

KG
11365
217

K.7

Wones

No. 7

From
March 16th 1853 to

@

KG-11365.017

KG 11865, 217

1853 March 16th

Zone 40

Feb E of pier

W H 1.20.1
 9.40
 8.20

EC 7.36.00 Ba 30.270-64 Et 22.5
 9.40.00 30.320-68 21.1

Zero of 12.5 90° 01' 38"
 und 90.04.00

Clear Calm & fine



6.17.10.5 14.3 — 6.17.14.40

17.44.1 48.2 17.48.15

18.17.6 21.5 18.21.55

18.41.0 45.1 18.45.05

18.53.1 57.2 18.57.15

19.11.10.5 36.7 19.36.70

B

20.58.2 — 20.02.20

21.16.0 19.8 21.19.90

21.24.1 28.0 21.28.05

21.50.0 44.0 21.54.00

22.17.0 20.9 22.20.95

22.41.7 45.7 22.45.70

22.55.9 59.8 22.59.85

23.3.2 7.2 23.07.20

D

23.24.1 28.0 23.28.05

23.42.7 46.7 23.46.70

24.9.0 13.2 24.13.10

24.41.1 45.2 24.45.15

24.49.3 53.4 24.53.35

25.1.0 5.0 25.05.00

25.14.9 18.8 25.18.85

26.6.2 — 26.10.20

26.9.7 13.7 26.13.70

26.31.1 35.2 26.35.15

26.40.6 44.6 26.44.60

26.53.3 57.3 26.57.30

B B

W 589

Zone 40

R 6^h 15^m to 0^h 10^m
 8^h 20^m to 0^h 20^m

10. 3.16

12. 8.19

11. 10.08

12. 8.36

12. 9.59

x 8. 3.10 same

B

12 2.08

7 3.07

12 6.00

10 7.35

12 9.00

12 0.32

11 0.26

12 7.18

D

12 6.15

12 4.09

12 9.00

x 12 0.47

12 8.24

12 0.42

11 0.40

11-12 4.52

11-12 8.36

11 2.12

12 7.02

9-10 8.54

13.03

~~10.08~~ 8

Comp 13 7^m n p

2 wire lost

comp 13 13^m s h

2 wire lost
 no sig

6..27..16.0	20.1	6..27..20.05
27..54.2	58.2	27..58.20
28..7.0	—	28..11.00
28..11.3	15.2	28..15.25
28..26.9	30.9	28..30.90
29..10.6	14.5	29..14.55
29..35.5	39.5	29..39.50
29..52.6	56.5	29..56.55
30..4.9	—	30..08.90
30..11.6	15.4	30..15.50
BB		
30..37.9	41.9	30..41.90
30..59.8	3.7	31..03.75
31..17.7	21.6	31..21.65
31..34.8	—	31..38.80
31..44.1	48.1	31..48.10
32..9.8	13.8	32..13.80
32..39.2	43.1	32..43.15
32..59.4	3.5	33..03.45
33..14.7	—	33..18.70
33..19.0	—	33..23.00
33..23.1	27.0	33..27.05
33..54.5	58.5	33..58.50
34..15.0	—	34..19.00
34..21.6	the wine	34..25.60
34..24.6	28.6	34..28.60
34..55.2	59.1	34..59.15
BB		
35..20.5	—	35..24.50
35..29.6	33.4	35..33.45
35..41.4	45.4	35..45.40
36..18.0	—	36..22.00
36..30.3	—	36..34.30
36..33.8	37.7	36..37.75
36..48.6	52.6	36..52.60
36..54.2	58.2	36..58.20

11 9.56
 11 1.32
 10/11 6.56
 11 6.10
 12 8.14
 11 9.58
 11-12 2.56
 12 10.02
 12 7.46
 12 8.37
 13
 9-10 3.03
 12 5.07
 9-10 6.84
 12 8.52
 9 4.25
 10 0.10
 12 7.00
 12 6.21
 9 6.20
 10 4.55
 10 7.07
 10-11 2.20
 12 5.06
 11 4.14
 10 3.00
 12 1.42
 13.13
 12 1.40
 9 2.02
 10 -0.06
 12-13 5.47
 11 8.26
 10/11 2.34
 11 3.00
 9 7.28

2 win lost

2 win lost

2 win lost

 2 lost
 2 lost

com m f 4"2 lost

2 lost
yellowish
 2 lost
 2 lost

m 24

6..37..05.5 9.4 ~ 6..37..09.45

37..58.3 —

38..02.30

38..01.5 5.5

38..05.50

38..2.8 6.7

38..06.78

BDB

38..32.7 36.7

38..36.70

38..40.8 44.8

38..44.80

38..53.4 57.5

38..57.45

38..54.9 58.9

38..58.90

39..33.7 37.8

39..37.75

39..50.0 53.9

39..53.95

B

40..7.6 ~~11.6~~

40..11.60

40..11.6 15.4

40..15.45

40..14.9 18.8

40..18.85

40..58.9 2.8

41..02.85

41..7.1 11.0

41..11.05

41..18.3 22.3

41..22.30

41..21.7 25.6

41..25.65

41..32.0 36.0

41..36.00

41..37.1 41.2

41..41.15

41..48.8 51.8

41..51.80

42..1.7 5.7

42..05.70

X 42..10.0 14.0?

42..14.00

DB

42..36.6 40.5

42..40.55

42..46.1 50.0

42..50.05

42..53.0 57.0

42..57.00

43..7.3 11.3

43..11.30

43..17.5 21.6

43..21.55

43..31.0 34.9

43..34.95

43..39.2 43.3

43..43.28

43..57.4 1.3

44..01.35

44..8.0 12.0

44..12.00

D

10 8.30
 12 5.28
 11 7.40
 11 3.34
 13 3.13

2 lost
 no sig
 no sig

12 5.02
 9 10 5.10
 11 5.28
 11 4.24
 11 2.28
 11 3.35

Oct. 5
 1874
 (2.26)

no sig

11 5.13
 12 3.00
 10 11 1.50

no doubt ought to be
 changed

great numbers & lost
 of stars pass
 unobs

no sig
 no sig

11 0.07
 11 1.11
 12 6.20
 12 4.04
 10 5.06
 11 1.10
 12 8.25
 11 0.57
 12 6.41

no sig

13
 8.9 8.11
 11 9.31
 11-12 1.30
 11-12 4.50
 12 7.06
 11 3.05
 12 0.23
 10-11 3.12
 11 2.36

(6.30 adphed. Oct 5th 1874)

About one
 quarter of the
 stars obs.

no sig

None 40

6..44..37.9	41.8 ~ 6..44..41.85
44..50.7	54.6 44..54.65
44..53.0	56.9 44..56.95
45..21.0	25.0 45..25.00
45..40.2	44.2 45..44.20
45..46.5	50.3 45..50.40
46..2.7	6.7 46..06.70
46..11.8	15.6 46..15.70
46..25.2	29.2 46..29.20
46..50.2	54.2 46..54.20
47..3.6	7.6 47..07.60
47..11.3	15.3 47..15.30
47..20.9	24.9 47..24.90
47..30.3	34.3 47..34.30
47..39.5	43.3 47..43.40
47..57.0	1.0 48..01.00
48..11.6	13.6 48..15.60
48..24.7	28.6 48..28.65
48..27.2	31.2 48..31.20

B

48 49.9	—	48..53.90
48 51.0	—	48..55.00
48 57.1	1.0	49..01.05

L.D.

50..10.8	14.8	50..14.80
50..17.0	20.9	50..20.95
50..48.6	52.5	50..52.55
50..49.2	53.1	50..53.15
50..57.7	1.7	50..01.70
52..00.4	4.5	52..04.45
52..25.4	29.3	52..29.35
52..37.5	41.6	52..41.55
52..46.2	50.1	52..50.15
52..55.2	59.5	52..59.25
53..16.1	20.0	53..20.05
53..24.5	28.4	53..28.45
53..39.4	43.3	53..43.35

Wone 40

12 2.52

11 1.25

11 0.52

12 -0.12

12 1.59

11-12 3.04

11 2.30

11-12 -0.28

12 9.23

12 6.18

12 6.23

12 2.02

12 0.50

11-12 8.13

12 7.54

12 6.29

12 8.45

12 2.20

13 3.29

03

12 3.46

5.14

9.1 7.36

12 6.51

9 3.58

12 0.03

9. 0.29

9 7.20

12 10.18

10 5.30

8 7.06

12 6.30

11 8.52

12 9.50

12 3.02

8 2.52

no ej

n 0.5

(-)

n ej

2 lost

n ej

6..54.01.0 5.0 ~ 6.. 54.. 05.00

54.01.2 5.2 54.. 05.20

54.24.8 28.9 54.. 28.85

B.B.D.

55.17.5 21.4 55.. 21.45

55.25.9 29.9 55.. 29.90

55.44.2 48.2 55.. 48.20

56.49 8.8 56.. 08.85

56.55.5 9.5 56.. 09.50

56.22.4 26.5 56.. 26.45

56.31.7 35.7 56.. 35.70

56.47.0 51.0 56.. 51.00

D.B.

57.20.7 24.6 57.. 24.65

58.14.0 17.9 58.. 17.95

58.31.2 35.2 58.. 35.20

58.47.4 51.5 58.. 51.45

58.58.6 — 59.. 02.60

59.8.5 12.5 59.. 12.50

59.11.2 15.2 59.. 15.20

59.25.2 29.2 59.. 29.20

59.38.9 42.8 59.. 42.85

59.51.1 — 59.. 58.10

6 59.53.5 57.6 59.. 57.55

D.D.

7.. 00.25.2 29.1 ~ 7.. 00.29.15

0.. 30.5 34.5 00.. 34.50

B

1.. 15.6 19.6 1.. 19.60

1.. 24.9 28.9 1.. 28.90

1.. 32.6 36.4 1.. 36.50

1.. 42.5 46.5 1.. 46.50

2.. 2.2 6.2 2.. 06.20

2.. 3.5 7.5 2.. 07.50

2.. 49.2 53.1 2.. 53.15

3.. 3.2 7.3 3.. 07.35

3.. 24.4 28.4 7.. 3.. 28.40

11 8.22

10 8.44

12 10.36

B B D

12,13 9.23

11-12 3.57

12 6.59

8 8.36

13 8.06

= 11 10.23

9 2.32

11 19.59

D B

12 3.29

10 2.33

12 0.52

12 1.31

11-12 3.06

10 7.42

11 5.53

12 3.47

12 4.26

12 1.25

12 3.25

42 DD

9-10 4.16

11 2.23

10 B

9 4.25

11 6.12

11-12 3.03

11-12 6.22

12 4.32

12 2.15

12 3.13

12 1.37

12 0.34

12 0.34

12 0.34

12 0.34

12 0.34

no - no sig

2 best

my

2 best
2 best

no

7..03.269 31.0 — 7..03..30.95

3..56.3 0.3 4..00.30

4..3.0 6.9 4..06.95

4..^{29.0}~~29.0~~ 28.0 4..28.00

4..32.0 36.1 4..36.05

4..53.2 57.2 4..57.20

4..56.6 0.5 5..00.55

B

5..25.4 29.5 5..29.45

5..41.0 44.9 5..44.95

5..46.8 50.8 5..50.80

5..57.9 1.9 6..01.90

5 — 5.9 6..05.90

6..19.5 23.4 6..23.45

6..26.7 30.8 6..30.75

~~6..34.8 58.9~~ *circum broken - doubtful*

6..^D 00.3 7 00.3

7..27.1 30.1 7..31.10

7..40.2 44.2 7..44.20

7..58.9 2.8 8..02.85

8..23.9 28.0 8..27.95

8..31.0 35.0 8..35.00

8..54.5 58.5 8..58.50

9..5.0 9.0 9..09.00

9..25.0 28.9 9..28.95

9..27.0 30.9 9..30.95

9..38.8 42.7 9..42.75

9..48.2 52.1 9..52.15

10..4.3 8.2 10..08.25

10..06.8 10.9 10..10.85

10..37.9 ~~37.9~~ 10..41.90

10..41.9 46.9 10..45.90

12..02.1 05.9 11..06.00

D B

11..19.2 23.1 11..23.15

11..51.1 55.0 11..55.05

12..00.7 4.6 12..04.65

11-12	9.56	no
12	3.05	
11	9.58	
12	1.15	
11	9.56	
12	4.47	
12	0.12	no
12	5.51	
12	4.03	
12	4.17	no
12	-0.21	
11	-0.20	1 lost no
11	7.33	
10	8.19	
12	1.44	
11	10.03	
9	2.01	
12	-0.26	
10	4.02	
11	3.12	
12	1.53	
12	7.34	
12	0.02	
10	1.42	no
12	1.50	
12	1.36	
9	1.48	
12	7.36	no
12	2.02	2 lost
12	1.53	no
10	7.34	
9	10.47±	
11	6.04	
12	5.33	

