

Assigned, Proj. ... 857

KG
11365
81

B. 10

No. 10.

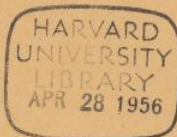
Reduction of Transits
Nov. 11, 1851 to Feb. 25, 1852.

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KG-11365.P1



KG 11365.81



1851. Nov. 11/12

$a = -0.28$

$b = -0.08$

$c = +0.10$

C. W. J.

H. W. M.

Polaris S.P.

 α Virginis α Bootis ϵ Bootis

43	6.5			56.4		3.0		37.2		
51	59.8			10.5		18.0		52.8		
0	50.0			24.4		32.5		8.3		
9	42.5			38.5		47.0		24.0		
17	32.5			52.5		2.0		39.3		
27	28.4			6.2		16.4		54.5		
36	27.4	13	21	20.3	14	10	31.0	14	40	10.0
	247.1			208.8			149.9			226.1

43.87 38.40 47.13 23.59

-2 -2 -2 -2

13 9 41.87 13 20 36.40 14 9 45.13 14 39 21.59

1851. Nov. 11/12

$a = -0.28$

$b = -0.08$

$c = +0.10$

C. W. 7

J. L. Wink

 β Mus. Min α Cor. Bor.

	1	—			31.5
47	46	—			47.0
		—			2.5
	0.3	0.4			18.0
	52	0.1 52.5			33.4
	53	0.1 44.4			48.5
14	54	0.4 37.0	15	30	4.5
					185.4
		0.17			17.91
		-2			-2
14	51	58.17	15	29	15.91

Nov. 12 1851.

$a = -0.28$

$b = -0.08$

$c = +0.10$

H. W. W.

C. W. 7

2³ Capricorn

2.0

16.0

30.4

44.8

58.8

12.8

20 11 27.0

191.2

44.46

-2

20 10 42.46

1851. Nov. 13

$a = -0.29$

$b = -0.08$

$c = +0.11$

Ill. West

"

"

C. N. 7.

 α Lyrae α Aquilae β Aquilae α Pegasi

58.9

48.9

18.0

39.0

17.0

3.0

32.0

53.4

34.5

16.5

48.6

7.5

52.0

30.5

59.5

21.9

9.8

44.4

13.4

36.0

27.4

58.3

27.4

50.4

18 33

45.0

19

45

12.0

19

49

41.3

22

59

4.2

244.6

213.6

237.2

212.4

52.09

30.51

59.60

21.77

-2

-2

-2

-2

18 32

50.09

19

44

28.51

19

48

57.60

22

58

19.77

1851. Nov. 15

$a = -0.29$

$b = -0.08$

$c = +0.11$

Ill. Meri

Q. W. 7.

Andromedae

γ Pegasi

3.0

59.9

19.0

14.0

34.5

28.0

50.0

42.4

5.5

56.5

21.5

10.5

37.2

24.9

170.7

236.2

50.10

42.31

-2

-2

48.10

40.31

1851. Nov. 17

$a = -0.30$

$b = -0.08$

$c = +0.12$

Ill. West

C.N. 7

 α Pegasi

52.9

7.0

21.5

35.5

49.5

4.0

22 59 18.0

188.4

35.49

-2

22 58 33.49

651. Nov. 17/14

$a = -0.30$

$b = -0.08$

$c = +0.11$

C. W. 7.

J. L. West

 β Leonis α Virginis

Polaris S.P.

 α Bootis

0.0	54.8	41	3.0	11.6
14.4	8.9	49	57.0	26.5
28.5	22.5	38	48.5	40.8
43.0	36.5	7	40.0	55.5
57.1	50.5	16	34.0	10.0
11.5	4.4	25	26.5	24.8
11. 43 25.7	18.5	13 34	22.4	14 8 39.0
180.2	196.1		231.4	207.2
42.89	36.58		41.63	55.31
-2	-2		-2	-2
11 42 40.89	13 18 34.58	13 7	39.63	14 7 53.31

1951. Nov. 18

$$a = -0.29$$

$$b = -0.08$$

$$c = +0.09$$

all. m

C. M. 7.

δ Aquilae

"

δ Aquilae

"

γ Aquilae

"

α Aquilae

"

β Aquilae

55.4

22.0

—

53.5

4.0 22.5

9.4

36.0

+10°

1574.947.0

7.4

+6°

24.1 36.5

23.8

49.8

14.9 1.0

21.4

4.2 50.4

37.7

3.5

14.9 14.9

35.2

—

51.9

17.0

15.029.0

49.0

4.2 18.0

6.0

30.9

14.942.8

3.0

4.4 32.0

18 59 20.0 19

18

44.5 19

40

15357.1

19

44

16.8 19

48

44.4 45.8

204.2

203.7

186.3

37.74

3.39

14.97

35.19

4.22

-2

-2

-2

-2

-2

18 58 35.74 19

18

1.39 19

40

12.97

19

43

33.19 19

48

2.22

1851. Nov. 19

$a = -0.29$

$b = -0.08$

$c = +0.09$

C. N. 7.

All. West

5² Capricor

5 Cygni

51.0

-13° 0' 49.921.8

7.0

50.136.0

22.5 1.

50.050.0

38.4 4.

49.94.0

54.5 2.5

49.918.1

10.0 2.50

20 10 49.731.9

21

7

25.4 2.5

208.8

49.92

38.40

-2

-2

20 9 47.92

21

6

36.40

1851. Nov. $\frac{24}{12}$

$a = -0.28$

$b = -0.09$

$c = +0.08$

All West

C. M. 7

 α Leonis

12 Can. Ven.

 α Virginis

46.0

10.8

0.0

28.5

-10

23

22.4

54.5

14.0

46.8

22.5

8.5

28.1

4.0

22.4

22.4

42.0

21.3

22.5

36.5

56.0

39.4

22.4

50.3

10 1

9.3

12

49

57.0

13

18

22.7

4.5

195.4

207.8

27.91

3.97

22.48

2

-2

-2

10 0

25.91

12

49

1.97

13

17

20.48

1851. Nov. 23/24

$$a = -0.29$$

$$b = -0.10$$

$$c = +0.09$$

Joh. W. M.

