KG
11.365
522

1992phae.proj...520W

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KG 11365.519

1892phot.proj..526w

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1892phae.proj..520W

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1992ptrs..fold..552W

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1892phae.proj..520W

KG 11365.519

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1892phae.proj..520W

Dec. 9, 1892.

Comet Holmes W. Obs.

0 4√ + 35.1
1 0
+0 1√

Comp Star = 9.m + 35° 1√4 ~~16~~ (8.9 K)

Obs. zero 290.√
45.0
Setting 335.√

1 34 40.0 *
34 ~~4~~2.√ *
3√ 1.√ ≤
3√ 3√.√ ≤

3√ √6.√
36 8.6
36 18.1
36 √32

37 17.√
37 29.7
37 4 0.√
38 1√.4 + 0.7

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1892phae.proj..520W

Dec. 9. 1892

1 38 ~~4.3~~

~~39~~ 6.

1. 39 35.2
39 47.8
39 ~~7.2~~
40 32.6

42 32.0
42 44.
42 53.6
43 29.0

43 ~~1.~~
44 4.0
44 13.1
44 49.

45 17.
45 29.8
45 39.5 + 0.2
46 16.0
~~46~~ ~~16.0~~

46 39.0
46 ~~41.~~
47 0.8
47 37.0

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Dec. 9. 1892

1	47	55.0
	48	8.0
	48	17.5
	48	3.5
	49	10.5
	49	23.3
	49	32.5
	50	8.4
	50	29.6 + 0.2
	50	43.5
	50	3.5
	51	23.0
	51	36.0
	52	1.5
	52	14.0
	52	23.5
	53	0.0

Rejoin 3rd full set from last. Other in phec. transits stars, stars comets. Both in southern half.

Comet quite faint. There is a nucleus & coma. Fourth faint & shrunken nucleus, rather stellar. Coma in larger telescope quite small.

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Dec. 9. 1892.

Coma about 2'.4 in diam. Nucleus quite faint. Obs. rather difficult There seems to be some light round about principally to following. And laterly. The light to prec. seems to be rather wanting.

On looking again there seems to be a diffused light ~~20~~ extending to 20' fol. the nucleus with not much if any to prec. and extending 18' both north & south of Nucleus, so as to be although quite faint. The comet's light can be made to just about fill the field of No. I. eye piece. The coma is proper a little more to fol. than north & south. It extends perhaps about 3' to following.

B 236 B 394

2	6	46.5	8	37	0.0
	7	46.5		38	0.0

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Dec. 9. 1892

Phot. 2 pair on. Meas. of general light in Nucleus & coma immediate adjacent. Comp Star = γ Androm.

Large telescope in focus.

Focus	outside
12.7	
13.9	
13.0	

β Androm. too bright for comes even when further outside focus. Abandoned.

New start with Comp Star

Large telescope in focus.

Comp star γ Andromeda.

Focus	Outside	
12.9	30.0	12.14
13.2	30.0	12.1 inyu.
13.0	29.0	
13.0	29.7	

9.3 ±

The brightness Mrs. atone is the general brightness of nucleus & coma immediate adjacent.

29.7
13.0
16.7

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Dec. 9. 1892.

Revision of Comp. Stars for Var. Stds.

R Ceti.

2	2 r	−1,7
2	K α	
+0	23	

One or two more stars are coming on beginning of sequence as Var. comes up. to 7.r mag.

Clouds

Star b in the finder looks a little brighter than star a. a however in the large tube one looks perhaps a little brighter than b possibly perhaps because it is a little reddish. Or may be longer than the coming of the clouds is affecting the relative estimate.

2	15	−0.2
3	41	
+1	26	

Star j is a little bright than d but j is quite near a bright star. There are one or two stars

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Dec. 9. 1892.

near "β which could perhaps be substituted for "γ.

δ is very slightly less not much brighter than β.

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1892phae.proj..520W

Dec. 10. 1892.

Comet Holmes U.Obs.

0 45 +35.1
0 55
+0 10

Δt

General light of nucleus of Comet with Lot 2.
Comp Star m μ Androm.

Focus	Outside	
12.8	29.7	12.2
13.5	31.0	12.9 magn.
13.3	30.8	
13.2	30.5	
	13.2	
	17.3	

7.7 ℓ

Obs. zero 6.1
45.0
Setting 51.1

General appearance of Comet practically the same as last night.

Pretty clear in the Zenith the first of evening. became hazier quite fast. Another Comet was probably invisible when last as pos. zero

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1892phae.prj..520W

Dec. 10. 1892.

Was obtained.

Very foggy now & growing steadily worse.

B&C 1182 B 394

9 ⩛6 42.⩛ 10 0 0.0
⩛7 42.⩛ 1 0.0

Resp. Sup. I. Phot. R. Obs. Green
Comp. with Sat. pol. = Sat. III.
Seeing rather poor.

10 0 3⩛
+12

10 + K7
10 0 0

+ K7
9 ⩛6 K2

10 ⩛ 29. Ap. time ecl.

Sun. of Vcs:

10 3 2⩛.0 20⩛.2 16.2
37.⩛ 10 7 1.2 22.1.K 22.9
K9.0 43.2 202.K 39.1
K 1.⩛ 22⩛.3 213.6 19.6

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Dec. 10. 1892.

10		26.0	10	8 44.0	Lear.
		29.5	10	8 47.5	201.1
		34.5	10	8 56.5	229.5
		44.0	10	9 2.0	193.6
		49.0	10	9 7.0	222.3
		55.0	10	9 13.0	189.7
	6	1.0	10	9 19.0	234.4
		8.0	10	9 26.0	184.4
		16.0	10	9 34.0	239.0
		22.5	10	9 40.5	184.9
		30.0	10	9 48.0	244.2
		36.0	10	9 54.0	183.3
		43.0	10	10 1.0	243.3
		50.0	10	10 8.0	183.7
		56.0	10	10 14.0	244.9
	7	3.0	10	10 21.0	182.9
		11.0	10	10 29.0	246.4
		19.5	10	10 37.5	177.4
		27.0	10	10 45.0	247.7
		36.5	10	10 54.5	174.4
		44.5	10	11 2.5	250.3
		51.5	10	11 9.5	176.6
		59.5	10	11 17.5	253.2
	8	8.0	10	11 26.0	175.2
		16.5	10	11 32.5	252.8
		21.5	10	11 39.5	178.5
		28.0	10	11 46.0	257.3 →

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Dec. 10. 1892.

10	8	36.0		172	81.5
		44.0	10 12 7.5	253.7	82.0
		55.5	49.5		163.5
	9	2.5	49.5	172.5	81.8
		10.0		256.5	213.2
		17.0		173.4	81.0
		26.5	10 12 40.4	254.4	85.7
		33.0	22.4		166.7
		44.0		169.7	83.4
		54.5	10 13 13.2	255.4	213.2
			55.2	172.4	86.8
	10	2.5		179.5	90.5
		9.0	55.2	164.6	177.3
		17.0		259.5	214.9
		24.0		171.7	86.6
		32.0	10 13 44.5	256.9	87.2
		34.0	26.5		168.8
		46.5		170.3	84.4
		53.5	10 14 15.6	257.5	215.0
			57.6	171.4	83.3
	11	1.0		255.1	83.3
		9.5		172.7	83.3
		20.0		255.6	213.7
		28.0	10 14 58.9	176.6	177.1
		36.0	40.9	253.3	84.5
	12	1.5		170.4	162.2
		9.5		256.5	81.1
		16.0		178.9	213.6
		27.5	10 15 40.8	253.6	78.7
		36.0	22.8	173.0	81.3
				254.3	160.0
					80.0
					214.0

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Dec 10. 1892.

10 12 KKV
V 2.0 10 16 16.0
58.0

13 3.0
12 V

17K2 81.2
2V V.K 81.7
82.9
81.4

17K1
2V V.6 214.9

B4C1182
10 21 42.0
22 42.0

10 B39K
2V 0.0
26 0.0

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1892phae.proj..520W

Dec. 11. 1892.

B. & C. 1142.

11	√A	26.√
	√9	26.√

B. 394

12	2	0.0
	3	0.0

12	30	√A
12	2	0
	2A	√A.
11	√A	26
12	27	24. Apo. time ed.

Rec. of Jy-II W. obs. Powe rec. Phot. R. Comp. with Kat. preceding = Sat. I.

Limit of ors.

12		22	√0			24.1 20.4 21.2 41.6 20.8
		23	6			44.√
			19	h 12	m 26 46.0	24.2
			33		12.0	4√.K 34.6
		2A	24	12	31 58.0	Seen.
		28	3~~2~~	12	32 6.0	19.7
			39	12	32 13.8	48.2
			46	12	32 20.0	18.8
			√.L	12	32 26.0	√6.0
			√8	12	32 32.0	16.2
		29	√7	12	32 39.0	√√.0
			10	12	32 44.0	12.3
			15	12	32 49.0	√8.0

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Dec. 11. 1892.

21	12h 32m 53.0s		4.2
26	12 33 00.0		58.2
31	12 33 05.0		8.2
37	12 33 11.0		66.0
42	12 33 17.0		5.7
48	12 33 22.0		68.0
53	12 33 27.0		348.0
58	12 33 32.0		69.8
30	4 12 33 38.0		354.2
9	12 33 43.0		72.0
14	12 33 48.0		346.5
19	12 33 52.0		73.8
23	24 12 33 57.0		349.0
29	12 34 03.0		74.5
34	12 34 08.0		350.8
39	12 34 13.0		75.2
4 5	12 34 19.0		~~348.0~~
50	12 34 24.0		74.0
54	12 34 28.0		354.2
00	12 34 34.0		73.0
31	4 12 34 38.0		354.1
10	12 34 44.0		75.4
15	12 34 49.0		355.5
20	12 34 54.0		76.7
26	~~12 35 00.0~~		353.6
31	~~12 35 05.0~~		76.5
37	12 35 08.0		354.8
42	34.0		75.2
4			349.8

7.0
83.0
80.4
~~162.4~~
81.7

215.2

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Dec. 11, 1892

	12	35	30.8	76.1	88.3 / 87.9 / 176.2 / 88.1
			56.8	351.1	
32				79.0	214.5
				345.8	87.0
				76.8	94.0 / 181.0 / 90.5
	12	35	54.2	349.0	
			20.2	83.0	214.6
				349.7	94.5
				64.2	91.3 / 185.8 / 92.9
	12	36	19.0	347.0	
			45.0	75.3	214.8
33				348.1	
				78.8	90.7 / 97.0 / 187.7 / 93.8
	12	36	46.0	347.0	
			12.0	82.0	213.5
				344.2	96.7
				80.9	92.9 / 189.6 / 94.8
	12	37	14	346.2	
			40.0	81.1	213.6
				348.3	94.0
34				82.3	95.3 / 189.3 / 94.6
	12	37	47.5	347.7	
			13.5	81.0	214.3
				343.8	98.3
				82.1	92.8 / 191.1 / 95.6
	12	38	19.2	347.2	
			45.2	80.0	213.3
35				348.1	
				80.0	

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Dec. 11. 1892.

	30	12 38 58.8	349.5	91.9 89.5 181.4 90.7
	36	24.8	79.0	214.2
	43		349.0	90.9 94.5 185.4
	52		79.9	92.7
36	15	12 39 37.2	344.5	
	23	3.2	80.0	213.6
	31		343	93.7 96.2 189.9 95.0
	40		79.0	
	50	12 40 19.0	344.9	
	59	45.0	81.1	212.6
37	20		343.5	96.5 98.0 194.5 97.2
	36		80.0	
40	16	12 48 28.8	342.0	
	27	38 14.8	80.0	211.4

Imp. rather low. Seeing rather bad at times, with a little boiling, cloth also gave some trouble. Sat. seem to have a little late probably from low altitude and somewhat bad atmospheric conditions

B. + C. 11 A2.

12	52	2 V.2	13	2	0.0
	59	2 V.1		3	0.0

B. 394.

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1892phae.proj..520W

Dec. 12. 1892.

~~Sky~~ Haze in sky pretty thick but will try for Comet Holmes.

Comet Holmes

0	45	+35.1
1	4	
+0	19	

Comet invisible. Stars very faint.

7 45 Sky steadily growing worse.

Sky now very thick & growing worse.

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Dec. 1V. 1892.

B. & C. 11 42.

10 30 1A.4

31 1A.4

B. 39 K.

10 3V 0.0

36 0.0

11 3 V.

4 12

11 11 17.

10 3V 0

36 17.

10 30 14

11 6 3V. Ap. time ecl.

Dis. of Jupiter III w. obs. Rod reversed. Photometric R. Confound w. I sat. preceding, V is 3 min. limit. which is equal to Sat I

11 3 3V.

10 V6 3V. 10 " "

h

10 57 16 3.1

4.5 262.2

Limit uncertain

10h 49m 35 203.2

53 57.4 222.2

5.5 10h 54m 39.4 203.2

16.0 222.4 212.8

19.0
19.2
38.2
19.1

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1892phae.proj..520W

Dec. 15. 1892.

		34	165.0		98.2
					99.1
		43	263.2	1	197.3
		10 55 29.2			98.6
10	50	50 47.2	163.1		
		62	262.2	213.4	
	51	12	163.1		
					97.0
		21	260.1		99.4
				2	196.4
		25.5	163.6		98.2
		37 10 56 6.6 24.6	263.0	212.4	
		49.5	165.0		
					99.3
		57.0	264.3		99.2
				3	198.5
	52	7 10 56 45.9	162.8		99.2
		22 3.9	262.0	213.3	
		34.5	161.5		
					96.6
		50	258.1		97.7
					194.3
		58.5 10 57 34.1 52.1	161.3	4	97.2
	53	5.5	259.0	210.0	
		14	163.0		
					97.0
		20.5	260.0		98.0
					195.0
		27 10 58 6.5	165.0		97.5
		36.5 24.5	263.0	212.8	
		43	166.8		
					94.1
		48	260.9		103.2
					197.3
		55 10 58 35.5 53.5	164.2	6	98.6
	54	8	267.4	214.8	
		17	166.1		
					93.1
		26	259.2		94.2
					187.3
		37 10 59 10.5	166.0	7	93.6
		38 28.5	260.2	212.9	
		43.5	164.4		
					95.9
		50	260.3		89.8
					185.7
		54.5 10 59 34.4 52.9	170.2		92.8

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1892phae.proj..520W

Dec. 15, 1892

61	1.5		260.0	213.9	
	11		168.0		91.4
	16		259.4	9	84.9
	22	11h 00m 01.1s	170.1		176.3
	27.5	19.1	255.0	213.1	88.2
	32.5		166.0		90.0
	37.5		256.0		96.8
	45.1	18h 00 24.4	164.2	10	186.8
	52.	42.4	261.0	211.8	93.4
	58		166.8		87.2
56	4		256.0		98.9
	11	18h 00 49.6	165.0		186.1
	17.5	7.6	263.9	211.1	93.0
	24		171.2		86.8
	30		258.0		95.5
	37	18h 01 15.5	165.5		182.3
	43	33.5	261.0	213.4	91.2
	48.5		169.1		88.4
56	55	18h 01 39.6	257.5		82.6
57	57.6		175.2		171.2
	0.5		258.0	214.0	85.6
	6.5		169.0		88.0
	12		257.0		87.2
	18.5		169.1		175.2
	24.5	18h 02 3.4	260	211.8	87.6
	30.5	21.4	172.2		82.9
	36.5		255.1		82.6
	42.5		171.2		164.9
	48	18h 02 27.0	258.2	212.9	82.4
	53.0	45.0			

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1892phae.proj..520W

Dec. 15, 1892.

58.2	173.2		78.8 / 87.2 / 166.0 / 83.0
9.5	258.0	16	
14.5	169.6		
21.5	18 02 53.9 / 11.9	236.5	212.9
28 ~~33.0~~		173.2	
36		255.1	81.9 / 76.1 / 158.0 / 79.0
40.5	18 03 49.8	175.9	17
47.	37.9	252.0	213.8
52		169.2	83.6 / 27.3 / 160.9 / 80.4
58.5		252.8	
5.5	18 03 43.9	173.2	18
11.5	1.9	250.5	211.4
18		173.5	
24		254.5	81.0 / 81.9 / 162.9 / 81.4
29.5	18 04 08.6	171.1	19
35	26.6	253.0	213.0
41		173.4	75.4 / 72.9 / 148.3 / 74.2
46.5		248.8	
52.5	18 04 31.9	178.0	
59.5	49.9	250.9	212.8
0 5		179.1	66.4 / 68.6 / 135.6 / 67.5
12		245.5	
17	18 04 56.6	178.5	
24.5	14.6	247.1	212.6
29.5		178.7	75.1 / 70.2 / 145.3 / 72.6
37.5		253.5	
47.5		178.8	
53.0	18 05 24.4	248.2	213.6
0	42.4	176.1	

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1892phae.proj..520W

Dec. 15, 1892.

	5		248.1		72.0
	10.1	1h 05 50.2	172.4		69.8
	17.5	8.2	243.3	210.2	141.8
	23.1		172.4		70.9
	29.5		242.5		65.1
	34.5	1h 06 14.1	179.4		71.6
	41	32.1	251.0	212.6	136.7
	49.		176.0		68.4
11					74.8
10	1 56		250.8		71.0
	2 57.5	1h 06 42.5	178.0		145.8
	11.5	0.5	249.0	213.4	72.9
	17		178.0		70.0
	21.5		248.0		65.3
	26.5	1h 07 06.9	180.6		135.3
	31	24.0	246.1	213.2	67.6
	37.5		180.0		66.0
	44.5		246.9		65.9
	51	11 07 29.2	181.1		131.9
	2 56	47.2	247.0	213.5	65.6
	3 2.5		180.7		62.2
	8.5		242.9		62.4
	8		181.2		62.3
	21.5	11 07 58.4	177.8		
	30	16.4	241.3	210.4	
	40		182.8		55.2
	46.5		235.0		52.8
	52	11 08 31.1	184.2		108.0
	3 58	49.1	227.0	210.5	54.0
	4 3.5		183.0		58.0
	?		241.0		54.2
	15.5	11 08 54.0	(illegible)		112.2
					56.1

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1892phae.proj..520W

Dec. 15. 1892

		21	12.0		239.0	212.0			
		26			186.4			50.8	
		34			239.2			51.4	
		39.5	11	09	18.8	185.8		102.2	
		45.5	36.8			237.2	212.6	51.1	
		51				184.5			
m	m	4				238.0		53.2	
11	5	14	11	09	42.0	189.0		50.1	
		8	0.0			239.1	212.7	103.3	
		17				190.1		51.6	
		20.5				240.0			
		26	11	10	5.5	192.1		49.9	
		30.5	23.5			238.0	211.0	45.9	
		37.5				189.0		95.8	
		43.5				240.0		47.9	
		50	11	10	29.1	192.0			
		57.5	47.1			238.0	214.8	51.0	
	6	3				193.0		46.0	
		9				234.0		97.0	
		16.5	11	10	54.5	190.1		48.5	
		21.5	12.5			237.2	213.1		
		31				192.0		41.0	
		36.5				237.0		45.1	
		41.5	11	11	21.0	193.0		86.1	
		47.0	39.0			233.9	214.0	43.0	
	6	56.5	11	11	38.5	194.0			
h	7	2	11	11	44.0	235.0		45.0	
11		8.5	11	11	50.8	195.1		40.9	
		15	11	11	57.0	232.0		85.9	
								42.0	

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1892phae.proj..520W

Dec. 17. 1892.

m	m	20	11	12 02.0	196.0
11	7	27	11	12 09.0	232.0
		31.5	11	12 13.5	193.5
		37	11	12 19.0	220.0
		44	11	12 26.0	196.0
	7	49	11	12 31.0	220.2
	7	56.5	11	12 39.5	196.5
	8	2	11	12 44.0	229.5
		9.5	11	12 51.5	199.3
		14.5	11	12 56.5	220.0
		20.5	11	13 02.5	198.2
		26.5	11	13 08.5	227.3
		33	11	13 15.0	199.1
		39	11	13 21.0	222.2
	8	46.5	11	13 28.5	201.9
		54	11	13 36.0	222.2
		0	11	13 42.0	200.2
		8	11	13 50.0	223.0
		17.5	11	13 59.5	202.0
m	m	25	11	14 07.0	222.0
11	9	36	11	14 18.0	204.5
		52	11	14 34.0	221.0

Mart seen ↑ ↓ Jupiter.

