

THE PHOTOGRAPHIC LIGHT CURVES OF THIRTEEN NOVAE

BY ARVILLE D. WALKER

The observations of novae given in Harvard Annals **84**, No. **5**, are continued in the present paper for thirteen additional stars. Miss Mary D. Applegate made the observations on all of the later plates and prepared the tables. As previously, the observations were made on all plates taken at Harvard during the initial outburst of each nova and during the fluctuations immediately succeeding the maximum. A part of the material was examined for all other years for which plates were available.

The photographic magnitudes of the comparison stars in each case are reduced to the scale of the North Polar Sequence or of some Harvard Standard Region by means of plates taken in series with the 16-inch, 8-inch, or 10-inch telescopes. Stars of the Harvard visual sequences for RS Carinae, Z Centauri, Nova Normae, Nova Sagittarii 1898.2, and Nova Aquilae 1905.6, are included in these photographic sequences.

In Table I the designation of the comparison star is given in the first column. In the second column the number in the Bonn Durchmusterung zone is given for stars north of -22° , in the Cordoba Durchmusterung for stars north of -52° , and in the Cape Photographic Durchmusterung for stars south of -52° . In general, the zone is the same as the degree of declination given in the fourth column; when it is different, owing to precession, the number in the second column is in *Italics*, and the zone is the next one north for stars between 6^h and 18^h of right ascension, and in the next one south for all other stars.

The third column contains the minutes and tenths of right ascension; the hour is given by the first two figures of the positional designation of the nova in the heading. If the right ascension of a comparison star is in *Italics*, the star is in the preceding hour for Nova Sagittarii 1901.4 and in the following hour for Nova Sagittarii 1898.2 and Nova Aquilae 1905.6. Positions of the faint stars have been measured on photographic plates, except for those whose rectangular coördinates were already given in Harvard Annals **47**. For these the coördinates were reduced directly to positions in right ascension and declination.

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The fourth column gives the degrees and minutes of declination for 1900. The coördinates in x and y , with the nova as center, and expressed approximately in seconds of arc, are given in the fifth and sixth columns. The positions and rectangular coördinates for stars that have already been printed in these Annals are repeated (except for RS Carinae), and a statement of the source is given in the Remarks which follow the table.

The photographic magnitude in the seventh column is derived from several plates taken on different nights. Residuals are not given, but the following compound column contains the number of images of plates made with the several instruments. The first three entries for each star refer to the primary, prismatic companion, and diffraction images on plates taken in series with the 8-inch, 10-inch, or 16-inch telescopes. The fourth entry refers to plates taken (not in series) with the 1-inch Cooke, 8-inch Bache, and 24-inch Bruce telescopes. The letter p in the fifth indicates that photometric magnitudes from Harvard Annals 50 and 54 were used, after being reduced by means of their spectra, as published in the Henry Draper Catalogue, using the system of corrections in Harvard Annals 80, 151, Table IV.

The photographic magnitudes have not been corrected to the scale of 1922. (*Cf.* H.B. 781.)

TABLE I
COMPARISON STARS

Des.	DM.	R. A. 1900	Dec. 1900	x	y	Ptg.	No.	Des.	DM.	R. A. 1900	Dec. 1900	x	y	Ptg.	No.	
<i>105853. NOVA VELORUM 1905.9</i>								<i>110361. RS CARINAE</i>								
N	..	<i>m</i>	<i>°</i>	<i>'</i>	<i>"</i>	<i>"</i>	..	N	..	<i>m</i>	<i>°</i>	<i>'</i>	<i>"</i>	<i>"</i>	..	
1	4310	58.3	-53	51	0	0	..	1	2558	4.0	-61	24	0	0	..	
2	4305	59.2	-53	53	+ 457	- 114	9.14	3 . 2 . 4 .	2	2068	4.6	-61	1	..	..	6.95 . 3
3	4306	58.7	-53	54	+ 192	- 211	9.99	3 . 2 . 4 .	3	2554	2.5	-61	19	..	..	7.45 . 4 3 . . .
4	4302	58.7	-53	50	+ 200	+ 63	10.77	3 . . 5 .	4	2554	4.2	-61	5	..	..	7.79 . 4 3 . . .
5	4300	58.4	-53	45	+ 61	+ 342	11.08	3 . . 6 .	4	2064	1.3	-61	18	-1115	+ 308	8.56 4 1 3 4 .
6	..	58.4	-53	51	+ 25	+ 1	11.24	3 . . 6 .	5	2071	3.2	-61	26	..	..	9.13 . . . 4 .
7	..	58.8	-53	49	+ 271	+ 117	11.48	3 . . 6 .	6	2069	3.0	-61	38	- 378	- 898	9.44 3
8	..	58.5	-53	50	+ 109	+ 66	11.82	3 . . 6 .	7	2070	3.1	-61	30	..	..	9.55 3 . 1 4 .
9	..	58.0	-53	50	- 166	+ 39	12.42	3 . . 6 .	8	2081	5.7	-61	23	+ 757	+ 56	9.76 3 . . 4 .
10	..	57.7	-53	52	- 342	- 84	12.56	3	9	2080	5.6	-61	30	..	..	10.67 3 . . 5 .
11	..	57.6	-53	52	- 408	- 90	12.80	.. . 6 .	10	..	3.9	-61	24	- 42	- 57	10.86 3 . . 5 .
12	..	58.2	-53	50	- 82	+ 35	13.41	2 . . 6 .	11	..	4.6	-61	32	+ 267	- 501	11.10 2
13	..	58.7	-53	51	+ 193	- 30	13.86	1 . . 6 .	12	..	4.0	-61	22	+ 30	+ 99	11.14 3 . . 5 .
14	..	58.5	-53	51	+ 110	- 1	14.40	.. . 6 .	13	..	3.5	-61	27	- 216	- 178	11.36 2 . . 5 .
15	..	58.3	-53	52	- 6	- 57	14.80	.. . 6 .	14	..	4.3	-61	26	+ 169	- 129	11.82 . . . 5 .
16	..	58.4	-53	52	+ 74	- 73	15.73	.. . 2 .	15	..	4.1	-61	22	+ 60	+ 110	12.36 . . . 5 .
17	..	58.5	-53	52	+ 96	- 72	16.00	.. . 2 .	16	..	3.8	-61	26	- 60	- 141	12.82 . . . 5 .
17	..	58.3	-53	51	- 12	+ 6	16.48	.. . 2 .	17	..	4.0	-61	26	+ 6	- 128	13.1 . . . 4 .

Des.	DM.	R. A. 1900	Dec. 1900	x	y	Ptg.	No.	Des.	DM.	R. A. 1900	Dec. 1900	x	y	Ptg.	No.
110361. RS CARINAE								144059. NOVA CIRCINI 1906.1							
18	..	m 3.6	o 24	' - 144	" - 12	13.3	... 3	6	..	m 40.9	o 34	' + 192	" + 51	11.75	2 . . 3
19	..	3.8	-61 25	- 59	- 105	13.7	... 3	7	..	41.2	-59 38	+ 318	- 168	12.00	2 . . 3
20	..	4.0	-61 24	- 3	- 40	14.0	... 3	8	..	40.5	-59 30	- 3	+ 276	12.70	2 . . 4
21	..	3.8	-61 24	- 79	- 12	14.4	... 3	9	..	40.6	-59 34	+ 28	+ 83	13.16	2 . . 5
22	..	4.1	-61 23	+ 60	+ 9	14.6	... 3	10	..	41.2	-59 35	+ 327	- 21	13.46	1 . . 6
23	..	4.1	-61 24	+ 45	+ 3	15.8	... 1	11	..	40.7	-59 32	+ 93	+ 177	13.96	... 2
133431. Z CENTAURI								12	..	41.0	-59 33	+ 195	+ 99	14.40	... 2
								13	..	40.6	-59 36	+ 45	- 29	14.76	... 2
								14	..	40.7	-59 35	+ 78	+ 12	15.19	... 2
152250. NOVA NORMAE 1893.5								161402. X SERPENTIS							
N	..	m 34.3	o 8	' 0	" 0	..	... .	N	..	m 22.2	o 14	' 0	" 0	..	... .
1	10498	31.1	-31 54	-2393	-2778	7.69	. 5 4 4	1	9132	21.1	-51 15	- 563	-3647	7.22	. 2 3 4
2	10512	32.0	-31 51	-1740	-2603	8.34	4 4 5 4	2	9468	22.2	-50 23	+ 52	- 544	7.74	. 4 4 4
3	10511	31.9	-31 38	-1803	-1826	9.00	5 1 5 4	3	9653	22.2	-49 36	+ 16	+2279	8.13	4 4 3 4
4	10520	32.5	-31 44	-1337	-2169	9.58	5 . 2 4	4	9509	23.9	-50 10	+1005	+ 267	8.62	4 3 4 4
5	10826	36.8	-31 2	+1903	+ 426	9.97	5 . 1 4	5	9634	20.5	-49 48	- 979	+1519	9.00	4 . 3 4
6	10563	36.0	-31 14	+1285	- 263	10.26	5 . . 4	6	9635	20.6	-49 58	..	..	9.36	4 . 3 . .
7	10769	33.1	-30 53	- 934	+ 865	10.75	5 . . 4	7	9487	22.7	-50 10	+ 339	+ 220	9.68	4 . 3 4
8	10790	34.1	-31 4	- 106	+ 256	11.34	5 . . 4	8	9461	22.0	-50 6	- 127	+ 479	10.31	4 . . 4
9	10543	34.7	-31 17	+ 354	- 532	11.60	5 . . 4	9	9460	22.0	-50 10	- 124	+ 212	10.82	4 . . 4
10	10534	34.0	-31 8	- 183	- 4	12.00	5 . . 4	10	R	22.5	-50 0	..	..	11.22	4
11	10782	33.8	-31 0	- 379	+ 530	12.50	5 . . 6	11	9493	23.1	-50 8	+ 539	+ 384	11.52	4 . . 4
12	10798	34.4	-31 2	+ 95	+ 283	12.78	5 . . 6	12	R	22.1	-50 7	- 25	+ 444	11.75	4 . . 4
13	..	34.2	-31 6	- 45	+ 95	13.11	5 . . 6	13	..	22.4	-50 8	+ 128	+ 326	12.65	4 . . 3
14	..	34.4	-31 6	+ 91	+ 86	13.16	4 . . 7	14	..	22.5	-50 13	+ 168	+ 71	12.96	4 . . 3
15	..	33.9	-31 12	- 281	- 263	13.46	2 . . 7	15	..	22.3	-50 14	+ 56	- 32	13.61	2 . . 4
16	..	34.5	-31 14	+ 163	- 416	13.77	1 . . 3	16	..	22.1	-50 11	- 70	+ 170	13.88	2 . . 4
17	..	33.6	-31 11	- 492	- 218	14.06	.. . 3	17	..	22.1	-50 12	- 81	+ 103	14.42	.. . 4
18	..	33.8	-31 8	- 321	- 26	14.36	.. . 3	18	..	22.0	-50 14	- 134	- 37	14.64	.. . 2
19	..	34.0	-31 11	- 169	- 185	14.58	.. . 3	19	..	22.3	-50 14	+ 48	+ 18	14.90	.. . 2
20	..	33.7	-31 12	- 432	- 284	14.82	.. . 3	20	..	22.2	-50 14	- 29	- 44	15.14	.. . 2
21	..	33.5	-31 6	- 591	+ 83	15.04	.. . 3	21	..	22.2	-50 14	- 15	+ 10	15.46	.. . 2
22	..	34.2	-31 8	- 84	- 41	15.40	.. . 2	22	..	22.2	-50 13	- 6	+ 22	16.1	.. . 1
23	..	34.3	-31 8	+ 25	- 56	15.62	.. . 2								
24	..	34.4	-31 8	+ 77	+ 1	15.90	.. . 2								
144059. NOVA CIRCINI 1906.1								161402. X SERPENTIS							
N	..	m 40.5	o 35	' 0	" 0	..	... .	N	..	m 14.1	o 15	' 0	" 0	..	... .
1	5719	40.9	-59 22	+ 178	+ 775	9.80	2 . . 2	1	4179	19.5	- 2 16	..	..	7.49	. 1 . 6
2	5717	40.8	-59 34	+ 102	+ 51	10.22	2 . . 2	2	3147	8.1	- 1 9	..	..	7.99	. 1 . 9
3	5715	40.6	-59 24	+ 60	+ 649	10.76	2 . . 2	3	3939	20.3	- 3 38	..	..	8.17	. 1 . 9
4	5718	40.8	-59 35	+ 128	+ 9	11.28	2 . . 3	4	4144	9.8	- 2 35	..	..	8.74	. 1 1 9
5	..	39.5	-59 36	- 468	- 36	11.56	2 . . 3								

