Photographic measures of six southern variable stars

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COMMUNICATIONS FROM THE OBSERVATORY AT LEIDEN

Photographic measures of six southern variable stars, by *C. J. Kooreman*.

The six variable stars AY Pup; $7^h35^m45^s, -25°21'·9$ (1875); WX Pup; $7^h46^m44^s, -20°59'·1$ (1875); WW Pup and C.P.D. — 25°2896 have been measured with the Schilt microphotometer by the writer on plates taken at Johannesburg with the Franklin-Adams camera mainly by Dr. H. VAN GENT. For all variables and their comparison stars the galvanometer readings were converted into provisional magnitudes with the aid of the table of *B.A.N.* No. 318.

The measures of the first four stars have been discussed by Prof. E. HERTZSPRUNG in *B.A.N.* No. 340. The variability of C.P.D. — 25°2896 was discovered by Dr. H. VAN GENT, while A. BLAAUW will give a discussion of these and other observations in a subsequent number of these publications.

The observations of WW Pup will be discussed by Prof. E. HERTZSPRUNG in a later issue of the *B.A.N.*

The reduced measures are given in the table.

J.D.— 2420000	AY Pup	$7^h35^m45^s$ $-25°21'·9$	WX Pup	$7^h46^m44^s$ $-20°59'·1$	WW Pup	C.P.D. $-25°2896$
	m	m	m	m	m	m
5507·6121	·46	— ·39	·31	— ·26	— ·40	·67
24·5716	— ·08	— ·38	·31	—	— ·21	— ·06
·5945	·09	— ·38	·30	—	— ·28	— ·10
31·4879	·60	— ·24	— ·11	·20:	·33	·01
·5108	·58	— ·03	— ·05	·10	·24	·04
32·5884	·20	— ·49	·07	— ·35	·63	— ·03
61·5086	·55	— ·42	·48	— ·23	— ·15	— ·26
·5307	·50	— ·46	·51	— ·29	— ·24	— ·13
62·5056	·17	— ·28	·75	·12	— ·50	·48
·5257	·05	— ·45	·89	·20	— ·66	·28
64·5044	·19	— ·41	1·23	— ·37	·29	— ·13
·5262	·37	— ·40	1·30	— ·38	·25	— ·05
68·4948	·23	— ·32	·28	— ·14	— ·39	— ·14
·5170	·34	— ·28	·19	— ·16	— ·19	— ·13
70·4507	·40	— ·02	·46	— ·22.	·40	·41
·4736	·19	— ·12	·45	— ·21	·46	·58
5613·3667	·28	— ·27	·33	— ·22	— ·03	·59
·3896	·13	— ·40	·33	— ·11	·14	·36
14·5067	·68	— ·42	·32	— ·28	·32	·64
·5289	·40	— ·26	·31	— ·27	·42	·40
15·3544	·06	— ·33	·58	— ·36.	·52	— ·10
·3761	·10	— ·33	·52	— ·26	·59	— ·10
16·2686	·00	— ·61	·52	— ·31	·65	·19
41·4403	·41	— ·05	·13	— ·23	·23	·07
·4624	·64	— ·11	·04	—	—	— ·01
43·4687	·04	— ·24	·96	— ·21	·62	— ·13
·4909	— ·01	— ·24	·86	— ·27	·63	— ·11
44·2769	·67	— ·52	1·22	— ·29	— ·33	·13
·2991	·52	— ·58	1·19	— ·34	— ·36	·02
·3213	·29	— ·46	1·29	— ·25	— ·36	— ·08
·4071	·00	— ·53	1·28	— ·25	— ·52	— ·10
·4290	·08	— ·45	1·32	— ·22.	— ·57	— ·13
·4975	·47	— ·44	1·11	·11	— ·63	— ·08
45·2583	·38	— ·43	1·23	—	— ·46	— ·06
·2801	·15	— ·39	1·15	— ·26	— ·52	·12
5646·2639	·01	— ·47	·99	—	— ·10	— ·21
·2857	·04	— ·56	·96	·02	— ·05	— ·05
·3871	·60	— ·59	1·10	— ·34	— ·04	·00
·4089	·56	— ·54	1·22	—	·00	— ·07
·4848	·11	— ·52	·94	— ·22	·10	·58
·5069	·14	— ·45	·94:	— ·30	·12	·75
·5824	·24	— ·45	·62	— ·12	— ·02	·09
49·2601	·23	— ·51	·20	— ·12	·56	·01
·2826	·16	— ·48	·32	— ·11	·40	·02
·3046	·06::	— ·44	·31	— ·21	·36	·16
·3249	·02	— ·45	·28	— ·28	·46	·33
·3453	·04	— ·33	·39	— ·29	·42	·56
·3671	·11	— ·22	·40	— ·26:	·38	·52
50·3228	·19	— ·54	·27	— ·32	— ·87	— ·07
·3450	·41	— ·50	·29	— ·26	— ·88	— ·08
·4139	—	— ·58	·32	— ·20	— ·82	— ·05
·4357	·17	— ·50	·32	— ·23	— ·80	·07
·5036	·01	— ·50	·29	·02	— ·80	·61
·5254	·03	— ·46	·19	·17	— ·69	·41
51·2578	·18	— ·41	·61	— ·19.	— ·36	— ·10
·2796	·28	— ·45	·69	—	— ·26	— ·08
·4295	·00	·02	·76	·16	— ·27	—
·4517	·10	— ·03	·75	·08	— ·17	— ·07
52·2626	·70	— ·36	·91	·20	·13	·23
·2843	·41	— ·35	·94	·18	·12	·07
·3059	·19	— ·41	—	— ·06	·14	— ·05
·3276	·08	— ·48	1·03	— ·04	·03	— ·05
·3492	·03	— ·50	·91	— ·18	·17	— ·09
·3709	·02	— ·48	·94	— ·17	·13	— ·14
·3925	·04	—	·95	—	·14	— ·07
·4147	·08	— ·48	1·00	— ·22	·16	— ·23
·4366	·14	— ·43	1·02	— ·20.	·32	— ·13
·4583	·40	— ·47	·96	— ·20	·09	— ·19
·4801	·58	— ·50	·99	— ·28	·21	— ·06
·5017	·61	— ·47	·92	— ·25	·15	— ·06