7.12.15.4	—	7.12.19.40
12.23.5	2	12.27.50
12.26.9	—	12.30.90
12.34.0	39.9	12.37.95
12.40.7	44.4	12.44.55
13.23.5	27.5	13.27.50
13.33.7	37.5	13.37.60
13.45.5	49.4	13.49.45

B

14.5.6	—	14.09.60
14.7.7	—	14.11.70
14.8.7	12.6	14.12.65

D

14.31.0	34.9	14.34.95
14.53.1	56.9	14.57.00
15.4.5	8.5	15.08.50
15.16.8	20.9	15.20.85
15.20.0	23.9	15.23.95
16.43.3	47.2	16.47.25
16.10.0	14.0	16.14.00
16.34.2	38.2	16.38.20
16.47.6	51.5	16.51.55
17.7.1	11.0	17.11.05
17.26.0	30.0	17.30.00
17.35.1	39.0	17.39.05
17.48.6	52.6	17.52.60
18.2.0	5.9	18.05.95
18.39.2	43.1	18.43.15
18.53.0	56.9	18.56.95
19.4.1	8.1	19.08.10

DBD

19.29.0	32.9	19.32.95
19.42.7	46.6	19.46.65
19.55.7	59.8	19.59.75
20.5.0	9.0	20.09.00
20.19.8	23.8	20.23.80

12 8.10
 11 4.13
 10 2.38
 9 4.58
 11 5.02
 11 8.19
 9-10 7.34
 11 1.32

2 lost
 2h
 2h ms

12 4.46
 11-12 1.03
 11 8.23

2 lost
 2 lost

12 2.01
 12 10.25
 11-12 4.20
 12 2.13
 12 5.28
 12 8.08
 10 7.38
 12 4.49
 12 6.18
 12 -0.18
 11 4.37
 12 2.47
 12 2.11
 11 8.27
 12 3.13
 12 1.20
 12 2.20
 8.38

ms

12 2.10
 12 9.19
 12 4.06
 12 8.44
 12 6.10

7..20.38.3 42.3 — 7..20..42.30

20..47.6 51.7 20..51.65

21..11.2 15.2 21..15.20

21 19.4 23.5 21..23.45

B

21..31.6 35.5 21..35.55

21..53.3 57.2 21..57.25

21..55.9 59.8 21..59.85

22..27.9 31.8 22..31.85

22..41.4 45.3 22..45.35

22..47.6 51.6 22..51.60

22..59.2 3.2 23..03.20

23..16.3 20.2 23..20.25

23..18.3 22.2 23..22.25

23..49.6 53.7 23..53.65

24..22.2 26.3 24..26.25

24..56.7 00.6 25..00.65

24 — 3.2 25..03.20

25..35.2 39.3 25..39.25

25..42.7 46.6 25..46.65

25..43.7 48.8 25..47.75

B

26..13.0 — 26..17.00

26..17.0 20.9 26..20.95

26..30.7 34.7 26..34.70

27..18.7 22.7 27..22.70

27..27.0 31.6 27..31.05

27..29.8 33.8 27..33.80

27..39.2 43.2 27..43.20

DB

28..3.1 7.0 28..07.05

28..11.2 15.3 28..15.25

28..27.5 ~~32~~ 28..31.50

28..32.3 — 28..36.30

28..36.5 — 28..40.50

28..47.0 50.9 28..50.95

28..56.6 00.6 29..00.60

12 9.53
 12 4.36
 11 7.05
 11-12 5.19

B

12 7.43
 12 9.26
 12 3.40
 11 1.08
 11 2.53
 11 4.04
 11-12 10.23

12 3.58
 11 3.36

12 3.13

12 1.38

12 9.33

11 0.04

11-12 8.53

12 7.09

12 7.42

B

10 10.17

11 7.00

11-12 10.14

12 0.10

12 7.23

12 7.40

10 0.11

B

12 3.36

12 1.03

12 5.11

9 5.43

9 1.15

11 3.51

10 3.27

no

no

no

no

1 run lost

2 lost

no

2 lost

DB

7., 29., 14.9	18.9	7., 29., 18.90
29., 22.4	26.4	29., 26.40
29., 25.9	33.9	29., 33.90
<u>29., 59.3</u>	<u>3.2</u>	<u>30., 03.25</u>
<u>30., 04.1</u>	<u>8.2</u>	<u>30., 08.75</u>
30., 38.6	42.5	30., 42.55
30., 47.7	51.7	30., 51.70
30., 56.9	00.8	31., 00.85
31., 15.0	19.0	31., 19.00
31., 31.5	35.5	31., 35.50
31., 43.6	47.6	31., 47.60
32., 10.4	14.4	32., 14.40
32., 17.7	21.5	32., 21.60
32., 40.9	44.9	32., 44.90
32., 41.2	45.1	32., 45.15
33., 00.0	3.9	32., 03.95
33., 14.9	18.8	33., 18.85
33., 30.1	34.1	33., 34.10
33., 31.2	35.2	33., 35.20

B

33., 57.2	55.2	33., 55.20
33., 53.8	57.7	33., 57.75
34., 14.5	18.4	34., 18.45
34., 37.3	41.2	34., 41.25
34., 41.8	45.9	34., 45.85
34., 52.9	57.0	34., 56.95
35., 11.3	15.3	35., 15.30
35., 12.2	16.1	35., 16.15
35., 25.1	29.0	35., 29.05
35., 26.0	29.8	35., 29.90
35., 39.0	42.9	35., 42.95
35., 47.1	47.1	35., 47.10
36., 10.0	13.9	36., 13.95

DDDB

Zone 40

8/3

12	3.52
12	2.11
11	2.25
12	2.51
11	4.36
11	8.26
10	4.45
12	10.18
11	9.46
11	9.48
10	2.13
11	10.42
11	6.40
12	2.13
12	3.56
11	2.03
10	3.24
12	5.23
11	5.23

8/3

12 9.27 prob. 9.57 cmv.

12 9.26

12 6.13

11 7.54

10 9.45

12 7.58

11 14.0

9 3.44

10 1.04

12 0.31

10 8.38

12 6.10

11 7.35

~~8/3~~

9.05 ^{exp 10} adopted see Zone 41

no

no

no

no

no

lost

@comp 14" n.f.

7.37.02.1 6.0 ~ 7.. 37..06.05

37..17.0 — 37..21.00

37..22.1 26.2 37..26.15

37..28.1 32.1 37..32.10

D

38..16.2 19.2 38..19.20

38..38.0 42.0 38..42.00

38..46.2 50.2 38..50.20

39..6.2 — 39..10.20

9.. 9.6 ^{1st} _{2nd}

39..13.8 17.8 39..17.80

DB

39..42.2 46.1 39..46.15

39..48.6 52.4 39..52.50

39..53.2 57.0 39..57.10

40..4.0 8.0 40..08.00

40..05.2 9.2 40..09.20

40..14.0 18.0 40..18.00

40..51.0 55.0 40..55.00

LB

41..42.9 46.7 41..46.80

41..46.3 49.2 41..49.25

42..02.1 6.1 42..06.10

42..10.2 — 42..14.20

42..13.9 17.8 42..17.85

43..11.0 15.0 43..15.00

43..11.2 13.2 43..13.20

43..30.6 34.7 43..34.65

43..42.2 46.2 43..46.20

DBDD

44..36.8 40.7 44..40.75

44..51.1 54.9 44..55.00

44..53.7 57.5 44..57.60

45..11.7 15.5 45..15.60

45..41.2 45.1 45..45.15

45..44.0 47.9 45..47.95

X

Zone 40

11 8.46

12 8.22

10 3.02

10 3.13

L O

12 9.26

12 5.32

12-13 3.40

12 1.08

11 -0.32

11 0.08

DB

12 6.18

11 4.35

12 2.12

11 0.32

12 0.15

11 1.13

10 3.22

L O

10 3.18

11 5.59

11 3.04

12 3.32

12 0.32

10 9.26

10 3.50

12 4.47

10 6.00

DBDB

12 7.17

12 5.58

11-12 3.18

12 10.42

10 4.50

12 6.66

2 lost

2 lost

ms

ms

ms

ms

ms sig

ms 2nd run lost

ms

ms

See next page

Zone 40

7.45.55.9 59.8 ~ 7.. 45..59.85

46..11.0 14.9 46..14.95

46..27.3 31.2 46..31.25

46..33.6 37.4 46..37.50

B

46..51.1 55.0 46..55.05

BB

47..26.5 30.3 47..30.40

48..3.3 7.3 48..07.30

48..19.9 23.9 48..23.90

DDB

49..11.3 15.5 49..15.40

49..13.5 17.5 49..17.50

49..24.9 28.8 49..28.85

49..41.8 45.8 49..45.80

50..15.9 19.8 50..19.85

50..24.4 28.4 50..28.40

50..44.7 48.5 50..48.60

51..22.4 26.4 51..26.40

51..23.9 27.8 51..27.85

51..32.5 36.5 51..36.50

51..39.7 43.7 51..43.70

DD

51..58.9 2.9 52..02.40

52..4.9 8.9 52..08.90

52..32.8 36.7 52..36.75

52..41.5 45.4 52..45.45

52..49.4 53.3 52..53.35

53..8.0 12.0 53..12.00

D

53..41.0 44.9 53..44.95

53..48.0 52.2 53..52.10

54..1.9 5.9 54..05.90

55..06.1 10.0 55..10.05

55..13.5 17.4 55..17.45

55..38.9 43.0 55..42.95

Zone 40

9 0.20

12 10.05

12 6.27

10 6.49

B

11 1.38

B B

12 8.00

12 3.44

12 7.22

S. S. L. B

11-12 7.05

11-12 9.28

12 8.20

12 8.27

12 7.48

12 -0.10

12 6.44

12 8.49

11 0.00

11-12 9.00

12 9.04

S. S. S

12 7.41

11 1.12

11 10.10

11 8.36

8 10.04

12 2.45

S.

