

KG
11365
951

XXVII

Standard Photographic Magnitudes

Scale Corrections.

Scale M, from I 32811, for I, B, and MA plates

Scale 1 correction $+0.2$
0.0

Scale P, from C 15350, for A, X, H, and C plates

Scale 1 correction -0.3
0.0

Scale N, from AC 8858, for AC and AM plates with usual aperture

A Scale 1 correction -0.2

B 2 -0.4

C 3 0.0

Scale O, from AC 8796, for AC and AM plates with reduced aperture
and AI plates

A Scale 1 correction 0.0

B 2 -0.3

C 3 0.0

Scale R, from C 17493, for C and MC plates

Scale 1 correction $+0.3$
0.0

{ Do not use Scale 2 for images brighter than 8.0 }
when measures are made also on Scale 1. Brighter
image may be employed if Scale 1 is not used.
{ Reductions made previous to Oct. 12, 1910 need not be
altered.

Contents of Book XXVII. H. S. L.

		Page.
Polar Sequence. B. Plates - Scale Measures.		4-6
Standard Sequences.		
AC Plates - Scale Measures.		7-22
Plate	Sequences	pages
AC 9642	6, 15, 18, 17	6, 7
9564	6, 15, 24, 34, 32, 30	9-11
9551	24, Polar; 28, 30	12, 13
9484	6, 15, 24, 33; 29, 26, 27, 28	14-17
9497	6, 15, 24, 33; 1, 2, 35, 36	18-21
9566	6, 15, 24, 33; 1, 2, 35, 36	22, not remounted.
9506	6, 24, 33, 12, 16, 14	27, 32
9874	6, 15, 24, 33; 19, 20, 17, 18	33-35, 56
9565	6, 15, 24, 33; 11, 15, 19, 20	57-60
I Plates. Polar and Standard Sequences		23-26
I 35623	Seq. 6	p 23, 24
I 35608	" 6	25, 26
I 35634	" 24	28, 29
I 35632	" 33	30, 31
North Polar Sequence.		
I Plates of Different Apertures.		36, 39
I " taken with Large Prism		37, 38, 40
C " of Different Apertures		41-43
C " with and without Screen		44-45, 54, 55
C " measures of Faint Stars		46
AC " , T', on Pleiades		47-53



Contents

Cont.

Bright Stars near the North Pole	page
Scale Measures on AC Plates, class T'	61-71
	74-83
	86, 87
Standard Sequence 6	
Estimates on I Plates, class T'	72, 96
" " A.I. "	73, 104, 105
Remeasurements on AC, T', Plates and	
Estimates on " " "	84, 85, 97
Standard Sequence 15 - Direct estimates on I, T', Plates	88, 96, 101
" " 24 - " " " "	89, 103
Standard Sequence at $+6^\circ$	104
Direct estimates on A.I. Plates	90-93
Remarks	94, 95
Bright Stars near the North Pole	
Direct Estimates on AC, T', Plates	98-100, 102
	106, 107
	110-118
North Polar Sequence	
C Plates having diff. apertures, small ap. at	
different distances from centre	119-122
AC Plates having several exp. at diff. distances	123-136
Proceps and North Polar Sequence	
Scale Measures on T', AC Plates.	137-141
North Polar Sequence.	
A.I. Plates of several exp.	142-149
I Plate having 5 exps. First and last	150-154
exps with full ap., others with	
small ap. in different positions.	

Contents

cont.

North Polar Sequence.	page
Scale Measures.	
C 17763, with and without screen	155, 156
Mc plates, isochromatic	161, 188-190
Mc 235, 241, 249, 172, 188-190	
Mc plates	162, 163, 169, 170
Mc 230, 235, 232, 225	
Mc plates	209-215, 218, 219
Mc plates	
Mc 114, 115, 175, 114, 245, 246, 48, 241, 249, 251, 292, 462, 449, 448, 444, 441, 457	175-178, 180-187, 194-204
I 36739, without and with tin screen	191, 192
Distances from centre.	
Mc plates - Remarks	167, 168
Mc 457	207
Estimates	
of star images in terms of P.C. 2e, Mc 81	157-160
of isometric comparison, 1618	
of Supplementary Stars near North Pole	164, 165
of isometric comparison of 227	166
of faint stars in terms of secondary image of bright stars	171-173
on Paper Print of enlargement from plate 20607 Franklin Adams by argylean's method, Mc plates	174, 179
	216, 217
Examination of plates taken with and without wire grating	193
Standard Sequence F	205, 206, 208
North Polar Sequence. Mc Plates	209-215, 218, 219

Tuesday, Oct November 3, 1908

22.25

North
Polar Sequence

B 937

B 2304

Scale M

 μ 9.7

c	3.8 4.0 4.0 0.0	a	
d	1.9 2.1 2.1 a	b	1.0 1.2
e	3.7 3.9 3.9 a	c	1.6 1.8
f	4.9 5.1 5.4 5.25 1.2	d	2.6 2.8
g	6.2 6.4 6.4 6.40 0.0	e	4.4
a ³	2.2 2.5 2.5 a	f	2.1 2.1
c	5.6 5.8 5.8 5.80 0.0	g	2.1 2.6
d	6.8 7.0 6.9 6.95 0.1	h	2.9 3.1
e	4.7 4.9 4.8 4.85 1.0	i	2.0 2.2
f	5.8 6.0 5.9 5.95 0.1	j	3.9 4.1
g	3.0 3.2 3.2 a	k	5.2 5.5 5.8 5.65 1.2
h	4.2 4.4 4.5 4.45 0.1	l	2.8 3.0
i	5.9 6.1 5.8 5.95 1.2	m	2.8 3.0
j	7.3 7.3 a	n	4.8 5.0 5.3 5.15 2.1
k	3.1 3.3 3.3 a	o	6.3 6.5 6.8 6.65 1.2
l	5.7 5.9 5.8 5.85 1.0	p	3.7 3.9
m	7.7	q	5.9 6.1 6.3 6.20 1.1
n	8.5	r	6.9 7.1 7.0 7.05 1.0
o	8.9	s	1.9 2.1
p	9.8	t	2.2 2.4
q	8.3	u	8.0
r	9.5	v	9.1
s		w	7.7
t		x	8.6
u		y	8.7
v		z	8.9
w		aa	9.1
x		ab	9.7
y		ac	9.9
z		ad	10.0

Images elongated
measures diff.

22.45

M.E.H.

Tuesday, November 3, 1908

22.45

North
Polar Sequence

B 3353

B 2640

Scale M

 μ 9.7

a	1.7 1.9		1.6 1.8
b	2.1 2.3		2.2 2.4
c	2.4		3.0 3.2
d	2.7 2.9		3.1 3.3
e	2.4		3.9 4.1
f	3.3 3.5		3.8 4.0
g	3.7 3.9		5.1 5.3 5.3 5.30 0.0
h	4.0 4.2		5.7 5.9 5.7 5.80 1.1
i	4.4		4.5 4.7 4.8 4.75 1.0
j	4.4		5.8 6.0 5.8 5.90 1.1
k	4.8 5.0 4.8 4.90 1.1		5.7 5.9 5.9 5.90 0.0
l	5.0 5.2 5.0 5.10 1.1		5.8 6.0 6.0 6.00 0.0
m	4.8 5.0 5.0 5.00 0.0		6.0 6.2 6.4 6.30 1.1
n	4.9 5.1 5.5 5.30 2.2		6.2 6.4 6.7 6.55 2.1
o	5.9 6.1 6.0 6.05 1.0		6.9 7.1 7.3 7.20 2.1
p	6.6 6.8 6.8 6.80 0.0		7.9
q	7.0 7.2 7.2 7.20 0.0		8.1
r	7.9		8.9
s	8.2		9.0
t	8.6		9.0
u	8.7		
v	8.9		
w	9.1		
x	9.7		
y	9.9		
z			

Images elongated
measures diff.

22.00

M.E.H.

Tuesday, November

Polar Sequence

B 29

a' 2.7

a³ 2.8b³ 4.5c⁴plate too faint
to measure

12.45

Standard

Polar Sequence

Scale N

Al. 9642

Reman. p. 8

Seq. 15

Scale 63^h

Seq. 15

Diff.

d 4.7 7.3 7.5 7.40 11 1.27

a 6.0 5.6 5.7 5.65 01

174

b 5.0 4.6 4.7 4.65 01 272

b 6.2 5.8 5.8 5.80 00

172

g 8.9 063

c 7.4 7.0 6.9 6.95 01

133

a 4.7 4.3 4.5 4.40 11 252

d 7.7 7.3 7.4 7.35 10

104

e 8.3 7.9 7.9 7.90 00 102

e 8.5 8.1 8.1 8.10 00

085

c 6.7 6.3 6.4 6.35 10 156

f 9.0 8.6 8.7 8.65 01

062

f 9.0 8.6 8.9 8.75 01 071

g 9.1

042

h 10.0 +4 051

h 9.2

061

e 10.3 12.7 073

k 10.0

004

h 9.7 051

l 10.3

019

Seq. 18 and Seq. 17

Seq. 17

a 5.6 5.2 5.2 5.20 00

a 5.5 5.1 4.9 5.00 11

b 6.6 6.2 5.9 6.05 01

b 6.3 5.9 5.7 5.80 11

c 7.3 6.9 6.8 6.85 10

c 6.7 6.3 5.9 6.10 22

d 7.7 7.3 7.6 7.45 12

d 7.6 7.2 6.8 7.00 22

e 8.7 8.3 8.3 8.30 00

e 9.1 8.7 8.8 8.75 10

f 8.9 8.5 8.6 8.55 10

f 9.4

g 9.3 +5 051

g 9.8

h 9.7 12.7 073

h 10.4

R 9.8

measured diff.

measured diff.

m.c. 14

Thursday November 5, 1908

Thursday, November 5, 1908

Standard sequences remeasured

Scale N.	AC 9642	Mean p.p.	Seq 6	Seq 15
Diff. mean				
200	4.42	4.7	4.7	4.7
272	4.65	4.9	4.9	4.9
161	6.30	6.3	6.3	6.3
127	7.40	7.4	7.4	7.4
104	7.88	8.2	8.2	8.2
068	8.78	8.7	8.7	8.7
048	9.05	9.2	9.2	9.2
051	9.70	9.7	9.7	9.7
056	9.95	9.9	9.9	9.9
068	10.35	10.4	10.4	10.4
Seq 18				
7.6	5.32	5.4	5.4	5.4
7.96	6.20	6.3	6.3	6.3
8.32	6.78	6.9	6.9	6.9
8.66	7.48	7.6	7.6	7.6
9.11	8.28	8.3	8.3	8.3
9.25	8.52	8.7	8.7	8.7
9.85	9.35	9.4	9.4	9.4
10.23	9.53	9.7	9.7	9.7
10.34	9.54	9.8	9.8	9.8
Seq 17				
5.4	5.0	5.0	5.0	5.0
6.3	5.9	5.7	5.7	5.7
6.8	6.4	5.9	5.9	5.9
7.7	7.3	6.9	6.9	6.9
9.0	8.6	8.9	8.75	8.75
9.5	9.4	9.4	9.4	9.4
9.8	9.8	9.8	9.8	9.8
10.4	10.4	10.4	10.4	10.4

23.20

M. E. H.

Thursday, November 5, 1908

Standard Sequence

Scale N.	AC 9564	Romans pp 10, 11	Copied pp 10, 11
Seq 6			
7.3	6.9	7.3	7.30
7.4	7.0	7.4	7.55
8.2	7.8	8.2	8.25
8.8	8.4	8.8	8.40
8.9	8.5	8.9	8.70
9.2	9.2	9.2	9.0
9.3	9.3	9.3	9.3
9.7	9.7	9.7	9.5
10.2	10.2	10.2	9.8
11.2	11.2	11.2	11.2
Seq 34			
7.6	7.2	7.3	7.25
7.9	7.5	7.7	7.60
8.3	7.9	8.1	8.00
8.6	8.2	8.4	8.30
8.8	8.4	8.6	8.50
9.0	8.6	8.9	8.75
9.3	9.3	9.3	9.3
9.4	9.4	9.4	9.4
9.8	9.8	9.8	9.8
10.1	10.1	10.1	10.1

M. E. H.

Friday, November 6, 1908

Standard Sequences

Scale AC 8858				Scale AC 9564			
Seq 24				Seq 6 3486			
Mean				Mean			
Diff.				Diff.			
a	7.5	7.1	6.8	6.95	12	6.9	6.85
b	7.8	7.4	7.6	7.5	11	6.9	6.85
c	8.1	7.7	8.0	7.85	12	7.8	7.75
d	8.4	8.0	8.2	8.1	11	7.8	7.75
e	8.8	8.4	8.7	8.55	11	8.5	8.45
f	9.2	8.8	9.1	8.95	11	8.6	8.55
g	9.2	8.8	9.1	8.95	11	8.6	8.55
h	9.7	9.3	9.5	9.2	11	8.6	8.55
i	9.9	9.5	9.7	9.65	11	8.6	8.55
j	10.1	9.7	9.9	9.85	11	8.6	8.55
Seq 30				Seq 34			
Mean				Mean			
Diff.				Diff.			
a	7.5	7.1	7.2	7.15	10	7.3	7.25
b	7.8	7.4	7.5	7.45	11	7.6	7.55
c	8.3	7.9	8.2	8.05	12	7.9	7.85
d	8.4	8.0	8.1	8.05	11	8.3	8.25
e	8.6	8.2	8.4	8.3	11	8.3	8.25
f	8.8	8.4	8.6	8.5	11	8.7	8.65
g	9.1	8.7	9.0	8.85	12	9.1	9.05
h	9.6	9.2	9.4	9.3	11	9.6	9.55
i	9.8	9.4	9.6	9.5	11	9.6	9.55
j	10.2	9.8	10.0	9.9	11	10.2	10.15

Friday, November 6, 1908

Standard sequences remeasured

Scale AC 9564				Scale AC 9564			
Seq 15				Seq 24			
Mean				Mean			
Diff.				Diff.			
a	7.8	7.4	7.5	7.45	11	7.3	7.25
b	7.9	7.5	7.7	7.6	11	7.5	7.45
c	8.6	8.2	8.5	8.35	11	8.25	8.2
d	8.8	8.4	8.6	8.5	11	8.4	8.35
e	8.9	8.5	8.7	8.65	12	8.7	8.65
f	9.0	8.6	8.8	8.7	11	8.8	8.75
g	9.3	8.9	9.1	9.0	11	9.0	8.95
h	9.6	9.2	9.4	9.3	11	9.6	9.55
i	9.9	9.5	9.7	9.65	11	9.9	9.85
j	10.2	9.8	10.0	9.9	11	10.2	10.15
Seq 32				Seq 30			
Mean				Mean			
Diff.				Diff.			
a	7.3	6.9	7.1	7.0	11	7.15	7.1
b	7.6	7.2	7.4	7.3	11	7.45	7.4
c	7.9	7.5	7.7	7.6	11	7.65	7.6
d	8.2	7.8	8.0	7.9	11	8.05	8.0
e	8.6	8.2	8.4	8.3	11	8.35	8.3
f	8.9	8.5	8.7	8.6	11	8.65	8.6
g	9.0	8.6	8.8	8.7	11	8.75	8.7
h	9.3	8.9	9.1	9.0	11	9.05	9.0
i	9.6	9.2	9.4	9.3	11	9.35	9.3
j	10.2	9.8	10.0	9.9	11	10.2	10.15

Friday, November 6, 1908.

Standard Sequences

2.38		Remar. p. 13 Main on p. 13	
Scale 72		Plate AC 9551	
Sequence 24		Polar Sequence	
a		a'	
6.6	6.2	5.8	5.4
5.9	6.05	5.2	5.30
2.1		1.2	
b		b'	
7.3	6.9	6.8	6.4
8.4	6.65	5.9	6.15
2.2		2.1	
c		c'	
7.4	7.0	6.8	6.4
6.9	6.95	5.8	6.10
2.3		3.2	
d		d'	
7.7	7.4	7.9	7.5
7.45		7.60	1.1
e		e'	
8.5	8.1	8.4	8.0
8.15		8.15	2.1
f		f'	
8.9	8.5	8.5	8.1
8.65		8.20	1.1
g		g'	
9.0		9.0	8.6
8.7		8.7	8.65
h		h'	
9.4		9.1	8.7
9.0		9.0	8.85
i		i'	
10.1		9.5	9.1
		9.7	9.15
		10.1	9.1
Seq. 28 superposed on 24			
a		a'	
6.8	6.4	5.8	6.0
6.70		6.10	2.3
b		b'	
7.5	7.1	7.0	7.05
7.0		7.05	1.0
c		c'	
7.8	7.4	7.5	7.45
7.0		7.45	0.1
d		d'	
8.2	7.8	7.9	7.85
7.0		7.85	0.1
e		e'	
8.3	7.9	8.3	8.10
8.2		8.10	2.2
f		f'	
8.7	8.3	8.4	8.35
8.0		8.35	1.0
g		g'	
8.9	8.5	8.6	8.55
8.0		8.55	1.0
h		h'	
9.0	8.6	8.8	8.70
8.0		8.70	2.1
i		i'	
9.0		9.0	8.8
8.7		8.8	8.70
j		j'	
9.8		9.8	9.5
9.5		9.5	9.15
k		k'	
10.0		10.0	9.8
9.8		9.8	9.5
l		l'	
10.1		10.1	9.8
9.8		9.8	9.5
m		m'	
10.0		10.0	9.8
9.8		9.8	9.5
9.5		9.5	9.15
9.2		9.2	8.8
8.9		8.9	8.5
8.6		8.6	8.2
8.3		8.3	7.9
8.0		8.0	7.6
7.7		7.7	7.3
7.4		7.4	7.0
7.1		7.1	6.7
6.8		6.8	6.4
6.5		6.5	6.1
6.2		6.2	5.8
5.9		5.9	5.5
5.6		5.6	5.2
5.3		5.3	4.9
5.0		5.0	4.6
4.7		4.7	4.3
4.4		4.4	4.0
4.1		4.1	3.7
3.8		3.8	3.4
3.5		3.5	3.1
3.2		3.2	2.8
2.9		2.9	2.5
2.6		2.6	2.2
2.3		2.3	1.9
2.0		2.0	1.6
1.7		1.7	1.3
1.4		1.4	1.0
1.1		1.1	0.7
0.8		0.8	0.4
0.5		0.5	0.1
0.2		0.2	0.0
0.0		0.0	0.0
A faint star is almost superposed on a of Seq. 27			
A.D. 2.04			

Friday, November 6, 1908

Standard Sequences

3.04	Remar. p. 13 Main on p. 13	
Scale 72	Plate AC 9551	
Sequence 24	Polar Sequence	
	mean	Diff
a	6.6 6.2 5.8 6.00 22	6.02 23 22 0.98
b	7.0 6.6 6.4 6.50 12	6.58 07 10 1.01
c	7.6 7.2 7.1 7.15 02	7.05 22 10 0.91
d	7.9 7.5 7.6 7.85 10	7.50 25 15 0.80
e	8.5 8.1 8.3 8.20 11	8.18 23 02 0.86
f	8.9 8.5 8.8 8.15 12	8.65 00 03 0.94
g	9.4 9.0 9.2 9.15 12	9.15 05 15 1.05
h	9.9 9.5 9.8 9.45 12	9.40 02 02 0.92
i	10.4 10.0 10.2 10.15 12	9.45 05 15 1.11
j	10.9 10.5 10.8 10.45 12	10.15 02 02 0.98
k	11.4 11.0 11.2 11.15 12	10.15 05 15 1.05
l	11.9 11.5 11.8 11.45 12	11.15 02 02 0.98
m	12.4 12.0 12.2 12.15 12	11.15 05 15 1.05
n	12.9 12.5 12.8 12.45 12	12.15 02 02 0.98
o	13.4 13.0 13.2 13.15 12	12.15 05 15 1.05
p	13.9 13.5 13.8 13.45 12	13.15 02 02 0.98
q	14.4 14.0 14.2 14.15 12	13.15 05 15 1.05
r	14.9 14.5 14.8 14.45 12	14.15 02 02 0.98
s	15.4 15.0 15.2 15.15 12	14.15 05 15 1.05
t	15.9 15.5 15.8 15.45 12	15.15 02 02 0.98
u	16.4 16.0 16.2 16.15 12	15.15 05 15 1.05
v	16.9 16.5 16.8 16.45 12	16.15 02 02 0.98
w	17.4 17.0 17.2 17.15 12	16.15 05 15 1.05
x	17.9 17.5 17.8 17.45 12	17.15 02 02 0.98
y	18.4 18.0 18.2 18.15 12	17.15 05 15 1.05
z	18.9 18.5 18.8 18.45 12	18.15 02 02 0.98
aa	19.4 19.0 19.2 19.15 12	18.15 05 15 1.05
ab	19.9 19.5 19.8 19.45 12	19.15 02 02 0.98
ac	20.4 20.0 20.2 20.15 12	19.15 05 15 1.05
ad	20.9 20.5 20.8 20.45 12	20.15 02 02 0.98
ae	21.4 21.0 21.2 21.15 12	20.15 05 15 1.05
af	21.9 21.5 21.8 21.45 12	21.15 02 02 0.98
ag	22.4 22.0 22.2 22.15 12	21.15 05 15 1.05
ah	22.9 22.5 22.8 22.45 12	22.15 02 02 0.98
ai	23.4 23.0 23.2 23.15 12	22.15 05 15 1.05
aj	23.9 23.5 23.8 23.45 12	23.15 02 02 0.98
ak	24.4 24.0 24.2 24.15 12	23.15 05 15 1.05
al	24.9 24.5 24.8 24.45 12	24.15 02 02 0.98
am	25.4 25.0 25.2 25.15 12	24.15 05 15 1.05
an	25.9 25.5 25.8 25.45 12	25.15 02 02 0.98
ao	26.4 26.0 26.2 26.15 12	25.15 05 15 1.05
ap	26.9 26.5 26.8 26.45 12	26.15 02 02 0.98
aq	27.4 27.0 27.2 27.15 12	26.15 05 15 1.05
ar	27.9 27.5 27.8 27.45 12	27.15 02 02 0.98
as	28.4 28.0 28.2 28.15 12	27.15 05 15 1.05
at	28.9 28.5 28.8 28.45 12	28.15 02 02 0.98
au	29.4 29.0 29.2 29.15 12	28.15 05 15 1.05
av	29.9 29.5 29.8 29.45 12	29.15 02 02 0.98
aw	30.4 30.0 30.2 30.15 12	29.15 05 15 1.05
ax	30.9 30.5 30.8 30.45 12	30.15 02 02 0.98
ay	31.4 31.0 31.2 31.15 12	30.15 05 15 1.05
az	31.9 31.5 31.8 31.45 12	31.15 02 02 0.98
ba	32.4 32.0 32.2 32.15 12	31.15 05 15 1.05
bb	32.9 32.5 32.8 32.45 12	32.15 02 02 0.98
bc	33.4 33.0 33.2 33.15 12	32.15 05 15 1.05
bd	33.9 33.5 33.8 33.45 12	33.15 02 02 0.98
be	34.4 34.0 34.2 34.15 12	33.15 05 15 1.05
bf	34.9 34.5 34.8 34.45 12	34.15 02 02 0.98
bg	35.4 35.0 35.2 35.15 12	34.15 05 15 1.05
bh	35.9 35.5 35.8 35.45 12	35.15 02 02 0.98
bi	36.4 36.0 36.2 36.15 12	35.15 05 15 1.05
bj	36.9 36.5 36.8 36.45 12	36.15 02 02 0.98
bk	37.4 37.0 37.2 37.15 12	36.15 05 15 1.05
bl	37.9 37.5 37.8 37.45 12	37.15 02 02 0.98
bm	38.4 38.0 38.2 38.15 12	37.15 05 15 1.05
bn	38.9 38.5 38.8 38.45 12	38.15 02 02 0.98
bo	39.4 39.0 39.2 39.15 12	38.15 05 15 1.05
bp	39.9 39.5 39.8 39.45 12	39.15 02 02 0.98
bq	40.4 40.0 40.2 40.15 12	39.15 05 15 1.05
br	40.9 40.5 40.8 40.45 12	40.15 02 02 0.98
bs	41.4 41.0 41.2 41.15 12	40.15 05 15 1.05
bt	41.9 41.5 41.8 41.45 12	41.15 02 02 0.98
bu	42.4 42.0 42.2 42.15 12	41.15 05 15 1.05
bv	42.9 42.5 42.8 42.45 12	42.15 02 02 0.98
bw	43.4 43.0 43.2 43.15 12	42.15 05 15 1.05
bx	43.9 43.5 43.8 43.45 12	43.15 02 02 0.98
by	44.4 44.0 44.2 44.15 12	43.15 05 15 1.05
bz	44.9 44.5 44.8 44.45 12	44.15 02 02 0.98
ca	45.4 45.0 45.2 45.15 12	44.15 05 15 1.05
cb	45.9 45.5 45.8 45.45 12	45.15 02 02 0.98
cc	46.4 46.0 46.2 46.15 12	45.15 05 15 1.05
cd	46.9 46.5 46.8 46.45 12	46.15 02 02 0.98
ce	47.4 47.0 47.2 47.15 12	46.15 05 15 1.05
cd	47.9 47.5 47.8 47.45 12	47.15 02 02 0.98
ce	48.4 48.0 48.2 48.15 12	47.15 05 15 1.05
cf	48.9 48.5 48.8 48.45 12	48.15 02 02 0.98
cg	49.4 49.0 49.2 49.15 12	48.15 05 15 1.05
ch	49.9 49.5 49.8 49.45 12	49.15 02 02 0.98
ci	50.4 50.0 50.2 50.15 12	49.15 05 15 1.05
ch	50.9 50.5 50.8 50.45 12	50.15 02 02 0.98
ci	51.4 51.0 51.2 51.15 12	50.15 05 15 1.05
cj	51.9 51.5 51.8 51.45 12	51.15 02 02 0.98
ck	52.4 52.0 52.2 52.15 12	51.15 05 15 1.05
cl	52.9 52.5 52.8 52.45 12	52.15 02 02 0.98
cm	53.4 53.0 53.2 53.15 12	52.15 05 15 1.05
cn	53.9 53.5 53.8 53.45 12	53.15 02 02 0.98
co	54.4 54.0 54.2 54.15 12	53.15 05 15 1.05
cp	54.9 54.5 54.8 54.45 12	54.15 02 02 0.98
cq	55.4 55.0 55.2 55.15 12	54.15 05 15 1.05
cr	55.9 55.5 55.8 55.45 12	55.15 02 02 0.98
cs	56.4 56.0 56.2 56.15 12	55.15 05 15 1.05
ct	56.9 56.5 56.8 56.45 12	56.15 02 02 0.98
cu	57.4 57.0 57.2 57.15 12	56.15 05 15 1.05
cv	57.9 57.5 57.8 57.45 12	57.15 02 02 0.98
cw	58.4 58.0 58.2 58.15 12	57.15 05 15 1.05
cx	58.9 58.5 58.8 58.45 12	58.15 02 02 0.98
cy	59.4 59.0 59.2 59.15 12	58.15 05 15 1.05
cz	59.9 59.5 59.8 59.45 12	59.15 02 02 0.98
da	60.4 60.0 60.2 60.15 12	59.15 05 15 1.05
db	60.9 60.5 60.8 60.45 12	60.15 02 02 0.98
dc	61.4 61.0 61.2 61.15 12	60.15 05 15 1.05
dd	61.9 61.5 61.8 61.45 12	61.15 02 02 0.98
de	62.4 62.0 62.2 62.15 12	61.15 05 15 1.05
de	62.9 62.5 62.8 62.45 12	62.15 02 02 0.98
de	63.4 63.0 63.2 63.15 12	62.15 05 15 1.05
df	63.9 63.5 63.8 63.45 12	63.15 02 02 0.98
dg	64.4 64.0 64.2 64.15 12	63.15 05 15 1.05
dh	64.9 64.5 64.8 64.45 12	64.15 02 02 0.98
di	65.4 65.0 65.2 65.15 12	64.15 05 15 1.05
dh	65.9 65.5 65.8 65.45 12	65.15 02 02 0.98
di	66.4 66.0 66.2 66.15 12	65.15 05 15 1.05
dj	66.9 66.5 66.8 66.45 12	66.15 02 02 0.98
dk	67.4 67.0 67.2 67.15 12	66.15 05 15 1.05
dl	67.9 67.5 67.8 67.45 12	67.15 02 02 0.98
dm	68.4 68.0 68.2 68.15 12	67.15 05 15 1.05
dn	68.9 68.5 68.8 68.45 12	68.15 02 02 0.98
do	69.4 69.0 69.2 69.15 12	68.15 05 15 1.05
dp	69.9 69.5 69.8 69.45 12	69.15 02 02 0.98
dq	70.4 70.0 70.2 70.15 12	69.15 05 15 1.05
dr	70.9 70.5 70.8 70.45 12	70.15 02 02 0.98
ds	71.4 71.0 71.2 71.15 12	70.15 05 15 1.05
dt	71.9 71.5 71.8 71.45 12	71.15 02 02 0.98
du	72.4 72.0 72.2 72.15 12	71.15 05 15 1.05
dv	72.9 72.5 72.8 72.45 12	72.15 02 02 0.98
dw	73.4 73.0 73.2 73.15 12	72.15 05 15 1.05
dx	73.9 73.5 73.8 73.45 12	73.15 02 02 0.98
dy	74.4 74.0 74.2 74.15 12	73.15 05 15 1.05
dz	74.9 74.5 74.8 74.45 12	74.15 02 02 0.98
ea	75.4 75.0 75.2 75.15 12	74.15 05 15 1.05
eb	75.9 75.5 75.8 75.45 12	75.15 02 02 0.98
ec	76.4 76.0 76.2 76.15 12	75.15 05 15 1.05
ed	76.9 76.5 76.8 76.45 12	76.15 02 02 0.98
ee	77.4 77.0 77.2 77.15 12	76.15 05 15 1.05
ed	77.9 77.5 77.8 77.45 12	77.15 02 02 0.98
ee	78.4 78.0 78.2 78.15 12	77.15 05 15 1.05
ef	78.9 78.5 78.8 78.45 12	78.15 02 02 0.98
eg	79.4 79.0 79.2 79.15 12	78.15 05 15 1.05
eh	79.9 79.5 79.8 79.45 12	79.15 02 02 0.98
ei	80.4 80.0 80.2 80.15 12	79.15 05 15 1.05
eh	80.9 80.5 80.8 80.45 12	80.15 02 02 0.98
ei	81.4 81.0 81.2 81.15 12	80.15 05 15 1.05
ej	81.9 81.5 81.8 81.45 12	81.15 02 02 0.98
ek	82.4 82.0 82.2 82.15 12	81.15 05 15 1.05
el	82.9 82.5 82.8 82.45 12	82.15 02 02 0.98
em	83.4 83.0 83.2 83.15 12	82.15 05 15 1.05
en	83.9 83.5 83.8 83.45 12	83.15 02 02 0.98
eo	84.4 84.0 84.2 84.15 12	83.15 05 15 1.05
ep	84.9 84.5 84.8 84.45 12	84.15 02 02 0.98
eq	85.4 85.0 85.2 85.15 12	84.15 05 15 1.05
er	85.9 85.5 85.8 85.45 12	85.15 02 02 0.98
es	86.4 86.0 86.2 86.15 12	85.15 05 15 1.05
et	86.9 86.5 86.8 86.45 12	86.15 02 02 0.98
eu	87.4 87.0 87.2 87.15 12	86.15 05 15 1.05
ev	87.9 87.5 87.8 87.45 12	87.15 02 02 0.98
ew	88.4 88.0 88.2 88.15 12	87.15 05 15 1.05
ex	88.9 88.5 88.8 88.45 12	88.15 02 02 0.98
ey	89.4 89.0 89.2 89.15 12	88.15 05 15 1.05
ez	89.9 89.5 89.8 89.45 12	89.15 02 02 0.98
fa	90.4 90.0 90.2 90.15 12	89.15 05 15 1.05
fb	90.9 90.5 90.8 90.45 12	90.15 02 02 0.98
fc	91.4 91.0 91.2 91.15 12	90.15 05 15 1.05
fd	91.9 91.5 91.8 91.45 12	91.15 02 02 0.98
fe	92.4 92.0 92.2 92.15 12	91.15 05 15 1.05
fd	92.9 92.5 92.8 92.45 12	92.15 02 02 0.98
fe	93.4 93.0 93.2 93.15 12	92.15 05 15 1.05
ff	93.9 93.5 93.8 93.45 12	93.15 02 02 0.98
fg	94.4 94.0 94.2 94.15 12	93.15 05 15 1.05
fh	94.9 94.5 94.8 94.45 12	94.15 02 02 0.98
fi	95.4 95.0 95.2 95.15 12	94.15 05 15 1.05
fh	95.9 95.5 95.8 95.45 12	95.15 02 02 0.98
fi	96.4 96.0 96.2 96.15 12	95.15 05 15 1.05
fj	96.9 96.5 96.8 96.45 12	96.15 02 02 0.98
fk	97.4 97.0 97.2 97.15 12	96.15 05 15 1.05
fl	97.9 97.5 97.8 97.45 12	97.15 02 02 0.98
fm	98.4 98.0 98.2 98.15 12	97.15 05 15 1.05
fn	98.9 98.5 98.8 98.45 12	98.15 02 02 0.98
fo	99.4 99.0 99.2 99.15 12	98.15 05 15 1.05
fp	99.9 99.5 99.8 99.45 12	99.15 02 02 0.98
fq	100.4 100.0 100.2 100.15 12	99.15 05 15 1.05
fr	100.9 100.5 100.8 100.45 12	100.15 02 02 0.98
fs	101.4 101.0 101.2 101.15 12	100.15 05 15 1.05
ft	101.9 101.5 101.8 101.45 12	101.15 02 02 0.98
fu	102.4 102.0 102.2 102.15 12	101.15 05 15 1.05
fv	102.9 102.5 102.8 102.45 12	102.15 02 02 0.98
fw	103.4 103.0 103.2 103.15 12	102.15 05 15 1.05
fx	103.9 103.5 103.8 103.45 12	103.15 02 02 0.98
fy	104.4 104.0 104.2 104.15 12	103.15 05 15 1.05
fz	104.9 104.5 104.8 104.45 12	104.15 02 02 0.98
ga	105.4 105.0 105.2 105.15 12	104.15 05 15 1.05
gb	105.9 105.5 105.8 105.45 12	105.15 02 02 0.98
gc	106.4 106.0 106.2 106.15 12	105.15 05 15 1.05
gd	106.9 106.5 106.8 106.45 12	106.15 02 02 0.98
ge	107.4 107.0 107.2 107.15 12	106.15 05 15 1.05
gd	107.9 107.5 107.8 107.45 12	107.15 02 02 0.98
ge	108.4 108.0 108.2 108.15 12	107.15 05 15 1.05
gf	108.9 108.5 108.8 108.45 12	108.15 02 02 0.98
gg	109.4 109.0 109.2 109.15 12	108.15 05 15 1.05
gh	109.9 109.5 109	

Monday, November 9, 1908

Standard Sequences

AC 9484 Remear μ 15 Copied μ 16

Scale 9C8858	Seq 6
a	6.5 6.1 5.9 6.00 12
b	6.9 6.5 6.4 6.45 10
c	7.6 7.2 6.9 7.05 21
d	7.9 7.5 7.7 7.60 11
e	8.5 8.1 8.0 8.05 10
f	8.7 8.3 8.3 8.30 00
g	8.8 8.4 8.6 8.50 11
h	9.0 $\frac{+7}{-6}$
k	9.2 $\frac{14}{11} \frac{7}{8}$ ± 0.077
l	9.8
m	def
n	10.1

Seq 29 enf on μ 6

a	6.1 5.7 5.7 5.70 00
b	6.7 6.3 5.9 6.10 22
c	7.5 7.1 6.9 7.00 12
d	7.7 7.3 7.2 7.25 10
e	8.1 7.7 7.7 7.70 00
f	8.6 8.2 8.3 8.25 01
g	9.0 8.6 8.7 8.65 01
h	9.5 $\frac{+6}{-6}$
k	9.7 $\frac{14}{11} \frac{7}{8}$ ± 0.064
l	10.3

m.e.H.

Seq 15 μ 15 + 86

a	7.0 6.6 6.4 6.50 12
b	7.2 6.8 6.6 6.70 12
c	7.9 7.5 7.5 7.50 00
d	7.8 7.4 7.7 7.55 21
e	8.3 7.9 7.9 7.90 00
f	8.6 8.2 8.2 8.20 00
g	8.9 8.5 8.6 8.55 20
h	8.8 $\frac{+8}{-5}$
k	8.9 $\frac{14}{11} \frac{7}{8}$ ± 0.057
l	9.3
m	9.5
n	10.1
o	10.4 ²

Seq 26 enf on μ 15

a	7.2 6.8 6.7 6.75 02
b	7.4 7.2 6.9 7.05 21
c	7.7 7.3 6.9 7.10 22
d	8.0 7.6 7.7 7.65 01
e	8.2 7.8 7.9 7.85 01
f	8.6 8.2 8.5 8.35 21
g	9.0 8.6 8.7 8.65 01
h	9.0 $\frac{+8}{-6}$
k	9.7 $\frac{14}{11} \frac{7}{8}$ ± 0.100
l	10.0

1.00

m.e.H.

Monday, November 9, 1908

Standard Sequences

AC 9484 Remear μ 17 Copied μ 17

Seq 24	15 + 86
a	6.7 6.3 5.8 6.05 22
b	6.9 6.5 6.4 6.45 10
c	7.7 7.3 6.8 7.05 22
d	7.8 7.4 7.4 7.40 00
e	8.4 8.0 8.0 8.00 00
f	8.7 8.3 8.7 8.50 22
g	8.9 8.5 8.7 8.60 11
h	8.9 $\frac{+10}{-7}$
k	9.0 $\frac{14}{11} \frac{7}{8}$ ± 0.121
l	9.4
m	9.6
n	10.0
o	10.2

Seq 27 enf on μ 14

a	7.1 6.7 6.7 6.70 00
b	7.6 7.2 6.9 7.05 21
c	7.8 7.4 7.6 7.50 21
d	8.1 7.7 7.8 7.75 10
e	8.5 8.1 8.3 8.20 11
f	8.7 8.3 8.6 8.45 12
g	8.9 8.5 8.8 8.65 12
h	9.1 $\frac{+8}{-6}$
k	9.2 $\frac{14}{11} \frac{7}{8}$ ± 0.100
l	9.6
m	10.0
n	10.3

Seq 28 enf on 33

a	7.0 6.6 6.3 6.45 21
b	7.7 7.3 7.5 7.40 11
c	7.9 7.5 7.6 7.55 10
d	8.0 7.6 7.8 7.70 11
e	8.5 8.1 8.3 8.20 11
f	8.7 8.3 8.6 8.45 12
g	8.9 8.5 8.7 8.60 11
h	8.9 8.5 8.8 8.65 12
k	9.2 $\frac{+10}{-8}$
l	9.7 $\frac{16}{11} \frac{7}{8}$ ± 0.112
m	10.0
n	n.a

Monday, November 9, 1908

Pkt

Standard Sequence

AC 9484

remeasured Mean p 14

Sgt.	Seq. 6	p 14	Mean	Seq. 15	p 14	Mean	Sgt.
097	a	6.4 6.0 5.9 5.95	01 6.50	5.95 02 02	6.9 6.5 6.4 6.45	10 6.50	6.48 03 02 0.91
092	b	6.8 6.4 6.5 6.45	01 6.45	6.45 00 00	6.7 6.8 6.7 6.75	01 6.70	6.72 10 02 0.80
086	c	7.6 7.2 6.9 7.05	02 7.05	7.05 00 00	7.7 7.3 7.7 7.50	02 7.50	7.50 00 00 0.78
105	d	7.9 7.5 7.8 7.65	12 7.60	7.60 00 02	7.8 7.4 7.6 7.50	11 7.55	7.52 02 03 0.87
097	e	8.2 7.8 7.8 7.85	01 8.05	7.95 10 10	8.5 8.1 7.8 7.95	12 7.90	7.92 00 02 1.03
114	f	8.7 8.3 8.4 8.35	10 8.30	8.30 00 02	8.7 8.3 8.2 8.25	10 8.20	8.22 00 02 1.05
098	g	8.6	$\frac{+6}{12/10}$ 8.50	8.55 05 05	8.9 8.5 8.7 8.60	11 8.65	8.62 00 02 0.94
121	h	9.0	$\frac{12/10}{\pm 0.003}$ 9.0	9.00 00 00	9.0 8.6 8.8 8.70	11 8.8	8.75 05 05 1.06
126	k	9.3	9.2 05 05	8.9	$\frac{+8}{16/16}$ 8.9	8.90 00 00	1.14
118	l	9.9	9.8 05 05	9.5	$\frac{16/16}{\pm 0.110}$ 9.3	9.40 10 10	1.09
m	20.1	.	.	m	9.5	9.50 00 00	1.35
166	n	10.0	10.1 05 05	10.1	10.1	10.10 00 00	1.26

Seq. 29 Super Seq. 6

Seq. 26 Super Seq. 15

a	6.2 5.8 5.7 5.75	01 5.70	5.70 00 02	7.4 7.0 6.7 6.85	01 6.75	6.80 05 05
b	6.7 6.3 6.2 6.25	10 6.10	6.18 07 05	6.7 7.1 6.8 6.95	12 7.05	7.00 05 05
c	7.4 7.0 6.8 6.90	12 7.00	6.95 05 05	7.8 7.4 7.5 7.45	01 7.10	7.28 17 18
d	7.7 7.3 7.5 7.40	11 7.25	7.32 07 07	7.9 7.5 7.8 7.65	12 7.65	7.65 00 00
e	8.0 7.6 7.8 7.70	11 7.70	7.70 00 00	8.4 8.0 7.9 7.95	01 7.85	7.90 05 05
f	8.6 8.2 8.2 8.20	00 8.25	8.22 02 03	8.7 8.3 8.4 8.35	10 8.35	8.35 00 00
g	9.0 8.6 8.9 8.75	01 8.65	8.70 05 05	9.0 8.6 8.7 8.65	01 8.65	8.65 00 00
h	9.4	$\frac{+5}{-6}$ 9.5	9.45 05 05	8.9	$\frac{+7}{-6}$ 9.0	8.95 05 05
k	9.7	$\frac{14/11}{\pm 0.007}$ 9.7	9.70 00 00	9.6	$\frac{14/13}{\pm 0.007}$ 9.7	9.65 05 05
l	10.1	10.3 10 10	10.0	10.0	10.0	10.00 00 00

M.E.H.

Monday, November 9, 1908

Pkt

Standard Sequence

AC 9484

remeasured Mean p 15

Sgt.	Seq. 24	15h	p 15	Mean	Seq. 33	21h	p 15	Mean	Sgt.
095	a	6.7 6.3 5.8 6.05	02 6.05	6.05 00 00	6.9 6.5 6.5 6.50	00 6.45	6.48 00 00	0.90	
104	b	6.9 6.5 6.8 6.65	12 6.45	6.55 10 10	6.7 7.3 7.3 7.30	00 7.10	7.20 10 10	0.85	
074	c	7.7 7.3 7.5 7.40	11 7.05	7.02 15 15	8.0 7.6 7.6 7.60	00 7.55	7.58 00 00	0.82	
085	d	7.8 7.4 7.6 7.50	11 7.40	7.45 05 05	8.2 7.8 7.9 7.85	01 7.80	7.82 00 00	0.97	
099	e	8.4 8.0 8.2 8.10	11 8.00	8.05 05 05	8.7 8.3 8.5 8.45	10 8.40	8.42 00 00	0.91	
107	f	8.8 8.4 8.7 8.65	11 8.50	8.52 00 02	8.9 8.5 8.7 8.60	11 8.60	8.60 00 00	1.15	
135	g	9.0 8.6 8.8 8.70	11 8.60	8.65 05 05	8.9	$\frac{+2}{-2}$ 8.8	8.85 05 05	1.13	
127	h	9.2	$\frac{+10}{-10}$ 8.9	9.05 05 05	9.6	$\frac{12/14}{\pm 0.003}$ 9.5	9.55 05 05	0.95	
146	k	9.0	$\frac{14/17}{\pm 0.136}$ 9.0	9.10 10 10	10.0	9.9	9.95 05 05	1.11	
134	l	9.4	9.4 9.40 00 00				$\frac{+35}{-45}$ 9.95		
137	m	9.7	9.6 9.65 05 05		Seq. 28	7.15			
128	n	10.1	10.0 10.05 05 05		a	6.7 6.3 6.3 6.30	00 6.45	6.38 07 07	
144	o	10.3	10.2 10.25 05 05		b	7.8 7.4 7.6 7.50	11 7.40	7.45 05 05	
			$\frac{+10}{-10}$ 10.2		c	7.9 7.5 7.7 7.60	11 7.55	7.58 00 00	
			$\frac{20/170}{\pm 0.002}$ 10.2		d	8.3 7.9 7.8 7.85	10 7.70	7.78 07 07	
					e	8.7 8.3 8.3 8.30	00 8.20	8.25 05 05	
					f	8.8 8.4 8.5 8.45	01 8.45	8.45 00 00	
					g	9.0 8.6 8.7 8.65	10 8.60	8.62 00 00	
					h	8.8	$\frac{+5}{-6}$ 8.65	8.72 05 07	
					i	9.2	$\frac{14/17}{\pm 0.050}$ 9.2	9.20 00 00	
					j	9.8	9.7 9.75 05 05		
					k	10.1	10.0 10.05 05 05		
					l		$\frac{+17}{-18}$ 10.05		
					m		$\frac{20/175}{\pm 0.043}$ 10.05		
					n				
					o				

M.E.H.

