

KG
11365
165

H. 11

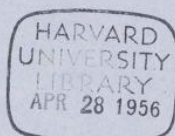
Vol II
293-392

Equatorial
from May 10th to Sept.
1850

KG11365.165

Daguerrotype of α Lyrae
July 17 1850

KG-11365.165



Aug 10th 1850

Trial of a bar of porcelain from a German crucible
ditto

74⁰ 74.40 or 74.35
170 73.60
204 73.25 — 9.12
rested at from 200 to 210
204 72.95

returned to 74.15 1.20
mean 1.16

70, 74.02
170, 73.20
200 — 72.50 9.12

Return 200 — 72.55
70 — 73.77 9.22
mean 9.17

This was about the best
material we found

Then
Yuel

74, — 74.50
170 — 74.00
204 — 73.78 — 0.72

Return 74 — 74.40 — 0.62
mean 0.67

1850 May 14th

Petter of Wedgewoodman

70. 67.9
 170. 67.2
 200. 66.95
 Return 200. 66.9
 70. 67.8

76. 74.03
 176. 73.40
 206. 73.02
 70. 73.85

15th Coarse Earthman (Blue Plate)

70. 74.20
 170. 73.50
 200. 73.35
 Return 200. 73.20
 70. 74.00

Comets daily motion
 R Dec h
 May 30th 10^h 7^m 04^s - 7^m 04^s - 5^m 00^s
 31st 10 7^m 08^s - 7^m 11^s - 6^m 24^s
 Jun 2nd 10 7^m 22^s - 7^m 23^s - 9^m 50^s
 19th 20

Reduction of Comet. Observations May 29thStar A δ, γ^k mag

D = 73.00

0.18

 δ 74.05

6

 $\delta - D = +65$ $d' = +1.6$ $\frac{5}{1.1}$

Arg. Jones No 126

17^h 40^m 22.7374^o 05' 07.0

K

- 2.82

d = + 21.8

- .12

+ 1.1

18428

17^h 40^m 19.79

74 05 " 29.9

- 12.82

- 13.8

1850.0

R

17^h 40^m 06.9774^o 05 " 16.1

Prec. from Glit. Celest 32630

- 1.614

+ 1.620

+ 0.011

+ 0.11

Sec. var

- 1.603

+ 1.73

8

8

- 12.824

+ 13.84 in PD

- 13.84 in dec

Glit. Cel 32630

17^h 41^m 28.3415^h 53^m 14.3

- 1.608

+ 1.68

Preceptor

- 1^m 20.40

+ 1.24.0

80.40

84.0

17^h 40^m 07.9415^h 54^m 38.3- 1^m 20.40+ 1^m 24.074^o 05 " 21.7Star A Glit. Cel. R 17^h 40^m 07.94Dec + 74^o 05' 21.7

Arg. Jones

06.97

74^o 05' 16.1

Star

17^h 40^m 07.45+ 74^o 05' 18.9

dR

6^m 02.27^m 25.8

R

17^h 46^m 09.65

p Dec 74 12 " 44.7

By Star A

With Micrometer

May 29th 11^h 30^m 07^s

R

17^h 46^m 09.6

By one comp. with

Dec

74^o 12' 44.7

H.C. 32630

Mean Eq. of SunthMay 29th 11^h 52.52 H m s

1860

R

17^h 46^m 03.84

By one Comp with

Dec

74^o 12' 29.6

H.C. 6001

= 29 Draconis

The R by 29 Draconis should be better than that by 32630 H.C. It having been taken by two pagages over R wire while the latter was by its transiting the center of the field

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May 29th 1850Petersen Comet of May 1st1st 15" 50 95.59

2419 = 13.45.35

2419 Slow +29.5

13.46.04.5 mo in 2^h.40^m
 4.00.37.0 - 40^s = 17.46.01 at 16^h.24^m silt

15" 53" 37

Approv
 R 17^h.46^m.12^s
 9^h.15^m 74^h.11^m.52^s
 mgt

11.50
 16.21
 4.31

Silt T part of m s.

This is the Comet
 first seen by me April 30th
 but not recognized as such
 See 'Comet of April' Book

Stand of 7th S.p. Comet A

Zero 50.20

50.20

2557 = 15 55.20.8 * 95.68
 16 01.23.0 Comet
 6.02.2
 Another star taken

95.68
 50.20
 45.48
 40
 445.8
 7^h.25.8

Cz 11.53.00
 2557 16.25.00
 4.32.00
 Cz Slow 42
 4.31.18

17^h

New Star is 29 Draconis Gr. 2460

Star n.p.	Comet	d.R
16.14.42.3	16.23.55.8	9.13.5
15.14.3	24.27.5	9.13.6
mean	16 24 11.8	
2557	+ 1.59.0	
	16 22.12.8	

4.31.19
 16.30.40
 11.59.21

Comet has a central
 point & can be very
 nicely observed

Fairford 16.30.40

10.17
 50.20

Star is n of Comet clouded up

h m s
 16.22.12.8 4.26.37.37
 4.27.24.1 46.75
 1.1.54.48.7 4.27.24.12
 1.57.1

11.52.51.6 = M.S.P. for R
 6 27.6

12.59.19.2 = M.S.P. for Dec

40.03
 80
 392.3 = 6.32.3

Star is 29 Draconis = B.A.C. 6001

Jan 1850 NPD 15.40.58.11

R 17.36.50.29 74.19.01.9

d.R 9.13.55 dd 6.32.3

Comet R 17.46.03.84 Dec 74.12.29.6

See preceding Page
 May 29th 11^h.52^m.52^s
 Comet R 17^h.46^m.03.84 } Mean Eq
 Dec 74^h.12^m.29.6 } Jan 1st 1850

apiece out of centre May 31st

14^h 07^m 00^s
 14^h 08^m 35^s 16^h 00^m 32^s
 8^m 33^s 43 73 59^m 28^s
 3^m 26^s 17 3^m 16^s
 2557 ~~Flash~~ 17^h 34^m 52^s 74 02^m 44^s Sec?
 2 00 ~~crust~~ + 9
 17^h 32^m 59^s 74 02^m 35^s

Petersen's Comet

apiece out of centre 3' in Dec

44 is + 3.16
 For this error
 cor of obs'd Dec = $\pm 3.16''$
 Dec = 0^m 00^s

17^h 46^m 03^s
 6 02
 17^h 40^m 00^s
 17^h 32^m 48^s
 7^m 12^s

Calculated?
 * A follows by 7^m 45^s
 N of it by 5'

centre ^{star} exil
 14^h 26^m 51.5 14^h 28^m 13.5

Clouds covered comet

m² = right hand
 star 5 of comet right hand
 37^m 22^s reads
 130.0
 26
 127.4
 = 2^m 07^s 4^s
 5^m 01^s 22^s
 13^m 00^s

By circles uncorrected

Just saw the comet
 through an opening in the clouds
 the instrument was so nearly
 pointed that it was in the field
 of the finder when the clouds parted.
 It is much larger & brighter

May 31st 9^h 35^m
 comets Dec 17^h 32^m 52^s
 Dec 74^h 02^m 35^s
 74^h 02^m 35^s

17^h 37^m
 14^h 55^m
 2^m 42^s
 9^m 18^s

14^h 26^m 50^s
 2 04

14^h 24^m 46^s
 4^m 35^s 17
 9^m 49^s 30
 1^m 37^s
 9^m 47^s 53

74^h 03^m 18.9
 2^m 07.9
 74 03^m 11.5

Approximate place of Comet
 hastily read off = Comet just caught between clouds

May 31st 9^h 30^m Dec 17^h 32^m 52^s $\pm 2''$
 Dec 74^h 02^m 35^s $\pm 1'$ perhaps

at 9^h 47^m 53^s 2^m 07^s 4^s South of a star of the
 9th mag supposed to
 be R.C. 32830 but
 clouds prevented fur-
 ther observation —

98

24) 437 (18.2)

24
19.2

Gyrum out of center

June 1st 1850

Hy. mo in R = -18.2

in Dec = -20.0

2557 13.35.25 PD 16.06.32

8.07.23

73.53.28

Daily mo

dR 7.19.5

dδ - 8.00

..28.02

3.52.37

17.28.02

2557 + 2.05

17.25.57

Comet is decidedly
brighter & larger

23 14. 11.30 66.36

14.05 66.44

15. 66.36

66.34

50.30

16.19

15.8

* 2.38.7

Comet n p * of 9th mag. with small companion
Zero

17.25.41.8

1.027

Ap * 1 R 17.26.44

Dec 73.53.34

73.56.13

2.39

73.53.34

14. 17. 52.3

18 35.8

18 57.5

19 34.8

1.05.2

0.59.0

Clouds uncertain

"

14. 20. 17.2

20 55.3

21. 19.5

21. 58.4

1.02.3

1.03.1

Micrometric Comparisons
with an unknown star of the 9th mag.June 1st 9^h 38^m 51^sComet proceeds * 1^m 02.60" North of * 2^m 38.7

14. 22. 36.8

23. 12.8

23. 38.3

24 16.3

1.01.5

1.03.5

10.4

Approximate place of Star

* R 17.26.44^s

Dec 73.53.34"

14. 20. 36

22.54

For place of Star of Comp.

See obs on July 25th

14. 21. 45

2.05

* R 17.26.45.36 * Dec

* R 1.02.60

73.53.30.9

2.38.7

14. 19. 40

4. 39. 14

9. 40. 26

1.35

9.35.51 dec 7

p R 17 25 42.76

p Dec 73.56.09.6

June 1st 9^h 38^m 51^s

Comets R 17.25.42.76 } Mean Eq

Dec 73.56.09.6 } Jan 1850

By 6 Comp in R & 3 in Dec with

* 9th determined July 29th

Petersen's Comet May 1st

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June 1st 1850

Comet enters

2557 14 31. 29.2 enter w/H 9.05.49 PD 16.03.44

mid. 32. 56.5

34. 11.5

14 32. 52.4

14. 37. 51

mid. 39. 20.4

40. 38.3

49.7

H 9. 11. 43

2. 48. 17

17 27. 37.4

16.03.44

Trines

14. 32. 57

39. 20

45. 14

117.31

14. 39. 10

2. 05

14. 37. 05

4. 39. 14

9. 57. 51

1. 35

11.57 9. 56. 18

L

mid. 14. 43. 43.5
45. 13.7
46. 28.8

9. 17. 36

2. 42. 24

17. 27. 37.7

16.03.46

Mean 16.03.44.7
Cor inst 9.2

16. 03. 53.9

73. 56. 06.1

29 Draconis

14. 56. 01.5

9. 17. 09

2. 42. 51

14. 56. 01.5

17. 38. 52.5

15. 40. 50

June 1st 9. 56. 18^s Mean Eq.

Comet at 17. 25. 35.67

Dec 73. 56. 06.1

By 3 Inst. Comparisons with 29 Draconis
good results apparently

15. 40. 48

See page pre
ceding

15. 00. 10.8

9. 21. 19

2. 38. 41

15. 00. 10.8

17. 38. 51.8

Stn
Mean 15. 40. 49

NPD 15. 40. 58.1

Cor. inst + 9.1

Comet

17. 27. 37.53

2. 01. 86 = Cor

R 17. 25. 35.67

Stn

Mean 17. 38. 52.15

17. 36. 50.29

Cor. Chr. & inst 2. 01. 86

Inst + Chro Error = +2. 01. 9

Chr. Error = +2. 05. 1

- 3.2 inst Cor

June 3rd 1850

Comet

Zero 50.22

2557 + 2^m 10.14Star is γ . 2420

Star & S.p. Comet = Comet & Star

* 14^h 45^m 00.5 82.22

11 51^m 14.7

6^m 14.2

NPD = 16° 23' 26" C.H.

9^h 38^m 18^s

2^m 21^s 42

14^m 51^s 14.7

17^m 12^s 56.7

* 14^m 54^s 50.7 82.08

Comet 15^m 01^s 04.9 82.15

6^m 14.2 50.20

31.05

16.4

31 3.1 = 5^m 13.1

16^m 23^s 32

9^m 48^s 71

2^m 11^s 49

15^m 01^s 04.9

17^m 12^s 53.9

29 Draconis

15^m 05^s 01.2

15^m 40^s 48

* NPD 15^m 40^s 58.1

cor inst + 10.1

H 9^m 26^s 06

2^m 33^s 54

15^m 05^s 01.2

17^m 38^s 55.2

* CR 17^m 36^s 50.29

cor - 2^m 04.91

14^m 51^s 1515^m 01^s 0529^m 52^s 2014^m 56^s 102^m 1014^m 54^s 004^m 47^s 0710^m 06^s 531^m 39NPD 10^m 05^s 1416^m 23^s 26

23.32

16^m 23^s 29

cor inst + 10

NPD 16 23 39

73.36 21

17^m 12^s 56.7

53.9

17^m 12^s 55.3cor inst 2^m 04.9NPD = 17^m 10^s 50.4

Note. - By former obs the cor of the inst. & Chronometer would be for this eve - 2^m 07.2

$$\begin{array}{r}
 17^{\circ} 04' 36.2'' - 1.336 \\
 73^{\circ} 31' 08'' \text{ sec } 8. \\
 \hline
 - 1.328 \\
 \hline
 40 \\
 53.120 \\
 \hline
 19080
 \end{array}$$

Groombridge 2420

$$\begin{array}{r}
 17^{\circ} 05' 22.55'' \quad 16^{\circ} 25' 44.8'' \\
 53.12 \quad 3.10.8 \\
 17^{\circ} 04' 29.43'' \quad 16^{\circ} 28' 55.6''
 \end{array}$$

$$\begin{array}{r}
 \text{Sol Radcliffe Obs} \\
 2420 \quad 17^{\circ} 04' 40.43'' \quad 48^{\circ} 16' 28.21.3 \\
 1642 \quad - 10.56 \quad + 33.7 \\
 \hline
 17^{\circ} 04' 29.87'' \quad 16^{\circ} 28' 55.0'' \\
 6.14.20 \quad 73^{\circ} 31' 05.0'' \\
 \hline
 17^{\circ} 10' 44.07'' \quad 5'' 13.1'' \\
 \hline
 73^{\circ} 36' 18.1''
 \end{array}$$

June 3rd 10^h 05^m 14^s MSF

$$\begin{array}{l}
 \text{of } \text{Dr } 17^{\circ} 10' 50.4'' \\
 \text{Dec } 73^{\circ} 36' 21''
 \end{array}
 \left. \vphantom{\begin{array}{l} \text{of } \text{Dr } 17^{\circ} 10' 50.4'' \\ \text{Dec } 73^{\circ} 36' 21'' \end{array}} \right\} \text{Mean Eq. Jan 1 1850}$$

By two inst. Comp with
29 Draconis

June 3rd 10^h 05^m 14^s

$$\begin{array}{l}
 \text{of } \text{Dr } 17^{\circ} 10' 44.07'' \\
 \text{Dec } 73^{\circ} 36' 18.1''
 \end{array}$$

By 2 Micrometric Comp. with

Gr 2420

Diff. R. by passages of centre of field.
Place of stars by
Radcliffe Obs.

$$\begin{array}{r}
 1.32 \quad 4.81 \\
 1056 \quad 3367 \\
 \hline
 1056 \quad 3367
 \end{array}$$

June 4th 1850

Comet.

2557

6th mag. Star S.p. Comet -

Comet n. of Star

Star 8th n. f
other Star* 15^h 45^m 17.2

diff. Dec

38.15

15^h 49^m 33.848^m 59.23^h 42.0Star 6th on fixed wire1 10^m 3515^h 51.05* 15^h 51^m 04.8

or

Star 8th n. fH 10^m 49^m 25

205

54^m 41.2

38.51

15^h 55^m 17.0N.P.D. 16^m 38^m 3215^h 493^h 36.41^h 10.3516^h 59.35

diff. R

Comet

Star 8th48' S of bright *
= 8^h (1 + 1/2)* 16^h 00^m 03.903^h 42.73^h 38.804^h 20.500^m 30.304^h 08.8

38.5

04^h 47.7

37.8

38.9

39.6

41.0

16^h 05^m 36.409^h 13.23^h 36.8

09 52.8

06^m 02.809^h 38.8

36.0

10 119.8

3^h 37.52* 8th = 39.32

38.75

51

38.33

41.71

77

50.27

375.6 = 6^h 15.6

85.0

16

38.33

83.4

50.20

1^h 23.4Comet S of * 8th

11.87

3.4

115.3 = 1^h 55.3 Comet n. of * 6thComet d * 8th
at 16^h 11^m

41.71

Comet S of * 8that
16^h 14^m 14^s
Comet d * 6th 39.67Star 8th n. of Star 6th
31.46

BAC 5769

α R 16^h 59^m 17.55
 δ R 3^s 37.52
 ρ R 17 02^m 55.07

NPD 16^h 38^m 49.8
 73^s 21^m 10.2
 1^s 55.3
 73^s 23^m 05.8
 9.0
 73^s 22^m 56.8

cor mo. 14

Gr. 2418 = Star 8th

17^h 03^m 33.32 16^h 35^m 46.2
 from Radcliffe obs.

For α R

16^h 03^m 55
 09.26
 13^s 21

16^h 06^m 402557 + 2^m 1216^h 04^m 284^s 54.0311^h 13^m 25

1 50

11^h 11^m 35 = M.S.P.For δ R

15^h 49^m 00
 54.41
 3 41

15^h 51^m 50June 4th 11^h 11^m 35^s

α R 17^h 02^m 55.07 } Mean Eq
 δ R 73^s 22^m 56.5 } Jun 1st 1850

By 3 Comparisons by Micromet
 with B.A.C. 5769

June 4th 11^h 11^m 35^s

α R 17^h 02^m 54.92 } Mean Eq
 δ R 73^s 22^m 53.1 } Jun 1st 1850

By 4 Comp in α & 1 in δ with
 Gr. 2418 place of this star
 was taken from the Radcliffe
 Observations Vol 4 pt III
 See next page —

1841.0 17.03.45.56 1061 PD 16.35.04.4 154
42.0 44.74 3.2 35.08.2 154

17.03.44.51
10.27

08.7
39.2

4.87
8
39.16

1.284
8
10.272

17.03.54.24
39.32

17.02.54.92

16.35.48.0
73.24.12.0

1.23.4

73.22.48.6

mo cos. 7.72 4.5

73.22.53.1

160
30
240
12

Jan 6th 14.23.29 79.38 35.3/2.72 (.077) .077 Arc change in $l^h = 0.46''$
31.35 79.91 2471 4.62 R 16.43^h Dec 72.57'
58.48 82.10 2490 385 Proc in Dec Proc in R
113.52 139 4312 -6.18 -0.998

cor for 14.37.57 80.46 $m = 46.03$ $n = 20.06$
5.41 43 $n = 1.3023$
14.43.38 80.89 $m = 9.9790$
50.16 $m = 0.5133$
30.73 -60.90 = 1.7946
6.1 +46.03
30.12 1514.87 (0991)
133
137
135
1320

-49.52 7928

Comet is Sif* Sif Dec 5.01.2
Arg. Zone No 126

16.43.23.41 +72.57.32.6 14.43.38
-2.70 +21.2 2.20
-0.17 +1.8 14.41.18

16.43.20.54 +72.57.55.6 4.58 56
Proc -7.93 -49.5 9.42.22

16.43.12.61 * 72.57.06.1 1.37
dR 4.54.72 5.01.2 9.40.45 = 11.5.7

16.48.07.33 72.52.04.9

6.44.40.45^s
June 16.48.07.33 } Mean
Dec 72.52.04.9 } Eq.

By 3 Comp. in Dec at 4 in R with
* 7th Arg. Zone No 126

16^h 46^m
= 72.50

June 6th 1850

15.18
Pg 2557

-21
-13

14.44

very rough

Arg Zone 126 * 7th

H 14.00.20 17.07.20
9.08.51 72 52.40
2.51.09
16.51.29

Error Chro.
Ap. Rg

2.15
16.49.14

Star 7th mag = Arg. Zone 126 is n.p. Comet
Star on the fixed wire.

