.5(?)	15	4.7 +3 +.4	1.2	-0.1 +1.3 +.2
	<u>21.5</u> 9.5 5.5				7.9 5.5
	<u>47.1</u> 5.5 1.2				
	72			72	

32.1

32.8

17.0

15.9

15.8

11.1

46.6

15.9

~~65~~ 39.9~~75~~ 21.0?

42.1

July 23, 1883.

1883phae.F

Transits. Oct.

2

Oct. 8.

16 0 17.6

16 0 17.5 +1

-2 0.1 0.3 -2 -2

19.4

6.6

41.0 6.6

45.0 0.1

50.5

50.5 0

-3 6.7 6.8 -1 -1

1 19.3 6.7

24.0

1 23.8 +2

-1 7.7 8.0 -3 -3

26.5

26.2 +3

.0 0.1 0.2 -1 -1

53.2 0.1

2 1.6 7.7

30.3

0.5

41.5

2 41.3 +2

-1 8.5 8.9 -4 -4

46.5 0.5

3 7.5 8.5

20.1

3 19.6 +5

+2 0.6 0.7 -1 -1

25.4

25.0 +4

+1 4.0 4.2 -2 -2

43.2 0.6

47.5 4.0

47.3 +2

-1 5.2 5.3 -1 -1

4 20.2 5.2

24.5

4 24.3 +2

-1 2.8 3.1 -3 -4

30.0

29.8 +2

-1 4.4 4.4 .0 -1

35.2

34.7 +5

+2 4.9 4.9 .0 -1

45.3 2.8

52.6 4.4

58.5 4.9

5 12.6

5 12.1 +5

+2 6.8 6.7 +1 .0

27.4

27.1 +3

.0 6.6 6.2 +4 +3

42.0 6.8

48.3 6.6

55.0

54.1 +9

+6 10.3 10.6 -3 -4

27.4

21.6

28.8

37.6

26.7

16.2

26.0

23.1

22.1

32.7

20.8

22.6

23.3

29.4

20.9

35.5

July 23, 1953

Transits. Oct.

6^h 6^m 30.5^u 10.3

42.5

7 8.2 10.5^{2nd} 1.8

36.0

43.0 2.0

59.4 1.7

8 3.0

21.3 3.2

54.0

a. 9 15.4 7.0^{2nd} 5.1

46.5

10 19.5 8.0

11 22.1

29.3

54.0 11.0

12 0.8 2.4

5.6

24.3 2.0

13 58.0

14 18.1

42.2 5.0

44.4 7.9

15 5.0

20.3 4.8

48.3 0.2

56.4

16 22.9 5.8

B 17 15.5 2.5

48.1

53.0

L

6 30.1 +.4 +.1

7 7.8 +.4 +.1

35.5 +.5 +.2

8 2.5 +.5 +.2

53.5 +.5 +.2

9 46.1 +.4 +.1

11 21.7 +.4 +.1

29.2 +.1 -2

12 5.3 +.3 .0

13 57.4 +.6 +.3

14 41.9 +.3 .0

15 4.7 +.3 .0

56.4 .0 -3

17 15.0 +.5 +.2

52.7 +.3 .0

Oct. S

10.5 10.8 -.3 -4

1.8

2.0 1.4 +.6 +.4

1.7 1.0 +.7 +.5

3.2 3.2 .0 -2

7.0^{2nd} 6.6 +.4 +.2

8.0 8.0 .0 -2

2.4 1.8 +.6 +.3

11.0 10.8 +.2 -1

2.0 1.5 +.5 +.2

7.9 7.9 .0 -3

5.0

4.8 4.2 +.6 +.3

0.2 -0.1 +.3 ~~9.9 [9.9]~~ -1

5.8 5.5 +.3 -1

2.5 2.1 +.4 -1

7.7 7.6 +.1 -4

377

25.7

34.8

23.4

18.3

21.4

33.0

38.7

24.7

18.7

46.4

24.1

38.1

43.3

26.5

25.9

July 23, 1883.

