

KG
11365
80

B.9

No. 9.

Reduction of Transits
Sept. 4. 1851. to Nov. 11. 1851

Sold by T. Groom & Co., Stationers, India Building, 82 State St., Boston.

KG 11365,80



KG-11365,80



851. Sept. 4.

C. N. T.

Ill. East

1851phae

Polaris S.P.			γ Uls Maj		α Bootis		ε Bootis		γ Bootis						
1	39	32.658.0		49.8		23.3		57.5		7.0					
88	30	50.1		10.4		37.7		12.8		21.4					
	56	30.640.0		32.5		52.5		28.3		36.0					
	5	36.838.5		54.0		7.0		44.0		50.2					
		—		15.5		21.5		59.2		5.0					
	23	33.614.0		36.7		36.4		14.9		19.5					
13	32	34.64.5	13	41	58.0	14	8	51.0	14	38	30.5	13	47	34.0	14
				256.9		229.4		247.2		173.1					
		33.68		53.84		7.06		43.88		50.44					
		-2		-2		2		2		-2					
13	5	31.68	13	40	51.84	14	8	5.06	14	37	41.88	13	46	48.44	14

1851. Sept. 4

$a = + 0.08$

$b = + 0.11$

$c = 0.00$

Ill. East

C. N. 7		"		"		"		"	
α Librae		β Urs Min		α Serpentis		α Hirculi		β Draconis	
10.4		47.0		30.0		24.9		10.3	
25.7		39.0		43.8		39.0		34.5	
40.0		31.0		37.5		53.0		57.0	
54.1		23.1		11.4		7.1		19.5	
8.4		15.3		25.3		21.5		42.0	
22.6		7.5		39.0		35.5		4.5	
14 42 37.0	14 53 0.3	15 36 53.0	17 7 49.8	17 27 27.3					
198.2	163.2	260.0	230.8	195.1					
54.03	23.31	11.43	7.26	19.30					
-2	-2	-2	-2	-2					
14 41 52.03	14 50 21.31	15 36 9.43	17 7 5.26	17 26 17.30					

1851. Sept. 4

$a = +0.08$

$b = +0.11$

$c = 0.00$

C. N. 7

Ill. East

γ Draconis	5 Aquilae	S Aquilae	γ Aquilae	α Aquilae
—	8.0	34.5	45.4	6.0
+3.1 30	22.0	48.4	59.4	19.7
24.6 2.5	36.4	2.0	13.4	33.5
25.0 24.9	50.2	16.0	27.3	47.5
24.5 46.5	4.5	29.5	41.2	1.4
24.4 8.5	18.5	43.0	55.0	15.4
17 5325231.5	16 58 33.0	19 17 57.0	19 39 9.0	19 43 29.3
	172.6	230.4	250.7	152.8
24.74	50.37	15.77	27.24	47.54
-2	-2	-2	-2	-2
17 52 22.74	18 57 48.37	19 17 18.77	19 38 25.24	19 42 41.54

1851. Sept. 4

$a = +0.11$

$b = +0.10$

$c = +0.05$

C.N.7		M. East		M. West					
β Aquilae		α^3 Capricorn		α Cygni		61' Cygni		5' Cygni	
0		34.9		22.0		38.6 40.5		38.2	5.0
7		48.6		36.0	~~48.6~~ 45	38.6 0.0		55.7	21.3
5		2.8		50.0		38.3 19.0		13.2	37.2
5		16.5		3.9		—		30.8	52.5
4		30.4		18.0		38.6 58.0		48.1	8.5
		44.2		32.0		38.8 17.5		5.7	24.4
3	19 47	58.0	20 9	46.3	20 36	38.6 36.1	21 0	23.2	21 6 40.2
5		235.4		208.2				214.9	189.1
4		16.48		4.03		38.58		30.70	52.73
		-2		2		-2		-2	-2
4	19 47	14.48	20 9	2.03	20 35	36.58	20 59	28.70	21 5 50.73

1851. Sept. 4/5

$a = +0.11$

$b = +0.10$

$c = +0.05$

C. D. P.		W. C. B.		Ill. West C. W. T.		"		"	
β Tauri		ϵ Orionis		α Canis Maj		α^2 Gemino		α Canis Min	
	21.1		13.2		6.9		31.2		3.4
	36.8		26.9		21.0		47.5		17.2
	52.4		40.9		35.4		3.6		30.9
	8.0		54.4		49.8		20.0		44.8
	23.8		8.2		4.0		36.0		58.5
	39.2		22.0		18.3		52.4		12.3
5 16	54.8	5 28	35.7	6 38	32.4	7 25	8.4	7 31	26.1
	236.1		201.3		167.8		199.1		193.2
	8.01		54.47		49.68		19.87		44.74
	-2		-2		-2		-2		-2
5 16	6.01	5 27	52.47	6 37	47.68	7 24	17.87	7 30	42.74

1851. Sept. 4/5

Ill. West

2 57

C. M. 7

 β Gemino

2 Uls. Maj

2 Leonis

4		39.2		11.0		57.5	
2		55.0		31.5		12.0	
9		10.5		52.1		26.0	
8		26.1		13.0		40.0	
5		41.7		34.0		54.0	
3		57.3		54.5		8.3	
1	7 36	13.0	8 49	15.5	10 0	22.1	
2		242.8		211.6		219.9	
74		26.11		13.09		39.99	
		-2		-2		-2	
74	7 35	24.11	8 48	11.09	9 59	37.99	

1851. Sept. 5

$$\begin{aligned} a &= +0.11 \\ b &= +0.10 \\ c &= +0.05 \end{aligned}$$

Ill. West

C. N. 7.

14

卷一

24

11

Polaris S. P.

& Virginis

y Mrs Maj

2 Bootis

ⁿ
3 Librae

38	54.0			53.4			49.0			6.0			32.5
47	44.5			7.5			10.5			20.4			46.5
56	37.0			21.3			32.0			35.0			0.4
5	19.5			35.2			53.1			49.0			14.5
14	10.5			49.0			14.4			4.0			28.2
23	1.5			2.9			36.0			19.5			42.0
31	52.0	13	17	17.0	13	41	57.4	13	47	33.1	15	8	56.0
	219.0			186.3			252.4			167.0			220.1

22.71	35.19	53.20	49.57	14.30
-2	-2	-2	-2	-2

20.74 13 16 33.19 13 40 51.20 13 46 47.57 15 8 12.30

1851 Sept. 5

C.M.V.			Alt. West		
α Lupentis			β Draconis		
		28.9		11.0	17.0
		43.0		33.5	39.4
		56.9		56.0	1.5
		10.5		18.4	23.4
		24.3		41.1	45.5
		38.1		3.5	7.4
15	36	52.0	17	27	26.0
		253.7			189.5
					163.7
30		10.53			18.50
		2			-2
15	36	8.53	17	26	16.50
					52
					21.39

1851. Sept 5/6

$a = +0.11$

$b = +0.10$

$c = +0.06$

Ill. Mer

1851phae.p

C. W. 7.		"		"		"		"									
2 Tauri		2 Aquilae		3 Tauri		8 Orionis		8 Orionis									
	54.0		57.0		20.0		—		12.0								
	8.4		17.0		36.0	-0° 25'	38.0 10.1		25.9								
	22.8		36.3		51.1		37.9 24.2		39.5								
	37.0		56.0		7.1		38.0 38.0		53.5								
	51.4		15.9		22.6		37.9 51.7		7.2								
	5.5		31.5		38.2		37.8 5.3		21.2								
4	27	20.0	5	5	51.0	5	16	53.8	5	24	37.8	19.0	5	28	34.6	19	
		199.1			272.7			229.2				129.7				193.9	
		37.01			56.10			7.03				37.90				53.41	
		-2			-2			-2				-2				-2	
4	26	35.01	5	4	54.10	5	16	5.03	5	23	35.90	5	27	51.41	19		

Sept. 6, 1851.

