

KG
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No. 26.

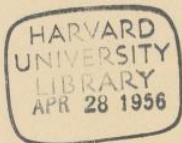
Reductions of Transits

1856. Nov. 20. to Apr. 30, 1857.

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KG 11365.97

KG 11365,97



1856. Nov. 20/21

W.C.B.		" "		M. East		" "		P.S.C	
Mrs. Maj		δ Leonis		δ Leonis		δ Leonis		Polaris s.p	
	33.3		28.4		19.3		35.6	13	3 52.6
	41.7		32.0		23.2		39.2		6 11.4
	42.1		35.7		27.1		42.9		8 34.6
	56.8		39.1		30.9		46.5	"	10 51.1
10	56	4.4	10 58	42.5	11 7	34.8	11 14	49.9	13 16.65 13
	185.3		177.7		135.3		214.1		42 43.3
10	55	49.06	10 58	35.54	11 7	27.06	11 14	42.82	13 8 32.66

Nov. 20/21

D. S. C

Ill. Ear

α Virginis

28.9

32.8

36.3

39.8

43.4

18

18

Nov. 26.

M.C. 03

M. Ear

 α Cygni β Cygni γ Cygni δ Cygni

14.1

11.2

34.0

12.7

" 19.2

15.9

38.3

17.6

24.1

20.4

42.4

21.8

29.2

24.8

46.4

26.2

20 37

34.0

21

1

29.2

21

7

50.4

21

1

30.8

Nov. 26/27

W.C.B.

Id. Ear

Polaris r.p.

42.7?

3 22.7

6 2.0

8 21.0

10 26.8

13 13 4.7

41 27.2

13 8 17.44

Nov. 27/28. 1856.

Ill. East

• W. C. B.

Polaris S. p

2 Virginis

	3	45.1		22.7	
	6	2.9		26.1	
	8	21.2		30.0	
	10	38.8		32.1	
13	13	6.0	13	37.1	
	41	54.0			
17	8	22.80			

Nov. 28.

W.C.B.

Ill. Ear

α Cygni

12.9

18.0

23.0

27.9

32.9

114.7

20 37

20 37

22.94

1856. Dec. 2.

W. C. O		J. H. S		All. E. an J. H. S.		Moon TO		5 Cygni		7 β Aquarii			
α Aquilae		α Cygni											
	27.8		9.4		27.7		29.7		42.0				
	31.5		14.8		31.9		33.9		45.8				
	34.9		19.6		35.8		37.7		49.2				
	38.6		25.0		39.7		42.0		52.7				
19	44	20	37	29.5	21	4	43.5	21	7	48.9	21	24	56.2
	175.0		98.3		178.6		189.2		245.9				
19	44	20	37	19.66	21	4	35.72	21	7	37.84	21	24	48.18

Dec 4.

N.C.B.
"Pegasi"

"
5 Pegasi

Ill. Ear

"
Moon TV

"
Majors 1

"
2 Pegasi

0			4.9			58.2			51.2			10.6			17.2
8			8.9			2.4			55.1			14.3			21.0
2			12.4			6.2			58.1			18.3			24.7
7			15.9			9.7			2.3			21.8			28.3
2	21	59	19.3	22	35	13.1	22	52	5.7	22	52	25.4	22	58	31.9
9			61.4			29.6			172.8			90.4			123.1
						29.6			292.8						
8	21	59	12.28	22	31	6.2	22	51	58.56	22	52	18.08	22	58	24.62

1856. Dec. 4.

H. P. 7.

M. East

³ Aquarii

23	12	10.2	14.1	18.0	21.6	25.1	28.0	17.80
23	12	89.0						
23	12							

Dec 5/6

W.C.B.

Ill. Ear

 α Bootis

44.5

48.4

52.4

56.1

14 10 0.0

201.4

14 10 52.28

W. C. B.

M. Eam

β Aquarii

ε Ρεζανί

a. Aquarii

38.7

46.5

3.4

425

50.3

7.0

46.0

52.9

10.6

49.1-

57.3

14.0

21 24

529

21

38

10

21

55

17.5

229.6

209.0

52. 1-

21 24

45.92

21

37

53.40

24

55

10.50

Sa C.

U.D.T.

JL. Can

 α Andromedae γ Pegasi

Moon

 ϵ Piscium

36.0

29.5

12.6

9.0

40.1

33.4

15.2

13.0

44.4

37.1

18.9

16.2

48.6

40.8

22.7

20.1

51.9

44.3

26.4

23.7

221.2

185.1

94.8

82.0

44.24

37.02

18.96

16.40

Dec 8, 1856

W.C.B.		" "		O.C. Egan		" "		" "	
α Cygni		δ Cygni		γ Pegasi		β Luti		η Arietis	
	4.7		24.7		28.0		0.5		42.3
	9.9		28.8		31.7		4.1		46.5
	14.7		33.2		35.4		8.1		50.2
	19.7		36.9		38.9		11.9		54.2
20	37	21	7	41.0	0 3 6	42.7	0 17	11.5	59 57.9
	73.8		164.6		176.7		40.5		251.1
20	37	21	7	32.92	0 6	35.34	0 37	8.10	59 50.22

Dec. 8.

24. P. 7.

Ill. East

Mson. TV

15. 9

20.6

23.4

27.1

No. 8

117.2

23.44

1856. Dec. 9.

M. Earl

W.C. B.