12 4.41

11 4.16

= 12 9.28

12 -0.06

12 3.06

11 -0.13

	7, 55.52.3	56.3	7, 55.56.30
	56, 00.2	4.2	56, 04.20
X	56, 19.4	23.00	56, 23.20
	56, 20.5	24.3	56, 24.40
	B B D B		
	57, 08.5	12.5	57, 12.50
	57, 10.6	14.5	57, 14.55
	57, 16.2	20.3	57, 20.25
	57, 22.9	22.9	57, 24.90
	B		
	58, 06.6	10.7	58, 10.65
7, 58.46.9	49.9	7, 58.49.90	
8, 00.14.9	18.9	8, 00.18.90	
0, 23.9	27.9	00, 27.90	
0, 57.3	—	00, 55.30	
1, 20.4	24.4	1, 24.40	
1, 42.3	46.4	1, 46.35	
2, 26.3	30.3	2, 30.30	
2, 34.6	38.6	2, 38.60	
2, 45.6	49.6	2, 49.60	
2, 57.0	0.9	3, 00.95	
3, 22.7	26.7	3, 26.70	
4, 10.1	14.1	4, 14.10	
4, 54.9	58.9	4, 58.90	
5, 00.2	4.2	5, 04.20	
B			
5, 38.0	41.9	5, 41.95	
6, 39.5	43.3	6, 43.40	
6, 57.8	1.8	7, 01.80	
B			
7, 18.0	21.9	7, 21.95	
7, 50.5	54.3	7, 54.40	
7, 57.2	3.3	8, 03.25	
8, 24.9	28.9	8, 28.90	
8, 43.4	47.5	8, 47.45	
8, 48.6	52.5	8, 52.55	
8, 52.2	56.2	8, 56.20	

Zone 40

11 456
 11 0.34
 10 0.34
 11-12 1.35
 13.03 & .0

ms

12 1.00
 10 8.02
 12 4.36
 11 2.55

ms

ms 3

L03

12 1.01
 12 8.53
 12 5.32
 12 6.17
 12 10.47
 12 10.19
 8-9 8.38
 12 2.02
 12 1.52
 12 -0.08
 12 6.14
 12 -0.07
 12 10.22
 11 12 0.48
 10 11 1.47

2 lost

ms

B

12 2.53
 12-3 2.48
 12 6.52

B

12-13 5.40
 12 2.38
 12 3.48
 12 9.06
 11-12 4.36
 10 4.15
 9 1.10

ms

8..09..25.7	29.6 ~	8..09..29.65
9..57.6	1.7	10..01.65
10..9.8	13.8	10..13.80
\textcircled{B}		
10..32.9	36.9	10..36.90
10..51.9	65.8	10..55.85
10..58.1	2.2	11..02.15
11.23.3	27.2	11..27.25
11.28.9	32.8	11..32.85
$\textcircled{B}, \textcircled{Q}$		
13..32.3	36.4	13..36.35
14..28.5	32.5	14..32.50
14..48.6	53.6	14..53.60
14 —	57.1	14..57.10
15..46.8	50.8	15..50.80
17..9.3	—	17..13.3
8..17..13.6	17.5	8..17..17.55
\textcircled{B}		

Zone 40

B. 9
12 4.08
12-13 1.15
12 2.38
B

12 7.35
12 -0.03
12 7.06
12 0.22
11 1.19

B. 13 &

12 9.56
S-9 8.20
11 7.17
11 -0.33
11 -0.02
11 3.12
80 10.20
B 313

No stars above 12th ms

no stars
above 14

1st lost
com 13 12" m f
2 lost
ms

1853 March 19th Zone 41 = 40 Repeated Σ

E. 6. 8..24.00 Bar. 30.064 62 Ext. +31.2
10..28.00 30.090 60 .. 29.1

Angle of Pos. 90° 02' 15
mid 90° 03' 00

1st star = θ of Zone 40

6..24..41.2 45.3 ~ 6..24..45.25
24 — 53.4 24..53.40
25..1.2 5.1 25..05.18
25..14.9 18.9 25..18.90
B
26..6.2 10.2 26..10.20
X 26..13.5 13.5 26..13.50
26..31.1 35.2 26..35.15
26..40.7 44.6 26..44.65
26..53.3 57.3 26..57.30
27..15.9 19.9 27..19.90
D

Zone 41-40 R 6^h 15^m Dec 0° 10'

% 8^h 20 0^h 20

• 10	3.116
• 12	8.119
x 11	10.108
• 12	8.119
• 12	9.159
• 9	3.10
• 12	2.119
• 7.8	3.108

comp 13 mm 7" in 1/2

12	0.148
12	8.24
12	0.142
11	0.140
12-12	4.52
11	8.36
11	7.12
12	7.00
10-14	8.152
11	9.51

1st mi' Sep

6..27.54.1 58.2 ~ 6..27..58.15

28..7.0 10.9 28..10.95

28..11.2 15.2 28..15.20

28..26.8 30.8 28..30.80

BB

29..10.7 14.5 29..14.60

29..35.6 39.6 29..39.60

29..52.3 56.4 29..56.35

30..4.9 8.8 30..08.85

30..11.5 15.4 30..15.45

30..37.8 41.8 30..41.80

D

30..59.8 3.8 31..03.80

31..17.7 21.6 31..21.65

31..34.8 38.9 31..38.85

31..44.1 48.2 31..48.15

B

32..9.9 13.8 32..13.85

32..39.3 43.2 32..43.25

33..14.8 — 33..18.80

33..19.2 — 33..23.20

33..23.1 27.2 33..27.15

DB

33..54.7 58.6 33..58.65

34 — 18.9 34..18.90

— 25.5 34..25.50

34..55.3 59.3 34..59.30

BDB

35..20.6 24.6 35..24.60

..29.6 33.5 35..33.55

35..41.6 45.6 35..45.55

36..18.0 — 36..22.00

36..30.3 — 36..34.30

36..33.9 37.9 36..37.90

36..39.3 58.3 36..58.30

37..9.5 9.4 37..09.45

DBB

37..58.5 2.5 38..02.50

12 1.32
 12 6.56
 12 6.10
 12 8.14
 B B

no sig

12.13 9.0755
 11.12 2.56
 12 10.02
 12 7.45
 12 8.38
 10 3.03

no sig.

D
 12 5.06
 9.10 6.53
 11.12 8.53
 9 4.25
 B

10.11 0.10
 12 7.60
 9 4.55
 10 7.08
 D B

1st dot right in R

2 w last
1 w last

10 2.20
 12 5.06
 10 3.00
 12 1.42
 B D B

12 last
12 m l no sig

12 1.39
 9 2.02
 10 -0.07
 13 5.47
 11 8.22
 10.11 2.36
 10 7.28
 10.11 8.30
 D D B
 11.12 5.27

yellow

2 w last
2 w m last
no sig

~~0.~~ 38. 01.6 5.4 ~ 6. 38. 05.50
 6 38. + 6.8 38. 06.80
 38. 40.9 44.8 38. 44.85
 8 53.6 57.6 38. 57.60
 38. 55.0 58.9 38. 58.95
 39. 33.7 37.7 39. 37.70
 39. 50.1 54.0 39. 54.05

B

40. 7.8 11.8 40. 11.80
 40. 15.0 19.0 40. 19.00

~~40~~ DB

40. 59.0 2.9 40. 02.95
 41. 18.3 2. 41. 22.30
 41. 32.0 35.9 41. 35.95
 42. 1.9 5.8 42. 05.85
 42. 10.0 13.9 42. 13.95
 2. 36.7 40.7 42. 40.70
 2. 46.0 50.2 42. 50.10
 42. 53.0 57.0 42. 57.00
 3. 7.3 11.3 43. 11.30
 3. 17.6 21.5 43. 21.55
 43. 31.0 35.0 43. 35.00
 43. 39.4 43.2 43. 43.30

B

43. 57.5 1.4 44. 01.45
 44. 8.0 12.1 44. 12.05
 44. 37.9 41.9 44. 41.90
 44. 50.9 54.8 44. 54.85
 4. 53.2 57.2 44. 57.20
 45. 21.0 24.9 45. 24.95
 5 40.2 44.2 45. 44.20
 45. 46.5 50.5 45. 50.50

B B

46. 2.8 6.8 46. 06.80
 46. 11.8 15.8 46. 15.80
 46 25.4 29.5 46. 29.45
 46 50.4 54.4 46. 54.40

10.12 7.38
 . 11 3.33
 . 10 5.09
 . 10 5.28
 . 11 4.28
 . 11.12 2.27
 . 11 3.35

OB

. 12 5.13
 . 11 3.00

~~10.11~~ B

. 11 0.07
 . 11 6.20
 . 10 5.04
 . 10.11 0.57
 . 12 6.41

. 9 8.11
 . 11 9.82
 . 11 6.82

cent

. 12 4.50
 . 11 7.09
 . 11 3.06
 . 12 1.24

OB

. 11 3.13
 . 12 2.37
 . 12.13 2.53

. 11 1.25

. 11 0.52

x 12 -0.13

. 12 2.00

. 12 3.04

BB

. 16.12 2.30

x 11.12 -0.28

. 12 9.23

. 12 6.18

w.s.
 1st w best-

m s

2nd best

ms

6..47..03.8 7.8 ~ 6..47..07.80

~~7~~ — 15.4 47..15.40

47.210 24.9 47..24.95

~~47~~ — 34.3 47..34.30

47.57.2 1.1 48..01.15

48.17.7 15.6 48..15.65

48.24.8 28.7 48..28.75

48 — 31.2 48..31.20

48.57.2 1.1 49..01.15

50..3.9 7.9 50..07.90

50..17.1 21.2 50..21.15

DD B

50.49.3 53.2 50..53.25

50..57.8 1.8 51..01.80

D

52..00.7 4.7 52..04.70

2..25.6 29.5 52..29.55

52..37.7 41.7 52..41.70

52..46.4 50.4 52..50.40

52..55.5 59.5 52..59.50

53..56.3 20.2 53..20.25

53..24.6 28.7 53..28.65

53..39.7 43.6 53..43.65

54..01.0 4.9 54..04.95

54..1.3 5.4 54..05.35

54..25.1 29.2 54..29.15

B

X 55..17.5 21.5 55..21.50

5..26.0 29.9 55..29.95

56..44.5 48.4 55..48.45

56..4.9 8.9 56..08.90

56..5.8 9.7 56..09.75

56..22.8 26.7 56..26.75

56..31.9 35.8 56..35.85

56..47.2 51.2 56..51.20

57..20.9 24.9 57..24.90

58..13.9 18.0 58..17.95

.12 6.23
 2.02
 .12 5.50
 .12 6.13
 .12 6.30
 .12 6.45
 .12 7.20
 .12 3.30
 .8 7.36
 .12 6.03 ent.
 .9 3.58
 D 0.803
 .9 0.28x
 x 9.10 7.18
 D

x 12 10.18
 .10 5.30
 .8 7.06x
 .12 6.29
 .11 8.53
 .12 9.50
 .12 3.02
 .8 2.52
 .11 8.20
 .11 8.43
 .12 10.36