Tuesday, November 10, 1908

0.30

Standard Sequences

A.C. 9497

Revised for 20 Cepheid 120

Seq. 6

a	7.3	6.9	6.7	6.50	12
b	6.5	7.1	6.9	7.00	12
c	7.9	7.5	7.7	7.60	11
d	8.6	8.2	8.3	8.25	01
e	8.8	8.4	8.5	8.45	01
f	8.8	$\frac{+5}{-8}$			
g	9.1	$\frac{10}{10}$			
h	9.6	± 0.080			
k	9.8				
l	10.2				

Seq. 1 sup on 6

a	7.4	7.0	6.8	6.90	12
b	8.2	7.8	7.8	7.80	00
c	8.5	8.1	8.2	8.15	10
d	8.8	8.4	8.6	8.50	11
e	8.9	8.5	8.7	8.60	11
f	8.7	$\frac{+3}{-10}$			
g	9.3	± 0.070			
h	9.5				
k	9.8				
l	10.2				

Seq. 15

a	7.6	7.2	7.1	7.15	02
b	7.7	7.3	7.2	7.25	10
c	8.4	8.0	7.9	7.95	01
d	8.4	8.0	8.2	8.10	11
e	8.9	8.5	8.7	8.60	11
f	9.1	8.7	8.9	8.90	11
g	9.2	$\frac{+4}{-5}$			
h	9.4	$\frac{12}{12}$			
k	9.7	± 0.075			
l	9.9				
m	9.9				
n	10.3				

Seq. 2 sup on 15

a	7.4	7.0	6.8	6.90	12
b	7.7	7.3	7.2	7.25	10
c	7.9	7.5	7.6	7.55	10
d	8.6	8.2	8.2	8.20	00
e	8.7	8.3	8.5	8.45	12
f	8.9	8.5	8.6	8.55	10
g	9.2	$\frac{+3}{-4}$			
h	9.7	$\frac{12}{12}$			
k	9.9	± 0.058			
l	10.0				

M. E. H.

Tuesday, November 10, 1908

Standard Sequences

A.C. 9497

Revised for 21 Cepheid 121

Seq. 24

a	6.9	6.5	6.5	6.50	00
b	7.6	7.2	7.3	7.25	01
c	7.9	7.5	7.7	7.60	11
d	8.3	7.9	7.9	7.90	00
e	8.6	8.2	8.5	8.55	11
f	9.0	8.6	8.9	8.75	11
g	9.0	$\frac{+4}{-5}$			
h	9.6	$\frac{12}{12}$			
k	9.7	± 0.075			
l	9.7				
m	9.9				
n	10.1				
o	10.4				

Seq. 35 sup on 24

a	7.5	7.1	6.9	7.00	12
b	7.9	7.5	7.5	7.50	00
c	8.5	8.1	8.0	8.05	10
d	8.6	8.2	8.2	8.20	00
e	9.0	8.6	8.6	8.60	00
f	8.8	$\frac{+2}{-1}$			
g	9.2	$\frac{10}{10}$			
h	9.6	± 0.080			
k	10.0				
l	10.0				

M. E. H.

Seq. 33

a	7.5	7.1	6.9	7.00	12
b	8.2	7.8	7.7	7.75	02
c	8.2	7.8	8.0	7.90	11
d	8.7	8.3	8.6	8.45	12
e	9.0	8.6	8.7	8.65	01
f	8.9	$\frac{+5}{-4}$			
g	9.5	$\frac{10}{10}$			
h	9.7	± 0.090			
k	9.9				
l	10.3				
m	10.2				

Seq. 36 sup on 33

a	6.9	6.5	6.7	6.60	11
b	7.5	7.1	6.8	6.95	12
c	7.7	7.3	7.5	7.40	11
d	7.9	7.5	7.6	7.55	10
e	8.6	8.2	8.2	8.20	00
f	8.9	8.5	8.6	8.55	10
g	9.0	8.6	8.8	8.70	11
h	9.0	$\frac{+4}{-7}$			
k	9.2	$\frac{10}{10}$			
l	9.5	± 0.079			
m	9.9				
n	10.0				

Tuesday, November 10, 1908

Standard Sequence

AC 9497 remeasured Mean p. 18

Off.	Seq. 6	p. 18	Mean	Seq. 15	p. 18	Mean	Off.
027	a	6.9 6.5 6.5 6.5 01	6.50 6.65 ^{±0.15}	a	7.6 7.2 6.8 7.00 22	7.15 7.08 01 01	0.31
047	b	7.3 6.9 6.7 6.8 12	7.00 6.90 ^{±0.10}	b	7.7 7.3 6.9 7.10 22	7.25 7.18 01 01	0.34
033	c	7.8 7.4 7.7 7.55 ±1	7.60 7.55 ^{±0.05}	c	8.0 7.6 7.9 7.75 21	7.95 7.85 10 10	0.43
045	d	8.5 8.1 8.3 8.20 11	8.25 8.22 ^{±0.03}	d	8.3 7.9 7.9 7.90 00	8.10 8.03 10 10	0.39
047	e	8.8 8.4 8.5 8.45 01	8.45 8.45 ^{±0.01}	e	8.8 8.4 8.5 8.45 11	8.60 8.52 17 05	0.43
061	f	8.9	$\frac{+4}{10\sqrt{8}} \pm 0.080$	f	8.9	$\frac{+6}{10\sqrt{12}} \pm 0.120$	0.42
048	g	9.0	9.1 9.05 ±0.05	g	9.0	9.2 9.10 ±0.10	0.42
061	h	9.6	9.6 9.60 ±0.00	h	9.3	9.4 9.35 ±0.05	0.46
066	i	9.9	9.8 9.85 ±0.05	i	9.7	9.7 9.70 ±0.00	0.34
083	j	10.2	10.2 10.20 ±0.00	j	9.8	9.9 9.85 ±0.05	0.64
			$\frac{+45}{20\sqrt{15}} \pm 0.075$		9.8	9.9 9.85 ±0.05	1.00
					10.3	10.3 10.30 ±0.00	$\frac{+72}{24\sqrt{145}} \pm 0.060$

Segmentally out 16

a	7.2 6.8 6.7 6.75 02	6.90 6.82 17 08
b	7.9 7.5 7.6 7.55 10	7.80 7.8 12 10
c	8.1 7.7 7.8 7.75 10	8.15 7.95 20 20
d	8.7 8.3 8.5 8.40 11	8.50 8.45 05 05
e	8.8 8.4 8.5 8.45 01	8.60 8.52 07 07
f	9.0 8.6 8.8 8.70 11	8.7 8.70 00 00
g	9.2	$\frac{+3}{10\sqrt{8}} \pm 0.080$
h	9.5	9.5 9.50 ±0.00
i	9.8	9.8 9.80 ±0.00
j	10.0	10.2 10.10 10 10
		$\frac{+15}{20\sqrt{15}} \pm 0.063$

Seq. 2 out p. 15

a	7.3 6.9 6.7 6.80 12	6.90 6.85 05 05
b	7.3 7.2 7.25 10	7.25 7.25 00 00
c	7.8 7.4 7.4 7.40 00	7.55 7.48 08 07
d	8.2 8.2 8.2 8.20 00	8.20 8.20 00 00
e	8.4 8.5 8.45 01	8.40 8.42 10 12
f	8.6	$\frac{+3}{10\sqrt{8}} \pm 0.080$
g	9.1	9.1 9.10 ±0.10
h	9.6	9.7 9.65 ±0.05
i	9.9	9.9 9.90 ±0.00
j	10.0	10.0 10.00 ±0.00

 $\frac{+27}{20\sqrt{15}} \pm 0.048$

m. 2. 4.

Wednesday, November 11, 1908

Standard Sequence

AC 9497 remeasured Mean p. 19

Off.	Seq. 24	p. 19	Mean	Seq. 33	p. 19	Mean	Off.
050	a	7.0 6.6 6.4 6.50 12	6.50 6.50 ±0.00	a	7.5 7.1 6.8 6.95 12	7.00 6.98 20 20	0.40
047	b	7.6 7.2 6.8 7.00 22	7.25 7.12 12 12	b	7.8 7.4 7.5 7.45 01	7.75 7.60 15 15	0.45
044	c	7.7 7.3 7.6 7.45 12	7.60 7.52 02 01	c	8.2 7.8 7.8 7.80 00	7.90 7.85 05 05	0.52
048	d	8.0 7.8 7.7 7.75 02	7.80 7.80 12 12	d	8.6 8.2 8.4 8.30 11	8.45 8.28 17 07	0.41
059	e	8.8 8.4 8.7 8.55 11	8.35 8.45 10 12	e	8.9 8.5 8.7 8.60 11	8.65 8.62 12 03	0.71
077	f	8.9	$\frac{+6}{10\sqrt{12}} \pm 0.120$	f	8.9	$\frac{+4}{10\sqrt{8}} \pm 0.080$	0.80
090	g	9.2	$\frac{+10}{20\sqrt{130}} \pm 0.090$	g	9.4	$\frac{+10}{20\sqrt{130}} \pm 0.080$	0.83
067	h	9.7	9.6 9.65 ±0.05	h	9.7	9.7 9.70 ±0.00	0.80
086	i	9.7	9.7 9.70 ±0.00	i	10.0	9.9 9.95 ±0.05	1.11
104	j	9.7	9.7 9.70 ±0.00	j	10.3	10.3 10.30 ±0.00	1.41
112	m	9.9	9.9 9.90 ±0.00	m	10.3	10.2	$\frac{+17}{20\sqrt{15}} \pm 0.053$
123	n	10.1	10.1 10.10 ±0.00				
129	o	10.4	10.4 10.40 ±0.00				

Seq. 36

Seq. 35

a	7.5 7.1 6.7 6.90 22	7.00 6.95 05 05
b	7.7 7.3 7.6 7.45 12	7.50 7.48 02 02
c	8.4 8.0 7.9 7.95 02	8.05 8.00 05 05
d	8.7 8.3 8.3 8.30 00	8.25 8.25 05 05
e	8.7 8.3 8.7 8.50 22	8.60 8.55 05 05
f	9.1 8.7 9.0 8.85 12	8.8 8.82 03 02
g	9.2	$\frac{+3}{10\sqrt{8}} \pm 0.080$
h	9.6	$\frac{+10}{20\sqrt{130}} \pm 0.090$
i	10.1	10.0 10.05 ±0.05
j	10.2	10.0 10.10 10 10

 $\frac{+40}{20\sqrt{80}} \pm 0.040$

m. 2. 4.

Wednesday, November 11, 1908

Has this plate repeated?

Sequences standard

ac 9566

Seq 6	Diff.
a 8.1 7.5 7.60 12	-0.68
b 8.3 7.7 7.8 10	-0.48
c 8.8 8.4 8.6 8.50 11	-0.59
d 9.1 $\frac{+3}{-6}$	-0.43
e 9.5 $\frac{+3}{-6}$	-0.58
f 9.7	-0.24
g 10.0	-0.47
h 10.3	-0.09

Seq 1 exp 26

a 7.7 7.3 7.5 7.40 11
b 8.4 8.0 8.0 8.00 10
c 8.7 8.3 8.6 8.45 12
d 8.9 8.5 8.8 8.65 12
e 9.0 8.6 8.8 8.70 11
f 8.9 $\frac{+6}{-4}$
g 9.8 $\frac{10.10}{\pm 0.100}$
h 10.0

Seq 15

a 8.6 8.2 8.0 8.10 11	-1.18
b 8.7 8.3 8.3 8.30 10	-0.93
c 9.0 8.6 8.8 8.70 11	-0.79
d 9.0 $\frac{+2}{-2}$	-0.33
e 9.2 $\frac{6.7}{\pm 0.06}$	-0.28
f 9.9	-0.44
g 9.9	-0.37

Seq 2 exp m 15

a 8.5 7.1 6.8 6.95 12
b 7.8 7.4 7.7 7.05 21
c 8.0 7.6 7.7 7.65 11
d 8.7 8.3 8.5 8.40 11
e 8.9 8.5 8.8 8.65 12
f 8.8 $\frac{+6}{-4}$
g 9.4 $\frac{10.12}{\pm 0.120}$
h 9.8
i 10.0

Seq 24

a 7.8 7.4 7.4 7.40 10	-0.48
b 8.4 8.0 8.1 8.05 11	-0.68
c 8.6 8.2 8.5 8.35 21	-0.44
d 8.9 8.5 8.5 8.50 10	+0.17
e 9.1 $\frac{+2}{-2}$	-0.18
f 9.8 $\frac{10.17}{\pm 0.060}$	-0.34
g 9.8	-0.27
h 10.1	+0.11

Seq 25 exp on 24

a 7.7 7.3 7.4 7.35 10
b 8.2 7.8 7.9 7.75 11
c 8.6 8.2 8.3 8.25 11
d 8.8 8.4 8.5 8.45 11
e 8.8 $\frac{+3}{-1}$
f 9.1 $\frac{8.7}{\pm 0.060}$
g 9.3
h 9.8
i 10.0

Plot

Seq 33	Diff.
a 8.2 7.8 7.8 7.80 10	-0.88
b 8.5 8.1 8.5 8.30 22	-0.93
c 8.8 8.4 8.6 8.50 11	-0.59
d 8.9 $\frac{+3}{-6}$	-0.23
e 9.6 $\frac{1.76}{\pm 0.100}$	-0.39
f 9.9	-0.44
g 10.2	-0.67

Seq 36

a 7.6 7.2 6.8 7.02 22
b 7.9 7.5 7.6 7.55 10
c 7.9 7.5 7.8 7.65 12
d 8.3 7.9 8.0 7.95 10
e 8.7 8.3 8.4 8.35 10
f 8.9 8.5 8.7 8.60 11
g 9.0 8.6 8.9 8.75 21
h 9.2 $\frac{+6}{-4}$
i 9.7 $\frac{10.15}{\pm 0.107}$
j 10.0
m 10.2

Circled 120

Polar + Standard Sequences

I 35633

I plate

Scale I 32811

Polar Sequences

Seq 6 exp

b	2.8 3.0	3.0	a.	a	1.9 2.1	2.1	a.		
c	3.7 3.9	3.9	a.	b	2.4				
c	4.1 4.3	4.6	4.45	1.2	c	2.8 3.0	3.0	a.	
d	5.1 5.3	5.6	5.45	1.2	d	2.4			
e	6.8 7.0	7.0	6.90	0.0	e	3.1 3.3	3.3	a.	
f	3.9 4.1	4.5	4.30	2.2	f	3.9 4.1	4.1	a.	
g	5.8 6.0	6.0	6.00	0.0	g	3.9 4.1	4.5	4.30	2.2
h	4.9 5.1	5.4	5.25	1.2	h	4.9 5.0	4.9	4.95	0.1
i	2.7 2.9	2.9	a.		i	4.9 5.1	5.0	5.05	1.0
j	3.6 3.8	3.8	a.		j	5.7 5.9	5.9	5.90	0.0
k	1.9 2.1	2.1	a.		k	6.0 6.2	6.8	6.50	3.3
l	6.5 6.7	6.6	6.65	1.0	l	6.5 6.7	7.0	6.85	1.2
m	7.5				m	7.0 7.2	8.3	7.25	0.1
n	7.9				n	7.8			
o	9.4				o	8.4			
p	9.0				p	9.5			
q	7.9				q	9.8			
r	9.3								
s	10.1								
t	8.6								
u	9.4								
v	9.8								
w	8.5								

Wednesday, November 11, 1908

Wednesday, Nov. 11, 1908

Polar & Standard sequences

I 35633

remeasured

Seq. 6

Scale M	223	Polar Sequence	Mean	Seq. 6	223	Mean
21	6	2.1 2.1	2.1	2.1	2.1	2.1
29	2	2.8 2.0	3.0	2.95	2.5	2.5
30	8	2.9 3.1	3.1	3.05	3.1	3.1
38	9	3.5 2.7	3.7	3.75	3.75	3.75
40	10	3.8 4.0	4.0	3.95	3.95	3.95
430	11	3.9 4.1	4.2	4.25	4.25	4.25
445	12	4.4 4.6	4.5	4.5	4.5	4.5
525	13	5.0 5.2	5.2	5.22	5.22	5.22
545	14	5.3 5.5	5.6	5.52	5.52	5.52
600	15	5.8 6.0	5.9	5.95	5.95	5.95
665	16	6.3 6.5	6.7	6.72	6.72	6.72
700	17	6.8 7.0	7.0	7.02	7.02	7.02
75	18	7.6	7.5	7.5	7.5	7.5
79	19	7.9	7.9	7.9	7.9	7.9
85	20	8.6	8.55	8.55	8.55	8.55
86	21	8.6	8.6	8.6	8.6	8.6
79	22	8.1	8.0	8.0	8.0	8.0
90	23	8.9	8.95	8.95	8.95	8.95
93	24	9.4	9.35	9.35	9.35	9.35
94	25	9.5	9.45	9.45	9.45	9.45
94	26	9.7	9.55	9.55	9.55	9.55
98	27	9.7	9.75	9.75	9.75	9.75
101	28	10.1	10.1	10.1	10.1	10.1

+103
-102
+101
±0.045

Wednesday, November 11, 1908.

April 1908

Polar & Standard Sequences

2.40

I 35608

Polar Sequence

Sequence 6 3^h + 86°

a'	2.1	2.1	2.1
a''	1.8	2.0	2.0
a'''	2.1	3.0	3.0
b'	2.9	3.1	3.1
b''	3.7	4.1	4.1
c'	3.6	3.8	3.8
d'	4.2	4.4	4.4
e'	4.6	4.8	4.8
f'	4.9	5.1	5.1
g'	5.6	5.8	5.8
h'	6.3	6.5	6.5
i'	6.8	7.0	7.0
j'	7.6	7.9	7.9
k'	8.3	8.5	8.5
l'	8.6	8.8	8.8
m'	9.4	9.7	9.7
n'	9.9	10.1	10.1

+2
-2
±0.050

A.D.K.

Wednesday, November 11, 1908

Polar and Standard Sequences.

Scale M	I 35408 remeasured				Sequence 6			
p25	Polar Sequence Mean				Mean			
20	a ³	2.0	2.2	A. 2.10	2.10	a	2.10	2.10
30	a ⁵	2.9	3.1	A. 3.05	3.05	b	3.05	3.05
31	b ¹	3.2	3.4	A. 3.25	3.25	c	3.25	3.25
41	b ⁴	4.0	4.2	A. 4.15	4.15	d	4.15	4.15
38	c ¹	3.9	4.1	A. 3.95	3.95	e	3.95	3.95
44	c ²	4.5	4.7	A. 4.65	4.65	f	4.65	4.65
480	c ³	4.9	5.1	A. 4.95	4.95	g	4.95	4.95
515	d	5.0	5.2	A. 5.1	5.1	h	5.1	5.1
575	e	5.6	5.8	A. 5.7	5.7	i	5.7	5.7
650	f	6.0	6.2	A. 6.1	6.1	j	6.1	6.1
680	g	6.6	6.8	A. 6.7	6.7	k	6.7	6.7
700	h	7.0	7.2	A. 7.1	7.1	l	7.1	7.1
74	i	7.7	7.9	A. 7.8	7.8	m	7.8	7.8
78	j	8.0	8.2	A. 8.1	8.1	n	8.1	8.1
80	k	8.3	8.5	A. 8.4	8.4	o	8.4	8.4
83	l	8.6	8.8	A. 8.7	8.7	p	8.7	8.7
84	m	8.9	9.1	A. 9.0	9.0	q	9.0	9.0
87	n	9.2	9.4	A. 9.3	9.3	r	9.3	9.3
90	o	9.5	9.7	A. 9.6	9.6	s	9.6	9.6
95	p	9.8	10.0	A. 9.9	9.9	t	9.9	9.9
97	q	10.1	10.3	A. 10.2	10.2	u	10.2	10.2
99	r	10.4	10.6	A. 10.5	10.5	v	10.5	10.5

* f² unit changed 9/11/27/093.10
2.50.4

22.30

Standard Sequences

	AC 9506	Remed. p. 32	Chin p. 32
Scale N	Seq. 6 3 h. 16	Seq. 33	Seq. 24
a	6.7 6.3 5.9 6.10 22	6.9 6.5 6.3 6.40 11	6.0 5.6 5.8 5.70 11
b	7.2 6.8 6.7 6.75 21	7.6 7.2 7.3 7.25 11	6.9 6.5 6.7 6.60 11
c	7.7 7.3 7.2 7.25 20	7.7 7.3 7.7 7.50 22	7.6 7.2 7.2 7.20 20
d	8.3 7.9 7.9 7.90 19	8.4 8.0 8.2 8.10 11	8.5 8.1 8.1 8.10 20
e	8.4 8.0 8.3 8.15 18	8.6 8.2 8.5 8.35 21	8.9 8.5 8.8 8.65 12
f	9.0 8.6 8.8 8.70 17	9.0 8.6 9.2 8.90 23	9.1 8.7 9.1 8.95 12
g	9.1 8.7 8.9 8.90 16	9.3 8.9 9.5 9.15 15	9.3 8.9 9.3 9.15 15
h	9.5 9.1 9.3 9.30 15	9.7 9.3 9.7 9.35 15	9.6 9.2 9.6 9.45 15
i	9.8 9.4 9.6 9.60 14	10.0 9.6 10.0 9.85 15	10.1 9.7 10.1 9.95 15
j	10.1 9.7 9.9 9.90 13	10.2 9.8 10.2 10.05 15	10.4 10.0 10.4 10.25 15
k	10.4 10.0 10.2 10.20 12	10.5 10.1 10.5 10.35 15	10.7 10.3 10.7 10.55 15
l	10.7 10.3 10.5 10.50 11	10.8 10.4 10.8 10.65 15	11.0 10.6 11.0 10.85 15
m	11.0 10.6 10.8 10.80 10	11.1 10.7 11.1 10.95 15	11.3 10.9 11.3 11.15 15
n	11.3 10.9 11.1 11.10 9	11.4 11.0 11.4 11.25 15	11.6 11.2 11.6 11.45 15
o	11.6 11.2 11.4 11.40 8	11.7 11.3 11.7 11.55 15	11.9 11.5 11.9 11.75 15
p	11.9 11.5 11.7 11.70 7	12.0 11.6 12.0 11.85 15	12.1 11.7 12.1 11.95 15
q	12.2 11.8 12.0 12.00 6	12.3 11.9 12.3 12.15 15	12.4 12.0 12.4 12.25 15
r	12.5 12.1 12.3 12.30 5	12.6 12.2 12.6 12.45 15	12.7 12.3 12.7 12.55 15
s	12.8 12.4 12.6 12.60 4	12.9 12.5 12.9 12.75 15	13.0 12.6 13.0 12.95 15
t	13.1 12.7 12.9 12.90 3	13.2 12.8 13.2 13.05 15	13.3 12.9 13.3 13.15 15
u	13.4 13.0 13.2 13.20 2	13.5 13.1 13.5 13.35 15	13.6 13.2 13.6 13.45 15
v	13.7 13.3 13.5 13.50 1	13.8 13.4 13.8 13.65 15	13.9 13.5 13.9 13.75 15
w	14.0 13.6 13.8 13.80 0	14.1 13.7 14.1 13.95 15	14.2 13.8 14.2 14.15 15
x	14.3 13.9 14.1 14.10 -1	14.4 14.0 14.4 14.25 15	14.5 14.1 14.5 14.35 15
y	14.6 14.2 14.4 14.40 -2	14.7 14.3 14.7 14.55 15	14.8 14.4 14.8 14.65 15
z	14.9 14.5 14.7 14.70 -3	15.0 14.6 15.0 14.85 15	15.1 14.7 15.1 14.95 15
aa	15.2 14.8 15.0 15.00 -4	15.3 14.9 15.3 15.15 15	15.4 15.0 15.4 15.25 15
ab	15.5 15.1 15.3 15.30 -5	15.6 15.2 15.6 15.45 15	15.7 15.3 15.7 15.55 15
ac	15.8 15.4 15.6 15.60 -6	15.9 15.5 15.9 15.75 15	16.0 15.6 16.0 15.95 15
ad	16.1 15.7 15.9 15.90 -7	16.2 15.8 16.2 16.05 15	16.3 15.9 16.3 16.15 15
ae	16.4 16.0 16.2 16.20 -8	16.5 16.1 16.5 16.35 15	16.6 16.2 16.6 16.45 15
af	16.7 16.3 16.5 16.50 -9	16.8 16.4 16.8 16.65 15	16.9 16.5 16.9 16.75 15
ag	17.0 16.6 16.8 16.80 -10	17.1 16.7 17.1 16.95 15	17.2 16.8 17.2 17.15 15
ah	17.3 16.9 17.1 17.10 -11	17.4 17.0 17.4 17.25 15	17.5 17.1 17.5 17.45 15
ai	17.6 17.2 17.4 17.40 -12	17.7 17.3 17.7 17.55 15	17.8 17.4 17.8 17.75 15
aj	17.9 17.5 17.7 17.70 -13	18.0 17.6 18.0 17.85 15	18.1 17.7 18.1 18.05 15
ak	18.2 17.8 18.0 18.00 -14	18.3 17.9 18.3 18.15 15	18.4 18.0 18.4 18.25 15
al	18.5 18.1 18.3 18.30 -15	18.6 18.2 18.6 18.45 15	18.7 18.3 18.7 18.55 15
am	18.8 18.4 18.6 18.60 -16	18.9 18.5 18.9 18.75 15	19.0 18.6 19.0 18.95 15
an	19.1 18.7 18.9 18.90 -17	19.2 18.8 19.2 19.05 15	19.3 18.9 19.3 19.15 15
ao	19.4 19.0 19.2 19.20 -18	19.5 19.1 19.5 19.35 15	19.6 19.2 19.6 19.45 15
ap	19.7 19.3 19.5 19.50 -19	19.8 19.4 19.8 19.65 15	19.9 19.5 19.9 19.75 15
aq	20.0 19.6 19.8 19.80 -20	20.1 19.7 20.1 19.95 15	20.2 19.8 20.2 20.15 15
ar	20.3 19.9 20.1 20.10 -21	20.4 20.0 20.4 20.25 15	20.5 19.9 20.5 20.35 15
as	20.6 20.2 20.4 20.40 -22	20.7 20.3 20.7 20.55 15	20.8 20.4 20.8 20.65 15
at	20.9 20.5 20.7 20.70 -23	21.0 20.6 21.0 20.85 15	21.1 20.5 21.1 20.95 15
au	21.2 20.8 21.0 21.00 -24	21.3 20.9 21.3 21.15 15	21.4 20.8 21.4 21.25 15
av	21.5 21.1 21.3 21.30 -25	21.6 21.2 21.6 21.45 15	21.7 21.3 21.7 21.55 15
aw	21.8 21.4 21.6 21.60 -26	21.9 21.5 21.9 21.75 15	22.0 21.6 22.0 21.95 15
ax	22.1 21.7 21.9 21.90 -27	22.2 21.8 22.2 22.05 15	22.3 21.7 22.3 22.15 15
ay	22.4 22.0 22.2 22.20 -28	22.5 22.1 22.5 22.35 15	22.6 22.2 22.6 22.45 15
az	22.7 22.3 22.5 22.50 -29	22.8 22.4 22.8 22.65 15	22.9 22.3 22.9 22.75 15
ba	23.0 22.6 22.8 22.80 -30	23.1 22.7 23.1 22.95 15	23.2 22.8 23.2 23.15 15
bb	23.3 22.9 23.1 23.10 -31	23.4 23.0 23.4 23.25 15	23.5 22.9 23.5 23.35 15
bc	23.6 23.2 23.4 23.40 -32	23.7 23.3 23.7 23.55 15	23.8 23.4 23.8 23.75 15
bd	23.9 23.5 23.7 23.70 -33	24.0 23.6 24.0 23.85 15	24.1 23.5 24.1 23.95 15
be	24.2 23.8 24.0 24.00 -34	24.3 23.9 24.3 24.15 15	24.4 23.8 24.4 24.25 15
bf	24.5 24.1 24.3 24.30 -35	24.6 24.2 24.6 24.45 15	24.7 24.3 24.7 24.55 15
bg	24.8 24.4 24.6 24.60 -36	24.9 24.5 24.9 24.75 15	25.0 24.6 25.0 24.95 15
bh	25.1 24.7 24.9 24.90 -37	25.2 24.8 25.2 25.05 15	25.3 24.7 25.3 25.15 15
bi	25.4 25.0 25.2 25.20 -38	25.5 25.1 25.5 25.35 15	25.6 25.2 25.6 25.55 15
bj	25.7 25.3 25.5 25.50 -39	25.8 25.4 25.8 25.65 15	25.9 25.3 25.9 25.75 15
bk	26.0 25.6 25.8 25.80 -40	26.1 25.7 26.1 25.95 15	26.2 25.6 26.2 26.05 15
bl	26.3 25.9 26.1 26.10 -41	26.4 26.0 26.4 26.25 15	26.5 25.9 26.5 26.35 15
bm	26.6 26.2 26.4 26.40 -42	26.7 26.3 26.7 26.55 15	26.8 26.4 26.8 26.65 15
bn	26.9 26.5 26.7 26.70 -43	27.0 26.6 27.0 26.85 15	27.1 26.5 27.1 26.95 15
bo	27.2 26.8 27.0 27.00 -44	27.3 26.9 27.3 27.15 15	27.4 26.8 27.4 27.25 15
bp	27.5 27.1 27.3 27.30 -45	27.6 27.2 27.6 27.45 15	27.7 27.3 27.7 27.55 15
bq	27.8 27.4 27.6 27.60 -46	27.9 27.5 27.9 27.75 15	28.0 27.4 28.0 27.95 15
br	28.1 27.7 27.9 27.90 -47	28.2 27.8 28.2 28.05 15	28.3 27.7 28.3 28.15 15
bs	28.4 28.0 28.2 28.20 -48	28.5 28.1 28.5 28.35 15	28.6 28.2 28.6 28.45 15
bt	28.7 28.3 28.5 28.50 -49	28.8 28.4 28.8 28.65 15	28.9 28.3 28.9 28.75 15
bu	29.0 28.6 28.8 28.80 -50	29.1 28.7 29.1 28.95 15	29.2 28.6 29.2 29.05 15
bv	29.3 28.9 29.1 29.10 -51	29.4 29.0 29.4 29.25 15	29.5 28.9 29.5 29.35 15
bw	29.6 29.2 29.4 29.40 -52	29.7 29.3 29.7 29.55 15	29.8 29.2 29.8 29.65 15
bx	29.9 29.5 29.7 29.70 -53	30.0 29.6 30.0 29.85 15	30.1 29.5 30.1 29.95 15
by	30.2 29.8 30.0 30.00 -54	30.3 29.9 30.3 30.15 15	30.4 29.8 30.4 30.25 15
bz	30.5 30.1 30.3 30.30 -55	30.6 30.2 30.6 30.45 15	30.7 30.1 30.7 30.55 15
ca	30.8 30.4 30.6 30.60 -56	30.9 30.5 30.9 30.75 15	31.0 30.4 31.0 30.95 15
cb	31.1 30.7 30.9 30.90 -57	31.2 30.8 31.2 31.05 15	31.3 30.7 31.3 31.15 15
cc	31.4 31.0 31.2 31.20 -58	31.5 31.1 31.5 31.35 15	31.6 31.0 31.6 31.45 15
cd	31.7 31.3 31.5 31.50 -59	31.8 31.4 31.8 31.65 15	31.9 31.3 31.9 31.75 15
ce	32.0 31.6 31.8 31.80 -60	32.1 31.7 32.1 31.95 15	32.2 31.6 32.2 32.05 15
cf	32.3 31.9 32.1 32.10 -61	32.4 32.0 32.4 32.25 15	32.5 31.9 32.5 32.35 15
cg	32.6 32.2 32.4 32.40 -62	32.7 32.3 32.7 32.55 15	32.8 32.2 32.8 32.65 15
ch	32.9 32.5 32.7 32.70 -63	33.0 32.6 33.0 32.85 15	33.1 32.5 33.1 32.95 15
ci	33.2 32.8 33.0 33.00 -64	33.3 32.9 33.3 33.15 15	33.4 32.8 33.4 33.25 15
cj	33.5 33.1 33.3 33.30 -65	33.6 33.2 33.6 33.45 15	33.7 33.1 33.7 33.55 15
ck	33.8 33.4 33.6 33.60 -66	33.9 33.5 33.9 33.75 15	34.0 33.4 34.0 33.95 15
cl	34.1 33.7 33.9 33.90 -67	34.2 33.8 34.2 34.05 15	34.3 33.7 34.3 34.15 15
cm	34.4 34.0 34.2 34.20 -68	34.5 34.1 34.5 34.35 15	34.6 34.0 34.6 34.45 15
cn	34.7 34.3 34.5 34.50 -69	34.8 34.4 34.8 34.65 15	34.9 34.3 34.9 34.75 15
co	35.0 34.6 34.8 34.80 -70	35.1 34.7 35.1 34.95 15	35.2 34.6 35.2 35.05 15
cp	35.3 34.9 35.1 35.10 -71	35.4 35.0 35.4 35.25 15	35.5 34.9 35.5 35.35 15
cq	35.6 35.2 35.4 35.40 -72	35.7 35.3 35.7 35.55 15	35.8 35.2 35.8 35.65 15
cr	35.9 35.5 35.7 35.70 -73	36.0 35.6 36.0 35.85 15	36.1 35.5 36.1 35.95 15
cs	36.2 35.8 36.0 36.00 -74	36.3 35.9 36.3 36.15 15	36.4 35.8 36.4 36.25 15
ct	36.5 36.1 36.3 36.30 -75	36.6 36.2 36.6 36.45 15	36.7 36.1 36.7 36.55 15
cu	36.8 36.4 36.6 36.60 -76	36.9 36.5 36.9 36.75 15	37.0 36.4 37.0 36.95 15
cv	37.1 36.7 36.9 36.90 -77	37.2 36.8 37.2 37.05 15	37.3 36.7 37.3 37.15 15
cw	37.4 37.0 37.2 37.20 -78	37.5 37.1 37.5 37.35 15	37.6 37.0 37.6 37.45 15
cx	37.7 37.3 37.5 37.50 -79	37.8 37.4 37.8 37.65 15	37.9 37.3 37.9 37.75 15
cy	38.0 37.6 37.8 37.80 -80	38.1 37.7 38.1 37.95 15	38.2 37.6 38.2 38.05 15
cz	38.3 37.9 38.1 38.10 -81	38.4 38.0 38.4 38.25 15	38.5 37.9 38.5 38.35 15
da	38.6 38.2 38.4 38.40 -82	38.7 38.3 38.7 38.55 15	38.8 38.2 38.8 38.65 15
db	38.9 38.5 38.7 38.70 -83	39.0 38.6 39.0 38.85 15	39.1 38.5 39.1 38.95 15
dc	39.2 38.8 39.0 39.00 -84	39.3 38.9 39.3 39.15 15	39.4 38.8 39.4 39.25 15
dd	39.5 39.1 39.3 39.30 -85	39.6 39.2 39.6 39.45 15	39.7 39.1 39.7 39.55 15
de	39.8 39.4 39.6 39.60 -86	39.9 39.5 39.9 39.75 15	40.0 39.4 40.0 39.95 15
df	40.1 39.7 39.9 39.90 -87	40.2 39.8 40.2 40.05 15	40.3 39.7 40.3 40.15 15
dg	40.4 40.0 40.2 40.20 -88	40.5 40.1 40.5 40.35 15	40.6 40.0 40.6 40.45 15
dh	40.7 40.3 40.5 40.50 -89	40.8 40.4 40.8 40.65 15	40.9 40.3 40.9 40.75 15
di	41.0 40.6 40.8 40.80 -90	41.1 40.7 41.1 40.95 15	41.2 40.6 41.2 41.05 15
dj	41.3 40.9 41.1 41.10 -91	41.4 41.0 41.4 41.25 15	41.5 40.9 41.5 41.35 15
dk	41.6 41.2 41.4 41.40 -92	41.7 41.3 41.7 41.55 15	41.8 41.2 41.8 41.65 15
dl	41.9 41.5 41.7 41.70 -93	42.0 41.6 42.0 41.85 15	42.1 41.5 42.1 41.95 15
dm	42.2 41.8 42.0 42.00 -94	42.3 41.9 42.3 42.15 15	42.4 41.8 42.4 42.25 15
dn	42.5 42.1 42.3 42.30 -95	42.6 42.2 42.6 42.45 15	42.7 42.1 42.7 42.55 15
do	42.8 42.4 42.6 42.60 -96	42.9 42.5 42.9 42.75 15	43.0 42.4 43.0 42.95 15
dp	43.1 42.7 42.9 42.90 -97	43.2 42.8 43.2 43.05 15	43.3 42.7 43.3 43.15 15
dq	43.4 43.0 43.2 43.20 -98	43.5 43.1 43.5 43.35 15	43.6 43.0 43.6 43.45 15
dr	43.7 43.3 43.5 43.50 -99	43.8 43.4 43.8 43.65 15	43.9 43.3 43.9 43.75 15
ds	44.0 43.6 43.8 43.80 -100	44.1 43.7 44.1 43.95 15	44.2 43.6 44.2 44.05 15
dt	44.3 43.9 44.1 44.10 -101	44.4 44.0 44.4 44.25 15	44.5 43.9 44.5 44.35 15
du	44.6 44.2 44.4 44.40 -102	44.7 44.3 44.7 44.55 15	44.8 44.2 44.8 44.65 15
dv	44.9 44.5 44.7 44.70 -103	45.0 44.6 45.0 44.85 15	45.1 44.5 45.1 44.95 15
dw	45.2 44.8 45.0 45.00 -104	45.3 44.9 45.3 45.15 15	45.4 44.8 45.4 45.25 15
dx	45.5 45.1 45.3 45.30 -105	45.6 45.2 45.6 45.45 15	45.7 45.1 45.7 45.55 15
dy	45.8 45.4 45.6 45.60 -106	45.9 45.5 45.9 45.75 15	46.0 45.4 46.0 45.95 15
dz	46.1 45.7 45.9 45.90 -107	46.2 45.8 46.2 46.05 15	46.3 45.7 46.3 46.15 15
ea	46.4 46.0 46.2 46.20 -108	46.5 46.1 46.5 46.35 15	46.6 46.0 46.6 46.45 15
eb	46.7 46.3 46.5 46.50 -109	46.8 46.4 46.8 46.65 15	46.9 46.3 46.9 46.75 15
ec	47.0 46.6		

Thursday, Nov 12, 1908

0.15

Polar and standard sequences

I 35634 Remorse 29; copied 29

Polar Sequence	Seq 24	15 ^h + 06
a 1.9	a 1.8	2.0 a.
a 2.8	a 2.5	2.7 a.
b 3.0	c 2.9	3.1 a.
b 3.6	d 3.0	3.2 a.
c 3.7	e 3.8	4.0 a.
c 4.1 4.3 4.7	f 4.6 4.8 4.7	4.75 0.1
d 3.2 5.4 5.5	g 4.8 5.0 5.2	5.10 1.1
e 5.7 5.9 5.7	h 4.9 5.1 4.9	5.00 1.1
f 5.8 6.0 6.5	i 5.2 5.4 5.7	5.55 2.1
g 6.6 6.8 6.7	j 5.7 5.9 5.7	5.80 1.1
h 6.7 6.9 7.0	k 5.9 6.1 5.9	6.00 1.1
i 7.6	l 6.5 6.7 6.5	6.60 1.1
j 7.7	m 6.8 7.0 6.9	6.95 0.1
k 7.9	n 7.0 7.2 7.5	7.35 2.1
l 8.3	o 7.8	7.75 0.5
m 8.4	p 8.4	8.40 1.1
n 8.3	q 8.8	8.80 1.1
o 9.5	r 9.0	9.00 1.1
p 9.6	s 9.8	9.80 1.1
q 9.7	t 9.8	9.80 1.1

m. e. H.

Thursday, Nov. 12, 1908

Polar and standard sequences

I 35634

Polar Sequence	remorse.	Seq 24	Mean
1.3 a. a 1.1	1.3 a. 2.1	a 1.9	2.1 a. 2.0 2.05 0.5 2.5
2.10 a. a 2.1	2.1 a. 2.1	b 2.5	2.7 a. 2.7 2.70 0.5 3.0
3.00 a. a 3.0	3.0 a. 3.0	c 2.8	3.0 a. 3.1 3.05 0.5 3.5
3.20 a. a 3.2	3.2 a. 3.2	d 3.1	3.3 a. 3.2 3.25 0.5 3.5
3.85 a. a 3.7	3.7 a. 3.8	e 3.9	4.1 a. 4.0 4.05 0.5 4.5
3.90 a. a 3.7	3.9 a. 3.9	f 4.1 4.3 4.3	4.30 0.0 4.75 4.52 0.5 5.0
4.42 a. a 4.3	4.35 0.1 4.50	g 4.9 5.1 5.0	5.05 1.0 5.10 5.08 0.5 5.5
4.72 a. a 4.8	4.70 1.1 4.75	h 4.8 5.0 5.2	5.10 1.1 5.00 5.05 0.5 5.5
5.40 a. a 5.4	5.35 1.0 5.45	i 4.6 5.8 5.6	5.70 1.1 5.55 5.62 0.5 6.0
5.78 a. a 5.7	5.75 0.1 5.80	j 5.7 5.9 5.7	5.80 1.1 5.80 5.80 0.5 6.0
6.20 a. a 6.2	6.15 0.0 6.25	k 5.8 6.0 5.9	5.95 0.1 6.00 5.98 0.5 6.5
6.72 a. a 6.7	6.70 0.0 6.75	l 5.8 6.6 6.7	6.65 0.1 6.60 6.62 0.5 7.0
6.95 a. a 6.9	6.95 0.1 6.95	m 6.8 7.0 7.0	7.00 0.0 6.95 6.98 0.5 7.5
7.60 a. a 7.6	7.6 0.1 7.6	n 7.6 7.8 7.8	7.80 0.1 7.80 7.80 0.5 8.0
7.75 a. a 7.8	7.8 0.1 7.8	o 7.8 8.0 8.0	8.00 0.1 8.00 8.00 0.5 8.5
7.90 a. a 7.9	7.9 0.1 7.9	p 8.5 8.5 8.5	8.50 0.1 8.50 8.50 0.5 9.0
8.35 a. a 8.4	8.4 0.1 8.4	q 8.8 9.0 9.0	9.00 0.1 9.00 9.00 0.5 9.5
8.50 a. a 8.5	8.5 0.1 8.5	r 9.7 9.7 9.7	9.70 0.1 9.70 9.70 0.5 10.0
8.95 a. a 9.0	9.0 0.1 9.0	s 9.8 9.8 9.8	9.80 0.1 9.80 9.80 0.5 10.0
9.50 a. a 9.5	9.5 0.1 9.5	t 9.9 9.9 9.9	9.90 0.1 9.90 9.90 0.5 10.0
9.65 a. a 9.7	9.7 0.1 9.7	u 9.9 9.9 9.9	9.90 0.1 9.90 9.90 0.5 10.0
9.70 a. a 9.7	9.7 0.1 9.7	v 9.9 9.9 9.9	9.90 0.1 9.90 9.90 0.5 10.0
10.2 a. a 10.2	10.2 0.1 10.2	w 9.9 9.9 9.9	9.90 0.1 9.90 9.90 0.5 10.0

7.6
-6.9
42.745
±0.000

m. e. H.