14 10.27
9 19.51
2 40.09
16 50.26
2 15
16 48.10

17.07.20 Star in center of field & on fixed wire

* 14.18.28

14.23.28.8 Diff. Dec. from reads = 79.38

* 14.26.32.5
14.31.35.

79.91

Zero

50.18

115

Zero = 50.16

Diff. of R

21

Star	Comet	diff R
14 35.24.8	40 20.5	4.55.7
35.55.8	40.50.8	55.0

for the star

14 41.29.8	46.24.0	4.54.2
42.00.8	46.54.8	4.54.0

H = 9^h 56^m 05^s NPD 17^o 05' 20"

2557 = 14.43.38

9
4.54.72

Another Diff. Dec

* 14.53.56
14.58.47.8

92.10

June 7th 1850

$$\begin{array}{r} 160 \\ 80 \\ 240 \\ 10 \\ \hline 250 = 07^{\circ} 30'' \end{array}$$

$$\begin{array}{r} 14 \quad 37^{\circ} 12' \quad 17^{\circ} 26' 44'' \\ 9 \quad 54 \quad 24 \\ \hline 2 \quad 05 \quad 36 \\ 16 \quad 42 \quad 48 \\ \hline \text{cor} \quad 2 \quad 18 \\ 16 \quad 40 \quad 30 \end{array}$$

at 9^h 31^m MST
 R 16^h 40^m 30^s
 Dec 72^o 33' 16"

Reduction of Obs. on June 13th

prec R + 0.055

Dec - 10.05

Stars in Arg. Zone 114

0.440

86 40

Star A

Star L

$$\begin{array}{r} K \quad 16^{\circ} 04' 07.00 \quad 69^{\circ} 39' 30.2 \\ \quad - 4' 34.76 \quad \quad + 28.4 \\ \quad \quad - .07 \quad \quad + 0.7 \\ \quad 15.59.32.17 \quad + 69^{\circ} 39' 59.3 \\ \quad \quad + 0.50 \quad \quad - 1' 20.4 \\ \text{cor of K} \quad 15.59.32.67 \quad + 69^{\circ} 38' 38.9 \\ \text{pXXIX} \quad \quad + 0.44 \quad \quad 3' 29.2 \\ \text{prec} \quad 15.59.32.23 \quad \text{p Dec } 69^{\circ} 42' 08.1 \\ \text{x6.R} \quad \quad 3.50.95 \\ \text{d.R} \quad 15.55.41.28 \end{array}$$

$$\begin{array}{r} 16^{\circ} 04' 29.25 \quad 69^{\circ} 40' 10.2 \\ \quad - 4' 34.76 \quad \quad + 28.4 \\ \quad \quad - .07 \quad \quad + 0.7 \\ \quad 15.59.54.42 \quad 69^{\circ} 40' 39.3 \\ \text{cor K} \quad + 0.50 \quad \quad - 1' 20.4 \\ 15.59.54.92 \quad 69^{\circ} 39' 18.9 \\ \quad \quad + 0.44 \quad \quad 2' 47.8 \\ \text{x6.R} \quad 15.59.54.48 \quad \text{p Dec } 69^{\circ} 42' 06.7 \\ \text{d.R} \quad 4' 12.42 \\ \text{p.R} \quad 15.55.42.06 \end{array}$$

2*1 5.9^h 45 540" 122^sThursday June 13th 1850

H.A. 14^h 55^m 40^s
 10^h 53^m 22^s
 1^m 06^s 38^s
 16^h 02^m 18^s

P8 + 20^m 21^s
 69^m 39^s

* 1 R = 16^h 00^m 2^s
 8u 69^m 39^s

a & b in Arg. Zones 114

	Comet	Star a	Star b	dR a	dR b
2557 15 ^h	09 ^m 24.8	15 ^h 13 ^m 14.9	15 ^h 13 ^m 36.3	3 ^m 50.1	4 ^m 11.5
	09 ^m 38.7	13 ^m 28.5	13 ^m 50.2	3 ^m 49.8	11.5

15^h 14^m 38.4
 14^m 51.8
 48 34

15^h 18^m 29.7
 18^m 44.4

15^h 18^m 51.4
 19^m 05.5

3^m 51.3
 52.6
 38

4^m 13.0
 13.7
 97

15^h 12^m 08^s
 2^m 35

15^h 09^m 33^s
 5^m 26^s 32^s
 9^m 43^s 01^s
 1^m 35

Stars are in Arg. Zones 114
 June 13th 9^h 41^m 26^s

3^m 50.954^m 12.42

15 09 33

9^h 41^m 26^s M.S.F.Comet precedes * a 3^m 50.95* b 4^m 12.42 4^h 01

Comet & Star a diff Dec
 15^h 23^m 07^s 27.4

June 13th 10^h 01^m 55^sComet N of * a 3^m 29.2Comet N of * b 2^m 47.8 2^h 01

Comet n of * 1 a & b

June 13th 9^h 41^m 26^s M.S.F.

Comets R 15^h 55^m 41.28 by * a
 R 42.06 by * b

15^h 28^m 15^s

71.92 * a
 67.73 * b

71.92
 20.80

67.73

66.54

13th 10^h 01^m 55^s M.S.F.

71.36

14.27

Comet Dec 69^m 42^s 08.1 by * a

50.02

67.13

42.06.7 by * b

21.35

50.05

213.5

17.12

4.3

171.2

209.2

3.4

3^m 29.2

1678

2^m 47.82^m 47.815^h 37^m 07^s

70.80 * a

21.35

50.05

65^m 22^s

66.54 * b

213.5

17.12

15^h 32^m 41^s2^m 3515^h 30^m 06^s5^m 26^s 32^s10^m 03^s 34^s1^m 3910^m 01^s 55^s = M.S.F.

Mr Starns Theodolite

Two marks used one in Somerville & the other in
Roxbury

	S	R
reads	360° 00'	270° 00'

45° 01	315° 01
--------	---------

270° 02	360° 00
---------	---------

315° 00	45° 00
---------	--------

360° 02	90° 01
---------	--------

L

45° 00	135° 00
--------	---------

90° 00	180° 00
--------	---------

135° 00	225° 00
---------	---------

Did not detect any sensible error

Tuesday Jan 18th

Comet Star
 19^h 01^m 08^s + 65[°] 46['] 34["] 19^h 12^m 50^s
 W 3^h 35^m 59^s
 15^h 25^m 69^s
 2 30
 15^h 22^m 40^s

Jan 19th Wednesday By J. Gibson

Comet	Star	dist			
14 51 16.4	52.19.7	1 ^m 03.9	14.59.30	26.39	back
51 43.3	52.46.8	03.5	15.00.55	26.70	23.86
			02.55	26.18	238.6
			05.04	25.64	4.8
			8 54	26.15	233.8
					3 ^m 53.8
14 ^h 53 ^m 40.9	54 ^h 45.5	04.6	15 ^h 02 ^m 58 ^s	50.01	
54 ^h 09.0	55 ^h 12.7	03.7		23.86	

Star of the 10th mag.
 No better star
 is to be found

Zero
 50.02
 01

15^h 08^m 36.0 15^h 09^m 43.9 1^m 07.9
 09^m 06.6 10^m 14.2 07.6
 348 326 6) 312
 14^h 58^m 54^s 1^m 05.20

49.97
 50.03
 50.01

Star of 10th mag. at 15^h 17^m 44^s
 Dec 65[°] 04['] 20["]

June 19th 9^h 08^m 29^s

2^m 48^s
 14^h 56^m 06^s
 5^m 50^m 11^s
 9^m 05^m 55^s
 1^m 29^s

June 19th 9^h 04^m 26^s

Comet proceeds * 1^m 05.20

Comet S of * 3^m 53.8

MSB 9^h 04^m 26^s For Star of Comparison See July 24

June 19th 9^h 04^m 26^s M.S.P.
 Comets at 15^h 16^m 36^s 24^s Eq 1850.0
 June 19th 9^h 08^m 29^s
 Comets Dec 64[°] 58['] 44["] 3

1850.0 Star at 15^h 17^m 41.44 + 65[°] 02['] 38["] 1
 dist 1^m 05.20 at 3^m 53.8
 at 15 16.36.24 Dec + 64[°] 58['] 44["] 3

Over

June 19th Continued

By 2557

Comet

15^h 21^m 40^sPD = 25^h 00^m 12^sWh 0^h 02^m 13^sDec + 64^h 59^m 48^s15^h 19^m 27^sdδ 4^h 30^m

2 53

65^h 04^m 18^s = * Dec

R

15^h 16^m 34^s

d.R

R

1^h 10^m

* R

15^h 17^m 44^s

Comet 21⁴
 PD 26⁰.58
 R 15^h.05^m.20^s } Computed Friday June 21st 1850

~~Comet compared with Gr. 2215 * 7th~~
 Gr 2224

Star Gr 2215 9^h mag
 Radcliffe
 R 15^h.13^m.40^s V, VE
 PS 26⁰.56' EV

26^h.59^m.11.8 2^{ds}
 11.3 V
 26^h.59^m.11.7
 15^h.17^m.09.52

By Ob
 PD 27⁰.05'
 R 15^h.05^m.14^s

Comet
 14 52^h.45.8
 58.3

Star 2ⁱⁿ 8th
 14^h.57^m.19.3
 57.31.3

* 9^h 10^h 2^{is}
 14 59^h.17.7
 29.3

c
 2^{is}
 15^h.03^m.31.8
 43.4

* 7^h.8^m 6ⁱⁿ 8th
 15 04^h.38.9
 50.2

H 11^h.44^m.43
 0^h.15^m.17
 15^h.04^m.40
 15^h.19^m.57
 2 50

PD 297⁰.01' = 270⁰ = +27⁰.01

diff. Gr * 7^h.8^m = d

Comet on fixed wire
 15^h.14^m.30 8.00 PD 27⁰.05'

431.1
 8.6
 422.5 = 7⁰.02.5

15^h.21^m.30 5.40
 43^h.7.9
 43^h.1.1

Comet
 15 25^h.11.4
 25^h.34.5

Star d
 15^h.37^m.13.3
 57^h.35.7

Gr
 49^h.41
 49^h.81

* d
 15^h.17.07 = R * 7^h.8^m = 2224 Gr. EV, V, VI
 Thin dr * d

14^h.52.46 11^h.53.1
 14^h.52.58 11^h.51.9
 15^h.25.11 12^h.01.9
 15^h.25.34 12^h.01.2
 15^h.15.39 11^h.58.62

2.52 15^h.17.09.52 R *
 15^h.12.43 15^h.05.10.90 R *
 5^h.58.05 26^h.59^m.11.7
 9^h.14.42 7⁰.02.5
 1 30 R * PD 27 06^h.14.2
 15^h.09.13.12 62^h.53.45.8

June 21st 9^h.13^m.12^s

The instrument was moved
 for the diff. of Gr.

R 15^h.05^m.10.90 } By 2 Comp in Dec 24th 1850
 Dec 62^h.53^m.45.8 } with Gr. 2224 * 7th

Mean Gr

(Date from Ephemeris is - June 26th)June 2 (26th) Wednesday 1850

Star is Arg. Lome 5

* 8th mag.

Comet dR

15^h 50^m 07^s15^h 503^m 49^s15^h 47^m15 46^m 48^s1^m 12^s1^m 11^s 33^s

* dR 14.35

Very rough

* dR 14 35.45

Dec 56^h 20'2557 15^h 43^m 53.849^h 02.3

5.08.5

44^m 07.9

15.8

07.9

15^h 49 59.250^m 13.715^h 55^m 21.0

Cloudy

5^h 07.3H 1^h 11^m 33^s W326^h 21^m 20^s

+ 49

= 56^h 21^m 20^s1^h 09^m 44^s16^h 15^m 05^sDiff. Dec by moving telescope
54.84 Comet is S of *It being necessary to do so
on account of Clouds

* Transits centre * on fixed wire

* 16^h 17^m 12.557^m 29^s

Diff. Dec by paper-

Comet 16 22^m 13.016^h 24^m 44.8

Comet

dR

prec in R

in Dec

+ 1.84

- 15.64

25^m 02.724^m 49.55^h 00.7

8 years

125^h 12^m = 2^h 05^m 1^s

30 02.8

5 00.1

14.48

Zero

49.82

16^h 38^m 40^s

64.00

Arg Lome 5 * 9^h14^h 36^m 13.07+ 56^h 23^m 18.4- 1^m 22.72

- 16.7

- 0.07

+ 0.17

14^h 34^m 50.28+ 56^h 23^m 02.4

+ 14.48

- 2^h 05.1* dR 14^h 35^m 04.76+ 56^h 20^m 57.3dR 5^h 04.90dR 1^h 46.1dR 14^h 40^m 09.66Dec 56^h 19^m 11.2

Times for dR		dR	Times for dS		"
Star	15 ^m 43 ^m 54	5 ^m 08.5	16 ^m 22 ^m 13		57.29
	15 ^m 44 ^m 08	07.9	38 ^m 40		64.00
	15 ^m 50 ^m 14	07.3	60 ^m 53		1.29
	16 ^m 24 ^m 49	00.7	16 ^m 30 ^m 26		60.64
	16 ^m 25 ^m 03	00.1	3 06	Gen	49.81
	8 ^m 08	24.5	16 ^m 27 ^m 20		10.83
	16 ^m 01 ^m 38	5 ^m 04.90 // follows*	6 ^m 17 ^m 48		2.2
dR	5 ^m 10		10 ^m 09 ^m 32		106.1
Shiny Comet	16 ^m 06 ^m 48		1 40	dS	1 ^m 46 ^m 1
	3 ^m 06		MS 10 07 52		
	16 ^m 03 ^m 42		for d Dec.		
	6 ^m 17 ^m 48	218 ^m 43 ^m in 9.79621	cos 9 ^m 89223		
	9 ^m 45 ^m 54	6 ^m 5 0.17742	1.30242		
	1 ^m 36	1.30242	1 ^m 19485		
MS.P	9 ^m 44 ^m 18	-18.88 = 1.27605	-15.65		
for dR		+46.03			
		+27.15 = +1.81			

Note The reductions have been made on the supposition that the date was June 26th

Comet Compared with a star of the 8th mag.

18^m 45^m 15^s
Dec +56° 21' 20"

Cannot be certain on this point until we have a good ephemeris

June 26th 9^m 44^m 18^s MS.P

Comet follows * 5^m 04.90 50s

June 26th 10^m 07^m 52^s MS.P

Comet South of * 1^m 46.1 20s.

June 26th 9^m 44^m 18^s MS.P

Comet's R 14^m 40^m 09.86 60s

Jun 26th 10^m 07^m 52^s

Comet's Dec +56° 19' 11.2 20s.

Compared with a star of the 9th mag in Argelander's Zone 5

July 4th

Comet

* 9th or 8th = 4

2557	16 ^h	51	26.8	51	57.0	30.2
		51	42.7	52	13.3	30.6

16	"	52	29.3	"	59.7	30.4
		52	45.4	53	15.8	30.4
			24.2			30.40

16	"	52	06.
			8

Comet N of Star

16	"	56	15	8	96	
		57	36	9	67	10.24
		59	20	10	77	49.81
17	"	00	37	11	54	39.57
			108	4	40.94	7.9
16	"	58	27	10	24	38.98
						6.27.8
						100.4 = 1

47	"	04	36.2	05	08.3	32.1
		04	47.5		09.3	31.8

05	"	41.4	06	"	13.6	32.2
05	"	52.4			24.6	32.2
		57.5				32.08

Times of day { 17.05.14.
16.52.06
117.20

Altitude 16.58.40
- 13

16.58.27
3.20

16.55.01
6.49.20

10.05.41

1.39

Alt. 10.04.02

A star of 9th is 3' S of α & fol
as much ~~or~~ $\frac{12}{3}$ dist of Comet

Alt. of α follows α in
~~see with α 3' S α~~

Zero = 49.80

Comet in Center of field
17" 11" 52.3 221" 11" 57"
h X 21.58.18.5
14" 13" 34 = 41" 11" 57"
X 14 89.34

The Comet has always appeared
with a decided stellar nucleus
at first faint

But now as decided α as
bright as a star of the 11th magnitude
Its diameter < 1" It looks
quite solid

July 4th 10^h 04^m 02^s M.S.F.Comet's dist = 14^h 09^m 54^s Dec +41° 11' 57"Comet precedes * 8.9 = 4 0^m 31.21" North of " 6^m 27.8July 4th 10^h 04^m 02^s

Comet's dist 14^h 09^m 50.03 } Alt.
Dec 41° 12' 26.7 } Eq.

By & Comp. with B.G. 472

850

$$\begin{array}{r} 48.47 \\ - 1.14 \\ \hline 47.33 \end{array}$$

$$\begin{array}{r} 2.44 \\ 122 \\ \hline 2.02 \end{array}$$

$$\begin{array}{r} 17.0 \\ 25.5 \\ \hline 42.5 \end{array}$$

$$6.3) .152 \overline{) 0.024}$$

315

Comet

Star a 6'S 57A

$$\text{Star } 9^{\text{h}} 10^{\text{m}} 21.30^{\text{s}} 34 \quad | \quad \text{Star } 9^{\text{h}} 10^{\text{m}} 21.30^{\text{s}} 34 = 10'' \text{ S } 57^{\circ} \text{ A}$$

17. 19. 27.7

20. 01.8

20. 26.7

17 20. 57.8

(a) Star is 18.8. 472

			1800. + 2,460	prec	
	14. 09. 04.12	+ 41. 12. 10.5	mean - .002	+ 17.000	
K	+ 16.22	+ 52.5	019	+ 0.62	faint nebulosity
100 x K	+ 0.07	+ 0.7	2.139	16.938	17. 45. 07
18250	14. 09. 20.27	+ 41. 13. 02.3	60.97	423.45	W 3 09. 21
prec	+ 1.00.97	- 7. 03.4		7. 03.4	
	14 10. 21. 24	+ 41. 05. 58.9 = Star's place			221. 0. 07. 40"
d.R	0. 31. 21	6. 27. 8			
	14 09 50. 03	41 12. 26.7			

2557
July 6th P. Comet and double star n.p. 8 and 9th mag. Companion 10th 11th mag

Diff. $R \times a$ α ΔR Dec. micron
 $\times 17.9..10$
 1st wire 35.3 50.14 0.38.7 17.9.46 — 99.60 \times n.p. 8
 2nd — 48.8 16.50 26.5 37.7

55.4 58.33.2 37.8* 17.11.45
 58 08.2 -16.58 46.0 38.0 17.12.20 — 81.41

32.0 0 9.7 2.37.7 17.13.44 314.0
 59.45.1 7.0 22.3 37.2 17.14.18 — 82.62 6.3
 336 150 Σ 36.24 13.63 307.7
 Mean 16.56.25 Mean 17.12.08 81.21 5.07.7
 16.81 31.40 Diff. Dec

8.3 19 44.0 35.7 30.55
 17.19.24.0 17.20.00.0 36.0 17.31.26 — 93.04 17.12.08
 3.30

43.5 21 18.7 35.2 32.58
 17.20.59.5 17.21.34.8 35.3 17.33.33 — 94.64 17.08.38
 6.57.13

16.8 22 52.2 35.4 35.18 — 95.91 10.09.45
 22 33.0 17.23.08.0 35.0 10.09.45
 M.S.I.

41.0 24 15.9 34.9 17.37.36.7 — 97.41 37.04.0
 23.57.0 -17.24.32.0 35.10 17.37.36.7 — 97.41
 14/150 35.4 14/89.6 640
 10 14/54.681
 11.2 20
 11.2 20

Mean 17.11.08 d.R 36.40 Mean 17.11.08
 17.11.08 17.11.08
 17.11.08 17.11.08

July 6th 10^h 09^m 45^s

Comet's R

Dec

Comet follows \times 0^m 36.27

" S of \times 5^m 07.7

By 14 diff. of R α 3 of Dec.

d.R 36.27
 Compared with a star of 8^m 9^m
 Star of Comp 17.12.45
 16.7 The mean is nearly right
 14.03.20
 Dec +36.33
 Star is double for 329.20' Dist 8.6
 210x40

Let fixed wire

Zero

50.000

50.012

50.002

2557.