B

.12.13 9.22
 .12 3.57
 .12 6.59
 .8 8.37
 .12 8.06
 x 11 10.23
 .9 4.30
 .11 9.59
 .13 3.27
 .10 2.32

17 n by

15 n by

" 15 n by
 amp 18 10 n p yell

ms

m s

6.. 58.. 31.3 35.3 ~ 6.. 58.. 35.30
 58.. 42.6 51.6 58.. 57.60
 58.. 58.8 2.9 59.. 02.85
 59.. 8.6 12.7 59.. 12.65
 6.. 59 + 15.2 59.. 15.20
 D

7.. 00.. 25.2 29.5 7.. 00.. 29.35
 00.. 30.8 34.8 00.. 34.80
 0.. 44.8 48.6 00.. 48.70
 1 ~~1~~ 19.7 01.. 19.70
 1.. 25.3 29.2 1.. 29.25
 1.. 32.8 36.7 1.. 36.75
 1.. 42.7 46.8 1.. 46.75
 2.. 2.5 6.4 2.. 06.45
 2.. 3.6 7.5 2.. 07.55
 2.. 12.2 16.2 2.. 16.20
 2.. 49.4 53.4 2.. 53.40
 3.. 3.3 7.3 3.. 07.30
 3.. 24.5 28.5 3.. 28.50
 3.. 56.5 0.4 4.. 00.45
 4.. 3.1 7.0 4.. 07.05
 4.. 24.2 28.2 4.. 28.20
 4.. 32.2 36.2 4.. 36.20

BB

4.. 63.5 57.5 4.. 57.50
 5.. 25.7 29.6 5.. 29.65
 5.. 41.1 45.0 5.. 45.05
 5.. 46.9 50.9 5.. 50.90

B

6.. 2.2 6.2 6.. 06.20
 6.. 19.6 23.6 6.. 23.60
 6.. 26.8 30.9 6.. 30.85
 6.. 36.5 00.5 7.. 00.50
 7.. 27.3 31.2 7.. 31.25
 7.. 40.5 44.3 7.. 44.40
 7.. 58.9 2.9 8.. 02.90

B

. 12 0.51
 . 12 1.30
 . 12 3.05
 . 10 7.42
 . 12 5.54

1st run best

x 9.10 4.16
 . 11 2.23
 . 11 7.19
 . 9 4.25
 . 10 6.11
 . 12 3.03
 . 12 6.21
 . 12 4.31
 . 12.13 2.14
 x 10 -0.35
 . 12 3.13
 . 12 1.37
 . 11.12 0.33
 . 12 3.05
 . 11 9.57
 . 12 1.15
 . 12 9.56

. 12 4.46
 . 11.12 5.50
 . 12 4.03
 . 12 4.17

x 12 -0.20
 . 11 7.33
 . 10 8.18
 . 12 1.43
 x 11.12 10.03
 . 9 2.01
 . 12 -0.26

γ , 08..24.2 28.. γ , 08..28.10
 8..31.3 35.2 8..35.25
 9..5.1 9.2 9..09.15
 9..25.2 29.1 9..29.15
 9..27.1 31.1 9..31.10
 9..38.9 42.9 9..42.40
 9..48.3 52.3 9..52.30
 10..08.55
 10..38.2 42.1 10..42.10
 10.. 46.0 10..46.00
 11..2.1 6.1 11..06.10
 11..51.3 55.2 11..55.25
 12..00.9 4.8 12..04.85
 12..19.5 19.6 12..19.55
 12..28.6 27.4 12..27.50
 12..26.9 30.9 12..30.40
 12..34.0 38.1 12..38.05
 12..41.0 44.8 12..44.40
 DBD

13..23.8 27.7 13..27.75
 13..33.7 37.7 13..37.70
 13..45.6 49.6 13..49.60
 13..47.6 51.5 13..51.55
 14..7.9 11.9 14..11.90
 14..8.9 12.9 14..12.90
 14..31.2 35.2 14..35.20
 14..53.1 57.1 14..57.10
 15..4.9 8.9 15..08.90
 15..17.0 21.0 15..21.00
 15..20.1 24.1 15..24.10
 15..43.3 47.4 15..47.35
 16..10.2 14.2 16..14.20
 16..34.5 38.5 16..38.50
 16..47.7 51.7 16..51.70
 B
 17..7.2 11.2 17..11.20
 17..26.2 30.1 γ ..17..30.15

MS

10.11 4.01
 10 3.11
 11 7.33
 12 6.00
 10 1.41
 12 1.50
 9 1.48
 D

m 5

12 2.02
 12 1.52
 10 7.84
 10.11 6.03
 12 5.33
 12 8.10
 11 4.12
 10 2.55
 9 4.56
 12 5.03
 D BD

sig. let. in wires

11.12 8.18
 10 7.35
 11 1.32
 12 4.44
 11 1.03
 11 8.23
 12 2.02
 12 10.26
 11.12 4.20
 12 2.14
 11.12 5.28
 12 8.07
 9.10 7.38
 12 4.50
 12 6.18
 B

ms

ms

12 -0.18
 11.12 4.37

7, 17.35.3	39.3	7, 17. 39.30
7, 43.5	47.3	17, 47.40
18, 2.3	6.1	18, 06.20
18, 39.4	43.3	18, 43.35
18, 53.2	57.2	18, 57.20
19, 4.4	8.4	19, 08.40
19, 29.3	33.2	19, 33.25
19, 42.9	46.9	19, 46.90
19, 56.0	59.9	19, 59.95
20, 5.3	9.2	20, 09.25
20, 20.0	23.9	20, 23.95
20, 38.4	42.3	20, 42.35
20, 47.9	51.9	20, 51.90

D

21, 11.5	15.5	21, 15.50
21, 19.7	23.5	21, 23.60
21, 31.8	35.7	21, 35.75
21, 53.4	57.4	21, 57.40
21, 55.9	59.8	21, 59.85

B

22, 27.9	31.8	22, 31.85
22, 41.5	45.6	22, 45.55
22, 47.7	51.7	22, 51.70
22, 59.0	3.2	23, 03.10
23, 16.4	20.4	23, 20.40
23, 18.4	22.4	23, 22.40

DDDD

23, 49.8	53.8	23, 53.80
24, 22.4	26.3	24, 26.35
24, 59.5	3.6	25, 03.55
25, 35.6	39.5	25, 39.55
25, 42.9	46.8	25, 46.85
X 25, 42.9	46.9	25, 46.90
25, 43.9	47.8	25, 47.85
25, 59.5	3.5	26, 03.50
26, 13.3	—	26, 17.30
26, 77.2	21.0	26, 21.10

Z 41

.12 2.47

.12 2.12

.11 8.26

.12 3.13

.12 1.20

.12 2.18

.12 2.11

.12 9.19

.12 4.06

.12 8.43

.12 6.09

.12 9.53

.12 4.36

D

.11 7.04

.12 5.20

.12 7.42

.12 9.26

.12 3.40

B B

.11.12 1.08

.11 2.52

.11 4.03

.11.12 10.24

.12 3.59

.11 3.34

D D B D

.12 3.11

.12 1.38

.11.12 0.04

.11.12 8.82

~~.11 2.47~~

.12 7.11

.12 7.49

x .11 10.11

x .10 10.18

.12 6.59

no

no

no

no

20 in last

no

7..26.30.8	34.8	7..26..34.80
7..18.9	22.8	27..22.85
7..27.3	31.2	27..31.25
7..39.5	43.6	27..43.55
28 3.3	7.3	28..07.30
28..11.5	15.5	28..15.50
28..27.8	—	28..31.80
28..32.6	36.6	28..36.60
28 36.6	40.8	28..40.80
28..47.1	61.1	28..57.10
28.56.9	0.8	29..00.85
9 22.6	26.6	29..26.60
29 —	33.9	29..33.90
29..58.4	—	30..03.40
30..4.2	8.2	30..08.20
B D D		

30	31.9	30..57.90
31 15.2	19.2	31..19.20
31..31.8	35.8	31..35.80
31..43.8	47.9	31..47.85
32..10.6	14.6	32..14.60
32..18.8	21.8	32..21.80
32..41.3	45.2	32..45.25
32..41.5	45.5	32..45.50
33..00.4	4.3	33..04.35
33..15.2	19.3	33..19.25
33..30.3	34.3	33..34.30
33..31.6	35.6	33..35.60
33..39.6	43.7	33..43.65
33..51.4	55.4	33..55.40

B

34..37.6	41.5	34..41.55
34..42.2	46.0	34..46.10
35..11.6	15.6	35..15.60
35..12.5	16.4	35..16.45
35..25.5	29.6	35..29.55
35..39.1	43.2	35..43.15

x 12 10.13
 12.13 0.9
 12 7.23
 10 0.09
 11 3.37
 12 1.03
 12 5.11
 9 5.45
 10 1.14
 10 3.51
 10 3.27
 x 10.11 10.07
 11 2.24
 13 2.51
 11 4.36
 BD 03
 11 8.46
 10 9.45
 11 9.46
 11 9.48
 10.11 2.13
 11 10.47
 11.12 6.40
 12 2.11
 12 3.56
 11.12 2.02
 10 3.24
 12 6.14
 12 5.23
 12 2.14
 12 9.58
 BD
 11 7.53
 10 9.04 cert,
 11 1.40
 9.10 3.42
 11 1.04
 10 8.35

2nd in best1st in best
 1st min best
 2nd in best

ns

ns

n +

7.. 36..10.1 14.0 - 7.. 36..14.05

6.. 10.3 14.3 36..14.30

7.. 2.3 6.3 37..06.30

7.. 17.2 21.2 37..21.20

7.. 22.3 26.4 37..26.35

37.. 28.5 32.5 37..32.50

D

38 — 19.3 38..19.30

38.. 38.2 42.2 38..42.20

38.. 46.5 50.5 38..50.50

39.. 6.3 — 39..10.30

39.. 10.0 13.9 39..13.95

~~39.. 17.9~~

39.. 42.2 46.3 39..46.25

39.. 48.8 52.8 39..52.80

40.. 4.3 8.4 40..08.35

40.. 14.4 18.4 40..18.40

B

40.. 51.4 55.5 40..55.45

41.. 43.2 47.0 41..47.10

41.. 45.5 49.6 41..49.55

41.. 59.3 3.2 42..03.25

42.. 2.6 6.6 42..06.60

42.. 14.3 18.3 42..18.30

Q

43.. 11.3 — 43..15.30

43.. 31.0 — 43..35.00

43.. 42.5 46.6 43..46.55

44.. 37.0 40.9 44..40.95

44.. 51.2 55.2 44..55.20

44.. 54.0 58.0 44..58.0

46.. 33.9 37.8 - 46.. 37.85

.11 7.34
 .11 7.47
 .11 8.46
 .11 8.20
 .10 3.02
 .10 3.12

D

.12 9.26
 x12.13 5.32
 .12.13 3.40
 .11 1.107
 .11 3.14

1.1 no 8

x11.12 6.16
 .11 4.34
 .11 0.33

10.11 1.13

B

.10.11 3.22
 .11 3.17
 .12 5.67
 .12 5.20
 .11 3.04
 .12 0.33

D

.10 9.27
 .10 3.50
 .12 4.46
 x9.10 6.00
 .11.12 7.18
 .12 5.58
 .11 3.17
 .10 4.51
 .11.12 6.46
 x9.10 0.20
 x12 10.04
 .10 9.49

ms

ms

ms

1st in bus

2nd in bus

ms

2nd will be
 1st in bus
 2nd in bus

ms

ms

7..46..51.6	55.5	7..46..55.55
47..26.8	30.7	47..30.75
48..3.7	7.6	48..7.64
48..20.3	24.2	48..24.25
49..11.6	15.6	49..15.60
49.13		
49..13.8	17.8	49..17.80
49..25.3	29.1	49..29.20
49..42.2	46.2	49..46.20
50..16.0	20.1	50..20.05
50..24.8	28.7	50..28.75
50 45.0	49.0	50..49.00
51 6.2	10.39 ^{quad}	51..10.25
22.9	26.8	51..26.85
<i>B</i>		
51..33.0	36.9	51..36.95