 δ Cygni α Cephei β Aquarii δ Cephei γ Pegasi

23.3

33.7

35.8

4.9

43.5

27.7

41.7

39.6

15.8

47.4

31.8

49.0

43.0

26.0

50.9

35.9

56.6

46.5

36.5

54.6

21 6 39.921

16 4.021

24 49.921

27 46.6

21 37 57.9

21

188.6

188.0

214.8

129.7

254.3

21 6 31.7221

16 49.0021

24 42.9611

27 28.94

21 37 50.86

21

Dec 7. 1856.

Ill. Ear											
W. C. B			"			"			"		
a Aquarii			α Andromedae			γ Pegasi			β Ceti		
			0.4			33.4		26.8		59.8	21.8
			4.1			37.5		30.5		3.3	21.2
			7.7			41.7		34.0		6.9	29.3
			11.2			45.4		37.9		10.5	37.0
59	14.7	0	1	49.4	0	6	41.3	0	37	14.3	37.0
	38.1			207.4			170.5			91.1	146.3
59	7.62	0	1	41.48	0	6	34.10	0	37	19.02	29.26

Dec. 9. 1886.

U.P.Y.

 γ Ceti

M. E. an

29.0

32.7

36.1

39.1

43.0

180.3

2 36

2 36 36.06

Dec 9/10

H.O. 7.

M. Ear

β Lora		γ Ura Maj							
11	42	19.2	46.1	11	47	18.0	171.2	11	42
22.9	58.5	4.4	132.8	11	46	34.24			
26.7									
30.1									
33.9									
37.8									
41.7									
45.6									
49.5									
53.4									
57.3									
61.2									
65.1									
69.0									
72.9									
76.8									
80.7									
84.6									
88.5									
92.4									
96.3									
100.2									
104.1									
108.0									
111.9									
115.8									
119.7									
123.6									
127.5									
131.4									
135.3									
139.2									
143.1									
147.0									
150.9									
154.8									
158.7									
162.6									
166.5									
170.4									
174.3									
178.2									
182.1									
186.0									
189.9									
193.8									
197.7									
201.6									
205.5									
209.4									
213.3									
217.2									
221.1									
225.0									
228.9									
232.8									
236.7									
240.6									
244.5									
248.4									
252.3									
256.2									
260.1									
264.0									
267.9									
271.8									
275.7									
279.6									
283.5									
287.4									
291.3									
295.2									
299.1									
303.0									
306.9									
310.8									
314.7									
318.6									
322.5									
326.4									
330.3									
334.2									
338.1									
342.0									
345.9									
349.8									
353.7									
357.6									
361.5									
365.4									
369.3									
373.2									
377.1									
381.0									
384.9									
388.8									
392.7									
396.6									
400.5									
404.4									
408.3									
412.2									
416.1									
420.0									
423.9									
427.8									
431.7									
435.6									
439.5									
443.4									
447.3									
451.2									
455.1									
459.0									
462.9									
466.8									
470.7									
474.6									
478.5									
482.4									
486.3									
490.2									
494.1									
498.0									
501.9									
505.8									
509.7									
513.6									
517.5									
521.4									
525.3									
529.2									
533.1									
537.0									
540.9									
544.8									
548.7									
552.6									
556.5									
560.4									
564.3									
568.2									
572.1									
576.0									
579.9									
583.8									
587.7									
591.6									
595.5									
599.4									
603.3									
607.2									
611.1									
615.0									
618.9									
622.8									
626.7									
630.6									
634.5									
638.4									
642.3									
646.2									
650.1									
654.0									
657.9									
661.8									
665.7									
669.6									
673.5									
677.4									
681.3									
685.2									
689.1									
693.0									
696.9									
700.8									
704.7									
708.6									
712.5									
716.4									
720.3									
724.2									
728.1									
732.0									
735.9									
739.8									
743.7									
747.6									
751.5									
755.4									
759.3									
763.2									
767.1									
771.0									
774.9									
778.8									
782.7									
786.6									
790.5									
794.4									
798.3									
802.2									
806.1									
810.0									
813.9									
817.8									
821.7									
825.6									
829.5									
833.4									
837.3									
841.2									
845.1									
849.0									
852.9									
856.8									
860.7									
864.6									
868.5									
872.4									
876.3									
880.2									
884.1									
888.0									
891.9									
895.8									
899.7									
903.6									
907.5									
911.4									
915.3									
919.2									

Dec. 10. 1856.

W.C.B.		H.P.G.		Ill. Ear		"		"		"	
Pegani		Pisni Aus.		Pegani		Piscium		Andromeda			
	42.3		16.8		11.1		9.0		32.2		
	46.0		21.3		15.0		12.7		36.4		
	49.6		25.3		18.6		16.4		40.2		
	53.1		29.4		22.2		19.8		44.4		
21	56.8	22	33.4	22	25.9	23	23.3	0	48.2	0	
	242.8		126.2		92.7		81.2		201.4		
21	49.56	22	21.24	22	18.54	23	16.24	0	40.28	0	

Dec 10.