C. W. 7.

 α Bootis

9.3

24.3

39.1

53.7

8.2

22.6

37.3

194.5

53.50

-2

51.50

11 9

11 8

 α

19

19

1851. Nov. 24

$a = -0.29$

$b = -0.10$

$c = +0.09$ Del. West

C. W. T.

 α Aquilae β Aquilae

51.4

21.0

5.5

64.9

19.4

48.6

33.5

2.4

47.3

16.3

1.2

30.1

19 44 15.1 19 48 44.0

173.4

197.3

33.34

2.47

-2

-2

19 43 31.34 19 48 0.47

1851 Nov. 25/26.

$$a = -0.31$$

$$b = -0.10$$

$$c = +0.10$$

Ill. West

C. W. 7.

 β Mus Maji

74 46 6.9 22.5

6.9 14.7

7.1 7.3

7.35 9.7

7.45 2.0

14 53 7.6 44.2

7.20

-2

14 51 5.20

1851, Dec 1.

$$a = -0.26$$

$$b = -0.11$$

$$c = +0.03$$

all west

C. 747.

α Bootis

6.9

21.5

36.2

51.0

51.5

20.0

14 9 34.5

175.6

50.80

- 2.25

48.55

14 8 48.55

1851. Dec. 3.

$a = -0.21$

$b = -0.12$

$c = -0.06$

All. Mer

C. W. 7.

Andromedae		Pegasi		B. A. C. 205		20 Octi	
46.0		42.3		58.9		33.8	
1.4		56.7		13.0		47.5	
17.5		10.6		26.5		1.0	
32.8		24.9		40.3		14.9	
48.0		38.9		54.5		28.5	
3.9		53.0		8.0		42.3	
0 1 19.8 0	6	7.3 0	38	21.5 0	45	56.0	
169.4		233.7		222.7		224.0	
229.4		173.7		282.7		104.0	
32.77		24.81		40.38		14.86	
-2		-2		-2		-2	
0 0 30.77 0	5	22.81 0	37	38.38 0	45	12.86	

1857, Dec 3

C. M. T.

Ill. Mer

Moon TO

" μ Piscium" $\circ$ Piscium" α Arietis

—	—	—	—	41.5	53.5
-2° 29' 36.0 8.0	+5° 22' 14.1 46.5	—	—	55.4	9.0
35.7 21.7	14.2 0.4	—	—	9.4	23.8
36.0 36.0	14.5 14.5	—	—	23.4	39.0
35.8 49.8	14.6 28.4	—	—	37.2	53.6
35.9 3.9	14.4 42.0	—	—	51.0	8.5
1 11 35.5 7.4	1 22 14.2 55.5	1 38	5.0	1 59	23.4
—	—	—	222.9	—	210.8
—	—	—	162.9	—	270.8
35.82	14.33	—	23.27	—	38.68
-2	-2	—	-2	—	-2
1 14 33.82	1 22 12.33	1 37	21.27	1 58	36.68

Dec. 4, 1851

$$a = -0.18$$

$$b = -0.12$$

$$C = -0.10$$

C. 7. 7.

Dec. 1891

α Andromedae

7 Pegasi

o' beti

μ Ρόσιον

o Pocium

18	28	1631.1	0.0	+14	21	23.4	55.1	42.9	81.3	40.3
		31.0	15.4			23.7	9.5	56.8	45.1	54.4
		30.4	30.5			23.4	23.4	10.5	59.3	8.2
		30.8	46.4			23.8	38.0	24.5	13.0	21.8
		31.2	2.4			23.6	52.0	38.4	27.0	36.0
0	1	30.5	17.2	0	6	23.5	6.0	52.5	40.8	49.6
								6.3	54.5	38
								22	54.5	3.5
								17	54.5	3.5
								231.9	271.4	213.8
								171.9	91.4	153.8
		30.83				23.57		24.56	13.06	21.97
		-2				-2		-2	-2	-2
0	1	28.82	0	5	21.57	1	16	22.56	11.06	37
								22	11.06	19.97

1851. Dec. 4

H. Mer

C. W. T.

1851phae.p

		Saturn	♈	Arietis		Moon	♈	♈	♈	♈	♈	♈			
0.3		5.0		52.5		13.0		23.0							
4.4		19.0		7.4		27.0		37.1	+4	56	53.5	26.0			
5.2		32.8		22.4		41.0		51.0			53.8	40.0			
8		46.5		37.3		54.9		5.0			53.9	53.9			
6.0		0.4		52.1		9.2		18.9			54.2	8.0			
3.6		14.5		7.0		23.2		32.5			54.1	21.7			
5	1	48	28.41	59	21.7	2	1	37.5	2	20	46.5	2	28	54.0	53.3
8			146.6		200.4			205.8			214.0				
8			326.6		260.4			385.8			34.0				
77			46.66		37.20			58.11			4.86				53.92
			-2		-2			-2			-2				-2
97	1	47	44.66	1	58	35.20	2	0	53.11	2	20	2.86	2	27	51.92

Dec. 4. 1851.

$$a = -0.18$$

$$b = -0.12$$

$$c = -0.10$$

Ed. West

C. W. 7.

x Belli

38.9

52.5

6.0

20.0

33.9

47.6

1.0

199.9

139.9

19.98

-2

17.98

1851, Dec. 5

$a = -0.16$

$b = -0.13$

$c = -0.11$

Ill. Mer.