B + C. 11 f 2.

11	33	17.3
	34	17.3

B. 39 4.

11	38	0.0
	39	0.0

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1902phae.proj...scan

Dec. 16. 1892.

Comet Holmes 34.2 W. 060.

0 47 + ~~35.8~~
1 17
+0 30

0 ✓0 +34.2
1 28
+0 38

0 ✓0 +34.8
0. 32
+0 42

Pos. Zero 277.2
45.0
Setting 322.2

1	39	10.✓	∈
	39	42.0	*
	39	✓8.0	*
	40	7.2	∈
	40	33.1	
	41	6.2	
	41	22.✓	
	41	32.✓	

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1892phae.proj..520W

Dec. 16. 1892.

1	42	1.0	≡
	42	~~30~~ 30.7	*
	42	50.0	*
	43	0.5 + 1.0	≡
	44	~~31~~ 22.5	
	44	54.0	
	45	10.5	
	45	22.0	
	46	32.3	
	47	5.0	
	47	21.0	
	47	33.5	
	48	24.5	
	48	56.4	
	49	12.6	
	49	24.8	
	50	24.2	
	50	55.6	
	51	12.0	
	51	24.0	

Order the precitransits Comet Star, Star Comet. Star in Southern Leaf, Comet In Northern Leaf, Comet ~~faint~~ faint. Obs. difficult, ~~Not much of anything visible of Star seems to be~~

1892phae.proj...520W

Sept. 16.15 G.M.T.

Little faint light following the Comet but it is very faint & almost invisible. About all that remains of the Comet that is particular definite is a little central condensation approximating to a nucleus with a surrounding small coma the whole not being more than 6' in diam. & quite faint.

Comp. Star is 7.7 mag.

and 8.7 mag. for Comp. Star 4° sec. & is 10' north of it. a 9.3 prec. Comp. Star 1 sec. & is 3' south of it. a 9.0 following 8.8 mag. 7 sec. & is 2' south of it. a 9.1 mag. prec. Comp. Star 7 sec. & is 9' south of it. Lower prec. Comp Star 8.5 mag. sec. & is 6' north of it.

∴ Comp. Star = 2h 11m. + 34° 14' (7.0 K)

B 236			B 394	
2	11	37.5	15	0.0
	12	37.6	16	0.0
	13	37.6	17	0.0

∴ B. 236 is 3m 23.0 slow.

Meas. of light of Comet with Pole.

2. Long. of Star focus.

Comp. Star μ Androm.

1892phae.proj..520W

Dec. 16. 1892.

W Obs.

Focus	outside.	
13.4	37.0	12.7 <
13.0	34.9	~~12.4~~ magn.
13.0	34 √	
13.1 <	3 √ √ <	
	13.1	22.4

Large tel. set ○ √ out of focus. W Obs.

Outside	Focus	
39.0	13.0	13.0 √ +
37.4	12.8	~~13.0~~ < magn.
39.0	13 √	
3 4 √ <	13.1 <	
13.1		
2 √ +		

Exam. of Comp. Stars for R. Ceti

2	20	−1.4
3	6	
+0	46	

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1892phae.proj...520w

Dec. 16. 1892.

Exam. of Comp. Stars for

η Cet.

2	26	−12.0
4	17	
+1	51	

Selection very good as far as examined to be finished on next night.
One or two brighter stars need to interpolated as we beginning.

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1892phae.proj..520W

Dec. 20. 1892.

Revision of Comp. stars for Vars

N. Ceti

2 26 −12.1

3 36

+1 10

~~2 32~~

~~3~~

C' is lighter than c but the interval is rather small.

Star c has a rather close companion which decidedly prejudices it mag. in the large tel. Possibly a star at about 2h 27m 49sec −13° 20' was intended.

Nova Aurigae

5 23 +32,0

4 45

−0 38

10 40 Nova = 9 in large tel.
Same in finder.

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1892phae.proj..520w

Dec. 20. 1892.

Comet Holmes 6.06

0 $\sqrt{-3}$ +34.5

4 $\sqrt{-6}$

+4 3

0 $\sqrt{-3}$ +34.5

$\sqrt{-}$ 6

+4 13

Comet not certainly seen. Seeing poor.

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1892phae.proj..520W

Dec. 27. 1892.

Comet Holmes 11,860,

0 √2.3 +34° 13'

2 3

+1 1 √

0 48 +34,5

2 3

+1 1 √

Comp Star – Dm + 34° 1√4 (7.9 L)

210,8 Pos. zero

4√0

2√√.8 Setting

2	31	40.√		*
	32	30.√		*
	33	33.√	+0.7	○
	3√	9.6		○
	36	0.7		
	36	√0.8		
	38	55.2		
	39	30.√		

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1892phae.proj..520W

Dec. 22. 1892.

2	40	1.2
	40	57.6
	42	54.5
	43	31.0
	44	39.7
	45	30.2
	47	32.7
	48	9.5 — −0.5
	48	43.5
	49	44.2
	51	47.0 +0.4
	52	22.5 +0.6
	54	12.0
	55	3.2
	57	7.0
	57	43.1
	58	16.0
	59	7.0
3	1	0.8
	1	46.9

Obs. in prec. to nuc. to star, star — comet
Comet. Comet faint. Coma 0.7 in diam.
tendency to nucleus but faint
There seems to be diffused light
which can be traced for 1°

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1892phae.proj..520W

Dec. 27 V. 1892

some 15" to following. No general appearance better for a small object. No. 2 not differs from faintness of corner. Both in southern half.

	B 236			B 394	
3	11	49.0	8	5.2	0.0
	12	49.0		5.3	0.2

∴ B. 236 is 3m 6.7 slow.

Meas. of light of Comet Holmes.

Large tel. in focus. Comp. star A Androm.
Mean of general light of Nucleus.

Focus	Outside	
13.0	37.8	
13.3	37.0	
13.1	36.0	Diff.
13.3	36.9	23.6
	13.3	
	23.6	

12.49 ~~13.9~~ mean.

g. 2 h

Mean of general light of nucleus with large tel. 0.5 outside focus. M. obs.

Focus	Outside	
12.2	38.1	34.6
13.0	38.8	12.7
13.0	38.4	21.9
12.7	34.6	21.9

13.09 ~~13.1~~ mean.

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1892phae.proj..520W

Dec. 27, 1892.

Revision of Comp stars for

R. Tauri

4 19 +10.9

4 ✓

—0 14

4 10

—0 9

Examine interval bet. f & c in small telescope.

Look at interval bet. d' & d.

g' is probably wrongly identified & should be Dm +10° ✓79

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1892phae.proj..520W

Posted to Lere.

Dec. 23. 1892.

Exam. of Comp. Stars for

O. Cete'

2 14 −3.4

2 7

−0 7

Interval bet. a & b rather large.
There is not very much diff. bet. a & b.
There is not much diff. between n & 0.0 of
Argelander's notation
Last as m & n in last notation.
Interval bet. n & 0 in last notation
a little larger.

Clouds

S. Cassiop

1 10 +72.1

4 30

+3 20

My 4 S, S, n in large tel
200 fr. for finder
Exam. 126

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1892phae.proj.-520W

Dec. 23. 1892.

R. Lyncis

6 49 +V V.O

4 46

-2 ~~+7~~3

More clouds

R = n in long tel.

Too p. for fiador

Eor 129

More or less light cloud in 104.

Routed throughout evening by clouds.

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1892phae.proj..520W

Dec. 24. 1892.

Meas. of light of faint star in large tel. with Auto 7 bright & faint star in succession in small tel. with Plob. 2. 7 M.Obs.

First case. Comp. Star β Orionis

Focus	Outside	
12.6	~~36.2~~ wrong	
12.2	34.2	
12.2	34.2	
12.2	34.1	Magn. 9.1
12.5	34.0	
12.7	34.0	
12.40	33.0	
	33.92	
±.2	±.3	

Second case. Comp. Star β Eridani.

~~19~~

Focus	outside	
12.8	19.3	
12.9	19.0	Magn. 8.9
12.8	19.0	
13.0	18.5	~~Magn. 8.9~~
13.2	19.06	
12.9	18.5	~~Magn. 9.0~~
12.193	18.90	
±.1	±.2	

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1892phae.proj..520W

Dec. 24. 1892

Exam. of Comp. stars for Var's. W. Obs.

R. Geminorum

6 5 4 +24.4

3 3 5

−3 1 9

Interval bet. a & b large.
Interval bet. b & c rather large.
Look also at interval bet. a & d
perhaps a star 20' south of b & c
little bright would be used
with advantage.
Otherwise selection very good.

Light of Comet Holmes. Jr. 7h.

Plot. 2.

0 5 7 +34.3

4 5 5

+3 5 8

1892phae.proj..520W

Dec. 24. 1892.

Suspected Star Comet near
β Andromeda.

Pos. 900 243.5
45.0
Setting 288.5

5	15	45.5
	15	52.5
	16	22.0
	16	46.6
	17	8.5
	17	14.6
	17	43.5
	18	9.0
	18	34.5
	18	40.5
	19	9.3
	19	35.5
	20	2.0
	20	7.0
	20	36.5
	21	3.0

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1892phae.proj..520W

Dec. 24, 1892.

✓	21	26.5
	21	31.5
	22	0.5
	22	27.7

Obscure prec. triangle Comp, Star, Comp, Star.
Comp in Northern Left Star
in Southern Left.

This turns out to be a Nebula.

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1892phae.proj..520W

Dec. 27. 1892.

Revision of Comp. Stars for ☉ Cete. Fr. obs.

2	12	−3.4
2	2 v	
+0	13	

Revision of Comp. Stars for,

R Geminorum. Fr. obs.

6	v 3	+24.4
4	1 v	
−2	34	

S Cassiop.

1	10	+72.1
4	v v	
+3	4 v	

m 3.5 S, S 1 m in large tel.
Too ft. for finder.
Est. 10.7

10 v

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1892phae.proj..520W

Dec. 27. 1892.

γ ~~Geminorum~~ Andromedæ.

Divided both by Fr. and B. with various powers.

~~Σ~~ Σ 73

0	48	+22.9
√	45	
+4	√7	

0	48
√	√0
+√	2

Divided by Fr. and elongated by B.

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1892phae.proj..520W

Dec. 29. 1892.

B. & C. 1162.

6 41 2V.0
42 2V.0

394
6 42 0.0
43 0.0

Resp. Lat. II. Phot. R. P. obs. Fr. rec.
Comp. with most remote Lat. for E = Lat. I.

6 V4 V.
42 0

12V
6 41 2V

6 V3 30.
2 12.

7 1 42. Asp. Cine Sol.
Seeing good.
Limit of Vis.

6 V4 23.0
37.V 6h 59m 19.5
V3.V 44.5
V9 4.0

11E.6 11.4
126.0 12.7
24.1
11V.V 12.0
124.2 121.1

7

1892phae.proj..520W

Dec. 29, 1892.

7	2	19.0	7	2	54.0
		24.0	7	2	58.6
	2	29.5	7	2	59.5
		32.0	7	3	7.0
		36.5	7	3	11.5
		41.5	7	3	16.5
		46.0	7	3	21.0
		52.0	7	3	27.0
		57.0	7	3	32.0
	3	1.0	7	3	36.0
		5.5	7	3	40.5
		10.5	7	3	45.5
		15.5	7	3	50.5
		21.0	7	3	56.0
		24.0	7	4	3.0
		33.5	7	4	8.5
		38.0	7	4	13.0
		44.0	7	4	19.0
		52.0	7	4	27.0
		57.0	7	4	32.0
4		2.5	7	4	37.5
		7.5	7	4	42.5
		13.0	7	4	49.0
		19.5	7	4	54.5
		25.0	7	5	0.0
		31.0	7	5	6.0
		36.5	7	5	11.5
		42.0	7	5	17.0

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1892phae.proj..520W

Dec. 29. 1892.

7		7	5	24.5	
		7	5	31.0	
		7	5	38.5	
		7	5	43.0	
		7	5	49.0	
		7	5	54.0	
		7	5	59.5	
		7	6	5.0	
		7	6	11.0	
		7	6	17.0	
		7	6	23.0	
		7	6	28.0	
		7	6	34.5	
Assumed to be 6m →		7	6	41.0	
		7	6	47.0	
		7	6	52.5	
		7	6	58.5	
		7	7	4.0	
		7	7	20.0	
	45.0				125.2
Assumed to be 7m →	6				
		7	7	46.0	
	11.0				122.6

79.6
78.7
158.3
79.2

74.7
77.9
152.6
76.3

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1892phae.proj..520W

Dec. 29. 1892.

7 7

			23.3		
	7	8	29.5	163.0	79.7 / 82.3 / 162.0 / 81.0
			54.5		
4				166.6	124.3
				42.4	82.8 / 76.5 / 159.3 / 79.6
	7	8	54.9		
			19.9	165.6	125.3
				42.2	78.3 / 81.8 / 160.1 / 80.0
				160.2	
	7	9	19.9	42.2	
			44.9	166.1	* 122.3
9				41.2	84.6 / 80.6 / 165.2 / 82.6
				165.4	
	7	9	45.2	43.4	6
			10.2	164.6	** 123.8
				42.1	81.8 / 81.7 / 163.5 / 81.8
				165.9	
	7	10	24.1	40.6	
			49.1	162.2	123.2
10				42.0	79.1 / 77.5 / 156.6 / 78.3
				161.4	4
	7	10	50.6	42.4	
			15.6	160.2	121.7

* Prob. 166.1

** " 166.0

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Dec. 29. 1892.

B. + C. 11 Hr.

7 22 24,6
23 2K.V

B. 394.

7 23 0.0
24 0.0

Showed Mr. Lawrence various things about the work.

Exam of Faint Comp. Stars for U Cet.

2 26 ⊕ -12.1
2 VV
+29

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1892phae.proj..520W

Dec. 29. 1892

Dm. Wedge Zone Yr. obs.

+9° Series 104.

17 +9.9

104

9	31	823	470		
			465		
			468	14.03	6.07
		865	451	17.66	5.91
			455		
			460		
		872	302	Bright and southern	
			310	component measure	
			318	9.30	4.03
		879	350		
			355		
			357	10.92	4.73
		880	385		
			395		
			398	11.78	5.10
		890	360	Following bright	
			368	and northern	
			381	Triangle	
				12.09	4.37

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1892phae.proj..520W

Dec. 29. 1892.

894	328			
	330			
	318	9.76	4.23	
901	361			
	360			
	335	10.76	4.66	
908	277			
	282			
	268	8.27	3.58	
917	385			
	341			
	335	10.31	4.46	
923	315			
	302			
	312	9.29	4.02	
934	330			
	332			
	328	10.10	4.37	
939	440			
	435			
	438	14.13	6.12	

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1892phae.proj..520W

Dec. 29. 1892.

941	420		
	435		
	440	12.95 ✓	5.6x ✓
943	320		
	325		
	322	9.67 ✓	4.19 ✓
~~947~~	~~399~~	wrong date	
	~~338~~		
	~~380~~		
~~948~~			
947	350		
	358	10.62 ✓	4.62 ✓
	~~368~~	~~4.19~~	
952	315		
	381		
	373	11.39 ✓	4.93 ✓
960	295		
	320	9.30 ✓	4.03 ✓
	315	~~10.30~~	~~4.46~~
966	285		
	280		
	248	7.07 ✓	3.06 ✓

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1892phae.proj..520W

Dec. 29. 1892.

967		310		
		300		
		295	9.05	3.92
969		240		
		220		
		282	6.92	3.05
10	970	420		
		425		
		435	12.80	5.54

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1892phae.proj..520W

Dec. 30, 1892,

~~3 9 5~~ ~~4 4 0~~

Series 10 ~~5~~. +9°

~~4 4 5~~ wing

~~11 14~~ 2 3	1087	440		
		432		
		408	12.80	5.54
	1095	290		
		309		
		310	9.09	3.94
	1098	872		
		873		
		870	11.17	4.84
	1101	309		
		310		
		319	9.38	4.06
	1111	260		
		250		
		252	7.62	3.30
	1113	349	Star rather bright.	
		411		
		411	~~11~~ 11.71	5.~~49~~ 07

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1892phae.proj..520W

Dec. 20, 1892

1128	300		
	340		
	312	9.52	4.12
1135	320		
	332		
	321	9.73	4.21
1137	287		
	287		
	280	8.54	3.70
1139	290		
	283		
	315	8.88	3.84
1142	~~290~~	363	
	~~310~~	379	
	~~300~~	342	10.84 4.69
1144	292		
Seems to be an error in D.M.	380		
	341	9.63	4.17

There is a star following 1142 16 seconds, & subtracting the motion of it there is assumed to be 1129 in the measurement. There is no star in the position of 1144 as given in the D. M. The assumed 1144 has a star

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1892phae.proj...520w

Dec. 20, 1892

2½ minutes p are north of it in about the same right ascention and about equally bright

1159	385		
	380		
	393	9.98	4.32
1164	390		
	360		
	369	11.19	4.84
1167	350		
	381		
	390	11.21	4.85
1173	690		
	680		
	685	20.55	8.90
1174	374		
	394		
	390	~~10~~ 11.55	~~4.85~~ 5.00
1178	382		
	342		
	340	10.14	4.39

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1892phae.proj..520W

Dec. 30, 1892

1180	285		
	290		
	292	8.67	3.75
1193	330		
	338		
	342	10.20	4.42
1202	330		
	336		
	332	9.98	4.32
1216	280		
	270		
	282	7.92	3.43
	~~287~~	wrong star	
	~~276~~		
	~~292~~		
1226	335		
	328	10.23	4.43
	320		

This star rather faint; region identified

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1892phae..pdj..526W

Dec. 30. 1892

1236	321		
	313		
	302	10.56	4.57
1241	297		
	310		
	302	9.09	3.94
1246	329		
	329		
	322	9.80	4.24
1253	340		
	341		
	334	10.15	4.39
1255	881		
	870		
	829	10.50	4.58
1264	327		
	320		
	325	9.72	4.21
1266	369		
	340		
	340	10.49	4.54

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1892phae.proj..520W

Dec. 30, 1892

1265	380		
	386		
	382	9.98 ✓	4.32 ?
1269	460		
	470		
	486	14.16 ✓	6.13 ?
1295	510		
	570		
	506	15.26 ✓	6.61 ?
1324	510		
	505		
	532	15.47 ✓	6.70 ?
1381	502		
	470		
	480	14.52 ✓	6.29 ?
1382	470		
	479		
	490	14.39 ✓	6.23 ?
1385	428		
	439		
	430	12.97 ✓	5.62 ?