H. P. 7.

Ill. E. an

5 Pegasi

 α Canis major β Ceti

Polaris

 θ Ceti

2	25.1	51.9	58.4	2	48.8	26.5
4	29.2	58.4	2.2	5	17.4	30.4
2	33.0	4.9	5.9	7	32.5	33.9
4	36.9	11.1	9.1	9	50.5	37.0
2	0 6 40.4 0 33 17.1 0 37 13.2 1 12 10.4 17 40.7					
4	169.0	143.4	89.2	37	40.6	168.5
8	0 6 33.00 0 33 4.68 0 37 5.84 1 7 32.32 17 33.70					

Dec. 10. 1886.

Dec. 2nd

H. D. 7.

α Arietis

γ Ceti

40.3 27.9

44.2 31.4

48.2 34.8

51.9 38.5

55.6 42.2

59.2 45.9

59 48.04 2 36 34.98

Ser. 10/11

Ill. Ear

U. P. 7.

S. Louis

S. Kyd. et. Cal.

y. Mrs. May

	2.2		44.4		18.2	
	6.4		48.1		22.0	
	10.0		52.1		25.7	
	13.6		55.3		28.9	
11 3 7	17.7	11 11 12	59.1	11 42	34.4	
	49.9		219.4		129.3	
11 3 7	9.98	11 12	54.88	11 42	25.84	

1886 Dec. 11/12

H. P. T.

Ill. E an

α Urs Maj

δ Leonis

δ Hyd. et Crat. β Leonis

γ Urs Maj

16.3

1.1

43.1

17.3

44.2

24.0

5.3

47.6

21.0

50.5

37.8

9.0

50.6

24.7

56.2

39.5

12.0

54.1

28.3

2.4

10 55

46.7

7

16.6

12

57.9

42

32.0

47

8.6

158.3

45.4

253.1

123.3

161.9

10 55

31.66

7

9.08

12

50.62

42

24.66

46

56.38

Sun. 11/12

H.D.T.

Ill. Ear

d Provis

38.9

42.8

46.6

50.3

14 9

54.0

232.6

14 9

46.52

4856, Dec. 12.

W.C.B.

Ill. E. and

 α Aquarii δ Pegasi α Pictoris δ Pegasi

57.3

51.0

15.0

9.2

1.0

54.8

19.4

13.1

4.5

58.2

23.2

16.8

8.0

1.7

27.3

20.4

21 59

11.1

22

31

5.4

22

50

31.1

22

58

24.1

82.3

171.1

116.4

83.6

21 59

4.46

22

34

58.22

22

50

23.28

22

58

16.72

Dec. 12, 1856.

H. Q. 7.

W. Ear

Piscium

un k.

α Andromedae

Perhites / Lind

v. Person'

70

42. •

298

130

238

10.7

463

24.8

16.8

274

14.3

50.1

28. 4

20.1

31.0

18. 0

54.2

42.15

238

320

23 33 21.2 23 59 58.0 0 1 46.5 0 2 27.5 0 6 28.1

71.2

250. b

192.0

106.3

25. 5. 7

23	33	14.24	23	59	50.12	0	1	38.40	0	2	20.26	0	6	31.14
----	----	-------	----	----	-------	---	---	-------	---	---	-------	---	---	-------

Dec. 12. 1856

H. O. T.

Ill. Pan

α Cassiopeae	β Ceti	Polaris	δ Ceti	α Leonis
50.4	56.1	2	48.6	24.4
56.7	0.2	5	17.2	28.1
3.1	3.9	7	31.7	31.9
9.4	7.4	9	51.4	31.7
33 15.40	37 11.4	12 8.5	17 38.9	10 30.8
135.0	79.4	37 41.4	159.4	119.3
33 3.00	37 3.88	7 32.28	17 31.88	10 23.86

Dec 12.

Ill. Eau

H.P.T.		"		"		"	
α Urs Maj.		β Leonis		δ Hyd. et Crat.		γ Leonis	
	15.9		0.9		42.1		16.7
	23.9		4.6		46.1		20.6
	31.4		8.3		50.0		24.1
	39.0		12.0		53.8		27.9
10	51	46.5	11.7	12	57.1	41	31.5
	156.7		41.7		249.9		120.8
10	51	31.34	11.7	12	49.98	41	24.16

Dec 12/13. 1856.

H.P.T.		M.P.B.		All. Part	
γ Urs Maj		Polaris S. p.		γ Bootis	α Bootis
44.0	3	18.7		22.1	38.2
49.9	5	31.7		26.1	42.2
56.0	7	55.3		30.2	46.0
2.0	10	14.0		32.9	49.6
46	7.7 13	12	31.8 13	48	27.7 14 9
159.6	39	36.5		150.8	229.4
41	58.92 13	7	55.30 13	48	30.16 14 9

Dec. 13, 1856.

W.C.B.			H.P.T.			Ill. Eau			"			"			"		
d Aquarii			2 Piscium			α Andromedae			Jupiter / Sun			γ Pegasi					
		58.6			6.7			29.9			26.3			23.2			
		0.1			10.2			32.9			29.9			26.9			
		4.0			13.8			37.8			33.1			30.6			
		7.2			17.3			41.8			36.8			34.1			
21	59	11.9	23	33	20.8	10	10	41.7	0	2	40.1	0	6	38.0			
		80.8			18.8	10	10	157.1			167.1			152.9			
21	59	4.16	23	33	13.76	0	1	37.82	0	2	37.42	0	6	30.58			

Dec. 13, 1856.