$a = +0.11$

$b = +0.10$

$c = +0.06$

Ill. West

C. W. 7		"		"		"		"			
β Aquilae		α^2 Capricorn		β Capricorn		γ Capricorn		Moon TV			
	32.0		18.5		—		47.6 4.0		18.0		
	46.0		32.9	-15° 15'	—	-18° 40'	48.0 19.0		33.0		
	59.6		47.0		—		47.9 33.4		48.1		
	13.5		1.0	52.0 52.0			48.0 48.0		3.0		
	27.4		15.0	52.7 6.4	20	31 18.0	2.5		18.0		
	41.0		29.0	52.0 20.5			—		33.0		
19	47	55.0	20 9	43.2	52.4 35.0		—	20	32	48.0	
	274.5		186.6							201.1	
	94.5		6.6							21.1	
	13.50		0.94		52.12		47.9 0			3.01	
	2		-2		-2		-2.			-2	
19	47	11.50	20 8	58.94	50.12	20	30	45.90	20	32	1.01

1851. Sept. 6

 $a = +0.11$
 $b = +0.10$
 $c = +0.06$

C. N. 2

Ill. West

ψ Capricor		61' Cygni		5 Cygni		β Aquarii		2 Pegasi	
	44.6		35.5		2.5		57.5 16.0		24.4
	59.6		53.0		18.4	-6° 13	57.1 29.5		38.5
	15.5		10.5		34.2		57.6 43.8		52.5
	30.5		28.0		50.0		57.0 57.0		6.1
	45.5		45.4		6.0		56.7 10.5		20.0
	1.0		2.5		21.5		—		34.0
20 37	16.3 21	0	20.0 21	6	37.3 21	2356.1	37.5 21	36	47.8 4
	213.0		194.9		169.9				223.3
					349.9				43.3
	30.43		27.84		49.98		57.00		6.18
	-2		-2		-2		-2		2
20 36	28.43 20	59	25.84 21	5	47.98 21	22	55.00 21	36	4.18 4

1851. Sept. 7/8

$a = +0.13$

$b = +0.10$

$c = +0.03$

C. W. 7		" "		Idl. West		" "		" "		" "	
α Tauri		α Aurigae		β Tauri		δ Orionis		ϵ Orionis			
4.4	50.4		53.0		16.1		52.9		8.4		
5.5	4.5		12.9		32.0		6.5		72.0		
2.5	19.0		32.5		47.5		20.2		35.7		
1	33.4		52.1		3.4		34.0		49.5		
0	47.6		12.0		19.0		47.7		3.0		
0	2.0		31.5		34.5		1.5		16.8		
7.8	4 27 16.0	5 5 51.3	5 16 50.0	5 24 15.1	5 28 30.5						
3.3	172.9	245.3	202.5	177.9	165.9						
18	33.27	52.19	3.21	23.98	49.41						
	-2	-2	-2	-2	-2						
18	4 26 31.27	5 4 50.19	5 16 1.21	5 23 21.98	5 27 47.41						

1851. Sept. 8

$a = + 0.14$

$b = + 0.10$

$c = + 0.02$

Ill. West

G. W. 7.

 α Herculis

"

 α Ophiuchi

18.2

28.5

32.4

42.8

46.5

56.6

0.8

10.8

15.0

24.9

29.2

39.0

17 7

43.3

17

27

53.0

165.4

255.6

0.77

10.80

2

2

17 6

58.77

17

27

8.80

1851. Sept 8/9

$a = +0.14$

$b = +0.10$

$c = +0.02$

C.M. 7

Ill. Wre

 α Aurigae β Orionis γ Orionis δ Orionis

51.4

10.3

37.0

50.7

10.4

30.1

5 5 49.2 5

238.1

50.44

-2

5 4 48.44 5

-0° 25'

32.6 18.9

32.5 32.5

32.4 46.2

32.5 0.0

2432.3 13.5 5

32.47

-2

23 30.47 5

-1° 18' 47.9 20.4

47.9 34.2

48.0 48.0

48.0 1.8

48.0 18.5

2847.8 29.0 5

47.93

-2

27 45.93 5

33.5

47.5

1.4

18.0

29.0

42.7

5 46 56.5

225.6

15.09

-2

46 13.09

1851. Sept. 9

$$a = +0.14$$

$$b = +0.10$$

$$c = +0.02$$

Ill. West

C. W. T.

α Ophiuchi

27.5

41.5

55.4

9.8

24.0

37.9

17 27 52.0

248.1

9.73

-2

17 27 7.73

1851. Sept 9/10

$$a = + 0.64$$

$$b = + 0.10$$

$$c = + 0.02$$

Ill. West

C. W. 7

2 Canis Maj

58.9

13.6

27.9

42.0

56.4

10.8

6 38 25.2

234.8

42.11

2

6 37 40.11

1851, Sept. 10

$$a = + 0.14$$

$$b = + 0.10$$

$$c = + 0.02$$

Ill. Mut

C. N. 7

α Ophiuchi

26.3

40.4

54.5

8.7

22.7

36.8

50.6

240.0

8.57

- 2

6.57

1851 Sept. 10/11

$a = +0.14$

$b = +0.10$

$c = +0.03$

H. West

C. W. 7,

 α Canis Maj α Canis Min β Gemini

58.0

54.8

—

12.4

8.5

+28°

23

17.7

46.5

26.9

22.4

17.6

2.0

41.3

36.3

17.5

17.5

53.5

50.0

17.7

33.3

9.8

3.8

17.4

48.6

6 38

24.0

17

31

17.6

7

36

17.7

4.5

227.9

193.4

41.13

36.20

17.60

-2

-2

-2

6 37

39.13

7

30

34.20

7

35

15.60

1851. Sept. 11

$a = + 0.15$

$b = + 0.10$

$c = + 0.03$

c. n. 7

Oct. West

 β Lyrae δ Aquilae γ Aquilae α Aquilae β Aquilae

51.4

~~57.5~~

34.9

53.9

24.4

7.8

~~11.8~~

48.9

9.4

38.3

24.4

25.3

2.8

23.3

52.3

40.7

40.0

16.7

37.0

6.0

57.5

54.0

30.8

51.0

19.8

13.8

8.2

44.8

4.9

33.6

18 44

30.1

18

58

22.4

19

38

58.6

19

43

18.9

19

47

47.5

17

221.7

219.2

237.5

200.4

221.9

40.81

39.88

16.78

37.20

5.98

-2

2

-2

-2

-2

18 43

38.81

18

57

37.88

19

38

14.78

19

42

33.20

19

47

3.98

17

1851. Sept. 12

$a = +0.15$

$b = +0.10$

$c = +0.03$

C.M.7

All West

		β Draconis	γ Draconis	5 Aquilae	α Aquilae
4		2.0	7.0	56.4	54.5
3		24.5	29.0	10.7	8.6
3		46.0	51.2	24.8	22.5
0		8.5	13.4	39.0	36.3
8		31.0	35.5	53.1	50.1
6		53.5	57.5	7.3	4.0
5	17 27	16.0	19.5	21.5	17.9
9		181.5	213.1	212.8	193.9
8		8.78	13.30	38.97	36.27
	2		-2	-2	-2
8	17 26	6.78	11.30	36.97	34.27

1851. Sept. 12/13

$$a = +0.15$$

$$b = +0.10$$

$$c = +0.03$$

C. W. 7.

Ill. West-

Orionis		2 Gemino		Canis Min		3 Gemino	
			20.3		52.3		28.4
+7	22 10.7 43.0		36.5		6.2		44.0
	10.9 57.0		52.9		20.0		59.7
	10.9 10.9		9.0		33.9		15.3
	10.8 24.7		25.3		47.7		30.9
	10.8 38.5		41.4		1.4		46.5
5	46 10.8 52.3	7 24	57.6	7 31	15.3	7 36	2.0
			243.0		176.8		226.8
	10.82		9.00		33.83		15.25
	-2		-2		-2		-2
5	46 8.82	7 24	7.00	7 30	31.83	7 35	13.25

1851. Sept. 14/5

$a = +0.07$

$b = +0.14$

$c = +0.03$

alt. wt.