1883phae1

Transits. Oct.	L					Oct. S.									
16	18 ^m	0.7				18	0.4	+3	.0	7.8	7.6	+2	-3		
	<u>18.9</u>	7.7													
	<u>23.2</u>	7.8													
	32.8			32.4	+4			+1		7.0	6.5	+5	.0		
	58.2			58.4	-2				-5	10.4	10.2	+2	-3		
	59.0	rej.		59.6						2.7					
19	0.1	7.0		59.6	+5	+2	+1			7.0	3.7	+3	-1.2		
	<u>24.2</u>	10.4 ^{2nd} 4.0		19	23.5	+7	+1			7.0	4.9	-7	+4		
	<u>37.4</u>	6.0?		36.9	+5		+2			7.0	3.9	+1	+1.4		
	<u>57.2</u>	5.2 6.0?													
20	7.2									7.0	5.8				
	<u>24.6</u>	5.8								7.0					
	32.0			20	31.6	+4	+1			7.0	9.9	9.4	+5	-1	+1.4
	40.2				39.8	+4	+1			10.0	9.5	+5	-1		
	42.2				41.6	+6	+3			9.0	8.6	+4	-2		
	<u>56.3</u>	9.9													
	<u>59.8</u>	10.0													
21	7.1	9.0		21	26.1	+3	.0			9.5	8.9	+6	.0		
	26.4														
22	47.5			22	47.1	+4	+1			10.4	10.1	+3	-3		
	55.1				54.7	+4	+1			8.5	8.1	+4	-2		
23	<u>15.0</u>	10.4													
	<u>25.7</u>	8.5													
B	25	25.7		25	35.4	+3			-1	7.2	6.3	+9	+2		
	35.7									8.5					
	40.7									9.5					
	43.0														
	<u>46.5</u>	0.0													
	55.5			55.5	.0				-4	6.8	5.7	+11	+4		
26	2.6	8.5 ^{2nd} 9.5													

22.5

27.3

26.0

24.1

~~19.8~~ 19.8~~49.1~~ 17.4~~35.2~~~~35.1~~ 24.3

49.6

24.9

27.5

30.6

17.8

37.7

21.9

19.6

34.5

Transits. Oct.

July 23, 1883.

Oct. 8.

26 ^m	13.4 ⁹	7.2			26	17.1 +4	.0	2.3	1.4 +9	+2
	17.5									
	30.0	6.8								
	54.4	2.3								
27	22.4				27	22.1 +3	-1	9.5	8.6 +9	+1
	37.9							5.5		
	39.3							5.8		
	47.0							4.0		
	52.8	9.5, 5.8, 5.5, 4.0				52.6 +2	-2	8.0	7.4 +6	-2
28	15.0 7.5	5.8 5.5	4.0 8.0		28	28.7 +8	+4	7.7	7.0 +7	-1
	29.5									
	48.9	7.7								
	58.4							4.0		
29	7.5	4.0						0.0		
	39.4									
	45.5				29	45.6 -1	-5	11.2	10.4 +8	.0
30	3.0	0.0			30	2.9 +1	-3	11.0	10.0 +1.0	+1
	20.3	11.2								
	30.8	11.0								
	49.0					48.7 +3	-1	5.5	4.7 +8	-1
	58.5					58.3 +2	-2	7.3	6.2 +1.1	+2
31	3.0				31	2.7 +3	-1	1.8	0.6 +1.2	+3
	14.4							4.8		
	21.0	5.5								
	24.6	7.3								
	32.3	1.8								
	35.5	4.8								
	45.2					42.9			11.1	
						42.9 +3		4.9	11.1	
						54.9			3.9	
32	5.8	4.9			32	19.2 +3	-1	9.9	9.0 +9	.0
	19.5									

~~41.2~~ 36.9

~~52.6~~ 30.4

~~37.1~~ 14.9

~~35.4~~ 13.5

~~28.0~~ 5.8

22.2

19.4

~~49.1~~

23.6

34.8

27.8

32.0

26.1

29.3

21.1

20.6

27.0

July 23, 1883.