10 40

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1892phae.proj..520W

Jan. 2. 1893.

~~D 10, 3~~

Am. Ledge Zone. Fr. obs.

~~+9° Series 106.~~

$6^h\ 9^m$ $+10.0$

2 3v

~~6~~

-3 3K

Reject this Zone. Not enough obs. for constant.

X173	6.4v	
	6.70	
	6.90	
1174	3.47	
	3.92	
	3.60	
1170	3.20	
	3.K0	
	3.24	
1140	3.00	
	3.10	
	3.22	

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1892phae.proj..520W

Jan. 2, 1892.

1193	3.26
	3.37
	3.40
1202	3.26
	3.17
	3.20
1216	2.55
	3.00
	2.60
1226	3.32
	3.60
	3.39
1236	3.45
	3.20
	3.65
1241	3.27
	2.90
	3.10

Troubled, and stopped by clouds.

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1892phae.prj..520W

Jan. 2. 1894.

B. + C. II f 2.			B. 39 K.		
10	4	16.1	10	10	0.0
	9	16.0		11	0.0

Reap. Lat. I. Plat. R. Prob. Fr. rec.
Comp. with rear, Lat. pers. Comp. with S at. III.
Seen poor owing to low alt. of planet.

10	17	4.
	4	12.
10	21	16.
10	10	0
	11	16.
10	4	16.
10	23	32.

10	23	26.0	10	25	10.0	Seen.
		29.0	10	25	13.0	11K6
		32.0	10	25	19.0	12K7
		40.1	10	25	24.5	11.K
		45.1	10	25	29.5	12.5.K
		52.0	10	25	36.0	10 J.7
		58.0	10	25	42.0	13 9.2
	24	7.0	10	25	51.0	9 7.9
		12.1	10	25	56.5	1K 2.1

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1892phae.proj..520W

Jan. 2. 1893.

10	24	16.5	10	26	02.5	97.1
		25.0	10	26	09.0	151.4
		36.0	10	26	20.0	93.7
		42.5	10	26	26.5	155.7
		49.5	10	26	33.5	84.9
		55.0	10	26	39.0	154.4
	25	3.0	10	26	47.0	87.6
		11.0	10	26	55.0	151.3
		19.0	10	27	03.0	87.7
		26.5	10	27	10.5	157.4
		34.0	10	27	18.0	87.4
		40.0	10	27	24.0	159.1
		47.0	10	27	31.0	84.7
		53.0	10	27	37.0	156.6
		57.5	10	27	42.5	85.6
	26	4.0	10	27	48.0	165.2
		10.0	10	27	54.0	82.2
		16.0	10	28	02.0	162.9
		24.0	10	28	12.0	83.3
		31.0	10	28	19.0	163.9
		41.5				81.7
		44.0				163.7
		57.5	10	28	37.9	80.0
			53.9			
	27	7.5				161.7
		16.0				80.4
		25.0				159.2

82.0
81.12
163.12
81.6

121.6

78.8
83.3
162.1
81.0

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1892phae.proj..520W

Jan. 2, 1892.

Co	29	36,0	10 29 11.5	41,0	
		34,0	27.5	166,6	121.4
		46,5		46,0	
		52,0	56.4	163,4	78.9 85.4
	24	0,0	10 29 40.4	41,0	84.2
		7,0		166,4	124.0
		14,5		79,9	85.9
		20,5		161,4	81.2
		29,5	10 30 09.4	42,7	83.6
		37,0	25.4	163,9	123.1
		45,0		40,9	86.9
		51,5		163,4	84.6
	29	23,0	10 30 51.6	42,0	85.8
		31,0	7.6	166,6	124.3
		40,0		77,4	80.7
		50,0		166,1	80.4 169.1
		54,0	10 31 37.8 53.8	43,9	84.6
	30	7,0		163,3	122.9
		15,0		42,6	79.8
		23,0		162,4	81.3 161.1
		32,0	10 32 11.2	42,2	80.6
		39,0	27.2	163,5	122.7
		46,0		42,0	82.1
		54,0		161,1	79.2 161.3
	31	5,0	10 32 44.0	40,0	80.6
		12,0	0.0	163,2	123.8

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1892phae.proj..520W

Jan. 2. 1892.
Line of Vis.

10	31.	34.0		113.1	19.6
		47.0		132.7	21.2
		57.5	10 33 34.9 50.9	113.0	40.8
	32	5.0		103.2	20.4
					123.2

B. + C. 112.

10	45	15.5
	46	15.4

B. 39

10	47	0.0
	42	0.0

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1892phae.proj..520W

Jan. 3 1897.

D.M. Wedge Zone U.66.
Series 106. +9°

6 9 +10.0
3 3
3 3

-3 3

.7 vA 1173 6,80
6,8v
6,83 20.48v 8.87v

1174 4.02
3,9v
4,00 11.97v v.18v

1178 3,20
3,22
3,41 9.83v 4.25 6v 7v

1180 2,90 9.62v 4.16
3,29 Star late fr. for 9.4
3,43 fainter than the 9.5 here.

~~H93~~
3,23
3,v2
3,42 10.17v 4.40v

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1892phae.proj..520W

Jan. 3. 1893

1202	3.22		
	3.14		
	3.80	10.56	4.57
1216	3.10		
	2.80		
	2.70		
	3.20	9.10	3.94
1226	3.41		
	3.48		
	3.45	10.34	4.48
1236	3.22		
	3.70	10.52	4.56
	3.60	~~9.52~~	~~4.12~~
1241	2.92		
	3.05		
	3.02	8.99	3.89
1246	2.70		
	2.98		
	2.91	8.59	3.72
			~~3.72~~
1253	3.07		
	3.40		
	3.42	9.89	4.28

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1892phae.proj...520W

Jan. 3. 1893.

1255	3.01		
	3.25		
	3.48	9.74	4.22
1264	2.88		
	2.81		
	2.88	8.57	3.71
1265	3.21		
	3.51		
	3.62	10.34	4.48
1266	3.51		
	3.51		
	3.45	10.47	4.53
1269	4.50		
	4.38		
	4.30	13.18	5.71
1280	2.60		
	2.98		
	3.00	8.58	3.72
1283	3.05		
	3.12		
	3.39	9.56	4.14

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1892phae.proj..520W

Jan. 3, 1893.

1256	3.46		
	3.53		
	3.60	10.53 ✓	4.52 ✓
1288	3.80		
	4.00		
	4.09	11.89 ✓	5.15 ✓
1290	3.40		
	3.61		
	3.69	10.70 ✓	4.63 ✓
	~~3.76~~		
	~~3.79~~		
	~~3.85~~		
1293	3.80		
	3.90		
	3.86	11.56 ✓	~~5.01~~ ~~5.00~~ ~~4.00~~ ✓
1295	4.49		
	4.64		
	4.70	13.88 ✓	6.01 ✓
1296	3.11		
	3.07		
	3.12	9.30 ✓	4.03 ✓

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1892phae.proj..520w

Jan. 3. 1893.

1314. 2.48
2.61
2.69 7.78 ✓ 3.37 ✓

Star 1314 pre. 1324 by the amount ~~1324~~ indicated in the Dec. for it is some 7.5 ~~—~~ North of it. Dec is undoubtedly the star intended however.

1324 4.68
4.76
4.58 13.96 ✓ 6.04 ✓ ~~5.95~~

Wrong ~~4.18~~ 3.70
3.70 Star interfered
~~3.79~~

1330 3.81
4.00
4.08 11.89 ✓ 5.15 ✓

1331 4.90
4.81
4.78 14.49 ✓ 6.27 ✓

1332 ~~4.58~~
4.60
4.70 13.88 ✓ 6.01 ✓

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1892phae.proj..520W

Jan. 3, 1893.

1335	4.22			
	4.30			
	4.51	13.03 ✓	5.64 ✓	
1336	3.72			
	3.62			
	3.70	11.04	4.72	✓
		~~10.04~~ ✓	~~4.35~~	
1338	4.20			
	4.10			
	3.92 ✓	12.22 ✓	5.29	✓
1349	4.30			
	4.40			
	4.32	13.02 ✓	5.64	
		~~12.02~~	~~5.20~~	
1350	4.70			
	4.98			
	5.18	14.86 ✓	6.43	✓
1351	4.10			
	3.88			
	3.95	11.88 ✓	5.14	✓
1353	3.60			
	3.30			
	3.40	10.30 ✓	4.46	✓

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1892phae.proj..520W

Jan. 3. 1893.

1355	3.80			
	3.51			
	3.60	10.91 ✓	4.72 ✓	
1361	3.29			
	3.20			
	3.41	9.90 ✓	4.29 ✓	
1364	3.42			
	3.40			
	3.45	10.27 ✓	4.45 ✓	
1367	2.10			
	2.55	Star faint.		
	2.58	7.23 ✓	3.13 ✓	
1374	4.51			
	4.70			
	4.72	13.93 ✓	6.03 ~~2.13~~ ✓	
1376	5.49			
	5.50			
	5.61	16.60 ✓	7.19 ✓	
1392	3.41			
	3.89			
	3.80	11.10 ✓	4.81 ~~4.37~~ ✓	

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1892phae.proj..520W

Jan. 3, 1893.

	1403	~~2.60~~ wrong		
		3.20		
		~~3.45~~		
		3.34	9.99 ✓	4.32 ✓
	1416	3.71		
		~~3.81~~		
		3.80	11.32 ✓	4.90 ✓
	1418	~~3.54~~		
		3.90		
		4.00	11.44 ✓	4.95 ✓
	1423	~~3.48~~		
		~~3.51~~		
		3.70	10.69 ✓	4.63 ✓
10	~~1424~~	4.19		
		4.29		
		4.40	12.88 ✓	5.58 ✓

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1892phae.proj...520W

Posted to here.

Jan. 6. 1892.

Cloudy.

Sky now somewhat clearer.

1	10	+72.1
4	15	
+3	√	

Dome partly frozen & ice on cannon balls so that dome & cannon be readily turned.

D.M. Welch Zone. 11.06.
Series +9°.

6	23	+9.9
4	26	
−1	√	9

More or less light cloud.
Not really fit for a weigh Tour.
Abandoned for work on 2 Cete.

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1892phae.proj..520W

Jan. 7, 1893.

S. Cassiop.

1	10	+72.1
3	0	
+1	√0	

Cloudy

Somewhat clearer

1	10	+72.1
4	0	
+2	√0	

2 35 — 0 2 $ $ $3.√ ϕ

Est. 10.9

Sky fairly clear just now, but some haze.

α Lyncis

6	49	+5 5.0
4	10	
−2	39	

9 0 — Star I saw, star I thought to be seen — was also seen. α thought to be midway between β & ε in brightness. ~~or~~ Dris ou. Cloudy however than an accurate est. is impossible.

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1892phae.proj..520W

Jan. 7. 1892.

all cloudy again.

Dome gives great trouble in turning. Rotation of dome very slow and detoroud on account of ice on cannon balls, considerable snow in groove but this cleaned out.

9 hr All cloudy and growing worse,

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1892phae.proj..520W

3

Jan. 11. 189[illegible]

B + C. 11 hr. 13. 39[illegible]

6 23 [illegible] 6 2[illegible] 0,0

Read. Jup. I. Plat. R. Robs. Fr. rec.

Comp. with Sat. pre. = Sat. II.

6 [illegible] [illegible]

[illegible] / 2

6 [illegible] 7.

2[illegible] 7.0

2[illegible] 7.

6 23 [illegible]

6 [illegible] [illegible]

6	[illegible]	[illegible]	6	50	5.0	111.0
	[illegible]6	[illegible]	6	50	16.5	136.[illegible]
		6.0	6	50	21.0	106.[illegible]
		11.0	6	50	26.0	141.[illegible]
		16.[illegible]	6	50	31.5	100.0
		23.0	6	50	38.0	145.9
		29.0	6	50	44.0	92.[illegible]
		37.0	6	50	50.0	147.[illegible]
		[illegible].[illegible]	6	50	55.5	91.6
		[illegible]6.0	6	51	1.0	[illegible]0.2
		[illegible]0.[illegible]	6	51	5.5	[illegible]0.0
		[illegible]7.0	6	51	12.0	[illegible]5[illegible].2
	[illegible]7	[illegible].[illegible]	6	51	19.5	[illegible]6.2
		12.0	6	51	27.0	[illegible]59.1

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1892phae.proj..520W

Jan. 11. 189[illegible]

6	47	26.0	6	51	36.0	43.6	
		27.0	6	51	42.0	49.6	
		34.0	6	51	49.0	44.4	
		36.0	6	51	51.0	160 9	
		47.0	6	52	2.0	78.4	
		53.0	6	52	8.0	160.7	
	48	1[illegible]	6	52	16.5	74.1	
		4.0	6	52	23.6	164.4	
		17.0	6	52	32.0	77.9	
		25.5	6	52	40.5	76.6	
		33.0	6	52	48.0	76.7	
		42.0	6	52	57.0	169.4	
		51.5	~~6~~	~~53~~	~~6.5~~	77.6	93.6
		59.0				169.2	100.4
	49	5.0	6	53	19.4	72.6	194.0
		15.0	4.4			120.0	122.6
		29.0				74.9	94.4
		34.5				169.3	103.5
		41.5	6	53	56.1	69.3	197.9
		51.5	41.1			172.8	99.0
		59.5				121.6	
	50	4.0				170.4	92.8
		17.0	6	54	27.4	76.7	93.0
		25.0	12.4			169.7	92.9
		32.0				123.8	
		40.0				74.4	102.0
		49.5	6	54	58.4	173.4	97.5
		2.0	43.4			74.1	199.5
						172.6	99.8
							123.3

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1892phae.proj..520W

3

Jan. 11, 1892.

6	F1	31.5	43.2	71.1	100.9
		39.5		72.0	162.0
		57.0	6 55 58.2	72.6	202.9
		55.0	43.2	72.6	101.4
				72.6	122.6
	F2	5.0		73.5	96.2
		12.0		69.6	98.7
		14.5	6 56 30.4	72.5	194.9
		27.0	15.4	71.1	97.4
					121.6
		35.0		75.5	97.3
		45.0		72.7	100.8
					198.1
		50.0	6 57 1.0	73.2	99.0
		54.0	46.0	73.0	123.3
	F3	11.5		73.3	94.6
		15.0		69.9	97.2
					191.8
		25.5	6 57 34.8	73.6	95.9
		34.0	19.8	77.0	124.9

Limit of V is.

6	F4	19.0		110.6	27.6
		26.0		138.2	31.6
					59.2
		31.5	6 58 43.5	109.2	29.6
		37.5	28.5	140.4	124.7

Seeing fairly good considering the low temperature.

B. + C. 118 v.

7	1	44.7	7	6	0.0
	2	44.8	7	0.0	

B. 394.

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1892phae.proj..520W

Jan. 11, 1893

Exam. of Interpolated Stars
for

1 Cet. H. A.

2 1V −1.4
2 V0
+3V

Interpolated stars answer very well.

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1892phae.proj..520W

Jan. 13. 1893.

Exam. of faint comp. stars for.
R Geminorum. H. obs.

6	V 3	+24.6
3	2 0	
−3	3 3	

Faint stars seem all right.

~~to~~ Star provis. selected ~~#~~ to insert between a and b, but clouds prevented a critical examination;

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1892phae.prj..520W

Jan. 16. 1893.

Exam. of comp. Stars for
R. Geminorum

~~6. 5 3~~
6 ∨3 +24.4°
4 0
− 2 ∨3
12
9 7

Exam. of Jupiter with 1st & 2nd
powers of new battery of eye pieces
also with one or two other eye pieces
in a comparative way.

Exam. of faint comp. Stars for
R. Andromedae.

0 16 +37.8°
4 50
4 34

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1892phae.proj..520W

Jan. 16, 1893

Comet Holmes.

1	21	+ 33.6
5	37	
4	16	
6	32	
+ √	11	+ 33,6

Comp. Star = δ Um. + 33° 23' (6.6 m)

Position zero 341.5°
45.0°
296.5°

6	54	50.0	*
	55	9.5	*
	55	55.1	≡
	56	17.5	≡
	57	5.0	
	57	25.5	
	58	11.3	
	58	34.0	
	59	13.2	
	59	34.0	
7	0	19.8	
	0	42.6	

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1892phae.proj..520W

Jan. 16 1893.

7	1	51.5
	2	11.9
	2	57.8
	3	20.3
	3	54.5
	4	14.6
	5	1.0
	5	23.5
~~5~~	~~54.0~~	
	6	46.5
	7	7.0
	7	53.2
	8	15.8

Order in preceding transits star star comet comet.

Star in northern half.

Comet in southern half.

Comet 8th magnitude, about 1 minute of arc in diameter, strong central condensation. Spectrum continuous. It also looks as if there were lines or bands in spectrum.

There does not seem to be any cometary light about the bright cometary mass, except that it looks at times as if

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1892phae.proj..520W

Jan. 16, 1893

there might be a faint nebulosity some 2.5 minutes of arc in diameter.

~~B. 236,~~ ~~B. 394~~

B. 236.

7 26 v F. 0
27 v F. 0

F. 1327

7 27 1.0
7 20 1.0

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1892phae.proj..520W

Jan. 17. 1893

Exam. of faint comp. stars for R. Andromedae W. obs.

0	16	+ 37.8
3	25	
3	9	

Intervals between faint stars very good. Interval between s & r possibly a trifle large but not bad.

Exam. of faint comp. stars for S. Ceti

0	12	− 9.6
4	00	
3	48	

Intervals between faint comp. stars for S. Ceti quite good. It would however be advisable to look at this region earlier in the evening as it is now getting rather low.

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1892phae.proj..520W

Jan. 17 1893

Comet Holmes.

1	28	+ 33.6
4	40	
3	17	

Position zero. ~~296.1~~

296.2
45.0
341.2

4	47	46.7	*
	48	10.5	*
	50	8.2	<
	50	26.1	<
	51	6.6	
	51	30.8	
	53	28.5	
	53	46.8	
	54	25.1	
	54	49.0	
	56	47.0	
	57	5.2	

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1892phae.proj..520W

Jan. 17. 1893.