July 6th double star observed with cometWith new zero

Dist

Pos.

Zero 360 - 0

49^m 180

328.15

..183

329.00

.060

330.20

.093

329.45

116

36.80

329.20

49.129

double * of comparison = * a off 8^m 2 10^m

50.01

Pos 329.20 } by 40^m

88

Dist = 8.6

* b. ey mag. * c 5.4 mag.

Comet and stars b & c.

Comet

Star b

Star c

d.R. b

d.R. c

1st win -

44.5

41.9

57

2. 57.4

4. 12.5

2 .. -18..21 ..59.3

-18..24 ..57.4

-18..26 ..11.9

2. 58.1

4. 12.6

9.5

7.2

22.5

2. 57.7

4. 13.0

18..27 ..23.7

-18..30..22.3

-18..31..37.6

2. 58.6

4. 13.9

Comet south of stars
b and c

Diff Dec Confirmed

* b

* c

18..36 ..31.8

18..39.30 - 18..40..47

Diff. Dec b

Diff. Dec c

m

56.05

56.33

56.05

56.33

59.45

59.51

15.50

15.84

8 ..42..18

18..45..19.3

-18..46..35

57.75

57.92

59.45

59.51

50.01

50.01

77.5

77.5

75.9 = 1.15.9

77.5 = 1.17.5

Diff R & S

* b

* c

18..50 ..11.0

12.1

27.2

d.R. b

d.R. c

18..50 ..29.5

-18..53..31.0

-18..54..46.0

3.01.1

4.16.2

18..50 ..29.5

-18..53..31.0

-18..54..46.0

3.01.5

4.16.5

Star c - center of field

dark reading 18..56..28.

Reading of last

H

P.D.

19^m 03 ..34.5

4..52..08.5

216..19..32 = 36..19..32

18^m 59 ..43.0

5..02..9.5

216..33..00 -

dbl. star a 19.09..13.7

18^m 59 ..43.0

5..02..9.5

216..33..00 -

double *

Zero ex - all right

For Reductions see next page

July 6th (Continued) Reductions of Observations

Times for dR	Comet with b	Comet with c	p's motion in R
18 ^m 21.44	2 ^m 57.4	4 ^m 12.5	$\frac{1}{1^m} = 0.125$
21.59	2 ^m 58.1	12.6	
27.10	2 ^m 57.7	13.0	Dec 14.0 ^m 46 ^s Dec +36.19
27.24	2 ^m 58.6	13.9	Dec 9.00
50.11	3 ^m 01.1	16.2	211 ^m 57 ^s in 9.7236 cos 9.9287
50.30	3 ^m 01.5	16.5	212 ^m 12 ^s in 9.7266 9.9275
198.58	3 ^m 54.4	247	$\delta = 36.19$ tan 9.8663 9.5
Mean 18 ^m 33.10	2 ^m 59.07	4 ^m 14.12	9.5899
Motion in 5 ^m 15	+0.78	+0.78	9.5929
18 ^m 39.25	2 ^m 59.85	4 ^m 14.90	$n \quad 1.3022 \quad n = 1.3022$
			-7.80 0.8921 -17.02 = 1.2304
			-7.85 0.8951 16.97 = 1.2297

Times for dR	Comet with b	Comet with c
18 ^m 36.32	Am. price for b 1850. = +2.551 = 38.26 in Dec. price = -17.02	46.06
42.18	" c " = +2.548 = 38.21 = -16.97	
78.50	Star b R 14 ^m 07 ^m 43 ^s	Star c R 14 ^m 08 ^m 58 ^s
18 ^m 39.25	Dec +36.19.30	Dec +36.19.32
3.30	1.15.9 p s of b	1.17.5 p South of c
18 ^m 35.55	Comet Compared with	Comet Compared with
6.57.13	a star of the 7 th = b	a star of the 4 th = c
11.38.42	July 6 th 11 ^m 36 ^m 48 ^s	July 6 th 11 ^m 36 ^m 48 ^s
1.54	Comet proceeds x b 2 ^m 59.85	Comet proceeds x c 4 ^m 14.90
dR = 11 36.48	" South of " 1.15.9	" South of " 1.17.5

The corrections are
for precession since 1825
which were not applied in

The places published. Vide Astr. Nach. No. 197.

By x b	Comet with b	By x c	Comet with c
July 6 th 11 ^m 36 ^m 48 ^s	Comet R 14 ^m 02 ^m 31.24	July 6 th 11 ^m 36 ^m 48 ^s	Comet R 14 ^m 02 ^m 31.55
Dec 36.24.14.2	Dec 36.24.14.2	Dec 36.24.13.8	Dec 36.24.13.8
R 14 03 35.04	R 14 03 35.04	R 14 03 35.27	R 14 03 35.27
$\delta + 36.17.08.2$	$\delta + 36.17.08.2$	Dec 36.17.09.3	Dec 36.17.09.3

4/17.06 4/11.98
4260 4245
7.06.0

Stars ~~are~~ in B2 466

Star C

14.06.43.56 36.24.42.4

+2.90 +50.8

+0.03 +0.4

14.06.46.49 36.25.33.6

x 3.08

x 18.15

x 18.32

On the 23rd of July observed def. of a d b = 3.25.35 a d e 4.40.25 18.15
def d b a d b = 12.51.6 49.98
26 31.83

Precession

" 24 "

def d b a d b = 12.51.6

2.551

2.548

-17.02

-16.96

sec. var. +0.001

+0.001

-0.02

-0.02

4) +2.552

+2.549

-17.04

16.98

25 years +1.03.80

+1.03.72

-7.06.0

-7.04.5

3.08
49.98
26 31.83

x 46.96

26 31.83

78.73

13.7

a d b 12.51.6

93.08

Double star a B2 416 x 9^h

14.02.51.70 36.37.38.8

-45.62 +32.1

+0.03 +0.5

1825 = 14.02.06.12 36.38.11.4

06.19 38.28.1

14.02.06.15 36.38.19.8

06.22 38.27.7

14.02.42.42 36.33.12.1

Sec of x Doubtful

Star b 8^h

14.06.16.66 36.24.58.0

-45.60 +31.7

+0.03 +0.4

1825 = 14.05.31.04 36.25.30.1

prec 1.03.80 prec -7.06.0

14.06.34.89 36.18.24.1

dR 2.59.85 dS -1.15.4

14.03.35.04 dR = 36.17.08.2

Star c B2 416

Obs made on July 23rd x in 13th mag

a 19 51.5 20.09.2

x 21 19.0 21.31.7

1.22.5 1.22.5

x 23.04.0 23.22.0

b 25.07.0 25.24.7

c 26 21.8 26.39.7

x b 2.03.0 2.02.7

x c 3.17.8 3.17.7

a/prec b = 4.40.25

a/prec c = 3.25.35

By 2 comp.

a/prec b by 3.25.35

a/prec c by 4.40.25

b Dec 36.25.30.1

15x 12.51.6 By observation

36 38.21.7

5.07.7

36 33.14.0

Star c 7^h

14.07.31.97 36.24.57.3

-45.59 +31.4

+0.03 +0.4

14.06.46.41 36.25.29.1

06.46.49 33.6

14.06.46.45 36.25.31.3

4.03.72 -7.04.5

14.02.31.55 36.18.26.8

14.07.50.17

4.14.90

5.07 from b

14.02.06.20

05.74

14.02.05.97

By new place of star a

from Obs d d with x b

prec

R of c 1850.0

x c

14.07.50.17

4.14.90

5.07 from b

R 14.03.35.27

Since it seems that the R by B2 466 is i of R too small

July 8th 1850

In Comet Surken Tail 4° +

Comet easily seen with naked eye but
Star^a 7th (or more) it scarcely appears ^{more} than in X3

2557

Comet 50f Star

16..05..43

2.60

Star
dR07..09.8
1..26.8

16..08..42.5

0.44

dR

10..09.5
1..27.0Star's R 14^h 00^m 02^s
Dec +31° 34'

16..20..52	211° 34' 12"
H 2..17..14	= 31° 34' 12"
14..03..38	dR

16..05..43	102.60	1..26.8
08..42	100.44	27.0
11..18	98.74	29.6
25..44	178	1..27.80 = dR
16..08..35	100.59	proce *
3..36-	50.00	
16..05..00	49.41	
	99	dR

484.2 = 8° 04.2 p Sof *

Comet beyond range of scale proper

16..11..18.3

- (98.74)

16..12..47.9

Sum 50.00

1..29.6

51.26 = Dif Dec

16..05..00
7..05..06
8..59..54
1 28
8..58..26 = MSP

The place of the Star depends wholly on Hint Cat.

Star in BAC 4694

58° 25' 44".1

* R 13^h 58^m 47.31 + 31° 34' 15.9

1..27.80

8° 04.2

R = 13^h 58^m 19.51 + 31° 26' 11.7 = p DecJuly 8th 8^h 58^m 26^sp R 13^h 58^m 19.51 } Mean Eq
Dec + 31° 26' 11.7 } in 17850

Not a first rate place for several reasons

- 1st The dif of Dec between * & p was too large
- 2nd The dif of alt was from transit over centre of field
- 3rd The star is from Hint. Cat.

Though as given in BAC Cat.

Nucleus not so compact
as before

July 8th 1850

Gene

50.05

Cannot see the
wires distinctly
all perhaps
bad

02

00

98

211.06.00

Star L

20.42.00

W 6.41.26

14.00.34

Cor Chrono 3 51

31.06.00 X R 13.56.43

ref 2.40 X ref 1.06.13

Star Dec +31 03.20 X R 13.56.50 04^s
By Comet's motion from 8.58^m
X R = 13.56.04^s

Dist. Comet 25828

+2.682 +17.631

mean 0.000 -0.048

2.682 17.583

50 .5

13.41.0 879.15

2.14.10 14.39.1

13.53.56.73

mean 2.14.10

13.56.10.83 = X R

1.43.76 X Dec = +31.03.17.6

13.57.54.59 = X R

1.08.6

Dec +31 02.09.0

Star is H.C. 25828

July 8th 12.35.10^s MSF

Comet R 13.57.54.59

Dec +31.02.09.0

Good observations

left 10 beats all hands. but d

Star L 8.9^s

d.R

Star 8.9^s

Comet

19. 34. 50.5 36 35.3 1. 44.8
35 06.0 36 50.8 44.8

19. 37. 19.2 39. 04.0 1. 44.8
37 35.0 39. 19.3 44.3
507
19. 36. 12.7 229.4

Comet 8 of Star 37. 57.4 d

19. 42.53 45.08 43.00
45.45 43.32 7.00
49.13 40.61 1.4

17.51 9.01 68.6

19. 45.57 43.00 1.09.6

19. 51 16.2 52. 59.2 1. 43.0
51 32.5 53 15.5 43.0

13.53.56.73

mean 2.14.10

13.56.10.83 = X R

1.43.76 X Dec = +31.03.17.6

13.57.54.59 = X R

1.08.6

Dec +31 02.09.0

Star is H.C. 25828

July 8th 12.35.10^s MSF

Comet R 13.57.54.59

Dec +31.02.09.0

Good observations

2.04

R 12. 35. 36

26

R 12. 35. 10 = MSF

July 9th 1850Nucleus not so decided & small as
usual but the seeing is not good

Comet

Star 9th2557 = 16^h 19^m 27^sh W 2^h 19^m 05.5208^o 44' 28"14^h 00^m 21.53^h 38^m* 13^h 56^m 40^s13^h 56^m 43 - 13Dec 28^o 44' 28"~~14.9~~
- 10 beats from all obs for date

dR

15^h 56^m 00.5

56 43.0

0^h 42.556^m 17.857^m 00.00^h 42.2

motion in R in 18.7 = 2.0

57^m 47.258^m 30.00^h 42.858^m 04.2

46.8

42.6

1872.0 (1.107)

1300

motion in R in 1^m

= 0.107

Mean 15^h 57^m 02.4

Star is B.2 471

16^h 03^m 20

35.01

37.75

05^m 15

36.39

50.01

06^m 50

37.32

1226

09^m 35

39.48

24

11^m 01

40.55

1202

36^m 01

38.75

= 2^h 00^m 2 = d816^h 07^m 12

37.75

July 9th 8^h 53^m 04^s M52Comet prec x 0^h 43.6^s Good" n of x 2^h 00^m 2 Obs.Star 9th mag R 13^h 56^m 40^sDec + 28^o 44' 28"July 9th 8^h 53^m 04^s M52Comets R 13^h 55^m 42.12 } Mean 2y
Dec + 28^o 45' 39.5 } 1850.0By 8 Comp in R and 5 in Dec with
Star of 9th mag. B.2 47116 16^h 48.517^h 33.10^h 44.617^h 04.5

49.0

0^h 44.5

23 49.0

Mean

42

Mean 16^h 15^m 57.2

Mean dR

0^h 43.54Mean 15^h 57^m 02.4Cor for 42^s =

0.07

13^m 00Comet prec x 0^h 43.6116^h 06^m 30at 16^h 07^m 12^s 2557

reduced = 42

16^h 07^m 128^h 54^m 312557 fast 3^h 381^h 2716^h 03^m 348^h 53^m 04^s = M527^h 09^m 03

102 471

13^h 55^m 04.30

+ 13.55

- 0.07

13^h 55^m 17.781^m 07.9513^h 56^m 25.73

0.43.61

13^h 55^m 42.1228^h 50^m 16.3

+ 44.3

- 1.2

28^h 50^m 59.47^m 20.1+ 28 43^m 39.32^m 00.228^h 45^m 39.5 = p Sec

+ 2.720

- 0.02

2.718

67.95

1^m 07.95

- 17.630

+ .064

17.606

440.15

- 7^m 20.15July 10th

Times of revolution of the Equatorial Clock.

150 semi-revolutions

15^h 43^m 06.51^m 21.044^m 27.5

better counted

15^h 45^m 4646^m 35

49 = 100 semi-rev

One rev. a second

May be finally

324

x Star is B. 2 462

July 10th 1850A note (?) is added in B. 2 to this star thus 'minute Zeit?' showing that there might be an error of 1^m as we have found

$$13.53.13.30 \quad 26.11.50.2 \quad + 2.759$$

$$+ 56.154 \quad + 43.5 \quad \text{see Dec} - 0.67$$

$$+ 0.01 \quad + 0.2 \quad 2.757$$

Comet 812 8th 9th Star X

$$15.59.38.3 \quad 16.10.44.2 \quad 1.05.9 \quad 13.54.09.45 \quad 26.12.33.9 \quad 68.92$$

$$59 \quad 53.3 \quad 00.59.1 \quad 05.8 \text{ Dec} \quad 1.08.92 \quad 1.08.92$$

$$13.55.18.37 \quad 26.05.12.8 \quad \text{see Dec}$$

Comet 8 of 8th

16.03.24

26.50

good obs. *R 13.54.18.37

read with care AR 1.28.27

50.02

23.52

41.7

23.05 = 3.50.5

AR 13 52 50.10

Star x R 13.54.20.5

8.9 Dec + 26.06.10"

16.06.47.7

07.54.0 1.06.3

07.05.10

08.11.2 06.2

13.12.43

1.06.05

16.03.24

July 10th 8.45.18.37July 10th 8.45.18.37 M.S.Comet 8th proceeds *R 1.28.27

" South of " 7.04.8

3.41

15.59.43

Comet R 13.52.50.10 M.S.

+ 26.01.22.3 } Jan 1. 1850

7.12.59

8.46.44

1.12.6

dist = 8.45.18

diff of Dec of stars X and a - X north of a - X is directly brighter

16.08.45 - 93.35

93.37

50.02

43.35

8.17

424.8 = 7.04.8

*a diff. R

star X

14.9

43.5

17.03.28.4

17.04.57.0

1.28.6

*a diff. R 13.54.18.37

*a diff. R 1.28.27 by star

R * a 13.52.50.10

diff R 0.18.47

R 13.53.08.57

17.08.09.6

17.09.37.3

27.9

27.7

28.2

28.6

diff R 26.05.12.8

diff R 7.04.8

diff R 25.58.08.0

diff R 0.23.9

diff R 25.58.31.9

16.3

44.5

17.10.30.0

17.11.58.6

By 6 obs in R

*a diff. R

1.28.27

2 " in Dec

*a diff. R

7.04.8

-17.707

+0.064

-17.643

441.0

7.21.1

me.

16.16.41.7

Star

34.0

51

30.5

Comet

16.16.52

17.02.5

dR

21.5

20.8 h W

Star of comp $9^{\text{h}} 2^{\text{m}} 0^{\text{s}}$

16.43.45 + 25.59.10"

2.47.01

13.56.44

3.55

13.52.49

1.8

18.22

20.2

Star of comp = $\times 8^{\text{h}} 9^{\text{m}}$

16.18.12.0 - 16.18.32.7

20.7

16.48.39.5

26.06.10

W h 2.50.26

Times for dR

2.8

19.23.5

20.7

13.58.13

16.18.18

16.19.13.7 - 16.19.34.6

20.4

3.55

38.09

107

X * dR x 13.54.18

Mean 16.28.13

Mean 16.18.18

20.80

Sub for dR 16.28.10

3.40

off Dec * South of comet

16.24.55 -

54.52 July 10.9.10.00.00 M 55

16.24.30

Comet follows * a 0.18.47

7.12.59

" N of " 0.23.9

9.11.31

* a R 13.52.50

- 1.31

53.84 Dec + 25.59.10"

9.10.00

* 16.26.57 to 16.27.20

July 10.9.10.00.00 M 55

29.00 - 16.29.19

57.44

Comet at 13.53.08.57 } Mean Eq.

Dec 25.58.31.9 } 1850.0

16.31.14

= 50.02

Same Dec

By 12 Comp. in R d 4 in Dec with * a
* a depends on * x before used.

32.48

9.82

Mean 16.28.12 - 4 beats

52.45

Zero

30.2 36 49.0

18.8

18.47

50.04

16.36.39.8 - 16.36.58.2

18.4

20.90

50.03

45.2 38 3.3

18.1

19.63 = dR

50.01

54.0 16.38.12.0

18.0

Comet follows * a

2.7 39 21.2

18.5

52.45

12.0 16.39.31.0

19.0

50.02

0.55

2.8

243

Mean 16.38.09

18.47

0.23.9 = dR pN of * a

912h

July 10th Comet seen in Comet seeker seems
to have a curvature to the tail which is
now 5° long. Also the brightest part
of the tail near the nucleus prolonged
does not lie in the axis of the tail or of
the longest & best defined ray for I suspect
another tail or a widening of the tail proper
as in margin towards c

Smith

July 17th 1850
Star is H.C. 25380

Angle of pos. of star 120° ←

Comet South of			Star of Comp		
2557	26	55.8	25	0.29.2	16. 49.48 + 5. 53. 48"
16. 27.	11.0	27	40.4	0.29.4	3. 07. 01 ref 0. 50.
					13 42. 47
					4 00
28	07.7	37.0	0.29.3		13. 38. 50
28	23.0	28. 52.5	0.29.5		ref 5
					45
					Zero 50.01

29. 33.2	03.0	0.29.8	atp R 13. 38. 45"
16. 29 48.8	30. 18.4	0.29.6	Dec + 5. 53. 00"
2. 00		0.29.47 Mean	
Mean 16. 28. 20			

16. 33. 06	19. 14	32. 02	16. 34. 38
34. 34	18. 12	64	3. 55
36. 15	16. 72	31. 38 = 5. 13. 58 = dR	16. 30. 43
13. 55	23. 98		7. 40. 35
Mean 16. 34. 38	17. 99		8. 50. 08
			1. 27

41. 28.5	53.0	0.30.5	MSX 8. 48. 41
41. 37.4	42. 08.2	0.30.8	
42. 35.0	05.7	0.30.7	
42. 50.5	43. 21.0	0.30.5	

July 17th 8^h 48^m 41^s M.S.P.
at R 13. 38. 05.36 } Mean
Dec + 5. 47. 00.0 } E.g. R.