J.D.— 2420000	AY Pup	$7^h35^m45^s$ $-25°21'.9$	WX Pup	$7^h46^m44^s$ $-20°59'.1$	WW Pup	C.P.D. $-25°2896$
	m	m	m	m	m	m
5652·5234	·42	— ·47	·99	— ·30	·19	— ·13
53·2564	·20	— ·48	1·08	— ·21.	·43	— ·15
·2781	·10	— ·43	1·12	— ·21	·51	— ·01
·2997	·08	— ·39	1·16	— ·22	·49	·14
·3214	·07	— ·27	1·22	— ·25	·43	·37
·3430	·03	— ·32	1·22	— ·30	·50	·59
·3647	·13	— ·33	1·32	— ·24	·46	·70
·3863	·29	— ·19	1·30	— ·32	·47	·51
·4086	·54	— ·09	1·21	— ·26	·48	·22
·4303	·68	·03	1·28	— ·32	·45	·10
·4512	·60	·10	1·19	— ·17	·48	— ·07
·4729	·28	·25	1·06	— ·21.	·59	— ·10
·4945	·15	·00	·93	—	·43	·04
54·2990	·13	— ·45	1·25	— ·26	·76	— ·14
·3205	·10	— ·30	1·34	— ·20	·58	— ·10
·3422	·51	— ·32	1·30	— ·22	·59	— ·17
·4106	·28	— ·43	1·19	— ·16	·77	— ·03
·4322	·15	— ·53	1·31	— ·18	·67	·10
55·2510	·10	—	·87	—	— ·07	— ·11
·3292	·55	— ·37	1·00	— ·15.	— ·17	— ·07
·3749	·08	— ·26	·78	— ·20	— ·34	— ·15
·4556	·03	·03	·76	— ·30	— ·58	— ·13
·4774	·16	·05	·88	— ·26	— ·54	·06
·4991	·35	— ·05	·79	— ·32	— ·55	— ·06
·5207	·51	— ·05	·74	— ·26	— ·62	— ·02
73·2725	·09	— ·44	·85	— ·30	— ·28	·03
·2943	·20	— ·42	·79	— ·22	— ·29	·11
78·2565	·40	·05	·73	— ·24	— ·56	— ·16
·2787	·64	— ·07	·66	— ·25	— ·57	— ·10
83·2669	·09	— ·49	·11	— ·15	— ·84	— ·04
·2887	·02	— ·45	·02	— ·18	— ·70	— ·07
84·2384	·00	·04	·00	·09.	— ·38	·60
·2603	·00	·09	·00	— ·01	— ·33	·36
85·3260	·69	— ·38	·28	— ·30:	·13	·30
·3482	·46	— ·45	·40	— ·24	·12	·56
87·3028	·04	— ·52	·74	— ·20	·69	— ·08
·3253	·08	— ·51	·75	— ·19	·58	— ·16
5704·2824	·46	— ·25	·35	— ·22	·67	·00
·3042	·65	— ·19:	·35	— ·20	·58	— ·03
·3260	·59	·01	·39	— ·30	·56	— ·01
05·2935	·29	— ·52	·75	— ·23	— ·89	·06
·3153	·10	— ·58	·72	— ·23	— ·93	·20
06·2837	·06	— ·30	·91	— ·16	— ·43	— ·08
·3059	— ·07	— ·24	·91	— ·26	— ·42	— ·15
·3277	·03	— ·10	·97	— ·18	— ·38	— ·10
07·2788	— ·02	— ·50	1·22	— ·25	·00	— ·09
·3003	·08	— ·53	1·15	— ·30	·01	—
09·2324	·65	— ·46	·74	·09	·71	— ·01
·2781	·30	— ·49:	·68	·06	·63	— ·05
13·2371	·53	—	·37	— ·24	·19	— ·06
·2589	·33	— ·42	·32	— ·24	·23	·06
14·2121	·12	— ·46	·68	— ·24	·43	— ·08
·2340	·09	— ·56	·65	— ·25	·46	— ·07
15·2990	·33	— ·47	·77	·21	·66	·06
17·2529	·26	— ·42	1·20	— ·22	— ·50	— ·03
·2747	·13	— ·36	1·26	— ·27.	— ·29	— ·04
19·2482	·19	— ·35	— ·22	— ·12	·39	— ·04
·2701	·23	— ·40	— ·10	— ·15	·41	— ·04
34·2780	·24	— ·45	1·26	·13.	— ·12	— ·16
·2998	·50	— ·38	1·21	·13	— ·04	— ·04
39·2529	·60	— ·12	·13	— ·28	— ·44	— ·05
·2747	·48	—	·13	—	— ·44	— ·01
41·2327	·04	— ·03	·59	— ·06	·34	— ·11
·2546	·02	— ·27	·65	— ·13	·25	— ·01
58·1859	·21	— ·43	·36	— ·26	·60	·09
·2077	·43	— ·43	·50	— ·29:	·44	— ·11
61·2156	·08	—	—	—	—	—
5854·5994	·40	— ·44	·16	— ·09	— ·89	·50