4	57	44.4
	58	7.5
5	0	6.0
	0	24.5
	1	13.9
	1	36.5
	3	35.3
	3	54.1

Order in preceeding transits star, star, comet, comet, star in northern half, comet in southern half. Comet is decidedly different in appearance to what it was last night. Last night it was a round planetary disk ± 0.5' in diameter, with the whole disk being quite bright but with a somewhat brighter central point. Tonight it is a round circular disk with a central rather sharply defined nucleus and a surrounding coma 1.5' in diameter. The surrounding coma fades off in brightness from the nucleus and is decidedly fainter than the nucleus. That is the coma tonight is considerably larger and decidedly fainter than last night. same comp star

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1892phae.proj:520W

Jan. 17. 1893

used in transits as last night

Clouds

B. 236.

5 42 46.5
43 46.5

Fr. 1327.

5 43 1.0
44 1.0

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1892phae.proj...526w

Jan. 19. 1892.

Selection of 3 comp. stars for insertion in list of comp. stars for R. Geminorum.
W. Obs.

Comet Holmes

1	25	+33.6
5	2	
3	37	

Comp. Star = Dm. +33° 2466 (AIK)

Position zero

296.0	
45.0	
341.0	

5	31	55.0	*
	32	20.0	*
	33	0.4	∝
	33	39.5	∝
	34	14.5	
	34	50.1	
	35	20.0	
	36	0.5	

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1892phae.proj..520W

Jan 19. 1893

5	36	41.5
	37	7.0
	37	46.7
	38	27.1
	39	6.0
	39	31.7
	40	11.5
	40	52.0
	41	25.5
	41	51.6
	42	31.3
	43	11.7
	43	47.6
	44	14.5
	44	53.5
	45	34.3

Order in preceding transits star, star, comet, comet, both in southern half. comet brighter than when last seen. The nucleus is brighter and ~~some~~ a little larger, not quite so sharply defined. The coma is also brighter and about 2' in diameter. The part immediately adjacent to the nucleus is quite bright, gradually fading off

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1892phae.proj.:520w

Jan. 19, 1893.

to the outer edge.

B. 236.

✓	53	30.✓
5K		30.7

Fr. 1327.

5	✓K	1.0
	✓✓	1.0

Meas. of light of Comet Holmes.
Large Telescope set 1' outside focus. Comp. star is β Andromedae.

Focus	Outside Focus.	
~~13.2~~ wrong.		
11.9	17.1	Δ 2 ✓
12.0	18.2	Δ 2 ✓ mag.
12.0	18.9	
12.0	18.1	6.1 diff.

10 10

Measurements thought to be not over good. Much fog in the air, region a little low, comp. star a little dim to naked eye. The comet when thrown out of focus is a large bright disc, while the star when equalized is a small disc so that equalization is rather difficult

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1892phae.proj..520W

Jan. 19 1893

Exam. of faint comp. stars for
S. Canis Minoris N. Obs.

7	28	+ 7.9
6	44	
− 0	44	

Selection very good.

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1892phae.proj..526w

Jan 20. 1893

F

B+C. 1162. B. 394.

6 43 23,2 6 45 00

44 23.3 46 0.0

7 14 16

14 12

7 26 24.

6 46 0

40 24.

6 44 23.

7 24 51. Ap. time des.

Obs of Jup. III. Chart. R. N. Obs; Clymer Rec.

comp with satellite I

7 6.00 76.2

6 14 7 7 53 94.6 170.8

22 46.5 93.4 76.8 4494.0

29 16 94.0 170.2 123.5

38 76.6

47 7 8 30 169.0

57 4212 92.4 77.5 4492.3

53 91.7

7 10 53 184.1 169.2 123.1

92.0

21 77.8

56 7 9 17 168.0

46 4156 90.2 77.2 4489.0

89.8

55 40 180.0 167.0 122.2

90.0

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Jan 20, 1893

8	5		76.0			
	15	7 9 55	171.3			95.3
						90.0
						185.3
	21	4(41	76.0	4(489.3		92.6
	30	18	166.0	122.3		
	40		79.0			
	51	7 10 33 56	167.9			88.9
						89.2
9	00	4226	79.0	4(494.1		178.1
	15	56	168.2	123.5		89.0
	25		78.2			
	35	7 11 17	165.1			86.9
						91.3
						178.2
	44	4(158	76.2	4(487.0		89.1
	54	40	167.5	121.8		
10	1		77.6			
	9	7 11 52	165.8			88.2
	21	4(54	78.8	4(489.2		88.2
						88.2
	28	15	167.0	122.3		
	49		77.0			
	58	7 12 40	170.3			93.3
						89.5
11	8	4251	78.0	4(492.8		182.8
	16	3	167.5	123.2		91.4
	25		80.2			
	38	7 13 17	168.0			87.8
						90.5
						178.3
	45	4(160	77.5	4(493.7		89.2
	52	40	168.0	123.4		
~~12~~	~~78~~ 12		78.7			
	9		166.2			87.5
						88.7
						176.2
	16		77.4	4(488.4		88.1
	26		166.5	122.1		

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1002phae.proj:.55ecw

Jan 20, 1893

	37		78.0			
	45	7 14 28	169.8			91.8
	57	4(204.	75.1	4(492.4		94.4
	5	5.1	169.5	123.1		186.2
13						93.1
	13		78.0			
	20	7 15 3	167.0			89.0
	27	4(106.	77.0	4(493.0		94.0
	46	2.6	171.0	123.2		183.0
	54		77.5			91.5
14	1	7 15 41	168.0			90.5
	8	4(25.7	79.0	4(492.6		89.1
	14	4	168.1	123.2		179.6
	25		81.8			89.8
	34	7 16 15	169.2			87.4
	41	4(15.0	82.0	4(500.0		85.0
	50	3.8	167.0	125.0		172.4
	57		78.1			86.2
15	4	7 16 45	165.8			87.7
	12	4(27.4	81.3	4(489.3		82.8
	21	8	164.1	122.3		170.5
	31		85.1			85.2
	38	7 17 18	167.0			81.9
	44	4(16.3	85.0	4(498.4		76.3
	50	4.1	161.3	124.6		158.2
	56		81.2			79.1
16	4	7 17 45	168.8			
	12	4(27.3	87.0	4(503.2		87.6
	21	8	166.2	125.8		79.2
	29		83.0			166.8
	36		164.0			83.4

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1892phae.proj..520W

Jan. 20, 1893

	7 18 17					81.0
45	4461	83.1	4496.1			82.9
51	40	166.0	124.0			163.9
17.0		87.0				81.7
						74.0
9	7 18 53	161.0				80.2
23	4665	82.7	4493.6			154.2
33	16	162.9	123.4			77.1
41		84.2				
						76.8
51	7 19 31	161.0				71.9
57	4214	89.2	4498.5			148.7
18.5	54 8	161.1	123.9			74.4
15		85.9				
						72.6
22	7 20 21	158.5				71.9
29	4101	86.1	4488.5			144.5
35	25	158.0	122.1			72.2
42		88.9				
						69.9
49	7 20 30	155.8				66.5
57	4213	89.6	4493.4			136.4
19.5	53	156.1	123.4			68.2
13		90.0				
						64.9
20	7 21 0	154.9				67.8
26	491	91.0	4494.7			132.1
32	23	158.8	123.7			66.4
41		93.1				
						64.9
48	7 21 35	158.0				63.0
20.8	58 4233	93.0	4500.1			127.9
16		156.0	125.0			64.0
22		92.0				

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1892phae.proj..526w

Jan 20. 1893

	~~50~~					
	37	7	22	15	155.2	63.2 / 61.5 / 124.7
	44		4|154		93.5	4|495.7 62.4
	51		38		155.0	123.9
	58				96.0	
21	3	7	22	45	154.8	58.8 / 59.8 / 118.6
	~~9~~		4|26		94.0	4|498.6 59.3
	16		6		153.8	124.6
	21				94.2	
	28	7	23	10	154.0	59.8 / 52.8
	33		4|125		100.2	4|501.4 112.6 / 56.3
	43		31		153.0	125.4
	49				96.2	
	55	7	23	36	151.0	54.8 / 54.1
22	3		4|237		95.5	4|492.9
	10				150.2	123.2
	16				96.0	
	22	7	24	3	153.0	57.0 / 55.2 / 112.2
	28		4|102		98.0	4|500.2 56.1
	36		26		153.2	125.0
	43				98.0	
	47	7	24	28	148.0	50.0 / 49.0 / 99.0
	53		4|205		98.0	4|494.0 49.5
23	2		51		147.0	122.8
	9				102.2	
	15	7	24	56	145.8	43.6 / 44.0 / 87.6
	20		4|76		101.0	4|494.0 73.8
	~~26~~		19			123.5

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Jan. 20, 1893

	32		145.0		
	40		~~98.5~~	98.5	
	52	7 25 32	148.8		50.3 / 42.2 / 92.5
	59	4219 55	104.8	4499.1	46.2
24	8		147.0	124.8	
	15		104.5		41.5 / 35.2 / 76.7
	22	7 26 1	146.0		
	27	498	105.0	4495.7	38.4
	34	24	140.2	123.9	
	39		105.1		
	46	7 26 25	142.2		37.1 / 33.5 / 70.6
	52	4195	106 5	4493.8	35.3
	58	49	140.0	123.4	
25	3		108.2		30.5 / 33.5 / 64.0
	10	7 26 51	138.7		
	16	4554	107.2	4494.8	32.0
	25	14	140.7	124.0	
	32	7 27 9	111.0		
	38	7 27 15	139.3		
	45	7 27 22	110.1		
	52	7 27 29	138 2		
	59	7 27 36	110.2		
26	6	7 27 43	138.3		
	20	7 27 57	113.0		
	28	7 28 5	138.0		
	35	7 28 12	111.0		
	42	7 28 19	135.0		
	48	7 28 25	13.0		

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Jan. 20, 1893

	5	4	7 28 31	134.0	
27		1	7 28 38	113.2	
		7	7 28 44	133.0	
		15	7 28 52	115.8	
		22	7 28 59	132.2	
		30	7 29 7	117.0	
		39	7 29 16	133.2	
		49	7 29 26	116.0	
28		1	7 29 38	129.9	
		14	7 29 51	117.2	
		31	7 30 8	129.6	

not seen later.

Limit of visibility.

30		23		118.0	11.6
		37	7 32 5 0 27	129.6	10.8
31		2	4 20 2	118.2	22.4
		20		129.0	11.2
					4494.8
					123.7

B. & C. 1142.

7	39	22.5	
	40	22.5	

B. 394.

7	41	0.0	
	42	0.0	

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1892phae.proj..520W

Jan 20. 1893

B. + C. 142.

8 ▽7 22,0

B. 394.

8 ▽9 0,0

9 0 0.0

9 ▽ 42

8 12

9 13 ▽2.

8 ▽9 0.

1 4 ▽4.

8 ▽7 22.

9 12 16. Ap. time 2 cl.

Reappearance of Sat. III Obst. Dr. R.

H. Obs. Clymer rec. Cap. Sat. with Sat. I.

9 9

10

47 9 11 25 97.1

59 9 11 37 148.8

6 9 11 44 93.2

12 9 11 50 151.2

19 9 11 57 98.0

24 9 12 2 150.0

24 9 12 7 94.8

35 9 12 13 155.8

40 9 12 18 97.2

46 9 12 24 150.1

52 9 12 30 95.8

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1892phae.proj..520w

Jan 20, 1893

	5	8	9	12	36	152.0	
11		3	9	12	41	96.7	
	11	9	12	49	155.5		
	17	9	12	55	98.0		
	22	9	13	06	56.0		
	29	9	13	7	93.0		
	35	9	13	13	53.5		
	43	9	13	21	89.1		
	48	9	13	27	56.1		
	55	9	13	33	93.3		
12	1	9	13	39	152.2		
	8	9	13	46	94.0		
	15	9	13	53	56.0		
	21	9	13	59	97.1		
	27	9	14	5	59.0		
	34	9	14	12	93.0		
	40	9	14	18	58.1		
	47	9	14	25	87.8		
	55	9	14	33	59.7		
13	3	~~9~~	~~14~~	~~41~~	83.0		
	10	~~9~~			162.3		79.3
	16	9	14	51	86.3	4493.0	75.1
		4451					154.4
	22	13			161.4	123.2	77.2
	28				87.0		
	34				163.2		76.2
	40	9	15	16	86.0	4496.2	74.0
		41150					150.2
	48	38			160.0	124.0	75.1
	55				83.0		

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Jan 20, 1893

14	2		164.2		81.2	
		9 15 44			80.0	
	10	4(23	81.0	4(489.2	161.2	80.6
	16	6	161.0	122.3		
	23		83.0		79.0	
	28		162.0		76.9	
		9 16 10			155.9	
	35	4(29	87.5	4(496.978		
	43	32	164.4	124.2		
	51		75.2			
15	2		162.2		87.0	
		9 16 44			88.2	
	12	4(23	77.8	4(481.2	175.2	87.6
	18	6	166.0	120.3		
	25		79.5			
	35		170.1		90.6	
		9 17 19			87.0	
	45	4(64	78.0	4(492.6	177.6	88.8
	59	41	165.0	123.2		
16	8		79.2			
					87.9	
	16	9 17 58	167.1		88.9	
					176.8	
	24	4(9	77.1	4(489.4		88.4
	31	20	166.0	122.4		
	39		77.2		88.0	
	49	9 18 37	165.2		92.9	
		5 9			180.9	
17	5	4(236	78.2	4(491.7		90.4
	23		171.1	122.9		
	31		74.0			
	38		173.3		99.3	
					97.3	
	44	9 19 20	76.7		196.6	
		4(166		4(498.0		98.3
	53	42	174.0	124.5		
	59		76.7			

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1892phae.proj..520w

Jan 20, 1893

18	11	9 19 51	172.0		95.3
					97.6
					193.9
					96.4
	17	4(53	73.7	4(492.7	
	26	13	171.3	123.2	
	34		76.9		95.6
					99.0
					194.6
	41		172.5		97.3
	49	9 20 23 4(480	75.0	4(498.4	
	56	45	174.0	124.6	
19	11		74.5		97.3
					94.8
					192.1
	19		171.8		96.0
	27	9 21 2 4(47	78.0	4(497.1	
	40	24	172.8	124.3	
	48		72.7		100.4
					99.5
					199.9
	56		173.1		100.0
20	8	9 21 40 4(249	74.5	4(494.3	
	17	2	174.0	123.6	
	26		74.8		97.0
					99.1
					196.1
	35		171.8		98.0
	47	9 22 20 4(168	74.1	4(493.9	
21	00	42	73.2	123.5	
21	8		72.9		98.8
					101.6
					200.4
	16		171.7		100.0
	27	9 23 00 4(86	72.9	4(492.0	
	35	22	174.5	123.0	
	42		74.5		106.5
					107.2
					207.7
	50		1750		103.8
22	6	9 23 38 1238	69.0	4(494.7	
	20	00	176.2	123.9	

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1892phae.proj..520W

Jan. 20 1893

22	29		68.0		105.5
	40		173.5		107.9
					213.4
	49	9 24 22 4477	69.1	4487.6	106.7
	59	44	177.0		121.9
23	9		66.5		109.0
	18		175.1		103.2
					212.2
	42	9 25 8 4418	70.1	4484.6	106.1
	49	30	173.3		121.2
	55		69.5		104.6
24	4		174.1		100.8
					205.4
	17	9 25 48 4441	71.2	4486.6	102.7
	25	10	172.0		121.7
	45		69.0		106.7
	51	9 26 34 5-6	175.7		102.2
					208.9
25	1	4225	73.0	4492.9	104.4
	8		175.2		123.2
	14		71.5		101.5
	21		172.0		107.0
					208.5
	30	9 27 4 4402	70.0	4490.5	104.2
	37	26	177.0		122.6
	47		70.7		107.1
	54		177.8		98.5
					205.6
26	4	9 27 38 4240	73.2	4493.4	102.8
	15	00	171.7		123.4
	24		72.8		103.0
	36		175.8		101.9
					204.9
	46	9 28 18 4459	73.3	4497.1	102.4
	53	40	175.2		124.0

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1892phae.proj..520W

Jan 20 1893

limit of visibility.

29	13		114.0	17.7
	20		131.7	19.4
	35	9 31 7 4115	113.0	37.1 4491.1
	47	29	132.4	18.6 122.3

Time of eclipse as computed in book of Ephemerides was 10 min. too late, so that first observations of reappearance were later, seeing variable

B. + C. 1182.		B. 396.	
9	35 21.7	9	37 0.0
	36 21.7		38 0.0

Comet Halmes

1	25	+ 33.6
6	7	
4	42	

Tevens	Outside focus.	
8.4	14.6	8.2 -
9.0	14.2	8.2 mean.
8.2	14.9	
8.5	14.6	6.1 diff.
	6.1	

10.0. +

Comp. Star β. Andromedae Phot. 2.

Measurement of light of Comet Halmes

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1892phae.proj.520W

Jan. 20, 1893

Chronometer 1" on the fine focus.

Position Zero 147.7
45.0
192.7

6	57	30.1	*
		55.8	*
7	0	0.0	≤
		42.0	≤
	1	18.1	
		44.0	
	3	48.5	
	4	30.4	
	~~6~~	~~28.4~~	
	7	41.0	
	8	7.5	
	10	11.6	
	10	54.6	
	11	32.5	
	12	0.1	
	14	3.5	
		46.5	

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1892phae.proj..520W

Jan 20, 1893

7	15	16.0
		43.8
	17	47.2
	18	30.6

Order in preceding transits star star comet, comet both in southern half, nucleus of about the same brightness as last night. The coma surrounding nucleus does not seem to be quite as bright and not quite as much in diameter. total diameter of coma 1.8'. There seems to be ~~either~~ slight indications of a short tail following and it looks as if there was either a secondary maximum of light, ~~i could~~ some two secs. ~~to~~ following or else a faint star Same comp. star as last night. Anvsum. with the new eye piece powers 1 & 2 seems to rather confirm this, although the phenomenon is not very marked.

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1892phae.proj.520W

Jan. 20. 1893.

13. 236.

7 3H 22.0
3V 22.0

Fr. 1327.

