

1861phms. no. 5. 2345

KG
11365
234

K. 24

24)

Zones
No. 11^a.

Sept 24 1861. Jan 31. 1862

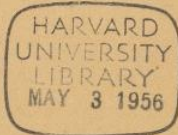
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KG-11 365.234

1861phae.proj..234S



RG 11365.234



1858 - 20 29 (Continued)

N^o 81

| | | |
|----|------|------|
| 24 | | 47.8 |
| 25 | 12.0 | 16.0 |
| 25 | 33.7 | 37.7 |

| | | |
|-------|------|------|
| 19 25 | 33.6 | 37.5 |
|-------|------|------|

| | | |
|----|------|------|
| 25 | 49.1 | 53.1 |
| 26 | 4.8 | |
| 26 | | 9.0 |

| | | |
|----|------|------|
| 25 | 48.9 | 52.9 |
| 26 | 4.4 | 8.5 |
| 26 | 4.7 | 8.9 |

| | | |
|----|------|------|
| 26 | 32.8 | |
| 26 | | 35.0 |
| 27 | 19.5 | 23.3 |

| | | |
|----|------|------|
| 26 | | 36.4 |
| 27 | 19.3 | 23.4 |

27 11.8

| | | |
|----|------|------|
| 27 | 30.2 | 34.0 |
| 27 | 55.6 | 59.5 |
| 27 | 57.4 | 61.5 |

N^o 90
N^o 91

| | | |
|----|------|------|
| 27 | 29.8 | 34.0 |
| 27 | 55.4 | 58.3 |
| 27 | 57.4 | 61.3 |

| | | |
|----|------|------|
| 28 | 22.9 | 27.0 |
| 29 | 6.4 | 10.5 |
| 29 | 42.1 | 46.1 |

| | | |
|----|------|------|
| 28 | | |
| 29 | 6.2 | 10.2 |
| 29 | 41.7 | 45.9 |

| | | |
|----|------|------|
| 29 | | 50.3 |
| 30 | 4.1 | 8.0 |
| 30 | 53.1 | 57.0 |

96

97

98

99

| | | |
|----|------|------|
| 29 | 46.6 | 50.4 |
| 30 | 4.0 | 7.9 |
| 30 | 53.9 | 56.8 |

| | | |
|----|------|------|
| 31 | 20.5 | 24.6 |
| 31 | 33.8 | 37.8 |
| 32 | 21.8 | 25.7 |

100

| | | |
|----|------|------|
| 31 | 20.3 | 24.4 |
| 31 | 33.7 | 37.5 |
| 32 | 21.5 | 25.4 |

| | | |
|----|------|------|
| 33 | 39.6 | 43.5 |
| 34 | 10.1 | 14.1 |
| 34 | 11.7 | 15.7 |

| | | |
|----|------|------|
| 34 | 10.0 | 14.0 |
|----|------|------|

| | | |
|----|------|------|
| 34 | 29.5 | 33.3 |
| 35 | 10.8 | 14.7 |
| 35 | 28.1 | 32.2 |

| | | |
|----|------|------|
| 34 | 29.3 | 33.3 |
| 35 | 10.5 | 14.5 |
| 35 | 27.9 | 32.0 |

| | | |
|----|------|------|
| 35 | 49.9 | 54.0 |
|----|------|------|

| | | |
|----|------|------|
| 35 | 49.7 | 53.6 |
|----|------|------|

19 36 6.5 (10.8)

N^o 110

19 36 6.3 10.3

1^h 10' - 1^h 20' (Continued)

| | | | | | | | |
|--------|----|----|--------------------------------------|-----|--------|----|-----------------------------|
| 11.12 | 6 | 34 | firm wire lost | | | | |
| 10.117 | 0 | 54 | | | | | |
| 10B | 6 | 45 | | 9.5 | 10 | 6 | 4.6 |
| 10.11B | 2 | 9 | | | 10.11B | 2 | 5 |
| 11 | 4 | 50 | see wire lost | | 11 | 4 | 45 |
| 11B | 4 | 15 | first wire lost | | 11B | 4 | 11 |
| 11 | 8 | 55 | see wire lost | | | 8 | 51 |
| 11B | 7 | 21 | firm " " | | | | See wire only * obs here |
| 10 | 3 | 16 | | | 10 | 3 | 11 |
| 8.9 | 1 | 6 | C | 8.5 | 8.9 | 1 | 6 |
| | 6 | 50 | | | 11.12 | 0 | 29 |
| 9.10 | 5 | 31 | ns | | 9.10 | 5 | 25 |
| | 22 | B | | | | | |
| 11.7 | 8 | 18 | | | | | |
| 10.11 | 9 | 52 | | | 10.11 | 9 | 49 |
| 11.12 | 7 | 14 | | | 11 | 7 | 9 |
| 11.12B | 6 | 40 | first wire lost | | 11 | 6 | 39 |
| 11.127 | 6 | 9 | | | 11B | 6 | 5 |
| 8 | 1 | 29 | C | 7.6 | 11 | 8 | 18 |
| 9.10 | 1 | 41 | C | | 8.9 | 1 | 25 |
| 10 | 11 | 1 | | 9.1 | 9.10 | 1 | 36 |
| 11 | 4 | 54 | no stars above 12 in field following | 9.5 | 10B | 10 | 55 |
| | B | | | | 11B | 4 | 50 |
| 11.12B | 2 | 29 | | | | | |
| 10.11B | 5 | 28 | | | | | |
| 11 | 8 | 5 | ns | | | | |
| 11 | 9 | 15 | | | | | |
| 9.107 | 3 | 37 | | 9.5 | 10.11 | 9 | 7 |
| 7.8 | 6 | 4 | C | 7.8 | 10 | 3 | 32 |
| | | | | | 8 | 5 | 57 |
| 9 | 2 | 34 | C | 8.5 | 9.03 | 2 | 26 |
| | B | | | | | | |
| 9.1 | 6 | 11 | See wire doubtful | 8.8 | 9.7 | 6 | 5 |
| | | | | | | | |

36 17.6 21.5
 36 22.7 26.8
 37 26.7 30.6

No 112

19 36 17.4 21.3
 36 22.6 26.5
 37 26.5 30.4

37 50.0 53.9
 38 19.2 23.1
 38 49.6 53.5

115
 114
 114

37 49.8 53.7
 38 19.0 23.0
 38 28.4 32.3
 38 49.4

38 57.0 57.3 ?

118
 149
 120

38 53.3 57.2
 39 35.4 39.5
 40 16.2 20.0

40 16.5 20.4

40 27.4 31.3
 40 60.0 63.9
 41 9.0 12.1

40 27.0 31.0
 40 59.8 63.6
 41 8.9 12.9

41 33.3 37.1
 41 35.0
 41 52.9 58.8

41 33.2 37.0
 41 35.0 38.9
 41 54.8 58.7

41 57.3 61.2
 42 6.7 8.5
 B.

41
 42 4.4 8.4

42 34.3
 42 37.8 41.7
 42 52.3 56.4

170

42 34.3 38.1
 42 37.4 41.6
 42 52.4 56.2
 D.

43 18.3 19.2
 43 31.7
 43 35.9 39.7

No 125

~~43~~
 43 31.1
 43 35.8 39.7

43 57.2 61.1
 44 6.7 10.8
 44 14.8 18.8

No 135

43 56.8
 44 6.5 10.7
 44 14.5 18.6
 44 42.7 52.7

44 49.0 52.8
 44 58.9 62.9
 1945 0.3 4.3

No 147

19 45 0.3 4.1

10B 8 15
10B 6 11
10 4 55

11 2 46 accidental B

117 10 6

11.12 8 19

{Examine wire}

10.11 2 21

D

11 2 32

10.11 1 53

9 5 31

10.11 3 25

C

11B 7 5

10.7 8 44

9.7 7 15

n.s. see wire loss

10.11 10 6

10.11 9 32

B

10.11 2 46 see wire loss

11 7 23

11 9 39

n.s.

11B 0 50

11 1 25

9.10 5 7

see wire loss

sig?

10.11 0 36

10B 7 13

11B 5 8

n.s.

9.7 10 22

9.10 1 26

8B 5 11

B

Ex. Mag.
Ex. Mag.
C.

9.3
9.2

10B 8 8

9.10 6 5

11B 1 49

10.11 2 40

10.11 10 0

11B 8 30

11.12 8 13

see wire loss

10.11 2 75

11B 1 28

117 2 29

10.7 1 47

9.10B 5 36

10.11 3 18

9.0

11B 7 0

10 8 38

9.10 7 8

9.5

10.11 10 1

10.7 9 28

see wire loss

10.11 2 40

117 7 17

10.11 9 34

D

11.12 1 20

10 5 3

see wire loss

11 0 30

10 7 6

10.117 5 5

9.10 10 25

117 10 16

10.11 1 23

see wire loss

9.10 5 8

8.0

| | | | | |
|-----------|----|------|------|--------------------|
| 1861phae. | 65 | 38.2 | 42.1 | N ^o 163 |
| | 46 | 1.2 | 5.4 | |
| | 46 | 27.4 | 31.4 | |
| | 46 | 55.2 | 59.0 | |
| | 47 | 20.5 | 24.6 | |
| | 47 | 50.8 | 54.8 | |

| | | |
|----|------|------|
| 48 | 3.9 | 36.2 |
| 48 | | 40.0 |
| 48 | 52.2 | 56.1 |

| | | |
|----|------|------|
| 49 | 7.5 | 11.5 |
| 49 | 17.9 | 21.9 |
| 49 | 38.3 | 42.3 |

| | | |
|----|------|------|
| 50 | 12.2 | 16.1 |
| 50 | 35.6 | 39.7 |
| 50 | | 43.6 |

| | | |
|----|------|-----------------|
| 50 | 56.9 | 60.9 |
| 51 | 18.9 | 23.0 |
| 51 | — | 23.0 |

| | | |
|-----|------|------|
| 51 | 44.1 | 48.0 |
| 52 | 4.7 | 8.7 |
| DDD | | |

| | | |
|----|------|------|
| 53 | 0.9 | 4.9 |
| 53 | 11.5 | 15.5 |
| 53 | 22.0 | 26.0 |

| | | |
|----|------|------|
| 53 | 45.1 | 49.0 |
| 53 | 45.1 | 49.0 |
| 52 | 21.1 | — |

| | | |
|----|------|------|
| 54 | 24.1 | 28.0 |
| 54 | 40.6 | 44.4 |
| P. | | |

| | | | |
|----|----|--------|------|
| 19 | 45 | (34.1) | 41.9 |
| | 46 | 1.1 | 50.0 |
| | 46 | 27.2 | 31.2 |
| | 46 | 30.3 | 36.1 |
| | 46 | 55.0 | 58.9 |
| | 47 | 20.4 | 24.4 |
| | 47 | 50.7 | 54.6 |

| | | |
|----|------|------|
| 48 | 52.0 | 36.0 |
| 48 | | 39.8 |
| 48 | 52.0 | 55.9 |

| | | |
|----|------|------|
| 49 | 7.3 | 11.3 |
| 49 | 17.8 | 21.7 |
| 49 | 38.1 | 42.0 |

| | | |
|----|------|-----------------|
| 50 | 12.1 | 16.0 |
| 50 | 35.5 | 39.6 |
| 50 | 39.6 | 43.6 |

| | | |
|----|--------|------|
| 5 | | |
| 51 | 14.6 | |
| 51 | (19.2) | 22.9 |

| | | |
|---------|------|------|
| 51 | 43.8 | 47.9 |
| 52 | 4.5 | 8.5 |
| B. B. D | | |

| | | |
|----|------|------|
| 53 | 0.8 | 1.7 |
| 53 | 11.3 | 15.4 |
| 53 | 21.9 | 25.8 |

| | | |
|----|------|------|
| 53 | 45.0 | 49.0 |
| 54 | 21.0 | 24.8 |

| | | |
|----|------|------|
| 54 | 21.0 | 27.9 |
| 54 | 41.3 | 44.5 |
| 55 | 5.6 | 9.5 |

| | | | | | | | | |
|-------|----|----|-------------------------------|-----|-----------|-------|----|------------------|
| 11.12 | 4 | 18 | n.s. | | 11.7 | 4 | 18 | fine wire wrong |
| 10 | 8 | 24 | | 9.5 | 10 | 8 | 18 | |
| 11.13 | 6 | 27 | | | 10.11 | 6 | 24 | |
| 11.13 | 3 | 2 | | | 11.12 | 2 | 56 | |
| 10.11 | 8 | 13 | few Bright Stars | | 10 | 2 | 55 | |
| 11.13 | 3 | 28 | | | 10 | 8 | 6 | |
| 10.11 | 0 | 46 | | | 10.11 | 3 | 24 | |
| 11.12 | 7 | 11 | fine wire lost, brightness of | | 10.11 | 0 | 42 | |
| 10.7 | 9 | 35 | a large pump | | 10 | 9 | 26 | fine wire lost |
| 10.7 | 9 | 25 | | | 9.5 | 10 | 9 | 22 |
| 9.10 | 4 | 34 | | | 9.2 | 10 | 1 | 18 |
| 9.10 | 7 | 8 | comp n.f. 28" distance | | 9.5-10.13 | 7 | 4 | sure |
| 10 | 8 | 45 | | | 9.5 | 9.10 | 8 | 38 |
| 10.13 | 5 | 6 | (E. wires) | | 9.5 | 9.10 | 5 | 3 |
| 10 | 3 | 17 | | | 9.10.7 | 3 | 13 | See wire lost |
| 10.11 | 9 | 29 | | | | 9 | 24 | AR |
| 10 | 4 | 26 | see wire lost | | 9.3 | 9.10 | 4 | 21 |
| 11 | 0 | 50 | fine " " | | 10 | 0 | 45 | fine wire double |
| 7.8 | 7 | 53 | | | 7.1 | 8 | 7 | 46 |
| 9.7 | 3 | 35 | | | 8.7 | 9.7 | 3 | 30 |
| | | | | | | | | BBB |
| 11 | 4 | 38 | | | | 11.13 | 4 | 33 |
| 10.43 | 7 | 43 | | | | 10.11 | 7 | 36 |
| 8 | 9 | 25 | | | | 8 | 9 | 20 |
| 10.7 | 6 | 29 | AR wire | | | | | |
| 10.11 | 2 | 10 | | | 9.5 | 10 | 2 | 6 |
| 10.11 | 4 | 41 | See wire lost | | 9.4 | 10 | 4 | 36 |
| 9.7 | 0 | 46 | | | 9.0 | 9 | 0 | 43 |
| 10.17 | 10 | 35 | | | | 10 | 30 | |
| | | | | | | 7 | 2 | |

| | | | | | | | |
|----|------|------|-------------------|----|--------|------|------|
| 55 | 18.4 | 22.8 | } Two stars No 17 | 19 | 55 | 18.0 | 22.2 |
| 55 | | 22.8 | | 55 | (18.6) | | |
| 55 | 49.4 | 53.3 | | 5 | | | |
| 55 | 58.5 | 62.4 | | 55 | 58.3 | 62.1 | |
| 56 | 36.9 | 40.8 | | 56 | 6.1 | 10.2 | |
| 56 | 38.4 | 42.4 | | 56 | 36.3 | 40.4 | |
| 56 | 47.4 | 51.5 | | 56 | 47.4 | | |
| 56 | | 55.8 | } No 160 | 56 | 51.7 | 55.7 | |
| 59 | 21.7 | 25.5 | | 59 | 21.2 | 25.2 | |
| | | | | 59 | 21.0 | 25.2 | |
| 19 | 59 | 42.9 | | 19 | 59 | 42.7 | 46.6 |
| 20 | 0 | 16.6 | | 20 | 0 | 16.4 | 20.4 |
| 0 | | 21.2 | | 0 | | 21.0 | 25.2 |
| 0 | 18.3 | 52.4 | | 0 | 18.3 | 52.1 | |
| 1 | 13.0 | 16.8 | | 1 | 12.7 | 16.6 | |
| 1 | 18.8 | 22.8 | | 1 | 18.6 | 22.6 | |
| 1 | 41.3 | 45.5 | | 1 | 41.4 | 45.2 | |
| 2 | 0.8 | 4.8 | | 2 | 0.6 | 4.6 | |
| 2 | 15.9 | 19.9 | | 2 | 15.7 | 19.6 | |
| 2 | 50.3 | 54.2 | | 2 | | 51.1 | |
| 2 | 55.7 | 59.6 | | 2 | 55.6 | 59.5 | |
| 3 | 7.3 | 11.5 | | 3 | 7.2 | 11.2 | |
| 3 | 41.7 | 45.6 | | 3 | | 15.9 | |
| 4 | 12.7 | 16.5 | | 3 | 41.7 | 45.6 | |
| 4 | 14.6 | 18.4 | | 4 | 52.7 | 56.7 | |
| 4 | 37.6 | 41.3 | | 4 | 12.3 | 16.2 | |
| 4 | 47.0 | 50.9 | | 4 | | 16.2 | |
| 5 | 2.4 | 6.2 | | 4 | 37.3 | 41.2 | |
| 5 | 13.5 | 17.4 | | 4 | 46.6 | 50.7 | |
| 5 | | | | 5 | 2.1 | 6.0 | |
| 5 | | | | 5 | 13.4 | 17.2 | |
| 5 | | | | 5 | 19.3 | 23.3 | |
| | | | | | 2.2 | | |

10.11 7 20 } Exam. AR.
 117 10 50
 10.11 9 2

9.10 9 16
 10 6 33
 11.12 10 1 n.s.

9.11 8 33
 1.10 9 45 } first wire lost?
 117 6 18 } from end of book.

9 10 7
 11 1 0
 11B 2 44
 D.

9.10 7 1 n.s.
 10.11 8 58
 11 6 11

10 7 32
 9B 5 0
 97 10 45
 B

11B 1 0
 10.11 2 53 n.s.
 9.10 9 16

11 7 26
 9.10 10 52
 107. 1 56

10B 10 40
 9.10 3 7
 9.10 6 9

9 2 22
 .B
 10 6 35 AR lost

7 15
 10 45 } see wire^{lost} first bad

10.11 9 14
 11B 4 25
 10.11 6 28

10.11 8 29
 10.11 9 42 } Some wires lost
 10 10 30
 D.

11 6 13
 11 6 12
 9 10 5
 11B 10 56
 11 2 39

9.5- 9.10 6 57
 10 8 53
 11B 6 6

10 7 25
 8.9 4 55
 9.10 10 42
 B

11 0 56 } first wire lost
 10.11 2 47
 9.10 9 13
 9.10 0 28 } fin wire lost

10.10 7 32
 11 7 30
 9.10 10 46
 11B 1 52

10.11 10 36
 9.10 3 3
 97 6 5

9.10 9B 2 16
 10.11 6 31
 D.