C. M. 7			" "			" "			" "			" "		
α Canis Maj			α Canis Min			β Geminor			β Geminor			α Leonis		
56.8			53.4			53.4			29.4					
11.2			7.4			7.4			45.3	+12	42	30.5	2.4	
25.8			21.3			21.3			1.0			30.5	16.4	
40.0			35.1			35.1			16.4			30.3	30.3	
54.4			49.0			49.0			32.0			30.3	44.4	
8.8			2.9			2.9			47.7			30.1	58.3	
6 38 23.0	7	31 16.6				16.6	7	36 3.410				0 30.0	12.2	
220.0			185.7			245.7			175.2					
40.00			35.10			35.10			16.46				30.28	
2			-2			-2			-2				-2	
6 37 38.00	7	30 33.10				33.10	7	35 14.46	9	59			28.28	

1851. Sept. 15

C. W. 7.

Ill. West

$a = +0.00$

$b = +0.16$

$c = +0.02$

<i>Thuculis</i>	β Draconis	γ Draconis	β Lyrae
14.5	1.5	8.0	51.5
28.7	24.4	30.3	7.9
42.9	46.6	52.0	24.4
57.2	9.4	14.1	41.0
11.4	31.9	36.4	57.3
25.5	54.4	58.5	13.8
17 39.6	17 27 16.9	17 53. 20.4	18 44 29.9
219.8	185.1	219.7	225.8
57.11	9.30	14.24	40.83
-2	2	-2	-2
17 6 55.11	17 26 7.30	17 52 12.24	18 43 38.83

1851 Sept. 15/16

$a = 0.00$

$b = +0.16$

$c = 0.00$

Ill. West

C. M. 7		o Tauri		5 Tauri		y Pauri		Moon T T O						
α Pauri														
47.0		13.5		4.1		0.4		27.5						
8.4		27.4		18.2		18.4		42.1						
29.2		41.1		32.3		30.3		56.8						
50.4		54.9		46.2		45.0		11.0						
11.5		9.0		0.2		0.0		25.3						
32.4		23.0		14.3		15.2		40.4						
3	13	53.7	3	76	38.2	3	22	28.6	3	38	30.1	3	43	54.7
232.6		205.7		143.8		136.4		257.8						
352.6		385.7		323.9		316.4		77.8						
50.37		55.10		46.26		45.20		11.11						
-2		-2		-2		-2		-2						
3	12	48.37	3	15	53.10	3	11	44.26	3	37	43.20	3	43	9.11

1851. Sept. 15/16

$a = 0.00$

$b = +0.16$

$c = 0.00$

C. W. J.		M. W. J.		R. F. B.		C. W. J.	
Tauri		Tauri		Urs. Min.		Auriga	
43.3		54.4		46.5		55.26.720.0	49.0
57.7		9.0		0.8	82 16	57 25.4 1.5	9.0
11.8		23.2		15.2		58 25.043.0	28.6
26.0		37.5		29.5		0 25.225.5	48.4
40.3		52.0		43.8	5	2 25.8 6.9	8.0
54.5		6.3		58.2		—	27.5
4 11 8.8	4 15	20.7	4 27	12.3		—	5 5 47.4
242.4		203.1		206.3			217.9
182.4		213.1					337.1
26.05		37.58		29.47		25.62	48.27
-2		-2		-2		-2	-2
4 10 24.05	4 14	35.58	4 26	27.47	5 0	23.62	5 4 46.27

1857. Sept. 15/16

1851phae.proj.

C. n. T.				Ill. West							
β Tauri				δ Orionis		ϵ Leporis		ϵ Orionis		α Orionis	
2.0			11.4		48.9		—		3.3		—
7.0			27.5		2.8	-17	56 15.8 47.		17.7	+7	22 —
6.6			43.0		16.6		15.8 1.4		31.5		12.6 58.8
5.4			58.8		30.0		16.2 16.0		45.0		12.6 12.6
0			14.4		43.8		15.9 30.4		59.0		12.6 26.5
5			30.0		57.6		15.8 44.7		12.9		12.7 40.4
4	5	16	45.4	5	24	11.2	5 25 15.9 59.1	5	28	26.5	5 46 12.7 54.2
9			230.5		210.9				195.9		
1			418.5						315.9		
27			58.64		80.13		15.87		45.13		12.64
			-2		-2		-2		-2		-2
7	5	15	56.64	6	23	28.13	5 25 13.87	5	27	43.13	5 46 10.64

1851phae. pr. 807

1851, Sept. 15/16

$a = 0.00$
 $b = +0.16$

$a = 0.00$

$b = +0.16$

$c = -0.05$

W.C.B.

all. East

all. West

α Gemino			β Gemino		
		22.2			30.5
		38.5			46.2
		54.7			1.5
		11.0			17.0
		27.3			33.2
		43.5			48.6
7	24	59.6	7	36	4.5
		256.6			181.5
		16.8			121.5
		10.97			17.36
		-2			-2
7	24	8.97	7	35	15.36

14

14

1851 Sept. 16

$a = -0.03$

$b = +0.20$

$c = -0.06$

Ill. ~~East~~

W. C. B.		C. W. B.	
β Uls Min		α Cor. Bot.	
47	36.0	41.0	
48	28.3	57.0	
49	20.5	12.5	
50	12.8	27.7	
51	5.0	43.5	
51	57.2	58.7	
14	52	49.7	15 28 14.3
	189.5	254.7	
	12.80	27.81	
	2	2	
14	50	10.80	15 27 25.81

1851. Sept 16/7

$a = -0.03$

$b = +0.19$

$c = -0.05$

Ill. E art.