O. M. 7,		"		"		"		"		"				
α Antis		ξ^2 beti		ν beti		γ beti		α beti		"				
	48.9		19.3		8.5		40.4		34.9					
	3.8		33.4		22.3		34.5		48.6					
	19.0		47.4		36.4		8.0		2.4					
	33.7		1.3		50.2		21.8		16.0					
	48.5		15.0		4.0		38.5		30.0					
	3.4		28.7		17.5		49.5		43.6					
1	59	18.2	2	20	42.5	2	28	31.5	2	36	3.2	2	54	57.5
	175.5				187.6			170.4			212.9			233.0
	235.5				07.6			350.4			152.9			113.0
	33.64				1.08			50.06			21.84			16.14
	-2				-2			-2			-2			-2
1	58	31.64	2	19	59.08	2	27	48.06	2	35	19.84	2	54	14.14

1851. Dec. 5

$$a = -0.16$$

$$b = -0.13$$

$$c = -0.11$$

C. N. 7.

Moon TO

o Tami

f Tami

18.7

53.0

43.3

32.7

6.8

57.5

47.3

21.0

11.8

1.3

34.6

26.0

15.4

48.5

39.8

29.7

2.3

54.0

2 49

44.0

3

17

16.0

2

23

8.0

189.1

182.2

240.4

09.1

242.2

180.4

1.30

34.60

25.77

-2

-2

-2

2 48

59.30

3

16

32.60

2

22

23.77

1851 Dec. 5/6

$a = -0.16$

$b = -0.13$

$c = -0.11$

Ill. Mer

C. W. 7.

α Bootis

ε Bootis

48.3

22.0

3.0

37.4

17.5

53.0

32.0

8.4

48.9

24.0

1.5

39.4

14 9

16.0

14

38

54.8

166.2

229.0

32.17

8.43

-2

-2

14 8

30.17

14

38

6.43

1851. Dec. 6

$a = -0.16$

$b = -0.13$

$c = -0.10$

C. W. 7.

Ill. West

y Beti		z Beti		o Tauri		f Tauri		Moon TO		
	34.8		29.5		47.5		38.4		57.5	1
	49.0		43.5		1.5		52.4		12.1	1
	2.7		57.4		15.4		6.5		26.5	2
	16.4		11.3		29.4		20.2		41.4	2
	30.0		25.0		43.3		34.5		55.5	1
	43.7		38.7		57.1		48.5		10.1	1
2	35	2	54	3	17	3	23	3	40	0
	57.4		52.3		11.0		3.0		25.0	0
	234.0		257.7		205.2		203.5		228.1	1
	114.0		77.7				143.5		288.1	
	16.28		11.10		29.31		20.50		41.16	
	-2		-2		-2		-2		-2	
2	35	2	54	3	16	3	22	3	39	00
	14.28		9.10		27.31		18.50		39.16	

1851. Dec 8

$$a = -0.18$$

$$b = -0.13$$

$$c = -0.08$$

C. M. 7.

1851 Dec. 8

v Andromedae

7.5	1	—	
2.1	1	+28°	16,46.0
3.5	2		17.6 2.0
4.4	3		17.01 7.1
5.5	1		16 43 2.5
6.1	1		17.24 8.4
7.0	0	1	17.3 4.0
8.1	1		
9.6	2		17.18
			-2
16	0	0	15.18

1851. Dec. 8/9

$a = -0.12$

$b = -0.13$

$c = -0.02$

18 11th Dec

C. M. 7

Vig'nis

14.4

28.3

42.1

56.0

10.0

24.0

13 17 37.9

212.7

56.10

2

13 16 54.10

1851. Jan 9

$$a = -0.19$$

$$b = -0.13$$

$$c = -0.08$$

H. West

C. N. 7.

γ Pegasi

+14° 21' —

10.7 56.5

11.0 11.0

10.8 25.0

10.6 39.0

0 5 11.0 53.5

0 5 10.82

-2

0 5 8.82

1851, Dec 10.

$a = -0.20$

$b = -0.13$

$c = -0.07$

C. W. 7

H. West

Andromedae

γ Pegasi

						27.9	
+28	16	18.1	47.0			42.0	
		18.1	2.5			56.3	
		18.0	18.0			10.5	
		18.4	34.0			24.5	
		18.3	49.5			38.4	
0	1	18.3	5.0	0	5	52.8	
						252.4	
		18.20				10.34	
		-2				-2	
0	0	16.200		5		8.34	

22

22

1861, Dec. 11.

$a = -0.21$

$b = -0.13$

$c = -0.04$

ell. int

C. W. T.

5 Pegasi

54.5

9.0

22.5

36.8

50.4

4.4

22 34 18.4

196.0

36.57

-2

22 38 34.57

1861. Dec. 15/16

$$a = - 0.26$$

$$b = - 0.13$$

$$c = + 0.02$$

C. N. 7.

Ill. Wm

 η Uls. Maj η Bootis

56.9

14.2

18.4

28.4

40.0

43.4

1.3

57.5

22.5

12.3

44.0

27.0

13 42

5.4

13

47

41.4

188.5

224.2

1.21

57.74

-2

-2

13 40

59.21

13

46

58.74

1851. Dec. 18

$$a = - 0.28$$

$$b = - 0.13$$

$$c = + 0.04$$

All West

C. V. 7.

 α Andromedae γ Pegasi

6.4

3.0

22.1

17.2

37.8

31.4

53.5

45.9

9.4

0.0

28.0

14.4

40.5

28.5

194.7

140.4

53.53

45.77

-2

-2

5 23 59 51.53 0

4 43.77

1851. Dec. 18/19

C. W. 7.

x Virginis

y Urs. Maj'