No 207

26

| | | |
|---|------|--------|
| 5 | 58.7 | (62.8) |
| 6 | 2.2 | 5.9 |
| 6 | 17.2 | 21.2 |

| | | |
|---|------|------|
| 6 | 31.8 | 35.7 |
| 6 | 46.8 | 51.0 |
| 7 | 31 | 71 |

| | | |
|---|------|------|
| 6 | 31.6 | 35.5 |
| 6 | 46.8 | 50.5 |
| 7 | 2.9 | 6.8 |

| | | |
|---|------|------|
| 7 | 24.9 | 28.8 |
| 7 | 40.3 | 44.2 |
| 8 | 6.4 | 10.2 |

| | | |
|---|------|------|
| 7 | 24.5 | 28.5 |
| 7 | 39.9 | 43.8 |
| 8 | 6.2 | 10.0 |

| | | |
|---|-----------------|-----------------|
| 8 | 22.1 | (23.9) |
| 8 | 41.7 | 45.8 |
| 8 | 41.7 | 45.8 |

MR ? Where ?

| | | |
|---|--------|------|
| 8 | 21.9 | 25.9 |
| 8 | 41.4 | |
| 8 | (42.0) | 46.6 |

| | | |
|---|------|------|
| 8 | 53.8 | 57.6 |
| 9 | 26.7 | 28.5 |

| | | |
|---|------|------|
| 8 | 53.6 | 57.6 |
| 9 | 1.5 | 5.7 |
| 9 | | |

| | | |
|----|------|------|
| 9 | 53.6 | 57.5 |
| 10 | 17.0 | 21.0 |
| 10 | 35.5 | 39.3 |

| | | |
|----|------|------|
| 9 | 53.5 | 57.3 |
| 10 | 16.8 | 20.7 |
| 10 | 35.2 | 39.3 |

No 215

| | | |
|----|------|------|
| 10 | 57.5 | |
| 11 | | 0.4 |
| 11 | 42.6 | 46.5 |

| | | |
|----|------|--------|
| 10 | 60.4 | 2 wire |
| 10 | 57.5 | 1 wire |

| | | |
|----|------|------|
| 10 | 56.1 | 60.2 |
| 10 | 57.3 | 61.2 |
| 11 | 42.4 | 46.3 |

This order is probably the correct one

| | | |
|----|------|------|
| 12 | 1.6 | 5.8 |
| 12 | 16.0 | 20.0 |
| 12 | 33.0 | 37.1 |

| | | |
|----|------|------|
| 12 | 1.4 | 5.2 |
| 12 | 15.8 | 19.7 |
| 12 | 32.8 | 36.9 |

| | | |
|----|------|------|
| 12 | 41.5 | 45.4 |
|----|------|------|

| | | |
|----|------|------|
| 12 | 41.4 | |
| 13 | 48.3 | 52.4 |

| | | |
|----|------|------|
| 14 | 14.3 | 18.3 |
| 14 | 21.5 | 25.3 |

| | | |
|----|------|------|
| 14 | 14.0 | 18.1 |
| 14 | | 25.2 |

| | | |
|-------|------|------|
| 20/14 | 30.2 | 34.0 |
|-------|------|------|

No 235

20 14

| | | |
|------|---------|-----------------|
| 30.0 | (34.5?) | Signal for next |
|------|---------|-----------------|

the short.

| | | | | | | | | |
|-------|----|----|--------------------------|--------|--------|----|----|----------------|
| 1103 | 7 | 45 | See wire loss | 9.4 | 10.11 | 7 | 41 | See wire wrong |
| 10 | 4 | 8 | | | 9.7 | 4 | 4 | |
| 11.11 | 10 | 42 | | | 10 | 10 | 36 | |
| 1103 | 6 | 50 | | | 10.11 | 6 | 46 | |
| 10 | 3 | 3 | | | 1003 | 2 | 55 | |
| 10.11 | 7 | 38 | | | 107 | 7 | 34 | |
| 203 | | | | | | | | |
| 9.10 | 0 | 55 | | 9.3 | 9 | 0 | 50 | |
| 11 | 5 | 2 | 45 | | 1103 | 5 | 0 | |
| 11.12 | 5 | 51 | | | 117 | 5 | 48 | |
| 11.12 | 9 | 48 | See wire possible double | | 117 | 9 | 44 | |
| | 5 | 4 | See wire loss | | 10 | 4 | 59 | See wire loss |
| 11.1 | 3 | 5 | | 9.4 | 10 | 2 | 58 | firm wrong |
| 1003 | 3 | 10 | B. | 9.4 | 9.10 | 3 | 3 | |
| 9.10 | 8 | 20 | AR loss | 9.4 | 9 | 8 | — | |
| 11 | 7 | 30 | | | 10 | 7 | 25 | AR loss |
| 203 | | | | | | | | |
| 11 | 1 | 45 | Ex. Mag. | 9.1 | 9 | 1 | 39 | |
| | 9 | 16 | In. AR. mag. | (9.5?) | 9.107 | 9 | 11 | |
| 10.11 | 4 | 46 | | | 10 | 4 | 43 | |
| 10.11 | 4 | 24 | firm wire loss | (9.5) | 107 | 4 | 22 | |
| 107 | 4 | 55 | See " " | | 9.107 | 4 | 51 | |
| 10.11 | 7 | 8 | | 9.5 | 9.10 | 6 | 58 | |
| | 2 | 26 | | 9.0 | 9.0 | 2 | 15 | |
| 9.1 | 0 | 49 | | 9.1 | 9.103 | 0 | 44 | |
| 9.10 | 7 | 38 | | 9.2 | 9 | 7 | 34 | |
| 107 | 2 | 12 | B. | 9.5 | 9.10 | 2 | 5 | |
| 103 | | | | | | | | |
| 107 | 5 | 38 | | | 103 | 5 | 34 | |
| 1103 | 6 | 54 | | | 10.117 | 6 | 48 | |
| 1103 | 2 | 51 | | | 10.11 | 2 | 17 | |
| 10.11 | 9 | 8 | | | 10 | 9 | 6 | See wire loss |

| | | |
|----|------|------|
| 14 | 36.2 | 40.1 |
| 15 | 22.1 | 26.1 |
| 15 | 24.7 | 28.6 |
| 15 | 43.6 | 47.4 |
| 16 | 24.3 | 28.4 |
| 17 | 32.9 | 37.0 |
| 17 | 52.2 | 56.1 |
| 18 | 10.7 | 14.7 |
| 18 | 21.5 | 25.5 |
| 19 | 14.7 | 18.6 |
| 19 | 29.4 | 33.3 |
| 19 | 31.1 | 35.0 |
| 19 | 40.6 | 44.4 |
| 20 | 39.9 | 43.8 |
| 21 | 4.9 | 8.9 |
| 21 | 35.2 | 39.2 |
| 22 | 33.1 | 37.0 |
| 22 | 51.5 | 55.4 |
| 23 | 8.6 | 12.5 |
| 23 | | 16.6 |
| 23 | 48.3 | 52.3 |
| 24 | 36.7 | 40.7 |
| 24 | 39.3 | 43.1 |
| 25 | 7.6 | 11.5 |
| 26 | 26.4 | 30.2 |
| 26 | 50.4 | 54.2 |
| 27 | 43.1 | 47.1 |
| 28 | 34.0 | 37.9 |

N^o 236

20 14 36.0 40.0

Pen in diff. in lines

17 27.1 31.0

17 52.1 56.0

18 10.4 14.4

18 21.5 25.4

19 14.4 18.3

19 29.2 33.3

19 31.1 35.0

19 40.3 44.3

20 39.7 43.7

21 4.7 8.7

21 35.2 39.0

22 33.0 37.0

22 51.5 55.3

23 8.4 12.4

23 16.6

23 48.3 52.2

24 36.5 40.5

24 39.2 43.2

25 7.5 11.5

26 26.2 30.1

26 50.3 54.3

27 43.1 47.0

28 33.9 37.8

N^o 264

20

| | | | | | | | | |
|-------|------|----|-----------|-----|-------|----|----|----------------|
| 8 | 4 | 8 | C | 7.5 | 7.8 | 4 | 5 | |
| 10B | 5 | 22 | | | 10.11 | 5 | 18 | See wire low |
| 10B | 5 | 4 | | | 10.11 | 4 | 58 | |
| | | | | | 107 | 10 | 12 | See wire low |
| 10.1 | 5 | 46 | | | 110 | 5 | 43 | |
| 11 | 1 | 46 | | | 110B | 1 | 42 | |
| 10.11 | 4 | 7 | | - | 10.10 | 1 | 33 | |
| | 0B D | | | | 10 | 4 | 3 | |
| 11 | 5 | 13 | | | 10.11 | 5 | 8 | |
| 9.10 | 2 | 34 | B. C. | 9.3 | 9.10 | 2 | 28 | |
| 8 | 8 | 25 | | 8.3 | 8.19 | 8 | 18 | |
| 10 | 6 | 52 | | 9.5 | 9 | 6 | 46 | |
| 100B | 7 | 32 | | 9.5 | 9 | 7 | 25 | |
| 10.11 | 9 | 39 | | | 9.10 | 9 | 34 | |
| 6 | 3 | 55 | | | 10 | 3 | 50 | |
| | 0B B | | | | 107 | 1 | 43 | |
| 110B | 1 | 18 | | | | | | |
| 107 | 2 | 53 | | 9.5 | 10B | 2 | 18 | |
| 10 | 10 | 15 | | | 9.10 | 10 | 10 | |
| 100B | 6 | 34 | | | 100B | 6 | 26 | |
| 10.11 | 9 | 13 | | | 107 | 9 | 6 | |
| 9.10 | 10 | 55 | | 9.5 | 97 | 10 | 52 | |
| 10B | 6 | 56 | Exam wire | | 10.11 | 6 | 53 | first wire low |
| | | | | | | D | | |
| 10 | 5 | 57 | | | 10.11 | 5 | 51 | |
| | 0000 | | | | | | | |
| 9 | 6 | 20 | C. | 8.8 | 9 | 6 | 15 | |
| 11 | 9 | 26 | | | 10 | 9 | 30 | sure |
| 10.11 | 0 | 50 | | | 9.107 | 0 | 46 | |
| 11 | 9 | 59 | | | 110B | 9 | 55 | |
| 8.9 | 3 | 34 | C. | 8.3 | 8.9 | 3 | 27 | |
| 107 | 7 | 50 | | | 9.10 | 7 | 45 | |
| 110B | 9 | 44 | | | 10.11 | 9 | 37 | |
| | 0B D | | | | | | | |

28 53.9 57.7
29 17.8 21.6
29 20.7 24.7

N^o 265

20 28 53.8 57.8
29 17.7 21.7
29 20.6 24.7

S-A

| | | | | |
|------|-----|--------|-------|----|
| -0.3 | /// | | 1.89 | 5 |
| -0.2 | | | 0.53 | 2 |
| -0.1 | /// | -12 10 | 0.52 | 3 |
| 0.0 | /// | | 0.98 | 9 |
| 0.1 | | +2 2 | 0.09 | 2 |
| 0.2 | /// | 22 | 0.14 | 11 |
| 0.3 | /// | 33 22 | 0.00 | 11 |
| 0.4 | /// | 36 | 0.06 | 8 |
| 0.5 | /// | 45 50 | 0.31 | 9 |
| 0.6 | /// | 24 64 | 0.32 | 4 |
| 0.7 | /// | 22 70 | 0.89 | 6 |
| 0.8 | | | | |
| 0.9 | | | | |
| 1.0 | | 3.0 | 0.47 | 3 |
| 1.1 | | 1.1 | 0.61 | 1 |
| | | 23.3 | 6.81 | 74 |
| | | | 0.092 | |

S-A $a^m 315 \pm 0.20 \pm 0.24$

$\sigma_{\text{error lamp}} \pm 0.204$

The magnitude opposite 20 g 53.6 is probably wrong and has been rejected.

| | | | |
|------|----|------|------|
| -0.5 | 2 | -1.0 | 1.14 |
| -0.4 | 1 | -0.4 | 0.44 |
| -0.3 | 2 | -0.6 | 0.63 |
| -0.2 | 4 | -0.8 | 0.85 |
| -0.1 | 1 | -0.1 | 0.13 |
| 0.0 | 13 | | 0.88 |
| 0.1 | 4 | +0.4 | 0.10 |
| 0.2 | 10 | +2.0 | 0.04 |
| 0.3 | 9 | +1.7 | 0.01 |
| 0.4 | 5 | 2.0 | 0.10 |
| 0.5 | 14 | 7.0 | 0.81 |
| 0.6 | 1 | 0.6 | 0.12 |
| 0.7 | 1 | 0.7 | 0.19 |
| 0.8 | 2 | 1.6 | 0.58 |
| 0.9 | 2 | 1.8 | 0.82 |
| 1.0 | 1 | 1.0 | 0.55 |
| 1.1 | 1 | 1.1 | 0.71 |
| 1.3 | 1 | 1.3 | 1.00 |

74 19.3

9.19
1.26

$1.00 \text{ S-A} + 0.261 \pm 0.029$

$\sigma_{\text{error lamp}} \pm 0.239$

| | | | |
|------|---|----|----|
| 11 | 4 | 37 | |
| 1103 | 7 | 40 | |
| 11 | 5 | 43 | ns |

| | | | |
|-------|---|----|--|
| 11 | 4 | 33 | |
| 16 | 7 | 36 | |
| 10.11 | 5 | 37 | |

| | | | | | |
|-----|-------|-------|--------------|-----------------------|-------------------------|
| | | | x | | |
| 20 | 26 | 58.49 | +1° 13' 31.9 | 20th W. | |
| 40 | 31.77 | | 1 19 41.4 | $\frac{2}{5}$ W. | |
| 41 | 27.79 | | 1 13 7.0 | $\frac{2}{4}$ W. | |
| 48 | 7.87 | | 1 17 29.7 | $\frac{1}{2}$ W. 1 W. | Piaggi |
| 49 | 29.59 | | 1 15 34.6 | 1 W. | |
| 49 | 47.03 | | 1 11 52.5 | $\frac{1}{2}$ W. | Piaggi. P.W. |
| *21 | 1 | 53.07 | 1 13 54.9 | 1 W. | Duplex? B. 58° 54' 58.8 |
| | 2 | 59.49 | 1 14 27.2 | 2 W. | |
| | 3 | 44.10 | 1 10 54.8 | 2 W. | |
| | 7 | 38.79 | 1 10 39.9 | 1 W. | |
| | 11 | 39.95 | 1 19 37.7 | 2 W. | |
| | 27 | 31.25 | 1 17 51.0 | 2 W. | |
| | 27 | 41.47 | 1 13 4.3 | 2 W. | |
| | 36 | 22.51 | 1 10 24.9 | 2 W. | |
| | 45 | 6.43 | 1 16 13.0 | 2 W. | |
| | 47 | 42.92 | 1 16 16.9 | 1 W. | |
| | 59 | 27.89 | 1 10 38.6 | $\frac{2}{5}$ W. | |
| 22 | 0 | 1.46 | 1 14 31.3 | 1 W. | |

* According to mass, 54.072 instead of 53.07 —
 The quantities of this table have all been verified except the
 last, which was not found in the mass.

H. L. Lorey

19^h 6^m - 20 25^m

Sept 28, 1861,

Angle of Pos. 262° 42'

Dec 3, 1861

Ang. Pos. Lat at 262° 48'

19 7 20.3 24.7
 19 7 20.8 24.7
 7 28.5 32.4

No. 1

19 7 20.7 24.7
 7 28.2 32.2

7 58.8 62.6
 8 10.9 14.9
 8 25.0 28.8

8
 8 10.9 14.7
 8 24.3 28.7

8 42.4 46.4
 8 59.3 63.4

8 42.3 46.4
 8 59.1 63.3

9 29.9 33.9
 9 35.1 39.1
 9 54.9 58.9

9 29.6 33.7
 9 34.9 38.9
 9 54.6 58.6

10 15.0 (19.6)
 10 34.9 38.9
 10 47.6 51.7
 10 52.8

10 15.1 19.1
 10 34.6 38.7
 10 47.8 51.6

11 10.2 14.1
 11 24.4 28.4
 11 53.6 57.5

11 9.9 14.0
 11 24.1 28.1
 11 53.3 57.3
 11 54.4

12 0.0 4.0
 12 43.8 47.7
 13 28.0 32.1
 13 52.8

11 59.5 63.7
 12 43.6 47.6
 13 28.0 31.9

13 43.3 47.3
 13 54.5

13 43.1 47.2

19 14 23.5 27.5

14 23.3 27.3
 15 16.2 20.1

15 40.9 44.9

No 0'-1°10'

~~10.11~~ 5 14 not obs in AR
 9.7 7 34
 10.11 8 19

C.

9.3

9 7 25
 11 8 11

described in

11 6 8
 9 10 23
 11B 3 12

C.

9.1

9 10 14
 11B 3 3

described in

11B 6 3
 11B 6 44

B

10.11 5 57
 11B 6 36

B

9.10 9 35
 11 3 56
 10.11 6 57

9.5

9.7 9 26
 11B 3 48 NS
 10.11 6 50

one wire lost

11 7 16 see wire doubtful
 9.10 10 23
 11 1 30

B D

9.5

11B 7 8
 9.10 7 10 14
 11 1 22

B D

accidental loss B

11 1 32 NS
 10.11 1 58
 10.11 8 26

10 1 32
 10.10 1 50
 10.7 8 19

see wire doubtful

10.7 3 20
 10.7 7 46
 11 5 8

D.

9.5

10.11 3 15
 10.11 7 39
 11.03 5 2

10 4 35
 10.11 2 0
 10.11 7 2 19

first wire lost

9.4

10 4 29
 10 2 1
 10 2 12
 10.11 5 2
 10 5 54

15 16.4 20.2
 15 50.1 54.0
 16 26.9 36.9

No 25

16 41.5 45.3
 17 23.6 27.1
 17 43.2 47.1

19 16 30.6 34.5

16 41.2 45.1
 17 23.4 27.4
 17 43.0 47.2

17 52.8 57.0
 18 8.2 12.2

17 52.5 56.6
 18 8.2 12.1

18 47.9 51.8
 20 25.2 29.3
 20 37.7 (42.7)

18 48.0 51.9
 20 25.2 29.3
 20 37.4

20 42.0 46.8
 21 2.4 6.2
 21 16.5 20.6

20 41.8 45.9
 21 2.4 6.2
 21 16.3 20.4

21 35.0 39.0
 22 0.1 4.0
 22 5.5 9.7

21 34.9 39.0
 21 59.9
 22 0.4 9.5

22 25.0
 22 32.6 36.3
 22 39.2 43.1

22 25.0 29.0
 22 32.4 36.4
 22 43.1
 22 52.8 57.2

23 6.8 10.8
 23 25.0 28.8
 23 32.3 36.3

23 24.7 28.7
 23 32.2 36.1

24 39.1 43.0
 25 11.9 15.8
 25 24.3 28.3

24 39.0 42.8
 25 11.8 15.9
 25 24.4 28.2

25 57.6 61.7
 26 11.7 15.6
 19 26 24.9 28.9

No 55

25 57.6 61.6
 26 11.6 15.7
 19 26 22.7 26.8

| | | | | | | | |
|--------|----|-----|--------------------------|-----|-------|----|---------|
| 10.11 | 1 | 59 | exam for a star 5' 9" | | | | |
| 9.10 | 2 | 42 | 6' 0" | | | | |
| 107 | 9 | 34 | first wire lost ex dec. | | 107 | 9 | 18 |
| 10B | 7 | 40 | | 9.5 | 10B | 7 | 35 |
| 9.10 | 4 | 18 | | | 10 | 9 | 30 |
| 10.11 | 72 | 40 | | | 10 | 4 | 12 |
| | | | | | 10.11 | 2 | 36 |
| 10.117 | 1 | 41 | | | 10.11 | 1 | 36 |
| 10 | 10 | 8 | | | 10.11 | 10 | 3 |
| | | BBB | | | | | DDD |
| 10 | 7 | 23 | Fewer bright stars. | | 10.11 | 7 | 15 |
| 10.11 | 8 | 15 | | | 10.11 | 8 | 9 |
| 10B | 4 | 26 | See wire wrong | 9.5 | 9.10 | 4 | 18 |
| 10 | 10 | 5 | | | | | 2L lost |
| 11B | 3 | 17 | | | 10B | 9 | 59 |
| 10.117 | 9 | 22 | | | 11 | 3 | 13 nS |
| 9.107 | 6 | 6 | | | 10.11 | 9 | 22 |
| 10.11 | 10 | 16 | | | | | same |
| 10.11 | 6 | 27 | | | 9.10 | 6 | 1 |
| | | DD | | | 10.11 | 10 | 8 |
| 107 | 7 | 49 | See wire lost | | | 6 | 22 |
| 10.11 | 1 | 11 | dec. double fine | | | | 2L lost |
| 10B | 0 | 18 | nS | | 10 | 6 | 22 |
| 10 | 4 | 23 | | | | | |
| 10B | 5 | 32 | | | | | |
| 10 | 2 | 11 | | | | | |
| | | D | adjusted focus | | | | |
| 11 | 7 | 40 | | | | | |
| 107 | 10 | 52 | | | | | |
| 10 | 8 | 51 | | | | | |
| 11.12 | 9 | 12 | | | | | |
| 117 | 9 | 26 | | | | | |
| 11B | 1 | 11 | first wire lost, dec? nS | | | | |

| | | |
|-------|------|------|
| 19 26 | 25.8 | 29.9 |
| 27 | 28.2 | |
| 27 | | 32.3 |
| 28 | 6.4 | 10.0 |
| 28 | 32.9 | 37.0 |
| 28 | 40.9 | |
| 28 | 48.9 | 52.7 |
| 29 | 13.2 | 17.3 |
| 29 | 26.1 | 29.9 |
| 29 | 51.1 | 55.0 |
| 30 | 17.5 | 21.3 |
| 30 | 18.9 | 22.9 |
| 30 | 30.7 | 34.8 |
| 30 | 50.8 | 54.8 |
| 31 | 30.9 | 34.8 |
| 31 | 37.0 | 41.0 |
| 31 | 41.8 | 45.6 |
| 31 | 55.7 | 59.7 |
| 32 | 15.4 | 19.5 |
| 32 | 18.1 | 22.2 |
| 33 | 1.6 | 5.6 |
| 33 | 7.4 | 11.5 |
| 34 | 15.2 | 19.2 |
| 34 | 56.6 | 60.7 |
| 35 | 42.7 | 46.6 |
| 36 | 26.3 | 30.5 |
| 36 | 29.7 | 33.6 |
| 36 | 49.7 | 53.8 |
| 37 | 7.2 | 11.0 |
| 19 37 | 19.0 | 23.1 |