Des.	DM.	R. A. 1900	Dec. 1900	x	y	Ptg.	No.	Des.	DM.	R. A. 1900	Dec. 1900	x	y	Ptg.	No.
161402. X SERPENTIS								163352. NOVA ARAE 1910.3							
5	4160	m	o /	"	"			19	..	m	o /	"	"		
6	3180	14.7	- 2 47	..	..	9.42	I I I 7	20	..	32.9	-52 14	- 47	+ 33	12.68	3 . . 2 .
7	3926	18.9	- 2 6	..	..	9.67	I I I 7	21	..	33.6	-52 12	+ 337	+ 120	13.06	3 . . 2 .
8	3168	16.8	- 3 15	..	..	9.70	I I I 7	22	..	33.0	-52 12	- 16	+ 137	13.18	3 . . 2 .
9	4158	13.1	- 1 46	..	..	10.28	I . I 8	23	..	33.2	-52 13	+ 76	+ 75	13.57	I . . 2 .
10	4156	14.3	- 2 24	..	..	10.48	I . I 8	24	..	33.3	-52 14	+ 172	- 6	13.99	. . . 2 .
11	4155	13.9	- 2 27	- 136	- 704	10.82	I . . 8	25	..	33.4	-52 12	+ 217	+ 95	14.30	. . . 2 .
12	..	13.8	- 2 17	- 256	- 121	11.17	I . . 8	26	..	33.0	-52 16	- 20	- 96	14.78	. . . 2 .
13	4161	13.6	- 2 24	- 448	- 538	11.64	I . . 8	27	..	33.1	-52 14	+ 31	- 21	15.06	. . . 2 .
14	..	14.8	- 2 22	+ 665	- 416	11.82	I . . 7	28	..	33.0	-52 13	- 2	+ 43	15.6	. . . I .
15	..	13.8	- 2 34	- 211	- 1093	11.92	I . . 8	29	..	32.9	-52 15	- 50	- 69	16.0	. . . I .
16	..	14.5	- 2 10	+ 390	+ 296	12.27	I . . 7	30	..	33.1	-52 15	+ 38	- 42	16.3	. . . I .
17	..	14.6	- 2 18	+ 448	- 187	12.50	I . . 5	31	..	33.1	-52 14	+ 42	+ 3	16.8	. . . I .
18	..	13.9	- 2 21	- 163	- 334	12.74	I . . 5	32	..	33.0	-52 14	+ 14	+ 3	17.1	. . . I .
19	..	14.2	- 2 18	+ 68	- 157	12.92	I . . 5			33.0	-52 14	+ 13	- 9	17.5	. . . I .
20	..	13.9	- 2 12	- 175	+ 228	13.56	I . . 5	174734b. NOVA SCORPII 1906.5							
21	..	13.7	- 2 14	- 355	+ 53	13.80	. . . 5	N	..	m	o /	"	"		
22	..	14.6	- 2 16	+ 414	- 56	14.12	. . . 3	1	I 2244	47.5	-34 20	o	o	..	. . . . .
23	..	14.2	- 2 16	+ 137	- 13	14.8	. . . 2	2	I 2228	47.8	-34 26	..	..	6.05	. . . . P
24	..	14.2	- 2 16	+ 53	- 61	15.0	. . . 2	3	I 2253	47.3	-34 48	..	..	6.48	. I . . P
25	..	14.1	- 2 15	+ 35	+ 24	15.4	. . . I	4	I 2201	48.2	-34 31	..	..	6.67	. 2 . . P
26	..	14.1	- 2 13	+ 50	+ 118	16.4	. . . I	5	I 2609	46.7	-34 59	..	..	7.24	I 2 . . P
27	..	14.0	- 2 16	- 58	- 6	16.5	. . . I	6	I 2134	46.7	-34 59	..	..	7.24	I 2 . . P
		14.0	- 2 15	- 100	+ 5	16.8	. . . I	7	I 2177	48.1	-33 53	+ 459	+ 1612	7.55	I 2 . . .
163352. NOVA ARAE 1910.3								8	I 2134	44.2	-34 11	..	..	7.99	I 2 . . .
N	..	m	o /	"	"			9	I 2177	46.0	-34 19	..	..	8.38	I 2 . . .
1	I 0333	33.0	-52 14	o	o	..	. . . . .	10	I 2227	46.0	-34 19	..	..	8.38	I 2 . . .
2	I 0403	48.7	-52 8	..	..	6.16	. . . . P	11	I 2263	47.3	-34 29	..	..	8.59	2 2 . . .
3	I 0224	33.0	-51 17	..	..	6.60	. I . . P	12	I 2263	48.7	-34 20	..	..	8.86	2 2 . . .
4	I 0161	41.0	-52 46	..	..	6.87	. 2 . . P	13	I 2183	46.1	-34 30	..	..	9.46	2 I . . .
5	I 0410	36.8	-52 58	..	..	7.01	. 4 I . P	14	I 2602	47.7	-33 54	..	..	9.68	2
6	9965	31.9	-52 0	- 581	+ 837	8.76	3 2 I . .	15	I 2241	47.7	-34 17	+ 231	+ 165	10.20	2
7	I 0051	33.5	-51 12	..	..	7.16	. 4 I . .	16	..	48.0	-34 33	+ 370	- 762	10.48	2
8	9908	24.9	-52 9	..	..	7.45	. 4 I . .	17	I 2260	48.5	-34 10	+ 760	+ 606	10.67	2
9	9800	29.3	-52 10	..	..	8.14	3 4 I . .	18	..	48.0	-34 18	+ 380	+ 108	11.34	2 . . 2 .
10	I 0093	38.4	-52 2	..	..	8.58	3 3 I . .	19	..	47.7	-34 17	+ 159	+ 168	11.54	2 . . 2 .
11	I 0114	31.9	-52 0	- 581	+ 837	8.76	3 2 I . .	20	..	47.2	-34 26	- 195	- 351	11.95	2 . . 2 .
12	I 0104	31.7	-52 13	..	..	9.44	3 . I . .	21	..	47.7	-34 20	+ 141	- 33	12.34	2 . . 4 .
13	I 0081	31.7	-52 13	..	..	9.44	3 . I . .	22	..	47.6	-34 12	+ 93	+ 444	12.88	2 . . 4 .
14	I 0130	33.0	-52 23	- 12	- 537	9.88	3 . I . .	23	..	47.6	-34 24	+ 123	- 219	13.33	2 . . 4 .
15	I 0126	32.5	-52 24	..	..	10.11	3 . I . .	24	..	47.7	-34 19	+ 194	+ 72	14.10	I . . 4 .
16	..	31.3	-52 22	..	..	10.64	3			47.6	-34 19	+ 98	+ 32	14.54	I . . 4 .
17	..	34.1	-52 16	+ 618	- 97	11.16	3			47.5	-34 19	+ 17	+ 68	15.13	. . . 4 .
18	..	33.7	-52 14	11.51	3			47.4	-34 21	- 25	- 52	15.48	. . . 4 .
		32.9	-52 12	- 76	+ 144	11.90	3								
		33.0	-52 10	- 38	+ 215	12.25	3								
		33.0	-52 8	+ 8	+ 331	12.45	3 . . 2 .								