U.P. 7.		" "		Ill. Pair	
Canis major		β Ceti		Polaris	
49.6		55.9		2	49.6
56.0		59.7		5	18.0
2.3		3.1		7	31.7
8.4		6.9		9	52.1
0 33 15.0	0 37 10.7	1 12 07.0			
131.3	136.3	37		29.1	
0 33 2.26	0 37 3.26	7		29.82	

Dec. 14/10

W.C.B.

Polani 2 p. x Virginis

3	13.1			9.0					
5	22.3			12.8					
7	52.1			16.3					
10	11.2			20.0					
13	12	36.6	12	18	23.4				
39	26.3			81.1					
13	7	53.26	13	18	16.30				

Dec. 15, 1836.

Dec. 17/6

W.C.B.			H.P.T.			M. Ear			"			"			"		
d. Aquarii			Polaris			O' Ceti			S. Loris			S. Hyd. at Cret					
		51.4		2	44.3			22.9			58.8			40.7			
		59.2		5	12.1			26.1			2.9			44.6			
		2.6		7	21.2			20.2			6.7			48.2			
		6.1		9	49.7			32.3			10.1			51.9			
21	59	9.8	1	12	8.01	17		17.1	11	7	14.0	11	12	51.7			11
		133.1		37	25.7			150.0			92.1			241.1			
21	59	2.62	1	7	29.14	17		30.00	11	7	6.50	11	12	48.22			11

Dec. 15/6

ell. Ear
H. P. B

1856phae-fr

H. P. 7.	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
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1856, Dec. 16.

M.C.B.

Ill. East

M.C.B. Ill. West

α Az nani

α Pegasi

54.9

7.0

58.4

10.7

2.0

14.3

5.1

17.9

21 59 9.0

22 58 21.6

129.8

71.5

21 59 1.96

22 58 14.30

Dec. 14/17

W.C.B.

Ill. West

x Booth

36.1

39.9

42.4

46.9

14 9 51.1

217.4

14 9 43.48

1856. Dec. 17

H. P. 7.

Ed. Wm

Polaris

2 18.2

5 12.7

7 12.0

9 52.4

1 12 11.7

17 12.0

1 7 34.40

Dec. '17/18

H. P. 7.

W. C. B.

Ill. Kent

Moon T70

 α Virginis

21.1

7.3

29.2

11.0

32.6

14.6

36.4

18.4

11 18

39.9

13

18

22.0

163.6

73.3

11 18

32.72

13

18

14.66

1856. Dec 19.

H.P.T.		All. Mer	
Caniopear	β Ceti	Polaris	
48.1	51.9	2	50.8
52.2	51.3	5	9.8
58.4	59.1	7	31.7
4.4	2.9	9	43.8
0 33 10.9 0	37 6.81	12	12.8
		17	28.9
		1	7 29.78

Dec. 25;

R. F. B.			U. W. W.			U. P. T.		
S Pegasi			α Pictoris			α Andromedae		
42.1			6.1			0.3		21.7
41.3			10.2			4.1		21.7
49.1			14.2			7.1		29.1
52.7			18.2			11.3		32.1
22 14 56.2	22 50 22.6	22 58 11.0	0 5 1	17.7	0 6 29.6			

W. C. B

Polaris

III. War

Oct 11

18	2	41.5	14.7
4	58.2	18.0	
7	18.3	21.6	
9	34.5	21.3	
12	2.9	28.8	
	151.4	108.4	

1 7 19.08 1 17 21.68

Dec 28/29.

H. P. 7.

Ill. West

Polaris s.p.

α Virginis

	2	38.8			0.3
	5	12.2			2.9
	7	24.7			7.2
	9	32.9			10.9
13	11	54.0	13	18	14.7
		162.6			37.0
13	7	20.52	13	18	7.40

1855.7. Jan. 6

11h. West

W.C.B.

α Andromedae γ Pegasi

12.6	6.0
16.7	9.7
20.8	13.2
24.6	16.7
28.70	20.6

0	1	28.70	6	20.6	1.0	2.75	5	
					2.0	5.55	2	
					3.0	7.05	0	
					4.0	8.55	8	
					5.0	10.05	0	13
					6.0	11.55		
					7.0	13.05	5	

Jan. 67

H.D. 7.

 γ Her Maj

"

 γ Bootis

4.1

5.7

9.5

9.3

18.1

13.1

20.4

16.8

13 42 26.3 13 48 20.2

Ill. Mar

1857. Jan. 12.

M.C.B

W. W. W.

Pis. Ans.

q Pegani

51.9	45.2
55.9	50.0
0.1	53.4
4.2	57.2

22	50	8.4	20	59	0.9
----	----	-----	----	----	-----

Jan. 13.

W. A. S.

M. E. W. M.

α Andromedae	α Cassiopeae	π Ceti	α Arietis	γ Ceti
6.4	26.0	0.8	14.1	2.1
11.0	32.3	4.2	18.6	5.5
14.3	38.4	7.8	22.2	8.9
18.2	44.8	11.3	26.0	12.6
22.8	50.9	15.0	30.1	16.2
0	0	16	59	

1857, Jan 13.