C. n. 7.

 ϵ Leonis

+24. 27 28.6 58.4

2.5 28.4 13.3

1.5 28.5 28.5

1.5 28.4 43.5

1.5 28.4 58.5

9 27 28.5 13.8

28.47

-2

9 36 26.47

1887. Sept. 17

$$a = -0.04$$

$$b = +0.19$$

$$c = -0.05$$

$$a = -0.04$$

$$b = +0.19$$

$$c = -0.04$$

C. W. 7.

Ill. Ear

Ill. West

α Virginis	Polaris S.P.	α Scorpii	α Herculis	α Ophiuchi
—	38 54.0	37.3	14.9	25.0
-10° 23' —	47 47.5	52.4	28.9	39.1
26.2 12.2	56 34.4	7.5	43.0	53.3
26.0 26.0	5 29.5	23.0	57.3	7.4
26.2 40.2	14 17.0	38.3	11.5	21.5
26.1 54.0	23 6.4	53.3	28.6	35.6
13 17 26.1 8.0 13	31 58.2 16 20	8.9 17 7	39.9 17 27	49.6
	247.0	220.9	221.1	231.5
26.12	26.71	22.98	57.30	7.36
-2	-2	-2	-2	-2
13 16 24.12 13	5 24.71 16 19	20.98 17 6	58.30 17 27	5.36

1851. Sept. 17/18

$a = -0.04$

$b = +0.19$

$c = +0.04$

M. West

C. W. 7.		"		M. West	
α^2 Gemino		α Canis Min.		β Gemino	
22.7		54.8		31.0	
38.9		8.7		46.4	
53.2		22.5		1.9	
11.5		36.1		17.7	
27.6		52.0		33.4	
43.9		3.9		49.0	
7 25 0.1	7 81	17.6	7 36	4.5	
199.9		195.6		183.9	
11.41		36.51		17.70	
-2		-2		-2	
7 24 9.41	7 30	34.51	7 35	15.70	

1851. Sept. 18

$a = -0.03$

$b = +0.19$

$c = +0.03$

H. West

C. W. 7.

"

5 Aquilae & Cygni

58.5 30.4

12.8 50.0

26.8 9.4

40.8 28.9

54.9 48.0

9.0 7.4

18 58 23.1 20 36 26.7

225.9 200.8

40.84 28.68

-2 -2

18 57 38.84 20 35 26.68

1851. Sept. 18/19

19.

$$a = -0.03$$
$$b = + 0.19$$
$$C = +0.03$$

C. W. Y.

all west

β Geminor

u' Sagittarii

1851phae.

β Seminor	α Canis Min	β Seminor	μ Sagittarii
22.9	55.0	31.2	14.0
39.3	9.0	46.8	28.8
55.4	22.8	2.4	43.5
11.8	36.5	18.0	58.3
28.0	50.3	33.5	13.0
44.1	4.0	49.1	27.5
7 25 0.4	7 31 17.9	7 36 4.7	18 4 42.1
201.9	195.5	185.7	227.2
11.70	36.50	17.96	58.14
-2	-2	-2	-2
7 24 9.70	7 30 34.50	7 35 15.96	18 3 56.14

1857. Sept. 19/20

$a = -0.02$

$b = +0.19$

$c = +0.03$

J. L. West

W. C. B.

C. W. T.			J. L. West			W. C. B.		
α Canis Min			β Geminor			α Canis Maj		
		54.5			30.6			57.8
		8.4			46.4			12.1
		22.3			2.0			26.5
		36.1			17.6			41.0
		50.0			33.3			55.4
		3.7			48.9			9.6
7	30	17.5	7	36	4.4	6	38	23.7
		252.5			183.4			226.1
		36.07	7	35	17.63			41.16
		-2			2			-2
7	30	34.07	7	35	15.63	6	37	39.16

1851. Sept. 20

$a = -0.01$

$b = +0.19$

$c = +0.03$

Ill. West

C. W. T.

S. Aquilae

24.3

38.4

52.1

5.8

19.5

33.2

47.0

220.3

5.76

-2

3.76

1851. Sept. 22/23

$a = 0.00$

$b = +0.18$

$c = +0.03$

C. W. T.

M. W. T.

β Orionis	δ Orionis	ϵ Orionis	α Canis Min	β Gemina
47.5	49.0	4.5	54.5	—
1.7	2.8	18.4	8.4	+28 23
15.0	16.5	32.1	22.3	—
29.2	30.3	46.0	36.1	17.4 17.5
43.1	44.0	59.7	50.0	~~18.7~~ 34.3
57.4	57.5	13.5	3.6	17.5 48.7
5 7 10.9	5 24 11.4	5 28 27.2	31 17.5	7 36 17.5 4.3
204.8	211.8	201.4	192.4	
29.26	30.26	45.91	36.06	17.47
-2	-2	-2	-2	-2
5 6 27.26	5 23 28.26	5 27 43.91	30 34.06	7 35 15.47

1851. Sept. 23/24

$a = + 0.01$

$b = + 0.18$

$c = + 0.03$

C. W. T.

Ill. West

γ	β Gemino	α Canis Min.	β Gemino		
	23.7	56.0	32.0		
	40.2	9.8	47.5		
	56.4	23.6	3.2		
	12.6	37.3	19.0		
	28.9	51.2	24.0		
	48.0	8.0	50.0		
7 25	1.2	18.8	5.4		17
	208.0	201.7	191.1		
	12.57	37.39	18.73		
	-2	-2	-2		
7 24	10.57	35.39	16.73		17

1851. Sept. 24

$a = +0.01$

$b = +0.18$

$c = +0.03$

Ill. West

C. M. J.

 β Draconis" ξ Cygni

3.0

57.4

26.0

13.5

48.5

28.9

10.9

45.0

33.5

0.5

56.2

16.4

17 27

18.6

21

6

32.1

196.7

193.8

10.96

44.83

-2

-2

17 26

8.96

21

5

42.83

1851. Sept. 25/26

$$a = + 0.01$$

$$b = + 0.17$$

$$c = + 0.03$$

Ill. West

C.N.7.

 α beti

58.3

12.2

26.0

39.8

53.5

7.3

2 54 21.0

218.1

39.73

-2

2 53 37.73

1851. Sept. 26

$a = 0.00$

$b = +0.17$

$c = +0.03$

Ill. west

C. M. 7.

 α Herculis

18.1

32.4

46.4

0.5

14.8

29.0

43.2

184.4

0.63

-2

58.63

851. Sept. 29/70

W.C.B.

Ill. West

$a = 0.00$

$b = +0.15$

$c = +0.03$

1851phae.p

M.C. 13.		"		S Gemini		S Gemini		" Canis Min					
Canis Maj		Canis Maj		S Gemini		S Gemini		Canis Min					
	6.2		13.6		43.3		31.0		—				
	20.6		29.0		58.0		47.	+5. 36	44.5 16.9				
	38.0		44.8		13.0		3.2		44.6 30.8				
	49.4		0.4		28.0		19.6		44.5 44.5				
	3.7		16.3		42.8		35.8		44.5 58.3				
	18.0		31.5		57.4		52.0		44.6 12.2				
6	38	32.3	6	52	47.5	7	11	12.3	7	25	8.4	—	7
		165.2			3.1			194.0		137.0			
		49.31			0.44			27.86		19.57			44.52
		-2			2			-2		-2			-2
6	37	47.31	6	51	58.44	7	10	25.86	7	24	17.57		42.54

1857. Sept ¹⁰/₃₁

a = 0.00
b = +0.15
c = +0.03

R. A. A.

S. Gemini

	44.8
	59.5
	13.4
	29.2
	44.0
	58.8
7 11	13.5
	203.2
	29.03
	-2
7 10	27.03

1851. Oct. 1.

$a = -0.01$

$b = +0.14$

$c = +0.02$

Ill. West

C. M. 7.

1851phae.p

C. M. T.		" "		" "		" "		" "					
Herculis		β Draconis		γ Draconis		Moon TO		α Lyrae					
	24.4		11.5		18.0		1.9		17.0				
	39.0		34.4		40.3		17.1		34.4				
	53.4		56.7		2.1		32.4		51.8				
	7.3		19.5		24.3		47.8		9.4				
	21.5		41.8		46.4		3.0		27.5				
	35.6		4.2		8.5		18.2		44.9				
17	49.8	17	26.1	17	53	30.4	18	25	33.2	18	32	2.4	18
	231.0		194.6			170.0			153.6			187.4	
	51.0		134.6						333.6			67.4	
	7.28		19.23			24.28			47.66			9.63	
	-2		-2			-2			-2			-2	
17	5.28	17	26	17	52	22.28	18	24	45.66	18	31	7.63	18