No 54

| | | |
|-------|------|------|
| 19 26 | 25.5 | 29.7 |
| 27 | 28.0 | |
| 27 | | 32.1 |
| 28 | 6.0 | 10.0 |
| 28 | 32.7 | 36.7 |
| 28 | 40.8 | 44.8 |
| 28 | 48.6 | 52.6 |
| 29 | 13.1 | 17.0 |
| 29 | 25.9 | 29.8 |
| 29 | 50.8 | 54.8 |
| 30 | 17.0 | |
| 30 | 18.6 | 22.9 |
| 30 | | 34.4 |
| 30 | 50.6 | 54.6 |
| 31 | 30.8 | 34.8 |
| 31 | | 40.8 |
| 31 | 41.6 | 45.6 |
| 31 | 55.6 | 59.6 |
| 32 | 15.3 | 19.2 |
| 32 | 16.0 | 22.0 |
| 33 | 1.5 | 5.3 |
| 33 | 7.1 | 11.2 |
| 34 | 14.9 | 18.9 |
| 34 | 24.7 | 28.6 |
| 34 | 56.4 | 60.2 |
| 35 | 13.8 | 17.9 |
| 35 | 42.3 | 46.4 |
| 36 | 26.2 | |
| 36 | 29.4 | 33.4 |
| 36 | 49.5 | 53.4 |
| 37 | 7.0 | 10.9 |
| 19 37 | 19.0 | 22.9 |

No 84

10.11 2 7
 10 2 29 See wire loss
 1003 4 25 fine wire loss

B

11 7 17 see wire 0.1 too soon
 9 4 11
 10.11 9 9 see wire loss

9.4

10.11 8 6
 10.11 B 5 28
 107 9 0

1103 6 58
 11 2 33
 9.1103 8 3

B

9.4

1103 2 3
 11 0 42
 107 8 21

10.11 6 32
 107 7 53
 1003 5 36
 D D

9.1003 1 59
 10.11 5 6 ns
 9.7 4 7

9.4

9.1

9 1 40 atmosphere not very good
 9.1003 2 15 B
 10.117 7 38 Fewer bright stars again
 B D

9.0

9.1

10.11 2 26
 10 2 58
 1003 7 4

10.11 2 37
 1103 5 37
 1103 2 14

10.11 2 1
 9.10 2 29
 1003 4 20

fine wire loss

1103 7 11
 9.10 4 5
 11 9 4

see wire loss

1103 8 0
 10.117 5 23
 10.11 8 54

D

expected double

11 6 49
 11 2 29
 1003 7 58

2nd loss

11 1 58
 10.11 0 35
 10.11 8 16

11 6 25
 10.11 7 46
 10 5 32

see wire loss

1003 1 54
 10.11 5 1
 9.7 4 3

903 1 36
 9.1003 2 18
 10.11 0 54

double is before

1103 7 34
 11 2 28
 10.11 2 20

a new star

10.11 2 52
 107 6 59

see wire loss

10.117 2 33
 117 5 31
 10.11 2 10

| | | | | |
|--------------|----|-----------------|------|-------------------|
| 1861phae. pr | 37 | 29.7 | 33.8 | N ^o 88 |
| | 37 | 29.7 | 44.9 | |
| | 38 | 23.7 | | N ^o 90 |

| | | | |
|----|------|------|-------------------|
| 38 | 27.2 | 31.2 | N ^o 91 |
| 38 | 39.7 | 43.8 | |
| 38 | 47.1 | 51.2 | |

| | | |
|----|-----|-----|
| 39 | 1.8 | 5.7 |
| 39 | 2.5 | 6.5 |

| | | |
|----|------|------|
| 39 | 30.3 | 34.2 |
| 40 | 4.8 | 8.8 |
| 40 | 45.3 | 49.3 |

| | | |
|----|------|------|
| 41 | 2.6 | 6.7 |
| 41 | 49.7 | 53.6 |
| 41 | 58.4 | 62.4 |

| | | |
|----|------|------|
| 42 | 13.7 | 17.6 |
| 42 | 22.8 | 26.7 |

| | | |
|----|------|------|
| 42 | 49.3 | 53.2 |
| 42 | 50.8 | 54.5 |
| 43 | 15.0 | 19.0 |
| | 22.2 | |

| | | |
|----|------|------|
| 43 | 45.6 | 49.6 |
| 43 | 55.5 | 59.6 |
| 43 | 56.1 | 60.1 |

| | | |
|----|-----------------|------|
| 44 | 15.1 | 15.1 |
| 44 | 54.4 | 58.4 |
| 45 | 6.3 | 10.3 |

| | | |
|----|------|------|
| 45 | 20.4 | 24.2 |
| 45 | 45.0 | 49.0 |

| | | | |
|----|----|------|------|
| 19 | 46 | 12.6 | 16.6 |
|----|----|------|------|

N^o 116

| | | | |
|----|----|------|------|
| 19 | 37 | 29.5 | 33.6 |
| | 37 | 40.5 | 44.5 |
| | 38 | 23.4 | 27.4 |

| | | |
|----|------|------|
| 38 | | 31.1 |
| 38 | 37.7 | 43.5 |
| 38 | 47.0 | 51.0 |

| | | |
|----|-----|-----|
| 39 | 1.4 | 5 |
| 39 | — | 6.3 |

| | | |
|----|------|------|
| 39 | 3.0 | 34.1 |
| 40 | 4.7 | 8.2 |
| 40 | 45.2 | 49.1 |

| | | |
|----|------|------|
| 41 | 2.5 | 6.5 |
| 41 | 49.5 | 53.7 |
| 42 | — | |

some trifling doubt
about these stars

| | | |
|----|---|------|
| 42 | — | 26.4 |
|----|---|------|

| | | |
|------|------|------|
| (42) | 50.4 | 54.4 |
| 43 | — | 18.8 |

| | | |
|----|------|------|
| 43 | 45.5 | 49.4 |
| 43 | 55.3 | 59.3 |
| 43 | 55.9 | 59.8 |

| | | |
|----|------|------|
| 44 | 11.0 | 15.0 |
| 44 | 54.1 | 58.1 |
| 45 | 6.0 | 9.9 |

| | | |
|----|------|------|
| 45 | 20.5 | 24.3 |
| 45 | 44.8 | 49.0 |
| 46 | 12.5 | 16.4 |

97 2 29
 11 0 55 *ex. wire*
 10.11 6 42 *see wire line*

10.11 7 10
 10 6 24
 9.10 7 55

9 6 26
 9.10 1 54 *ns*
 B

8 8 54 *B*
 10.117 6 18
 10B 8 54

9.10 3 36
 10.11 9 47
 11B 5 2

10.11 1 28
 B
 10B 2 43

11 1 24
 10.11 3 25
 10B 10 54
 2222

11B 9 11
 10.11 4 58
 10 5 15

11 3 4 *ex wire*
 9 3 26 *Very bright region coming*
 10 4 38 *< 35 arc line* *8.0*

10.11 8 51
 10.11 8 8
 9.10 9 15
 2

9.2 9.10 2 25
 11 0 50
 10.11 6 36 *see wire line*

11B 7 4 *12e line*
 10.11 6 22
 9.10 7 49

9.2 9.107 6 19 *22e line*
 9.5 10.10 1 47 *12e line*

76 8 8 46
 10.117 6 11
 11 7 59
 107 8 48

9.5 10 3 36
 9 40
 5 0 *see double*

10.11 acc. B

10.11 2 36 *12e line*

10 48 *12e line*

11 9 5
 10.11 4 54
 10 5 11

11B 3 1
 97 3 20
 10.11 4 33

11B 8 46 *ns*
 11B 8 3
 10.11B 9 7

No 117

| | | |
|----|------|------|
| 46 | 39.7 | 43.5 |
| 46 | 50.0 | 54.0 |
| 46 | 51.3 | 55.2 |

| | | |
|----|------|------|
| 46 | 39.4 | 43.3 |
| 46 | 50.8 | 53.9 |
| 46 | 51.0 | 55.2 |

| | | |
|----|------|------|
| 47 | 15.9 | 19.6 |
| 47 | 19.6 | 23.8 |
| 47 | 20.3 | 24.6 |

~~47~~

| | | |
|----|------|------|
| 47 | 58.4 | 62.3 |
| 48 | 7.9 | 11.9 |
| 48 | 17.7 | 21.7 |

| | | |
|----|------|------|
| 47 | 58.2 | 62.1 |
| 48 | 7.6 | 11.7 |

| | | |
|----|------|------|
| 48 | 32.0 | 35.9 |
|----|------|------|

| | | |
|----|------|------|
| 48 | 56.3 | 60.2 |
|----|------|------|

| | | |
|----|------|------|
| 48 | 56.1 | 59.8 |
|----|------|------|

| | | |
|----|------|------|
| 49 | 6.2 | 10.3 |
| 49 | 34.6 | 38.5 |
| 49 | 52.3 | 56.2 |

| | | |
|----|------|------|
| 49 | 5.7 | 9.9 |
| 49 | 34.1 | 38.1 |
| 49 | 52.1 | 56.1 |

| | | |
|----|------|------|
| 50 | 14.5 | |
| 50 | 20.5 | 24.4 |
| 50 | 21.0 | 25.0 |

| | | |
|----|------|------|
| 50 | 14.4 | 18.1 |
| 50 | 20.7 | 24.7 |

| | | |
|----|------|------|
| 50 | 46.3 | 50.3 |
| 51 | 7.9 | 11.9 |
| 51 | 19.1 | 23.1 |

No 135

| | | |
|----|------|------|
| 50 | 46.0 | 50.0 |
| 51 | 18.9 | 22.7 |

| | | |
|----|------|------|
| 51 | 41.0 | 45.0 |
| 51 | 42.4 | 46.3 |

No 136

| | | |
|----|------|------|
| 51 | 41.0 | 45.0 |
| 51 | 42.2 | |

| | | |
|----|------|------|
| 51 | 58.9 | 63.0 |
| 52 | 23.2 | 27.3 |
| 52 | 29.0 | 33.0 |

| | | |
|----|------|------|
| 51 | 58.8 | 63.0 |
| 52 | 23.1 | 27.9 |
| 52 | 28.9 | 33.0 |

| | | |
|------|------|------|
| 53 | 23.5 | 27.6 |
| 53 | 26.2 | 30.0 |
| 1953 | 43.7 | 47.7 |

No 144

| | | |
|------|------|------|
| 53 | 23.4 | 27.2 |
| 53 | 26.7 | 29.8 |
| 1953 | 43.6 | 47.5 |

9.10B 5 40
10 9 11
9.10 0 55 NS

8.7

8.9 5 36

10.11 9 16

9.107 0 49

10.11 0 40 See wire loss

10.11 5 3

10 6 15 NS

10.11 5 7

10.7 6 16

11 7 11

11.7 7 5

9.10 6 47

9.3

9.107 6 42

11 3 4 dec a little doubtful

11 3 3

10B 10 45

10.7 10 46

B D

11 3 57

10.7 9 16

10 9 11

10.11 1 13

10B 1 8

9.10 0 56

9.10 0 57

9.20 1 52

9.2

10 1 46

10 1 38

1 32

11B 6 24

6 26

10.11 6 21 NS

6 15 NS

D D

10B 6 56

7 52

10B 5 23

5 18

9.10 10 46

10.7 10 43

See wire wrong

10.11 7 59

10.11 7 54

10B 2 45

2 38

B

9.3

9.03 9 25

b.

8.5

9.03 9 22

11B 7 26

7 21

9.10 7 3

9.0

10.11 6 57

11 4 35

11 4 34

10 1 1

10.11 0 10

9.10B 6 42

C

8.5

9.10 6 36

54 14.2 18.2
 54 24.1 28.0
 54 32.1

54 59.0 63.0
 55 10.9 14.9
 55 20.8 24.7

55 31.1
 55 41.8 45.9
 55 51.6 55.5

56 11.8 15.7
 56 20.4 24.4
 56 33.5 37.6

57 7.0 10.9
 57 18.3 22.3
 57 37.8 42.1

57 54.7 58.7
 58 13.2

58 17.0 20.8
 58 35.0 38.9
 58 48.4 52.3

58 53.4 57.2
 59 5.1 9.1

19 59 27.4 31.3

20 0 19.1 23.2
 0 33.3 37.3
 0 59.6 63.5

1 40.0

1 43.4 47.4

20 1 55.3 59.3

N^o 145

19 54 13.9 18.0
 54 23.7 27.7
 54 27.6 31.7

55 10.7 15.0
 55 20.6 24.4

55 45.8
 55 51.5 55.5

56 11.6 15.6
 56 20.2 24.2
 56 33.5 37.4

57 6.8 10.7
 57 18.3 22.5

57 54.6 58.4

58 16.9 20.8
 58 35.0 38.9
 58 48.0 52.1

58 53.0
 59 5.0 9.0

19 59 27.3 31.0

20 0 19.0 23.0
 0 33.1 37.1

1 43.2 47.1
 20 1 59.1

N^o 178

| | | | | | | | | |
|--------|----|----|----------------------------------|-----|-------|----|----|---------------|
| 8 | 3 | 52 | B | 8.3 | 8 | 3 | 46 | |
| 9.7 | 10 | 46 | B | 9.0 | 9 | 10 | 42 | 2d |
| 9.10 | 1 | 55 | | 9.2 | 10 | 1 | 53 | sun wire loss |
| | B | | | | | | | |
| 10.11 | 8 | 26 | dec double | | | | | sun |
| 9.10 | 2 | 45 | | 9.5 | 9 | 2 | 36 | |
| 10 | 7 | 51 | | 9.5 | 9.10 | 7 | 44 | |
| | | | | | | | | |
| 10.11 | 5 | 24 | (one wire only?) | | | | | sun |
| 10 | 1 | 16 | | | 10.11 | 1 | 11 | |
| 10 | 7 | 48 | | 9.5 | 9.10 | 7 | 44 | |
| | | | | | | | | |
| 10 | 6 | 8 | B | 9.5 | 9.10 | 6 | 3 | |
| 9.10 | 4 | 24 | | 9.3 | 10.13 | 3 | 18 | sure |
| 9 | 8 | 56 | | 9.0 | 9.10 | 8 | 50 | |
| | | | | | | | | |
| 10.11 | 5 | 9 | | | 10.11 | 5 | 4 | |
| 10 | 10 | 28 | see star of two in same dec near | | 10.13 | 10 | 22 | |
| 10.7 | 8 | 0 | | | 10.11 | 8 | 1 | |
| | | | | | | | | |
| 10.13 | 3 | 35 | | | 10 | 3 | 29 | |
| | B | | | | | | | |
| 10.7 | 3 | 44 | sun wire loss | | | | | sun wire loss |
| | | | | | | | | |
| 10 | 10 | 14 | | | 10.7 | 10 | 8 | |
| 10 | 7 | 2 | | | 10.11 | 6 | 56 | |
| 9.10 | 2 | 46 | | | 10 | 2 | 44 | |
| | | | | | | | | |
| 10.7 | 3 | 26 | | | 10.11 | 3 | 22 | |
| 10.11 | 6 | 3 | | | 10.11 | 5 | 37 | |
| 9.10 | 8 | 9 | | | 10 | 8 | 5 | |
| | B | | Many more stars than at Bay | | | | | |
| 9.10 | 1 | 48 | if done | | 10 | 1 | 45 | |
| 9.13 | 1 | 16 | | | 9 | 1 | 15 | |
| 10.11 | 8 | 23 | | | 10 | 8 | 23 | |
| | | | | | | | | |
| 11 | 8 | 15 | sun wire loss | | | | | sun wire loss |
| 9.10.7 | 7 | 50 | | | 10.13 | 7 | 45 | |
| 10 | 2 | 13 | 115 | | 10 | 2 | 8 | 12 |

| | | |
|----|------|------|
| 1 | 63.7 | |
| 2 | 38.3 | 42.3 |
| 2 | 45.1 | 49.0 |
| 2 | 47.6 | 51.5 |
| 3 | 12.1 | 16.1 |
| 3 | 12.1 | 16.1 |
| 3 | 12.1 | 16.1 |
| 3 | 13.0 | |
| 3 | 40.3 | 44.4 |
| 3 | 42.4 | 46.3 |
| 4 | 9.2 | 13.2 |
| 4 | 30.0 | 33.9 |
| 4 | 45.6 | 49.5 |
| 4 | 52.9 | 57.1 |
| 4 | 54.7 | 58.9 |
| 5 | 18.0 | 22.0 |
| DB | | |
| 5 | 47.0 | 51.0 |
| 6 | 6.7 | 10.6 |
| 6 | 13.0 | 26.9 |
| 6 | 14.3 | 28.0 |
| 6 | 34.9 | 38.9 |
| 6 | 54.6 | 58.7 |
| 7 | 16.8 | 20.7 |
| 7 | 24.7 | 28.7 |
| 8 | 30.0 | 34.0 |
| 8 | 38.5 | 42.4 |
| 9 | 35.0 | 38.9 |
| D. | | |
| 10 | 17.4 | 21.3 |
| 10 | 24.2 | 28.3 |
| 11 | 41.0 | 45.0 |

No 174

| | | | |
|----|---|------|------|
| 20 | 1 | 62 | 63.7 |
| | 2 | 38.0 | 42.0 |
| | 2 | 45.0 | 48.9 |

No 180

181

| | | |
|-----------|------|------|
| 3 | 42.0 | 46.4 |
| 3 | — | 47.2 |
| 4 | 29.2 | 33.2 |
| Long Peak | | |

| | | |
|----|------|------|
| 6 | 22.8 | 26.9 |
| 6 | | 28.0 |
| 6 | 34.6 | 38.6 |
| 6 | 54.3 | 58.5 |
| 7 | 16.6 | 20.4 |
| 7 | 24.6 | 28.5 |
| 8 | 29.8 | 33.9 |
| 8 | 38.1 | 42.2 |
| 9 | 34.9 | 38.9 |
| 10 | 17.2 | 21.1 |
| 10 | 24.1 | 28.0 |
| 11 | 40.7 | 44.9 |

No 200

20

10B 7 33 first wire tone
 9.10 7 43
 9 9 2

11B 4 45 ns
 10 10 34

10.11 3 28 first wire tone
 10 0 36
 10B 5 57

11 9 33
 8 2 54
 10 6 24

10.11 9 40
 10B 9 54
 10.7 9 44
 B

10 5 37
 10.11 6 54
 8.9 8 32

11 1 10
 9.10 4 36
 10.11 3 58
 B

10 8 52
 9 10 55
 9B 8 24

10 3 29
 10 8 26
 B

10 9 20
 9 3 16
 9.10 8 13

9.3 9.7 7 29
 9.3 9.10 7 36
 9.3 9.10B 8 55 acc. B, between wires

10.11 0 31
 10B 5 52 12
 10B 9 51

8.9 8.9 2 50
 10.11B 6 21

10.11 9 36
 10.11 9 56
 10.11 9 57

10.11 5 33
 11 6 50
 9B 3 27

10.11 1 10 1st wire tone
 10 4 32
 10.11 3 53

10.7 8 45
 9.3 9.10 10 49
 9.4 9.10 8 17

10 3 25
 10 8 20

8.5 10.7 9 16
 9 3 13
 10 8 6

No 202

No 202

12 0.5

12 15.3 19.7

12 17.0 23.0

12 29.0 32.9

12 47.0 50.8

13 7.4 11.3

13 16.6?

