KG
11365
695

1919phae..proj..696A

- Asteroids + Novae -

Scale measures.
Direct Estimates

Bk. 5. M. D. Applegate

A. Bk. 5

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KQ11365.695

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System of signals for Multiple Image plates.

Signals at

0, 10^{h}, 15th, 17th, 26th, 28th, 33rd, 43rd, 45th, 50th minutes past the E. T. hour.

For asteroids etc., the intervals by which the clock is stopped will be 6^{s}.

This arrangement gives exposures approximately

10, 5, 2, 9, 2, 5, 10, 2, 5 + 10 minutes.

M. D. a. Oct. 16, 1919

The measures in this book, although recorded in order, were measured in as irregular an order as possible.

M. D. a. Oct. 16, 1919.

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KE 11365.695

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Contents of Book 5.

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Scale Measures of,		~~6-7,~~
Athamantis		6-7
Semiramis		24-25
Thyra		26-27
Vesta	(See D. W. B. 6:109)	29-31
Nausikaa	(See D. W. B. 6:88)	32-33
Examination of plates for Variables		108-115
Magnitudes for Metcalf's Variable		116-125

(over)

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Contents of Book 5 (Cont.)

* Novae:

Scale Measures for Comparison Stars of,

B Series 636	Nova Velorum	38-42
MT Series 137	" "	48-55
MT Series 116	" "	56-69
B Series 699	L Centauri	80-85
B Series 701	" "	86-91
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Rel. Mag. with 30 Ks	R S Carinae	100-103
Rel. Mag.	Nova Persei No. 2	44-47
Sc. meas. Mf. Stars	R S Carinae	129-134
Mf Series 173	Nova Circini	136-143
B " 137	" "	144-152
Rel. mag.	" "	153-160
Mf Series 189	Nova Normae	167-172
Ff. Stars	" "	173-174
Rel. mag.	" Arae	180-182
Ff. Stars.	L Centauri	183-185
	Nova Sagittarii No. 2	195-200
Ff. Stars.	" Scorpii No. 2	207-208
p.c. of	Nova Sagittae	218-220

* For continuation of work on Novae see M.D.A. 6:

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Contents of Book 5 (Cont.)

	pp.
Novae:	
Direct Estimates of,	
Nova Velorum	72-79
Nova Persei No. 2 (Positions sent by Sampland)	70
X Serpentis	104-107
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" Normae	175-179
Z Centauri	186-189
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N. Sagittarii #2	201-206
N. Scorpii #2	209-217

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Thursday Oct. 16, 1919

~~Wednesday Oct. 15, 1919~~

Measured following A prec

Sc. M.

Oct. Corr.

Athamantis
81
I 39 6 ~~98~~

10:40

G.M.T.	Mid'n Sec	Length of Exp. m	Exp. s	Athamantis Sc 1	Sc 2	Star b" Sc 1	Sc 2	Cu.	Mag.
14 59½	1		1	.	8.9	1. .	9.2	.	
15 5	10		2	7.0 6.8	8 6.80 6.6	7.2 7.0	7.1	3.55	10.70
15 12½	5		3	.	7.6	3. .	7.6	~~3.38~~	
15 16	2		4	6.9	8.5	4. .	8.6	~~2.91~~	
15 21½	9		5	7 6.8	9 6.85 6.8	7.1 6.9	7.05 7.2	~~3.58~~	
15 27	2		6	.	8.6	6. .	8.8	~~2.82~~	
15 30½	5		7	.	7.7	7. .	7.7	~~3.32~~	
15 38	10		8	6.9 6.7	8 6.70 6.7	7.1 6.9	~~7.05~~ 7.0	3.58	10.63
15 44	2		9	.	8.7	9. .	8.8	~~2.82~~	
15 47½	5		10	.	7.6	10. .	7.7	~~3.32~~	
15 55	10		11	6.9 6.7	8 6.70 6.7	7.1 6.9	7.10 7.1	3.56	10.66
16 15 01	2		12	.	9.4	12. .	9.7	.	

10.66 04 03 00

	Star a"			Cu.	Mag.	Star c" Sc 1	Sc 2	Cu.
i	.		8.7	~~2.87~~		1. .	sup.	.
2	6.2 6.0	6.20	6.2	3.77	9.97	2. .	7.4	3.48 10.88
3	6.9 6.7	7 6.65	6.6	~~3.68~~		3. .	7.8	~~3.28~~
4	.		7.8	~~3.20~~		4. .	8.8	~~2.82~~
5	6.3 6.1	6.25	6.2	~~3.76~~		5. .	7.4	~~3.48~~
6	.		7.8	~~3.28~~		6. .	8.8	~~2.82~~
7	7.0 6.8	9 6.85	6.9	~~2.61~~		7. .	7.9	~~3.20~~
8	6.2 6.0	1 6.05	6.1	3.77	9.92	8. .	7.5	3.43 10.93
9	.		8.0	~~3.15~~		9. .	8.8	~~2.82~~
10	7.3 7.1	3 7.20	7.3	~~3.50~~		10. .	8.0	~~3.15~~
11	6.1 5.9	6.05 ~~5.95~~	6.0	3.77	9.82	11. .	7.4	3.48 10.88
11:15 12	.		8.8	~~2.62~~		12. .	9.9	.

9.90 07 02 ~~08~~

10.89 ~~10.90~~ 02 03 ~~02~~

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Thursday Oct. 16, 1919

~~Wednesday Oct. 15, 1919~~

Sc. M. I 3967 ~~78~~ 81

11:15

Polar sequence

		Sc. 1	Sc 2		Diff.	Ci. Mag.
		5.8				
	11	5.6	5.80	5.8	3.86	3.79
		6.1	6.05			
	12	5.9	~~5.95~~	6.0	3.91	3.77
		6.7	6			
	13	6.5	6.55	6.6	3.85	3.70
		7.0	7.00			
	14	6.8	~~6.90~~	7.0	3.75	3.60
	16			7.8	3.28	3.28
	17			8.5	2.90	2.95
11:22	18			8.7	2.93	2.87

0302

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1919phae.proj..696A

Monday Oct. 27, 1919

Se. M. MC 16216

G.M.T	Mid.	length Exp.	Exp.
	2304½	5	1
	23 12	10	2
	23 22	10	3
	23 32	10	4
	23 42	10	5
	23 52	10	6
	0 01		
~~2302~~		10	7
			8

Seminamis

	Sc. 1	Sc 2
1		
2		
3		
4		
5		
6		
7		
8		

Star "b"

	Sc. 1	Sc 2
1		
2		
3		
4		
5		
6		
7		
8		

Star "a"

	Sc. 1	Sc 2
1	1	
2	3	
3	4	
4	5	
5	6	
6	7	
7	8	
8		

Star "c"

	Sc. 1	Sc 2
1		
2		
3		
4		
5		
6		
7		
8		

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Monday Oct. 27, 1919.

bc, M MC 16216

Polar Sequence

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1919phae.proj..696A

239677

Ceres

G.M.T.	Mid Time	Length Exp.	×	Sc 1	Sc 2
	0 59 12½	25[S]	1		
	1 04 12½	25 10	2		
	1 14 25	10	3		
	1 24 25	10	4		
	1 34 25	10	5		
	1 44 25	10	6		
	1 54 25	10	7		
	2 04 12½	2 35	8		

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12

Alt. Cor. -.50

Monday Oct. 27, 1919

Metis Measured from preceding to following

Sc. M. MC 16193.

10:10

G.M.T	Mid. Time	Length Exp	Exp	Metis Sc 1	Sc 2		Star "b" Sc 1	Sc 2		Cu.	Mag.
			+								
				5.0	5.00				5.4		
			1	4.8	4.90	5.0	1 5.2	5.4	5.40		
			2	.		8.0	2 .	8.2			
				4.8	7		5.1		5.00		
		10	3	4.6	4.60	4.6	3 4.9	4.9	4.90	4.71	9.71 10
			4	.		8.0	4 .	8.1			
				4.9	8		5.2		2		
		10	5	4.7	4.75	4.8	5 5.0	5.3	5.25	4.60	9.80 01
			6	.		8.2	6 .	8.2			
				4.9	8		5.2		2		
		10	7	4.7	4.75	4.8	7 5.0	5.2	5.20	4.62	9.82 01
			8	.		8.1	8 .	8.2			
				4.9	8		5.3		3		
		10	9	4.7	4.70	4.7	9 5.1	5.4	5.35	4.57	9.42 11
			10	.		8.3	10 .	8.4			
				5.7	6		5.8		7		
			11	5.5	5.45	5.6	11 5.6	5.7	5.75		
										3.26	
										9.81	

	Star "a"			Cu.	Mag.	Star "c"				
	4.8	8				5.9				
1	4.6	4.80	4.8	—		1 5.7	5.8	5.85		
2	.		7.7			2 .	8.7			
	4.6	6				5.7		7		
3	4.4	4.40	4.4	4.85	9.45 01	3 5.5	5.7	5.60	4.44	10.14 13
4	.		7.7			4 .	8.6			
	4.6	5				5.9		9		
5	4.4	4.45	4.5	4.86	9.41 03	5 5.7	5.9	5.80	4.37	10.27 00
6	.		7.7			6 .	8.7			
	4.7	6				6.0		9		
7	4.5	4.50	4.5	4.85	9.45 01	7 5.8	5.9	5.85	4.35	10.30 03
8	.		7.6			8 .	8.8			
	4.6	6				6.2		9		
9	4.4	4.40	4.6	4.85	9.45 01	9 6.0	6.0	6.00	4.28	10.38 11
10	.		8.2			10 .	8.9			
	4.9	9				6.4		3		
11	4.7	4.85	5.0			11 6.2	6.2	6.40		
			6							.09
			9.44	Mean Mag						10.27

10:40

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Monday, Oct. 27, 1919

ScM. MC 16193

10:40 Polar Sequence

		Sc 1		Sc 2	Diff.
		3.9			
	10	3.7			5.12
		4.8			
	11	4.6	4.75	4.9	4.70
		5.2			
	12	5.0	5.20	5.2	4.66
		5.9			
	13	5.7	5.85	5.8	4.45
		6.8			
	14	6.6	6.80	6.8	3.85
		7.1			
10:50	15	6.9	7.05	7.0	4.03

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Monday Oct. 27, 1919

Sc. M. MC 16192

G.M.T	M.d Time	Sept. Prof.	Sept.	Pallas. Sc 1	Pallas. Sc 2	Star "b" Sc 1	Star "b" Sc 2
			1			1	
			2			2	
			3			3	
			4			4	
			5			5	
			6			6	
			7			7	

	Star "a"	Star "c"
1		1
2		2
3		3
4		4
5		5
6		6
7		7

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Monday Oct. 27, 1919

Sc M MC 1619 z

Star "d"

Sc 1 Sc 2

1
2
3
4
5
6
7

Polar sequence

1

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Monday Nov. 10, 1919

Examination of plates for Asteroid.

10:00 Liguria
MC 16361 Not found

10:30

2:50 Bamis
MC 16359 not found

3:15

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Tuesday Nov. 11, 1919

Examinations of plates for Asteroids

11:25 Thyra
MC 16325 formed by trail
MC 16324 " " superposing on MC16325
11:30 No apparent variation, signals irregular.
11:35 Thetis
MC 16278
Not found - No chart plate covering this region. Plate rather dark + poor -
11:50
11:50 Semiramis
12:10 MC 16326 Found by superposing chart plate of same region. MC 6460
2:00
2:15 Very near edge, distant from computed position

Ceres
2:25 MC 16327 Not found - Can not get chart plate which covers entire region.

2:45

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Wednesday Nov. 12, 1919

Examination of plates for Asteroids

9:50 Bancia

MC 16359 Found by superposing Chart plate MC 9570. Near edge of plate

MC 16329 Found by superposing MC 14251 Chart plate. Near edge. No apparent variation shown on either plate

MC 16330 Found by superposing on MC 16329

MC 16360 Found by superposing on MC 16359

10:15

10:25 Liguria

MC 16361 Not found.

11:00

11:40 Thetis

MC 16278 Not Found

12:00

2:15 Ceres

MC 16327 Found by superposing Chart plate MC 4362.

MC 16328 Found by superposing MC 16327.

3:00

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1919phae.proj..696A

Thursday Nov. 13, 1919.

examination of plates for Asteroids.

9:25 Liguria
MC 16361 Not Found -

10:00

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1919phae.proj..696A

Wednesday Nov. 19, 1919

Examination of plates for Asteroids

11:10 Liguria
Cannot be found on MC. 16361
Superposed AC 21993 (Nov. 13, 1919) center at $3^h + 30°$
or AC 21984 (Nov. 9, 1919) center at $3^h + 30°$. According
to B.J. position the asteroid should be near
center of these plates - Nov. 9, 19 $3^h 8^m.9$ $+29\ 55$
Nothing found which proved to be Liguria.

12:00

1:55 Liguria
Superpose AC 21894 on AC 21993 -

2:45

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1919phae.proj..696A

Monday Nov. 24, 1919

Examination of plates for asteroids.

11:50 Thelis
I 39687 - Superposed Chart Plate I 14226
Not found - neither of the plates very good.

12:15

12:15 Ceres
I 39688 - tried to find by trail
Not found

12:30

2:00 Superposed I 15354 on I 39688
I 15354 does not show faint enough stars - Superposed I 15736
found - Images elongated - can't tell whether any variation appears or not.

2:10

2:15 Baucis
MC 16378 - Superposed Chart plate MC 15254.
Not found - Superposed Chart plate MC 12086 + MC 14265 -
~~2:50~~ MC 16379 - Superposed Chart plate MC 15254
found - no trace of variation

MC 16378 -
3:00 found - by superposing on MC 16379

3:15 (Atlante) Atalanta
MC 16381 - Superposed Chart Plate MC 16225
Not found -
3:30 Too dark to continue.

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1919phae.proj..696A

Tuesday Nov. 25, 1919

Examination of Plates for Asteroids

Ligiria

9:45 ~~MC 13403~~

MC 16407 } Not Found - Superposed Chart
MC 16406 } Plate MC 9359

10:30

10:45 Virtia

MC 16405 Superposed Chart Plate MC 15413.

Found -

MC 16404 - Out of focus - Superposed on MC 16405

~~Found~~

MC 16401 - Superposed on MC 16405

Found.

No apparent variation

10:50

10:55 Nysa

MC 16400

Found by trail. No apparent variation

Also superposed MC ~~14161~~ 14161

10:57

Atalante

11:05 MC 16380 - Superposed Chart Plate MC ~~15350~~ 16225

Not found

11:15

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Wednesday Dec. 3, 1919.

Examination of plates for Asteroids.

10:45 Vihlia
MC 16417 Found by superposing on multiple Image plates MC 16401+16404.
The images on this plate are out of focus.

~~10:55~~ MC 16418 Found by superposing on MC 16417.
Images out of focus.

11:00 Both plates Exp. 10 min.

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1919phae.proj..696A

Alt. Corr. +.16

Wednesday Dec. 3, 1919

Seminarnis

Measured from prec. to foll.
Mag. to Comp. Stars.

ScM

NC 16326

9; 35

GMT	M.d. Time	Length of Exp.	No. of Plate	Seminarnis Sc 1	Mean	Sc 2	Star "a" Sc 1	Sc 2	Cu. Mag.
	21 10½	1	1	6.9		8.7 7.1	1		8.6
	21 13½	5	2	5.5		7.6 5.6	2	6.8	6.90 6.8
	21 17	2	3	6.7		8.6 6.7	3		8.3
	21 22½	9	4	4.4	6.7 6.5 6.65	6.6 4.8	4	6.0	6.20 6.2
	21 28	2	5	6.6		8.6 6.7	5		8.0
	21 ~~29½~~ 31½	5	6	5.2		7.5 5.5	6	6.7	6.85 6.8
	21 39	10	7	4.4	6.6 6.4 6.50	6.4 4.7	7	5.9	6.05 6.0 4.49 10.54 04
	21 43 5	2	8	6.5		8.7 6.7	8		7.9
	21 ~~48½~~ 48½	5	9	5.3		7.5 5.6	9	6.8	6.90 6.8
	21 54 6	10	10	4.3	6.6 6.4 6.55	6.5 4.6	10	5.9	6.10 6.1 4.47 10.57 01
	22 0~~4~~ 6	10	11	4.3	6.6 6.4 6.60	6.6 4.6	11	6.0	6.20 6.2 4.42 10.62 04
	22 ~~14½~~ 3	5	12	5.2		7.6 5.6	12	7.0	7.30 7.4
	22 ~~15~~ 7	2	13	6.8		8.7 7.0	13		8.2
	22 ~~19~~ 20½	~~7~~ 8	14	5.5	7.4 7.2 7.45	7.5 5.6	14	6.8	7.00 7.0

1.73
10.58

Meas. wrong star.

10:05

* Asteroid + sequence near edge of plate but images seem good - The polar sequence is in the center of the plate.

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Wednesday Dec. 3, 1919

Measured from prec. & foll. Mags. for comp. stars.

Se. M. MC 16236

10:05

	Star "b"					Star "c"					
	Sc 1	Sc 2	Cu. Mag.			Sc 1	Sc 2	Cu. Mag.		
1	·		8.7			1 ·		9.0			
2	·		7.8			2 ·		7.8 ~~8.0~~			
3	·		8.6			3 ·		8.8			
4	6.9 6.7	6.85	6.8			4 ·		7.3			
5	·		8.6			5 ·		8.8			
6	·		7.7			6 ·		8.5			
7	6.7 6.5	6.70	6.7	4.18	10.88 00	7 7.4 7.2	7.30	7.2	3.96 ~~4.46~~	11.26 10	
8	·		8.7			8 ·		8.8			
9	·		7.6			9 ·		7.7			
10	6.8 6.6	6.75	6.7	4.15	10.90 07	10 7.2 7.0	7.10	7.0	4.02	11.12 04	
11	6.7 6.5	6.65	6.6	4.20	10.85 03	11 ~~7.1~~ 7.2	7.05	7.0	4.04	11.09 07	
12	·		7.5			12 ·		7.9			
13	·		8.7			13 ·		8.8			
14	·		7.6			14 ·		8.0			
				2.63					.47		
				10.88					11.16		

Polar Sequence

	Sc 1		Sc 2	Diff.
13	5.6 5.4	5.60	5.6	4.70
14	6.6 6.4	6.50	6.4	4.15
15	6.9 6.7	6.90	6.9	4.18
16			7.6	3.80
17			7.8	3.83

10:35

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1919phae.proj..696A

Tuesday, Dec. 2, 1919 Alt. Corr. +.19

Thyra

Measured from preceding to following.

Sc. M MC 16324

10:00

Thyra

B.M.T.	Mid. Time	Swgle Brkt.	Exp.	P.	Sc 1	Sc. 1	Sc 2
	23 36	6	1	3.7	5.9 5.7	5.80	5.7
	23 39½	3	2	4.8	6.9 6.7	6.80	6.7
	~~23 44~~ 23 42	2	3	5.5	·		7.4
	23 45½	5	4	4.6	6.6 6.4	6.50	6.4
	23 53	10	5	3.5	i		·
	~~0 04~~ 03	10	6	3.5	i		·
	0 10½	5	7	5.2	7.0 6.8	6.90	6.8
	0 14	2	8	5.9	·		7.8
	0 19½	9	9	3.3	5.2 5.0	5.20	5.2
	0 25	2	10	5.7	·		7.5
	0 28½	5	11	4.7	6.4 6.2	6.30	6.2
	0 36	10	12	4.0	i		·
	0 42	2	13	6.7	·		8.2
	0 45½	5	14	5.2	7.1 6.9	7.20	7.3
	0 49	2	15	6.1	·		7.8

To Star "a"

10:40

Star "a" Cu. mag.

	Sc 1		Sc 2		
~~1~~	3.9				
~~1'~~	3.7		·		
2	5.0 4.8	4.95	4.9		
~~3~~ 4	5.7 5.5	5.65	5.6		
~~4~~ 5	4.8 4.6	4.80	4.8		
~~5~~ 4	3.7 3.5	·		5.16	8.86 (10)
~~6~~ 7	3.7 3.5	·		5.16	8.86 (10)
8	5.4 5.2	5.40	5.4		
~~8~~ 6	6.1 5.9	6.05	6.0		
~~9~~ ~~10~~	3.5 3.3	·			
~~10~~ ~~11~~	5.9 5.7	6.85	5.8		
~~11~~ ~~12~~	4.9 4.7	4.80	4.7		
~~12~~ ~~13~~	4.2 4.0	4.20	4.2	4.97	9.17 (21)
~~13~~ ~~14~~	6.9 6.7	6.70	~~6.5~~ 6.5		
14	5.4 5.2	5.40	5.4		
15	6.3 6.1	6.25	6.2		

2.89

8.96

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1919phae.proj..696A

Tuesday Dec. 2, 1919.

Sequence for Thuja cont.

Sc. M. MC 16324

10:40

	Star "b" Sc 1	Sc 2	Cu. Mag.			×	Star "c" Sc 1	Sc 2	Cu. Mag.		
1	6.0 5.8	5.90	5.8			1	7.0 6.8	7.00	7.0		
2	6.9 6.7	6.85	6.8			2	·		7.8		
3	·		7.5			3	·		8.4		
4	6.4 6.2	6.40	6.4			4	·		7.6		
5	5.8 5.6	5.70	5.6	4.47	10.17 11	5	6.7 6.5	6.70	6.7	4.17	10.87 00
6	5.8 5.6	5.70	5.6	4.47	10.17 11	6	6.7 6.5	6.70	6.7	4.17	10.87 00
7	7.2 7.0	7.30	7.4			7	·		8.0		
8	·		7.8			8	·		8.8		
9	5.4 5.2	5.50	5.6			9	6.8 6.6	6.75	6.7		
10	·		7.7			10	·		8.7		
11	6.9 6.7	6.85	6.8			11	·		7.7		
12	6.2 6.0	6.20	6.2	4.31	10.51 23	12	·		7.6	3.92 e	11.52 e
13	·		8.3			13	·		9.0		
14	·		7.6			14	·		8.5		
15	·		8.0			15	·		8.9		
					.85						
					10.28						10.87

Polar Sequence

	Sc 1 3.7	Sc. 2	Diff.
9	3.5		5.13
10	3.7 3.9		5.12
11	4.9 4.7	4.90	4.9 4.65
12	5.2 5.0	5.20	5.2 4.66
13	6.0 5.8	5.90	5.8 4.40
14	6.4 6.2	6.40	6.4 4.25
15	7.0 6.8	7.00	7.0 4.08

11:20

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1919phae.proj..696A

Saturday Dec. 6, 1919

Examination of plates for asteroids.

10:50 Harmonia

MC 16420 Found by superposing chart plate MC 15388

MC 16419 Apparently does not cover same region as 16420 for it will not superpose

10:55

Monday Dec. 15, 1919

Harmonia found on MC 16419 by superposing on 16420. This plate was mistaken for another and left at the Sob. without a cover, while MC 16394 was put in the cover which belonged to MC 16419. MC 16394 is a multiple image plate for Atalanta but the asteroid cannot be found on it.

M. D. A.

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1919phae.proj..696A

Thursday Dec, 11, 1919 alt. Corr. -.10

Vesta - Exp. numbered from full. to free.

Sa. M. M 1134 - See D. W. B 6:119

9:55 Remeasured for fainter comp. stars.

Exp.	Vesta g	Vesta h				Star "a" g	Star "a" h				
	Dc 2	Dc 2	Cu	Mag.		Dc 2	Dc 2	Cu.	Mag.		Diff
2	7.3	7.35	7.4	-0.31	7.04 01	2	8.8	8.75	8.7	-0.32	8.43 02	-0.61
3	7.4	7.45	7.5	-0.59	6.86 17	3 ✱	8.6	8.65	8.7	-0.32	8.33 08	-0.51
6	7.7	7.70	7.7	-0.68	7.02 01	6	8.9	8.90	8.9			-0.76
8	8.5 ✱	8.60	8.7	-1.42	7.18 15	8	9.4	9.40	9.4			-1.26
9	7.7	7.75	7.8	-0.71	7.04 01	9	8.8	8.80	8.8	-0.32	8.48 07	-0.66
					.14						.24	
					7.03						8.41	

Star "c" g						Polar Sequence g			
Dc 2	Dc 2	Cu.	Mag.	Diff		Dc 2	Dc 2	Diff.	
2	7.2	7.10	7.0	-0.22	6.88 25	-0.24	5	6.7	6.70	6.7	-0.21
3 ✱	7.4	7.45	7.5	-0.24	7.21 08	-0.69 5	8	8.6	8.60	8.6	-0.37
6	7.6	7.60	7.6			-0.74	9	9.0	8.95	8.9	-0.12
8	8.4	8.25	8.1			-1.39	10	9.4	9.40	9.4	-0.38
9	7.6	7.55	7.5	-0.25	7.30 17	-0.69	++				
					7.13 39 mean mag.						

Star "d"					
Dc 2	Dc 2			Diff.	
2	7.4	7.25	7.3	-0.23	7.12 20 -0.31
3 ✱	7.5	7.60	7.7	-0.25	7.35 03 -0.56
6	7.6	7.65	7.7		-0.61
8	8.6	8.60	8.6		-1.56
9	7.8	7.75	7.7	-0.27	7.48 16 -0.71
					.95
					7.32

10:20

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1919phae.proj...696A

Thursday Dec. 11, 1919 Alt Corr. −.16

Vesta - Eph. numbered from following to prec.

Sc. M. 10:25

M.T. 1135 - See D.W.B. 6:120

Remeasured for fainter comp. stars.

Vesta

	Sc² g		Sc² h	Cu.	Cu.	Mag.
2	7.8	7.85	7.9	-0.42	-0.76	7.09 02
3	7.8	7.80	7.8	-0.40	-0.76	7.04 17
6	8.4	8.45	8.5	-0.73	-0.95	7.40 34
8	8.8	8.75	8.7	-1.38	-1.54	7.21 06
9	7.7	7.85	8.0	-	-0.95	6.90 26
12	8.3	8.30	8.3		-1.08	7.22 06

7.16

Star "d"

	Dc 2 g		Sc 2 h	Cu.	Mag.	Diff.
2	7.9	7.85	7.8	-1.08	6.77 34	-0.81
3	8.0	7.90	7.8	-1.05	6.85 26	-0.86
6	8.6	8.30	8.0			-1.26
8	8.7	8.70	8.7			-1.66
9	8.2	8.10	8.0	-0.98	7.12 01	-1.06
12	8.4	8.50	8.6	-0.81	7.69 58	-1.46

43

7.11 mean mag

Star "c"

	Sc 2 g		Sc 2 h	Cu.	Mag. Diff	
2	7.6	7.65	7.7	-1.16	6.49 02	-0.79
3	7.5	7.55	7.6	-1.20	6.35 12	-0.69
6	7.8	7.80	7.8			-0.94
8	8.2	8.40	8.6			-1.54
9	7.6	7.65	7.7	-1.16	6.49 02	-0.79
12	7.8	7.70	7.8	-1.14	6.56 09	-0.84

189

6.47 Mean Mag.

Star "e"

	g Sc 2		h Sc 2	Cu.		
2	8.7	8.70	8.7	-0.73	7.97 23	-0.56
3	8.7	8.75	8.8	-0.72	8.03 17	-0.61
6	8.9	8.90	8.9			-0.76
8	9.4	9.45	9.5			-1.31
9	8.8	8.90	9.0	-0.67	8.23 03	-0.76
12	9.0	9.15	9.3	-0.58	8.57 37	-1.01

80

8.20 mean mag.

Polar Sequence

	g Sc²		h Sc 2	Diff.
5	7.7	7.65	7.6	-1.16
8	8.8	8.85	8.9	-0.62
9	9.4	9.40	9.4	-0.57

10:55

Polar Sequence

	g Sc 2		h Sc 2
10			
11			

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1919phae.proj..696A

Thursday Dec. 11, 1919 Alt. Corr. -.10

Vesta - Exp. numbered from full to free.

Sc. M. M.F. 1220 - See D.W.B. 6:122 Plate slightly fogged.

Remeasured for faintest comp. stars.

11:05 Vesta

	Sc 2 g	Sc 2 h	Cu.	Mag.		Star "d" g Sc 2	h Sc 2	Cu.	Mag.	Diff.
2	8.7	8.70	8.7	-1.31	7.39 .19	8.3	8.25	8.2	-1.51	6.74 .31 -1.21
3	8.7	8.65	8.6	-1.48	7.17 .03	8.6	8.65	8.7	-1.50	7.15 .10 -1.61
6	8.9	8.85	8.8	-1.72	7.13 .07	8.7	8.70	8.7		-1.66
8	9.2	9.25	9.3	-1.87	7.38 .18	8.8	8.80	8.8		-1.76
9	8.7	8.75	8.8	-1.70	7.05 .15	8.6	8.65	8.7	-1.50	7.15 .10 -1.61
12	8.8	8.80	8.8	-1.70	7.10 .10	8.6	8.65	8.7	-1.50	7.16 .10 -1.61
					.22					.19
					7.20					7.05

Star "c"

	g	h	Cu.	Mag.	Diff.	Star "e" g	h	Cu.		
2	8.0	8.05	8.1	-1.51	6.54 .34 -1.19	9.7	9.65	9.6	-1.47	8.18 .00 -1.51
3	7.9	8.15	8.4	-1.51	6.64 .24 -1.29	9.6	9.65	9.7	-1.47	8.18 .00 -1.51
6	8.7	8.70	8.7		-1.84	9.7	9.70	9.7		-1.56
8	8.9	8.90	8.9		-2.04	10.0	9.95	9.9		-1.81
9	8.7	8.70	8.7	-1.50	7.20 .32 -1.84	9.4	9.50	9.6	-1.48	8.02 .16 -1.36
12	8.7	8.65	8.6	-1.50	7.15 .27 -1.79	9.8	9.80	9.8	-1.46	8.34 .16 -1.66
					3.53					.72
					6.88					8.18

Polar Sequence

	g	h	Diff.
5	8.0	8.00	8.0 -1.51
8	9.6	9.70	9.8 -1.47
9	7.		

11:25 +10

11

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1919phae.proj..696A

Thursday Dec. 11, 1919 Alt. Corr. +.16

Nausikaa - Eph. numbered foll. to prec.

Sc. M. 2:20

J39481 - See D.W.B. 3.88

Remeasured for brighter stars in polar sequence

Nausikaa

			Sc 1		Sc 2	Cu.	Mag.	
5	2	1	6.9 6.7	6.90	6.9	2.48	9.38	08
10	3	2	5.6 5.4	5.60	5.6	3.81	9.41	11
10	4	3	5.6 5.4	5.60	5.6	3.86	9.46	16
5	5	4	6.1 5.9	6.05	6.0	3.04	9.09	21
2	6	5	7.0 6.8	7.00	7.0	2.09	9.09	21
10	7	6	5.6 5.4	5.60	5.6	4.00	9.60	30
5 10	8	7	5.9 5.7	5.95	6.0	3.30	9.25	05
2	9	8	7.0 6.8	7.00	7.0	2.15	9.15	15
9	10	9	5.4 5.2	5.40	5.4	4.00	9.40	10
2 10	11	10	6.9 6.7	6.85	6.8	2.34	9.19	11
5 10	12	11	5.9 5.7	5.90	5.9	3.46	9.36	06
4	13	12	6.2 6.0	6.20	6.2	3.00	9.20	10
	D		n.s.					

3.68
9.30 Mean Mag

Star "a"

				Cu.	Mag.	Diff.
1	5.8 5.6	5.75	5.7			2.99
2	4.8 4.6	4.75	4.7	3.96	8.71	07 3.99
3	4.7 4.5	4.65	4.6	4.00	8.65	04 4.09
4	5.4 5.2	5.45	5.5			3.29
5	6.0 5.8	6.00	6.0			2.74
6	4.7 4.5	4.75	4.8	3.96	8.71	07 3.99
7	5.0 4.8	5.05	5.1	~~3.90~~	~~8.95~~	20 3.69
8	6.1 5.9	6.00	5.9			2.74
9	4.8 4.6	4.80	4.8			3.94
10	6.1 5.9	6.05	6.0	~~3.50~~	~~9.55~~	40 2.69

2.55

Star "a"

	Sc 1		Sc 2	Diff	Cu.	Mag.	D
11	5.0 4.8	5.05	5.1	3.69	~~3.90~~	~~8.95~~ 20	
12	5.7 5.5	5.70	5.7	3.04			
13	n.s						

4.5
9.15
3.07
8.69

Star "b"

1	6.1 5.9	6.05	6.0	2.83				
2	4.8 4.6	4.80	4.8	4.08	3.94	8.74	07	
3	4.8 4.6	4.80	4.8	4.08	3.94	8.74	07	
4	5.9 5.7	5.85	5.8	3.03				
5	6.8 6.6	6.80	6.8	2.08				
6	4.9 4.7	4.90	4.9	3.98	3.90	8.80	04	
7	5.6 5.3	5.50	5.5	3.38	~~3.90~~	~~9.20~~	10	
8	6.7 6.5	6.70	6.7	2.18				
9	4.8 4.6	4.85	4.9	4.03				
10	6.2 6.0	6.30	6.4	2.58	3.42	9.72	36	
11	5.4 5.2	5.45	5.5	3.43	3.70	9.15	21	
12	5.8 5.6	5.80	5.8	3.08				
13	n.s							

1.07
9.36
2.28
8.76

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Thursday Dec. 11, 1919

Nausikaa - Ex f, numbered fold. to prec.

Sc M.
2:55

D 39451 - continued

Star "c"

	Sc 1		Sc 2	Co.	mag.	Diff
1	7.2 7.0	7.30	7.4			2.30
2	5.9 5.7	5.85	5.8	3.57	9.42 07	3.75
3	5.8 5.6	5.80	5.8	3.58	9.38 03	3.80
4	6.7 6.5	6.65	6.6			2.95
5	.		7.7			1.90
6	5.6 5.4	5.60	5.6	3.65	9.25 10	4.00
7	6.4 6.2	6.40	6.4			3.20
8	.		7.6			2.00
9	5.6 5.4	5.60	5.6			4.00
10	.		7.6			2.00
11	6.1 5.9	6.15	6.2			3.45
12	6.7 6.5 6.4	6.70	6.7			2.90
13	N.S					

10 5
9.35

3:10

Polar Sequence

	Sc 1		Sc 2	Diff
8	4.1 3.9			4.13
9	4.8 4.6	4.80	4.8	4.03
10	5.2 5.0	5.20	5.2	3.87
11	6.1 5.9	6.05	6.0	3.50
12	6.7 6.5	6.65	6.6	3.21
13	7.0 6.8	7.00	7.0	3.30
14		7.7		2.95
15		7.8		3.28

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1919phae.proj..696A

Monday Jan. 5, 1920

Sc. M

B Series 536

B 50777

C6

	Sc 1	Sc 2	g Sc 2	h Sc 2	P.C. Sc 2
11:05	-	-			
1	4.3	4.4	6.4	6.6	8.7
Edge too long to meas. 2	.		i	.	8.8
3	4.8	5.2	i	.	9.0
4	5.6	5.5	7.9	7.7	9.5
slightly elong. 5	5.0	5.4	7.5	7.6	9.6
6	5.7	5.7	8.5	8.6	9.8
9	6.0	6.0	8.8	8.7	10.0
10	6.6	6.6	8.9	8.8	10.0
10a	6.5	6.5	9.0	8.9	
12	6.8	6.9	9.5	9.6	
13		7.4	9.9	9.9	
14		7.6	10.0	10.0	
16		7.9			
17		7.9			
19		8.2			
21		8.7			
22		8.8			
23		8.8			
24		9.0			
25		9.0			
26		9.7			
27		9.8			
28		9.9			
30		.			

11:50

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1919phae.proj..696A

Monday Jan. 5 1920

Sc M

B Series 536

B50 778

η Carinae

11:40

	Sc 1	Sc 2
d		
B		
a	4.8 ~~6.6~~	5.2
a'	do. ~~5.4~~	.
a^2	5 4.6	5.8
a^3	5.7	5.9
a^4	5.8	5.8
a^5	5.7	5.9
b	6.0	6.0
b'	do	.
c	5.6	5.7
d	5.9	6.0
e	6.4	6.4
f	6.0 ~~5.8~~	6.4
g	&	7.6
g'	6.6	6.6

12:10

g h

Sc 2 Sc 2

P.C.

Sc. 2

Too many stars in region to make it possible to meas. diff 1. + P.C.

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1919phae.proj..696A

Monday Jan. 5, 1920

Sc. M.