Ill. Med

$$a = -0.29$$

$$b = -0.13$$

$$c = +0.05$$

48.0

2.0

+50°

4 47.2 4.5

15.9

47.0 21.6

30.0

46.9 47.0

43.9

47.0 8.4

58.0

46.7 29.5

13 17

12.0

13

41 46.9 51.0

209.8

29.97

46.95

-2

-2

13 16

27.97

13

40

44.95

1881. Dec. 19

$a = -0.28$

$b = -0.13$

$c = +0.06$

Ill. Men

C. N. 7.

 α Andromedae γ Pegasi

3.0 59.5

18.3 13.4

34.0 27.4

49.7 41.9

5.2 56.5

21.0 10.4

0 0 36.5 0 5 24.5

107.7 233.6

49.67 41.94

-2 -2

23 59 47.67 0 4 39.94

1851. Dec. 1920

$$a = -0.29$$

$$b = -0.13$$

$$c = +0.06$$

ell. Mil

O. N. 7.

x Virginis

41.4

59.5

18.5

27.4

41.5

55.5

9.4

252.2

27.46

-2

28.46

1851, Dec. 22

$$a = -0.30$$

$$b = -0.13$$

$$c = +0.06$$

D. W. M.

C. W. F.

 α Cassiopeae

+51° 43'

58.434.0

0 31 58.122.5

58.25

-2

0 30 56.25

1851, Su. 23

$$a = -0.31$$

$$b = -0.13$$

$$c = +0.07$$

J.L. Wm

C. W. T.

 β lecti α lecti

11.0

37.0

25.3

50.5

40.0

4.3

54.5

18.0

9.0

31.8

23.5

45.5

0 35 38.0 2

53 59.3

201.3

246.4

54.47

18.06

-2

-2

0 34 52.47 2

53 16.06

1851. Dec 23/24

$a = -0.31$

$b = -0.13$

$c = +0.07$

H. W. W.

C. N. 7.

 η Boobis

35.8

50.4

5.0

19.3

34.0

48.5

13 47 3.0

197.0

19.57

-2

13 46 17.57

1851. Dec. 29/25

$$a = -0.33$$

$$b = -0.13$$

$$c = +0.10$$

C. W. 7

E Bootis

J. H. M. H.

+27° 42' 11.5 46.5

11.3 55.8

11.3 11.4

11.5 27.0

11.4 42.4

14 37 11.1 57.5

11.35

-2

14 37 9.35

1851 Dec. 26

$a = -0.34$

$b = -0.13$

$c = +0.13$

11.3 *llh* *Mut*

C. N. T.

 β *beti* θ *beti*

57.0

27.0

11.5

41.0

26.0

54.9

40.5

9.0

54.9

23.0

9.5

36.8

35

24.0 /

15

50.5

223.4

2.2

40.48

8.89

-2

-2

34

38.48 /

15

6.89

1851. Dec. 26/27

$$a = -0.34$$

$$b = -0.13$$

$$c = +0.14$$

H. West

C. N. 7.

 γ Bootis α Bootis

22.0

38.0

36.4

51.4

50.8

7.3

5.5

21.8

19.8

36.5

34.5

50.9

13 46 48.5 14 8

5.5

217.5

211.4

5.36

21.63

-2

-2

13 46 3.36 14 7

19.63

1851. Dec 28/29

$a = -0.36$

$b = -0.13$

$e = +0.17$

C. M. F.

J. L. M. M.

 ϵ Bootis α^2 Librae α Herculis

		1.4			15.3			—
		16.9			30.0	+14°	34	9.9 41.5
		32.3			44.4			9.7 55.5
		48.8			58.5			9.4 9.4
		3.4			12.8			9.6 23.8
		19.0			27.0			9.6 38.0
14	37	34.4	14	41	41.2	17	6	9.9 52.4
		156.2			229.2			
		48.03			58.45			9.68
		-2			-2			-2
14	36	46.03	14	40	56.45	17	6	7.68

1851. Dec. 29

 $a = - 0.87$ $b = - 0.13$ $c = + 0.17$

Ill. Mer

C. N. 7.

5 Pegasi

" α Pegasi

" 27 Piscium

" 30 Piscium

" α Andromedae

21.3

39.4

23.0

39.1

56.7

35.6

53.7

37.0

53.2

12.2

49.6

7.5

50.6

6.9

27.9

3.5

22.0

4.4

20.7

43.4

17.1

36.1

18.2

34.6

58.6

31.2

50.5

32.0

48.2

14.4

22 82

45.1

22 56

4.5

23 49

45.1

23 53

2.1

23 59

30.0

203.4

214.0

210.5

204.8

243.2

23.4

153.7

30.7

146.8

303.2

3.34

22.00

4.36

20.68

43.32

0

0

0

0

0

22 32

3.34

22 55

22.00

23 49

4.36

23 52

20.68

23 58

43.32

1851phae.proj...81T

1851. Dec. 29

C. W. 7.

Ill. West

γ Pegasi			Moon TV			12 Ceti			13 Ceti			α Cassiopeae		
6.7		53.2			58.0			46.4			55.2			54.0
2.2		7.2			12.1			0.4			9.0			18.4
7.9		21.3			26.3			14.2			22.8			42.9
3.4		35.5			40.5			27.9			36.5			7.2
5.6		49.7			54.5			41.7			50.3			31.6
4.4		4.0			8.5			55.5			4.0			56.0
0	0	4	18.2	0	9	22.40	21	9.20	26	17.8	0	31	20.3	
2		189.1			222.4			195.3			195.6			230.4
2		249.1			282.3						255.6			50.4
32		35.59			40.34			27.90			36.51			7.20
		0			-0			0			-0			0
32	0	3	35.59	0	8	40.340	20	27.900	25	36.510	0	30	7.20	