52..05.3	9.2	52..09.25
52..33.2	37.1	52..37.15
52..42.0	<i>no mark</i>	52..46.00
52..49.7	53.7	52..53.70
53..41.3	45.3	53..45.30
53..48.6	52.5	53..52.55

DBD

55..6.4	10.5	55..10.45
55..13.8	17.9	55..17.85
55..39.2	43.2	55..43.20
7..55..52.7	56.7	55..56.70
56..00.7	4.7	56..04.70
56..19.7		56..23.70
6..20.9	24.9	56..24.90
57..8.9	—	57..12.90
7 11.0	14.9	57..14.95
7..14.7	20.7	57..20.70
57..19.6	23.6	57..23.60

DBD

58..7.2	11.2	7..58..11.20
---------	------	--------------

Z 41

. 11 1.40
 . 12 8.00
 . 12 3.43
 . 12 7.23
 11.12 7.05
~~12 7.04~~
 . 11 9.28
 . 12 8.18
 . 12 8.26
 . 12 7.48
~~12 7.47~~
 x 12 - 0.08
 . 12 6.43
 . 12 8.19
 B
 . 11.12 9.00
 . 12 9.04
 . 10 1.12
 x 12 10.11
 . 11 8.36
 x 8 10.04
 . 12 4.41
 . 11 4.18
 = 8 B D
 x 12 - 0.06
 . 12 3.06
 x 11 - 0.13
 . 11 4.56
 . 11 0.34
 . 10 0.34
 . 11 1.53
 . 12 1.00
 . 10 8.02
 . 12 4.36
 . 11 2.54
 B D B
 . 12 1.01

ms

 ms
 20 mbs
 ms

ms

7.. 58.46.2	50.2	7.. 58.50.20
59.. 35.0	39.0	7.. 59.39.00
8.. 00.15.2	19.3	8.. 00.19.25
0.. 24.2	28.2	0.. 28.20
0.. —	55.8	0.. 55.80
1.. 20.8	24.7	1.. 24.75
1.. 42.8	46.9	1.. 46.85
2.. 26.8	30.4	2.. 30.70
2.. 35.1	39.0	2.. 39.05
2.. 46.0	49.9	2.. 49.95
2.. 57.5	1.4	3.. 01.45

BD

3.. 23.0	27.2	3.. 27.10
3.. 39.2	43.1	3.. 43.15
3.. 47.9	51.9	3.. 51.90
4.. 10.5	14.5	4.. 14.50
4.. 55.5	59.5	4.. 59.50
5.. 00.9	4.9	5.. 04.90
5.. 38.5	42.4	5.. 42.45
5.. 58.3	2.4	6.. 2.35
7.. 18.4	22.3	7.. 22.35
7.. 51.0	54.9	7.. 54.95
7.. 59.9	3.9	8.. 03.90
8.. 25.5	29.7	8.. 29.60
8.. 43.9	47.9	8.. 47.60
8.. 48.9	52.0	8.. 52.90
8.. —	56.8	8.. 56.80
9.. 26.2	30.0	9.. 30.10
9.. 58.2	2.0	10.. 02.10
10.. 10.4	14.5	10.. 14.45
10.. 33.5	37.5	10.. 37.50
10.. 52.3	56.4	10.. 56.35
10.. 58.7	2.7	11.. 02.70
11.. 23.9	plot	11.. 27.90
8.. 11.. 29.3	33.3	11.. 33.30

Z 41

10.17 8.53

12.13 10.02

11.12 5.52

12.1 6.16

x 11.1 10.47

x 12.1 10.21

8.1 8.38

12.1 2.00

12.13 1.50

x 12.1 - 0.10

12.1 6.13

BD

x 13.1 - 0.08

x 12.1 - 0.22

x 12.1 10.17

x 12.1 10.22

12.1 0.47

10.11 1.46

12.1 2.53

12.1 6.52

12.1 5.37

12.1 2.37

12.1 3.48

13.1 9.06

11.12 4.36

10.11 4.15

x 9.10 1.08

12.1 9.08

12.13 1.17

12.1 2.35

12.1 7.34

x 12.1 - 0.03

11.12 7.06

12.1 0.22

11.1 1.19

12.1 No. stars above 19 mag.

1st win betcomp 14th 14th m. p.
moving1st win betcomp 13th 11th m. p.

ms

2 41

1/25 7.03

March 29th 1853

Zone 42

N.B. Owing to failure of the Battery the right Ascensions for only about the first twenty minutes was recorded & on ascertaining this to be so - we discontinued the Zone & re-commenced with Zone 43 = 42 repeated

E.C. 9.13.00 Bar 30.100 69 Ex. 38.3
11.26.00 30.060 66 34.5

7. 47. 52.8 56.7 ~ 7. 47. 56.75
48. 20.1 24.1 48. 24.10
8. 32.8 36.7 48. 36.75
48. 58.7 2.6 49. 02.65
49. 6.6 10.5 49. 10.55
49. 13.9 17.9 49. 17.90
49. 33.7 37.6 49. 37.65
BDD

of Zone 39

50. 14.9 18.9 50. 18.90
50. 21.8 25.8 50. 25.80
51. 12.7 16.8 51. 16.75
51. 22.7 26.7 51. 26.70
51. 33.6 37.6 51. 37.60

B

52. 12.8 16.8 52. 16.80
52. 26.4 30.3 52. 30.35
52. 55.5 59.5 52. 59.50
55.5 59.5 52. 59.50

~~3. 15.3 19.3~~

53. 15.3 19.3 53. 19.30
53. 34.6 38.6 53. 38.60
53. 50.1 54.1 53. 54.10
53. 59.7 3.6 54. 03.65
54. 24.6 28.6 54. 28.60

54. 47.2

X

42

11 6.37
 10.11 7.21
 10.11 3.32
 12 2.81
 10.11 2.56
 11.12 3.10
 12 3.54
 12 5.39
 11 3.05
 12 7.34
 12 5.42
 12 0.05

B

12 7.33
 11 10.23
 12 8.35 *Edwin R*
 12 8.03 *Edwin R*
~~12 8.03~~
 11 -0.31
 10 7.53
 11 6.37
 11 3.04
 12 0.34
 12 9.45

no reg

γ , 54, 58.0 1.9 - γ , 55, 01.95
 55, 24.9 28.8 55, 28.85
 56, 16.7 20.7 56, 20.70
 56, 23.0 26.9 56, 26.95
 57, 16.6 20.6 57, 20.60
 57, 22.8 26.7 57, 26.75
 57, 24.4 28.3 57, 28.35

B

57, 43.6 47.6 57, 47.60
 57, 4 1.4 58, 01.40
 58, 33.0 36.9 58, 36.95
 58, 42.1 46.0 58, 46.05
 59, 23.7 27.6 59, 27.65
 59, 30.9 34.8 59, 34.85

D

γ , 59, 52.8 56.9 γ , 59, 56.85
 8 00, 54.5 58.5 8, 00, 58.50
 1, 9.6 13.6 1, 13.60
 1, 27.5 31.4 1, 31.45
 1, 41.6 — 1, 45.60
 1, 44.5 48.5 1, 48.50
 2, 00.9 4.8 2, 04.85
 2, 29.9 33.9 2, 33.90
 2, 51.5 55.6 2, 55.55
 2, 56.6 00.6 3, 00.60

B D

3, 27.0 30.9 3, 30.95
 3, 45.9 49.9 3, 49.90
 4, 49.5 53.5 4, 53.50
 5, 37.7 32.5 5, 31.35
 5, 34.4 38.3 5, 38.35
 6, 16.6 20.6 6, 20.60
 6, 22.0 25.9 6, 25.95
 6, 46.7 50.7 6, 50.70
 7, 24.0 28.0 7, 28.00
 7, 37.5 41.6 ~ 8, 7, 41.55

positions all uncertain

42

11 2.46

12 8.47

10.11 0.53

12 4.10

* 10 6.51

11.12 0.11

11 4.20

B

11.12 2.39

12 7.54

12 4.52

11.12 7.35

10 0.40

11 4.50

D

11 6.33

10 5.57

12 1.48

12 1.47

11 4.08

8.9 -0.14

11 7.56

11 8.07

11.12 9.11

11.12 -0.03

B D

= 9.10 8.22

11 4.52

11.12 0.40

12.13 3.13

11.12 6.08

9.10 2.37

9.10 0.05

12 6.04

12 7.31

12 10.05

12 5.58

ms

ms

ms

2^d win lost

13 mag. * pre. 4"

moving

reddish

ms

Zone 42

11 6.23

ns

12 6.07

ns

B

12 4.01

11 10.09

10 3.17

12 6.08

11 5.27

12 1.44

12 1.26

11.12 7.08

11 10.03

12 4.52

12 7.00

11 -0.20

12 9.02

11 5.03

12 3.43

B B B

12 3.08

12 4.32

12 3.12

8 5.07

12 5.03

B D

11 9.27

12 10.06

11.12 6.36

12 4.27

12 0.32

9.10 8.13

12 0.56

12 0.08

12 9.18

12 3.07

10.11 0.10

12 6.48

ns
duplex 12^{mag} 16["] s.f.ns
duplex 12^{mag} 9["] s.f.

8.15 0.05?
w/R 8.15 14.64? 2^W min hot
Dec +0.9 9.9 ns
4.4 5.3 ns
yellowish

W. 541 R 8.20.51/85
Dec +0.07.02.0

amp 12^{on} 8["] m.f.