Saturday, November 14, 1908

23.15

Polar & Standard sequences

I 35632 remeasured from p. 31

Polar Sequence		Seq. 33	21
a ³ 1.6	1.8 a.	a 1.9	2.1 a.
a ⁵ 2.7	2.9 a.	b 2.7	2.9 a.
b ³ 2.9	3.1 a.	c 3.1	3.3 a.
b ³ 3.5	3.7 a.	d 3.7	3.9 a.
c ³ 3.7	3.9 a.	e 4.0 4.2 4.5	4.35 2.1
c ³ 3.9 4.1 4.3	4.20 1.1	f 4.5 4.7 4.9	4.80 1.1
c ³ 4.0 4.8 4.7	4.75 0.1	g 5.0 5.4 5.5	5.45 0.1
d 5.0 5.2 5.5	5.35 2.1	h 5.7 5.9 5.9	5.90 0.0
e 5.6 5.8 5.8	5.80 0.0	i 5.9 6.1 6.4	6.25 1.2
f 5.9 6.1 6.0	6.05 1.0	j 6.0 6.2 6.8	6.50 3.3
g 6.6 6.8 6.7	6.75 0.1	m 7.0 7.2 7.3	7.25 0.1
h 6.8 7.0 7.0	7.00 0.0	n 7.7	
i 7.5	+3 -5	o 8.5	+9
j 7.7	14.8 ±0.087	p 8.7	14.16 ±0.114
k 7.8		q 9.0	
k 8.7		r 9.8	
k ² 8.5		t 10.0	
k ³ 9.0			
k ⁴ 9.2			
k ⁵ 9.5			
l 9.6			
m 9.7			
n 10.1			

m. e. H

Saturday, Nov. 14, 1908

Official Bl. 53.46

Polar & standard sequences

I 35632 remeasured from p. 30

Polar Sequence		Seq. 33	Mean I 35632	Seq. 33
a ³ 1.8	2.0 a.	a 1.8	2.0 a.	a 2.05 0.05
a ⁵ 2.8	3.0 a.	b 2.7	2.9 a.	b 2.90 0.10
c 3.1	3.1 a.	c 3.0	3.2 a.	c 3.20 0.10
d 3.8	4.0 a.	d 3.6	3.9 a.	d 3.85 0.15
e 4.0	4.0 a.	e 4.1 4.3 4.7	4.50 2.2	e 4.42 0.08
f 4.0 4.2 4.5	4.35 2.1	f 4.6 4.8 4.8	4.80 0.0	f 4.80 0.00
g 4.4 4.6 4.7	4.65 0.1	g 5.2 5.4 5.4	5.40 0.0	g 5.42 0.02
h 5.2 5.4 5.5	5.45 0.1	h 5.7 5.9 5.9	5.90 0.0	h 5.90 0.00
i 5.7 5.9 5.7	5.80 1.1	i 6.1 6.3 6.1	6.20 1.0	i 6.22 0.02
j 6.1 6.3 6.6	6.45 1.2	j 6.6 6.8 6.8	6.80 0.0	j 6.65 0.15
k 6.4 6.6 6.8	6.70 1.1	m 7.0 7.2 7.3	7.25 0.1	m 7.25 0.00
l 7.0 7.2 7.2	7.20 0.0	n 7.7	+4 -8	n 7.70 0.00
o 7.5	+7 -6	o 8.2	14.1 ±0.050	o 8.05 0.15
p 7.8	14.72 ±0.079	p 8.3		p 8.40 0.10
q 7.7		q 8.7		q 8.70 0.05
r 8.4		r 9.0		r 8.95 0.15
s 8.7		s 9.8		s 9.80 0.10
t 8.9		t 10.0		t 9.95 0.05
u 9.6				u 9.90 0.00
v 9.2				v 9.85 0.15
w 9.6				w 9.60 0.00
x 9.5				x 9.60 0.10
y 10.0				y 10.00 0.00

m. e. H

2.55

Friday March 12, 1909

Scale M	Spd	North Polar Sequence	Different Apertures	Pisistrate Companion	2nd Ep. Small sp.
		1st Ep. full aperture			
C ¹	3.7	to br.	3.9	C ¹ 8.6 changed Mar. 13	C ¹ 6.6 6.8 d 7.7
d	4.8	5.0	5.6	5.30 $\frac{30}{23}$ 30	C ² 6.7 7.1 f ¹ 8.6
f ²	6.0	6.2	6.6	6.40 20 20	C ³ 7.5 7.5
C ²	4.2	4.2	4.5	4.45 05 05	C ² 7.5 7.50 \pm
e	5.6	5.8	5.8	5.80 10 10	e 8.3
g	6.9	7.1	7.2	7.15 05 05	f ² 9.0
C ³	4.8	5.0	4.9	4.95 05 05	C ³ 7.8
C ⁴	5.0	5.2	5.5	5.35 15 15	b ¹ 8.2
f ¹	5.8	6.0	5.9	5.95 05 05	d 9.6
f ³	6.1	6.9	6.8	6.85 05 05	e 10.1
C ⁵	4.3	4.5	4.9	4.70 20 20	C ⁴ 9.7 9.75 1.0
i		7.6			f ¹ 7.0
L ⁴		8.7			a ¹ 6.7
L ³		8.7			
w		9.6			
L ¹		7.7			
L ¹		8.0			
w		9.6			
L ⁵		8.9			
r		9.8			
L ²		8.3			
f		10.1			

Additional stars meas. March 13

a	b	c	d	e
a	b	c	d	e
a ³	"	c ¹	7.6	
b ¹	"	c ¹	7.9	
b ²	"	c ³	7.7	7.75 05 05
b ¹	"	d	7.8	7.75 15 05
b	8.3	e	2.2	8.25 05 05

H. S. S.

2.25

Images on 2nd Ep. here very sharp focus

Images on 1st Ep. here have small companion and difficult to measure

Friday March 12, 1909.

Scale M	Spd	North Polar Sequence	Taken with large prism	Pisistrate Companion large prism	Pisistrate Companion small prism
C ¹	3.3	3.5 to br.	3.5 a.	C ¹ 6.0 6.2 6.3 6.25 05 05	L ² 8.8
C ³	4.0	4.2 4.8	4.20 10 10	C ³ 4.1 4.6 4.35 25 25	C ³ 7.7
f ¹	5.8	6.0 5.8	5.90 10 10	C ¹ 6.7 6.9 6.9 6.90 05 10	C ¹ 9.0
f ¹	2.8	3.0 to br.	2.0 a.	C ⁶ 7.8 7.8 1.2	d 7.9
C ²	4.9	5.1 5.0	5.05 05 05	C ³ 4.9 5.1 5.2 5.15 05 05	C ² 9.3
d	4.9	5.1 4.8	4.95 15 15	f ² 6.7 6.9 6.8 6.85 05 05	f ¹ 8.1
C ²	3.8	4.0 to br.	4.0 a.	a ⁵ 5.8 6.0 5.8 5.90 10 10	a ⁵ 7.9
f ²	6.5	6.7 6.6	6.65 05 05	C ³ 7.7	C ⁶ 7.8
f ²	3.2	3.4 to br.	3.4 a.	C ² 7.6	C ³ 9.6
C ⁴	4.7	4.9 4.8	4.85 05 05	g 9.8	C ¹ 7.9
e	5.0	5.2 5.7	5.45 25 25	d 7.9	L ¹ 10.1
f ³	6.9	7.1 7.2	7.15 05 05	f ¹ 8.8	a ¹ 6.8
a	1.1	1.3 to br.	1.3 a.	f ³ 9.6	
a ⁵	2.2	2.4 to br.	2.4 a.	C ⁷ 8.0	
g	7.5			e 8.5	
L ³	8.7			f ² 10.1	
w	9.8			L 10.1	
i	7.8				
L ⁴	7.0				
L ¹	7.7				
L	9.1				
r	9.7				
L ¹	8.3				
L ⁵	9.1				
w	9.5				
f	9.9				
L ²	8.4				
3.45	10.3				

H. S. S.

3.45

3,45

Friday March 12, 1909

Scale M	North Polar Sequence	Taken with Large Prism	Prismatic Companion	Prismatic Companion
	L 35726		Prismatic Companion	Prismatic Companion
C ¹	4.0 4.2 4.8 4.50 30, 30	C ³	5.7 5.9 5.8 5.85 05, 05	C ¹ small prism 9.9
C ³	5.6 5.8 5.7 5.75 05, 05	C ¹	toft 7.7 7.7 12	C ¹ 7.2
e	6.2 6.4 5.9 6.15 25, 25	C ¹	6.8 7.0 6.9 6.95 05, 05	C ² 9.5
A ³	2.2 2.4 to br 2.4 a.	A ¹	4.9 5.1 5.2 5.15 05, 05	C ² 10.0
f ²	4.0 4.2 4.1 4.15 05, 05	f ²	7.2 7.4 7.2 7.30 10, 10	C ³ n.s.
C ⁶	5.7 5.9 5.7 5.80 10, 10	A ⁵	6.1 6.3 6.6 6.45 15, 15	C ⁶ n.s.
f ¹	6.7 6.9 6.8 6.85 05, 05	C ⁷	8.9	C ⁷ n.s.
C ²	4.9 5.1 5.1 5.10 10, 10	d	8.8	A ³ 8.2
f ²	7.0 7.2 7.2 7.20 05, 05	C ²	8.1	A ⁵ 8.5
C ⁵	5.7 5.9 5.8 5.85 05, 05	C ³	8.5	Do not use
A ⁵	3.5 3.7 to br 3.7 a.	e	9.8	small prism
f ¹	3.7 3.9 to br 3.9 a.	C ⁶	8.6	
d	5.8 6.0 5.9 5.95 05, 05	f ¹	9.5	
i	8.6	f ²	10.1	
L ⁴	9.7	f		
g	7.9			
L ³	9.6			
f ³	9.8			
L	8.5			
L ¹	9.0			
L ⁵	9.8			
e	9.9			
m	10.0			
n	n.s.			
L ²	8.9			

4.00

H. J. S.

23.20

Laport

Saturday March 13, 1909

Scale M	North Polar Sequence	Different apertures	Prismatic Companion
	L 35753		
	1st Exp. full aperture	2nd Exp. small aperture	a ¹ 6.6 6.8 6.9 6.85 01
C ¹	3.2 3.4 to br 3.4 a.	C ¹ 6.7 7.1 7.1 7.10 00	f ¹ toft 8.4
C ⁶	4.9 5.1 5.2 5.15 10	A ¹ to br poor	A ³ 6.9 7.1 7.4 7.25 12
f ¹	6.0 6.2 6.6 6.40 22	f ¹ to br poor	C ¹⁰ 9.2
f ³	6.7 7.1 7.5 7.30 22	f ³ to br poor	C ² 9.6
C ²	3.9 4.1 to br 4.1 a.	A ³ to br poor	f ² 8.8
C ⁷	3.9 5.1 5.2 5.15 10	C ⁶	8.1 C ⁶ 9.8 ±10
f ¹	to br poor to br poor	d	8.3 C ³ 9.9
d	5.0 5.2 5.6 5.40 22	C ²	7.8 d n.s.
f ²	6.7 6.9 6.9 6.70 00	f ¹	9.0 C ⁷ n.s.
e	5.5 5.7 5.7 5.70 00	C ³	8.2 A ⁵ 8.1
C ³	4.9 5.1 5.0 5.05 10	f ²	9.5
i	8.5	e	8.7
L ⁴	9.6	f ³	9.9
g	7.8	f ⁴	8.5
L ³	9.2	f	10.0
L	8.2		
L ¹	9.7		
L ⁵	8.7		
L ²	9.7		
L	8.7		
m	9.8		
n	n.s.		

H. J. S.

23.40

Images on 1st Exp. have small companions and difficult to measure.
 Images on 2nd Exp. have very sharp focus.

Saturday March 13, 1909

23.40

left

Scale M

North Polar Sequence taken with large prism

I 35725

Primitive Comparisons

Primitive Comp.
small prism
low job

C ¹	4.8 5.0 4.8 4.9 1.1	W ¹	5.3 5.5 5.7 5.6 1.1
C ⁶	5.9 6.1 5.7 5.9 2.2	t ¹	6.9 7.1 7.1 7.0 0.0
d	6.0 6.2 6.7 6.4 2.3	a ³	5.9 6.1 6.0 6.0 1.0
f ¹	7.0 7.2 7.4 7.3 1.1	a ⁵	6.7 6.9 6.8 6.5 1.0
f ¹	3.9 4.1 4.0 4.1 a.	C ¹	8.2
d	2.8 3.0 3.0 3.0 a.	C ⁶	9.7
C ⁷	6.0 6.2 6.4 6.3 1.1	f ²	7.9
a ⁵	3.6 3.8 3.8 3.8 a.	C ²	8.7
C ²	5.4 5.6 5.6 5.6 0.0	d	9.6
e	6.7 6.9 6.9 6.9	C ⁷	9.8
f ³	8.3	e	10.0
f ¹	9.0	C ³	8.9
R ³	10.0	f ¹	10.1
g	8.6		
f ²	7.7		
f ¹	9.3		
f ²	4.8		

H.S.B.
23.55Primitive comparisons very comparable
Images very poor especially of faint stars

Saturday March 13, 1909

23.55

left

Scale M

North Polar Sequence

C 14037 different aperture Scale from I 32811

2nd Exp. full aperture 1st Exp. small aperture

C ¹	2.1 2.3 2.3 2.3 a.	C ¹	4.7 4.9 4.9 4.9 a.
C ⁷	3.7 3.9 3.9 3.9 a.	C ²	4.7 4.9 4.9 4.9 a.
d	3.7 3.9 3.9 3.9 a.	C ³	4.7 4.9 4.9 4.9 a.
f ¹	4.8 5.0 4.8 4.9 1.1	C ⁴	4.7 4.9 4.9 4.9 a.
g	6.7 6.9 6.9 6.9 0.0	f ¹	5.9 6.1 5.9 6.0 1.1
C ⁶	2.6 3.8 3.8 3.8 a.	f ³	7.8 7.8 7.8 7.8 a.
f ²	5.8 6.0 5.8 5.9 1.1	d	4.4 4.6 4.6 4.6 a.
h	7.0 7.2 7.2 7.2 0.0	f ²	7.5
C ³	3.0 3.2 3.2 3.2 a.	e	5.1 5.3 5.2 5.2 1.0
e	3.9 4.1 4.1 4.1 1.0	i	9.0
f ³	6.9 6.9 6.9 6.9 1.1	g	8.4
* R ¹	7.8 7.8 7.8 7.8 a.	f ¹	8.8
R ¹	7.8	R ¹	9.8
R ³	8.7	R ³	10.8
R ⁵	9.3	R ²	10.0
R ²	8.3		
m	13.2		
m	9.6		
s	10.8		

Comparisons difficult

Different aperture exposure.
R¹ 7.9March 19, 1909.
* Remasured R¹ on field

"first exp" is on C 14037, small aperture

"second exp" is C 14038 large aperture

Two exposures on one plate given separate plate numbers

H.S.B.
0.10

23.50

Monday March 15, 1909

North Polar Sequence

leptid

C 17564 different apertures Scale from I 32811

1st Exp. full aperture 2nd Exp. small aperture

C ¹	1.3	..	1.5	a.	C ¹	3.4	to b.	3.6	a.
C ⁶	2.5	..	2.7	a.	C ⁶	5.0	5.2	5.4	5.30 i
e	3.1	..	3.3	a.	e	5.9	6.1	6.0	6.05 i
f ³	5.5	..	5.7	5.70	f ³	7.0	7.2	7.6	7.40 2.2
f ⁴	2.1	2.9	..	2.9	d	4.9	5.1	5.5	5.30 2.2 * measured again later, mean 5.45
f ¹	3.8	to b.	4.0	a.	C ²	4.1	4.3	4.8	4.55 3.2
f ²	5.7	5.9	5.9	5.90 0.0	C ¹	5.1	5.3	5.3	5.55 3.2
C ²	2.0	2.2	..	2.2	f ¹	6.7	6.9	6.8	6.85 i
d	2.9	2.7	..	3.1	C ³	4.9	5.1	5.0	5.05 i
f ²	4.8	5.0	5.2	5.10 i	f ³	to f.	7.9		
h	5.9	6.1	6.0	6.05 i	f ¹	8.9			
h ¹	6.8	7.0	7.0	7.00 0.0	g	8.2			
C ³	2.0	..	2.5	a.	d	* 5.6			
d	6.2	6.4	6.6	6.0 i	h	8.7			
h ²	7.0	7.2	7.2	7.20 0.0	h ¹	9.5			
h ⁴	8.3				h ²	9.7			
g	9.1				h ³	10.3			

Mean of two measures, full ap. Small ap.

1) 2.3

2) 2.3

3) 2.3

4) 2.3

5) 2.3

6) 2.3

7) 2.3

8) 2.3

9) 2.3

10) 2.3

11) 2.3

12) 2.3

13) 2.3

14) 2.3

15) 2.3

16) 2.3

17) 2.3

18) 2.3

19) 2.3

20) 2.3

21) 2.3

22) 2.3

23) 2.3

24) 2.3

25) 2.3

26) 2.3

27) 2.3

28) 2.3

29) 2.3

30) 2.3

31) 2.3

32) 2.3

33) 2.3

34) 2.3

35) 2.3

36) 2.3

37) 2.3

38) 2.3

39) 2.3

40) 2.3

41) 2.3

42) 2.3

43) 2.3

44) 2.3

45) 2.3

46) 2.3

47) 2.3

48) 2.3

49) 2.3

50) 2.3

51) 2.3

52) 2.3

53) 2.3

54) 2.3

55) 2.3

56) 2.3

57) 2.3

58) 2.3

59) 2.3

60) 2.3

61) 2.3

62) 2.3

63) 2.3

64) 2.3

65) 2.3

66) 2.3

67) 2.3

68) 2.3

69) 2.3

70) 2.3

71) 2.3

72) 2.3

73) 2.3

74) 2.3

75) 2.3

76) 2.3

77) 2.3

78) 2.3

79) 2.3

80) 2.3

81) 2.3

82) 2.3

83) 2.3

84) 2.3

85) 2.3

86) 2.3

87) 2.3

88) 2.3

89) 2.3

90) 2.3

91) 2.3

92) 2.3

93) 2.3

94) 2.3

95) 2.3

96) 2.3

97) 2.3

98) 2.3

99) 2.3

100) 2.3

101) 2.3

102) 2.3

103) 2.3

104) 2.3

105) 2.3

106) 2.3

107) 2.3

108) 2.3

109) 2.3

110) 2.3

111) 2.3

112) 2.3

113) 2.3

114) 2.3

115) 2.3

116) 2.3

117) 2.3

118) 2.3

119) 2.3

120) 2.3

121) 2.3

122) 2.3

123) 2.3

124) 2.3

125) 2.3

126) 2.3

127) 2.3

128) 2.3

129) 2.3

130) 2.3

131) 2.3

132) 2.3

133) 2.3

134) 2.3

135) 2.3

136) 2.3

137) 2.3

138) 2.3

139) 2.3

140) 2.3

141) 2.3

142) 2.3

143) 2.3

144) 2.3

145) 2.3

146) 2.3

147) 2.3

148) 2.3

149) 2.3

150) 2.3

151) 2.3

152) 2.3

153) 2.3

154) 2.3

155) 2.3

156) 2.3

157) 2.3

158) 2.3

159) 2.3

160) 2.3

161) 2.3

162) 2.3

163) 2.3

164) 2.3

165) 2.3

166) 2.3

167) 2.3

168) 2.3

169) 2.3

170) 2.3

171) 2.3

172) 2.3

173) 2.3

174) 2.3

175) 2.3

176) 2.3

177) 2.3

178) 2.3

179) 2.3

180) 2.3

181) 2.3

182) 2.3

183) 2.3

184) 2.3

185) 2.3

186) 2.3

187) 2.3

188) 2.3

189) 2.3

190) 2.3

191) 2.3

192) 2.3

193) 2.3

194) 2.3

195) 2.3

196) 2.3

197) 2.3

198) 2.3

199) 2.3

200) 2.3

201) 2.3

202) 2.3

203) 2.3

204) 2.3

205) 2.3

206) 2.3

207) 2.3

208) 2.3

209) 2.3

210) 2.3

211) 2.3

212) 2.3

213) 2.3

214) 2.3

215) 2.3

216) 2.3

217) 2.3

218) 2.3

219) 2.3

220) 2.3

221) 2.3

222) 2.3

223) 2.3

224) 2.3

225) 2.3

226) 2.3

227) 2.3

228) 2.3

229) 2.3

230) 2.3

231) 2.3

232) 2.3

233) 2.3

234) 2.3

235) 2.3

236) 2.3

237) 2.3

238) 2.3

239) 2.3

240) 2.3

241) 2.3

242) 2.3

243) 2.3

244) 2.3

245) 2.3

246) 2.3

247) 2.3

248) 2.3

249) 2.3

250) 2.3

251) 2.3

252) 2.3

253) 2.3

254) 2.3

255) 2.3

256) 2.3

257) 2.3

258) 2.3

259) 2.3

260) 2.3

261) 2.3

262) 2.3

263) 2.3

264) 2.3

265) 2.3

266) 2.3

267) 2.3

268) 2.3

269) 2.3

270) 2.3

271) 2.3

272) 2.3

273) 2.3

274) 2.3

275) 2.3

276) 2.3

277) 2.3

278) 2.3

279) 2.3

280) 2.3

281) 2.3

282) 2.3

0.30

Monday March 15, 1909.

Exp. 1st

North Polar Sequence

C 175.16 with and without screen scale for T=32811

C' 3.4 too bl. without screen

C' 2nd Exp. with screen

C' t.p. " "

C' t.p. " "

C' t.p. " "

C' t.p. " "

C² 3.4 p " 3.9 a.C² t.p. " "

d 5.0 5.2 5.5 5.35 ± 1

C³ t.p. " "

f' 6.2 6.4 6.6 6.50 ± 1

d 8.1

g too ft. 7.7 7.7 .2

f' 8.8

C³ 4.2 p " 4.4 a.

f 8.8

e 5.8 6.0 5.8 5.90 ± 2

f³ 9.8f³ 7.0 7.2 7.3 7.25 ± 1

ke 8.6.

f² 6.8 7.0 7.0 7.00 ± 0f² 9.4

f 8.5

L³ 9.2

L 8.2

L¹ 8.7

m 10.1

L⁵ 9.8L² 8.9L⁴ 9.7

H. J. B.

0.40

0.40

Monday March 15, 1909

Exp. 1st

North Polar Sequence

C 175.14 with and without screen

C' 3.5 too bl. without screen

C' t.p. t.p. some Exp. with screen

d 4.9 5.1 5.6 5.35 ± 2

f' 6.0 6.2 6.3 6.25 ± 1

C² 3.9 p 4.1 4.10 ± 0

C' 4.4 4.6 4.6 a.

C' t.p. " "

C² t.p. " "

e 5.8 6.0 5.9 5.95 ± 1

f³ too ft. 7.6 7.6 .2f³ 6.8 7.0 7.0 7.00 ± 0

f 8.5

d * 5.5

L 8.2

L 9.9

L³ 9.8L² 9.3L¹ 8.6

L 10.2

L 8.8

m 8.8

L⁵ 10.0L⁴ 9.8

0.50

H. J. B.

23.50

Tuesday March 16, 1909

Opal	North Polar Sequence	Measures of faint stars on C Plate		
	C 17539 (Scale 15350)	C 17532 (Scale 15350)	C 17544 (Scale 15350)	C 17550 (Scale 15350)
γ	6.2	γ t.f.	γ 6.7	γ t.f.
δ	7.0	δ 6.6	δ 8.3	δ 7.2
ϵ	7.7	ϵ 8.1	ϵ 7.0	ϵ 6.7
ζ	7.6	ζ 8.8	ζ 7.4	ζ 8.3
η	8.2	η 6.8	η 9.1	η 7.7
θ	9.1	θ 4.9	θ 6.9	θ 4.8
ι	6.7	ι 8.8	ι 8.3	ι 6.9
κ	7.8	κ 9.9	κ 8.4	κ 7.8
λ	7.0	λ 8.1	λ 9.1	λ 8.2
μ	6.7	μ 6.9	μ 7.0	μ 8.6
ν	8.2	ν 8.4	ν 8.7	ν 9.5
ξ	7.2	ξ 7.1	ξ 7.8	ξ 6.7
π	7.0	π 9.5	π 7.8	π 9.1
ρ	7.8	ρ 7.1	ρ 7.1	ρ 10.0
σ	9.8	σ t.f.	σ 8.0	σ 10.0
τ	8.9	τ 7.1	τ 7.8	τ 7.3
υ	10.0	υ t.f.	υ 8.0	υ 7.3
ϕ	9.9	ϕ 7.1	ϕ 7.8	ϕ 7.3
χ	10.0	χ 7.1	χ 7.8	χ 7.3
ψ	10.1	ψ 7.1	ψ 7.8	ψ 7.3

0.10
H.S.S.

3.10

Saturday
Sunday March 27, 1909

North Polar Sequence	T' Plates on the Pleiades		
Plate A C 10325	Scale 76	Plate B	Scale 76
γ 6.7	γ 4.9	γ 4.5	γ 4.5
δ 7.0	δ 6.6	δ 7.2	δ 7.2
ϵ 8.1	ϵ 7.0	ϵ 6.7	ϵ 6.7
ζ 8.8	ζ 7.4	ζ 8.3	ζ 8.3
η 6.8	η 9.1	η 7.7	η 7.7
θ 4.9	θ 6.9	θ 4.8	θ 4.8
ι 8.8	ι 8.3	ι 6.9	ι 6.9
κ 9.9	κ 8.4	κ 7.8	κ 7.8
λ 8.1	λ 9.1	λ 8.2	λ 8.2
μ 6.9	μ 7.0	μ 8.6	μ 8.6
ν 8.4	ν 8.7	ν 9.5	ν 9.5
ξ 7.1	ξ 7.8	ξ 6.7	ξ 6.7
π 9.5	π 7.8	π 9.1	π 9.1
ρ 7.1	ρ 7.1	ρ 10.0	ρ 10.0
σ 8.0	σ 10.0	σ 10.0	σ 10.0
τ 7.8	τ 7.3	τ 7.3	τ 7.3
υ 8.0	υ 7.3	υ 7.3	υ 7.3
ϕ 7.1	ϕ 7.8	ϕ 7.8	ϕ 7.8
χ 7.8	χ 7.3	χ 7.3	χ 7.3
ψ 7.3	ψ 7.3	ψ 7.3	ψ 7.3

super

+15
-16
21.31
± 0.11

3.30

H.S.S.

H.S.S. on the Pleiades

Thursday April 8, 1909

North Polar Sequence T' Plates on the Pleiades re-measured
Scale No. Plate AC 10305

1st Se	2nd Se	3rd Se	1st Se	2nd Se	3rd Se
B	8.7 2.5 t.b.	t.b. 2.5 a..	A	0.1 -0.1	-0.1 a..
E	4.6 4.4 4.8 4.4	4.7 4.45 4.6 4.3	a'	0.8 0.6	0.6 a..
A	0.2 0.0 t.b.	t.b. 0.0 a..	b'	2.7 2.5	2.5 a..
C	3.6 3.4 3.8 3.4	t.b. 3.4 0.0	b ²	0.8 0.6	0.6 a..
D	4.2 4.0 4.5 4.1	4.0 4.0 3.1 0	f	1.8 1.6	1.6 a..
F	5.0 4.8 5.6 5.2	5.0 5.0 2.8 0	x	1.1 0.9	0.9 a..
a ³	6.6 6.2	5.7 5.95 .23	C	3.4 3.2	3.2 a..
c'	8.5 8.1	8.6 8.35 .32	d'	4.8 4.6 4.8 4.4	4.6 4.53 1.1 1
a'	5.1 4.7	5.0 4.85 .12	B	1.5 1.3	1.3 a..
f'	8.3 7.9	8.0 7.95 .10	y	t.b.	6.6 6.2
a ⁵	7.7 7.3	7.2 7.25 .02	d	3.8 3.6 3.9 3.5	3.5 3.55 0.1
c ²	t.b.	9.0 9.0 .02	e	t.b.	5.9 5.5
a ⁴	6.7 6.3	6.1 6.20 .11	e'	5.9 5.5	5.6 5.55 .10
a ²	6.1 5.7	5.7 5.70 .00	g	6.7 6.3	6.3 6.30 .00
g	5.8 5.4	5.6 5.80 .11	h	6.7 6.3	5.8 6.05 .32
f ²	8.7 8.3	8.6 8.45 .12	d	8.6 8.2	8.3 8.25 .01
f ³	8.4 8.0	7.9 7.95 .01	E	8.7 8.3	8.0 8.15 .12
d		9.9 9.9 .02	h	7.6 7.2	6.8 7.00 .22
c			f	6.8 6.4	5.8 6.10 .33
			f ¹	8.9 8.5	8.6 8.55 .30
			i	8.5 8.1	7.9 8.00 .11
			i'	8.2 7.8	7.6 7.70 .11
			i'		8.2 8.20
			i'		9.3
			i'		8.5
			i'		9.0
			i'		7.8

+16
-15
31.31
±10.10

0.30
76.98

T' Plates on the Pleiades Means

AC 10305

Polar Seq.

Pleiades

(1)	(2)	Mean	(1)	(2)	Mean
A	-0.2 0.0	-0.10 10 10	a	-0.1 -0.1	-0.10 10 10
B	2.3 2.5	+2.40 10 10	a'	0.8 0.6	0.70 10 10
C	3.40 3.40	3.40 00 00	b	4.0 1.6	1.6 05 15
D	3.90 4.03	3.96 06 07	b'	2.6 2.5	2.55 04
E	4.50 4.45	4.48 02 03	b ²	0.7 0.6	0.65 05 05
F	4.90 5.00	4.95 05 05	C	2.9 3.2	3.05 15 15
h	5.50 5.50	5.50 00 00	d	3.50 3.55	3.52 02 03
a'	5.15 4.85	5.00 15 15	d'	4.40 4.53	4.46 06 07
a ²	5.65 5.70	5.68 03 02	e	5.45 5.35	5.38 04 03
a ³	5.95 5.95	5.95 00 00	e'	5.55 5.55	5.55 00 00
a ⁴	6.10 6.20	6.15 05 05	f	6.25 6.10	6.18 07 08
a ⁵	7.10 7.25	7.18 08 07	g	6.35 6.30	6.31 01 01
f'	7.80 7.95	7.88 08 07	h	7.05 7.00	7.02 00 02
f ²	7.85 8.45	8.15 .02	h'	7.70 7.70	7.70 00 00
f ³	7.95	7.95 .02	i	7.95 8.00	7.98 02 02
c'	8.35 8.35	8.35 00 00	i'	8.15 8.2	8.22 02 02
c ²	9.1 9.0	9.05 05 05	j	8.65 8.55	8.60 05 05
c ³			j'	9.8	9.8 .02
d	9.7 9.9	9.80 10 10	j ²	8.9 8.8	8.85 10 05
			j ³	8.9 9.0	8.95 05 05
			k	9.2 9.0	9.10 10 10
			k	10.1	10.1 .02
			α	0.8 0.9	0.85 05 05
			β	1.4 1.3	1.35 05 05
			γ	5.80 5.95	5.88 08 07
			δ	8.20 8.25	8.22 02 02
			ε	8.0 8.15	8.08 08 07
			ζ	5.90 6.05	5.98 08 07

+83
-15
32.164
±0.52

+134
-133
50.217
±0.53

Thursday April 8, 1909.

North Polar Sequence T' Plates on the Pleiades re-measured
Plate AC 10326

Polar Sequence	1st Se.	2nd Se.	3rd Se.	1st Se.	Pleiades	2nd Se.
A 1.2 1.0	t.f.	t.f.	1.0 a..	A' 1.9 1.7		1.7 a..
D t.f.	5.7 5.3	5.0	5.15 .12	D' 3.8 3.6	4.1 3.7	3.65 0.1
* C 3.9 3.7	4.7 4.3	t.f.	4.65 .23	C' 1.1 0.9		0.9 a..
B 3.0 2.8	3.3 2.9	t.f.	2.85 0.1	B' 1.9 1.7		1.7 a..
a ²	6.8 6.4	6.7	6.55 .21	a' 2.8 2.6		2.6 a..
c'	t.f.	8.8	8.8 .a	c 4.7 4.5	4.8 4.4	4.45 .1
a ⁵	7.9 7.5	7.8	7.65 .12	a 2.5 2.3		2.3 a..
a'	6.3 5.9	5.7	5.80 .11	d t.f.	5.5 5.1	4.8 4.95 .12
f'	8.4 8.0	8.0	8.05 .02	B 2.7 2.7		2.7 a..
a ³	7.3 6.9	6.7	6.80 .11	e	7.5 7.1	6.6 6.85 .32
C	5.8 5.4	5.2	5.30 .11	e		
d	6.8 6.4	5.9	6.15 .23		7.6 7.2	7.20 .00
a ⁴	7.5 7.1	6.6	6.85 .32		8.9 8.5	8.8 8.65 .12
f ²	9.0 8.6	8.6	8.60 .00		7.7 7.3	7.3 7.30 .00
e ³		9.7		e	6.9 6.5	6.5 6.50 .00
f	5.7		7.6 .12	E	t.f.	8.7 8.7 .a
c ²	9.3		24.32 ± .003	d'	6.6 6.2	5.95 .22
d	10.1			i	8.9 8.5	8.8 8.65 .12
				f	7.6 7.2	7.0 7.10 .12
				f'	8.7 8.3	8.6 8.45 .12
				g	7.7 7.3	7.6 7.45 .12
				h	8.2 7.8	7.8 7.80 .00
				i'	t.f.	
				j		
				j ²		
				j ³		
				j ⁴		
				k		
				l		
				m		
				n		
				o		
				p		
				q		
				r		
				s		
				t		
				u		
				v		
				w		
				x		
				y		
				z		

Measure of C 3.9 certainly wrong. Probably
included for 4.9. Repeat

3.30

H.S.S.

T' Plates on the Pleiades. Means.

AC 10326

Polar Sequence

Pleiades.

(1)	(2)	Mean	(1)	(2)	Mean
A 0.9 1.0	0.95 05 05		a 0.9 0.9	0.90	00 00
B 2.9 2.85	2.88 12 13		a' 1.7 1.7	1.70	00 00
C 4.47 4.02	4.24 23 24		b 2.6 2.6	2.60	00 00
D 5.10 5.15	5.12 02 03		b' 3.60 3.65	3.62	02 03
E 5.30 5.30	5.30 00 00		b ² 1.7 1.7	1.70	00 00
F 5.90 5.7	5.80 10 12		c 4.23 4.45	4.34	11 11
G 6.15 6.15	6.15 00 00		d 4.80 4.95	4.88	08 07
a' 6.50 5.80	5.90 10 20		d' 5.80 5.95	5.88	08 07
a ² 6.65 6.55	6.60 05 05		e 6.25 6.50	6.38	13 12
a ³ 6.85 6.80	6.82 03 02		e' 6.65 6.85	6.75	12 10
a ⁴ 6.95 6.85	6.90 05 05		f 7.40 7.10	7.25	15 15
a ⁵ 7.70 7.65	7.68 02 03		g 7.40 7.45	7.42	02 03
b' 8.05 8.00	8.02 03 02		h 7.80 7.80	7.80	00 00
b ² 8.7 8.60	8.65 05 05		h' 8.45 8.45	8.45	00 00
c' 8.8 8.8	8.80 00 00		i 8.70 8.65	8.68	02 03
c ² 8.95 9.3	9.12 17 18		i' 8.80 8.9	8.85	05 05
c ³ 9.8 9.7	9.75 05 05		j 8.8	9.1	8.95 15 15
d 10.1 10.1	10.10 00 00		j ²	10.2	10.2 .a

Value of C, 4.42 is the mean
of 4 hand values, 3 on first
set of measures, and one on second+130
-132
260
520
5050

2.50

Wednesday April 21, 1909

Standard Sequence

Scale No. Plate AC 9874 Re-measurements cont. from page 35

First meas. no.		Seq. 24	Seq. 24	Seq. 33	Seq. 33
		Mean	Mean	Mean	Mean
420	a	4.7 4.3 4.8	4.3 2. 4.25, 0.5	5.0 4.6 4.8	4.70 1' 5.05 4.88 17, 18
514	b	4.9 4.5 4.8	4.65 1.2 4.40 2.5, 2.5	6.8 6.4 5.8	6.10 3.3 6.15 6.12 03, 02
605	c	6.0 5.6 5.8	5.70 1' 5.88 17, 18	6.9 6.5 6.6	6.55 0' 6.80 6.68 12, 13
665	d	6.9 6.5 6.5	6.50 0.0 6.58 01, 02	7.8 7.4 7.7	7.65 1' 7.80 7.68 12, 13
760	e	8.8 7.4 7.7	7.55 2' 7.58 02, 03	8.6 8.2 8.4	8.30 1' 8.20 8.25 05, 05
855	f	8.7 8.3 8.6	8.45 1.2 8.50 05, 05	9.0 8.6 8.8	8.70 1' 8.80 8.75 05, 05
89	g	8.8	8.85 05, 05	9.3	9.2 9.25 05, 05
96	h	9.6	9.60 07, 00	9.6	9.7 9.65 05, 05
97	i			10.1	10.1 10.10 07, 00
	j			10.3	10.3? a.
97	k	9.7	9.70 07, 00		
99	l	10.1	10.10 07, 00		
101	m	10.2	10.15 05, 05		
104?	n	n.s.	10.4? a.		

Seq. 17 before Seq. 24 Seq. 27
Seq. 18 before Seq. 33 Seq. 18

		Seq. 17	Seq. 17	Seq. 18	Seq. 18
		Mean	Mean	Mean	Mean
37	a	4.0 3.6 4.5	3.6 2. 3.65 05, 05	4.8 4.4 4.6	4.50 1' 4.60 10, 10
500	b	5.4 5.0 4.9	4.95 0.1 4.91 05, 05	5.9 5.5 5.7	5.60 1' 6.05 5.82 23, 23
530	c	5.7 5.3 5.4	5.35 1.0 5.32 05, 05	6.6 6.2 6.0	6.10 1.2 6.15 6.12 02, 03
630	d	6.8 6.4 5.9	6.15 2.3 6.22 05, 05	7.2 6.8 6.7	6.75 0.1 6.90 6.82 08, 07
730	e	7.9 7.5 7.5	7.50 0.0 7.40 10, 10	7.7 7.3 7.4	7.35 1.0 7.45 7.40 05, 05
810	f	8.6 8.2 8.2	8.20 0.0 8.15 05, 05	8.0 7.6 7.6	7.60 0.0 7.55 7.58 03, 02
87	g	8.9 8.5 8.5	8.50 0.0 8.60 10, 10	8.7 8.3 8.4	8.35 1.0 8.45 8.40 05, 05
95	h	9.7	9.60 10, 10	8.7 8.3 8.8	8.55 3.2 8.8 8.68 12, 13
98	i	9.9	9.85 05, 05	9.5	9.5 9.5 9.5
3.15	10.1	10.1	10.10 07, 00	10.0	9.8 9.90 10, 10
H.D.S.	10.3	10.3?	10.30 07, 00	10.3	10.20 10, 10
H.D.S.	m	10.3?	10.30 07, 00	10.3	10.20 10, 10

3.15

Wednesday April 21, 1909.

Standard Sequence

Scale No. Plate AC 9565 (first 109)

	Seq. 6				Seq. 15						
a	7.3	6.9	6.7	6.80	1.2	a	7.4	7.0	6.9	6.95	0.1
b	7.5	7.1	6.9	7.00	1.2	b	7.7	7.3	7.0	7.65	^{1.2} ±1
c	7.8	7.4	7.7	7.55	2.1	c	8.2	7.8	8.3	8.05	2.3
d	8.6	8.2	8.0	8.10	1.2	d	8.5	8.1	8.2	8.15	1.0
e	8.7	8.3	8.5	8.40	1.1	e	8.7	8.3	8.7	8.50	2.2
f	t.f.		9.2			f	8.8	8.4	8.8	8.60	2.2
g			9.3	$\frac{+5}{10.77}$		g	t.f.		9.0	$\frac{+9}{-7}$	
h			9.9	± 0.110		h			9.4	$\frac{12}{78}$	± 0.150
i			10.1			i			9.7		
l			n.s.			l			10.0		

Seq. 17 before Seq. 6

a	6.8 6.4 6.0	6.20 2.2
b	7.7 7.3 7.1	7.20 1.2
c	7.8 7.4 7.4	7.40 2.0
d	8.2 7.8 7.9	7.85 0.1
e	8.9 8.5 8.7	8.60 1.1
f	9.7	$\frac{+5}{10.77} \pm 0.110$
g	9.5	$\frac{10.79}{20.090}$
h	10.0	
i	10.8	

Seq. 18 before Seq. 15

a	7.6 7.2 6.8	7.00 2.2
b	7.9 7.5 7.6	7.55 1.0
c	8.1 7.7 7.8	7.75 1.0
d	8.6 8.2 8.4	8.30 1.1
e	8.9 8.5 8.7	8.60 1.1
f	8.9 8.5 8.8	8.65 1.2
g	9.2	$\frac{+6}{-7} \pm 0.160$
h	9.7	$\frac{12}{78} \pm 0.150$
i	9.9	
l	10.1	

H.D.S.

3.30

3.30

Scale N

Standard Sequence

Photo AC 9565 East. Cf. p. 60

Sep. 24

a	6.7	6.3	6.4	6.35	10
b	7.6	7.2	6.8	7.00	22
c	7.8	7.4	7.6	7.50	21
d	8.3	7.9	7.8	7.85	10
e	8.8	8.4	8.6	8.50	11
f	t.f.		9.1		
g	t.f.		9.5		
h			9.8		
k			10.0		
l			10.2		

Sep. 33

a	7.3	6.9	6.7	6.80	12
b	7.8	7.4	7.7	7.55	21
c	8.1	7.7	7.8	7.75	10
d	8.7	8.3	8.6	8.45	12
e	9.0	8.6	8.9	8.75	21
f	t.f.		9.5		
g			9.6		
h			9.9		
k			10.1		

Sep. 19 sup. on Sep. 24

a	7.4	7.0	6.7	6.85	21
b	7.6	7.3	7.5	7.4	11
c	7.8	7.4	7.4	7.40	10
d	8.2	7.8	7.8	7.80	10
e	8.6	8.2	8.6	8.40	22
f	8.9	8.5	8.8	8.65	12
g	t.f.		9.0		
h			9.2		
k			10.0		
l			10.3?		

Sep. 20 sup. on Sep. 33

a	7.4	7.0	6.9	6.95	01
b	7.7	7.3	7.4	7.35	10
c	7.8	7.4	7.4	7.40	10
d	8.6	8.2	8.5	8.35	21
e	9.0	8.6	8.8	8.70	11
f	t.f.		9.1		
g	t.f.		9.5		
h			10.0		
k			10.5		
l			t.f.		

3.50

H.S.S.