1851. Oct. 1.

C. W. 7				J. L. West			
β Lyrae				Sagittarii			
	1.9		—		7.9		27.0
	18.5	-21 57	2.1 32.5		22.0		42.0
	34.8		1.8 47.0		36.0		56.4
	51.0		2.0 2.0		50.3		11.0
	7.3		2.1 16.9		4.5		25.5
	23.7		1.9 31.5		18.5		40.5
18 44 40.0	18 55-2.1 46.5	18 58	82.5	19 0	55.0		
177.2			171.7		257.4		
357.2			351.7		77.4		
51.03	2.00		50.24		11.06		
-2	-2		-2		-2		
18 43 49.03	18 55 0.00	18 57	48.24/9	0	9.06		

1851. Oct. 12

$a = +0.01$

$b = +0.14$

$c = +0.03$

H. M. W.

O. W. Y.

α Leonis

0.0

14.0

28.0

42.3

56.3

10.5

10 0 24.6

176.7

42.24

-2

9 59 40.24

1851 Oct. 2

$a = +0.01$

$b = +0.14$

$c = +0.02$

Ill. Mer

C. N. 7.

 α Lyrae

5 Aquilae

17.6

8.7

35.5

23.0

52.8

37.0

10.4

51.3

28.3

5.5

45.8

19.5

3.4

33.6

193.8

178.6

10.54

51.23

-2

-2

8.54

49.23

Oct. $\frac{2}{3}$

$a = +0.01$

$b = +0.14$

$c = +0.03$

Oct. West

C. M. 7.

 α Canis Min β Geminor

6.5

42.8

20.3

58.5

34.2

14.0

48.0

29.5

1.9

45.2

15.8

0.8

7 31 29.5 7 36 16.5

156.2 207.3

48.03

29.61

-2

-2

7 30 46.03 7 35 27.61

Oct. 5/6. 1851.

$a = + 0.01$

$b = + 0.14$

$c = + 0.03$

All. New

C. M. T.

 α Leonis

6.4

20.5

34.6

48.8

3.0

17.1

10 0 31.0

161.4

48.77

-2

9 59 46.77

1851. Oct. 6

$a = +0.03$

$b = +0.13$

$c = 0.00$

1851phae.pro

C. W. 7.				Ill. West				C = 0.00				H. 25.3							
2 Lyrae				2 Pegasi				2 Aurigae				0 Aurigae				5 Pegasi			
24.4				35.4				6.2				42.0				45.5			
42.0				49.5				20.4				56.0				59.4			
59.8				3.5				34.5				9.9				13.5			
17.3				17.4				48.8				23.5				27.4			
35.0				31.3				3.0				37.5				41.4			
52.5				45.0				17.1				51.5				55.5			
18	32	10.0	21	36	59.0	21	58	31.3	22	9	5.3	22	34	9.3	22				
241.0				241.1				161.3				225.7				252.0			
121.0				121.1				341.3				165.7				192.0			
17.28				17.30				48.76				23.67				27.43			
-2				-2				-2				-2				-2			
18	31	15.28	21	36	15.30	21	57	46.76	22	8	21.67	22	33	25.43	22				

1851. Oct. 6

C. M. 7

Ill. M. 11

Moon TD

v Pegasi

 ψ^3 Aquarii

5		14.5		3.5		56.1	
4		28.3		17.9		10.4	
5		42.5		32.0		24.4	
4		57.0		46.2		38.4	
4		11.3		0.4		52.5	
5		25.2		14.5		6.3	
3	22	45	39.9	22	57	28.6	23 11 20.0
0			218.7			142.3	208.1
0			398.7			323.1	268.1
43			56.96			46.16	38.30
			-2			-2	
43	22	44	54.96	22	56	44.16	23 10 36.30

1851. Oct. 6/7

$a = + 0.03$

$b = + 0.13$

$c = - 0.01$

ell. West

C. N. 7

Hydrae

58.6

12.5

26.5

40.4

54.4

8.3

9 20 22.1

222.8

40.40

2

9 19 38.40

1851. Oct. 7

$a = + 0.04$

$b = + 0.13$

$c = - 0.01$

Ill. Mer

C. W. 7			"			"			"			"		
Pis. Aus.			Pegasi			Aquarii			Aquarii			Moon TO		
	3.5			4.5			21.9			57.3			45.9	
	19.5			18.9			35.4			11.4			0.0	
	35.4			33.2			49.4			25.3			14.2	
	51.4			47.2			3.1			39.5			28.4	
	7.5			1.3			17.0			53.2			42.5	
	27.5			15.5			30.8			7.0			56.5	
22	49	39.3	22	57	29.8	23	6	44.5	23	11	21.0	23	32	10.8
	180.1			150.5			202.1			214.7			198.5	
	360.1			330.5			22.1			274.7				
	51.44			47.21			3.16			39.24			28.33	
	-2			-2			-2			2			-2	
22	48	49.44	22	56	45.21	23	6	1.16	23	10	57.24	23	31	26.33

1851. Oct 7.

$a = +0.04$

$b = +0.13$

$c = -0.01$

O. M. 7.

N. Ill. West

27 Piscium		33 Piscium		α Andromedae		γ Pegasi	
48.0		27.9		22.0		18.4	
2.0		41.8		37.4		32.8	
15.8		55.5		53.3		46.8	
29.5		9.4		8.5		1.0	
43.4		23.0		24.3		15.3	
57.0		36.9		40.0		29.5	
23 51 10.9	23 57 50.6	0 0 55.4	0 5 43.5				
206.6	245.1	240.9	187.3				
	65.1	60.9	07.3				
29.57	9.30	8.70	1.04				
-2	-2	-2	2				
23 50 27.51	23 57 7.30	0 0 6.20	0 4 59.04				

1851. Oct 7/8

$$a = + 0.06$$

$$b = + 0.13$$

$$c = - 0.02$$

All. West

C. M. 7

 α Leonis

9.0

23.2

17.1 46.8

51.5 1.0

15.1 15.3

19.4 29.5

10 0 32.5 43.5

179.0

51.50

-2

9 59 49.30

1851. Oct 8

$a = +0.08$

$b = +0.12$

$c = -0.03$

ell. West

C. M. 2

Aquaia

54.0

7.9

21.3

35.0

48.9

2.8

21 58 16.7

186.6

35.23

-2

21 57 33.23

1851. Oct 9.

$a = + 0.09$

$b = + 0.12$

$c = - 0.03$

Dec. West

C. W. 7

 β Lyrae

12.4

28.9

45.1

1.4

18.0

34.3

18 44 50.6

190.7

1.53

-2

18 43 59.53

1851 Oct. 9/10

$$a = +0.09$$

$$b = +0.12$$

$$c = -0.03$$

Ill. West

O. M. 7.

Hydrae

"

Leonis

1.9

11.3

15.8

25.3

29.5

39.5

43.5

53.5

57.4

7.4

11.3

21.4

9 20 25.0 10 0 35.8

184.4 194.2

43.49

53.46

-2

-2

9 19 41.49 9 59 51.46

1851, Oct. 10

$a = +0.09$

$b = +0.12$

$c = -0.03$

Ill. Min

C. M. T.

 α Lyrae

28.8

46.4

4.2

21.5

39.2

57.0

18 32 14.5

211.6

21.66

-2

18 31 19.66

1851. Oct. 13

$a = +0.07$

$b = +0.12$

$c = -0.04$

Ill. West

C. W. 7.

"

 α^2 Capricorn α Cygni

38.4

56.5

52.8

16.3

7.0

35.4

21.0

55.0

35.0

14.3

48.9

33.4

20 10 3.6 20

36

53.0

206.7

263.9

20.96

54.99

-2

-2

20 9 18.96 20

35

52.99

1851. Oct. 13/14

Ill. Mar

C. W. 7

 α Hydrae

"

 α Leonis

7.9

17.3

22.0

31.5

35.8

45.5

49.5

59.4

3.5

13.5

17.3

27.7

9 20

31.2

10

0

41.8

167.2

236.7

49.60

59.53

-2

-2

9 9 19

47.60

9

59

57.53

Oct. 14/15 1881.