B Series 536

B50778

29 Ks.

12:10

	Sc1	SO2	g	h	Sc2	SO2	P.C.	SO2
1	5.8							
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

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1919phae.proj...696A

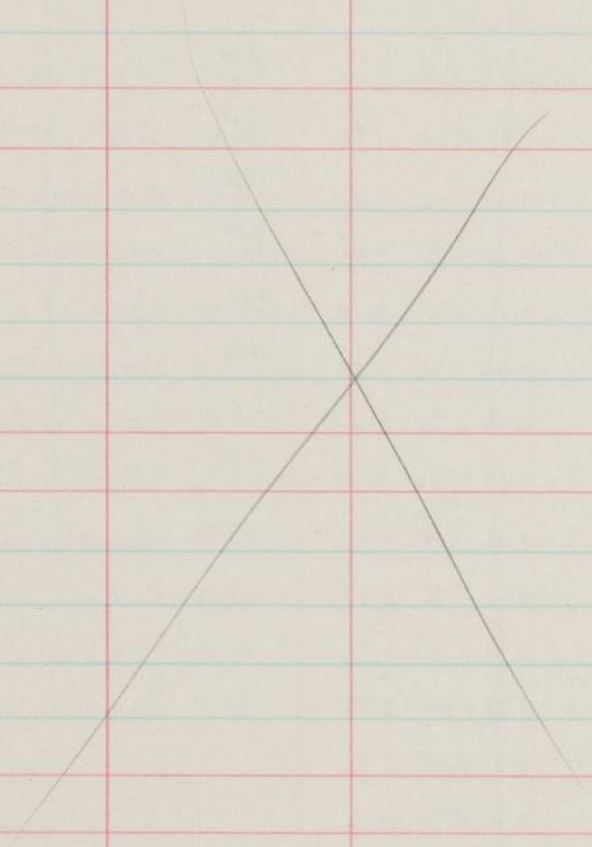
B Series 536

B 50780 Nova Velorum

g h P.C.

Sc1 Sc2 Sc2 Sc2 Sc2

a
b
c
d
e
f
g
h
k
l
m
n
o
p
q
r



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1919phae.proj..696A

Sheet 201

Tuesday Jan. 6, 1920

Sc. M.

B Series 536

B 50777 | C 6 | 11 00 +15

Time	Note	p.42	No.	Sc1	Mean	Sc2	Diff	Mean	Diff	g Sc2	h Sc2	Mean	Diff	p.42	Diff	P.C. Sc.2 (p.42)	Diff	Mean	Diff
2ʹ00		4.30	1	4.5 / 4.3	4.45	4.4	2.31	4.38	2.38	6.4 (6.46)	6.4	6.40	+.36	6.50	+.31	8.7 (8.6)	−1.94	8.65	−1.89
	i. near edge		2	.		.				.	.					8.6 (8.5)	−1.72	8.55	−1.67
		5.15	3	5.1 / 4.9	5.05	5.0	2.46	6.10	2.41	i (7.60)	7.6	7.6	−.09		−.09	8.9 (9.0)	−1.39	8.95	−1.44
		5.60	4	5.6 / 5.4	5.60	5.6	1.96	5.60	1.96	7.8 (7.78)	7.7	7.75	−.29	7.80	−.22	9.5 (9.4)	−1.96	9.45	−1.89
		5.10	5	5.1 / 4.9	5.15	5.2	2.62	5.12	2.65	7.8 (7.90)	8.2	8.00	−.23	7.8	−.13	9.7 (9.5)	−1.93	9.60	−1.83
		5.75	6	5.8 / 5.6	5.76	5.7	2.46	5.75	2.46	8.5 (8.56)	8.6	8.55	−.34	8.55	−.34	9.7 (9.7)	−1.49	9.70	−1.49
		6.20	9	6.1 / 5.9	6.05	6.0	2.54	6.12	2.47	8.7 (8.70)	8.7	8.70	−.11	8.70	−.11	9.9 (10.0)	−1.38	9.95	−1.36
		6.50	10	6.5 / 6.3	6.55	6.6	2.45 (3)	6.52	2.38	9.7 (2) (8.90)	8.8	9.00	−.10	8.80	00	9.9	−1.00		−1.00
		6.90	12	7.0 / 6.8	6.90	6.8	2.44	6.90	2.44	9.8 (9.75)	9.8	9.80	−.46	9.70	−.41				
		7.4	13			7.4	2.29	7.40	2.29	9.9 (9.90)	9.9	9.90	−.21	9.90	−.21				
		7.5	14			7.6	2.46	7.55	2.51	10.0 (10.00)	10.0	10.00	+.06	10.00	+.06				
		7.7	16			7.8	2.72	7.75	2.77										
		7.8	17			7.9	2.88	7.85	2.93										
		7.9	19			8.1	2.83	8.00	2.93										
		8.5	21			8.6	2.66	8.55	2.71										
		8.7	22			8.7	2.84	8.70	2.84										
		8.7	23			8.8	3.03	8.75	3.08										
		8.9	24			8.9	3.26	8.90	3.26										
		9.0	25			9.0	3.33	9.00	3.33										
		9.6	26			9.8	3.08 (6)	9.60	3.08										
		9.8	27			9.7	3.42	9.75	3.37										
		9.8	28			9.8	3.48	9.80	3.48										
2ʹ35		10.0	30			10.0	~~3.28~~	10.00											

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Sc.M. B Series 536 alt. Cor. −.07

B50778 η Carinae 10 39 −59.4

2.135

	Sc 1		Sc 2	Cu.	Mag.	g Sc.2	h Sc.2	P.C. Sc.2
a∞	4.7 4.9			2.35	7.28			
a	4.9 5.1	5.10	5.1	2.36	7.45			
a'	do.		.	.	.			
a²	5.9 5.7	5.85	5.8	2.36	8.21			
a³	5.7 5.5	5.70	5.7	2.36	8.06			
a⁴	5.9 5.7	5.80	5.7	2.36	8.16			
a⁵	6.8 5.6	5.80	5.8	2.36	8.16			
b	6.1 5.9	6.05	6.0	2.36	8.41			
b'	do.		.	.	.			
c	5.8 5.6	5.70	5.6	2.36	8.06			
d	6.0 5.8	5.95	5.9	2.36	8.31			
e	6.7 6.5	6.65	6.6	2.37	9.02			
f	6.2 6.0	6.35	6.5	2.37	8.72			
g	6.7		7.6	2.65	10.25			
g'	6.5 5.6	6.70	6.7	2.38	9.08			

Diffr. images too confused with other stars to measure.

2.158

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Tuesday Jan. 6, 1920

Sc. M

B Series 536

Alt. Corr. -.07

B 50778

29 Ks

10 39 -59.4

2:55

	Sc.1		Sc.2	Cu.	mag.	g Sc.2	h Sc.2	P.C. Sc.2
	6.0							
1	5.8	5.95	5.9	2.35	8.30			
	6.2							
2	6.0	6.25	6.3	2.36	8.61			
	6.9							
3	6.7	6.85	6.8	2.40	9.25			
4			6.7	2.38	9.08			
5	"		7.3	2.63	9.83			
6			7.7	2.68	10.38			
7			7.8	2.72	10.52			
8			8.1	2.84	10.94			
9			8.8	3.08	11.88			
10			8.7	3.04	11.74			
11			8.8	3.08	11.88			
12			.	.	.			
13			9.4	3.27	12.67			
14			9.6	3.31	12.91			
15			9.7	3.33	13.03			
16			9.9	3.38	13.28			

not marked in pl.

Too many stars to meas. diffr.

3:12

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Tuesday Jan. 6, 1920

ScM

B Series 536

Alt. Cor. -.02

B50780

Nova Velorum 1059 −53.9

3:12

	Sc 1		Sc 2	Cu.	Mag.	g h Sc 2 Sc 2	P.C. Sc 2	Cu.	Mag.
	5.9								
a	5.7	5.85	5.8	2.35	8.20		9.9	-1.40	8.50
	6.8								
b	6.6	6.75	6.7	2.39	9.14	Turpon to meas.			
c			7.4	2.56	9.96				
d			7.6	2.65	10.25				
e			7.7	2.68	10.38				
f			8.4	2.96	11.36				
g			8.7	3.04	11.74				
h			9.2	3.20	12.40				
k k			9.5	3.29	12.79				
l			9.9	3.37	13.27				
m			10.0	3.40	13.40				
n			n.s.						
o									
p									
q									
r									

3:30

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1919phae.proj..696A

~~Sup page 38~~

Tuesday Jan. 6, 1920

Sc. M.

B Series 536

B 50777 C 6

3:30

	Sc 1	Mean	Sc 2	Diff.	g Sc 2	h Sc 2	Mean	Diff.	P.C. Sc 2	Diff.
	4.2									
1	4.0	4.30	4.4	2.46	6.4	6.6	6.50	+.26	8.6	-1.84
2	.		.		.	.			8.5	-1.62
	5.1			2.36						
3	4.9	5.15	5.2	1.78	i	i			9.0	-1.49
	5.6									
4	5.4	5.60	5.6	1.96	7.8	7.8	7.80	-.24	9.4	-1.84
	5.0									
5	4.8	5.10	5.2	2.67	7.8	i			9.5	-1.73
	5.8									
6	5.6	5.75	5.7	2.46	8.5	8.6	8.55	-.34	9.7	-1.49
	6.2									
9	6.0	6.20	6.2	2.39	8.7	8.7	8.70	-.11	10.0	-1.41
	6.6									
10	6.4	6.50	6.4	2.40	8.8	8.8	8.80	+.10		
	7.0									
12	6.8	6.90	6.8	2.44	9.7	9.7	9.70	-.06		
13			7.4	2.29	9.9	9.9	9.90	-.21		
14			7.5	2.56	10.0	10.0	10.00	+.06		
16			7.7	2.82						
17			7.8	2.98						
19			7.9	3.03						
21			8.5	2.76						
22			8.7	2.84						
23			8.7	3.13						
24			8.9	3.26						
25			9.0	3.33						
26			9.6	3.08						
27			9.8	3.22						
28			9.8	3.48						
30			10.0							

4:00

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Tuesday Jan. 6, 1920

Sc. M.
MC 5174

Nova Persei No. 2. - Magnitude of adjacent stars desired by C. O Lampland.

Stars on Barnard's Chart in A.N. 3796

		Sc 1	Sc 2	Au.	mag.	P.C. Sc. 2
9:35	1		10.1	5.30	15.40	
	2		9.7	5.15	14.85	
	3		8.7	5.00	13.70	
	4		9.8	5.22	16.12	
	5		8.6	5.00	13.60	
	6		9.9	5.22	16.12	
	7		9.6	5.11	14.71	
	8		8.6	5.00	13.60	
	9		9.8	5.19	14.99	
	10		8.8	5.00	13.80	
	11		8.7	5.00	13.70	
	12		9.7	5.15	14.85	
	13		9.8	5.19	14.99	
9:50	14		7.7	5.08	12.78	

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Tuesday Jan. 6, 1920

Sc. M. Nova Persei No 2 - Continued.

MC 5174 Stars of Sequence

9:50

	Sc 1	Sc. 2	Diff.	Cu.	Mag.
f		7.5	4.99	5.10	12.60
h		8.6	4.94	5.00	13.60
k		8.5	4.83	5.00	13.50
l		8.0	5.26	5.04	13.04
m		8.6	5.01	6.00	13.60
n'		8.7	6.10	5.00	13.70
g		9.7	4.87	5.09	14.79
r		9.9	5.10	5.22	15.12

9:55

14 = g	7.7	5.12	5.08	12.78
8 = n	8.6	5.04	5.00	13.60
5 = o	8.6	5.44	5.00	13.60
7 = p	9.6	5.16	5.11	14.71
6 = s	9.9	5.60	5.22	15.12

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Tuesday Jan. 6, 1920

Sc M

Nova Persei No. 2 Continued

MC 1993

10:20

Barnard's Nova

	Sc 1	Sc 2	Cu.	Mag.
1		10.1	5.29	15.39
2		9.8	5.23	15.03
3		8.6	5.33	13.93
4		9.9	5.25	15.15
5		8.7	5.29	13.99
6		9.9	5.25	15.15
7		9.4	5.20	14.60
8		8.0	6.68	13.68
9		9.6	5.20	14.80
10		8.4	6.45	13.85
11		8.5	5.37	13.87
12		9.5	5.20	14.70
13		9.8	6.23	15.03
10:26	14 6.7 6.9 6.85	6.8	6.10	12.95

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Sunday Jan. 6, 1920

Sc M. Nova Pucis No. 2. Continued
MC1993 Sequence
10:26

	Sc 1		Sc 2	Diff	Cu.	Mag.
	6.2					
f	6.0	6.20	6.2	6.29	6.24	12.44
h			7.6	5.94	5.87	13.47
k			7.4	5.93	5.95	13.35
l			7.5 2	6.06	6.00	13.20
m			7.7	5.91	5.82	13.52
n'			8.7	5.10	6.29	13.99
q			9.5	5.07	5.20	14.70
n			9.9	5.10	5.25	15.15

10:35

14 = q	6.85	5.97	6.10	12.96	
8 = n	8.0	5.64	5.68	13.68	
5 = o	8.7	5.34	5.29	13.99	
7 = p	9.4	5.36	5.20	14.60	
6 = s	9.9	5.60	6.25	15.16	

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Sheet No. 203

Wednesday Jan. 7, 1920

ScM.

Mf 3476

10:10

Mf Series 187

C 5

	Sc 1		Sc 2	Diff.	g Sc 2	h Sc 2	Diff.	P.C. Sc 2	Diff
1	3				5.8	5.8	5.80	8.6	-1.36
2	2.8 2.6			5.22	7.6	7.6	7.60	9.6	-1.58
4	2.8 2.6			5.40	7.7	7.7	7.70	9.7	-1.50
5	3.9 3.7			5.04	9.5	8.6	8.56	10.0	-1.06
6	4.5 4.3	4.50	4.5	4.66	8.7	8.7	8.70		
8	5.0 4.8	4.95	4.9	4.60	8.9	8.8	8.86		
9	5.1 4.9	5.20	5.3	4.52	9.8	9.7	9.75		-.03
10	5.8 5.6	5.70	5.6	4.31	9.9	9.9	9.90		0.11
12	6.1 5.9	6.05	6.0	4.16	9.9	10.0	9.95		0.26
13	6.4 6.2	6.46	6.5	4.01	10.0	10.0	10.00		0.46
15			7.7	3.46					
16			7.6	3.76					
18			8.2	3.62					
19			8.5	3.55					
20			8.7	3.52					
21			8.8	3.89					
22			9.2	3.81					
23			9.4	3.79					
24			9.8	3.68					
25			9.9	4.19					
27			ns						
28									
29									

10:45

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Ser 14

MF 3477

10:45

MF Series 137 — Alt. Corr. −.02

172 N — 8 40 − 48

	Ser 1	Sc 2		Cu.	Mag.	g Sc 2	h Sc 2	Cu.	Mag.	P.C. Sc 2	Cu.	Mag.
	2.4											
1	2.2			5.66	8.06	7.9	7.8	7.85	.60	9.8	−1.26	8.54
	3.5											
2	3.3			5.27	8.77	7.9	stars.	.58	8.48			
	4.0											
3	3.8	4.05	4.1	5.02	9.07	8.8	8.8	8.80	.43	9.23		
	4.9											
4	4.7	4.90	4.9	4.65	9.55	8.8	9.0	8.90	.42	9.32		
	5.7											
5	5.5	5.65	5.6	4.38	10.03	9.8	9.8	9.80	.28	10.08		
	5.9											
6	5.7	5.85	5.8	4.32	10.17	9.9	10.0	9.95	.27	10.22		
	6.2											
7	7.0	6.30	6.4	4.15	10.45							
	7.0											
8	6.8	6.95	6.9	3.94	10.89							
9			7.5	3.77	11.27							
10			7.8	3.70	11.50							
11			8.6	3.67	12.27							
12			8.7	3.68	12.38							
13			9.6	3.83	13.43							
14			9.8	3.89	13.69							
15			10.0	3.94	13.94							

11:08

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Sc M

MF Series 137

all. corr. −.01

MF 3481

11:08

E4

9 20 −45

	Sc1	Mean	Sc2	Cu.	Mag.	g Sc2	h Sc2	Mean	Cu.	Mag.	P.C1 Sc2	Cu.	Mag.
1	0					5.5	5.6	5.55	1.34	6.89	8.2	−1.28	6.92
2	2.4 2.2			5.66	8.05	6.2	5.9	6.05	1.20	7.25	8.8	−1.27	7.53
3	2.8 2.6			5.60	8.30	6.8	6.8	6.80	0.87	7.67	9.3	−1.25	8.05
4	2.2 2.0			6.72	7.92	6.6	6.7	6.65	0.93	7.58	8.9	−1.27	7.63
5	2.1 1.9			5.75	7.85	7.0	7.0	7.00	0.80	7.80	8.9	−1.27	7.63
6	3.1 2.9			5.49	8.50	6.9	6.8	6.85	0.86	7.71	9.2	−1.26	7.94
7	2.9 2.7			5.48	8.38	6.9	7.2	7.05	0.78	7.83	9.6	−1.25	8.35
8	3.8 3.6			5.13	8.93	7.8	7.8	7.80	0.60	8.40	9.8	−1.25	8.55
9	4.8 4.6	4.75	4.7	4.72	9.47	8.8	8.7	8.75	0.44	9.19			
10	4.8 4.6	4.70	4.6	4.74	9.44	8.8	8.7	8.75	0.44	9.19			
11	4.9 4.7	4.95	5.0	4.63	9.58	8.7	8.8	8.75	0.44	9.19			
12	5.0 4.8	5.10	5.2	4.57	9.67	8.8	8.8	8.80	0.43	9.23			
13	4.9 4.7	4.80	4.7	4.70	9.50	9.2	9.3	9.25	0.36	9.61			
14	5.0 4.8	4.95	4.9	4.63	9.58	9.4	9.3	9.35	0.35	9.70			
15	5.2 5.0	6.30	5.4	4.50	9.80	9.7	9.5	9.60	0.31	9.91			
16	5.4 5.2	5.45	5.5	4.48	9.90	9.9	9.8	9.85	0.28	10.13			
17	5.9 5.7	5.85	5.8	4.30	10.15	9.9	9.9	9.90	0.27	10.17			
18	6.1 5.9	6.10	6.1	4.22	10.32	9.9	10.0	9.95	0.27	10.22			
19	6.4 6.2	6.30	6.2	4.16	10.46	10.0	10.0	10.00	0.26	10.26			
20	6.8 6.6	6.70	6.6	4.02	10.72	27 8.7		3.66		12.38			
21	7.0 6.8	6.95	6.9	3.94	10.89	28 8.9		3.71		12.61			
22			7.5	3.78	11.28	29 8.8		3.70		12.50			
23			7.7	3.72	11.42	30 9.8		3.89		13.69			
24			7.7	3.72	11.42	31 9.9		3.92		13.82			
25			8.6	3.67	12.27	32							
12:00	26		8.6	3.67	12.27	33 9.9		3.92		13.82			
						34 10.0		3.91		13.96			

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ScM MF series 137 Alt. Corr. .00

MF 3482 1747 10 40 -48

12:00

	Sc 1	Sc 2	Cu.	Mag.	g Sc 2	h Sc 2	Cu	Mag.	P.C. Sc. 2	Cu	mag.
	2.6										
1	2.4 4.8		5.58	8.18	6.8	6.7	6.75	.90	7.65	9.0 -1.27	7.73
2	4.6 6.0	4.70	4.6	4.75	9.7	9.7	9.70	.30	10.00	9.8 -1.25	8.55
3	5.8	6.00	6.0	4.27							
3a	6.1	6.2 6.20	6.2	4.20							
4			7.4	4.20 3.80							
5			7.7	3.72							
6			8.6	3.67							
7			8.7	3.68							
8			8.8	3.70							
9			9.5	3.80							
10			9.9	3.92							
11			10.0	3.94							
12			11.5								
12:12 13											
14											
15											
16											
17											
18											
19											

Sequence was edge of plate

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Wednesday Jan. 7, 1920

Se. M
MF 3483
12:12

MF Series 137 Att. Corr. -.02
Nova Velorum 1100 − 52

	Sc 1		Sc 2	Cu.	Mag.	g Sc 2	h Sc 2	P.C. Sc 2	Cu.	Mag.
	4.6									
a	4.4	4.55	4.5	4.80	9.35			10.0 −1.25	8.75	
	5.4									
b	5.2	5.45	5.5	4.42	9.87	Too poor to meas.				
	6.4									
c	6.*	6.40	6.4	4.12	10.52					
	6.9									
d	6.7	6.80	6.7	3.99	10.79					
	7.0									
e	6.8	7.10	7.2	3.90	11.00					
f			7.6	3.75	11.35					
g			8.2	3.63	11.93					
h			8.8	3.70	12.50					
k			8.7	3.68	12.38					
l			9.8	3.89	13.69					
m			9.5	3.92	13.82					
n			n.s							
n′										
o										
p										
q										
r										

12:25

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Sc M MT Series 137 alt. Corr. -02

MT 3483 Carte 1100 -52

				g	h	P.C.
	Sc1	Sc2		Sc2	Sc2	Sc2
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

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bc M
MF 3486

MF Series 137
δ U Centauri

	Sc 1	Sc 2	g Sc 2	h Sc 2	P.C. Sc 2
a					
b					
c					
d					
e					
f					
g					
h					
k					
l					
m					
n					
o					

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Wednesday Jan. 7, 1920 Sheet No. 203

ScM

MY3487

12:25

MZ Series 137

C7

	Sc1		Sc2	diff.	g Sc2	h Sc2	diff.	P.C. Sc2	diff.
1	B				5.6	5.7	5.65	1.20	8.0 − 1.15
	1.6			6.11					
2	1.4			5.25	6.7	6.5	6.60	1.11	8.7 − 0.99
	2.8			5.31					
3	2.6			4.91	7.4	7.5	7.45	0.66	8.7 − 0.59
	2.5								
4	2.3			5.70	7.7	7.6	7.65	0.65	9.4 − 1.20
	2.9								
5	2.7			5.66	7.9	7.8	7.85	0.71	9.) − 1.24
	3.7								
6	3.5			5.24	8.5	8.2	8.35	0.59	10.0 − 1.06
	3.9								
7	3.7			5.30	8.7	8.8	8.75	0.45	
	4.9								
8	4.7	4.80	4.7	4.80	8.9	8.8	8.85	0.75	
	5.4								
9	5.2	5.40	5.4	4.41	9.5	9.8	9.65	0.16	
	5.8								
11	5.6	5.70	5.6	4.41	10.0	n.s	10.0	0.11	
	6.1								
12	5.9	6.00	5.9	4.36					
	6.6								
13	6.4	6.50	6.4	4.16					
	7.0								
15	7.0	7.00	7.0	3.99					
	6.8								
16			7.3	3.93					
17			7.7	3.96					
19			8.4	3.61					
20			8.6	3.66					
21			9.0	3.88					
22			9.4	3.84					
23			9.8	3.60					
24			9.9	4.00					
25			10.0	4.08					
26			n.s.						

12:55

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1919phae.proj..696A

Sheet No. 202

Monday Jan. 12, 1920

Sc. M.

MZ 3204

9:20

MZ Series 116

C6

	Sc 1		Sc 2	Diff.	g Sc 2	h Sc 2	Mean	Diff.	P.G. Sc. 2	Diff.
	2.6									
1	2.4	d		4.16	5.6	6.2	5.90	0.86	8.5	-1.74
2	.			.	5.7	6.4	6.05	0.83	8.6	-1.72
	2.5									
3	2.3			5.01	6.8	6.5	6.65	0.86	8.9	-1.39
	3.0									
4	2.8			4.56	6.8	7.0	6.90	0.66	9.0	-1.44
	3.7									
5	3.5	d.		4.07	7.0	7.5	7.25	0.62	9.4	-1.63
	3.9									
6	3.7			4.31	7.4	7.8	7.70	0.51	9.7	-1.49
	3.9									
9	3.7			4.69	8.6	8.6	8.60	-0.01	9.8	-1.21
	4.0									
10	3.8			4.90	8.7	8.7	8.70	0.20		
	4.9									
12	4.7	4.85	4.8	4.49	9.7	9.5	9.60	-0.26		
	5.4									
13	4.2	5.40	5.4	4.29	9.9	9.9	9.90	-0.21		
	5.9									
14	5.7	5.80	5.7	4.26	10.0	10.0	10.00	+0.06		
	6.9									
16	6.7	6.80	6.7	3.72						
	7.0									
17	6.8	6.90	6.8	3.88						
	7.1									
19	6.9	7.05	7.0	3.88						
21			7.6	3.66						
22			7.8	3.74						
23			8.4	3.43						
24			8.7	3.46						
25			8.9	3.43						
26			9.5	3.18						
27			9.8	3.32						
28			9.9	3.38						
30			11.5							

56

9:50

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Monday Jan. 12, 1920

Sc.M

MF 3206

9:50

MF Series 116

Nova Velorum

Alt. Cors. — .02

	Sc 1	Sc 2	Cu. Diff	Mag.	g Sc 2	h Sc 2	Cu. Diff	Mag.	P.C. Sc 2.	Cu. Diff	Mag.
a	5.2 5.0	5.20	5.2	4.27	9.47	8.8	8.8	8.80	0.13	8.93	9.8 -1.41	8.39
b	6.2 6.0	6.20	6.2	4.03	10.23	9.8	stars uf.		0.0	9.80		
c			7.4	3.78	11.18							
d			7.7	3.72	11.42							
e			7.8	3.70	11.50							
f			8.1	3.63	11.73							
g			8.7	3.52	12.22							
h			8.9	3.49	12.39							
k′ k			9.4	3.46	12.86							
l			9.9	3.53	13.43							
m			10.1	3.58	13.68							
n			N.S.									
o												
p												
q												
r												

73

10:00

Film badly damaged but does not interfere with sequence for Nova.

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Monday Jan. 12, 1920

Sc M.

MT 3206

10:00

MT Series 116 Corte

Act. Corr. -.02

11 00 -51.5
11 00 -52

	Sc 1		Sc 2	Cen Diff.	Mag.	g Sc 2	h Sc 2	Cen.	mag.	P.C. Sc 2	Cen.	Mag.
	2.4											
1	2.2			4.70	7.10	6.8	dy	0.83	7.63	8.8	-1.50	7.30
	3.4									def		
2	3.2			4.57	7.97	7.5	7.6	7.55	0.57	8.12	~~9.3~~	
	4.8											
3	4.6	4.75	4.7	4.38	9.13	8.7	8.7	8.70	0.26	8.96	9.0	-1.49 7.51
4	.		.	.	.	.		.	.	.		
	5.1											
5	4.9	5.15	5.2	4.28	9.43	9.2	9.2	9.20	0.07	9.27		
	~~5.6~~ 5											
6	~~5.4~~	5.60	5.6	4.18	9.78	9.4	9.4	9.40	0.03	9.43		
	5.8											
7	5.6	5.70	5.6	4.14	9.84	9.6	9.7	9.65	0.00	9.65		
	6.4											
8	6.2	6.45	6.5	3.98	10.43	9.8	10.0	9.90	-0.01	9.89		
	7.2											
9	7.0	7.10	7.0	3.85	10.95							
10	.		.	.	.							
11			7.9	3.68	11.58							
12		8.15	8.2 8.1	3.62	11.77							
13		8.80	8.8 8.8	3.50	12.30							
14		8.95	9.0 8.9	3.49	12.44							
15		9.70	9.7 9.7	3.49	13.19							

10:20

111

Stars 4 + 10 scratched - Film is badly damaged but these are the only stars that are affected by it - also p.c. 9 stars

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Monday Jan. 12, 1920

J.C.M

MF 3207

10:22

MF Series 116 — alt. Corr. -.13

30 Ks — 11 00 - 64

	Sc 1	Sc 2	Cu.	Mag.	g Sc 2	h Sc 2	Cu.	Mag.	P.C. Sc 2	Cu.	mag.
	2.9										
1	2.7		4.63	7.53	6.9	6.6	6.75	0.85	7.60	9.0 -1.49	7.51
	3.0										
2	2.8		4.61	7.61	7.4	7.2	7.30	0.65	7.95	9.4 -1.45	7.95
	3.8										
3	3.6		4.51	8.31	7.8	7.8	7.80	0.48	8.28	10.0 -1.40	8.60
	3.9										
4	3.7		4.50	8.40	8.6	8.6	8.60	0.19	8.79		
	4.6										
5	4.4	4.60	4.6 4.40	9.00	9.2	9.6	9.40	0.02	9.42		
	4.8										
6	4.6	4.80	4.8 4.37	9.17		10.0	10.00	-0.01	9.99		
	6.1										
7	5.9	6.00	5.9 4.07	10.07							
	7.0										
8	6.8	6.96	6.9 3.88	10.83							
9			7.6 3.74	11.34							
10			8.2 3.61	11.81							
11			8.7 3.52	12.22							
12			~~8.8~~ 9.3 3.46	12.76							
13			9.8 3.50	13.30							
14			10.1 3.58	13.68							
15											

10:42

143

Does MF come near center of plate

Images somewhat elongated

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Monday Jan. 12, 1920

Sc. M

MT 3207

10;42

MT Series 116 Alt. Corr. −.13

110361 RS Carinae

	Sc 1	Sc 2	Cu.	Mag.	g Sc 2	h Sc 2	Cu.	Mag.	P.C. Sc 2	Cu.	Mag.
	2.5					5.6					
a	2.3		4.68	7.18	5.7	~~5.0~~ 5.65	1.05	6.70	8.7	-1.51	7.19
	2.9										
b	2.7		4.63	7.53	6.8	6.6 6.70	0.86	7.56	9.2	-1.46	7.74
	3.0										
c	2.8		4.61	7.61	7.5	7.6 7.55	0.56	8.11	9.2	-1.46	7.74
	3.9										
d	3.7		4.51	8.41	8.6	8.7 8.65	0.18	8.83			
	5.1										
d'	4.9	5.10	5.1	4.29	9.39	9.9	10.1 10.00	−0.01	9.99		
e											
	5.0										
f	4.8	5.00	5.0	4.31	9.31						
	5.0										
g	4.8	5.00	5.0	4.31	9.31						
h	dbl.										
	6.8										
k	6.6	6.85	6.9	3.89	10.74						
	7.0										
l	6.8	7.00	7.0	3.86	10.86						
m			7.4	3.78	11.18						
n			7.7	3.71	11.41						

11:00

172

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Monday Jan. 12, 1920

DeM

MZ 3208

11:04

MZ Series 116 alt. Corr. +.03

12 0 − 40.5

12 00 −40

Carte

		Sc 1	Sc 2		Cu.	Mag.	g Sc 2	h Sc 2	Δ	Cu.	Mag.	P.C. Sc 2	Cu.	Mag.
	1	3.7 3.5			4.53	8.23	7.4	7.4	7.40	0.61	8.01	9.8	-1.41	8.39
	2	4.7 4.5	4.66	4.6	4.40	9.05	8.8	8.7	8.75	0.15	8.90	9.9	-1.40	8.50
	3	5.1 4.9	5.15	5.2	4.28	9.43	9.2	9.4	9.30	0.05	9.35			
	4	5.6 5.4	5.60	5.6	4.18	9.78	9.8	9.9	9.85	0.00	9.85			
	5	6.2 6.0	6.20	6.2	4.02	10.22								
	6	6.8 6.6	6.80	6.8	3.90	10.70								
	7	7.0 6.8	7.00	7.0	3.86	10.86								
	8			7.6	3.74	11.34								
	9			7.8	3.70	11.50								
	10			8.4	3.58	11.98								
	11			8.6	3.54	12.14								
	12			8.8	3.50	12.30								
	13			9.8	3.50	13.30								
	14			10.0	3.55	13.56								
11:15	15			U.S.										

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Monday Jan. 12, 1920

JcM

MF 3208

11:15

MF Series 116 Adl. Corr. +.03

K Centauri 12 00 -40

	Sc1		Sc2	Cu.	mag.	g h Sc2	Sc2	Mean	Cu.	mag.	P.C. Sc2	Cu.	mag.
	3.5												
a	3.3			4.62	8.12	7.4	7.5	7.45	0.60	8.05	dff,		
	4.0												
a'	3.8	4.00	4.0	4.50	8.50	7.9	7.9	7.90	0.42	8.32	9.9	-1.40	8.50
	4.0												
a²	3.8	4.00	4.0	4.50	8.50	8.6	8.6	8.60	0.19	8.79	10.0	-1.40	8.60
	4.9												
b	4.7	4.85	4.8	4.36	9.21	8.9	8.9	8.90	0.11	9.01			
	5.8												
c	5.6	5.70	5.6	4.15	9.85	10.0	9.9	9.95	0.00	9.96			
	5.9												
c'	5.7	5.80	5.7	4.11	9.91								
	6.0												
d	5.8	5.90	5.8	4.09	9.99								
	7.1												
e	6.9	7.15	7.2	3.83	10.98								
f			7.5	3.76	11.26								
g			7.8	3.70	11.50								
h			8.6	3.54	12.14								
h'			9.0	3.48	12.48								
k			9.9	3.53	13.43								
l			n.s										
m			"										

11:30

734

Near edge of plate

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ScM. MF Series 116 alt. Corr. +.01

MF3209 E5 1200 - 45

11130

	Sc1		Sc2	Cu.	Mag.	g h Sc2	Sc2 mean	Cu.	mag.	P.C. Sc2	Cu.	mag.
	2.6			4								
1	2.4			8.67	7.27	5.8 5.9	5.85	1.02	6.87	8.6	-1.52	7.08
	2.0											
2	1.8			.	.	5.8 6.4	6.10	1.00	7.10	8.6	-1.52	7.08
	3.3											
3	3.1			4.58	7.88	6.4 6.2	6.30	0.96	7.26	8.8	-1.50	7.30
	2.9											
4	2.7			4.63	7.53	6.7 6.6	6.65	0.87	7.52	8.8	-1.50	7.30
	3.4					6						
5	3.2			4.57	7.97	6.7 6.7	6.70	0.86	7.56	8.9	-1.50	7.40
	3.6											
6	3.4			4.55	8.15	7.4 7.4	7.40	0.61	8.01	9.2	-1.46	7.74
	3.7											
7	3.5			4.53	8.23	7.6 7.6	7.60	0.55	8.15	9.6	-1.43	8.17
	3.9											
8	3.7	3.95	4.0	4.50	8.45	7.8 7.8	7.80	0.48	8.28	9.8	-1.41	8.39
	4.4											
9	4.2	4.40	4.4	4.44	8.84	8.2 8.4	8.30	0.28	8.58			
	4.5											
10	4.3	4.40	4.3	4.44	8.84	8.5 8.7	8.60	0.19	8.79			
	5.0											
11	4.8	4.90	4.8	4.34	9.24	8.8 8.9	8.85	0.12	8.97			
	5.7								0.00			
12	5.5	5.65	5.6	4.16	9.81	7.8 9.9	9.85	0.10	9.86			
	5.6											
13	5.4	5.60	5.6	4.17	9.77	9.9 9.9	9.90	0.00	9.90			
	5.8											
14	5.6	5.70	5.6	4.15	9.86	9.9 10.0	9.95	-0.01	9.94			
	6.2											
15	6.0	6.20	6.2	4.03	10.23							
	6.7											
16	6.5	6.70	6.7	3.92	10.62							
	7.0											
17	6.8	6.90	6.8	3.88	10.78							
	6.9											
18	6.7	6.85	6.8	3.89	10.74							
	7.2											
19	7.0	7.10	7.0	3.85	10.95							
20			7.7	3.72	11.42							
21			7.7	3.72	11.42							
22			8.2	3.61	11.81	2 8	8.0	3.55	13.55			
23			8.6	3.54	12.14							
24			8.7	3.52	12.22							
25			8.9	3.49	12.39							
12.03 26			9.5	3.46	12.96							
27			9.8	3.5	13.38							

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1919phae.proj..696A

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1cM

MF 32.10

12:03

MF Series 116 Alt. Corr. .00

SW Centauri 12 00 -48

	Sc 1		Sc 2	Cu.	mag.	g Sc 2	h Sc 2	Mean Cu.	mag.	P.C. Sc 2
	5.7									
a	6.5	5.65	5.6	4.16	9.81	9.4	9.4	9.40	0.02	9.42
	6.2									
b	6.0	6.20	6.2	4.02	10.22	9.9	9.8	9.85	0.00	9.85
	6.2									
c	6.0	6.20	6.2	4.02	10.22					
	6.8									
d	6.6	6.70	6.6	3.92	10.62					
	7.3									
e	7.1	7.25	7.2	3.80	11.05					
f			7.4	3.78	11.18					
g			7.7	3.72	11.42					
h			7.8	3.70	11.50					
b			8.4	3.58	11.98					
l			8.7	3.52	12.22					
m			9.0	3.48	12.48					
n			9.6	3.47	13.07					
o			10.0	3.55	13.55					
p			n.s							

12:12

332

Region not in center of plate

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Monday Jan. 12, 1920

fcM. M.F. Series 116 alt. Corr. -.05

M.F. 3211 W Centauri 12 00 -56

12:12

	Sc1		Sc2	Cu.	Mag.	g Sc2	h Sc2	P.C. Sc2	Cu.	Mag.
	3.0									
a	2.8			4.61	7.61			8.8	-1.50	7.30
	4.0									
a'	3.8			4.50	8.50	Too poor to measure		9.5	-1.44	8.06
	3.8									
a^2	3.6			4.51	8.31			dif.		
	3.7									
c	3.5			4.53	8.23					
	4.2									
d	4.0	4.30	4.4	4.46	8.76					
	4.7									
e	4.5	4.70	4.7	4.39	9.09					
	5.4									
f	5.2	5.45	5.5	4.20	9.65					
	6.0									
h	5.8	5.90	5.8	4.09	9.99					
	6.7									
h'	6.5	6.70	6.7	3.92	10.62					
	7.0									
k	6.8	7.00	7.0	3.86	10.86					
k'			7.7	3.71	11.41					
l			8.6	3.54	12.14					
m			8.8	3.50	12.30					
m'			9.6	3.47	13.07					
n			10.0	3.55	13.55					
o			4.5							
p			..							