Thursday, April 22, 1909

22 25

Scale N

Standard Sequence

AC 9565 Re. measured Mar. p. 57

Mean

Sep. 6

p. 57

Sep. 15

p. 57

Mean

6.78	12	22	a	7.2	6.8	6.7	6.75	01	6.80	a	7.2	7.1	7.0	7.05	10	6.95	7.00	15	05
7.02	12	22	b	8.6	7.2	6.9	7.05	21	7.00	b	7.7	7.3	7.2	7.25	10	7.05	7.15	12	12
7.60	15	05	c	8.0	7.6	7.7	7.65	01	7.55	c	8.5	8.1	8.1	8.10	10	8.05	8.08	12	03
8.20	10	10	d	8.6	8.2	8.4	8.30	11	8.10	d	8.6	8.2	8.4	8.30	11	8.15	8.22	15	11
8.45	05	05	e	8.8	8.4	8.6	8.50	11	8.40	e	8.9	8.5	8.6	8.55	10	8.50	8.52	13	12
9.30	10	10	f			9.4			9.2	f			8.9			8.60	8.75	15	15
9.45	15	15	g			9.6			9.3	g			9.1			9.0	9.05	15	05
9.90	10	10	h			9.9			9.9	h			9.5			9.4	9.45	05	05
10.05	15	15	k			10.0			10.1	k			9.7			9.7	9.70	10	00
			l							l			10.0			10.0	10.00	10	00

Sep. 17 sup. on Sep. 6

6.25	15	05	a	6.7	6.3	6.3	6.30	00	6.20	a	7.5	7.1	6.8	6.95	12	7.00	6.98	12	02
7.20	00	00	b	7.7	7.3	7.1	7.20	11	7.20	b	7.8	7.4	7.6	7.50	11	7.55	7.52	02	13
7.38	02	02	c	7.7	7.3	7.4	7.35	21	7.40	c	8.0	7.6	7.9	7.75	21	7.75	7.75	10	10
7.80	02	02	d	8.1	8.7	7.9	7.80	11	7.85	d	8.7	8.3	8.1	8.20	11	8.30	8.25	05	15
8.62	13	13	e	8.9	8.5	8.8	8.65	12	8.60	e	8.9	8.5	8.7	8.60	11	8.60	8.60	10	10
9.10	20	20	f			9.3			8.9	f	8.9	8.5	8.7	8.60	11	8.65	8.62	12	13
9.50	00	00	g			9.5			9.5	g			9.3			9.2	9.25	05	15
9.95	25	05	h			9.9			10.0	h			9.7			9.7	9.70	10	10
10.2	22	22	k						10.2	k			9.8			9.7	9.85	05	05
			l							l			10.1			10.1	10.10	00	00

22 55

H.S.S.

23 10

Thursday, April 22, 1909

Mean 458

Mean	Aug. 24	1.58	Aug. 33	1.07 Mean
6.30 12.00 a	6.8 6.4 6.2 6.30 12	6.35	a 7.2 6.8 6.7 6.75 01	6.50 6.75 02 02
7.00 noon b	7.5 7.1 6.9 7.00 12	7.00	b 7.7 7.3 7.5 7.40 11	7.55 7.48 03 07
7.45 02 02 c	7.7 7.3 7.6 7.45 12	7.50	c 8.0 7.6 7.9 7.75 21	7.75 7.75 00 00
7.70 05 05 d	8.3 7.9 8.0 7.75 10	7.85	d 8.5 8.1 8.3 8.20 11	8.45 8.32 02 10
8.50 noon e	8.8 8.4 8.6 8.50 21	8.50	e 8.9 8.5 8.8 8.65 12	8.75 8.70 05 05
9.10 noon f	9.1 9.1	9.1	f 9.4	9.5 9.45 05 05
9.40 10.0 g	9.3	9.5	g 9.6	9.6 9.60 00 00
9.85 15.00 h	9.9	9.8	h 9.8	9.9 9.85 05 05
10.00 noon k	10.0	10.0	k 10.20	10.10 10.15 05 05
10.15 05 05 l	10.1 2	10.21	l	

Seq. 19 sup. on Seq. 24

Aug. 20 sup. on Aug. 33

6.75 10 10 a	7.2 6.8 6.5 6.65 2.1 6.85	a 7.3 6.9 6.7 6.80 1.2 6.95 6.85 25 07
7.40 00 20 b	7.7 7.3 7.5 7.40 1.1 7.40	b 7.7 7.3 7.4 7.35 2.0 7.35 7.35 00 00
7.38 02 00 c	7.7 7.3 7.4 7.35 1.0 7.40	c 7.7 7.3 7.4 7.35 2.0 7.40 7.38 02 00
7.78 03 00 d	8.0 7.6 7.9 7.75 2.1 7.80	d 8.4 8.0 8.1 8.05 0.1 8.35 8.20 15 15
8.35 05 05 e	8.6 8.2 8.4 8.30 1.1 8.40	e 8.9 8.5 8.7 8.60 2.1 8.70 8.65 25 15
8.60 05 05 f	8.8 8.4 8.7 8.55 2.1 8.65	f 9.0 9.1 9.05 05 05
8.85 05 15 g	9.0 8.6 8.8 8.70 1.1 9.0	g 9.3 9.5 9.40 00 10
9.10 10 11 h	9.0 9.2	h 10.0 10.0 10.00 00 20
9.95 05 05 k	9.9 10.0	k 10.2 10.5 10.35 05 15
10.25 05 05 l	10.2 10.3	l

23 35

3,50

Copied

Scale N

Bright Stars near the North Pole

Scale Measures of State down to Magn. 8.5

AC 9473⁵ (see also Boks XVII, 112, 113, 144)

Stars on Exp. 3^L, +86°

13	9.6	2009	9.7	13	9.6	2007	9.0	8.6	8.65	01
23	9.7	2034	9.6	52	7.0	6.7	6.75	2.08	9.0	8.6
105	9.0	2035	9.2	62	8.58	8.0	8.55	2009		9.5
132	9.7	2036	9.2	83		9.1	2010			9.4
237	9.6	2046	9.6	90	1	8.9	2011			9.2
496	9.3	2049	9.7	125		8.8	2012			9.3
601	8.85	8.655	8	118	9.0	8.6	8.7	8.65	2013	9.6
684	9.4	9.7	9.6	132		9.7	2014			9.2
722	9.5	9.4	8.58	8.5	1.3	7.7	7.3	7.6	7.45	2052
745	9.2	B	5.9	5.5	4.5	7.7	7.3	7.3	7.3	3.7
778	9.4	6	7.5	7.6	8.5	2.38		9.4	a'	7.9
949	9.8	a ⁵	8.7	8.3	8.6	2.40	8.3	8.1	8.0	2.1
977	9.2	a ³	8.5	8.2	8.3	2.64	8.7	8.5	8.0	2.1
011	9.9	a'	7.9	7.5	7.7	2.74	9.0	8.6	8.8	8.7
16	9.5	A	2.7	3.5	3.8	3.4	2.05	1.79	8.3	7.9
1100	9.5	10	7.5	7.6	7.8	2.94	7.8	7.4	7.6	7.5
1109	8.8	8.4	8.8	6.8	6.6	3.6	3.5	3.10	8.8	8.4
156	9.7	a ²	7.9	7.5	7.7	3.13		9.0		
171	8.6	8.2	8.6	8.2	8.6	2.001		9.8		
201	9.8	f ²	9.6			2.002		9.3		
204	9.8	c'	9.7			2.003		9.0		
	c ²		1.0			2.004		9.7		
	c ³		1.0			2.005		9.1		
	c ³		9.5			2.006		8.9		

23.35

Friday April 23, 1909

Scale No

Bright Stars Near the North Pole
Scale Minimum on J Plate A.C. 9473 repeated

Star on	3	1 2 Mean	3	1 2 Mean	
13	9.7	9.6 9.65 9.65 2036	9.0	9.2 9.25 9.25	
83	9.7	9.7 9.7 9.7 2046	9.6	9.6 9.6 9.6	
105	9.0	9.0 9.0 9.0 2049	9.8	9.7 9.75 9.75	
132	9.8	9.7 9.75 9.75 2049	3.5 3.5 3.5 3.5	3.40 1.1 2.45 3.45 3.45 3.45	
238	9.6	9.6 9.6 9.6 2049	4.8 5.85 6.7 5.55 6.1 5.50 5.45 5.50 5.50	9.10 20 22 90	
498	9.2	9.3 9.25 9.25 2049	6.86 6.4 6.40 6.0 6.40 6.35 6.38 6.38	1.15 15 15 105	
601	8.6	8.55 8.55 8.55 2049	7.6 7.2 7.2 7.20 0.0 7.15 6.95 7.10 7.10	8.68 15 22 118	
684	9.5	9.4 9.45 9.45 2049	7.57 6.7 6.90 2.2 6.95 6.95 6.93 6.93	9.70 10 10 132	
722	9.7	9.5 9.60 9.60 2049	8.0 7.6 7.6 7.60 0.0 7.40 7.45 7.48 7.48	7.50 15 15 183	
765	9.0	9.2 9.0 9.0 2049	8.0 7.6 7.70 1.1 7.50 7.60 7.60 7.60	7.22 15 15 205	
779	9.2	9.4 9.30 9.30 2049	8.2 7.8 7.8 7.80 0.0 7.75 7.60 7.72 7.72	9.40 10 10 238 d	
949	9.7	9.8 9.85 9.85 2049	7.9 7.5 7.7 7.60 1.1 7.50 7.60 7.67 7.67	8.00 15 15 240 a	
977	9.2	9.2 9.20 9.20 2049	8.4 8.0 8.2 8.10 1.1 8.10 8.20 8.13 8.13	8.55 15 15 264	
1011	10.0	9.9 9.95 9.95 2049	8.6 8.2 8.3 8.25 0.1 8.35 8.30 8.30 8.30	8.70 10 10 274	
1016	9.7	9.5 9.60 9.60 2049	8.9 8.5 8.7 8.60 1.1 8.65 8.45 8.57 8.57	7.80 15 15 279	
1107	9.7	9.5 9.60 9.60 2049	9.0	9.2 9.2 9.2 9.2	7.55 15 15 294
1109	8.7 8.3 8.5 8.40 1.1	8.40 8.40 8.40 2049	9.7	9.5 9.6 9.60 10 10	8.42 10 22 310
1156	9.7	9.7 9.70 9.70 2049	9.6	9.4 9.5 9.50 20 20	9.15 15 15 313
1171	8.8 8.4 8.5 8.45 0.1	8.40 8.42 8.42 2049	9.7	9.7 9.7 9.70 10 10	9.30 10 10 321
2001	9.7	9.8 9.85 9.85 2049	10.0	9.9 10.0 9.97 17 17	9.35 15 15 202
2074	9.7	9.8 9.85 9.85 2049		10.1 10.2 10.15 15 15	9.20 20 22 203
2089	9.7	9.7 9.70 9.70 2049	9.8	9.7 9.75 9.75 2049	9.75 15 15 204
2034	9.8	9.6 9.70 9.70 2049			9.15 15 15 2075
2035	9.5	9.2 9.35 9.35 2049			9.10 20 22 2076

Diff. from
Heliocentric

+11
-10
-283

110) 563
± 0.051

Plan. Distance
miles

53 370
± 0.63

Diff. Stars
Readings
+11
-10
+12
± 0.075
110) 563
± 0.051

Planisphere
55 12 10
3 0.063

Scale No

Bright Stars Near the North Pole
Repeated Scale Minimum on A.C. 9473 Cont.

Star on Sep. 26 - 86 ^h		Mean		Mean	
Mean	9.61 $\frac{100}{100}$	9.61	9.61	9.61	9.61
9.65 13	9.7	9.6	9.6	9.6	9.6
6.62 23 56	6.7 6.7 6.7 21	6.65	6.65	6.65	6.65
5.19 17 27	5.2 5.2 5.2 21	5.15	5.15	5.15	5.15
6.2 6	6.2 6.2 6.2 21	6.15	6.15	6.15	6.15
9.35 25 25	9.4	9.3	9.3	9.3	9.3
9.10 20 25	9.2	9.1	9.1	9.1	9.1
1.15 15 15	1.2	1.1	1.1	1.1	1.1
8.68 12 23	8.7 8.7 8.7 21	8.65	8.65	8.65	8.65
9.70 10 10	9.7	9.6	9.6	9.6	9.6
7.50 15 15	7.5 7.5 7.5 21	7.45	7.45	7.45	7.45
7.22 15 15	7.2 7.2 7.2 21	7.15	7.15	7.15	7.15
9.40 10 10	9.4	9.3	9.3	9.3	9.3
8.00 15 15	8.0 8.0 8.0 21	7.95	7.95	7.95	7.95
8.55 15 15	8.5 8.5 8.5 21	8.45	8.45	8.45	8.45
8.70 10 10	8.7 8.7 8.7 21	8.65	8.65	8.65	8.65
7.80 15 15	7.8 7.8 7.8 21	7.75	7.75	7.75	7.75
7.55 15 15	7.5 7.5 7.5 21	7.45	7.45	7.45	7.45
8.42 10 10	8.4 8.4 8.4 21	8.35	8.35	8.35	8.35
9.15 15 15	9.1	9.0	9.0	9.0	9.0
9.30 10 10	9.3	9.2	9.2	9.2	9.2
9.35 15 15	9.3	9.2	9.2	9.2	9.2
9.20 20 20	9.2	9.1	9.1	9.1	9.1
9.75 15 15	9.7	9.6	9.6	9.6	9.6
9.15 15 15	9.1	9.0	9.0	9.0	9.0
9.10 20 20	9.1	9.0	9.0	9.0	9.0

12.15
X.88

Friday April 23, 1909

Scale No

Bright Stars Near the North Pole
Repeated Scale Minimum on A.C. 9473 Cont.

Star on Sep. 26 - 86 ^h		Mean		Mean	
Mean	9.61 $\frac{100}{100}$	9.61	9.61	9.61	9.61
9.65 13	9.7	9.6	9.6	9.6	9.6
6.62 23 56	6.7 6.7 6.7 21	6.65	6.65	6.65	6.65
5.19 17 27	5.2 5.2 5.2 21	5.15	5.15	5.15	5.15
6.2 6	6.2 6.2 6.2 21	6.15	6.15	6.15	6.15
9.35 25 25	9.4	9.3	9.3	9.3	9.3
9.10 20 25	9.2	9.1	9.1	9.1	9.1
1.15 15 15	1.2	1.1	1.1	1.1	1.1
8.68 12 23	8.7 8.7 8.7 21	8.65	8.65	8.65	8.65
9.70 10 10	9.7	9.6	9.6	9.6	9.6
7.50 15 15	7.5 7.5 7.5 21	7.45	7.45	7.45	7.45
7.22 15 15	7.2 7.2 7.2 21	7.15	7.15	7.15	7.15
9.40 10 10	9.4	9.3	9.3	9.3	9.3
8.00 15 15	8.0 8.0 8.0 21	7.95	7.95	7.95	7.95
8.55 15 15	8.5 8.5 8.5 21	8.45	8.45	8.45	8.45
8.70 10 10	8.7 8.7 8.7 21	8.65	8.65	8.65	8.65
7.80 15 15	7.8 7.8 7.8 21	7.75	7.75	7.75	7.75
7.55 15 15	7.5 7.5 7.5 21	7.45	7.45	7.45	7.45
8.42 10 10	8.4 8.4 8.4 21	8.35	8.35	8.35	8.35
9.15 15 15	9.1	9.0	9.0	9.0	9.0
9.30 10 10	9.3	9.2	9.2	9.2	9.2
9.35 15 15	9.3	9.2	9.2	9.2	9.2
9.20 20 20	9.2	9.1	9.1	9.1	9.1
9.75 15 15	9.7	9.6	9.6	9.6	9.6
9.15 15 15	9.1	9.0	9.0	9.0	9.0
9.10 20 20	9.1	9.0	9.0	9.0	9.0

12.15
X.88

12.15

Friday April 23, 1909

Scale N Bright Stars near North Pole

Copied to 66 AC 9475 Scale measured on T' Plate

Star on	Exp at +90.0		
13		2036	8.75 8.8 8.65 12 almost exposed
83	9.5	2046	8.9
105	8.95 8.75 8.60 11	2049	9.5
132	9.1	A 2052	2.6
238	9.2	B 4745	5.0 46 12.7 480 10.1
496	9.086 8.8 8.70 11	C 1	6.2 58 5.8 580 00
601	8.783 8.6 8.45 12	D 1	6.8 64 6.4 640 00
684	9.1	E	6.8 64 6.5 645 01
722	9.3	F	7.7 73 7.0 715 12
765	8.955 8.9 8.70 12	G	7.6 72 7.4 730 11
778	9.086 8.9 8.75 11	a'	7.6 72 6.9 705 12
949	9.5	a ²	7.6 72 7.20 720 00
977	9.086 8.9 8.75 11	a ³	8.2 78 7.8 780 00
1011	9.5	a ⁴	8.4 80 8.0 800 00
1016	9.3	a ⁵	8.7 83 8.6 845 12
1100	9.2	b'	8.9 85 8.7 860 11
1109	8.279 8.3 8.0 12	b ²	9.3
1156	9.4	b ³	9.2
1171	8.279 8.2 8.05 12	c'	9.3
2001	9.5	c ²	9.9
2004	9.3	c ³	10.0
2029	9.6	c ⁴	9.7
2034	9.4	d	10.0
2035	9.086 8.8 8.70 11		

Order Sequence only
 7.7
 7.6 11.4
 8.7 15.0

Friday April 23, 1909.

Scale N Bright Stars near the North Pole

AC 9475 Scale measured on T' Plate cont.

Star on	Exp at +86.0		
13	9.3	2007	8.753 8.6 8.65 12
56	6.763 6.3 6.30 00	C 2008	9.086 8.6 8.60 00
62	8.279 8.21 8.05 12	2009	9.6
83	9.3	2010	9.4
90	8.985 8.8 8.65 12	2011	9.21
105	8.985 8.7 8.60 11	2012	9.2
118	8.581 8.5 8.30 12	F 2013	9.4
132	9.1	2014	9.3
183	7.773 7.0 7.15 12	A 2017	
205	7.470 6.7 6.85 11	a'	7.773 7.1 7.20 11
d 238	9.0	b'	9.086 8.8 8.70 11
a 240	7.874 7.6 7.50 11	b ²	9.3
264	8.581 8.3 8.20 11	2052	9.3
274	8.985 8.7 8.45 10	f 2056	9.7
279	7.773 7.3 7.30 00	g 2056	10.2
294	7.672 7.4 7.30 11		
310	8.783 8.5 8.40 11		
313	9.0		
2001	9.4		
2002	9.2		
2023	8.9		
2004	9.4		
2005	8.8		
2006	9.0		

1.10
 2.98

2.55

Friday April 23, 1909.

Scale N

Bright Stars near the North Pole

AC 9475 Scale measures on 'T' Plate repeated

Stars on $\text{Exp. at } +90.0$

[illegible]

Diff. scales

Diff. times

Polar Sequence only

$$\begin{array}{r} 10 + 25 \\ - 21 \\ \hline 43 \overline{) 46} \\ \underline{107} \end{array}$$
$$\begin{array}{r} 00 + 415 \\ - 417 \\ \hline 111 \overline{) 832} \\ + 075 \end{array}$$

59) 472
± 080

3.15

3.15

Scale n

Bright Stars near the North Pole

ac 9445 Scale measure on 7' Plate cont

Stars on Exp at $+86^{\circ}$

Additional
measures p 84, 95

[illegible]

Saturday April 24, 1909.

Scale N

Bright Star near the North Pole

copy 1/18

AC 9470 Scale Measures on T' Plate remeasured

Star on Exp. at +90.0

13	8.8 8.4 8.6	8.50 11	2036	8.6 8.2 8.1	8.15 01
83	9.0 8.6 8.8	8.70 11	2046	8.8 8.4 8.6	8.50 11
105	8.2 7.8 8.3	8.05 23	2049	8.8 8.8 .a	
132	8.7 8.5 8.8	8.65 22	A	1.4 1.2 .	1.2 a..
238	8.7 8.5 8.7	8.60 11	B	2.9 2.7 .	2.7 a..
496	8.8 8.4 8.3	8.35 01	C	4.7 4.5 4.7	4.3 3.4 4.4 1.2
601	7.8 7.4 7.7	7.55 21	D	5.6 5.2 4.8	5.00 22
684	8.8 8.8 .a		E	5.7 5.3 4.8	5.05 32
722	9.0 8.6 8.7	8.65 01	F	6.7 6.3 5.7	6.00 32
765	8.4 8.0 8.2	8.10 11	G	6.9 6.5 6.0	6.25 32
778	8.7 8.3 8.4	8.35 10	a'	5.8 5.4 5.7	5.55 31
949	9.1 9.1 .a		a ²	7.2 6.8 6.7	6.75 01
977	8.7 8.3 8.2	8.35 10	a ³	7.4 7.0 6.6	6.80 22
1011	8.9 8.9 .a		a ⁴	7.6 7.2 6.8	7.00 22
1016	8.7 8.7 .a		a ⁵	8.2 7.8 7.4	7.60 22
1100	9.0 8.6 8.6	8.60 10	b'	8.0 7.6 7.9	7.75 31
1109	7.6 7.2 6.8	7.00 22	b ²	9.0 8.6 8.7	8.65 01
1156	8.6 8.6 .a		b ³	8.8 8.4 8.7	8.55 31
1171	7.6 7.2 6.9	7.05 21	c'	9.0	
2001	8.9 8.5 8.9	8.70 22	c ²	9.5	
2004	9.0 8.6 8.7	8.65 01	c ³	9.8	
2009	8.9 8.9 .a		c ⁴	8.7	
2034	9.0 8.6 8.7	8.65 01	d	10.1	
2035	8.5 8.1 8.3	8.20 11			

Saturday April 24, 1909

Bright

Scale N

AC 9470

Scale Measures on T' Plate remeasured

Star on Exp. at +86.0

mean	AC 9470	mean	AC 9470
772 10 23 338	8.1 7.7 7.8	7.75 10	7.70
738 17 21 420	7.7 7.3 7.6	7.45 12	7.30
802 10 22 425	8.6 8.2 7.9	8.05 21	8.00
600 15 22 426	6.6 6.2 5.9	6.05 21	5.95
758 10 23 451	7.8 7.4 7.8	7.60 22	7.55
778 12 13 457	8.3 7.9 7.9	7.90 00	7.65
722 15 15 464	7.7 7.3 7.0	7.15 12	7.20
618 15 17 479	6.8 6.4 5.8	6.10 32	6.25
820 15 18 496	8.7 8.3 8.0	8.15 12	8.25
710 11 22 498	7.6 7.2 7.0	7.10 12	7.10
860 11 22 513	8.8 8.4 8.8	8.60 22	8.60
858 12 23 515	9.0 8.6 8.6	8.60 00	8.55
788 10 23 523	8.3 7.9 7.9	7.90 00	7.85
495 15 25 536	5.8 5.2 5.0	5.10 12	4.80
800 15 25 541	8.3 7.9 8.0	7.95 10	8.05
718 12 15 540	7.7 7.3 7.3	7.30 00	7.00 7.25
795 15 25 583	8.5 8.1 4.9	8.00 12	7.70
737 15 25 587	7.7 7.3 7.6	7.45 12	7.30 7.35
745 11 22 601	7.6 7.4 7.5	7.45 01	7.45
692 15 25 606	6.9 6.5 6.5	6.50 00	6.35
605 11 22 615	8.5 8.1 8.0	8.05 11	8.05
838 17 15 616	8.7 8.3 8.6	8.45 12	8.30
832 12 23 625	8.7 8.3 8.3	8.30 00	8.35
875 15 25 654	8.8 8.8 .a	8.7	

Tuesday April 27, 1909

Standard Sequence 6 3^2 $+86^\circ$ Estimates of Brightness on T' Plates ~~I 35608~~

Plate Log: c' 8.8 2^2 9.3 c³ 9.6 d 10.1 e 10.5 f 11.0
 f^2 11.5 f^3 11.9 g 12.3 h 12.6 i 12.8 K¹ 13.2 K² 13.4
 K³ 13.8 K⁴ 14.1 K⁵ 14.2 L 14.3 m 14.6 n 14.9

I 35608

I 35633

c 8.7 dit.

c 8.5 dit. my diff.

f 9.0 "

f - dit.

g 9.5

g 9.0? dir. from not very separate

h 10.2

h 9.9

K 10.3

K 10.2

L 11.1

L 10.8

m 11.5

m 11.2

n 11.7

n 11.6

o 12.4

o 12.2

p 12.6

p 12.3

q 12.7

q 12.7

r 13.1

r 13.2

s 13.6

s 13.8

t 14.0

t 14.0

u 14.3

u 14.3

v 14.6

v 14.4

The above estimates were not made in view of brightness, but irregularly as is done in making scale measures, and entire independence is thus assumed. The images on both plates are excellent, but comparisons are some difficult than would be expected. There are surprising differences in the form of images and slight differences in position on plate make considerable differences in brightness.

Thursday April 29, 1909

Standard Sequence 6

Estimates of Brightness on AI Plates

AI 5583

AI 5484

AI 5499

AI 5389

a 6.8 6.9 6.85 0.1	6.8 6.8 6.80 0.0	6.9 6.8 6.85	6.8 6.8 6.80 0.0
f 7.1 7.1 7.10 0.0	7.0 7.0 7.00 0.0	7.0 7.1 7.05	7.1 7.1 7.10 0.0
c 8.0 8.1 8.05 0.1	8.0 7.9 7.95 0.1	8.0 7.9 7.95	7.8 7.8 7.80 0.1
d 8.3 8.4 8.35 0.1	8.5 8.6 8.55 0.1	8.5 8.5 8.50	8.5 8.4 8.60 0.1
e 8.7 9.0 8.85 0.2	8.7 8.8 8.75 0.1	8.6 8.7 8.65	8.5? 8.8? 8.65 0.2
f 9.5 9.4 9.45 0.1	9.3 9.4 9.35 0.1	9.4 9.5 9.45	
g 9.6 9.5 9.55 0.1	9.2 9.5 9.35 0.1	9.5 9.6 9.55	
h 10.3 10.0 10.15 0.2	10.1? 10.0? 10.08? 0.10	10.0? 10.0?	
K 10.3 10.1 10.20 0.1			Very poor
L 10.5?			

slat faint than
 c to near limit
 for good est.

as my ft on
 this plate

AI 5585 $\frac{1}{2}$ the exposure

AI 5484

AI 5499

AI 5389

a 6.9	6.8	6.8	6.8
f 7.1	7.0	7.1	7.1
c 8.1	7.9	7.9	7.8
d 8.4	8.6	8.5	8.7
e 9.0	8.8	8.7	8.8?
f 9.4	9.4	9.5	-
g 9.5	9.5	9.6	-
h 10.0	10.0?	10.0?	-
K 10.1			-
L 10.5?			-

Stand. set. of measures made with light from eye piece
 Order of estimates irregular

3.25

Tuesday April 27, 1909

Bright Stars near the North Pole

AC 9478

Scale Measures on T' Plates

Remains p 76; copied p 76

Stars on Exp. at +90°

13	9.0 8.6 8.8	8.70 1'	2036	8.7 8.3 8.7	8.50 22
23	9.0 8.6 8.8	8.70 1'	2046	8.9 8.5 8.8	8.65 12
105	8.6 8.2 8.4	8.30 1'	2049	8.9 8.9	.2
132	. 8.9		A	1.5 1.3	. 1.3 a..
238	. 8.7		B	3.5 3.3	. 3.3 a..
476	8.7 8.3 8.5	8.40 1'	C	4.7 4.5	3.9 4.5 4.7 4.5 7 11
601	8.3 7.9 7.8	7.85 10	D	5.8 5.4 5.2	5.30 12
684	. 9.0		E	5.8 5.4 5.4	5.40 10
722	8.9 8.5 8.7	8.60 1'	F	6.7 6.3 6.0	6.15 12
765	8.7 8.3 8.6	8.45 12	G	7.0 6.6 6.6	6.60 00
778	8.7 8.3 8.7	8.50 22	a'	6.7 6.3 6.2	6.25 10
949	. 9.2		a ²	7.3 6.9 6.5	6.70 22
977	8.8 8.4 8.7	8.55 21	a ³	7.5 7.1 6.8	6.95 12
1011	. 9.2		a ⁴	7.8 7.4 7.6	7.50 1'
1016	. 9.1		a ⁵	7.9 7.5 7.8	7.65 12
1100	9.0 8.6 8.8	8.70 1'	b'	8.7 8.3 8.3	8.30 00
1109	7.8 7.4 7.3	7.35 02	b ²	. 8.9 8.9	.2
1156	. 9.2		b ³	9.0 8.6 8.8	8.70 1'
1171	7.8 7.4 7.5	7.45 01	C	. 9.0	
2001	. 9.1		C ²	. 9.5	
2004	. 9.0		C ³	. 9.8	
2009	. 9.2		C ⁴	. 9.0	
2034	. 8.9		d	. 10.0	
2035	8.6 8.2 8.5	8.35 21			

+29
-29
55) 58 (1106+

Tuesday April 27, 1909

Bright Stars near the North Pole

copied p 77

AC 9478

Scale Measures on T' Plates

Remains p 77

Stars on Exp. at +86°

338	8.9 7.5 7.8	7.65 12	2018	8.8 8.4 8.7	8.40 00
420	7.8 7.4 7.7	7.55 21	2019	8.7 8.3 8.6	8.45 10
425	8.6 8.2 8.2	8.20 00	2020	8.9 8.5 8.7	8.60 1'
426	6.8 6.4 6.1	6.25 21	2021	8.9 8.5 8.6	8.55 10
451	7.9 7.5 7.7	7.60 11	2022	8.8 8.4 8.3	8.35 01
457	8.1 7.7 7.8	7.75 10	a ²	7.3 6.9 6.5	6.70 22
464	7.7 7.3 7.4	7.35 10	a ³	7.5 7.1 6.7	6.90 22
479	6.8 6.4 6.0	6.20 22	a ⁴	7.6 7.2 7.0	7.10 12
496	8.8 8.4 8.3	8.35 01	a ⁵	8.9 8.5 8.6	8.55 10
498	7.8 7.4 7.5	7.45 01	e	. 8.8	
513	9.0 8.6 8.7	8.65 01	f	. 9.3	
515	8.9 8.5 8.7	8.60 1'	g	. 9.5	
523	8.4 8.0 7.8	7.90 12	h	. 9.7	
536	5.7 5.3 5.2	5.25 10	k	. 10.1	
541	8.7 8.3 8.9	8.10 22			
570	7.8 7.4 7.4	7.40 00			
583	8.6 8.2 8.2	8.20 00			
587	7.8 7.4 7.5	7.45 01			
601	8.0 7.6 7.7	7.65 01			
626	6.9 6.5 6.4	6.45 10			
2015	8.6 8.2 8.2	8.20 00			
2016	8.9 8.5 8.5	8.50 00			
2053	8.8 8.4 8.4	8.40 00			
2054	. 8.9	8.9 .2			

4.00 7.98

Wednesday April 28, 1909.

Bright Stars near the North Pole repeated
Scale Measures on T' Plates

AC 9478 repeated mean p 74



Mean	Stars on Exp. at +90°	Mean
8.50 10 12 13	8.9	8.70 2036 8.8
8.85 15 15 83	9.0	8.70 2046 8.8
8.38 17 12 105	8.9 8.58 4 8.45 10 8.30 2049 9.0	8.9 8.95 05 05
8.95 15 15 132	9.0	8.9 8.95 05 05
8.67 12 12 238	9.0 8.68 7 8.65 11 8.7 3.6 3.4 3.6 3.2 3.30 12 8.3 3.45 3.55 05 10	8.9 8.95 05 05
8.50 10 12 496	8.6	8.9 8.95 05 05
7.75 12 10 601	7.9 7.5 12 7.65 12 7.85	8.9 8.95 05 05
8.95 05 05 684	8.9	8.9 8.95 05 05
8.62 02 02 722	8.9 8.58 8 8.65 12 8.60	8.9 8.95 05 05
8.48 02 02 745	8.8 8.4 8.6 8.50 11 8.45	8.9 8.95 05 05
8.52 02 02 748	8.8 8.4 8.7 8.55 21 8.50	8.9 8.95 05 05
9.25 05 05 949	9.3	8.9 8.95 05 05
8.60 05 05 977	8.9 8.5 8.8 8.65 12 8.55	8.9 8.95 05 05
9.25 05 05 1011	9.3	8.9 8.95 05 05
9.10 10 10 1016	9.8	8.9 8.95 05 05
8.70 10 10 1100	9.0 8.6 8.8 8.70 11 8.70	8.9 8.95 05 05
7.42 05 05 1109	7.8 7.4 7.6 7.50 11 7.35	8.9 8.95 05 05
9.15 05 05 1156	9.1	8.9 8.95 05 05
7.45 05 05 1171	7.9 7.5 7.5 7.50 00 7.45	8.9 8.95 05 05
9.00 10 10 2001	8.9	8.9 8.95 05 05
9.00 10 10 2004	9.3	8.9 8.95 05 05
9.00 10 10 2009	9.4	8.9 8.95 05 05
8.90 10 10 2034	8.9	8.9 8.95 05 05
8.15 8.45 10 2035	8.9 8.5 8.6 8.55 10 7.35	8.9 8.95 05 05
8.6 3.8	Diff. scales 7.23 7.14 7.12 7.09	Diff. times 114 107 107 107

Wednesday April 28, 1909

Bright Stars near the North Pole repeated
Scale Measures on T' Plates

AC 9478 repeated mean p 75

Mean	Stars on Exp. at +86°	Mean
7.62 02 02 338	7.8 7.4 7.8 7.60 22 7.65	7.62 02 02 338
7.52 02 02 420	7.8 7.4 7.6 7.50 11 7.55	7.52 02 02 420
8.85 05 05 425	8.7 8.3 8.3 8.30 00 8.20	8.85 05 05 425
6.20 05 05 426	6.8 6.4 5.9 6.15 23 6.25	6.20 05 05 426
7.60 05 05 451	7.8 7.4 7.8 7.60 22 7.60	7.60 05 05 451
7.68 05 05 454	7.9 7.5 7.7 7.60 11 7.75	7.68 05 05 454
7.42 05 05 464	7.8 7.4 7.6 7.50 11 7.35	7.42 05 05 464
6.28 05 05 479	6.8 6.4 6.3 6.35 02 6.20	6.28 05 05 479
8.35 05 05 496	8.6 8.2 8.5 8.35 21 8.35	8.35 05 05 496
7.40 05 05 498	7.5 7.1 7.6 7.35 22 7.45	7.40 05 05 498
8.65 05 05 513	8.9 8.5 8.8 8.65 12 8.65	8.65 05 05 513
8.62 05 05 515	8.9 8.5 8.8 8.65 12 8.60	8.62 05 05 515
7.88 05 05 523	8.2 7.8 7.9 7.85 01 7.90	7.88 05 05 523
5.22 05 05 536	5.7 5.3 5.1 5.20 12 5.25	5.22 05 05 536
8.15 05 05 541	8.6 8.2 8.2 8.20 00 8.10	8.15 05 05 541
8.35 05 05 570 a	7.7 7.3 7.6 7.45 12 7.40 7.20	8.35 05 05 570 a
8.20 05 05 583	8.7 8.0 8.1 8.20 11 8.20	8.20 05 05 583
7.42 05 05 584 b	7.9 7.5 7.6 7.55 10 7.45 7.25	7.42 05 05 584 b
7.65 05 05 601	7.9 7.5 7.8 7.65 12 7.65	7.65 05 05 601
6.52 05 05 606	7.0 6.6 6.6 6.60 00 6.45	6.52 05 05 606
8.22 05 05 2015	8.6 8.2 8.3 8.25 01 8.20	8.22 05 05 2015
8.48 05 05 2016	8.8 8.4 8.5 8.45 11 8.50	8.48 05 05 2016
8.42 05 05 2053	8.8 8.4 8.5 8.45 11 8.40	8.42 05 05 2053
8.95 05 05 2054	9.0 9.0 a 8.9	8.95 05 05 2054

3.5 H 98

Wednesday April 28, 1909.

Bright Stars near the North Pole
Scale Measures on 7" Plates

Scale N

Cepheid ¹⁰⁰

AC 9480

Stars on Exp. at +90°

	1	2	3
13	8.9	2036	8.8 8.8 8.55 ±
83	9.3	2046	8.9
105	8.8 8.4 8.4	2049	9.2
132	8.9	A.	1.9 1.7 1.7 a
238	9.1	B.	3.7 3.5 4.8 2.6 3.55 10
496	8.7	C.	4.8 4.6 5.1 4.7 4.9 4.73 102
601	8.6 8.2 8.3 8.25 01	D.	5.7 5.5 5.7 5.60 11
684	9.0	E.	6.5 6.1 6.0 6.05 10
722	9.3	F.	7.2 6.8 6.6 6.70 12
765	8.9 8.5 8.7 8.60 11	G.	7.5 7.1 6.9 7.00 12
778	9.0 8.6 8.8 8.70 11	a'	6.9 6.5 6.5 6.50 10
949	9.6	a ²	7.5 7.1 7.1 7.10 10
977	9.0 8.6 8.8 8.70 11	a ³	7.7 7.3 7.5 7.40 11
1011	9.4	a ⁴	8.0 7.6 7.7 7.65 01
1016	9.3	a ⁵	8.5 8.1 8.2 8.15 10
1100	8.9	b'	9.0 8.6 8.6 8.60 10
1109	7.8 7.4 7.6 7.50 11	b ²	9.0
1156	9.1	b ³	8.9
1171	7.9 7.5 7.7 7.60 11	c'	9.1
2201	9.4	C ²	9.7
2224	9.5	C ³	9.8
2209	9.2	C ⁴	9.3
2034	9.1	d	10.1
2035	8.9 8.5 8.9 8.70 ±2		

3.45

Wednesday April 28, 1909.

Bright Stars near the North Pole
Scale Measures on 7" Plates

3.45

Scale N

Cepheid ¹⁰⁰ AC 9480

Stars on Exp. at 15° and +80°

	1	2	3		2	3
642	7.7 7.3 7.4 7.35 10	2027	8.7 8.3 7.9 8.10 22			
669	8.7 8.3 8.4 8.35 10	2028	8.5 8.1 7.8 7.95 12			
679	7.9 7.5 7.7 7.60 11	2029	8.8			
684	8.8	2030	8.5			
688	8.7 8.3 8.4 8.35 10	2031	8.7 8.3 8.7 8.50 ±2			
707	8.9	2032	8.6			
713	7.7 7.3 7.7 7.50 ±2	2033	9.2			
722	8.9	2034	9.1			
748	8.7 8.3 8.0 8.15 12	2035	8.9 8.5 8.7 8.60 11			
752	6.8 6.4 5.9 6.15 23	F	7.0 6.6 6.7 6.65 01			
758	8.7 8.3 8.4 8.35 10	G.	7.2 6.8 6.7 6.75 01			
764	8.8 8.4 8.2 8.30 12	H ³	8.8			
765	8.9 8.5 8.4 8.45 10					
778	8.8 8.4 8.5 8.45 01	Seq. 24				
790	8.2 7.8 7.9 7.85 01	H				
805	7.4 7.0 6.8 6.90 12					
807	8.8 8.4 8.6 8.50 11	f	9.5			
840	8.8 8.4 8.6 8.50 11	g	9.8			
880	8.5 8.1 7.8 7.95 12	h	10.1			
893	9.0 8.6 8.7 8.65 11	k	10.1			
2023	8.9	l				
2024	9.1					
2025	9.3					
2026	9.2					

ultraviolet exp.

H. J. S.
4.5

23.30

Saturday May 1, 1909

Scale No. 4
April 1908

AC 9503

Exp. at $+90^\circ$

13	9.3
23	9.5
105	8.9
132	9.5
238	9.4
496	8.8
601	8.7 8.5 8.40 \pm
684	9.2
722	9.3
765	8.9 8.5 8.7 8.60 \pm
778	9.0 8.6 8.8 8.70 \pm
949	9.6
977	8.9
1011	9.6
1016	9.4
1100	9.3
1109	8.6 8.2 8.4 8.30 \pm
1156	9.3
1171	8.7 8.3 8.4 8.35 \pm
2001	9.6
2004	9.5
2009	9.3
2034	9.4
2035	8.9 8.5 8.9 8.70 \pm

Bright Stars near the North Pole
Scale Measured on T' Plates

1	2	3
2036	9.0 8.6 8.9 8.75 \pm	
2046	9.2	
2049	9.6	
A	2.7 2.5	2.5 a..
B	5.0 4.8 4.9 4.73 \pm	
C	6.6 6.2 5.8 6.00 \pm	
D	7.4 7.0 6.7 6.85 \pm	
E	7.0 6.6 6.6 6.60 \pm	
F	7.7 7.3 7.3 7.30 \pm	
G	7.9 7.5 7.7 7.60 \pm	
a'	7.7 7.3 7.3 7.30 \pm	
a ²	7.7 7.3 7.5 7.40 \pm	
a ³	8.3 7.9 8.1 8.00 \pm	
a ⁴	8.3 7.9 7.8 7.85 \pm	
a ⁵	8.8 8.4 8.5 8.45 \pm	
b ¹	9.0 8.6 9.0 8.80 \pm	
b ²	9.6	
b ³	9.6	
c ¹	9.7	
c ²	10.0	
c ³		
c ⁴	9.6	
d	10.3	

Comparisons difficult

+21
-19
3770 \pm 103

23.50

23.50

Saturday May 1, 1909

Scale No. 4
April 1908

AC 9503

Stars on Exp. at 15° and $+86^\circ$

1	2	3
642	8.4 8.0 8.2 8.10 \pm	2027 8.8
669	8.9 8.5 8.7 8.60 \pm	2028 8.8 8.4 8.5 8.45 \pm
679	8.7 8.3 8.4 8.35 \pm	2029 9.7
684	9.2	2030 9.7
688	8.9 8.5 8.8 8.65 \pm	2031 9.6
707	9.2	2032 9.3
713	8.8 8.4 8.4 8.40 \pm	2033 9.6
722	9.5	2034 9.7
748	8.9 8.5 8.7 8.60 \pm	2035 9.3
752	7.3 6.9 6.7 6.70 \pm	F 7.8 7.4 7.5 7.45 \pm
758	9.0 8.6 8.7 8.65 \pm	G 7.7 7.3 7.8 7.55 \pm
764	8.8	L ³ 9.3
765	9.0	
778	9.2	log. 24
790	8.9 8.5 8.6 8.55 \pm	f 10.0
805	8.2 7.8 7.8 7.80 \pm	g 10.0
807	8.9	h 10.3?
840	9.2	k
880	8.9 8.5 8.7 8.60 \pm	
893	exp. exp.	
2023	9.2	
2024	9.7	
2025	9.8	
2026	9.7	

Comparisons with double difficult
on this plate

0.0 2.88

Saturday, May 1, 1909.

Standard Sequence 6

Measurements on A.C. T' Plates

On A.C. 9475 the stars measured as g was h and g was not measured. Identification of f not certain. On A.C. 9473 stars g and h were not measured, but are seen. Three stars and h are therefore Remained below

Scale 12

A.C. 9473				A.C. 9475			
e	9.3	9.5	9.40	e	9.3	9.2	9.25
f	10.1?	10.1	10.01	f	9.6	9.6	9.60
g	9.7	9.8	9.75	g	9.8	9.8	9.85
h	.	10.3?	10.3?	h	10.2?	10.2	10.20

Estimates

A.C. 9473				A.C. 9475				Mean
e	8.5	8.5	8.50 10	e	8.5	8.5	8.50 10	8.50 10
f	.	.	.	f	9.0	8.9	8.95 02	8.95 02
g	9.0	9.1	9.05 11	g	9.3	9.2	9.25 10	9.25 10
h	.	.	.	h	10.1?	10.0?	10.02 11	10.02 11

The above estimates and scale measures were made in irregular order, and are quite independent.

The second set of estimates made with high power, and probably better than the first.

Is of variable, or is film defect in A.C. 9473. Does not appear in any very peculiar. I am not certain that there is a star near h that is not

Tuesday, May 4, 1909

Standard Sequence

Estimates of Brightness on A.C. Plates T'
(Repeatable. First set of estimates made in connection with light stars.)

Seq. 6

A.C. 9473 ^{III} 144, 104 A.C. 9475 ^{XVI} 145, 104

a	240	6.9	6.8	6.8	6.8
b	62	7.0	7.0	7.2	7.0
c	208	7.6	7.7	7.9	7.8
d	238	8.5	8.6	8.4	8.45
e	2013	8.6	8.5	8.50	8.5
f		8.8		8.8	9.1
g		9.0	9.05	9.2	9.25
h				10.1	10.0?