Transits. Oct.		L		Oct.		S.	
h	32 ^m	37.1	32 37.1 0	-4	7.5	6.6 +9	.0
		46.5 9.9					
		59.2	58.7 +5	+1	8.0	7.2 +8	-1
33	2.1				0.2		
		9.2 7.5					
		22.5 8.0 2nd 0.2					
B	34	26.6	34 26.4 +2	-2	5.3	4.4 +9	-1
		45.3 5.3					
		55.8			7.8		
35	7.5				7.4		
		15.4 7.8					
		22.4 7.4			3.0		
		36.3 3.0	35 35.9 +4	.0	3.5	3.0 +5	-5
		37.9	37.5 +4	.0	4.9	3.9 +1.0	.0
		43.2			3.0		
		55.4	55.0 +4	.0	1.0	-0.1 +1.1 7.9 [-8.9]	+1
		57.9 4.9					
36	5.0	3.5 2nd 3.0					
		20.5 1.0	36 21.1 +4	-2		11.0	
		47.0	46.6 +4	.0	5.6	4.6 +1.0	-1
		54.7			8.8		
37	10.1	5.5					
		13.5 8.8					
a.	37	36.5	37 36.4 +1	-3	2.0	0.8 +1.2	+1
		40.2	39.6 +6	+2	17	0.1 +1.6	+5
		46.2	45.6 +6	+2	5.5	4.4 +1.1	.0
		54.5 2.0					
		58.6 1.7					
38	5.4	5.5					
		56.1	38 55.6 +5	+1	7.4	6.0 +1.4	+3
			56.3			2.2	

32.1

23.3

20.4

18.7

19.6

14.9

13.9

28.7

20.0

21.8

25.1

23.1

18.8

18.0

18.4

29.2

19.3

July 23, 1883.

Transit. Oct.
^h 39^m 15.4 7.4
 53.4
 58.5
 40 9.4 10.1
 14.4
 29.4
 32.6 5.1
 35.0 9.5
 42.9 6.5
 B 41 18.7
 38.4 2.0
 42 17.0
 55.1 9.8
 44 11.1
 34.5 7.7
 38.2
 52.4 9.8
 45 18.3
 43.6 3.9

39 52.9 +5 +.1
 58.2 +3

40 28.8 +6 +.2

41 18.0 +7 +.3

42 16.7 +3 -.1

43 3.4
 44 10.6 +5 +.1

37.7 +5 +.1

45 17.6 +4 +.3
 38.1

Oct. L.
 9.5 8.4 +1.1 .0
 10.1 9.1 +1.0 -.1

5.1
 6.5 5.1 +1.4 +.2

2.0 0.2 +1.8 +.6

9.8 8.5 +1.3 +.1

10.4
 7.7 6.4 +1.3 .0

9.8 8.5 +1.3 .0

3.9 2.6 +1.3 .0
 9.3

41.6

10.9

18.2

13.5

19.7

38.1

23.4

14.2

25.3

July 25, 1953.

Transito. Oct.

11^m 21.7

29.2

54.8 10.3

59.4 1.7

12 5.4

27.4 1.5

13 31.5

50.3 7.7

54.4

14 41.9 7.6

15 20.6 3.9

56.5

16 18.5 5.2

17 15.2

29.4

31.4

45.6 2.2

48.7 7.0

52.7 2.1

18 0.3

18.5 7.6

22.6 7.7

30.5

32.5

42.4 5.5

51.4 6.2

58.5

59.5

19 18.5 10.0

22.5 3.3

16 11 21.7 0

29.2 0

12 5.3 +1

13 57.4 0

14 41.9 0

15 4.7

56.4 +1

17 15.0 +2

52.7 0

18 0.4 -1

32.4 +1

58.4 +1

59.6 -1

19 23.5

Oct. 8.