14 7.2 11.3

14 26.5 30.4

14 29.7 33.9

14 34.7 38.7

15 27.3 31.1

15 38.0?

16 31.9 35.6

16 53.2 57.2

17 7.0 10.9

17 12.6 16.4

17 32.2 36.2

17 52.0 55.8

18 9.7 13.7

18 16.5 20.5

18 34.0 37.9

Break - (Inkamental)

No 225

No 226

No 231

12 0.7 4.5

12 14.7 19.8

12 23.3

12 47.0 51.0

12 47.0 51.0

13 7.7 11.6

13 39.3 43.4

14 7.7 11.6

14 26.8 30.6

14 29.8 33.9

14 34.9 38.8

15 27.6 31.5

16 32.2 36.1

16 53.3 (57.7)

17 7.3 11.2

17 13.0 17.0

17 12.0 17.0

17 32.5 36.5

17 52.2 56.2

18 10.3 14.7

18 16.7 20.9

18 34.2 38.0

19 10.0 14.0

19 36.0 39.9

19 50.2 54.1

20 5.5 9.5

20 31.0 35.0

20 35.0 38.2

20 54.3 58.2

21 24.8 28.7

21 38.7 42.5

1103 9 43
 97 10 46
 9.10 2 57

9.10 7 5 AR low
 9.107 5 52
 10 2 7
 2203

11 4 40
 10.1103 1 49
 10 5 50

10.117 7 42 ns
 9.10 5 41 ns
 10 2 44 small double * fol. 5; reads 11-
 B

11 10 1
 1103 1 34 see wire double
 10 1 58

10B 0 53 B. for 5'
 10 5 53
 107 1 8

10 2 7
 10.117 5 53
 10.11 6 11
 2B

10 6 46
 9.10 4 37
 107 5 49

10B 4 22
 107 8 51 see wire low
 11 9 0 see " "

10.11 0 45
 11 5 16
 9.10B 4 11

9.1 9 29
 9.2 9.10 2 52

10 6 57
 9.5 10 5 45
 10 2 2
 BD

11 4 37 AR low
 107 1 47
 10 5 45

10.11 7 37
 10 5 35
 2 40

117 9 56
 1103 1 30
 10 1 55

10 6 49
 10 5 49
 11 1 2

10.11 2 3
 11 5 50
 1103 6 8

10.11 6 43
 9.2 9.10 4 34
 10.11 5 47

10B 4 17
 107 8 45

11 5 10
 9.5 9.10 4 5

19 21 57.5 55.5
13 13
19 22 18.2

22 22.4
(22 29.0 29.0
23 22.7 26.7

23 26.8 30.1
24 26.6 28.6
24 34.1 37.8

20 23 22.4 26.3

23 25.4 29.7
24 16.2 20.2
24 33.7 37.8

19 25 7.5 11.4 X N^o 240 20 25 7.2 11.3

Diff of Min 10 of Diff

0.0 74
0.1 103
0.2 30
0.3 5

1103 0 30

BB

1103 4 21 see wire tone

10.11 4 36 first wire tone, ns. (9.5)

10 5 5 ns ex wire

1103 5 36

10.11 4 16

10.11 4 30

10 5 1

10.11 5 30

10.11 4 36

10.11 4 30

107 6 7

10 7 6 3

10.11 5 58

10.117 5 52

D

97 10 51

9.10 10 45

1003 0 36

Spring Governor
STOPPED.

107 8 22

10 1 13

10.11 9 48

9.10 8 17

B

9.10 9 35

11 4 31

10 2 20

11 1 7

1003 3 52

9 9 4

11 5 22

107 6 39

BBB

1003 6 26

10 6 0

10.11 7 0

9.10 9 4

10.117 1 11

9.10 6 15

B

10.1103 4 49

10 7 59

10.11 4 0

10.11 1 29

10.11 4 19

107 6 23

8

11 2 0

903 10 48

10.11 4 51

1103 8 12

1103 6 10

222

Getting somewhere lag

1103 2 45

6 22

7 55

first wire lost

107 4 16

10.11 5 6

10 3 47

*first wire lost*10.1103 0 38 *see wire lost*9.10 2 46 *see wire lost*

10 9 3

8 1 14

203

10 2 35

10.11 9 46

1103 1 3

10.11 2 28

107 7 52

10 10 14

9.10 0 22

10 0 16

OB

11 10 26

1103 2 34 ns fine wire loss

10.11 1 44

10.117 6 52

9.1003 4 14

107 1 51

10.11 2 3

2

9.107 8 54

1003 6 38 ns

10.11 7 8 short cy

1003 0 30

11 0 31 see wire wrong

9.107 3 16

OB

9.1003 1 36

9.107 4 17

11 6 17 ns

10.11 10 59

11 7 35

8.9 4 39

1003 0 46

1103 2 23

10.11 0 30

10 2 52

10 10 35 fine wire loss

8 4 26

97 4 56

203

107 1 7 see wire loss

9
1
4
1
1
9
9
9
9

9.1003 1 29 {magn. all rather bad in
10.03 6 8 {low half of zone
7 9 9

9.10 10 26
10.11 8 16
10 0 47

9.10 9 18
9.10 0 29
9.7 5 36

| | | | |
|------|--|---------|-----------|
| -0.6 | | | 0.61 |
| -0.5 | | | 0.46 |
| -0.4 | | -1.5 3 | 0.38 |
| -0.3 | | | 0.91 |
| 0.2 | | | 0.30 |
| -0.1 | | -2.0 10 | 0.31 |
| 0.0 | | 9 | 0.29 |
| 0.1 | | | 0.01 3.22 |
| 0.2 | | 1.6 9 | 0.00 |
| 0.3 | | 3.0 10 | 0.15 |
| 0.4 | | 0.4 1 | 0.05 |
| 0.5 | | 4.0 8 | 0.82 |
| 0.6 | | 1.2 2 | 0.35 |
| 0.7 | | 0.7 1 | 0.7 |
| 0.8 | | 1.6 2 | 0.75 |
| 0.9 | | | |
| 1.0 | | 1.0 1 | 0.67 3.06 |

10.0 56 6.28
3.28

$$I-A \quad 0.179 \pm 0.030$$

$$I_{comp} \pm 0.226$$

20ⁿ 26^m - 22ⁿ 0^m

1861. Oct. 31.

Ang. of Pos. = 262 47

1862 Sept 27th G.P.B. in JHS rec.
 Angle of Pos. 262° 44'
 352 46

This sheet was read off by W.H.L. Gory.
 and is his first work for the Obs.
 (1862 Oct. 22)

| | | | | |
|----|----|------|------|-----------------------------|
| 20 | 26 | 501 | 542 | -05 |
| 27 | | 43.0 | 46.9 | -05 |
| 28 | | 20.8 | 24.7 | -05 |
| 28 | | 33.7 | 37.7 | -05 |
| 28 | | | 54.3 | -10 |
| 28 | | | 57.7 | -10 |
| 29 | | 17.6 | 21.6 | -05 |
| 29 | | 20.5 | 24.4 | -05 |
| 29 | | | 40.1 | |
| | | 213 | | |
| 30 | | 44.5 | 48.5 | |
| 30 | | 57.2 | 4.6 | |
| 31 | | 0.7 | 4.6 | |
| 31 | | 0.7 | 14.6 | |
| 31 | | 13.7 | 17.7 | } one APR. <u>reptd.</u> |
| 31 | | 41.7 | 45.6 | |
| 32 | | 9.7 | 13.7 | |
| 32 | | 11.9 | 15.7 | |
| 33 | | 1.2 | 5.3 | |
| 33 | | 20.6 | 24.6 | |
| 33 | | 52.8 | 56.5 | |
| 34 | | 2.9 | 6.8 | |
| 34 | | 15.2 | 19.0 | |
| 34 | | 23.6 | 27.4 | N. 21. |

| | | | |
|-------|----|-------|------|
| 20 | 26 | 49.5 | 53.5 |
| 27 | | 42.3 | 46.4 |
| 28 | | 20.0 | 24.0 |
| 28 | | 32.8 | 36.7 |
| 28 | | 49.7 | 53.8 |
| 28 | | | 56.8 |
| 29 | | 17.1 | 20.8 |
| 29 | | 19.9 | 23.8 |
| 29 | | 35.5 | 39.5 |
| | | B. | |
| 30 | | 43.7 | 47.9 |
| 30 | | 56.5 | 60.4 |
| 31 | | — | 4.0 |
| 31 | | 41.0 | 44.8 |
| | | B. | |
| 32 | | 9.2 | 13.2 |
| 32 | | 11.2 | 15.2 |
| 33 | | 0.6 | 4.7 |
| 33 | | 19.9 | 24.0 |
| | | B. B. | |
| 33 | | 57.9 | 56.0 |
| 34 | | 2.8 | 6.0 |
| 34 | | 14.5 | 18.3 |
| 20 34 | | 22.8 | 26.7 |

$$1^{\circ} 10' - 1^{\circ} 20'$$

| | | | | | |
|------------|---|----|------------|----|---------------------------|
| <i>Day</i> | | | <i>Day</i> | | |
| 8.9 | 3 | 34 | 8.3 | — | 3 33 |
| 10.7 | 7 | 52 | 10.7 | 7 | 54 |
| 11.12 | 5 | 30 | 13 | 5 | 31 |
| 10.11.7 | 9 | 42 | 12 | 9 | 43 |
| 11 | 6 | 13 | | 6 | 14 1 L |
| 11 | 5 | 36 | | 5 | 39 |
| | | | | | |
| 11.13 | 7 | 44 | | 7 | 45 |
| 11.13 | 5 | 36 | NS | 5 | 47 |
| 11.12 | 2 | 15 | 1W L | 2 | 17 |
| | | | | | |
| 10.11.13 | 7 | 7 | 11.12 | 7 | 9 |
| 10.11 | 6 | 52 | 11. | 6 | 52 |
| 9 | 1 | 56 | 9.5 | 9 | 1 57 1 st Int. |
| | | | | | |
| 10.7 | 6 | 56 | | | |
| 10.11 | 2 | 18 | | | |
| 10 | 4 | 10 | | | |
| | | | | | |
| 9.10 | 3 | 44 | 10 | 3 | 45 |
| 9.10.13 | 2 | 15 | | 2 | 18 |
| 10.11 | 2 | 25 | | 2 | 27 |
| | | | | | |
| 10.7 | 6 | 33 | 10.7 | 6 | 34 |
| | | | | 6 | 32 |
| 11 | 7 | 31 | | 7 | 32 |
| | | | | | |
| 10.11.7 | 9 | 56 | 11.12 | 9 | 57 |
| 11.13 | 9 | 58 | 12 | 10 | 0 |
| 10.11 | 8 | 16 | | 8 | 18 |

| | | | |
|-------|-----------------|------|-------|
| 34 | 34.4 | 36.4 | N. 22 |
| 35 | 21.0 | 24.9 | |
| 35 | 51.2 | 55.1 | |
| 36 | 7.9 | 11.7 | |
| 36 | 29.8 | 33.8 | |
| 36 | 51.4 | 55.5 | |
| 37 | 15.6 | 19.6 | |
| 37 | 52.8 | 56.8 | |
| 37 | 58.4 | 62.4 | |
| 38 | 16.9 | | |
| | 19. | | |
| 38 | 24.1 | 28.3 | |
| 38 | 24.1 | 51.8 | |
| 39 | 50.0 | 54.0 | |
| 40 | 12.0 | 15.8 | |
| 40 | 34.4 | 38.5 | |
| | 3. | | |
| 41 | 27.4 | 31.4 | |
| 41 | 47.4 | 51.2 | |
| 42 | 0.7 | 4.7 | |
| 42 | 20.4 | 24.3 | |
| 42 | 46.5 | 50.5 | |
| 43 | 30.9 | 34.8 | |
| 43 | 55.0 | 59.0 | |
| 44 | 44.0 | 48.0 | |
| 44 | 53.7 | 57.6 | N. 45 |
| 45 | | 4.5 | N. 46 |
| 45 | | 53.4 | 47 |
| 20 45 | 52.8 | 56.9 | 48 |

| | | |
|-------|----------|------|
| 20 34 | 33.8 | 37.7 |
| 35 | 51.3 | |
| 35 | 20.0 | 23.9 |
| 35 | 50.7 | 54.5 |
| 36 | 7.0 | 11.0 |
| 36 | 29.2 | 33.1 |
| 36 | 50.8 | 54.8 |
| 37 | 14.9 | 19.0 |
| 37 | 52.2 | 56.1 |
| 37 | 57.7 | 61.7 |
| 38 | 16.3 | 20.4 |
| 38 | 23.6 | 27.6 |
| 38 | 47.2 | 51.1 |
| | N. D. 3. | |
| 39 | 49.7 | 53.6 |
| 40 | 11.3 | 15.3 |
| 40 | 33.9 | 37.8 |
| 41 | 26.7 | 30.7 |
| 41 | 46.7 | 50.8 |
| 42 | 0.0 | 4.1 |
| 42 | 19.8 | 23.8 |
| 43 | 30.2 | 34.2 |
| 43 | 54.2 | 58.2 |
| 44 | 43.2 | 47.4 |
| 44 | 52.9 | 56.9 |
| 20 44 | 59.8 | 63.9 |
| | 53. | |

10.11 1 6

B

11B 2 2

11 9 55

10.11 4 51

10 0 40

9.70 1 46

9 9 26

11B 1 8

10.11 2 18

107 1 7 2w Le

B Short

10 6 50

10.11 8 0 1w Le

adjusted focus (of eyepiece only)

12 2 38 double comp 13my (AR 8 Dec.?)

11 4 31

8 9 44 red

D

8.9 3 6

11 9 30

11B 6 6

10B 2 9

107 11 5

11 10 18

B.D.

11B 2 45

10.11 1 43

11 8 0

11 6 57 1w Le

11B 9 22 1w Le

11B 7 11

11.12 2 8 mce.

B.D. 13

12 2 1

12.13 9 56

4 53

10.11 0 41

9 146

8.9 9 30

12 1 48

11.12 2 18 ns.

11 1 7

6 57 ns

12 8 1

B.D. 13

13 2 39 comp up.

12 4 32

7 9 46

7.8 3 7

9 28 mce

6 8

10 2 12

10 24

2 46

11.12 0 42 mce

8 2

7 0

46 23.8 27.8
 46 41.7 40.6
 47 15.3 19.3
 D.D.D.

48 1.1 5.1
 48 7.7 11.7
 48 21.8 25.7

48 40.6 44.6
 49 3.6 7.7
 B.

49 29.8 33.6
 49 46.8 50.7

50 12.3 16.3

51 5.6 9.6

51 46.4 50.4

52 8.4 12.3
 S.D.

52 24.7 28.8

52 32.4 36.4

52 42.5 46.3

52 56.3 60.3

53 — 12.0

> 53 14.7 18.7

53 25.1 29.3

D.D.D.

54 33.6 37.5

54 47.3 51.2

55 16.1 20.0

55 47.7 51.8

B.D.D.

20 56 39.8 —

N^o 49
 " 50

20 46 23.2 27.2
 46 40.8 45.1
 47 11.7 18.7
 D.D.D.

48 — 6.4
 48 6.8 11.0

48 — 43.7
 49 2.9 7.0
 D.D.D.

49 29.0 33.3

49 46.3 50.2

50 11.4 15.4

51 5.0 9.0

51 45.7 49.6

52 7.6 11.6

52 24.0 28.0

52 31.7 35.9

52 41.9 45.7

52 55.7 59.7

53 7.3 —

53 14.2 18.2

53 20.6 24.5

54 32.8 36.8

55 15.2 19.4

55 46.9 51.0

N^o 75

20 56 39.0 43.1

| | | | | | | | |
|--------|--------|----|--------------|-----|-------|---------|----------------|
| 11 | 9 | 35 | | | 12 | 9 38 | |
| 10.11 | 8 | 40 | | | 12 | 8 44 | |
| 9.10 | 6 | 46 | | | 10.11 | 6 50 | |
| | BDD | | | | | 5.13 | |
| 10.117 | 2 | 42 | | | 11.12 | 3 43 | sure (lat 1.) |
| 8 | 7 | 26 | | 7.0 | 7 | 7 30 | |
| 10.11 | 6 | 25 | | | | ren | |
| 11B | 8 | 58 | | | | 4 59 | 1st lat |
| 11 | 9 | 36 | | | 12 | 9 38 | |
| | B | | | | | 5.10 | |
| 9.7 | 5 | 27 | examine det. | 9.0 | | 5 31 | |
| 8.9 | 1. | 46 | Examine det. | 7.7 | 7.7 | 1 47 | |
| | Acc. B | | | | | | |
| 10.11 | 1 | 57 | | | 12 | 1 59 | |
| 10.11 | 0 | 58 | | | 12 | 0 59 | |
| 1103 | 2 | 58 | | | | 3 0 | |
| 10.11 | 5 | 34 | | | 11. | 5 35 | |
| | 2 2 | | | | | | |
| 10.11 | 8 | 54 | | | | 8.56 | |
| 10.11 | 2 | 33 | | | 11.12 | 3 24 | sure |
| 10.11 | 2 | 5 | | | 12 | 2 7 | |
| 10.7 | 1 | 55 | | | 11. | 1 56 | |
| 1103 | 6 | 24 | 1wL | | | 6 25 | 20 lat |
| 10 | 8 | 26 | | | | 8 28 | |
| 1103 | 1 | 2 | | | | 9 34 | sure pre + ren |
| | BDD | | | | | B.R.R.B | |
| 1103 | 8 | 40 | 2w doubtful | | 12 | 8 42 | |
| 9.10 | 10 | 56 | | 9.5 | | | |
| 1103 | 7 | 55 | | | 12 | 7 57 | |
| 1103 | 7 | 38 | | | | 7 41 | |
| | BDD | | | | | | |
| 1103 | 1 | 23 | 2wL | | 12 | 1 26 | |

| | | | | | | |
|------|------|--------|------------------|-------|------|------|
| 56 | — | 44.1 | N. 76 | 20 56 | 39.5 | 42.5 |
| 56 | 53.0 | — | | 56 | 52.3 | 56.1 |
| 57 | 1.3 | 5.5 | | 57 | 0.5 | 4.6 |
| 57 | 23.6 | 27.6 | | 57 | 22.9 | 27.0 |
| 57 | 43.0 | 47.0 | | 57 | 42.3 | 46.4 |
| 57 | 58.2 | 62.2 | | 57 | 57.7 | 61.7 |
| 58 | 4.6 | 8.6 | | 58 | 3.9 | 7.9 |
| 58 | 34.8 | 38.8 | | 58 | 33.9 | 37.8 |
| 58 | 50.3 | 54.3 | | 58 | 49.7 | 53.7 |
| 58 | — | 58.8 | | 20 58 | — | 58.2 |
| 21 0 | 25.6 | 29.4 | | | | |
| 0 | 32.6 | (36.4) | | 21 0 | 31.8 | 35.8 |
| 0 | 42.6 | 46.5 | | 0 | 41.8 | 45.8 |
| 1 | 3.2 | 7.1 | | 1 | 2.4 | 6.4 |
| 1 | — | 24.1 | N. 90 | | | |
| 1 | 27.4 | 31.3 | 91 | | | |
| 1 | 50.8 | 54.9 | AR Cambr. | 1 | 50.1 | 54.0 |
| 2 | 27.0 | 31.0 | | 2 | 26.2 | 30.3 |
| 2 | 41.3 | 45.2 | | 2 | 40.7 | 44.8 |
| 2 | 59.6 | 63.7 | AR Cambr. | 2 | 59.0 | 63.0 |
| 3 | 17.9 | 22.0 | | 3 | 17.3 | 21.4 |
| 3 | 44.3 | 48.2 | AR Cambr. | 3 | 43.7 | 47.7 |
| 4 | 7.7 | 11.5 | | 4 | 7.0 | 10.9 |
| 4 | 28.3 | 32.4 | | 4 | 27.7 | 31.7 |
| 5 | 19.0 | 23.0 | AR Cambr. N. 100 | 5 | 18.2 | 22.4 |
| 5 | 33.9 | 37.9 | AR Cambr. N. 101 | 5 | 33.3 | 37.3 |
| 21 6 | 23.5 | 27.5 | 102 | 5 | — | 37.3 |
| | | | 103 | 21 6 | 22.8 | 26.8 |