355

12:26

Region not in center of plate

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1919phae.proj..696A

MT Series 116 Att. Corr. -13

MT 3212 Carte 1200 – 64

	Sc 1	Sc 2	g Sc 1	h Sc 2	P.C. Sc 2
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
15a					

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1919phae.proj...696A

M 7 Series 116 Alt. Corr. -.13

M 7 3212 Southern Cross 12 00 -64

	Sc 1	Sc 2		g Sc 2	h Sc 2	P.C. Sc. 2
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

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1919phae.proj..696A

MF Series 116 Alt. Corr. -.33

MF 3214 F_2 12 00 -76

			g	h	P.C.
	δc_1	δc_2	δc_2	δc_2	δc_2
1					
2	~~2.9~~				
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

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1919phae.proj...696A

Sheet No. 202

Monday Jan. 12, 1920

Fe. M.

MF 3215

12:26

MF Series 116

C7

Film Scratched.

	Sc 1	Sc 2	Diff.	g Sc 2	h Sc 2	Diff.	P.C. Sc 2	Diff.
1	c.			5.7	5.6	5.65	1.20	8.4 -1.56
2	2.9 2.7		4.81	6.7	6.5	6.60	1.11	8.8 -1.09
3	4.0 3.8		4.11	7.7	7.6	7.65	0.46	9.5 -1.39
4	3.6 3.4		4.60	7.7	7.7	7.70	0.50	9.7 -1.50
5	3.8 3.6		4.76	8.4	8.2	8.30	0.26	10.0 -1.44
6	4.6 4.4	4.60	4.6 4.84	8.7	8.7	8.70	0.24	
7	4.7 4.5	4.70	4.7 4.50	8.8	8.8	8.80	0.40	
8	6.4 5.2	6.40	5.4 4.20	9.0	9.4	9.20	0.40	
9	5.9 5.7	5.85	5.8 3.96	9.7	9.9	9.80	0.01	
11	6.1 5.9	6.15	6.2 3.96	10.0	10.0	10.00	0.11	
12	6.5 6.3	6.45	6.4 3.91					
13	6.8 6.6	6.70	6.6 3.96					
15	7.2 7.0	7.20	7.2 3.79					
16			7.6 3.63					
17			7.7 3.86					
19			8.4 3.61					
20			8.7 3.56					
21			9.4 3.48					
22			9.6 3.64					
23			9.8 3.60					
24			9.9 4.00					
25			10.0 4.08					
26			M.S.					

409

12:52

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1919phae.proj..696A

Thursday Jan. 8, 1920

2:30 Nova Persei No. 2 - Direct Estimates on plates sent by C. O. Lampland. (Positives)

C.S.		North up. →		South up.	Mean.
f	12.5	Nov. 15, 1917	14.7	14.6	14.65 ¹⁰
g	12.8	Dec. 2, 1917	13.3 (4)	14.4	14.35 ⁰¹
l	13.2	Dec. 10, 1917	14.5	14.5	14.50 ⁰⁰
k	13.3	Jan. 2, 1918	14.5 R.	15.0 R.* 14.8	14.80 ³₂⁰
h	13.5	Feb. 2, 1918	13.8	13.7	13.75 ¹⁰
m	13.6	Feb. 28, "	14.4	14.5	14.45 ⁰¹
n	13.7	Mar. 1, "	14.5	14.7	14.60 ¹₁
n'	13.8	July 16, "	14.9	14.9	14.90 ⁰⁰
o	13.9	Aug. 16, "	14.6	14.7	14.65 ⁰¹
p	14.7	Sept. 10, "	13.6	13.6	13.60 ⁰⁰
q	14.7	Oct. 1, '19	13.6	13.6	13.60 ⁰⁰
r	15.1	" 1, "	13.5	13.6	13.55 ⁰¹
s	15.3	Sept. 3, "	13.3	13.1	13.20 ¹₁
		July 30, "	14.6	14.8	14.70 ¹₁
		Jan. 19, "	14.3	14.5	14.40 ¹₁
		Dec. 28, '18	14.2	14.4	14.30 ¹₁
		Dec. 5, 18	13.3	13.4	13.35 ⁰¹
		Nov. 8, 18	13.2	13.2	13.20 ⁰⁰
		Oct. 30, "	14.7	14.9	14.80 ¹₁

* Reexam. of plate taken Jan. 2, 1918 gave mag. of 14.8. Reject other two observations as they are certainly wrong.

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Thursday January 15, 1920

Ref. Plate A 3021

105853 Nova Velorum

Direct Estimates.

3:05

1909	B 40147	13.8		
	B 38620	13.7		
a 9.1	Plates showing		Plates showing	
b 10.0	Stars = 11.0 or fainter		Stars = 11.0 or 12.0	
c 10.8	B 27594 ✓		B 19536 ✓	B 17106 ✓
d 11.1	B 27312 ✓		B 19646 ✓	B 21565 ✓
e 11.2	B 27225 ✓		B 26844 ✓	B 11294 ✓
f 11.5	B 25185 ✓		B 25490 ✓	B 15721 ✓
g 11.8	B 31796 ✓		B 19470 ✓	B 15503 ✓
h 12.4	B 21439 ✓		B 19263 ✓	B 15365 ✓
k' 12.6	B 11317 ✓		B 19072 ✓	B 15420 ✓
k 12.8	B 11302 ✓		B 18466 ✓	B 16866 ✓
l 13.4	B 44413 ✓		B 18321 ✓	B 16634 ✓
m 13.9			B 18629 ✓	B 16042 ✓
n 14.4		Plates showing	B 16379 ✓	B 44454 ✓
o 14.8		stars not fainter		
p 15.7		than 11.0	Region of 3 degrees	
q 16.0		B 19668 ✓	following plates	
r 16.5		B 18270 ✓	B 27205 ✓	
		B 18702 ✓	B 27333 ✓	
			B 25834 ✓	
			B 38807 ✓	
			B 39987 ✓	
			B 31631 ✓	
			B 41272 ✓	

3:45

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1919phae.proj...696A

Friday January 16, 1920

105853 Nova Sclorum

Direct Estimates

9:35

Plates showing stars = 14.0 or fainter	Plates showing stars not < 11.0	Plates showing stars = 11.0 or 12.0
B5199	B4818	B12538
B7492	B4817	B13521
B9514	B5704	B13183
B11190	B6058	B13479
B12743	B9291	B15239
B12941	B10836	B15292
B13861	B10985	B16171
B13198	B11152	B21609
B13702	B12793	B21022
B21183	B12812	B18179
B22912	B12834	B15919
B24558	B15180	B24654
B24861	B15353	
	B24767	
	B24646	

Region off edge on following plates

B 22782

B 24907

10:10

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1919phae.proj..696A

Friday January 16, 1920

105853 Nova Vulpecula

Region 12h - 6°

Direct Estimates

2;15

	Plates showing stars as ft. as 11.0	Plates showing stars as ft. as 14.0	Plates showing stars as faint 11.0 - 12.0		Poor plates not estimated
am	5557 AM 7442	AM 1970	AM 5525	AM 9910 C118	AM 8518
"	5626 " 7329		" 9412	10466	8076
"	5625 " 7111	AM 9056	" 7386	10448	8029
"	5606 " 6978	9168	" 3444	10407	8269
"	5533 " 6949	9262	" 2738	10719	8253
"	5532 " 6908	9731	" 2717	12957	8235
"	5526 " 6885	9769	" 2569	13058	8940
"	5524 " 2801	8491	" 2529	13027	8813
"	5519 " 2588	3355	" 2442	13796	9794
"	5518 " 2478	11488	" 2117	13840	9789
"	5515 " 1843	11909	" 2098	13854	9962
"	5514 " 1808	11950	" 1944	13858	10045
"	8315 " 1724	12624	" 1915	13863	10395
"	8297 " 1411	14888	" 1899	13989	14145
"	8217 " 1159	9706	" 1839	13924	14151
"	8210 " 928	13974	" 1258	14599	
"	8203 " 846	13962	" 1229	14708	
"	8184 " 738	13957	" 806	14784	
"	8148 " 782	13931		14822	
"	8062 " 446	14009			
"	7604 " 445	~~14452~~			
"	7521 " 389	14642			
"	7489	14662			
3;10	" 7444	14667			
		14668			

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1919phae.proj...696A

Saturday January 17, 1920

105853 Nova Velorum

12-60

10;15

AM 4134	10.5 ✓	Plates showing stars	Region of f. edge	
AM 4194	10.6 ✓	from 11.0 - 12.0 ✓	AM 11012	
AM 4798	12.2? ✓	AM 6268 ✓ AM 5967 ✓	" 10707	
AM 4212	10.4 ✓ in. def.	" 6194 ✓ " 5946 ✓	" 10681	
AM 4300	10.5 ✓	" 6179 ✓ " 5287 ✓	" 10620	
AM 4364	10.8 ✓	" 6152 ✓ " 3700 ✓	" 10601	
AM 4746	11.6 ✓	" 6123 ✓ " 3557 ✓	" 10484	
AM 4053	10.3 ✓	" 6101 ✓ " 3487 ✓	" 10410	
Plates showing		" 6053 ✓ " 5482 ✓	" 10390	
stars as fr. as 11.0 ✓		" 5471 ✓ " 5448 ✓	" 9974 ✓	
AM 6846 ✓	AM 5433 ✓		" 8476 ✓	
" 6365 ✓	" 5375 ✓	2:20	Plates showing stars	
" 6235 ✓	" 5342 ✓	AM 9706?	from 11.0 - 12.0	
" 6108 ✓	" 5320 ✓	Plates showing stars as fr as 11.0	AM 11487 ✓ AM 10653 ✓	
" 5984 ✓		AM 11554 ✓ AM 9180 ✓	" 10576 ✓ " 10492 ✓	
" 5672 ✓		" 11544 ✓ " 9112 ✓	" 10457 ✓ " 10433 ✓	
" 5671 ✓		" 11527 ✓ " 8981 ✓	" 10430 ✓ " 10413 ✓	
" 5313 ✓		" 10845 ✓ " 8931 ✓	" 10388 ✓ " 9936 ✓	
" 4741 ✓		" 10768 ✓ " 8912 ✓	" 9915 ✓ " 9901 ✓	
" 4901 ✓		" 9940 ✓ " 8879 ✓	Too poor to estimate	
" 4825 ✓		" 9851 ✓ " 8853 ✓	AM 11551 ✓ AM 9024 ✓	
" 4143		" 9788 ✓ " 8809 ✓	" 10479 " 8980 ✓	
" 3604 ✓		" 9777 ✓ " 8807 ✓	" 10399 " 8971 ✓	
" 3499 ✓		" 9774 ✓ " 8482 ✓	" 9857 ✓ " 8964	
" 3318 ✓		" 9770 ✓ " 8413 ✓	" 9726 ✓	
" 5512 ✓		" 9689 ✓	" 9253 ✓	

10:55

2:50

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1919phae.proj..696A

Tuesday January 20, 1920

10 5883 Nova Sclerum

12 - 60 Direct Estimates

2:05	Limiting mag. of plates 11.0	Limiting mag. of plates 12.0-13.0	Pos. plate #12863	AM 540 1 <11.8
	AM 12792 AM 11608	AM 12059	" 6835	5405 <11.5
	" 12681 " 11594	" 11706	" 6060	5413 <11.1
	" 12268 " 14709	" 11648	" 5325	5422 <10.8
	" 12231 " 13258	" 11606	" 2469	5468 <11.5
	" 12218 " 13244 13271	" 14629	" 404	5469 <11.5
	" 12027 " 13135	" 13016	" 388	5470 <11.5
	" 11896 " 13128	" 12989	" 372	5434 <11.2
	" 11778 " 13094	" 12977	" 363	5438 <11.8
	" 11667 " 12913		" 4757	5456 <10.8
2:35	" 11659 " 12847			5446 <11.8

11 - 45 Wednesday January 21, 1920

2:10	AM 4015	10.1	Limiting mag. 11.0		Limiting mag 12.0-13.0
	AM 4076	10.6	AM 6202	AM 441	AM 6210 AM 1814
	AM 4098	10.7	" 6121	" 430	" 6083 " 1771
	AM 4133	10.3	" 6066	" 3528	" 5932 " 1370
	AM 4185	11.2	" 5975	" 3469	" 5539 " 1341
	AM 4225	11.0	" 5949	AM 3271	" 5432 " 1223
	AM 4287	11.0	" 5681	" 2821	" 5400 " 750
	AM 4352	11.7	" 2493	" 2742	" 5381 " 3718
	AM 4720	11.4	" 2077	" 2699	" 2502 " 3628
	AM 4765	12.0	" 2056	" 2667	" 2448 " 3573
	AM 4848	<12.4	" 1850	" 2605	" 2403 " 3556
	AM 5309	12.4	" 1750	" 2516	" 1996 " 3439
			" 1169	" 2562	" 1987 " 3353
6:00			" 837		" 1858 " 3320

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1919phae.proj...696A

Thursday January 22, 1920

105853 Nova Velorum

11 - 45

2:10

Poor plates

AM 9696
" 8154
" 7374
" 6847
" 10019
" 9810
" 9798
" 9756
" 9725
" 11593
" 11545
" 10776
" 10654
" 10477
" 10409
" 14657
" 14617
" 12904
" 12819
" 12288
" 12016

Limiting mag. 11.0

AM 9002
" 8419
" 8351
" 6992
" 6901
" 6860
" 10387
" 9990
" 9885
" 9809
" 11526
" 10926
" 10759
" 10627
" 10590
" 10441
" 10416
" 10397
" 14663
" 14641
" 14611
" 14606
" 14258
" 14157
" 14134
" 14093
" 13980

AM 13973 AM 11627
" 13944 " 11603
" 13859
" 13853
" 13849
" 13827
" 13811
" 13407
" 13397
" 13387
" 13314
" 13297
" 13290
" 13265
" 13029
" 13017
" 12967
" 12888
" 12848
" 12791
" 12301
" 12204
" 12134
" 12102
" 11939
" 11870
" 11631

Limiting mag. 12.0-13.0

AM 7415
" 11538
" 11517
" 10706
" 10594
" 10525
" 10449
" 10423
" 10422
" 14671
" 14589
" 13961
" 13956
" 13862
" 13817
" 13801
" 13794
" 13103
" 12979
" 12918
" 12896
" 11705
" 11694
" 11655

3:25 10

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1919phae.proj..696A

Friday January 23, 1920

105853 Nova Velorum

10:05	A 2354	n.s. <12.6 ✓	11:55 B 50780	<14.4 ✓	B 50553 <13.9 ✓
	A 3021	n.s. <16.0 ✓	B 50321	<14.8 ✓	Mf 3206 <13.9 ✓
	A 2269 ✓	n.s. <14.4 ✓	B 50206	<14.4 ✓	Mf 3483 <14.4 ✓
	A 8224	12.2	B 50368	<13.9 ✓	
	A 1805	n.s. <16.0 ✓	B 50604	<12.8 ✓	
10:20	A 8317	12.1	B 50746	<13.4 ✓	12:02

10:30 Broken plates

	B 7517 (586)	<12.4 ✓	AM 13144 (4546)	<11.2 ✓	
	B 11087 (677)	<11.8 ✓	AM 12113 (4427)	<16.0 ✓	AM 10575 (4334)
	B 12940 (843)	<13.4 ✓	AM 4829 (3066)	<11.8 ✓	" 9719 (3585)
	B 7959 (717	<12.4 ✓	AM 360 (3186)	<10.0 ✓	" 12060
	B 10807 (673)	<11.8	AM 10381 (4157)	<12.4 ✓	
	B 35727 (3298)	<12.8 ✓	AM 769 (285)	<12.4 ✓	
	B 5003 (3416)	<13.4 ✓	AM 400 (200)	<10.0 ✓	
			AM 1467 (222)	<11.2 ✓	
	AM 3306 (2930)	<11.8 ✓ scratch			
	AM 3370 (4575)	<11.8 ✓	Cracked plates		
	AM 3664 (2894)	<11.5 ✓			
	AM 1799 (2908)	<11.2 ✓	AM 11649	<11.2 ✓	
	AM 9717 (3583)	<10.0 ✓	AM 13151	<11.2 ✓	
	AM 2645 (2853)	<11.2 ✓ Edge			
	AM 10704 (3701)	<11.5 ✓			
	AM 3682 (2932)	<11.8 ✓			
	AM 12889 (4441)	<11.5 ✓			
	AM 12965 (4526)	<11.8 ✓			

11:30

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1919phae.proj...696A

Tuesday January 27, 1920

105853 Nova Delphini

Reobservations of plates showing Nova; South end up.

2:50

				p.76 Mean				p.75 Mean	
Bk.6:108	AM 3718	<12.4							
	AM 4015	10.2		10.1	10.15	10 ✓	AM 4715 E	12.1? 12.2?	12.15 01
	AM 4076	10.6		10.6	10.60	00 ✓	Mean. April 10, 1920		
	AM 4098	10.6		10.7	10.65	01 ✓	B 37721	12.4 ✓	
	AM 4133	10.3		10.3	10.30	00 ✓	B 37322	12.5- ✓	
	AM 4185	11.2		11.2	11.20	00 ✓	12.3 B 37353	12.7 R ✓	
	AM 4225	10.7	10.7	K 11.0	10.70	00 ✓	B 38432	<13.4 ✓	
	AM 4287	10.5	10.5	R 11.0	10.50	00 ✓	13.8 B 40001	13.6 ✓ very diffuse	
	AM 4352	R 11.4	11.8	11.7	11.75	10 ✓	B 41280	13.8 ✓	
	AM 4720	11.3		11.4	11.35	01 ✓	13.5 B 39999	13.5 ✓	
12.0	AM 4765	11.7	11.8	R 12.0	11.75	01 ✓	B 40000	13.9 ✓	
	AM 4848	<12.6							
	AM 5309	12.3		12.4	12.35	01 HV ✓			
11.6	AM 4746	11.5		p.75 11.6	11.56	01 ✓			
	AM 4134	10.4		p.75 10.5	10.45	01 ✓			
	AM 4143	multiple Dm. Cannot estimate							
11.2	AM 4194	10.5		P Reject 10.6	10.55	01 ✓			
dif.	AM 4212	10.5		10.4	10.45	10 ✓	dif. near Dm.		
	AM 4300	10.4		10.5	10.45	01 ✓			
11.5	AM 4364	11.0		10.8	10.90	11			
	AM 4053	10.2		10.3	10.25	01 ✓			
3:15				p.78					
	A 8317	11.9		12.1	12.00	11 ✓			
	A 8324	12.1		12.2	12.15	01 ✓			
				p.72					
	B 40147	13.7		13.8	13.75	01 ✓			

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1919phae.proj..696A

Sheet no. 204

Monday January 19, 1920

Sc. M

B Series 699

B52706

C7

10:15

	Sc 1		Sc 2	Diff	g h Sc 2 Sc 2	P.C. Sc 2 Diff
1	t.p.					8.7 - 1.85
2	3.6			3.91	to point	9.2 - 1.89
3	4.6	4.80	4.8	3.30	measure	9.8 - 1.69
4	4.9	5.15	5.2	3.05		def.
5	5.1	5.35	5.4	3.21		10.0 - 1.44
6	5.6	5.70	5.6	3.24		
7	5.5	5.60	5.5	3.60		
8	5.9	6.10	6.1	3.50		
9	5.8	5.90	5.8	3.91		
11	6.9	7.05	7.0	3.06		
12			7.4	2.96		
13			7.6	3.06		
15			7.7	3.29		
16			7.8	3.43		
17			8.6	2.96		
19			8.8	3.21		
20			8.8	3.36		
21			9.9	2.98		
22			9.9	3.34		
23			10.0	3.40		
24			N.S.			
25			N.S.			
26						

31

10:35

Image on this plate elongated - Difficult to compare with scale. (slight elong.)

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1919phae.proj..696A

Copied 45:16

Monday January 19, 1920

ScM

B Series 699

B 52707 $13^{h}7.2$ $-63°37'$ SS Centauri Alt. Corr. −12

10:35

	Sc1		Sc2	Cu.	Mag.	g Sc2	h Sc2	P.C. Sc2
	5.9							
a	5.7	5.85	5.8	3.29	9.14			
	6.8							
b	6.6	6.80	6.8	3.07	9.87			
	7.2							
c	7.0	7.20	7.2	3.00	10.20			
c'			7.5	2.97	10.47			
d			7.8	2.97	10.77			
e			8.1	2.98	11.08			
f			8.7	3.06	11.76			
g			8.8	3.07	11.87			
h			9.2	3.13	12.33			
h			9.8	3.40	13.20			
l			10.0	3.50	13.50			
m			n.s.					

Too faint

10:50

45

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1919phae.proj...696A

Monday January 19, 1920

Copied 38:192

Sc. M.

B Series 699

B52708 South Pole Alt. Corr −92

10:55

	Sc1		Sc2	Cu.	mag.	g Sc2	h Sc2 mean	Cu.	mag.	P.C. Sc2	Cu.	mag.
a	3.8 3.6			·		6 7.5	6.6	6.55	·	·	8.2	·
b	4.6 4.4	4.60	4.6	·		6.8 t.p.	t.p.	6.8	·	·	6 8.4	-1.70 6.90
c	4.7 4.5	4.70	4.7	·		7.8	7.7	7.75	-.41	7.34	8.8	-1.68 7.12
d	4.9 4.7	4.95	5.0	·		t.p.	7.9	7.9	-.40	7.50	9.5	-1.62 7.88
e	5.1 4.9	6.16	5.2	·		t.p.	8.0	8.0	-.40	7.60	9.2	-1.65 7.55
f	5.8 5.6	6.75	5.7	3.32	9.07	8.6	8.6	8.60	-.38	8.22	9.6	-1.60 8.00
g	5.9 5.7	5.80	5.7	3.30	9.10	8.8	8.8	8.80	-.37	8.43	9.8	-1.58 8.22
h	6.4 6.2	6.30	6.2	3.20	9.50	9.0	9.2	9.10	-.34	8.76		
k	6.9 6.7	6.85	6.8	3.07	9.92	9.6	9.6	9.60	-.30	9.30		
l	7.1 6.9	7.00	6.9	3.02	10.02							
m			7.5	2 3.97	10.47							
n			7.7	2 3.97	10.67							
o			7.8	2 3.97	10.77							
p			8.3	3.00	11.30							
q			8.5	3.03	11.53							
r			8.6	3.04	11.64							
R			8.7	3.06	11.76							
t			8.8	3.07	11.87							
u			8.8	3.07	11.87							
w			9.2	3.13	12.33							
x			9.6	3.30	12.90							
y			9.7	3.36	13.06	δ						
z			9.7	3.36	13.06	δ'						
α			9.9	3.46	13.36	ε						
β			11.5			3						
γ												

* Bright images & other fuzzy

11:25

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1919phae.proj..696A

Copied 45:24 Monday January 19, 1920

Sc. M

B Series 699

B 52709 $13^h 34^m$ -31.0 ζ Centauri Alt. Corr. +.06

11:25

		Sc 1		Sc 2	Cu.	Mag.	q h Sc 2	q h Sc 2	q h Cu.	q h Mag.	P.C. Sc 2	P.C. Cu.	P.C. mag.
		4.8						7.75					
a		4.6	4.75	4.7	·		7.8	7.7	-.41	7.34	9.3	-1.64	7.66
b		5.0	5.20	5.2	·		8.5	8.50 8.8	-.38	8.12	9.7	-1.60	8.10
c		5.7	5.95	6.0	3.27	9.22	8.9	8.85 8.8	-.36	8.49			
d		6.3	6.45	6.4	3.16	9.61	9.6	9.65 9.7	-.27	9.38			
e		6.7	9.85	6.8	3.07	9.92	9.9	9.90 9.9	-.24	9.66			
f		7.0	7.10	7.0	3.00	10.10	10.0	9.95 9.9	-.23	9.72			
g				7.6	2.97	10.57							
h				8.3	3.00	11.30							
k				8.4	3.01	11.41							
l				8.7	3.06	11.76							
m				9.1	3.12	12.22							
n				9.4	3.21	12.61							
o				9.7	3.36	13.06							
p				9.8	3.40	13.20							
q				9.9	3.46	13.36							
r				10.1	3.57	13.67							
10:45	s			9.5									

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1919phae.proj..696A

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Monday January 19, 1920

Nc. M

B Series 699

B 527.0 130 K $14^h 7^m.7$ $-15° 10'$ Alt. Cor. +.08

11:45

	g				h				P.C.		
	Sc1		Sc 2	Cu.	mag.	Sc2	Sc2	Cu.	mag.	Sc.2	Cu	mag.
1	5.6 5.4	5.50	5.4	3.38	8.88	8.80 8.8	8.8	-.38	8.42	10.0	-1.54	8.46
2	6.8 5.6	5.65	5.5	3.35	9.00	8.80 8.7	8.9	-.38	8.42			
3	6.8 6.6	6.70	6.6	3.10	9.80	9.90 9.9	9.9	-.24	9.66			
4			7.5	2.97	10.47							
5			7.4	2.98	10.38	10.05 10.0	10.1	-.23	9.82			
6	~~7.7~~		7.7	2.97	10.67							
7			8.6	3.04	11.64							
8			8.7	3.06	11.76							
9			8.0	2.98	10.98							
10			8.7	3.06	11.76							
11			9.2	3.13	12.33							
12			9.5	3.27	12.77							
13			9.4	3.21	12.61							
14			Def.									
15			9.9	3.46	13.36							
16			10.0	3.50	13.50							
17			N.S									
18			"									

12:10

163

Images elongated. Not very comparable with Scale.

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1919phae.proj..696A

Monday January 19, 1920

Dec N

B Series 699

B 52711

C_8

12;15

	Dc1	Dc2	Diff.	g h Dc2	g h Dc2	g h Diff	P.E. Dc2	P.E. Diff.
	4.5							
1	4.3	4.50	4.8 5	2.70	t. p.	7.6 -0.40	8.8	-1.60
	4.7				8.50			
3	4.5	4.80	4.9	3.29	8.5	8.5 -0.41	9.6	-1.51
	4.8							
4	4.6	4.70	4.6	3.02	t. p.	t. p.	9.4	-1.68
	5.7				9.00			
8	5.5	5.70	5.7	3.27	9.0	9.0 -0.03		
	6.0				9.60			
9	5.8	5.95	5.9	3.27	9.5	9.7 -0.38		
	6.6				9.80			
11	6.4	6.55	6.5	2.96	9.8	9.8 -0.29		
	6.7				10.00			
12	6.5	6.70	6.7	3.15	10.0	10.0 -0.25		
	7.2							
14	7.0	7.10	7.0	2.87				
15			7.6	2.76				
16			7.6	2.92				
18			7.7	2.98				
20			7.7	2.87				
20a			7.9	3.32				
21			8.6	2.82				
22			8.8	3.02				
25			9.2	3.06				
26			9.6	3.13				
27			9.7	3.61				
28			10.1	3.76				
29			10.2	3.78				
30			4.5					
31								
33								

9.5

Star "4" nearer edge than "3" ; more enlarged.

Images not very good.

17;40

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1919phae.proj..696A

Sheet no. 204

Tuesday January 20, 1920

ScM

B Series 701

B 52-730

C7

9:35

	Sc 1		Sc 2	Diff.	g h Sc 2	Sc 2	P.C. Sc 2	Diff.
1	t.p.				t.p.		8.7	-1.85
2	4.1 3.9			3.61	t.p.		9.2	-1.49
3	5.0 4.8	5.10	5.2	3.01	t.p.		9.8	-1.69
4	5.2 5.0	6.25	5.3	2.95	t.p.		9.8	-1.60
5	5.4 5.2	6.40	5.4	3.16	Too poor.		10.0	-1.44
6	5.9 5.7	6.85	5.8	3.09	Too poor to mea.			
7	5.9 5.7	5.90	5.9	3.30				
8	6.6 6.4	6.60	6.6	3.00				
9	6.1 5.9	6.05	6.0	3.76				
11	7.3 7.1	7.30	7.3	2.81				
12			7.5	2.86				
13			7.6	3.06				
15			7.8	3.19				
16			8.0	3.23				
17			8.4	3.16				
19			8.8	3.21				
20			8.9	3.36				
21			9.7	3.18				
22			9.8	3.44				
23			10.0	3.40				
24			N.S.					
25			N.S.					
26			"					

Poor image on pl. enlarged near edge. Omit from enumeration.

9 h 55

Images elon gated - Lots good. Diffs. poor

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Tuesday January 20, 1920

8cM

B Series 701

B 5273 $12^h 50^m.7$ $-57°21'$ V Crucis Abt. Corr. −.04

9 16:55

	Sc1		Sc2	Cu.	Mag.	g Sc2	h Sc2	Cu.	Mag.	P.C. Sc2	Cu.	Mag.
	5.3											
a	5.1	5.35	5.4	3.08	8.43	8.2	8.74	8.30	−.40 (21)	8.89 / 7.90	9.9	−1.58 (8)	8.32 / 8.74
	6.4			2.93*	38								
b	6.2	6.45	6.5	3.16	9.61	9.9	10.09	9.95	−.24 (8)	9.71 (67)			
	6.8			2.89	6								
c	6.6	6.75	6.7	3.09	9.84								
	6.9			2.88	73								
d	6.7	6.85	6.8	3.07	9.72								
e			8.2	2.96 / 3.00	11.20 (16)								
f			8.8	3.09 / 2.94	11.79 (8)								
g			9.4	3.22	12.62								
h			9.7	3.34	13.08								
k			9.9	3.46 (3)	13.36 (2)								
l			n.s.										
m													
n													
b													

10:08

*N.B. Wrong curve read first for this Series - The corrected readings are from the right curve.

M.D.A. Jan. 21, 1920

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See note p. 87

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Tuesday January 20, 1920

LcM

B Series 701

B 52732 R Centauri 12 55.6 −64° 5′ Alt. Corr. −1.2

10:10

	Sc 1		Sc 2	Cu.	mag.	g h Sc 2	Sc 2 mean	Cu.	mag.	P. Sc 2	Cu.	mag.
a	4.7 4.5	4.75	4.8	3.20	7.95	7.8	7.8	7.80	−.14	7.66	9.6	−1.61	7.99
b	5.7 5.5	5.65	5.6	3.03	8.68	8.7	8.8	8.75	−.27	8.48			
c	5.8 5.6	5.80	5.8	3.01	8.81	9.5	9.5	9.50	−.30	9.20			
d	6.4 6.2	6.40	6.4	2.93	9.33	9.9	9.8	9.85	−.28	9.57			
e	6.9 6.7	6.85	6.8	2.88	9.73	10.0	10.0	10.00	−.27	9.73			
f			7.5	2.83	10.33								
g			8.0	2.98	10.98								
h			8.4	3.00	11.40								
k			8.6	3.04	11.64								
l			8.8	3.09	11.89								
m			9.2	3.14	12.34								
n			9.7	3.36	13.06								
o			10.0	3.50	13.50								
p			n.s.										

10:22

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Tuesday January 20, 1920

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8c 14

B Series 701

B 52733 Pole (South) Att. Corr. −.92

10:25

	Se 1	Dc 2		Cu.	mag.	g Dc	g Se 2	g Mean	g Cu.	g Mag.	P.C. Se 2.	P.C. Cu.	P.C. Mag.
	3.4												
a	3.2					6.2	6.4	6.30			8.0		
	4.0												
b	3.8			3.38	7.38	7.0	t.p.	7.0	+.02	7.02	8.6	−1.75	7.86
	4.2												
c	4.0	4.20	4.2	3.34	7.54	7.2	7.4	7.30	−.04	7.26	8.9	−1.70	7.20
	4.8												
d	4.6	4.75	4.7	3.20	7.95	t.p.	7.7	7.7	−.41 (12)	7.29 (58)	9.7	−1.60	8.10
	4.7												
e	4.5	4.70	4.7	3.22	7.92	t.p.	7.6	7.6	−.41 (10)	7.19 (60)	9.4	−1.63	7.77
	5.4												
f	5.2	5.40	5.4	3.08	8.48	8.5	8.6	8.55	−.39 (24)	8.16 (31)	9.9	−1.58	8.32
	5.5												
g	5.3	5.55	5.6	3.37 (05)	8.92 (60)	8.7	8.7	8.70	−.38 (26)	8.32 (44)	10.0	−1.56	8.44
	5.8												
h	5.6	5.80	5.8	3.30 (01)	9.10 (5.81)	9.0	9.3	9.15	−.38	8.82 (5)			
k	6.4			2.92	9.66 (42)								
	6.2	6.50	6.6	3.15		9.9	9.9	9.90	−.24 (8)	9.66 (2)			
	6.9			2.88	9.72 (73)								
l	6.7	6.85	6.8	3.07									
	7.4												
m	7.2	7.40	7.4	2.78 (82)	10.38 (22)								
n			7.6	2.96 (84)	10.56 (44)								
o			7.7	2.97 (85)	10.67 (55)								
p			7.9	2.97 (89)	10.87 (79)								
q			7.8	2.97 (87)	10.77 (6)								
r			8.4	3.00	11.40								
s			8.6	3.04	11.64								
t			8.7	3.06	11.76								
u			8.9	3.0 (12)	11.9 (7) 12.02								
w			8.9	3.0 (12)	11.9 (7) 12.02								
x			9.7	3.36 (0)	13.06 (0)								
y			9.9	3.46 (3)	13.36 (2)								
z			9.8	3.40 (33)	13.20 (13)								
a			10.0	3.50 (37)	13.50 (37)								
β				Ns									
γ													

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10:50

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see note p. 87

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Sc M. B Series 701

B 52734 13h 34m -31° 7 Centauri Alt. Corr. +.06

10:50

	Sc 1		Sc 2	Cu.	mag.	g Sc 2	h Sc 2	Cu.	mag.	P.C. Sc 2	Cu.	mag.
	4.6					7.90						
a	4.4	4.50	4.4	3.26	7.76	7.8	8.0	-.15	7.75	9.4	-1.63	7.77
	5.1					8.65						
b	4.9	5.10	5.1	3.13	8.23	8.6	8.7	-.26	8.39	9.8	-1.60	8.20
	6.0			2.98		9.10						
c	5.8	6.00	6.0	~~3.25~~	8.98	9.0	9.2	-.30	8.80			
	6.8			2.90		9.70						
d	6.6	6.70	6.6	~~3.10~~	9.60	9.6	9.8	-.30	9.40			
	7.1			2.85		10.00						
e	6.9	7.00	6.9	~~3.02~~	9.85	10.0	10.0	-.27	9.73			
f			7.2	82 2.78	10.22							
g			7.8	8 2.87	10.67							
h			8.4	3.00	11.40							
k			8.6	3.04	11.64							
l			8.9	12 ~~3.09~~	12.02							
m			9.2	8 3.14	12.38							
n			9.6	28 ~~3.30~~	12.88							
o			9.8	33 ~~3.40~~	13.13							
p			9.8	33 ~~3.40~~	13.13							
q			10.0	3.37	13.37							
r			NS									
s			"									

11:05

Images wings'd.