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Des.	DM.	R. A. 1900	Dec. 1900	x	y	Ptg.	No.	Des.	DM.	R. A. 1900	Dec. 1900	x	y	Ptg.	No.
175327. NOVA SAGITTARII 1910.4								180027. NOVA SAGITTARII 1901.4							
N	..	m	° /	"	"	..	.....	N	..	m	° /	"	"	..	.....
1	I2258	53.8	-27 33	0	0	8.11	2 2 2 . .	14	..	0.4	-27 31	- 44	- 289	13.19	4 . . 3 .
2	I2187	52.3	-27 30	..	..	8.37	2 2 2 . .	15	..	1.1	-27 33	+ 540	- 403	13.69	. . . 3 .
3	I2237	54.3	-27 43	..	..	8.95	2 . 2 . .	16	..	1.3	-27 34	+ 704	- 443	14.27	. . . 3 .
4	I2227	53.9	-27 36	..	..	9.39	2 . 1 . .	17	..	1.4	-27 32	+ 750	- 321	14.70	. . . 3 .
5	I2191	52.5	-27 29	..	..	9.62	3 . 1 . .	18	..	1.1	-27 30	+ 478	- 193	14.93	. . . 3 .
6	I2218	53.6	-27 37	- 147	- 273	10.26	3	19	..	0.8	-27 28	+ 288	- 79	15.16	. . . 3 .
7	I2241	54.4	-27 37	+ 492	- 270	10.38	3	20	..	0.6	-27 24	+ 90	+ 173	15.56	. . . 3 .
8	I2233	54.1	-27 35	..	..	10.52	3	21	..	0.6	-27 26	+ 148	+ 49	16.13	. . . 2 .
9	I2219	53.6	-27 25	- 165	+ 453	11.05	3	181325. NOVA SAGITTARII 1899.6							
10	I2221	53.7	-27 32	- 107	+ 16	11.37	3	N	..	13.8	-25 14	0	0	..	.....
11	..	53.5	-27 28	- 216	+ 304	11.49	3	1	I3068	15.0	-26 8	..	..	6.66	1 . . 3 .
12	..	54.1	-27 31	+ 279	+ 99	11.74	3	2	I3081	16.2	-26 27	..	..	7.63	2 . . 3 .
13	..	53.8	-27 29	- 5	+ 201	12.00	3	3	I3031	14.5	-25 31	+ 601	-1039	7.91	3 . . 3 .
14	..	53.7	-27 30	- 73	+ 144	12.12	3 . . 4 .	4	I2983	11.8	-25 7	..	..	8.85	3 . . 3 .
15	..	53.7	-27 32	- 72	+ 21	12.32	3 . . 4 .	5	I4189	14.0	-25 0	+ 184	+ 878	9.04	3 . . 3 .
16	..	54.1	-27 29	+ 270	+ 201	12.89	3 . . 4 .	6	I3025	14.2	-25 6	..	..	9.77	3 . . 3 .
17	..	53.9	-27 32	+ 48	+ 62	13.27	1 . . 5 .	7	I2991	12.2	-25 9	-1298	+ 281	10.26	3 . . 3 .
18	..	53.8	-27 33	+ 24	- 39	13.84	. . . 5 .	8	I3022	13.9	-25 15	..	..	10.59	3 . . 3 .
19	..	53.9	-27 33	+ 95	- 26	13.89	. . . 5 .	9	I3011	13.5	-25 15	..	..	10.79	3 . . 3 .
20	..	53.8	-27 31	- 30	+ 126	14.12	. . . 5 .	10	I4180	13.5	-24 59	..	..	10.80	. . . 2 .
21	..	54.0	-27 34	+ 150	- 51	14.74	. . . 5 .	11	..	13.2	-25 6	- 497	+ 431	11.32	3 . . 3 .
22	..	53.8	-27 30	+ 24	+ 184	14.78	. . . 5 .	12	I3020	13.8	-25 15	+ 1	- 76	11.72	3 . . 3 .
23	..	53.8	-27 34	+ 36	- 68	14.85	. . . 5 .	13	..	13.9	-25 16	+ 91	- 175	12.12	3 . . 3 .
24	..	53.8	-27 33	+ 24	- 3	15.12	. . . 5 .	14	..	13.9	-25 19	+ 48	- 304	12.37	3 . . 3 .
25	..	53.8	-27 32	+ 24	+ 27	15.91	. . . 5 .	15	..	13.6	-25 23	- 178	- 547	12.70	3 . . 3 .
26	..	53.7	-27 32	- 45	+ 18	16.38	. . . 2 .	16	..	14.1	-25 12	+ 283	+ 86	12.95	3
180027. NOVA SAGITTARII 1901.4								17	..	13.5	-25 21	- 224	- 457	13.09	. . . 4 .
N	..	m	° /	"	"	..	.....	18	..	14.1	-25 20	+ 228	- 373	13.12	3
1	I4144	0.5	-27 26	0	0	7.01	. 2 2 . .	19	..	13.5	-25 22	- 230	- 517	13.46	. . . 4 .
2	I2393	0.0	-27 30	- 424	- 168	7.52	. 4 . . .	20	..	14.0	-25 19	+ 128	- 352	13.78	. . . 1 .
3	I2444	1.9	-27 20	+1096	+ 447	8.04	. 4 1 . .	21	..	13.9	-25 19	+ 48	- 306	13.90	. . . 3 .
4	I2330	57.6	-27 18	-2319	+ 527	8.63	4 2 . . .	22	..	13.5	-25 11	- 245	+ 179	14.66	. . . 1 .
5	I2409	0.7	-27 30	+ 183	- 240	9.22	4 1 2 . .	23	..	13.8	-25 13	- 23	+ 56	14.80	. . . 1 .
6	I2366	59.0	-27 32	-1164	- 348	9.61	4 . 3 . .	24	..	13.9	-25 14	+ 66	- 36	15.00	. . . 1 .
7	I2373	59.2	-27 18	-1041	+ 547	10.13	4 . 2 . .	25	..	13.7	-25 17	- 80	- 217	15.52	. . . 1 .
8	I2388	59.8	-27 31	- 576	- 288	10.65	4	185613. NOVA SAGITTARII 1898.2							
9	I2414	0.9	-27 24	+ 336	+ 155	11.05	4	N	..	56.2	-13 18	0	0	..	.....
10	..	0.9	-27 30	+ 342	- 204	11.43	4	1	5275	3.8	-21 11	..	..	3.36	. . . . P
11	..	0.9	-27 27	+ 336	- 21	11.81	4	2	5283	16.0	-16 8	..	..	4.64	. . . 4 P
12	..	0.8	-27 26	+ 294	+ 36	12.46	4								
13	..	0.5	-27 22	+ 75	+ 257	12.75	4								

Des.	DM.	R. A. 1900	Dec. 1900	x	y	Ptg.	No.	Des.	DM.	R. A. 1900	Dec. 1900	x	y	Ptg.	No.
<i>185613. NOVA SAGITTARII 1898.2</i>								<i>185604. NOVA AQUILAE 1905.6</i>							
		<i>m</i>	<i>o</i>	<i>'</i>	<i>"</i>	<i>"</i>				<i>m</i>	<i>o</i>	<i>'</i>	<i>"</i>	<i>"</i>	
3	<i>5172</i>	53.8	-12	58	-2105	+1199	5.24 . . . 4 P	N	..	56.8	- 4	35	0	0	.. . . . .
4	5479	<i>31.9</i>	-14	31	..	..	6.10 . . . 4 P	1	4663	55.9	- 4	34	- 852	+ 36	8.51 . I . 6 .
5	5228	53.4	-12	43	-2424	+2109	6.89 . 3 . 2 .	2	4668	56.6	- 4	28	- 206	+ 408	9.13 . I . 6 .
6	5259	<i>57.7</i>	-12	51	+1382	+1597	7.51 . 3 . 2 .	3	4665	56.1	- 4	48	- 646	- 831	9.50 2 I . 6 .
7	5194	56.6	-13	24	+ 329	- 340	7.75 2 3 . 2 .	4	<i>4844</i>	57.4	- 4	56	+ 488	-1278	9.76 2 I . 6 .
8	5185	55.6	-13	29	- 548	- 564	8.84 4 3 I 2 .	5	4839	56.2	- 5	7	- 586	-1908	9.82 2 I . 6 .
9	5197	57.0	-13	18	+ 691	- 18	9.52 8 3 I 2 .	6	4675	57.8	- 4	32	+ 852	+ 198	10.07 2 . . 6 .
10	5202	57.5	-13	33	+1131	- 945	9.96 8 3 I 2 .	7	4687	<i>00.0</i>	- 4	41	+2919	- 342	10.10 2 I . 6 .
11	5183	55.5	-13	8	- 575	+ 635	10.31 8 3 I 2 .	8	4656	54.5	- 4	50	-2127	- 897	10.61 2 . . 6 .
12	5200	57.2	-13	18	+ 920	- 27	10.71 8 . . 2 .	9	..	56.7	- 4	44	- 102	- 570	10.72 2 . . 6 .
13	5193	56.5	-13	16	+ 297	+ 93	11.20 8 . . 2 .	10	4677	58.4	- 4	40	+1422	- 303	10.90 2 . . 4 .
14	..	56.5	-13	31	+ 231	- 779	11.69 8 . . 2 .	11	..	56.6	- 4	34	- 162	+ 57	11.38 2 . . 4 .
15	..	56.3	-13	34	+ 43	- 934	11.99 8 . . 2 .	12	..	56.7	- 4	29	- 54	+ 363	11.50 2 . . 4 .
16	..	55.7	-13	24	- 422	- 349	12.43 7 . . 5 .	13	..	56.6	- 4	34	- 219	+ 39	12.28 2 . . 5 .
17	..	55.9	-13	11	- 297	+ 456	13.01 4 . . 5 .	14	..	57.1	- 4	39	+ 238	- 215	13.14 2 . . I .
18	..	56.4	-13	17	+ 132	+ 63	13.55 4 . . 5 .	15	..	57.1	- 4	39	+ 276	- 240	13.53 2 . . I .
19	..	56.4	-13	16	+ 141	+ 158	14.06 4 . . 5 .	16	..	57.0	- 4	29	+ 138	+ 339	13.76 2 . . I .
20	..	56.3	-13	14	+ 34	+ 254	14.43 4 . . 5 .	17	..	57.3	- 4	37	+ 424	- 102	14.02 2 . . I .
21	..	55.8	-13	15	- 360	+ 179	14.73 2 . . 5 .	18	..	57.0	- 4	35	+ 126	- 24	14.82 2 . . I .
22	..	55.9	-13	18	- 279	+ 27	14.85 . . . 5 .	19	..	57.0	- 4	37	+ 183	- 115	15.08 . . . I .
23	..	56.1	-13	19	- 127	- 54	14.90 . . . 5 .	20	..	56.9	- 4	38	+ 78	- 189	15.48 . . . I .
24	..	56.2	-13	16	- 32	+ 122	15.28 . . . 5 .	21	..	56.8	- 4	36	+ 6	- 72	15.95 . . . I .
25	..	56.1	-13	15	- 100	+ 188	15.44 . . . 5 .	22	..	56.8	- 4	35	0	+ 17	16.21 . . . I .
26	..	56.2	-13	15	- 40	+ 205	15.56 . . . 5 .	23	..	56.9	- 4	34	+ 58	+ 36	16.41 . . . I .
27	..	56.1	-13	16	- 124	+ 154	15.78 . . . 4 .	24	..	56.8	- 4	35	- 4	- 23	16.81 . . . I .