| | | | | | | | | |
|---------|----|----|---|---|-------|----|------|----------------------|
| 10 | 3 | 24 | 1wLe | | 10 | 3 | 24 | ns. |
| 1103 | 10 | 42 | no 2wLe | | | | | |
| 10 | 0 | 26 | | | | | 0 28 | |
| 10.11 | 1 | 44 | | | 12 | 1 | 43 | |
| 10.11 | 3 | 10 | | | 12 | 3 | 11 | |
| 10.11 | 9 | 37 | | | 11 | 9 | 38 | |
| 10.1103 | 6 | 25 | | | 11 | 6 | 25 | ns |
| 10.11 | 2 | 6 | | | 11.12 | 2 | 9 | |
| 10 | 0 | 54 | | | 10 | 0 | 56 | |
| 103 | 9 | 8 | 1wLe | The stars come in groups quite well marked. | | 9 | 9 | |
| 11 | 10 | 56 | 2 Long | | | | | |
| 107 | 7 | 58 | | | 11 | 8 | 0 | |
| 10.11 | 2 | 17 | | | 11 | 2 | 19 | |
| 1103 | 5 | 8 | | | 12 | 6 | 19 | ms |
| 1103 | 6 | 59 | 1wLe | | | | | |
| 1003 | 10 | 31 | | 9.5 | | | | |
| 903 | 3 | 56 | | 7.7 | 7.8 | 3 | 59 | |
| 10.11 | 1 | 15 | | | 12 | 1 | 16 | |
| 10.1103 | | 36 | | | 11 | 0 | 36 | |
| 97 | 4 | 27 | | 9.0 | 9.10 | 4 | 29 | ns |
| | | B | | | | | | |
| 11 | 4 | 27 | | | 13 | 4 | 29 | |
| 9.10 | 0 | 54 | | 9.2 | 9 | 0 | 54 | reddish |
| 11 | 10 | 40 | | | 1 | 10 | 62 | |
| 1103 | 2 | 13 | | | 12 | 2 | 14 | |
| 1003 | 3 | 24 | | 8.8 | 9 | 3 | 26 | |
| | | D | | | | | | |
| 10.11 | 5 | 4 | (9.3) double, only the first obs. in 11 | | 5 | 5 | ns | 2 nd lost |
| | 5 | 12 | | | 5 | 13 | | 1 st lost |
| 10.1179 | | 16 | | | 12 | 9 | 19 | |

| | | | |
|-------|--------|------|--------------------|
| 6 | 29.3 | 33.2 | N ^o 104 |
| 7 | 27.2 | 31.2 | |
| 7 | 28.9 | 32.8 | |
| 7 | 29.0 | 43.0 | |
| 8 | 9.1 | 13.0 | |
| 8 | 27.8 | 31.6 | |
| 9 | 33.5 | 37.5 | N ^o 110 |
| 10 | 0.8 | 4.8 | |
| 10 | 23.1 | 27.2 | |
| 11 | 1.2 | 5.1 | |
| 11 | 40.0 | 44.0 | |
| 12 | 9.3 | 13.4 | |
| 12 | 22.9 | 26.8 | |
| 12 | (27.4) | 31.1 | |
| 12 | 32.0 | 37.1 | |
| 13 | 23.7 | 27.8 | |
| 13 | 46.8 | 50.8 | N ^o 120 |
| 14 | (21.0) | | rejet |
| 14 | 27.0 | 30.9 | N ^o 121 |
| 14 | 41.6 | 45.6 | |
| 15 | 7.2 | 11.1 | |
| 15 | 36.3 | 40.3 | |
| 15 | 39.1 | 43.1 | |
| 16 | 38.8 | 42.7 | |
| 17 | 24.9 | 28.9 | |
| 18 | 9.4 | 13.2 | |
| 18 | 19.0 | 22.9 | |
| 18 | 29.8 | 33.6 | N ^o 130 |
| 18 | 59.0 | 63.0 | " 131 |
| 21 19 | 18.8 | 22.8 | " 132 |

| | | |
|-------|------|--------|
| 21 6 | 28.4 | [33.0] |
| 7 | 26.8 | 30.5 |
| 7 | 28.3 | 32.3 |
| 7 | 38.4 | 42.6 |
| 8 | 8.2 | 12.3 |
| 8 | 27.0 | 31.1 |
| 9 | 32.8 | 36.8 |
| 10 | 0.2 | 4.2 |
| 10 | 22.4 | 26.4 |
| 11 | 0.5 | 4.5 |
| 11 | 39.5 | 43.4 |
| 12 | 8.7 | 12.7 |
| 12 | 22.1 | 26.1 |
| 12 | — | 30.7 |
| 12 | 32.4 | 36.4 |
| 13 | — | 26.8 |
| 14 | 26.2 | 30.2 |
| 14 | 41.0 | 45.0 |
| 15 | 6.4 | 10.4 |
| 15 | 35.7 | 39.6 |
| 15 | 38.5 | 42.3 |
| 16 | 37.9 | 41.9 |
| 17 | 23.9 | 27.9 |
| 18 | 18.4 | 22.3 |
| 18 | 29.1 | 33.0 |
| 18 | 58.2 | 62.2 |
| 21 19 | 18.0 | 22.0 |

107 7 12
 40.11 2 34
 10 9 5 ns

9.10 0 43
 10.11 10 22
 107 9 0
 2 B

107 6 37
 10 7 50
 10.11 6 31

11 8 42
 97 9 39
 107 1 52

107 4 6
 10.11 6 5 1WD
 10 0 23
 B

1103 8 58
 11 4 57

10.11 11 5 one wire lost? Wire?

10.11 8 58
 1103 6 24 1W de
 10 9 1

10 5 53
 10 2 14
 10.117 9 16
 2

10.117 7 19
 10 10 53
 107 6 14

9.10 B 10 40
 10.11 0 32 AR & de?
 9.10 2 16

11.12 7 16 right last time
 2 37
 9 37 sure

9.2 0 46 ~~1st~~ 2nd
 10 10 1st
 12 9 1
 B. 13

6 40
 7 52
 12 6 33

12.13 8 46 Comp sp.
 9 9 42
 12.1 1 54

5-10 ns. sure
 6 8 1st
 0 24 ns.
 B. 13

9 54 sure 1st
 1st

9 1
 6 26 ns.
 11 9 4

10.11 5 55
 10. 2 17 ns.
 9 19
 B. 13

7 25
 11.12 6 16

10 10 4-?
 0 33
 9. 10 2 18

| | | | | | | | |
|-------|------|------|--------|-------|--------|------|--------|
| 19 | 56.8 | 60.9 | No 133 | 21 | 56.1 | 60.2 | B.D.B. |
| 20 | 2.4 | 6.5 | | 20 | 1.4 | 5.6 | |
| | D. | | | | | | |
| 20 | 4.4 | 8.2 | 135 | 21 | 3.6 | 7.4 | |
| 21 | 42.8 | 46.7 | 136 | 21 | 42.1 | 46.0 | |
| 21 | 57.1 | 55.0 | | 21 | 58.4 | 54.3 | |
| 22 | 33.7 | 37.8 | | 22 | 33.0 | 37.2 | |
| 23 | 0.3 | 1.0 | | 22 | 59.4 | — | |
| 23 | 27.6 | 31.4 | | 23 | 26.9 | 31.0 | |
| 23 | 28.6 | 32.6 | | 23 | 28.0 | 32.0 | |
| 23 | 50.2 | 54.1 | | 23 | 49.6 | 53.5 | |
| | D.D. | | | | D. | | |
| 25 | 10.6 | 14.7 | | 25 | 9.8 | 14.0 | |
| 25 | 31.6 | 35.5 | | 25 | 30.9 | 35.0 | |
| 25 | 45.7 | 49.8 | | 25 | 45.0 | 49.0 | |
| 26 | 15.6 | 19.9 | | 26 | 14.8 | 18.8 | |
| 26 | 36.4 | 40.3 | | 26 | 35.7 | 39.7 | |
| 26 | 38.0 | 42.0 | | 26 | 37.4 | 41.3 | |
| 26 | 59.5 | 63.5 | No 137 | 26 | 58.8 | 62.8 | |
| 27 | 12.9 | 16.9 | | 27 | 12.2 | 16.2 | |
| 27 | 31.7 | 35.7 | | 27 | 31.0 | 35.0 | |
| 27 | 41.8 | 45.8 | | 27 | 41.3 | 45.2 | |
| | | | | | D. | | |
| 28 | 45.0 | 49.0 | | 28 | 44.2 | 48.2 | |
| 29 | 7.4 | 11.3 | | 29 | 6.6 | 10.6 | |
| 29 | 28.8 | 32.8 | | 29 | 28.2 | 32.2 | |
| 29 | 51.7 | 55.8 | | 29 | 51.2 | 55.2 | |
| 30 | 26.9 | 30.9 | | 30 | 26.1 | 30.2 | |
| 30 | 33.0 | 37.0 | | 30 | 32.3 | 36.3 | |
| 21 31 | 3.3 | 7.3 | No 139 | 21 31 | 2.7 | 6.7 | |
| | | | | | B.D.B. | | |

10 2 53
11B 7 5
D

11 10 27
10B 3 5
10 6 20

9.10 8 4
11B 6 12
10.11 5 2

11 5 30
10.11 1 5 Dec?
BD

11B 1 7
10.11 10 10
10B 1 3

10.11 4 5
9.10 2 56
9.10 2 5

10 8 46
10.7 3 1
9 7 55

7.8 3 4
BD
10.11 5 32

10.11 3 0
10B 0 44
9.10 8 26

9.10 0 50
10B 3 0
9.10 3 18
B

12 2 56
12.13 7 8 ns.
B.D.B

12.13 10 29
10. 3 7
10. 6 24

9.3 8 6
12 6 17 2 int.
12 5 5

12.13 5 32
12 1 7
D.

12 1 9
12 10 15
10.8 1 6

11. 4 7
11 3 0
10.11 2 7

11.12 8 50
12 3 3
9 7 58

7.7 7 3 9
B.D.B.
12 5 26

12 3 2
10.11 0 43
10. 8 29

11 0 52
10.11 3 2 ns
9.10 3 22
B.D.B

1862.0

32 0.5 4.5
 32 17.7 24.7
 32 23.1 27.0

32 44.7
 33 37.6 41.5
 33 39.2 43.0

34 9.0 13.2
 34 12.0 [examine]
 34 15.4 19.4

34 17.7 *More doubtful, probably due to 4th.*

Pen not acting

1862.0

35 1.4 8.8
 513

36 22.4 26.4
 37 40.8 50.7
 38 35.7 39.9
 39 26.6 30.6

39 54.6 58.8
 40 20.3 24.4
 41 5.3 9.4

41 19.2 23.2

41 43.0 46.8

1862.0

- 180

- 181

42 36.2 40.2

43 23.0 27.0

43 31.0 34.8

513.0

45 5.7 9.7

45 53.4 47.5

46 20.1 24.1

47 14.3 18.3

47 42.8 46.9

2147 — 50.6

45 6.3 10.3 *HR number*

45 44.2 48.2

46 21.2 25.0

47 15.0 18.9

47 43.6 47.6

2147 51.4

- 187

2147

| | | | | | | |
|--------|------|------|-------------------|-----|-------------------|-------------------------|
| 97 | 8 | 44 | | 9.3 | 846 | |
| 10.11 | 6 | 50 | | | 12 | 654 |
| 10 | 6 | 31 | | 9.5 | 9 6.34 | ms. |
| 11 | 4 | 32 | 1wL | | 12 | 433 ms |
| 1103 | 3 | 30 | | | | 333 2 nd lot |
| 10 | 10 | 25 | ns | | 11 | 10 - |
| 10.11 | 9 | 55 | | | | 958 |
| 10 | 4 | 56 | 1wL? | | | 50 |
| 97 | 8 | 20 | a little doubtful | 9.5 | | 825 |
| 117 | 9 | 38 | Ex Mir reject. m. | | | |
| | 2 | long | | | | |
| 11 | 8 | 57 | | | 12.13 | 910 513 |
| 11 | 9 | 20 | | | | |
| 10.11 | 5 | 32 | Catalpa 8.8 | 9 | 026 | 12 4' 38" |
| 107 | 5 | 54 | | 12 | 534 | |
| | | | | 11 | 558 | |
| | | | | | 03 | |
| 1103 | 2 | 23 | | | 12 | 227 |
| 1103 | 4 | 33 | | | 12 | 435 |
| 97 | 9 | 54 | | 9.5 | 9.10 | 956 |
| 10 | 1 | 41 | | 9.5 | 11 | 145 |
| 10.11 | 8 | — | | | | |
| 9.10 | 9 | 31 | | | 10.11 | 922 |
| | B.D. | | | | | |
| 1103 | 3 | 28 | | | 12 | 330 |
| 10 | 3 | 40 | | | 11.12 | 344 |
| 9.103 | 8 | 7 | | | 10 | 810 |
| | D | | | | 5138 | |
| 87 | 6 | 9 | | 8.8 | 9 | 612 |
| 11 | 2 | 9 | | | 12 | 214 |
| 10.117 | 0 | 50 | | | | 053 |
| 1103 | 5 | 59 | | | 12 | 61 |
| 97 | 6 | 16 | | 9.3 | 9.10 | 622 |
| 9.10 | 10 | 4 | 1wL | | (11) | 108 ms. 1 lot |

| | | | | | | |
|-------|------|------|--------------------|-------|--------------|--------------|
| 48 | 50.8 | 54.7 | N ^o 188 | 21 48 | 50.0 | 54.0 |
| 49 | 44.8 | 48.8 | | 49 | 44.0 | 4 |
| 49 | 58.0 | 62.0 | | 49 | 57.2 | 61.4 |
| 50 | 40.3 | 44.1 | | 50 | 39.4 | |
| 51 | 20.3 | 24.3 | 189 | 51 | 19.7 | 23.7 |
| 52 | 7.2 | 11.0 | 190 | 52 | 6.4 | 10.3 |
| 52 | 28.7 | 32.6 | 191 | 52 | 28.1 | 32.0 |
| 52 | 29.7 | | | 52 | 30.9 | 34.8 |
| 52 | 31.4 | 35.6 | | 53 | 40.7 | 44.6 |
| 53 | 41.4 | 45.3 | HR Cambr. | 53 | 51.6 | 55.4 |
| 53 | 52.0 | 56.1 | | 54 | — | 19.6 |
| 54 | 16.4 | 20.4 | | 54 | 51.6 | 55.6 |
| 54 | 52.6 | 56.4 | | 55 | 14.4 | 18.3 |
| 55 | 15.1 | 19.0 | 200 | 55 | | |
| 55 | | | | 55 | 48.6 | 52.6 |
| 55 | 49.6 | 53.5 | | 55 | 59.7 | 63.7 |
| 56 | 0.5 | 4.4 | 204 | 56 | 10.3 | 14.3 |
| 56 | 11.0 | 15.1 | 205 | 56 | — | 41.1 |
| 56 | | 42.0 | 206 | 56 | 58.4 | 54.5 |
| 56 | 51.2 | 55.3 | | 57 | 18.4 | 22.6 |
| 57 | 19.3 | 23.2 | | 58 | 9.7 | 13.7 |
| 58 | 10.3 | 14.2 | | 58 | 16.5 | 20.6 |
| 58 | 17.3 | 21.2 | 210 | 59 | | |
| 59 | 1.2 | 5.2 | 211 | 59 | 20.4 | 24.5 |
| 59 | | | | 59 | 29.2 | 32.2 |
| 59 | 21.1 | 25.0 | | 21 59 | 51.8 | 55.8 |
| 59 | 29.0 | 32.9 | | | | |
| 21 59 | 52.7 | 56.5 | | 22 0 | 0.8 | 4.8 |
| 22 0 | 1.5 | 5.3 | 215 | | | |

1° 10' - 1° 20'

| | | |
|-----|---|----|
| 10 | 8 | 6 |
| 11 | 6 | 30 |
| 11B | 9 | 39 |
| | B | |

| | | |
|-------|----|----|
| 10.11 | 10 | 31 |
| 10.11 | 8 | 1 |
| 11B | 8 | 50 |

| | | |
|-------|---|----|
| 9.107 | 1 | 17 |
| 107 | 9 | 21 |
| 9.10 | 3 | 45 |

comp. 10.11 2w Le. ns

(9.5)
9.5

| | | |
|-------|----|----|
| 9 | 9 | 57 |
| 10.11 | 10 | 0 |
| 10.11 | 2 | 37 |

| | | |
|----|---|----|
| 11 | 2 | 3 |
| 10 | 5 | 15 |
| | D | |

| | | |
|-------|---|----|
| 10.11 | 9 | 23 |
|-------|---|----|

 2w D

| | | |
|----|---|----|
| 10 | 9 | 47 |
|----|---|----|

| | | |
|-----|---|----|
| 107 | 7 | 13 |
|-----|---|----|

 87 22 obs the middle in AR

| | | |
|-----|---|---|
| 11B | 7 | 4 |
|-----|---|---|

 1w Le

| | | |
|-----|---|----|
| 11B | 6 | 10 |
|-----|---|----|

| | | |
|-------|---|---|
| 10.11 | 5 | 0 |
|-------|---|---|

| | | |
|----|---|----|
| 10 | 0 | 40 |
|----|---|----|

| | | |
|----|---|---|
| 10 | 8 | 8 |
|----|---|---|

| | | |
|----|----|---|
| 10 | 11 | 2 |
|----|----|---|

B

| | | |
|------|---|----|
| 9.10 | 9 | 27 |
|------|---|----|

| | | |
|-----|---|----|
| 7.8 | 0 | 51 |
|-----|---|----|

| | | |
|-------|---|----|
| 10.11 | 7 | 49 |
|-------|---|----|

| | | |
|------|---|----|
| 9.10 | 4 | 33 |
|------|---|----|

| | | |
|----|---|----|
| 12 | 8 | 10 |
|----|---|----|

| | | |
|-------|---|----|
| 12.13 | 6 | 37 |
|-------|---|----|

28 wt

| | | |
|----|---|----|
| 12 | 9 | 43 |
|----|---|----|

B2B13

ns. 1st n. ?

| | | |
|----|---|---|
| 12 | 8 | 4 |
|----|---|---|

| | | |
|----|---|----|
| 12 | 8 | 52 |
|----|---|----|

122

3

349

| | | |
|---|---|----|
| 9 | 0 | 59 |
|---|---|----|

10 5

238

1st int

| | | |
|----|---|---|
| 12 | 2 | 7 |
|----|---|---|

| | | |
|-------|---|----|
| 10.11 | 5 | 17 |
|-------|---|----|

B2B13

| | | |
|----|---|----|
| 12 | 9 | 27 |
|----|---|----|

9 57

7 15

on AR

7 27

AR int.

| | | |
|----|---|---|
| 12 | 7 | 8 |
|----|---|---|

6 13

| | | |
|----|---|---|
| 12 | 5 | 3 |
|----|---|---|

| | | |
|----|---|----|
| 11 | 0 | 43 |
|----|---|----|

| | | |
|----|---|----|
| 11 | 8 | 12 |
|----|---|----|

ns

B2B13

9.5 9.5 9 32

8.5 7.8 0 53

11. 7 50

9.0 9.1 4 34

19. 30' - 1 2.10'

begin at 20° 22'

Mag.

