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Record
of the Photometric Observations

[A few of the earlier observations not relating to the stars between 40° and 50° of north declination have been omitted.]

1872 March 6.

Group X

decr.	14 B Aurigae	
52°	17.°2	3,08
	16.0	3.22
		3.15

18 B Aurigae

11.8	4,02
12.7	3.83
	3.92

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α Aurigae

38°.6	1.19
45.7	0.85
	1.02

ζ Aurigae

28.4	1.87
25.9	2.09
	1.98

η Aurigae

30.0	1.75
33.8	1.48
	1.61

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μ Aurigae

16.4	3.19
15.8	3.29
	3.24

λ Aurigae

14.0	3.59
14.5	3.50
	3.54

S.P. ζ Aurigae

11.2	4.15
7.3 clouds.	5.26
	4.70

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s. f. g Aurigae

8.3
4.7 clouds

4.93
6.45
5.69

g Aurigae

11.8

4.02

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1872 March 8

Windy night. Lamp not trimmed very well.

Experiments on the Caps.

Cap 0. Pinhole 3

148.°0	1.60
147.4	1.56
143.6	1.32
142.0	1.22
147.8	1.59
	1.42

Cap 1. Pinhole 3

154.7	2.14
152.2	1.92
155.8	2.25
150.0	1.73
151.8	1.89
	1.97

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Cap 0. Pinhole 3

136.0	0.92
139.2	1.07
145.8	1.45
151.7	1.88
141.0	1.17
	1.30

Cap 2. Pinhole 3

	.1
161.7	2.92
163.8	3.22
165.0	3.42
164.4	3.32
160.7	2.79
	3.13

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Cap 0. Pinhole 3

143.4	1.30
146.2	1.48
150.1	1.75
152.0	1.91
148.8	1.66
	1.62

Cap 1. Pinhole 3

154.2	2.10
156.7	2.34
154.6	2.13
152.1	1.91
150.2	1.76
	2.05

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Cap 1. Pinhole 2

163.3	3.15
155.8	2.25
161.9	2.95
158.4	2.21
159.8	2.68
	2.65

Cap 1. Pinhole 3

152.0	1.91
152.8	1.97
157.0	2.37
157.8	2.45
159.6	2.66
	2.27

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Cap 1. Pinhole 5

122.1	0.42
114.7	0.25
127.0	0.57
135.0	0.88
115.0	0.25
	0.47

Cap 1. Pinhole 3

146.2	1.48
148.8	1.66
148.6	1.64
155.9	2.26
157.0	2.37
	1.88

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1872 March 8

Experiments on Caps.

α Leonis
Cap 2

35.0	1.40
31.3	1.65
32.2	1.59
36.3	1.32
29.0	1.82
28.9	1.83
41.2	1.05
37.9	1.23
29.2	1.81
	1.52

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α Leonis
Cap 0.

26.1
20.9
22.1

α Leonis
Cap 1

67.6	0.20
50.8	0.66
54.6	0.52
54.9	0.51
47.4	0.78
59.2	0.39
	0.51

α Leonis
Cap 2

29.1	1.82
30.0	1.75
27.3	1.96
	1.84

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γ Leonis
Cap 1

47.8	0.76
39.2	1.16
51.8	0.61
38.0	1.22
49.8	0.68
	0.89
37.4	1.26
44.9	0.88
43.2	0.96
44.8	0.89
40.5	1.09
53.0	0.57
	0.92

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γ Leonis
Cap 2

24.0	2.27
23.2	2.35
28.2	1.89
21.8	2.50
25.2	2.15
18.1	2.95
	2.35

γ Leonis
Cap 1

38.2	1.21
40.8	1.07
43.8	0.93
	1.07

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1872 March 05

Groups XXIV and XXVI.

67 Ursae majoris

25.0	2.17
22.0	2.48
23.2	2.35
24.2	2.25
24.3	2.24
	2.30

8 Can. Ven.

37.4	1.26
46.6	0.81
43.3	0.95
44.9	0.88
44.3	0.91
	0.96

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♀ Can. Ver.

35.3	1.38
35.1	1.40
35.0	1.40
30.0	1.75
28.4	1.87
	1.36

☿ Can. Ver.

17.9	2.98
20.0	2.71
20.0	2.71
19.7	2.74
18.9	2.84
	2.80

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1872 March 16.

Began 9h 15m

Groups XXIII and XXIV.

γ Ursae maj.
Cap 2

43.3	0.95
38.3 *	1.21
35.1	1.40
37.2	1.27
37.9	1.23
	1.21
	1.79
	−0.58

χ Ursae maj.
Cap 1

41.4	1.84
38.2 *	1.21
37.8 *	1.24
47.8	0.76
47.2	0.78
	1.81

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283B Urs. maj.
Cap O.

18.3	2.92
21.5	2.53
19.8	2.73
21.6	2.52
17.3	3.06
	2.75

65 Urs. maj. preceding

18.2	2.94
18.6	2.88
17.0	3.10
16.5	3.18
18.6*	2.88
	3.00

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65 Hrs. maj. foll.