1851. Dec. 29

$$a = -0.37$$

$$b = -0.13$$

$$c = +0.17$$

Jell. Mnt

C. W. 7

 β Ucti

2 Antis

24.8

4.8

39.2

19.8

53.8

34.5

8.5

49.4

22.9

4.4

37.2

19.4

0 34

51.7

1

57

34.1

238.1

166.4

58.1

346.4

8.30

49.49

0

0

0 34

8.30

1

56

49.49

1851 Dec. 29/30

all. West

O. W. 7

 α Virginis γ Bootis

-10°	23	-	+19°	9	55.5	26.5
42.0	28.0		55.5	41.0		
42.0	42.0		55.5	55.5		
41.4	55.4		55.4	10.0		
41.6	9.5		55.3	24.4		
13	16417	23.5	13	46	55.5	39.0

	41.74		55.47
	-2		-2
13	15	39.74	13
		45	53.47

1851. Dec. 30

C. W. T.

All. Mar

$a = -0.38$

$b = -0.13$

$c = +0.16$

C. W. T.		All. Mar		C. W. T.		All. Mar	
α Andromedae		γ Pegasi		η Beti		α Cassiopeae	
53.2		50.0		43.2		50.4	
9.5		4.4		57.1		18.0	-18 485.0 36.0
24.5		18.5		11.0		39.3	4.8 50.3
40.3		32.6		24.5		3.6	4.8 4.8
55.8		46.9		38.4		28.1	4.9 19.4
11.5		1.0		52.1		52.5	4.8 33.8
23 59 26.7 0 4	15.2 0 21	6.0 0 31	17.0 0 345.0 48.5 0				
221.5	168.6	232.3	205.9				
281.5	228.6	172.3	25.9				
40.21	32.66	24.61	3.70				
0	0	0	0				
23 58 40.21 0 3	32.66 0 20	24.61 0 30	3.70 0 34 4.88 0				

1811 Dec 30

Dec. 30

C. M. 7

Moon TV

58.5

12.6

26.2

40.2

54.0

8.2

21.9

221.8

281.6

40.21

0

40.21

1852 Jan. 1

$a = -0.38$

$b = -0.14$

$c = +0.16$

Ill. West

C. W. 7.
Polaris

θ' βeli

α Piscium

α Arctis

ξ' βeti

0	36	34.2	44.0	11.9	44.4	54.0	57.916.2
	45	31.9	57.8	+2° 3'	11.8 58.0	8.9 +8°	9' 57.930.2
	54	27.5	11.8	11.8	11.8	23.7	58.144.2
	3	20.6	25.8	11.5	25.3	38.52	2 58.258.2
	12	16.7	39.7	11.7	39.2	53.7	—
	21	10.0	53.41	52 11.8	53.0	8.4	—
1	30	3.71	15 7.3			1 57 23.2	—
	144.6		239.8			210.4	
			179.8			270.4	
	20.66		25.69		11.75	38.63	58.02
	-2		-0		0	0	0
21	18.661	14	25.691	52	11.751	56 38.63	2 2 58.02

1852 Jan. 1

C. W. 7

J. L. W. 10

1851phae.pro

	C. W. 7			" "			" "			" "			" "		
	Moon TV			845 B. A. C.			π Arietis			α Ceti			α Persei		
6.2			0.4			3.4			7.8			39.8			32.0
0.2			14.7			17.4			22.0			53.7			53.0
4.2			28.9			31.2			36.4			7.5			14.3
8.2			43.2			45.1			50.7			21.2			35.2
			57.3			59.0			5.2			34.9			56.2
			11.7			13.0			19.4			48.6			17.3
	2	26	25.7	2	35	26.9	2	39	33.6	2	53	2.53	12	38.2	
			181.9			196.0			175.1			208.2			246.2
			301.9			316.0			355.1			148.2			
0.2			43.13			45.13			50.73			21.17			35.17
			0			0			0			0			0
0.2	2	25	43.13	2	34	45.13	2	38	50.73	2	53	21.17	3	11	35.17

1851. Jan. 2

$a = -0.39$

$b = -0.14$

$c = +0.16$

All. Mut.

C. W. 7

α Arietis		π Arietis		α Ceti		α Persei		Moon TD		
50.5		4.2		36.5		28.6		37.7		
3.8		19.0		50.4		50.2		12.2		
20.5		33.2		4.3		11.2		26.3		
35.4		47.4		18.0		32.4		41.1		
50.5		2.0		31.9		53.4		55.8		
8.2		16.2		41.4		14.8		10.0		
1 57 20.0	2 39 30.3	2 52 59.3	3 12 35.4	3 15 24.2	3					3
187.9	152.3	245.8	226.0	227.3						
247.9	332.3	125.8								
35.41	47.47	17.97	32.29	41.04						
0	0	0	0	0						
1 56 35.41	2 38 47.47	2 52 17.97	3 11 32.29	3 14 41.04	3					3