A.C. 9473			A.C. 9475		
Mean	rec		Mean	rec	
a	6.85	10.1	6.80	0.0	6.82 03, 02
b	7.00	10.0	7.10	1.1	7.05 05, 05
c	7.65	1.0	7.85	0.1	7.75 10, 10
d	8.5	1.0	8.40	0.0	8.45 05, 05
e	8.53	0.0	8.50	0.00	8.52 01, 02
f	.	.	8.95	1.02	8.95 0.2
g	9.02	0.0	9.14	0.0	9.12 02, 02
h	.	.	10.05	1.0	10.05? 0.2

$$\frac{+3}{-0}$$

$$11 \pm 0.027$$

$$\frac{+4}{-3}$$

$$16 \pm 0.044$$

$$18 \pm 0.039$$

3.15

Wednesday, May 12, 1909

Standard Sequence 15.
Direct Estimates on I' Plates

	I 35274 ²⁰⁷	I 35327 ²⁰⁷	I 35274 ²⁰⁷ measured	I 35327 ²⁰⁷ Mean
c	9.2	9.1	9.0 9.10 12	9.0 9.05 11
f	9.2	9.2	9.2 9.20 10	9.2 9.20 11
g	9.5	9.5	9.5 9.65 12	9.5 9.50 11
h	10.0	9.9	9.8 9.90 12	9.9 9.90 11
k	10.4	9.7	10.3 10.35 12	10.1 9.90 22
l	10.4	10.3	10.7 10.55 21	10.3 10.30 11
m	11.0	10.8	10.9 10.95 12	11.2 11.00 22
n	11.6	11.4	10.6 11.60 11	11.4 11.40 11
o	12.1	12.1	12.0 12.05 10	11.9 12.00 12
p	12.3	12.3	12.5 12.40 11	12.3 12.30 11
q	13.1	13.0	13.1 13.10 11	13.1 13.05 11
r	13.4	13.1	13.4 12.40 11	13.1 13.10 11
s	14.4 def.	13.8	14.1 ² 14.1. 2	13.7 13.75 12
t	14.4	14.3	14.5 14.45 11	14.3
	$\frac{+3}{-4}$	$\frac{+5}{-4}$	$\frac{+1}{-1}$	$\frac{+7}{-6}$
	$\frac{26.15}{\pm 0.072}$	$\frac{26.15}{\pm 0.072}$	$\frac{26.15}{\pm 0.072}$	$\frac{26.15}{\pm 0.072}$

In making the second set of estimates, the plates were held with the numbered end reversed.

Estimates of stars brighter than the magnitude 10.1 are difficult on account of the large size of the images due to the comparatively long exposures.

3.45
36.98

3.45

Wednesday May 12, 1909

Standard Sequence 24

April 24, 1909

	I 35514	I 35634
c	8.7	9.0
f	9.3	9.4
g	9.5	9.9
h	9.7	9.9
k	10.0	10.7
l	10.3	10.5
m	10.9	10.9
n	11.0	11.3
o	11.4	11.7
p	12.2	12.3
q	12.4	12.5
r	12.9	13.1
s	13.3	13.6
t	13.7	14.0
u	14.3	14.4
v	14.7	14.7
o'	11.7	11.6
o''	11.8	11.8

This estimate, 10.7, of K is certainly wrong. See XXXIII, 21

Conf. Star of Polar Sequence is nearly superposed on I 35514

Polar sequence and Seq. 15 nearly a degree apart on Plate I 35514 and also 35634

4.00

H. J. S.

Estimates on this page and page 88 are probably from My attention was distracted, particularly on this page, by confusion about sub-

Saturday, May 15, 1909

Standard Sequences at $+16^{\circ}$

Direct Estimate on A I Plate

A I 5389 Marked end at top

Seq. 15

Seq. 24

Seq. 33

a	7.2	7.4	7.30 1	a	6.8	6.9	6.85 01	a	7.2	7.2	7.20 00
b	7.4	7.5	7.45 01	b	7.1	7.4	7.25 12	b	7.9	7.8	7.85 10
c	7.9	7.9	7.90 00	c	7.8	7.9	7.85 01	c	8.0	8.1	8.05 01
d	8.1	8.2	8.15 10	d	8.2	8.5	8.35 21	d	8.7	8.4	8.55 12
e	8.7	8.7	8.70 00	e	8.7	8.9	8.80 11	e	9.0	9.0?	9.0? 00
f	left			f				f			
	± 2	-2	± 2		± 6	-6	± 12		± 3	-3	± 1
	± 0.040	-0.04	± 0.04		± 1.00	-1.00	± 1.050		± 0.04	-0.02	

A I 5389 reversed

Seq. 15

Seq. 24

Seq. 33

a	7.4	a	6.9	a	7.2
b	7.5	b	7.4	b	7.8
c	7.9	c	7.9	c	8.1
d	8.2	d	8.5	d	8.4
e	8.7	e	8.9	e	9.0?
f	-				

Saturday, May 15, 1909

0 45

Standard Sequences at $+16^{\circ}$

Direct Estimate on A I Plate

A I 5499 Marked end at top

Seq. 15

Seq. 24

Seq. 33

a	7.2	7.2	7.15 10	a	6.8	6.8	6.80 00	a	7.1	7.1	7.10 00
b	7.3	7.6	7.45 12	b	7.1	7.4	7.25 12	b	7.9	7.7	7.80 11
c	7.2	8.2	7.90 33	c	7.7	7.9	7.80 11	c	8.1	8.2	8.15 10
d	7.9	8.2	8.05 12	d	8.0	8.5	8.25 23	d	8.7	8.7	8.7 12
e	8.4	8.5	8.45 01	e	8.7	9.0	8.85 12	e	9.4	9.1	9.25 21
f	9.0	9.1	9.05 01	f	9.6	9.7	9.65 01	f	9.6?	9.5	9.55 01
g	9.4	9.5	9.45 01	g	9.5	9.7	9.60 11	g	9.8?	9.9?	9.85 01
h				h				h			
	± 10	± 6	± 14		± 10	-6	± 10		± 4	-4	± 2
	± 1.14	-0.9	± 1.14		± 1.14	-0.9	± 1.14		± 0.87	-0.3	± 0.3

a of other Seq. my fault - nearly like b

Seq. 15 A I 5499 reversed

Seq. 15

Seq. 24

Seq. 33

a	7.4	a	6.8	a	7.1
b	7.6	b	7.4	b	7.7?
c	8.2	c	7.9	c	8.2
d	8.2	d	8.5	d	8.7
e	8.5	e	9.0	e	9.1
f	9.1	f	9.7	f	9.5
g	9.5	g	9.7	g	9.9?

Estimates given below the mean 7.5 and 8.1
very difficult on acct of faintness of a.

Saturday, May 15, 1909

Standard Sequences at +86°
Direct Estimates on A I Plates

A I 5184 marked end at top

Seq. 15 ar.	Seq. 24 ar.	Seq. 33 ar.
a 7.2 7.4 7.30 1.1	a 6.9 7.1 7.00 1.1	a 7.3 7.2 7.25 1.0
b 7.3 7.6 7.45 1.2	b 7.4 7.5 7.45 0.1	b 7.8 7.7 7.75 0.1
c 8.0 8.4 8.20 2.2	c 7.8 8.1 7.95 2.1	c 8.0 8.0 8.00 0.0
d 8.3 8.5 8.40 1.1	d 8.0 8.3 8.15 2.1	d 8.7 8.5 8.60 1.1
e 8.5 8.8 8.65 1.2	e 8.5 8.8 8.65 1.2	e 9.1 9.0 9.05 1.0
f 9.3 9.3 9.30 0.0	f 9.3 9.4 9.35 1.0	f 9.6 9.5 9.55 0.1
g 9.4 9.3 9.35 0.1	g 9.4 9.4 9.40 0.0	g 9.8 9.8 9.80 0.0
h 9.9 9.9 9.90 0.0	h 9.9 9.9 9.90 0.0	h 9.9 9.9 9.90 0.0
+8 -2 ±.107	-6 +7 -09 +10 -7.56 -09 +08 ±.081	+3 -3 +0.4 -0.1 ±.043

A I 5484 removed

Seq. 15	Seq. 24	Seq. 33
a 7.4	a 7.1	a 7.2
b 7.6	b 7.5	b 7.7
c 8.4	c 8.1	c 8.0
d 8.5	d 8.3	d 8.5
e 8.8	e 8.8	e 9.0
f 9.3	f 9.4	f 9.5
g 9.3	g 9.4	g 9.8 ²
	h 9.9 ²	

Saturday, May 15, 1909

Standard Sequences at +86°
Direct Estimates on A I Plates

A I 5585 marked end at top

Seq. 15 ar.	Seq. 24 ar.	Seq. 33 ar.
a 7.1 7.3 7.20 1.1	a 6.9 6.9 6.90 0.0	a 7.2 7.0 7.10 1.1
b 7.4 7.5 7.45 0.1	b 7.1 7.4 7.25 1.2	b 7.8 7.7 7.75 0.1
c 7.7 8.1 7.90 2.2	c 7.6 7.8 7.70 1.1	c 8.2 8.1 8.15 0.1
d 8.0 8.3 8.15 2.1	d 7.9 8.0 7.95 1.0	d 8.5 8.4 8.45 1.0
e 8.5 8.7 8.60 1.1	e 8.5 8.7 8.60 1.1	e 9.1 9.1 9.10 0.0
f 9.2 9.1 9.15 0.1	f 9.5 9.5 9.50 0.0	f 9.5 9.3 9.40 1.1
g 9.4 9.3 9.35 0.1	g 9.5 9.5 9.50 0.0	g 9.7 9.7 9.70 1.1
h 10.0 10.0 10.00 0.0	h 10.0 9.9 9.95 0.1	h 10.1 10.2 10.15 1.0
+6 -8 ±.088	-6 +4 -08 +05 +0.55 -0.4 +0.4 ±.082	+4 -6 +3 -5 +0.4 -0.6 ±.04 -0.6

A I 5585 removed

Seq. 15	Seq. 24	Seq. 33
a 7.3	a 6.9	a 7.0
b 7.5	b 7.4	b 7.7
c 8.1	c 7.8	c 8.1
d 8.3	d 8.0	d 8.4
e 8.7	e 8.7	e 9.1
f 9.1	f 9.5	f 9.3
g 9.3	g 9.5	g 9.7
h 10.0	h 10.9	h 10.2 ²
	10.1	

Saturday, May 15, 1909

Standard Sequences

Remark on Estimates on A I Plates

In making these estimates the method always observed in making both either scale measures or estimates was followed, i.e. the stars are entered in the record in the order of their magnitudes, but were measured in irregular order. In this way it may be assumed that measures and estimates were entirely independent, even when repeated immediately. The observer kept his mind purposely free and estimates were forgotten as soon as they were made.

Evidently it is important to reverse the position of the plate in making a second set of estimates. Systematic differences are found on all of the plates as follows:—

Seq. 6	I	Seq. 15	Seq. 24	Seq. 33	
7.12	24	5484	+0.19	+0.17	-0.08
7.15		5389	+0.08	+0.20	-0.06
7.09		5497	+0.23	+0.23	-0.06
7.20		5585	+0.13	+0.08	-0.16
			46.3	68	30
			+0.16	+0.17	-0.08

When marked edge was at the top, Sequence 15 was 0.2 magn. brighter than when plate was reversed, Sequence 33 was nearly 0.1 magn. fainter, Sequence 6 was 0.2 magn. fainter.

Sequences 15 and 24 are nearer the marked end than the Plan Sequence, and Seq. 33 is farther. Sequence 33 is near much nearer the bright stars

Remark Cont.

of the Plan Sequence than the other two sequences. This doubtless accounts for the difference being only half as great for the two positions, and the fact that it is in the opposite direction from the Plan Sequence explains the difference of sign.

These differences are very much greater, probably, on these plates, than they would be in ordinary estimates, because of the distance of the stars compared. Usually comparisons are not made at such great distances. These were made for the special purpose of determining the effect of distance. Two principal effects are to be looked for, one depending upon the distance from the center of the plate, affecting the actual size of the images; the other depending upon the difficulty of making estimates on a wide retroming distance, causing large accidental errors. To these must be added the systematic error due to direction.

When a second set of estimates has been made on this plate, the plate has usually, but not always, been reversed. Systematic errors when deduced are usually exceedingly small.

General results. Magnitudes are estimated brighter when comparison stars are below objects observed than when they are above. The unequal lighting of the plate probably has something to do with this. Upper part more strongly lighted

Monday, May 17, 1909

Bright stars near the North Pole

A.C. 9473 reversed Rk 3

Stars on Exp. +90°

Stars on Exp. +56°

13	8.78	8.70	00	13	8.685	8.55	01	2005	8.1	8.1	8.10	00
83	8.686	8.60	00	56	5.536	5.55	10	2016	8.280	8.10	11	
105	7.980	7.95	10	62	7.730	7.75	12	2007	7.785	7.60	11	
132	8.485	8.45	01	83	8.686	8.60	00	2008	8.078	7.90	12	
238	8.485	8.45	01	90	8.088	8.10	11	2009	9.188	8.95	12	
496	8.280	8.10	11	105	8.079	7.95	01	2010	8.690	8.50	12	
601	7.676	7.60	00	118	7.676	7.60	00	2011	8.386	8.45	12	
624	8.384	8.35	10	132	8.486	8.50	11	2012	8.184	8.35	12	
722	8.485	8.45	01	183	6.363	6.30	00	2013	8.785	8.60	12	
765	8.181	8.10	00	205	6.062	6.10	11	2014	8.584	8.45	10	
778	8.282	8.20	00	228	9.484	8.40	00	2052	8.485	8.45	01	
949	8.887	8.75	01	240	6.968	6.85	10					
977	8.484	8.40	00	264	7.475	7.45	01					
1011	9.090	9.00	00	274	7.877	7.75	01					
1016	8.585	8.50	00	279	6.664	6.50	11					
1120	8.585	8.50	00	294	6.463	6.35	01					
1109	7.074	7.20	22	310	7.775	7.60	11					
1156	8.485	8.45	01	313	8.284	8.30	11					
1171	7.373	7.30	00	2001	8.788	8.75	00					
2001	8.788	8.75	00	2004	8.586	8.55	10					
2004	8.586	8.55	10	2009	8.888	8.80	00					
2009	8.888	8.80	00	2034	8.686	8.60	00					
2034	8.686	8.60	00	2035	8.280	8.10	11					
2035	8.280	8.10	11	2036	8.181	8.10	00					
2036	8.181	8.10	00	2046	8.185	8.30	22					
2046	8.185	8.30	22	2049	8.586	8.55	10					
2049	8.586	8.55	10									

2045 8.585 8.50 00
2046 8.185 8.30 22
2049 8.586 8.55 10
2050 8.585 8.50 00
2051 8.585 8.50 00
2052 8.485 8.45 01
2053 8.485 8.45 01
2054 8.485 8.45 01
2055 8.485 8.45 01
2056 8.485 8.45 01
2057 8.485 8.45 01
2058 8.485 8.45 01
2059 8.485 8.45 01
2060 8.485 8.45 01
2061 8.485 8.45 01
2062 8.485 8.45 01
2063 8.485 8.45 01
2064 8.485 8.45 01
2065 8.485 8.45 01
2066 8.485 8.45 01
2067 8.485 8.45 01
2068 8.485 8.45 01
2069 8.485 8.45 01
2070 8.485 8.45 01
2071 8.485 8.45 01
2072 8.485 8.45 01
2073 8.485 8.45 01
2074 8.485 8.45 01
2075 8.485 8.45 01
2076 8.485 8.45 01
2077 8.485 8.45 01
2078 8.485 8.45 01
2079 8.485 8.45 01
2080 8.485 8.45 01
2081 8.485 8.45 01
2082 8.485 8.45 01
2083 8.485 8.45 01
2084 8.485 8.45 01
2085 8.485 8.45 01
2086 8.485 8.45 01
2087 8.485 8.45 01
2088 8.485 8.45 01
2089 8.485 8.45 01
2090 8.485 8.45 01
2091 8.485 8.45 01
2092 8.485 8.45 01
2093 8.485 8.45 01
2094 8.485 8.45 01
2095 8.485 8.45 01
2096 8.485 8.45 01
2097 8.485 8.45 01
2098 8.485 8.45 01
2099 8.485 8.45 01
2100 8.485 8.45 01

Monday, May 17, 1909

Bright stars near North Pole

A.C. 9473 rev. Rk 3

Exp. +90°

Exp. +56°

13	8.78	8.70	00	235	8.486	8.45	10	2013	8.584	8.45	10	
83	8.687	8.65	01	236	8.580	8.55	12	2014	8.584	8.50	11	
105	8.181	8.10	00	246	8.284	8.25	11	2015	8.284	8.25	11	
132	8.787	8.70	00	247	8.886	8.80	11	2016	8.886	8.80	11	
238	8.686	8.60	00	248	8.686	8.60	00	2017	8.686	8.60	00	
496	8.082	8.10	11	249	8.082	8.10	11	2018	8.082	8.10	11	
601	7.876	7.70	11	250	7.876	7.70	11	2019	7.876	7.70	11	
624	8.582	8.35	12	251	8.582	8.35	12	2020	8.582	8.35	12	
722	8.685	8.5	12	252	8.685	8.5	12	2021	8.685	8.5	12	
765	8.078	7.90	11	253	8.078	7.90	11	2022	8.078	7.90	11	
778	8.480	8.40	00	254	8.480	8.40	00	2023	8.480	8.40	00	
949	8.691	9.1	12	255	8.691	9.1	12	2024	8.691	9.1	12	
977	8.380	8.15	12	256	8.380	8.15	12	2025	8.380	8.15	12	
1011	8.689	8.9	12	257	8.689	8.9	12	2026	8.689	8.9	12	
1016	8.585	8.5	12	258	8.585	8.5	12	2027	8.585	8.5	12	
1109	7.372	7.25	10	259	7.372	7.25	10	2028	7.372	7.25	10	
1156	8.587	8.60	11	260	8.587	8.60	11	2029	8.587	8.60	11	
1171	7.273	7.25	01	261	7.273	7.25	01	2030	7.273	7.25	01	
2001	8.888	8.8	12	262	8.888	8.8	12	2031	8.888	8.8	12	
2004	8.586	8.5	12	263	8.586	8.5	12	2032	8.586	8.5	12	
2009	8.888	8.7	12	264	8.888	8.7	12	2033	8.888	8.7	12	
2034	8.686	8.60	00	265	8.686	8.60	00	2034	8.686	8.60	00	
2035	8.280	8.20	00					2035	8.280	8.20	00	
2036	8.181	8.10	00					2036	8.181	8.10	00	
2046	8.185	8.30	22					2046	8.185	8.30	22	
2049	8.586	8.55	10					2049	8.586	8.55	10	

Stars from plates to be sent also

Monday, May 17, 1909

350

Bright Stars near the North Pole

Direct Estimates of Magnitudes repeated

AC 9470 reversed

$2^h + 90^\circ$	$2^h + 136^\circ$
19 8.5 8.6 8.55 10 204 8.6 8.6 8.6 10	338 7.8 7.9 7.85 01 249 8.2 8.4 8.30 11
83 8.6 8.5 8.55 01 245 8.1 8.2 8.15 10	420 7.5 7.5 7.50 00 260 8.4 8.5 8.45 01
105 8.0 8.0 8.00 00 236 8.6 8.3 8.25 01	425 8.2 8.1 8.15 01 261 8.8 8.3 8.20 11
132 8.5 8.6 8.55 10 246 8.4 8.5 8.45 01	426 6.3 6.4 6.35 10 262 8.2 8.2 8.20 00
238 8.4 8.4 8.40 00 249 8.6 8.6 8.60 00	451 7.6 7.6 7.60 00 263 8.3 8.2 8.25 10
496 8.3 8.1 8.20 11	457 7.8 7.8 7.80 00 269 8.5 8.5 8.50 00
601 7.6 7.6 7.60 00	464 7.2 7.4 7.30 11 27 6.9 6.8 6.85 10 21
684 8.5 8.6 8.55 10	479 6.3 6.4 6.35 10 27 7.2 7.2 7.20 00 21
722 8.5 8.5 8.50 00	496 8.0 8.3 8.15 21 10 27 7.3 7.2 7.25 10 21
765 8.1 8.2 8.15 10	498 7.3 7.5 7.40 11
778 8.4 8.4 8.40 00	513 8.4 8.4 8.40 00 29 15
949 9.0 8. 9.0 2.	515 8.4 8.4 8.40 00 d 8.2 8.4 8.30 11
977 8.3 8.3 8.30 00	523 7.8 7.9 7.85 01 2 8.5 8.6 8.55 10
1011 9.0. 9.0 2.	526 5.5 5.7 5.60 11 f 8.9 8.9 8.90 00
1016 8.4 8.5 8.45 01	541 7.7 8.0 7.85 12 g 9.3 9.3 9.30 00
1100 8.3 8.4 8.35 10	2 570 7.5 7.3 7.40 12 h 9.5
1109 7.4 7.5 7.45 01	523 8.0 8.1 8.05 01
1156 8.1 8.7 8.65 01	2 587 7.7 7.7 7.70 00
1171 7.4 7.4 7.40 00	601 7.6 7.9 7.75 21 13
2051 8.7. 8.7 2.	686 6.7 6.6 6.65 20
2054 8.6. 8.6 2.	2015 8.0 8.2 8.10 11
2079 8.6. 8.6 2.	2016 8.2 8.3 8.25 01
	2055 8.1 8.3 8.20 11

c

2055

8.1

8.3

8.20

11

3 40

Monday, May 17, 1909

Standard Sequence 15

 $9^h + 86^\circ$

Direct Estimates repeated

I 35231 rev.

Rev. $\frac{14}{10000}$ Direct

a	
b	
c	
d	
e	8.6? 8.6? 8.60?
f	9.3? 8.9? 9.12
g	9.4 9.15 9.28
h	9.5 9.40 9.45
i	10.0 9.55 9.78
j	10.6 10.15 10.38
k	10.8 10.50 10.65
l	11.1 10.95 11.02
m	11.5 11.45 11.48
n	11.9 11.85 11.88
o	12.0 12.25 12.12
p	12.8 12.8 12.80
q	13.2? 13.15 13.22
r	13.4? 13.4?
s	13.4?
t	13.4?

I 35309 rev.

Rev. $\frac{14}{10000}$ Direct

e	8.8? 9.1? 9.00 8.90 1.11
f	9.1 9.0 9.20 9.20 1.11
g	9.3 9.5 9.50 9.40 1.11
h	10.0 10.2 10.15 10.05 0.1
i	10.3 10.4 10.35 10.32 08 03
j	10.8 10.7 10.70 10.75 05 05
k	11.2 11.4 11.35 11.28 05 07
l	11.8 11.8 11.8 11.80 00 00
m	12.4 12.3 12.35 12.38 02 03
n	12.8 12.9 12.85 12.82 02 03
o	13.2 13.2? 13.25? 13.22 02 03
p	13.4? 13.4?
q	13.4?
r	13.4?
s	13.4?
t	13.4?

Tuesday, May 18, 1909

Standard sequences new Pte

Estimate repeated

Seq. 33

I 35319 rev

e
f 9.5
g 9.8
h 10.5
k 10.7
l 11.3
m 11.8
n 12.2
o 12.7
p 13.02
q 13.32
r -
s -
t -
u -
v -
w -
x 10.9
y 11.4

Seq. 6

AT 5389 rev

a 6.7 6.80 6.75 16 05 05
b 7.0 7.10 7.05 01 05 05
c 7.6 7.80 7.70 11 12 10
d 8.5 8.60 8.55 10 05 05
e 8.42 8.65 8.52 11 12 13
f -
g -
h -

Dir Rev
51+29 -27
+07 -07

00 12 2

01 10

Tuesday, May 18, 1909

Standard sequences new Pte

Seq 6

Seq. 6

AT 5499 rev

a 6.7 6.85 6.78 11 03 07
b 7.1 7.05 7.08 00 02 03
c 7.6 7.75 7.78 22 18 18
d 8.4 8.50 8.45 01 05 05
e 8.7 8.65 8.68 00 02 13
f 8.45 9.45 .A .A
g 9.5 9.55 9.52 00 02 13
h 10.0? 10.0? .A .A

Dir Rev
+23-06 +24-23
61-27 -29
+04 -05

Seq. 6

AT 5484 rev

a 6.8 6.80 6.80 00 00 10
b 7.1 7.00 7.05 10 05 05
c 7.6 7.75 7.78 22 18 17
d 8.5 8.55 8.52 00 02 03
e 8.6 8.75 8.68 11 08 07
f 9.2 9.35 9.28 11 08 07
g 9.1 9.35 9.22 12 13

Dir Rev
+47-05 +25-48
71+42 -43
+06 -06

AT 5485 rev

a 6.8 6.85 6.82 00 02 03
b 7.0 7.10 7.05 01 05 05
c 7.5 8.05 7.78 22 18 17
d 8.5 8.55 8.42 11 08 07
e 8.6 8.85 8.72 11 12 13
f 9.0 9.45 9.32 22 22 23
g 9.4 9.55 9.48 11 08 07
h 9.9 10.15 10.02 11 12 13

Dir Rev
+47-07 +28-59
81+82 -81
+10 -10
07 07

K 10.20 10.20

Tuesday, May 19, 1909

Bright Stars near the North Pole
Direct Estimates of Magnitudes repeated

Plate AC AC9480, reversed

Exp. $+90^\circ$

13 85 85 8.50 00	2034 86 85 8.55 01	
83 85 86 8.55 10	2035 86 86 8.10 11	
115 8.0 86 8.00 00	2036 86 81 8.05 01	
132 8.5 86 8.55 10	2046 83 84 8.35 10	
238 85 85 8.50 00	2049 87 88 8.75 10	
446 8.4 83 8.35 01		
601 7.8 78 7.80 00	Dir. +5-5 Rev. +2-12	+7
684 8.6 85 8.55 01	231 00 -10	46-17
	± 0.0 -0.143	± 0.52
722 8.4 86 8.50 11		
765 7.9 79 7.90 00		
778 8.1 82 8.15 10		
949 8.7 8. 8.7 a.		
977 7.9 8.4 8.15 32 sup. 16		
1011 8.7. 8.7 a.		
1016 8.5 86 8.55 10		
1100 8.5 85 8.50 00		
1109 7.5 73 7.40 11		
1156 8.6. 8.6 a.		
1171 7.2. 7.2 a.		
2021 8.6 86 8.60 00		
2074 8.6 89 8.75 21		
2099 9.0 90 9.00 00		

Tuesday, May 18, 1909

Bright Stars near the North Pole
Direct Est. repeated

AC9480 rev. ant. in Rumb. 188

Exp. $15^\circ + 86^\circ$

640 7.1 71 7.10 00	2023 8.3 84 8.35 10
669 7.7 75 7.60 11	2024 8.6 87 8.65 01
679 7.4 73 7.35 01	2025 8.8 88 8.90 00
684 8.4 84 8.40 00	2026 8.6 86 8.60 00
688 7.7 76 7.65 10	2027 7.8 77 7.75 01
707 8.3 85 8.40 11	2028 7.5 76 7.55 10
713 7.3 72 7.25 11	2029 8.4 86 8.50 11
722 8.4 85 8.45 01	2030 8.6 87 8.65 01
743 7.7 76 7.65 10	2031 8.1 81 8.10 00
752 5.7 68 5.75 10	2032 8.3 85 8.40 11
758 7.8 76 7.70 11	2033 8.4 8.8 8.60 22
764 7.8 80 7.90 11	2034 8.5 86 8.55 10
778 7.7 78 7.80 11	2035 8.0 80 8.00 00
785 8.1 82 8.15 10	7 6.3 63 6.30 00
790 7.4 75 7.45 01	8 6.4 64 6.40 00
a 803 6.5 66 6.55 10	B 8.5 85 8.50 00
807 7.7 79 7.80 11	Sept 1881
840 7.9 81 8.00 11	f 8.7 90 8.85 12
880 7.6 76 7.60 00	g 9.6? . 9.6? a.
893 6.9. 6.9. a.	h 10.0? . 10.0? a.

Dir +15-44

36+11
 ± 0.03

Rev +5-16

36-11
-0.3+20-
-20
72+40
 ± 0.056 6140
7207

Wednesday May 19, 1909

Standard Sequences at $+86^\circ$

Direct Estimates on AC Plate updated

Sequence 15

AC 9470 rev

AC 9478 rev

570a	7.5	a	7.2
571b	7.6	b	7.5
2018c	8.0	c	8.0
d	8.3	d	8.2
e	8.4	e	8.5
f	8.6	f	8.7
g	9.4	g	9.1 ² from
h	9.6	h	9.5
k	9.8	k	9.7

AC 9480 Sequence 24

rev.

AC 9503 rev

805a	6.5	a	6.8
713b	7.2	b	7.5
748c	7.6	c	7.6
764d	7.9	d	7.9
2006e	8.5	e	8.5
f	8.6	f	9.5 ²
g	10.0 from	g	9.7 ²
h		h	

Very from
plateWednesday
Monday May 19, 1909Standard Sequences at $+86^\circ$

Direct Estimates on AC Plate updated

Sequence 33

AC 9425 rev

AC 9505 rev

1109a	7.3	a	7.2
1189b	8.0	b	7.7
2045c	8.3	c	8.1
1189d	8.6	d	8.6
e	9.0	e	9.0
f	9.6 ²	f	9.5 ²
g	10.0 ²	g	
h		h	

Estimates very diffuse

Wednesday, May 19, 1909

Bright stars near North Pole
Direct estimates on A.C. Plates reported

AC 9503 removed.

Common at 90°

13	8.5	8.5	8.50	00	2034	8.485	8.45	01			
83	8.6	8.8	8.70	11	2035	7.874	7.85	01			
105	8.0	8.0	8.00	00	2036	7.980	7.95	10			
132	8.6	8.7	8.65	01	2046	8.183	8.20	11			
238	8.5	8.5	8.50	00	2049	8.185	8.65	21			
476	7.9	7.9	7.90	00							
601	7.6	7.5	7.55	01	2049	8.185	8.65	21			
684	8.4	8.5	8.45	01							
722	8.3	8.3	8.30	00							
765	7.8	7.6	7.70	11							
778	8.0	7.8	7.90	11							
949	7.9	8.9	8.9	21							
977	7.8	8.0	7.90	11							
1011	8.5	8.5	8.5	21							
1016	8.5	8.6	8.55	10							
1100	8.3	8.4	8.35	10							
1109	7.4	7.5	7.45	01							
1156	8.4	8.7	8.55	21							
1171	7.2	7.6	7.40	±2 on p. 116							
2021	8.8	8.8	8.80	00							
2024	8.7	8.8	8.75	10							
2029	8.9	8.8	8.85	10							

2049 $\frac{+16}{+0.3}$ Rev $\frac{+5}{-0.2}$ $\frac{+16}{+0.3}$
 25 $\frac{+7}{+0.3}$ 25 $\frac{-6}{-0.2}$ 57 $\frac{31}{+0.62}$

Wednesday, May 19, 1909

Bright stars near the North Pole
Direct estimates on A.C. Plates reported.

AC 9503 removed.

2049, 15^h +86

642	7.2	7.2	7.20	00	2023	8.385	8.40	11			
669	7.8	7.9	7.85	01	2024	8.790	8.85	12			
679	7.5	7.4	7.45	10	2025	9.090	9.00	00			
684	8.4	8.3	8.35	01	2026	8.487	8.55	21			
688	7.7	7.8	7.75	10	2027	7.978	7.85	10			
707	8.4	8.4	8.40	00	2028	7.576	7.55	10			
713	7.8	7.6	7.70	11	2029	8.589	8.60	11			
722	8.5	8.4	8.45	10	2030	9.091	9.05	01			
742	7.8	7.8	7.80	00	2031	8.585	8.50	00			
752	5.8	5.9	5.85	01	2032	8.283	8.25	01			
758	7.8	7.8	7.80	00	2033	8.787	8.70	00			
764	7.9	8.0	7.95	10	2034	8.988	8.85	10			
765	7.9	7.9	7.90	00	2035	8.481	8.25	21			
778	8.2	8.4	8.30	11	F	6.363	6.30	00			
790	7.5	7.6	7.55	10	G	6.664	6.50	11			
805	6.7	6.8	6.75	10	F ³	8.686	8.60	00			
807	7.8	7.9	7.85	01	2049	15 ^h					
840	8.0	8.3	8.15	21	f	9.694	9.50	11			
880	7.7	7.8	7.75	10	g	9.87	9.87	21			
893	8.2	8.4	8.30	11	h						

Direct
est.

2049 $\frac{+13}{+0.2}$ Rev $\frac{+15}{-0.2}$
 37 $\frac{+8}{+0.2}$ $\frac{-6}{-0.2}$

2049 $\frac{+22}{+0.057}$
 74 $\frac{+22}{+0.057}$

+10
-105
6 $\frac{+15}{-0.24}$
-0.24

Wednesday, May 19, 1909

Bright stars near the North Pole
Direct Estimation on AC Photo repeated

AC 9485 rev. (Boddy scratched)

Exp. at $+90^\circ$

13 8.5 8.4 8.45 10
83 8.5 8.6 8.55 10
105 8.0 8.0 8.00 00
132 8.3 8.3 8.30 00
238 8.4 8.3 8.35 01
496 8.3 8.0 8.15 12
681 7.6 7.5 7.55 01
684 8.5 8.6 8.55 10
722 8.6 8.7 8.65 01
765 8.1 7.9 8.00 11
778 8.2 8.0 8.10 11
949 9.1 . 9.1 0.
977 8.3 8.3 8.30 00
1011 8.8 . 8.8 0.
1016 8.5 8.6 8.55 10
1100 8.4 8.5 8.45 01
1119 7.3 7.5 7.40 11
1156 8.6 8.9 8.75 21
1171 7.2 7.4 7.30 11
2051 8.8 9.0 8.90 11
2224 8.6 8.7 8.65 01
2899 scratched.

2034 8.6 8.7 8.65 01
2035 8.1 8.0 8.05 10
2036 scratched.
2046 8.3 8.5 8.40 11
2049 8.7 8.7 8.70 00

Rev $+9-6$
23 $+3$
 $+0.1$

Rev $+5-9$
 -4
 -0.2

$+14$
 -15
46 8.9
20063

Wednesday, May 19, 1909

Bright stars near the North Pole
Direct Estimation on AC Photo repeated
de Kinkadee p. 93

AC 9485 rev.

Exp. at 21° , $+86^\circ$

907 7.6 7.6 7.60 00
948 8.0 8.0 8.00 00
949 9.1 9.0 9.05 10
975 8.4 8.3 8.35 01
977 8.5 8.2 8.35 12
1011 8.9 8.6 8.75 12
1016 8.6 8.5 8.55 01
1030 6.8 7.0 6.90 11
1043 scratched 7.4 7.4
1062 6.1 . 6.1 0.
1044 7.4 7.5 7.45 01
1100 8.6 . 8.6 0.
21109 7.3 7.4 7.35 10
1110 7.6 7.6 7.60 00
1081 7.9 7.6 7.40 22 amp 116
1156 8.7 8.7 8.70 00
1157 scratched.
1166 7.6 7.8 7.70 11
1171 7.5 7.5 7.50 00
1176 8.0 8.1 8.05 01
21189 7.4 7.4 7.40 00
1208 7.4 7.4 7.40 00
1242 6.8 7.0 6.90 11
1244 8.3 8.0 8.35 10
1246 7.6 7.5 7.55 01
+0

1251 7.4 7.2 7.30 11
1279 6.7 6.9 6.80 11
2036 8.3 8.2 8.25 10
2037 8.5 8.4 8.45 10
2038 8.6 8.6 8.60 00
2039 8.7 8.7 8.70 00
2045 8.5 8.4 8.45 10
2041 9.1 8.9 9.00 11
2042 8.5 8.4 8.45 10
2043 7.9 7.8 7.85 10
2044 8.3 8.4 8.35 10
2045 8.2 8.3 8.25 01
2046 8.4 8.3 8.35 01
2047 8.5 8.5 8.50 00
2048 8.3 8.2 8.25 10
2049 8.8 8.7 8.75 01
2050 8.1 7.8 7.95 12
2051 8.2 8.3 8.25 01
B 4.7 4.6 4.65 01
E 5.9 5.6 5.75 12
A 5 7.7 7.7 7.80 11
C 8.8 8.7 8.75 01
C 5.2 5.1 5.15 01
D 5.8 5.5 5.65 21
2 8.6 8.5 8.55 01
2 9.1 9.1 9.10 00

Rev $+10-20$
47 $+10$
 -0.2

Rev $+14-9$
47 $+14$
 -0.2

order. acq 185
727
-29
94 $+5.6$
 ± 0.039

2046 8.4 8.3 8.35 01
2047 8.5 8.5 8.50 00
2048 8.3 8.2 8.25 10
2049 8.8 8.7 8.75 01
2050 8.1 7.8 7.95 12
2051 8.2 8.3 8.25 01
B 4.7 4.6 4.65 01
E 5.9 5.6 5.75 12
A 5 7.7 7.7 7.80 11
C 8.8 8.7 8.75 01
C 5.2 5.1 5.15 01
D 5.8 5.5 5.65 21
2 8.6 8.5 8.55 01
2 9.1 9.1 9.10 00

$+10-25$
51 $+15$
 -0.05

$+9.5$ 9.5 9.5
9 9.9 9.9 9.9

Wednesday, May 19, 1909

Bright Stars near the North Pole
Direct Estimates on AC Plates repeated

AC 9505 rev.

Exp. at $+90^\circ$

13	85	85	850	00	2034	87	88	875	10			
83	86	87	865	01	2035	80	80	800	00			
105	79	79	790	00	2036	81	81	810	00			
132	85	84	845	10	2046	81	84	825	12			
238	85	84	845	10	2049	81	86	855	10			
496	83	80	815	12								
601	76	73	745	21								
674	86	82	840	22	Dir +8-7	Rev +8-11	+16					
722	84	83	835	01	25 +1	-3	-18					
765	81	80	805	10	+200	-0.01	50/34					
778	82	82	820	00			± 0068					
949	89		89	a.								
977	83	83	830	00								
104	87		87	a.								
1016	85	86	855	10								
1100	84	84	840	00								
im fm 1109	72	75	735	21								
1156	85	87	860	11								
1171	71	74	725	12								
2021	88	91	895	21								
2024	86	85	855	01								
2019	87	88	875	10								

Wednesday, May 19, 1909

Bright Stars near the North Pole
Direct Estimates on AC Plates repeated

AC 9505 rev.

Exp. at $21^\circ +86^\circ$

907	73	74	735	10	2051	67	73	710	22	sup. 116	25	
943	80	79	795	01	1279	67	66	675	10		15	
949	90	87	885	21	2036	83	80	815	12		10	
975	84	80	820	22	2037	82	85	820	11		25	
977	83	80	815	12	2038	89	88	874	22	sup. 116	08	
1011	80	88	890	12	2039	90	87	885	21		15	
1016	86	85	855	01	2040	86	84	850	11		05	
1030	64	67	655	21	2041	89	89	890	00		10	
1043	68	70	690	11	2042	84	79	835	01		10	
1044	74	75	745	01	2043	73	79	785	01		10	
1062	60		60	a.	2044	80	80	800	00		35	
1100	85	83	840	12	2045	80	81	805	01		20	
a 1109	73	75	740	11	2046	86	83	845	21		10	
1110	76	79	775	21	2047	77	80	785	12	sup. 118	4	
1181	71	75	740	22	2048	81	79	810	11		25	
1156	88	87	875	01	2049	90	84	870	33	sup. 116	03	
1157	82	82	820	00	2050	79	78	785	10		10	
1166	77	76	765	10	2051	79	81	800	11		25	
1171	74	74	740	00	B	46	46	460	00		15	
1176	78	78	780	00	E	59	59	590	00		15	
6 1189	79	77	780	12	C	51	50	505	10		20	
1208	70	74	725	22	D	57	56	565	10		03	
1242	67	68	675	10	25	77	75	760	12		10	
1244	80	82	810	11	U		87	87	a.			
1246	76	75	755	01	2	84	86	850	11	f 9.6		
					L	91	81	910	00	7 -		

Wednesday, May 19, 1909

Bright Stars near North Pole
 Estimates repeated; stars same former
 estimates differ by more than 0.3 magn.

AC 9473 dir

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 778 8.0 diff. 8.0 8.4 8.5 8.2 2 1081 7.6 7.4 7.6 7.2 7.4 8.2 2 2046 8.0 8.3 8.0 8.4 8.18 2 122

AC 9475 dir

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 1109 7.3 7.2 7.4 7.0 7.2 2 1022 975 8.1 8.3 8.0 8.4 8.20 1 122
 2046 8.4 8.4 8.5 8.1 8.35 0 112 1081 7.4 diff. 7.2 7.5 7.1 8.30 1 122
 1208 7.1 diff. 7.0 7.4 7.0 7.1 8.2 1 122
 1251 7.1 diff. 6.9 7.3 6.9 7.05 1 122
 2038 8.6 8.7 8.5 8.9 8.68 10 22
 2049 8.6 8.9 8.4 9.0 8.72 12 33

AC 9478 dir

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 2036 8.1 8.2 8.1 8.5 8.22 10 13

AC 9480 dir

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 977 8.3 8.1 8.4 7.9 8.18 1 22

AC 9503 dir

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 1171 7.2 7.4 7.6 7.2 8.95 2 022

All the retained except Est. (1) of 2010 on AC 9475

AC 9485 dir

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 1081 7.6 7.4 7.6 7.2 7.4 8.2 2 2046 8.0 8.3 8.0 8.4 8.18 2 122

AC 9505 dir

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 684 8.5 diff. 8.7 8.2 8.6 8.50 0 2 1

These on AC 9505
 are difficult

all these stars are
 difficult to observe. In-
 dicated with naturally
 smaller open estimates
 on this page and
 the next. Numbers
 in parentheses refer to
 order in which st. were obs.

Wednesday, May 19, 1909

Bright Stars near North Pole
 Repeated Est. Parts.

AC 9473 rev.

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 2046 8.5 8.0

AC 9505 rev.

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 684 8.7

AC 9475 rev.

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 1109 7.2
 2046 8.4
 2010 8.6

975 8.3

1081 7.2
 1208 7.0
 1251 6.9
 2038 8.7
 2049 8.9

AC 9478 rev.

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 2036 8.2

AC 9473 rev.

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 778 8.2 2
 2035 8.3 2

AC 9480 rev.

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 977 8.1

AC 9503 rev.

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 1171 7.4

AC 9485 rev.

Exp. 1908
 (3) (4) (1) (2) (3) (4)
 1081 7.4

Thursday, May 20, 1909

Bright stars near the North Pole

No. 2047 examined on A.C. 9505

The star estimated as 2047 on exp. $+76^\circ$
is 2055 on exp. $+90^\circ$ Estimates of star
No. 2047 are made below

A.C. 9505 dis
2047 8.0

A.C. 9505 uv
2047 8.1 8.0 8.05 10

2.35

Friday, May 21, 1909

North Polar Sequence

Scale M. Plate having different Apertures, Small Apertures
marked at different distances from Centre.

		Exp. 1	Exp. 2	Exp. 3	Exp. 4	Exp. 5
-4	C 17721					
-3						
-2						
1.5		Exp. 1	Exp. 2	Exp. 3	Exp. 4	Exp. 5
10	c ¹	3.1 3.1 3.1 A.	8.7	8.7	8.7	2.8 3.0 3.30 A.
00	c ²	3.8 4.0 4.0 A.	9.6	9.1	9.7	3.8 4.0 4.0 A.
75	c ³	3.7 3.9 4.5 3.9 A.	9.9	9.8	9.9	4.5 4.7 4.6 4.65 10
10	c ⁴	3.8 5.0 5.3 5.15 2.1	9.9	9.9	10.1	4.7 4.9 5.6 5.25 3.4
05	c ⁵	4.7 5.1 5.4 5.25 1.2	10.8	10.0	10.5	4.9 5.1 5.5 5.30 2.2
05	d	4.8 5.0 5.6 5.30 3.3	10.1	10.1	10.2	4.8 5.0 5.5 5.25 2.3
00	e	5.8 6.0 5.8 5.90 1.1				5.8 6.0 5.8 5.90 1.1
10	f	6.6 6.8 6.7 6.75 0.1				6.7 6.9 6.8 6.85 10
40	f ²	6.8 7.1 7.5 7.30 2.2				7.7
10	f ³	7.7				7.8
10	g	8.7				8.6
10	h	8.8	+9 -10 12.17 ± 15.8			8.9
20	i	8.8				9.0
00	k ¹	9.7				9.7
20	k ²	9.7				9.9
10	k ³	9.9				10.0
	k ⁴	10.2				10.3
+30	k ⁵	10.2				
-20.0	L					
-170						
-0.18						

It is assumed that exposures were made on
the order given in diagram at top of page. If the three faint images
No. 2 is sharpest and No. 4 least sharp. Perhaps 2 and 3 should be interchanged.
Images were very difficult to compare with Scale M.