1.7 1.8 -1 +3

10.3 10.8 -5 -1

1.5 1.5 0 +4

7.7

7.6 7.9 -3 +1

3.9 4.2 -3 +1

-0.1 ~~7.9~~

5.2 5.5 -3 0

2.2 2.1 +1 +3

7.0

2.1

7.6 7.6 0 +2

7.7 7.6 +1 +3

5.5

6.2 6.5 -3 -1

10.0 10.2 -2 0

3.3 3.7 -4 -2

4.9

37.7

25.6

22.0

18.8

44.5

38.7

22.0

30.4

19.3

21.3

25.8

22.3

11.9

18.9

20.0

23.0

July 25, 1883.

Transits. Oct.		Oct.		Oct.		Oct.	
19 ^m	36.7	19	36.9 0	0	3.4	3.9 -5	-3
	<u>57.1</u> 3.4						
20	7.0				5.3		
	<u>23.2</u> 5.3						
	31.7	20	31.6 +1	+1	9.3	9.4 -1	+1
	39.5		39.8 -3	-3	9.5	9.5 0	+2
	41.5		41.6 -1	-1	8.3	8.6 -3	-1
	<u>52.0</u> 9.3						
	<u>56.5</u> 9.5						
21	7.7 8.3						
	26.0	21	26.1 -1	-1	8.6	Did not Disap. 8.9 -3	-2
22	47.2	22	47.1 +1	+1	10.0	10.1 -1	0
	55.0		54.7 +3	+3	7.9	8.1 -2	-1
23	<u>11.9</u> 10.0						
	<u>24.0</u> 7.9						
25	35.3	25	35.4 -1	-1	6.6	6.3 +3	+3
	55.6		55.5 +1	+1	5.7	5.7 0	0
26	<u>10.6</u> 6.6						
	17.3	26	17.1 +2	+2	1.8	1.4 +4	+4
	<u>30.4</u> 5.5						
	49.9 1.8						
a. 27	22.2	27	22.1 +1	+1	8.3	8.6 -3	-4
	<u>46.3</u> 8.3						
	52.5		52.6 -1	-1	7.7	7.4 +3	+2
28	<u>12.0</u> 7.7						
	28.9	28	28.7 +2	+2	7.3	7.0 +3	+2
	<u>48.4</u> 7.3						
29	45.6	29	45.6 0	0	10.3	10.4 -1	-2
30	3.1	30	2.9 +2	+2	10.2	10.0 +2	0
	<u>16.3</u> 10.3						

20.2

16.2

20.3

17.0

26.2

24.7

29.0

35.3

34.8

32.6

24.1

19.5

19.5

30.7

29.3

July 25, 1883.