Zom 42

12.13 6.25

13 7.67

11 -0.16

10 0.57

10 0.15

DB

12 1.36

11 7.04

11.12 1.38

9.10 5.08

9 2.32

11.12 3.57

12 3.01

B

12 0.36

12 10.18

12 7.31

10 5.31

12 3.50

11 8.20

11 9.14

12 1.28

11 -0.13

11 -0.08

D

10.11 6.37

11.12 9.20

10.11 0.47

11 5.04

12 7.15

11 4.44

12 4.13

12 10.04

12 -0.08

12 8.87

12 8.32

BDB

1st win lost

735 W

739 W

reddish
nsns 1st win lost

ns

nosy

ns

ns

ns

Zone 42

12 4.16
 9.12 6.14
 12 8.01
 11.12 3.13
 11 4.37
 12 6.32
 11 1.09
 10.11 2.29
 13 1.27

B

12 0.02
 11 0.12
 12 8.08
 12 8.03
 12 5.47
 11.12 7.46
 11.12 9.26

D

12.13 4.38
 12 5.15
 13 0.09
 12 9.07
 10 6.21
 11 10.30
 12 8.02
 12 10.32

9 - 0.11
 9.10 1.40
 12 2.54
 12 4.34

B D

12 9.00
 9 9.56
 12 9.07
 12 0.57
 12 6.08

2nd win lost ns

1st win lost

ns

ns

duplex game

ns

orange

7..47..52.8 56.8 ~ 7..47..56.80

48..20.2 24.2 48..24.20

48..32.8 36.9 48..36.85

48..58.7 2.7 49..02.70

49..6.7 10.7 49..10.70

49..13.8 17.9 49..17.85

49..33.8 37.7 49..37.85

B

50..15.1 19.0 50..19.05

50..21.9 25.9 50..25.90

51..12.9 17.0 51..16.95

52..26.5 30.4 52..30.45

52..55.6 59.6 52..59.60

52..55.6 59.6 52..59.60

53..15.4 19.4 53..19.40

53..34.9 38.8 53..38.85

Zone 42

Zone 43

12 6.01

B B

11 5.25

12 10.04

12 0.30

9 0.30 about 1/2 way

Owing to failure in Battery only the first
20th of R was recorded - which we immediately reobserved

1853 March 29th

Zone 43 = 1st part of 42 repeated
W.H. = 2.47

Zone of pos 90.01.30
Ref cor 1.20
90.02.50

March 29 E.C. 9.13.00 Bar. 30.100 69 Ext. 38.3

11.26.00 30.060 66 34.5

11 6.34

11 7.18

11 3.29

12 2.28

11 2.53

12 3.07

12 3.51

B

11 5.36

12 3.02

12 7.81

11 10.20

12 8.32

12 8.01

11 -0.33

9 7.52

Sun R

Wone 43

7..53..50.2 54.2 ~ 7..53..54.20

53 59.8 3.8 54..03.80

54..24.9 28.9 54..28.90

55..25.0 28.9 55..28.95

56..16.9 20.7 56..20.80

56..23.0 27.1 56..27.05

D

57..16.8 20.7 57..20.75

57..22.9 26.9 57..26.90

57..^{c. broken} 47.8 57..47.80

57..57.6 1.5 58..01.55

58..33.2 37.1 58..37.15

58 ^{may 11/18/84} 46.2 58..46.20

59..24.0 27.8 59..27.90

59..31.2 35.2 59..35.20

7..59..63.2 57.1 59..57.15

8 00..54.9 58.8 8..00..58.85

1..9.8 ^{c. brn.} 1..13.801..~~4~~ 45.8 1..45.80

1..44.9 48.9 1..48.90

2..00.9 4.9 2..04.90

2..30.1 34.1 2..34.10

2..51.7 55.8 2..55.75

2 — 00.8 3..00.80

3..27.3 31.3 3..31.30

3..46.2 50.2 3..50.20

L B

4..49.6 53.7 4..53.65

5..34.2 38.6 5..32.15

6..17.0 20.9 5..38.65

6..22.2 26.0 6..20.95

6..47.0 50.9 6..26.10

6..47.0 50.9 8..6..50.95

D

7..24.2 28.2 - 8..7..28.20

Morse 43

11 6.45 cerini
 11.12 3.60
 12 0.30
~~12 2.45~~
 12 8.45
 11 0.51
 12 4.07
 D

+ 10 6.08
 11 0.10
 11 2.37
 12 7.50
 12 4.49
 11 7.33
 11 0.37
 11 4.47
 11 6.30

10.11 5.54
 12 1.45
 12 4.06

✓ 8 -0.17
 11 7.52
 11 8.03
 11.12 9.08

2 11.12 -0.05
 10 8.18
 11 4.48

D B

12 0.37
 12.13 3.10
 11 6.06
 9.10 2.34
 9.10 0.12
 12 6.02

D
 12 7.28

cent-

ms
 duplex 4" free,

1" in lost

2 in lost

8..07..37.9 41.9 ~ 8..07..41.90
 8..40.1 44.0 8..44.05

10..3.2 7.3 ~ 10..07.25
 10..23.9 27.9 10..27.90
 10..49.7 53.6 10..53.65

BB

11..15.5 19.5 11..19.50
 11..18.4 22.3 11..22.35
 11..44.0 48.2 11..48.10
 12..39.3 43.4 12..43.15
 13..49.3 53.2 13..53.25

positions all double

12 10.02

12 5.54

11 6.10

12 6.04

12 3.59

11 10.06

10 3.15

12 6.04

11 5.25

BB

12 1.40

12 1.22 certain

12 7.04

x 11 10.00

12 4.48

12 6.56

11 -0.23

12 8.59

D

11 10.28

11 4.59

12 3.38

11.12 4.27

12 3.08

w 47 8 5.04

12 5.00

BBB

ns reddish
ns

duplex 7" s.f. ns

duplex 12" 3" free

H 2.47.20 11.07 ns
1st min lost

11.31	+0.09.14.5	3.073	8.16.48.60	11.08.50
2828	-5.16.7	7682	1.26.04	2.47.20
33.9	+0 3 57.8	9.22	8.18.14.64	8.18.30
316.7		8604		

Declination Zero By *radiation* 1.08"
Scale reads too much

March 30, 1853

Wone 44

8 ^h 15 ^m 21.3	lost	Mean 8 ^h 15 ^m 25.30
32.6	36.6	36.60
17 ^h 57.7	56.8	17 ^h 56.85
18 ^h 8.8	12.8	18 ^h 12.850
18 ^h 10.7	14.6	18 ^h 14.65
B		
19 ^h 23.8	27.7	19 ^h 27.75
19 ^h 42.6	46.6	19 ^h 46.60
20 ^h 2.1	6.0	20 ^h 6.05
20 ^h 21.6	25.5	20 ^h 25.55
20 ^h 47.3	51.3	20 ^h 51.30 20
21 ^h 53.8	57.8	21 ^h 57.80
22 ^h 37.1	35.2	22 ^h 35.15
24 ^h 19.7	23.7	24 ^h 23.70
D		
24 ^h 39.7	43.2	24 ^h 43.45
25 ^h 24.9	28.9	25 ^h 28.90
No. R		
26 ^h 24.7	28.6	26 ^h 28.65
26 ^h 53.9	57.9	26 ^h 57.90
No. R		
28 ^h 9.6	13.5	28 ^h 13.55
28 ^h 16.3	20.3	28 ^h 20.30
29 ^h 28.7	32.6	29 ^h 32.65
29 ^h 41.2	46.3	29 ^h 46.25
29 ^h 52.6	56.6	29 ^h 56.60
30 ^h 07.5	11.5	30 ^h 11.50
30 ^h 35.8	39.8	30 ^h 39.80

*
X

Zorro 44

E.C. 8.25.00 Bar. 29.744-72 Ext. 51.2°
 29.750 72 48.1

11 3.53
 12 2.33
 11-12 3.32 (oct 18)
 11 2.03 (3.23)
 8 3.18

B

11 8.18
 11 8.59
 11 5.28
 12 3.18
 9-10 7.05
 9-10 8.34 no 12
 11-12 8.11
 12-13 4.18
 11 5.37
 1 5

12-13 5.15

11 -0.12
 11 6.59 AB
 11 0.27

10-11 5.55

12-13 4.27 (not used oct. 12)

8-9 4.02

8-9 1.22

11 9.10

11 6.23

9 4.23

10-11 7.12

9-10 8.07

Feb 8 34.5 2 feet

AB lost

AB lost

Mean

8.31.03.5	7.4	8.31.07.45
32. 3.8	7.8	32. 7.80
32. 56.8	0.7	33. 00.75
3. 2.8	6.9	33. 06.85
33. 19.8	23.8	33. 23.80
3. 23.3	27.3	33. 27.30
34. 13.2	17.2	34. 17.20
4. 20.6	24.6	34. 24.60
34. 28.4	32.8	34. 32.60
35. 19.9	23.9	35. 23.90
5. 28.2	32.2	35. 32.20
36. 18.8	22.8	36. 22.80
36. 47.7	51.7	36. 51.70
7. 7.1	11.1	37. 11.10
38. 49.7		
38. 49.7	53.8	38. 53.75
39. 00.8	4.8	39. 04.80
39. 57.0	1.0	40. 01.00

At last

40. 50.6 54.9 40. 54.75

QBD

41. 42.5	46.6	41. 46.55
41. 53.1	57.0	41. 57.05
42. 19.1	23.0	42. 23.05
42. 29.0	32.9	42. 32.95
42. 39.3	43.2	43. 43.25
43. 1.2	5.3	43. 05.25
43. 16.6	20.8	43. 20.70
43. 32.4	—	43. 36.40
44. 12.3	16.2	44. 16.25
4. 35.5	39.6	44. 39.55
44. 54.8	58.8	44. 58.75
4. 56.9	0.9	45. 00.90
45. 19.8	22.9	45. 22.85
45. 25.6	29.5	45. 29.55
45. 53.7	57.8	45. 57.75

44

B.B.B

12 5.49
 12 5.22
 9 5.28
 9-10 8.13
 9-10 ^{change} 3.54
 9 - 0.153
 10 3.36
 12 3.04
 2-11 8.57
 10 7.28
 10-11 7.22
 9-10 9.48
 8-9 5.05
 11-12 6.53
 = 12-13 6.03
 11-12 2.05
 10 3.29
 10 1.22
 12 9.22
 11 10.00

no

no

AR lost

AR lost

D.B.B

12 1.32
 11-12 7.01
 12 6.56
 11 6.38
 11 8.18
 11-12 8.19
 11-12 2.02
 11-12 3.30
 12 4.06
 12 8.39
 11 5.11
 11 9.21
 11-12 6.52
 11-12 9.283
 11-12 4.04

2 wind lost

no

no

8,, 46,, 14.0 17.9 8,, 46,, 17.95

6,, 24.4 28.7 46,, 28.25

6,, 37.3 41.2 46,, 41.25

7,, 6.6 10.5 47,, 10.55

48,, 29.0 33.1 48,, 33.05

9,, 11.7 15.7 49,, 15.70

9,, 32.4 36.4 49,, 36.40

50,, 37.2 41.2 50,, 41.20

1,, 59.8 2.8 52,, 3.80

2,, 19.3 22.5 52,, 22.40

2,, 59.8 3.7 53,, 3.75

3,, 33.8 37.8 53,, 37.80

4,, 3.3 7.3 54,, 7.30

4,, 08.1 12.1 54,, 12.10

4,, 22.9 27.0 54,, 26.95

55,, 1.4 5.3 55,, 05.35

57,, 17.4 21.6 57,, 21.50

57,, 25.2 7 25.20

57,, 58.7 2.7 58,, 02.70

58,, 33.5 37.6 58,, 37.55

8, 59, 28.2 32.2 8,, 59, 32.20

9,, 00,, 1.3 5.3 9,, 00,, 05.30

0,, 53.5 57.7 00,, 57.60

1,, 44.9 48.8 1,, 48.85

2,, 21.6 25.5 2,, 25.55

②

2,, 36.9 41.1 2,, 41.00

3,, 47.3 51.2 3,, 51.25

4,, 40.6 44.6 4,, 44.60

5,, 46.9 50.9 5,, 50.90

6,, 18.3 22.6 6,, 22.45

7,, 14.5 18.4 7,, 18.45

NR last

7,, 48.2 52.2 7,, 52.20

8,, 7.2 11.3 8,, 11.25

trip: AR is 8' too small-

2nd run 3

9.10 0.30

11 9.33-

11 1.47

12 3.27

12 7.50

7-8 8.47

12 5.59

11 7.02

11 9.33

10-11 4.18

11-12 8.57

12 4.21

9-10 0.28

10. 3.103 2.05

6 5.20

12 7.57

11 0.51

10 8.19

11 9.33-

11 8.23

12+ 5.04

12 4.23

11 2.18

11-12 7.16

11 5.33

11 2

10 3.28

12 6.35

10-11 9.41

12 8.1

11 9.07

12 5.89

12 7.04

11 5.12

11-12 2.21

(7.47 used out 21) All done 45

no 1 run lost

AR lost

44

8. 17.3	11.3	8. 11.25
9. 08. 43.0	47.0	9. 08. 47.00
9. 9.6	13.7	9. 13.65
10. 20.9	24.8	10. 24.85
10. 37.7	41.7	10. 41.70
11. 37.7	41.6	11. 41.65
		11. 41.6