REMARKS

110361. RS Carinae. Nos. 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, correspond to the letters a, b, c, d, e, f, g, k, l, h, m, n, o, p, q, r, respectively, as given in H.A. 47, 27. The coordinates in volume 47 were not confirmed by later measures for which the values are entered here. No. 11 is double.

133431. Z Centauri. Nos. 1 to 15 correspond to the letters a to q, respectively, as given in H.A. 47, 34.

152250. Nova Normae. Nos. 1, 2, 3, 4, 5, 7, 8, 9, 11 to 22 correspond to the letters a, b, c, d, e, f, h, k, l to y, respectively, as given in H.A. 47, 40. No. 10 is C.P.D. -49°8143, No. 12 is C.P.D. -50°8082.

185613. Nova Sagittarii 1898.2. Nos. 1 to 25 correspond to the letters a to y, respectively, in H.A. 47, 57.

185604. Nova Aquilae 1905.6. The same stars are designated a to α , in H.A. 47, 58.

Table II contains the photographic observations of the novae. The first column gives the last two digits of the year in which the plate was taken. The second column gives the last four digits of the Julian Days, and the instruments, which are designated by the following letters: a, 24-inch Bruce; b, 8-inch Bache; c, 11-inch Draper; e, 1-inch Cooke, Cambridge; f, 1-inch Cooke, Arequipa; i, 8-inch Draper; o, 10-inch Metcalf; x, 13-inch Boyden. The third column contains the mean magnitude derived by each observer. Estimates were made to tenths of a magnitude. When two or more estimates were made by one observer the mean magnitude is given to hundredths. Italics signify that the nova was not visible and must have been fainter than the estimated magnitude. An interroga-

tion point denotes that the observation was doubtful or difficult; the letter e following the observation indicates that the image was near the edge of the plate. Initials in the last column refer to observers as follows: A, Mrs. M. D. (Applegate) Beach; B, Mrs. S. E. (Breslin) White; Br, Miss G. R. Brooks; C, Miss A. J. Cannon; F, Mrs. W. P. Fleming; L, Miss H. S. Leavitt; O, Mrs. M. E. (O'Reilly) Sloan.

The light curves in the vicinity of maximum are shown in the accompanying figures for all thirteen novae. A curve for Z Centauri has been published by Hubble and Lundmark in Publications of the Astronomical Society of the Pacific, 34, 292, 1922.

TABLE II
PHOTOGRAPHIC OBSERVATIONS OF NOVAE

Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.
NOVA VELORUM 1905.9				NOVA VELORUM 1905.9				NOVA VELORUM 1905.9				NOVA VELORUM 1905.9			
89	1140b	11.6	L	03	6459f	13.0	A	06		10.45	A	07	7731f	11.0	A
90	1503b	15.2	L	04	6489f	12.0	A		7343f	10.85	L		7759b	12.1?	L
91	1880b	12.1	L		6575f	13.0	A			10.70	A			12.3	O
92	2215b	15.2	L		6605f	13.0	A		7373f	10.72	L			12.4	A
93	2616b	15.2	L		6821f	13.0	A			10.50	A	08	7966f	12.0	A
94	2970b	13.8	L	05	6902f	13.0	A		7375f	10.44	L		7992f	12.35	A
	3177b	12.8	L		6941f	13.0	A			10.45	A		7999b	13.4	A
95	3292b	12.8	L		6999f	13.0	A		7391f	11.65	L		8041f	12.0	A
	3353b	15.8	L		7010f	13.0	A			11.75	A		8041b	13.6	L
	3544b	12.8	L		7030f	11.8	L		7394f	11.6	L			13.8	O
96	3710a	16.5	L		7037f	12.0	A			11.5	A			13.7	A
97	3940b	12.1	L		7039f	12.1	L		7557f	11.35	A		8055f	12.0	A
	4022b	15.2	L		7185f	10.32	L	07	7590f	11.0	A		8100f	13.0	A
	4055a	15.2	L			10.15	A		7651a	12.1	L		8297f	13.0	A
98	4392b	15.2	L	06	7237f	10.38	L			12.1	O	09	8387f	11.0	A
	4434a	16.5	L			10.25	A			12.15	A		8404b	13.50	A
99	4797b	15.2	L		7241f	10.68	L		7651f	11.55	A		8404b	14.3	L
	4979b	15.2	L			10.60	A		7682f	12.0	A			13.9	A
00	5050b	12.1	L		7245f	10.65	L		7699b	12.20	L		8404b	13.70	A
	5100b	14.0	A			10.65	A			12.3	O		8420f	12.0	A
	5140b	16.5	L		7287f	10.42	L			12.5	A		8434f	13.0	A
	5381b	12.1	L			10.30	A		7699f	12.15?	A		8434b	13.75	A
01	5441b	13.8	L		7291f	10.38	L		7704b	12.1	L		8436f	12.0	A
	5473b	15.2	L			10.45	A			12.3	A		8440f	12.0	A
	5497b	16.5	L		7296f	10.40	L		7707f	11.0	A		8463f	12.0	A
	5542b	15.2	L		7329f	11.25	L		7709f	11.8	A		8468f	13.0	A
02	5753b	12.1	L			11.4	O		7713b	12.4	L	10	8797f	11.0	A
	5866b	15.2	L			11.20	A		7718f	12.4	A		8809b	13.9	L
	6107f	13.0	A		7331f	11.10	L		7725a	12.1	L			14.3	O
03	6140f	13.0	A			11.2	A			12.0	O			13.8	A
	6253f	14.0	A		7341f	10.78	L			12.00	A		8821f	11.0	A

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Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.
Z CENTAURI				Z CENTAURI				NOVA CIRCINI 1906.I				NOVA CIRCINI 1906.I			
96	3628i	13.4?	A	08	803of	13.0	A	94	3051b	13.5	A	05	7087f	12.7	A
	3628i	13.5?	A		8056a	15.4	A	95	3320b	14.4	A		7094f	12.7	A
	3635i	13.9	A		8114a	14.1	A		3408b	14.0	A	06	7238f	11.5	A
	3636i	13.6	B	09	8383f	13.0	A		3551b	14.8e	A		7242f	11.2	A
	3652b	13.5?	B		8434a	15.4	A	96	3569b	13.5	A		7244f	11.5?	A
		13.7	A		8497f	12.0	A		3673b	14.0	A		7255f	10.8	A
	3656b	13.8	A	10	8807b	13.5	A		3709a	14.4	A		7256f	10.63	L
	3684b	14.1	A		8867b	13.5	A		3785b	13.5	A		7259f	10.58	L
	3694b	14.1	A	11	9114b	12.0	A	97	3946b	13.2	A			10.3	A
	3709b	15.0	A		9180a	15.0	A		4055b	13.5	A		7294f	10.83	L
	3713a	14.5	A		9251f	12.0	A		4105a	14.7	A			11.1	A
	3726a	14.6	A	12	9548f	12.0	A		4121b	14.4	A		7297f	10.63	L
	3740a	14.70	A		9599f	13.0	A		4151a	15.0	A			10.5	A
	3747a	14.8	A	13	9888b	13.5	A		4171a	13.5	A		7314f	10.2	A
	3754b	15.0	A		9932b	12.0	A	98	4448b	14.0	A		7325f	10.83	L
	3789b	13.6	B		9959b	13.5	A		4550b	14.0	A			11.1	A
97	3937i	13.2	B	14	0245f	12.0	A	99	4753b	14.0	A		7329f	10.6	A
	4008b	14.1	A		0313b	15.0	A		4795b	15.0	A		7341f	11.26	L
	4093a	15.0	A		0347b	12.0	A		4806b	14.8	A			11.5	A
	4150b	13.5	A	15	0584f	13.0	A		4853b	14.4	A		7342f	11.2	A
98	4298i	13.4	B		0660f	13.0	A		4882b	14.0	A		7345f	11.30	L
	4450a	16.2	A		0723f	12.0	A	00	5105b	14.0	A			11.6	A
99	4778b	13.6	B	16	0951b	13.5	A		5136b	15.0	A		7371f	12.0	A
	4841b	13.2	B		1017b	13.5	A		5206b	14.4	A		7375f	12.02	L
00	5077b	13.6	B		1079f	12.0	A		5221b	14.9	A			11.9	A
	5163b	14.1	A	17	1333b	13.5	A	01	5415b	14.4	A		7389a	11.98	L
	5204b	14.1	A		1370b	13.5	A		5437b	15.0	A			11.8	A
01	5485b	14.1	A		1449f	12.0	A		5442b	14.9	A		7402f	11.43	L
	5544a	14.6	A	18	1686b	13.5	A		5490b	14.8	A			11.80	A
	5592b	13.6	B		1716b	13.5	A		5513b	14.8	A		7403f	11.4	A
02	5841b	13.6	B		1756a	15.0	A		5532b	14.4	A		7405f	11.8	A
	5898b	15.4	A		1817f	12.0	A		5556b	14.6	A		7405f	11.86	L
	5926b	15.6	A	19	20730	13.5	A		5571b	14.7	A			11.7	A
03	6166b	14.1	A		21340	13.5	A		5585b	14.0	A		7416f	11.94	L
	6204b	14.8	A		2186f	13.0	A	02	5869b	14.0	A			11.9	A
	6309b	14.1	A	NOVA CIRCINI 1906.I					5871b	14.9e	A		7447f	12.4?	L
04	6583b	13.0	B										5907a	14.9	A			12.0?	A
	6603a	15.6	A						5925b	14.4	A	07	7687a	13.6	A
	6664b	13.7	B					03	6166b	15.0	A		7748b	14.0?	A
05	6957b	13.6	B	89	1154b	12.7	A		6204b	14.8	A		7760b	13.2	A
	7039b	14.1	A		1164b	13.2	A		6254b	15.0e	A	08	8082b	14.0	A
	7072b	12.9	B		1214b	13.5	A		6268b	14.4	A		8129a	14.2	A
06	7343f	12.0	A	90	1533b	13.5	A		6310b	14.4	A	09	8404b	14.0	A
	7429f	13.0	A	91	1911b	13.2	A	04	6593b	14.4	A		8487a	14.6	A
07	7711b	13.5	A	93	2587b	14.0	A		6646b	14.4	A	10	8868b	13.5	A
	7787f	13.0	A		2638b	14.4	A	05	7037b	13.5	A	11	9166b	14.0	A
08	797of	12.0	A	94	2936b	14.4	A		7077b	13.2	A		9253b	14.0	A

Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.							
NOVA CIRCINI 1906.1				NOVA NORMAE 1893.5				NOVA NORMAE 1893.5				NOVA NORMAE 1893.5										
12	9557f	12.0	A	94	2922b	10.8	F	95	3383b	14.7	A	10	875of	12.0	A							
	9618f	12.7	A				10.7			A		14.7	F			8819b	14.5	A				
13	0019f	12.7	A			2923b	10.7			F		14.7	A			8850a	15.6	A				
14	0300b	14.4	A				10.7			A		3384b	14.7?	F	11	9166b	14.5	A				
	0311b	14.8e	A			2929b	10.7			F			14.4?	A		9254b	14.5	A				
15	0713b	14.0	A				10.6			A		3384b	14.7?	F	12	954of	11.2	A				
16	0994b	14.4	A			2933b	10.7			F			14.7?	A		9638b	14.5	A				
	1023b	14.4	A				10.7			A		3409b	14.6	F	13	9888f	11.5	A				
17	1331b	14.4	A			2936b	10.8			F		3414b	14.8?	F		9998b	14.5	A				
	1360b	14.0	A				10.9			A			15.5?	A	14	0238f	12.0	A				
18	1755a	14.8	A			2937b	10.7			F	96	3628b	15.1	F		0335b	16.3	A				
	1757a	14.8	A				10.5			A			3721a	15.9	A	15	0623f	13.0	A			
19	21300	15.0	A			2945b	11.2			F			3724a	15.9	A		0757f	11.8	A			
	2100f	12.7	A				10.9			A			3773a	15.5	A	16	0991b	14.5	A			
NOVA NORMAE 1893.5						2947b	10.4?			F			4101a	15.5	A		1067b	14.5	A			
						2972b	11.2			F		97	4106a	15.7	A	17	1331b	14.5	A			
							11.1			A				4128a	15.5	A		1457a	15.7	A		
						2979b	11.7			F			98	4382b	14.0	B	18	1714f	12.6	A		
							11.7			A					4451a	15.9	A		1760a	16.3	A	
89	1160b	14.8	F		2994b	11.1	F		4536b	14.0				B	19	1871f	11.2	A				
	1205b	13.2	F			11.2e	A	99	4749b	14.5				B		21020	14.5	A				
90	1451b	11.0	F		2994b	11.3	F			5108b				15.1	B		2172f	13.0	A			
	1531b	14.1	F			11.2	A			5120b				14.6	B	X SERPENTIS						
91	1869b	14.0	F		2994b	11.3	F		01	5264b				14.5	B							
	1894b	13.1	F			11.4	A							5532b	14.6	B	90	1544i	12.2	Br		
92	2320b	9.3	F			12.1	F							5547b	16.2	B		1605i	12.2	Br		
	2591b	14.1	F		3042x	11.7	A			02				5632b	14.0	B	91	1908i	12.5	Br		
93	2606b	13.2	F			12.2	F								5866b	14.1	B		2378b	12.9	Br	
	2636b	10.2	F		3043x	11.7	A								5896b	14.7	B	92	2674b	14.1	Br	
	2638b	6.9e	A			11.7	A				03			5928b	14.7	B	93	2936b	12.2	Br		
	2638b	7.2e	A		3044x	12.1	F								6222b	13.7	B		3055b	12.2	Br	
	2655b	7.2	F			11.8	A								6263b	14.5	B	94	3726b	13.8	Br	
		7.2	A		3050b	12.2	F								6290a	16.3	A		3846b	12.2	Br	
	2681b	8.0	F			11.8	A							04	6359b	14.1	B	95	3384b	13.8	Br	
		7.7	A		3052b	12.3	F								6603b	14.0	B	96	3702b	13.8	Br	
	2766b	9.3	F			12.2	A								6652b	13.7	B		3726b	13.8	Br	
		9.5	A		3182b	13.6	F					05	6932b		14.0	B		3846b	12.2	Br		
94	2837b	10.2	F			13.8	A								7027a	16.1	B	97	4036b	14.1	Br	
		10.1	A	95	3290b	14.6	F								7076b	14.0	B		4102i	14.1	Br	
	2869b	10.7	F				14.5	A					06		7259f	13.6	A		4185b	12.2	Br	
		10.5	A			3301b	14.9	F								7447f	13.0	A	98	4522i	12.9	Br
	2876b	10.6	F				14.6	F								7702a	16.3	A	99	4825b	13.8	Br
		10.3	A			3327b	14.6	A	07						7805a	15.8	A		4883b	12.2	Br	
	2888b	10.5	F				14.7	F								8081a	15.1	A		4884a	14.1	Br
		10.5	A			3329b	14.7	A							08	8160b	14.5	A			14.4	A
	2888b	10.6	F				14.7	A								8404b	14.5	A	00	5090i	14.8	Br
		10.3?	A			3346b	14.5	A		09						8457a	15.3	A		5116b	13.6	Br
	2918b	R	F			3348b	14.4	A														
						3363b	14.7	F														

THE PHOTOGRAPHIC LIGHT CURVES OF THIRTEEN NOVAE

Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.
X SERPENTIS				X SERPENTIS				X SERPENTIS				X SERPENTIS			
00	5275i	12.8	Br	03	6281f	9.3	A	04	6606f	10.8	A	05		12.8	A
01	5485b	12.9	Br		6282e	9.6	A		6606b	11.0	Br		6960f	12.7	A
	5543b	14.1	Br		6288f	9.8	A			11.2	A		6966e	12.0	Br
	5572b	14.8	Br		6293e	9.7	Br		6606f	10.7?	A			12.2	A
	5599b	15.4	A			9.7	A		6608e	10.8	Br		6967e	12.2	Br
	5621a	14.1	Br		6295f	9.4	A			11.1	A			12.4	A
02	5828b	12.9	Br		6295f	9.9	A		6608f	11.0	A		6979f	12.7	A
	5884b	12.8	Br		6298f	9.4	A		6608b	11.4	Br		6990e	12.2	Br
	5897b	13.6	Br		6298b	9.7	Br			11.5	A		7068b	12.9	Br
	5910e	12.2	Br			9.7	A		6612f	11.3	A			13.3	A
	5937e	R	..		6309f	9.7	A		6613e	10.8	A		7080b	12.9	Br
	5976b	12.8	A		6310f	9.6	A		6624b	11.7	Br	06	7307e	12.2	Br
	5998e	11.2	Br		6312f	9.9	A			11.5	A		7359a	13.9	Br
03	6170e	9.1	A		6320e	9.6	A		6632b	11.2	Br			14.0	A
	6185e	8.9	Br		6337b	9.5	Br			11.1	A		7460a	12.9	Br
		9.2	A			9.7	A		6634f	11.2	A	07	7727b	12.9	Br
	6223e	9.2	A		6337f	9.8	A		6634f	11.4	A	08	8055a	13.8	Br
	6226e	9.2	A		6337f	10.0	A		6638f	11.5	A		8065b	14.1	A
	6226f	9.1	A		6339f	9.9	A		6642f	11.5	A		8123a	14.7	Br
	6229f	9.1	A		6339e	9.4	A		6642e	10.8	A			14.7	A
	6229f	9.1	A		6345e	9.7	Br		6650i	11.8	Br		8129e	11.2	Br
	6232e	9.3	A			9.9	A			11.6	A	09	8392e	11.9	Br
	6234e	9.2	A		6345e	9.7	Br		6650f	11.4	A		8457a	12.9	Br
	6235e	9.2	A			10.0	A		6652f	11.3	A	10	8756e	12.2	Br
	6236e	9.2	A		6361b	10.1	Br		6662f	11.0	A		8811e	12.2	Br
	6240f	9.5	A			9.6?	A		6663f	11.5	A		8820b	14.8	Br
	6241e	9.7	A		6372f	10.0	A		6664i	11.7	Br			14.7	A
	6249f	9.1	A		6379f	10.0	A			11.8	A		8869b	12.2	Br
	6253f	9.2	A	04	6531e	10.6	Br		6681i	11.5	Br	11	9240e	11.9	Br
	6253b	9.4	Br			10.3	A			11.5	A	12	9562e	12.2	Br
		9.6	A		6534b	11.0	Br		6707f	11.7	A	13	9863e	12.2	Br
	6254e	9.3	A			10.6	A		6716b	11.7	Br		9894b	12.2	Br
	6255f	9.3	A		6549e	10.5	Br			11.7	A	14	0244e	12.2	Br
	6256e	9.4	Br			10.6	A		6741b	12.0	Br		0367e	12.2	Br
		9.6	A		6551e	10.8	A			11.9	A	15	0566e	12.2	Br
	6257e	9.4	A		6553e	10.6	A		6741f	12.0	A	16	0891e	12.2	Br
	6259e	9.4	A		6558b	10.7	Br	05	6890e	11.5	Br		0993e	12.2	Br
	6259e	9.4?	A			10.7	A			11.6	A	17	1276e	12.2	Br
	6260e	9.3	A		6582f	11.0	A		6917e	12.0	Br		1310e	12.8	Br
	6265e	9.5	A		6583e	10.8	Br			12.1	A	18	1638e	12.2	Br
	6265i	9.5	Br			10.8	A		6922f	12.1	A		1821e	11.9	Br
		9.5	A		6589f	11.0	A		6932f	12.1	A	19	2000e	11.9	Br
	6268f	9.5	A		6591f	11.0	A		6932e	12.0	Br		2084e	12.2	Br
	6268f	9.2	A		6604b	11.7	Br			12.0	A	20	2375m	15.4	A
	6269b	9.6	Br			11.4	A		6952e	11.7	Br				
		9.3	A		6604f	11.3	A			12.0	A				
	6279f	9.6	A		6605b	11.0	Br		6958b	12.8	Br				

Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.
NOVA ARAE 1910.3				NOVA ARAE 1910.3				NOVA ARAE 1910.3				NOVA SCORPII 1906.5			
89	1190b	14.5	A	09	8457b	14.8	A	11	9300a	13.6	A	04	6615b	15.0	A
	1235b	13.5	A	10	8750f	11.2	A	12	9588f	12.7	A	05	6943b	14.5	A
91	1873b	13.5	A		8766f	6.2	A		9638b	12.2	A		7094b	14.1	A
	1882b	12.5	A		8779f	6.4	A	13	9903f	12.0	A		7124f	12.0	A
92	2232b	11.2	A		8791f	7.1	A		9959b	12.7	A	06	7325f	11.60	A
93	2581b	13.5	A		8797f	7.3	A	14	0283f	12.2	A		7335f	12.15	A
	2639b	12.5	A		8804f	7.6	A		0348b	14.0	A		7353f	11.80	A
94	2945b	12.5	A		8818f	8.5	A		0393f	12.0	A		7360f	12.10	A
	3026b	13.5	A		8819b	8.0e	A	15	0594f	12.5	A		7363f	11.45	A
	3054b	14.5	A		8819b	8.5	A		0651f	13.2	A		7376f	10.90	A
95	3292b	13.5	A		8823f	9.1	A		0725f	13.1	A		7378f	10.45	A
	3348b	14.5	A		8824f	9.0	A	16	0932f	11.5	A		7384f	10.25	A
96	3658b	14.5	A		8824f	8.6	A		1077b	13.6	A		7392a	10.20	A
	3754b	14.5	A		8825f	8.6	A	17	1331b	13.1	A		7393a	10.10	A
97	4079b	13.5	A		8832f	7.9	A		1462a	15.3	A		7394f	9.75	A
	4211a	16.3	A		8852f	9.9	A	18	1731b	14.0	A		7394f	9.70	A
98	4392b	14.5	A		8856f	10.3	A		1776f	13.1	A		7403f	9.95	A
	4528b	14.5	A		8856f	10.3	A		1874f	11.5	A		7429f	9.90	A
	4584b	12.5	A		8859f	10.4	A	19	21420	14.5	A		7433f	10.40	A
99	4751b	13.5	A		8860f	10.4	A		2175f	13.6	A		7447f	11.00	A
	4805b	15.1	A		8861f	10.3	A	NOVA SCORPII 1906.5					7450f	10.75	A
	4891b	14.5	A		8867b	10.4	A	89	1202b	14.0	A		7465f	11.25	A
00	5120b	13.5e	A		8883f	10.8	A	90	1529b	15.0	A		7476f	11.30	A
	5175b	15.1	A		8884f	10.6	A		1642b	13.0	A	07	7493f	11.40	A
	5221b	16.0	A		8885f	10.6	A		1872b	14.0	A		7495f	11.40	A
	5267b	15.1	A		8897f	11.0	A	91	2585b	13.0	A		7727b	14.0	A
01	5523b	14.5	A		8898f	10.9	A	93	2623b	14.5	A		7803b	15.2	A
	5620b	13.5e	A		8911f	11.0	A		3030b	14.1	A		7804a	14.0	A
02	5912b	14.5	A		8917f	11.2	A	94	3327b	14.5	A	08	7813b	15.0	A
	5927b	16.0	A		8939f	11.3?	A	95	3834b	14.0	A		8091b	14.0	A
03	6183b	13.5	A	11	9093a	12.1?	A	96	3958b	14.5	A		8114a	13.3	A
	6263b	16.3	A		9123a	12.9	A	97	4084b	15.0	A	09	8183a	15.5	A
	6360b	13.5	A		9125a	12.7	A		4140a	15.0	A		8406b	14.0	A
04	6605b	15.1	A		9137a	12.7	A		4204a	14.1	A		8571f	12.3	A
	6625b	14.5	A		9144b	12.9	A	98	4457b	15.5	A	10	8828a	15.2	A
05	6935b	14.5	A		9144b	13.0	A	99	4751b	14.0	A	11	9176b	13.3	A
	7028a	17.5	A		9149a	12.8	A		4863b	15.0	A	12	9572f	12.4	A
	7068b	13.5	A		9156a	13.1	A	00	5171b	15.2	A		9605b	13.3	A
06	7325f	12.5	A		9176b	13.2	A		5263b	15.1	A	13	9912b	12.9	A
	7422a	14.8	A		9180a	13.1	A	01	5486b	14.6	A	14	0288b	14.4	A
	7493f	12.5	A		9205a	13.3	A		5663b	13.3	A		0362b	15.5	A
07	7727b	14.5	A		9212a	13.4	A	02	5872b	15.1	A	15	0709b	13.0	A
	7784a	15.6	A		9215a	13.5	A		5964b	14.5	A	16	1064b	14.1	A
	7805a	15.1	A		9234a	13.5	A	03	6228b	14.5	A	17	1437f	12.9	A
08	8041b	12.5	A		9261a	13.9	A		6347b	15.1	A	18	1787f	12.3	A
	8169f	13.5	A		9279a	13.7	A					19	2083f	12.5	A
09	8404b	12.5	A		9291a	13.5	A						21930	15.1	A

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Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.
NOVA SAGITTARII 1910.4				NOVA SAGITTARII 1910.4				NOVA SAGITTARII 1910.4				NOVA SAGITTARII 1910.4			
89	1207b	14.0	A	09	8571f	13.0	A	10	8870f	10.35	A	13	9931b	14.10	A
	1236b	15.0	A		8587f	10.5	A		8878f	11.00	A	14	0288b	14.70	A
90	1517b	13.0	A		8594f	10.30	A		8878b	R	F		0300b	14.50	A
91	1948b	11.0	A	10	8752e	9.50	A		8884f	11.35	A		0300b	13.70e	A
92	2378b	14.0	A		8766f	9.90	A		8887f	11.50	A		0308b	14.45	A
93	2585b	14.0	A		8774e	9.25	A		8892f	11.4	A		0313b	14.55	A
	2630b	15.0	A		8777f	8.80	A		8898f	10.90	A		0313b	14.70	A
	2666b	13.0	A		8778e	8.65	A		8908f	10.45	A		0315b	14.55	A
94	3083b	14.0	A		8806f	8.10	A		8908a	10.4	A		0316b	14.30	A
95	3327b	13.0e	A		8808e	8.30	A		8911f	10.05	A		0316b	13.6e	A
	3378b	14.0	A		8811e	8.20	A		8911f	10.10	A		0316b	13.85e	A
96	3710b	15.0	A		8818f	9.35	A		8912f	10.35	A		0332b	14.45	A
	3846b	14.0e	A		8820f	9.25	A		8917f	10.40	A		0354b	13.85	A
97	4058b	15.0	A		8820f	9.20	A		8918f	10.10	A		0359b	14.7	A
	4183a	16.4	A		8820b	9.25	A		8919f	10.35	A	15	0626f	12.3	A
	4203a	15.3	A		8821f	9.20	A		8925f	10.20	A		0711b	14.2	A
98	4375b	13.0	A		8821f	9.30	A		8939f	10.30	A	16	0993b	14.3	A
	4536b	15.0	A		8823b	9.5?	A		8956i	10.95	A		1006b	15.40	A
99	4779b	13.0	A		8824f	9.60	A		8957i	10.70	A		1047b	13.0e	A
	4875b	15.0	A		8824f	9.50	A		8958i	10.70	A	17	1336b	13.8	A
	4941b	14.0e	A		8825f	9.35	A		8962i	10.80	A		1391b	14.0	A
00	5121b	14.0	A		8825f	9.35	A		8963i	10.80	A		1453a	14.8	A
	5315b	16.0	A		8825e	9.20	A		8971i	11.30	A		1455a	14.9	A
01	5486b	15.0	A		8827f	9.25	A	11	9136a	12.2	A	18	1749b	14.0	A
	5561b	14.0	A		8827e	9.50	A		9149a	12.2	A		1818f	12.0	A
	5661b	13.0	A		8828f	9.30	A		9156a	12.4	A	19	2083f	12.3	A
02	5842b	14.0	A		8830e	9.55	A		9176b	12.45	A		21900	14.8	A
	5943b	16.0	A		8831f	9.95	A		9180a	12.5	A		21960	14.60	A
03	6222b	13.0e	A		8831f	9.95	A		9206a	12.9	A		21970	14.0	A
	6297b	15.0	A		8832f	9.45	A		9213a	12.7	A	NOVA SAGITTARII 1901.4			
	6396b	14.0	A		8832f	9.70	A		9234a	12.6	A	89	1207b	14.0	A
04	6606b	14.0	A		8834f	9.80	A		9237a	12.7	A	90	1509b	12.0	A
	6638b	16.0	A		8848f	10.15	A		9247a	12.6	A	91	1883b	11.0e	A
05	6934b	13.0	A		8848f	10.20	A		9264a	12.6	A	92	2378b	13.0	A
	7080b	14.0	A		8849f	10.10	A		9275a	12.7	A	93	2657b	15.0	A
06	7360f	12.9	A		8849f	10.10	A		9279a	12.6	A	94	3083b	14.0	A
	7447f	13.3	A		8852e	10.30	A		9288b	12.20	A	95	3357b	15.0	A
07	7698b	14.0e	A		8855f	10.00	A		9290a	12.7	A	96	3846b	15.0	A
	7727b	14.0	A		8856f	10.15	A		9292b	12.50	A	97	4140a	16.1	A
	7773a	16.5	A		8857e	9.85	A		9299a	12.7	A	98	4587a	15.2	A
	7801a	16.3	A		8859f	9.95	A		9322a	13.0	A	99	4875b	15.0	A
	7836a	14.1e	A		8859f	10.00	A		9323a	13.1	A	00	5317b	15.0	A
08	8091b	14.0	A		8859e	9.50?	A	12	9605b	13.70	A	01	5486b	14.0	A
	8181a	13.8	A		8862f	9.95	A		9607b	14.0	A		5518e	10.6	A
09	8406b	13.0	A		8864f	10.00	A	13	9662b	13.50	A				
	8528a	14.1e	A		8866f	9.95	A		9903b	14.05	A				
	8530a	15.1	A		8866b	10.05	A		9931b	13.70	A				

Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.
NOVA SAGITTARII 1901.4				NOVA SAGITTARII 1899.6				NOVA SAGITTARII 1899.6				NOVA SAGITTARII 1899.6			
01	5526f	11.1	A	95	3348b	14.7	A	00	5162b	12.1	C	18	1758b	12.0	A
	5527f	10.9	A	96	3846b	14.0	A			11.8	A	19	21900	14.0	A
	5530b	11.6	A	97	4094b	14.0	A		5222b	12.1	C	20	25160	14.0	A
	5532b	10.7e	A		4140a	15.0	A			11.9	A	NOVA SAGITTARII 1898.2			
	5532f	11.1	A		4181a	14.0	A		5224f	12.2	A				
	5533f	11.0	A	98	4536b	14.5	A		5264b	12.0	A				
	5541f	11.5	A	99	4833b	14.5	A		5276b	12.3	A				
	5542f	11.2	A		4846a	14.9	A		5304b	12.2	A	88	0941b	14.2	B
	5542f	11.2	A		4863b	13.8	A		5315b	12.0e	A	90	1609i	12.1	B
	5543f	11.4	A		4869b	15.0	A		5316b	12.1e	A	91	1929b	14.5	B
	5551f	10.4?	A		4870a	14.9	A		5316b	12.2	A	92	2260b	11.3	B
	5560f	11.6	A		4870a	14.8	A		5317b	12.2	A	93	2269b	14.5	B
	5561b	12.1	A		4871b	15.0	A		5318b	12.3	A	94	3146b	13.8	B
	5575f	11.4	A		4876f	11.5	A	01	5490b	12.8	A	95	3385b	14.9	B
	5599f	11.0	A		4877r	8.6	C		5530b	13.0	A	96	3847b	14.9	B
	5602f	11.8	A		4890f	8.7	C		5532b	13.0	A	97	4210a	15.0	B
	5632f	12.5	A			8.4	A		5561b	13.0	A		4221a	16.0	A
	5661b	13.0	A		4891f	8.6	A		5591b	13.2	A	98	4357i	4.8?	B
02	5869b	14.0	A		4892f	8.8	C		5603b	13.3	A			5.0?	A
	5943b	14.0	A			8.8?	A		5604b	13.2	A		4363i	6.4	B
03	6297b	15.0	A		4898f	9.5	A		5661b	13.3	A			5.6?	A
04	6638b	15.0	A		4904f	9.5	C	02	5869b	14.0?	A		4383i	8.3	B
05	7052i	13.0	A			9.7	A		5869b	13.6	A			8.0e	A
06	7465f	12.7	A		4919f	10.4	A		5915a	14.0	A		4399b	8.5	B
07	7773a	16.1	A		4939f	10.7	A		5940b	14.2	A		4401b	8.3	B
08	8091b	14.0	A		4941b	10.6	C		6013b	13.0	A		4401i	8.4	B
09	8456b	14.0	A			10.7	A	03	6297b	14.7?	A		4406b	8.2	B
10	8820b	13.0	A		4942f	10.7?	A		6319b	14.8?	A			8.1?	A
11	9180a	16.1	A		4953f	10.9	A		6347b	14.8	A		4409b	8.4	B
12	9662b	14.0	A	00	5086i	11.6	C	04	6622b	14.9	A			8.5	A
13	9931b	13.0	A			11.6	A	05	6934b	14.0	A		4570b	10.5	B
14	0316b	15.0	A		5096i	11.7	A		7000a	14.9	A			10.6	A
15	0711b	14.0	A		5118i	12.0	C		7002a	14.9	A		4571b	10.5	B
16	1006b	14.0	A			12.0	A		7021a	14.8	A			10.5	A
17	1453a	16.1	A		5120a	12.1	C		7049i	13.5	A	99	4722i	11.3	A
18	1749b	13.0	A			11.9	A	06	7335f	12.7	A		4723i	11.9	B
19	21960	14.0	A		5121a	12.0	C	07	7756b	14.0	A			11.6	A
20	2516f	12.5	A			11.6	A	08	8112a	14.7	A		4723i	11.4	B
					5136a	12.1	C	09	8471a	15.0	A			11.8	A
						12.0	A	10	8820b	14.0	A		4734i	11.3	B
					5140a	12.1	C	11	9288b	13.0	A		4734i	11.8	B
						12.0	A	12	9662b	14.0	A			11.9	A
					5141b	12.1	C	13	9933b	13.0	A		4753i	11.5	B
89	1207b	14.0	A			11.7	A	14	0316b	14.7	A			11.8?	A
90	1509b	14.0	A			11.6	A	15	0755b	13.0	A		4772i	12.4	A
91	1883b	13.0	A		5148f	11.6	A	16	1047b	14.0	A		4777b	11.8	B
92	2237b	12.0	A		5158b	12.1	C	17	1454a	14.8	A			11.8	A
93	2582b	13.0e	A			11.9	A								

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Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.
NOVA SAGITTARII 1898.2				NOVA SAGITTARII 1898.2				NOVA AQUILAE 1905.6				NOVA AQUILAE 1905.6			
99	4784b	11.8	B	01	5724a	14.0	A	95	3348b	15.0	A	05	7090i	10.6	F
		12.0	A	02	5869b	14.1	A	96	3728a	14.0	A			10.7	A
	4789i	12.1	B		5915b	14.3	B	97	4086b	14.0	A		7090i	10.6	F
		11.9	A			14.5?	A	98	4424i	13.0	A			10.6	A
	4815b	11.8	B		5961b	15.0	B	99	4826b	14.0	A		7090c	10.4	F
	4818i	12.2	B			14.7	A	00	5180i	13.0	A			10.6	A
		11.9	A		6020a	14.7	A		5336i	13.0	A		7090i	10.5	F
	4825i	11.55	B	03	6253b	14.5	A	01	5534b	14.0	A			10.4	A
		11.9	A		6313b	15.2	B		5635b	15.0	A		7090f	10.7	A
	4825b	12.2	B			15.1	A	02	5870b	14.0	A		7094i	10.7	F
		11.90	A		6324b	15.5	A		5897b	13.0	A			10.7	A
	4835b	12.2	B	04	6607b	13.7	B		5924i	14.0	A		7094c	10.7	F
		12.0	A	05	7018b	13.7	B	03	6242b	14.0	A			10.7	A
	4844b	11.9	B	06	7335a	15.8	A		6308b	14.0	A		7094c	10.5	F
		12.1	A		7411a	15.4	A		6342a	16.8	A			10.7	A
	4846i	12.2	B		7418a	15.7	A	04	6594b	13.0	A		7094i	10.7	F
		12.2	A	07	7866b	14.0	A		6634b	14.0	A		7094b	10.7	A
	4853b	11.8	B	08	8152i	14.0	A		6751i	13.5	A		7095f	10.8	A
		12.0	A	09	8438b	14.0	A	05	6981b	13.8	A		7095i	10.7	F
	4867f	11.9	A		8580a	15.9	A		7006b	13.5	A		7097i	10.9	F
	4869b	12.2	B	10	8944m	15.0	A		7017b	14.0	A			11.1	A
		12.0	A	11	9207m	15.6	A		7049b	13.0	A		7097c	10.9	F
	4873i	12.2	B		9270m	16.0	A		7053f	11.5	A			10.8	A
		12.2	A	12	9676b	15.0	A		7061e	11.4	A		7098i	10.9	F
	4882b	12.2	B	13	9956a	16.0	A		7066f	12.5	A			11.2?	A
		12.1	A		0058m	15.0	A		7068e	10.0e	A		7098c	11.0	F
	4890f	12.7	B	14	0385m	15.3	A		7075f	8.2	A			10.8	A
		12.8	A	15	0738a	16.0	A		7076c	9.0	F		7099i	11.1	F
	4953a	12.6	B	16	0986m	15.8	A		7076b	8.0	A			11.2	A
		12.6	A		1102a	16.0	A		7076f	8.3	A		7099c	11.0	F
	4954a	12.2	B		1129m	16.0	A		7076f	8.7	A			10.9	A
		12.2	A		1156a	16.0	A		7079e	9.2	F		7103i	10.7	F
	4973b	12.7	B	17	1379m	14.5	A			9.55 ^e	A			11.00	A
		12.4	A	18	18740	14.0	A		7084e	9.9	F		7103c	10.8	F
00	5163b	13.4	B	19	21970	14.0	A			10.1	A			10.9	A
		13.00	A	20	2514m	14.0	A		7089e	10.1	F		7103c	10.8	F
	5196b	13.0	A		2607e	11.0	A			10.65	A			10.9	A
	5282b	13.4	A	NOVA AQUILAE 1905.6					7089f	10.4	A		7105f	10.9	A
	5291b	12.70	B						7089i	10.6	F		7107f	11.1	A
		12.9	A						7089i	10.5	F		7108f	10.9	A
01	5533b	14.5	B							10.4	A		7108f	11.0	A
		14.4	A	88	0780b	12.7	F		7089c	10.5	F		R f	11.1	A
	5548b	13.3	B	90	1545i	13.0	A			10.5	A		7110e	11.2	F
		13.5	A	91	1873b	13.0	A		7089c	10.5	F			11.4	A
	5600a	14.3	A	92	2304i	13.0	A			10.5	A		7110c	11.14	F
	5668a	14.2	B	93	2669b	14.0	A		7089c	10.5	F			11.2	A
		14.30	A	94	3146b	13.0	A			10.6	A		7110i	11.19	F

Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.	Yr.	J. D.	Mag.	Obs.
NOVA AQUILAE 1905.6				NOVA AQUILAE 1905.6				NOVA AQUILAE 1905.6				NOVA AQUILAE 1905.6			
05		11.2	A	05	7120i	11.3	A	06	7357f	11.5	A	14	0254m	15.0e	A
	7111i	11.3	F		7122i	10.9	A		7372e	11.0	A		0301m	15.5	A
		11.2	A		7123i	11.3	A		7374a	15.9	A		0375n	12.0	A
	7111c	11.2	F		7125i	11.4	A		7417e	10.9	A	15	0628e	12.0	A
		11.2	A		7126i	11.5	A		7473i	12.5	A		0750b	13.0	A
	7111e	10.9	F		7127e	10.6	A	07	7696b	13.5	A	16	1009b	13.0	A
		10.6e	A		7129i	11.5	A		7734f	12.0	A		1022b	13.0	A
	7111f	11.2	A		7131i	11.5	A	08	8082b	13.5	A		1137b	12.0	A
	7112i	11.1	F		7132e	11.2	A		8268i	12.3	A	17	1284e	11.0	A
		11.2	A		7135a	11.9	A	09	8438b	13.0	A		1400m	13.0	A
	7112e	11.2	F		7135f	11.4	A		8575b	14.0	A		1540e	11.0	A
		10.9?	A		7140a	12.0	A	10	8821b	14.0	A	18	1676e	12.0	A
	7114i	11.3	F		7140e	11.4?	A		8868b	12.0	A		1783e	12.0	A
		11.3	A		7164a	12.2	A	11	9178f	11.0	A	19	2063e	11.0	A
	R f	11.2	A		7166f	10.7	A		9290f	12.0	A		21940	13.0e	A
	7115c	11.1	F		7167b	11.9	A	12	9566f	11.0	A	20	2381e	11.0	A
		11.2	A	06	7264i	13.1	A		9655f	10.5	A		2642e	11.0	A
	7117i	11.3	A		7297f	12.3	A	13	9896f	11.0	A	21	2735e	10.5	A
	7119f	11.0	A		7329f	12.3	A		9989b	13.0	A				