Transits. Oct.		Oct.		Oct.		Oct.	
30 ^m	32.4 ⁿ 10.2	30	48.7 -1	-1	5.0	4.7 +.3	+1
	44.6		58.3 -3	-3	6.4	6.2 +.2	.0
31	2.5 ⁿ	31	2.7 -2	-1	0.8	0.6 +.2	.0
	13.3				4.0 dbl.		
	15.8 5.0						
	24.4 6.4						
	32.2 4.0						
	35.2 0.8						
	42.2		42.9 -7	-6	10.8	11.0 -2	-4
	44.6		54.9		3.9	3.9	
32	7.0 3.9						
	11.4 10.8						
	19.2	32	19.2 0	+1	9.0	9.0 .0	-2
	37.0		37.1 -1	.0	7.0	6.6 +.4	+2
	44.4 9.0						
	58.5		58.7 -2	-1	7.4	7.2 +.2	.0
33	4.4 7.0						
	18.8 7.4						
34	26.3	34	26.4 -1	.0	4.8	4.4 +.4	+1
	47.5 4.8						
35	35.9	35	35.9 0	+1	2.9	3.0 -1	-4
	37.5		37.5 0	+1	4.0	3.9 +.1	-2
	55.0		55.0 0	+1	0.3	0.1 0.4 0.7 0.9 1.1 1.3 1.5 1.7 1.9 2.1 2.3 2.5 2.7 2.9 3.1 3.3 3.5 3.7 3.9 4.1 4.3 4.5 4.7 4.9 5.1 5.3 5.5 5.7 5.9 6.1 6.3 6.5 6.7 6.9 7.1 7.3 7.5 7.7 7.9 8.1 8.3 8.5 8.7 8.9 9.1 9.3 9.5 9.7 9.9 10.1 10.3 10.5 10.7 10.9 11.1 11.3 11.5 11.7 11.9 12.1 12.3 12.5 12.7 12.9 13.1 13.3 13.5 13.7 13.9 14.1 14.3 14.5 14.7 14.9 15.1 15.3 15.5 15.7 15.9 16.1 16.3 16.5 16.7 16.9 17.1 17.3 17.5 17.7 17.9 18.1 18.3 18.5 18.7 18.9 19.1 19.3 19.5 19.7 19.9 20.1 20.3 20.5 20.7 20.9 21.1 21.3 21.5 21.7 21.9 22.1 22.3 22.5 22.7 22.9 23.1 23.3 23.5 23.7 23.9 24.1 24.3 24.5 24.7 24.9 25.1 25.3 25.5 25.7 25.9 26.1 26.3 26.5 26.7 26.9 27.1 27.3 27.5 27.7 27.9 28.1 28.3 28.5 28.7 28.9 29.1 29.3 29.5 29.7 29.9 30.1 30.3 30.5 30.7 30.9 31.1 31.3 31.5 31.7 31.9 32.1 32.3 32.5 32.7 32.9 33.1 33.3 33.5 33.7 33.9 34.1 34.3 34.5 34.7 34.9 35.1 35.3 35.5 35.7 35.9 36.1 36.3 36.5 36.7 36.9 37.1 37.3 37.5 37.7 37.9 38.1 38.3 38.5 38.7 38.9 39.1 39.3 39.5 39.7 39.9 40.1 40.3 40.5 40.7 40.9 41.1 41.3 41.5 41.7 41.9 42.1 42.3 42.5 42.7 42.9 43.1 43.3 43.5 43.7 43.9 44.1 44.3 44.5 44.7 44.9 45.1 45.3 45.5 45.7 45.9 46.1 46.3 46.5 46.7 46.9 47.1 47.3 47.5 47.7 47.9 48.1 48.3 48.5 48.7 48.9 49.1 49.3 49.5 49.7 49.9 50.1 50.3 50.5 50.7 50.9 51.1 51.3 51.5 51.7 51.9 52.1 52.3 52.5 52.7 52.9 53.1 53.3 53.5 53.7 53.9 54.1 54.3 54.5 54.7 54.9 55.1 55.3 55.5 55.7 55.9 56.1 56.3 56.5 56.7 56.9 57.1 57.3 57.5 57.7 57.9 58.1 58.3 58.5 58.7 58.9 59.1 59.3 59.5 59.7 59.9 60.1 60.3 60.5 60.7 60.9 61.1 61.3 61.5 61.7 61.9 62.1 62.3 62.5 62.7 62.9 63.1 63.3 63.5 63.7 63.9 64.1 64.3 64.5 64.7 64.9 65.1 65.3 65.5 65.7 65.9 66.1 66.3 66.5 66.7 66.9 67.1 67.3 67.5 67.7 67.9 68.1 68.3 68.5 68.7 68.9 69.1 69.3 69.5 69.7 69.9 70.1 70.3 70.5 70.7 70.9 71.1 71.3 71.5 71.7 71.9 72.1 72.3 72.5 72.7 72.9 73.1 73.3 73.5 73.7 73.9 74.1 74.3 74.5 74.7 74.9 75.1 75.3 75.5 75.7 75.9 76.1 76.3 76.5 76.7 76.9 77.1 77.3 77.5 77.7 77.9 78.1 78.3 78.5 78.7 78.9 79.1 79.3 79.5 79.7 79.9 80.1 80.3 80.5 80.7 80.9 81.1 81.3 81.5 81.7 81.9 82.1 82.3 82.5 82.7 82.9 83.1 83.3 83.5 83.7 83.9 84.1 84.3 84.5 84.7 84.9 85.1 85.3 85.5 85.7 85.9 86.1 86.3 86.5 86.7 86.9 87.1 87.3 87.5 87.7 87.9 88.1 88.3 88.5 88.7 88.9 89.1 89.3 89.5 89.7 89.9 90.1 90.3 90.5 90.7 90.9 91.1 91.3 91.5 91.7 91.9 92.1 92.3 92.5 92.7 92.9 93.1 93.3 93.5 93.7 93.9 94.1 94.3 94.5 94.7 94.9 95.1 95.3 95.5 95.7 95.9 96.1 96.3 96.5 96.7 96.9 97.1 97.3 97.5 97.7 97.9 98.1 98.3 98.5 98.7 98.9 99.1 99.3 99.5 99.7 99.9 100.1 100.3 100.5 100.7 100.9 101.1 101.3 101.5 101.7 101.9 102.1 102.3 