16. 43. 45.5	44. 16.0	0.30.5	
44. 00.5	44. 31.5	0.31.0	
251		40	
Mean 16. 42. 42		0.30.67 Mean	
88 20		0.29.47 "	
Mean 16. 35. 31		0.30.07 Mean	
		cor 53.5	
		dR 0.30.00	

From 12 camps in R & 3 in Dec
with H.C. 25380 and B2
No 83 Star is double 10" or 2"
angle of pos 60°
Good Observations

Daguerreotype

July 17th 1850 Wednesday

Comet has a fine star nucleus can be very well observed

The Micrometer was taken off last night for a Daguerreotype of the moon - Put on again this afternoon. Zero found $88^{\circ}.44'$ which was used in observing the Comet -

Zero of position altered & adjusted after the observations
Daguerreotyped as usual

Reduction of Star HC 25380				R	NPD
1800.0	R	$13^{\circ}.36^{\prime}.04.78$	NPD $88^{\circ}.52'.28.7$	prec + $3^{\circ}.011$	+18.322
	precipn	+2.30.55	+15.13.8	See var = 0.000	- .045
1850.0	R	$13^{\circ}.38'.35.33$	NPD $84^{\circ}.07'.42.5$	1825.0 + $3^{\circ}.011$	+18.377
			See + $5^{\circ}.52'.17.5$	150.55	913.85
				= + $2^{\circ}.30.55$	15.13.8
B.2 83					
t		$13^{\circ}.36^{\prime}.46.67$	+ $6^{\circ}.01'.33.3$		
K		+ 33.44	- $1^{\circ}.48.7$		
		0.00	0.0	3.011×25	+ 18.322
1825.0		$13^{\circ}.37'.20.11$	+ $5^{\circ}.59'.47.6$.000 See var	- .022
		+ $1^{\circ}.15.27$	- $7^{\circ}.37.5$	75.27×25	18.300 $\times 25$
1850.0	R *	$13^{\circ}.38'.35.38$	+ $5^{\circ}.52'.10.1$	$1^{\circ}.15.27$	45.75
		35.33	17.5		$7^{\circ}.37'.5$
Mean *		$13^{\circ}.38'.35.36$	+ $5^{\circ}.52'.13.8$		
dif R		0.00	$5^{\circ}.13.8$		
R.R		$13^{\circ}.38'.05.36$	+ $5^{\circ}.47'.00.0$		

THE FIRST DAGUERRETYPE EVER
MADE OF A STAR WAS RECORDED AS
AN AFTERTHOUGHT IN THE RECORD-
BOOK AT THE "GREAT REFRACTOR"

July 22nd (Monday) 1850
 Star is α Virginis B.A.C. 4565

A good nucleus to the center

Comet proceeds Star of 4th mag. dis North of it ($5\frac{1}{2}$ by 14 at C)

2557

Comet

Star

diff. R

diff. Dec.

16^h 35^m 17.4

16^h 39^m 35.2

4^m 34.7.8 } not taken

29.18 H = 3^h 01^m 24^s

16^h 42^m 28.7

46^h 44.5

115.8 } well

33.89 H = 3^h 08^m 36^s

16^h 38^m 53

307

31.53

16^h 49^m 06.8

53^h 24.8

4^m 18.0

49.98

49^m 19.9

37.9

118.0

18.45

16^h 54^m 05.4

58^h 23.8

4^m 18.4

54^m 18.6

58^h 37.2

18.6

at 16^h 56^m 42.7

4^m 18.25

at 22^h 02

17^h 00^m 56.4

17^h 05^m 14.5

4^m 18.23

46.07

1

06^h 39.0

10^h 58.4

49.62

H 3^h 32^m 46^s

95.4

15.69

17^h 03^m 47.7

47.84

172^h 05^m 48^s

16^h 38^m 53

Sum 49.98

Dec -7^h 54^m 12^s

102 40

214

at 16^h 51^m 20

diff. Dec 1^h 40^m 9 40 by N of star

18.45

4^m 07

" R 4^m 18.23 40 by

20.59

Sum 10.30

16^h 47^m 13

21

8^h 00^m 18

8^h 46^m 55

100.9

1^h 26

1^h 40.9

8^h 45^m 29 M.S.S.

Zero

49.92

49.98

49.98

50.04 bright

49.98

49.98

49.98

17.10.58

3.32.46

13.38.12

Cor 4.12

* R 13.34

Dec -7.54 - ref

Star from B.A.C.

* R 13^h 33^m 44.76 - 7^o 56' 38.2"d R 4.18.23 1.40.9

P R = 13.29.26.53 Dec -7.54.57.3

July 22nd 8^h 45^m 29^sComet's R 13^h 29^m 26.53 } Mean Eq.Dec -7^o 54' 57.3 } Jan 1st 1850

From four good comparisons with B.A.C. 4565

July 23rd

2nd 13^h 29.27 -7^m 54.87
 direct mo 1 48 2.37.80
 23rd 13^h 27.40 -10^m 26 Comet's Place

By spots on wire

Spica left ten beats all of them sp.

16^h 20^m 00.1 52.23
 19.5
 33.5

Star 8th Ypsilon H¹⁵ (430)

16^h 28 36.8 54.82
 55.8.83
 10.0

Comet

16 30 36.3 59.20
 55.8
 31 09.5

Apparent DR of Spica star

13^h 17^m 18.65 -10^m 22^m 40.2
 dS 10^m 36.17 -1^m 08.6
 13^h 27^m 54.83 -10^m 23^m 48.8
 Cor. to Mean Eq. +1.97 +3.3
 Comet's DR 13 27^m 53.86 Dec -10 23^m 45.5 Mean Eq

16^h 30^m 55
 4^m 10

16^h 26^m 454^m 04^m 138^m 22^m 311^m 22M.S.Z. 8^m 21^m 09Star 8th

d.R

dS

1^m 59.5

54.82

2 00.0

59.20

1 59.5

4 40

d.R 1^m 59.67

9

Comet follow

4 31

Comet S

0^m 43.1Spica 13^h 17^m 18 -10^m 22^m

H.C. 25073

13^h 26.19 -10^m 45

25202

13^h 31.18 -10^m 18^m25277 13^h 34.23 -10^m 32

d.R

700

10 36.2

14

36 3

686

36.0

d.R 10^m 36.17 dS 1^m 08.6

Comet follows Spica 10^m 36.17
 " South of " 1^m 08.6

July 23rd 8^h 21^m 09^s

By the Micrometer -

Comet's DR 13^h 27^m 53.86 } Mean EqDec -10^m 23^m 45.5 } In 1850

By 3 Comp. in DR and one in Dec with Spica.

3.15
25
1575
636
7875
1.18

-18.7
470
7.50"

July 23rd
J g h g L
+15.3 49.6 +20.9 46.09 151.30 +4.1

$\alpha = 13.27.40^s$ $\delta = 10.23'$ $\tan \delta = 0.176301$ $\sin \delta = 0.175583$ $\cos \delta = 0.984717$

$\alpha = 201.57'$
g 46.09
H 151.30

Sting^h

16. 48 43.5 59.00
49.03.0

(g+a) 248.06 \rightarrow 9.96747 \rightarrow 9.57169
(H+a) 353.27 \rightarrow 9.05717 \rightarrow 9.99716

Comet

50. 43.5
02.0
51 15.0

g 0.9823
a(g+a) 9.96747
h δ 9.26301
0.2128
= +1.63

h 1.32010
(H+a) 9.05717
mid 0.00717
0.3844
= -2.42

+1.63
-2.42
+15.3
-0.8
15) +14.5 (957
135
100
-3.6
-3.7
+4.0
-3.3
-3.6

g 0.9823
a(g+a) 9.5717
h δ 9.26301
0.5540
-3.6

h 1.3201
(H+a) 9.9972
mid 9.2558
0.5731
-3.7

Spec
corr R
+0.93
a δ
-3.6

Weiser H 13 No 430

13. 24. 35.90.
1. 18.95

- 10. 15. 11.8
- 7. 47.2

13. 25. 54.85

10. 22. 59.0

dR 1. 59.67

dD

0. 43.1

13. 27. 54.52

10. 23 42.1

3.157 -18.71
+ 0.01 + 2
3.158 18.69
78.95 467.2
1. 18.95 7. 47.2

July 23rd 8. 21. 09^s

Comets R 13. 27. 54.52

$\delta = 10. 23. 42.1$

By 3 comp in R x1 in Dec with
Weiser Hora 13 No 430

July 28th

All these obs. taken 6 beats from transit

Star & center of field
 * 16. 54 06.5 63.34
 A 57. 49.0

diff. dec

Star & center of field
 17. 00 48.5 62.74
 01 12.8
 01 26.5

By spots on the wire
 Comet
 17 04 30.5 71.63
 04 55.5
 05 09.3

diff. dec
 3. 42.0
 42.7
 42.8

06 25.2 63.12
 06 49.5
 07 02.5

17 10 07.0 68.61
 10 32.0
 10 45.0

3. 41.8
 42.5
 42.5

11. 52.5 63.70
 12. 16.8 56
 17. 12. 30.0 63.19

17. 18. 34.0 65.65
 15 58.5 2589
 16 11.3 68.63
 93 43.1 63.19
 17. 10. 24.8 544
 4. 10 11
 17. 06. 15 533
 8. 04. 14 0. 53.3
 9. 02. 01 Comet No. 7*

1 29
 M.S.S. 9. 00. 32

H 3. 43. 20^s
 Dec - 10. 32' (28^{1/2})
 3. 41.5
 41.7
 41.3
 18.8
 3. 42.09
 Comet follows *

July 23rd

$$\begin{array}{rcl}
 p \text{ Dec} & -10^{\circ} 27' 30'' & \text{at } 9^h \\
 & 50 & \\
 \text{Dec} \times 10 & 28 & 20 \\
 \text{AR} & 13.27.50 & \\
 \text{dk} & 3.42 & \\
 \text{ARK} & 13.24.08 &
 \end{array}$$

$$\begin{array}{r}
 17.12.10 \\
 3.43.21 \\
 \hline
 13.28.44 \\
 4.10 \\
 \hline
 13.24.08 = * \text{AR} \\
 -10.28 = * \text{Dec}
 \end{array}$$

$$\begin{array}{r}
 13.24.08 = * \text{AR} \\
 -10.28 = * \text{Dec}
 \end{array}$$

$$\begin{array}{rcl}
 & +3.156 & -18.76 \\
 \text{m. var.} & + \underline{0.021} & +0.02 \\
 & +3.157 & -18.74 \\
 & 78.92 & 468.5
 \end{array}$$

Star is Weiske H 13 No 397

$$\begin{array}{r}
 1^m 18.92 \\
 7.48.5
 \end{array}$$

$$\begin{array}{rcl}
 1625.0 & 13^h 22^m 51.40 & -10^{\circ} 20' 45.1 \\
 \text{mcc} & +1.18.92 & -7.48.5 \\
 * \text{AR} & 13.24.10.32 & -10.28.33.6 \\
 \text{dk} & 3.42.09 & \text{d} \delta \quad 0.53.3 \\
 & 13.27.52.41 & -10.27.40.3 = p \text{ Dec}
 \end{array}$$

July 23rd 9^h 00^m 32^sComets AR 13^h 27^m 52.41Dec -10[°] 27' 40.3By G Comp in AR and 3 in Dec
with Weiske H 13 No 397

July 23rd

18.21

Star of Comparison of June 1st 1850 = x

Spots on wire

Arg Zone = y

z is n of x

2 spots too faint
6 columns wide

x	z	dk	x	z
04 11.0	04.0	13. 53.0	73.38	65.14
04. 41.0	34.0	53.0	65.14	
05. 19.0	13.0	54.0	8.21	
05. 44.0	38.0	54.0	16	
19. 06. 06.3	20. 00.0	53.7	80.5 = 1. 20.5	z. n of x
		13. 53.54	y follows x	

Arg Zone 126

z	17. 40. 54.73	73. 54. 41.4
	- 2.92	+ 22.9
	- 0.09	+ 1.0
1842.0	17. 40. 51.72	73. 54. 05.3
	- 12.82	+ 0.13.9
Arg	17 40. 38.90	73. 54. 51.4
1950		
dk	13. 53. 54	dk 1. 20. 5
R	17. 26. 45.36	73. 53. 30.9
*x		

= Star of Comp on June 1st 1850Not the Star
Hirt. Cel 32630

17. 41. 28.34	15. 53. 14.3
- 1. 20.40	+ 1. 24.0
17. 40. 07.94	15. 54. 38.3
	74 05. 21.7

-1.614	+1.620
+0.006	+0.060
-1.608	1.680
8040	8400
-1. 20.40	+1. 24.0

-1.614	+1.620
+0.061	+120
-1.503	+1.740
8040	8780
12824	13920
-12.82	in PD +0. 13.9

July 24th 1850

9^h P.M. R 13^h 26^m 18^s
 Dec - 12^o 54'

G.C. 25179 * 8^h 9^m 30^s
 R 13^h 30^m 30^s
 - 12^o 47'

Heife * 9^h 13^h 24^m 44^s
 410 - 13^h 02^m 40^s

46 29.2 34.2 4.05.0
 16.46 42.0 - 16.50 46.8 4.04.8

2.56
 13.24.44
 16.20.44

16^h 53^m 19^s
 comet

16.57 24.8

16^h 11^m 11^s = -12^o 44'
 H 3.22.30

3.06
 13.24.44
 16.30.44
 4.12
 16 34.56

76.83 Comet S of Star 8th

Comet
 17.00 37.4
 00 55.4
 164.0

Star
 17.04 43.2 4.05.8
 05.01.4 4.06.0
 Mean 4.05.40

76.83

49.98

26.85

5.4

263.1 = 4.23.1

corr. ref. 0.4

dd 4.23.5 S of Star

16.53 41.0

4.13

16.49 28

8.08 11

8.41 17

1.25

M.S.G. 8.39 52 for R

22

8.39.30 for Dec

Comet precedes star
 motion in 22^s
 4.05.41

July 24th 8^h 39^m 30^s

Comet's R 13^h 26^m 22^s 91

Dec - 12^o 51' 45" 46.5

By 4 Comp in R and 1 index with
 G.C. 25179 & Heife H XIII 520

H.C. 25179

	13.27.49.05	- 12.31.53.6	+ 3.181	+ 18.605
	<u>2.39.20</u>	<u>15.28.1</u>	<u>- 1.003</u>	<u>+ 0.48</u>
	13.30.28.25	- 12.47.21.7	3.184	18.562
d.R	<u>4.05.47</u>	<u>4.23.5</u>	15920	928.10
Comets R	13.26.22.84	12.51.45.2	2.39.20	15.28.1

	Griffin H XIII 520 <i>errata to Griffin</i>		3.184	- 18.56
	13.29.08.73	- 12.39.35.9 - 5.0	<u>2</u>	<u>2</u>
	<u>1.19.65</u>	<u>7.43.5</u>	3.186	18.54
Griffin	13.30.28.38	- 12.47.19.4 24.4	79.65	4635
H.C.	<u>28.25</u>	<u>21.7</u>		7.43.5
	13.30.28.32	- 12.47.20.5 23.0		
	<u>4.05.41</u>	<u>4.23.5</u>		
Comet R	13.26.22.91	12.51.44.8 46.5		

July 24th Comet compared with Freije 410

a * 9th s p Comet

2557 17. 10. 59.8 12. 30.8 1. 31.0
11. 17.5 12. 48.8 1. 31.3

17. 13. 21.7 17. 14 52.7 1. 31.0
13 39.8 15. 10.7 1. 30.9

Comet n of 8th

* 17. 17. 05 17. 18. 35.5

by Sec
94.83

17. 20 28.8 21. 59.8
35.3

17. 20. 18

92.82

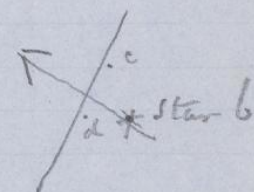
93.82

49.98

43 44

4296 = 7.09.6

ref



* 6 17. 25. 13.0 26. 43.2
25 27.4 26. 57.6

1. 30.2

1. 30.2

b 9-10 mag

c 11

d 11-12

e 13

27. 18.8 28. 48.8 1. 30.0

27. 33.1 29. 09.3 1. 30.2

86 56

48

17. 20. 52 d.R 1. 30.60 d.R 7.09.6

2557+ 4. 14 cor ref +0.11 ref +1.2

17. 16. 38 d.R 1. 30.71 d.R 7.10.8 Comet W of *

8. 08. 11 Comet follows *

9. 08. 27

1. 30

dis. 9. 06. 57 for Dec

dis. 9. 06. 23 for Dec 1. 30.71

mo in 34. 04

75

July 24th 9. 06. 23

Comet 1 13. 26. 20.65 } Mean 9
Dec -12. 55. 38.7 } Jan 1850

July 24th 9. 06. 23

Comet 1 13. 26. 20.65

Dec -12. 54. 32.9

By 8 Comp in R d 2 in Dec
With Freije H. 412

Krijs 412

1825 ~~13^h 23^m 24^s.47~~ ~~-12^h 54^m 51^s.5~~
~~+ 1^m 19.50~~ ~~- 7^m 48.0~~
 1850.0 x R ~~13^h 24^m 43.97~~ ~~Dec-13^h 02^m 39.5~~
~~+ 1^m 30.75~~ ~~AD 7^m 10.8~~
 Comets R ~~13^h 26^m 14.72~~ ~~Dec-12^h 55^m 28.7~~
~~AD 7^m 10.8~~

1825 13^h 23^m 30.44 -12^h 53^m 55.7
 1^m 19.50 7^m 48.0
 * 1850.0 R 13^h 24^m 49.44 Dec-13^h 01^m 43.7
 AD 1^m 30.71 AD 7^m 10.8
 Comets R 13 26 20.65 Dec-12^h 54^m 32.9

3.179

±0.01

3.180

79.50

1^m 19.50

18.74

-02

18.72

4680

7^m 48.0

-8.16

-3^m 43.5

23
 4
 24/92 (3.83)
 72
 200
 192
 80

60) 3.83 (0.0638)
 360
 230
 130
 500

0.66
 37
 468
 128
 1,728

July 24th

Zero of Position 269° 48'

$$\begin{array}{r} 8/650 \\ .0512 \\ .1624 \\ 568 \\ 0.219 \end{array}$$

57.5

65° 28' 24"

10.0

42 23.8

49.0

18 43 28.0

The n p star of the
two in Arg. Zone 11.2
med

$$\begin{array}{r} .0318 \\ .0383 \end{array}$$

18 58.29

19 03.58

$$\begin{array}{r} .0338 \\ -.038 \\ +.081 \end{array}$$

n * A.2

+ 0.58

05 02.5

65° 28' 26"

14.2

19 05 28.3

53.5

06 32.5

5 27.8

28.8

27.7

27.5

27.0

5 13.8

5 27.76

5 27.76

28.10

28.60

28.24

270

dir * A.2 / prec 2 5 27.67

24' 38"

41

48

50

17"

24' 44.2

* A.2 n of x

Star x 10 30.3

43.0

56.0

65° 03' 28"

24' 38"

12.3

+ 0.769

11 21.0

15 16 36.89

65 29 06.6

+ 0.860

11 59.5

- 4 30.12

+ 2.0

12.3) - 0.071 (-0.0058)

- 0.08

+ 1.0

Star A.2 1842.0 or 15 12 06.69

Dec +65 29 09.6

+ 0.592

Computed

prec

+ 0.07.08

- 1 47.3

- 0.002

1850.0

15 12 13.77

+ 65 27 22.3

+ 0.219

dir

5 27.67

do 24 44.2

+ 0.809

Star of Comp June 19th * x

UR

15 17 41.44

Dec 65 02 38.1

prec in R + 0.97
+ 0.945
do - 13.41

7.080

107.28

0 07.09

1 47.3

Star of Comp June 19th

or 15 17 41.44 } Mean Eq
do 65 02 38.1 } 1850.0

Star of Comp. June 19thn x A₂

22.2
33.5
19" 18 48.3
19" 13.0
52.5

65.28.33

5" 28.8
28.7
28.0
28.0
27.0
5

5" 28.10

51.0

65.03.52"
24.41

02.2

24" 16.3

41.0

25 19.5

04.0

65.28.32"

16.2

19 29" 30.0

55.0

30 34.3

33.5

65.03.44
24.48

44.9

19" 34 58.8

23.5?