W. A. P.

Pegasi

Ill. Mer

44.0

48.4

52.2

55.8

2 57

0.0

Jan. 19/20

M. C. G.

W. H. W.
H. D. G.

Moon 11 0

"
α Serpentis

α Scorpis

20.5

19.0

43.3

24.2

22.6

47.1

28.3

26.0

50.9

32.2

28.6

54.8

15 30

36.3

15 27

33.3

16

20

59.0

141.5

130.5

255.1

30

15 30

28.20

15 37

26.10

16

20

51.02

1857. Jan. 23

W. A. Smith
Casino

Ill. Wm

22.9

28.5

351

41.2

0 22 48.1

175.8

0 32 35.16

1857. Feb. 9.

M. Wren

M. C. B.

α Ceti	α Pumi	γ Tami	γ Eridani	α Aurigae
47.3	52.8	48.0	10.8	54.4
40.8	58.2	48.1	14.3	59.8
44.3	2.1	51.5	18.0	4.7
47.9	9.0	58.5	21.7	9.0
2 53 54.5	3 14 14.6	3 38 59.3	3 51 25.3	
221.6	138.1	259.4	90.1	
2 53 44.36	3 14 3.62	3 38 51.88	3 51 18.02	

	β Orionis	β Tauri	δ Orionis	α Leporis	ϵ Orionis
	29.6	4.0	32.2	15.0	47.1
	33.1	7.9	35.2	18.8	50.7
	36.7	11.9	38.9	22.3	54.1
	40.0	15.8	42.5	26.0	57.8
5	43.1	19	46.2	26	59.3
	182.9	54.6	195.0	112.0	211.0
5	36.58	11.92	39.00	22.40	54.20

These stars beginning with β Orionis

α Columbae			α Orionis			μ Geminorum			α Tauri		
		16.9			18.0			8.0			33.3
		21.1			19.1			11.9			38.8
		26.5			22.7			15.7			40.5
		29.7			26.5			19.4			44.2
5	34	34.35	5	47	29.8	6	14	23.2	4	27	46.0
		128.5			113.1			78.2			201.8
5	34	25.70	5	47	22.62	6	14	15.64	4	27	40.36

γ Tauri have no date or name of observer

1857 Feb. 7/14

Ld. West

M. C. B.

Scorpi

Moon 11 0

a Lyrae

23.4 46.2

27.0 50.3

30.7 54.3

348 58.2

16 20 38.7 17 54 20 18 32 6.0

1542 211.5

16 20 30.84 16 54 54.30

Feb. 22,

Ill. West.

R. F. B.

51 Cygni

α Can. Maj

ε Can. Min

	29	52.2			33.9			43.0
	31	8.0			17.4			42.0
	32	20.1			41.0			50.8
	33	31.0			44.5			54.8
6	34	46.2	6	38	48.4	6	52	58.9
		157.5			205.2			254.5
6	32	19.506	38	41.04	6	52		50.90

Feb. 25, 1887.

R. F. B.

Ill. Min

α^2 lumin		a Can. Min							
	9.3		34.0						
	13.6		34.1						
	17.4		38.0						
	21.9		41.3						
7	21	21.8	7	31	48.0				
	88.0				189.8				
7	25	17.60	7	31	17.96				

Feb. 27.

W. C. B.

Vlt. Mer

W. & Perri

γ "Lami"

α "Ceti"

		43.3			38.4		28.3
		48.9			42.1		31.7
		54.3			46.2		25.6
		59.7			50.0		38.6
3	14	51.0	3	38	53.9	2	54
		211.2			231.0		175.6
3	13	54.24	3	38	46.20	2	54
							35.12

1857. Mar. 3

M. C. B.

All. Mus

1856phae.

M. P. 03. " " " "

Cti α Persi γ Tauri ε Tauri α Tauri

		26.8		42.1		37.2		54.5		21.5					
		30.5		47.6		41.2		58.2		25.2					
		33.9		52.8		44.9		1.9		28.9					
		27.2		58.0		48.6		8.6		32.5					
2	54	40.9	3	14	3.6	38	52.1	4	20	9.2	4	27	36.2	4	
		169.3			204.1		274.4			129.5			144.3		
					264.1					9.5					
2	54	38.86	3	13	52.81	3	28	44.88	4	20	1.90	4	27	28.86	4

Mar. 3

W.C.B.

Alt. West

BAC. 1526

103 Tauri

 α Aurigae

Moon TD

Spiral Mercur

45.4

2.8

43.7

54.4

18.4

49.2

6.1

49.1

58.6

22.7

52.9

10.0

53.7

2.6

26.8

56.4

13.7

58.7

6.1

30.1

4 49

0.1

4

58

17.1

5

4.0

5

29

29

54.8

204.0

49.6

209.2

132.6

133.2

264.0

269.2

12.7

4 48

52.80

4

58

9.92

5

53.84

5

29

29

26.64

March. 3. 1857

N. C. B.

All. West

H. P. T.

1856phae

Spot 2. Minus		136 Tauri	139 Tauri	μ Gemini	γ Gemini						
	19.0	58.7	41.9	57.4	6.3						
	23.2	2.9	50.0	1.4	10.0						
	27.4	6.6	53.7	5.0	13.6						
	31.3	10.1	57.3	8.7	17.0						
5	29	35.4 5	44	14.1 5	49	1.3 6	14	12.1 6	29	20.7	6
	136.3	93.2	208.2	85.0	67.6						
		33.2	268.2								
5	29	27.26 5	44	6.64 5	48	53.64 6	14	5.00 6	29	12.52	6

March. 3.