102.5 102.7 102.9 103.1 103.3 103.5 103.7 103.9 104.1 104.3 104.5 104.7 104.9 105.1 105.3 105.5 105.7 105.9 106.1 106.3 106.5 106.7 106.9 107.1 107.3 107.5 107.7 107.9 108.1 108.3 108.5 108.7 108.9 109.1 109.3 109.5 109.7 109.9 110.1 110.3 110.5 110.7 110.9 111.1 111.3 111.5 111.7 111.9 112.1 112.3 112.5 112.7 112.9 113.1 113.3 113.5 113.7 113.9 114.1 114.3 114.5 114.7 114.9 115.1 115.3 115.5 115.7 115.9 116.1 116.3 116.5 116.7 116.9 117.1 117.3 117.5 117.7 117.9 118.1 118.3 118.5 118.7 118.9 119.1 119.3 119.5 119.7 119.9 120.1 120.3 120.5 120.7 120.9 121.1 121.3 121.5 121.7 121.9 122.1 122.3 122.5 122.7 122.9 123.1 123.3 123.5 123.7 123.9 124.1 124.3 124.5 124.7 124.9 125.1 125.3 125.5 125.7 125.9 126.1 126.3 126.5 126.7 126.9 127.1 127.3 127.5 127.7 127.9 128.1 128.3 128.5 128.7 128.9 129.1 129.3 129.5 129.7 129.9 130.1 130.3 130.5 130.7 130.9 131.1 131.3 131.5 131.7 131.9 132.1 132.3 132.5 132.7 132.9 133.1 133.3 133.5 133.7 133.9 134.1 134.3 134.5 134.7 134.9 135.1 135.3 135.5 135.7 135.9 136.1 136.3 136.5 136.7 136.9 137.1 137.3 137.5 137.7 137.9 138.1 138.3 138.5 138.7 138.9 139.1 139.3 139.5 139.7 139.9 140.1 140.3 140.5 140.7 140.9 141.1 141.3 141.5 141.7 141.9 142.1 142.3 142.5 142.7 142.9 143.1 143.3 143.5 143.7 143.9 144.1 144.3 144.5 144.7 144.9 145.1 145.3 145.5 145.7 145.9 146.1 146.3 146.5 146.7 146.9 147.1 147.3 147.5 147.7 147.9 148.1 148.3 148.5 148.7 148.9 149.1 149.3 149.5 149.7 149.9 150.1 150.3 150.5 150.7 150.9 151.1 151.3 151.5 151.7 151.9 152.1 152.3 152.5 152.7 152.9 153.1 153.3 153.5 153.7 153.9 154.1 154.3 154.5 154.7 154.9 155.1 155.3 155.5 155.7 155.9 156.1 156.3 156.5 156.7 156.9 157.1 157.3 157.5 157.7 157.9 158.1 158.3 158.5 158.7 158.9 159.1 159.3 159.5 159.7 159.9 160.1 160.3 160.5 160.7 160.9 161.1 161.3 161.5 161.7 161.9 162.1 162.3 162.5 162.7 162.9 163.1 163.3 163.5 163.7 163.9 164.1 164.3 164.5 164.7 164.9 165.1 165.3 165.5 165.7 165.9 166.1 166.3 166.5 166.7 166.9 167.1 167.3 167.5 167.7 167.9 168.1 168.3 168.5 168.7 168.9 169.1 169.3 169.5 169.7 169.9 170.1 170.3 170.5 170.7 170.9 171.1 171.3 171.5 171.7 171.9 172.1 172.3 172.5 172.7 172.9 173.1 173.3 173.5 173.7 173.9 174.1 174.3 174.5 174.7 174.9 175.1 175.3 175.5 175.7 175.9 176.1 176.3 176.5 176.7 176.9 177.1 177.3 177.5 177.7 177.9 178.1 178.3 178.5 178.7 178.9 179.1 179.3 179.5 179.7 179.9 180.1 180.3 180.5 180.7 180.9 181.1 181.3 181.5 181.7 181.9 182.1 182.3 182.5 182.7 182.9 183.1 183.3 183.5 183.7 183.9 184.1 184.3 184.5 184.7 184.9 185.1 185.3 185.5 185.7 185.9 186.1 186.3 186.5 186.7 186.9 187.1 187.3 187.5 187.7 187.9 188.1 188.3 188.5 188.7 188.9 189.1 189.3 189.5 189.7 189.9 190.1 190.3 190.5 190.7 190.9 191.1 191.3 191.5 191.7 191.9 192.1 192.3 192.5 192.7 192.9 193.1 193.3 193.5 193.7 193.9 194.1 194.3 194.5 194.7 194.9 195.1 195.3 195.5 195.7 195.9 196.1 196.3 196.5 196.7 196.9 197.1 197.3 197.5 197.7 197.9 198.1 198.3 198.5 198.7 198.9 199.1 199.3 199.5 199.7 199.9 200.1 200.3 200.5 200.7 200.9 201.1 201.3 201.5 201.7 201.9 202.1 202.3 202.5 202.7 202.9 203.1 203.3 203.5 203.7 203.9 204.1 204.3 204.5 204.7 204.9 205.1 205.3 205.5 205.7 205.9 206.1 206.3 206.5 206.7 2	