| | | | | | | | |
|----|----|-------|----|----|------|-------|-----|
| 20 | 29 | 54.02 | +1 | 9 | 4.5 | | 9.0 |
| | 53 | 28.14 | | 4 | 29.5 | Baily | 8.6 |
| | 53 | 50.64 | | 4 | 53.2 | " | 9.0 |
| | 56 | 5.83 | | 9 | 20.6 | | 8.3 |
| 21 | 3 | 20.92 | | 4 | 26.4 | | 9.3 |
| | 3 | 44.10 | | 10 | 52.2 | | 9.2 |
| | 5 | 3.84 | | 4 | 17.6 | | 8.3 |

Dec. 4' 46" 36 line -

| | | | | | | |
|---|-------|--|----|------|-------|-----|
| 5 | 46.45 | | 4 | 48.1 | Baily | ? |
| 7 | 38.79 | | 10 | 39.9 | | 8.8 |
| 7 | 52.91 | | 4 | 40.2 | | 8.5 |

| | | | | | | |
|---------------|------------------|--|--------------|-----------------|----------------------|-----|
| 14 | 47.07 | | 6 | 23.2 | St. night | |
| 16 | 45.73 | | 5 | 29.5 | | 8.2 |
| 16 | 49.04 | | 1 | 55.4 | | 9.3 |
| 36 | 22.51 | | 10 | 24.9 | | 8.8 |

| | | | | | | |
|----|-------|--|---|------|--|-----|
| 43 | 2.35 | | 7 | 48.0 | | 9.0 |
| 57 | 45.19 | | 6 | 25.6 | | 8.7 |
| 58 | 37.17 | | 6 | 52.1 | | 8.8 |

| | | | | | | |
|----|-------|----|----|------|------------|-----|
| 59 | 27.89 | +1 | 10 | 38.6 | St. night? | 8.5 |
|----|-------|----|----|------|------------|-----|

19 10' - 1 20'

avg.

| | | | | | |
|--|----------------|----------------|-----------|-----------------|---------------------------------|
| 21 59 27.89 | + 1° 10' 34.6" | 47. | | 8.5 | |
| 22 0 1.46 | 14 31.3 | 29. | | 9.0 | |
| 3 59.15 | 12 14.7 | 14. | | 9.3 | |
| X 22.74 | 17 55.3 | 1. | | 9.0 | |
| 8 33.32 | 15 48.9 | 52. | | 8.5 | |
| 9 33.57 | 16 0.2 | | Lalande. | exam | X does not exist 3.06 17.76 |
| 9 50.63 | 16 31.3 | 37. | | 9.3 | |
| 14 10.33 | 10 43.1 | 46. | | exam | |
| 19 1.65 | 16 35.0 | | Lalande | 9.3 | |
| 19 22.73 | 16 5.1 | 13. | PM? | 8.5 | |
| 20 8 | 20 | | | | |
| 23 18.90 | 20 17.3 | 19. | | 8.0 | |
| 30 14.00 | 12 39.7 | 46. | AR? | 8.3 | |
| 39 44.77 | 14 11.9 | 16. | | 8.8 | |
| 40 27.94 | 10 42.4 | | Lalande | exam | X does not exist 3.063 18.85 |
| 41 50.52 | 10 22.2 | 27. | Star? | 8.5 | |
| 48 55.93 | 13 0.3 | 3. | | 8.7 | |
| 23 1 14.43 | 15 4.2 | 8. | AR? | 9.0 | |
| 2 30.76 | 10 54.2 | 55. | | 8.3 | |
| R 10848 3 36.64 | 17 0.3 | | R. | exam | X does not exist 3.065 19.45 |
| 4 39.10 | 11 20.3 | 24. | | 9.2 | |
| 5 15.09 | 15 54.6 | 55. | Pi (cf B) | 8.7 | xxiii.10 P.m. in AR? |
| 13 0.44 | 19 45.9 | 49. | Star? | 8.8 | |
| Not very precise Catalogue plan 16 22.72 | 14 23.5 | 16 | Star? | 9.5 | Runkwe 3.067 19.69 |
| 27 20.24 | 14 28.0 | 57. | Pi (cf B) | 8.5 | xxiii 119 |
| 28 42.66 | 18 43.8 | 48. | | 9.0 | |
| 3 29 20.92 | + 1 20 10.8 | 17. | Pi (cf B) | 6.8 | xxiii 132 16 P.m. |

21ⁿ 58^m —

23ⁿ 29^m

Dec 5, 1861

Any Po. 352° 46' (Set)

AR about 1.2 too small

1862. Oct. 20

Any Po. 352° 53' (Set)

G.P.B. at M. rec.

Recd. by W. H. Long

21 58 9.1 12.7 N^o 1.
58 15.6 19.5
58 29.6 63.5

24 59 19.5 23.4
59 27.2 31.2
59 50.7 54.7

21 59 59.7 63.8
22 0 32.8 36.8
1 42.5 46.4

2 11.1 15.0 10

3 57.5 61.4 AR climb.

4 20.3 24.2
5 26.3 30.3
5 43.1 49.1

6 9.2 13.2
6 45.3 49.0

7 21.8 25.6
7 — 30.5
8 20.5 24.3

8 31.9 35.8 20
9 52.6 56.5
22 9 36.6 40.8 2

21 58 9.4 13.3

59 20.5 24.5
59 28.1 32.2
59 51.6 55.6

4 0 0.8 4.8
0 33.9 37.9
1 43.3

2 11.9 16.1

B.B.
3 58.5 62.4

4 21.2 25.3
5 27.4 31.2
5 46.2 50.0

6 10.2 14.0
6 45.9 50.2
B.B.

7 22.7 26.8
7 — 31.3
8 21.5 —

8 32.9 36.9
8 53.6 57.6
22 9 37.8 —

1° 10' - 1° 20'

See about 3" too large.

10.11 0 39

11B 8 8

107 11 0

short sig

10B 9 26

8.9 0 47

10 7 46

B

Catalogue

9.5

8.5

9.10 9 33

8.9 0 55

11 7 52

97 4 29

11 3 19

117 10 40

Catalogue

9.0

9.10 4 36

12.13 3 26

11.12 10 43

11 0 27

B

9.10B 2 14

Catalogue

9.3

11.12 0 30

B.13

9.13 2 70

11B 1 38

10.11 8 22

11 5 56

12 1 52

12 8 28

12 6 2

sure.

2.2

10.11 7 13

11.12 6 53

D

12 7 20

13 4 0

8.13

97 8 1

11B 3 28

10.11 6 50

Catalogue
main wire

9.0

8.1 8 5

11.12 3 32

12 6 56

1.2 ns

9 5 52

107 9 25

11 4 2

Catalogue

8.5

8.9 5 56

11.12 9 30

12 4 5

2.2

| | | | | | |
|-------------|----|--------|------|------|-------|
| 1861phae. p | 22 | 9 | 49.2 | 53.2 | No 29 |
| | | 10 | 32.1 | 36.1 | |
| | | 10 | 48.9 | 52.8 | |
| | | 11 | 10.1 | 14.1 | |
| | | 11 | 31.5 | 35.6 | |
| | | B.D.13 | | | |

| | | | |
|----|------|------|------|
| 12 | 20.5 | | |
| 12 | 31.8 | 35.8 | |
| 13 | 2.7 | 6.6 | " 30 |

| | | | |
|----|------|------|--|
| 13 | 17.7 | 21.7 | |
| 13 | 31.7 | 35.6 | |
| 14 | 6.9 | 10.8 | |

| | | | |
|----|----------------|------|--|
| 14 | 31.9 | 35.9 | |
| 15 | 13.1 | 17.0 | |
| 15 | 4.3 | 21.3 | |

| | | | |
|----|------|------|--|
| 15 | 53.4 | 57.6 | |
| 15 | 59.8 | 63.6 | |
| 16 | 20.3 | 24.3 | |

| | | | |
|----|------|------|------|
| 16 | 31.8 | 35.7 | " 40 |
| 17 | 21.6 | 25.3 | " 41 |

| | | | |
|----|------|------|------|
| 17 | 23.3 | 27.1 | " 42 |
| 18 | 9.4 | 13.4 | |
| 18 | 37.9 | 43.9 | |

| | | | |
|--------|------|------|----------|
| 18 | 42.3 | 46.1 | No 15 |
| 19 | 0.7 | 4.6 | 46 |
| 19 | 21.6 | 25.7 | McKinnon |
| B.D.13 | | | |

| | | | |
|----|------|------|--|
| 20 | 16.3 | 22.2 | |
| 20 | 53.5 | | |

| | | | |
|----|------|------|----|
| 20 | 55.3 | 59.2 | 50 |
| 22 | 55.7 | 59.5 | 54 |

| | | | |
|----|------|------|------|
| 22 | 9 | 50.2 | 54.3 |
| 10 | 33.0 | 37.2 | |
| 10 | 50.0 | 53.9 | |
| 11 | 11.0 | 15.0 | |

| | | | |
|----|------|------|--|
| 12 | 21.6 | — | |
| 12 | 33.0 | 37.0 | |
| 13 | 3.6 | 7.7 | |

| | | | |
|--------|------|------|--|
| 13 | 18.8 | 22.9 | |
| B.D.13 | | | |
| 14 | 7.7 | 12.0 | |

| | | | |
|----|------|------|--|
| 14 | 32.7 | | |
| 15 | 14.0 | 18.1 | |
| 15 | 18.7 | 22.2 | |

| | | | |
|----|------|------|--|
| 15 | 54.5 | 58.3 | |
| 16 | 0.6 | 4.7 | |
| 16 | 21.3 | 25.4 | |

| | | | |
|--------|------|------|--|
| 16 | 32.6 | 36.4 | |
| B.D.13 | | | |

| | | | |
|----|------|------|--|
| 17 | 24.5 | 28.0 | |
| 18 | 10.3 | 14.3 | |
| 18 | 40.7 | 44.8 | |

| | | | |
|--------|------|------|--|
| 18 | 43.2 | 47.2 | |
| 19 | 1.7 | 5.7 | |
| 19 | 22.7 | 26.7 | |
| B.D.13 | | | |

| | | | |
|----|------|------|--|
| 20 | 19.2 | 23.2 | |
| 20 | 54.4 | 58.0 | |
| 22 | 56.4 | 60.2 | |

97 6 37 Catalogue
10.117 4 48
10.11 9 38

10 2 30
11.12 8 24 doubtful
BDB

11 7 59 2L
10B 8 32
10.11 2 22

10 9 10
9.10B 10 47
10.11 9 57

11.12 6 43 Dec. doubtful
10 1 36
10.11 2 45 1L

11 8 27
11B 6 24
10.11 5 25

11 6 35
D long
117 3 44

11 8 49
97 0 46 Catalogue
10B 0 35

10 0 59
10B 6 36 Catalogue (Daily alone)
9 6 13 Catalogue
BDBB

107 5 15
11 9 15 2L
10B 6 3
10.11 5 28 2L n.s. 1D

9.3 8.9 6 44
12B 4 52
12B 9 438

11 2 337

8 2 2L
9.5-9.10 8 37
11.12 2 25

9.5-10B 9 157 BDB
8.9 10 116
12.13 10 2 n.s.

to print
107 1 403
10.11 2 50 n.s. kn

12 8 33
11.12 6 29 n.s.
10 5 29

12 6 38
B.B

12.13 8 58
9.0 9 0 49
9.10 0 38

[9.5] 11 1 4
9.3 9 6 41
8.5-8.9 6 16
2D

5 19
11.12 9 23
10 6 9 n.s.

21 46.7 50.5 No. 52
~~22~~

22 21 47.4 51.6
~~23~~

23 17.9 21.8 53
 23 58.7 62.7 54
 24 55.3 59.2 55

23 19.0 23.0
 23 59.5 63.7
 24 56.4 60.4

25 21.6 25.6

25 22.6 26.3

25 37.0 40.9

25 37.8 41.8

25 40.4 50.4

25 47.3 51.3

26 22.5 6.7

26 3.9 7.7

26 40.5 44.5 60

26 41.4 45.4

26 56.6 58.5

26 55.6 59.6

27 (20.5 23.9)

27 20.8 24.8

27 51.6 55.5

27 52.6 56.6

28 45.4 49.7

28 46.2 50.3

29 53.0 57.0

29 53.8 57.8

30 13.5 17.6 H.R. Lamb.

30 14.5 18.3

30 32.9 37.8

30 34.7 39.0

32 1.6 5.2

32 2.3 6.2

32 15.9 19.8

32 — 20.7

32 28.4 32.2 70

32 29.2 33.2

32 59.5 63.4

33 0.5 4.5

33 31.1 35.5

33 32.1 36.9

33 35.6

33 32.4 36.4

33 57.3 61.2

33 58.1 62.2

34 [52.6 57.0]

34 59.4 63.5

34 58.6 62.4

36 23.8 27.8

36 23.0 27.1

36 44.0 48.0

36 43.0 47.1

22 37 2.8 6.7

22 37 1.7 5.5 79

10 6 24

S.D.D.

~~11 4 44~~ + acc. B Star 6 wires

10 6 30

B.B.

9 10 19

Catalyze

E.O.

8. 10 26

11B 8 23

12 8 29

10 8 57

10.11 9 2

11 5 32

12. 5 39

11 2 3 acc. B between wires

12 2 6

10.11 8 30

11 8 36

B.11 7 49

double

11.12 7 53

10.11 3 12

12.13 3 18

10. 0 44

10 0 46

B

S.D.B.

11.12 7 50

AR. doubtful

12. 7 58

11 10 4

12 10 11

117 3 19

12 3 26

9.10 1 45

9.10 1 50

9B 2 46

Catalyze

E.3

8.9 2 49

10.11 7 47

11.12 7 53

B.B.B.

11B 6 6

12 6 11

11B 1 24

12.13 1 29

10.11 9 28

11.12 9 31

B.D.D.

10.11 5 39

11 5 43

11 7 14

2L

12.13 7 17

10.11 9 2

1L

12 9 6

ns

107 7 25

10. 7 30

11.12 8 2

AR wrong

12 9 52

10.11 9 46

B.B.B.

10.11 10 1

12 10 9

10.11 9 14

11 9 18

11 4 45

12 4 49

22.37 35.6 39.4
38 34.4 38.4

39 21.3 15.2
39 43.1 47.1
40 34.3 38.3

41 18.8 22.7
41 22.6 25.5 (27.5)
41 49.5 53.4

43 7.9 12.0
43 35.2 39.2
45 22.2 26.2

45 45.1 49.1
45 55.0 (63.1)
46 17.7 21.6

46 39.4 43.4
47 22.0
48 0.5 4.4

48 18.9 22.8 }
48 20.6 26.6 }
48 55.1 59.0

49 32.7 36.7
49 6.2 10.1
50 18.3 22.3

50 15.3 19.2
50 55.7
50 59.2 63.2

51 22.7 26.6

22 51 52.9 57.0

No 80
81

82
83
84

85

At Cambridge.

No 90

91
92
93

94
95
96

97
98
99

100
101
102

103
104
105

106

107

22 37 — 40.5
38 35.5 39.5

39 22.4 26.4
39 44.0 48.2
40 35.4 39.4

41 19.6
41 24.8 28.8
41 50.4 54.3

43 9.2 13.2
43 36.3 40.5
45 23.3 —

45 45.9 49.7

46 18.4 22.6

46 40.4 44.4

48 19.4 23.8

48 56.1 60.0

49 33.6 37.9

50 7.2 —

50 19.0 23.3

50 26.4 30.3

50

51 0.0 4.2

51 23.5 27.6

B. B.

22 51 53.7 57.9

| | | | | | | | | |
|------------|----|------|-------|-----------|----|----|------|------|
| 1861 phase | 52 | 39.0 | 112.7 | No 108 | 22 | 52 | 39.6 | 42.7 |
| | 52 | 47.0 | 51.0 | | | 52 | 47.7 | 51.7 |
| | 53 | 0.3 | 4.1 | 110 | | | | |
| | 53 | 46.2 | 50.2 | | | 53 | 47.3 | 51.2 |
| | 54 | 22.7 | | | | 54 | 40.7 | 44.7 |
| | 54 | 39.8 | 44.0 | | | | | |
| | 55 | 29.8 | 33.6 | | | 55 | 30.7 | 34.6 |
| | 56 | 31.5 | 35.4 | | | 56 | 32.5 | 36.7 |
| | 56 | 50.1 | 54.2 | | | 56 | 51.0 | 55.0 |
| | 57 | 27.0 | 30.8 | | | 57 | 27.7 | 31.8 |
| | 57 | 34.6 | | | | 57 | 35.6 | 39.3 |
| | 58 | 16.7 | | | | 58 | 17.8 | |
| | 58 | 20.3 | 24.0 | 120 | | 58 | 21.1 | 25.1 |
| | 58 | | 58.0 | | | 58 | 54.8 | 58.2 |
| | 58 | 55.7 | 59.5 | | | 58 | 56.8 | 60.5 |
| | 59 | 28.2 | 32.1 | | | 59 | 29.3 | 33.2 |
| | 59 | 55.3 | 59.3 | | | 59 | 56.5 | 60.6 |
| 22 | 59 | 21 | 62.6 | | 22 | 59 | 59.4 | 63.4 |
| 23 | 0 | 13.1 | 17.0 | | 23 | 0 | 14.1 | 18.1 |
| | 0 | 58.2 | 62.0 | | | 0 | 59.0 | 63.0 |
| | 1 | 6.6 | 10.3 | | | | | |
| | 1 | 13.8 | 17.8 | | | 1 | 14.9 | 19.0 |
| | 1 | 46.2 | 50.2 | 30 | | | | |
| | 2 | 30.2 | 34.2 | | | 2 | 31.2 | 35.2 |
| | 3 | 21.3 | 25.3 | | | 3 | 22.5 | 26.5 |
| | 4 | 34.5 | 38.4 | | | 4 | 35.5 | 39.5 |
| | 5 | 14.3 | 18.3 | ARLander. | | 5 | 15.4 | 19.4 |
| | 6 | 37.1 | 41.0 | 135 | | 6 | 38.3 | 42.0 |
| | 6 | 59.7 | 63.7 | 136 | | 7 | 0.5 | 4.8 |
| 23 | 7 | 44.4 | 48.4 | 137 | 23 | 7 | 45.2 | 49.3 |

10.11 7 46
 10.11 2 15
 10.13 11 4

9.5

11.12 7 52
 11. 2 23

10 10 9
 11.12 8 7
 11 1 10

Maximum time

10 10 16
 12.13
 10.11 1 22

10.7 3 8
 11 8 9
 10 1 16

9.5

10.11 3 13
 12 8 14
 9.10 1 22

11.13 0 43 ns
 11.13 4 23 2 L
 10.11 10 10 2 L

12 0 48
 11 4 26 2 L
 11 10 15 2 L

10.7 3 45 ns
 11.13 6 42 1 L, ns
 10.11 3 37

10.11 3 50
 12 6 50
 11 3 40

10.11.7 8 12
 10.11 9 45
 10.11.13 6 27 1 L

10.11 8 17
 11 9 50
 10. 6 33

10.11 6 20
 11 7 35
 10.11 10 58

10. 6 25
 12 7 42

9.7 5 8
 10.11.7 10 53
 9.13 0 55
~~9.13~~

Catalogue

9.0 8.9 5 13

Catalogue

8.3 8 0 59

10.11 3 8
 9.10 1 24
 9.13 5 55

long sig

Catalogue

9.2 9 1 31

Catalogue

8.7 8.9 6 0

11 8 44
 10.7 1 19
 10 2 9

12 3 12
 11 1 23
 10 2 14

D. long

33 8 14.5 18.5
 8 13.4 57.4
 22.2

9 11.9 15.9
 9 58.4 62.2
 10 66 10.6

10 12.8 16.8
 10 15.9 19.9
 10 35.0 35.0

10 43.3 47.2
 10 55.5 59.3
 213

11 57.7 61.7
 12 33.2 37.8
 12 55.3 63.0

14 32.8

Circuit
 Spring Governor out of order for two or three
 minutes

rij
 rij

14 11.3 15.2
 15 41.0 44.8
 16 48.0 52.2
 23 20 4.8 8.8

136 23 8 15.5 19.4
 139 8 44.3 48.5

140 9 13.2 17.1
 9 59.2 63.2
 10 7.6 —

10 13.9 18.0
 10 — 21.2
 10 30.0 34.0

10 44.4 48.2
 10 55.4 60.5
 13.