14·0	3.59
12·7	3.83
14·2	3.55
13·6	3.66
12·5	3.87
	3.70

67 Hrs. maj. Po.

26·9	2.00
32·8	1.55
25·9	2.09
26·3	2.05
31·1	1.67
	1.57

67 Hrs maj. Foll.

13·8	3.62
19·7	2.74
18·1	2.95
16·2	3.22
18·5	2.90
	3.09

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349B. No 1.

16.2	3.22
14.8	3.45
	3.33

349B. No 2.

18.0	2.96
21.1*	2.58
	2.77

349B. No. 3.

16.1	3.24
21.0	2.59
	2.91

349B. No. 4.

12.0	3.98
15.2	3.38
	3.68

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6 Can. Ven.

31.0	1.67
26.9*	2.00
32.3	1.58
33.2	1.52
37.0	1.25
	1.66

29B Can Ven

14.4	3.52
18.2	2.94
20.1	2.64
18.9	2.84
21.1	2.58
	2.91

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4 Can. Ven.

14.5	3.50
18.4	2.91
20.3	2.67
22.4	2.43
23.0	2.37
	2.78

2 Can. Ven.

23.3	2.34
24.0	2.27
27.6	1.94
27.4	1.96
28.9	1.83
	2.07

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Notes on Groups XXIII and XXIV

During the first round observer thinks the lamp may have altered.

4 Con. Ven. has a star north of it which reads

15°.4 3.27

65 Hrs. maj. is double. Precedg component measured.

67 is Double.

In place of 3497 B I find 4 stars not very unequal.

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η, ζ, g, and c Ursae maj.

η

74.2	0.10
64.2	0.27
61.4	0.33
75.0	0.09
60.8	0.35
	0.23

ζ

49.6	0.69
53.8	0.54
47.1	0.79
51.1	0.64
48.0	0.75
	0.68

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g

20.0	2.71
18.3	2.92
18.3	2.92
25.1	2.16
20.1	2.69
	2.68

α

50.0	0.68
53.6	0.55
47.7	0.76
62.3	0.31
53.9	0.54
	0.57

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Experiments on Caps

g Ursae Majoris

Cap 2

20.0	2.71
25.2	2.15
17.5	3.03
19.6	2.76
21.2	2.56
	2.64

Cap 0

50.5	0.66
49.6	0.69
46.5	0.81
44.8	0.89
45.2	0.87
	0.78

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Cap 1

40.3	1.10
40.0	1.12
38.7	1.19
36.7	1.30
34.3	1.45
	1.23

Cap 0

49.2	0.71
54.1	0.64
59.4	0.38
50.6	0.65
55.1	0.49
	0.57

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1872 March 18

Bright moon-light; thin, light clouds.

Groups XX and XXII.

λ Ursae maj.

Cap 0. Pinhole 4.

60.9	0.34
54.8	0.51
50.5	0.66
49.6	0.69
48.2 Reject	0.74
	0.58

μ Ursae majoris

Pinhole 3

53.6	0.55
50.0	0.68
50.1	0.67
49.0	0.71
48.5 Reject	0.73
	0.65

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Comp. of μ.
Pinhole 5

21.6	2.52
26.0	2.08
26.0	2.08
23.5	2.32
24.0 Reject	2.27
	2.25

32 Leon. min.
Pinhole 5

27.1	1.98
23.0	2.37
24.2	2.25
21.1	2.58
18.8 Reject	2.86
	2.21

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31 Leon. min
Pinhole 5

57.8		0.43
48.0		0.75
47.2		0.78
45.7		0.85
32.8	Reject	1.55
		0.87

Another Leon. min.
Pinhole 5

24.2		2.25
21.5		2.53
25.7		2.11
21.1		2.58
18.8	Reject	2.86
		2.37

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α Ursae maj.
Pinhole 5

34.9	1.44
29.1	1.82
28.8	1.84
31.0	1.67
23.9 Reject.	2.28
	1.89

210 B North.
Pinhole 5

24.0	2.27
19.0	2.83
21.7	2.51
19.2	2.88
	2.60

210 B South
Pinhole 5

17.7	3.00
14.4	3.52
16.7	3.15
15.0	3.42
	3.27

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47 Ursae maj.
Pin hole 5

33.9	1.47
28.3	1.88
24.9	2.18
29.0	1.82
	1.84

Between ω and 47.
Pin hole 5

26.7	2.02
18.4	2.91
22.3	2.44
17.3	3.06
	2.61

Comp of λ

17.2	3.08
15.3	3.37
	3.22

Between λ and μ

15.3	3.37

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Between μ and 33 H. North.

25.1	2.16
21.8	2.50
22.9	2.38
20.9	2.60
19.0 Reject	2.83
	2.49

Between μ and 33 H. South.

15.1	3.40
—	
15.2	3.38
14.9	3.43
13.9 Reject.	3.61
	3.40

49 Ursae. maj.

29.9	1.75
30.6	1.70
33.8	1.48
28.3	1.88
	1.70

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Another Ursae. maj.

20.1	2.69
20.6	2.63
19.9	2.72
19.4	2.78
	2.70

A star in Leo minor.