1851 Jan. 2

C. M. 7

Ill. Men

 γ Tauri ϵ Tauri λ Tauri

41.9

—

32.1

57.0

+10 41 —

46.2

11.8

54.4 40.4

0.3

26.8

54.6 54.6

14.4

41.8

54.6 8.6

28.2

56.9

54.7 22.7

42.4

11.9

38 54.6 36.5 3 50

56.4

248.1

220.0

188.1

14.29

26.87

54.58

0

0

0

26.87

37 54.58 3 50

14.29

1852 Jan. 7/8

$$a = -0.38$$

$$b = -0.14$$

$$c = +0.16$$

J. L. M. W.

 ϵ^2 Librae ϵ Bootis

10.4

55.4

24.4

11.3

39.7

53.0

27.0

7.1

42.0

21.4

57.4

13.4

14 41 36.5 14 37 28.9

190.5

2 36.4

52.93

42.20

-2

-2

14 40 50.93 14 36 40.20

1852. Jan. 8.

$a = -0.88$

$b = -0.14$

$c = +0.66$

Ill. West

C. No. 7.

 α Andromedae γ Pegasi

8.5 5.0

24.0 19.4

39.8 33.5

55.4 48.0

10.8 2.1

26.5 16.4

42.0 0 6 30.5

207.0 154.9

55.29 47.84

-2 -2

53.290 5 45.84

1852. Jan. 13

$$a = -0.37$$

$$b = -0.14$$

$$c = +0.15$$

Ill. Mar

C. W. 7,

γ Pegori

α Pegori

89.0

48.5

13.4

10.0

27.5

31.4

41.8

52.4

56.0

13.4

10.0

34.3

0

6

24.4

3

14

55.8

232.1

245.8

41.73

52.26

-2

-2

0

5

39.73

3

13

50.26

1852. Jan. 13/14

Ill. Mr

C. W. T.
 β 'Scorpii'

7.0

21.0

36.0

51.0

5.5

19.8

15 57 34.5

174.8

50.68

-2

15 56 48.68

1852 Jan. 16/17

C. W. 7.

Ill. West

$a = -0.37$

$b = -0.14$

$c = +0.15$

 δ Ophiuchi α Scorpii

48.0

14.1 28.1

2.0

-26

6 13.9 43.4

15.8

lat

~~14.0~~

29.5

13.9 14.0

43.5

14.2 29.5

57.0

14.2 44.8

16

7

10.7

16

21 14.2 0.0

206.5

29.50

14.08

-2

-2

16

6

27.50

16

20

12.08

1852. Jan. 17

$a = -0.37$

$b = -0.14$

$c = +0.15$

Hll. West

C. M. 7.

 α Arietis

59.0

14.0

29.0

43.5

58.0

13.4

1 59 28.0

244.9

43.56

-2

1 58 41.56

1852. Jan. 19

C. W. 7.

H. W. 11

$$a = -0.36$$

$$b = -0.15$$

$$c = +0.15$$

x Arietis

" β Tauri

38.5

41.4

53.5

37.4

8.3

13.0

23.3

28.8

38.0

44.4

53.0

59.4

1 59 8.0 5 17 15.5

222.6

259.9

23.23

28.56

-2

-2

1 58 21.23 5 16 26.56

1852 Jan 19/20

Ill. Mass

C. N. T.
 β Librae" "
 α Cor. Br.

48.3

51.7

2.1

21.8

16.0

36.5

29.9

51.8

44.0

7.3

57.6

22.5

15 9

11.5 15

28

38.0

209.4

183.1

29.91

51.87

-2

-2

15 8

27.91 15

27

49.87

1852. Jan. 20

C. W. 7.

x Pusi

ell. Men

$a = -0.36$

$b = -0.15$

$c = +0.15$

7.5

28.5

49.4

10.4

31.7

52.5

3 14 13.5

193.5

10.50

-2

3 13 8.50

1852. Jan. 2/22

$$a = -0.35$$

$$b = -0.15$$

$$c = +0.14$$

ell. wave

C.N. 7.

 β Scorpii δ Ophiuchi

	0.2	16.5		3.9
-19	24599	30.8		17.8
	0.0	45.5		31.5
	0.0	0.0		45.4
	59.9	14.5		58.9
	59.9	29.0		12.8
15	56	—	16	6
				26.5
				196.8
	59.98			45.25
	-2			-2
15	55	57.98	16	5
				43.25

1852, Jan. 22.

$$a = -0.35$$

$$b = -0.14$$

$$c = +0.14$$

Sel. Min

C. W. 7.

θ' Ceti

3.0

17.4

31.0

45.0

59.0

13.0

1 16 26.9

195.3

45.04

-2

1 15 43.04

1882 Jan. 23

$$a = -0.35$$

$$b = -0.15$$

$$c = +0.14$$

C. M. 7

Jel. Mer

Polaris

γ' Eridani

0	37	30.5		25.5
	46	31.6		39.4
	55	23.7		53.4
	4	20.0		7.8
	13	11.5		22.0
	22	5.0		36.0
1	31	3.4	3	50.0
		125.5		234.1
		17.93		7.73
		-2		-2
1	4	15.933	50	5.73

1852. Jan. 23/4

$$a = -0.35$$

$$b = -0.15$$

$$c = +0.14$$

Ill. Wm

C. W. 7.

Huculis

4.9

19.0

33.3

47.5

1.8

16.0

30.0

152.5

47.50

-2

45.50

1852 Jan 24.

$a = -0.35$

$b = -0.15$

$c = +0.14$

Ill. Wnt

C. W. T.

7 Jani

48.5

3.4

19.0

33.6

48.5

4.0

3

38

19.5

175.5

33.64

2

3

37

31.64

1852 Jan. 26/27

$a = -0.35$

$b = -0.15$

$c = +0.14$

ell. int

Q. M. 7.

 β Scorpii

40.9

56.0

10.2

24.5

39.3

53.1

15 56 8.2

232.6

24.66

-2

15 55 22.66

1852. Jan. 27

$a = -0.35$

$b = -0.15$

$c = +0.14$

Ill. mu

C. N. 7.

α Cassiopeiæ	"	β beti	"	δ beti	"	20' beti	"	"	Moon TV
4.5		36.1		5.7		55.4			—
28.9		50.4		20.0		9.2	+3 9		—
53.1		4.8		33.6		22.9		21.4	7.4
17.6		19.4		47.4		36.7		21.5	21.5
42.0		34.0		1.4		30.4		21.6	35.6
6.4		48.4		15.4		4.1		21.5	49.5
0 29 30.5	0	33 3.4	1	13 29.2	0	42 17.8	1	19 21.6	3.6
183.0		196.5		152.7		196.5			
123.0		136.5		332.7		256.5			
17.57		19.49		47.53		36.64			
0		0		0		-0			
0 28 17.57	0	32 19.49	1	12 47.53	0	41 36.64	1	18	21.52

1852, Jan. 27.