7 3V 1.6
3G 1.0

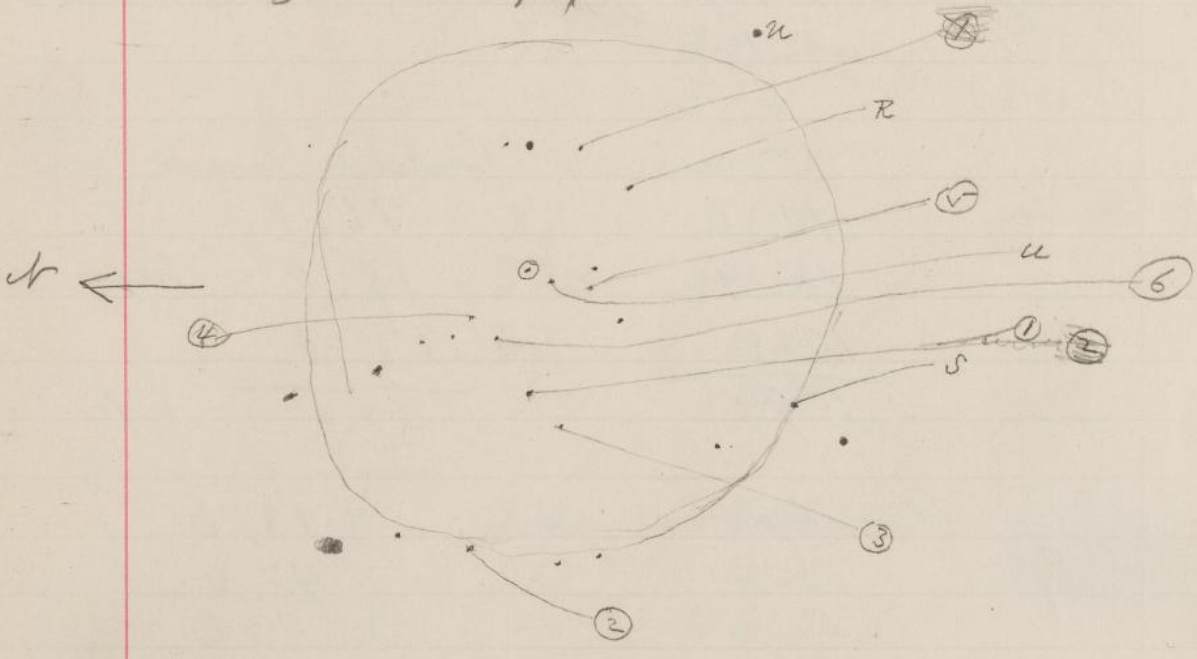
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1892phae.proj..520W

Jan. 21, 1893.

Cont. of selection of faint comp. stars for R. Andromedae N. Obs.

0	13	+37.2
3	57	
3	44	



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1892phae.proj..520W

Jan, 21. 1893.

Comet Holmes.

1°	26	+33.6
5	31	
4	5	

Meas. of light of Comet Holmes Phot 2. Sarye Tel. 1° out of focus. Comp. Star β Andromedae.

Focus	Outside Focus.	
11.0	16.9	
10.9	16.0	Mean
10.8	17.0	
10.9<	17.0<	6.1<
	16.9	
	6.1	

Position zero 213.6
45.0
258.6

6	24.	10.1	○=
	25	5.0	○=
		48.2	*
	26	6.4	*

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1892phae.proj..520W

Jan. 21. 1893.

6	26	34.8
	27	29.9
	28	12.6
	–	30.5
	29	2.0
	–	57.0
	30	39.5
	–	57.8
	31	38.8
	32	34.0
	33	16.0
	–	34.8
	34	8.4
	35	4.2
	–	46.0
	36	4.5

Order in preceding transits comet, comet star star both in southern half. ~~Comet~~ Nucleus of comet is about the same brightness as last night, but the coma seems rather brighter and a little more extensive. Coma seems rather more extended to following. Total diameter of coma about 2.5'

Comp. Star = 2 Lac + 33° 260 (9.0 K)

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1892phae.proj..520W

Jan: 21. 1893.

B. 236.
6 ✓A 14.0

Fr. 1327.
6 ✓9 ~~2.0~~ 1.0
~~7 0 0.0~~
~~7 1 0.0~~
~~7 2 0.0~~

Nova Aurigae

✓ 23 + 320
7 ✓
+1 ✓2

Index below.

	148.0	115.0^	
10 ✓1	263.0		
	155.8		
	260.9	105.1^	
		~~220.8~~^	1.2✓
Index above		139.9	-0.78
	61.0	114.1^	
	179.1		
	65.2	115.3^	
	180.5	~~233.5~~^	0.9✓
		126.6	-1.05
	65.9	113.1^	
	179.0		
	68.7	106.0^	
	174.7	219.1^	1.2✓
		140.9	-0.76

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1892phae.proj..520W

Jan 21. 1893.

Index below.

156.4	104.6		
265.0			
157.2	106.1		
263.3			
	210.7		
	175.3		−0.67
158.5	106.6		
265.1			
160.0	104.8		
264.8			
	211.4		
	148.6		−0.60

Index above.

~~24~~			
71.1	103.1		
174.2			
67.1	102.9		
170.0			
	206.0		
	154.0		−0.50

11.20
11 5.5

Much troubled by frost on eye piece. Clock broke down towards last of observations so that telescope had to be moved by hand to keep images in the field

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1892phae.proj..520W

Jan. 25, 1893

Looked at several doubles with Mr. Bailey.

Σ 138		
1	30	+7.0
4	18	
2	48	

Σ 113		
1	14	+1.2
4	5	
2	49	

Σ 183		
1	48	+28.2
4	38	
2	50	

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Jan. 27. 1893.

Lw. Grdg. Tone. Gr. Ob.

Series. 107 + 9°

A	36	+9.9
V	24	
—	3	4

A V9	2038	526		
		521		
		520	15.67	~~6.78~~ ~~7.00~~ 6.79
	2048	406		
		395		
		400	12.01	5.20
	2053	442		
		448		
		451	13.41	5.81
	2070	389		
		381		
		393	11.63	5.04
	2075	297		
		310		
		300	9.07	3.93

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1892phae.proj..520W

Jan. 25, 1893

2086	340		
	329		
	331	10.00^{7}	$4.33^{9}<$
2090	357		
	343		
	371	10.71^{7}	$4.64^{7}<$
2092	438		
	452		
	434	13.24^{7}	$5.73^{7}>$
2093	620		
	600		
	608	18.28^{7}	$7.92^{7}>$
2098	372		
	362		
	360	10.94^{7}	$4.74^{7}>$
2103	313		
	290		
	282	8.85^{7}	$3.83^{7}<$
2119	290		
	311		
	320	9.21^{7}	$3.99^{7}<$

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Jan. 25, 1893.

2126	320		
	361		
	348	10.29[7]	4.46[7]<
2134	292		
	300		
	301	8.93[7]	3.87[7]<
2135	290		
	284		
	309	8.83[7]	3.82[7]<
2137	331		
	359		
	370	10.60[7]	4.59[7]<
2150	316		
	290		
	300	9.06[7]	3.93[7]< ~~3.92[7]~~
2151	408		
	429		
	405	~~12~~ 12.42[7]	~~5.38[7]<~~ 5.11
2155	330		
	330		
	328	9.88[7]	4.28[7]<

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1892phae.proj...520W

Jan. 25, 1893.

2157

2 8 0
2 6 9
3 0 0 8.49[1] ~~3.68~~ 3.67[1]

2165

2 8 8
2 9 7
2 9 0 8.75[1] 3.79[1]

2168

2 5 1
2 6 0
2 5 5 7.66[1] 3.32[1]

2172

3 0 6 8.76[1] 3.79[1] This star follows
2 8 0 2168, 52[s] a is 2' south
2 9 0 of it. Dec. of Dm Evident-

ly wrong.

2175

3 9 1
3 8 6
3 8 7 11.64[1] 5.04[1]

2189

~~4 3 0~~ 3 8 2
~~4 2 0~~ 3 8 1
~~4 3 2~~ 3 9 2 11.55[-1] 5.00[1]

2206

2 8 0
2 9 0
3 0 0 8.70 ~~5.00~~ 3.77[1]

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1892phae.proj..520W

Jan. 25, 1893.

2222

329
327
330 9.86 4.27

2231.

279
290
290 8.59 3.72

10 V 1 2234

289
289
292 8.70 3.77

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1892phae.proj..520W

Jan. 26 1893

Cloudy

Started until 9 o'clock but still cloudy.

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1892phae.proj..520W

Jan. 27, 1893.

Some Cloud.
Circumpolar Variables. N. Obs.

Clearer.

R. Cassiop.

23	51	+49.7
28	17	
4	26	

Dome gives much trouble. two cannon balls together.

~~h. m. s.~~
~~4 5 5~~
~~h. min.~~
8 13

p 2.5 R, R 1 q. in large telescope. rather too faint for finder.
Est. 10.4.

R. Syncis.

6	49	+55.1
5	0	
−1	49	
12	00	
10	11	
5	9	
1	40	
10	20	

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1892phae.proj..520W

Jan. 27, 1893.

8h 35m Variable thought to be seen
near 2.5 R, R 2 S. in large telescope.
too faint for finder.
Est 13.9
The whole estimate is rather uncertain as all the stars are very faint in bright moonlight.

T. Ursae Maj.

12	33	+60.4.
5	24	
−7	9	
12	00	
4	51	

8 48 Region difficult to identify on account of bright moonlight, low altitude and scarcity of surrounding stars, but region thought to be correctly identified. Var, is about equal to ~~8~~ 8 as near as can be determined in moonlight est. 12.0.

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1892phae.proj..526w

Jan. 27, 1893.

S Ursae Maj.

9h. 0min. $\underline{\nu}$ 3, 4 S, S 2.5 o.m large telescope too faint for finder

D m. Greg. Time. Fr. obs.

Sercé 108 +9°

2	√ 0	+9.9
6	√	
2	4 √	
9	1 √	

2	36	
6	10	
2	26	
9	34	

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1892phae.proj..520W

Jan. 27, 1893.

9 31

2038	5.12 5.02 5.12	N·26	6.61
2048	4.10 3.92 3.95	18·97	5.18
2053	4.00 4.13 4.65	16·78	N-S-3 ~~7.16~~
2070	3.76 ~~4.20~~ wrong 3.90 3.82	11·48	4.97
2092	4.41 4.27 4.70	13.38	5.79
2093	6.10 5.90 6.10	18·10	7.84
2098	3.80 3.90 3.90	11·60	5.02

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1892phae.proj...520W

Jan. 27, 1893.

2103	2.90		
	3.18	9.03	3.91
	2.95	~~12.03~~	~~4.24~~
2119	2.76		
	3.29		
	3.07	9.12	3.95
2126	3.49		
	3.49		
	3.49	10.47	4.53
2134	3.03		
	3.10		
	3.40	9.53	4.13
2135	3.00		
	3.05		
	3.16	9.21	3.99
2137	3.90		
	4.07		
	4.20	12.17	5.27
2150	~~3.23~~		
	~~3.30~~		
	~~3.25~~	9.78	4.23

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1892phae.proj..520W

Jan. 27. 1893.

2151	~~4.74~~		
	~~4.54~~		
	~~4.29~~	~~13.57~~	~~5.88~~

~~2155~~ Clouds came suddenly, possibly affecting last two stars and these are remeasured.

2150	3.08		
	3.07		
	3.08	9.23	4.00
2151	4.60		
	4.50		
	4.78	13.88	6.01
2155	3.60		
	3.60		
	3.76	10.96	4.71
2157	2.93		
	3.30		
	3.50	9.73	4.21
2165.	3.08		
	3.07		
	3.00	9.15	3.96

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1892phae.proj...520W

Jan. 27, 1893.

2168	2.75		
	2.93		
	2.82	8.50 7 <	3.68 7
2172	~~2.05~~	wrong star	
	~~2.11~~		
	~~2.47~~		
2172	2.81		
	3.00		
	3.03	8.84 7 <	3.83 7
2175	4.36		
	4.40		
	4.48	13.24 7 <	5.73 7
2189	4.20		
	3.97		
	4.00	12.17 7 <	5.27 7
2206	3.05		
	3.10		
	2.90	9.05 7 <	3.92 7
2222	3.52		
	3.41		
	3.50	10.43 7 <	4.52 7

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1892phae.proj..520W

Jan. 27, 1893.

		2231	2.78		
			2.98		
			2.80	8.56^{1}	3.71^{1}
11	3.	2234	3.18		
			2.87		
			3.07	9.12^{1}	3.95^{-1}

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1892phae.proj..520W

Feb. 3. 1893

D.M. Wedge Gone. H. Obs.

Series 109 +9°

9	49	+ 9.6
7	5	
2	44	
+12	0	
9	16	

9 vA	2254	2.94 3.10 3.00	9.04 3.91
	2258	2.65 2.90 3.00	8.55 3.70
	2267	2.70 2.92 2.85	8.47 3.67
	2272	2.78 2.71 2.63	8.12 3.52

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1892phae.proj..520W

Feb. 3. 1893

2282	2.70		
	2.62		
	2.60	7.92^{1} <	3.43^{1}
2296	3.30		
	3.25		
	3.28	9.83^{1} <	4.26^{1}
2297	3.00		
	2.75		
	2.80	8.55^{1} <	3.70^{1}
2299	3.55		
	3.45		
	3.48	10.48^{1} <	4.54^{1}
2303	2.65		
	2.60		
	2.58	7.83^{1} <	3.39^{1}
2308	2.35		
	2.40		
	2.38	7.13^{1} <	3.09^{1}
2311	4.50		
	4.40		
	4.46	13.36^{1} <	5.78^{1}

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1892phae.proj..520W

Feb. 3, 1893.

2313	3.25	star rather	
	3.50	bright.	
	3.45	10.20^{7}<	4.42^{7}
2316	2.60	same star ~~as~~ in serius 75.	
	2.55		
	2.50	7.65^{7}<	3.31^{7}
2317	5.25		
	5.20		
	5.15	15^{7}.60<	6.7^{7}
2324	4.70		
	4.82		
	4.75	14.27^{7}<	6.18^{7}
2336	5.10		
	4.90		
	5.12	15^{7}.12	6.5 ~~7~~
10:55 2380	4.82		
	4.75		
	4.77	14.34^{7}<	6.20^{7}

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1892phae.proj..520W

Feb. 4. 1893.

N. A. Pyxis 34. St. Obs.

8	45	− 29.0
5	35	
3	10	
12	0	
8	50	

Still too low.

Upper shutter will not go way back in attempting to carry it back broke plate in which main gear spindle sets, some little time also consumed in wiring gear spindle so that gears will not get loose & middle shutter will not run.

Exam. of faint comp. stars for
δ Canis Minoris

7	27	+ 7.9
5	45	
1	42	
12	00	
10	18	

δ shutter interferes.

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1892phae.proj...520W

Feb. 4, 1893

Exam. of faint Comp. Stars for

N. Orionis.

5	46	20.2
6	5.	
	19	

Double Auroral arch under pole, the lower arch having $\frac{4}{5}$ altitude of the pole star & the upper arch having $\frac{2}{5}$ of the altitude of same under the pole. This arching Aurora has been visible since befor 7:00 P.M. this evening. But it is not remembered that the double character of the arch was so pronounced as at the present time, 9:65 P.M.,

Selection of faint Comp. stars very good, except that a star could be inserted with advantage between 1s m^2, the interval being rather large.

Exam. of faint comp. stars for.
V Canori.

8	13	+18.2
7	10	
1	3	
12	0	
19	57	Selection very good.

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1892phae.proj..520W

Feb. 4, 1893

The Aurora is now (10:09) in the form of a single arch, its maximum height being $\frac{1}{5}$ that of the polestar.

U. A. Pyxis 34.

8	45	−29.0
7	36	
1	9	
12	0	
10	51	

A	⟨V	−27.2
7	V1	
	−V⟨	

Star A. G. C. 11890 is bandeau as found by Mr. Douglass.

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1892phae.proj..520W

Feb. 8, 1893

Testing of indexes of Circles & telescope.

4	49	+44.9
−1	0	
5	49	

R. Ursae Maj.

10	30	+69.8
5	9	
−5	21	
12	00	
6	39	Too high.

T. Cassiop.

0	18	+55.9
5	13	
4	57	Too high.

R. Cassiop.

23	51	+49.7
29	17	
5	26	Too high.

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1892phae.proj.520W

Feb. 8 1893.

T. Cephei

21	6	+67.7
29	20	
8	14	. Too high.

S Bootis.

14	16	+54.6
5	23	
−8	53	
12	00	
3	7	

Some fragm. and cannot be used.

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1892phae.proj...520W

Feb. 11. 1893.

Pretty clear.

Comet of 1892 (Holmes) Fr. obs.

2	0	+34.1
5	40	
+3	40	

5	47
+3	47

There has been a very marked change in the comet since last seen and measured. It is now a large disc which can be traced for a diameter of 4' or 5', (the coma apparently rather more abundant and extensive to following), with a faint central condensation about 11.5 to 12.0 mags. the light gradually fading away out to the edge of the coma. The central condensation is not particularly marked, and a measurement of the light could well be made with the large telescope in focus. but it has become all cloudy again, apparently to remain so for the night.

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1892phae.proj.1520W

Feb. 11. 1893.

9 0 Still thickly cloudy with no prospect of clearing.

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1892phae.proj..520W

Feb. 14. 1892.

Somewhat clear, now.

Comet f 1892. (Holmes) Fr. ob.

2 K , +3K.2

5 30

+3 26

Position zero.

8!25 Somewhat clearer now.

position zero 79.5
45.0
124.5

Sky growing worse again.

~~4~~ 8 Caphaei.

22 24 +57.8

7 0

-1.5 24

24 00

8 36

Now so thick that no stars are visible.

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1892phae.proj.520W

Z. d. 0 = 43.0 Abs. = 0.10
" " χ = 42.5 " = 0.10

Feb. 15, 1893.

Comet af 1892 (Holmes) N. Obs.

2	5	+34.2
5	37	
+3	32	

Measurement af light af Comet f 1892. (Holmes). Alat. 2. N. obs.
Large telescope in focus. comp. star χ Triangu-li

focus.		outside focus.	
10.2	magn. = 12.1 v +	25.7 v	25.2 / 10.1 / 15.1
10.0	~~12.0~~	25.1 v	
10.0	~~2 magn~~ ~~12.1~~	24.8	
10.1		25.2 v	~~12.1~~
		10.1 v	
		15.1	

7.7 ≠

Sky pretty Clear at present time. comet faint. There is a central condensation gradually fainting outwards towards the margin af the coma. Although the light of comet runs up to a sort af maximum at center, with a suspition of a somewhat stellar nucleus, yet it is not particularly marked, so that the general light af central condensation was measured, Not very much surrounding coma visible in large telescope

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1892phae.proj...520W

Feb. 15, 1893.

No. 1 ring micrometer eyepiece put on. Total diameter of comet as seen with this eyepiece 3' to 4', no particular nucleus visible but rather a diffused faint central condensation.

Comet too diffused and indefinite for transits.

Circumpolar Variables. N. obs.

R. Cassiop.

23	51	+49.7
30	50	
6	59	

o 3.5 R, R 1.5 f. in large telescope rather too faint & close for finder. estimate 10.2

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1892phae.proj..520W

Feb. 15, 1893

R Leonis

6	49	+55.1
7	9	
+	20	

Too high upr.

T Ursae Maj.

12	33	+60.4
7	21	
−5	42	
12	00	
+6	48	

9. 20 $\frac{h}{h}$ 3 $\frac{I}{I}$, $\frac{I}{I}$ 2.5 $\frac{k}{k}$ in finder.
$\frac{h}{h}$ 3 $\frac{I}{I}$, $\frac{I}{I}$ 3 k in large telescope.
Estimate 9.0

S Ursae Maj.

9 30 $\underline{S}$ = m in large telescope.
$\underline{S}$ = m in finder.
Estimate 10.7

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1892phae.proj..520W

Feb. 15, 1893

Nova Aurigae

5 23 + 32.0
7 52
2 29 right and
index above.

s dec. 251.0
348.8 97.8^
241.8 111^
356.9 212.9 v^ +.4
147.1 -0.63

Altered focus a little.

index below.