3.00
H. S. S.

Friday May 21, 1909

North Polar Sequence

Scale P. Plate having different aperture Small aperture
At different distance from center

C 17721 repeated

	Exp. 1	Exp. 2	Exp. 3	Exp. 4	Exp. 5
1-5	1	2	2	2	2
55	C ¹ 5.4 5.1 4.8 4.9 5.2	8.0	7.9	8.3	4.5 4.2 4.6 4.4 2.2
25	C ² 5.8 5.5 5.5 5.5 5.0	9.1	8.6	9.0	5.6 5.3 5.2 5.2 5.0
10	C ³ 5.6 5.3 5.7 5.5 5.2	9.6	9.3	9.7	5.7 5.4 5.8 5.6 2.2
20	C ⁶ 6.2 5.9 5.9 5.9 5.0	9.6	9.0	10.0	5.8 5.5 5.9 5.7 2.2
25	C ⁷ 6.5 6.2 6.0 6.1 5.1	n.s.	9.8	n.s.	6.5 6.2 6.1 6.1 5.1
25	d 6.3 6.0 6.1 6.0 6.1	9.9	9.9	9.9	6.3 6.0 6.0 6.0 2.0
30	e 6.7	n.s.	n.s.	n.s.	6.6 6.3 6.5 6.4 1.1
10	f ¹ 6.7				6.8
10	f ² 7.2				7.8
20	f ³ 7.6				7.8
10	f ⁴ 7.9				8.0
50	f ⁵ 8.1				8.6
40	i 8.3				8.7
40	k ¹ 9.2				9.6
50	k ² 9.1				9.6
40	k ³ 9.6				10.0
10	k ⁴ 10.0				10.1
	k ⁵ 10.1				n.s.
+14.5		+5			+8
-28.5		-5			12/16
17-140		12/10			±133
-0.08		±0.83			

3.15
H.S.S

Comparisons difficult

Friday May 21, 1909

North Polar Sequence

Scale M. Plate having different aperture

C 17723

	Exp. 1	Exp. 2	Exp. 3	Exp. 4	Exp. 5
1-5	1	2	2	2	2
10	C ¹ 3.9 4.1 4.1 4.1	9.1	9.3	9.4	3.8 4.0 4.0
45	C ² 4.0 4.2 4.2 4.2	9.8	9.7	10.1	4.7 4.9 4.4 4.6 3.2
65	C ³ 4.3 4.5 4.9 4.7 2.2	9.8	10.0	10.3	5.0 5.2 5.5 5.3 5.1
40	C ⁶ 5.0 5.2 5.7 5.4 5.3	10.0	n.s.	n.s.	5.7 5.9 5.8 5.8 5.0
20	C ⁷ 5.4 5.6 5.8 5.7 5.1	n.s.	n.s.	n.s.	5.9 6.1 5.7 5.9 2.2
15	d 5.8 6.0 6.0 6.0 2.0	10.2	10.2	n.s.	5.8 6.0 6.3 6.5 2.1
20	e 6.6 6.8 6.6 6.7 2.0	n.s.			6.8 7.0 6.8 6.9 1.1
25	f ¹ 7.0 7.2 7.3 7.2 5.1				6.9 7.1 6.9 7.0 1.1
60	f ² 7.9				8.5
30	f ³ 8.5				8.8
50	f ⁴ 8.7				9.2
50	f ⁵ 9.2				9.7
50	i 9.4				9.9
10	k ¹ 9.8				9.9
30	k ² 9.8				10.1
	k ³ 10.0				n.s.
	k ⁴ n.s.				
	k ⁵ n.s.				
+4.8		+7			+10
+3.5		12/16			-10
17-140		±1.00			14/20
-0.30					±1.41

It is assumed that exposures were made in the order marked in diagram at top of page. By the spirit image, No. 3 is the sharpest and No. 4 the least sharp.

Measurements difficult.

Friday May 21, 1909

North Polar Sequence

Scale P. Plate having different aperture

C 14723

	Exp 1	Exp 2	Exp 3	Exp 4	Exp 5
15	C ¹	C ²	C ³	C ⁴	C ⁵
25	5.6 5.3 5.6 5.45 12	8.4	8.9	9.2	5.3 5.0 5.4 5.30 22
20	5.8 5.5 5.7 5.60 11	9.2	9.8	9.8	6.0 5.7 5.9 5.80 11
25	6.1 5.8 5.9 5.85 01	9.7	9.8	9.8	6.4 6.1 6.1 6.10 10
30	6.3 6.0 6.1 6.05 01	10.0	n.s.	n.s.	6.5 6.2 6.5 6.35 21
30	6.5 6.2 6.2 6.20 00	.	n.s.	n.s.	6.6 6.3 6.7 6.50 22
35	6.6 6.3 6.3 6.30 00	10.1	9.9	n.s.	6.8 6.5 6.8 6.65 12
35	6.8 6.5 6.8 6.65 12	n.s.	.	.	7.0
40	f ¹	7.2	.	.	7.6
30	f ²	7.6	.	.	7.9
30	f ³	8.0	.	.	8.3
100	f ⁴	8.0	.	.	9.0
30	f ⁵	8.8	.	.	9.1
70	h ¹	8.9	.	.	9.6
50	h ²	9.2	.	.	9.7
50	h ³	9.4	.	.	9.9
	h ⁴	9.9	.	.	n.s.
	h ⁵	.	.	.	.

4120 - 575
640 + 6.5
15532
- 0.37

+7
-3
1470
± 0.1

Measurements different

131 - 475
- 0.32
(multiplier)

3.50

H.S.S.

Thursday May 27, 1909.

North Polar Sequence

Scale O. Measure on AC Plate having same exposure at different distances from center

Expt
H 1112, 133

AC 10504

	Exp +90°	Exp +88°
A	0.8 2.8	0.8 2.8
B	3.0	3.0
C	4.4	4.4
D	5.1	5.1
E	5.6	5.6
F	5.8	5.8
G	5.9	5.9
H	5.7	5.7
I	6.1	6.1
J	6.4	6.4
K	6.5	6.5
L	6.5	6.5
M	7.8 7.5 7.6	7.55 7.6
N	8.5 8.2 7.8	8.0 7.7 7.8
O	8.8 8.5 8.6	8.5 8.2 8.3
P	8.7 8.4 8.5	8.45 8.5
Q	8.7 8.4 8.3	8.35 8.4
R	9.2 8.9 9.1	9.0 8.9
S	9.7 9.4 9.3	9.35 9.5
T	8.8 8.5 8.7	8.60 8.8
U	9.7 9.6 9.9	9.75 9.9

nearly exp.

+10
-16
33722
± 0.19

3.40

H.S.S.

+10
-11
33721
± 0.64

3.48

H.S.S

Thursday May 27, 1907.

North Polar Sequence

Scale 0

A.C. 10504 Cuts.

Speed 44.134/05

Exp. +86°	
A	1.0 2 3 10 a..
B	2.8 28 a..
C	4.3 43 a..
D	5.2 52 a..
E	5.3 53 a..
F	5.9 58 585 1.0
G	6.0 58 590 1.2
a	5.8 59 585 0.1
a ²	6.7 6.86 5.66 660 1.0
a ³	6.8 6.96 6.67 670 1.0
a ⁴	6.8 7.16 6.8 680 0.0
a ⁵	7.8 7.5 7.6 755 1.0
f ¹	8.4 8.1 8.10 0.0
f ²	8.9 8.6 8.0 870 1.1
f ³	8.9 8.6 8.5 845 2.1
c ¹	8.9 8.6 8.7 865 0.1
c ²	9.6 9.3 9.1 920 1.2
c ³	9.8 9.6 9.55 1.0
c ⁴	8.8 8.5 8.7 860 1.1
d	10.5 9.9 10.0 995 1.0

$$\begin{array}{r} +11 \\ -10 \\ 33 \overline{) 21} \\ \pm .064 \end{array}$$

4.10

4.10

Thursday May 27, 1907

North Polar Sequence

Scale 0

A.C. 10504 Cuts.

Speed 44.134/05

Exp. +89°	
A	1.0 2 3 10 a..
B	2.9 29 a..
C	4.8 48 a..
D	5.3 53 a..
E	5.6 56 a..
F	5.9 6.3 6.0 5.8 590 0.1
G	6.0 6.8 6.5 5.9 613 1.2
pro a	6.0 6.7 6.4 5.8 607 1.3
a ²	6.7 7.0 6.7 6.7 0.0
a ³	6.7 7.0 6.7 6.7 0.0
a ⁴	6.9 6.7 6.6 6.8 6.77 1.0
a ⁵	7.7 7.4 7.4 7.5 7.2
c ¹	8.7 8.7 8.7 8.7
c ²	8.9 8.9 8.9 8.9
d	9.8 9.8 9.8 9.8
c ³	9.7 9.4 9.4 9.4

$$\begin{array}{r} +9 \\ -10 \\ 33 \overline{) 19} \\ \pm .112 \end{array}$$

H.S.S

4.15

Thursday, May 27, 1907

Copied

North Polar Sequence

AC 10504. Distances from Center of Plate

Exp. +90° +88° +86° +84° +80°

x	A	9	l	13al	25ob	36a	41a
	B	23	t	12t	3h	13a	37a
	C	29	tl	26l	28al	34al	53al
	D	21	tl	22l	28al	38al	59al
x	E	21	t	10t	4h	15a	39a
	F	9	r	11ar	22ar	33ar	57ar
	G	16	r	18ar	25ar	35ar	59ar
	A'	11	h	14al	25al	36a	61a
x	A ²	13	a	24a	37a	49a	74a
x	A ³	4	ar	9a	26a	38a	63a
	A ⁴	10	r	14ar	26ar	36ar	61ar
x	A ⁵	10	t	6l	16a	28a	52a
	B'	7	h	11al	26al	38al	65
	B ²	7	h	12al	27al	39al	65
	B ³	10	r	10ar	19ar	30ar	55ar
x	C'	2	h	18ar	23a	35a	59a
x	C ²	2	h	8a	22a	33a	57
x	C ³	5	h	6a	20a	31a	55
	C ⁴	8	h	5a	19a	30a	54

3.30

Monday May 31, 1909.

Scale 0
Copied

North Polar Sequence

Measures on Plate having several exposures at different Distances from Center.

AC 10505

	Exp. +90°	1	2	3	Exp. +88°	1
A	2.3	2.7	2.50	2.2	2.7	2.6
B	3.9	3.9	3.90	0.0	3.7	3.8
C	4.6	4.7	4.65	0.1	4.7	4.75
E	4.7	4.9	4.80	0.1	4.8	4.9
F	5.4	5.5	5.45	0.1	5.6	5.6
G	5.7	5.7	5.70	0.0	5.8	5.8
A'	5.5	5.6	5.55	0.0	5.3	5.2
A ²	5.7	6.360	5.6	5.8	5.7	6.0
A ³	5.8	6.663	5.8	6.3	6.1	6.6
A ⁴	6.4	6.764	6.3	6.37	6.1	6.30
A ⁵	7.572	7.3	7.25	0.1	6.8	6.73
F'	8.077	7.8	7.75	0.1	8.1	8.1
B ²	8.184	8.6	8.50	0.1	8.087	8.70
B ³	8.885	8.7	8.60	0.1	8.926	8.40
C'	9.289	9.0	8.95	0.1	9.789	8.90
C ²	9.794	9.6	9.50	0.1	9.794	9.70
C ³	9.895	9.8	9.65	0.1	9.895	9.80
C ⁴	9.879	9.0	8.85	0.1	9.879	8.95

H. 0.8

3.55

$$\begin{array}{r} +21 \\ -19 \\ \hline 41 \\ \hline 40 \\ \hline 2098 \end{array}$$

$$\begin{array}{r} +16 \\ -14 \\ \hline 38 \\ \hline 29 \\ \hline 2096 \end{array}$$

Scale 0

Monday May 31, 1907

North Polar Sequence

Copied

AC 10505 Ant
Exp + 86

Exp + 84

A	1	2	3	1	1	2	3	1
B	2.8	..	..	2.8	2.80	0.0	3.0	..
B ₁	3.6	..	..	3.5	3.55	0.1	3.8	..
20	4.5	..	..	4.6	4.55	1.0	4.7	..
B ₂	4.9	..	..	4.9	4.90	0.0	5.5	..
F	5.9	..	..	5.9	5.90	0.0	6.5	6.562 5.9
B ₃	6.0	..	..	6.0	6.00	0.0	6.4	6.45 1.00
a ¹	5.4	..	..	5.4	5.40	0.0	5.7	5.53 2.21
a ²	5.9	6.764	6.0	6.1	6.10	2.0	6.2	6.22 0.11
a ³	6.5	6.764	6.1	6.4	6.35	10.0	6.8	6.65 2.01
a ⁴	6.7	6.766	6.7	..	6.67	0.0	7.0	7.00 1.0
a ⁵	6.9	7.269	6.9	..	6.90	0.0	7.6	7.15 1.2
f ¹	..	8.178	7.8	..	7.80	0.0	7.9	7.95 1.4
f ²	..	8.828	8.3	..	8.65	1.2	8.7	8.60 1.1
f ³	..	8.828	8.6	..	8.55	1.0	8.6	8.60 0.0
c ¹	..	8.926	9.0	..	8.80	2.2	8.7	8.65 0.1
c ²	..	9.629	9.5	..	9.40	1.1	9.3	9.20 1.1
c ³	..	9.496	9.9	..	9.75	2.1	9.8	9.65 1.2
c ⁴	..	9.188	8.8	..	8.80	0.0	8.8	8.75 2.0

$$\begin{array}{r} +10 \\ -16 \\ \hline 42 \end{array} \begin{array}{r} 26 \\ 40 \\ \hline \pm 0.62 \end{array}$$

4.20

H. S. S.

4.20

Monday May 31, 1907

North Polar Sequence

Copied

AC 10505 Ant
Exp + 80

A	1	2	3	1
B	t.p.	..	..	..
B ₁	4.2	..	4.0	4.10 1.1
20	5.0	..	4.9	4.95 0.1
B ₂	t.p.	..	t.p.	..
F	t.p.	..	t.p.	..
B ₃	t.p.	..	t.p.	..
a ¹	5.9	6.613	5.8	5.9 5.98 1.321
a ²	6.5	6.865	6.3	6.40 1.111
a ³	6.8	7.027	6.8	6.78 0.100
a ⁴	t.p.	t.p.	..	..
a ⁵	..	7.976	7.6	7.60 0.0
f ¹	..	8.683	7.9	8.10 2.2
f ²	..	8.926	8.9	8.75 2.1
f ³	..	t.p.	..	..
c ¹	..	8.926	8.7	8.70 1.1
c ²	..	9.390	9.2	9.10 1.1
c ³	..	9.629	9.4	9.35 1.0
c ⁴	..	9.188	8.8	8.80 0.0

$$\begin{array}{r} +11 \\ -16 \\ \hline 30 \end{array} \begin{array}{r} 27 \\ 40 \\ \hline \pm 0.90 \end{array}$$

4.30

H. S. S.

Monday, May 31, 1909

Chief

North Polar Sequence
Distances in millimeters from Center of Plate

AC 10505

	+90°	+88°	+86°	+84°	+80°
A					
B	31 r	23 ar	31 ar	40 ar	62 ar
C	29 b	18 br	12 r	15 ar	36 ar
D	21 b	10 b	4 ar	15 r	38 ar
E	18 ar	21 ar	29 ar	39 ar	61 ar
F	8 ar	19 ar	32 ar	44 ar	
G	16 ar	27 ar	40 ar	52 ar	
a ¹	11 b	3 ar	12 ar	25 ar	49 ar
a ²	15 b	19 ar	29 ar	40 ar	64 ar
a ³	5 b	14 ar	24 ar	37 ar	61 ar
a ⁴	8 ar	20 ar	32 ar	44 ar	69 ar
a ⁵	8 br	10 ar	20 ar	32 ar	56 ar
b ¹	9 br	4 ar	15 ar	27 ar	52 ar
b ²	like b ¹				
b ³	like b ¹				
c	4 b	7 ar	21 ar	32 ar	57 ar
c ¹	2 ar	7 ar	25 ar	37 ar	62 ar
c ²	like c ¹				
c ⁴	like a ⁵				

Monday, May 31, 1909

North Polar Sequence

None of the measures on this page to be used. Connect
AC 10504 to combined with others.

Scale B

	$1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100$	$+90^\circ$	$+88^\circ$	$+86^\circ$	$+84^\circ$	$+80^\circ$
A	0.8 0.8	0.9 0.9	1.0	1.0		
B	3.5 4.0	2.9 2.9	2.8	2.9	3.6	
C	4.6 4.4	4.5 4.6	4.7	4.7		
D	5.4 5.1	5.1 4.9	5.0	5.0		
E	5.5 5.6	5.5 5.4	5.3	5.2	5.6	
F	5.8 5.8	5.8 5.8	5.9	5.9		
G	6.0 5.9	6.0	6.3	6.0		
a	5.8 5.7	5.8	5.9	5.9		
a ²	6.0 6.1	6.5	6.5	6.3		
a ³	6.6 6.4	6.6	6.7	6.7		

Scale N

	1	2		1, 2		1	2
u	N			1.8			
a	4.6			1.8			
B	3.7	3.9		3.7	3.9		
C	4.9	5.2		4.9	4.9		
D		5.9			5.8		
E		6.6			5.9		
F		7.0			6.9		
G		7.3			7.3		
a'		6.8			6.8		
a ²		7.7			7.7		
a ³		7.8			7.7		

Tuesday, June 1, 1909.

Copied

Scale 0

22.00

North Polar Sequence.

Plates having several Exp. at Diff. Dist. from Centre.

AC 10504 repeated

A	Exp. at +90°		1st 2nd		Page 123	Mean		Re
	1st	2nd	1st	2nd		0.8	0.8	
B	3.2	.	3.4	3.30 1.1	3.6	3.15	15.15	
C	4.6	.	4.6	4.60 0.0	4.4	4.50	10.10	
* D	5.0	.	5.3	5.15 2.1	5.1	5.12	13.22	
E	5.6	.	5.6	5.60 0.0	5.6	5.60	00.00	
F	5.7	.	5.6	5.70 0.1	5.75	5.72	02.03	
G	5.8	.	6.0	5.93 1.1	5.90	5.92	01.02	
a	5.8	.	5.7	5.8 5.77 0.10	5.65	5.71	06.06	
a ²	6.3	6.8	6.5	6.6 6.5 6.48 2.0	6.27	6.38	10.11	
a ³	6.6	6.9	6.6	6.8 6.5 6.67 0.02	6.58	6.58	07.08	
a ⁴	6.8	6.9	6.6	6.8 6.8 6.75 0.20	6.57	6.68	09.09	
a ⁵	.	7.3	7.5	7.5 7.50 0.0	7.55	7.52	02.03	
b	.	8.3	8.0	8.0 8.00 0.0	8.00	8.00	00.00	
b ²	.	8.7	8.4	8.2 8.35 0.1	8.55	8.45	10.10	
b ³	.	8.8	8.5	8.4 8.45 0.10	8.45	8.45	00.00	
c	.	8.9	8.6	8.6 8.60 0.00	8.35	8.48	12.13	
c ²	.	9.5	9.2	8.9 9.05 0.21	9.00	9.02	03.02	
c ³	.	9.7	9.4	9.1 9.15 0.21	9.35	9.45	10.10	
c ⁴	.	8.9	8.6	8.7 8.65 0.1	8.60	8.62	03.04	
d	.	10.2	9.7	9.9 9.80 1.1	9.75	9.78	02.03	

+12
-15
47) 27
± 0.51

+107
-124
88) 214
± 0.56

* Two faint stars near D make measurement difficult

A.D.W.

Tuesday, June 1, 1909.

Copied

Scale 0

22.13

North Polar Sequence.

Plates having several Exp. at Diff. Dist. from Centre.

AC 10504 repeated

Page 123 Mean

A	Exp. at +88°		1st 2nd		Page 123	Mean		Re
	1st	2nd	1st	2nd		0.9	0.9	
B	3.1	.	3.1	3.10 0.0	2.9	3.00	10.10	
C	4.6	.	4.5	4.55 0.1	4.6	4.58	03.02	
D	5.2	.	5.2	5.20 0.0	4.9	5.05	15.15	
E	5.8 ⁴	.	5.5	5.45 0.1	5.4	5.42	03.02	
F	5.8	.	5.9	5.85 0.1	5.75	5.80	05.05	
G	5.9	6.3	6.0	5.9 5.93 0.10	5.85	5.89	04.04	
a	5.7	.	5.6	5.7 5.67 0.10	5.55	5.61	06.06	
a ²	6.5	6.8	6.5	6.7 6.6 6.58 1.10	6.33	6.46	12.13	
a ³	6.7	6.8	6.5	6.7 6.6 6.60 1.11	6.33	6.46	14.13	
a ⁴	6.8	6.9	6.6	6.8 6.8 6.75 0.20	6.60	6.68	07.08	
a ⁵	.	7.3	7.5	7.5 7.50 0.00	7.55	7.52	02.03	
b	.	8.2	7.9	7.8 7.85 0.10	7.75	7.80	05.05	
b ²	.	8.3	8.5	8.6 8.55 0.10	8.30	8.42	13.12	
b ³	.	8.7	8.4	8.5 8.45 0.10	8.40	8.42	03.02	
c	.	8.9	8.6	8.6 8.60 0.00	8.40	8.50	10.10	
c ²	.	9.4	9.1	9.0 9.05 0.10	8.90	8.98	07.08	
c ³	.	9.8	9.5	9.6 9.55 0.10	9.50	9.52	03.02	
c ⁴	.	8.9	8.6	8.7 8.65 0.10	8.70	8.68	03.02	
d	.	10.2	9.7	9.9 9.80 1.1	9.80	9.80	14.10	

+11
-11
46) 52
± 0.48

+124
-123
30) 21
± 0.65

A.D.W.

Tuesday, June 1, 1909.

Copied

North Polar Sequence.

Scale 0

22-28

Plates having several exp. at diff. dist. from centre

AC 10504 repeated

	Exp. + 76°				Mean
	1st	2nd	3rd	4th	
A					
B	3.1		3.2	3.15	1.0
C	4.7		4.7	4.70	0.0
D	rechecked				
E	5.6		5.6	5.60	0.0
F	5.9	6.4	6.1	5.8	6.0
G	6.1	6.7	6.4	6.1	6.3
a	5.9	6.5	6.2	5.8	5.8
a ²	6.6	6.8	6.5	6.6	6.6
a ³	6.8	7.2	6.9	6.8	6.8
a ⁴	6.9	7.3	7.0	6.8	6.9
a ⁵	7.4	7.6	7.7	7.6	7.5
*b ¹	8.4	8.1	8.1	7.95	8.1
*b ²	9.1	8.8	8.8	8.80	8.8
b ³	8.8	8.5	8.7	8.60	8.6
c ¹	8.9	8.6	8.7	8.65	8.65
c ²	9.3	9.0	9.2	9.10	9.1
c ³	9.6	9.3	9.7	9.50	9.5
c ⁴	8.9	8.6	8.8	8.70	8.65
d	12.0	9.7	12.0	9.85	9.90

$$\begin{array}{r} +19 \\ -18 \\ \hline 41 \end{array} \begin{array}{r} 37 \\ 37 \\ \hline 74 \end{array} \begin{array}{r} 0.07 \\ 0.07 \\ \hline 0.14 \end{array}$$

$$\begin{array}{r} +123 \\ -130 \\ \hline 36 \end{array} \begin{array}{r} 263 \\ 263 \\ \hline 526 \end{array} \begin{array}{r} 0.03 \\ 0.03 \\ \hline 0.06 \end{array}$$

Mus. of P⁺ on third scale should be 7.8, instead of 8.8.

A.D.W.

Tuesday, June 1, 1909.

Copied

North Polar Sequence.

Plates having several exp. at diff. dist. from centre

AC 10504 repeated

	Exp. + 74°				Mean
	1st	2nd	3rd	4th	
A					
B	3.0		2.9	2.95	0.0
C	4.7		4.5	4.60	0.0
D	5.4		5.2	5.30	0.0
E	5.4		5.2	5.30	0.0
F	5.9	6.3	6.0	5.8	5.9
G	6.1	6.8	6.5	6.0	6.1
a	5.9	6.8	6.0	5.7	5.9
a ²	6.6	6.7	6.4	6.0	6.4
a ³	6.7	6.9	6.6	6.8	6.7
a ⁴	7.0	7.3	7.0	6.9	7.0
a ⁵	7.8	7.5	7.6	7.5	7.6
b ¹	8.4	8.1	7.8	7.95	8.05
b ²	8.7	8.4	8.6	8.50	8.5
b ³	8.6	8.3	8.2	8.25	8.45
c ¹	8.8	8.5	8.7	8.60	8.85
c ²	9.3	9.0	9.2	9.10	9.10
c ³	9.8	9.5	9.5	9.50	9.45
c ⁴	8.9	8.6	8.9	8.75	8.95
d	12.0	9.7	9.7	9.75	9.75

$$\begin{array}{r} +11 \\ -11 \\ \hline 50 \end{array} \begin{array}{r} 45 \\ 45 \\ \hline 90 \end{array} \begin{array}{r} 0.09 \\ 0.09 \\ \hline 0.18 \end{array}$$

$$\begin{array}{r} +16 \\ -17 \\ \hline 38 \end{array} \begin{array}{r} 153 \\ 153 \\ \hline 306 \end{array} \begin{array}{r} 0.04 \\ 0.04 \\ \hline 0.08 \end{array}$$

A.D.W.

Copied

AC 10504 repeated.

Exp. at $+80^{\circ}$
1st 2nd 2nd 1st

Page 125 Mean

[illegible]

No mean is entered for C and D, because ³⁵the large dif-
ference for B which may be systematic.

Scale N

Prosepe and North Polar Sequence
Scale measures on 7' Plates

AC 9483

Polac Sequence

Tracings

0.9 0.7	0.7 a..	a	5.8 5.4 5.5	5.45 .01
B 2.8 2.6	2.6 a..	b	6.7 6.3 5.7	6.00 5.95 .33
C 3.9 3.7	3.7 a..	c	6.7 6.3 5.8	6.05 .32
D 5.6 5.2 4.9	5.05 2.1.	d	6.8 6.4 5.9	6.15 .23
E 5.3 4.9 4.7	4.90 .00	e	7.1 2 6.7 6.7	6.70? .00
F 5.9 5.5 5.6	5.55 .10	f	7.7 7.3 7.5 7.5	7.40? .11
G 6.1 5.7 5.7	5.70 .00	g	7.6 7.2 6.8	7.00 .23
H 5.8 5.4 5.6	5.50 .11	h	7.5 7.1 6.9	7.00 .11
a ²		i	7.5 7.1 6.8	6.95 .12
a ³	6.8 6.6 6.2	j	7.9 7.5 7.6	7.55 .10
a ⁴	6.9 6.5 6.5	k	8.3 7.9 8.0	7.95 .10
a ⁵	7.7 7.3 7.6	l	8.8 8.4 8.6	8.50 .10
b	8.1 7.7 7.8	e'		9.20
b ²	8.7 8.3 8.5	k ²		9.3
b ³	8.8 8.4 8.1	l		9.6
c'	9.0 8.6 8.7	m		9.8
c ²	9.0	n		9.7
c ³	9.3	n ²		9.7
d [#]	8.8 8.0 8.8	o		9.9
d	9.7	p		9.9
e	10.1	q		9.8
		r		9.9
		s		10.3

land & close together, diff. to meas

12.5

Tuesday June 2, 1909.

Praceps and North Polar Sequence
Scale Measured on T' Plate

AC 9483 remeasured

Polar Sequence

SP, 110 p. 107		Praceps		Praceps		SP, 110 p. 107
1.1 0.7	A	0.947	0.7 A.	a	5.8 5.4 5.4 5.40 .00 5.0 5.0	
2.7 2.6	B	2.826	2.6 A.	b	6.4 6.0 5.7 5.85 .21 6.05 6.0	
3.8 3.0	C	4.644 4.541	4.45 4.1.	c	6.6 6.2 5.8 6.0 2.2 6.15 6.05	
5.00 5.05	D	5.652 4.9	5.05 .21	d	6.8 6.4 5.9 6.15 .23 6.70 6.15	
5.10 4.90	E	5.750 5.0	5.00 .00	e	7.2 6.8 6.6 6.70 .11 6.95 6.70	
5.60 5.55	F	5.955 5.5	5.50 .00	f	7.7 7.3 7.5 7.40 .51 7.25 7.40	
5.73 5.70	G	5.958 5.7	5.75 .01	g	7.7 7.0 6.8 6.90 .11 7.05 7.0	
5.63 5.50	a	6.561 5.7	5.90 .22	h	7.6 7.2 6.8 7.00 .22 7.25 7.00	
6.15	a ¹			h ²	7.6 7.2 6.8 7.00 .22 7.20 6.95	
6.43 6.30	a ²	8.845	6.35 .01	h ³	7.9 7.5 7.6 7.55 .10 7.50 7.55	
6.53 6.50	a ⁴	7.066 6.5	6.55 .01	h ⁴	8.5 8.1 7.8 7.95 .12 8.00 7.95	
7.20 7.45	a ⁵	7.874 7.6	7.50 .11	h ⁵	8.9 8.5 8.6 8.55 .10 8.40 8.50	
7.53 7.75	b	8.076 7.8	7.70 .11	k	9.1	9.1 9.2
8.20 8.40	b ²	8.783 8.5	8.40 .11	k ²	9.4	9.3 9.3
8.33 8.25	b ³	8.783 8.4	8.35 .10	l	9.3	9.2 9.6
8.43 8.65	c	8.985 8.7	8.60 .11	m	9.6	9.6 9.8
8.77 9.0	c ²	9.0		n	9.5	9.5 9.7
9.35 9.3	c ³	9.4		n ²	9.7	9.6 9.7
9.60 9.60	c ⁴	9.086 8.7	8.65 .01	o	9.8	9.7 9.9
9.45 9.7	d	9.8		p	9.8	9.7 9.9
9.90 10.1	e	10.1		q	9.9	9.7 9.8
				r	10.0	9.8 9.9
				s	10.3	10.3 10.3
				x _y	6.0 5.6 5.7	5.65 .01 5.90 5.90
				x _z	7.7 7.3 7.5	7.40 .11 7.40 7.30

$$\frac{11}{20} \frac{12}{23} \frac{13}{25} \frac{14}{27}$$

12.5

H 33

12.25

Tuesday June 2, 1909

Praceps and North Polar Sequence
Scale Measured on T' Plate

AC 9498

Polar Sequence

SP, 110 p. 107			Praceps		SP, 110 p. 107
2.0 1.8	A	1.8 A.		a	6.8 6.4 6.1 6.25 2.1
4.1 3.9 4.4 4.0	B	3.95 1.0		b	7.3 6.9 6.7 6.80 1.1
5.7 5.3 5.2 5.25 1.0	C			c	7.3 6.9 6.8 6.85 1.0
6.6 6.2 5.8 6.0 2.2	D			d	7.6 7.2 6.8 7.00 2.2
6.8 6.4 5.9 6.15 2.2	E			e	rev.
7.0 6.6 6.6 6.60 .00	F			f	8.8 8.4 8.7 8.55 2.1
rev.	G			g	rev.
6.7 6.5 6.5 6.50 .00	a ¹			h ¹	8.4 8.0 7.9 7.95 0.1
7.4 7.0 6.8 6.90 .12	a ²			h ²	8.1 7.7 7.8 7.80 2.1
7.7 7.3 6.9 7.10 2.2	a ³			h ³	rev.
7.8 7.4 7.5 7.45 .01	a ⁴			h ⁴	9.0 8.6 8.7 8.65 0.1
rev.	a ⁵			h ⁵	9.1
8.9 8.5 8.5 8.50 .00	b ¹			h ⁶	9.6
9.0 8.6 8.9 8.75 2.1	b ²			h ⁷	9.7
8.3	b ³			h ⁸	10.0
rev.	c ¹			n	9.9
9.5	c ²			n ²	10.1
9.8	c ³			n ³	rev.
9.3	c ⁴			o	
7.4	d			p	
e				q	
				r	
				s	
				x _y	rev.
				x _z	8.7 8.3 8.0 8.15 1.2

$$\frac{+10}{-11} \frac{20}{21} \frac{10}{15}$$

12.40

H 33

12,40

Tuesday June 2, 1909.

Scale N.

Præsepe and North Polar Sequence

Scale Measure on T' Plate

Polar Sequence

Præsepe

1911, 18 p. 139	AC 9498 measured	1 2 3	XXI, 18 p. 139
19 18	a	2.1 19	19 a.
400 395	b	4.0 3.8 4.6 4.2	400 3.2 i
540 525	c	5.7 5.35 5.25 5.25	5.10
600 600	d	6.5 6.15 5.8 5.95	6.12
615 615	e	6.7 6.35 5.9 6.10	6.22
655 660	f	6.8 6.4 6.5 6.45	6.61
670	g	acv.	
680 650	a'	7.0 6.6 6.6	6.60 .00
695 690	a''	7.4 7.0 6.8	6.90 .11
730 710	a'''	7.6 7.2 7.3	7.25 .01
745 745	a''''	7.9 7.5 7.6	7.55 .10
775	a'''''	acv.	
840 850	b'	8.9 8.5 8.7	8.60 .11
870 875	b''		8.9
88 8.3	b'''		8.6
9.6	b''''		20 7 1/2 0.15
9.8 9.5	c'	acv.	
98 9.8	c''		9.6
91 9.3	c'''		9.8
9.2	c''''		9.3
	d		9.7
	e		9.7
	f		9.7
	g		9.7
	h		9.7
	i		9.7
	j		9.7
	k		9.7
	l		9.7
	m		9.7
	n		9.7
	o		9.7
	p		9.7
	q		9.7
	r		9.7
	s		9.7
	t		9.7
	u		9.7
	v		9.7
	w		9.7
	x		9.7
	y		9.7
	z		9.7

12.55
H. 2.2.X₂
X₂

2.7 2.3 2.2 2.25 2.20 2.15

Tuesday, June 2, 1909

Præsepe and North Polar Sequence.
Means of Measures on AC Plate T'

AC 9483	AC 9498	AC 9483	AC 9498
Polar Seq.	Polar Seq.	Polar Seq.	Polar Seq.
(1) (2) (3)	(1) (2) (3)	(1) (2) (3)	(1) (2) (3)
a 0.83 27, 13, 13	187 10 27 13	a 5.45 15 15 10	6.32 03 03 07
B 2.63 07 03 03	3.97 12 03 02	b 5.97 12 03 03	6.72 12 07 08
C 3.98 27 13 27	5.30 10 15 15	c 6.07 17 08 02	6.93 12 07 08
D 5.03 13 02 02	5.98 12 02 03	d 6.33 15 07 13	6.98 12 03 02
E 5.00 10 10 00	6.13 12 12 03	e 6.78 15 17 05	7.60 . a .
F 5.55 05 00 15	6.53 12 07 08	f 7.35 15 10 15	8.40 15 20 15
G 5.73 00 03 02	6.70 . a .	g 6.98 15 07 02	7.75 . a .
a' 5.87 27 13 27	6.57 13 03 07	h' 7.18 15 17 03	7.78 15 17 03
a'' 6.15 . a .	6.92 03 02 12	h'' 7.35 15 15 10	7.82 17 17 02
a''' 6.36 07 06 11	7.22 18 12 03	h''' 7.53 12 12 02	8.17 12 . a .
a'''' 6.53 10 03 02	7.48 12 03 07	h'''' 7.97 12 03 12	8.67 12 03 02
a''''' 7.38 13 07 12	7.75 . a .	h''''' 8.48 17 08 02	9.07 23 27 13
b' 7.66 13 07 07	8.50 10 00 10	k' 9.13 13 13 07	9.53 07 13 07
b'' 8.33 13 07 07	8.78 13 03 12	k'' 9.33 17 03 13	9.43 17 13 27
b''' 8.31 12 06 04	8.57 13 13 03	l 9.37 17 13 23	9.67 13 17 23
c' 8.56 13 09 04	9.01 . a .	m 9.67 17 17 13	9.93 07 13 07
c'' 8.92 15 08 03	9.53 13 13 07	n' 9.57 17 13 13	9.83 07 13 07
c''' 9.35 10 05 05	9.80 10 00 00	n'' 9.67 13 13 13	10.13 07 13 13
c'''' 9.62 13 02 03	9.23 13 07 07	o 9.80 10 10 10	9.9 . a .
d 9.65 13 05 15		p 9.80 10 10 10	9.7 . a .
e 10.03 13 07 07		q 9.80 10 10 10	9.7 . a .
f 9.2 . a .		r 9.90 10 10 10	10.2 . a .
g 9.2 . a .		s 9.90 10 10 10	10.2 . a .
h 9.2 . a .		t 9.90 10 10 10	10.2 . a .
i 9.2 . a .		u 9.90 10 10 10	10.2 . a .
j 9.2 . a .		v 9.90 10 10 10	10.2 . a .
k 9.2 . a .		w 9.90 10 10 10	10.2 . a .
l 9.2 . a .		x 9.90 10 10 10	10.2 . a .
m 9.2 . a .		y 9.90 10 10 10	10.2 . a .
n 9.2 . a .		z 9.90 10 10 10	10.2 . a .

+236
-282
60 7 1/2 3
± 0.18+134
-129
45 2 1/2 3
± 0.55

2.45

Wednesday June 9, 1909

North Polar Sequence

Scale 0 Scale Measures in Plate with direct exposure

AI 7786

Exp. +90°

Exp. +85°

	1	2	3	1 reman	1	2	3	
A	1.44	.	.	1.5 1.45 0.1	2.0	.	.	2.0 2.00 0.10
B	5.7	.	5.6	5.7 5.67 0.10	5.8	6.2 5.9 5.8		5.8 5.82 0.100
C	6.8	7.471	7.5	6.9 7.0 7.5 7.52	6.8	7.471	6.9	7.0 6.95 2.10
D	7.7	8.077	7.8	7.75 .10.		7.6976	7.6	7. 7.60 .00.
E	7.7	8.380	7.9	7.95 .01.		8.683	7.8	8.05 .32.
F		8.986	8.1	8.35 .22.		8.784	8.3	8.35 .01.
G		9.087	8.6	8.65 .10.		9.087	8.6	8.65 .10.
a'		8.784	8.5	8.45 .01.		8.885	8.3	8.40 .11.
a ²		9.289	8.7	8.80 .11.		9.087	8.8	8.75 .10.
a ³		9.693	9.1	9.20 .11.		9.693	8.9	9.10 .22.
a ⁴		9.794	9.3	9.35 .01.		9.895	9.3	9.40 .11.
a ⁵		9.895	9.8	9.65 .12.		10.198	9.9	9.85 .01.
b'								
b ³								
b ²								

$$\begin{array}{r} +13 \\ -15 \\ \hline 27.28 \\ \hline \pm 1.04 \end{array}$$

$$\begin{array}{r} +11 \\ -11 \\ \hline 28.22 \\ \hline \pm 1.09 \end{array}$$

Wednesday June 9, 1909

North Polar Sequence

Scale 0

AI 7786

Exp. +80°

	1	2	3	1 reman	
A	3.4	.	.	3.5 3.45 0.1	
B	5.8	6.2 5.9 5.8		5.9 5.85 0.101	
C	6.4	6.865	6.3	6.4 6.40 0.110	
D	6.9	7.693	7.0	6.9 7.02 1.301	
E		7.784	7.2	7.30 .11.	
F		exp. exp.			
G		8.582	7.9	8.05 .21.	
a'		8.380	7.8	7.90 .11.	
a ²		8.784	8.5	8.45 .01.	
a ³		8.986	8.7	8.65 .01.	
a ⁴		9.087	8.8	8.75 .10.	
a ⁵		9.794	9.6	9.50 .11.	
b'		9.895	9.8	9.65 .12.	
b ³					
b ²					

$$\begin{array}{r} +16 \\ -11 \\ \hline 29.25 \\ \hline \pm 0.93 \end{array}$$

3,10

H.D.S.

Wednesday June 9, 1907

North Polar Sequence.

Scale II

aI 7792

Exp +90°

Exp +85°

	1	2	3	1. remove.	1	2	3	1. remove.
a	4.4	3.9	2.2	4.4	4.3	4.3	0.1	4.3
b	5.9	5.9	0.0	5.9	6.5	6.2	5.7	5.8
c	6.7	6.6	6.7	6.7	7.2	6.9	6.8	6.7
d	6.8	7.2	6.9	6.8	7.1	6.8	6.8	6.9
e	7.0	6.9	7.0	7.0	7.1	6.8	6.8	7.0
f	7.7	7.7	7.7	7.7	8.2	7.6	7.6	8.2
g	8.4	8.1	8.9	8.0	8.4	8.1	7.8	8.4
a'	7.7	7.7	7.7	7.6	8.2	7.7	7.7	8.0
a ²	8.6	8.3	8.2	8.2	8.5	8.2	7.7	8.0
a ³	8.7	8.4	8.5	8.4	8.7	8.4	8.7	8.5
a ⁴	8.9	8.6	8.8	8.7	8.9	8.6	8.6	8.6
a ⁵	9.1	9.4	9.5	9.4	9.4	9.1	9.5	9.3
b'	9.8	9.7	9.6	9.5	9.7	9.4	9.7	9.5
c ²	10.2	10.3	10.3	10.1	10.1	9.8	10.1	9.9
f ²								
							</	

$$\frac{+16}{20} = \frac{21}{20} = 1.05$$

The images of A. B. C.
D. & E. are very poor
on the exp. +90°

Wednesday June 9, 1909.

North Polar Sequence

Scale O

aI 7792

Exp +80°

	1	2	3	1 remove			
A	1.0			1.0	1.00		0.10
B	5.1			5.2	5.15		1.10
C	6.2	6.5	6.0	6.2	6.15		0.020
D	6.8	7.0	6.9	6.8	6.88		1.101
E		7.6	7.3	7.0	7.45		1.102
F		7.9	7.8		7.65		0.1
G		7.9	7.6		7.65		0.1
a'		8.3	8.0		7.90		1.1
a ²		8.6	8.3		8.10		2.2
a ³		8.7	8.4		8.25		3.1
a ⁴		8.8	8.5		8.55		1.0
a ⁵		9.0	8.9		9.25		1.0
b'		9.8	9.7		9.60		1.1
c ²		10.2	10.1		10.00		1.1
c ²		10.2	10.1		10.00		1.1

$$\frac{+16}{20} = \frac{21}{20} = 1.05$$

3,40

Score 0

AI 7801

$$E_{xp} + 90^\circ$$

1 2 3

1. Косово

A	1.7	1.5	1.2
B	5.6		5.6
C	6.6	6.8	6.5
D	7.0	7.8	7.3
E		7.9	7.6
F		8.1	8.2
G		8.7	8.4
H		8.7	8.4
I		8.7	8.4
J		8.7	8.4
K		8.7	8.4
L		8.7	8.4
M		8.7	8.4
N		8.7	8.4
O		8.7	8.4
P		8.7	8.4
Q		8.7	8.4
R		8.7	8.4
S		8.7	8.4
T		8.7	8.4
U		8.7	8.4
V		8.7	8.4
W		8.7	8.4
X		8.7	8.4
Y		8.7	8.4
Z		8.7	8.4

$$\begin{array}{r} +11 \\ -16 \\ \hline 30 \overline{) 27} \\ \underline{+090} \end{array}$$

4.00

N. S. S.

 $\text{Exp} + 85^\circ$

1 2 3

1.9		1.9	1.9
5.1		5.0	5.0
6.6	6.6	6.4	6.5
7.0	7.8	7.0	7.2
	7.8		7.5
	8.5		8.5
	8.4		8.3
	8.6		8.1
	8.7		8.5
	9.1		9.5
	9.4		9.6
	9.7		
	9.8		
	9.9		
	10.0		

$$\begin{array}{r} +14 \\ -14 \\ \hline 28 \overline{) 28} \\ \underline{\pm 100} \end{array}$$

4.00

Seneca

$$\exp + 80^{\circ}$$

1 reman.