$a = -0.35$

$b = -0.15$

$c = +0.14$

J. H. M. W.

C. W. 7

Pisces

Arietis

3.1 15.3

17.4 20.6

31.0 41.3

45.0 0.3

59.0 15.0

13.0 30.0

1 34 26.7 1 55 45.0

195.2 181.5

315.2 1.5

45.03 0.21

0 0

1 33 45.03 1 55 0.21

1852 Jan. 29

$a = -0.35$

$b = -0.14$

$c = +0.14$

wt. 100. mra

5. W

C. M. 7.

 α Tauri δ Ucti α Auctis ξ^2 Ucti

845 B. A. C.

185

		6.0		59.5		8.9		39.3		18.1				
		20.5		13.2		24.0		53.3		32.2				
		14.8		27.0		38.8		7.0		46.1				
		49.0		40.8		53.7		21.0		59.9				
		3.4		54.6		8.6		57.7		14.0				
		17.6		8.6		23.6		48.6		27.7				
4	26	22.01	13	22.51	55	68.0	2	17	2.4	2	33	41.8		
		163.3		226.2		195.5		208.3		239.6				
		343.3		286.2		375.5		149.3		419.8				
		49.04		40.89		53.64		21.33		59.97				
		-2		0		0		0		0				
4	25	47.04	1	12	40.89	1	54	53.64	2	16	21.18	2	32	59.97

1852. Jan. 29

$a = -0.35$

$b = -0.14$

$c = +0.14$

Ill. Wm

G. N. 7.

Moon TV

S Arietis

α Pauri

17 Tauri

17.0

30.0

50.1 46.8

22.8

31.4

44.7

+49

20

—

39.0

45.5

59.2

—

54.0

0.0

13.7

50.2 50.3

8.9

14.4

28.1

50.4 11.5

24.0

28.6

42.7

50.3 32.1

39.1

42.8

2 59

57.4

50.5 53.6

3

32

53.5

179.7

275.9

242.3

0.3

95.9

62.3

59.96

13.70

50.30

8.90

0

-0

-2

-0

59.96

2 59

13.70

48.30

3

32

8.90

1852. Feb. 2

$$a = -0.34$$

$$b = -0.13$$

$$c = +0.14$$

ell. west

C. N. 7

 α Andromedae

0.3

15.9

61.4

47.0

2.5

18.0

23 59 33.5

148.6

46.94

-2

23 58 44.94

1852. Feb. 3

$a = -0.34$

$b = -0.13$

$c = +0.14$

J. C. W. M.

C. W. 7

Andromedae

 γ Pegasi

53.0

5.3

8.7

19.5

24.5

33.6

39.7

47.8

55.5

2.0

11.0

16.3

23

59

26.70

7

30.5

19

219.1

155.0

39.87

47.86

-2

-2

23

58

37.870

6

45.86

19

1852 Feb. $\frac{4}{5}$

$$a = -0.34$$

$$b = -0.13$$

$$c = +0.14$$

Ill. W. no

C. W. 7

 γ Aquilae α Aquilae

11.9

32.4

25.8

46.3

39.7

0.2

53.5

14.2

7.5

28.0

21.4

42.0

19 36

35.3

19

40

55.7

195.1

218.8

53.59

14.11

-2

-2

19 35

51.59

19

40

12.11

1852. Feb. 5

C. W. T.

Ill. West

$a = 0.34$

$b = -0.13$

$c = +0.14$

 γ beti

45.5

59.5

13.2

27.0

40.8

54.5

2 33 13.4

253.9

27.70

-2

2 32 25.70

1852 Feb. 5/6

C. N. 7.

 γ Draconis

49.6

12.0

34.0

56.1

18.0

40.0

17 54 2.0

211.7

55.96

-2

17 52 53.96

111.71

1852. Feb. 6/7

$$a = -0.34$$

$$b = -0.13$$

$$c = +0.14$$

J. L. K. M.

E. P. B.

 β Draconis

42.0

5.8

28.0

50.8

12.3

35.7

58.3

233.9

50.56

-2

48.56

1892. Feb. 9

$a = -0.33$

$b = -0.12$

$c = +0.14$

Ill. West

O. N. T.

 μ Geminox α Arietis

19.0

7.4

34.0

22.4

48.7

37.3

3.5

52.0

18.4

7.0

33.5

21.8

6 13 48.31

58

36.6

205.4

184.5

3.63

52.07

-2

-2

6 13 1.631

57

50.07

1852, Feb. 9/10

$a = -0.33$

$b = -0.12$

$c = +0.14$

Ill. West

C. W. T.

 γ Draconis

47.0

9.4

31.5

53.6

15.6

37.5

59.5

253.1

53.30

-2

51.30

1852. Feb. 11/12

$a = -0.33$

$b = -0.11$

$c = +0.14$

Ill. West

C. W. J

 α Aquilae

34.8

48.9

2.6

16.5

30.4

44.3

19 43 58.0

235.5

16.50

-2

19 43 14.50

1852 Feb. 12

C. M. 7

 β Orionis ϵ Orionis

all. mst

$$a = -0.32$$

$$b = -0.11$$

$$c = +0.14$$

55.8

11.0

9.9

25.0

23.2

39.0

37.1

52.8

51.2

6.5

4.6

20.2

5 24 18.2 5 26 33.7

200.0 188.2

37.14 52.60

-2 -2

5 23 35.14 5 27 50.60

1852 Feb. 12/13

Ill. M. M.