10 v

331.5
89.1 117.6^
337.0
81.0 104.0^ +.2 v
2216 v^
138.4 -0.81

341.8
80.2 94.4^
330.0
89.0 119.0^
217.4 v^ +.3 v
142.6 -0.72

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1892phae.proj.520W

Feb. 15, 1893.

Index above

~~63.2~~
~~177.0~~

Focus altered.

Index above,

72.5
171.0 98.5 ^
62.2 115.5 ^
178.0 213 v ^ +1.2 v
145.7 -0.66

60.0 119.0 ^
179.0
69.0 102.0 ^
171.0 221.0 v ^ +1.2 v
139.0 -0.79

Index below.

157.2 101.3 ^
258.5
151.2 114.2 ^
270.0 220 v ^ +1.2 v
139.9 -0.78

10:40.
10 22.5

Observations a little difficult on account of rather high altitude.

pr 2.5m Nova, Nova 2. g in finder.
pr 2.5m Nova, Nova 2.5 g in large telescope.

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1892phae.proj..520W

Feb. 15, 1893

R. Synsis

6	49	+55.1
8	46	
1	57	

10.56 t 2 R, R 1.4 w. in large telescope too faint for finder.
Estimate 13.0.

Fine Aurora throughout evening consisting at times of streamers and at times of double arches. It now consists of mainly of one brilliant arch and streamers (11:05).

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1892phae.proj..520W

Feb. 20 1893.

Nova Aurigae.

5	23	+ 32.0
7	39	
+ 2	16	

Measurement of light of Nova Aurigae Chart. R. H. obs.

Index above

9 30

70.0 99.5
169.5

67.0 105.2
172.2 205.7
153.3 -0.47

Index below

158.5 105.5
264.0

154.0 110.2
264.8 216.3
143.7 -0.70

9.50

155.0 110.0
265.0

153.3 110.9
264.2 220.9
139.1 -0.79

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1892phae.proj..520W

Feb. 20, 1893.

Index above.

64.0
174.0 110.0

68.1
174.4. 106.3
216.3
143.7 X3 −0.70

70.0 104.0
174.0

63.2 111.2
175.0 216.2
144.2 X3 −0.69

Index below.

156.5
261.4 104.9

155.0 105.7
260.7 210.6
149.4 X1 −0.59

10:20
9 53.3

fp 2 Nova, Nova 3, 9 in finder.
fp 2.5 Nova, Nova 2.5 9 in large telescope.

Somewhat troubled by frost on Nical prism, driving clock also frozen so that it cannot be used, but especial care taken with each setting so that measurements are thought to be good.

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1892phae.proj..520W

Feb. 20, 1893.

Comet f 1892 (Holmes.) Ob. Obs.
Light measurement with Phot. 2.

2	14	+34.4
9	4	
+6	50	

Focus ~~+0.5~~	outside focus.
10.5	27.2
10.3	26.8
10.0	26.1
10.3	26.7
	10 3
	16.4

10 4 ✓

12.33 ✓
Means ~~12.4~~

Comp. stars & Triangle

Comet rather low.

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1892phae.proj..520W

Feb. 24. 1893.

Mean of Jup. I and II with Plot. R. H. M.

Index above.

167.0		
25v.9	< I dia.	44.9 v^
166.7		
25v3.2		46.5 v^
		17v.8 +2.1 v

Index below.

25v2.0		
347.7		9v.7 v^
25v0.1		
347.2		97.1 v^
		192.8 v^ +1.4 v

25v.1		
3v0.1		9v.0 v^
25v1.0		
348.8		97.4 v^
		192.4 v^ +1.4 v

Index above.

166.7		
25v0.7		44.0 ^
169.2		
25v1.7		42.5 ^
		166.v v^ +2.3 v
~~4~~		
168.0		
25v1.0		43.0 v^
166.1		
25v2.9		46.4 v^
		169.5 v^ +2.2 v

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1892phae.proj..520W

Feb. 24. 1892.

Index below.

2481		
3490	100.9	v^
2560		
3475	91.5	v^
	192.4	v^ +1.8 v

δ 55

Jupiter rather low, especially towards end of settings, when it was considerably below top of steeple. Images fairly good for sight when ☩ index was above, but one image △ decidedly elongated when index was below. Images rather unsteady and varying somewhat in light, so that time was taken to get the average light impression.

Images necessarily rather near limb of Jupiter, since Sat. I was near limb of same.

Comp. Stars for Var. Gr. Hs.

R Draconis.

16	26	+67.3
δ	0	
δ	26	
1		
3	34	

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1892phae.proj..526w

Feb. 24. 14h 9m.

R Draconis.

9 43 $\frac{1}{2}$ 2 R, R 3 9 in lar. tel.
Too ft. for finder.
Est. 12.0

R Lyncis.

6 49 + 55.1
2 2v
+1 3 6

10 22 0 1.v R, R 3 p in lar. tel.
Too ft. for finder.
Est. 12.3

Nova Aurigae.

5 23 +32.0
9 0
+3 37

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1892phae.proj..520W

Feb. 24. 1893.

Nova Aurigae. Fr. obs.
Index above.

10 33

63.5 104.6
172.1
66.2
173.5 $\frac{105.3}{213.9}$ +1.3
146.1 −0.65

Index below.

177.3 105.9
263.2
176.0 $\frac{109.5}{215.4}$ +1.3
265.5 144.6 −0.68

176.2 109.4
266.0
175.0 $\frac{111.1}{220.9}$ +1.2
266.1 139.1 −0.79

Index above.

64.0 105.0
173.0
65.5 $\frac{111.1}{216.1}$ +1.3
176.6 143.9 −0.70

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1892phae.proj..520W

Feb. 24. 1893.

67.2 ^ 104.3 ^
171.V
66.4 ^ 110.9 ^
177.3 215.2 V^ +1.3 V
144.8 −0.68

Index below.

1V6.0 106.0 ^
262.0
1V4.0 104.V ^
262.V 21V.V V^ +1.3 V
145.5 −0.66

10 V7
10 45.0

£ 2 Arora, Arora 2.V g in Cor. tel.
Moon too brt. for finder.

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1892phae.proj..520W

Feb. 27. 1893.

Jupiter I and II with Plot. R. Sr. obs.

Index to right and below.

2 < 5.0
3 > 6.0
2 > 3.2
3 < 5.0

Index to right + below.

I dis. 7 2 < 2.0
3 > 2.7 110.7 ^
2 > 1.9
3 < 6.9 9 > .0 ^
20 > .7 ^ + 1. > v

Index to left and above.

16 < .2
2 > 6.3 44.1 ^
1 > 9.0
2 > 4.0 99.0 ^
147.1 ^ + 1.9 >

1 > 7.2 101.4 ^
2 > 9.0
16 2.2
2 > 8.9 96.7 ^
194.2 ^ + 1.6 >

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1892phxe.proj...526W

Feb. 27. 1893.

Index to right and below.

2 K 6.1	102.7 ^	
3 K 0.4		
2 K V 1.0	106.0 ^	
3 V 1.0	208.7 ^	+1.V V

2 K 6.9	104.1 ^	
3 V 1.0		
2 V 1.0	95.4 ^	
3 K 6.4	199.9 ^	+1.6 V

Index to left and above.

160.0	103.2 ^	
263.2		
1 V 3.0	103.4 ^	
2 V 6.4	207.0 ^	+1.V V

Δ 1Δ

Jupiter rather low. Images unsteady and blurry. ~~At times~~ Jupiter I and II almost close together so that it was almost impossible to adjust the images in the best manner before and after reversal. From the unsteadiness of the air, the images frequently merged together so that ~~at times~~ it was impossible to distinguish them separately, except by waiting for the air to become steady.

First set retaken as images were thought to be better adjusted.

Clock ~~slowing~~ losing badly

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1892phae.proj.520W

Feb. 27. 1893.

Examination of region of β Persei to see if there is a sufficiently bright star near it to use in relative measurements of β. Fr. obs.

~~+7~~

3 0 +40.V

7 20

+4 20

No star available except one about 4' distant.

2 in. Wedge Zone, Fr. obs.
Series. 110.
+9°

6 22 +9.1
4 30

+2 4

2 17
4 31

6 14

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1892phae.proj...520w

Feb. 27. 1893.

6 16
4 33
---
42 17

9 31 1269 4.V-2
4.61
4.33 13.467 5.837

1240 2.7V-
2.93
3.10 8.787 3.807

1243 3.07
3.2V-
3.30 9.627 4.147

1246 3.V-1
3.6V-
3.67 10.837 4.697

1249 3.92
3.97
4.10 11.997 V.197

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1892phae.proj..520W

Feb. 27. 1893.

1290	3.61	
	3.vv	
	3.70	10.86[7] < 4.70[7]
1293	3.7v	
	4.00	
	3.74	11.53[7] < 4.99[7]
129v	4.7v	
	4.62	
	4.4v	1F.22[7] < 6.16[7]
1296	~~3.0+~~ 3.14	
	3.27	
	3.2v	9.70[7] < 4.20[7]
1314	2.7v	Same star as
	2.v0	in Lev. 106.
	2.71	7.96[7] < 3.4v[-7]
1324	4.54	
	4.40	
	4.77	14.1v[-7] < 6.13[7]
1330	3.42	
	3.47	
	3.49	11.v8[7] < v.01[7]

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1892phae.proj...520w

Feb. 27. 1893.

1331	4.92		
	4.6v		
	4.43	14.40^{1}	6.24^{1}
1332	4.73		
	4.vv		
	4.62	13.90^{1}	6.02^{1}
133v	4.3v		
	4.42		
	4.20	12.97^{1}	v.v6-2^{1}
1336	3.vv		
	3.v0		
	3.49	10.v7^{1}	4.v-6^{1}
1334	3.91		
	3.97		
	3.84	11.76^{1}	5.09^{1}
1349	4.1v		
	4.27		
	4.21	12.63^{1}	v.47^{1}
13v0	4.v2		
	4.70		
	4.74	14.10^{1}	6.06^{1}

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1892phae.proj.520W

Feb. 27. 1893.

13V1	3.97		
	3.8V		
	3.92	11.74[1]	V.08[-1]
13V3	3.61		
	3.V8		
	3.6V	10.84[1]	4.69[-1]
13VV	3.80		
	3.8V		
	3.30	10.1V[-1]	4.39[-1]
1361	3.00		
	3.10		
	3.03	9.13[1]	3.9V[-1]
1364	3.27		
	3.10		
	3.17	9.V4[1]	4.13[-1]
1367	2.V2		
	2.V0		
	2.8V	7.47[1]	3.23[-1]
1374	4.3V		
	4.37		
	4.34	13.06[1]	V.6V[-1]

10 V6

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1892phae.proj...520W

March 1, 1893.

Measurement of Jup. I & II, with Phot. R. N. obs.

7:40

Index above.

344.0
74.5 < I dia. 90.5 ^
343.0
76.0 93.0 ^
183.5 ^ +1.9 <

Index below.

72.5
168.0 95.5 ^
76.2
165.0 88.8 ^
184.3 ^ +1.9 <

79.5
167.0 87.5 ^
74.2
169.0 94.8 ^
182.3 ^ +2.0 <

Index above.

346.0
76.9 90.9 ^
346.2
71.0 84.8 ^
175.7 ^ +2.1 <

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1892phae.proj..520W

March 1, 1893.

347.0	
71.7	84.7
344.0	
75.0	96.0
	175.7 +2.1

Index below.

74.0	
167.0	93.0
79.0	
164.0	85.0
	178.0 +2.0

8.10

Observations somewhat ~~rather~~ difficult owing to the fact that Jupr. was rather low and the seeing somewhat unsteady but principally because satellite II was very near limb of Jupr. and gradually ~~growing~~ nearer during observations

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1892phae.proj..520w

March 1, 1893.

D. M. Hedgecone.
Series III

N. Obs.

+19.°

4	46			+19.8
7	24			
2	38			

8.45

793	3.58		
	3.75		
	3.60	10.93.7	4.73'
800	4.39		
	4.49		
	4.18	13.06.7	5.65.9
803	2.72		
	3.39		
	3.12	9.23.7	4.00.7
806	3.30		
	3.69		
	3.45	10.44.7	4.52.7
824	3.00		
	3.20		
	3.19	9.39.7	4.06.7

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1892phae.proj.520W

March 1, 1893.

826.	3.40		
	3.25		
	3.49	10.14.1	4.39.1
827	3.51		
	3.69		
	3.62	10.82.1	4.68.1
831	4.70		
	4.70		
	4.80	14.20.1	6.15.1
835	3.31		
	3.49		
	3.40	10.20.1	4.42.1
837	2.50		
	2.72	7.82.1	3.39.1
	2.60		

There must be an error in the R. M. Star 837 follows 835 13 sec instead of 23 sec & is about 9' south of it instead of 6'. These two stars check by adjacent stars & there is apparently no other star which can be taken for 837 save this one.

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1892phae.proj..520W

March. 1, 1893.

~~848~~

~~3.15~~
~~3.01~~ Wrong star.
~~3.10~~

~~848~~ ~~852~~ This star is double.
North preceding component.

~~2.90~~
~~3.10~~ ~~Wrong star~~
~~2.99~~ 8.99 3.89

So
South following component. ~~2.80~~
~~2.80~~ ~~wrong star~~.
~~2.84~~ 8.44 3.65

852 ~~852~~

3.49
3.60
3.60 $10.69^{.7}$ $4.63^{.7}$

866

3.30
3.58
3.57 $10.45^{.7}$ $4.5-2^{.7}$

868

2.52
2.69
2.80 $8.01^{.7}$ $3.47^{.7}$

871

3.39
3.50
3.22 $10.11^{.7}$ $4.38^{.7}$

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1892phae.proj.,520W

March 1, 1893.

874	~~2.58~~ 2.99		
	2.95		
	3.00	8.94	3.87
876	4.81		
	4.84		
	4.92	14.57	6.81
881	4.50		
	4.38		
	4.79	13.67	5.92
884	5.10		
	5.02		
	4.92	15.04	6.51
886	5.69		
	5.79		
	5.80	17.28	7.48
893	6.25		
	6.05		
	6.00	18.30	7.92

900 The only star which can be taken for 900 is one preceding 901, 5 sec & some 1' north of it. Is very faint. ~~This makes~~, whereas the D. M. would make the star wanted preced 901 by 1 sec 5' north. This is the

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1892phae.proj..520W

March 1, 1893.

only star about here.

1.98
1.90
1.85 $\sqrt{.73}^{.7}$ $2,48^{.7}$

905

3.99
3,90
3.92 $11.81^{.7}$ $\sqrt{.11}^{.7}$

Star 905 is a rather close double combined light measured as nearly as possible.

907

3.69
3.67
3.79 $11.1\sqrt{}^{.7}$ $4.83^{.7}$

910

3.79
3.70
3.50 $10.99^{.7}$ $4.76^{.7}$

This star is rather bright for a 9.5

914

4.40
4.42
4.48 $13.30^{.7}$ $\sqrt{.76}^{.7}$

923

3,05
3,30
3,42 $9.77^{.7}$ $4.23^{.7}$

Star double preceding + brighter component measured.

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1892phae.proj..520W

March 1, 1893.

928	4.13		
	4.04		
	4.15	12.32	±.33
929	2.65		
	3.10		
	3.08	8.83	3.82
931	2.90		
	3.10		
	3.00	9.00	3.90
934	4.17		
	3.80		
	4.07	16.04	±.21
936	4.70		
	4.70		
	4.75	14.15	6.13
10:50 938	4.29		
	4.50		
	4.42	13.21	±.72

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1892phae.proj...520W

Z.D. ☉ = 76.9 Obs. = 0.21
" " ☿ = 62.3 " = 0.31

Mar. 6. 1893.

Comet Holmes (f) 1892. Gr. M.

2 3Δ +3√.0
6 √-6
+4 1Δ

Focus.	Outside.	
10.0	32.0	1293
10.3	32.2	12.9 mags.
10.0	31.0	√
10.1	31.7	13.0 = cor. mags.
Large telescope	10.1 Focus.	
	21.6	

Comps. star y Triangulí.

Obs. rather difficult. Altitude, although not low, yet not high. Cloudy the first of evening but apparently quite clear at time of obs. Comet faint. General light of coma measured, that is ~~was~~ ~~each~~ central portion.

Δ 32

Cloudy.

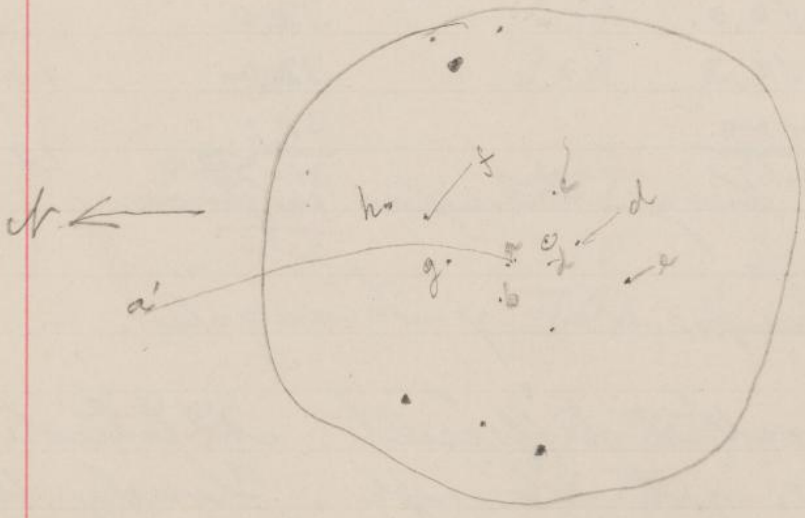
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1892phae.proj.1520W

Mar. 6. 1893.

Selection of faint Comp. Stars for R ~~Tauri~~ Persei. Fr. obs.

3	24	+ 3 v. o
4	20	
+4	v 6	



If the chart is right. ~~R. persei~~ R Persei is invisible to right. The configurations check and the faint stars on same adjacent to R. but R is not seen, and is ftr. than star a or ai above ~~day~~ diagram, and probably ftr than 14.v although region is getting rather low.