36 02.0

n x A₂

48.2

00.0

19" 42" 14.0

39.0

43 18.3

265.28.42

265.03.52

24 50

2 15.0

26.5

47" 40.2

05.0

48 44.0

26.8

26.5

26.2

26.0

25.7

12

5" 26.24

79

13.17

105.3

15.16.37 65.29.06

-4.30 -1.45

15.12.07 65.27.20

6

15.12.13

Taken By moving the
Telescope in Dec but not
in RA Not a good way
as it is not clamped in RA
The Chair is before the steps

228.04' α in 9.8715

65.30' δ in 0.3413

20.064 n 1.3024

-32.75 1.5152

+46.03

15) 1328 (885

120

128

5" 29.5

28.7

28.8

28.5

27.5

30

5" 28.60

Place of Comet for July 25^h 8^h 30. PMJuly 25thComets R 13^h 24^m 50^s
Dec -15° 10'Daily motion in R decreasing 1^m 25^s
in Dec South 2° 15'A Star of the 5th mag. R 13^h 15^m 27^s
BAC 4494 Dec -15° 12'
$$\begin{array}{r} \alpha \text{ km} \sim 10.23 \\ 15.12 \\ \hline 4.49 \\ 360.00 \\ 15.12 \\ \hline 344.48 \end{array} \quad \begin{array}{r} 347.40 \\ 10.20 \\ \hline \end{array}$$
The Comet has got too far South for all the
Lines of small stars. excepting chance ones.

* BAC. 4494

2557 fast - 4.14

16.46.37.2

16.52.28.9

Coffin's method

B

43.62

16.53.59*

47.02
3.40

16.56.12

17.01.39.2

Comet South of Star

42.16

17.01.39

42.16

17.30.12

26.64

31.51

68.80

17.15.55.7

34.40

4.14.4

49.98

17.11.41.3

15.58

8.12.07.8

3.1

8.59.33.5

1527

1.28.4

2.32.7

11.59.8.58.05

10.2.38.2

17.05.25.8

24.6

11.50.0

5.26.0

17.06.39.5

17.12.07.3

27.8

11.59.8.58.05

10.2.38.2

17.13.25.6

17.18.57.3

5.25.8

25.7

motion in R Ref.

17.15.21.6

5.26.33

-0.02 - 0.03 = -0.05

= 5.26.28

17.21.52.

17.30.12.5

clouds, just moved carefully
in R only

26.64

17.34.05.0

17.32.29.8

17.35.38.0

20.70

by moving the Rst

July 25[±]
X Diff Dec p

17.38.38.5 - 17.44.5.2 good

17.33

* AR
17.47.28.0 - 17.52.52.2

24.5 - 17.19.47.5
17.54.46.2 - 18.00.10.2

Correct South of Star
B A C 4494

for plane of Star
* Readings of circles
18.02.20.5 HC - 4.37^m.70 = 4.38^m.10 Dec - 74.56.40

15.03.20
164.
344.58.60

not in CR Star is B A C 4494

-0.064

1850
* CR 13.19.27.71 - 15.11.43.0
d CR + 5.26.28 - 2.33.2
p CR 13.24.53.98 Dec - 15.14.16.2

July 25^m 8^m 58^m 05^m MSY

Correct CR 13.24.53.98 } Mean Eq.

Dec - 15.14.16.2 } Lat 1850

By 4 comp in CR and two in Dec with
B. A. C. 4494.

July 26^t Obs-2557

* a

off. Dec

Cornet

16. 59.36

17. 0. 55.2

35.62

17. 02. 37.2

17. 03. 57.2

37.50

17. 04. 42.5

17. 06. 55.5

Mean

38.91

3

at 17. 03. 39.3

1179

Differ = 2. 03. 9 Cornet No. 8 Star
array + 0.5

2. 04. 4 = Cornet No. 8 Star

AR

17. 09. 41.2

17. 10. 47.5

1. 22.0

17. 11. 02.2

1. 21.0

17. 12. 6.2

17. 13. 26.2

1. 21.0

1. 20.0

* a in center
of the field

17. 14. 25.2

17. 15. 46.2

1. 21.0

1. 21.0

1. 21.00 = Mean

Mean 17. 13. 27.4

+ .03 corr. def.

+ .59 motion in 10. 12

1. 21.62 = differ

* a centre of field

17. 44. 18

4. 17. 20

13. 26. 58

4. 17

13. 22. 41

ref - 25

13. 22. 16

a 9-10 mag

a 8-9 or 10 mag

Star is low
probably an 8th mag.

b is 11 mag

c. 12-13 small

no other stars
seen in the field

35.62

37.50

38.91

2203

37.34

Zero 49.98

12.64

25

123.9

2. 03. 9

72. 33. 20

162. 33. 20

-17. 26. 40

ref 4

-17. 30

Dec 72. 36. 20

17. 23. 40

* Dec -17. 31'

13. 22. 16

By instrument

17. 03. 39

4. 17

16. 59. 22

8. 16. 04

8. 43. 18

1. 25

MS. 8. 41. 53

24) 84 (3.50

72

6) 3.50 (583

30

50

42

motion in R in 1^m = 0.058

0.58

1

0.58

July 25th 9 P.M. p R 13. 24. 54

motion in 1 day

9 P.M. 26th

Comets

R 13. 23. 30

dR

1. 21

* R 13. 22. 09

Dec - 15. 14. 16

- 2. 18. 16

Dec - 17. 32

dR 3

* Dec 17. 34

July 26th 8. 41. 53^s MSComet follows * 9th dR = 1. 21. 62

dR

6 * 8 R 13. 22. 10^s

" North of " dR = 2. 04. 4

3

Dec - 17. 32

July 29th at 9 AM
 Comet IR $13^h 19^m 26^s$
 $-23^{\circ} 53'$

$10.22'$
 5.28^s
 $13.24.54$
 $13.19.26$
 -8.35
 15.14
 -23.53

July 29th

no other star nearly as bright.

Comet

Star of 7th m diR

faintly seen through clouds & haze

17 03.55.5 05.4 40.3 2.34.9
 03.29.0 19.8 05.54.5 2.34.7

ref 0.00

52.40

49.98

2.42

5

0.23.7

ref 0.2

0.23.9

Com

Comet South of Star a
 17.07.32 17.10.06 52.40

Comet

x a

Int. not altered

+ b 3.30" n of a

+ 8th same distance

H 3.47.40

17.12.06.2 17.14.41.0
 12.15.7 50.8

17.17.50.4 17.19.14.2
 18.00.2 19.24.2

156.26.30
 $-23.33.30$

30.47.1

17.07.41.8

4.24

17.03.18

8.27.54

8.35.24

1.25

M.S. 8.33.59

diR as p

ref

2.34.8

0.05

35.1

19.5

2.34.88

ref. $+1.03 = \frac{1}{2}(0.05 + 0.00)$

2.34.91 = diR

cor 8'

2.34.92

bis < a magnitude 17.14.45

4.23

17.10.22

3.47.40

13.22.42

ref 23.5

13.22.17

July 29th 8.33.59 M.S.

Star's R $13^h 22^m 17^s$

Dec $-23^{\circ} 40'$

Comet preceds x 8th by 2.34.92 4 comp.

" South of " 0.23.9 1 "

None other near.

July 29th

$$\begin{array}{r} 9.20 \\ 6.50 \\ \hline \end{array}$$

$$\begin{array}{r} 560 \\ 41 \\ \hline 84 \\ 63 \end{array}$$

Comet

6/20

*

v

17 24. 53.2 17. 27. 27.5 62.66

Aug 26th For Parthenope

R 15^h 33^m 15^s

Dec -15^h 41^m set the inst by this
in which is included ref & inst cor
for 8'

49

B' Scorpii
R 15^h 56^m 45^s
Dec -19^h 23^m

15^h 33^m 15^s
4 54
15^h 38^m 09^s

-15^h 43^m
2^m 30^s
-15^h 40^m 30^s

18^h 10^m
4^m 35^s
18^h 05^m 25^s
15^h 33^m
2^m 32^s

24) 80 (3.33)
22
8dxe
14
13.5
bxc
20

13 39-6

u

b

64" 01-4
14.514" 26.5
40.025.5
25.512
x
ux 9th 12th
b c10th 11th 10th
* *
d edxe
18^h 18^m 13.5 beats
26. 13.5bxc
20 beats

u

b

18 23, 42.0 08.0
55.5 24, 21.012
x
a9th 12th
* *
u c10th 11th 10th
* *
d e28" 01.5 26.8 25.3
15.0 40.5 25.5I was found to be the
Asteroid Parthenope40.0 31 05.5 25.5
53.5 18.5 25.0at 18^h 40^m I proceeded by 9.3
19" 25 " 6.8
20" 00 " 5.035. 37.5 9.3
46.8
I proceeded by 9.307.0
16.3 9.3

Monday Aug. 26th 1850 Parthenope

22.5
29.3 6.8

There is no doubt of its
being the planet in its motion
among the stars was very ap-
parent.

19^h 29 44.0 30^h 15.0
57.5 28.2

Star & g ^t		Parthenope	
19	33 ^h 21.0	34	52.5
	34.8		31.5
			31.2

	28.5	34 ^h 59.7	31.2
34	42.0	35 13.4	31.4

19 37.48
39^h 00

34^h 60
34.56
34.58
50.02
15.44

Par. n. g^t × g^t

154.4
3.1
151.3 = 2^h 31.3

ref. 1.0
diff. du = 2^h 32.3 Parthenope N of × 6

40^h 44.8
58.0

41^h 16.2
29.5

31.4
31.5

42^h 06.7
19.7

42 38.0
51.2

31.3
31.5

19^h 38.00
5.33

19^h 33^h 00

10^h 18^h 16

9^h 14^h 44

1^h 30

1859^h 12^h 44

0^m 31.38
ref 05
0^m 31^h 43

Aug 26th

Parthenope n.p. * 9th brighter than b
 19 46. 42.7 48. 21.0
 56.2 34.0

19^h 50^m 20^s
 52. 02

10.93

Parthenope S.p. Star of 8th
 20. 01. 26.0 20. 06. 20.0 34.56
 4.54.0

Zero

50.02

04

04

00

20 08. 14.5 4.53.0
 13. 07.5

34.45

* 6 R 15^h 32^m 29^s 02 Dec -15° 46' 24".2 = Star of Comp 2nd Aug. 26th 9^h 12^m 40^s
 d.R 0. 31.43 2. 32.3
 15. 33. 00.45 -15. 43. 51.9

Aug. 26th 9^h 12^m 40^s M.S.D.

Parthenope

R 15^h 33^m 00^s 45 } Mean Eq

Dec -15° 43' 51".9 } Jan. 1 1850

By 8 comp. in R & 2 in Dec with a star
 of the 10th mag - determined Aug 29th
 from B & C 5184

Aug 27th Parthenope Δ 15.34.34
Dec -15.50

It will follow $\times b = 9^{\text{th}}$ by $1^{\text{m}} 50^{\text{s}}$
will be South of " $4' 15''$

Star b is S of B.A.C. by $14'$
" μ $1^{\text{m}} 36^{\text{s}}$
B.A.C. 5184
 Δ 15.34.20
Dec -15.32'

18.00
4.40
17 55.20
15.33
2 22

24) 23.669
 $\frac{1}{24} = 0.017$
1.20.0
 $\frac{1}{6} = 0.166$
1.18.6
33.00.45
34 19 09

1.4
2.66
1.17.9
14.34
24) 40.617
24 68
122 238
6.48
6.22
43.51.9
56.137

Aug 27th 1850 Parthenope = * $\begin{array}{r} 24 \\ 11 \end{array} \begin{array}{r} 400 \\ 24 \\ 160 \end{array} (17$ $\begin{array}{r} 24 \\ 80 \end{array} (3333$
 $\begin{array}{r} 0.055 \end{array}$

d.R

* 6 of 28th

18 02 20.0

02 34.5

Par.

04 04.5

19.5

1.44.5

1.45.0

Zero 50.02

44

22

2

18 04 51.0

05 06.0

06 35.7

50.7

1.44.7

1.44.7

18.03.42

21.52

18.12.47

2"

Parthenope 3 of * 6

18.12.25 25.74

15.30 25.98

18.50 26.07

18.17.10 26.02

26.02

50.02

24.00

 $\frac{28}{257.2} = 3.57.2$

ref 0.5

diff Dec 3.57.7

-15.46.24.2 * 6

18 20 31.2

47.4

22 17.0

33.0

1.45.8

45.6

Du - 15.50.21.9 Parthenope

66

.34

7

66

238

46

22

51.9

131

18 22 57.5

23 13.2

24 43.0 1.45.5

24 59.1 45.9

97

1.45.24

ref - 02

diff 1.45.19

15.32.29.02 * 6

15.34.14.21 Parthenope

mo in 4^m 23 0.24

15.34 14.45

Aug 27th 7^h 46^m 05^s MSZ

Parthenope's

R 15^h 34^m 14^s 45 } Mean eqsDec - 15^h 50^m 21^s 9 } Jan 1850-By & comp. in R and 2 in Dec
with #3 star b determined on 2
Jan 28th -

18.17.10

5.35

18.11.35

10.22.13

7.49.22

1 17

7.48.05

Partenope

Aug 28th Obs. for determining the place
of the star of comparison b

18^h 32^m
18^h 34
18^h 36

0^s 59
0^s 82
0^s 73
2.14

star b is sp * B

0.71
50.02
49.31

493.1
4.9

483.2 = 8^s 03.2 * B is n of * b
cor. ref 1.0

18^h 39.30
18^h 42

9^s 76
9^s 96
9.86
50.02
40.16

star B sp BAC 5184

98.6
2.0

B prec BAC

18^h 44^m 17.9
34.2

393.6 = 6^s 33.6 * B is s of BAC.
ref 0.8
BAC 6344

BAC is double
a small comp. follows on
parallel (a little s) dist
= 3" or 4"

45^s 03.8
20.8

45.9

46.6 = moved the telescope?

45 46.3
46^s 02.8

46^s 32.3
49.0

46.0

46.2

* B prec BAC. 0^m 46.04 d.R

ref +.04
0^s 46.08

47^s 27.0
44.0

48^s 13.2
29.9

46.2

45.9

ref
6^s 33.6 + 0.8

8^s 03.2 + 1.0

14^s 36.8 + 1.8

1.8

Exp. 14^s 38.6 * b is s of * BAC 5184

Exp. R 1^m 51.23 b prec * BAC

Aug 28th 1850. Star of Comp with Parthenope
on Aug. 26th & 27th

b prec B			B		
18	49	28.4	50	33.5	1. 05.1
		44.9		50.0	1. 05.1

51.	26.2	52	31.2	1. 05.0
	42.8		48.0	1. 05.2

dR 1. 05.10 *b prec * B

ref 1. 05.15

0. 46.08

1. 51.23

*b prec * BAC.

BAC 51.84

1850.0 B 15. 34. 20.25

dR 1. 51.23

1850.0 *b B 15. 32. 29.02

- 15. 31. 45.6

81/21 14. 38. 6

dec - 15. 46. 24.2

Aug 29th 1850 New Comet21^h Sid.

94.44

47.22

* 9 ^h 18 ^h		Comet	
2557	21 33. 48.5	35 49.0	2. 00.5
	34 15.4	36 15.0	1. 59.6
	21. 36. 52.0	38 53.0	2. 01.0
	37. 18.5	39. 21.0	2. 02.5
		28. 138	3 6
	21. 37. 34	2. 00.90	

New Comet in Perseus
First seen at 10^h 30^m

Comet South of Star

21. 43. 40	27.45	22.80
21. 47. 00	27.20	4.6
21. 51. 30	27.00	223.4
22 10	27.22	
21. 47. 23	50.02	
	22.80	

3. 43.4 = Δ of Dec.

46.55
1 11
48.06
48.00

21. 53. 12.0	55. 20.5	2. 08.5
53. 40.0	55 50.0	2. 10.0

56. 20.5	58. 31.0	2. 10.5
56. 48.5	58. 58.5	2. 10.0
1 0	40 0	

21. 55. 00.2	21. 57. 10.0	2. 09.75
--------------	--------------	----------

21. 37. 34	2. 00.90
21. 47. 22	d.R = 2. 05.33
5. 40	

21. 41. 42

10. 30. 07

11. 11. 35

1. 50

M.S. Time 11. 09. 45

$$34^{th}) \begin{array}{r} 218 \\ 204 \\ \hline 140 \end{array} (0064 \quad 2,7) 1,010$$

$$\begin{array}{r} 64 \\ 4.6 \\ 384 \\ 256 \\ \hline 2944 \end{array} \quad \begin{array}{r} 405 \\ 405 \\ 1450 \\ 1215 \\ \hline 2350 \end{array} \quad \begin{array}{r} 55 \\ 136 \\ 136 \\ 2364 \\ 1152 \\ \hline 3516 \end{array} \quad \begin{array}{r} 384 \\ 136 \\ 2364 \\ 1152 \\ \hline 5224 \end{array} \quad 361$$

Star of Comp

Sure

2557 22" 05" 41.5 PD 31" 55" 28" 121" 55" 55" H 6" 37" 26" S 22" 34"

22" 00" 00

8" 37" 34

27" 37" 34

+ IR 3" 27" 34
Dec 58" 05

HC 8858?

prec +4.9
+39.1

Dec +7.2
+58.1

IR 3" 22" 34

Dec 58" 05

-452

The Star of Comp is Arg. Zone 57 No 125

precession

3" 20" 52.58

+1" 13.86

+1.04

58" 02' 37.5

+2.6

-0.6

4.732

-12.78

8

8

37856

108.84

1842.0 3" 22" 06.48

prec +37.86

58" 02' 39.5

+1" 41.8

prec

BAC1062 +4.720

1850.0 x IR 3" 22" 44.34

Dec 58" 04' 27.3 Star of Comp

d IR 2" 05.33

IR 3" 43.4 S

IR 3" 24" 49.67

Dec 58" 00' 39.9

prec 4.733

New Comet Difficult to observe well

hly-meter in IR +28"
Dec +33"

1850 Aug 29th 11^h 09^m 45^s M.S.P. Star 4

Comet: IR 3" 24" 49.67 } Mean Eq
Dec +58" 00' 37.9 } Jan. 1st 1850

The comet has no tail
& the body of light has a
diameter of about 1" 30"

By 8 Comp. in IR & 3 in Dec with a star
of the 8th 9th mag. in Arg. Zone 57

Aug^{sr} 29/30th28^s

Star K

Comet

diff dec

* 22.53 .44.8 ~ 22.56..3.0 ~ 22.58..13 ~ 30.66^a
 * 22.54 7.0 ~ 22.56..43.0

2..38.2

2..36.0

2..37

2..09

28

24

2

Aug 29th New Comet at 10^h.30^m P.M.

For the last three or four days past have swept East & West of the Meridian as far as the time between twilight & the rising of the Moon has permitted.

This evening we swept first West of the meridian beginning rather late as we had had several visitors looking through the Telescope - After sweeping over the portion of the Western sky omitted on the previous evening - Observed the cluster in Hercules to allow the Constellations near the Eastern Horizon to rise - Commenced sweeping in the NE at a low altitude - Swept over the E & SE Sky & Having nearly finished for the evening thought I would turn the Comet Sweeper to an object in Perseus which we had noticed on the previous evening & supposed to be a cluster of small stars as it really was - I had examined this spot very carefully then so that I was much surprised at seeing a nebulous object in a place where I felt sure it could not have been before - Suspected at once that must be a Comet though I should not perhaps have felt much confidence in it had it not been in a spot which I had examined so carefully the eve before - As soon as we could bring the G.R. to bear on it told Charles that it had a very suspicious look. So we proceeded to track it accordingly. Proved to be a Comet moving to the E & N fast for our so faint.

It was seen Sept. 5th By Brorsen
and on the 9th By Mauvais at Paris and by Robertson
at Markree On the 14th Sept By Clausen at Dorpat.