H.P. 7.

Ill. Mer

H.P. 7.		"		"		"		"						
α Canis Maj		ϵ Can. Min.		γ Can. Maj		δ Geminor		α^2 Geminor						
	29.7		38.9		56.7		14.1		6.9					
	33.6		43.0		0.3		17.9		11.2					
	17.0		46.8		3.7		21.7		15.0					
	40.6		50.1		7.1		25.3		19.1					
6	38	44.3	6	52	54.7	6	57	11.2	7	11	29.2	7	21	23.3
	185.2		233.9				72.4		108.2					71.0
6	38	37.04	6	52	46.78	6	57	3.88	7	11	21.64	7	21	15.10

March. 3. 1857.

Ill. Wm

N.P. 7.

Can. Min.

 β Gemino

28.1

12.1

32.2

17.0

35.7

20.6

39.0

24.1

42.6

28.5

178.0

103.1

31.60

20.62

March 4.

W. C. B.		Ill. West											
μ Gemini cr		Moon	TO	1 Messier	2 Messier	Spot	3						
56.9			1.9		26.9		27.1					17.1	
0.8			6.0		31.0		31.6					21.7	
4.3			9.9		31.0		31.1					25.7	
8.0			14.1		38.9		39.1					29.6	
6 14 12.0	6 33	18.2	6 33	43.1	6 33	43.8	6 34	33.8					
82.0		50.1		174.9		177.9		128.3					
22.0													
6 14 4.40	6 33	10.02	6 33	34.98	6 33	31.58	6 34	25.66					

March. 4. 1857.

1856phae.proj

W.C.B.			U.P.T.			Ill. Wm			"			"			S. Gemini		
Spot &			α Canis Maj			ϵ Can. Maj			γ Can. Maj								
		41.0			29.3			38.1			—			13.3			
		41.3			33.0			42.6			—			17.2			
		49.1			36.7			46.1			3.1			20.9			
		53.1			40.3			50.3			7.0			24.7			
6	34	55.2	6	38	44.0	6	52	54.2	6	57	10.1	7	11	28.4			
		246.1			182.7			232.1						104.5			
6	34	49.22	6	38	36.66	6	52	46.42				7	11	20.90			

M arch. 4,

Ill. Wm

H.P.T.

α Gemini

α Can. Min

β Gemini

		6.2			28.1			12.1	
		10.3			31.8			16.1	
		14.4			33.0			20.1	
		18.6			35.6			24.0	
7	25	22.7	7	31	42.6	7	36	28.0	
		72.2			176.2			100.4	
7	25	14.44	7	31	35.24	7	36	20.08	

March 6. 1857.

W.C.B.

H. W. W. W.

H. P. C.

 α Persei γ Tauri γ Cancri ψ^2 Cancri δ Cancri

40.8

35.9

21.7

28.1

30.9

46.2

39.9

25.6

32.1

34.9

51.1

43.7

29.5

35.9

38.9

56.8

47.3

33.3

39.6

42.1

3

14

2.2

3

38

51.1

7

52

17.3

8

1

43.5

8

21

46.0

8

197.1

217.9

147.4

172.2

192.3

3

13

54.50

3

38

43.8

7

52

29.48

8

1

35.84

8

31

38.46

8

March 6.

All. War

P.J.C

Star			Moon			Spot			Cancer		
40. Can			10			cent			Cancer		
		36.2			57.0			49.2			12.0
		40.1			1.0			52.1			15.1
		42.7			4.9			57.1			19.0
		47.2			8.1			6.0			22.5
8	31	51.0	8	23	12.1	8	35	5.1	8	36	26.1
3		218.2			83.9			165.1			95.1
					23.9			285.5			
8	31	43.64	8	33	4.78	8	34	57.10	8	36	19.10

March 8/9.

W. C. B.

St. Mir

a Aguilar

24.2

27.9

31.2

34.7

19 43 38.3

156.3

19 43 31.26

March, 10

W.C. B.

Ill. War

θ Orionis	δ Orionis	α Leporis	ϵ Orionis
16.1	18.7	1.6	34.0
20.0	22.3	5.3	37.6
23.5	25.6	8.9	41.0
26.8	29.0	12.4	44.4
5 7 20.1	5 24 32.7	5 26 16.2	5 28 48.0
117.3	128.3	44.4	205.0
5 7 23.46	5 24 25.66	5 26 8.88	5 28 41.00

March. 12. 1857.

1856phae.proj

W.C.B.			" "			Ill. West			" "			R.Y.B.			" "		
♂ Orionis			♂ Leporis			♂ Orionis			♂ Orionis			♂ Corvi			♂ Virginis		
		18.2			1.1			23.1			29.2			2.1			
		21.8			4.8			37.1			33.2			9.4			
		21.2			8.1			40.6			36.9			9.0			
		28.6			12.1			43.9			40.4			12.4			
5	24	32.1	5	26	15.9	5	28	47.6	12	26	44.8	12	34	16.0	12		
		129.9			42.4			202.7			184.2			44.9			
5	24	21.18	5	26	8.48	5	28	40.54	12	26	36.84	12	34	8.98	12		

March. 12.