REMARKS

110361. RS Carinae. Plates taken on J.D. 3298 and 3360 are spectrum plates. The estimates of magnitude were based on the continuous spectrum near the G line. Two hundred and forty-two additional plates, representing all years from 1889 to 1919, failed to show the nova.
133431. Z Centauri. The plate taken on J.D. 3393 is a spectrum plate. Two hundred and seventeen additional plates, representing all years from 1889 to 1919, failed to show the nova.
144059. Nova Circini 1906.1. One hundred and thirty-nine additional plates, representing all years from 1889 to 1919 except 1892 and 1906, failed to show the nova.
152250. Nova Normae 1893.5. Plates taken on the following Julian Days are spectrum plates: 2636, 2655, 2681, 2888, 2918, 2947, 2979. One hundred and seventy-six additional plates, representing all years except 1890 and 1892, failed to show the nova.
161402. X Serpentis. Estimates by two observers of the plate taken on J.D. 5937 give a magnitude of 11.6? for the nova. The plate is poor.
163352. Nova Arae 1910.3. The former measures of this nova, made by Mrs. Fleming, were rejected. No record could be found of magnitudes of comparison stars used, so it was assumed that arbitrary magnitudes had been assigned.

A spectrum plate taken on J.D. 8878 shows 5007, H β , 4070, H γ , H δ , H ϵ , and H ζ bright. Two other spectrum plates taken on J.D. 8883 and 8887 respectively show 5007, H β , 4670, H γ , H δ , H ϵ , and H ζ bright.

This nova was seen on a plate taken in 1905 which was exposed four hours.

One hundred and sixty-two additional plates, representing all years from 1889 to 1919 except 1890 and 1892 failed to show the nova.

175327. Nova Sagittarii 1910.4. The observation on J.D. 8594 was confirmed by Miss Cannon. This plate is the earliest on which the nova was seen, and there are no other plates taken until the following spring when the nova is bright. The position of the nova is very near the edge of the plate, but there is obviously a photographic image in the position. Plates taken on J.D. 8823 and 8878 are spectrum plates. On the latter date H β , H γ , and H ϵ are bright. There is no trace of lines characteristic of gaseous nebulae.

185604. Nova Aquilae 1905.6. Plates taken on the following Julian Days are spectrum plates: 7076c, 7089i and 7094i (observed by F only), and 7095i. One plate was exposed on two nights, J.D. 7109 and 7110, and another on three nights, J.D. 7114, 7116, and 7117.

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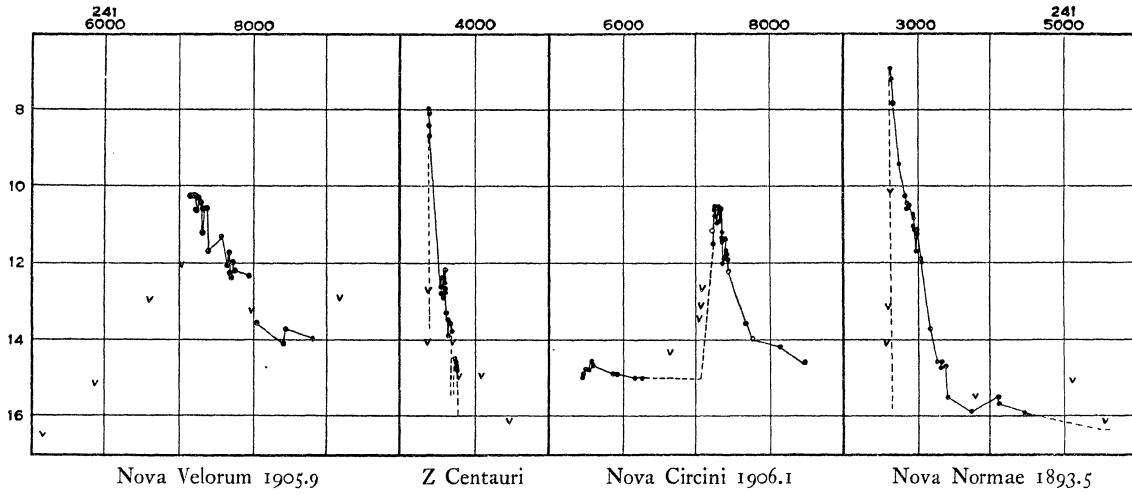


FIGURE 1

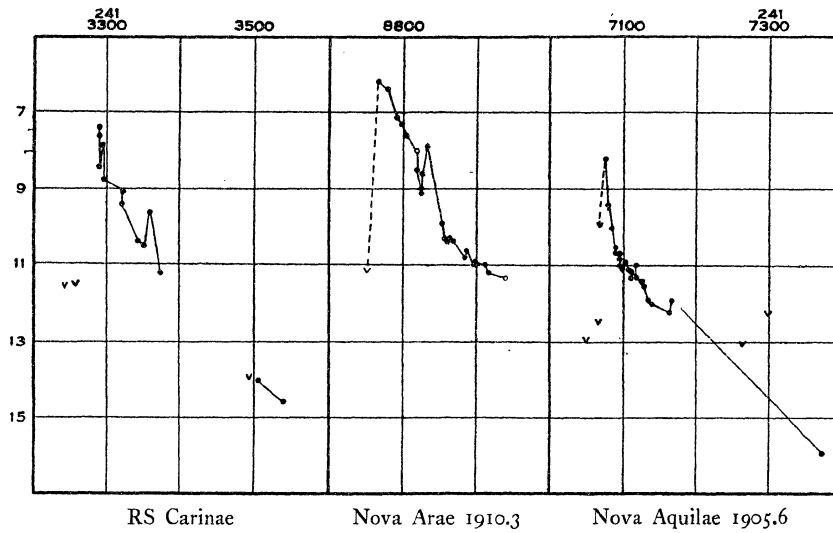


FIGURE 2

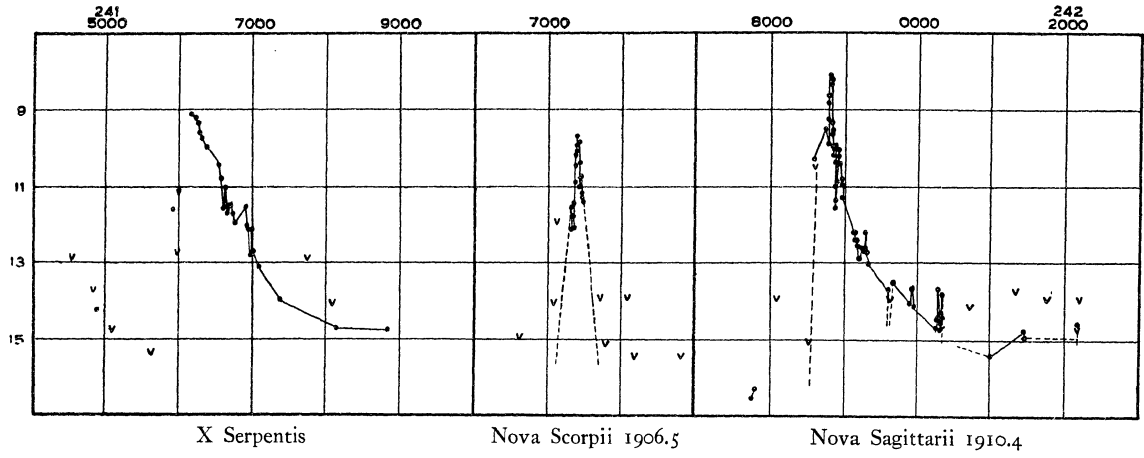


FIGURE 3

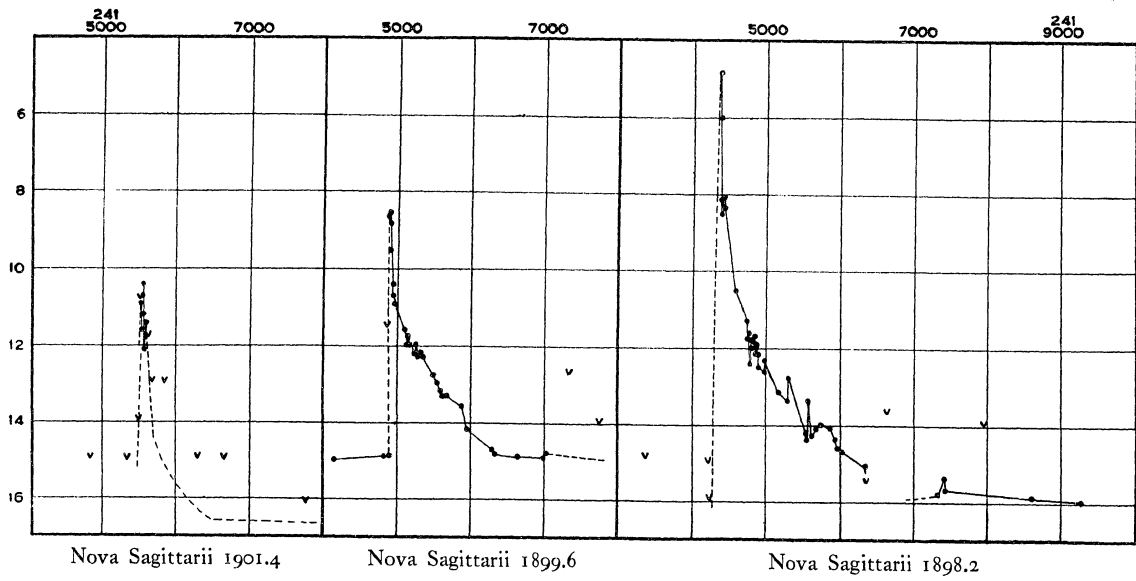


FIGURE 4