New Comet Aug 30th 1850

* 9 ^h 10 ^m	Comet n. f. *	
20 ^h 10 ^m 22.9	20 ^h 11 ^m 48.5	11 ^m 25.6
10 50.0	12 ^m 15.5	11 25.5
20 ^h 12 ^m 58.5	14 ^m 24.5	1 ^m 26.0
13 ^m 25.3	14 ^m 51.8	1 ^m 26.5
		1 ^m 25.90

20 ^h 19 ^m 30	11 ^m 45	comet n. f. *
20 ^h 23 ^m 00	10 ^m 30	10.77
20 ^h 26 ^m 00	10.88	50.02
20 ^h 29 ^m 00	10.84	39.25
20 ^h 32 ^m	10.70	7.8
29 30	387	384.7 = 6 ^m 24.7
20 ^h 25 ^m 54	10.77	

20 ^h 35 42.4	20 ^h 37 ^m 20.5	1 ^m 38.1
36 ^m 09.0	20 ^h 37 ^m 48.0	1 ^m 39.0

20 ^h 38 ^m 19.3	20 ^h 39 59.0	1 ^m 39.7
38 ^m 46.2	20 ^h 40 ^m 26.0	1 ^m 39.8
	48 52	202
	20 ^h 26 ^m 06.5	1 ^m 32.52
	5 43	
	20 ^h 20 ^m 23	
	10 ^m 34 ^m 02.4	
	9 ^m 46 ^m 19	
	1 ^m 36	
M.S.G.	9 ^m 44 ^m 43	

19^m 5^m 0
5.43

18^m 59.10
27^m 35.45
8^m 36.55

57^m 48^m

82 32^m 11

diff. of R
Mean of 1st set 20^h 13^m 20^s
diff. R 1^m 25.90

2nd set 20^h 38^m 53

diff. R 1^m 39.15

Comet

R 3^h 38^m 57° 53' = Dec

Aug 30th

u = Star of Comp on 29th

b = Star of Comp. on 30th is S of a

20^h 50 19.0

21^h 01^m 47.5 11.28.5

50 33.5

02.7 11.29.2 28.96

50^h 50.0

02^h 18.5 11.28.5

28.96

28.88

28.92

50.02

21.10

42

206.8

3^h 26^m 8^s

21^h 04 53.0

21 16 22.0

11.28.0

28.88

05 08.2

37.3

11 29.1

05 24.3

53.0

11.28.7

11.28.83

a 3^h 22^m 44.34

58° 04' 21.3

b follows a 11^h 28.83

3^h 26.8

b is S of a

R* b 3^h 34^m 13.17

58° 00' 54.5 = Dec * b

Comet fol. b 1^h 32.52

6^h 24.7

Comet n of b

Comet R 3^h 35^m 45.69

58° 07' 19.2 = Comet Dec.

Comet

Aug 30th 9^h 44^m 43^s M.S.P.

Comet R 3^h 35^m 45.69 } Mean Eq
Dec 58° 07' 19.2 } Jan 1st 1850

star b

By 8 comp. in R and 5 in Dec with a star of the 9th 10th mag. The star was afterwards compared with the star used on the 29th.

The Comet is faint and it is not possible to observe it with much exactness as there is no well defined centre.

58..00..38
58..07..19
6..41

$$\begin{array}{r} 24 \overline{) 1.4} \quad (0.583) \\ \underline{120} \\ 200 \\ \underline{192} \\ 80 \end{array}$$

60) 17 (0.3")

$$\begin{array}{r} 22.6 \overline{) 10.93} \quad (0.484 \\ \underline{904} \\ 1890 \\ \underline{1808} \\ 820 \end{array}$$

$$\begin{array}{r} 22.6 \overline{) 6.7} \quad (0.296 \\ \underline{452} \\ 2180 \\ \underline{2034} \\ 1460 \end{array}$$

4.9 11.0
245
4.05³

Uly motion in R + 29.^s04
 " Dec + 17".8
 Daily motion in R + 11^m.37
 " Dec + 7'.06

$$\begin{array}{r} 10.56 \\ 29 \\ \hline 12 \\ 11.37 \end{array} \qquad \begin{array}{r} 6.41 \\ 18 \\ \hline 7 \\ 7.06 \end{array}$$

3, 35, 46
11, 37

58.. 07.. 19
7.. 06

pt R 3. 47 " 23

$\frac{7.06}{\text{Dec } 58 \text{ " } 14 \text{ " } 25} \text{ for } 9 \frac{1}{4} \text{ Aug } 31^{\text{st}}$

$$\begin{array}{r} 27.27 \\ 22.75 \\ \hline 3457 \\ 223 \end{array}$$

3.43

Stars in Ang. Zone 68

	δ^h	δ^m	δ^s	
a	8.9	3.46	06.9	$58.10.46$
b	8.9	3.52	31.9	$58.14.22$

6 8.9 3" 52.3 1.9 58" 14.22

Aug. 31st 1850 Comet of Aug. 29th
 Star of Comp is in Arg. None 68

+ 4.903^s - 11.06
 39.224 88.48

u = * 8.5 9²

Comet

18 57" 40.5 18 58" 45.0 1" 04.5
 18 58" 08.7 18 59" 12.5 1" 03.8

3" 44" 06.86
 + 1" 24.95
 + 0.01

18" 59" 53.3 19" 00" 57.8 1" 04.5
 19" 00 21.5 19" 01" 27.2 1" 05.7
 236" 04.0 22.5 25

1842.0 3" 45" 31.82

Free + 39.22

18" 59" 01 19" 00" 08 1" 04.62

* AR 3" 46" 11.04 1850.0
 dif. R 1" 09.82
 R 3" 47" 20.86

19" 04" 30 46.75 Comet s of star

19" 07" 00 47.32 47.06

19" 09" 30 46.71 50.02

19" 12" 10 47.50 296

19" 14" 20 47.00 6

47 30 28 0" 29.0

19" 09" 30 47.06 0.3 motion in 1^m

Comet s of star G = 0" 29.3 at 19^h 08^m 28^s

58" 09" 28.4

- 10.2

- 0.3

58" 09" 17.9

+ 1" 28.5

* Dec 58" 10" 46.4 1850.0

dif. Dec 0" 29.3

58° 10' 17".1

R Dec

19" 16" 31.9 19" 17" 46.5 1" 14.6

16" 57.5 19 18" 11.5 1" 14.0

* h dif. Dec 3" 43"
 by moving
 selected

19" 18" 53.0 19 20" 09.0 1" 16.0

19 19.0 19 20 34.5 1" 15.5

31 41.4 76 41.5 201

19" 17" 55.3 19" 19" 10.4 1" 15.02

* 18" 59" 01.0 1" 04.62

16 56.5 19.64

19" 08" 28 Comet fol * 1" 09.82

5" 46

19" 02" 42

10" 38" 00

8" 24" 42

1" 23

M.S.D 8" 23" 19

Aug. 31st 8^h 23^m 19^s M.S.D

Comets R 3" 47" 20.86 } Mean Eq
 Dec 58° 10' 17".1 } Jan 1st 1850

Star c

Sept. 1st 9h. 06^m

Saw a fine Meteor brighter than Venus as it illuminated the country though not brightly -

It started near a Dragon - passed between 2 & 3 Mr. Mag. to 70° of alt when it disappeared without explosion - Its course very nearly perpendicular to the horizon. It appeared to be enveloped in a haze of coloured light $\frac{1}{2}$ degree in diameter but this might have been the effect of cirrus clouds on its light as it passed through some dense masses of it. Its motion was comparatively slow it being in sight 3^s or 4^s. It once nearly disappeared & then recovered its brilliance. This also may have been the effect of the clouds -

22-31 $\begin{matrix} 29^h \\ 30^h \end{matrix}$ $\begin{matrix} 58^m 00.6 \\ 58^m 07.3 \end{matrix}$ $\begin{matrix} 6.7 \\ 3.7 \end{matrix}$
 11-35 $\begin{matrix} 31^h \\ 40^h \end{matrix}$ $\begin{matrix} 58^m 10.3 \\ 58^m 09.6 \end{matrix}$ $\begin{matrix} +3.0 \\ -0.7 \end{matrix}$ $\begin{matrix} 3.7 \\ 4.3 \end{matrix}$
 12-15 $\begin{matrix} 2^h \\ 50^h \end{matrix}$ $\begin{matrix} 58^m 04.6 \\ 58^m 04.6 \end{matrix}$ $\begin{matrix} -5.0 \\ -5.0 \end{matrix}$

$\begin{matrix} 19.25 \\ 28.11 \end{matrix}$ $\begin{matrix} 19.29 \\ 28.11 \end{matrix}$
 $\begin{matrix} 8.46 \\ 8.42 \end{matrix}$

13-05

29-20

3-47-21
 R 4-12-41 } Sept 2nd 8^h 30^m
 Dec 58-05' } Comets place

Aug. Zone 68

a *8.9 4^h 11-03.12 +58^m 08-10
 b *9.2 4^h 20-03.73 +57^m 59.18
 on pnc b 55^s α 4 8' 5

3' 8 8 8
 5^m 50' fol.

New Comet

Sept 2nd

$$\begin{array}{r} 156 \\ 3 \\ \hline 153 \\ 2.83 \end{array}$$
* $9.8 = a$

Comet S.f.*

$$\begin{array}{r} 19. 37 51.5 \\ 38. 16.2 \end{array}$$

$$\begin{array}{r} 19. 38.07 \\ + 3. 21.15 \\ \hline 8. 38.45 \\ 4. 16.52 \\ \hline 5 \end{array}$$

+ a

$$\begin{array}{r} * 20. 35. 48.0 \\ \hline 39. 15.0 \end{array}$$

89.00 ±

$$\begin{array}{r} 9.00 \\ 3.30 \\ \hline 5.30 \end{array}$$

$$\begin{array}{r} 40.00 \\ 8 \\ \hline 392 \\ 6.32 \\ 2.33 \\ \hline 9.05 \end{array}$$

44. 23.0

*

$$\begin{array}{r} 19. 45. 46.6 \\ \hline 46. 11.8 \end{array}$$

$$\begin{array}{r} * 20. 39. 54.5 \\ \hline 43. 25.0 \pm \end{array}$$

89.84

$$49.05.0 \rightarrow 8.29.50 \times a$$

* 20 46. 45.5

A 50. 14.5 ±

$$\begin{array}{r} 19. 57. 38.5 \\ \hline \end{array}$$

$$\begin{array}{r} 20. 01. 44.5 \\ 5. 48 \end{array}$$

19 55. 56

an H 3. 45. 06

8. 14. 54

4. 10. 50

20 01. 44.5

31. 51. 00

Star a is in Arg. Zone 68

20. 06. 02.0

7. 45

Comet S.f.*

* 20. 08. 48.5

89.00

com 20. 12. 00.5

20. 14. 23.5

65.62 20^h 53^m

Comet 4 5/ *a

Comet np *b

20. 53. 52.5 65.62
*b 20 59. 16.0

By wires

*a 21. 01. 36.5
02. 12.8

Comet

05. 18.0 uncertain 1^s

Comet sq *a

21. 18. 90.61

* 21. 18. 57.0 90.50

22 47.5

* 21. 23. 38.5 91.60
27. 37.0

Sept 2nd Continued

Time by 2557

d
dR

20.12	3.12.50	89.00
20.39	3.27.0	89.00
20.44	3.30.5	89.84
20.50	3.29.0	90.61
21.02	3.41.0	90.50
21.23	3.50.5	91.60
21.28	3.58.5	95.55
378	2485	90.09
20.54.00	3.35.50	50.02
5.50		40.97
20.48.10		8.0

10.45.53 20.57.20 392.7 = 6' 32.7

10.02.17 cor for - 3.20

1.39

M.S.G. 10.00.38

20.54.00 Dif. Dec 6' 31.5 Comet S of Star a

4.09.03.12

+ 1.24.80

+ 1.02

1842.0 R 4.10.27.94

proce + 39.76

1850.0 4.11.07.70

3.35.50

Comet R 4.14.43.20

58.06.50.6

- 8.6

- 0.4

Dec 58.06.41.6

+ 1.13.9

58.07.55.5

6.31.5

Dec 58.01.24.0

procepin

+ 4.97

+ 9.24

8

8

3976

7392

place of star a

Sept 2nd 10.00.38^s

Comet R 4.14.43.20 } Mean Eq

Dec 58.01.24.0 } 1850.0

From 7. comp. in R. & S in Dec with
a star in Arg Lane 68

The R. & S. transits were through
the center of the field. As the clouds
were constantly obscuring the comet
I was only got by 8 hours obser-
ving

$m = 1.66302$
 1.30240
 $62.37 \text{ } \alpha_i \quad 9.94840$
 $58.06 \text{ } \delta \text{ } \text{ } \quad 2.20590$
 $28.62 \quad 1.45670$
 46.03
 $15) 74.65 (4.97$
 60
 146
 135
 760

4^h 30'57^m 50^s

L. G. nearly right

20^m 37^s 15^s4^m 08^s 38^s Dec 57^m 50^s-7 51^m 22^s4^m 28^s 37^s

By Inst

4^m 28^s 37^sDec + 57^m 50^s

8^h 51^m 17^s ZSept 8thComet is 5 p x 15th mag = x

24

26

in 12^m mo in Dec 6.7
in 1^m " 0.562557 Comet S of x 2 15th21^h 07^m 20^s

2.27

2.27

21^h 08^m 45^s

2.11

50.00

09^m 44^s

2.50

4773

11^m 00^s

2.20

95

21^h 09^m 14.2

108

4678

2.27

7^h 47^m 8^s7^h 54^m 5^s

2557

Comet free x x

21^h 12^m 45^s

15 beats

dd 7^h 51^m 1^s Comet S of x x at 21^h 15^m 18^s13^m 30^s

10 "

du 0^m 04^m 44^s " free x x 21^h 15^m 01^s14^m 10^s

11 "

14^m 37^s

9 "

15^m 05^s

8 "

15^m 28^s

8

16^m 03^s

7

16^m 30^s

6

16^m 57^s

6

45^m 05^s

80

21^h 15^m 01^s

8.89 = 4.44

dd 7^h 51^m 1^s
21^h 15^m 01^s mo in 17^s 0.1
5^m 52^s 7^h 51^m 2^s21 09^m 09^s10^m 49^m 50^s10^m 19^m 19^s1^m 41^s10^m 17^m 38^s M.S.P.21 20^m 00^s

1.67

21^m 10^s

1.74

21^m 45^s

1.50

22^m 45^s

1.40

231

42^m 24^s

1.58

21^h 15^m 18^s

50.00

48 42

97

474.5

7^h 54^m 5^sSept 3rd 10^h 17^m 38^s M.S.P.Comet at 4^h 29^m 04^s 09^s Mean Eq
Dec. 57^h 47^m 39^s 2 1850.0Arg 4 comp. in M & S in Dec with a
star of the 15th mag - which was de-
termined from Arg. Zone 68

Sept 3rd x is s of Arg. Zone $\times 9^h = a$ 34. 30.2
35 26.7

Sip. Dec
 $1^h 50$
 1.82
 1.60
 192
 $1^h 64$

1.64
 $\frac{5006}{4836}$
 $\frac{9.7}{473.9}$

7^h 53.9 x is s of a

21. 29. 25.5
 21 30. 21.3

Arg. zone a a 9^h 26^h x follows a

0.7
 0.3
 0.5
 $\frac{0.5}{20}$
 0.50

obs'd Sip. R

 a 26^h
0^h 55.8

Obs'd Sip. Dec

0. 56.5

23.88
50.006 m. f a

6 m

7.084

7.78
6224Zero
50.00 a in Arg Zone 68 No 61

4^h 27^m 02.98
 $+ 1^h 24.71$
 $+ 03$

58^h 02^m 28.7
 $- 7.2$
 $- 0.5$

4^h 28^m 27.72
 $+ 40.39$

58^h 02^m 21.01^h 03.41

4^h 29^m 08.03
 $+ 0.50$

58^h 03^m 24.4

2. R 4^h 29^m 08.53
 del R 4.44

7^h 53.9
 57^h 55^m 30.5
 7^h 51.2

R 4^h 29^m 04.09R 57^h 47^m 39.3

Sept 8th 1/9^h midnight
diff obs

h m		
0.34	23	68.43
36	03	68.09
38	25	67.50
18	51	2
0.36	17	68.01

diff R

0.41 11.3
11.7

49.7 38.4

68.54

50.06

38.50

7.7

377.3

6.17.3

Comet is brighter Zero

Comet & star off 8th mag.
& north falls -

Star of 3 mag Dec 1885

star of group north of
star of 3 mag

88.53

88.55

diff R * 8^m & 3^m mag
h m s 8th in 3^m

1.14 35.6

14.59.0

15.06

30.4

15.29.2

30.2

1.15 48.2

7.3

18.5

30.3

37.3

30.0

1.17 5.5

35.2

29.7

23.8

17.54.3

30.5

1.18 17.0

1.18 47.2

30.3

36.3

1.19 06.3

30.3

* 8th following Dec 1885 by 30.14

Star	Comet	
0.43 20.0	3.59	0.39.0
43 39.8	44.20	0.40.2
44 20.2	45.21.3	0.41.1
" 59.7	45.41.7	0.42.0
58.0	46.39.8	0.41.8
46 17.3	clouds	

0.47 48.0	0.48 31.0	0.43.0
48 07.5	cloudy	

0.50 10.0	0.50 55.0	0.45.0
50 29.7	cloudy	

0.51 31.0	cloudy	
51 51.0		

The stars are in
Aug. Zone 174 Nov 425

54134e 1885

1850 R 5.47 10.63	54.15.58.1
Obsd date 0.30.14	6.17.3
5.47 40.77	54.22.15.4

Sept 8/9th mag nth
diff dec & L star 7/8 mag

$0^h 56^m 4^s$	$62^{\circ} 69'$	
$58^m 47^s$	$62^{\circ} 22'$	
$59^m 43^s$	$62^{\circ} 17'$	cloudy
$23 \quad 34$	$10^{\circ} 8'$	
$0^h 57^m 51^s$	$62^{\circ} 36'$	

ca. H 7.05.08 - P.D. 35.37

$\frac{2.7}{3.2}$

68.09

62.22

$21.8 \left) \begin{array}{r} 5.87 \\ 4.36 \\ \hline 1.510 \end{array} \right. (2.7$

$\frac{1.15}{8} \quad \frac{68}{88}$

* 8th mag. comp^d with star of 3rd mag

Times for diff. R

Times for diff. Dec

4.926

$0^h 41^m 49^s$

$0^h 38^m 4^s$

$0^h 36^m 17^s$

$68^{\circ} 01'$

$\frac{4.926}{8}$

$0^h 59^m 13^s$

$43^m 59^s$

$0^h 39^m 0^s$

$0^h 57^m 51^s$

$62^{\circ} 36'$

39.408

$6^m 08^s$

$44^m 20^s$

$40^m 2^s$

$94^m 08^s$

$10^{\circ} 37'$

$0^h 53^m 05^s$

$45^m 21^s$

$41^m 1^s$

$0^h 47^m 04^s$

$65^{\circ} 18'$

$4^m 54^m 52^s$

$45^m 42^s$

$42^m 0^s$

$50^m 00^s$

$15^{\circ} 18'$

$\Delta R = 5^h 47^m 57^s$

$46^m 40^s$

$41^m 8^s$

$15^m 18^s$

3.0

ΔR

$48^m 31^s$

$43^m 0^s$

$148^m 8^s$

$2^h 28^m 8^s$

$5^h 47^m 07^s$

$50^m 55^s$

$45^m 0^s$

$2^h 28^m 8^s$

3.2

$5^h 47^m 23^s$

$47^m 17^s$

$8^h 10^m 5^s$

$Red to \Delta R$

$2^h 32^m 0^s$

$5^h 46^m 37^s$

$0^h 45^m 54^s$

$0^h 41^m 31^s$

$comet follows*$

$comet N 7^*$

$5^h 46^m 17^s$

$6^m 08^s$

$comet follows*$

$comet N 7^*$

$comet N 7^*$

$5^h 46^m 17^s$

$0^h 39^m 46^s$

$11^m 09^m 33^s$

$13^m 30^m 13^s$

$2^m 13^s$

$5^h 47^m 16^s$

$11^m 09^m 33^s$

$13^m 30^m 13^s$

$2^m 13^s$

$2^m 13^s$

$5^h 47^m 16^s$

$13^m 30^m 13^s$

$2^m 13^s$

$2^m 13^s$

$2^m 13^s$

$5^h 47^m 16^s$

$2^m 13^s$

$2^m 13^s$

$2^m 13^s$

$2^m 13^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

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$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

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$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$13^m 28^m 00^s$

$5^h 47^m 16^s$

Monday, Sept 9th Comet
The star of Comp. is Schrage - B.A.C. 1885

6.6) 2.49 (3.77
1.28
510
462
480

Comet moves 3 in Dec 2.7 in a minute

31.3

Sif R

Sif Dec

dR

* 3rd mag
1.. 35.. 16.8
35 35.2
37.. 47.5
38.. 06.1
40.. 29.5
40 48.0
48.. 1.1
1.. 38.. 00.18

Comet
1 37.. 02.0 1.. 45.2
37 21.0 1.. 45.8
39 33.3 1.. 45.8
39.. 53.5 47.4
42 18.3 1.. 48.8
42.. 37.5 1.. 49.5

1.. 46.. 57
50.. 45
53.. 37
1.. 19
1.. 50.. 26
87.67
86.19
85.18
104
86.35
50.00
36.35
7.3

p N of * 356.2 = 5.. 56.. 2
motion in 38^s - 0.8
p R of * Sif. Dec 5.. 54.. 5

B.A.C. 1885

1850.0 5^h 47^m 10.63 35.. 44.. 01.9
54.. 15.. 58.1
1.. 56.. 27.8 1.. 58.. 26.8 1.. 59.0
56.. 51.3 58.. 51.5 2.. 00.2
2.. 00 09.0 2 02.. 10.2 2.. 01.2
00 33.0 2 02 35.0 2.. 02.0
2.. 03.. 43.8 2 05.. 47.5 2.. 03.7
04.. 07.5 2 06.. 12.5 2 05.0
132.6 127 612 48 6532
1.. 51.. 04 1.. 54.43
6.. 08
1.. 44.. 56
11.. 09.. 33
14.. 35.. 23
2.. 23

M.S.G. 14.. 33.. 00

Sept 8th 14^h 33^m 00^s M.S.G. star
Comet R 5^h 49^m 05.06 } Eq 1850.0
Dec 54^m 21^s 52.6

By 12 comp. in R d 3 in Dec.
with * 3rd mag = B.A.C. 1885

The comet is much brighter & its
light more concentrated - most of the
light being on the side opposite to the
Sun.