1	3.5	3.0	3.25	3.1
2	5.4	5.0	5.35	5.1
3	6.7	6.6	6.65	6.7
4	7.1	7.0	7.12	7.1
5	7.7	7.5	7.55	7.7
6	8.3	8.0	8.25	8.3
7	8.8	8.5	8.65	8.8
8	9.3	9.0	9.15	9.3
9	9.8	9.5	9.65	9.8
10	10.3	10.0	10.15	10.3
11	10.8	10.5	10.65	10.8
12	11.3	11.0	11.15	11.3
13	11.8	11.5	11.65	11.8
14	12.3	12.0	12.15	12.3
15	12.8	12.5	12.65	12.8
16	13.3	13.0	13.15	13.3
17	13.8	13.5	13.65	13.8
18	14.3	14.0	14.15	14.3
19	14.8	14.5	14.65	14.8
20	15.3	15.0	15.15	15.3

$$\begin{array}{r} +21 \\ -19 \\ \hline 30 \overline{)40} \\ \underline{10} \end{array}$$

4. 10

Wednesday, June 9, 1909

North Star Sequence
Distances from Center of Plate

AI 7786

+90° +85° +80°

A	6al	10bl	24b
B	8ra	16br	29br
C	8la	20tl	34b
D	6la	16bl	30b
E	6ra	15br	28br
F	12ar	6br	19b
G	14ar	7r	18br
a	5al	11tl	24b
a ²	14a	4l	16tl
a ³	10a	5b	19b
a ⁴	12a	5br	18b
a ⁵	3a	11b	24b
b	like A		
b ²	" "		
b ³	like F		

AI 7792

+90° +85° +80°

3a	17a	31a
14ar	24ar	11ar
10ar	18ar	32ar
4ar	15ar	29ar
13ar	26ar	41ar
11al	24al	38al
15al	27al	41al
3a	16a	31a
10l	18al	31al
3al	20al	34al
11al	24al	38al
8a	21a	41a
3al	16a	30a
like F		

Wednesday, June 9, 1909

North Star Sequence
Distances from Center of Plate

AI 7801

+90° +85° +80°

A	6ar	8b	22b
B	16a	3al	11b
C	15ar	9r	18br
D	11ar	9ab	20br
E	15a	2al	13b
F	9al	11bl	21bl
G	12al	13bl	23bl
a	6ar	8b	22b
a ²	4bl	15bl	28b
a ³	6al	10bl	24b
a ⁴	8al	11bl	23bl
a ⁵	9a	4b	18b
b	5al	9b	23b
b ²			
b ³	like F		

Saturday June 19, 1907.

North Polar Sequence.

Scale M I 36085 For exposure. First and last full aperture. Others with credit. apertures in different positions.

	Exp(a)		Exp(b)	Exp(c)		Exp(d)		Exp(e)	
	1	2	1	2	1	2	1	2	1
a ¹	t.f.	t.f.	7.2	6.36	6.96	t.f.	t.f.	2.42	2.6 a.
a ³	2.7	2.9	7.6	7.7	7.3	2.83	3.0 a.		
a ⁵	3.8	4.0	8.3	7.8	7.8	4.14	4.3 a.		
b ¹	4.9	4.9	8.7	t.f.	8.1	8.6	4.6	4.9	4.85 o.i.
b ²	5.1	5.6	9.4	8.7	8.7	9.2	5.7	5.8	5.85 10
c ¹	5.8	5.8	9.8	9.0	9.2	5.6	5.8	5.8	5.80 00
c ²	5.9	6.1	9.9	9.5	9.8	6.4	6.6	6.6	6.60 00
c ³	6.6	6.8	10.8	9.7	10.2	6.7	6.9	6.9	6.90 20
c ⁶	6.5	6.7	10.1	9.7	10.2	6.7	6.9	6.9	6.95 00
d ¹	6.7	6.9		10.1	10.3	6.9	7.3	7.20	7.20 11
d ²	6.7	6.9		10.0	n.s.	6.8	7.3	7.20	7.20 11
e	t.f.	7.5							
f ¹	7.8	14.13							
f ²	8.2	10.2							
f ³	8.7								
g ¹	8.7								
h ¹	9.2								
i	9.6								
k ¹	9.7								
k ²	9.9								
k ³	10.0								
k ⁴	10.2								

H.S.B.

0.55

The images of exposure (d) (aperture near edge of plate) are extremely poor.

Saturday June 19, 1907

North Polar Sequence

36085 I 350685 Prismatic Companion

	Exp(a)		Exp(b)	Exp(c)	
	1	2	1	2	1
a ¹	t.f.	7.8	t.f.	8.0	7.9
a ³		8.5		8.6	8.3
a ⁵		9.2		9.7	9.2
b ¹		9.6		9.9	9.7
b ²		10.4		10.2	10.3
c ¹		12.0		10.2	n.s.
d	4.0	4.1	4.15	4.25	4.1

1.10

H.S.B.

Saturday June 19, 1907

North Polar Sequence

Scale M

T 36085 repeated

	Exp. (a)		p. 150	Mean			Exp. (b)	p. 150	Mean	
	1	2					1	2		
a'	t.f.	t.f.					4.3	7.2	4.25	05.05
a ²	2.9	3.1	2.9	3.0	10.0		7.8	7.6	7.70	10.0
a ⁵	3.9	4.1	t.f.	4.0	10.0		8.4	8.3	8.35	05.05
b'	4.7	4.9	5.0	4.8	10.0		8.7	8.7	8.70	10.0
b ²	5.5	5.7	5.7	5.7	00.50		9.6	9.4	9.50	10.0
c'	5.5	5.7	5.6	5.6	10.0		9.7	9.8	9.75	05.05
c ²	6.0	6.2	6.5	6.3	2.1		9.8	9.9	9.85	05.05
c ³	6.6	6.8	6.8	6.8	00.60		n.s.			
c ⁴	6.5	6.7	6.8	6.7	00.60		10.1	10.1	10.1	10.0
c ⁵	6.8	7.0	7.0	6.9	00.60		n.s.			
d	6.9	7.1	7.0	7.0	10.6					16.22 2.05
e	7.4	7.7	7.5	7.4	05.05					
f'	7.7	7.8	7.7	7.7	05.05					
f ²	8.3	8.2	8.2	8.2	05.05					
f ³	8.7	8.7	8.7	8.7	10.0					
f ⁴	8.8	8.7	8.7	8.7	05.05					
g	9.1	9.2	9.1	9.1	05.05					
h	9.4	9.6	9.5	9.5	10.0					
h'	9.8	9.7	9.7	9.7	05.05					
h ²	9.9	9.9	9.8	9.8	05.05					
h ³	10.1	10.0	10.0	10.0	05.05					
h ⁴	t.f.	10.2	10.2	10.2	10.0					

 $\frac{10.21}{2.05}$

Saturday June 19, 1907.

North Polar Sequence

Scale M

T 36085

Polaris Comparison (repeated)

	Exp. (a)		p. 150	Mean			Exp. (b)	p. 150	Mean			Exp. (c)	p. 150	Mean		
	1	2					1	2				1	2			
a'	6.7	6.9	6.8	6.8	10.0		7.7	7.6	7.70	10.0		8.1	8.0	8.05	10.0	
a ²	7.7	7.8	7.7	7.7	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
a ³	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
a ⁴	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
b'	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
b ²	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
c'	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
c ²	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
c ³	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
c ⁴	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
d	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
e	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
f'	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
f ²	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
f ³	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
f ⁴	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
g	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
h	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
h'	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
h ²	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
h ³	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	
h ⁴	8.1	8.1	8.1	8.1	10.0		8.1	8.1	8.10	10.0		8.1	8.1	8.10	10.0	

1.40

H. J. S.

1.40

Saturday June 19, 1907

North Polar Sequence
T 36085 Primatic Companion repeated

p. 151 Exp (a)	Exp (b)	Exp (c)	p. 151
4.15 a	3.941 4.12 4.042	4.2425 4.143	4.1 4.20 4.25
7.8 a ¹	7.8	7.9 8.0	7.9 7.9
8.5 a ³	8.3	8.6 8.6	8.6 8.3
9.2 a ⁵	9.5	9.6 9.7	9.3 9.2
9.6 b ¹	9.6	9.9 9.9	9.7 9.7
10.1 b ²	10.1	10.1 10.2?	10.1 10.3?
11.0 c ¹	10.1	10.1 10.2?	n.s.
c ²	n.s.	n.s.	n.s.
c ⁶	n.s.	n.s.	n.s.

Mean (a)

a	4.12 03 02
a ¹	7.80 0 0
a ³	8.40 1 1
a ⁵	9.35 2 1
b ¹	9.60 0 0
b ²	10.10 0 0
c ¹	10.05 0 1

Mean (b)

4.22 02 03
7.95 1 0
8.60 0 0
9.65 0 1
9.90 0 0
10.15? 1 0
10.15? 1 0

Mean (c)

4.22 02 03
7.90 0 0
8.45 2 1
9.25 1 0
10.20 1 1
.
.

1.45
H.S.S.

3.50

Saturday June 19, 1907.

North Polar Sequence
Scale IV C 17763 with & without Screen

C ¹	Exp (a)	Exp (b)
C ²	2.18 3.0	5.4 5.6 5.5 5.55 0.1
C ³	3.8 4.0	6.8 7.0 6.6 6.80 2.2
C ⁶	3.8 4.0	6.8 7.0 7.1 7.05 0.1
C ⁷	4.2 4.4	7.6
d	3.9 5.1 5.0 5.05 1.0	7.9
e	4.8 5.0 4.7 4.85 2.1	8.3
f	5.5 5.7 5.6 5.65 1.0	8.7
g	6.2 6.2 6.6 6.40 2.2	9.3
h	6.8 7.0 7.4 7.20 2.2	9.9
i	7.8 7.8 7.8 7.8 0	10.2?
j	8.3	
k	8.7	
l	8.8	
m	9.8	
n	9.6	
o	10.0	
p	10.1	
q	n.s.	
r	10.2?	

too faint to
measure.
Reexamined
June 21, 1907+8
-5
10/13
± 130+3
-3
6/6
± 100

Measure very difficult

4.00
H.S.S.

4100

Saturday June 19, 1909

North Polar Sequence

Scale P C 17763 repeated

	exp (a)	exp (b)
C ¹	4.4 4.4 4.5 4.35 0.1	6.5 6.2 2 6.2 2.
C ²	5.4 5.1 5.2 5.15 1.0	7.0 6.7 6.9 6.80 1.1
C ³	5.7 5.4 5.7 5.55 2.1	7.4
C ⁶	5.9 5.6 5.8 5.70 1.1	7.6
C ⁷	6.0 5.7 5.9 5.80 1.1	7.7
d	6.1 5.8 5.9 5.85 0.1	7.8
e	6.4 6.1 6.2 6.15 1.0	8.2
f ¹	6.7 6.4 6.8 6.60 2.2	9.0
f ²		9.6
g ³		10.1
h		
i		
i ¹		
i ²		
i ³		
i ⁴		
L		

Measures still more difficult than with Scale M.

410

H. S. S.

Saturday, May 14, 1910

North Polar Sequence

Estimates of Brightness of Star Groups in Series of Prismatic Comparisons

MC 81

L d 3l loe l3 f'	10.44	10.53	10.69	10.55	11.02	14
m f'1 m m1 f'	11.09	11.42			11.26	17.6
m f'2 m m1 f'	11.19	11.42			11.30	11.12
ap f'2 a p p2 g	12.12	12.10			12.11	0.1 0.1
po f'2 o o1 f'	10.19	11.42			11.30	11.12
q g'1 g q3 h q1 i	12.40	12.35	12.77		12.51	11.14 26
r g2 r n2 h n2 o2 24 K	12.60	12.45	12.87	12.85	12.69	0.24 18.16
s g2 s a2 h i2 2 2 K	12.80	12.65	13.07	13.05	12.89	0.24 18.16
t i1 t t1 K	12.97	13.15			13.06	0.9 0.9
u f'3 u u1 g	12.32	12.20			12.26	0.6 0.6
v K'1 v v o1 2 v2 K ³	13.35	13.40	13.55		13.48	0.8 0.8 5
w i3 w n o K' w1 K ²	13.17	13.25	13.30		13.24	0.7 0.7 0.8

f² prism amp. has star image abt. to it

Comparisons difficult on account of sharpness of p.c.

For earlier estimates on paper print from enlargement of this plate see pp. 158, 159

The differences in appearance of images would affect scale measures quite as much as estimates, and would doubtless influence different persons differently, and the same person differently at different times. The only safe way seems to be to apply a correction for each set of measures, based on star brightness.

9 15

Monday, January 31, 1910

Estimates of Brightness of Primaries Compared with
in Place Sequence.

Plate MC 31 (16 inch Mitelson Telescope)

$\delta 1 h_p$	$p 4 p'$	
$d 3 m$	040	$t 1 K_p^3$
p	04p	$K^3 o v$
h_p	$p 3 p'$	p
$24 K_p$		$W 2 K_p^3$
$20 X_p$	$p 3 g p$	
$K^3 t$	$p 1 g$	
$p o v$	$p 1 z$	
$X^3 p$		
$K^3 h_p$		
$K 1 K_p$		

2. $K^3 f 3 z$
look up slit
in Cambridge

$p 2 f^3$	$2 1 K^2$
$p 5 g$	$K^2 1 t$
	$p 2 X$
	p
	$K^2 o W$
	p
$2 2 K_p$	
$K^3 o t$	$g 3 i p$
$K^3 1 X$	$2 3 i p$
$K^3 o W$	$2 1 i p$
	$i p 2 t$
	$i p 3 v$
$0 2 e p$	$i p 2 W$
$e p X o'$	

9 45

9 43

Monday, January 31, 1910

Estimates of Brightness of Stars in Place Sequence, Compared
with Primaries Compared

Plate MC 31

$K^3 1 W$	$g 1 g$	$f^3 5 u$
$W o K^2$	$g 3 h_p$	$u 2 g p$
$W 2 K_p^3$		$u 4 h_p$
h_p	$K^2 2 v$	
$3 m$	$d 1 o$	$g 3 i p$
$charts in$	$0 3 e_p$	$g 3 h_p$
Cambridge		$g p 2 g$
Shed.	$f^3 4 n$	
imp. certain	$2 0 g p$	$2 4 i p$
	$2 3 h_p$	$g 3 z$
		$2 4 h_p$
	$2 4 o'$	
	$p 5 p$	$g p 5 z$
	$K^3 t$	$2 1 i p$
	$K^2 1 t$	$2 1 h_p$
	$t 1 K^3$	
	$K^3 o t$	
	$g 2 u$	
	$2 1 h_p$	

10 15

Saturday, May 14, 1910

North Polar Sequence

Estimate of Brightness of star groups in
luminous of prismatic companions

MC 81 continued from page 157

g			
h	h 2 c'	8.61	8.61 ² a
i	i 3 c'	8.51	8.51 ² a
k'	c' 2 k' k' 2 c'	9.01 9.15	9.08 07 07
k ²	c' 3 k' k' 2 c'	8.91 9.15	9.03 12 12
k ³	c' 3 k' k' 3 d	9.75 9.84	9.80 05 04
k ⁴	d 4 k' k' 3 c	10.24 10.23	10.24 00 01
k ⁵	c' 3 k' k' 5 d k' 5 h	10.05 10.14 10.13	10.11 06 03 02
l	d 3 l l 1 e	10.44 10.43	10.44 00 01
m	f' 1 m m 3 f ²	11.09 11.22	11.16 07 06

Friday, May 28, 1910

North Polar Sequence

X MC 235^{prismatic} five exposures. First and last, full aperture; others with small aperture in different positions.Scale ^M X

Exp. 1	Exp. 2	Exp. 3	Exp. 4	Exp. 5
a'	1.7 1.9	1.7 1.9	1.7 1.9	1.7 1.9
a ²	2.8 3.0	2.8 3.0	2.8 3.0	2.8 3.0
a ⁵ time				
b'	3.7 3.9	3.7 3.9	3.7 3.9	3.7 3.9
b ²	4.8 5.0	4.8 5.0	4.8 5.0	4.8 5.0
c'	4.9 5.1	4.9 5.1	4.9 5.1	4.9 5.1
c ²	5.8 6.0	5.8 6.0	5.8 6.0	5.8 6.0
c ³	6.3 6.5	6.3 6.5	6.3 6.5	6.3 6.5
c ⁴	6.5 6.7	6.5 6.7	6.5 6.7	6.5 6.7
c ⁵	6.5 6.7	6.5 6.7	6.5 6.7	6.5 6.7
d'	5.0 5.2	5.0 5.2	5.0 5.2	5.0 5.2
d ²	6.7 6.9	6.7 6.9	6.7 6.9	6.7 6.9
e'	6.1 6.3	6.1 6.3	6.1 6.3	6.1 6.3
e ²	6.9 7.1	6.9 7.1	6.9 7.1	6.9 7.1
e ³	7.7 7.9	7.7 7.9	7.7 7.9	7.7 7.9
f ²	8.1 8.3	8.1 8.3	8.1 8.3	8.1 8.3
f ³	8.7	8.7	8.7	8.7
g	9.7	9.7	9.7	9.7
h	9.7	9.7	9.7	9.7
i	8.8	8.8	8.8	8.8
k'	10.0	10.0	10.0	10.0
k ²	9.7	9.7	9.7	9.7
k ³				

Ac companion

A 1.9 X
9.32.0
9.62.1 feet each
9.5

2.8 X

Thursday, June 9, 1910

North Polar Sequence.

Cepheid

Estimates of brightness of supplementary stars near North Pole

Magnitudes of comparison stars used:-

 α 10.14 - ϵ 10.53 - ζ 10.99 - η 11.52 - θ 11.92 - γ 12.30

No.	α at top	ϵ at top	ζ at top	η at top	θ at top
No. 40	AC 2519	AC 4737	AC 5441	AC 5465	AC 5544
75	7	10.9	10.9	10.8	11.0
85	10	12.2	12.17	11.8	7
197	10.8	10.7	10.6	10.7	10.9
227	10.5	10.4	10.5	10.6	10.5
362	10.5	10.5	10.5	10.6	10.5
386	10.5	10.4	10.3	10.5	10.4
408	11.4	11.0	11.0	11.0	11.1
68	11.7	11.6	11.4	11.6	11.7

No.	α at top	ϵ at top	ζ at top
No. 40	AC 5638	AC 6308	AC 8756 longer exp.
75	10.9	10.9	
85	7	10.9	
197	10.9	10.8	
227	10.5	10.4	
362	10.6	10.7	
386	10.5	10.5	
408	11.3	11.17	
68	11.6	11.7	

Thursday, June 9, 1910

North Polar Sequence

Cepheid

Brightness of Supplementary stars east

No.	α at top	ϵ at top	ζ at top	η at top
No. 40	I 24192	I 3227	I 34324	I 32284
68	11.7	11.6	11.6	11.5
75	10.9	10.9	10.9	10.9
85	12.3	12.2	12.2	12.3
197	10.7	10.8	10.8	10.7
227	10.8	-	-	-
362	10.5	10.5	10.5	10.5
386	10.3	10.5	10.4	10.4
408	10.9	11.1	11.0	11.2

No.	α at top	ϵ at top	ζ at top	η at top
No. 40	I 24193	I 32284	I 34319	I 35398
68	11.4	11.6	11.4	11.5
75	10.7	10.8	10.9	11.2
85	12.2	12.2	12.2	12.3
197	10.9	10.8	10.9	10.9
227	12.0	-	-	-
362	10.7	10.6	10.6	10.5
386	10.6	10.6	10.6	10.7
408	11.3	11.3	11.4	11.3

Thursday, June 9, 1910

Estimate of brightness of No. 227 (supplementary)
Prismatic Compansus brand

<i>Plate 17</i>				
<i>MC 252 0^t</i>	10.6	10.52	11.10	10.52 <u>10</u>
<i>253 def.</i>				10.70 08
<i>348 0</i>	10.6			10.66 04
<i>354 0</i>	10.4			<u>10.60</u> <u>02</u>
<i>285 0</i>	<u>10.5</u>			2.48 +12
<i>173 12</i>	10.6	10.70	10.01	10.62 ± .006
<i>143 12</i>	10.7			
<i>174 12</i>	10.7			
<i>81 12</i>	10.8			

Mean 10.6¹ 09 09

Plates of long Exposure - Large Prisms
P. C. Skene

Plate	4				35365	10.6	0
	1				35398	10.6	0
I35399	0	10.6	10.66	100	35399	10.6	0
35737	0	10.7			35737	10.7	1
35797	12	10.7				10.62	

[illegible]

23. 29

M 8-196

MA 200

M 25 204

En. 2 along.

See next page See also
Birkbeck 29

Friday, June 10, 1910

Plates taken with 60. in Mt Wilson Reflectr
Remarks on quality, based on observations
recorded on page 167. (Plates 196, 200 and 204)

These plates all have their centres some
distance from the pole, about 6 mm on plate 200
and 204, and about 13 mm on plate 196. The
displacement is approximately on the meridian
of 2° . The greater part of the sequence is
approximately on the meridian 12° . The
displacement of the centre is, therefore, serious,
and results in poor images for many stars,
especially near 34, 38, 39, 40, 41, 42, 43. On plate 196
the above stars give extremely poor images. If
the displacement had been on the meridian
 12° , the result would have been an improve-
ment over that obtained with the pole exactly
at the centre.

Mem. Would it not be well hereafter to have
plates with telescopes giving small fields,
taken at 15° , Dec. = $+89^{\circ} 57'$ instead of at $+90^{\circ}$?

The secondary images on these plates are
usually comparable with star images near the
centre of the plates. This is true even of secondary
images near the edge. They are comparable in degree 20.

A large number of stars in the sequence, however,
being near the edge of the plates are comparable
with secondary images only with difficulty - degree 40.
The qualification entered at the right of distances of bright
stars on page 167 refers to actual comparability with stars
in sequence of similar brightness.

Saturday, June 11, 1910.

Copied

North Polar Sequence

Mt 20⁰Scale from
C 17493First set of images
First second
Scale rule

197	7.6	7.2	7.25	10	7.9
205	8.5	8.0	8.0	0	8.30 ± 3
227	8.6	8.3	8.45	20	8.85 ± 0
352	8.6	8.3	8.60	30	8.90 ± 0
386	8.7	8.6	8.75	21	9.05 ± 1
408	8.8	8.6	9.45	45	9.75 ± 1
16	8.8	8.4	9.05	34	9.40 ± 0
24	9.7	9.1	9.70	33	10.00 ± 0
28	1.9	1.6	10.25	56	10.55 ± 0
29	2.8	2.5	10.3	57	10.8
30	2.6	2.3	11.2	52	11.2
31	3.9	3.4	11.4	53	11.4
32	3.7	3.4	11.7	54	11.7
33	4.0	3.7	12.4	55	12.4
34	4.0	3.7	12.3	56	12.3
35	4.7	4.4	12.0	57	12.0
36	5.3	5.0	12.4	58	12.4
37	5.6	5.3	12.9	59	12.9
38	5.7	5.4	12.4	60	12.4
39	5.4	5.1	12.4	61	12.4
40	6.0	5.7	12.4	62	12.4
41	7.1	6.7	12.4	63	12.4

326

A.D.N.

Cpied

Saturday, June 11, 1910.

North Polar Sequence

Scale 1/493

M_N 20⁰ cont. from preceding page

	Second set of images				Third set of images			
	First head		Tail		First head		Tail	
197	6.8	7.1	7.1	7.1	6.7	6.8	7.0	
225	9.6	9.8	9.8	9.8	unpaired	unpaired		
227	6.7	7.0	7.0	7.0	6.7	6.6	7.0	
382	6.9	7.2	7.2	7.2	6.4	6.8	6.7	
376	6.7	6.9	7.0	7.0	6.7	6.8	7.0	
489	8.0	7.8	8.3	8.3	7.7	7.6	8.0	
16	4.4	4.7	4.7	4.7	4.2	4.3	4.5	
from 84	6.8	6.6	7.1	7.1	6.7	6.8	7.0	
28	9.3	10.0	9.8	9.8	9.2	9.5	9.8	9.65
29	9.9	10.4	10.3	10.3	9.8	10.1	10.7	10.40
30	10.9	10.9			6.	10.8		
27	7.9	9.5	9.5	9.5	8.8	9.1	9.3	9.20
31	11.8	8.1	8.1	8.1	11.6	6.1	6.1	6.1
32	12.2				11.9			
33	12.7				13.5			
34	13.8	diff.			13.3			
35	13.1				13.8			
36	13.1				13.1			
37	13.7				13.1			
38	13.7				13.1			

Second set of images
Unpaired

It is uncertain whether "head" or "tail"
set of images was beyond first. The marking used was that originally
found by H. L. on the plate and doesn't correspond with that on model.
The second mark on plate has been marked 1/4.

Saturday, June 11, 1910

North Polar Sequence

Estimate of faint stars in terms of
secondary images of bright starsM_N 200Nos 38, 39, 40, 41, 42, ⁴³, not comparable with sec. im.

Comparisons with Images 2

44	Between 408 and 27	Estimated too great		
45	408 - , 1 27	Not comparable		
46	(28) 4, 1 (28)	difficult	12.32	12.20 12.26
47	(28) 1, 2 (29)	"	12.40	12.45 12.42
48	(28) 3, 1 (29)	"	12.60	12.55 12.58
49	(28) 3, 0 (29), 4 (30)	"	12.60	12.65 12.47 12.59
50	(29) 2, 3 (30)		12.85	12.57 12.71
51	(29) 4, 1 (30)		13.05	12.77 12.81
52	(30) 3, 1 (31)		13.17	13.15 13.16
53	(31) 1, 1 (32)		13.35	13.30 13.32
54		Image defective		
55	(32) 3, 0 (33), 2 (34)		13.70	13.5 13.7 13.77
56	(32) 1, 2 (33)		13.50	13.55 13.52
57	n.s.			
3	54a (32) 1, 2 (33)		13.50	13.55 13.52
4	55a (32) 4, 0 (33), 2 (34)		13.80	13.7 13.87 13.81
5	56 (33) 3, 1 (34)		14.05	13.97 14.01

North Polar Sequence

M H 210 Cont,

Companions with Lungs $\frac{2}{3}$

46	(408) - , 0 (27)	3 (28)	extremely difficult (271)	Mean	20.1
47	(27) 1, 1 (28)		12.02 12.20	12.11 09 09	12.26 12.26 15.16
48	(27) 1, 1 (28)		12.02 12.26	12.11 09 09	12.42 12.32 15.19
49	(28) 1, 2 (29)		12.40 12.45	12.42 02 03	12.58 12.50 02.01
50	(28) 2, 1 (29)		12.50 12.55	12.52 02 03	12.59 12.62 10.01
51	(28) 4, 0 (29), 2 30		12.70 12.65 12.67	12.68 02 03	12.91 12.80 12.11
52	(32) 2, 2 (31)		13.07 13.05	13.06 01 01	13.16 13.11 05.00
53	(32) 3, 0 (31) 2 (32)		13.17 13.25 13.20	13.21 04 04	13.32 13.26 05.00
54	24,				
55	(32) 1, 3 (33)		13.50 13.45	13.48 02 03	13.52 13.50 02.00
56	(33) 4, 0 33, 2 (34)		13.80 13.75 13.87	13.81 01 02 06	13.77 13.79 02.00
54u	(31) 2, 1 (32)		13.45 13.30	13.38 07 08	13.52 13.45 07.01
55a	(32) 4, 1 (32)		13.60 13.65	13.72 08 07	13.81 13.76 09.00
55b	(32) 4, 0 (33), 3 (34)		13.80 13.75 13.77	13.77 03 02 00	13.82 13.89 12.12

$$\begin{array}{r} \text{Sum (3)} \quad \text{Sum (2)} \\ -103 \quad +104 \\ +02 \quad -02 \\ \hline 12 \quad -101 \quad -102 \\ \hline -0.084 \quad +0.085 \end{array}$$

The average difference of companions
depending upon Image (2) and (3)
is 0.169 hundredths (Image (2) brighter)

North Polar Sequence

Caption

Scale P

Scale measured on M H 210⁴

Images (2), repeated (see page 163)

Image	Scale	Mean	Comp. Mean
197	6.6 6.3 6.6 6.45 1.2	5.75 35 6.10 35 35	6.22 6.44 2.1
225	- 7.8 7.8 .a	7.8 07 7.80 07 07	7.82 7.84 0.4
227	6.6 6.3 6.5 6.40 1.1	6.30 05 6.35 05 05	6.47 6.39 0.1
362	6.7 6.4 6.5 6.45 0.1	6.40 02 6.42 03 02	6.54 6.46 0.2
386	6.6 6.3 6.7 6.50 2.2	6.25 12 6.38 12 13	6.50 6.42 0.1
408	- 7.4 7.4 .a	6.85 (6.77) 7.03 27 33 03	7.15 7.07 0.2
16	4.7 4.4 4.4 4.40 0.0	4.25 01 4.32 08 07	4.44 4.36 0.3
24	6.2 5.9 6.0 5.95 1.0	5.85 05 5.90 05 05	6.02 5.94 0.1
28	- 7.9	7.9 07 7.90 07 07	7.94 7.94 0.4
29	8.4	8.5 05 8.45 05 05	8.44 8.44 0.9
30	8.5	8.3 10 8.40 10 10	8.44 8.44 0.6
31	8.7	8.9 10 8.80 10 10	8.84 8.84 1.4
32	9.3	9.1 10 9.20 10 10	9.24 9.24 0.6
33	9.2	9.3 05 9.25 05 05	9.24 9.24 0.9
34	9.8	9.8 00 9.80 00 00	9.84 9.84 0.4
35	9.8	9.9 05 9.85 05 05	9.84 9.84 0.9
36	9.8	10.0 10 9.90 10 10	9.94 9.94 1.4

$$\begin{array}{r} +35 \\ -105 \\ \hline 171 -20 \\ -04 \end{array}$$

$$\begin{array}{r} +125 \\ -35 \\ \hline 171 -20 \\ -04 \end{array}$$

Images measured on the images 0.4² fainter
than on page 1.63. Thus, for, about 0.4² from
of 197 and 408 (mean edge, discordance apparently
coordinate) and 34, 35, 36 (at limit of visibility) omitted, difference
is 0.169 hundredths (Image (2) brighter).

$$\begin{array}{r} +35 \\ -35 \\ \hline 171 -20 \\ -04 \end{array}$$

Wednesday, June 15, 1910.

North Polar Sequence.

Copied

MC 114

Scale from
C 17493

Star images

Scale 1 Scale 2

Scale 2

Prismatic Comparisons.

Scale 1 Scale 2

Scale 2

c'		227	
c ²		b 10.5	
c ³		m 11.0	
c ⁴		n 11.2	
c ⁵		s 11.5	
c ⁶	2.8	f 12.2	
c ⁷	4.9	g 12.8	
d	2.8	h 13.1	
e	5.0	k 12.9	
f	5.9	l 13.1	
f ²	6.6	m 12.9	
f ³	7.2	n 13.6 F	
g	7.9	o 13.7 F	
h	8.5	8.4 8.6 20 20	
i	8.6	8.9 8.5 8.7 20 20	
k	8.9	9.2 9.2 9.2 20 20	
k ²	8.9	9.2 9.4 9.3 20 20	
k ³	9.8	10.1 10.2 10.15 25 25	
k ⁴		10.6	
k ⁵		10.3	
197	5.8	6.1	
362	5.7	6.0	
376	5.0	5.3	
407	6.8	7.1	

Haler makes star images lighter than all diff. with a camera

1.10
A.D.H.

Wednesday, June 15, 1910.

North Polar Sequence.

Copied

252

MC 115

Scale from
C 17493

Star images

Scale 1 Scale 2

Scale 2

Prismatic Comparisons

Scale 1 Scale 2

Scale 2

197	6.1	6.4	l 12.3
227			m 10.7
362	6.2	6.5	n 11.1
376	5.9	6.2	o 11.4
407	6.9	7.2	p 12.0
c'			q 12.6
c ²			r 12.9
c ³	2.9	3.2	s 12.9
c ⁴	3.6		t 12.9
c ⁵	3.8	4.1	u 12.8
c ⁶	4.7	5.0	v 13.2
c ⁷	5.2	5.5	w 13.5
diff	d 4.7	5.0	x
e	5.8	6.1	
f	6.3	6.6	
f ²	7.4	6.7	
f ³	7.6	7.8 7.9	
g	8.3	8.6 8.1 8.35 25 25	
g ²	8.8	8.8 8.7 8.7 20 10	
g ³	8.8	8.6 8.8 8.7 20 10	
h	8.8	8.6 8.8 8.7 20 10	
h ²	8.9	9.2 9.4 9.3 20 10	
h ³	9.0	9.3 9.6 9.45 25 25	
h ⁴	9.1	10.9 5 9.75 25 25	
h ⁵	9.5	9.8 10.1 9.95 15 15	
h ⁶	10.3		

unmeasured -
very orange
not on faint.

3.16

A.D.H.

Stars brighter than h have marked halos and have different in mean

Sat. June 18.

f 2.65 7.0 7.1

Repeat; f 3 probably

measured.

3 determined June 22

reading probably

1 magnitude out

12.20

0.10

Wednesday, June 15, 1910.

North Polar Sequence.

Copied
leads from
C 17493

MC 175

Star images

Leads Leads

Prismatic Companions

Leads Leads

197	8.6	8.9	8.7	8.80	8.1	3.9	4.2
227				8.2	5.5	5.8	
362	8.4	8.7	8.5	8.60	8.2	3.7	4.1
386	7.9	7.8	8.2	8.4	12.8		
408	8.8	9.1	9.0	9.05	8.5	12.7	
C ¹	5.8	6.1	6.1	6.1	12.9		
C ²	6.7	6.7	7.0	7.0	13.4		
C ³	6.9	6.9	7.2	7.2	13.5		
C ⁴	5.4	5.7	5.7	5.7	13.6		
C ⁵	6.5	6.8	6.8	6.8	14.0		
C ⁶	7.5	7.7	7.8	7.8	14.2		
C ⁷	7.0	7.5	7.3	7.3			
d	7.7	7.8	8.0	8.0			
e	7.7	7.7	8.0	8.0			
f ¹	8.3	8.6	8.7	8.65			
f ²	8.9	9.2	9.5	9.35			
f ³	9.5	9.8	9.8	9.80			
g	10.6						
h	10.8				12.90		
i	10.9				12.75		
h ¹	11.8						
h ²	11.8						
h ³	11.8						
h ⁴	13.6						

3.40 Lines brighter than f¹ have marked leads and are difficult to measure.
A.D.H.

Thursday, June 16, 1910

North Polar Sequence.

Estimates on Print from Photograph by
Franklin Adams ("Plate 226") repeated.
(See page 174)
18th at top

A-B-C-D-E-2-a'-3-F-3-h-0-a³a³ 2 a⁴a⁴ 4 a²a² 1 b¹f¹ 3 b²f² 0 a⁵a⁵ 0 c¹c¹ 4 c²c² 4 c³c³ 2 c³c³ 4 c⁵c⁵ 0 d

d 5 e

e 4 f¹f¹ 5 f²

No magnify-
ing glass used
to this point.

f¹ 5 f²f² 5 f³f³ 3 g

g 4 h

h 0 i

i 5 K¹K¹ 5 K²K² 2 K³K³ 2 K⁴K⁴ 2 K⁵K⁵ 1 h

h 2 m

m 3 n

n 5 F

The print is poor in the region of c¹. Images of c⁶ and c⁷, which are included in this region, are too poor to estimate.

Thursday, June 16, 1910.

Copied
3.02

North Polar Sequence.

Scale from
C 17493

Star images

first second
scale scalesecond
scale

Prismatic Companions.

first second
scale scale

diff 197	7.8	8.9	8.1	h ⁴	11.1
227	.	.	.	h ⁵	11.3
diff 362	7.0	7.6	7.3	h	11.4
diff 386	6.9	7.6	7.2	m	11.7
408	7.8	7.5	8.1	n	12.3
c ¹	.	.	.	.	12.2
c ²	.	.	.	p	12.9
diff. c ³	4.2	4.5	g	13.3	
c ⁴	.	.	h	13.7	
c ⁵	.	.	t	13.7	
c ⁶	7.6	.	u	13.8	
diff d	5.8	6.1	r	n.s.	
e	6.0	6.3	or	.	
f ¹	6.9	7.0	7.2	.	
f ²	7.6	7.7	7.9	.	
f ³	7.8	7.8	8.1	.	
g	8.7	9.0	9.2	9.10	n.s.
h	9.1	9.4	9.9	9.15	n.s.
i	9.4	9.7	9.8	9.15	n.s.
j	9.7	10.0	10.0	10.00	n.s.
k ¹	9.8	10.0	10.15	10.15	n.s.
k ²	10.0	10.0	10.15	10.15	n.s.

12.12
0.10

Images on this plate slightly elongated.

All stars brighter than g have marked labels and are difficult to measure.

Thursday, June 16, 1910

Copied

North Polar Sequence.

Scale from
C 17493

Star images

first second
scale scalesecond
scale

Prismatic Companions

first second
scale scale

197	7.7	7.8	8.0	h ⁴	12.1
227	—	—	—	h ⁵	12.3
362	7.6	7.7	7.9	h	12.6
386	7.0	7.5	7.3	m	12.8
408	7.0	7.6	8.4	n	12.9
c ¹	3.6	.	8.9	o	13.0
c ²	5.0	.	5.3	p	13.8
c ³	5.8	.	6.1	q	13.9
c ⁴	—	—	—	r	n.s.
c ⁵	—	—	—	s	14.0
c ⁶	5.9	.	6.2	t	F
d	6.1	.	6.4	u	14.0
e	7.1	7.0	7.4	v	n.s.
f ¹	7.7	7.7	8.0	.	
f ²	8.6	8.7	8.8	8.80	n.s.
f ³	8.9	8.9	9.1	9.15	n.s.
g	9.7	9.9	9.9	9.95	n.s.
h	9.8	10.0	10.0	10.05	n.s.
i	9.8	10.4	10.25	10.25	n.s.
j	10.9	.	.	.	
k ¹	10.7	.	.	.	
k ²	11.9	.	.	.	

197	13.1	g	n.s.
227	12.9	h	
362	13.2	i	
386	13.1	k ¹	
408	13.6	k ²	
c ¹	9.9	10.2	10.20
c ²	.	.	n.s.
c ³	11.9	k ⁴	
c ⁴	12.3	k ⁵	
c ⁵	10.7	l	
c ⁶	12.0	m	
c ⁷	12.3	n	
a ¹	6.2	6.2	6.5
a ²	7.5	7.2	7.8
a ³	8.2	8.6	8.55
b ¹	9.0	9.4	9.35
b ²	10.0	10.4	10.35

Sat. June 18.

PCa³ 7.3 7.5 7.6
my poor mapStars brighter than e have marked labels and are difficult to measure.
Prismatic companions very hazy.

Saturday, June 18, 1910.

Copied

North Polar Sequence

Scale from
C 17493

MC 251

Star Images
First Second
Scale ScaleLegend
ScalePrismatic Comparisons
First Second
Scale Scale

197	9.5	9.8	9.7	9.45	12.7
227	—	—	—	—	12.6
262	9.0	9.3	9.8	9.55	12.9
386	9.0	9.3	9.5	9.40	13.22
408	9.9	10.1	10.2	10.15	defective
ℓ^1	5.9	—	6.2	—	13.3
ℓ^2	6.8	—	7.1	—	13.8
c^1	defective	—	—	—	13.9
c^2	7.8	7.7	8.1	—	14.0
c^3	7.9	8.0	8.2	—	n.s.
c^4	6.0	—	6.3	—	—
c^5	6.8	—	7.1	—	—
c^6	8.4	8.7	—	—	—
c^7	8.5	8.5	8.6	8.5	—
d	8.6	8.9	8.9	8.9	n.s.
e	8.8	9.1	8.8	8.95	15.5
f	9.5	9.8	9.8	9.8	n.s.
g	9.9	10.2	10.4	10.30	16.1
h	—	—	—	—	11.3
i	—	—	—	—	11.6
a^5	5.5	—	5.8	—	11.70 10.7
a^3	3.9	—	4.2	—	—

0.22

A.D.H.

Copied

North Polar Sequence

Scale from
C 17493

MC 292

Star Images
First Second
Scale ScaleLegend
ScalePrismatic Comparisons
First Second
Scale Scale

197	7.7	8.1	8.0	—	11.5
227	—	—	—	—	11.0
* 362	7.4	7.4	7.35	—	11.8
386	6.8	7.4	7.1	—	12.5
408	8.3	8.6	8.1	8.35	12.6
ℓ^1	before	—	—	—	12.7
ℓ^2	before	—	—	—	13.0
c^1	3.9	—	4.2	—	13.6 F
c^2	5.0	—	5.3	—	—
c^3	5.8	—	6.1	—	—
c^4	4.1	—	4.4	—	—
c^5	—	—	—	—	—
c^6	6.7	6.7	7.0	—	—
c^7	6.5	6.7	6.8	—	—
d	6.7	6.8	7.0	—	—
e	6.9	6.9	7.2	—	—
f	7.6	7.7	7.9	—	—
g	8.6	8.9	8.7	8.80	12.2
h	9.2	9.5	9.5	9.50	n.s.
i	9.6	9.9	9.9	9.90	n.s.
a^1	9.9	10.2	10.3	10.25	15.5
a^2	10.0	10.2	10.4	10.25	15.5
a^5	4.0	—	4.3	—	—

0.38

A.D.H.

Saturday, June 18, 1910.

Sat, June 18 400

Star 362 7.0 7.570

Reject measure on

first scale.

197	13.22
227	13.1
362	13.9
386	13.7
408	n.s.
A 2.8	3.1
a ¹ 5.9	6.7 6.2
a ³ 7.4	7.3 7.7
a ⁵ 7.7	9.0 8.7 8.85 15.5
ℓ^1 8.0	8.9 8.75 15.5
ℓ^2 9.9	10.2 10.1 10.10 15.5
c^1 9.9	10.2 10.3 10.25 15.5
c^2	11.4
c^3	11.7
c^4 11.0	10.3 10.6 10.45 15.5
c^5	11.4
c^6	12.0
c^7	defective 10.45 15.5
d	12.5
e	12.8
f	13.1
g	13.0
h	14.0

Reject immigator
slightly measured
May 24, 1911.

Monday, June 27, 1910

North Polar Sequence.

3.26

Copied
Scale from
C 19493

MC 261 Isochromatic.

Star images

First Second
Scale Scale

Unit mm. PHL

a' 1.7 2.0

a³ 1.9 2.2a² 1.9 2.2

b' 3.7 4.1

f' 4.3 4.6

c' 5.4 5.7

c² 5.5 5.8c³ 5.5 5.8c⁴ 3.0 3.3c⁵ 3.5 3.8c⁶ 6.0 6.3c⁷ 5.4 5.7

d 6.7 7.0

e 5.7 6.0

f' 6.7 7.0

g 10.0 10.3 10.30 0.0

h 10.7

i 9.7 10.0 10.0 10.00 0.0

197 11.7 8.0

227

362 7.5 7.8

386 6.8 7.1

408 8.2 8.5 8.6 8.55 1.0

2.46

a.D.H.

Prismatic Companions

First Second
Scale ScaleA² 8.1 8.4

a' 7.8 8.1

a³ 8.9 12.9 4 930 1.1a⁵ 7.6 7.9

b' 12.7

c' 11.9

c² 12.4c³ 13.1c⁴ 10.0 10.7 10.50 2.2c⁵ 11.4c⁶ 13.6c⁷ 12.5

197 11.7

227 13.9

362 m.s.

386 m.s.

408 m.s.

d 13.9

e 13.7

f' 14.1

g 9.4 9.8 9.5 4.0

h 9.4 9.8 9.5 1.0

Unit mm. PHL

June 27

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

F 7.8 8.1

Monday, June 27, 1910.

North Polar Sequence.

Copied
Scale from
C 19493

MC 299 Isochromatic.

Star images

First Second
Scale Scale

Scale B 197 3.7 12.3

= Scale Q 227

362 7.5 10.1

386 8.2 9.8

408 8.8 10.4

a' .

a² .a³ .

b' 5.7 7.3

b² 6.3 7.9

c' 6.7 8.3

c² 7.0 9.2c³ 7.7 9.3c⁴ 7.9 9.5c⁵ 8.0 8.2c⁶ 7.7 9.3c⁷ 7.3 8.9

d 8.1 9.7

e 7.7 9.3

f' 7.0 9.6

g 8.9 10.5

h 9.5 11.1

4.06

a.D.H.