For the above diagram, which is a preliminary selection ~~of~~ of faint comp. stars for R Persei, star a is the faintest and star b, c + c. successively brighter, the

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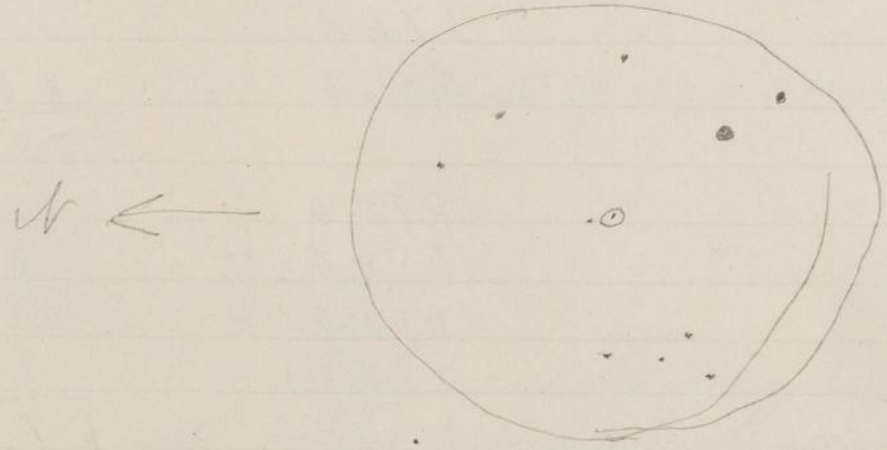
1892phae.proj..520W

Swar. 6; 493

sequence by beginning with the faintest star and proceeding to the brighter stars. Class a is 0 ftr. than star a.

for. Selection of faint comp. stars R. Lacerc. Fr. do.

ℓ	2	+10.0
g	30	
+	r	ℓ



Becoming cloudy again.

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1892phae.proj..520W

March. 7, 1893.

Measurement of Jup. I–II with Phot R.
St. obs.

Index below.

7 33

75.2
164.5 < I. dis.
72.5
170.5

89.3^
98.0^
187.3^ +1.9^.

Index above

168.0
260.0
171.0
251.3

92.0^
80.3^
172.3^ +2.1^

170.0
259.0
172.0
255.1

89.0^
83.1^
172.1^ +2.1^

Index below.

250.0
347.0
254.1
340.8

97.0^
86.7^
183.7^ +1.9^

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1892phae.proj..520W

March. 7, 1893 -

Index below.

256.3
341.0 . 84.7^
251.5
347.1 95.6^
180.3^ +2.0 v

Index above.

343.0
77.0 94.0^
344.1
71.0 ~~87.0~~ 86.9^
~~181.0~~ +2.0 v
180.9

L 10

Comet of 1892 (Holmes) N. Obs

. 2, 40 +35.0
7 30
+4 50

Thorough search made for Comet. Comet suspected, but if seen it is too faint to measure. Sky a little hazy

Nova Aurigae.

5 23 +32.0
8 16
+2 53

Abandoned for present

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1892phae.proj..520W

March 7, 1893

R. Persei

A. obs.

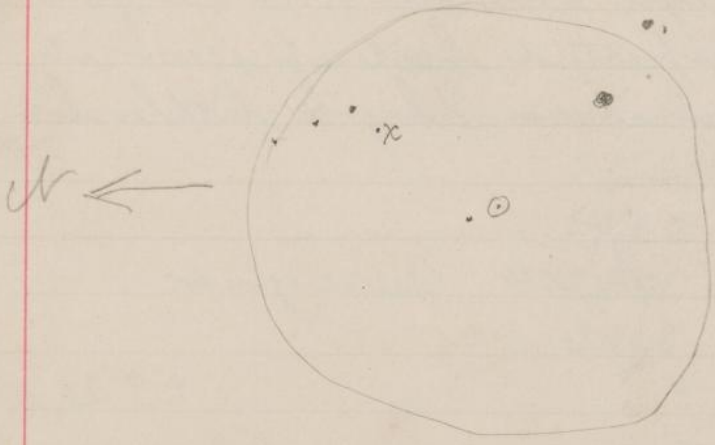
3	24	+ 35.0
8	20	
+ 4	56	

R. Persei thought to be seen. It is extremely faint. There seems to be a star ~~a~~ a' near a which is very faint. R is fully as faint as a' + perhaps a grain fainter.

9.25 Est. 14.7

R. Tauri

4	22.0	+ 10.0
8	49.0	
4	27.	



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1892phae.proj..520W

March 7. 1893.

R. quite faint at this altitude. Thus ~~seems it to be~~ is a star × as indicated in the diagram. R 3.5×. Est. 13.8

Region a little low & sky a little foggy, ~~×~~ but still pretty clear.

R. Lyncis.

6	49	+55.1
9	9	
+2	20	

m 2 R, R 2.5 v in large telescope.
m 2.5 R, R 2.5 v in finder.
10.10 Est. 11.4.

Nova Aurigae

5	23	+32.0
9	33	
4	10	

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1892phae.proj..520W

March 7, 1893.

Nova Aurigae

Phot. R.

N. obs.

10:20

Index below

334.8
83.2 — 108.4
332.0
86.0 — 114.0

222.4 +1.2
137.6 -0.82

Index above.

64.2
174.1 — 109.9
66.0
174.0 — 108.0

217.9 +1.3
142.1 -0.73

66.0
173.1 — 107.1
66.0
174.7 — 108.7

215.8 +1.3
144.2 -0.69

Index below.

334.0
87.2 — 113.2
335.5
85.0 — 109.5

222.7 +1.2
137.3 -0.83

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1892phae.proj..520W

March 7, 1893.

Index below.

333.0
87.5 — 114.5

335.8
87.3 — 111.5

226.0 +1.1
134.8 -0.90

Index above.

63.2
175.0 — 111.8

65.8
174.1 — 108.3

220.1 +1.2
139.9 -0.78

10:55
10 37.5

fr 2.5 Nova, Nova 2.5 g. in large telescope.
fr 2.0 Nova, Nova .3 g. in finder.

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1892phae.proj..520W

March 8, 1893

Sky pretty cloudy, but will try R. Persei.

	R. Persei	N. obs.
3	24	+35.0
6	53	
+3	29	

7:40 Too cloudy at present to see variable.

7:55 Faint star a seen but star a' not seen. Variable not seen. sky pretty thick and growing worse.

	δ Cephei.	
22	25	+57.8
7	20	
-15	5	
24	0	
+8	55	

Sky too thick to see δ Cephei.

8:15 Sky still thick & growing worse.

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1892phae.proj..520W

March 13, 1893

Comp. of Jup. I + II. Phot. R. Ott. obs.

Jup. I is on the planet + hence cannot be compared with Jup. II.

R. Persei.

3	24	+ 35.0
7	38	
+4	14	

a' 1.5 Variable. Est 14.7.

Comet f 1892 (Holmes) Ott. obs.

2	50	+ 35.°3
8	8	
+5	18	

Comet not found, probably too faint. Sky pretty clear.

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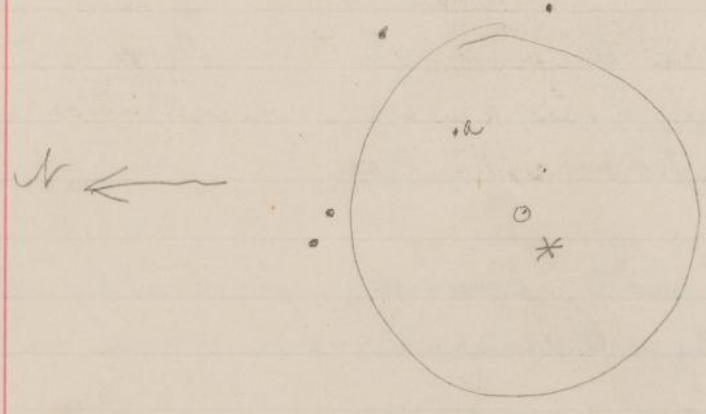
1892phae.proj..520W

March 13, 1893

Faint variables R. Comae. N. obs.

11	5 7	+19.6
8	2 5	
−3	3 2	
12	0 0	
+8	28	

9 R. Comae thought to be certainly identified. It is rather near a 7.5 magnitude star and although some of the stars on the chart do not check very well there does not seem to be much doubt that this is the right region.



9:10 R = a in diagram Est. 13.2

The above observation rejected as there seems to be a little uncertainty about identification and trouble was experienced at time of obs.

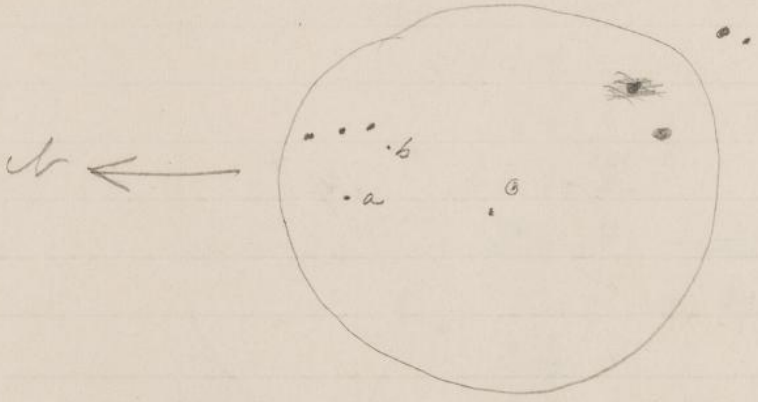
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1892phae.proj...520w

March 13, 1893

R Tauri. Ot. obs.

4	22	+10.0
8	57	
+4	35	



9:30 a 1 R, R 2.5 b in large telescope too faint for finder. Est ~~14.0~~ ~~12.9~~ 13.1

The comp. stars a & b are those indicated in the diagram above. The absolute estimate is rather difficult & perhaps affected somewhat by rather low altitude.

R. Leporis

6	50	+55.1
9	17	
+2	27	

9:50 l 3 R, R 2 m in large telescope. Est. 11.0

l 2.5 R, R 2.5 m in finder.

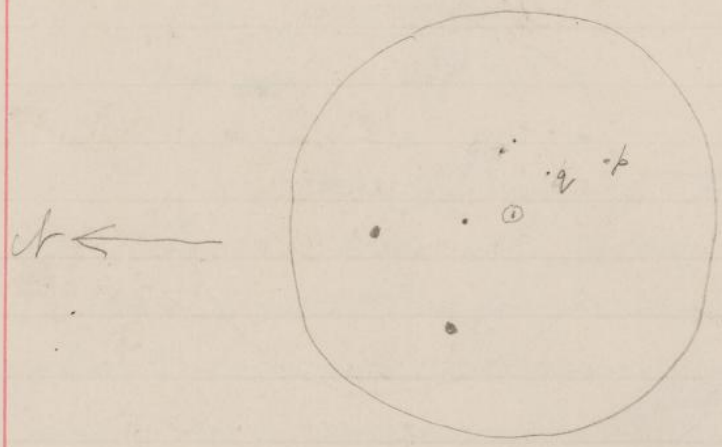
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1892phae.proj..520W

March 13, 1893.

R. Geminarum H. obs.

7	0	+ 22.1
9	36	
+2	36	



10:15 p 1.5 Rp, R 2.5 q in tor. tel.
Est. 13.0

p is the last star on newly selected list at present time, and in new notation, q is a next fainter star added to right. These stars seem to be n and o on chart in Chandler's notation.

Nova Aurigae Phot. R. H. obs.

5	23	+ 32.0
10	2	
+4	39	

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1892phae.proj..520w

March 13, 1893.

10135

Index above.

244.1		
353.9	109.8	
245.9		
352.8	106.9	
	216.7	+1.3
Index below.	143.3	-0.71
334.2		
86.3	112.1	
337.2		
85.0	107.8	
	219.9	+1.2
	140.1	
336.9		-0.77
86.0	109.1	
334.7		
87.0	112.3	
	221.4	+1.2
Index above	138.6	-0.80
63.0		
177.8	114.8	
66.0		
174.0	108.0	
	222.8	+1.2
65.7	137.2	-0.83
174.9	109.2	
66.0		
175.5	109.5	
	218.7	+1.3
	141.3	0.75

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1892phae.proj..520W

March 13, 1893.

Nova Aurigae.

Sandra below.

10 52

10 43.5

154.9
264.7 109.8
155.0
264.9 109.9
219.7 140.3 +0.77 ~~+1.2~~

10 57 fp 2.5 Nova, Nova 3.. g in finder.
fp 2.5 Nova, Nova 3 g. in large telescope.

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1892phae.pfoj..526W

March. 15 1893

Comp. of Jup. I + II. Phot R. Ol. obs.

Jup. rather low. Sat. I + III rather near together, much unsteady images unsteady + discs boiling so that measurement had to be abandoned.

R. Persei.

3	24	+ 35.0
8	5	
+4	41	

R. Persei not certainly seen. Star b thought to be seen, Star a not certainly seen. Star b thought probably at least 3 grades brighter than variable.
Variable probably as faint or fainter than 14.6. Seeing rather poor much wind.

8:25

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1892phae.proj..520W

March 15, 1893.

R. Ursae Maj.

10	32	+69.3
8	26	
−2	6	
12	0	
+9	54	

p 4 R, R 1.5 g. in large telescope.
p 3.5 R, R 1.5 g. in finder,
8:55 Est. 10.5

S Boötis

14	16	+54.6
9	0	
−5	16	
12	0	
+6	44	

9:25 k 4 S, S 3 1 in large telescope,
rather too faint for finder.
Est. 11.4

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1892phae.proj..520w

March. 15, 1893

R. Draconis.

16	26	+ 67.4
9	18	
7	8	
12	0	
+4	52	

n 2.5 R, R 1,50 in large telescope.
n 3 R, R 1. 0 in finder.
Est. 11.1

9;35.

T. Hydrae.

8	44	− 8.6
9	28	
+	44	

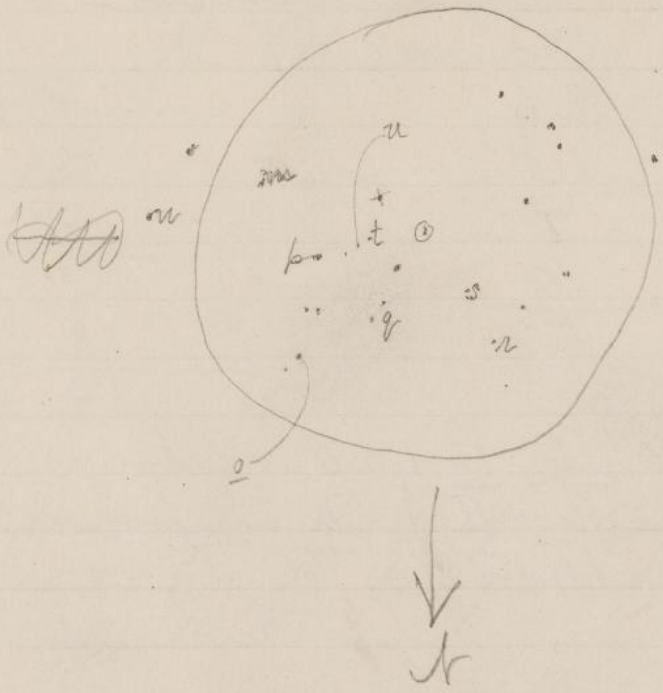
The last star Mr. Reed has on chart is star n which is brighter than variable, consequently will carry sequence down to faintest stars.

over.

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1892phae.proj..520W

March, 15, 1893.



Star n is the last star on chart in Mr. Reed's notation. Stars m - n in diagram above are Mr Reed's m - n + .o is ~~any~~ the first star of my continuation of sequence beyond Mr Reed's n.

10.55

E o 1.5 I, I 2.5 p in large telescope too faint for finder.
Est. 11.3.

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1892phae.proj..520W

March 16, 1893.

Selection of faint comp. stars for T. Hydrae. R. obs. — 8, 6

8	44
8	28
—	16
12	00
11	44

Selection of faint comp. stars indicated in diagram on page 188 carefully re-examined and selection seems to be very good. There seems to be a faint star as indicated in diagram on page 188, which has been added tonight. It is about the faintest star which can be seen with certainty tonight & should be looked at again on a subsequent night.

0 1 I, I 3 p. in large telescope.
0 1 I, I 3 p in finder.

9:15 Est. 11.4

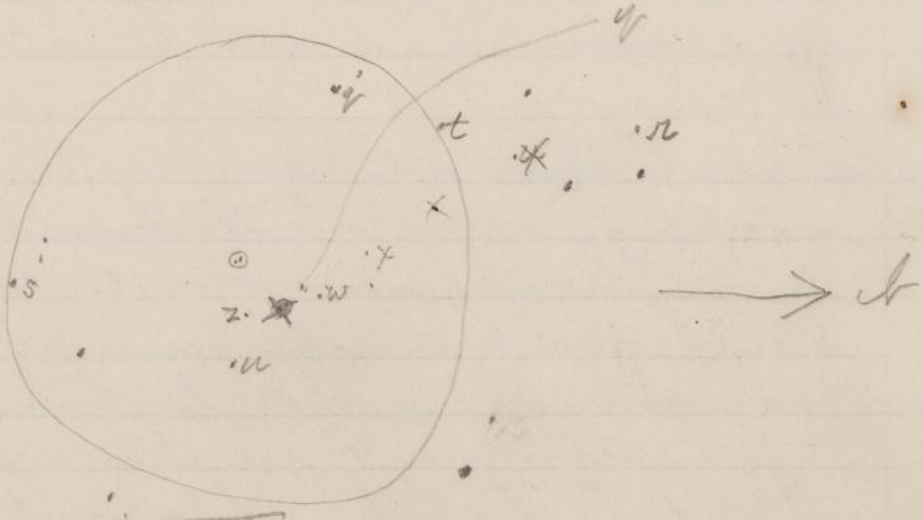
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1892phae.proj..520W

March 16, 1893.
Selection of faint Comp. stars for
R. Comae.

11.	57	+19.6
9	27	
2	30	
12	00	
+9	30	

Selection of faint Comp. Stars.



~~Star x in diagram is about the faintest star that can be seen with certainty tonight for selection~~, Star y is Mr. Reed's last star & Star z is my first star. There seems to be a star about in position of R Comae although it is pretty faint.

Star x & R Com are labelled too faint for finder. Est 14.5. Est perhaps somewhat affected by bright star in field.

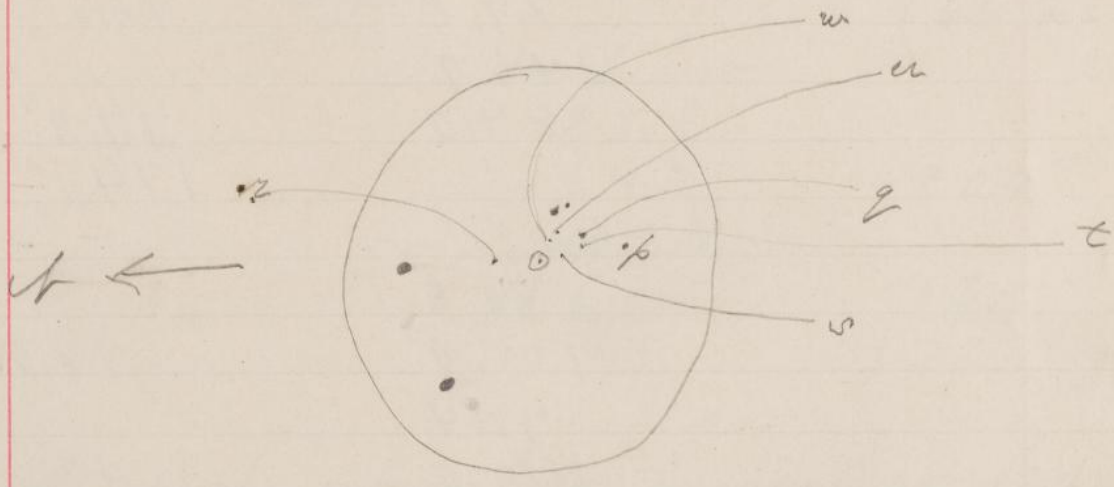
10:25.