$a = + 0.09$

$b = + 0.12$

$c = - 0.04$

Ill. West

C. W. T.

 α Leonis

19.8

34.0

48.0

1.9

15.7

30.0

10 0 44.3

193.7

1.96

-2

9 59 59.96

Oct 15. 1857.

$a = -0.03$

$b = +0.12$

$c = -0.07$

Ill. m

C. m. 7			" "			" "		
ε Pegasi			α Aquarii			δ Pegasi		
		49.0			8.4			—
		2.9			19.0	+10° 3'		—
		16.6			32.8		40.9	27.0
		30.5			46.6		41.0	41.0
		44.7			0.3		41.0	58.0
		58.9			14.0		41.4	9.0
21	37	12.5	21	58	27.6	22	34	41.1 22.9
		215.1			145.7			
		30.73			46.53			41.02
		-2			-2			-2
21	36	28.73	21	57	44.53	22	33	39.02

1851. Oct 15/13

$a = -0.03$

$b = +0.11$

$c = +0.04$

ell. Winc

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Q. W. T.

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22.4

36.3

50.4

4.5

18.5

32.8

46.7

211.6

4.51

-2

2.51

10

0

10

5.5

36.0

166.3

6.2

18.5

33.0

162.5

48.93

-2

46.93

11

6

33.0

162.5

48.93

-2

46.93

11

6

33.0

162.5

48.93

-2

46.93

11

1851. Oct ¹⁵/₁₆

$a = -0.03$

$b = +0.10$

$c = -0.08$

Ill. West.

Ill. East

C. W. 7.

	U.S. Maj	Polaris S.P.	Polaris S.P.	α Serpenti	α Scorpiae
5	24.4	12 39 48 30.0	—	53.5 53.5	—
4	48.5	48 53 22.0	—	70 40.5	-26° 6 56.1 25.5
3	12.0	57 7.6 15.5	—	20.5 51.5	55.8 40.5
2	35.9	88 31 5.2	—	34.5 11.0	55.9 55.9
8	59.4	—	13 14 59 58.0	40.5 26.3	55.7 11.0
5	22.9	—	23 7.7 51.0	2.5	55.8 26.3
0	11 46 46.5	—	32 8.1 42.5	11 37 16.5	16 20 56.1 42.0
5	249.6	—	—	182.8	152.2
93	35.66	5.73	7.23	34.69	55.90
	-2	-2	-2	-2	-2
93	11 45 33.66	13 6 3.73	13 6 5.23	15 36 32.69	16 19 53.90

1851. Oct. 1/16

$a = -0.07$

$b = +0.10$

$c = -0.08$

all East

C. M. 7.

1851phae.p.00

C. M. 7.		" β Lyrae		" α^2 Capricorn		" α Cephei		" β Aquarii								
Draconis																
	41.3		24.8		45.0		—		41.9							
	3.0		41.0		59.0	+61 57	—		55.8							
	25.0		57.5		13.3		41.3 12.		9.7							
	47.0		14.0		27.5		41.5 41.4		23.5							
	9.1		30.3		41.5		41.8 11.0		37.5							
	30.9		46.5		55.5		42.0 40.3		51.2							
17	53	58.7	18	45	3.0	20	10	9.9	21	16	41.6	9.3	21	24	5.0	21
		210.0			217.1			251.7							224.6	
	47.14		13.87		27.38		41.64		22.51							
	-2		-2		-2		-2		-2							
17	52	45.14	18	44	11.87	20	9	25.38	21	14	39.64	21	23	21.51	21	21

1851. Oct 16

Ill. Carr

C. N. 7

 β Cephei

2 Pegasi

9	—	51.2			
8	+69° 54' —	4.9			
7	24.0 44.0	18.9			
5	24.12 4.0	32.8			
5	23.6 3.5	46.8			
2	24.2 44.0	0.6			
0	21 28 23.92 4.0	21 37 14.5			
6		169.7			
1	23.96	32.81			
	-2	-2			
0	21 26 21.96	21 36 30.81			

1851. Oct. 16/17

$a = -0.06$

$b = +0.09$

$c = -0.08$

Ill. East

Polaris

25.0	26.4 12	39	26.5
38.9	50.0	48	24.0
53.3	13.9	57	15.0
7.4	37.6	6	5.0
21.5	1.0	14	56.0
35.7	24.7	23	47.5
50.4 11	46 48.5 13	32	41.5
52.2	202.1		215.5

7.44	37.44	5.07
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-2	-2	-2
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11 41 5.44 11	45 35.44 13	6 3.07
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1851. Oct. 17

$$a = -0.07$$

$$b = +0.08$$

$$c = +0.05$$

C. W. 7.

see. E. & W. M. W.

C. W. 5.		" "		" "		" "		" "						
β Urs. Min		α Herculis		α Ophiuchi		γ Draconis		α Lyrae						
—		49.4		59.5		42.3		41.5						
+74° 46' —		3.5		13.8		4.5		58.2						
47.2	55.0	17.5		27.9		26.5		17.0						
45.8	46.0	31.8		42.0		48.5		34.0						
46.5	38.9	46.0		56.0		10.4		52.0						
45.9	30.5	0.0		10.1		32.6		9.5						
14	5346923.5	17	8	14.4	17	28	24.0	17	53	54.8	18	32	26.9	
				162.6			233.3			219.6			239.1	
	46.46			31.80			41.90			48.51			34.16	
	-2			-2			-2			-2			-2	
14	50	44.46	17	7	29.80	17	27	39.90	17	52	46.51	18	31	32.16

1851. Oct. 17

$$a = -0.07$$

$$b = +0.08$$

$$c = +0.05$$

22. Nov

C. N. 7.

 α Pegasi

20.5

38.0

49.0

3.3

17.5

31.5

45.8

202.6

3.23

-2

1.23

1851. 7/18

 $a = -0.07$
 $b = +0.08$
 $c = +0.04$

C.M.V.		All. M.V.		W. C. B.	
α Hydraz	"	α Leonis	"	Polaris S.D	
16.0	19.5	25.4	12	39	5.5 31.0
30.3	34.9	39.8		48	6.9 23.5
44.0	50.0	54.0	88	31	5.9
58.0	5.0	8.0		6	7.7 6.0
11.7	20.1	22.1			
25.5	35.4	36.0		23	10.3 52.0
9 20 39.5 9	37 50.2 10 0	50.0		32	9.4 48.5
225.0	215.1	235.3			
57.86	5.01	7.90			7.96
-2	-2	-2			-2
9 19 55.86 9	37 3.01 10 0	5.90	13	6	5.96

1851. Oct. 19/20

$a = -0.07$

$b = +0.07$

$c = +0.03$

C. N. T.

Ill. Nut

α Hydraz		ϵ Leonis		α Leonis		α Uls Maj		δ Leonis	
	20.4		23.9		29.5		44.4		12.
	34.3		39.0		43.5		14.5		27.
	48.0		54.0		57.3		44.0		41.5
	2.0		9.1		11.9		43.7		56.3
	16.0		24.2		26.0		13.6		11.2
	29.9		39.4		39.5	10 55	43.3		25.9
9 20	43.6	9 37	54.4	10 0	54.0		217.5	11 6	40.6
	194.2		244.0		261.7				394.5
	2.03		9.14		11.67		13.93		56.36
	-2		-2		-2		-2		-2
9 20	0.03	9 37	7.14	10 0	9.67	10 54	11.93	11 5	54.36

1851 Oct. 19/20

C. W. J.

All. Mat.