Star images

First Second
Scale Scale

g 9.6 11.1 11.5 0.1

h 9.7 11.2 11.5 1.0

i 9.4 11.0 11.0 a

R' . 11.8

R' 11.3 11.30 0.1

R' 12.2

R' 12.4

R' 12.4 12.5

R' 12.6

R' 12.9

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

R' 13.0

Star images

First Second
Scale Scale

A .

a' 8.4 10.0

a² 8.8 10.4a³ 8.8 10.4a⁴ 8.8 10.4a⁵ 8.8 10.4a⁶ 8.8 10.4a⁷ 8.8 10.4a⁸ 8.8 10.4a⁹ 8.8 10.4a¹⁰ 8.8 10.4a¹¹ 8.8 10.4a¹² 8.8 10.4a¹³ 8.8 10.4a¹⁴ 8.8 10.4a¹⁵ 8.8 10.4a¹⁶ 8.8 10.4a¹⁷ 8.8 10.4a¹⁸ 8.8 10.4a¹⁹ 8.8 10.4a²⁰ 8.8 10.4a²¹ 8.8 10.4a²² 8.8 10.4a²³ 8.8 10.4a²⁴ 8.8 10.4a²⁵ 8.8 10.4a²⁶ 8.8 10.4a²⁷ 8.8 10.4a²⁸ 8.8 10.4a²⁹ 8.8 10.4a³⁰ 8.8 10.4

Prismatic Companions

First Second
Scale Scale

A .

a' 8.4 10.0

a² 8.8 10.4a³ 8.8 10.4a⁴ 8.8 10.4a⁵ 8.8 10.4a⁶ 8.8 10.4a⁷ 8.8 10.4a⁸ 8.8 10.4a⁹ 8.8 10.4a¹⁰ 8.8 10.4a¹¹ 8.8 10.4a¹² 8.8 10.4a¹³ 8.8 10.4a¹⁴ 8.8 10.4a¹⁵ 8.8 10.4a¹⁶ 8.8 10.4a¹⁷ 8.8 10.4a¹⁸ 8.8 10.4a¹⁹ 8.8 10.4a²⁰ 8.8 10.4a²¹ 8.8 10.4a²² 8.8 10.4a²³ 8.8 10.4a²⁴ 8.8 10.4a²⁵ 8.8 10.4a²⁶ 8.8 10.4a²⁷ 8.8 10.4a²⁸ 8.8 10.4a²⁹ 8.8 10.4a³⁰ 8.8 10.4

Star images

First Second
Scale Scale

A .

a' 8.4 10.0

a² 8.8 10.4a³ 8.8 10.4a⁴ 8.8 10.4a⁵ 8.8 10.4a⁶ 8.8 10.4a⁷ 8.8 10.4a⁸ 8.8 10.4a⁹ 8.8 10.4a¹⁰ 8.8 10.4a¹¹ 8.8 10.4a¹² 8.8 10.4a¹³ 8.8 10.4a¹⁴ 8.8 10.4a¹⁵ 8.8 10.4a¹⁶ 8.8 10.4a¹⁷ 8.8 10.4a¹⁸ 8.8 10.4a¹⁹ 8.8 10.4a²⁰ 8.8 10.4a²¹ 8.8 10.4a²² 8.8 10.4a²³ 8.8 10.4a²⁴ 8.8 10.4a²⁵ 8.8 10.4a²⁶ 8.8 10.4a²⁷ 8.8 10.4a²⁸ 8.8 10.4a²⁹ 8.8 10.4a³⁰ 8.8 10.4

Prismatic Companions

First Second
Scale Scale

A .

a' 8.4 10.0

a² 8.8 10.4a³ 8.8 10.4a⁴ 8.8 10.4a⁵ 8.8 10.4a⁶ 8.8 10.4a⁷ 8.8 10.4a⁸ 8.8 10.4a⁹ 8.8 10.4a¹⁰ 8.8 10.4a¹¹ 8.8 10.4a¹² 8.8 10.4a¹³ 8.8 10.4a¹⁴ 8.8 10.4a¹⁵ 8.8 10.4a¹⁶ 8.8 10.4a¹⁷ 8.8 10.4a¹⁸ 8.8 10.4a¹⁹ 8.8 10.4a²⁰ 8.8 10.4a²¹ 8.8 10.4a²² 8.8 10.4a²³ 8.8 10.4a²⁴ 8.8 10.4a²⁵ 8.8 10.4a²⁶ 8.8 10.4a²⁷ 8.8 10.4a²⁸ 8.8 10.4a²⁹ 8.8 10.4a³⁰ 8.8 10.4

Monday, June 27, 1910.

North Polar Sequence.

MC 172 isochromatic.

copied
Miss Leland's
Scale B
= Scale Q

Star images

First Second
Scale Scale

Prismatic Companions

First Second
Scale Scale

a ¹	a	9.8 ¹¹⁴	11.3	11.35 oi	197	f ¹	m ³
a ²	a	10.6 ¹¹²	11.6	11.60 io	227	f ²	
a ⁵	i	9.6 ¹¹²	11.2	11.20 io	362	f ³	
b ¹ 5.9 7.5	k ¹		13.3		386	f	
b ² 6.6 8.2	k ²		11.7	A 5.1 6.7			
c ¹ 6.8 8.4	k ³		12.7	a ¹ 9.4 11.0			
c ² 7.6 9.2	k ⁴		12.9	a ² 9.8 11.4			
c ³ 7.7 9.3	k ⁵		12.8	a ⁴ 9.7 11.3	11.35 io		
c ⁴ 5.9 7.5	F			a ⁵ 9.1 10.7			
c ⁵ 6.8 8.4	f ³			b ¹	11.7		
c ⁶ 7.8 9.4	a ⁴			f ²	12.4		
c ⁷ 7.3 8.9	l	12.9		b ³	11.2		
197 8.8 10.4	m	13.1		c ¹	12.6		
227	m	m ³		c ²	13.1		
362 8.7 10.3				c ³	13.1		
386 8.4 10.0				c ⁴	11.9		
408 9.1 10.7				c ⁵	12.2		
d 8.2 9.8				c ⁶	13.0		
e 7.6 9.2				c ⁷	13.7		
f ¹ 8.4 10.0				F 9.2 10.8			
f ² 9.1 10.7				d	m ³		
f ³ 9.7 11.3				e	13.2		

4.06
A. D. H.

Wednesday, July 6, 1910

North Polar Sequence.

Scale N
copied from T 36739, with and without screen of prepared thin.

First Second Third
Scale Scale ScaleThird
Scale

Exposure with Screen.

2nd Third
Scale Scale

a	f ¹	m ¹	a ³	6.7 6.3 5.8 6.05 ± 2
a	f ²	m ⁵	c ¹	8.8 8.4 8.5 8.45 ± 1
a ⁵			a ²	8.9
c ¹	4.6 4.2 4.3 4.25 ± 1		c ³	9.3
c ²	5.6 5.2 4.9 5.05 ± 1		c ⁴	
c ³	5.9 5.5 5.5 5.50 ± 1		c ⁵	
c ⁴			c ⁶	9.9
c ⁵			c ⁷	10.0
c ⁶	6.7 6.3 6.0 6.15 ± 2		a ⁵	7.2 6.6 6.70 ± 2
c ⁷	6.7 6.4 6.3 6.35 ± 2		d	10.1
d	6.9 6.5 6.4 6.45 ± 1		e	10.1
e	7.6 7.2 7.1 7.15 ± 1		f ¹	m ⁵
f ¹	7.8 7.4 7.7 7.55 ± 1			
f ²	8.5 8.1 7.9 8.00 ± 2			
f ³	8.9 8.5 8.3 8.65 ± 2			
g	9.0			
h	9.6			
i	9.7			
197	10.0 10.6 7.60 ± 1			
227				
362	7.6 7.2 6.8 7.00 ± 2			
386	7.4 7.0 6.8 6.90 ± 2			
408	8.0 7.6 7.7 7.65 ± 1			

28) 2.5
± 0.9

Wednesday, July 6, 1910.

Scale N
Capit

North Polar Sequence - Remeasurement.

I 36739, with and without screen of perforated tin.

First exposure
2nd and 3rd
East Scale

Mean

Second exposure, with screen

Mean

Scale

Scale

(2)

Mean

(1)

(2)

1191

(1)

4.25

4.64

4.1

(2)

4.15

0.2

4.20

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

C

5.05

5.55

5.0

5.10

1.2

5.08

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

C

5.50

6.05

5.5

5.55

0.2

5.58

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

C

6.15

6.34

5.8

6.10

0.3

6.12

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

C

6.35

6.34

5.8

6.50

0.0

6.42

0.7

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

C

6.35

6.34

5.8

6.50

0.0

6.42

0.7

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

C

6.45

6.34

5.8

6.50

0.0

6.42

0.7

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

0.8

C

7.15

7.5

7.1

6.6

6.85

0.32

7.00

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

C

7.55

7.75

7.5

7.50

0.0

7.52

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

C

8.00

8.68

7.9

8.05

0.2

8.02

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

0.2

C

8.65

9.06

8.7

8.65

0.01

8.65

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

C

9.0

8.9

8.95

0.1

8.95

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

Friday, July 3, 1910.

Copied

North Polar Sequence.

and without

MC 462, with wire gratings.

	Images 1 First Second Scale Scale	Images a (fine screen) First Second Scale Scale	Images b (medium screen) First Second Scale Scale	Images c (fine screen) First Second Scale Scale	Images 2 First Second Scale Scale
* 1	c' 3.7 3.9 . 3.9	c' 6.3 6.6 6.55 . 5.8 6.0 6.00 . 5.8 6.0 5.8 5.9 11			3.8 4.0 . 4.0
* 2	c' 4.8 5.0 4.8 4.9 12	c' 6.2 7.0 7.0 7.0 11	c' 6.2 6.9 6.95 6.5 6.7 6.7 6.7 11		4.5 4.7 4.8 4.75 11
x c	c' 5.4 5.6 5.5 5.55 12	c' 7.0 7.2 7.5 7.35 11	c' 7.1 6.9 7.0 11		4.9 5.1 5.5 5.30 22
	c' 7.7	c' 7.7	c' 7.7		5.5 5.7 5.6 5.65 10
	c' 7.7	c' 7.7	c' 7.7		7.0 7.2 7.3 7.25 11
	c' 5.6 5.8 5.6 5.70 12	d 3.1	d 7.9		5.8 6.0 5.9 5.95 12
	c' 5.6 5.8 5.7 5.75 12	e 7.9	e 7.9		6.0 6.2 6.5 6.35 21
	d 5.9 6.1 6.4 6.25 12	f' 3.7	f' 3.6		6.9 7.1 6.9 7.0 12
	e 6.4 6.6 6.6 6.60 10	f' 3.7	f' 3.6		7.7 7.7
	f' 6.7 6.9 7.3 7.10 12	f' 3.7	f' 3.6		8.2 8.2
	f' 7.6 7.6	f' 7.7	f' 7.7		6.9 7.1 7.2 7.15 11
	362 6.6 6.8 6.8 6.80 11	362 8.5	362 8.4		6.7 6.9 6.9 6.80 12
	383 6.6 6.8 6.7 6.75 12	383 8.4	383 8.3		6.4 6.6 6.7 6.65 11
	197 6.7 7.1 7.1 7.10 11	197 9.0	197 8.9		7.4
	408 7.0 7.2 7.2 7.25 11	408 9.0	408 8.9		8.6
	f' 3.2	f' 3.2	f' 3.2		8.9
	g 8.6	g 8.6	g 8.6		5.9
	h 9.1	h 9.1	h 9.1		9.6
	i 8.7	i 8.7	i 8.7		9.6
	j 9.7	j 9.7	j 9.7		10.1
	k 9.3	k 9.3	k 9.3		10.5
	l 10.0	l 10.0	l 10.0		10.5
	m 10.5	m 10.5	m 10.5		10.5

* Re-examination shows that f' is actually slightly fainter than f.

Images a, b, c, and d
+13
42 100
1071

23.32.

A. D. H.

Saturday July 3, 1910

North Polar Sequence.

2.45 Plate

Scale from MC 449
C 17493

	First Eff. 60" 1st 2nd Scale Scale	at tube	Second Eff. 8" 1st 2nd Scale Scale	Third Eff. 1" 1st 2nd Scale Scale
a'	2.7 2.10 2.10 10.10 11		g 12.2	a' 5.2 5.5
a'	2.7 2.10 2.10 10.10 11		h 12.6	a' 6.7 7.0
a'	2.7 2.10 2.10 10.10 11		i 12.4	a' 7.1 7.4 7.7 7.55 21
a'	2.7 2.10 2.10 10.10 11		j 13.1	a' 8.0 8.3 8.3 8.30 10
a'	2.7 2.10 2.10 10.10 11		k 13.2	a' 9.3 9.6 9.7 9.65 11
a'	2.7 2.10 2.10 10.10 11		l 13.3	a' 10.0 10.3 10.2 10.25 10
a'	2.7 2.10 2.10 10.10 11		m 13.3	a' 11.2
a'	2.7 2.10 2.10 10.10 11		n 13.5	a' 11.2
a'	2.7 2.10 2.10 10.10 11		o 13.5	a' 11.2
a'	2.7 2.10 2.10 10.10 11		p 13.5	a' 11.2
a'	2.7 2.10 2.10 10.10 11		q 13.5	a' 11.2
a'	2.7 2.10 2.10 10.10 11		r 13.5	a' 11.2
a'	2.7 2.10 2.10 10.10 11		s 13.5	a' 11.2
a'	2.7 2.10 2.10 10.10 11		t 13.5	a' 11.2
a'	2.7 2.10 2.10 10.10 11		u 13.5	a' 11.2
a'	2.7 2.10 2.10 10.10 11		v 13.5	a' 11.2
a'	2.7 2.10 2.10 10.10 11		w 13.5	a' 11.2
a'	2.7 2.10 2.10 10.10 11		x 13.5	a' 11.2
a'	2.7 2.10 2.10 10.10 11		y 13.5	a' 11.2
a'	2.7 2.10 2.10 10.10 11		z 13.5	a' 11.2

3.28 2.28.

Star bright - difficult to measure on account of background.

Saturday, July 9, 1910.

North Polar Sequence

Scale from
C 17493

M 448

Prismatic Comparisons

First Exp. 10^m
1st and 2nd
Scale ScaleSecond Exp. 8^m
1st and 2nd
Scale Scale

Third Exp.

a' 6.8 6.8 7.1

a' 8.1 8.1 8.9

A 4.9 5.2

a² 7.4 7.7 7.7a² 9.6 9.8 9.85 1.0a³ 7.9 8.0 8.10 1.2a³ 10.0 10.2 10.25 1.0a⁴ 8.9 8.7 8.95 2.3a⁴ 11.0

b' 9.3 9.5 9.55 2.2

b' 11.9 4) 11.2 2.0 5.0

b² 9.9 10.5 10.35 2.1b² 12.7

c' 10.6

c' 13.2

c² 11.6 $\pm \frac{4}{7}$ c² 13.7c³ 11.6 $\pm \frac{8}{11}$ c³ 13.8c⁴ 10.3 ± 1.98 c⁴ 12.8c⁵ 11.9c⁵ 12.9c⁶ 12.3c⁶ m.s.c⁷ 12.6c⁷ m.s.

197 13.7

197

362 12.9

362

386 12.9

386 m.s.

408 13.8

408

d 12.4

d m.s.

e 12.8

e

f' 13.0

f'

f² 13.9f²

d

d

North Polar Sequence

Scale from
C 17493

M C 448

First Exp. 10^m
1st and 2nd
Scale ScaleSecond Exp. 15^s
1st and 2nd
Scale ScaleFirst Exp. P.C.
1st and 2nd
Scale Scale

a' 12.2

a' 7.7 7.6 8.0

a' 8.7 9.0 8.8 8.9 1.2

a² 12.4a² 9.2 9.3 9.40 1.2a² 9.4 9.7 9.70 0.0a³ 8.1 8.4a³ 8.0 8.2 8.25 1.0a³ 9.5 9.8 9.80 0.1a⁴ 4.9 5.2a⁴ 9.3 9.2 9.40 2.2a⁴ 10.8

b' 5.5 5.8

b' 10.6

b' 11.6

b² 6.1 6.4b² 11.6 $\pm \frac{4}{3}$ b² 12.4 $\pm \frac{2}{4}$

c' 7.6 7.7 7.9

c' 12.0 $\pm \frac{6}{11}$ c' 13.1 $\pm \frac{6}{11}$ c² 8.0 8.3 8.0 8.15 1.2c² 12.5c² 13.6c³ 8.7 9.0 8.8 8.90 1.2c³ 12.7c³ 14.0c⁴ 6.7 6.7 7.0c⁴ 11.8c⁴ 12.4c⁵ 7.8 8.1 8.2 8.15 2.0c⁵ 12.8c⁵ 13.9c⁶ 9.0 9.3 9.2 9.25 1.0c⁶ 13.0c⁶ 13.8c⁷ 9.0 9.3 9.3 9.30 0.0c⁷ 13.1c⁷ m.s.

197 9.7 10.2 10.6 10.40 2.2

197 m.s.

197

362 9.7 10.0 10.3 10.15 2.1

362 14.0

362 m.s.

386 9.5 9.8 10.0 9.90 2.1

386 13.9

386 m.s.

408 10.0 10.3 10.6 10.45 2.1

408 m.s.

408

d 9.1 9.4 9.7 9.55 2.1

d 13.6

d 14.2?

e 9.6 9.9 9.9 9.90 0.0

e 13.7

e

f' 9.9 10.2 10.5 10.35 2.1

f'

f'

f² 11.0f²f²f³ 11.5f³f³f⁴ 11.5f⁴f⁴f⁵ 11.5f⁵f⁵f⁶ 11.5f⁶f⁶f⁷ 11.5f⁷f⁷f⁸ 11.5f⁸f⁸f⁹ 11.5f⁹f⁹

Saturday, July 7, 1910.

North Polar Sequence.

Scale N

MC 444

First Exp. 10^m1st 2nd 3rd
Scale Scale Scale2nd
Scale2nd Exp. 15^s1st 2nd 3rd
Scale Scale Scale

First Exp. P.C.

1st 2nd
Scale Scale

f' 1.8 16 h 9.0

f² 2.8 26 i 8.7

c' 3.2 30 k 9.7

c² 3.8 36 4.3 39 3.75 9.6c³ 4.0 38 4.9 45 4.15 10.1c⁴ 3.2 30 k⁴ n.s.c⁵ 3.9 37 4.3 39 3.80 10.c⁶ 4.8 44 4.7 40 4.2c⁷ 5.4 50 4.8 40 4.2a⁵ 1.2 10a⁴

d 5.5 51 4.9 50 0.12

e 6.0 56 5.6 50 0.0

197 6.7 63 6.2 60 1.0

362 6.0 56 5.3 50 1.1

386 5.9 55 5.5 50 0.0

408 7.7 70 6.6 60 1.2

f' 6.7 63 6.0 60 1.2

f² 7.7 73 7.0 71 1.2f³ 8.0 76 7.9 71 2.1

f 8.9 85 8.7 81 1.1

+15
-19
30.34
±11.34.21
A. D. N.

Primitive Comparisons are difficult to compare with scale.

Saturday, July 7, 1910

North Polar Sequence

mc
Dott 449

Some misunderstanding led to a
mistake in readings for f² and f³
on exp. 7^m. Repeat and reduce
without these images

Tuesday, July 12, 1910.

North Polar Sequence.

Scale M
23.17

M.C. 441

First Eph. 10 ^m 1st and 2nd scale scale		Second Eph. 15 ^s 1st and 2nd scale scale		P.C. First Eph. 1st and 2nd scale scale	
a ¹		a ¹	4.2 4.4 4.6 4.5 1.1	A	1.9 2.1
a ²		a ²	6.3 6.5 6.2 6.5 1.2	a ¹	5.1 6.0 5.8 5.9 1.1
a ³	2.7	a ³	5.7 5.9 5.7 5.8 1.1	a ²	6.7 6.9 6.8 6.8 1.0
b ¹	3.7	b ¹	6.5 6.7 6.8 6.7 1.0	a ⁴	7.5 7.6
b ²	3.3	b ²	7.4	a ⁵	7.8
c ¹	4.6 4.8 4.8 4.8 0.1	c ¹	8.1	b ¹	8.3
c ²	5.0 5.5 5.3 5.1	c ²	8.1	b ²	8.7
c ³	5.7 5.9 5.7 5.8 1.1	c ³	8.8	c ¹	9.2
c ⁴	3.5	c ⁴	8.9	c ²	9.6
c ⁵	4.8 5.0 4.8 4.9 1.1	c ⁵	8.4	c ³	9.9
c ⁶	5.7 5.9 5.8 5.8 1.0	c ⁶	9.0	c ⁴	8.8
c ⁷	5.8 6.0 5.8 5.9 1.2	c ⁷	9.2	c ⁵	9.7
d ¹	6.6 6.8 6.9 6.8 0.1	c ⁸	9.2	c ⁶	9.5
d ²	6.8 7.0 6.9 6.9 0.1	d	9.7	c ⁷	9.8
d ³	6.7 6.9 6.9 6.9 0.0	e	9.7	c ⁸	n.s.
d ⁴	7.0 7.2 7.2 7.2 0.0	f ¹	10.3	d	10.2
d ⁵	6.0 6.2 6.2 6.2 0.0	f ²		e	n.s.
e ¹	6.6 6.8 6.7 6.7 0.1	f ³		PC Second Eph.	
e ²	6.8 7.0 7.0 7.0 0.0	f ⁴	10.1	1st and 2nd scale scale	
f ¹	7.6	362	10.1	A	5.5 5.7 5.7 5.7 0.0
f ²	8.0	386	10.1	a ¹	10.8
f ³	8.4	408	n.s.	a ²	n.s.
f ⁴				a ³	n.s.

23.41
a.d. 8.

Wednesday, July 13, 1910. 201

North Polar Sequence.

Scale M
23.43

M.C. 457

Polar Sequence Eph. at 70° 1st and 2nd scale scale		P.C. Polar Eph. + 90° 1st and 2nd scale scale	
a ¹		a ¹	5.4 5.7 5.6 5.1
a ²	1.7 1.9	a ²	6.4 6.6 6.7 6.6 0.1
a ³	3.6 3.8	a ³	7.5
a ⁴	4.5 4.7 4.9 4.5 0.2	a ⁴	9.3
a ⁵	4.8 5.0 4.9 4.9 0.2	a ⁵	10.8
a ⁶		a ⁶	10.1
a ⁷	5.6 5.8 5.7 5.7 0.2	a ⁷	8.8
a ⁸	5.7 5.9 5.8 5.8 1.0	a ⁸	n.s.
b ¹	6.4 6.6 6.8 6.7 0.1		
b ²	6.9 7.1 7.3 7.2 0.1		
b ³	7.9		
b ⁴	8.2		
b ⁵	8.7		
b ⁶	8.6		
b ⁷	9.0		
b ⁸	8.9		
b ⁹	9.7		
b ¹⁰	n.s.		
c ¹	3.6 3.8 3.6		

Wednesday, July 13, 1910.

North Polar Sequence.

Scale m

MC 457

Polar Sequence +90.8
1st 2nd
Scale ScaleP.C. Polardip. +90.8
1st 2nd
Scale Scale

a ²	.	a ²	5.759 5.7 5.80 1.2
a ³	.	a ³	6.365 6.6 6.55 1.0
a ⁵	2.5 2.7. almost superposed	a ⁵	7.4
c ¹	3.8 . 4.0	c ¹	9.1 $\frac{+1}{-2}$
c ²	4.5 4.7 4.7 4.70 0.0	c ²	9.9 $\frac{4)3}{\pm .075}$
c ³	4.9 5.1 4.9 5.00 1.2	c ³	10.0
c ⁴	3.6 . 3.8	c ⁴	8.9
d	5.6 5.8 5.7 5.80 0.0	d	10.2
e	5.8 6.0 5.8 5.90 1.2	e	
f ¹	6.6 6.8 6.7 6.75 0.2		
f ²	7.4		
f ³	8.0 $\frac{+2}{-3}$		
g	8.1 $\frac{10)5}{\pm .050}$		
h	8.6		
i	8.4		
k ¹	9.0		
k ²	9.0		
k ³	9.3		
k ⁴	9.9		
k ⁵	10.0		
l	10.0		

Wednesday July 13, 1910.

North Polar Sequence

Scale m

MC 457

Fourth Eff at +92.4
1st 2nd
Scale ScaleP.C.
1st 2nd
Scale Scale

a ²	.	a ²	5.759 5.8 5.85 1.0
a ³	.	a ³	6.567 6.4 6.55 1.2
a ⁵	off edge	a ⁵	5.7
c ¹	3.8 . 4.0	c ¹	9.3
c ²	4.6 4.6 4.6 4.60 0.0	c ²	9.7
c ³	4.7 4.9 4.9 4.90 0.0	c ³	9.9
c ⁴	off edge	d	10.2
d	5.5 5.7 5.7 5.70 0.0		$\frac{+2}{-2}$
e	5.9 6.1 5.8 5.95 1.2		$\frac{4)3}{\pm .075}$
f ¹	6.4 6.6 6.5 6.55 0.2		
f ²	7.3		
f ³	7.8 $\frac{+0}{-1}$		
g	8.2 $\frac{8)1}{\pm .012}$		
h	8.6		
i	superposed		
k ¹	9.0		
k ²			
k ³	9.6		
k ⁴	9.9		
k ⁵	10.0		
l	10.2		

Wednesday, July 13, 1910.

North Polar Sequence.

Scale m

MC 457

Third Eff. ^{9.16}
Polar Sequence P.C.
1st and 2nd
Scale Scale

a ²		a ²	5.658 5.6 5.70 12
a ³		a ³	5.961 6.4 6.25 12
a ⁵	2.2 2.4	a ⁵	7.3
a ¹	3.7 3.9	c	8.9
c ¹	4.1 4.4 7 4.55 21	c ²	9.6
c ³	4.85 5.3 5.15 21	c ³	9.9
c ⁴	Superfused on Standard Square	c ⁴	superfused
d	5.658 5.7 5.75 21	d	10.0
e	5.759 5.85 8.5 10	e	n.s
f	6.648 6.7 6.75 21		
f ¹	7.0 7.2 7.3 7.25 21		
f ²	7.8		
g	8.3		
h	8.6		
i	8.6		
k ¹	superfused		
k ²	9.1		
k ³	9.7		
k ⁴	10.1		
k ⁵	10.0		
l	10.1 ?		

$$\begin{array}{r} +3 \\ -2 \\ \hline 4)5 \\ \hline \pm 1.25 \end{array}$$

all pneumatic companions are very much less sharp than star images.

Wednesday, July 13, 1910.

North Polar Plates.

MC 457

First Eff. at +90°
Standard Sequence F
1st and 2nd
Scale ScaleFourth Eff.
P.C. Standard Sequence F
1st and 2nd
Scale Scale

a	5.557 5.6 5.65 10	a	5.355 5.7 5.60 21
b	6.062 6.2 6.20 10	b	5.961 6.3 6.20 21
c	6.365 6.5 6.50 10	c	6.648 6.6 6.70 12
d	6.567 6.7 6.70 10	d	6.749 6.7 6.80 12
e	6.971 7.2 7.15 10	e	6.870 7.3 7.15 21
f	7.072 7.1 7.15 21	f	6.870 7.2 7.10 21
g	7.9	g	7.9
h	7.8	h	7.8
k	8.4	k	8.3
l	8.5	l	8.5
m	8.7	m	8.4
n	9.1	n	8.9
o	9.9	o	9.9

$$\alpha = a^2$$

$$\alpha = a^2$$

β	to main edge
γ	3.6 3.8 very poor
δ	3.9 4.1 very poor
ϵ	3.9 4.1
ζ	superfused
η	4.5 4.7 4.7 4.70 10 very poor

β	1.8 2.0
γ	3.6 3.8
δ	3.9 4.1
ϵ	3.7 3.9
ζ	4.6 4.6 4.6 4.70 12
η	4.4 4.6 4.6 4.60 10

$$\begin{array}{r} +1 \\ -2 \\ \hline 14)3 \\ \hline \pm .021 \end{array}$$

$$\begin{array}{r} +7 \\ -8 \\ \hline 16)15 \\ \hline \pm .094 \end{array}$$

Wednesday, July 13, 1910.

North Polar Plate MC 457

Third
~~Second~~ Exp. +90.8
Standard Seq. F
1st 2nd
Scale Scale

a	5.56 5.7 5.70 4
b	6.1 6.3 6.0 6.15 12
c	6.3 6.5 6.6 6.55 10
d	6.4 6.6 6.6 6.60 10
e	7.0 7.2 7.3 7.25 10
f	7.0 7.2 7.1 7.15 10
g	8.0
h	7.8
k	8.4
l	8.3
m	8.6
n	9.0
o	8.6
o	superfused

 $\alpha = a^2$ β 1.8 2.0 from γ 3.5 3.7 δ 3.9 4.1 ϵ 4.0 4.2 ζ 4.6 4.8 4.2 4.5 10 2 η 4.6 4.8 4.7 4.75 10 2
$$\begin{array}{r} +4 \\ -6 \\ 12 \\ 10 \\ \hline \pm .050 \end{array}$$
Third Exp. +91.6
Standard Seq. F
1st 2nd
Scale Scale

a	5.1 5.5 5.6 5.45 14 20
b	5.9 6.1 6.3 6.20 11
c	6.3 6.5 6.7 6.60 11
d	6.5 6.7 6.6 6.65 10
e	7.0 7.2 7.2 7.20 10
f	6.8 7.0 6.9 6.95 10
g	7.9
h	7.6
k	8.3
l	8.5
m	8.4
n	9.0
o	9.8

 $\alpha = a^2$ β superfused γ 3.3 3.5 δ 3.9 4.1 ϵ 3.7 4.0 ζ 4.5 4.7 4.70 10 η 3.8 4.0
$$\begin{array}{r} +3 \\ -4 \\ 11 \\ 7 \\ \hline \pm .050 \end{array}$$

Wednesday, July 13, 1910.

Distances in mm. from center of plate.
Plate MC 457

Polar Sequence

First Exp. +90.	Second Exp.	Third Exp.	Fourth Exp.
a ² 7.08	7.99 l	-52 l	-32 l
a ³ 7.43	-25 l	+36 l	+64
a ⁵ +37	+65	+99	off plate
c ¹ +9	+23	+58	+85
c ² 6.24 l	+38 l	+64	+95
c ³ 2.5 l	+47 l	+74	+106
c ⁴ +49	+79	+108	off plate
d 7.13 l	+44	+74	+106
e +14 l	+40	+70	+103
f ¹ +16	+46	+75	+109
f ² +16	+45	+75	+107
f ³ +11	+43	+72	+105
g +10 l	+37	+66	+98
h +10 l	+35	"	"
i +10 l	"	"	"
k ¹ +10 l	"	"	"
k ² "	"	"	"
k ³ "	"	"	"
k ⁴ "	"	"	"
k ⁵ "	"	"	"
l "	"	"	"

+ toward marked end
- away from marked end

r. right with marked end at top
l left " "

Wednesday, July 13, 1910.

Distances in mm.

Plate MC 457

Sequence F

First Exp.	Second Exp.	Third Exp.	Fourth Exp.
a -53.	-33	+10 l	+41
b -61	-31	-1	+32
c -77	-47	-21 l	+20 l
d -74	-52 l	+34 l	+43 l
e -57	-57	-27	+11 l
f -74	-56 l	+23 l	+30 l
g -70	-53	-26 l	+27 l
h -70	-41	-12 l	+24
k -64	-34	-4	+30
l -65	-34	3 l	+30
m -76	-46	-16	+18
n -76	-46	-16	+18
o -74	-45	-17 l	+20 l
$\alpha = \alpha^2$	τ		
β -124 -244	-93	-63	-31
γ -95	-65	-42 l	20 l
δ -100	-70	-42 l	25 l
ϵ -50	-54 l	-33 l	+37 l
ζ -63	-33	10 l	+32
η -101	-71	-41	-8

Saturday, July 23, 1910.

Copied

Scale measures of North Polar Sequence on
Mount Wilson plate.Scale from
C 17493

M8 230

2.0 .3

1.0 .4

Film side up
Unobscured edge
at top.First set of images
not 2nd
scale scale2nd
scaleSecond set of images
not 2nd
scale scale1st
scale2nd
scale

2nd measure with second scale.

Reject,
Plate examined
July 27

11.13

31.64

32.62

33.69

34.41

35.79

36.33

37.86

38.97

39.77

40.97

41.16

42.12

43.12

44.12

45.12

46.12

47.12

48.12

49.12

50.12

51.12

52.12

53.12

54.12

55.12

56.12

57.12

58.12

59.12

60.12

61.12

62.12

63.12

64.12

65.12

66.12

67.12

68.12

69.12

70.12

71.12

72.12

73.12

74.12

75.12

76.12

77.12

78.12

79.12

80.12

81.12

82.12

83.12

84.12

85.12

86.12

87.12

88.12

89.12

90.12

91.12

92.12

93.12

94.12

95.12

96.12

97.12

98.12

99.12

100.12

101.12

102.12

103.12

104.12

105.12

106.12

107.12

108.12

109.12

110.12

111.12

112.12

113.12

114.12

115.12

116.12

117.12

118.12

119.12

120.12

121.12

122.12

123.12

124.12

125.12

126.12

127.12

128.12

129.12

130.12

131.12

132.12

133.12

134.12

135.12

136.12

137.12

138.12

139.12

140.12

141.12

142.12

143.12

144.12

145.12

146.12

147.12

148.12

149.12

150.12

151.12

152.12

153.12

154.12

155.12

156.12

157.12

158.12

159.12

160.12

161.12

162.12

163.12

164.12

165.12

166.12

167.12

168.12

169.12

170.12

171.12

172.12

173.12

174.12

175.12

176.12

177.12

178.12

179.12

180.12

181.12

182.12

183.12

184.12

185.12

186.12

187.12

188.12

189.12

190.12

191.12

192.12

193.12

194.12

195.12

196.12

197.12

198.12

199.12

200.12

201.12

202.12

203.12

204.12

205.12

206.12

207.12

208.12

209.12

210.12

211.12

212.12

213.12

214.12

215.12

216.12

217.12

218.12

219.12

220.12

221.12

222.12

223.12

224.12

225.12

226.12

227.12

228.12

229.12

230.12

231.12

232.12

233.12

234.12

235.12

236.12

237.12

238.12

239.12

240.12

241.12

242.12

243.12

244.12

245.12

246.12

247.12

248.12

249.12

250.12

251.12

252.12

253.12

254.12

255.12

256.12

257.12

258.12

259.12

260.12

261.12

262.12

263.12

264.12

265.12

266.12

267.12

268.12

269.12

270.12

271.12

272.12

273.12

274.12

275.12

276.12

277.12

278.12

279.12

280.12

281.12

282.12

283.12

284.12

285.12

286.12

287.12

288.12

289.12

290.12

291.12

292.12

293.12

294.12

295.12

296.12

297.12

298.12

299.12

300.12

301.12

302.12

303.12

304.12

305.12

306.12

307.12

308.12

309.12

310.12

311.12

312.12

313.12

314.12

315.12

316.12

317.12

318.12

319.12

320.12

321.12

322.12

Saturday, July 23, 1910.

Copied

Scale measures on North Polar Sequence on
Mount Wilson Plate.
M H 232

Scale P

Third set of images 1st and 2nd sub-images scale scale or 2nd scale			Fourth set of images 1st and 2nd sub-images scale scale with 2nd scale			Fifth correction 4.1 4.1	
36	8.2 2.9	2.9 a.	36	2.9 2.6	2.6 a.	1.8	.80
37	3.7 3.4	3.4 a.	37	2.7 2.4	2.4 a.	2.5	10
38	5.1 4.8	4.8 a.	38	4.1 3.8	3.8 a.		
38	5.6 3.5	3.5 00.	38	3.9 3.6	3.6 a.	2.7	90
39	5.6 3.5	3.5 00.	39	4.7 4.5	4.5 10.	3.2	1.85
30	5.9 6.5	6.5 0.1	30	4.8 4.5	4.5 10.	3.6	.95
31	6.4 6.4	6.2 1.2	31	5.5 5.2	5.2 00.	4.15	1.85
32	6.5 6.6	6.4 2.2	32	5.6 5.5	5.4 11.	4.70	.70
33	6.8 6.7	6.7 0.1	33	5.9 5.8	5.7 11.	5.40	.30
34	7.1 7.2	7.1 1.0	34	6.2 6.1	6.0 11.	5.80	.20
35	7.4 7.1	7.5 3.3	35	6.4 6.3	6.2 11.	5.95	.25
36	7.6 7.5	7.5 0.1	36	6.6 6.6	6.4 1.2	6.00	.45
37	7.7 7.6	7.6 1.0	37	6.8 6.6	6.3 1.1	6.30	.35
38	8.2 8.0	8.0 1.1	38	6.9 6.9	6.9 0.0	6.70	.00
39	8.0 8.2	8.0 1.1	39	7.0 7.0	7.0 0.0	7.05	
40	9.0 9.0	9.0 0.0	40	7.9 7.9	7.9 0.0	7.60	.30
41	9.1 9.2	9.1 1.0	41	8.1 8.1	8.1 0.0	7.95	.15
42	9.3 9.3	9.3 0.0	42	8.1 8.0	8.0 1.0	8.25	.20
43	9.6 9.5	9.5 0.1	43	8.8 8.7	8.7 0.0	8.25	.50
			44	8.9 8.9	8.9 0.0	9.10	.20
			45	8.9 8.8	8.8 1.0	9.25	.40
			46	9.3 9.2	9.2 1.0	9.05	.20
			47	n.s.		9.55	-
			48	n.s.		9.35	-
			49			9.05	-

Images on this plate difficult
to compare with scale.

4.18

A.D.H.

$$\begin{array}{r} +13 \\ -14 \\ \hline 33 \end{array} \begin{array}{r} 27 \\ \hline \pm 0.82 \end{array}$$

Monday, July 25, 1910.

Copied

Scale measures on North Polar Sequence on
Mount Wilson Plate.
M H 235Scale from
P

First set of images 1st and 2nd sub-images scale scale with 2nd scale			Second set of images 1st and 2nd sub-images scale scale with 2nd scale			Third correction 2.1 2.1	
36	2.6 2.6	2.6 3.0	36	2.6 2.6	2.6 3.0	2.1	.1
37	2.7 2.7	2.7 3.0	37	2.7 2.7	2.7 3.0	2.1	.1
38	2.9 2.9	2.9 3.0	38	2.9 2.9	2.9 3.0	2.1	.1
39	3.1 3.1	3.1 3.0	39	3.1 3.1	3.1 3.0	2.1	.1
40	3.3 3.3	3.3 3.0	40	3.3 3.3	3.3 3.0	2.1	.1
41	3.5 3.5	3.5 3.0	41	3.5 3.5	3.5 3.0	2.1	.1
42	3.7 3.7	3.7 3.0	42	3.7 3.7	3.7 3.0	2.1	.1
43	3.9 3.9	3.9 3.0	43	3.9 3.9	3.9 3.0	2.1	.1
44	4.1 4.1	4.1 3.0	44	4.1 4.1	4.1 3.0	2.1	.1
45	4.3 4.3	4.3 3.0	45	4.3 4.3	4.3 3.0	2.1	.1
46	4.5 4.5	4.5 3.0	46	4.5 4.5	4.5 3.0	2.1	.1
47	4.7 4.7	4.7 3.0	47	4.7 4.7	4.7 3.0	2.1	.1
48	4.9 4.9	4.9 3.0	48	4.9 4.9	4.9 3.0	2.1	.1
49	5.1 5.1	5.1 3.0	49	5.1 5.1	5.1 3.0	2.1	.1

23.55

A.D.H.

$$\begin{array}{r} +29 \\ -31 \\ \hline 85 \end{array} \begin{array}{r} 27 \\ \hline \pm 0.71 \end{array}$$

Monday July 25, 1910.

Estimates by Argelander's method

North Polar Sequence

M H 225

28	2	29	51	4	52	51	4	52
29	3	30	52	-1	53	52	4	β
30	2	31	53	4	54	β	2	γ
31	0	32	54	2	55	γ	1	55
32	3	33	55	4	56	55	3	56
33	4	34	56			56	3	λ
34	1	35	57			λ	2	μ
35	1	36	58			μ	1	κ
36	0	37				κ	4	57
37	5	38				57	2	58
38	21	39				58	1	ξ
39	7	40				ξ	2	π
40	4	41				π	1	ω
41	1	42				ω	\times^3	ν
42	2	43				ν	1	ψ
43	0	44						
44	1	45						
45	3	46						
46	2	47						
47	2	48						
48	3	49						
49	2	50						
50	3	51						

A.S.P.

Monday July 25, 1910.

Estimates by Argelander's method

North Polar Sequence

M H 110

3.34

28	2	29	51	5	52	51	5	52
29	3	30	52	0	53	52	2	β
30	2	31	53	4	54	β	3	γ
31	-2	32	54	6f		γ	1	55
32	4	33	54	1	55	55	3	56
33	4	34	55	2	56	56	0	λ
34	1	35	56	1	57	λ	1	μ
35	1	36	57	1	58	μ	0	κ
36	2	37				κ	1	57
37	4	38				57	2	58
38	8	39				ξ and next		
39	6	40				not seen.		
40	4	41						
41	2	42						
42	3	43						
43	0	44						
44	1	45						
45	2	46						
46	3	47						
47	0	48						
48	2	49						
49	2	50						
50	2	51						

North Polar Sequence

Scale C 17493

M H 232

Brighten stars remeasured with scale C 17493

First Scale Second

Lange (1)

Lange (2)

First Scale

Lange (2)

225	1.8 ^{2.1} 2.0 ^{2.3} 2.20	2.20 a.	2.30 00
227	1.8 ^{2.1} 2.0 ^{2.3} 2.20	2.20 a.	2.30 00
386	1.8 ^{2.1} 2.0 ^{2.3} 2.20	2.20 a.	2.30 00
386	1.8 ^{2.1} 2.0 ^{2.3} 2.20	2.20 a.	2.30 00
38	4.0 ^{4.3} 3.9 ^{4.2} 4.25	4.25 a.	4.25 12
29	4.7 ^{5.0} 4.4 ^{4.1} 5.25	5.25 a.	5.25 10
30	5.0 ^{5.3} 4.9 ^{5.2} 5.25	5.25 a.	5.25 00
31	5.0 ^{5.3} 4.9 ^{5.2} 5.25	5.25 a.	5.25 00
32	5.8 ^{6.1} 5.7 ^{6.0} 6.15	6.15 a.	6.15 11
33	7.0 ^{7.3} 6.8 ^{7.1} 7.0	7.10 10.0	7.10 01
34	7.0 ^{7.3} 6.8 ^{7.1} 7.0	7.10 10.0	7.10 01
35	7.0 ^{7.3} 6.8 ^{7.1} 7.0	7.10 10.0	7.10 01
36	7.0 ^{7.3} 6.8 ^{7.1} 7.0	7.10 10.0	7.10 01
37	7.0 ^{7.3} 6.8 ^{7.1} 7.0	7.10 10.0	7.10 01

+44
-46
10) 90
±.090

+7
-4
22) 11
±.050

Repeat. See Remarks on Opposite page.

North Polar Sequence

Scale C 17493

M H 232 Cont.

Lange (3)

First Scale

Lange (2)

Lange (2)

225	6.8 7.1 6.8 7.1	7.10 00.0
227	4.3 4.6 4.6 4.9	4.75 ± 1.0
386	4.0 4.3 4.1 4.4	4.35 ± 0.0
28	7.0 7.3 6.8 7.1	7.20 11.0
29	7.3 7.6 7.7 7.7	7.65 0.1
30	7.8 8.1 7.9	8.00 1.1
31	8.4 8.7 8.6	8.65 1.0
32	8.8 9.1 9.2	9.05 1.0
33	- 9.8 9.6	9.70 1.1
34	- 10.5 10.8	10.65 1.2
35	- 10.6 10.8	10.70 1.1
36	- 11.0 10.9	10.95 1.0
37	- 11.3 11.2	11.25 1.0

+10
-10
20) 20
±.077

Stars and darkness intensity measured

Comparison with this scale so difficult
for stars fainter than 7 that conclusion
seems hardly worth while

Repeat the above measures May 9, 1911

Source	J.D. Month	Line Center	Seq.	Ident. Ident.	Mean	Plot	Red	Ch.	Mag. mag.	Diff.
	1914									
227 b	March	161		MK	0	55	mk	ld	mag	45
201 b	Feb.	160	v		0	53	mk	ld	mag	
MD 201	"	126								