R. 7. B.

All. Mer

38 Virginis			K Virginis			θ Virginis		
		29.0			54.8			10.3
		22.8			58.3			13.6
		26.0			1.8			17.0
		39.4			5.2			20.4
12	41	43.2	12	52	8.7	13	2	24.0
		180.4			128.8			85.3
12	41	36.08	12	52	1.76	13	2	17.06

March, 14/13.

N.C. B.

H. M.

Aguilar

27.2

27.0

30.1

33.8

19 43 37.1

152.0

19 43 30.40

March 14.

N.C.B.		All. Mer												
α Persei		α Tauri		β Orionis		β Tauri		δ Orionis						
	28.3		17.9		15.3		49.8						17.6	
	43.8		21.7		18.9		53.9						21.2	
	49.1		21.3		22.1		57.7						24.6	
	54.2		28.7		25.9		1.6						28.1	
3	13	59.8	4	27	32.4	5	7	29.1	5	17	5.6	5	24	31.6
	241.2		126.0					112.1			168.6			123.1
5	13	49.04	4	27	21.20	5	7	22.42	5	16	57.72	5	24	24.62

March, 14, 1857.

Ill. Min

W.C.B.

"

α Leporis

ε Orionis

0.6

32.9

4.3

26.6

8.0

41.0

11.6

47.4

15.2

5 28

47.0

39.7

199.8

7.94

5

28

39.98

March 2 $\frac{1}{2}$

W. C. D.

& Lyrae

Ill. Mar

16.9

41.4

41.8

50.3

18 31 54.8

229.2

18 31 41.84

1857. March. 29/21

Ill. West

W.C.B.

 α Lyrae β Lyrae

36.7

19.1

41.2

23.7

45.3

27.6

50.0

31.8

18 31 54.7 18 44 36.1

227.9 138.4

18 31 45.58 18 44 27.78

March 26.

M.C.B.

M. W.

 β Tauri δ Orionis ϵ Orionis

47.1

15.0

30.3

51.3

16.4

34.6

55.0

21.9

37.4

58.8

25.3

40.8

5 17

3.0

5

24

28.9

5

28

44.4

215.2

109.1

186.9

5 17

43.04

24

21.90

5

28

37.38

1857. March. 30/31

W. C. B.

M. W. R.

♂ Lyrae

♂ Aquilae

19.0

22.1

23.3

26.3

27.1

29.9

31.6

33.4

18 44 31.9 18 58 37.0

137.3 149.1

18 44 27.46 18 58 29.82

March. 31.

W.C. B.

W. W. W.

α Auriga	β Orionis	β Tauri	δ Orionis	α Leporis
36.8	12.0	46.4	14.2	57.2
42.0	15.7	50.5	17.9	1.0
46.7	19.1	54.4	21.2	4.7
51.7	22.5	58.3	24.7	8.1
55.5	26.0	2.3	28.4	12.0
234.0	48.3	211.9	106.4	83.0
		271.9		23.0
55.5	46.80	5	24	21.28
5	7	16	24	26
	19.06	54.38		4.60

March. 31.

H. W. W.

W. C. B.

"

"

"

"

2 Orionis

2 Orionis

Moon 10

1 Mercur

2 Mercur

29.7

58.2

27.9

53.7

54.7

33.3

1.7

32.0

58.0

58.7

26.7

5.2

36.0

1.9

2.5

40.1

8.7

40.0

5.9

6.5

5

28

43.75

47

12.36

12

44.16

13

10.26

13

10.8

6

183.5

86.1

180.0

129.7

132.8

26.1

9.7

12.8

5

28

36.705

47

5.226

12

36.006

13

1.946

13

2.56

6

March 31

W.C.B.

H. Wren

Spot 3.

2 " Canis Maj

8 " Can. Maj

28.3	22.8	31.7
32.7	30.0	36.1
36.6	26.6	39.8
40.6	22.8	43.7
6 13 44.8	6 38 37.4	6 52 47.7
183.0	110.6	199.0
6 13 36.60	6 38 30.12	6 52 39.80

1857 Apr. 2.

M.C.B.

Ill. West

α Jami

" Moon 10

1 Merin

2 Merier

" γ Canari

14.3

44.1

10.5

11.1

58.8

18.3

48.0

14.4

15.0

2.7

22.1

51.8

18.1

19.0

6.2

25.7

55.5

22.3

22.9

9.9

4 27 29.1 8

15

59.6 8

16

29.3 8

16

27.1 8

24

13.7 8

10.9.1

259.0

98.0

91.1

91.3

31.3

4 27 21.90 8

15

51.80 8

16

19.00 8

16

19.02 8

24

6.26 8

Apr. 2.

U. Mus

W.C.B.

γ Cancri

ϵ Hydrae

8		32.9		45.0	
7		36.8		48.7	
2		40.5		52.2	
9		44.3		55.6	
8	34	48.18	38	59.2	
3		262.6		260.7	
3					
6	8	34	40.52	8	38
					52.14

Apr. 3. 1857.