 β Leonis

Polaris S.P.

30. 12 59 36.0

44.4 48 28.5

58.6 57 16.5

12.9 6 10.4

27.1 15 1.2

41.5 23 53.4

11 41 55.6 13 32 52.3

90.1 198.3

12.87 11.19

-2 -2

11 41 10.87 13 6 9.19

851. Oct. 20/21

$a = -0.06$

$b = +0.07$

$c = +0.03$

C. W. 7.

J. W. 7.

C. W. 7.			J. W. 7.		
2 ^h Gemini			3 ^h Gemini		
	6.0	37.3		—	
	21.5	51.2	+28° 23'	—	
	37.8	5.0	1.1	45.5	
	54.0	19.0	0.4	0.5	
	10.3	32.7	0.4	16.0	
	26.5	46.5	0.1	31.3	
7	25	43.0	7	32	0.0
	199.1	191.7			0.2 47.0
	54.16	18.81		0.44	
	-2	-2		-2	
7	24	52.16	7	31	16.81
					58.44

1851 Oct. 21.

$a = -0.06$

$b = +0.07$

$c = +0.03$

Set. Nov

O. M. 7.

 α Ophiuchi

7.4

21.5

35.5

49.8

3.8

18.0

17 28 32.0

168.0

49.71

-2

17 27 47.71

1851. Oct. 22/23

$a = -0.05$

$b = +0.06$

$c = +0.03$

C. W. 7.		" "		" "		" "		" "	
α Leonis		α Urs. Maj		β Leonis		Polaris S.P.			
	36.4		51.4		37.0	12	39	44.5	
	50.7		21.0		51.0		48	37.7	
	4.8		51.0		5.4		57	27.5	
	18.7		20.8		19.9		6	18.4	
	32.9		50.5		34.0		15	10.0	
	46.8		20.4		48.4	13	24	1.5	
10	1	1.0	55	56.4	11	42		139.6	21
	191.3		265.5		198.2				
	18.76		20.78		19.74			19.94	
	-2		-2		-2			-2	
10	0	16.76	10	54	18.78	11	41	17.74	13
							6	17.94	21

1851. Oct 23

$$a = - 0.03$$

$$b = + 0.06$$

$$c = + 0.03$$

Q. M. 7.		Oct. Mm	
S Cygni		β Aquarii	ϵ Pegasi
	43.5	56.4	5.4
	59.0	10.0	19.3
	14.9	24.0	33.0
	20.5	38.0	47.3
	46.4	51.5	1.5
	2.3	5.5	15.0
21 7	17.6	21 24 19.3	21 37 29.0
	214.2	204.7	150.3
	30.60	37.82	47.19
	-2	-2	-2
21 6	28.60	21 23 35.82	21 36 45.19

1851. Oct. 24

$a = -0.02$

$b = +0.06$

$c = +0.03$

O. W. D.

Ill. West

Herculis

 α Lyrae β Lyrae β Aquarii γ Pegasi

5.0

56.8

41.5

59.0

8.0

19.0

14.5

58.0

13.0

22.0

33.0

32.0

14.5

27.0

35.9

47.4

49.9

31.0

40.7

50.0

1.5

7.4

47.5

54.5

3.8

16.0

24.9

4.0

8.0

17.7

17 8

30.0

18

32

42.4

18

45

20.3

21

24

22.0

21

37

31.5

151.9

227.9

216.8

224.2

168.9

47.41

49.70

30.97

40.57

49.84

-2

-2

-2

-2

-2

17 7

45.41

18

31

47.70

18

44

28.97

21

23

38.57

21

36

47.84

1851, Oct. 27

 $a = -0.06$
 $b = +0.03$
 $c = +0.02$

C. W. M.

ell. m. t.

δ Aquilae	γ Aquilae	β Aquarii	ϵ Pegasi
4.8 23.5	34.5	8.0	17.9
+2 494.9 37.4	48.5	22.0	30.9
4.9 51.2	2.4	35.5	45.0
5.0 5.0	16.4	49.4	58.8
4.9 18.7	30.5	3.0	12.5
5.0 32.5	44.4	16.9	26.4
19 18 —	19 39 58.5 21	24 31.0 21	37 40.5
	283.2	165.8	231.1
4 4.92	16.45	49.40	58.73
-2	-2	-2	-2
4 19 18 2.92	19 39 14.45 21	23 47.40 21	36 56.73

1851 Oct. 28

$a = -0.06$

$b = +0.06$

$c = +0.02$

Ill. West

C. W. T.

 α Aquilae β Aquilae

57.6

26.9

11.5

40.5

25.5

54.4

39.5

8.3

53.4

22.1

7.2

36.0

19 44

21.1

19

48

49.6

215.8

237.8

39.40

8.26

-2

-2

19 43

37.40

19

48

6.26

1851. Oct. 30/31

$$a = -0.09$$

$$b = 0.00$$

$$c = +0.02$$

Oct. 1851

G. W. T.

W. C. B.

 β Leonis

Polaris S. P.

59.3

40 38.8 3.0

13.9

88 31 10.8 48 37.4 53.2

28.0

57 57.6 41.0

42.0

-

56.3

11 39.6 31.4

10.5

~~32~~

11 42 24.8

13

33 41.4 22.0

234.8

42.11

38.96

-2

-2

11 41 40.11

13

6

36.96

1851. Oct. 31

$a = -0.10$

$b = -0.01$

$c = +0.02$

C. W. 7

Dec. West

"

5 Pegasi

 α Pis. Aus. α Pegasi

37.7

54.4

55.4

51.5

10.5

10.0

5.5

26.5

24.0

19.4

42.4

38.3

33.5

58.3

52.3

47.5

14.0

6.5

22 35

1.3

22

50

30.4

22

58

20.8

196.4

236.5

207.3

19.48

42.36

38.18

-2

-2

-2

22 34

17.48

23

49

40.36

22

57

36.18

1851 Nov. 1

$$a = -0.12$$

$$b = -0.01$$

$$c = +0.02$$

Ill. West

C. M. T.			" "			" "			" "			" "		
α Hydral			α Leonis			α Cygni			α Aquarii			α Capricor		
52.0			1.4			41.5			5.5			—		
6.2			15.5			1.0			19.6	-15	47	49.0	20.5	
20.1			29.5			20.0			33.5			49.3	34.9	
33.8			43.8			39.4			47.8			49.4	49.4	
47.5			57.7			59.0			1.9			49.2	3.5	
1.5			12.0			18.5			16.0			49.4	17.9	
9 21 15.4	10	1	25.8	20	37	38.0	21	2	30.0	21	8	49.2	32.9	
176.5			185.7			217.4			154.3					
236.5			305.7			277.4			334.3					
33.78			43.67			39.63			47.76			49.25		
-2			-2			-2			-2			-2		
9 20 31.78	10	0	41.67	20	36	37.63	21	1	45.76	21	7	47.25		