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Tuesday January 20, 1920

Sept. B Series 701

B52735 C7

		Δc_1		Δc_2	Diff.	g h Δc_2	Δc	Mean	Diff.	P.C. Δc_2	Diff.
11;10	1	t.p.				t.p. 6.8		.05		8.6	-1.75
	2	4.8 4.6	4.80	4.8	2.91	t.p. 7.8		-.09		9.2	-1.49
	3	4.9 4.7	4.95	5.0	3.16	8.6	8.4	8.50	-.39 -.64	9.8	-1.69
	4	4.8 4.6	4.85	4.9	3.35	8.5	8.6	8.55	-.35	9.9	-1.70
	5	5.6 5.4	6.55	5.5	3.01	8.8	8.7	8.75	-.84 -.19	10.0	-1.44
	6	5.9 5.7	6.80	5.7	3.14	9.0	9.0	9.00	-.06		
	7	6.4 6.2	6.30	6.2	2.90	9.8	9.5	9.66	-.45		
	8	6.9 6.7	6.70	6.7	2.90	9.9	9.8	9.86	-.25		
	9	7.0 6.8	7.00	7.0	2.81						
	11			7.6	2.51						
	12			7.7	2.66						
	13			7.8	2.86						
	15			8.2	2.79						
	16			8.4	2.83						
	17			8.6	2.96						
	19			9.0	3.01						
	20			9.0	3.26						
	21			9.9	2.98						
	22			9.9 +.1	3.34						
	23			10.0	3.40						
	24			10.1	3.80						
	25			M.S							
11;30	26			"							

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Images wingid. Not very comparable with scale

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Sheet No. 205

Wednesday January 21, 1920

8 eM

B Series 726

B 53023

C 7

9:15

	Sc 1	Sc 2	Diff.	g Sc 2	h Sc 2	Mean.	Diff	P.C. Sc 2	Diff.
	4.0			t.p.	t.p.				
1	3.8		2.85					8.7	-1.85
2	4.7 4.5	4.70	4.7 3.01	7.6	7.7	7.65	.06	9.6	-1.89
3	4.9 4.7	4.90	4.9 3.21	8.6	8.4	8.50	-.39	9.9	-1.79
4	4.9 4.7	4.80	4.7 3.40	8.6	8.7	8.65	-.45	9.9	-1.70
5	5.4 5.2	5.40	5.4 3.16	8.8	8.8	8.80	-.24		
6	5.8 5.6	5.70	5.6 3.24	9.0	9.0	9.00	-.06		
7	6.2 6.0	6.10	6.0 3.10	9.9	9.7	9.80	-.60		
8	6.8 6.6	6.70	6.6 2.90	10.0	9.9	9.95	-.35		
9	6.9 6.7	6.80	6.7 3.01						
11			7.5 2.61						
12			7.6 2.76						
13			7.9 2.86						
15			8.3 2.69						
16			8.4 2.83						
17			8.6 2.96						
19			8.8 3.21						
20			8.9 3.36						
21			9.8 3.08						
22			9.9? 3.34						
23			10.1 3.30						
24			n.s						
25			"						
26			"						

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9:35

Images slightly winged.

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Wednesday January 21, 1920

DCM

B Series 726

B 53024 $12^h 26.^m9$ $-57°$ 1' lu Crucis Att. Cor. −05

9:35

	Sc 1		Sc 2	Cu.	mag.	g Sc 2	h Sc 2	Mean	Cu.	mag.	P.C. Sc 2	Cu.	mag.
a	4.0 3.8			3.22	7.22	7.8	8.0	7.90	−.30	7.60	9.2	−1.88	7.32
b	4.7 4.5	4.70	4.7	3.10	7.80	8.7	8.7	8.70	−.45	8.25	9.8	−1.88	7.92
c	5.3 5.1	5.30	5.3	3.04	8.34	8.8	8.9	8.85	−.48	8.37			
d	5.8 5.6	5.70	5.6	3.00	8.70	9.0	9.4	9.20	−.50	8.70			
e	5.9 5.7	5.80	5.7	2.98	8.78	9.4	9.6	9.50	−.51	8.99			
f	7.0 6.8	6.90	6.8	2.81	9.71	10.0	10.0	10.00	−.50	9.50			
g	7.2 7.0	7.20	7.2	2.78	9.98								
h			7.8	2.73	10.53								
k			8.4	2.84	11.24								
l			8.8	2.94	11.74								
m			9.0	3.00	12.00								
n			9.5	3.15	12.65								
o			N.S.	.	.								
p			10.0	3.31	13.31								

9:55

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Images imaged - not as good as preceding pl.

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Wednesday January 21, 1920

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LcM

B Series 726

B 53025 Pole (South) alt cor. −.92

9:55

	Sc 1	Sc 2	Cu.	mag.	g Ser	h Sc 2	Cu.	mag.	P.C. Sc 2	Cu.	mag.
	3.2										
a	3.0				6.40 6.3	6.5	.		8.2	.	
	4.1				6.80						
b	3.9	4.15	4.2	3.20	7.35 6.9	6.7	.		8.7	−1.82	6.88
	4.4				7.65						
c	4.2	4.30	4.2	3.17	7.47 7.7	7.6	−.22	7.43	9.0	−1.86	7.14
	4.7				7.85						
d	4.5	4.70	4.7	3.10	7.80 7.8	7.9	−.28	7.57	9.8	−1.89	7.81
	4.8				7.90						
e	4.6	4.75	4.7	3.10	7.85 8.0	7.8	−.29	7.61	9.4	−1.88	7.52
	5.4				8.65						
f	5.2	5.40	5.4	3.02	8.42 8.6	8.7	−.45	8.20	10.0	7.88	8.12
	5.8				8.85						
g	5.6	5.70	5.6	3.00	8.70 8.8	8.9	−.48	8.37			
	5.8				9.20						
h	5.6	5.75	5.7	2.99	8.74 9.2	9.2	−.50	8.70			
	6.7				9.95						
k	6.5	6.70	6.7	2.84	9.54 9.9	10.0	−.50	9.45			
	7.0										
l	6.8	6.90	6.8	2.81	9.71						
	7.3										
m	7.1	7.35	7.4	2.77	10.12						
n			7.6	2.76	10.36						
o			7.8	2.73	10.53						
p			8.2	2.80	11.00						
q			8.4	2.83	11.23						
r			8.5	2.86	11.36						
s			8.7	2.90	11.60						
t			8.7	2.90	11.60						
u			8.9	2.97	11.87						
w			9.2	3.06	12.26						
x			9.9	3.28	13.18						
y			10.0	3.31	13.31						
z			10.0	3.31	13.31						
α			9.5								
β			"								
γ			"								

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10:30

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DcM

B Series 726

B 53026 $13^h 34^m$ -31.0 ι Centauri Alt Cor. +.06

10:30

	Sc 1		Sc 2	Cu.	mag.	g h Sc 2	Sc 2	Cu.	mag.	P.C. Sc 2	Cu.	mag.
	4.8					7.75						
a	4.6	4.75	4.7	3.10	7.85	7.7	7.8	-.25	7.50	9.3	-1.88	7.42
	5.6					8.65						
b	5.4	5.60	5.6	3.00	8.60	8.6	8.7	-.45	8.20	10.0?	-1.88	8.12?
	6.2					9.10						
c	6.0	6.20	6.2	2.92	9.12	9.0	9.2	-.50	8.60			
	6.8					9.85						
d	6.6	6.70	6.6	2.85	9.55	9.7	10.0	-.50	9.35			
	7.1					10.00						
e	6.9	7.05	7.0	2.80	9.85	10.0	10.0	-.50	9.50			
f			7.4	2.86	10.16							
g			7.8	2.73	10.53							
h			8.4	2.83	11.23							
k			8.7	2.90	11.60							
l			8.8	2.94	11.74							
m			9.4	3.12	12.52							
n			9.6	3.18	12.78							
o			9.9	3.28	13.18							
p			9.9	3.28	13.18							
q			10.0	3.31	13.31							
r			n.s									
s			"									

168

10:45

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1919phae.proj..696A

copied 34'.23

Wednesday January 21, 1920

De M

B Series 926

B 53027 131 H $15^h 11.4$ $-15° 12'$ Alt. Corr. +.07

10;45

	g					h				P.C.
	Sc 1		Sc 2	Cu.	mag.	Sc 1	Sc 2	Cu.	mag.	Sc 2
	5.5					8.70				
1	5.3	5.50	5.5	3.02	8.52	8.7	8.7	-.45	8.25	
	7.0									
2	6.8	6.95	6.9	2.80	9.75					
	7.0									
3	6.8	6.95	6.9	2.80	9.75					
4			7.5	2.76	10.26					
5	?		8.0	2.77	10.77					
6			8.5	2.86	11.36					
7			8.9	2.97	11.87					
8			8.7	2.90	11.60					
9			8.8	2.83	11.63					
10			9.2	3.06	12.26					
11			9.7	3.2	12.92					
12			9.8	3.25	13.05					
13			9.9	3.28	13.18					
14			7.5							
15										
16										
17										
18										

10;55

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Wednesday January 21, 1920

DeM

B Series 726

B 53028

C_8

11:00

	Sc 1	Sc 2	Diff.	g h Sc 2	g h Sc 2	g h Diff.	P.C. Sc 2	P.C. Diff.
	4.4			7.60				
1	4.2	4.40	4.4	7.6	7.6	-.40	9.0	-1.80
	5.4			8.65				
3	5.2	5.45	5.5	8.7	8.6	-.56	9.9	-1.81
	4.6							
edge unbridged 4	4.4	4.55	4.5	t.p.	t.p.	·	9.8	-2.08
	6.9			9.65				
8	5.7	5.85	5.8	9.5	9.8	-.68		
	6.6			9.85				
9	5.8	6.10	6.2	9.8	9.9	-.63		
	6.8			10.00				
11	6.6	6.70	6.6	10.0	10.0	-.49		
	7.1							
12	6.9	7.15	7.2					
14			7.4					
15			7.6					
16			7.6					
18			7.8					
20			7.9					
20a			8.6					
21			8.6					
22			8.8					
25			9.4					
26			9.6					
27			10.0					
28			n.s					
29			"					
30			"					
31			"					
32			"					

224

11:20

Images much better than other C_8 region at beginning of series - Round

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1919phae.proj..696A

Thursday January 22, 1920

Examination of plates for Asteroids

~~MC 16594~~

10:00

Lætitia

MC 16594 Found by sleuth. No apparent variation

MC 16599 Found by superposing on above plate

10:03 Long tails - only two images

10:03 Clotho

MC 16589 ~~Found by sleuth. No apparent variation~~ Not Found

MC 16590 Black plate - two stars to be seen on it - Light struck?

MC 16594 Not Found

MC 16595 Not Found.

10:25

10:35 Melpomene

MC 16578 Not Found

10:55

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Friday January 23, 1920

Examination of plates for asteroids

2:00		
	Melpomene	
	MC 16575	Found by slant. Also superposed Chart plate MC 12404 to make sure of object. No apparent variation
2:05	MC 16576	Found by superposing on MC 16575
2:10	Clotho	
	MC 16589	Not found.

Monday February 2, 1920

9:30	Melpomene	
	MC 16614	Found by slant. Exposed glass side up.
	MC 16612	Found by superposing on MC 16611
	MC 16613	Found by superposing on MC 16611
	MC 16614	Found by superposing on MC 16611
9:40		

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Snow on ground.

January

Thursday 29, 1920

Sc M

B 13:97

10:00

Measures for faint stars in Sequence of R S Corinae.

Rel. mag. with 30 Ks. + P.C. of bright stars

	Sc 1		Sc 2	Rel. 30 Ks Cu.	Rel. 30 Ks mag.	P.C. Cu.	P.C. mag.	Constant 5.05 + mag	P.C. Sc 2	Diff.
k	7.0 6.8	6.90	6.8	3.91	10.81	~~-0.38~~	.	.	a	7.9 -0.47
l	7.2 7.0	7.10	7.0	3.90	11.00		.	.	1=b	8.7 -0.93
m			7.5	3.87	11.37	-0.38	7.12	12.17	2=c	Stars eq.
n			7.7	3.84	11.54	-0.45	7.25	12.30	d	9.7 -0.97
o			8.0	3.81	11.81	-0.58	7.42	12.47	e	Vis
p			8.8	3.67	12.47	-0.83	7.97	13.02		
q			9.2	3.55	12.75	-0.94	8.26	13.31		
r			9.7	3.40	13.10	-1.04	8.66	13.71		
Nova bright Nsaps			9.8	3.38	13.18	-1.06	8.74	13.79		
t			9.9	3.34	13.24	-1.08	8.82	13.87		
Nova br. mean u			10.1	3.28	13.38	-1.10	9.00	14.05		

	30 Ks		Diff.		P.C.	Diff
8	7.1 6.9	7.10	7.1	3.88	t=1	8.7 -1.16
9			7.5	3.77	c=2	. .
10			7.7	3.93	3	9.0 -0.51
11			8.4	3.57	4	
12			8.6	3.79	5	
13			8.8	3.88		
14			9.7	3.37		
15			9.9	3.16		

10:25

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January
Thursday, 29, 1920

ScM
D 10924
10:35

Measures for faint stars in sequence of R S Carinae
Rel. mag. with 30 Ks. + P.C. of brightest star.

30 Ks

	Sc 1	Sc 2	Diff.
8		7.6	3.28
9		7.8	3.47
10		8.2	3.43
11		8.7	3.27
12		8.9	3.49
13		9.7	2.98
14		9.9	3.17
15		10.0	3.06

P.C.

Sc. 2

b = 1
c = 2
3
4
5

t. p. not comparable with scale.

	R S Carinae	Av.	Mag.
k		7.4	3.38 10.78
l		7.5	3.39 10.89
m		7.6	3.39 10.99
n		7.9	3.40 11.30
o		8.7	3.34 12.04
p		8.9	3.31 12.21
q		9.8	3.10 12.90
r		10.0	3.05 13.05
s		10.1	3.02 13.12
t			
u			

P.C.

a
1 = b
2 = c
d
e

10:50

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Thursday January 29, 1920

De M

B9294

11;00

Measures for faint stars in Sequence of RS Canum

Rel. mag. with 30 Ks

	Cu. mag.	4.97 + mag.
.	.	.
.	.	.
.	.	.
-0.87	7.83	12.80
-1.06	8.54	13.51
-1.10	8.80	13.77

	Sc 1		Sc 2 Cu.	mag.
k	6.6 6.4	6.50	6.4	4.62 11.12
l	6.7 6.5	6.70	6.7	4.56 11.26
m	6.8 6.6	6.70	6.6	4.56 11.26
n	7.0 6.8	6.90	6.8	4.50 11.40
o			7.5	4.26 11.76
p			8.7	3.73 12.43
q			9.6	3.30 12.90
r			9.9	3.27 13.17
s			N.S.	
t			"	
u			.	

P.C.

Sc 2 Diff.

a 7.8 - 0.37

1 = b 8.7 - 0.93

2 = c 8.8 - 0.87

d 9.8 - 1.07

e .

	30 Ks		Diff.	
8	6.4 6.2	6.30	6.2	4.68
9	6.8 6.6	6.70	6.6	4.57
10	7.2 7.0	7.15	7.1	4.48
11			7.8	4.17
12			8.8	3.59
13			9.0	3.68
14			9.9	3.19
16			10.1	2.96

P.C.

b = 1 8.7 - 1.16

c = 2 8.8 - 0.98

3 star sup.

4 N.S

5

p.c. nearly sup.

11;15

Images not very good - Near Edge of plate

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Thursday January 29, 1920

Sc AH_3 Measures for faint stars in Sequence of R S Canum
A 7747 Rel. mag. with 30 Ks
11:20 A 2513 Sc AH_3

	Sc 1	Sc 2	Diff.		Sc 1	Sc 2	Diff.
8	3.7		7.28				
9	4.6		6.67				
10	4.8	4.90	5.0	6.73			
11	6.2	6.05	5.9	5.92			
12	6.9	6.85	6.8	5.54			
13	7.9	7.80	7.7	4.98	4.2		8.48
14			7.9	5.17	4.6		8.47
15			9.2	3.86	5.0 5.00	5.0	8.06

	R S Car.			R. S. Car
k	3.3			
l	3.6			
m	4.0			
n	4.6			
o	5.2	5.10	5.0	
g	7.0	6.90	6.8	
q			8.0	
r			9.0	4.5
s			9.3	5.4 5.30 5.2
t			10.0	6.0 6.90 5.8
u			9.5	6.7 6.65 6.6

11:40

Image elong. & hazy.

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1919phae.proj..696A

Tuesday February 3, 1920

Direct Estimates of 1614 02 X Serpentis

Re-observations of plates showing Nova light.

	11:40	AC 3662	9.6 ✓	
c.s.	mag.	AC 3409	9.2 ✓	
a	7.6	AC 5998	11.6 ✓	
b	8.0	AC 10441	<11.9 ✓	slight defect in film near position of Nova
c	8.2	AC 3358	9.1 ✓	Edge
d	8.7	AC 10591	<11.9 ✓	slight defect near position of Nova. Not same shape as other images - do not think it can be Nova.
e	9.4			
f	9.7	AC 6530	<11.9 ✓	Can see no trace of im. in posit. of Nova
g	9.7	AC 6288	12.0 ✓	Not very sure of this estimate
h	10.3	AC 6332	12.2 ✓	
k	10.5	AC 4668	10.3 ✓	
l	10.8	AC 6162	12.1 ✓	
m	11.2	AC 6340	12.4 ✓	
n	11.6	AC 4726	10.6 ✓	
o	11.9	AC 6226	12.0 ✓	
p	11.8	AC 4825	10.8 ✓	
q	12.3	AC 1421	<11.9 ✓	Defect near posit. of Nova.
r	12.5	AC 4895	11.1 ✓	
s	12.7	AC 2669	11.6 ✓	Film fogged + streaked
t	12.9	AC 3738	9.7 ✓	
u	13.6	AC 3830	9.9 ✓	
w	13.8	AC 3841	10.0 ✓	
x	14.1			
y	14.8	I 30596	9.5 ✓	
z	15.0	I 31765	11.6 ✓	
α	15.4 δ 16.8	I 31821	11.8 ✓	
β	16.4 γ 16.5	I 31879	11.5 ✓	Very Image

12:40

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1919phae.proj...696A

Tuesday February 3, 1920

Direct Estimates of 161402 & Serpentis

Re-observations of plates.

2:15	B 36571	13.3 ✓	B 38115 ~~13.6~~ 14.2	See p. 106
	B 35887	12.8 ✓	B 38817 14.0	
	B 33694	11.5 ✓	B 41359 #13.9	Very ft. Intermediately Nova.
	B 34922	11.9 ✓		
	B 34766	11.7 ✓		
	B 33889	11.1 ✓	Edge	
	B 33803	11.5 ✓		
	B 33651	11.2 ✓		
	B 33574	11.4 ✓	Edge	
	B 30554	<12.8 ✓	very near edge	
	B 31803	9.6 ✓	Edge	
	B 31943	9.3 ✓	Image hazy - difficult to set.	
	B 32090	9.7 ✓	?	
	B 32396	9.7 ✓	Edge - difficult to set,	
	B 32615	9.6 ✓	? Near edge cannot be sure.	
	B 33107	10.6 ✓	Edge	
	B 33184	10.7 ✓	"	
2:45				

Observations on AM plates.

3:15	AM 1588	<11.8	AM 3504 <11.9 ✓	
	AM 2786	11.0 ✓	AM 3534 12.7 ✓	
	AM 2795	11.5 ✓	AM 3607 <11.9	
	AM 2945	11.7 ✓	AM 3624 <11.9	
	AM 3041	12.0 ✓	AM 3654 <12.2	
	AM 3391	12.1 ✓	AM 3667 <11.9	
	AM 3399	12.1 ✓	AM 3687 <11.9	
	AM 3478	12.7 ✓	AM 3818 <12.2	
3:30				

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Wednesday Feb. 4, 1920

Direct Estimates of 16 1402 X Serpentis.

9:05	A 7701	14.0 ✓	AC 3593 <9.7
	A 8914	14.7 ✓	" 5003 <11.2
	A 3855	14.4 ✓	
	B 38817	<14.1 ✓	
	B 41359	14.7 ✓	
9:20	B 28115	<15.4 ✓	
9:25			
	AM 2735	11.5 ✓	Multiple Im.
	AM 3858	<12.	Monday April 11, 1921
	AM 3881	<11.9	Acpeates from 17+15+17-15
	AM 896	<12.5	AC 3358 9.1 ✓
	AM 930	<11.9	" 3518 9.2 03,4,18 6223
	AM 1020	<11.9	" 3569 9.2 ✓ " 4,29 6234
	AM 1250	<12.5	" 3583 9.2 ✓ " 5,1 6236
	AM 1261	<12.5	" 3677 9.4? ✓ Expect one can't be sure of set " 5,24 6259
	AM 1279	<12.7	" 3701 9.5 ✓ " 5,30 6265
	AM 1275	<11.2	" 3717 t.p. " 6,2 6268
	AM 1446	<11.9 July 10, 1902	" 3817 9.4 ✓ " 8,12 6339
	AM 1910	9.5 ✓	" 3842 <9.0 " 8,18 6345
	AM 1937	9.1 ✓	" 3860 <9.0 " 8,24 6351
	AM 1957	9.2 ✓	" 3964 <9.0 " 9,22 6380
	AM 1964	9.3 ✓	" 4014 9.4? ✓ ft. or <9.4 - 9.30 6388
	AM 2092	9.4 ✓	" 4729 10.8 04,3,11 6651
	AM 2114	9.7 ✓	" 4826 10.5 " 4,12 6683
	AM 2118	9.6 ✓	" 4832 10.5 " 4,13 6684
	AM 2136	9.9 ✓	" 4881 t.p
	AM 2168	10.0 ✓	" 5053 <10.8 " 7,13 6675
10:05			

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Wednesday, Feb. 4, 1920

Direct Estimates of 16 1402 X Serpentis

10:05	AM 2287	10.0 ✓	AM 2637	11.0 ✓	
	AM 2557	11.0 ✓	AM 2692	11.2 ✓	
	AM 2599	11.3 ✓	AM 2757	11.4 ✓	
	AM 2644	11.3 ✓	11:00		
	AM 2720	11.5 ✓			
10:10			Wednesday April 28, 1920		
10:15	AM 2693	11.4 ✓			
	AM 2764	11.3 ✓	MC 16674	<15.4	Feb. 20, 1920
	AM 1382	<11.6	MC 16670	<12.5	Feb. 16, 1920
	AM 1502	<10.5			
	AM 1881	9.1 ✓			
	AM 1991	9.2 ✓			
	AM 2033	9.3 ✓	AC 2686	<11.2	July 12, 1902
	AM 2078	9.4 ✓	" 2658	<11.2	04,3,14 6553 ✓
	AM 2175	9.8 ✓	AM 1396	<10.8	AC 4746 10.6 04,5,12 6613
	AM 2617	10.7? ✓	" 1381	<11.7	" 4905 10.8 04,6,10 6642
10:35			AC 2672	<10.2	" 4948 10.8 04,6,12 7056 6644
10:50	AM 1873	9.1 ✓	AM 1402	<10.8	" 5105 <10.8 03,7,24 6320
	AM 1880	9.1 ✓	" 1395	<10.5	" 3777 9.6
	AM 1990	9.5 ✓	AC 3538	9.2 ✓	03,4,21 6226
	AM 2025	9.6 ✓	" 3556	9.3 ✓	" 4,27 6232
	AM 2060	9.8 ✓	" 3576	9.2 ✓	" 4,30 6235
	AM 2079	9.9 ✓	" 3650	9.3 ✓	" 5,19 6254
	AM 2176	10.0 ✓	" 3666	9.4 ✓	" 5,22 6257
	AM 2190	9.9 ✓	" 3676	9.4 ✓	" 5,24 6259
	AM 2524	11.0 ✓	" 3682	9.3 ✓	" 5,25 6260
	AM 2563	11.0 ✓	" 3723	9.6 ✓	" 6.16 6282
	AM 2616	10.8 ✓			

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Wednesday Feb. 4, 1920

Map of the Sky 102

Examination of plates for Variables

9 -45

2:25 Superposed ~~AM 11661, May 3, 1916~~ AM 13792, Nov. 18, 1918 on D 18534 (AM 4014) Dec. 5, 1905

3:00 Found 1 var. Examined only 1/3 of plate

Var. II

Bright	Faint.
AM 13792	AM 4014
" 2351	" 5363
" 5263	

New Variable CDM 4112 $8^h 14^m 33^s.3$ $-42^\circ 21'.8$

Identified on B 33066

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Friday February 6, 1920

Map of the Sky 102

Examination of plates for Variables

9 - 45

10:00 Superposed AM 5363 (on April 5, 1908) on D 18534 (AM 4014)

Found 2 variables

11:00

Var. 12		Var. 13	
Bright	Faint	Bright	Faint
AM 5363	AM 4014	AM 5363	AM 4014
" 3518	" 5431	" 4162	" 5431
" 12909	" 4790		" 4790
	" 13792		" 13792

Var. 12 is S Carinae

Var. 13 is SV Velorum

2:20 Superposed AM 2351 (Oct. 26, 1903) on D 18534

Found 2 variables

080934 RS Puppis Var. 14 Var. 15 W Puppis

Bright	Faint	Bright	Faint	
AM 2351	AM 4014	AM 2351	AM 13792	U.S.
" 13792	" 5263 ~~536~~	" 2307	" 5363	n.s.
" 5363	" 3518	" 2304	" 5263	n.s.
			" 3518	
			" 1896	
			" 1912	

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Saturday February 7, 1920

Map of the Sky 102

Examination of Plates for Variables

9 -45

11:30 Superposed AM 12909 (March 27, 1917) on D 18534

Covered only 1/2 of plate

Found one Variable

12:30 Var. 16

Bright	Faint
AM 4014	AM 12909
" 13792	" 5263
" 2351	" 18082
" 5363	
B 24698	

New Variable -

CDM 5361 $8^h 48^m 26.^s5$ $-34° 20'.6$ Mag 8.0

Identified on B 18082

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1919phae..proj... 696A

Monday February 9, 1920

Map of the Sky 102

Examination of Plates for Variables

9 – 45

10:20 Superposed A.H. 12909 (Mar. 27, 1917) on D 18534

Found 1 variable.

11:40

Var. 17	R Carinae
Bright	Faint
A.H. 12909	A.H. 14014
" 13792	" 5942
" 2351	" 4834
	" 5363

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Tuesday February 10, 1920

Map of the Sky 102

Examination of Plates for Variables

9 - 45

9:35 Superposed AM 9778 May 23, 1914 on D 18534

Found ~~1~~ 2 Variables

10:15

One was Var. 6 that found on plate AM 12909.

Var. 18

Bright	faint
AM 4014	AM 9778
" 12909	" 13792
" 5363	
" 2351	

CDM 5253 $9^h 30^m 37^s.3$ $-39° 20'.5$

Identified on B 5290

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Wednesday February 11, 1920

Map of the Sky 102

Examination of Plates for Variables.

9 - 45

10:00 Superposed AM 11661 May 3, 1916 on D 1853 φ.

Found 2 Asteroids

" R Carinae (Var. 7) again.

10:30

Var. 19	V4 Carinae
Bright	Faint
AM 4014	AM 11661
" 9778	" 12909
	" 5263

10

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Friday February 13, 1920

Map of the Sky 77

Examination of plates for Variables

7 +15

Superposed AC 22065 (Dec. 3, 1919) on
D 18476 (AC 16857) Oct. 17, 1915.

Found 2 variables.

*Var. 1 Bright	Faint	× Reminiscence Var. 2 Bright	Faint
AC 16857	K 22065 n.s.	AC 16857	AC 22065 n.s.
" 20878			AC 20878 n.s
" 18355			AC 18355 n.s.
" 15789			AC 15789
" 17054			AC 17054
			AC 16573

* Var. 1 - There is a defect on AC 22065 at the spot where the image would be. This probably wipes out the star image. Scanned on other plate on which the star is not seen or where it varies.

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Friday February 13, 1920

Map of the Sky 102

Examination of plates for Variables

9 -45-

Superposed AM 4162 April 18, 1906 on H 18534

Found 3 variables and 5 stars which may vary - or be defective

One variable is R Carinae - found before.

" " " SV Velorum - " "

Var. ~~10~~ 20

Bright	Faint
AM ~~4~~ 1062 ~~14~~	AM 4014
" 13792	AM 12909
	" 9778
	" 11661
	" 6363

101659 = Carinae 2059 (cpd)

Var. ~~11~~ 21

Bright	Faint
AM 4162	AM 4014
" 9778	" 13792
	" 5363
	" 2357
	" 11661

u Carinae

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1919phae.proj..696A

Tuesday February 17, 1920

ScIV

Relative Magnitudes for Metcalf's Variable

AM 11663 -2 -4 0 12 25 25- 12^h $-30°$

10:25

	ScA	ScB	ScC	Mean.	Cu.	Mag.
		6.3				
b		6.7	6.2	6.25	2.58	8.83
		6.9				
c		7.3	6.7	6.80	2.40	9.20
		7.0				
d		7.4	6.8	6.90	2.39	9.29
		7.2				
e		7.6	7.2	7.20	2.34	9.54
		7.4				
f		7.8	7.6	7.50	2.30	9.80
		7.7				
g		8.1	7.7	7.70	2.28	9.98
		8.2				
h		8.6	8.2	8.20	2.23	10.43
		8.4				
k		8.8	8.4	8.40	2.21	10.61
		8.6				
l		9.0	8.8	8.70	2.18	10.88
m			9.0	"	2.16	11.16
n			9.4	-	2.15	11.55
o			9.6		2.18	11.78
p			9.8		2.25	12.05

10:45

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Tuesday February 17, 1920

Sc N Relative Magnitudes for Metcalf's Variable

BM 11663 152 K 12h -30°

	10:45	Sc A	Sc B	Sc C	Mean	Diff.
		4.4	4.6			
1		4.6	5.0	4.6	4.53	3.11
			7.0			
2			7.4	6.8	6.90	2.38
			7.4			
3			7.8	7.5	7.45	2.26
4			8.2	7.8	7.80	2.33
			8.3			
5			8.7	8.4	8.35	2.28
			8.4			
6			8.8	8.6	8.50	2.29
7				8.8		2.30
8			~~9.4~~	9.4		2.08
9				9.5		2.15
10				9.7		2.14
11			~~10.0~~	10.0		2.21
12				9.9		2.44
13				10.2		2.57
14				10.3		2.46
15				n.s.		
16				"		
	11:05					

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Tuesday February 17, 1920

Sc N

Relative Magnitudes for Metcalf's Variable

AM 3503 — 152 K — $12^h - 30^\circ$

11:10

	ScA	ScB	ScC	Mean	Diff.
	4.4	4.4			
1	4.6	4.8	4.4	4.40	3.24
		6.5			
2		6.9	6.4	6.45	2.83
		7.2			
3		7.6	7.1	7.15	2.56
		7.4			
4		7.8	7.4	7.40	2.73
		7.8			
5		8.2	7.8	7.80	2.83
		8.1			
6		8.5	8.2	8.15	2.64
		8.5			
7		8.9	8.7	8.60	2.50
8			9.2		2.28
9			9.6		2.05
10			9.8		2.04
11			9.9		2.31
12			10.1		2.24
13			10.2		2.57
14			NS		
15					
16					

11:20

Image slightly elongated

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Tuesday February 17, 1920

Sc N. Relative magnitudes for Metcalf's Variable.

AM 3503 122525 12 -30

11:20	Sc A	Sc B	Sc C	Mean.	Cu.	Mag.
		6.1				
b		6.5	5.8	5.95	2.93	8.88
		6.4				
c		6.8	6.2	6.30	2.84	9.14
		6.4				
d		6.8	6.3	6.35	2.82	9.17
		7.0				
e		7.4	6.8	6.90	2.70	9.60
		7.15				
f		7.7	6.9	7.00	2.68	9.68
		7.3				
g		7.7	7.4	7.35	2.62	9.97
		8.9				
h		8.3	7.7	7.80	2.56	10.36
		8.3				
k		8.7	8.4	8.35	2.45	10.80
		8.5				
l		8.9	8.6	8.55	2.40	10.95
m			8.9		2.32	11.22
n		~~9.4~~	9.4		2.20	11.60
o			9.6		2.18	11.78
p			9.8		2.20	12.00

11:30

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Tuesday February 17, 1920

Sc IV

Relative Magnitudes for Metcalf's Variable

AM 2643 12 25 25 12 -30

2:20

	Sc A	Sc B	Sc C	Mean	Cu.	Mag.
		6.3				
b		6.7	6.6	6.25	2.75	9.00
		6.7				
c		7.1	6.7	6.70	2.65	9.35
		7.0				
d		7.4	6.7	6.85	2.62	9.47
		7.2				
e		7.6	7.1	7.15	2.56	9.71
		7.3				
f		7.7	7.4	7.35	2.52	9.87
		7.5				
g		7.9	7.6	7.55	2.49	10.04
		8.1				
h		8.5	8.2	8.15	2.38	10.53
		8.3				
k		8.7	8.5	8.40	2.33	10.73
l			8.8		2.27	10.97
m			9.2		2.20	11.40
n			9.3		2.17	11.47
o			9.6		2.12	11.72
p			9.8		2.10	11.90

2:35

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Images slightly elongated

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Tuesday February 17, 1920

Sc N Relative Magnitudes for Metcalf's Variable

DM 2643 152 K 2 −30

	2:35	Sc A	Sc B	Sc C	Mean.	Diff.
		4.6	4.3 4.7			
1		4.8	~~5.5~~ 6.8	4.4	4.43	3.21
2			7.2 7.2	6.6	6.70	2.58
3			7.6 7.4	7.2	7.20	2.51
4			7.8 8.1	7.6	7.50	2.63
5			8.5 8.5	8.2	8.15	2.48
6			8.7 8.7	8.7	8.60	2.19
7			9.1	8.7	8.70	2.40
8				9.2		2.28
9				9.7		1.95
10				9.9		1.94
11				10.0		2.21
12				10.2		2.14
13				10.4		2.37
14				n.s		
15				"		
16				"		
	2:45					

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Tuesday February 17, 1920

Sc N

Relative Magnitudes for McKay's Variable

AM 2568 152 K 12h -30°

3:00

	Sc A	Sc B	Sc C	Mean	Diff.
	3.6	3.8			
1	3.8	4.2	B	3.70	3.94
		6.2			
2		6.6	6.0	6.10	3.18
		6.8			
3		7.2	6.6	6.70	3.01
		7.2			
4		7.6	6.8	7.00	3.13
		7.3			
5		7.7	7.6	7.45	3.18
		7.4			
6		7.8	7.7	7.55	3.24
		8.3			
7		8.7	8.2	8.25	2.85
8			8.8		2.68
9			9.7		1.96
10			9.8		2.04
11			9.9		2.31
12			10.1		2.24
13			10.3		2.47
14			H.f. to meas.		
15					
16					

3:10

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Tuesday February 17, 1920

bc N

Relative Magnitudes for Metcalf's Variable

AM 2568 12 25 25 12 -30

3:10

	Δ A	Δ B	Δ C	Mean
		5.9		
b	~~6.3~~	6.3	5.7	5.80
		6.2		
c		6.6	6.0	6.10
		6.3		
d		6.7	6.2	6.25
		6.6		
e		7.0	6.6	6.60
		7.0		
f		7.4	6.8	6.90
		7.2		
g		7.6	7.0	7.10
		7.4		
h		7.8	7.6	7.60
		~~7.8~~ 8.2	7.8	
k		~~8.0~~	~~7.9~~	7.80
		8.2		
l		8.6	8.0	8.10
		8.6		
m		9.0	8.7	8.65
n			8.8	
o			9.5	
p			9.7	

3:20

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Wednesday February 18, 1920

Sc N — Relative magnitudes for Metcalf's Variable — AM 4155 — 152 K — 12h -30°

		Sc A	Sc B	Sc C	Mean	Diff.
10:10		4.5	4.4			
	1	4.7	4.8	4.5	4.47	3.17
			6.8			
	2		7.4	6.7	6.75	2.53
			7.3			
	3		8.7	7.4	7.35	2.36
			7.5			
	4		7.9	7.6	7.55	2.58
			8.3			
	5		8.7	8.2	8.25	2.38
			8.4			
	6		8.8	8.4	8.40	2.39
			8.8			
	7		9.2	8.8	8.80	2.30
	8			9.4		2.08
	9			9.6		2.05
	10			9.8		2.04
	11			10.0		2.21
	12			10.0		2.34
	13			10.2		2.57
	14			n.s.		
	15			"		
10:20	16			"		

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Wednesday February 18, 1920

Sc IV Relative Magnitudes for Metcalf's Variable

BM 4155 -25°9286 12-30

		Sc B	Sc C	Mean	Cm.	Mag.
10:20	Sc A	6.3				
b		6.7	6.4	6.35	2.65	9.00
		6.8				
c		7.2	6.7	6.75	2.58	9.33
		6.9				
d		7.3	6.7	6.80	2.57	9.37
		7.2				
e		7.6	7.0	7.10	2.51	9.61
		7.3				
f		7.7	7.2	7.25	2.49	9.74
		7.6				
g		8.0	7.7	7.65	2.42	10.07
		8.1				
h		8.5	8.0	8.05	2.36	10.41
		8.4				
k		8.8	8.6	8.50	2.28	10.78
		8.6				
l		9.0	8.7	8.65	2.25	10.90
m			9.4		2.12	11.62
n			9.6		2.10	11.70
o			9.8 8		2.10	11.90
p			9.8 9		2.20	12.10
10:30						

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Tuesday March 23, 1920

Ref. Plate B12988 — Direct Estimates of RS Canum

10:20

a	7.0	B 13861	11.3 ✓	E.
b	7.5	B 13183	9.1 ✓	
c	7.8	B 15131	~~13.5~~ 14.1 ✓	
d	8.6	B 12988	8.3 ✓	
e	9.1	B 7140	n.s. ~~Star in fog, near nova~~ (bright,) but cannot	
d'	9.4	be made to superpose with nova in same relation as		
f	9.6	other stars. This machine thinks it is not RS Can. also.		
g	9.8	difficult because it is near edge of plate + many trails.		
k	10.7			
l	10.9	B 13018	8.0 ✓	E. dark part of pl.
m	11.1	B 13027	8.8? ✓	~~Spectrum pl.~~
n	11.4	B 13521	10.4 ✓	
o	11.8	B 13478	10.3 ✓	
p	12.4	B 12941	7.5 ✓	
q	12.8	B 13479	~~8.3~~ 10.4 ✓	
r	13.1	B 12940	7.2 ✓	
~~t~~	~~13.3~~	B 13772	9.0 ✓	sp. pol.
s	13.3	B 13199	9.3 ✓	
t	13.7	B 15151	n.s.	
u	14.0	B 25556	n.s.	
w	14.4			
x	14.6			
y	15.8			

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Friday March 26, 1920

Estimates of limiting mag. for plates of RS Carinae. Nova not seen.