DB

12. 37.3	40.98	
13. 11.4	15.4	13. 15.40
13. 42.6	46.5	13. 46.55
15. 23.0	27.0	15. 27.00
15. 52.9	—	15. 56.90
16. 1.2	5.1	16. 06.15
17. 39.1	43.4	17. 43.10
17. 45.5	49.4	17. 49.45
18. 37.0	41.0	18. 41.00
18. 47.7	51.8	18. 51.75
18. 52.6	56.5	18. 56.55
20. 5.6	9.8	20. 09.70
21. 38.4	—	21. 39.40
21. 48.0	45.2	21. 45.10
22. 16.7	10.9	22. 10.80
22. 23.5	27.5	22. 27.50

D

R

24 —	5.7	24. 05.80
4. 8.3	12.6	4. 12.45
4. 17.5	21.5	4. 21.50
5 —	35.5	25. 35.50
25. 51.3	55.2	25. 56.25
26. 14.7	18.8	26. 18.75
27. 1.3	5.3	27. 5.30
28. 1.3	5.4	28. 5.35
29. 12.5	16.6	29. 16.55
29. 50.7	54.6	29. 54.65
30. 16.1	20.1	30. 20.10
32. 18.2	22.2	32. 22.20
32. 26.0	29.9	32. 29.95

12 3.43
 11-12 8.03
 12 9.09
 12 7.53
 9 0.22
 12 9.36
 9.13

Sup = com 20" n f

2 win 3

12 2.46
 12 4.27
 10-11 6.47
 11 5.05
 12 6.28
 9-10 9.08
 11 4.06
 11-12 8.25
 10-11 8.16
 10-11 3.27
 10-11 7.03
 12 7.45
 12 5.28
 10-11 7.18
 12 5.23
 10-11 4.09

2 win lost

no

2 win lost

12-13 1.38
 11 2.52
 11 4.03
 11 7.18
 12 6.34
 11 8.50
 11 9.40
 8-9 9.55
 11-12 7.07
 12 4.16
 10-11 6.12
 10-11 6.44
 10 3.01
 12 1.43

AP2 lost
 11 win lost

1 win lost

9,, 32,, 55.5	59.4	9,, 32,, 59.45
33,, 31.2	33.4	9,, 33,, 35.30
33,, 47.2	51.2	33,, 51.20
34,, 6.7	10.8	34,, 10.80
<i>M lost</i>		
36,, 52.7	56.5	36,, 56.60
38,, 35.0	39.0	38,, 39.00
39,, 04.0	7.9	39,, 7.95
39,, 29.4	33.5	39,, 33.50
39,, 38.7	42.8	39,, 42.75
39,, 41.7	45.6	39,, 45.65
<i>B</i>		
40,, 54.8	59.2	40 59.0
41,, 8.45	—	41,, 12.60
41,, 21.6	25.5	41,, 25.55
41,, 36.8	40.9	41,, 40.85
42,, 44.3	48.3	42,, 48.30
43,, 27.2	30.9	43 30.15
43,, 56.0	59.9	43,, 59.95
44,, 26.5	36.2	44 30.03
45,, 47.2	51.2	45,, 51.20
46,, 29.2	33.1	46,, 33.15
47,, 27.4	—	47,, 31.40
<i>DB</i>		
48,, 13.4	17.4	48,, 17.40
8,, 42.5	—	48,, 46.50
49,, 29.5	33.6	49,, 33.65
52,, 3.2	7.2	52,, 07.20
53,, 35.2	39.3	53,, 39.25
3,, 43.4	47.3	53,, 47.35
54,, 6.1	10.3	54,, 10.20
54,, 48.7	48.6	54,, 48.65
55,, 00.0	4.0	55,, 4.00
55,, 36.6	—	55,, 40.60
56,, 15.0	1.9.0	56,, 19.00
57,, 57.9	1.9	57,, 1.90
7,, 00.2	4.2	57,, 04.20

11 2.12
 10-11 4.58
 11 10.20
 12 7.46
 12 5.01 *1/2 lost*
 10 10.11
 10-11 2.38
 9-10 3.53
 8-9 3.48
 11 7.30
 11-12 8.00
 13

12 9.43
 11-12 7.30
 10 6.12
 11 10.10
 12 9.28
 12 6.41
 12-13 6.06
 10-11 3.30
 11 1.12
 12 3.07
 11-12 0.33
 2 f 3

11-12 0.39
 11-12 6.10
 11-12 10.13
 11 5.37
 12 8.31
 11-12 6.39
 12 1.41
 12 3.14
 11 5.00
 12-13 2.38
 11 6.27
 12 2.17
 12 1.49

no

2 win lost

2 win lost

2 win lost

no

44

9,, 58,, 64.0	8.2	9,, 58,, 08.10
8,, 23.5	27.4	58,, 27.45
58,, 55.0	59.0	58,, 59.00
59,, 25.2	29.3	59,, 29.25
10,, 0,, 4.6	8.7	10,, 00,, 08.65
0,, 42.7	46.6	0,, 46.65
0,, 57.7	1.5	1,, 01.60
1,, 15.8	29.8	1,, 19.80
2,, 00.2	4.1	2,, 04.15
2,, 3.6	7.6	2,, 09.60
3,, 19.1	23.4	3,, 23.25
A lost		
B B B		
4,, 53.4	57.3	4,, 57.35
5,, 27.9	31.8	5,, 31.85
6,, 22.2	25.8	6,, 26.00
6,, 37.2	41.1	6,, 41.15
A lost		
8,, 42.8	46.6	8,, 46.70
B		
9,, 19.6	23.6	9,, 23.60
9,, 35.0	39.0	9,, 39.00
9,, 48.7	51.7	9,, 51.70
10,, 3.2	7.2	10,, 7.20
11,, 16.9	20.9	11,, 20.90
D B D		
12,, 42.8	46.8	12,, 46.80
14,, 3.2	7.2	14,, 07.20
15,, 21.3	25.3	15,, 25.30
B B		
18,, 00.9	4.9	18,, 04.90
DDDD		
D D D D		

Zone 44

12 6.52
11 4.37

12 6.30

12 5.37

11-12 7.39

12 4.10

~~11~~ 5.09

11 7.16

11 0.12

11-12 0.09

12 2.12

12 3.18

B. B. B

10.11 5.53

10 10.38

12 1.04

11 10.30

12 2.06

10-11 5.20

B

12 5.31

12 4.24

12-13 5.11

11-12 5.29

12-13 8.37

B B D

12 3.17

11-12 7.03

11 3.09

B. B

11 9.11

-11-12 2.37

B. B. B. B

12 3.05

11 4.28

6-7 6.58

no

AR lost

No R

$\text{---} = 10^h 31^m 15^s$
 2nd wire double W $0.10^m 12^s$

$10^h 35^m 20^s$
 $W 0.10^m 12^s$

April 1st 1853

done 45

 $R \ 8^h \ 18^m \ Dec \ 0^{\circ} \ 00'$
 to $R \ 0^h \ 10'$
Zero of position carefully determined $90^{\circ} \ 01' \ 30''$
 $E.C. \ 9^h \ 00^m \ 00^s \ Bar. \ 29.910 \ 63^{\circ} \ Ext. \ 35.6$
 $11^h \ 15^m \ 00^s \ 29.956 \ 64 \ 36.0$

8..19..21.6 26.5 ~ 8..15..25.55
 15..32.8 36.7 15..36.75
 15..46.1 50.1 15..50.10
 17..52.1 56.2 17..56.15
 18..8.9 12.8 18..12.85
 18..10.7 14.7 18..14.70

B

19..24.3 28.2 19..28.25
 19..43.0 46.9 19..46.95
 20..2.5 6.5 20..06.50
 20..21.9 25.9 20..25.90

D

20..48.9 52.9 20..57.90
 21..53.9 57.9 21..57.90
 22 *no mark* 35.1 21..35.10
 23..18.2-22.2 23..22.20
 23..19.8 23.9 23..23.85

BD

ink failed

25..25.2 29.2 8..25..29.20

26..05.5 9.5 26..09.50
 26..54.3 58.3 26..58.30
 27..17.4 21.2 27..21.30

None 45 = 44 repeated

11 3.54
12 2.33
11 9.55
11 3.23 cent.
11 2.03
18 3.54
11 8.19
11/12 8.59
11 5.27
12 3.19

comp of 12 12" m.f.

2
9.10 7.05
12 8.12
12 4.18
12/13 1.15
12 5.38

BD
11/12 10.25
12.13 5.14
x 11 -0.12
12 7.00
0.76
11 5.56
x 11/12 10.23
11/12 0.28 (not used Oct 12)

ms

$28..09.8 \quad 13.7 \sim 8..28..13.75$
 $28..16.6 \quad 20.6 \quad 28..20.60$
 $28..28.9 \quad 32.9 \quad 28..32.90$

30..7.8 11.8

BDB

30..36.0 39.9

31..3.9 7.7

32..3.9 7.9

32..56.9 0.9

33..3.0 7.0

33..23.4 27.5

34..13.4 17.3

34..20.6 24.7

34..28.7 32.7

BDB

35..20.2 24.2

28.6 32.6

33.2 37.14

36..19.0 22.9

36..— 43.9

36..47.9 ^{in 4}

37 7.2 11.2

37..47.7 51.5

B

38..50.0 53.9

39..00.9 48

39..21.1 25.1

39..57.1 1.1

41..42.8 46.8

41..53.1 57.2

42..29.3 33.2

42..39.5 43.4

43..31.9 35.9

30..11.80

30..39.95

31..07.80

32..07.90

33..00.90

33..07.00

33..27.45

34..17.35

34..24.65

34..32.70

35..24.20

35..32.60

35..37.15

36..22.95

36..43.90

36..57.90

37..11.20

37..57.60

38..53.95

39..04.85

39..25.10

40..01.10

41..46.80

41..57.15

42..33.25

42..43.45

43..35.90

1/2 4.26 (not used Oct 12)