11 58.7 62.8
 12 34.8 38.9
 13 0.2 4.4

14 — 37.7
 15 16.4 20.2
 15 27.9 32.0

15 51.9 55.9

16 23.0 27.0

158 16 — 31.0

159 14 12.0 16.3

158 15 49.2 53.0

160 23 20 5.9 9.9

10.11 5 39
 10 5 56
 222

10B 8 56
 10.11 5 59
 10 5 46

9.10 9 4
 9.7 10 9
 10.11 8 19 12. *undoubtedly*

10.7 5 6
 10 4 59
 DB

9.10 0 38
 10B 5 14
 9 9 49

11.12 8 1 2L
 11 1 2
 11.12 9 17

9.10 2 13
 B

9.10 4 16

9.10.7 9 15 12
 10 2 13
 10.7 8 14

11 7 47
 D

11.12 2 39

11 8 35
 11.7 8 49
 10 6 34

11 5 45
 10.11 6 3

9.5 9.10 9 1
 12 6 2 2L
 11.12 5 52 2L

9.5 9. 9 54
 10 18 2L
 11 8 26

11 5 11
 10 5 3
 B mg

9.5 10 0 41
 10 5 19
 8.8 9 9 55

13 8 5
 1 6
 11.12 9 22

9.5 9.10 2 17

9.5 9.10 4 24 1

9.10 9 18 12

DD
 12.13 2 44

too faint 8
 12 8 58
 11.12 6 41

Large mass of
 stars

20 15.1 18.9
20 52.4 56.4
21 55.0 62.0

22 41.3 45.1
22 57.7 61.7
23 16.5 20.4

23 40.3 44.3
24 17.4 21.2
24 51.1 55.1

25 55.2 59.0
26 1.9 5.9
27 1.0

27 5.3 *
27 19.3 (23.8)
28 28.9 32.9

28 42.2 46.2
23 29 20.3 24.1

No. 111

23 20 16.1 20.0
20 53.1 57.4
21 58.9 62.1

22 42.0 46.3
22 58.9 62.7
23 17.3 21.4

23 41.1 45.4
24 18.2 22.4
24 52.0 56.2

25 56.3 60.4
26 3.1 7.0
27 — 5.8

27 2.3 —
27 20.5 24.5
27 30.2 34.2

28 43.6 47.3
23 29 21.5 25.3

No. 117

10 6 21
 10B 5 23
 107 2 55

10.11 1 40
 9.10 3 0
 97 4 8

9 4 38
 10.11 0 53
 10.117 3 15

10 9 7
 107 3 57
 10 9 14 2L

10.117 2 51 1L
 8.9 4 27 2nd wire wrong *Catalpa*
 10.11 7 33
 B

9B 8 48 *Catalpa*
 7 10 17. *Catalpa*

11 6 28
 10 5 30
 10.11 3 2

10 1 46 2L
 9.10 3 4
 9. 4 12

9.5 9. 5 3
 11 1 0
 11.12 3 19

10. 9 13
 10.11 4 4 ns
 10 9 19 1L

11 2 57 2L
 8.5 8. 4 35
 10.11 7 39

9.0 9. 8 55
 6.8 6 10 18 ?

$S-A$ (58 wings) $+0.22 \pm 0.031$

Prob. from 10 wings ± 0.192

Dec 7. 1861

Any Pos. at $35^{\circ} 47'$ Catalogue Stars for 25^h etc.Begin at $23^h 25^m 55.1^s$ $91^{\circ} 52'$
 $26^h 1.9^m$ $3^{\circ} 57'$

Mag.

| | | | | | | |
|----|----|-------|---|----|------|-----|
| 23 | 27 | 20.24 | 1 | 14 | 28.0 | 8.5 |
| | 28 | 12.97 | | 18 | 43.8 | 9.0 |
| | 29 | 20.95 | | 20 | 10.8 | 6.8 |

16. B. Cairn

| | | | | |
|----|-------|----|------|-----|
| 31 | 22.69 | 10 | 29.1 | 9.0 |
| 34 | 0.17 | 19 | 30.7 | 8.5 |
| 43 | 4.34 | 12 | 14.7 | 8.0 |

PM?

| | | | | | |
|----|-------|-------|-----|------|-----|
| 53 | 38.43 | 17 | 2.0 | 9.5 | |
| 0 | 3 | 36.65 | 17 | 11.4 | 7.8 |
| | 14 | 19.76 | 10 | 30.6 | 6.2 |

| | | | | |
|----|-------|----|-----|-----|
| 14 | 52.43 | 11 | 6.3 | 8.3 |
|----|-------|----|-----|-----|

| | | | | |
|----|------|----|----|-----|
| 36 | 11.7 | 17 | 53 | 7.8 |
|----|------|----|----|-----|

| | | | | |
|----|-------|----|------|-----|
| 50 | 36.24 | 20 | 45.5 | 7.8 |
|----|-------|----|------|-----|

Lalande

| | | | | | |
|---|---|-------|----|------|-----|
| 1 | 8 | 52.66 | 16 | 35.0 | 7.0 |
|---|---|-------|----|------|-----|

See exam. B.

| | | | | | |
|--|----|------|----|------|-----|
| | 10 | 4.31 | 17 | 10.5 | 7.8 |
|--|----|------|----|------|-----|

| | | |
|-----|---|-------|
| 9 | 3 | 57 |
| 11B | 4 | 4 |
| 11B | 4 | 20 ns |

| | | |
|-------|---|--------|
| 11 | 4 | 49 ns? |
| 11.12 | 4 | 19 |
| 11 | 5 | 52 |

| | | |
|-----|----|----|
| 107 | 10 | 39 |
| 10 | 8 | 3 |
| 10 | 3 | 37 |

| | | |
|-----|---|----|
| 10B | 8 | 49 |
|-----|---|----|

1° 0' - 1° 10'

20^h 21^m -21^h 25^m

1862 Jan 3

1862 Sept 29 GRTB obs

Lro 352° 52' pretty certain

El 22 3 0 - the 66°
dend off by H. Long.

| | | | | | |
|----|----|-------------|------|-----------|---------|
| 20 | 21 | 38.8 | 42.6 | No 1 | |
| 22 | | 18.7 | 22.6 | | |
| 22 | | 25.3 | 29.3 | | |
| 23 | | 23.0 | | | |
| 23 | | 26.4 | 30.0 | | |
| 24 | | 17.0 | 20.9 | | |
| 24 | | 34.5 | 38.3 | | |
| 25 | | 7.9 | 11.7 | | |
| 25 | | <u>37.7</u> | 39.7 | [35.7]? | 1.45.18 |
| 26 | | 0.5 | 1.5 | No 10 | |
| 26 | | 25.2 | 29.3 | | |
| 27 | | 10.4 | 14.3 | | |
| 27 | | 32.6 | 36.7 | | |
| 28 | | 57.9 | 61.7 | | |
| 29 | | 42.2 | 46.2 | | |
| 29 | | 44.1 | 48.0 | | |
| 29 | | 54.2 | 58.2 | Catalogue | |
| 30 | | 35.2 | 39.1 | | |
| 31 | | 7.2 | 11.0 | | |
| 31 | | 31.1 | 35.0 | No 20 | |
| 32 | | 7.6 | 11.5 | | |
| 20 | 33 | 11.8 | 15.9 | | |

| | | | | |
|----|----|------|------|--|
| 20 | 21 | 38.3 | 42.4 | |
| 22 | | 18.1 | 22.2 | |
| 22 | | 25.0 | 28.9 | |
| 23 | | 22.5 | 26.6 | |
| 23 | | 25.9 | 29.9 | |
| 24 | | 16.5 | 20.4 | |
| 24 | | 33.9 | 37.9 | |
| 25 | | 35.1 | 39.1 | |
| 25 | | 60.0 | 63.9 | |
| 26 | | 24.7 | 28.8 | |
| 27 | | 10.2 | 14.0 | |
| 27 | | 32.2 | 36.4 | |
| 28 | | 57.3 | 61.3 | |
| 29 | | 41.8 | 45.8 | |
| 29 | | 43.7 | 47.7 | |
| 29 | | 53.9 | 57.9 | |
| 30 | | 34.7 | 38.8 | |
| 31 | | 6.7 | 10.6 | |
| 31 | | 30.6 | 34.6 | |
| 32 | | 7.0 | 11.0 | |
| 20 | 33 | 11.0 | 14.9 | |

8.9 4 22
10 4 51
10B 5 18

8.9
double, Comp 8. p. dist 26" Ap. 20°
(9.5)

9.1 4 19
11 4 48
10.11 5 16

10.11 5 51 2L
10.11 4 50
107 6 22

12.13 5 48
12. 4 45 ns.
11. 6 19

10.11 6 10
9.10 11 5
10.11 8 39

11.12 6 4
B.B.
11.12 8 36

10 0 22 dec double
B.
11B 1 28

10.11 0 14
11. 1 24

9.10 8 31
10B 9 47
10.11 2 37

10.11 8 28
12. 9 46
12 2 32

9.7 4 6
10.11 4 0
9 9 18
D

Catalogan

9.3

9 4 2
11 3 54 ns.
9 9 15
B.B.

9.0

11 6 50
10 6 37
11 6 7

107 9 16
B.B.
11 11 23

10 9 13
B.B.
12 1 21

| | | | | | | | |
|-------|-------------|------|-------------------------|-------|-------------|------|--|
| 20 33 | 27.9 | 31.7 | <i>N^o 23</i> | 20 33 | 27.0 | 31.0 | |
| 33 | 43.9 | 47.8 | | 33 | 43.2 | 47.2 | |
| 33 | 54.9 | 58.8 | | 33 | 54.4 | 58.4 | |
| 35 | 58.5 | 62.5 | | 35 | 58.0 | 62.0 | |
| 36 | 30.3 | 34.3 | | 36 | 42.3 | 46.5 | |
| 36 | 42.8 | 47.0 | | 37 | 20.0 | 23.9 | |
| 37 | 20.6 | 24.4 | | 37 | 37.2 | 41.2 | |
| 37 | 37.8 | 41.9 | <i>" 30</i> | 37 | 47.3 | 51.3 | |
| 37 | 48.1 | 51.9 | <i>" 31</i> | 37 | <i>S.D.</i> | | |
| 38 | <i>S.D.</i> | | | 38 | 59.0 | 63.2 | |
| 38 | 59.6 | 63.8 | | 39 | 14.4 | 18.4 | |
| 39 | 15.0 | 18.8 | | 39 | 37.7 | 43.7 | |
| 39 | 40.2 | 44.3 | | 40 | 42.7 | 46.7 | |
| 40 | 43.4 | 47.0 | | 41 | 14.3 | 18.3 | |
| 41 | 14.9 | 18.9 | | 41 | — | 22.3 | |
| 41 | | 22.7 | | 41 | 40.7 | 44.7 | |
| 41 | 41.2 | 45.2 | <i>Catalogue</i> | 43 | — | 19.7 | |
| 43 | 16.2 | 20.6 | | 43 | 41.9 | 45.9 | |
| 43 | 42.3 | 46.3 | <i>N^o 40</i> | 44 | 6.6 | 10.5 | |
| 44 | <i>S.D.</i> | | | 44 | 22.5 | 26.3 | |
| 44 | 7.0 | 10.8 | | 44 | 32.0 | 36.1 | |
| 44 | 23.0 | 27.0 | | 46 | 16.5 | 20.6 | |
| 44 | 32.7 | 36.7 | | 46 | 56.3 | 60.2 | |
| 46 | 17.2 | 21.0 | | 48 | 8.8 | 12.8 | |
| 46 | 56.7 | 60.6 | <i>BC MR Lamber.</i> | 48 | 10.0 | 13.9 | |
| 48 | 9.3 | 13.5 | | 48 | 41.0 | 45.0 | |
| 48 | 10.5 | 14.3 | | 48 | 58.0 | 62.2 | |
| 48 | 45.7 | | <i>?</i> | 49 | <i>S.D.</i> | | |
| 48 | | 62.6 | | 49 | 58.0 | 62.0 | |
| 49 | 58.7 | 62.5 | <i>N^o 58</i> | 50 | 13.8 | 17.6 | |
| 50 | 14.5 | 18.3 | <i>51</i> | 50 | 35.8 | 39.8 | |
| 20 50 | 36.3 | 40.4 | <i>52</i> | 20 51 | 19.2 | 23.5 | |
| | | | <i>53</i> | | | | |

9.10 6 27
10.11 5 2
10 8 12

9.3

9.4 6 26
11 5 0
9.10 8 10

10.11 6 39
10 10 50
10.11 5 3

12 6 34
10.11 5 0

10.7 6 23
10 3 8
11.01 2 39
2 B

9.3

9.7 6 22
10 3 4
10.11 2 57 ns
2 B 1

10.7 6 35
10.7 5 16
10.11 3 39

11.12 6 34
11 5 18
12 3 39

10 4 4
9.10 3 2
10 B 9 16

9.5

10/11 4 1
9 2 58
9.10 9 14 ns 1st L.

8 1 25
11.12 5 49
11 8 6
B

Catalogue: 1st St 8.0

8 1 23
12.13 5 48 1 L.
12 8 3
B.

10.11 10 25
10 0 36
10 B 0 29

10/11 10 24
10 0 30
9.2 0 25

11 1 56
9.7 4 25
9.10 9 6

9.3

12 1 57
9.2 4 22
10 9 5

10 7 52
11 1
10.11 0 43

des. hor. Enamine Nire.
1 L. des. dondtuf

10 6 50 mms ns.
12 1 45
11 0 40
2 B 2 B

10.11 3 32
11 B 1 52 ns
10.11 4 33

11 3 29
10.6 1 47
10 4 30
11/12 10 22

| | | | | | | | | |
|-------|--------|------|-------------------|-------------------|-------|-------|------|----------|
| 52 | 14.0 | 17.8 | McLamb | N ^o 52 | 52 | 13.2 | 17.3 | |
| 53 | 17.8 | 21.8 | | | 53 | 17.4 | 21.3 | |
| 53 | 21.8 | 25.7 | | | | | | |
| 53 | 29.2 | 33.1 | McLamb | | 53 | 28.4 | 32.4 | |
| 53 | 50.6 | 54.8 | McLamb | | 53 | 50.2 | 54.1 | |
| 54 | 55.1 | 58.8 | | | 54 | 54.2 | 58.3 | |
| | D.D.D | | | | | B.B.D | | |
| 55 | 49.5 | 53.3 | | 60 | 55 | 48.9 | 52.8 | |
| 56 | 4.1 | 8.0 | examine | | 56 | 3.4 | 7.4 | |
| 57 | 1.8 | 6.0 | | | 57 | 1.3 | 5.3 | |
| 58 | 2.3 | 6.0 | | | 58 | 1.7 | 5.7 | 58 15.8? |
| 58 | 36.2 | 40.0 | McLamb | | 58 | 35.5 | 39.6 | |
| 58 | 54.0 | 57.8 | | | 58 | 53.3 | 57.3 | |
| 59 | 18.1 | 22.0 | | | 59 | 17.5 | 21.4 | |
| 20 59 | 56.2 | 60.1 | | | 20 59 | 55.7 | 59.8 | |
| 21 0 | 38.7 | 42.6 | | | 21 0 | 38.3 | 42.1 | |
| 1 | 30.5 | 34.5 | | | 1 | 29.8 | 33.8 | |
| 1 | 39.1 | 43.0 | | 70 | 1 | 38.5 | 42.4 | |
| 2 | 30.2 | 34.1 | | | 2 | 29.7 | 33.6 | |
| 2 | 41.8 | 45.7 | | | 2 | | | |
| 3 | 21.4 | 25.5 | | | 3 | 21.0 | 25.0 | |
| 3 | 44.7 | 48.7 | McLamb | | 3 | | | |
| 4 | 39.7 | 43.8 | | | 4 | 39.4 | 43.4 | |
| 5 | 4.4 | 8.6 | | | 5 | 4.0 | 8.0 | |
| 5 | 54.9 | 58.9 | | | 5 | 54.5 | 58.6 | |
| | D.D.D | | | | | D.D.D | | |
| 6 | [20.9] | 24.9 | | | 6 | 20.2 | 24.3 | |
| 6 | 37.8 | 41.8 | | | 6 | 37.5 | 41.2 | |
| 7 | 59.6 | 63.4 | | N ^o 80 | 7 | | | |
| 7 | 53.2 | 57.2 | | 81 | 7 | 53.0 | 57.0 | |
| 8 | 57.4 | 55.3 | | 82 | 21 8 | 50.8 | 54.8 | |
| 21 9 | 34.4 | 38.3 | | 83 | | | | |

| | | | | | | | |
|---------|----|----|---|-----|----------|-------|------------------------|
| 8.9 | 4 | 55 | <i>Comm. Catalogue</i> | 8.6 | 8.7 | 4 50 | orange-red |
| 10.11 | 3 | 4 | 2 L | | 11 | 3 4 | |
| 10 | 10 | | decolor Examine | | 10/11 | | |
| 7.8 | 4 | 13 | <i>Catalogue Lalonde</i> | 8.6 | 8.6 | 4 39 | |
| 8.9 | 5 | 12 | <i>Catalogue Lalonde</i> | 9.0 | 8.8 | 5 7 | |
| 10 B | 1 | 45 | | 9.5 | 9.3 | 4 42 | |
| | | DD | | | B. B. D. | | |
| 10.7 | 6 | 24 | [<i>Catalogue ?</i>] | | | 6 21 | |
| 9 B | 9 | 24 | <i>examine this star</i> | 8.3 | 7.4 | 9 21 | |
| 10.11 | 10 | 40 | bad B for first wire, beginning to be taken | | 11 | 10 39 | |
| 7 10.11 | 1 | 3 | | | 11 | 0 59 | (star not hot?) |
| 10 | 9 | 30 | | | 11 | 9 28 | |
| 9.10 | 5 | 53 | | | 10 | 5 49 | |
| 10.7 | 7 | 41 | | | 11 | 7 37 | |
| 10.11 | 4 | 24 | | | 12 | 4 22 | |
| 10.11 | 7 | 58 | | 9.5 | 10 | 7 58 | Another star within 2' |
| | | DB | | | | | |
| 9 | 1 | 18 | | 9.3 | 8.6 | 1 17 | |
| 11 | 0 | 58 | | | 11/12 | 0 53 | |
| 9 | 0 | 53 | L | 8.7 | 8.9 | 0 47 | |
| 10 | 10 | 48 | | | | | |
| 9.10 | 5 | 0 | <i>Catalogue</i> | 9.3 | 9.3 | 4 58 | |
| 9.7 | 11 | 6 | <i>Catalogue</i> | 9.3 | | | |
| 9.10 | 3 | 1 | | 9.5 | 10.11 | 2 58 | |
| 9 | 4 | 33 | <i>Catalogue</i> | 8.3 | 9. | 4 29 | red? |
| 9.10 | 1 | 0 | | | 10 | 0 57 | |
| | | D | | | B. | | |
| 10.11 | 0 | 26 | | | 11 | 0 23 | |
| 9.10 | 8 | 3 | | 9.5 | 9 | 8 2 | |
| 9 | 10 | 55 | <i>Catalogue</i> | 8.8 | | | |
| 9 | 4 | 57 | <i>Catalogue</i> | 8.5 | 8.2 | 4 57 | |
| 10 | 3 | 40 | | 9.5 | 10 | 3 39 | |
| 10.11 | 9 | 25 | decolorful | | | | |

| | | | | | | |
|----|--------|------|----------------|------------------|---------|------|
| 10 | 2.0 | 6.0 | No 84 | 21 10 | 1.6 | 5.6 |
| 10 | 38.0 | 39.1 | | 11 | | |
| 11 | 14.8 | 18.7 | | | | |
| 11 | 30.8 | 34.6 | El AR Lambi. | 11 | 30.3 | 34.1 |
| 12 | 23.7 | 27.6 | | | | |
| 12 | 33.8 | 37.4 | | | | |
| | 513.13 | | | | | |
| 14 | 5.1 | 9.2 | 90 | | | |
| 14 | 56.5 | 60.6 | 91 | | | |
| 15 | 43.6 | 47.4 | | 15 | 43.4 | 47.2 |
| 16 | 46.2 | 50.1 | Catalpa | 16 | 45.7 | 49.8 |
| 16 | 48.4 | 53.0 | Catalpa | 16 | 48.6 | 52.6 |
| 17 | 14.1 | 17.9 | | 17 | 13.7 | 17.7 |
| 17 | 26.3 | 30.7 | | 17 | 26.2 | 30.0 |
| 17 | 51.6 | 55.5 | | 17 | — | 55.2 |
| 19 | 5.7 | 9.5 | | 19 | 5.3 | 9.3 |
| 20 | 13.0 | 17.1 | | 20 | | |
| 21 | 37.9 | 41.8 | 100 | 21 | 37.3 | 41.2 |
| | 1513 | | | | 513.513 | |
| 22 | 28.0 | 29.3 | 19.3 11.00 101 | 22 | 28.1 | 29.1 |
| 22 | 51.4 | 55.0 | Catalpa 102 | 22 | 51.1 | — |
| 23 | 51.0 | 57.8 | 116.7 3 1/1 | | | |
| 24 | 30.3 | 34.3 | | 24 | 30.0 | 33.8 |
| 25 | 8.8 | 13.1 | | 25 | 8.7 | 12.8 |
| 25 | 36.0 | 39.9 | | 25 | 35.7 | 39.6 |
| 25 | 58.3 | 62.2 | No 107 | 21 25 | 57.7 | 61.7 |

10 1 46

107 2 59

10.11 6 35

comp n.p. 10" dia

12. but lat

11 258

6

Cloud

10 5 23

9.3

519

107 4 10

10 10 36

BBB

Seeing getting pretty bad

9.10 6 35

9.5

634

AR lat. Clouds
signals

10.11 6 50

1103 10 5

10 4

9 5 45

8.2

543

97 2 4

9.3

23

ns.