27.2

26.4

32.7

18.9

29.2

22.4

25.2

27.4

20.3

21.2

23.0

24.9

22.9

22.9

July 25, 1883.

Transits. Oct.		L		Oct.		S.	
16 ^h	37 ^m 36.2	37	36.4 - .2	-1	1.2	0.8 + .4	.0
	39.1		39.6 - .5	-1	0.5	0.1 + .4	.0
	45.5		45.6 - .1	.0	49	4.4 + .5	+1
	<u>56.0</u> 0.5						
	59.5 1.2						
a.	38 15.8 49	38	15.6 - .1	.0	6.5	6.0 + .5	+1
	56.3		56.3 .0	+1	2.3	2.2 + .1	-3
	39 14.6 2.3						
	17.7 6.5						
	53.0	39	52.9 + .1	+2	8.7	8.4 + .3	-1
	58.4		58.2 + .2	+3	9.9	9.1 + .8	+4
	40 10.6 9.9	40	28.8 - .3	-2	5.6	5.1 + .5	.0
	28.5 8.7						
	49.4 5.6						
	41 18.0	41	18.0 .0	+2	0.7	0.2 + .5	.0
	37.6 0.7						
	42 17.0	42	16.7 + .3	+5	9.0	8.5 + .5	.0
	51.0 9.0						
	43 3.1	43	3.4 - .3	-1	10.4	10.4 .0	-5
	25.2 10.4						
B	44 10.7	44	10.6 + .1	+1	7.3	6.4 + .9	+3
	32.4 7.3						
	37.3		37.7 - .4	-2	9.0	8.5 + .5	-1
	50.2 9.0						
	45 17.7	45	17.6 + .1	+3	3.2	2.6 + .6	.0
	38.0		38.1 - .1	+1	10.0	9.3 + .7	+1
	41.2 3.2						
	45.5		46.5 - 1.0	-8	10.7	10.5 + .2	+4
	49.9		51.3 - 1.4	-12	9.8	9.0 + .8	+2

23.3

16.9

30.3

22.2

18.3

35.5

12.2

20.9

19.6

34.0

22.6

21.7

12.9

23.5

24.4

19.9

15.5

For continuation See Book # 5

1837p1ae. Procs. 1434.