B15151	<u	14.0	B15083	<t	13.7
X7393	<t	13.7	B21300	<u	14.6
X7369	<u	14.0	B21732	<r	13.1
B9479	<x	14.6	B7951	<s	13.3
B21557	<u	14.0	A2242	<u	14.0
B36034	<t	13.7	A2513	<y	15.8
B36017	<w	14.4	A2549	<w	14.4
B22328	<s	13.3	A1958	<s	13.3
B22810	<t	13.7	A3013	<u	14.0
B19471	<u	14.0	A3012	<u	14.0
B21170	<u	14.0	A2484	<x	14.6
B21378	<s	13.3	A1804	<x	14.6
B21329	<u	14.0	A2521	<x	14.6
B21361	<t	13.7	A7747	<t	13.7 June 26, 1906
B21428	<u	14.0	A3076 Rust to Kapteyn		
B21437	<t	13.7			
B18346	<u	14.0	B9420		14.0
B3559	<r	13.1	B19074		14.4
B9191	<s	13.3	B22644		13.7
B11317	<u	14.0	B25352		15.8
B12743	<r	13.1	B5134		13.1
B15016	<u	14.0	B15131		14.0 14.0 (6:108)
B15212	RS=y	14.6			
B15405	<u	14.0			
B15556	<w	14.4			
B16844	<u	14.0			

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Tuesday March 30, 1920

Estimate of RS Corinae (if n.s. limiting mag. of plate recorded)

Year				Monday May 3, 1920	
1906	A7748	<t 13.7 ✓	B46608	<13.7 ✓	
	A 5824	<x 14.6 ✓	B46606	<12.8 ✓	
1907	A8240	<s 13.3 ✓	B46469	<13.2 ✓	
1908	A 8773	<s 13.3 ✓	B46468	<12.4 ✓	
1917	B50346	<s 13.3 ✓	B46439	<11.4 ✓	
1916	B46812	<s 13.3 ✓	B46347	<11.8 ✓	
1910	B41281	<t 13.7 ✓	B46273	t.p. ½ of plate sep. ✓	
1914	B44761	<r 13.1 ✓	B46260	✓ " " " "	
1918	B53021	<r 13.1 ✓	B46254	✓ " " "	
1909	B40001	<r 13.1 ✓	B46412	<12.4 ✓	
1908	B39240	<t 13.7 ✓	B46470	<12.4 ✓	
1912	AM 8297	<o 11.8 ✓	B46542	<12.4 ✓	B53021 <12.8 ✓
1911	AM 7412	<p 12.4 ✓	B35834 ✓	<11.8	B52866 <13.3 ✓
1915	AM 10553	<p 12.4 ✓	B51022	<11.4 ✓	B49635 <13.7 ✓
1913	AM 8879	<o 11.8 ✓	B52298	<11.8 ✓	
1919	Mf 3442	<r 13.1 ✓	B52413	<11.8 ✓	

Monday May 3, 1920

9d 5h

B52961 <11.8 ✓
A7685 <14.0 ✓

B50405 <11.4 ✓ B49603 t.p. ✓ B50036 <12.4 ✓ B50748 <13.3 ✓ B39241 <14.4 ✓
B50325 <12.4 ✓ B49927 <12.4 ✓ B50152 <12.4 ✓ B50745 <11.8 ✓ B40005 <13.7 ✓
B50221 <12.8 ✓ Mf 3353 <13.1 ✓ B50205 <12.4 ✓ B50779 <12.4 ✓ B44777 <12.4 ✓
B50590 <11.8 ✓ Mf 3734 <13.1 ✓ B50217 <12.8 ✓ B50924 <12.4 ✓ B47116 <13.3 ✓
B50635 <11.4 ✓ Mf 3207 <13.1 ✓ B50372 <13.7 ✓ B49879 <12.4 ✓ B47117 <13.7 ✓
B50778 <11.8 ✓ B52678 <13.3 ✓ B50592 <13.1 ✓ B49599 t.p. ✓ B47165 <14.6 ✓
B50744 <12.4 ✓ B52665 <12.4 ✓ B50552 <11.8 ✓ B49924 <12.4 ✓ B46756 <13.3 ✓
B50950 <11.4 ✓ B52696 <13.1 ✓ B50594 <12.8 ✓ B37353 <13.7 ✓ B46753 <12.4 ✓
B50974 <11.4 ✓ B52772 <13.1 ✓ B50636 <11.8 ✓ B38444 <12.4 ✓ B46630 <13.3 ✓

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Tuesday March 30, 1920

Se. P Scale Measures for Print Comp. stars of RS Carinae.

−0.3 A 2513

2:10

	Sc. 1	Sc 2	Diff	(extrapolated) Cu.	mag.	* Diff.	Cu.	mag.
	3.5							
n	3.8		7.86			7.86		
	3.9							
o	4.2		7.92			7.92		
	4.70							
p	5.7	4.70	4.7 7.66			7.66		
	5.3							
q	5.6	5.35	5.4 7.47			7.47		
	5.7							
r	6.0	5.80	5.9 7.29			7.82	7.42	13.22
	6.1							
s	6.4	6.15	6.2	7.15	13.30 e	7.87	7.35	13.50
	6.5							
t	6.8	6.55	6.6	7.04	13.58 e	7.79	7.27	13.82
	6.7							
u	7.0	6.85	7.0	6.87	13.72 e	7.73	7.20	14.05
			7					
w			7.7	6.64	14.34 e		7.03	14.73
x			8.0	6.53	14.53 e		6.97	14.97
2:20 y			9.0	6.27	15.27 e		6.78	15.78

Images peculiarly elongated – difficult to measure. Region in center of plate

*The second differences are from computed mag. from f.c. of bright stars measured by Argelander's Method, with ff. stars on A & B plates. The curves are drawn thro the points plotted from the first difference but also parallel to the curve ~~but~~ made by the computed mag. – scale meas.

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Tuesday March 30, 1920

Hc.AH.3 Scale Measures for Ft. C.S. of RS Carinae

A 2521

	Sc 1	Sc 2
n	B	
o	1.0	
p	2.4	
q	3.5	
r	3.8	
s		
t		
u	7.7	
w		
x		
y		

Images elonged + wriged. Region near north, following edge of plate.

Too poor to measure.

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Wednesday, March 31, 1920

Se, AH_3 Scale measures for ft. e.s. of R S Canum

A 1804

	Sc1		Sc2.	Diff. (Extraf)	Cu.	mag.	Diff	Cu.	mag.
n	3.1			8.26					
o	3.5			8.32					
p	4.4			7.96					
q	5.8	5.75	5.7	7.06					
r	6.3	6.15	6.0	6.94			7.47	6.82	12.97
s	6.7	6.65	6.6	6.74	13.39		7.37	6.54	13.19
t	7.8	7.70	7.6	6.37	14.07		6.64	6.03	13.73
u	~~8.2~~		8.0	6.28	14.28		6.58	5.90	13.90
w			8.9	6.03	14.93			5.50	14.40
v			9.0	6.00	15.00			5.47	14.47
y			n.s.						

Images elongated Region near preceding edge of plate.

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Wednesday March 31, 1920

Sc M. Scale Measures for ft. Comparison stars of R Sc Corona
B 15212

	Sc 1		Sc 2	Diff. Cu.		Diff. Cu.	Mag.	
	5.4							
m	5.2	5.30	5.2	5.84				
	5.8							
n	5.6	5.80	5.8	5.56				
	6.8							
o	6.6	6.75	6.7	5.07				
p			7.9	4.46				
q			8.3 ~~8.4~~	52 4.72		Remeasured - seem to be greater diff. from p.		
r			8.7	4.32		4.92	4.44	13.14
s			8.9		4.20 13.10	4.12	4.40	13.30
t			9.1		4.13 13.23	5.24	4.37	13.47
u			9.8		3.90 13.70	4.78	4.23	14.03
w			10.0		3.84 13.84		4.20	14.20
x			10.2		3.78 13.98		4.17	14.37
y			n.s.		.		.	.

Region in center of plate.
Images slightly elongated

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Monday April 5, 1920

Comparisons by Argelander's method between p.c. of bright stars and print c.c. for R S Carinae

p.c. of c nearly superposed by another star - cannot use it.

B 15212

o = a

b 5 p 3d

q = d

Too many p.c. superposed

J.D. 13946	B 18346		Jan. 21, 1897		Mean + Corr.	
Corr. 5.12	6.95 7.45 a 2 o 3 b	7.15	7.15	o	7.15	12.27
	7.79 8.56 c 2 p 3 d	7.99	8.26	p	8.12	13.24
	8.56 q = d	8.56		q	8.56	13.68
	r def.			r	.	
	8.56 9.13 d 2 s 3 e	8.76	8.83	s	8.80	13.92
	9.13 t = e	9.13		t	9.13	14.25
	9.13 e 2 u	9.23		u	9.23	14.36

J.D. 14410	B 21327		April 30, 1898		Mean + Corr.	
Corr. 5.17	6.95 o 1 a	6.85		o	6.85	12.02
	7.45 7.79 b 2 p 1 c	7.65	7.69	p	7.67	12.84
	7.79 8.56 c 4 q 3 d	8.19	8.26	q	8.22	13.39
	8.56 9.13 d 2 r 3 e	8.76	9.83	r	8.80	13.97
	8.56 9.13 d 3 s 1 e	8.86	9.03	s	8.94	14.11
	c t = 9.13 e	9.13		t	9.13	14.30
	u = 9.55 f	9.65		u	9.55	14.72

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1919phae.proj..696A

Monday April 5, 1920

Comparison by Argelander's Method of p.c. of bright stars with faint c.s. for K S Carinae

J.D. 14382
Corr. 5.1[6]

B21120

1 6.95
o = a
7.45 7.79
f 1 p 2 e
7.79 8.56
e 1 g 3 d
7.79 8.52
c 3 2 1 d
8.56 9.13
d 3 5 1 2
9.13 9.55
e 2 t 1 f
9.55
k = f

Apr. 2 1898	Mean + Corr.	
6.95	6.95	12.11
7.55 7.59	7.57	12.73
7.89 8.26	8.07	13.23
8.09 8.46	8.27	13.43
8.86 9.03	8.94	14.10
9.33 9.45	9.39	14.55
9.55	9.55	14.71

J.D. 14085
Corr. 5.13

B 19471

7.79 8.56
c 3 g 2 d
7.79 8.56
c 4 2 1 d
8.56 9.13
d 3 5 3 2
9.13
t = 2
9.13 9.55
2 2 4 1 f

June 9, 1897	Mean + Corr.	
8.09 8.36	8.22	13.35
8.19 8.46	8.32	13.45
8.86 8.83 ~~9.43~~	8.84	13.97
9.13	9.13	14.26
9.33 9.45	9.39	14.52

B 19471 not very comparable

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Monday May 24, 1920

110361 RS Carinae

Direct Estimate of first-star on plate.

Date					
April 9, 1908	B38621	<13.8	AM 14784	<12.0	June 22, 09
May 7, 1909	AM6082	<12.4	" 14145	<11.1	July 12, 18
Dec. 17, 1906	" 4730	<12.0	" 12847	<11.6	Dec. 22, 16
Feb. 13, "	" 4100	<12.2	" 12792	<12.0	Nov. 19, "
Jan. 27, "	" 4060	<12.0	" 12681	<12.0	Oct. 24, "
July 23, 11	" 7604	<11.0	" 12218	<12.0	July 19, "
June 12, "	" 7444	<12.4	" 11487	<12.4	Dec. 11, 15
Apr. 10, "	" 7386	<12.4	" 10768	<12.0	July 10, 15
Mar. 29, "	" 7379	<12.0	" 10653	<12.0	June 10, "
July 11, 10	" 7111	<12.0	" 10433	<12.4	Apr. 18, "
Apr. 17, "	" 6885	<12.4	" 10388	<12.4	" 6, "
July 17, 09	" 6265	<12.0	" 9901	<12.0	June 27, 14
June 17, "	" 6235	<12.0	" 9788	<11.8	May 26, "
" 22, "	" 6268	<12.4	" 9689	<12.0	Mar. 7, "
Mar. 17, "	" 5967	<12.0	" 9112	<12.0	June 26, 13
Jan. 25, "	" 5946	<12.4	" 9180	<11.8	July 8, "
July 8, 08	" 5644	<12.0	" 8413	<11.8	July 8, 12
July 4, "	" 5625	<11.6	" 8827	<11.4	Apr. 23, 13
Feb. 27, "	" 5313	<12.0	" 8170	<~~10.8~~ 10.7	May 10, 12
June 4, 07	" 4901	<12.4	" 8226	<11.4	" 22, "
Mar. 16, "	" 4746	<12.4	" 6886	<11.6	Apr. 18, 10
July 2, 06	" 4364	<12.0	" 13790	<11.4	Mar. 11, 18
Apr. 30, "	" 4194	<12.4	" 13406	<11.2	July 16, 17
Mar. 21, "	" 4134	<11.4	" 14589	<11.1	Mar. 22, 19
Aug. 1, 19	" 14878	<11.1	" 9696	<10.7	Apr. 3, 14
July 25, "	" 14866	<11.4			
" 2, "	" 14822	<12.4			

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Images large + fuzzy. Bright stars compare well with scale, ft. Sc. R stars too short.

~~Monday April 12, 1920~~
Friday April 16, 1920

Sheet no. 206

NF Series 173

Cor. +0.3 to Sc. 1 NF 3874 Σ6

9:30

	Sc. 1 mean	& c 2	Diff.	g mean h Sc 2	So 2	Diff	P.C. Sc. 2	Diff
1	B			9.2	9.45	9.7	11.7	-5.3
2	B			9.9	9.95	10.0	14.0	-5.20
3	B			9.7	9.65	9.6	11.9	-.507
4	3.9 3.6 3.7		3.31	10.3	10.15	10.0	12.3	-5.09
5	3.6 3.9		3.77	10.5	10.45	10.4	12.6	-5.23
6	4.4 4.1		3.25	10.6	10.60	10.6	12.8	-5.15
7	5.8 5.5		2.12	10.9	10.95	11.0	13.0	-6.08
8	6.2 5.9		2.21	11.4	11.50	11.6	13.7	-6.29
9	6.1 5.8		2.36	11.7	11.70	11.7	13.8	-5.34
10	6.2 5.9		2.33	11.8	11.80	11.8	star sup.	
11	7.6 7.3		1.38	12.6	12.50	12.4	14.0	-5.02
12	7.9 7.6		1.16	12.2	12.30	12.4		
13	8.2 7.9		0.90	12.7	12.70	12.7		
14	8.7 8.4		0.75	12.9	12.90	12.9		
15	8.2 7.9		1.26	12.7	12.80	12.9		
16	8.5 8.2	8.35	8.2 1.21	Sc.2 27 11.8	-0.18		12.7 12.70 12.7	-3.14
17	9.1 8.8	9.05	9.0 0.72	28 11.9	+0.12		13.2 13.30 13.4	-3.53
18	9.1 8.8	9.00	8.9 0.92	29 12.9	+014		13.4 13.35 13.3	-3.42
19	9.3 9.0	9.30	9.3 0.64	30 13.4	-0.12		13.3 13.45 13.6	-3.51
20	9.7 9.4	9.55	9.4 0.66	31 12.8	-0.33		13.9 13.90 13.9	-3.69
21	10.0 9.7	10.20	10.4 0.34	32 12.8	-0.31		14.0 13.90 13.8	-3.36
22	9.9 9.6	9.90	9.9 0.71	33 13.0	-0.39		14.1 14.05 14.0	-3.44
23	9.9 9.6	9.90	9.9 0.71	34 13.0	-0.23		14.0 14.00 14.0	-3.39
24	10.1 9.8	10.35	10.6 0.45	35 13.3	-0.43			
25			10.6 0.29	36 13.6	-0.22			
26			11.2 0.05	37 13.8	-0.41			
				39 14.0	-0.46			

10:45

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~~Monday April 12, 1920~~ Copied 45:32
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ScR M.F. Series 173

M.F. 3876 T Ajodis 14 15-76 Alt. Corr. -.33

10,45

	Sc1	Sc2	Cu.	Mag.	g Sc2	h Sc2	Cu.	Mag.	P.C. Sc.2	Cu.	Mag.
	5.7										
A	5.4			2.34	8.04	11.9	11.85 11.8	-3.27	8.58	13.8	-5.40 8.40
b	7.7 7.4			1.36	9.06	12.7	12.75 12.8	-3.56	9.19	14.1	-5.41 8.69
b'	8.5 8.2	8.50	8.5	1.03	9.53	13.2	13.30 13.4	-3.71	9.59		
a	9.9 9.6	9.70	9.9	0.52	10.42						
d			10.6	0.30	10.90						
c			11.6	-0.01	11.59						
c'			12.0	-0.12	11.88						
g			12.9	-0.36	12.54						
e			13.3	-0.40	12.90						
f			13.2	-0.40	12.80						
h			13.9	-0.38	13.52						
l			n.s.								

11:00

121

Sequence near Sdg

1919phae.proj...696A

Copied 45:34

Friday April 16, 1920

Sc R.

M Series 173

MF 3877 R U Hydrae 14 15 −28 alt. Corr. +.05

11:00

	Sc1	Sc2	Cu.	Mag.	g h Sc2	Sc 2	Cu.	Mag.	P.C. Sc. 2	Cu.	Mag.
A	B				t.p.	t.p.			11.8	−5.42	6.38
B	3.1 2.8		4.00	7.10	t.p.	t.p.			12.5	−5.40	7.10
a	4.8 4.5		2.81	7.61	12.9	11.90 11.9	−3.28	8.62	13.8	−5.40	8.40
a'	6.5 6.2		1.95	8.45	12.9	12.90 12.9	−3.61	9.29			
b	7.7 7.4		1.36	9.06	13.7	13.95 13.8	−3.83	9.92			
c	9.3 9.0	9.40	9.5	0.68 10.08	14.0	14.00 14.0	−3.88	10.12			
d	10.0 9.7	10.30	10.6	0.40 10.70							
e			10.9	0.20 11.10							
g			11.8	−.07 11.73							
f			11.9	−.10 11.80							
k			12.8	−.34 12.46							
h			13.2	−.40 12.80							
l			13.5	−.40 13.10							
m			13.9	−.38 13.52							
n			14.1	−.37 13.73							

Sequence near Edge

Prim. images of bright stars difficult to measure.

11:15

148

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Friday April 16, 1920 Copied 34.87

Sc, R, M 7 Series 173

M 7 3879 195 K 1430-60 alt Corr. -.09

11:15

	Sc 1		Sc 2	Cu.	Mag.	g h Sc 2	Sc 2 Cu.	Mag.	P.C. Sc. 2	Cu.	Mag.
	7.3										
1	7.0			1.54	8.84	sup. 11.4	-3.12	8.28	13.8	-5.40	8.40
	7.8										
2	7.5			1.30	9.10	12.7 12.75	12.8	-3.56	9.19	14.0	-5.41	8.59
	8.3										
3	8.0	8.30	8.3	1.10	9.40	t.p. 13.1	-3.66	9.44			
	9.0										
4	8.7	9.10	9.2	0.80	9.90	14.0 14.00	14.0	-3.88	10 12		
	9.7										
5	9.4	9.65	9.6	0.60	10.25						
	9.8										
6	9.5	9.80	9.8	0.55	10.35						
7				10.1	0.47	10.57					
8				10.0	0.50	10.50					
9				10.5	0.34	10.84					
10				10.7	0.27	10.97					
11				11.1	0.14	11.24					
12				11.8	-.07	11.73					
13				12.1	-.16	11.94					
14				12.9	-.36	12.54					
15				13.8	-.39	13.41					
16				14.0	-.38	13.62					

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11:35

Sequence near edge of plate

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1919phae.proj...696A

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Friday April 16, 1920

Sc. R

M.F Series 173

M.F 3879

34 Ks

Alt. Corr. -.09

11:35

	Sc.1		Sc.2	Cu.	Mag.	g Scz	h Scz	Cu.	Mag.	P.C. Sc.2	Cu.	Mag
	7.6											
1	7.3			1.40	9.00	12.1	11.90	11.7	-3.28	14.0	-5.40	8.60
	8.3											
2	8.0	8.35	8.4	1.10	9.45	12.9	13.15	13.4	-3.68			
	9.7											
3	9.4	9.70	9.7	0.58	10.28	14.0	14.00	14.0	-3.88			
	9.8											
4	9.5	9.80	9.8	0.55	10.35							
	10.1											
5	9.8	10.35	10.6	0.38	10.73							
6			10.9	0.20	11.10							
7			11.3	0.07	11.37							
8			11.5	0.02	11.52							
9			11.9	-.10	11.80							
10			12.7	-.33	12.37							
11			12.8	-.35	12.45							
12			12.9	-.36	12.54							
13			13.7	-.40	13.30							
14			13.9	-.38	13.52							
15			14.0	-.38	13.62							
16			N.S.									
17			"									
18			"									

207

11:50

Int in center of plate

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1919phae.proj..696A

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Friday April 16, 1920

Sc, R

M 7 Series 173

M # 3879

33 Ks

Alt. Corr. -.09

11:50

	Sc 1		Sc, 2	Cu.	Mag.	g Sc 2	h Sc 2	Cu.	Mag.	P.C. Sc. 2	Cu.	Mag.
	5.9											
1	5.6			2.23	8.13	10.7	10.65	0.6	-2.97 7.68	13.0	-5.40	7.60
	7.6											
2	7.3			1.40	9.00	12.0	12.10	2.2	-3.35 8.75	14.0	-5.40	8.60
	7.9											
3	7.6			1.26	9.16	12.9	12.85	2.8	-3.60 9.25			
	9.5											
4	9.2	9.55	9.6	0.63	10.18	13.8	13.85	3.9	-3.84 10.01			
	9.7											
5	9.4	9.90	9.7	0.59	10.29	13.9	star sup.					
6			10.6	0.30	10.90							
7			10.8	0.25	11.05							
8			10.9	0.20	11.10							
9			10.9	0.20	11.10							
10			11.1	0.15	11.25							
11			11.5	0.02	11.52							
12 +			12.0	-.12	11.88							
13			12.6	-.30	12.30							
14			13.0	-.38	12.62							
15			13.6	-.40	13.20							
16			13.9	-.38	13.52							
17			14.0	-.38	13.62							

12:05

In Center of plate

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Sc. R

MF Series 173

MF 3879 Nova Cincini 144059 Alt Corr. -09

12:05

	Sc.1		Sc.2	Cu.	Mag.	g Sc.2	h Sc.2	Cu.	Mag.	P.C. Sc.2
	9.0									
a	8.7 9.6	9.00	9.0	0.83	9.83	13.7	13.8	-3.82	9.93	
b	9.3 10.2	9.65	9.7	0.60	10.25	14.0	star sup	-3.88	10.12	
c	9.9	10.40	10.6	0.38	10.78					
d			11.4	0.05	11.45					
e			11.7	-.03	11.67					
f			12.1	-.06	11.94					
g			12.4	-.24	12.16					
h			12.9	-.36	12.54					
k			13.8	-.38	13.42					
l			13.9	-.38	13.52					
m			14.0	-.38	13.62					
n			n.s.							
o			"							
p			"							

12:20

249

Between 33 Ks + 34 Ks. Slightly above and to the right of the center.

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1919phae.proj..696A

Friday April 16, 1920

Dc. RJ

MF Series 173

MF 3880

C8

12:20

		Sc.1	Sc.2	Diff.	g h Sc.2	g h Sc2 Diff.	P.C. Sc.2	P.C. Diff.
	1	4.5 4.2		2.70	10.0	10.00 10.0 - 2.80	12.8	-5.60
	3	6.1 5.8		1.99	11.0	11.00 11.0 - 2.91	13.8	-5.71
near edge	4	5.1 4.8		2.62	10.6	10.70 10.8 - 2.98	13.2	-5.48
	8	7.3 7.0		1.67	12.8	12.85 12.9 - 3.88		
	9	8.0 7.7		1.22	13.2	13.25 13.0 - 4.03		
	11	8.4 8.1	8.45	8.5 1.06	13.9	13.85 13.8 - 4.34		
	12	8.8 8.5	8.75	8.7 1.00	14.0	14.00 14.0 - 4.25		
	14	9.2 8.9	9.25	9.3 0.72				
	15	9.8 9.5	9.90	10.0 0.46				
	16	10.0 9.7	10.00	10.0 0.52				
	18	10.2 9.9	10.30	10.4 0.38				
	21			11.0 0.42				
	22			11.8 0.02				
	25			12.8 -0.54				
	26			13.2 -0.47				
	27			13.8 -0.49				
	28			N.S.				
	29							

12:45

A little to the side of center.
Images elongated.

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Tuesday April 20, 1920

sheet no. 207

Sc M.

B Series 137

B 46564

D 8

9:05

		Sc 1		Sc 2	Diff.	g h Sc 2	Sc 2	P.C. Sc. 2	Diff
		4.1							
Sdge	1	3.9	4.15	4.2	3.07			8.7	-1.48
"	2	4.4 4.2	4.35	4.3	3.03			9.0	-1.62
	3	4.6 4.4	4.60	4.6	2.85			8.9	-1.45
Sdge	4	4.3 4.1	4.35	4.4	3.16			8.9	-1.34
	5	4.8 4.6	4.85	4.9	2.78			9.4	-1.77
	6	5.0 4.8	5.10	5.2	2.74			9.5	-1.66
	7	4.9 4.7	4.85	4.8	3.02			9.4	-1.53
	8	5.0? 4.8	4.95	4.9	2.93			9.6	-1.72
	9	5.2 5.0	5.25	5.3	2.89			9.8	-1.66
	10	5.7 5.5	5.65	5.6	2.83			10.0	-1.52
	11	6.1 5.9	6.10	6.1	2.84				
	12	6.4 6.2	6.40	6.4	2.69				
	13	6.8 6.6	6.70	6.6	2.61				
	14	7.1 6.9	7.25	7.4	2.74				
	15	7.3 7.1	7.35	7.4	2.70				
	16			7.5	2.63				
	17			7.7	2.79				
	18			7.9	2.96				
	19			8.2	2.70				
	20			8.4	2.80	27	9.1 2.92		
	21			8.6	2.63	28	9.8 2.88		
	22			8.8	2.67	29	9.9 2.92		
	23			8.7	3.00	30	10.0 3.17		
	24			8.9	2.93	31	10.0 3.24		
	25			9.2	3.01	32	10.4 3.30		
9:45	26			9.6	2.75	33	N.S.		

too hazy to see.

P.C. elongated not very comparable with scale.

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Tuesday April 20, 1920

Copied 34:112

Sc M

B Series 137

B 46565

34 Ks

Alt. Cor. -.11

9:45

	Sc 1		Sc 2	Cu.	Mag.	g Sc 2	h Sc 2
		5.7					
1	5.5	5.70	5.7	2.83	8.53	t, p.	
		6.9					
2	6.7	6.80	6.7	2.70	9.50	t, p.	
3			7.6	2.66	10.26		
4			7.7	2.66	10.36		
5			7.8	2.66	10.46		
6			8.2	2.68	10.88		
7			8.4	2.70	11.10		
8			8.6	2.75	11.35		
9			8.9	2.80	11.70		
10			9.0	2.81	11.81		
11			9.1	2.83	11.93		
12			9.7	3.00	12.70		
13			9.8	3.03	12.83		
14			10.0	3.15	13.15		
15			n.s				
16			"				
17			"				
18			"				

10:00

73

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Tuesday April 20, 1920

Sc. M

B Series 137

B 46565 Nova Circini 14 4059 Alt. Cor. −11

10:50

Mag.	Cu.		Sc 1	Sc 2	Cu.	Mag.	Diff	Sc 2	Sc 2	Cu.	mag.	Sc 2
	Reduced to M 73879											
9.74	2.79	a	6.7 ~~7.00~~ 6.95 ~~7.069~~	7.0	2.70	9.65	2.79	9.8 ~~9.85~~	9.9	−0.54	9.31	
10.21	2.61	b		7.6	2.66	10.26	2.56					
10.49	2.59	c		7.7	2.66	10.56	2.59					
11.20	2.70	d		8.5	2.74	11.24	2.86					
11.46	2.76	e		8.7	2.77	11.47	2.88					
11.57	2.79	f		8.8	2.78	11.58	3.05					
12.00	2.90	g		9.1	2.83	11.93	2.97					
12.62	3.12	h		9.5	2.92	12.42	2.95					
13.28	3.38	k		9.9	3.10	13.00	3.43					
13.45	3.45	l		10.0	3.15	13.15	3.43					
		m		t.f.								
		n										
		o										
		p										

Reduced to M 73879

g h

10:05

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1919phae.proj..696A

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Tuesday April 20, 1920

Sc. M

B Series 137

B 4656 6

Nova Normae 15 27 −49.8 Att. Cor. −.04

10:05

	Sc 1	Sc 2	Cu.	Mag.	g Sc 2	h Sc 2	Cu.	Mag.	P.C. Sc. 2	Cu.	Mag.
a	~~4.0~~ 3.9 3.7				7.2	t. p. −0.48 −0.52	6.72		8.8	−1.60	7.20
b	~~4.5~~ 4.3 4.2 4.1	~~4.8~~ 4.5	4.2	3.00	8.0	−0.52	7.48		9.2	−1.66	7.54
c	~~4.8~~ 4.7 4.5	~~4.90~~ 4.75	4.8	2.94	t. p.				9.4	−1.70	7.76
d	~~5.8~~ 5.8 5.6	~~5.90~~ 5.75	5.7	2.82	8.9	−0.54	8.36		9.8	−1.73	8.07
e	~~6.0~~ 5.8	~~6.00~~ 5.95	5.9	2.80					10.0	−1.76	8.24
e′	~~6.8~~ 6.7 6.5	~~6.60~~ 6.55	6.4	2.73							
f	~~7.2~~ 7.1 6.9	~~7.05~~	7.0	2.68							
h			7.7	2.66							
k			7.9	2.67							
b′			8.6	2.75							
l			8.8	2.78							
m			8.9	2.80							
n			9.5	2.92							
o			9.8	3.04							
q			10.0	3.15							
p			10.0	3.15							
r			n.s.								

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10:25 Images elongated

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Tuesday April 20, 1920

Sc. M

B Series 137

B 46566 R Normae Alt. Cor. -.04

10:26

	Sc 1	Sc 2	Cu.	Mag.	g Sc 2	h Sc 2	P.C. Sc 2	Cu.	Mag.
a	3.4 8.2			B			8.7	-1.58	7.12
b	5.3 5.1	5.35	5.4	2.87	8.17				
c	5.6 5.4	5.60	5.6	2.84	8.44				
d	5.9 5.7	5.85	5.8	2.80	8.65				
e	6.9 6.7	6.80	6.7	2.70	9.50				
f	7.2 7.0	7.35	7.5	2.67	10.02				
g			7.9 ~~8.0~~	2.67	10.57				
h			~~8.2~~ 8.6	2.68	10.88				
h'			8.6	2.75	11.35				
k			8.8	2.78	11.58				
l'			8.9	2.80	11.70				
m			9.3	2.87	12.17				
n			9.5	2.92	12.42				
o			9.7	3.00	12.70				
p			9.9	3.10	13.00				
q			10.0	3.15	13.15				
r			10.2	3.27	13.47				

137

10:40

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Tuesday April 20, 1920

Sc M.

B Series 137

B 46 567 — u Librae — 15 34 −20.9 — Alt. Corr. +.03

10:45

	Sc 1	Sc 2	Cu.	Mag.	g Sc 2	h Sc 2	h Cu.	h Mag.	P.C. Sc 2
	5.8								
a	5.6	5.70	5.6	2.83	8.63	9.1	t.p. −.54	8.56	
	6.1								
b	5.9	6.05	6.0	2.79	8.84	9.6	−.54	9.06	
	6.7								
b'	6.5	6.65	6.6	2.72	9.37	9.9	−.54	9.36	
	7.3								
c	7.1	7.35	7.4	2.67	10.02				
	7.3								
d	7.1	7.25	7.2	2.67	9.92				
	7.0								
d'	6.8	7.00	7.0	2.69	9.69	10.0	−.54	9.46	
d^2			7.9	2.67	10.57				
g			8.4	2.70	11.10				
f			8.7	2.76	11.46				
e			8.8	2.78	11.58				
l			8.9	2.80	11.70				
h			9.8	3.04	12.84				
k			10.0	3.15	13.15				
m			10.1	3.20	13.30				

10:55

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Tuesday April 20, 1920

Se. M.

B Series 137

B 4657 — χ Librae — Alt. Corr. +.03

10:55

	Sc 1		Sc 2	Cu.	Mag.	g Sc 2	h Sc 2	Cu.	Mag.	P.C. Sc 2	Cu.	Mag.
c°	4.9 4.7	4.85	4.8	2.92	7.77	8.5	8.50	8.5	-.53	7.97	9.8	-1.73	8.07
a°	5.6 5.4	5.60	5.6	2.84	8.44	8.8	8.80	8.8	-.54	8.26			
a°'	6.7 6.5	6.65	6.6	2.72	9.37	9.9	9.95	10.0	-.54	9.41			
b°			7.5	2.66	10.16								
d°	7.4 7.2	7.40	7.4	2.66	10.06								
d°'			7.8	2.67	10.47								
e°			7.9	2.67	10.57								
f°			8.4	2.70	11.10								
g°			8.6	2.75	11.35								
h°			8.8	2.78	11.58								
k°			9.2	2.85	12.05								
k°'			9.5	2.92	12.42								
l°			9.8	3.04	12.84								
m°			9.9	3.10	13.00								
n°			10.3	3.35	13.65								

11:05

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Tuesday April 20, 1920

Sc M.1 B Series 137

B 46 56 8 (Brokenpl.) 155 K 15 27 - 29.9 Alt. Cor. +.02

11:05

	Sc 1		Sc 2	Cu.	Mag.	g Sc 2	h Sc 2	Cu.	Mag.	P.C. Sc. 2
1	6.6	6.75 (6.8)	6.7	2.71	9.46	9.8	9.75 9.7	.54	9.21	
2			7.4	2.66	10.06					
3			7.6	2.66	10.26					
4			7.7	2.67	10.37					
5			8.1	2.68	10.78					
6			8.6	2.75	11.35					
7			8.7	2.77 (7)	11.47					
8			8.9	2.80 (8)	11.70					
9			8.9	2.80	11.70					
10			9.0	2.81	11.81					
11			9.4	2.90	12.30					
12			9.6	2.95	12.55					
13			9.9	3.10	13.00					
14			n.s.							
15										
16										

11:15

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Tuesday April 20, 1920

Se M

B Series 137

B 4656 9

C 8

11:15

	Sc 1		Sc 2	Diff.	g h Sc 2	g h Sc 2	g h Diff.	P.C. Sc 2
1	4.6 4.4	4.60	4.6	2.80	t.p.	7.7	-0.50	9.0 -1.80
3	5.2 5.0	5.25	5.3	2.84	8.65 8.7	8.6	-0.56	9.9 -1.81
4	4.8 4.6	4.80	4.8	2.92	t.p.			9.5 -1.78
8	5.9 6.1	5.85	5.8	3.12	9.0	t.p.	-0.03	
9	6.3 6.1	6.25	6.2	2.97	9.85 9.8	9.9	-0.63	
11	6.8 6.6	6.80	6.8	2.71	10.00 10.0	10.0	-0.49	
12	7.1 6.9	7.20	7.3	2.55				
14			7.5	2.47				
15			7.8 7	2.66				
16			7.7	2.82				
18			8.0	2.68				
21			8.7	2.72				
22			8.9	2.92				
23			9.0	~~3.26~~				
24			9.1					
25			9.4	2.86				241
26			9.8	2.93				
27			9.9	3.41				
28			n.s.					
29			"					

11:30

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Wednesday April 21, 1920

Sc B · Relative magnitudes for Nova Circini.