1/8.9 4.01

1/8.9 1.23

1/11 2.47

1/12 9.08

1/11 6.22

1/10 4.23

1/11.12 7.12

BBB

1/10 8.05

1/12 5.49

1/12 5.22

1/10 5.28

1/11 8.13

1/11 3.54

1/10.10 3.33

1/12 3.04

1/11 8.56

BBB

1/11 7.28

1/11 7.25

1/12 3.56

1/11 9.46

1/12 1.10

1/10 5.05

1/12 6.53

1/13 6.06

BBB

1/11.12 3.06

1/10.11 3.30

1/11 6.01

1/10 1.20

1/12 1.53

1/12 7.01

Dec. lost

1/11 6.38

1/11 8.17

x 1/12 -0.19

ns

ns

ns

1st min lost

ns

8,, 44,, 12.5' 16.4 - 8,, 44,, 16.45

4,, 35.7 39.7 44,, 39.70

4,, 54.9 58.8 44,, 58.85

44,, 37.1 1.1 45,, 01.10

D

45,, 53.9 57.9 45,, 57.90

46,, 13.9 17.9 46,, 17.90

19.5 23.5 46,, 23.50

37.3 41.4 46,, 41.35

47,, 06.7 10.6 47,, 10.65

48,, 29.2 33.2 48,, 33.20

49,, 11.8 15.8 49,, 15.80

49,, 48.0 52.0 49,, 52.00

DD.B

50,, 37.5 41.5 50,, 41.50

49.8 53.9 50,, 53.85

50,, 50.7 54.9 50,, 54.80

52,, 00.0 3.9 52,, 03.95

19.5 23.5 52,, 23.50

52,, 59.9 3.9 53,, 03.90

53,, 34.0 37.9 53,, 37.95

54,, 3.6 7.6 54,, 07.60

08.5 12.5 54,, 12.50

54,, 23.3 27.2 54,, 27.25

B

55,, 1.6 5.6 55,, 05.60

55,, 28.9 32.9 55,, 32.90

56,, 32.6 36.6 56,, 36.60

57,, 17.6 21.5 57,, 21.55

57,, ~~25.4~~ 25.4 57,, 25.40

57,, 58.6 2.6 58,, 02.60

58,, 33.7 37.8 58,, 37.75

DD

59,, 17.0 21.0 59,, 21.00

28.5 32.5 59,, 32.50

9,, 00 1.7 5.6 9,, 00..05.65

0 47.8 51.8 00,, 57.80

0 53.7 57.7 ~ 9,, 00..57.70

Zone 45-

1 11.12 7.106

1 12 8.240

1 10 5.111

1 12 9.21

ms

1 12 4.04

1 9.10 0.30

1 12 0.50

1 11 1.45

1 12 3.27

1 12 7.57

1 8 8.48

x 12 - 0.11

DDD

1 11.12 7.07

1 12 4.53

1 12 9.44

1 11 9.32

1 10 4.16

1 12 8.56

1 12 4.20

x 9 - 0.28 cent

1 11 3.06

1 6 5.19

B

1 12 7.46 cent

1 12 0.23

x 12 10.45

1 11 0.53

1 10 8.58

1 11 9.35

1 12 8.23

DDD

1 12 7.40

1 12 6.04

1 12 4.23

1 12 7.47

1 11 2.17

ms

9..01..44.9 48.9 ~ 9..01..48.90
 2..21.6 25.5 2..25.55
 2..37.2 41.2 2..41.20
 3..47.3 51.3 3..51.30
 3..57.3 1.3 4..01.40
 4..40.7 44.7 4..44.70
 5..47.0 50.9 5..50.95
 B

6..18.3 22.6 6..22.45
 7..14.7 18.6 7..18.65
 7..48.6 52.5 7..52.55
 8..7.6 11.5 8..11.55
 8..43.1 47.2 8..47.15
 9..9.7 13.7 9..13.70
 10..21.1 24.9 10..25.00
 10..37.9 41.8 10..41.85
 10..38.9 42.9 10..42.90
 11..37.8 41.8 11..41.80
 D

12..37.5 41.4 12..41.45
 13..11.6 15.5 13..15.55
 13..13.4 17.5 13..17.45
 13..42.8 46.7 13..46.75
 15..23.0 27.0 15..27.00
 15..24.2 28.3 15..28.25
 15..53.2 57.2 15..57.20
 17..1.5 5.5 17..05.50
 17..19.1 23.0 17..23.05
 17..39.5 43.4 17..43.45
 17..42.9 46.9 17..46.90
 No

18..37.3 41.2 18..41.25
 18..47.9 51.9 18..51.90
 18..52.9 56.9 18..56.90
 BB

20..06.0 10.0 20..10.00

21..35.6 39.5 ~ 9 .. 21..39.55

45

12 7.16
 11.12 6.34
 11 3.27
 12 6.35
 12 3.41
 10 9.49 cent;
 12 9.07
 B

12 5.00
 11 5.11
 12 2.21
 12 3.43
 12 8.04
 12 9.10
 12 7.52
 9 0.22
 11 0.47
 12 9.36

D

12 2.46
 12 4.27
 12 3.25
 10 6.47
 11 5.06
 12 3.34
 12 6.27
 9.10 9.07
 12.13 7.50
 11 4.07
 12 8.33
 12 8.27
 10 8.55
 10 3.14
 10 7.02
 B 03

12 7.15~

No star larger than 13 mag.

12.13 6.26

9..21..41.4	45.3	9..21..45.35
22..06.9	10.8	22..10.85
22..23.8	27.8	22..27.80
22..53.6	57.4	22..57.50
23..19.0	23.1	23..23.05
24 02.0	6.0	24..06.00
8.6	12.6	24..12.60
24..17.7	21.7	24..21.70
24 52.3	—	24..56.30

D

25..51.3	—	25..55.30
25 —	55.6	25..55.60
26..14.8	18.8	26..18.80

D.B.

27..01.6	5.6	27..05.60
27..10.2	14.1	27..14.15
27..55.8	39.8	27..59.80
28..1.4	5.4	28..05.40
29..12.9	16.8	29..16.85
29..36.1	—	29..40.00
29..49.0	52.9	29..52.90 ⁵
29..50.8	54.8	29..54.80
30..16.4	20.3	30..20.35
30..25.2	29.3	30..29.25
31..14.0	18.1	31..18.05

D

32..18.6	22.6	32..22.60
32..26.1	30.1	32..30.10
32..55.7	59.7	32..59.70
33..31.7	35.7	33..35.70
33..47.6	51.6	33..51.60

BDB

34..26.0	29.9	34..29.95
35..14.9	18.9	35..18.90
36..42.3	—	36..46.30
36..52.8	56.8	36..56.80
36..59.9	39	37..03.90

B

Moon 45-

11 7.17
 12 5.24
 10 4.09
 X 12 10.23
 12.13 2.00
 11 2.51
 11 4.03
 12 7.15
 X 10 10.49
 D
 11 8.50
 11 5.19
 12 9.38
 D
 9 9.55
 12 9.21
 12.13 8.17
 12 7.06
 12 4.66
 12 4.13
 12 8.43
 11 6.12
 12 6.43
 12.13 5.29
 12.13 9.59
 D
 9 3.01
 12 1.44
 11 2.12
 11 4.58
 X 11.12 10.22
 BDB
 12 4.06
 12.13 3.92
 12.13 5.03
 X 11 10.12
 12 7.11
 B

A? 2 min best

2 min lost
 1st min lost ns
 ns

2nd min lost

Mike
 2 min lost

9.. 37..17.6 21.5 ~ 9.. 37.. 21.55
 38.. 35.1 39.2 38.. 39.15
 39.. 4.2 8.1 39.. 08.15
 9.. 5.5 9.3 39.. 09.40
 9.. 29.8 33.8 39.. 33.80
~~39.. 42.9~~ 42.9 39.. 42.90
 40.. 44.5 48.5 40.. 48.50
 41.. 8.6 12.7 41.. 12.65
 41.. 21.9 25.9 41.. 25.90
 41.. 37.2 41.2 41.. 41.20

B

42.. 44.5 48.5 ~ 42.. 48.50
 44.. 26.7 30.7 44.. 30.70
 44.. 36.4 40.4 44.. 40.40
 45.. 47.5 51.6 45.. 51.55
 46.. 29.4 33.2 46.. 33.30
 47.. 27.6 31.6 47.. 31.60
 48.. 13.8 17.7 48.. 17.75
 49.. 29.9 33.9 49.. 33.90

D

52.. 03.6 7.5 ~ 52.. 07.55
 53.. 35.6 39.6 53.. 39.60
 3.. 43.7 47.8 53.. 47.75
 54.. 6.5 10.5 ~ 54.. 10.50
 54.. 44.9 48.9 54.. 48.90
 55.. 00.3 4.4 55.. 04.35
 56.. 15.4 19.3 56.. 19.35

DB

57.. 00.5 4.5 ~ 57.. 04.50
 58.. 23.6 27.9 58.. 27.75
 58— 31.4 58.. 31.40
 58.. 41.8 45.8 58.. 45.80
 9.. 59.. 25.6 29.6 59.. 29.50
 10.. 00.. 4.9 8.9 ~ 10.. 00.. 08.90
 0.. 42.9 46.8 00.. 46.85
 0.. 57.9 1.9 01.. 01.90
 1.. 16.1 20.0 1.. 20.05
 2.. 00.5 4.4 2.. 04.45

45

12 2.11
 11 2.38
 9 3.54
 12 1.54
 8.9 3.48
 11.12 7.30
 12 10.10
 12 7.27
 10 6.11
 * 11.12 10.07

B

12 9.26
 10 3.29
 12 2.50
 10.11 1.13
 12 3.08
 12 0.34
 11 0.38
 * 11 10.12

D

11 5.47
 12 8.81
 11 6.38
 12 1.41
 12 3.15
 11.12 5.00
 11 6.27
 8.13
 12 1.48
 11 4.37
 11.12 8.20
 * 12 10.30
 12 5.37

 12 7.39
 12 4.11
 10 5.07
 10 7.19
 11.12 0.12

ms

1st ms lost

1st win lost

10.. 2.. 04.0 7.9 ~ 10.. 2.. 07.95

3.. 19.3 23.2 3.. 23.25

4.. 53.5 57.5 4.. 57.50

5.. 28.2 32.2 5.. 32.20

6.. 37.5 41.5 6.. 41.50

8.. 43.0 47.0 8.. 47.00

9.. 19.7 23.8 9.. 23.75

9.. 30.1 34.0 9.. 34.05

9.. 35.1 39.1 9.. 39.10

9.. 41.8 45.9 9.. 45.85

2B

10.. 03.6 7.6 10.. 07.60

10.. 13.3 17.3 10.. 17.30

11.. 17.2 21.1 11.. 21.15

12.. 42.9 46.9 12.. 46.90

14.. 03.5 07.3 14.. 07.40 ~

✓ 15.. 21.6 25.6 15.. 25.60

✓ 16.. 03.6 7.4 16.. 07.50

✓ 18.. 01.0 4.9 ~ 10.. 18.. 04.95

1 12 0.09
 1 12 2.12
 1 10.11 5.54
 x 11 10.37
 x 10 10.28
 1 10 5.20
 1 12 5.30
 + 10 -0.13
 1 12 4.24
 1 12 9.33
 B

MS

1 10.11 5.28
 1 12.13 1.31
 1 12 8.37
 1 12 3.16
 1 11.12 7.03

 11 3.09
 12.13 2.57
 11.12 2.36

Vagraney

12 3.13
 11.12 10.41
 11 4.28
 11 10.17
 5 6.57

MS