Parthenope Sept 10th 1850

AR 15^h 54^m 30^s
Dec. - 17^o 23'.5

BAC 5304 * 5^h 6^m
AR 15^h 57^m 55^s
- 16^o 05'

BAC 5055
15^h 12^m 23^s 87
- 17^o 36' 34".5

H 19^h 28^m 45^s
3^h 30^m
6.10

19^h 22^m 35^s
3^h 30^m 16^s

16^h 01^m 20^s2490 14^s

19 38^m 35^s
3^h 40^m 00^s

15 58^m 35^s
15^h 51^m 55^s
6^m 40^s

19^h 41^m 10^s3^h 40^m 00^s - 17^o 32'16 01^m 10^s15^h 52^m 30^s6^m 40^s19^h 43^m19^h 43 58.0019^h 49 57.9619^h 51 58.08

00.0

17.2

35.0

59 52.2

13.0

29.8

50.7

47.8

05 01.0

18.0

52.5

11.5

17.7

20.5

48.0

38.0

04.8

17.5

39.8

56.7⁻²

16.9

$38^{\circ}.06'$ read twice
 $22^{\circ}.50.24$ $51^{\circ}.54$ $23^{\circ}.06.00$
 $6^{\circ}.10$ $\text{cor} -1.20$ $6^{\circ}.10$
 $22^{\circ}.44.14$ $51^{\circ}.52.40$ $22^{\circ}.59.50$
 $4^{\circ}.26.00$ $4^{\circ}.41.36$
 $7^{\circ}.33.00$ $7^{\circ}.18.24$
 $30^{\circ}.17.14$ $30^{\circ}.18.14$
 $6^{\circ}.17.14$ $6^{\circ}.18.14$

$23^{\circ}.08.23$ $6^{\circ}.17.30.68$ $51^{\circ}.52.14.6$ $23^{\circ}.26.20$
 $6^{\circ}.10$ $+49.70$ $+8.7$ $5^{\circ}.03.52$
 $23^{\circ}.02.13$ $\text{free} +38$ $\text{free} -24$ $6^{\circ}.56.08$
 $4^{\circ}.44.00$ $6^{\circ}.18.57$ $51^{\circ}.52$ $30^{\circ}.22.28$
 $7^{\circ}.16.00$ $6^{\circ}.22.28$
 $6^{\circ}.18.13$ $6^{\circ}.16$
 $\text{cor Intake} +16$ $6^{\circ}.16.18$
 $*R 6^{\circ}.18.29$ $23^{\circ}.30.10$
 $5^{\circ}.07.40$
 $6^{\circ}.52.20$
 $30^{\circ}.22.30$
 $6^{\circ}.22.30$
 $6^{\circ}.10$
 $6^{\circ}.16.20$

6" 15" 22
 1 27
 6" 16 49
 6" 16" 19
 30

6" 18" 43
 1 27
 6" 17. 16

6" 17" 38
 1 27
 6" 18 57

0" 00" 00
 6" 10
 23 53.450
 6" 18" 57
 6" 12" 47
 5" 47" 13

30" 18" 57
 23" 53" 30
 6" 25" 07
 5 34.53

23" 59" 30
 5 35.00
 6" 10
 23" 53" 20
 6" 25" 00
 30" 18" 20
 6" 18" 20

Sept 10th 1850Star of 8th 9th is sp Comet52.3
07 10.50^h 08 27.5
45.5Comet is N. J. Star 8th 9th

*	A	diff. R
0 ^h 09 ^m 57.8	10 ^m 45.5	0 ^m 47.7
10 15.8	11 03.0	0 ^m 47.2

0^h 12^m 20
$$\begin{array}{r} 56.19 \\ 50.01 \\ \hline 6.18 \\ 6.12 \\ \hline 6.06 = 1^m 00.6 \text{ } \delta^m \delta^s \end{array}$$
0^h 14^m 25.7
43.80^h 15^m 16.015^m 35.7

39 5

0^h 50.30^h 51.2

36 4

0^h 12^m 206^m 100^h 13^m 00Red. 0^m 40^s0^h 49.10

.51

0^h 06^m 100^h 48.5911^m 17^s 2612^m 48^s 44

2 06

12^m 46^s 38 = 11.58Comet n of * 1^m 00.6Comet fol. * 0^m 48.596^m 18^s 42.8651^m 52^s 10.4diff 0^m 48.59diff 1^m 00.6Comet's R 6^m 19^s 31.45Dec. 51^m 53^s 11.0

There is some difficulty
in recognising the stars in
Arg. Zone 163 - Nov 204 & 205

I suppose the star of comp
to be No 205 (probably not)

Its first R was 6^m 18^s 14^s
Dec 51^m 54^s

But no two stars could be
found with the same dif-
ferences of R with Nov 204 & 205
Though I spent two hours
in trying to find them

The brightest * R corrected 6^m 18^s 29^s
of three. Dec. 51^m 52.7

No doubt of the place
within 1^m in Dec & 2 or 3^m in R

There is a star in Arg

Zone 163 No 205

corrected R 6^m 18^s 57^s

for 1850 Dec 51^m 52

For Star of Comp. See Oct. 15/16

* R 6^m 18^s 42.86 } Mean Eq.

Dec 51^m 52^s 10.4 } Jan. 1st 1850.

By 4 comp. in R & 1 in Dec with Arg. Zone 163 No 192-3

Sept 10th 12^m 46^s 38^s

Comet's R 6^m 19^s 31.45 } Mean Eq.

Dec 51^m 53^s 11.0 } Jan. 1st 1850

By 4 comp. in R & 1 in Dec with * 8th 9th May.

Sept 11th P.M. Wednesday 1850

4140
1640 2^m 44
6^m 25^m 28^s
6^m 28^m 11^s 2

Comet is s.p. * 7th

Comet much brighter

22 18 18.8 19 18.5 0. 59.7
18 36.8 19 36.5 0. 59.7

* in Arg Zone 76
No 119

Star of Comp

22 20 02.5 21 21.2 0. 58.7
20 21.0 21 19.0 0. 58.0

23 03 03 129 27
4 22 28 Dec 50 33

22 22 30 80 20 31.67
24 20 80.50 63

7 33 32
30 36 35

26 40 81.74 310.4

6 36 35

28 20 82.70 5 10.4

6 12

30 10 83.25

32 20 83.9

22 26 24 81.68
50.01
31.67

6 30 23 Dec 50 33

23 16 37 39 27 = 120

4 36 00

7 24 00 - 3.00

30 40 37

6 40 37

6 12

6 34 25

6 34 41

cor. AR + 16

23 24 12

6 12

23 18 00

4 33 35

51 35

7 16 25

30 34 25

6 34 25

cor. East AR + 16

cor. East Dec - 1 in 20

5 10.4

Dec 50 26 31.7

Dec 50 31 42.1 = 1850.0

Dec 50 26 31.7

Dec 50 26 31.7

Dec 50 26 31.7

Dec 50 26 31.7

Dec 50 26 31.7

Dec 50 26 31.7

Dec 50 26 31.7

Sept 11th 10^h 57^m 02^s M.S.P.

AR 6 33 46.17 } Mean Eq.

Dec 50 26 31.7 } 1850.0

From 8 comp. in AR and 5 in Dec with a star in Arg. Zone 76, No 119

AR 15^h 57^m 37^s Parthenope Sept. 12th 1850 BAC 5304
 Dec - 17^m 36.55

$$u = AC \quad 15^{\circ} 58' 39'' \\ - 17^{\circ} 31' 37''$$

AR 15^h 51^m 55^s
 Dec - 16^m 05^s 13^s

$$\begin{array}{r} 19.3500 \\ 6.14 \\ 19.28.46 \\ 15.58.34 \\ \hline 330.07 \end{array}$$

u is S of c

$$\begin{array}{r} u \quad 19^{\circ} 53' 03'' \quad 4'' \text{ S of } c \\ 19^{\circ} 55' 35'' \quad 82.36 \quad 7^{\circ} c \\ \quad \quad \quad 82.31 \quad 9^{\circ} \text{ S of } c \\ \quad \quad \quad 82.40 \\ \quad \quad \quad 50.00 \\ \hline \quad \quad \quad 32.40 \\ \quad \quad \quad 65 \\ \hline \quad \quad \quad 317.5 \\ \quad \quad \quad = 5^{\circ} 17' 5'' \end{array}$$

$$\begin{array}{r} 19.42.11.5 \\ 42.46.5 \\ 43.32.8 \end{array}$$

$$\begin{array}{r} \times 14^{\circ} \\ \times 11^{\circ} \\ \times 7^{\circ} \end{array}$$

5' S of AC

AC

$$19.58.05$$

$$18.43$$

4 beats

$$56''$$

$$82.40$$

$$19.56.14$$

$$82.40$$

$$50.00$$

$$32.40$$

$$65$$

$$317.5$$

$$= 5^{\circ} 17' 5''$$

u in Parthenope

$$\begin{array}{r} 19.44.27.0 \\ 44.42.0 \end{array}$$

$$\begin{array}{r} 45.02.0 \\ 16.5 \end{array}$$

$$\begin{array}{r} 45.48.0 \\ 03.0 \end{array}$$

$$\begin{array}{r} 1.21.0 \\ 1.21.0 \end{array}$$

$$AC.29306$$

$$15.55.46.63$$

$$2.51.55$$

$$15.58.38.18$$

$$1.20.5$$

$$1.21.0$$

$$-17.22.58.1$$

$$8.32.5$$

$$+10.35$$

$$1.20.6 - 17.31.30.6$$

$$1.20.8$$

$$1.20.82$$

$$-10$$

$$10.25$$

$$51.25$$

$$8.32.5$$

$$49.43.0$$

$$49.57.7$$

$$42.39.2$$

$$19.47.06.5$$

$$20.04.19.4$$

$$39.51.25.9$$

$$19.55.43$$

$$1.6.15$$

$$19.49.28$$

$$11.25.19$$

$$8.24.09$$

$$1.23$$

$$8.22.46$$

$$50.17.5$$

$$32.0$$

$$1.20.82$$

$$1.19.52$$

$$51.03.6$$

$$18.3$$

$$15.58.38.18$$

$$1.20.27$$

$$-17.31.30.6$$

$$5.19.4$$

Parthenope AR

$$15.57.17.91$$

$$\text{Dec. } -17.36.50.0$$

ASS

$$\begin{array}{r} 19.44 \\ 15.57 \\ \hline 3.52 \end{array}$$

a is Parthenope

<i>a</i>		<i>L</i>	<i>e</i> = <i>H</i> <i>e</i>	20..13	12 beats
20.. 01.. 58.0	02.. 31.5	03.. 17.5	1.. 19.5		
02.. 15.3	49.0	55.0	1.. 19.7	<i>a</i> is S of <i>e</i>	
			20.. 15.. 55	83.32	
04.. 01.2	04.. 34.5	05.. 20.6	1.. 19.4		
04.. 18.5	52.0	38.0	1.. 19.5		
06.. 33.0	07.. 06.5	07.. 52.5	1.. 19.5		
06.. 50.5	07.. 24.0	08.. 10.8	1.. 19.5	On first looking into the	
05.. 56.5				31 Telescope m and <i>a</i> were as	
20.. 04.. 19.42			1.. 19.52 in II	40 ^m later as in II.	

Parthenope

Sept 12^h 8^m 22^s 46^s M.S.S.

Dec 15^h 57^m 17^s 91 } Mean Eq.
Dec - 17^h 36^m 50^s 0 } Jan. 1850.

From 12 obs in Dec and 3 obs in Dec - good
compared with H.C. 29306

I ^m x ^m x a

II ^m x ^m x a

So that *a* is certainly in
motion at first m pre-
called *a* by 4.5 but
afterwards by 6.0 by
many obs.
a is only of the fourteenth
magnitude

23..13..38

6..18

23 07..20

4..01..14

7..58..42

WR 7..06..02 + 16^s

AL - 1..20

Friday Sept 13th 1850 Comet

43..22..32 1/4 Saturday

46..37..28

23..29..35

43..23

6..22..51

6..18

46..37

6 18

23..23..17

0..16..33

4..17..13

7/36

5..10..21

7 48..49

5"

6 49..39

7..06..04

7..06..12

* is H.C. 14014 star of 8th mag.

Comet is n.p. *

23..53..24.5

23..55..36.4

2..11.9

The Comet increases in brightness & size. It is also

Zero

49.90

53..46.5

55 58.6

2..12.1

a much better object to observe

49.89

than heretofore, an exceedingly

49.91

23..57..12.0

23..59..21.5

2..09.5

minute sparkling nucleus is sur-

49.90

57..33.8

59..43.5

2..09.7

pected for the first time

156.8

432

It is not yet a

Zero adjusted to

23..55..29.2

2..10.80

well defined body-

read 50.00 after the

Comet n. of *

0..02..47

38.96

49.90

0..06..18

40.58

40.71

+ 4.434

+ 5.424

0..09..45

42.60

9.19

sec. var - .005

+ 0.16

18..50

2.14

18

+ 4.429

+ 5.44

0..06..17

40.71

90.1 = 1..30..1

Comet N. of star

22.45

2720

confirmation in 30"

2.5

3..41.45

+ 4.32.0

0..14..16.8

16..16.5

1..59.7

1..32.6

"

7..02..45.22

43..20..30.4

14..39.0

38.0

7..54.0

1850.0 * R

7..06..26.67

43..25..02.4

d.R

2..04.70

+ 46..34..57.6

0..17..33.3

19..31.0

1..57.7

Comet's R

7..04..21.97

diff. dec + 1..32.6

17..54.5

19..52.5

1..58.0

23.6

24

0..16..05.9

1..58.60

Sept 13th 12^h 28^m 12^s M.S.S.

23..55..29.2

2..10.80

Comet's R 7..04^m 21.97 } Mean Eq.

11..35.1

09.40

dec + 46..36..30.2 } 1850.0

0..05..47.5

Comet 2..04.70 } prec *

From 8 comp. in R and 3 in dec. with

6..18

a star of the 8th mag. in H.C. 14014

23..59..30

11..29..15

12..30..15

2..03

MS.Y.12..28..12

July 15th

Have recently sent to Dr. Gould for publication with
Astr. Journal the following papers viz

'On the orbit of the Comet of 1844-5'

'Method of Computing the distance of a Comet from
the Earth'

'Observations on the Comet of 1850'
On the 6th & 21st of June 6th 8th & 9th of July in part =

July 31st Observations on Petersens Comet complete series
from May 29th to July 29th

Aug 2nd Occultations of Aldebaran Regulus and Jupiter
1848-49-50

Sept. 20/21 A.M. Comet & Star 9^{th} mag n.p.