B 45424 34 Hs

10:40

	Sc 1		Sc 2	Diff.	g h Sc 2	g h Sc 2 Diff.	P.C. Sc. 2	P.C. Diff.
	8.4				12.05			
1	8.1	8.30	8.21	0.37	12.1	12.0 -3.38	14.0	-5.33
	9.2				13.05			
2	8.9	9.25	9.3	0.13	13.1	13.0 -3.67		
	10.1							
3	9.8	10.20	10.3	-.03				
4			10.6	-.16				
5			10.8	0.0				
6			11.4	-.27				
7			11.6	-.07				
8			11.7	-.11				
9			12.5	-.60				
10			12.8	-.52				
11			12.9	-.52				
12			13.2	-.61				
13			13.7	-.54				
14			13.8	-.42				
15			13.9	-.18				
16			14.1					~4
17			n.s.					
18								

10:55

Images elongated

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1919phae.proj..696A

Wednesday April 21, 1920

DcB

Relative Magnitudes for Nova Circini

B45424 — Nova Circini 144059

10;55

	Sc1	Sc2	Cu.	Mag.	g Sc.2	h Sc2	Cu.	P.C. Sc2
	9.9				13.75			
a	9.6	9.85	9.8	+.06	9.91	13.7	13.8	
	10.1							
b	9.8	10.30	10.5	-.03	10.27	14.0		
c			11.0	-.16	10.84			
d			11.7	-.30	11.40			
e			11.8	-.32	11.48			
f			12.1	-.37	11.73			
g			12.8	-.50	12.30			
h			13.1	-.54	12.56			
k			13.8	-.42	13.38			
l			13.9	-.38	13.52			
m			n.s.					
n								
o								
p								
q								
r								

11.05

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1919phae.proj..696A

Wednesday April 21, 1920

Relative magnitudes for Nova Cygni

B45424 1954

		Sc. 1	Sc 2	g Sc 2	h Sc 2	P.C. Sc 2.
11:05						
	1	7.7 (7.8 8.0)	8.00	8.0	11.8 (11.75) 11.7	
	2	8.3 (8.6)	8.45	8.3	12.8 (12.75) 12.7	
	3	8.8 (9.1)	9.15	9.2	13.0 (13.05) 13.1	
	4	9.6 (9.9)	9.95	10.0	14.0 (14.00) 14.0	
	5	9.8 (10.1)	10.35	10.6		
	6	9.8 (10.1)	10.35	10.6		
	7			10.7		
	8			10.8		
	9			11.0		
	10			11.7		69
	11			11.8		
	12			12.4		
	13			12.6		
	14			12.8		
	15			13.8		
	16			14.0		
11:15	17					
	18					

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Wednesday April 21, 1920

Sc M

Relative Magnitudes for Nova Cygni

B 46759 34 Hs

11:50

	Sc 1	Sc 2	Diff.	g Sc 2	h Sc 2	P.C. Sc 2
	5.9					
1	5.7	5.80	5.7 2.87	t, f.		
	6.8					
2	6.6	6.70	6.6 2.68			
3			7.6 2.57			
4			7.8 2.64			
5			8.0 2.80			
6			8.6 2.53			
7			~~8.5~~ 2.83			
8			8.7 2.89			
9			8.8 3.10			
10			9.0 3.28			
11			9.2 3.18			
12			9.7 2.89			
13			9.9 3.26			
14			9.9 3.48			
15			10.0 3.72			
16						
12:01 17						

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Wednesday April 21, 1920

Se M

Relative Magnitudes for Nova Aquilae

B4675-9

Nova Aquilae 144059

12:00

	Sc 1	Sc 2	Av.	Mag.	Mag.	g Sc 1	h Sc 2	Mean	P.C. Sc 2
					Copied p. 154				
a	6.9 7.1	7.15	7.2	2.68	9.83	9.91	9.9 9.9	9.87	04 04
b			7.6	2.65	10.25	10.27		10.26	01 01
c			8.3	2.72	11.02	10.84		10.93	09 09
d			8.6	2.82	11.42	11.40		11.41	01 01
e			8.7	2.86	11.56	11.48		11.52	04 04
f			8.7	2.86	11.56	11.73		11.64	08 09
g			8.9	2.84	11.74	12.30		12.02	28 28
h			9.8	3.24	12.84	12.56		12.70	14 14
								13.38	(07) a
k			10.0	3.45	13.45	13.38		~~13.42~~	~~03 04~~
								13.52	(07) a
l			10.0	3.45	13.45	13.52		~~13.48~~	~~03 04~~
m									
n									
o									
p									

12:05

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Wednesday April 21, 1920

Relative Magnitudes for Nova Cygni

1918

G.M.T.		Sc 1	Sc 2	g Sc 2 − h Sc 2	P.C. Sc 2	mag
12:05	1	~~5.5~~ 5.7 ~~5.8~~	5.70	5.7		11.82
	2	5.8 6.0	6.08	6.1		11.97
	3	6.7 6.9	6.80	6.7		12.65
	4			7.5		12.96
	5			7.6		12.53
	6			7.8		
	7			7.9		
	8			7.9		
	9			8.2		
	10			8.6		
	11			8.7		11.0
	12			8.9		11.2
	13			9.0		11.6
	14			9.4		
	15			9.7		
	16			10.0		
12:15						

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Wednesday April 28, 1920

De Ari 3 Relative magnitudes for faint c.s. of Nova Aurigae

A 11724 June 10, 1918 J.F. 21755

2:00

Mag. Cu.	Diff.		Sc 1	Mean	Sc 2	Diff.	Cu. Mag. + Corr.		Sc 2	Sc 2	Diff.
11.82	8.22	f	3.6				8.08	a	5.7	5.7	5.70	4.10
11.97	8.17	g	3.8				8.23	b	6.6	6.7	6.65	3.57
12.65	7.85	h	4.8				7.82	c	7.4	7.5	7.45	3.31
12.96	7.66	7.60	k	5.3	5.30	5.3	8.04	4.18	12.90	d	7.9	7.8	7.85	3.49
13.53	7.13	7.14	l	6.4	6.40	6.4	7.08	3.82	13.64	e	8.7	8.8	8.75	2.77
	6.76		m			7.2		3.53	14.15	f	9.0	9.3	9.15	2.53
	6.60		n			7.8		3.25	14.47	g	9.8	10.0	9.90	2.13
	6.16		o			8.6		2.86	14.88					
	5.79		p			9.4		2.41	15.23					
11.07	8.47		c	2.6			8.16					
11.22	8.42		d	2.8			8.54					
11.60	8.30		e	3.3			8.22					

2:15

Grating Constant 3.~~44~~ 47

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Wednesday April 28, 1920

Sc. P

Relative Magnitudes for Comet c. 1 of Nova Cygni

Corr. −0.3 to Sc. 1

A 11727 June 12, 1918 J.D. 21757

2:25

Cu.	Diff.		Sc 1 mag.	Sc 2	Diff.	Cu. Mag.		Sc 2	Sc 2	Diff.
~~6.20~~		f					b	7.7	7.7	7.70 2.52 ~~2.10~~
		g					c	8.6	8.7	8.65 2.11 ~~1.57~~
6.20		h	12.90	6.8 7	5.92		d	8.9	8.9	8.90 2.44
6.~~20~~ 18	6.~~46~~ 00	h	13.08	6.9	6.44		e	9.1	9.0	9.05 2.47
6.07	6.04	l	13.12	7.5	5.98	2.53 13.45	f	9.8	9.8	9.80 1.88
6.00	6.06	m	13.90	7.9		2.46 13.78				
5.83	5.80	n	14.43	8.6		2.32 14.34				
5.70	5.76	o	14.70	9.0		2.23 14.66				
5.50	~~4~~.49 5	p	15.20	9.7		2.03 15.15				

2:30

Grating Constant 3.42

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Thursday April 29, 1920

52

Ref. Plate B13483 144059 Nova Circini

C.S.	mag.				
a	9.8	B13483	<14.4 ✓	B 27426	<14.4 ✓
b	10.2	B 44610	<14.0 ✓	B34242	<14.0 ✓
c	10.8	B 25381	<13.5 ✓	B 34077	<14.4 ✓
d	11.3	B 25176	15.0 ✓	B 31348	15.0 ✓
e	11.6	B 24891	<14.0 ✓	B 30144	<14.4 ✓
f	11.8 ~~12.0~~	B 25725	<14.0 ✓	B 29513	<14.0 ✓
g	12.0	B 25717	<14.4 ✓	B 15296	<13.5 ✓
h	12.7	B 21240	<11.6 ✓	B14283	<14.0 ✓
k	13.2	B 26953	15.0 ✓	B 13168	<14.4 ✓
l	13.5	B 26951	<14.4 ✓	B 12946	<13.2 ✓
m	14.0	B 26950	<12.7 ✓	B12838	<11.6 ✓
n	14.4	B 31904	<14.4 ✓	B 6443	<12.7 ✓
o	14.8	B31716	<14.0 ✓	B6438	<13.2 ✓
p	15.2	B21979	<14.0 ✓	B9660	<14.4 ✓
		B21241	<12.7 ✓	B9372	<14.0 ✓
		B 27291	14.8 ✓	B29409	<11.8 ✓ out of focus
		B27181	14.8 ✓	B37657	14.0? ✓
assume that meant 26976 →		B 26976	14.9 ✓	B6442	<13.2 ✓
		B33435	<14.4 ✓	B 36733	<13.2 ✓
		B32183	<14.4 ✓	B36374	<13.5 ✓
		B23493	<14.4 ✓	B35747	<12.7 ✓
		B22951	14.8? ✓ trailed	B42557	<14.0 ✓
		B 27881	15.0 ✓	B40014	<14.0 ✓
		B22547	<14.0 ✓	B9365	<13.5 ✓
		B27812	14.7 ✓	B9330	<14.0 ✓
		B 27708	14.6 ✓	B9304	<13.2 ✓

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Thursday April 29, 1920

144059 Nova Cygni

B38961	<14.0 ✓	B11786	<13.2 ✓
B38858	<13.2 ✓	B11785	<13.5 ✓
B44938	t.p. ✓	B11202	<13.5 ✓
B44801	<14.0 ✓	B11201	<13.5 ✓
B6439	<12.0 ✓	B11089	<12.7 ✓
B42428	<13.2 ✓	B10933	<14.4 ✓
B42184	<13.5 ✓	M7 3879	<14.0 ✓
B41639	<13.2 ✓	M7 3867	15.0 ✓
B46565	<14.0 ✓	M7 3711	<14.0 ✓
B46618	<14.0 ✓	M7 3501	<13.5 ✓
B45424	<14.0 ✓	A11724	14.8 ✓
B5419	<13.5 ✓	A11727	14.8 ✓
B5404	<12.7 ✓	A7757	11.8
B3381	<12.7 ✓		
B3482	<13.5 ✓	Friday April 30, 1920	
B3524	<11.6 ✓		
B3516	<13.5 ✓	A8921	14.2 ✓
B3588	<11.6 ✓	A8484	14.6 ✓
B46759	<14.0 ✓	A8252	13.6 ✓
B19985	<13.5 ✓	A5915	14.9 ✓
B19830	<14.4 ✓	A2514	14.7 ✓
B19363	<13.5 ✓	A2395	<13.2 ✓
B16254	<13.5 ✓	A1801	<14.4 ✓
B16186	<13.5 ✓	A1800	<14.4 ✓
B12776	<13.2 ✓		

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Friday April 30, 1920

144059 Nova Circini

Sequence comes very near edge on most of these plates

B27917	<14.0 ✓	B15642	<13.5 ✓
B25738	14.9 ✓	B15641	<14.0 ✓
B25234	<13.5 ✓	B15387	<12.7 ✓
B23845	<14.0 ✓	B14285	<13.5 ✓
B23441	<13.2 ✓	B13966	<12.0 ✓
B23212	<12.0 ✓	B13525	<13.5 ✓
B22603	<13.5 ✓	B13179	<13.5 ✓
B22524	<13.2 ✓	B13175	<13.5 ✓
B21883	<13.5 ✓	B12910	<13.5 ✓
B21570	<14.0 ✓	B12871	t.p. ✓
B20276	t.p. ✓	B12796	t.p. ✓
B20119	t.p. ✓	B11842	<13.5 ✓
B19676	<12.7 ✓	B11411	<12.7 ✓
B19429	<13.2 ✓	B9971	<14.0 ✓
B19303	<13.2 ✓	B9971	<14.0 ✓
B19185	<12.0 ✓	B50738	<13.2 ✓
B19049	<13.5 ✓	B50653	t.p. ✓
B18834	<13.5 ✓	B50460	<12.7 ✓
B18680	<12.7 ✓	B50389	<13.2 ✓
B18347	<13.2 ✓	B50388	<11.6 ✓
B17287	<13.2 ✓	B50358	<14.0 ✓
B17113	<13.5 ✓	B50334	<13.5 ✓ sc.
B16871	<13.5 ✓	B50187	<11.6 ✓
B16350	<12.7 ✓	B50188	<13.2 ✓
B16926	<14.0 ✓	B50133	<13.5 ✓
B15818	<12.0 ✓	B50132	<12.7 ✓

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1919phae.proj..696A

Friday April 30, 1920

144059 Nova Cygni

B 50057	<14.4 ✓	B 44802	<13.5 ✓
B 49543	<14.0 ✓	B 44608	<14.4 ✓
B 49892	<14.4 ✓ sc. overexp.	B 42289	<14.0 ✓
B 48096	<12.7 ✓	B 41637	<13.5 ✓
B 47998	<12.0 ✓ e	B 40370	<13.5 ✓
B 47473	<12.7 e ✓	B 38852	<13.5 ✓
B 47247	<13.2 e ✓	B 37731	<13.2 e ✓
B 47177	<14.4 ✓	B 36763	<12.7 e ✓
B 47172	<13.2 ✓ e	B 36369	<13.2 e ✓
B 47094	too near e ✓	B 33613	<14.4 e ✓
B 47092	<12.0 e ✓	B 32214	<13.2 e ✓
B 47030	too near e ✓	B 31940	<14.0 ✓
B 46981	" " " ✓	B 31826	15.0 e ✓
B 46979	<12.7 e ✓	B 31402	<14.8 e ✓
B 46929	<12.0 e ✓	B 31393	<14.8 e ✓
B 46798	<14.4 ✓	B 30398	<12.7 e ✓
B 44665	14.8 e difficult ✓	B 30103	<13.2 e ✓
B 46617	<14.4 ✓	B 29694	<13.5 e ✓
B 46553	<14.0 ✓ sc.	B 29592	14.9 e ✓
B 46501	<12.7 ✓ e		
B 46451	<13.5 ✓		
B 46450	<14.0 ✓		
B 46448	<14.0 ✓		
B 46426	<13.5 ✓		
B 46237	1/2 ? pl. Sup. ✓		
B 44806	<13.5 ✓		

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1919phae.proj..696

Saturday May 1, 1920

144059 Nova Cygni

					Limiting mag. 12.7
Slide 2384	B 27301	< 12.7 E ✓	Am 4310	< 11.6 ✓	Am 3837 ✓
" 811	B 15271	14.8 E ft. ✓	" 4480	< 11.8 ✓	" 4951 ✓
" 727	B 15500	< 12.7 E ✓	" 4301	< 11.3 ✓	" 4877 ✓
" 3459	B 34274	< 12.0 E ✓	" 4188	10.6 ✓	" 4836 ✓
	B 26976	14.9 ft. ✓	" 4221	11.2 ✓	" 4806 ✓
			" 4101	10.8 ✓	" 3841 ✓
	A 3133	< 12.0 ✓	" 4086	11.2 ✓	" 5069
	A 2641	15.0 ✓	" 3773	< 12.0 ✓	" 4926 ✓
	A 2694	< 13.5 E ✓	" 3701	< 12.0 ✓	" 4849 ✓
			" 4384	11.4 ✓	" 14710 May 21, 19
	Am 4302	11.9 ✓	" 14386 (Sept. 9, 18)	< 12.0 ✓	" 14860 July 23, 19
	Am 4402	11.7 ✓	" 14164 (July 5, 18)	< 13.2 ✓	
	Am 4431	11.9 ✓			
	Am 4215	11.5 ✓	Friday May 7, 1920		
	Am 4147	10.5 ✓			
	Am 4096	~~< 11.3~~ 11.5? ✓	Am 4063	11.5	
	Am 4121	10.3 ✓			
	Am 4141	11.1 ✓			
	Am 4161	t.p. < 10.2 ✓			
	Am 4173	11.1 ✓			
	Am 4234	11.6 ✓			
	Am 4282	< 12.0 ✓			
	Am 4318	< 11.3 ✓			
	Am 4377	11.9 ✓	Ah 61:108 11.7	11.80 1 1	
	Am 4526	12.0? ✓			
	Am 4838	< 11.8			
	Am 4859	< 12.7			

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1919phae.proj..696A

Monday May 3, 1920

144059 Nova Circini

		Date Exp.
AM 10810	<11.6	July 15, 15 72
" 10838	<12.0 ✓	" 18, " 61
" 10600	<11.6 ✓	June 2, " 60
" 10556	<11.6 ✓	May 6, " 60
" 10549	<11.8 ✓	" 5, " 60
" 9549	<11.3 ✓	Oct. 4, 13 42
" 9469	<11.3 ✓	Sept. 23, " 60
" 9432	<12.7 ✓	" 8, " 58
" 8530	<12.7 ✓	Aug. 3, 12 60
" 8493	<12.7 ✓	July 20, " 57
" 8394	<12.7 ✓	July 5, " 69
" 8275	<12.6 ✓	June 3, " 60
" 8367	<12.0 ✓	" 18, " 65
" 8212	<11.3 ✓	May 20, " 56
" 11165	<11.8 ✓	Sept. 15, 15 30
" 11083	<12.7 ✓	" 6, " 30

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1919phae.proj..696A

Sheet no. 208

Monday May 3, 1920

Sc. R

M 7 Series 189

M 7 4060

C8

10:20

		Sc 1	Mean	Sc 2	Diff.	g Sc 2	h Sc. 2	Mean	Diff.	P.C. Sc. 2	Diff.
		3.4									
	1	3.1			3.80	9.9	9.9	9.90	-2.70	12.6	-4.80
		5.5								5	
	3	5.2			2.59	10.9	10.7	10.80	-2.71	13.1	-4.01
		3.7									
e	4	3.4			4.02	10.4	10.4	10.40	-2.68	12.7	-4.98
		6.6									
	8	6.3			2.37	12.3	12.0	12.15	-3.18	14.0	-5.03
		7.3									
	9	7.0			1.92	12.7	12.7	12.70	-3.48		
		8.1				9					
	11	7.8			1.41	12.8	12.8	12.85	-3.34		
		8.4				4					
	12	8.1	8.35	8.3	1.40	13.4	13.7	13.55	-3.80		
		9.0				5					
	14	8.7	8.95	8.9	1.02	13.4	13.6	13.55	-3.58		
		9.4									
	15	9.1	9.45	9.5	0.91	14.0	14.0	14.00	-3.64		
		9.8									
	16	9.5	9.75	9.7	0.77						
		9.9									
	18	9.6	9.90	9.9	0.78						
	20a										
	21			11.0	0.42						
	22			11.5	0.32						
	25			11.9	0.36						
	26			12.7	0.03						
	27			12.9	0.41						
	28			13.7	0.16						
	29			14.00	0.02						
10:50	30										
	31										
	33										

Y5

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1919phae.proj..696A

Copied 45:52

Monday May 3, 1920

Sc. R

M 7 Series 189

M 7 4062 Nova Normae 15 20 - 48 Wt. Corr. .00

11:15

See p. 172

	Sc 1	Sc 2	Cu.	Mag.	g h Sc 2	Sc 2 Mean	Cu.	Mag.	P.C. Sc 2.	Cu.	Mag.
	2.9										
a	2.6		4.33	7.23	T.p.	10.3	10.3-2.76	7.54	11.8	-4.37	7.43
	5.1										
b	4.8		3.10	8.20		10.7	10.7	10.70 -2.82	7.88	12.9	-5.02	7.88
	5.7										
c	5.4		2.82	8.52		11.8	11.5	11.40 -3.02	8.38	13.4	-5.10	8.30
	7.5										
d	7.2		1.85	9.35	t.p.	12.0	12.0	-3.25	8.75	13.8	-5.16	8.64
	7.9										
e	7.6		1.65	9.55		12.1	12.2	12.15 -3.30	8.85	14.0	-5.20	8.80
	8.3										
e'	8.0	8.25	8.2	1.48 9.73	t.p.	12.8	12.8	-3.50	9.30			
	9.2										
f	8.9	9.20	9.2	1.00 10.20	t.p.	13.0	13.0	-3.55	9.45			
	9.9										
h	9.6	9.85	9.8	0.74 10.59		13.9	13.9	13.90 -3.73	10.17			
	10.1										
k	9.8		10.6	0.46 11.05								
k'			10.9	0.34 11.24								
l			11.4	0.23 11.63								
m			12.0	0.15 12.15								
n			12.8	0.09 12.89								
o			13.0	0.08 13.08								
q			13.8	0.08 13.88								
p			13.4	0.08 13.48								
11:35 r			14.0	0.08 14.08								

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1919phae.proj...696A

Monday May 3, 1920

Copied 45:57

Se. R

M 7 Series 189

Mf4062 R Monmac alt. Cors. .00

11:35

	Se 1	Se 2	Cu.	Mag.	g h Sez Se2 Mean	Cu.	mag.	P.C. Sez.	Cu.	mag.
	3.2									
a	2.9		4.18	7.38	10.0 10.2 10.10	-2.75	7.35	11.8	-4.37	7.43
b	5.9 5.6		2.72	8.62	11.9 12.0 11.95	-3.23	8.72	13.9	-5.18	8.72
c	7.3 7.0		1.95	9.25	t.p. 12.2	12.2	-3.31	8.89		
d	8.3 8.0		1.45	9.75	~~t.p.~~ 12.6	12.6	-3.44	9.16		
e	8.9 8.6	8.85	1.18	10.03	12.9 12.8 12.85		-3.51	9.34		
f	9.5 9.2	9.55	0.86	10.41						
g	~~9.8~~		0.45	11.05						
h			0.48	10.98						
h'			0.40	11.10						
k			0.19	11.89						
k'			0.13	12.23						
m			0.10	12.50						
n			0.10	12.80						
o			0.08	12.98						
f			0.08	13.38						
g			0.08	13.78						
r			0.08	14.08						

12:00

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1919phae.proj..696A

Monday May 3, 1920

Copied 45;61

Sc. R.

MF Series 189

MF 4063 R Lupi Alt. Cors. +.05

12:00

	Sc 1		Sc 2	Cu.	Mag.	g Sc 2	h Sc 2	Cu.	Mag.	P.C. Sc 2	Cu.	Mag.
	2.0											
a	1.7			4.75	6.75	9.8	9.7	9.75 - 2.70	7.05	11.6	-4.84	6.76
b	5.1 4.8			3.10	8.20	12.4	12.4	12.40 - 3.38	9.02	13.8	-5.16	8.64
c	8.3 8.0	8.15	8.0	1.51	9.66	13.9	13.9	13.90 - 3.73	10.17			
d	7.5 7.2			1.85	9.35	star sys.	12.9	12.9 - 3.52	9.38			
e	8.5 8.2 9.3	8.35	8.2	1.42	9.77							
f	9.0	9.25	9.2	0.99	10.24							
f'	10.2 9.9	10.35	10.5	0.53	10.88							
f²			11.9	0.16	12.06							
g			12.8	0.09	12.89							
h			12.2	0.13	12.33							
h'			12.7	0.10	12.80							
k			13.7	0.08	13.78							
l			14.0	0.08	14.08							
m			13.9	0.08	13.98							
n	n.s.											

12:17

Images quite poor - do not compare well with those of E region

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1919phae.proj...696A

Monday May 3, 1920

Sc R. MT Series 189

MT 4065 Cg

12:20

	Sc 1	Sc 2	Diff.	g h Sc 2	g h Sc 2	g h Diff.	P.C. Sc 2	P.C. Diff.
	2.3							
2	2.0		4.74	9.6	9.80 10.0	−2.76	11.9	−4.86
	3.1				10.55			
3a	2.8		4.25	10.5	10.6	−3.20	12.6	−5.25
	4.0				10.70	2.88		
4	3.7		3.82	10.7	10.7	−~~3.12~~	12.8	−4.98
mistake of unit in measuring 5	4.8		3					
	5.5		4.26	10.9	11.00 11.1	−2.94	13.1	−5.04
	5.2							
6	4.9		3.27	11.7	11.75 11.8	−3.28	13.4	−4.93
	6.0							
6a	5.7		2.64	12.8	12.00 12.0	−3.36	14.0	−5.36
	6.0	6.3						
7	~~5.8~~		2.74	12.9	12.85 12.8	−3.81		
	7.7							
8	8.4		1.83	13.3	13.25 13.2	−3.72		
	8.0							
8a	7.7		1.68	13.4	13.30 13.2	−3.62		
	8.9							
9	8.6	8.80	8.7 1.29	13.8	13.85 13.9	−3.76		
	9.8							
12	9.5	9.80	9.8 0.77					
	10.2							
14	9.9	10.45	10.5 0.44					
15			11.0 0.13					
16			11.6 0.00					
17			11.8 0.03					
18			12.30.11					
20			12.8 −.04					
21			13.0 +.06					
22			13.5 −.10					
23			13.7 +.04					
24			13.9 +.03					
25			14.0 +.13					
			diff 13.9					
12:45	27							

192

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1919phae.proj..696A

Measured in order but sequence not selected when book was made out DeR

Should be between C8 (p. 167) + Nova Normae (p. 168)

Monday May 3, 1920

M 7 Series 189

M 7 #061 Nov 1910 15 15 − 36.0 Diff. Con. +.05

10:55

	Sc 1	Sc 2	Cu.	Mag.	g Sc 2	h Sc 2	Msan Cu.	Mag.	P.C. Sc 2.	Cu.	Mag.
	3.7										
1	3.4		3.93	7.63	10.4	10.4	10.40-2.77	7.63	12.0	-4.90	7.10
	5.7										
2	5.4		2.82	8.52	11.7	11.8	11.75-3.13	8.62	13.7	-5.18	8.52
	7.5										
3	7.2		1.85	9.35	12.8	12.8	12.80-3.50	9.30			
	8.3										
4	8.0	8.20	8.1 1.50	9.70	12.9	12.8	12.85-3.52	9.33			
	10.0										
5	9.7	10.25	10.5 0.58	10.83	14.0	13.9	13.95-3.52	10.43			
	10.0										
6	9.7	10.20	10.4 0.59	10.79	13.9	13.9	13.90-3.73	10.17			
7			10.8 0.38	11.18							
8			11.5 0.20	11.70							
9			12.0 0.15	12.15							
10			12.7 0.10	12.80							
11			12.9 0.08	12.98							
12			13.4 0.08	13.48							
13			13.7 0.08	13.78							
14			13.9 0.08	13.98							
N			14.0 0.08	14.08							

11:15

This should be on page between C_8 + Nova Normae - but pages were made out ready for recording before a sequence was selected. The plate was measured in the proper order.

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1919phae.proj..696

Tuesday May 4, 1920

Sc. Ah3 Measures for faint Comparison Stars of Nova Normae

A 11731

Constant for diffraction 3.42

	Sc 1	Sc 2	Cu.	mag + corr.		g Sc 1	h Sc 2	Mean	Diff.
a						B	B		
b						4.6	4.7	4.65	3.05
c						4.9	4.8	4.85	3.24
d						5.7	5.6	5.65	2.98
e						5.7	5.7	5.70	3.28
e'						5.9	5.9	5.90	3.46
f						·	6.4	6.4	3.34
g						·	~~6.4~~	·	·
h						6.5	6.7	6.60	3.74
k						6.9	7.2	7.05	3.75
k'						Sc 2 7.8	Sc 2' 7.8	7.80	3.42
l						8.2	8.1	8.15	3.39
m	4.8					8.7	8.8	8.75	3.18
n	5.3	5.35	5.4	3.10	11.87	9.7	9.6	9.65	2.96
o	5.9	5.85	5.8	3.38	12.63	·	10.0	10.0	2.82
p	6.7	6.70	6.7	3.67	13.79				
q	6.8	6.80	6.8	3.68	13.90				
r			7.6	3.55	14.57				
s			7.8	3.49	14.71				
t			7.9	3.46	15.78				
u			8.4	3.32	15.14				
x			8.8	3.20	15.42				
y			9.8	2.90	16.12				

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1919phae.proj...696A

Tuesday May 4, 1920

Sc. AH3 Measures for faint c.s. of Nova Normae

A 11729

Corr. 3.42

	Sc1	Sc2	Cu.	mag. + Cor.	g Sc1	h Sc1	Mean	Diff.
a					b	B		
b					3.6	3.6	3.60	4.10
c					3.6	3.7	3.65	4.44
d					4.7	4.8	4.75	3.88
e					4.7	4.7	4.65	4.33
e'					4.9	5.2	5.05	4.31
f					5.9	5.9	5.90	3.84
h					6.4	6.6	6.50	3.84
X					Sc.2	Sc.2		
k					7.6	7.6	7.60	3.20
k'					8.0	8.0	8.00	3.22
l					8.5	8.7	8.60	2.94
m	4.1			4.30	11.82	9.9	9.8	9.85	2.08
n	4.8			4.18	12.40				
o	5.3	5.35	5.4	4.05	12.82				
p	6.7	6.65	6.6	3.66	13.73				
q	6.7	6.70	6.7	3.64	13.76				
r			7.7	3.26	14.38				
s			8.0	3.16	14.58				
t			8.7	2.90	15.02				
u			8.9	2.82	15.14				
x			9.5	2.58	15.50				
y			11.5						

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1919phae.proj...696A

Wednesday May 5, 1920

Ref. Plate B46639

A 1839

152250 Nova Normae

6:10

c.s.	mag.						
		B13350	14.7 ✓			B10769	10.1 ✓
a	7.2	B10572	9.5 ✓			B12777	13.8 ✓
b	7.7	B15406	<15.1 ✓			B13705	<13.9 ✓
c	8.1	~~X~~ 5784	11.7 ✓	11.7	11.70	B10777	10.5 ✓
d	8.6	X 5802	11.8 ✓	11.8	11.80	B13827	n.s. sp.
e	9.0	X 5792	11.7 ✓	11.7	11.70	B10781	10.3 ✓
e'	9.4	B10788	10.5 ✓			B12913	14.5 ✓
f	9.7	B10789	10.3? ✓ ~~11.8~~ sp. pl.			B12840	<13.9 ✓
h	10.3	B11781	11.8 ✓	11.8	11.80	B12767	<12.0 ✓
k	10.8	B11413	11.4 ✓			B13788	14.7 ✓
k'	11.2	B10819	t. f. diffuse sp.			B12823	<11.8 ✓
l	11.5	B10838	10.7 ✓			B12109	12.2 ✓
m	11.8	B10853	10.7 ✓			B13050	<11.8 ✓ sp.
n	12.6	B9665	6.9e (>a diffuse) ✓			B13049	<14.6 ✓ film def. may be c.s.
o	13.0	B10865	10.7 sp.			B12036	n.s. <10.3 sp.
p	13.6	B10872	10.6 ✓			B13177	✓ def. in p.a. of nova
q	13.9	B10893	10.7 ✓			B11278	11.1 ✓
r	14.4	B13526	<14.4 ✓			B11327	11.7? ✓ sp.
s	14.6	B13336	14.6 ✓			B11409	11.2? ✓ e can't see all c.s.
t	14.9	B13970	14.7 ✓			B11412	11.2 ✓
u	15.1	B10935	10.9 ✓			B9767	7.2 ✓ sp.
x	15.5	B10955	10.5 ✓			B13486	<14.5 ✓
y	16.1	B9666	7.2e ✓			A11729	<15.5
		~~B10092~~	7.7 ✓ sp.			A11731	<16.1
		B11020	10.9 ✓			A11693	<15.5
		B11048	~~11.4~~ 11.9 ✓ ~~sp.~~ sp. difficult			A11726	<15.5
						A11696	<15.1

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1919phae.proj...696A

Saturday May 8, 1920

152250 Nova Normae

A 1839	15.9 ✓	
A 8969	<15.5	
A 1965	<15.5 ✓	
A 1858	<16.4	
A 1831	15.9 ✓	
A 3079	15.9 ✓	
A 2568	<15.5 ✓	
A 2518	15.7 ✓	
A 2511	15.5? ✓	
A 8744	<15.1 ✓	May 19, 1908
A 8439	<15.8 ✓	Aug. 17, 1907
A 8262	<16.3 ✓	May 6, 1907
A 9148	<14.4 ✓	April 7, 1909
A 9319	<15.3 ✓	May 30, 1909
A 9335	<14.6 ✓	June 8, "
A 10144	<15.6 ✓	June 27, 1910
A 6423	16.3 ✓	
A 7376	<16.1 ✓	

Limiting mag 11.0

B 47127	June 7, 16 ✓	
B 47527	June 21, " ✓	
B 47592	June 23, " ✓	
B 46981	May 29, " ✓	
B 46986	May " " ✓	
B 40016	Apr. 1, 09 ✓	
B 40350	May 29, 09 ✓	
B 57920	June 2, 18 ✓	

B 47030	June 2, 16 ✓
B 47032	" " " ✓
B 47094	" 6, " ✓

Limiting mag. 14.5

B 48100	July 27, 16 ✓
B 40015	April 7, 09 ✓
B 43438	Aug. 23, 12 ✓

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1919phae.proj..696

Monday May 10, 1920

152250 Nova Normae

		Limiting mag. 15.5
B 14024	14.4? ✓	B 39176 June 17, 1908 ✓
B 14030	14.7? ✓	B 44844 July 23, 1914 ✓
B 14349	15.5 ✓ defective bk. 6:109 very difficult to decide.	
B 44823	<16.3 14, 7, 21 ✓	
B 44839	<16.1 14, 7, 22 ✓	

Limiting mag. 14.5 Nova		Limiting mag. 13.0		Limiting mag. 12.0	
B 42580	Aug. 5, 1911 ✓	B 45305	July 18, 15 ✓	B 45306	July 18, 1915 ✓
B 39431	Aug. 6, 1908 ✓	B 41620	July 14, 10 ✓	B 38784	April 26, 1908 ✓
B 38687	April 10, 1908 ✓	B 38781	Apr. 26, 08 ✓	B 39129	June 9, 1908 ✓
B 41337	May 27, 1910 ✓	B 38635	Apr. 9, 08 ✓	B 46556	May 1, 1916 ✓
B 42292	May 9, 1911 ✓	B 39121	June 7, 08 ✓	B 47477	June 19, 16 ✓
B 44097	Aug. 18, 1913 ✓	B 44081	Aug. 13, 1913 ✓	B 49621	Mar. 23, 1917 ✓
B 46586	May 3, 1916 ✓	B 46803	May 23, 16 ✓	B 50685	May 24, " ✓
B 46581	May 7, " ✓	B 41320	May 26, 10 ✓	B 50013	Apr. 15, " ✓
B 44527	June 4, 1914 ✓	B 16261	June 11, 96 ✓	B 50060	Apr. 16, " ✓
B 44784	July 18, 1914 ✓	B 15550 ✓	April 7, 96 ✓	B 50115	Apr. 17, " ✓
B 44703	July 1, 1914 ✓	B 42217	April 17, 11 ✓	B 43439 ~~B 527~~ ✓	Aug. 23, 12 ✓
B 40234	May 9, 1909 ✓	B 46621	May 10, 16 ✓		
B 14287	Aug. 3, 1895 ✓	B 41622	July 14, 10 ✓	Limiting mag. 13.0	
B 15558	April 8, 1896 ✓	B 49991	April 14, 17 ✓	B 40477	June 26, 09 ✓
MF 3667	May 23, 1919 ✓	B 49728	Mar. 30, 17 ✓	B 44914	Aug. 3, 14 ✓
MF 4070	July 2, 1919 ✓	B 49694	Mar. 28, 17 ✓	B 52743	May 2, 18 ✓
MF 4062	July 1, 1919 ✓	B 49947	Apr. 13, 17 ✓	B 52885	May 18, 18 ✓
B 46689	May 11, 1916 ✓	B 52745	May 2, 18 ✓	B 52897	May 30, 18 ✓
B 47305	June 11, " ✓	B 40645	July 26, 09 ✓	B 50362	May 11, 17 ✓
B 49894	April 12, 1917 ✓	B 38027	Aug. 24, 07 ✓		
B 37967	Aug. 15, 1907 ✓	B 48091	July 25, 16 ✓		