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1892phae..proj...520W

March 16, 1893.
Selection of faint Comp. stars for
R. Geminorum

7 h 0 + 22, 1
10 16
+3 16.



Star w is the faintest star that can be seen tonight with certainty, star p is Mr Bell's last star, star q is my first star in this selection.

p 2 R, R 2.5 q. in large telescope.
rather faint for finder.
Est. 11.3

[0 vs A

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1892phae.proj..520W

March 18, 1893

~~Heavens~~ Comp'd of Jordan I + II. Phot B.
Ol. obs.

7 20

Index above

343.0 ⌐ I obs.
79.8 96.8^
346.7
64.0 77.3^
174.1^ +2.1v

Index below.

80.0
158.0 78.0^
75.4
170.8 95.4^
173.4^ +2.1v

76.0
165.8 89.8^
85.0
160.3 75.3^
165.1^ +2.3v

Index above

351.0
64.2 73.2^
347.2
72.0 84.8^
158.0^ +2.4v

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1892phae.proj...520w

March 18, 1893

Index above.

344.2	
74.0	89.8 ^
350.1	
67.0	76.9 ^
	166.7 ^ +2.3 ✓

Index below.

83.8	
164.2	80.4 ^
75.0	
168.5	93.5 ^
	173.9 ^ +2.1 ✓

7:50

Jupr. ~~xxx~~ low. images somewhat unsteady and elongated especially that of Jupr. I.

~~E~~ 4 Selection of faint comp. stars for R. Tauri

4	22	+10.0
8	11	
+3	49	

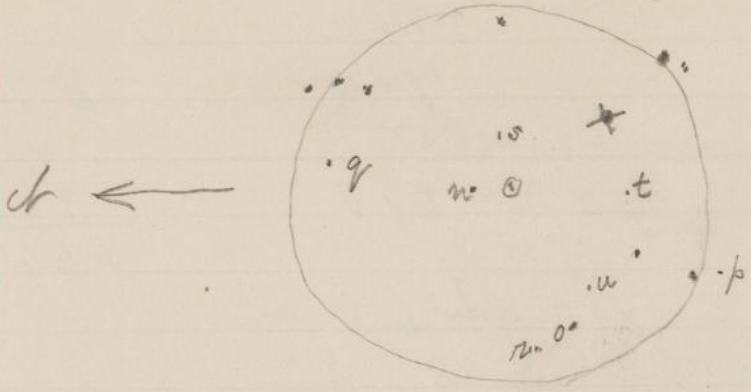
(over)

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Mar. 18. 1893.

R. Tauri (cont.)



Star s in ~~it~~ in diagram above is Mr. Reed's on chart. Stars o & p may possibly be Mr Reed's o & p on chart although they are not underscored there, however they form a good sequence in order after n, so that they are used in ~~diagram~~ selection tonight. Star ~~u~~ thought to be seen, so that is adopted & is the faintest star which can be seen tonight at this altitude.

p 1.5 R, R 2.0 q. in large telescope two faint for find.

9:15 Est 12.9 Variable comp. is in terms of notation in diagram above

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1892phae..proj...520W

March 18, 1893.

Reëxamination of selection of Comp. stars for R. Comae

11	57	+ 19.6
9	22	
−2	35	
12	00	
+9	25	

There is a somewhat cometary object in this region which seen on the 16th and <u>seemed</u> to right to have moved,

It precedes 8 Com. +19° 2V-2R (9.4) by 26.9 secs. and is 2' south of it.

11	V7	16.5	+19	16.7
		−26.9		−2.0
11	V6	49.6	+19	14.7
		+15.4		−1.7
R.A. =	11	V7 0.0	+19	13.0
			90	
			70	+7.0 = P.D.

This turns out to be N. G. C. 4064 for R Comae

Selection of faint comp. star very good.

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March 18, 1893

S Cygni.

20	8	+5 7.1
10	54	
−9	14	
12	00	
+2	46	

Star seen, star thought to be seen. S suspected at times, but not certainly seen. If seen it must be two or three grades fainter than star t, S star u not certainly seen. Var. probably as faint as 14.4. Region rather low, seeing not the best.

11.04

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1892phae.proj...520W

March 20, 1893

Reexamination of faint comp. stars for R. Cornac

11	57	719.6.
7	40	
+4	17	
12	0	
+7	43	

Var. equals star z in large telescope too faint for finder.

9:10. Est. 14.8

Stars y + z are two faint stars inserted tonight in diagram on page 190, two faint stars seem to be needed. These are rather near the bright star, but no others can seem to be found sufficiently near var. + with a higher power the bright star does not seem to prejudice them.

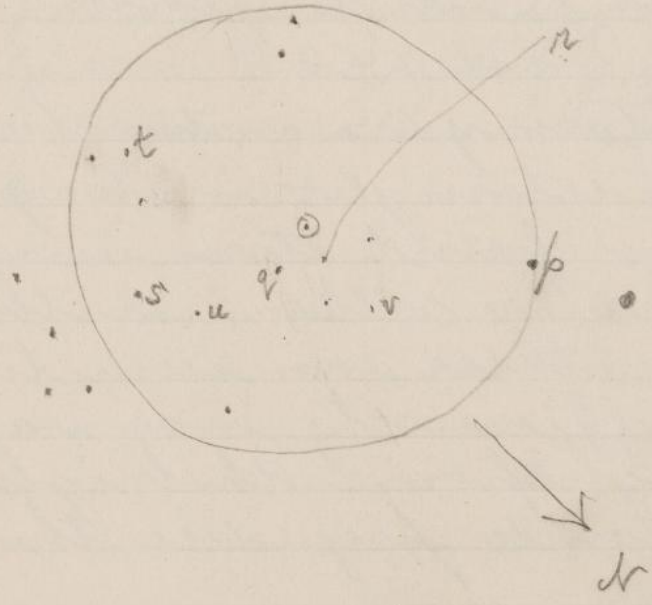
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1892phae.proj..520W

March 20, 1893

Selection of faint Comp stars for T Virginis M. obs.

12	7	−4.9
9	26	
−2	41	
12	00	
+9	19	



Stars q + r are the last two in Mr Reeds notation on chart + s is the first of my notation in diagram. Star u certainly seen, Star v suspected but needs to be confirmed when sky is a little freer from haze.

q + I. T 12 in large telescope too

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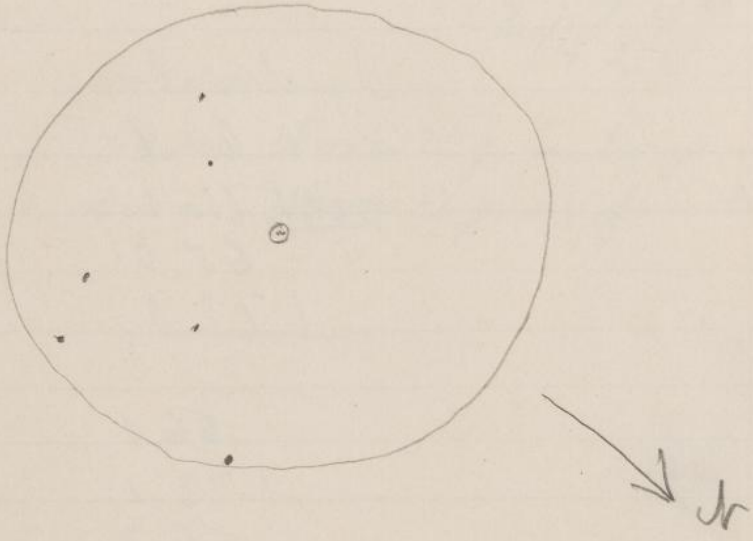
1892phae.proj..520W

March 20, 1893.

9:50 faint for finder. Est 12.1
Stars q. & r are in Mr. Rudd's notation.

Selection of faint comp. stars for V Virginis M. abs.

13	24	−1.6
10	4	
−3	20	
12	0	
+8	40	



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March 20, 1893.

Nova Aurigae. Phot. R. Ol. obs.

5	23	+32.0
10	35	
+5	12	

10:35

Index below.

336.7		
85.8	109.1	
337.5		
85.8	108.3	
	217.4	+1.3 ~~+1.3~~
	1426	-0.72

Index above.

68.9		
171.1	102.2	
65.0		
173.0	108.0	~~210.2~~
	210.2	+1.4 ~~+1.4~~
	149.8	-0.58
66.0	106.1	
172.1		
66.2		
174.0	107.8	
	213.9	~~+1.3~~
	146.1	-0.65

Index below.

334.8		
85.4	110.6	
337.2		
86.8	109.6	
	220.2	+1.2 ~~+1.2~~
	139.8	-0.78

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March 20, 1893.

Index below.

334.8
81.9 — 108.1
333.5
85.8 — 112.1 (3)
219.9 (4) — +1.2

Index above. 140.6 — −0.76
64.2
174.2 — 110.0
67.9
175.3 — 107.4
217.4 — +1.2
142.6 — −0.72

10.50
10 42.5

10.55

p 2.5 Nova, Nova 2.5g. in large telescope.
p 2.0 Nova, Nova 3.0g. in finder.

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1892phae.proj..520W

March 21, 1893.

Reapearance of Sat I accidentally forgotten until a little late. Region turned on & examined as soon as possible but Jup. so low & seeing so poor that Sat I was invisible in Phot at 7.45 although it must have been out at full brightness.
~~Sat I is I~~ Ot. obs.

R. Coronae Ot. obs.

11	57	+19.6
8	35	
−3	22	
12	0	
+8	38	

No better stars found tonight than y + z found last night,
Var. = z in large telescope too faint for finder.

8.53 Est 14.8.

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1892phae.proj..520W

March 21, 1893.

1
T. Virginis. Ol. obs.

12	7	− 4.9
9	9	
−2	58	
12	0	
+9	2	

Selection very good as far as can be decided upon tonight, The night not the best, more or less moisture in air.

Selection of faint Comp. stars for.

V Virginis. Ol. obs.

13	24	− 1.6
10	28	
−2	56	
12	0	
+9	4	

10:35 Dew on object glass now becoming too thick to see faint stars, so that rest of examination had better be abandoned tonight.

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1892phae.proj..520W

March 21, 1893.

Will try Nova Aurigae.

5	23	+32.0
10	50	
+5	27	

Nova Aurigae not certainly found.

10:52. Dew on object glass now pretty heavy. Troubled throughout evening more or less with dew on object glass, gradually increasing towards end.

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1892phae.proj..520W

March 25, 1893.

Measurement of bright double stars
Phot. Ry. M. obs.
Sky somewhat clearer but still rather cloudy.

No. 64 14 Aurigae.

5	7	+ 32.6
8	12	
+3	5	

Index below.

226.9
10.2 143.3
221.8
16.2 154.4
297.7 ~~0.8~~
Index above 62.3 -2.77

312.0
107.0 155.0
319.0
101.5 142.5
297.5 ~~0.8~~
62.5 -2.77

318.1
101.0 142.9
312.0
106.9 154.9
297.8 ~~0.8~~
62.2 -2.78

7 35

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1892phae.proj..520W

March 25, 1893

Index below.

44.2
197.5 153.3 ✓1
49.0

Clouds thick.

190.0 141.0 ✓1
294.3 ✓1 0.7 ✓1
Clouds thicker 60.7 -2.60
49.9
190.8 140.9 ✓1
44.2
200.2 156.0 ✓1
296.9 ✓1 0.7 ✓1
Index above. 63.1 -2.74
134.1
284.5 150.4 ✓1
138.9
280.0 141.1 ✓1
291.5 ✓1 0.6 ✓1
68.4 -2.56

8 10

Atmospheric conditions very bad but will try No. 68 23 Orionis.

5 16 + 3.4
8 50
3 34

Clouds so thick that stars cannot be found.

8 30

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1892phae.proj..520W

March 25, 1893.

Much trouble from clouds experienced in measures on first double.

8 4v Clouds now growing much thicker, so that it is impossible to proceed farther.

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1892phae.proj..520W

Postcard to here.

March 27, 1893.

Measurement of bright double stars
Phot R. N. abs.

No. 56 88 Tauri.

4	29	+ 9.9
8	2	
+3	33	

Index to right & below.

7:35

42.7 ptr. dis.
198.0 155.3 ✓ ^
44.7
195.7 151.0 ✓ ^
306.3 ✓ ^ ~~-1.1~~ ✓ ^
43.2 53.7 — 3.11
196.0 152.8 ^ -3.17
42.2
198.4 156.2 ✓ ^
309.0 ✓ ^ ~~-1.2~~ ✓ ^
~~51.0~~ -3.23

Index to left & above.

135.0
286.2 151.2 ✓ ^ Mean = -3.10
134.2
286.7 152.5 ✓ ^
303.7 ✓ ^ ~~-1.0~~ ✓ ^
56.3 -3.01

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1892phae.proj..520W

March 27. 1893.

Index to left + above.

	134.0		
	286.2	152.2 ✓	
	134.0		−3.02
7:45	286.1	152.1 ✓	
		304.3 ✓	~~−1.0~~ ✓
		~~304.1~~	−3.03

No. 57 τ Tauri.

4	35	+ 22.7
8	29	
+3	54	

Index to right + above.

7:55	135.7	⟨ ftr dia.	
	285.9	150.2 ✓	
	137.0		
	284.0	147.0 ✓	
		297.2 ✓	~~−0.8~~ ✓
	138.3	~~62.8~~	−2.76
	281.2	142.9 ✓	
	134.8		−2.67
	284.0	149.2 ✓	
		292.1 ✓	−2.58 ~~−0.6~~ ✓
		~~679~~	

Index to left + below.

	222.8		
	16.0	153.2 ✓	
	227.2		
	13.8	146.6 ✓	
	~~300.0~~		~~−0.1~~ ✓
	299.0 ✓	60.2	−2.05

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τ Tauri. (cont.)

Index to left & below.

226.2		2.83
13.0	146.8 ✓	
223.2		
8:05 15.0	151.8 ✓	
	298.6 ✓	~~0.8~~ ✓
	61.4	−2.81

Mean = 2.75

No. 59 ω Aurigae,

4 ~~5~~ 1 51		+37.7
8 44		
+3 53		

Index below & to ~~left~~ ~~right~~

8:20 311.5	< ftr. dis.	
107.5	156.0 ✓	
320.3		
101.2	140.9 ✓	
	296.9 ✓	~~0.7~~ ✓
318.0	63.1	−2.74
97.2	139.2 ✓	
314.0		−2.62
105.0	151.0 ✓	
	290.2 ✓	~~0.5~~ ✓
	Gr. 8	−2.51

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ω Aurigae. (cont.)

Index to ~~left~~ right & above.

137.4
278.7
136.2
284.8

141.3
147.8
289.1

wrong images

−0.5

135.9
283.5
136.2
281.1

147.6
142.9
290.5

wrong images.

−0.5

8.35

Thu

Index to right & above. Mean = 2.65

226.3
10.7 144.4 ✓
223.3
13.9 150.6 ✓
295.0 ✓ −0.7 ✓
6 ✓ 0 −2.6 ^
226.0
12.7 146.7 ✓
225.0 148.5 ✓ −2.6
13.5 295.2 ✓ −2.6 0.7 ^
64.8

8.41

Observation is very difficult ~~on account of~~ proximity of faint star to bright, seeing somewhat unsteady & blurry.

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No. 45 ℴ Persei

3	34	+ 33.6
9	32	
+5	58	

Index to right + above.

9:15

305.5	< ftr dis.	
114.1	168.6 ✓	
306.0		
112.9	166.9 ✓	
	335.5 ✓	~~2.8~~ ✓ ^
307.0	24.5	- 4.80
113.0	166.0 ✓	- 4.80
304.5	168.5 ✓	
113.0	334.5 ✓	- ~~2.8~~ ✓ ^
	25.5	4.76

Index to left + below.

216.1		Mean = 4.95
23.0	166.9 ✓	
214.0		
27.0	173.0 ✓	
	339.9 ✓	- 3.3 ^
215.8	20.1	- 5.25
25.2	169.4 ✓	
216.2		- 5.10
23.2	167.0 ✓	
	336.4 ✓	- ~~2.9~~ ✓ ^
	23.6	- 4.93

9:28

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Sky somewhat cloudy in observations of last star.

No. 60 11 + 12 Camelopr.

4	55
10	28
5	33

+58.8

Index to left.

9:59

340.0 < fr. dis.
79.9 99.9 ✓
339.0
80.2 101.2 ✓
201.1 ✓ +1.6 ✓
~~199.9~~
338.0 −0.40
81.1 103.1 ✓
340.5 −0.42
80.0 99.5 ✓
202.6 ✓ +1.6 ✓
~~199.4~~
Index to right −0.43
67.7
170.0 102.3 ✓ Mean = −0.46
69.0
173.4 104.4 ✓
206.7 ✓ +1.5 ✓
~~153~~
69.3 −0.51
174.0 104.7 ✓
71.3 −0.50
173.0 101.7 ✓
206.4 ✓ +1.5 ✓
~~153~~
−0.50

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March 27, 1893.

Observations of No 60 through light clouds.

No 61, 19 H. Camelop.

5	0	+ 79.1
10	50	
+5	50	

Index to left

10:20

312.2	← ptr. dis.		
106.0		153.8 ✓	
311.5			
108.1		156.6 ✓	
		310.4 ✓	-7.3 ✓
		49.6	
311.0			-3.29
108.2		157.2 ✓	
311.1			-3.33
108.0		156.9 ✓	
		314.1 ✓	-1.5 ✓
Index to right		45.9	-3.46
42.0			
199.1		157.1 ✓	Mean: -3.41
41.6			
199.0		157.4 ✓	
		314.5 ✓	-1.5 ✓
		45.5	
42.0			-3.48
198.8		156.8 ✓	
42.0			-3.44
10:35 198.0		156.0 ✓	
		312.8 ✓	-1.4 ✓
		47.2	
			-3.40

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March 27, 1893.

No 102, ι Canaris.

8	39	+29.2
11	17	
+2	38	

Order to right.

10:47

50.0	< for. dw.	
190.4	140.4 ✓	
50.6		
190.0	139.4 ✓	
	279.8 ✓	~~0.8~~ ✓ 1
49.2	80.2	−2.19
189.9	140.7 ✓	✓
51.0		−2.18
189.0	138.0 ✓	
	278.7 ✓	~~−0.2~~ ✓ 1
	139.3	−2.16

Order to ~~left~~.

140.0		
279.2	139.2 ✓	Mean = −2.22
138.7		
281.8	143.1 ✓	
	282.3 ✓	~~−0.3~~ ✓ 1
140.4	141.9	−2.26
280.0	139.6 ✓	
138.0		−2.26
281.0	143.0 ✓	
	282.6 ✓	−2.27 ~~0.3~~ ✓ 1

10:55

Measurements through ~~light~~ clouds.

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1902phys..pYoj...520W

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