25.7	2.11

Notes

When the last round was taken, it was getting cloudy. The fifth observation is therefore to be rejected in every case. Stratus clouds.

μ is reddish.

Nearly between μ and 33 H, there are two little stars of which readings are taken.

The "other" of Leo minor is reddish

The "other" of Ursa major is really a

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cluster but I measure the brightest star in it.

[The following notes were inserted soon in the book ~~shortly~~ after the observations were made.

The other of Lev minor is 38 Leon. min?

The other of Ursæ maj. is 51 Ursae maj.

The star of Leon minor on which the reading 25°.7 was taken was 35 Leon. min.]

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Observations on Artificial Stars

Star made by Lamp No 1.

22.0	2.48
21.2	2.56
21.2	2.56
23.7	2.30
24.4	2.23
	2.43

Star made by Lamp No 2

11.3	4.13
15.5	3.33
15.2	3.38
16.9	3.12
15.9	3.27
	3.45

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Star made by two Lamps together

27.5	1.95
26.8	2.01
25.3	2.14
26.0	2.08
23.2	2.35
	2.11

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Experiments on Pinholes

Pinhole 3

13.8	3.62
17.8	2.99
12.9	3.79
14.1	3.57
13.6	3.66
	3.53

Pinhole 2.

8.2	4.96
11.4	4.11
10.6	4.29
12.4	3.89
13.1	3.76
	4.20

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Pinhole 1

9.6	4.55
8.3	4.93
9.9	4.47
8.8	4.77
7.6	5.16
	4.78

Pinhole 6

35.3	1.38
33.4	1.51
45.5	0.85
40.0	1.12
30.4	1.72
	1.32

Pinhole 5

27.1	1.98
26.6	2.03
37.5	1.25
25.0	2.17
22.8	2.39
	1.96

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Pinhole #0

29.8	1.76
21.6	2.52
22.6	2.41
20.7	2.62
20.5	2.65
	2.39

Notes

Nos 1, 2, 3 did not look like the star. Therefore, they were not supposed to give good results.

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1872 March 21

Moon very near ☉ very windy; seeing very bad.

Groups XX

λ Ursae maj.

Cap 1 Pinhole 5

41.8 1.02

43.2 0.96

0.99

μ Ursae maj.

Cap 2. Pinhole 6

37.1 1.28

38.0 1.22

1.25

33H. Urs. maj.

Cap 0. Pinhole 5

22.7 2.40

27.0 1.99

2.20

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32 Leon. min.
Pinhole 5

14.2	3.55
14.9	3.43
	3.49

38 Leon. min.
Cap 1. Pinhole 5

29.8	1.76
30.0	1.75
	1.75

χ Urs. maj.
Cap 2. Pinhole 5

26.0	2.08
29.5	1.79
	1.93

39 H. Urs. maj.
Pinhole 5

22.6	2.41
22.0	2.48
	2.44

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21

36 H. Ms. maj.
Pinhole 5

24.4	2.23
23.3	2.34
	2.28

F 394
Pinhole 5

17.8	2.99

Another Leon. min.
Pinhole 5

17.0	3.10

Notes

Lamp went out after the second reading of Leon min. and was relit. Had to give up on account of stars coming past zenith.

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1872 March 21

Groups XXVI and XXVIII

8 Can. Ven.
Cap 1. Pinhole 5

30.5	1.71
30.6	1.70
30.9	1.68
31.1	1.67
29.2	1.81
	1.71

9 Can. Ven.
Pinhole 5

16.5	3.18
16.2	3.22
15.8	3.29
18.3	2.92
15.0	3.42
	3.21

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10 Can. Ven.
Pinhole 5.

20.4	2,66
22.6	2.41
19.8	2.73
19.8	2.73
20.7	2,62
	2.63

Another [6 H.]
Pinhole 5

17.4	3,05
21.0	2.59
20.0	2.71
18.3	2.92
19.9	2.72
	2.80

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12 Can. Ven.
Cap 2. Pinhole 5

24.7	2.20
26.7	2.02
33.1	1.53
35.3	1.38
32.4	1.57
	1.74

15 Can. Ven.
Pinhole 5

15.6	3.32
17.5	3.03
16.0	3.25
16.6	3.16
16.1	3.24
	3.20

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17 Com. Ven.
Pinhole 5

20.2	2.68
19.7	2.74
16.3	3.21
19.9	2.72
18.0	2.96
	2.86

11 H Com. Ven.
Pinhole 5

26.1	2.07
27.0	1.99
25.3	2.14
31.0	1.67
25.6	2.12
	2.00

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20 Can. Ven
Pinhole 5

32.3	1.58
35.5	1.37
30.4	1.72
31.0	1.67
29.8	1.76
	1.62

19 Can. Ven.
Pinhole 5

19.8	2.73
18.0	2.96
16.2	3.22
20.3	2.67
17.6	3.02
	2.92

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23 Can. Ven.
Pinhole 5

22.0	2.48
21.8	2.50
19.6	2.76
22.1	2.46
20.1	2.69
	2.58

8 ~~Can.~~ Ven.
~~Cap 2~~ Pinhole 5

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