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1919phae.proj...696A

Tuesday May 25, 1920

152250 Nova Normae

	A 11731	<16.3 ✓	AM 5010	<13.6	July 17, 07 ✓
	A 11729	<16.1 ✓	" 4302	<12.6	June 13, 06 ✓
	A 11726	<15.5 ✓	" 4215	<12.6	May 10, " ✓
	A 11693	<15.7 ✓	" 4147	<12.6	Mar. 27, " ✓
	A 11696	<15.1 ✓	" 5623	<12.6	July 3, 1908 ✓
Date	Plate <12.0		" 14386	<11.2	Sept. 8, 1918 ✓
Feb. 20, 1908	AM 5310	✓	" 14164	<12.2	July 15, " ✓
Mar. 25, "	" 5331	✓	" 14126	<12.6	July 1, " ✓
June 21, 1907	" 4935	✓	" 13436	<12.0	July 21, 1917 ✓
July 13, 1906	" 4402	✓	" 13388	<11.5	July 11, "
Jan. 27, "	" 4063	✓	" 13288	<10.8	June 16, " ✓
Sept. 13, 1914	" 10118	✓	" 12460	<10.8	Sept. 20, 1916 ✓
May 25, "	" 9785	<11.3 ✓	" 12290	<10.8	Aug. 2, " ✓
Oct. 4, 1913	" 9549	<11.2 ✓	" 11611	<11.5	Apr. 5, " ✓
Sept. 8, "	" 9432	✓	" 11561	<11.5	Mar. 12, " ✓
July 5, 1912	" 8394	✓	" 11170	<11.8	Sept. 16, 1915 ✓
June 3, "	" 8275	✓	" 11083	<11.8	" 6, "
May 17, "	" 8187	<11.2	" 10972	<10.8	Aug. 10, " ✓
Aug. 4, 1911	" 7650		" 10677	<10.8	June 13, " ✓
" 5, "	" 7658		" 10454	<12.6	Apr. 20, " ✓
July 21, "	" 7589	<11.5	" 10489	<11.8	Apr. 24, "
" 8, "	" 7534	✓	" 9114	<11.5	June 26, 1913
June 8, "	" 7439	✓	" 9150	<11.8	July 2, " ✓
Mar. 19, 1910	" 6855	✓	" 8997	<12.0	June 3, " ✓
Apr. 17, "	" 6887	✓	" 8867	<11.5	May 5, " ✓
Aug. 14, 1909	" 6461	✓	" 8843	<11.5	April 30, " ✓
Mar. 19, "	" 5976	<11.8 ✓	" 8575	<12.0	Aug. 29, 1912
Aug. 6, 1908	" 5739				

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1919phae.proj..696A

Wednesday May 26, 1920

152250 Nova Normae

June 15, 11	RM 7448	<11.5
" 24, "	" 7472	<11.2
Mar. 27, "	" 7377	<11.5 ✓
Aug. 1, 10	" 7169	<11.8 ✓
Apr. 13, 06	" 4161	<10.8
" 24, "	" 4173	<13.0 ✓
Feb. 2, "	" 4096	<12.0
" 17, "	" 4121	<13.6 ✓
Aug. 24, "	" 4526	<13.0 ✓
Apr. 30, 18	" 13927	<12.6 ✓
Oct. 22, 16	" 12652	<10.8 ✓
Feb. 28, "	" 11515	<11.2 ✓
May 5, 15	" 10549	<13.0 ✓
May 6, "	" 10556	<13.0
Apr. 15, 14	" 9712	<12.0 ✓
Aug. 1, 19	" 14880	<13.0 ✓
Oct. 4, 18	" 14487	<11.2 ✓

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1919phae.proj...696A

Wednesday May 12, 1920

63352 Nova Aquilae

A 11695 Estimates of diffs. of fk. stars by Argelander's method.

		g				
11.57	g 1 γ 2 R	11.90	11.61	11.70	11.66	05 04
11.16	γ 1 β 2 g	11.51	11.26	11.31	11.28	02 03
10.64	0 2 a 1 p	11.16	10.84	11.06	10.95	11 11
10.64	0 = g				10.64	a .
9.88	m 4 y 3 0	10.64	10.28	10.34	10.31	03 03
9.88	m 1 x 2 n	10.11	9.98	9.91	9.94	04 03
9.44	l 2 w 2 m	9.88	9.64	9.68	9.66	02 02
9.44	l = u				9.44	a .
8.58	h 3 t 1 l	9.44	8.88	9.34	9.11	23 23
8.58	h 2 s 2 l	9.44	8.78	9.24	9.01	23 23
8.14	g 2 R 2 h	8.58	8.34	8.38	8.36	02 02

	g p.180	h p.181	Mean	Res.		Grating constant 3.42 Mag.
R	8.36	8.36	8.36	00	00	11.78
p	9.01	8.62	8.82	19	20	12.24
t	9.11	9.01	9.06	05	05	12.48
u	9.44	9.16	9.30	14	14	12.72
w	9.66	9.66	9.66	00	00	13.08
x	9.94	9.76	9.85	09	09	13.27
y	10.31	10.11	10.21	10	10	13.63
g	10.64	10.48	10.56	08	08	13.98
α	10.95	10.95	10.95	00	00	14.37
β	11.28	11.34	11.31	03	03	14.73
γ	11.66	11.51	11.58	08	07	15.00

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1919phae.proj..696A

Thursday May 13, 1920

16 3352 Nova Aql

A11695 Estimate of diff. im. & ft. stars by Argelander's method

	h γ = q	11.51			11.51 · a
11.16	p 2 β 2 q	11.51	11.36	11.31	11.34 02 03
10.64	o 2 α 1 p	11.16	10.84	11.06	10.95 11 11
10.11	n 3 z 1 o	10.64	10.41	10.54	10.48 07 06
~~10.~~	y = n	10.11			10.11 · a
9.44	l 3 x 1 m	9.88	9.74	9.78	9.76 02 02
9.44	l 2 w 2 m	9.88	9.64	9.68	9.66 02 02
8.58	h 4 u 1 l	9.44	8.98	9.34	9.16 18 18
8.58	h 2 t 2 l	9.44	8.78	9.24	9.01 23 23
8.68	h 1 s 2 k	8.76	8.68	8.56	8.62 06 06
8.14	g 1 r 1 h	8.58	8.24	8.48	8.36 12 12

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Thursday May 13, 1920

Sc. P

A 7378

Cor. −.3

163352 Nova Aql

		Sc. 1		Sc. 2	Diff.	Cu.	Mag.
		2.7					
	p	3.0			8.46	8.44	11.14
		3.3					
	q	3.6			8.21	8.46	11.76
		3.5					
	r	3.8			8.40	8.47	11.97
		3.7					
	s	4.0			8.55	8.47	12.17
		4.0	3				
	t	4.3	4.05	4.1	8.36	8.48	12.53
		4.2					
	u	4.5	4.20	4.2	8.48	8.48	12.68
		4.5					
	w	4.8	4.55	4.6	8.51	8.49	13.04
		4.5					
	x	4.8	4.50	4.5	8.78	8.49	12.99
		5.1					
	y	5.4	5.10	5.1	8.46	8.50	13.60
		5.5					
	z	5.8	5.50	5.5	8.48	8.50	14.00
		5.7					
	α	6.0	5.75	5.8	8.42	8.49	14.24
		6.4					
	β	6.7	6.40	6.4	8.33	8.44	14.84
		6.6					
	γ	6.9	6.70	6.8	8.30	8.41	15.11
	δ			7.2		8.37	15.57[2]
	ε			7.7		8.31	16.01[2]
	ζ			8.0		8.28	16.28[2]
	η			8.6		8.20	16.80[2]
	θ			8.9		8.19	17.09[2]
	κ			9.4		8.10	17.50[2]

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1919phae.proj..696A

Monday May 17, 1920

133431 Z Centauri

A 11725 Estimates of diff. im. of faint stars by Argelander's method

g

11.99	l 1 x 1 m	12.48	12.09	12.38	12.24	15	14	
11.59	k 3 x 1 l	11.99	11.89	11.89	11.89	00	00	
11.59	k + w 2 l	11.99	11.69	11.79	11.74	05	05	
11.40	h 1 t 1 k	11.59	11.50	11.49	11.50	00	01	
10.72	g 3 s 2 h	11.40	~~+0.42~~ 11.02	11.20	11.11	09	09	
10.72	g = r				10.72	≡	.	
10.26	f 2 g 1 g	10.72	10.46	10.62	10.54	08	08	
9.97	e 1 f 1 f	10.26	10.07	10.16	10.~~07~~ 11	~~04~~	05	

h

										g+h Mean g h	+3.42 5
11.99	l = x				x	11.99	≡	a		12.12 12 13	14.54
11.59	k 3 w 2 l	11.99	11.89	11.79	w	11.84	05	05		11.86 03 02	15.28
11.59	k 1 u 3 l	11.99	11.69	11.69	u	11.69	00	00		11.72 02 03	15.14
11.40	h 1 t 1 k	11.59	11.50	11.49	t	11.50	00	01		11.50 00 00	14.92
10.72	g 3 s 2 h	11.40	11.02	11.20	s	11.11	09	09		11.11 00 00	14.53
10.72	g 1 r 3 h	11.40	10.82	11.10	r	10.96	14	14		10.84 12 12	14.26
10.26	f 2 g 2 g	10.72	10.46	10.52	g	10.49	03	03		10.52 02 03	13.94
9.97	e 1 f 1 f	10.26	10.07	10.16	f	10.11	04	05		10.11 00 00	13.53

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1919phae.proj..696A

Monday May 17, 1920

13 34 31 Z Centauri.

A-1873 Estimate of intervals between C.S. to get mag. for faintest stars.

		Diff.	Ce.	mag.
m 2 n	m 0.0	12.48	12.55	12.55
n 5 o	n 0.2	12.62	12.51	12.71
o 1 p	o 0.7	12.41	12.40	13.10
p 3 q	p 0.8	12.32	12.40	13.20
q 3 r	q 1.1	12.35	12.40	13.50
r 2 s	r 1.4	12.34	12.42	13.82
s 2 t	s 1.6	12.46	12.44	14.04
t 2 u	t 1.8	12.65	12.45	14.25
u 3 w	u 2.0	12.67	12.47	14.47
w 2 x	w 2.3	12.51	12.51	14.81
x 4 y	x 2.5	12.67	12.54	15.04
y 2 z	y 2.9		12.62	15.52
z 2 a	z 3.1		12.65	15.75
	a 3.3		12.69	15.99

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Monday May 17, 1920

133431 Z Centauri

A 1841 Estimates of intervals between c.s. by Argelander's Method to obtain mag. for faintest stars.

		Diff.	Cu.	mag.
m 3 n	m 0.0		12.48 12.50	12.50
n 4 o	n 0.3	12.52	12.47	12.77
o = p	o 0.7	12.41	12.44	13.14
o 3 q	q 0.7	12.42	12.44	13.14
q 3 r	q 1.0	12.45	12.45	13.45
r 3 s	r 1.3	12.44	12.48	13.78
s 2 t	s 1.6	12.46	12.50	14.10
t 2 u	t 1.8	12.65	12.52	14.32
u 3 w	u 2.0	12.67	12.54	14.54
w 1 x	w 2.3	12.51	12.56	14.86
x 3 y	x 2.4	12.67	12.57	14.97
y z z	y 2.7		12.58	15.28
z 3 2	z 2.9		12.60	15.50
	2 3.2		12.60	15.80

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Tuesday May 18, 1920

Ref. Plate B52686

133431 ζ Centauri

Estimates.

C.S.	mag.		Bk6;108		
a	7.7	B 13965	7.9 ✓.	B 15810	<12.0 —
b	8.3	B 17541	<12.0 ✓	B 20037	<13.1 ✓
c	9.0	I 18095	<11.6	B 20044	<13.5 ✓.
d	9.6	I 14076	11.5 ✓	B 19675	<13.5 ✓
e	10.0	I 14170	12.9? ✓.	B 19628	<14.4 ✓
f	10.3	I 14171	<12.5 ✓	B 19186	<13.5 —
g	10.7	I 14255	<12.8 ✓<12.2	B 19067	<14.4 ✓
h	11.3	I 14256	12.5 ✓.	B 15914	<12.5 —
k	11.6	B 14072	8.0 ✓.	B 15884	14.1 ✓.
l	12.0	B 14018	8.2 ✓.	B 15853	<13.5 —
m	12.5	B 14296	12.2? ✓.	C 8586	12.6? ✓.
n	12.8	I 14626	13.4? ✓.	C 8602	12.8 ✓.
o	13.1	I 14627	13.5? ✓.	C.8684	12.7? ✓.
p	13.2	I 14659	<13.2 ✓.		
q	13.5	I 14660	13.0? ✓		
r	13.8	B 15270	12.2 ✓.		
s	14.1	B 15295	12.7 ✓.		
t	14.4	B 15356	13.3 ✓.		
u	14.6	B 15447	<13.5		
w	14.8	B 15508	13.7 ✓.		
x	15.0	B 15573	13.8 ✓.		
y	15.4	B 16602	<13.5		
Nebula so much on Neb. can't distinguish		B 16824	x(15.0) ✓ faint star.		
z	15.6	B 13385	<13.1		
x	15.9	B 15404	13.5 ✓.		
		B 15728	<11.6		

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Wednesday May 19, 1920

133431 ζ Centauri

	6:108	n < 13.5	m < 14.1
X 7408	< 13.5	B 34271 ✓	B 33824 ✓
X 7370	13.9 ✓ ·	B 35843 ✓	B 36426 ✓ ·
I 14595	13.5 ✓ ·	B 28030 ✓	B 29511 ✓
I 14596	13.6? ✓	B 29240 ✓	B 31351 ✓ ·
I 14943	< 12.8	B 27994 ✓	B 31672 ✓
I 15052	< 13.5	B 25476 ✓	B 27101 ✓ ·
B 56686	< 14.1	B 24763 ✓	B 25694 ✓ ·
A 11725	< 15.0	B 22718 ✓	B 25443 ✓
A 1841	14.6 ✓ ·	B 21126 ✓	B 25418 ✓ ·
A 1873	14.7 ✓ 14.7	B 18782 ✓	B 18679 ✓ ·
A 1888	14.8 ✓ ·	B 18659 ✓	B 18404 ✓
A 9183	< 13.8	B 18577 ✓	B 15682 ✓ ·
A 8656	< 15.4 ✓	B 18549 ✓	B 13524 ✓ ·
A 8390	< 14.1	B 17196 ✓	B 13482 ✓ ·
A 2494	< 15.0 ✓	B 17112 ✓	B 5241 ✓
A 5336	< 14.6 ✓ ·	B 16935 ✓	
A 10402	< 15.0 ✓	B 16712 ✓	
A 1810	14.5 ✓ ·	B 16060 ✓	

Thursday May 20, 1920

		B 15639	
		B 11198 ✓	
B 18832 < 15.0 ✓	I 14297	12.8 ✓ difficult	B 11236 ✓
B 16934 < 14.8 ✓	B 31712	< 13.8 ✓	B 13298 ✓
B 15778 < 15.0 ✓	B 32167	< 14.1 ✓ ·	B 5981 ✓
	B 33468	< 13.8 ✓	B 5305 ✓
	B 29875	< 15.4 ✓ ·	B 9525 ✓
	B 30159	< 15.6 ✓ ·	B 9721 ✓
	B 31394	< 14.8 ✓ ·	B 9975 ✓

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Thursday May 20, 1920
+ Friday May 21, 1920
133431 Z Centauri.

Plate	<13.5	Date	Plate	<12.0	Date	<15.0	
B47025		June 2, 1916 ✓	B50757		May 27, 1917 ✓	B44666 ✓	June 29, 14
B49983		Apr. 14, 1917 ✓	B44910		Aug. 2, 1914 ✓		
B50509		May 17, " ✓	B46927		May 28, 1916 ✓	nova <13.0	
B50539		" 18, " ✓	B47517		June 20, " ✓	AM 14917	Aug. 15, 19 ✓
B50613		" 21, " ✓	B46560		May 3, " ✓	" 14853	July 21, " ✓
B50105		Apr. 17, " ✓	MT 3341		Apr. 24, 1915 ✓	" 14879	Aug. 1, " ✓
B46357		Mar. 28, 1916 ✓	I 38440	<11.6	May 7, 1913 ✓	" 10659 ✓	June 11, 1915
B46977		May 29, " ✓	I 38441	<11.3	" 7, " ✓	" 10537 ✓	May 3, "
B46419		April 5, 1916 ✓	B43807		June 13, " ✓	" 10403 ✓	April 11, "
B44681		June 30, 1914 ✓	B42281		May 6, 1911 ✓	" 10363 ✓	Mar. 27, "
B44559		June 9, " ✓	B42178		April 10, " ✓	" 8454 ✓	July 15, 1912
B44569		" 10, " ✓	B42179		March 18, " ✓	" 5969 ✓	
MT 3492		May 2, 1917 ✓	B52991		June 6, 1918 ✓	" 5346 ✓	
MT 3343		Apr. 24, 1917 ✓	B52808		May 9, 1918 ✓	" 5023 ✓	
MT 3938		June 24, " ✓	B53007		June 7, " ✓	" 4793 ✓	
MT 3942		" 24, " ✓	I 14469 ✓			" 4453 ✓	
MT 3789		June 2, 1917 ✓	I 14489				
B38775		April 26, 1908 ✓	I 14490				
B37456		May 22, 1907 ✓	AM 12890		Mar. 23, 1917 ✓		
B37406		May 15, " ✓	" 14279		Aug. 11, 1918 ✓		
B40126		April 30, 1909 ✓	" 14125		July 1, 1918 ✓		
B40140		May 1, " ✓	" 13483		Aug. 8, 1917 ✓		
B40155		May 7, " ✓	" 13329		June 22, " ✓		
B40192		May 8, " ✓	" 13246		" 10, " ✓		
B41260		May 15, 1910 ✓	" 12405	<11.3	Sept. 4, 1916 ✓		
B41615		July 14, " ✓	" 12744		July 23, " ✓		
			" 12764		" 25, " ✓		

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Friday May 21, 1920

133431 3 Centaurii

Plate	C 13.5	Date				
B 43928		July 10, 1913	✓	B 52686	< 14.1	Apr. 30, 1918
B 43925		" 10, "	✓	C 8918	13.3?	
B 43922		" 10, "	✓	A 3078	~~< 15.9~~ < 16.2	✓
B 43919		" 10, "	✓	A 6707	< 15.6	✓
~~B 43807~~		~~June 1~~		A 11725	< 15.0	June 1, 1918 ✓
B 43636		April 30, 1913	✓	A 8881	< 14.1	✓
B 52878		May 18, 1918	✓	A 9203	< 15.4	✓
B 52831		May 10, "	✓			
B 52784		May 8, "	✓	nova	< 12.0	< 12.0
B 52734		May 2, "	✓	AM 12295	✓ Aug. 3, 1916	AM 5289 ✓
B 52709		May 1, "	✓	" 10981	✓ Aug 13, 1915	" 4224 ✓
B 53026		June 11, "	✓	" 10659	17 ✓ June 18, "	" 4267 ✓
B 53011		June 7, "	✓	" 9923	✓ July 10, 1914	" 4326 ✓
B 52915		June 2, "	✓	" 9844	✓ June 10, "	" 7061 ✓
B 52936		June 4, "	✓	" 9800	✓ May 29, "	" 6967 < 10.7 ✓
B 52970		June 5, "	✓	" 9730	✓ Apr. 22, "	" 7480 ✓
B 52427		Apr. 11, "	✓	" 9345	✓ Aug. 13, 1913	" 8111 < 10.3 ✓
B 52315		Apr. 3 "	✓	" 8928	✓ May 22, "	" 8254 ✓
B 52275		Apr. 2, "	✓	" 8305	June 8, 1912 ✓	" 9166 ✓
I 12756		May 1, 1895	✓	" 7636	✓	
I 14450	✓			" 7576	✓	
I 14457	✓			" 7545 ~~7540~~	✓	
I 14476	✓			" 7168	✓	
I 20761	✓			" 6328	✓	
				" 6226	✓	
				" 5639	✓	
				" 5435	✓	

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1919phae.proj..696A

Saturday May 22, 1920

Ref. Plates 52999

163352 Nova Arae

Regions (14h to 18h) −60, 14 −45,

O.S.	Mag.	AM 6887	6.4 ✓	AM 8844	<11.5 ✓
a	6.2	1" 6861	6.2 ✓	" 8913	<12.0 ✓
b	6.6	" 7469	<11.9 ✓	" 9098	<11.9 ✓
c	6.9	" 6927	8.5 ✓	" 6855	<11.2 ✓
d	7.0	" 6971	8.6 ✓	" 6910	7.3 ✓
e	7.2	" 7310	11.3? ✓	" 6961	9.1 ✓
f	7.4	" 7394	<11.5 ✓	" 6969	9.0 ✓
g	8.1	" 6975	8.6 ✓	" 7082	10.4 ✓
h	8.6	" 7069	10.3 ✓	" 7054	10.3 ✓
k	8.8	" 7157	10.8 ✓	" 7162	10.6 ✓
l	9.4	" 7170	10.6 ✓	" 7383	<11.2 ✓
m	9.9	" 7209	10.9 ✓	" 7403	<10.6 ✓
n	10.1	" 7221	11.0 ✓	" 7039	<11.5 ✓
o	10.6	" 7405	<11.9 ✓	" 7534	<11.2 ✓
p	11.2	" 7411	<11.0 ✓	" 7589	<11.5 ✓
q	11.5	" 7452	<12.0 ✓	" 7650	<11.9 ✓
r	11.9	" 7461	<11.2 ✓	" 7845	<11.5 ✓
s	12.2	" 7515	<12.4 ✓	" 6899	7.1 ✓
t	12.4	" 7629	<11.9 ✓	" 6916	7.6 ✓
u	12.7	" 7675	<11.5 ✓	" 7013	7.9 ✓
w	13.1	" 7819	<11.2 ✓	" 7047	9.9 ✓
x	13.2	" 8112	<9.4 ✓	" 7070	10.3 ✓
y	13.6	" 8189	<10.6 ✓	" 7090	10.4 ✓
z	14.0	" 8334	<11.5 ✓	" 7204	11.0 ✓
α	14.3	" 8389	<12.7 ✓ sc.	" 7251	11.2 ✓
β	14.9	" 8565	11.5? ✓	" 7307	<12.6 ✓
γ	15.1	" 8606	<11.5 ✓	" 7418	<11.5 ✓

See last column −*

*C. S. (cont.)

δ	15.6
ε	16.0
ζ	16.3
+ η	16.8
θ	17.1
κ	17.5

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1919phae.proj...696A

Saturday May 22, 1920

163352 Nova Aquilae

	Plate	Date			
	~~Mf 3953 <14.0~~			B 41342	8.5 ✓
	Mf 3953 ✓	June 24, '19		B 41625	10.4 ✓
	Mf 3954	" " "		B 41338	Ref. 7.7 ✓ 8.0 Edge
<14.5	Mf 4079 ✓	July 2, "		B 52976	<13.2 ✓ June 5, 18
<14.5	B 40374			B 52892	<12.2 ✓ May 18, 18
	B 52888 ✓	May 18, 18		B 52856	<11.9 ✓ " 17, "
	B 52853 ✓	May 17, 18		B 52327	<12.5 ✓ Apr. 3, "
	B 44918 ✓	Aug. 3, 14		B 46996	<14.5 ✓ May 29, 16
				B 46943	" ✓ " 28, "
<11.0 ✓	B 43787	June 11, '13		B 51030	<10.6 ✓2 June 14, 17
<14.8 ✓	A 1860	June 19, 96		B 50165	<12.7 ✓ Apr. 25, "
<16.3 ✓	A 2824	Oct. 13, 97		B 50147	<13.2 ✓ " 18, "
<14.8 ✓	A 7914	July 30, 06		B 50577	<10.6 ✓ May 19, "
13.5 ✓	A 10436	July 16, 11		B 50666	" ✓ " 23, "
<15.6 ✓	A 8400 ✓	July 27, 07		B 49904	<13.1 ✓ Apr. 12, "
<15.1 ✓	A 8440	Aug. 17, "		B 43917	<12.7 ✓ July 10, 13
sc, 13.6 ✓	A 10496	Sept. 21, 11	sharper im)	B 43443	<12.2 ✓ Aug. 23, 12
13.5 ✓	A 10486	" 11, "	" ")	B 48116	<13.6 ✓ " 1, 16
13.7 ✓	A 10479	Aug. 30, "		B 42304	<13.2 ✓ May 19, 11
13.9 ✓	A 10464	" 12, "		B 42218	12.9 ✓ April 17, "
13.4	A 10449	July 22, "		B 42219	13.0 ✓ " " "
13.5 ✓	A 10423	June 27, "		B 44212	<13.2 ✓ Sept. 12, 13
13.4 ✓	A 10420	June 24, "		B 44216	<12.2 ✓ " 12, "
13.3 ✓	A 10415	June 19, "		B 44100	<13.2 ✓ Aug. 19, "
13.1 ✓	A 10403	May 23, "		B 43794	<12.4 ✓ June 12, "
				B 47041	<11.5 ✓ " 2, 16
				B 48042	<13.6 ✓ July 24, 16

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Saturday May 22, 1920

163352 Nova Aquae

A 10391	13.1 ✓ Sharp im.	Apr. 29, 1911
A 10371	12.8 ✓	Apr. 22, "
A 10366	12.7 ✓	" 10, "
A 10364	12.7 ✓ Sharp im.	Mar. 29, "
A 10363	12.9 ✓	" 27, "
A 10361	12.1? ✓ hazy im	Feb. 25, "
A 7378	17.5 ✓	July 1, 1905
A 11695	<15.3 ✓	Aug. 21, 1917
A 11685	<15.1 ✓	" 11, "
B 52999	<13.1 ✓	June 6, 1918
B 52943	<13.0 ✓	
B 40246	<13.1 ✓	
B 40020	<12.5 ✓	
B 40374	<14.8 ✓	

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Wednesday May 26, 1900

16335 Nova Aql

Limiting mag of following plates.

<11.2	<14.5	<13.5	<12.5	B 31877 <16.3
B 16584	B 13492	B 13743	B 13978	B 25964 <15.1
B 7605	B 13527	B 12957	B 15865	B 25740 <16.0
B 9202	B 15559	B 11801	B 15871	B 25528 <15.1
B 6102	B 16107	B 11629	B 16434	B 22929 <15.1
B 6082	B 16281	B 11597	B 17179	B 33622 <15.1
B 5927	B 16825	B 9160	B 12094	B 30220 <15.6
B 26012	B 11848	B 9197	B 9203	<12.5 cont.
B 21140	B 3738	B 5985	B 9204	B 22473
B 21989	B 27478	B 3779	B 9687	B 22523
B 20487	B 27558	B 25082	B 11031	B 23002
B 20001	B 27749	B 22508	B 11595	B 36662
B 19368	B 27719	B 20442	B 6100	B 37433
B 19322	B 25239	B 19366	B 6081	B 36400
B 35760	B 21157	B 35559	B 3805	B 32619
B 35761	B 21895	B 36576	B 27075	B 33590
B 36785	B 37533	B 36620	B 27692	B 28283
B 33381	B 35709	B 33758	B 27919	B 31432
B 33382	B 37935	B 33531	B 27724	B 21942
B 34281	B 33827	B 32584	B 27710	B 38646
B 34121	B 31828	B 32576	B 25219 felin damaged	B 38694
B 34092	B 30000	B 32095	B 25119	B 46020
B 34024	B 16328	B 28281	B 25117	
B 29259	B 23962	B 31378	B 23981	B 30189 <16.0
B 29275	B 27337	B 31522	B 23469	
B 28310		B 29975	B 21928	
B 30535		B 21191	B 22060	
B 24979		B 4047		

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Friday May 28, 1920
~~Thursday May 27, 1920~~

163352 Nova Aquae

	AM 5751	<13.5✓			~~<11.9~~
Apr. 24, 06	" 4174	<12.5✓	AM 14166	<11.9✓	July 15, 18
May 22, "	" 4249	<12.5✓	" 14149	<11.2✓	" 12, "
June 1, "	" 4273	<12.7✓	" 13420	<11.9✓	" 18, 17
June 16, "	" 4329	<12.7✓	" 12442	<10.6✓	Sept. 19, 16
Aug. 6, "	" 4455	<12.7✓	" 11611	<11.2✓	Apr. 5, "
Sept. 22, "	" 4590	<12.5✓	" 10393	<12.5✓	" 6, 75
Oct. 9, "	" 4612	<12.5✓	" 10443	<12.5✓	" 19, "
May 29, 14	" 9802	<11.2✓	" 12587	<11.9✓	Sept. 28, 16
May 30, "	" 9806	<12.2✓	" 13677	<10.1✓	Oct. 14, 17
June 2, "	" 9818	<11.9✓	" 14127	<13.1✓	July 1, 18
June 20, "	" 9883	<11.5✓	" 14267	<11.5✓	Aug. 6, "
July 22, "	" 9969	<11.5✓	" 14352	<11.5✓	" 28, "
Sept. 8, "	" 10099	<12.0✓	" 14456	<11.9✓	Sept. 29, "
" 17, "	" 10138	<12.0✓			
Oct. 20, "	" 10213	<11.2✓			
June 2, 15	" 10602	<13.2✓			
July 10, "	" 10769	<12.5✓			
Aug. 15, "	" 11000	<13.1✓			
Sept. 14, "	" 11155	<11.9✓			
Oct. 4, "	" 11305	<11.2✓			
March 9, 16	" 11557	<11.5✓			
Aug 4, 19	" 14890	<13.6✓			
" 22, "	" 14945	<12.5✓			
Sept 8, 18	" 14386	<11.2✓			
Oct. 7, "	" 14502	<11.5✓			

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1910phae_proj...696A

Thursday June 3, 1920

A1160 175327 Nova Sagittarii No. 2

Estimates by Argelander's Method between diffr. cin. & f.s.

	g						
12.36	f.1 α	·	12.46	·	12.46	~~oo~~ ~~oo~~	
11.37	m 3 z 1 n	11.74	11.67	11.64	11.66	01 02	
11.37	m = y	·	11.37	·	11.37	a ~~oo~~	
11.37	m 1 x 2 n	11.74	11.47	11.54	11.58	03 04	
11.05	k 2 ~~w~~ w' 1 m	11.37	11.25	11.27	11.26	01 01	
10.26	h 2 u 3 k	11.05	10.46	10.75	10.60	14 15	
10.26	h 2 t 3 k	11.05	10.46	10.75	10.60	14 15	
9.38	e 4 s 2 h	10.26	9.78	10.06	~~9~~ 9 92	14 14	
9.38	e 2 r 3 h	10.26	9.58	9.96	9.77	19 19	
(Sup. 199) 10.38	f 2 w 2 k	11.05	10.58	10.85	10.72	14 13	

	h						Mean g h	Grating Constant +3.42
12.36	f 1 α 1 r	12.88	12.46	12.78	12.62	16 16	12.54 08 08	15.96
11.37	m 2 z 1 n	11.74	11.57	11.64	11.60	03 04	11.63 03 03	15.05
11.37	m = y	·	11.37	·	11.37	a ·	11.37 00 00	14.79
11.37	m 1 x 2 n	11.74	11.47	11.54	11.50	03 04	11.50 00 00	14.92
11.05	k 2 ~~w~~ w' 1 m	11.37	11.25	11.27	11.26	01 01	11.26 00 00	14.68
10.26	h 2 u 1 g	10.52	10.46	10.42	10.44	02 02	10.52 08 08	13.94
10.26	h 2 t 1 g	10.52	10.46	10.42	10.44	02 02	10.52 08 08	13.94
9.38	e 3 s 2 h	10.26	9.68	10.06	9.87	19 19 ##	9.90 02 03	13.32
9.38	e 1 r 3 h	10.26	9.48	9.96	9.72	24 24	9.74 03 02	13.16
10.38	f 1 w 3 k	11.05	10.48	10.75	10.62	14 13	10.67 05 05	14.09

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1919phae.proj..696A

Thursday June 3, 1920

A 8420

1915327 Nova Sagittarii No. 2

Estimates of steps between faint stars by Argelander's Method

		Mr.	Diff.	Cu.	Mag.
m 1 l	m	0.0	11.37	11.32	11.32
l 2 n	l	0.1	11.39	11.42	11.52
n 1 q	n	0.3	11.44	11.60	11.90
q 1 p	q	0.4	11.80	11.68	12.08
o p = n	p	0.5	11.86	11.75	12.25
p 5 n	o	0.5 3	11.70	11.60	11.90
n 2 s	n	0.9	11.98	12.00	12.90
s 4 t	s	1.1	12.11	12.13	13.23
u = t	t	1.5	12.44	12.40	13.90
u 5 w'	u	1.5	12.44	12.40	13.90
w' 1 y	w'	2.0	12.68	12.68	14.68
y = w'	x	2.1	12.82	12.71	14.81
y 3 z	y	2.0	12.79	12.68	14.68
z 6 α	z	2.4	12.65	12.80	15.20
α 3 β	α	3.0	12.96	12.94	15.94
	β	3.3		12.98	16.28
u 1 w	w	1.6	12.49	12.46	14.06
w 4 w'	w'	2.0			

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1919phae..proj...696A

Thursday June 3, 1920

175327 Nova Sagittarii No. 2

Sc AH3

A 10392

	Sc 1	Sc. 2	Diff.	Cu.	mag.
k	1.9		9.15	·	
l	2.8		8.69	8.83	11.63
m	2.0		9.37	·	
n	2.9		8.84	8.81	11.71
q	3.5		8.50	8.68	12.18
p	3.6		8.76	8.65	12.25
o	3.4		8.80	8.70	12.10
r	4.4½	4.50	4.6 8.38	8.40	12.90
s	5.1	5.05	6.0 8.16	8.23	13.28
t	6.0	6.00	6.0 7.94	7.90	13.90
u	5.9	5.95	6.0 7.99	7.92	13.88½
w' w			7.9 6.78	7.04	14.94
x			7.8 7.12	7.08	14.88
y			7.7 7.09	7.13	14.83
z			8.0 7.05	7.00	15.00 difficult, Nova to. very close to z.
&			9.9 8.06	6.06	15.96
β			n.s.		

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1919phae.proj...696A

Friday June 4, 1920

A 10457

175327 Nova Sagittarii No. 2.

Se. A H3

				Diff.	Cu.	Cu.	Mag.
q	1.4			9.12	.	.	
h	1.2			9.06	.	.	
b	2.0			9.05	.	.	
l	2.3			9.19	.	.	
m	1.9			9.47	.	.	
n	2.9			8.84	8.94	8.96	11.86
g	3.2			8.80	8.75	8.92	12.12
p	3.4			8.96	8.70	8.94	12.30
o	3.1			9.10	8.77	8.94	12.04
r	4.0	4.10	4.2	8.78		8.78	12.88
s	4.7	4.75	4.8	8.46		8.66	13.41
t	5.3	5.25	5.2	8.69		8.54	13.79
u	5.5	5.35	5.2	8.59		8.52	13.87
w'	6.9	6.90	6.9	7.78		7.86	14.76
x			7.0	7.92		7.82	14.82
y	6.9	6.85	6.8	7.94		7.90	14.75
z			7.7	7.35		7.47	15.17
α			8.8	7.16		7.10	15.90
β			10.0	.		6.90	16.90

deflection?

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1919phae..proj...696A

See note at bottom of page

Friday June 4, 1920

A8386

175327 Nova Sagittarii No. 2.

Estimate by Argelander's Method.

			Diff.	Cu.	Mag.
k 2 m	k	0.0	11.05	11.10	11.10
m 1 l	m	0.2	11.17	11.14	11.34
l 3 n	l	0.3	11.19	11.16	11.46
n 1 q	n	0.6	11.14	11.23	11.83
n 2 o	q	0.7	11.30	11.26	11.96
o 2 p	o	0.8	11.40	11.29	12.09
p 4 r	p	1.0	11.36	11.36	12.36
r 3 s	r	1.4	11.48	11.54	12.94
s 2 t	s	1.7	11.51	11.69	13.39
t 1 u	t	1.9	12.04	11.79	13.69
u 2 w	u	2.0	11.94	11.85	13.85
w 4 w'	w	2.2	11.89	11.97	14.17
w' = x	w'	2.6	12.08	12.23	14.83
y 1 x	x	2.6	12.32	12.23	14.83
y 3 z	y	2.5	12.29	12.17	14.67
z 4 α	z	2.8	12.25	12.37	15.17
α β	α	3.2	12.76	12.60	15.80
	β	3.5		12.99	16.49

* Discovered that the markings on the chart did not agree with those on this plate for stars o, q, + w. Changed in red ink the chart markings to agree with those on the plate. Inter changed o + q in bk. 45: 217 to correspond to new markings on chart. Also changed the record books in same way.