10.11 1 2

9.5

12

10.7 9 1

93

10.11 4 4

42

1st L.

10.11 4 54

454

9.10 5 30

9.5

11.12 faint neb.

10.11 4 52

Examine

450

ns.

BBB

500

1103 5 54

557

false B

9 0 29

ns. Catalogue

8.8

027

2nd.

10.11 3 41

9.7 4 25

9.3

424

9.10 9 0

859

9.10B 4 7

see wire 5.1 too soon

43

10 4 52

451

Begin at 21 24 30 +1° 4' 14".cal

| | | | | | | |
|----|----|-------|----|----|------|-----|
| 21 | 36 | 22.51 | +1 | 10 | 24.9 | 8.4 |
| 43 | | 2.35 | | 7 | 48.1 | 9.0 |
| 57 | | 45.19 | | 6 | 25.6 | 8.7 |
| 56 | | 37.17 | | 6 | 53.1 | 8.4 |
| 59 | | 27.89 | | 10 | 38.6 | 8.5 |
| 22 | 18 | 10.33 | | 10 | 43.1 | 9.0 |

Probably in Ct. I.

| | | | | | | | |
|---------------|---|------------------|---|---------------|------|------------------------|------------------------|
| 23 | | 35.29 | | 9 | 5.4 | Baily | 9.0 |
| 23 | | 39.82 | | 8 | 21.3 | Baily | 9.0 |
| 26 | | 45.18 | | 8 | 58.9 | | 8.0 |
| 38 | | 22.44 | 1 | 1 | 51.6 | | 8.8 |
| 40 | | 19.63 | | 4 | 7.2 | R. | 9.0 |
| 40 | | 27.94 | | 10 | 42.4 | Baily | 8.5 |
| 41 | | 50.52 | | 10 | 23.2 | examine for this stat. | examine for this stat. |
| 44 | | 39.86 | | 2 | 55.1 | examine for this stat. | examine for this stat. |
| 46 | | 49.01 | | 6 | 41.6 | | 8.0 |
| 58 | | 34.37 | | 1 | 23.2 | | 8.5 |
| 23 | 2 | 30.76 | | 10 | 54.3 | | 8.3 |
| 4 | | 35.10 | | 11 | 20.3 | | 9.2 |
| 20 | | 39.26 | | 7 | 39.7 | | 9.0 |
| 31 | | 20.95 | | 20 | | | |

1862

Jan 31.

Observed also Dec 12 1862
and Jan 17 1863

For catalogues stars see 12 pages back.

| | | | |
|----|----|-------|------|
| 23 | 24 | 19.7 | 23.7 |
| | 27 | 29.7 | 33.3 |
| | 28 | 42.7 | 46.6 |
| | 29 | 20.5 | 24.5 |
| | 31 | 18.9 | 23.0 |
| | 33 | 8.0 | — |
| | 33 | — | 13.2 |
| | 33 | 42.1 | 46.0 |
| | 34 | 57.2 | — |
| | | 03. | |
| | 35 | 21.6 | 25.7 |
| | 35 | 36.2 | 40.0 |
| | 36 | 31.0 | 35.0 |
| | 37 | 7.7 | 11.7 |
| | 38 | 0.2 | 4.2 |
| | 38 | 19.4 | 23.6 |
| | 38 | — | 26.8 |
| | | 8.8.8 | |
| | 39 | 10.3 | 14.4 |
| | 40 | 39.8 | 43.6 |
| | 40 | 44.9 | 48.8 |
| | 41 | 36.2 | 40.3 |
| | 42 | 7.9 | 11.9 |
| | 42 | 20.9 | 24.8 |
| 23 | 42 | 47.5 | 51.4 |

Dec +1° ¹⁰20' to 1° ²⁰30'

| | | | | |
|--------|------|----|---------|------|
| 8.9 | 4 | 4 | | 8.5 |
| 11 | 7 | 4 | ns | |
| 9.7 | 8 | 21 | | 9.0 |
| | 9 | 50 | | 6.8 |
| 9.10 | 5 | 49 | | 9.4 |
| 10 | 0 | 44 | 2L | |
| 10.3 | 10 | 36 | 1Le, ns | |
| 10 | 5 | 17 | | 9.5 |
| 10.11 | 9 | 38 | 2Le | |
| | B | | | |
| 10.7 | 4 | 26 | | |
| 10.11 | 3 | 19 | | |
| 10.7 | 3 | 57 | | 9.5? |
| 10.11 | 3 | 12 | | |
| 9 | 9 | 7 | | 8.5 |
| 10.11 | 4 | 2 | | |
| 11 | 4 | 16 | 1Le | |
| | 20.2 | | | |
| 9.10 | 9 | 12 | | 9.3 |
| 9.10.7 | 5 | 26 | | 9.5 |
| 11 | 6 | 4 | ns | |
| 10 | 5 | 27 | | |
| 10.11 | 5 | 52 | | 9.5 |
| 10.7 | 6 | 37 | | 9.3 |
| 10 | 5 | 35 | | 9.3 |

1862

Jan 31.

For cataloger stars see 12 pages back.

Observed also Dec 12 1862
and Jan 17 1863

| | | | |
|----|----|--------|------|
| 23 | 27 | 19.7 | 23.7 |
| | 27 | 29.7 | 33.3 |
| | 28 | 42.7 | 46.6 |
| | 29 | 20.5 | 24.5 |
| | 31 | 16.9 | 23.0 |
| | 33 | 8.0 | — |
| | 33 | — | 13.2 |
| | 33 | 42.1 | 46.0 |
| | 34 | 57.2 | — |
| | | B. | |
| | 35 | 21.6 | 25.7 |
| | 35 | 36.2 | 40.0 |
| | 36 | 31.0 | 35.0 |
| | 37 | 4.2 | 11.7 |
| | 38 | 6.2 | 4.2 |
| | 38 | 19.4 | 23.6 |
| | 38 | — | 26.8 |
| | | S.S.S. | |
| | 39 | 10.3 | 14.4 |
| | 40 | 39.8 | 43.6 |
| | 40 | 44.9 | 48.8 |
| | 41 | 36.2 | 40.3 |
| | 42 | 7.9 | 11.9 |
| | 42 | 40.9 | 44.8 |
| 23 | 42 | 47.5 | 51.4 |

Dec +10¹⁰ 20' to 10²⁰ 30'

| | | | | |
|--------|----|----|---------|------|
| 8.9 | 4 | 4 | | 8.5 |
| 11 | 7 | 4 | ns | |
| 9.7 | 8 | 21 | | 9.0 |
| | 9 | 50 | | 6.8 |
| 9.10 | 5 | 49 | | 9.4 |
| 10 | 0 | 44 | 2L | |
| 10.3 | 10 | 36 | 1Le, ns | |
| 10 | 5 | 17 | | 9.5 |
| 10.11 | 9 | 38 | 2Le | |
| | B | | | |
| 10.7 | 4 | 26 | | |
| 10.11 | 3 | 19 | | |
| 10.7 | 3 | 57 | | 9.5? |
| 10.11 | 3 | 12 | | |
| 9 | 9 | 7 | | 8.5 |
| 10.11 | 4 | 2 | | |
| 11 | 4 | 16 | 1Le | |
| | 22 | | | |
| 9.10 | 9 | 12 | | 9.3 |
| 9.10.7 | 5 | 26 | | 9.5 |
| 11 | 6 | 4 | ns | |
| 10 | 5 | 27 | | |
| 10.11 | 5 | 52 | | 9.5 |
| 10.7 | 6 | 37 | | 9.3 |
| 10 | 5 | 35 | | 9.3 |

| | | | |
|-------|-----------------|------|-----|
| 43 | 43 | 4.1 | 8.1 |
| 43 | 57.2 | 55.0 | |
| 46 | 0.6 | 4.6 | |
| 46 | 34.6 | 38.5 | |
| 46 | 55 | 55.0 | |
| 47 | 39.1 | 43.1 | |
| 47 | 52.0 | 56.1 | |
| 49 | 20.4 | 24.2 | |
| 49 | 47.3 | 51.2 | |
| | 13.13 | | |
| 50 | 58.6 | 60.5 | |
| 51 | 22.6 | 26.6 | |
| 53 | 8.7 | 12.6 | |
| 53 | 28.3 | 32.1 | |
| 53 | 42.0 | 46.0 | |
| 54 | 18.7 | 19.7 | |
| 55 | | | |
| 55 | 31.1 | 35.1 | |
| 55 | 36.8 | 40.9 | |
| 56 | 12.2 | 14.4 | |
| 56 | 35.3 | 39.1 | |
| 57 | 2.7 | (-) | |
| 57 | 55.8 | 59.9 | |
| 58 | 1.3 | 5.2 | |
| 23 59 | 35.9 | 39.9 | |
| 0 0 | 20.3 | 27.1 | |
| 0 | 31.6 | 31.6 | |
| 0 | 45.4 | 49.4 | |
| 0 1 | 36.4 | 40.4 | |

| | | | | |
|----|---|----|-----------|-----|
| 97 | 1 | 51 | Catalogue | 8.8 |
| | | B2 | | |

| | | | | |
|----|----|----|--|--|
| 11 | 10 | 25 | | |
|----|----|----|--|--|

| | | | | |
|-----|---|---|---------|--|
| 7.8 | 9 | 2 | Salpide | |
|-----|---|---|---------|--|

| | | | | |
|-------|---|----|--|--|
| 10.11 | 3 | 45 | | |
|-------|---|----|--|--|

| | | | | |
|----|---|----|----|--|
| 11 | 7 | 46 | 12 | |
|----|---|----|----|--|

| | | | | |
|------|---|---|--|--|
| 1103 | 5 | 0 | | |
|------|---|---|--|--|

| | | | | |
|-----|---|----|--|--|
| 117 | 7 | 37 | | |
|-----|---|----|--|--|

| | | | | |
|-----|---|----|--|--|
| 117 | 1 | 30 | | |
|-----|---|----|--|--|

| | | | | |
|------|---|----|--|--|
| 1103 | 2 | 13 | | |
|------|---|----|--|--|

| | | | | |
|--|--|------|--|--|
| | | B3B3 | | |
|--|--|------|--|--|

| | | | | |
|-------|---|----|--|--|
| 10.11 | 2 | 28 | | |
|-------|---|----|--|--|

| | | | | |
|----|---|--|-----------------------------------|-----|
| 11 | — | | n.s. double, a 9% 11 mag. IR obs. | 9.3 |
|----|---|--|-----------------------------------|-----|

| | | | | |
|-------|---|----|--|--|
| 11.12 | 9 | 12 | | |
|-------|---|----|--|--|

| | | | | |
|-------|---|----|--|--|
| 10.11 | 0 | 52 | | |
|-------|---|----|--|--|

| | | | | |
|----|---|----|-----------|-----|
| 10 | 6 | 37 | Catalogue | 9.5 |
|----|---|----|-----------|-----|

| | | | | |
|-------|---|----|--|--|
| 10.11 | 2 | 36 | | |
|-------|---|----|--|--|

| | | | | |
|-------|---|----|---------|--|
| 10.11 | 5 | 57 | AR lost | |
|-------|---|----|---------|--|

| | | | | |
|------|---|----|--|--|
| 1103 | 5 | 15 | | |
|------|---|----|--|--|

| | | | | |
|--------|---|----|--|--|
| 10.117 | 3 | 29 | | |
|--------|---|----|--|--|

| | | | | |
|-------|---|----|--|--|
| 11.12 | 7 | 25 | | |
|-------|---|----|--|--|

| | | | | |
|-----|---|----|--|--|
| 107 | 7 | 41 | | |
|-----|---|----|--|--|

| | | | | |
|-----|---|----|----------------|--|
| 117 | 9 | 33 | su. wire wrong | |
|-----|---|----|----------------|--|

| | | | | |
|-------|---|----|--|--|
| 10.11 | 6 | 56 | | |
|-------|---|----|--|--|

| | | | | |
|-------|---|---|----------------|--|
| 11.12 | 7 | 8 | n.s. (double?) | |
|-------|---|---|----------------|--|

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|----|---|----|--|--|
| 10 | 9 | 52 | | |
|----|---|----|--|--|

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|----|---|----|-----------|-----|
| 11 | 8 | 34 | du double | 9.5 |
|----|---|----|-----------|-----|

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| 11 | 10 | 12 | 12 | |
|----|----|----|----|--|

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|-----|---|---|--|--|
| 117 | 7 | 9 | | |
|-----|---|---|--|--|

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|-----|---|----|--|--|
| 117 | 9 | 31 | | |
|-----|---|----|--|--|

1 45.8 49.8

2.13

2 45.5

2 57.6 61.5

3 36.6 40.5

3 44.2 48.3

5 35.8 39.8

6 1.0 5.1

7 10.1 14.0

8 5.6 9.6

D

10 29.9 33.8

11 2.0 6.0

Ink failed

37

38

42

49

56

50 58

69

71

1103 3 38

203

10 6 27 2L

10.11 4 36

9 6 50

10.11 8 5

7.8
(9.5?)

10.11 7 30

107 5 16

11 7 11

1103 6 6

2.

10 2 17

9.3

11 6 20

9.107 3 45

9.3

11 1 20

117 1 28

1103 8 7

11 8 35

10.11 1 19

9.10 10 42

117 2 2

9.1030 45

11.12 8 51

10 3 42

97 7 0

8.8

Arg +1° 69

10.1103 10 5

9 9 23 dir Comp 12 n/s, dir 25° 9.4

Arg +1° 71

10.11⁴ 6 29 neb. free 7' and 3' north

1103 8 0

1103 7 41

R 0° 23' 6" Dec +1° 16' 4"
Nebula = h. 26

11.12 2 25

B

10.11 4 56

10 0 38

11 9 39

10.11 9 32

10.11 8 32 2L

10.11 5 5

10.13 9 43

2D

10.7 9 39

11.13 9 36

9.7 8 11

10.11 10 3

10.11.75 42

10.11.7 6 45

9.13 7 26

10 4 50

10.11 5 37

11.13 10 22

10 9 38 1L

9.10.13 2 26

11.13 6 13

10.11 3 36

9.10.75 36

9.10 5 45

9.10 3 46

11.7 5 30

10 6 35

Series 1° 0' - 1° 20' (in this book)

| | | | | | |
|---------------|--------------------|---------------|-----------------|----|---------------------------------|
| 1861 Sept. 24 | N ^o 203 | 18 58 - 20 29 | 1° 10' - 1° 20' | S. | Continued from last vol. |
| Oct. 29 | N ^o 205 | " " | " " | " | |
| 1861 Sept. 28 | N ^o 204 | 19 7 - 20 25 | 1 0 - 1 10 | S. | Spring ground stopped. |
| Dec. 3 | 207 | 19 7 - 20 25 | 1 0 - 1 10 | S. | |
| 1861 Oct. 31 | N ^o 206 | 20 26 - 22 0 | 1 10 - 1 20 | S. | Very good evening. |
| 1862 Sept. 27 | 213 | 20 26 - 22 0 | 1 10 - 1 20 | B. | |
| ✓ 1861 Dec. 5 | N ^o 208 | 21 58 - 23 29 | 1 10 - 1 20 | S. | |
| 1862 Oct. 30 | " 215 | | | B. | |
| 1862 Jan. 3 | N ^o 209 | 20 21 - 21 25 | 1 0 - 1 10 | S. | Wind rose, lying grew very bad. |
| Sept 29 | - 214 | 20 21 - 21 25 | 1 0 - 1 10 | B. | Clouded up at end. |
| 1862 Jan. 21 | | 23 27 0 11 | 1 10 1 20 | | |

Zones N^o 210, 211, 212 are contained in book 12.
N^o 216 - " 11².

Zero of Position

| | | |
|----------|----------|----------------------|
| Sept. 28 | 262° 42' | |
| Oct. 3 | 48 | |
| " 31 | 47 | |
| " 29 | 50 | |
| Dec. 4. | 262 46 | |
| Jan 2 | 262 44 | H. A. 3 ⁴ |
| Sept. 27 | 262 46 | Kine heard |
| 29 | - 52 | " |

Differences between wires from 6.0

from 177.178 - 193 to 198 - 204

| | | | | | | | | |
|-----|-------------|--------------|------|----------------------|-----------------|--------|------|------|
| 0.0 | 567 | | | 9.84160 ⁰ | 0.6945 | 0.3605 | 530 | 567 |
| 0.1 | 712 | 7.12 | | 0.3877 ¹ | 2.083 | 0.8600 | 1235 | 1279 |
| 0.2 | 161 | 6.44 | | 0.54062 ² | 3.472 | 0.9808 | 1442 | 1440 |
| 0.3 | 23 | 2.07 | | 0.68675 ³ | 4.86 | 0.9990 | 1469 | 1463 |
| 0.4 | 7 | 1.12 | | 0.79589 ⁴ | 6.25 | | 1470 | 1470 |
| | <u>1470</u> | <u>16.75</u> | Day. | 1.22605 | | | | |
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Δ 1.22601
 Δ 3.16232
 Δ 8.05669
 Δ 9.02824
 Δ 8.85732

Prob. Error of one appulse 0.0509

Prob. Difference

Add sum to 5:

| | | |
|-----|--------|---------|
| 0.0 | 607 | |
| 0.1 | 767 | 767 |
| 0.2 | 147 | 746 |
| 0.3 | 31 | 279 |
| 0.4 | 9 | 144 |
| | 1621 | 1638 |
| | 32098 | 12874 |
| | 0.0225 | 8.0726 |
| | 12 | 9.02824 |
| | | 9.6808 |
| | | 8.7196 |
| | | 8.8701 |

Prob. Error + 0.0524

9794

| | | |
|-------|--------|-----|
| 0.684 | 0.480 | 778 |
| 2.462 | 0.466 | |
| 4.770 | 0.9986 | |
| 6.674 | | |

Passing

Bright stars scarce

1 117 6 18

2 9 10 7

3 ¹¹ 1 1 0

4 ¹¹⁰ 2 44

D

1861phae.proj..234S