C. N. 7.
γ Draconis

46.1

9.4

30.5

52.6

14.5

36.5

17 53 58.2

246.8

52.40

-2

17 52 50.40

1852. Feb. 13

$$a = -0.32$$

$$b = -0.11$$

$$c = +0.14$$

Stb. Wdr

Canis Maj

0 1 21.738.6
-16 3 121.653.0

21.3 7.0

21.7 21.7

21.4 35.8

6 38 21.3 50.0
—

21.50

-2

6 38 19.50

1852 Feb. 14

$a = -0.32$

$b = -0.11$

$c = +0.14$

Ill. West

 α Pumi

G.P.B.

 β Tauri

O. N. T.		"		"		"		"	
γ beti		α beti		α Pumi		α Canis Maj		β Tauri	
	38.4		33.3		25.0		36.5		48.5
	52.3		47.0		46.1		51.5		4.5
	6.1		0.7		7.0		5.5		20.0
	20.0		14.5		24.3		19.8		35.6
	33.7		28.2		49.5		34.0		51.2
	47.5		42.0		10.4		48.5		6.8
2	37	2	58	3	15	6	40	5	18
	1.2		55.9		31.5		3.0		22.4
	199.2		221.6		197.8		198.8		189.0
	19.88		14.51		28.26		19.83		35.57
	-2		-2		-2		-2		-2
2	36	2	55	3	14	6	39	5	17
	17.88		12.51		26.26		17.83		33.57

1852 Feb. 15

Ill. Met

$$a = -0.32$$

$$b = -0.11$$

$$c = +0.14$$

C. W. J.

Canis Maj

" B Tami

36.5

48.5

51.5

4.5

5.5

26.0

19.8

35.6

34.0

51.2

48.5

6.6

6 40 3.05 18 22.4

198.8 189.0

19.83

35.57

-2

-2

6 39 17.835 17 33.57

1851phae.proj...81T

1852 Feb 16

$a = -0.32$

$b = -0.10$

$c = +0.14$

"

Ill. Met?

C. M. 7

α Persei

α Canis Maj

20.0

32.0

41.0

46.5

1.8

0.8

23.0

15.0

44.0

29.4

5.1

43.5

3

15

26.4

6

39

58.0

161.3

22.83

23.04

15.04

-2

-2

3

14

21.04

6

39

13.04

1892. Feb. 19/7

$$a = - 0.32$$

$$b = - 0.10$$

$$c = + 0.14$$

All. East

C.M. 7,

x Lyrae

36.9

54.5

12.3

30.0

47.1

4.4

18 33 23.0

208.6

29.80

2

18 32 27.80

1852. Feb. 17

$$a = -0.31$$

$$b = -0.10$$

$$c = -0.15$$

Ill. East

C. M. 7.

 γ beti α beti

31.0

25.8

44.8

39.4

58.5

53.0

12.2

6.8

26.0

20.6

39.7

34.3

2

36

53.5

2

55

48.2

265.7

228.1

12.24

6.87

-2

-2

2

36

10.24

2

55

4.87

1852, Feb. 18

$$a = -0.31$$

$$b = -0.09$$

$$e = -0.15$$

C. N. 7.

Ill. East-

z leti

2 lecti

"
α Orionis

+2 37

9.3 23.0

9.5 37.0

2 36 9.4 50.8 2

9.40

- 2.

2 36 7.40 2

22.8

36.8

50.4

4.0

17.8

31.5

45.3 5

208.6

4.08

-2

55 2.085

0.0

13.8

28.0

41.5

55.5

9.2

23.0

171.0

41.57

-2

47 39.57

1852. Feb. 18/19

 $a = -0.31$
 $b = -0.09$
 $c = -0.15$

M. Barn

C. N. 7.

 α Aquilae γ beti

20.4

34.3

48.3

2.1

16.0

29.8

19 44 43.9

194.8

2.11

-2

19 44 0.11

1852, Feb. 19

$a = -0.31$
 $b = -0.09$
 $c = +0.15$

Hel. East

C. M. J.

γ beti	α beti	
		20.0
+2° 37.9	39.4	33.6
6.6	52.8	47.4
6.5	6.5	1.0
6.7	20.4	14.8
6.6	34.1	28.5
2 36.6	48.02	55 42.4
		187.7
	6.65	1.10
	-2	2
2 36	4.65	2 54 9.10

13

14

Feb. 19/20. 1852

$$a = -0.31$$

$$b = -0.09$$

$$c = -0.15$$

Ill. Carr.

C. W. 7

 β Lyrae

12.4

28.8

45.0

1.3

18.0

34.3

18 45 51.0

189.8

1.40

-2

18 44 59.40

1852. Feb. 20

$$a = -0.30$$

$$b = -0.09$$

$$e = -0.15$$

Ill. East

C. W. 7.

y beti

20.5

34.7

48.4

2.5

16.2

30.0

2 36 43.6

195.9

2.27

-2

2 36 0.27

1852. Feb. 26/24

East

Jll. Mist

C. M. T.

 α Lyrae

24.0

41.8

59.5

17.0

34.5

52.3

18 32 9.9

237.0

17.00

-2

18 32 15.00

1852, Feb. 27/23

$$a = -0.31$$

$$b = -0.09$$

$$c = -0.16$$

Ill. East

C. W. 7.

x by qni

40.9

0.2

19.4

38.9

38.3

17.5

20 37 37.0

212.2

38.88

-2

20 36 36.88

1852. Feb. 23/24

$a = -0.31$

$b = -0.09$

$c = -0.16$

All. E. ant.

C. N. 5

 α Cygni

37.1 89.2

+44 43 37.3 58.6

37.3 17.9

37.3 87.2

37.2 56.5

—

20 37 37.6 35.6

37.30

-2

20 36 35.30

1851phae.proj...811