R R Chro - 2557

* Star a ~~+0.2~~
* RComet ~~s~~
R Rdiff.
* Declination
8th Star
$$\begin{array}{r} .6 \\ \times 2 \\ \hline 1.2 \\ \times 2 \\ \hline 2.4 \\ \times 2 \\ \hline 4.8 \\ \times 2 \\ \hline 9.6 \\ \times 2 \\ \hline 19.2 \\ \times 2 \\ \hline 38.4 \\ \times 2 \\ \hline 76.8 \\ \times 2 \\ \hline 153.6 \\ \times 2 \\ \hline 307.2 \\ \times 2 \\ \hline 614.4 \\ \times 2 \\ \hline 1228.8 \\ \times 2 \\ \hline 2457.6 \\ \times 2 \\ \hline 4915.2 \\ \times 2 \\ \hline 9830.4 \\ \times 2 \\ \hline 19660.8 \\ \times 2 \\ \hline 39321.6 \\ \times 2 \\ \hline 78643.2 \\ \times 2 \\ \hline 157286.4 \\ \times 2 \\ \hline 314572.8 \\ \times 2 \\ \hline 629145.6 \\ \times 2 \\ \hline 1258291.2 \\ \times 2 \\ \hline 2516582.4 \\ \times 2 \\ \hline 5033164.8 \\ \times 2 \\ \hline 10066329.6 \\ \times 2 \\ \hline 20132659.2 \\ \times 2 \\ \hline 40265318.4 \\ \times 2 \\ \hline 80530636.8 \\ \times 2 \\ \hline 161061273.6 \\ \times 2 \\ \hline 322122547.2 \\ \times 2 \\ \hline 644245094.4 \\ \times 2 \\ \hline 1288490188.8 \\ \times 2 \\ \hline 2576980377.6 \\ \times 2 \\ \hline 5153960755.2 \\ \times 2 \\ \hline 10307921510.4 \\ \times 2 \\ \hline 20615843020.8 \\ \times 2 \\ \hline 41231686041.6 \\ \times 2 \\ \hline 82463372083.2 \\ \times 2 \\ \hline 164926744166.4 \\ \times 2 \\ \hline 329853488332.8 \\ \times 2 \\ \hline 659706976665.6 \\ \times 2 \\ \hline 1319413953331.2 \\ \times 2 \\ \hline 2638827906662.4 \\ \times 2 \\ \hline 5277655813324.8 \\ \times 2 \\ \hline 10555311626649.6 \\ \times 2 \\ \hline 21110623253299.2 \\ \times 2 \\ \hline 42221246506598.4 \\ \times 2 \\ \hline 84442493013196.8 \\ \times 2 \\ \hline 168884986026393.6 \\ \times 2 \\ \hline 337769972052787.2 \\ \times 2 \\ \hline 675539944105574.4 \\ \times 2 \\ \hline 1351079888211148.8 \\ \times 2 \\ \hline 2702159776422297.6 \\ \times 2 \\ \hline 5404319552844595.2 \\ \times 2 \\ \hline 10808639105689190.4 \\ \times 2 \\ \hline 21617278211378380.8 \\ \times 2 \\ \hline 43234556422756761.6 \\ \times 2 \\ \hline 86469112845513523.2 \\ \times 2 \\ \hline 172938225691027046.4 \\ \times 2 \\ \hline 345876451382054092.8 \\ \times 2 \\ \hline 691752902764108185.6 \\ \times 2 \\ \hline 1383505805528216371.2 \\ \times 2 \\ \hline 2767011611056432742.4 \\ \times 2 \\ \hline 5534023222112865484.8 \\ \times 2 \\ \hline 11068046444225730969.6 \\ \times 2 \\ \hline 22136092888451461939.2 \\ \times 2 \\ \hline 44272185776902923878.4 \\ \times 2 \\ \hline 88544371553805847756.8 \\ \times 2 \\ \hline 177088743107611695513.6 \\ \times 2 \\ \hline 354177486215223391027.2 \\ \times 2 \\ \hline 708354972430446782054.4 \\ \times 2 \\ \hline 1416709944860893564108.8 \\ \times 2 \\ \hline 2833419889721787128217.6 \\ \times 2 \\ \hline 5666839779443574256435.2 \\ \times 2 \\ \hline 11333679558887148512870.4 \\ \times 2 \\ \hline 22667359117774297025740.8 \\ \times 2 \\ \hline 45334718235548594051481.6 \\ \times 2 \\ \hline 90669436471097188102963.2 \\ \times 2 \\ \hline 181338872942194376205926.4 \\ \times 2 \\ \hline 362677745884388752411852.8 \\ \times 2 \\ \hline 725355491768777504823705.6 \\ \times 2 \\ \hline 1450710983537555009647411.2 \\ \times 2 \\ \hline 2901421967075110019294822.4 \\ \times 2 \\ \hline 5802843934150220038589644.8 \\ \times 2 \\ \hline 11605687868300440077179289.6 \\ \times 2 \\ \hline 23211375736600880154358579.2 \\ \times 2 \\ \hline 46422751473201760308717158.4 \\ \times 2 \\ \hline 92845502946403520617434316.8 \\ \times 2 \\ \hline 185691005892807041234868633.6 \\ \times 2 \\ \hline 371382011785614082469737267.2 \\ \times 2 \\ \hline 742764023571228164939474534.4 \\ \times 2 \\ \hline 1485528047142456329878949068.8 \\ \times 2 \\ \hline 2971056094284912659757898137.6 \\ \times 2 \\ \hline 5942112188569825319515796275.2 \\ \times 2 \\ \hline 11884224377139650639031592550.4 \\ \times 2 \\ \hline 23768448754279301278063185100.8 \\ \times 2 \\ \hline 47536897508558602556126370201.6 \\ \times 2 \\ \hline 95073795017117205112252740403.2 \\ \times 2 \\ \hline 190147590034234410224505480806.4 \\ \times 2 \\ \hline 380295180068468820449010961612.8 \\ \times 2 \\ \hline 760590360136937640898021923225.6 \\ \times 2 \\ \hline 1521180720273875281796043846451.2 \\ \times 2 \\ \hline 3042361440547750563592087692902.4 \\ \times 2 \\ \hline 6084722881095501127184175385804.8 \\ \times 2 \\ \hline 12169445762191002254368350771609.6 \\ \times 2 \\ \hline 24338891524382004508736701543219.2 \\ \times 2 \\ \hline 48677783048764009017473403086438.4 \\ \times 2 \\ \hline 97355566097528018034946806172876.8 \\ \times 2 \\ \hline 194711132195056036069893612345753.6 \\ \times 2 \\ \hline 389422264390112072139787224691507.2 \\ \times 2 \\ \hline 778844528780224144279574449383014.4 \\ \times 2 \\ \hline 1557689057560448288559148898766028.8 \\ \times 2 \\ \hline 3115378115120896577118297797532057.6 \\ \times 2 \\ \hline 6230756230241793154236595595064115.2 \\ \times 2 \\ \hline 12461512460483586308473191190128230.4 \\ \times 2 \\ \hline 24923024920967172616946382380256460.8 \\ \times 2 \\ \hline 49846049841934345233892764760512921.6 \\ \times 2 \\ \hline 99692099683868690467785529521025843.2 \\ \times 2 \\ \hline 199384199367737380935571059042051686.4 \\ \times 2 \\ \hline 398768398735474761871142118084103372.8 \\ \times 2 \\ \hline 797536797470949523742284236168206745.6 \\ \times 2 \\ \hline 1595073594941899047484568472336413491.2 \\ \times 2 \\ \hline 3190147189883798094969136944672826982.4 \\ \times 2 \\ \hline 6380294379767596189938273889345653964.8 \\ \times 2 \\ \hline 12760588759535192379876547778691307929.6 \\ \times 2 \\ \hline 25521177519070384759753095557382615859.2 \\ \times 2 \\ \hline 51042355038140769519506191114765231718.4 \\ \times 2 \\ \hline 102084710076281539039012382229530463436.8 \\ \times 2 \\ \hline 204169420152563078078024764459060926873.6 \\ \times 2 \\ \hline 408338840305126156156049528918121853747.2 \\ \times 2 \\ \hline 816677680610252312312099057836243707494.4 \\ \times 2 \\ \hline 1633355361220504624624198115672487414988.8 \\ \times 2 \\ \hline 326671072244100924924839623134497482997.6 \\ \times 2 \\ \hline 653342144488201849849679246268994965995.2 \\ \times 2 \\ \hline 1306684288976403699699358492537989931990.4 \\ \times 2 \\ \hline 2613368577952807399398716985075979863980.8 \\ \times 2 \\ \hline 5226737155905614798797433970151959727961.6 \\ \times 2 \\ \hline 10453474311811229597594867940303919455923.2 \\ \times 2 \\ \hline 20906948623622459195189735880607838911846.4 \\ \times 2 \\ \hline 41813897247244918390379471761215677823692.8 \\ \times 2 \\ \hline 83627794494489836780758943522431355647385.6 \\ \times 2 \\ \hline 167255588988979673561517887044862711294771.2 \\ \times 2 \\ \hline 334511177977959347123035774089725422589542.4 \\ \times 2 \\ \hline 66902235595591869424607154817945084517908.4 \\ \times 2 \\ \hline 133804471191183738849214309635890169035816.8 \\ \times 2 \\ \hline 267608942382367477698428619271780338071633.6 \\ \times 2 \\ \hline 535217884764734955396857238543560676143267.2 \\ \times 2 \\ \hline 1070435769529469910793714477087121352286534.4 \\ \times 2 \\ \hline 2140871539058939821587428954174242704573068.8 \\ \times 2 \\ \hline 4281743078117879643174857908348485409146137.6 \\ \times 2 \\ \hline 8563486156235759286349715816696970818292275.2 \\ \times 2 \\ \hline 17126972312471518572699431633393941636584550.4 \\ \times 2 \\ \hline 34253944624943037145398863266787883273169100.8 \\ \times 2 \\ \hline 68507889249886074290797726533575766546338201.6 \\ \times 2 \\ \hline 137015778499772148581595453067151533092676403.2 \\ \times 2 \\ \hline 274031556999544297163190906134303066185352806.4 \\ \times 2 \\ \hline 548063113999088594326381812268606132370705612.8 \\ \times 2 \\ \hline 1096126227998177188652763624537212264741411225.6 \\ \times 2 \\ \hline 2192252455996354377305527249074424529482822451.2 \\ \times 2 \\ \hline 4384504911992708754611054498148849058965644902.4 \\ \times 2 \\ \hline 8769009823985417509222108996297698117931289804.8 \\ \times 2 \\ \hline 17538019647970835018444217992595396235862579609.6 \\ \times 2 \\ \hline 35076039295941670036888435985190792471725159219.2 \\ \times 2 \\ \hline 70152078591883340073776871970381584943450318438.4 \\ \times 2 \\ \hline 140304157183766680147553743940763169886900636876.8 \\ \times 2 \\ \hline 280608314367533360295107487881526339773801273753.6 \\ \times 2 \\ \hline 561216628735066720590214975763052679547602547507.2 \\ \times 2 \\ \hline 1122433257470133441180429951526105359095205095014.4 \\ \times 2 \\ \hline 2244866514940266882360859903052210718190410190028.8 \\ \times 2 \\ \hline 4489733029880533764721719806104421436380820380057.6 \\ \times 2 \\ \hline 8979466059761067529443439612208842872761640760115.2 \\ \times 2 \\ \hline 17958932119522135058886879224417685745523281520230.4 \\ \times 2 \\ \hline 35917864239044270117773758448835371491046563040460.8 \\ \times 2 \\ \hline 71835728478088540235547516897670742982093126080921.6 \\ \times 2 \\ \hline 143671456956177080471095033795341485964186252161843.2 \\ \times 2 \\ \hline 287342913912354160942190067590682971928372504323686.4 \\ \times 2 \\ \hline 574685827824708321884380135181365943856745008647372.8 \\ \times 2 \\ \hline 1149371655649416643768760270362731887713490017294745.6 \\ \times 2 \\ \hline 229874331129883328753752054072546377542698003458949.2 \\ \times 2 \\ \hline 459748662259766657507504108145092755085396006917898.4 \\ \times 2 \\ \hline 919497324519533315015008216290185510170792013835796.8 \\ \times 2 \\ \hline 1838994648039066630030016425180371020341584027671593.6 \\ \times 2 \\ \hline 3677989296078133260060032850360742040683168055343187.2 \\ \times 2 \\ \hline 7355978592156266520120065700721484081366336110686374.4 \\ \times 2 \\ \hline 14711957184312533040240131401442968162732672221372748.8 \\ \times 2 \\ \hline 29423914368625066080480262802885936325465344442745497.6 \\ \times 2 \\ \hline 58847828737250132160960525605771872650930688885490995.2 \\ \times 2 \\ \hline 117695657474500264321921051211543745301861377770981990.4 \\ \times 2 \\ \hline 235391314949000528643842102423087490603722755541963980.8 \\ \times 2 \\ \hline 470782629898001057287684204846174981207445511083927961.6 \\ \times 2 \\ \hline 941565259796002114575368409692349962414891022167855923.2 \\ \times 2 \\ \hline 1883130519592004229150736819384699924829782044335711846.4 \\ \times 2 \\ \hline 376626103918400845830147363876939984965956408867142369.2 \\ \times 2 \\ \hline 753252207836801691660294727753879969931912817734284738.4 \\ \times 2 \\ \hline 1506504415673603383320589455507759939863825635468569476.8 \\ \times 2 \\ \hline 3013008831347206766641178911015519879727651270937138953.6 \\ \times 2 \\ \hline 6026017662694413533282357822031039759455302541874277907.2 \\ \times 2 \\ \hline 12052035325388827066564715644062079518910605083748555814.4 \\ \times 2 \\ \hline 24104070650777654133129431288124159037821210167497111628.8 \\ \times 2 \\ \hline 48208141301555308266258862576248318075642420334994223257.6 \\ \times 2 \\ \hline 96416282603110616532517725152496636151284840669988446515.2 \\ \times 2 \\ \hline 192832565206221233065035450304993272302569681339976893030.4 \\ \times 2 \\ \hline 385665130412442466130070900609986544605139362679953786060.8 \\ \times 2 \\ \hline 771330260824884932260141801219973089210278725359907572121.6 \\ \times 2 \\ \hline 1542660521649769864520283602439946178420557450719815144243.2 \\ \times 2 \\ \hline 3085321043299539729040567204879892356841114901439630288486.4 \\ \times 2 \\ \hline 6170642086599079458081134409759784713682229802879260576972.8 \\ \times 2 \\ \hline 12341284173198158916162268819519569427364459605758521153945.6 \\ \times 2 \\ \hline 24682568346396317832324537639039138854728919211517042307891.2 \\ \times 2 \\ \hline 49365136692792635664649075278078277709457838423034084615782.4 \\ \times 2 \\ \hline 98730273385585271329298150556156555418915676846068169231564.8 \\ \times 2 \\ \hline 197460546771170542658596301112313110837831353692136338463129.6 \\ \times 2 \\ \hline 394921093542341085317192602224626221675662707384272676826259.2 \\ \times 2 \\ \hline 789842187084682170634385204449252443351325414768545353652518.4 \\ \times 2 \\ \hline 1579684374169364341268770408898504886702650829537090707305036.8 \\ \times 2 \\ \hline 3159368748338728682537540817797009773405301659074181414610073.6 \\ \times 2 \\ \hline 6318737496677457365075081635594019546810603318148362829220147.2 \\ \times 2 \\ \hline 12637474993354914730150163271188039093621206636296725658440294.4 \\ \times 2 \\ \hline 25274949986709829460300326542376078187242413272593451316880588.8 \\ \times 2 \\ \hline 50549899973419658920600653084752156374484826545186902633761177.6 \\ \times 2 \\ \hline 101099799946839317841201306169504312748969653090373805267522355.2 \\ \times 2 \\ \hline 202199599893678635682402612339008625497939306180747610535044710.4 \\ \times 2 \\ \hline 404399199787357271364805224678017250995878612361495221070089420.8 \\ \times 2 \\ \hline 808798399574714542729610449356034501991757224722990442140178841.6 \\ \times 2 \\ \hline 1617596799149429085459220898712069003983514449445980884280357683.2 \\ \times 2 \\ \hline 3235193598298858170918441797424138007967028898891961768560715366.4 \\ \times 2 \\ \hline 6470387196597716341836883594848276015934057797783923537121430732.8 \\ \times 2 \\ \hline 12940774393195432683673767189696552031868115595567847074242861465.6 \\ \times 2 \\ \hline 25881548786390865367347534379393104063736231191135694148485722931.2 \\ \times 2 \\ \hline 51763097572781730734695068758786208127472462382271388296971445862.4 \\ \times 2 \\ \hline 103526195145563461469390137517572416254944924764542776593942891724.8 \\ \times 2 \\ \hline 207052390291126922938780275035144832509889849529085553187885783449.6 \\ \times 2 \\ \hline 414104780582253845877560550070289665019779699058171106375771566899.2 \\ \times 2 \\ \hline 828209561164507691755121100140579330039559398116342212751543133798.4 \\ \times 2 \\ \hline 1656419122329015383510242200281158660079118796232684425503086267596.8 \\ \times 2 \\ \hline 3312838244658030767020484400562317320158237592465368851006172535193.6 \\ \times 2 \\ \hline 6625676489316061534040968801124634640316475184930737702012345070387.2 \\ \times 2 \\ \hline 13251352978632123068081937602249269280632950369861475404024690140774.4 \\ \times 2 \\ \hline 26502705957264246136163875204498538561265900739722950808049380281548.8 \\ \times 2 \\ \hline 53005411914528492272327750408997077122531801479445901616098760563097.6 \\ \times 2 \\ \hline 106010823829056984544655500817994154245063602958891803232197521126195.2 \\ \times 2 \\ \hline 212021647658113969089311001635988308490127205917783606464395042252390.4 \\ \times 2 \\ \hline 424043295316227938178622003271976616980254411835567212928790084504780.8 \\ \times 2 \\ \hline 848086590632455876357244006543953233960508823671134425857580169009561.6 \\ \times 2 \\ \hline 1696173181264911752714488013087906467921017647342268851715160338019123.2 \\ \times 2 \\ \hline 3392346362529823505428976026175812935842035294684537703430320676038246.4 \\ \times 2 \\ \hline 6784692725059647010857952052351625871684070589369075406860641352076492.8 \\ \times 2 \\ \hline 13569385450119294021715904104703251743368141178738150813721282704152985.6 \\ \times 2 \\ \hline 27138770900238588043431808209406503486736282357476301627442565408305971.2 \\ \times 2 \\ \hline 54277541800477176086863616418813006973472564714$$

comet at $\alpha^{22.57}$ 4.31-0 - exactly in
a line with these two stars
& the 3 objects equidistant from
each other; comet, last following.

Comet has a misty appearance,
no defined nucleus, tolerable strong
condensation, diameter abt. 3'

we notice, a projection from the
nucleus in a north preceding direction.

say 10" or 15" diam. But it may be that
the comet is elongated that way - at
times it seems separate.

Afterwards supposed to have
been a star

Ephemeris of Parthenope - J.H.S.

G.M.N.		hly mo	hly mo	log. A
1850 = Aug. 31	15 ^h 39 ^m 13 ^s	+ 3.5	- 16 ^h 13 ^m 2 ^s	0.3568
Sept 1	40.38		20.1	
2	42.03		27.0	0.3607
3	43.26		33.8	
4	44.49		40.6	0.3647
5	46.15	+ 3.6	47.3	
6	47.43	+ 3.7	- 16 ^h 54.0	0.3688
7	49.11		- 17 ^h 00.5	
8	50.40		07.1	0.3729
9	52.11	+ 3.8	13.7	
10	53.43		20.2	0.3770
11	55.16	+ 3.9	26.7	
12	56.50	+ 4.0	33.2	0.3812
13	15 ^h 58.25		39.7	
14	16 ^h 00.01		46.2	0.3853
15	01.38	+ 4.1	52.6	
16	03.16		- 17 ^h 59.1	0.3894

Ephemeris of Comet of 1850

Camb. inst	At Per. m. noon	R	Dec	log Dist	Camb. inst
8 ^h 18 ^m 22 ^s - July 9	13 ^h 52 ^m 49 ^s	+	28 ^m 15 ^s	9.664	Camb. inst
9 ^h " " - 10	50 ^m 11 ^s	-	25 ^m 23 ^s	659	
10 " " - 11	47 ^m 39 ^s	-	22 ^m 28 ^s	656	
11 " " - 12	45 ^m 14 ^s	-	19 ^m 30 ^s	653	
12 " " - 13	42 ^m 55 ^s	-	16 ^m 31 ^s	651	
13 " " - 14	40 ^m 40 ^s	-	13 ^m 31 ^s	650	
14 " " - 15	38 ^m 29 ^s	-	10 ^m 31 ^s	650	
15 " " - 16	36 ^m 22 ^s	-	7 ^m 31 ^s	652	
16 " " - 17	34 ^m 19 ^s	-	4 ^m 33 ^s	655	
17 " " - 18	32 ^m 19 ^s	-	+ 1 ^m 37 ^s	9.659	

From the above correcting by the Camb obs of July 8th
 At 9^h inst Camb

July 8	13 ^h 58 ^m 20 ^s	+ 31^m 26^s	+ 31 ^m 26 ^s	
9	55 ^m 36 ^s	2 ^m 44 ^s	28 ^m 37 ^s	2 ^m 49 ^s
10	52 ^m 58 ^s	2 ^m 38 ^s	25 ^m 45 ^s	2 ^m 52 ^s
11	50 ^m 26 ^s	2 ^m 32 ^s	22 ^m 50 ^s	2 ^m 59 ^s
12	48 ^m 06 ^s	2 ^m 25 ^s	19 ^m 52 ^s	2 ^m 58 ^s
13	45 ^m 42 ^s	2 ^m 19 ^s	16 ^m 53 ^s	2 ^m 59 ^s
14	43 ^m 27 ^s	2 ^m 15 ^s	13 ^m 53 ^s	3 ^m 00 ^s
15	41 ^m 46 ^s	2 ^m 11 ^s	10 ^m 53 ^s	3 ^m 00 ^s
16	39 ^m 09 ^s	2 ^m 07 ^s	7 ^m 53 ^s	3 ^m 00 ^s
17	37 ^m 06 ^s	2 ^m 03 ^s	4 ^m 59 ^s	2 ^m 58 ^s
18	35 ^m 06 ^s	2 ^m 00 ^s	1 ^m 59 ^s	2 ^m 56 ^s

Ephemeris of Parthenope

8 ^h 47 ^m	Camb. m. s. t	R	Dec
Aug. 26 th 8 ^h 47 ^m	15 ^h 33 ^m 15 ^s	1 ^m 19 ^s	15 ^m 48 ^s 23 ^s
27 th "	34 ^m 34 ^s	1 ^m 20 ^s	50 ^m 09 ^s
28 th "	35 ^m 54 ^s		56 ^m 55 ^s