1851. Nov. 1

$a = -0.12$

$b = -0.01$

$c = +0.02$

C. M. 7.

Ill. Nut

1851phae.p

C. M. 7.		" "		" "		" "		" "	
Pegasi		B Aquarii		S Capricor		Moon TV		B Aquarii	
	11.8 30.0		20.9		—		48.4		0.5
+9° 12	11.8 44.0		34.5	-16 48	8.7 40.0		3.0		14.5
	—		48.5		8.3 54.0		17.8		28.6
	—		2.5		8.4 8.4		32.4		43.0
	11.5 25.4		16.4		8.6 23.0		47.0		57.0
	11.7 39.5		30.0		8.8 37.5		1.8		11.3
21 37	11.8 53.5	21 24	44.0	24 39	—	21 41	16.5	21 59	25.5
			196.8				166.9		180.4
			16.8				226.9		300.4
	11.72		2.40		8.56		32.41		42.91
	-2		-2		-2		-2		-2
21 37	9.72	21 24	0.40	21 39	6.56	21 40	30.41	21 58	40.91

1851. No. 1

Jlt. West

C. W. 9

 α Andromedae γ Pegasi

5			15.1			12.3		
5			31.2			26.5		
6			47.0			40.9		
0			2.8			55.0		
0			18.3			9.0		
3			34.0			23.4		
5	0	1	49.5	0	6	37.4		
4			198.3			204.5		
4			18.3			384.5		
1			2.61			54.93		
			-2			-2		
1	0	1	0.61	0	5	52.93		

1851. Nov. 3

$a = -0.18$

$b = -0.03$

$c = +0.05$

~~Handwritten~~

C. W. 7.

 α Andromedae

22.2

38.5

54.0

9.5

25.3

40.5

0 1 56.4

246.4

9.49

-2

0 1 7.49

1851 Nov. $\frac{4}{5}$

$a = -0.21$

$b = -0.05$

$c = +0.06$

C. W. 7		" "		" "		" "		" "		" "		" "		" "	
α Leonis		α Vir. Maj		δ Leonis		β Leonis		Polaris S.P							
	15.8		30.8		58.0		16.4	12	40		22.1				
	30.0		0.9		12.8		30.5		49		15.0				
	43.9		30.9		27.5		44.5		58		8.5				
	58.0		0.4		42.8		58.8		6		58.0				
	12.0		30.0		57.0		18.3		15		52.0				
	26.3		59.9		12.9		27.5		24		42.8				
10	1	40.3	10	56	29.8	11	7	26.5	11	42	41.8	13	33	45.0	
	226.3		182.7		237.5		232.8				243.4				
	58.04		0.39		42.50		58.97				0.49				
	-2		-2		-2		-2				-2				
10	0	56.04	10	54	58.39	11	6	40.50	11	41	56.97	13	6	58.49	

1851. Nov. 4/5

$$a = -0.21$$

$$b = -0.05$$

$$c = +0.06$$

ell. mer

C. W. 7

 α Virginis β Uls Min

11.0

25.0 74 46 49 37.8 53.4

39.1 50 37.0 44.8

52.9 51 36.8 37.0

7.0 52 36.6 29.0

21.0 53 36.5 20.9

13. 18 54.6 14 54 36.8 13.4

190.6

52.94 36.92

-2

-2

13 17 50.94 14 51 34.92

1851. Nov. 5

$a = -0.22$

$b = -0.05$

$c = +0.06$

Ill. Writ

e. n. 7.

γ Aquilae	α Aquilae	β Aquilae	α^2 Capricorn	α Cygni
2.0	22.5	51.5	16.2	34.0
16.0	36.4	5.9	30.4	53.5
30.0	50.3	19.4	44.4	12.9
43.9	4.3	33.2	58.6	32.2
58.0	18.1	47.0	12.6	51.4
11.9	31.9	0.5	26.5	10.8
19 40 26.0	19 44 45.8	19 49 14.2	20 10 40.7	20 38 30.2
187.8	209.3	171.7	229.4	225.0
43.97	4.19	33.10	58.49	32.14
-2	-2	-2	-2	-2
19 39 41.97	19 44 2.19	19 48 31.10	20 9 56.49	20 37 30.14

1851, Nov. 6

$a = -0.23$

$b = -0.05$

$c = +0.06$

C. M. Y.

Ill. M. M.

Andromedae		γ Pegasi		α Cassiopeae		β Ceti		33 Ceti	
6.8		—		4.3		35.0		25.0	
22.3	+14	21 45.9	17.6	29.0		49.8		38.8	
38.2		46.2	32.0	53.4		4.2		52.4	
54.0		46.3	46.3	17.6		18.8		6.2	
9.7		46.3	0.5	42.3		33.7		20.0	
24.8		46.0	14.4	6.7		47.8		33.7	
0 1 40.5	0	6 46.2	28.7	0 33 30.9	0	37 2.0	1 3	47.1	1
196.3		110.6		184.2		191.3		223.2	
376.3				224.2		131.3		43.2	
53.76				17.74		18.76		6.17	
-0				-0		-0		-0	
0 0 53.76	0	15 41.5	46.15	0 32 17.74	0	36 18.76	1 3	6.17	1

1851. Nov. 6

e. n. 7.		Jeb. m. n.		Moon TV		o. Piseiman	
40. Ceti		" "		Moon TV		o. Piseiman	
	52.4		4.9		29.6		2.2
	6.2		19.0		43.2		16.4
	20.1		33.2		56.9		30.3
	33.8		47.0		11.4		44.4
	47.4		0.8		28.6		58.2
	1.3		14.9		39.9		12.0
1	10	1	17	1	33	1	38
	15.0		28.6		53.7		26.0
2	178.2		148.4		260.1		189.5
2	236.2		328.4		80.3		309.5
17	33.8		46.91		11.44		44.21
	0		-0		-0		-0
7	9	1	16	1	32	1	37
	33.8		46.91		11.44		44.21

1851. Nov. 7

$a = -0.24$

$b = -0.06$

$c = +0.07$ *10.0 mm*

C. n. 7.

 γ Draconis α Pegasi

					19.5		
+51	30	—			34.0		
	46.7	24.7			48.4		
	46.9	47.0			2.4		
	46.9	9.0			16.5		
	46.9	31.0			31.0		
17	54	46.9	53.0	22	58	45.1	
						196.9	
		46.86				2.41	
		-2				-2	
17	53	44.86	22		58	0.41	

1851. Nov. 7/8

$$a = -0.24$$

$$b = -0.06$$

$$c = +0.06$$

J. W. W. W.

C. M. 7
S. Leonis

8.5

23.0

87.9

82.5

7.0

11 7 22.0

187.4

52.48

-2

11 6 50.48

1851, Nov. 10

$$a = -0.25$$

$$b = -0.07$$

$$c = +0.08$$

ell. vire

C. N. 7.

Andromedae γ Pegasi

46.4 25.9 43.1

2.5 +14 21 25.2 56.9

17.9

33.6 26.0 26.0

49.0 25.8 40.0

4.5 25.6 54.0

0 2 20.0 25.8 8.3

173.9

33.41 26.72

-2

-2

0 1 31.41 23.72

Nov. 11. 1851.

$a = -0.26$

$b = -0.07$

$c = +0.09$

C. V. 7.

ell. min

 α Urs. May β Leonis β Leonis

+12° 33'

54 20.320.8

18.0

36.0

20.350.5

32.8

50.6

20.320.4

47.5

45

20.950.8

2.4

18.9

17.0

33.0

32.0

47.4

10 56 20349.5

11

7

46.5

11

43

1.5

196.2

191.7

20.42

2.31

18.81

-2

-2

-2

10 55 18.42

11

7

0.31

11

42

16.81