Ill. West

1856phae.p

W. C. B.		"		"		"		"							
γ Cancri		Moon 10		1 Messier		2 Messier		2 Leonis							
	32.4		35.0		0.8		1.6		5.7						
	36.2		38.9		4.9		5.5		9.7						
	40.0		42.7		8.5		9.0		13.4						
	43.7		46.5		12.2		12.7		17.0						
8	34	47.4	9	10	50.2	9	11	16.0	9	11	16.6	9	23	20.9	9
		149.7			213.3			42.4			45.4			66.7	
8	34	39.94	9	10	42.66	9	11	8.48	9	11	9.08	9	23	13.34	9

Apr. 3

W.C. 03.

2 Lewis

Ill. Weir

16.1

19.9

23.7

27.6

9 37 31.5

118.8

9 37 23.76

1857. Apr. 4

Ill. West

1856phae.ppt

H.P. 7.		" "		" "		" "		" "		" "				
ε Leonis		π Leonis		Moon 10		37 Leonis		γ' Leonis						
	16.2		12.2		5.4		32.8		37.7					
	20.0		15.6		8.8		36.4		41.6					
	23.8		19.2		12.7		39.8		45.2					
	27.4		22.4		16.2		43.2		48.6					
9	37	31.5	52	26.0	10	1	19.7	10	8	47.0	10	11	52.4	18
	118.9		95.4		62.8		199.2		221.5					
9	37	23.78	52	19.08	10	1	12.56	10	8	39.84	10	11	45.10	18

Apr. 4

W.C. B.

 β Lyrae δ AquilarIll. Mr
" α Aquilar

18.6

22.0

20.1

23.2

23.9

23.7

26.9

29.3

27.1

31.0

32.8

30.7

18 44

31.0

18

58

36.1

19

41

34.3

134.7

146.1

131.9

18 44

26.44

18

58

29.30

19

41

27.18

1857. Apr. 8

Ill. West

W.C.B.

 α Car. Maj α^2 Semino α Car. Min

21.5

58.8

20.4

25.3

3.0

29.0

28.8

7.0

27.4

32.1

11.0

30.9

6 38 16.2 7

25

18.2

31

34.1

144.3

98.0

10.7

6 38 28.86 7

25

7.00

31

27.4

Apr. 11.

Ill. West

M.C. B

Venus 1 Limb E Orion

48.0 27.4

52.0 31.0

55.8 34.4

59.7 37.8

3 32 3.7 5 28 41.1

219.2 172.1

3 31 58.8 5 28 34.42

Apr. 18. 1857.

W.C.B.

Ill. War

		Can. Maj		1 st Seminor		2 nd Seminor		2 nd Can. Min	
		21.2		5.6		58.3		20.2	
		25.0		9.3		2.5		23.8	
		28.4		13.1		6.6		27.2	
		31.9		16.8		10.7		30.5	
6	38	35.87	11	20.67	25	14.97	31	34.2	20
		142.3		65.4		93.0		135.9	
6	38	28.467	11	13.087	25	6.607	31	27.18	20

Apr. 22/23.

W. C. B.

Ill. W. C.

 α Cygni" Polaris 3 mid α " β Aur." α Pegasi

		1.8		—		14.1		9.1		
		6.9	3	27.2		18.7		12.8		
		11.7	5	50.7		22.8		16.4		
		16.4	1	8	4.6	26.9		19.8		
20	36	21.3		—	22	49	30.9	22	57	23.4
		58.1					113.8			81.5

20	36	11.62			22	49	22.76	22	57	16.30
----	----	-------	--	--	----	----	-------	----	----	-------

1857. Apr. 26

Oll. West

W.C.B.

Venus 1 Line α Aurigae

8.1 34.8

11.8 40.3

15.8 45.0

19.5 50.0

3 21 23.4 5 4 55.2

78.6 225.3

3 31 15.725 4 45.06

Apr. 27/28

W.C.B.

Ell. Wren

 α Cygni

		1.7
		6.6
		11.4
		16.2
20	36	21.2
		57.1

20	36	11.42
----	----	-------

Apr. 28, 1857.

Ill. West

M.C.B.

Moon TO	δ Gemini	α^2 Gemini	α Can. Min.	β Gemini
---------	-----------------	-------------------	--------------------	----------------

55.0	5.3	58.0	20.0	4.0
------	-----	------	------	-----

59.2	9.2	2.4	23.6	8.1
------	-----	-----	------	-----

7.1	12.9	6.4	27.1	12.0
-----	------	-----	------	------

7.2	16.6	10.5	30.5	15.9
-----	------	------	------	------

6 52 11.47	11 20.67	25 14.77	31 34.07	36 19.9
------------	----------	----------	----------	---------

135.9	64.6	92.0	131.2	59.9
-------	------	------	-------	------

15.9		32.0		
------	--	------	--	--

6 52 3.187	11 12.927	25 6.407	31 27.047	36 11.98
------------	-----------	----------	-----------	----------

Apr. 29.

W.C. B.

Hl. W. W.

" Interchange "

Venus 1 Limb		α Tauri		γ Semino		α^2 Semino		β Semino	
	46.0		13.2		58.2		57.3		3.7
	49.9		16.9		2.4		1.0		7.8
	53.7		20.3		6.2		4.7		11.4
	57.4		—		10.3		8.4		15.7
3 27	1.2	4 27	—	7 25	14.2	6 29	11.9	7 36	19.7
	208.2				91.3		83.5		58.3
3 27	53.64			7 25	6.26	6 29	16.66	7 36	11.66