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Friday June 4, 1920

1e 1H.3

175327 Nova Sagittarii No. 2

A10392

	Dec1	Dec2	Diff.	Cu.	Mag.
s	5.1	5.05	5.0	8.16	
t	6.0	5.95	5.9	7.99	
w	6.1	6.05	6.0	7.89	
→ w	6.6	6.55	6.5	7.60	14.15
w'			7.8	6.88	
x			7.9	7.02	

A10457

			Diff.	Cu.	
s	4.8	4.75	4.7	8.46	
t	5.0	5.00	5.0	8.94	
u	5.1	5.05	5.0	8.89	
→ w	5.6	5.50	5.4	8.62	14.12
w'	6.9	6.90	6.9	7.78	
x	7.0	7.00	7.0	7.92	

* Star w was not measured with the rest of the sequence. Measured here with 5 other stars to determine mag.

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Saturday June 5, 1920

175-327 Nova Sagittarii No. 2.

		Print A 8386 Ref.			
e.s.	mag				
a	7.9	A 11686	14.8	A 10480	12.6
b	8.4	A 11690	14.9	A 10365	12.2
c	9.0	A 8420	16.3	A 10372	12.2
d	9.2	A 8386	16.5	A 10404	12.5
e	9.4	A 10512	13.1	A 10416	12.9
d'	9.7	A 11002	<13.5 a	A ~~8845~~ 8425	<14.1
f	10.3	A 10570	13.0	A 4822	<14.8 i } Taken for
g	10.4	A 10239	10.4	A 4828	<14.8 i } Comet Swift
h	10.5	A 10457	12.6		
k	11.0	A 10392	12.4		
m	11.4	A 9636	<14.1e		
l	11.5	A 8502	<14.1e		
n	11.7	A 8443	<14.1e		
q	12.0	A 10492	12.7		
o	12.1	A 10485	12.7		
p	12.3	A 4821	<15.6		
r	12.9	A ~~84~~34	<15.1		
s	13.3	A 9640	<15.1		
t	13.8	A 9057	<13.8		
u	13.9	A 2798	<15.3		
w	14.1	A 2735	16.4		
w'	14.8	A 10421	12.7		
y	14.7	A 10437	12.6		
x	14.8	A 10443	12.7		
z	15.1	A 10466	12.6		
α	15.9	A 10478	12.7		
β	16.4				

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Monday June 7, 1920

175327 Nova Sagittarii No. 2.

Limiting mag 12.0	Limiting mag 11.0	Limiting mag 13.0	Limiting mag. 14.0	Limiting Mag. 15.0
B 20466 ✓	B 20465 ✓	B 20457 ✓	B 8712 ✓	B 9592 ✓
B 19325e ✓	B 6615 ✓	B 19085e ✓	B 9279 ✓	B 9593 ✓
B 8713 ✓	B 28223 ✓ out of focus	B 3992 ✓	B 8886 ✓	B 4059 ✓
B 9208e ✓	BM 6264 ✓	B 4136 ✓	B 4124 ✓	B 19114 ✓
B 9280e ✓	" 6445 ✓	B 9209e ✓	B 13748 ✓	B 16036 ✓
B 5006 ✓	" 6453 ✓	B 9210 ✓	B 12117 ✓	B 23787 ✓
B 16576e ✓	" 6475 ✓	B 5338 ✓	B 17651e ✓	B 27155 ✓
B 16156e ✓	" 7456 ✓	B 3754 ✓	B 13728 ✓	B 26472 ✓
B 27438e ✓	" 7548 ✓	B 3993 ✓	B 13936 ✓	B 26461 ✓ <16.0
B 22478e ✓	" 7402 ✓	B 21077 ✓	B 31948e ✓	B 23203e ✓
B 32353e ✓	" 7457 ✓	B 17400e ✓	B 27750 ✓	B 23495 ✓
B 25387e ✓	" 7530 ✓	B 16496e ✓	B 26483e ✓	B 21918 ✓
B 19576e ✓	" 7676 ✓	B 9854 ✓	B 26473e ✓	B 32049e ✓
B 25344e ✓		B 13345e ✓	B 26432 ✓	B 32080 ✓
B 26387 ✓		B 13346e ✓	B 24376e ✓	B 30347 ✓ <16.0
B 26116 ✓		B 13535e ✓	B 25123 ✓	B 33921 ✓
B 24009e ✓		B 13536e ✓	B 25506e ✓	B 34004 ✓ <16.0
B 23696e ✓		B 28621 ✓	B 23172e ✓	
B 21225 ✓		B 25824e ✓	B 32649 ✓	
B 21709e ✓		B 27748 ✓	B 31576 ✓	
B 22022e ✓		B 31470e ✓	B 31862e, i, double ✓	
B 32574e ✓		B 29857e ✓	B 29253 ✓	
B 30512e ✓		B 40363e ✓	B 30513e, i, q ✓	
B 30594 ✓		B 40064 ✓	B 37314e ✓	
B 38824e ✓		B 35686 ✓	B 37537 ✓	
B 38784e ✓		B 41160 ✓	B 39051 ✓	
B 36432e ✓		B 21710 ✓	B 36791 ✓	

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Monday June 7, 1920

175327 Nova Sagittarii No. 2

		At	South up.	Mean		
15.0 Limiting mag 12.0	B 41608	10.0	10.1	10.05 01		Limiting mag 14.0
B 33486	B 41365	9.2	9.3	9.25 01		B 33657
B 30595	B 41397	9.5? sp.	·	9.5?		B 32032 e
B 28657	AM 6880	8.8	8.8	8.80 00	17-15	B 26491
B 19200 e	" 6945	9.3	9.2	9.25 10		
AM 6124	" 6989	9.3	9.2	9.25 10		
" 6206	" 6997	9.3	9.3	9.30 00		
" 6273	" 7007	9.9	10.0	9.95 01		
" 6320	" 7039	10.1	10.1	10.10 00		
5.0 " 6613 <13.0	" 7083	10.0	9.9	9.95 00		
" 7458	" 7102	10.0	9.9	9.95 00		
	" 7128	9.9	10.0	9.95 01	Broken	
	" 7147	11.0?	11.0	11.00 00		
	" 7183	11.5	11.5	11.50 00		
	" 7217	10.4	10.5	10.45 01		
.0	" 7226	10.4	10.3	10.35 10		
	" 7250	10.4	10.4	10.40 00		
0	" 6946	9.2 ~~9.8~~	9.2	9.20 00	18-30	
	" 6952	9.2	9.2	9.20 00		
	" 6976	9.3	9.4	9.35 01		
	" 7008	9.9	10.0	9.95 01		
	" 7033	10.1	10.2	10.15 01		
	" 7063	10.1	9.9	10.00 11		
	" 7084	10.0	10.0	10.00 00		
	" 7163	11.1	11.4	11.35 21		
	" 7265	10.3	10.4	10.35 01		

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Tuesday June 8, 1920

175327 Nova Sagittarii No. 2.

17-45		South up.	Mean	19-15		South up.	Mean
AM 6971	9.6	9.6	9.60 00	AC 11702	9.2	9.2	9.20 00
" 6861	9.9	9.9	9.90 00	AC 11711	9.4	9.6	9.50 1 1
" 6927	9.4	9.3	9.35 10	AC 11747	9.8	9.9	9.85 01
" 6975	9.3	9.4	9.35 01	" 11760	9.5?	9.5?	9.50 00
" 7069	10.1	10.2	10.15 01	17-15 AC 10641	<10.3	.	
" 7157	<10.3 ✓	.		" 11520	9.5	9.5	9.50 00
" 7170	<10.7 ✓	.		" 11574	9.2	9.3	9.25 01
" 7209	10.9	10.9	10.90 00	" 11595	8.7	8.6	8.65 10
" 7221	10.0	10.1	10.05 01	" 11664	8.3	8.3	8.30 00
" 7310	10.3?	10.3	10.30 00	" 11676	8.2	8.2	8.20 00
" 7394	<10.6	.		" 11716	9.6	9.5	9.55 10
19-15				" 11741	10.3	10.3?	10.30 00
AM 6676	10.3?	10.3	10.30 00	" 11757	<9.4 ✓		
" 6921	8.1	8.1	8.10 00	" 12383	<11.0 ✓		
" 6953	9.3	9.3	9.30 00	" 12394	<10.3 ✓		
" 6972	9.5	9.5	9.50 00	" 12414	<10.5 ✓		
" 7014	9.4	9.5	9.45 01	" 12523	<11.0 ✓		
" 7015	9.7	9.7	9.70 00				
" 7023	9.9	9.7	9.80 00	AM 7195	11.4	✓ Broken	
" 7035	10.1	10.3	10.20 11				
" 7040	10.1?	10.1	10.10 00				
" 7116	10.0	10.0	10.00 00				
" 7141	10.3	10.4	10.35 01				
" 7191	<10.3 ✓	.					
" 7222	10.1	10.1	10.10 00				
" 7257	10.1	10.1	10.10 00				
" 7292	10.2	10.2	10.20 00				
" 7467	<10.3 ✓	.					

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Tuesday June 8, 1920

175327 Nova Sagittarii No. 2.

Date	Plate	Est.	Mean	South up.
Oct. 12, 1910	I 36890	10.8	10.70	10.6
Oct. 11, "	I 36885	10.9	10.95	11.0
Oct. 13, "	I 36895	10.7	10.70	10.7
Oct. 17, "	I 36898	10.8	10.80	10.8
Oct. 18, "	I 36899	10.9	10.80	10.7
Oct. 26, "	I 36900	11.3	11.30	11.3
July 7, 1905	I 33214	<13.3		
" 25, "	I 33216	<14.0		
May 19, 1911	B 42308	12.5	12.45	12.4
Sept. 8, "	B 42655	12.2	12.20	12.2
" 12, "	B 42669	12.5	12.50	12.5
" 12, "	B 42670	<11.0		
May 15, 1913	B 43691	14.0	14.05	14.1
July 21, 1912	B 43354	13.6	13.70	13.8
June 16, 1914	B 44622	13.7 e	13.70	13.7
June 29, 1914	B 44677	14.7	14.70	14.7
" 16, "	B 44621	14.5	14.50	14.5
" 24, "	B 44660	14.5	14.45	14.4
" 29, "	B 44676	14.6	14.55	14.5
May 22, 1916	B 46779	15.4?	15.40	~~14.6~~ 15.4
June 12, 1913	B 43796	13.7	13.70	13.7
" 12, "	B 43797	14.1	14.10	14.1
July 18, 1914	B 44792	<13.0		
Aug. 1, 1915	B 45393	<14.2		
" 1, "	B 45394	<13.0		
July 1, 1914	B 44413	14.5	14.55	14.6

Date	Plate	Est.	Mean	South up.
July 2, 1914	B 44722	14.4	14.30	14.2
" 18, "	B 44793	14.5	14.45	14.4
Sept. 14, 1915	B 45722	<13.0 e		
July 2, 1916	B 47759	<13.0 e		
June 30, "	B 47710	<12.0 e		
July 2, 1914	B 44733	~~13.9?~~ 13.9 e	13.85	13.8
June 7, 1913	B 43744	<10.5 e		
July 2, 1914	B 44724	<13.6 e		
May 24, 1913	B 43711	<11.4 p		
May 9, 1916	B 46594	<14.3		
June 4, 1914	B 44537	14.7	14.70	14.7
Sept. 16, 1912	B 43509	13.5	13.50	13.5
June 2, 1916	B 47048	<12.0 e		
June 4, "	B 47081	<11.4 e		
Aug. 12, 1914	B 44986	<12.0 p		
" 14, "	B 44970	<14.7		
" 9, "	B 44929	13.8? e	13.85	13.9
" 12, "	B 44945	<12.0 e		
May 28, 1916	B 46950	<12.0 e		
" 24, 1912	B 43123	<12.0 e dbl.		
Aug. 19, 1913	B 44108	<12.0 e		
" 22, 1916	B 48174	<11.4 e		
" 23, "	B 48183	<11.4 e		
June 13, 1918	B 53060	<13.0		
" 12, "	B 53038	<13.0		
" 4, "	B 52954	<14.0		

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Tuesday June 8, 1920

17 5327 Nova Sagittarii No. 2.

Date	Plate	Est.	Plate	Est.	Date
May 15, 1917	B 50471	<12.0	AM 14869	<11.7	July 26, 19
" 15, "	B 50473	<13.8	" 14682	<12.3	May 4, "
" 12, "	B 50394	<13.0	AC 21364	<11.0	Nov. 21, "
Apr. 17, "	B 50123	<13.8	AC 21373	<11.4	" 22, "
" 25, "	B 50177	<13.0	AC 20084	<11.0	May 1, 18
June 11, "	B 50962	<12.0	AC 19965	<10.6	Mar. 22, "
" 11, "	B 50963	<14.0	AM 14280	<12.0	Aug. 11, "
July 16, "	B 51472	<12.0	" 14285	<12.0	" 12, "
June 13, 1918	B 53051	<14.0	" 14159	<12.0	July 14, "
" 12, "	B 53039	<12.0	" 14142	<11.4	" 11, "
" 4, "	B 52953	<13.8	" 10741	<11.7	July 2, 15
" 6, "	B 53003	<14.0	" 10764	<12.0	" 9, "
Aug. 19, 1919	Mf 4465	<14.0	" 10576	<12.3	May 8, "
" 19, "	Mf 4463	<14.8	" 10623	<12.3	June 4, "
" 25, "	Mf 4578	14.6 14.6 14.6	" 10632	<11.6	" 5, "
" 26, "	Mf 4611	<14.0	AC 11958	t.p.	
	B 43385	<14.0	Broken		
			AM 4365	<11.6	
	AM 6606	<11.5	" 4527	<13.3	
	" 6575	<11.0	" 4539	<12.3	
	" 6503	<11.0	" 4562	<12.9	
	" 6493	<11.0	" 4620	<13.3	
	" 6471	<11.5	" 4269	<12.9	
	" 6623	<11.0	" 4339	<12.3	
	" 6636	<10.5	" 4388	<13.3	
	AC 10875	<9.6			
	AM 6592	<12.3			

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Thursday June 10, 1920

Sc D H_3 174734 Nova Scorpii No. 2

D 9057

	Sc 1	Sc 2	Diff	Cu.	(1) Mag.	(1)+(2) Mean	(1)	(2)
r	1.4		10.14	.	.			
s	1.8		10.15	10.15	11.95	11.95	a	.
t	2.2		10.20	9.98	12.18	12.29	11	11
u	3.7		9.12	9.33	13.03	12.93	10	10
w	4.2	4.20	4.2	9.14	9.10	13.30	13.32	02	02
x	5.4	5.60	5.8	8.50	8.47	14.17	14.10	07	07
y	6.5	6.60	6.7	7.91	7.94	14.54	14.57	03	03
z			7.9	7.28	7.27	15.17	15.08	09	09
d			8.6	6.88	6.88	15.48	15.48	00	00

Images not very comparable with scale.

A 10126 Sequence near edge of plate

	Sc 1	Sc 2	Diff	Cu.	(2) Mag.
r	1.9		9.64	.	.
s	2.2		9.75	.	.
t	3.5		8.90	8.90	12.40
u	4.2	4.30	4.4	8.52	8.53	12.83
w	5.2	5.20	5.2	8.14	8.14	13.34
x	6.4	6.55	6.7	7.55	7.48	14.03
y	~~6.4~~		7.7	6.81	6.90	14.60
z			8.6	6.58	6.39	14.99
d			9.9	5.58	5.58	15.48

deposits

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Thursday June 10, 1920

P.C. Constant 5.35

17 47 34 Nova Scorpii No. 2

Comparison between P.C. & b, stars + ff. stars by Argelander's Method

B 44 840

					(1) Mean	(1)+(2) Mean + 5.35	
6.05	a 1 g 4 c	6.67	6.15	6.27	6.21 06 06	6.21 0000	11.56
6.05	a 3 r 2 c	6.67	6.35	6.47	6.41 06 06	6.41 0000	11.76
6.67	c 1 s 1 d	7.24	6.77	7.14	6.96 19 18	6.93 0303	12.28
7.24	d 1 t 2 e	7.55	7.34	7.35	7.34 0001	7.44 10 11	12.79
7.55	e 2 u 1 f	7.99	7.75	7.89	7.82 07 07	7.84 07 03	13.19
	w = g	8.38		8.38			
7.99	f 2 w 3 h	8.59	8.19	8.29	8.24 0505	8.31 07 07 8.34 0304	13.69
8.59	h 3 x 3 l	9.46	8.89	9.16	9.02 13 14	8.95 07 07	14.30
8.86	t 4 y 1 l	9.46	9.26	9.36	9.31 0505	9.26 05 04	14.61
	g = m	9.83			9.83 · ·	9.83 0000	15.18
9.83	m 3 d		10.13		10.13 a ·	10.13 0000	15.48

Var. 3c found when observing this plate. Noticed that the star appear bright when on A 10126 it was very faint.

P.C. K, nearly superposed on bright star

B +48 76

					(2) Mean	
6.05	a 1 g 4 c	6.67	6.15	6.27	6.21 06 06	
6.05	a 3 r 2 c	6.67	6.35	6.47	6.41 06 06	
6.67	c 1 s 2 d	7.24	6.77	7.04	6.90 13 14	
7.55	e = t		7.55		7.55 a = ·	
7.55	e 3 u 1 f	7.99	7.85	7.89	7.87 02 02	
8.38	g = w		8.38		8.38 a = ·	
8.59	h 1 x 4 l	9.46	8.69	9.06	8.88 19 18	
8.59	h 5 y 1 l	9.46	9.09	9.36	9.22 13 14	
	g = m	9.83			9.83	
9.83	m 3 a		10.13 ·		10.13 a = ·	

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Cohuit p 214

Saturday June 12, 1920

Ref. Plate B46997
A9057

174734 Nova Scorpii No. 2

BN Sco 36 Var.

c.s.	mag.					
		18-30	Nova			
		AM 4388	10.0 The Nova	12.8		
a	6.0	" 4205	12.2	n.s.		
b	6.5	" 4339	10.3 The Nova.	"		
c	6.7	" 4269	~~12.1~~	"		
d	7.2	" 4620	11.4?	"		
e	7.6	" 4562	11.3			
f	8.0	" 4539	10.9			
g	8.4	" 4527	11.0			
h	8.6	" 4365	9.6 This is the Nova Q.J.C.			
k	8.9	17-45				
l	9.5	AM 4174	11.5			
m	9.7	" 4249	11.9			
n	10.2	" 4273	11.4			
o	10.5	" 4329	10.5 The Nova.			
p	10.7	" 4367	9.7 The Nova. Q.J.C.			
q	11.3	" 4455	10.0			
r	11.5	" 4486	10.4			
s	12.0	" 4590	11.5			
t	12.3	" 4612	11.5			
u	12.9	" 4773	<11.5			
w	13.3					
x	14.1	B 44783	12.3	13.7	<15.5	
y	14.5	B 45000	12.2	13.6	<15.0	
z	15.1	B 3842	12.5	14.0		
&	15.5	B 40594	11.7	n.s. <13.3		
		B 5407	12.1	<14.5		
		B 21703	12.1	14.5	<15.5	

NOTE

All observations made on other plates except these AM plates included between the 2 stars * and A 7779, 7784 are not of the Nova. The star very near the Nova was mistaken for it and these estimates are of it. On A 7779 the Nova can be easily distinguished from this star. The plate was not found until after the observations were made. This star is var. 37 M.D.A.

I can not confirm variation in No. 37. It does look faint on 7784, but the Nova is bright & very close. On numerous extra plates, no change greater than 0.2 or so.

Q.J.C.

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Monday June 14, 1920

17h34b Nova Scorpii No. 2

Remarks.	Plate	~~BN Sco~~ see note p. 209 Nova	BN Sco Var.	Plate	~~BN Sco~~ see note p. 209 Nova	BN Sco Var.	Remarks.
difficult	B 5833	12.0	n. s. 13.0	B 29570	12.6	< 14.5	
Im. diff. slightly from other	B 37538	12.2	< 14.0	B 28255	11.8	12.8	e, i, dble
< 15.5	B 45001	12.4	13.7	B 29605	12.1	< 15.1	trails myn.
< 15.5	B 44876	12.3	13.3	B 47985	12.8	< 14.1	
	B 46997	12.2	< 13.0 n.s.	B 29254	11.9	< 12.0	e. g.
< 15.5	B 44840	12.6	13.5	B 30309	11.7	13.9 ? f	e. g.
< 15.5	B 44861	12.7	13.8	B 30359	12.0	n. s. < 12.3	e, i, g.
< 15.0	B 33759	12.1	13.8	B 30511	12.0	12.7	< 14.5 e, m. larg
	B 25506	12.2	< 15.2	B 29516	12.0	< 12.3	e, g.
	B 3960	12.3	< 13.0 n.s.	B 29818	12.1	< 12.9	e. g.
	B 14039	11.9	" < 13.0	B 35712	11.8	< 12.5	e. c.
	B 23172	12.2	14.4	B 36911	12.3	< 12.3	e. g. ff.
	B 21991	12.0	n. s. 13.0	B 38975	12.1	13.1	< 13.0 e. larg nr star hazy
	B 23496	12.4	14.2	B 38031	11.7	13.6	n. hazy < 15.0
	B 22475	12.2	n. s. < 13.0	B 39055	11.9	13.3	< 14.5 e. n. " diff. < 13.0
< 15.0	B 23684	12.1	14.5	B 39090	11.9	13.5	i. large hazy im.
	B 23968	11.9	n. s. 13.0	B 43354	12.1	< 13.3	g.
	B 23200	12.0	< 13.0 n. s.	B 42309	12.2	< 13.3	slightly diff im.
	B 23058	12.1	" < 13.0	B 45393	12.1	< 12.6	e. g.
	B 22022	12.2	" < 13.0	B 43712	12.2	12.9	e. g. < 12.9
sc.	B 21145	12.0	" < 12.5	B 44711	12.6	13.3 R	< 14.5
< 14.0	B 21709	12.2	13.7	B 35781	12.3	< 14.5	difficult
< 14.0	B 22510	12.8	13.2	B 36792	12.1	< 12.9	e. g.
< 13.5	B 17327	12.1	13.4	B 36868	12.0	< 14.1	
< 13.0	B 16037	11.9	12.4	B 37968	12.3	13.9	< 15.2 difficult hazy
< 13.0	B 16448	12.1	12.3	B 44538	12.1	14.4	e < 14.4
< 13.0	B 25424						

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Monday June 14, 1920

174734 Nova Scorpii No. 2

Remarks		See note p. 209 Nova	BH Sco Var.		See note p. 209 Nova. Var. n.s. <12.0
<13.0	B 16518	12.2	12.6	B 45021	11.8 e
	B 9556	11.8	<14.5	B 45022	12.1 e
	B 9482	12.1	14.3	B 45046	11.8 e diffic
	B 9280	12.1	13.4	B 45047	12.1 e
<14.0	A 8433	12.2	13.8	B 48010	12.2 e
	A 10112	12.3	15.2		
	A 9338	12.1	13.0		
	A 8883	12.1	n.s.<13.3		
<13.0	A 8832	12.2	n.s.		
<15.5	A 9057	12.5	14.5		
<15.0	A 2606	12.3	14.0		
	A 2809	12.4	14.1		
	A 10126	12.3	15.0		
<14.0	B 32658	12.1	n.s.		
<14.0	B 29853	11.9	"		
<15.5	B 44932	12.2	13.6		
	B 30594	12.2	13.3		
<14.5	B 31522	12.3	13.1		
<14.0	B 31470	12.2	12.9		
<14.0	B 33486	12.2	13.6		
	B 32491	12.2	<15.1		
<15.0	B 31862	12.3	13.8		
<14.1	B 33836	12.1	14.1		
<15.5	B 32049	12.2	14.5		
<12.4	B 43692	11.9	12.6		
Lun. dbl. <13.0	B 47633	12.2	n.s.		

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Tuesday June 15, 1920

174734 Nova Scorpii No. 2

		See note p. 209 Nova	BN Sc. Var.
<15.1	Mf 4465 ✓	12.1 ✓	14.5 ✓✓
<15.1	Mf 4538 ✓	12.3 ✓	14.5 ✓✓
outline not sharp	B 40484 ✓	12.0e	n.s. ✓ <12.4 ft. somewhat fuzzier than others
	B 41484 ✓	12.1 ✓	<14.1 ✓✓ n. like other images
<13.0	B 40358 ✓	12.0 ✓e	13.0 ✓✓ n. rather large im. but slightly unlike others
<14.0	B 40063 ✓	12.4 ✓	14.1? ✓✓ all images on pl. hazy
	B 41607 ✓	11.9 ✓	<13.3 ✓✓ n. like other im's
<12.5	B 31726 ✓	11.9	n.s. ✓ e. g.
	B 31719 ✓	11.9 ✓	<13.3 ✓✓
<13.0	B 33807 ✓	12.0e ✓	13.7 ✓✓
	B 32695 ✓	12.2e ✓	<12.9 ✓✓
	B 33299 ✓	12.1e ✓	<12.9 ✓✓
	B 27154 ✓	12.1 ✓	14.6 ✓✓
faint	B 27406 ✓	12.1 ✓	n.s. ✓
edge damaged	B 25269 ✓	12.0e?	n.s. <12.0 ✓
<14.0	B 25516 ✓	11.9 ✓	14.5 ✓✓
	B 25918 ✓	12.0	n.s. <12.5 ✓
	B 25824 ✓	12.3 ✓	<15.1 ✓✓
	B 20502 ✓	11.9 ✓	13.8? ✓✓
	B 20285 ✓	12.4 ✓	14.0 ✓✓
	B 18724 ✓	12.2 ✓	<14.1 ✓✓
	B 19082 ✓	12.2 ✓	<14.5 ✓✓
	B 17217 ✓	12.2 ✓	<14.1 ✓✓
	B 19444 ✓	12.2 ✓	15.0 ✓✓
	B 20489 ✓	12.1 ✓	13.9 ✓✓
	B 19719 ✓	12.2 ✓	14.1 ✓✓
	B 20465	12.2 ✓	13.8 ✓✓ <14.5

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Tuesday June 15, 1920

144734 Nova Scorpii No. 2

		See note p. 209 Nova	BN Sep Var.
	B 19,170	? e.	< 12,5 Cant. det. pl. uncertainty im.
	B 13346	12.2	< 14.5
	B 11421	12.3	n.s. < 12.3
	B 11634	12.1	< 14.1
the	B 13749	12.2	< 14,5
	B 13501	12.1? e	n.s. < 13.0
	B 18492	12,1	< 14.5
	B 5151	~~< 12.0~~ 11.5	
	B 6089	11.8	n.s. < 12.3
	B 6384	double im.,	? Cant. det. regions, stars susp.
	B 5397	12.3	15.2
	B 5835	12.3	< 13.0
	B 5967	12,5	13.7
Broken	B 19113	12.1	ns < 14.0
"	B 17534	12,0	" < 14.0
"	B 9281	11.9	" < 13.0
"	B 45388	12.2	" "

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Wednesday June 16, 1920

174434 Nova Scorpii No. 2

			see note p. 209 Nova	Var.
<13.0	B 21078	✓	12.2 ✓	12.8 ✓✓
	B 9405	✓	12.1 ✓	<13.3 ✓✓
	B 28657	✓	12.2 ✓	<13.3 ✓✓
	B 21710	✓	12.3 ✓	14.5 ✓✓ <15.5
	B 9406	✓	11.9	n.s. <12.5 ✓
	B 18921	✓	12.1 ✓	<14.1 ✓✓
<13.0	B 17120	✓	12.1 ✓	12.9 ✓✓
<14.0	B 17444	✓	12.2 ✓	14.0 ✓✓
	B 31948	✓	12.2 ✓	13.9 ✓✓
	B 15824	✓		✓ <10.7
			South up — copied fm. p. 209	
17-45	AM 4773		<11.5 ✓	
	" 4612		11.3 11.40 (1) 11.5 ✓	
	" 4590		11.1 11.30 (2) 11.5 ✓	
	" 4486		10.4 10.40 (0) 10.4 ✓	
	" 4455		9.8 9.90 (1) 10.0 ✓	
def. orn nova	" 4367		9.7 9.70 (0) 9.7 ✓	
	" 4329		10.4 10.45 (0) 10.5 ✓	
	" 4273		11.5 11.45 (1) 11.4 ✓	
	" 4249		11.7 11.80 (1) 11.9 ✓	
	" 4174		11.7 11.60 (1) 11.5 ✓	
18-30	" 4388		9.9 9.95 (0) 10.0 ✓	
	" 4365		9.9 9.75 (2) 9.6 ✓	
hazy in.	" 4527		11.0 11.00 (0) 11.0 ✓	
fuzzy "	" 4539		10.6 10.75 (2) 10.9 ✓	
	" 4562		11.2 11.25 (0) 11.3 ✓	
peculiarly shaped cav	" 4620		11.4 11.40 (0) 11.4 ✓	
	" 4269		12.1 12.10 (0) 12.1 ✓	

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Wednesday June 16, 1920

174734 Nova Scorpii No. 2

		see note p. 209 Nova.	Var.
	AM 4339	10.2 10.25 10.3	✓
fuzzy vim g.	" 4205	12.1 12.15 12.2	✓
	" 4804	11.8	✓
	" 4920	12.0 2	✓
	" 5013	11.8	✓
large vim. but not so dense ft.	" 5024	11.9	✓
	" 3928	11.9	
ft.	" 3762	12.0	✓
	" 5090	12.1	✓ 12.0 ✓
	" 3625	12.0	✓
	" 4954	12.1	✓
vl vim. hazy ft.	" 5114	11.9	✓
	" 5340	12.0	✓
	" 5390	12.1	✓
	" 5444	11.8	✓
	" 5576	12.0	✓
g	" 5640	12.0	✓
	" 5683	11.9	✓
	" 5712	11.9	✓
ft.	" 5778	12.0	✓
	" 5820	11.9	✓
	" 5854	12.0	✓
	A 7779	10.3 10.20 10.1	✓ 12.7
	A 7784	10.1 10.10 10.1	✓ 12.7
	AM 4311	10.9 10.96 10.9	

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Thursday June 17, 1920

174734 Nova Scorpii No. 2

			South up				
see note p. 209	A 7784		10.1		AM 6454	<12.3	12.1
	A. 7779		10.1		AM 6374	<12.3	11.9
			Nova	Var. near n.	" 6338	<12.6	11.8
June 20, 1915 (60)	AM	10718	<11.5				
" 11, " (60)	"	10662	<12.3	12.2			
	"	9541	<11.5				
	"	9386	<11.5				
	"	9336	<12.5	11.6			
	"	9267	<12.5	11.8			
	"	9146	<12.4	11.8			
	"	9131	<12.5	12.0			
	"	8999	<12.3	12.0			
	"	8624	<11.5				
	"	8522	<12.9	11.9			
	"	8369	<12.4	11.7			
	"	8390	<11.5				
	"	8423	<12.3	11.9			
	"	7651	<11.5				
	"	7792	<12.0				
	"	7841	<12.0				
	"	7402	<11.3				
	"	7454	<12.3	12.0			
	"	7163	<12.3	11.8			
	"	7265	<11.3				
	"	6946	<12.3	12.3			
	"	6613	<14.3	11.9			

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Thursday June 17, 1920

144734 & Nova Scorpii No. 2.

				Observation Var.	
Sept. 30, 16	DM 12535	<12.3		B 21709	B.6 yf.
Aug. 23, "	" 12363	<11.3		B 22510	13.2
" 1, "	" 12285	<12.3	11.8	B 23172	14.4
July 3, "	" 12127	<12.9	12.0	B 25424	<13.3 12.1
Aug. 10, 15	" 10973	<12.0		B 25516	14.8
Sept. 6, "	" 11084	<12.5	11.8	B 44711	14.0
" 28, "	" 11276	<12.3	12.3	B 44861	13.7
July 21, 19	" 14854	<12.9	11.6	B 44876	13.3
Sept. 29, 18	" 14456	<11.3		B 44932	13.6
Aug 28, "	" 14352	<12.3	<11.8		
May 17, "	" 13986	<11.5		AM 14187	12.9 July 29, 02
May 18, "	" 13994	<11.5			
June 4, "	" 14023	<11.5			
" 6, "	" 14038	<11.3			
Aug. 13, 17	" 13507	<11.3			
Aug. 6, "	" 13479	<11.5			
June 11, "	" 13255	<12.0	11.8		
May 29, 14	" 9802	<10.7			
July 17, 17	" 13416	<11.5			
" 27, "	" 13440	<12.9	11.8		
" 12, 18	" 14118	<12.3	11.9		
Apr. 18, 15	" 10435	<12.5	11.8		
May 8, "	" 10570	<12.3	12.0		
July 26, "	" 14869	<11.5			
May 5, 19	" 14682	<12.5	12.0		

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Monday Sept. 27, 1920

Sc. M.

Nova Sagittae - measures of p.c.

~~NC 6338~~

		Pole			Pole NC 6343			S6337 S6343 Mean	Diff.
		Sc. 1	Mean	Sc. 2	Sc. 1	Sc. 2	mean		
NC 6337	5	5.1 5.3	5.40	5.5	5.3 5.5	5.7 (se)	5.60	5.50	- 0.99
	6	6.2 6.0	6.20	6.2	6.1 5.9	6.0	6.05	6.12	0.99
	8		7.7			7.6		7.65	0.58
	9		8.5			8.0		8.25	0.58
	10		8.7			8.5		8.60	0.42
	11		8.8			8.9		8.85	0.70
	12		9.0			9.4		9.20	0.66
	13		9.8			9.8		9.80	0.50

		NC 6338	Nova		Cu.	mag.	
	a	5 5.8 5.6 6.0	5.70	5.6	0.98	6.68	
	b	5.8	5.90	5.8	0.94	6.84	
	c	6.3 6.4	6.35	6.4	0.83	7.18	
	d	7.1 6.9	7.00	6.9	0.70	7.70	
	e			7.5	0.62	8.12	
	f			8.1	0.55	8.65	
	g1			dif	.	.	
	g2			8.6	0.53	9.13	
	f3			8.8	0.52	9.32	
	f			9.1	0.53	9.63	
	g1			9.8	0.58	10.38	
	g2			10.0	0.60	10.60	

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Monday Sept. 27, 1920

So. M. Nova Sagittae - measures of P.C.

	Pole			Diff.	
		Mean	C. 2		
MC 5708 5	5.1 4.9	5.05	5.0	1.44	
6	5.8 5.6	5.70	5.6	1.41	
7			7.3	0.93	
9			7.9	0.93	
10			8.0	1.02	
11			8.8	0.75	
12			8.9	0.96	
13			9.8	0.50	

	Nova			Cu.	Mag.
MC 5709					
a	5.2 5.0	5.25	5.3	1.43	6.68
b	5.6 5.4	5.60	5.6	1.37	6.97
c	6.0 5.8	6.00	6.0	1.28	7.28
d	6.2 6.0	6.25	6.3	1.24	7.49
e	7.3 7.1	7.25	7.2	1.05	8.30
f			8.0	0.90	8.90
f'			8.1	0.88	8.98
f''			8.4	0.84	9.24
f'''			8.6	0.80	9.40
g			9.0	0.75	9.75
g'			9.6	0.67	10.27
h			9.9	0.63	10.53

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Tuesday Sept. 28, 1920

Sc. M

10:00

Nova Sagittae Measures of p.c.

MC 6410

	Pole Sc. 1	Sc. 2		Pole Sc. 1	MC 6416 Sc. 2	Mean	Mean	Diff.
5	5.2 5.0	5.20	5.2	5.3 5.1	5.3	5.30	5.25	1.24
6	5.8 5.6	5.80	5.8	6.0 5.8	5.8	5.90	5.85	1.26
8	7.1 6.9	7.15	7.2		7.4		7.28	0.96
9			7.8		7.7		7.75	1.08
10			8.1		8.0		8.05	0.97
11			8.7		8.7		8.70	0.85
12			8.9		8.8		8.85	1.01
13			9.0		8.9		8.95	1.35
14			9.7		9.9		9.80	0.85

MC 6411

	Nova			Cu.	Mag.
a	5.5 5.3	5.50	5.5	1.22	6.72
b	5.7 5.5	5.70	5.7	1.20	6.90
c	6.1 5.9	6.05	6.0	1.16	7.21
d	6.4 6.2	6.45	6.6	1.11	7.66
e	7.3 7.1	7.35	7.4	1.03	8.38
f			7.8	1.00	8.80
f_1			7.9	0.99	8.89
f_2			8.0	0.99	8.99
f_3			8.6	0.98	9.58
g			8.8	0.98	9.78
g'			9.0	0.99	9.99
h			9.7	1.03	10.73

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