J.D.— 2420000	AY Pup	$7^h35^m45^s$ $-25°21'.9$	WX Pup	$7^h46^m44^s$ $-20°59'.1$	WW Pup	C.P.D. $-25°2896$
	m	m	m	m	m	m
5854·6212	·51	— ·58	·26	— ·19:	— ·81	·22
87·5187	·09	— ·44	·90	— ·09	— ·79	·09
93·5076	·27	— ·47	·79	— ·10	— ·61	·00
·5296	·50	— ·44	·84	— ·13	— ·57	— ·07
5915·4616	·08	— ·35	·29	— ·02	— ·51	— ·12
·4838	·04	— ·39	·30	·02.	— ·66	— ·11
22·4748	·01	— ·60	1·23	— ·06	·04	·07
·4968	— ·06	— ·46	1·31	— ·22.	— ·04	·04
23·4386	— ·07	— ·24	·84	— ·25	·23	— ·14
·4604	·02	— ·22	·85	— ·28	·26	— ·14
43·4439	·33	— ·09	·06	— ·22	— ·45	— ·15
·4660	·50	— ·02	·03	— ·24	— ·54	— ·15
50·3920	— ·01	— ·54	·83	— ·23	·02	— ·11
·4138	·02	— ·64	·85	— ·12	·06	— ·08
68·3313	·58	— ·16	·79	— ·19	·36	·38
·3535	·47	— ·34	·84	— ·21	·40	·18
69·3556	·05	— ·43	·07	— ·20	·33	— ·04
·3778	·01	— ·49	·04	— ·21	·21	·09
71·3007	— ·03	— ·55	·30	— ·18	— ·32	— ·01
·3911	·56	— ·50	·35	— ·34	— ·26	— ·13
·4129	·37	— ·46	·38	— ·38	— ·49	— ·10
·4805	·04	— ·46	·37	— ·22	— ·34	— ·10
72·3171	·56	— ·05	·27	— ·15	— ·06	·56
·3392	·49	— ·29	·32	— ·24	·11	·28
·4064	·07	— ·45	·24	— ·12	— ·09	— ·06
·4201	·08	— ·29	·21	·01	— ·04	— ·36
73·4404	·20	— ·45	·81	— ·24	·27	·64
·4623	·35	— ·47	·84	— ·22	·32	·50
·5724	·04	— ·07	·84	— ·26	·44	— ·05
74·3484	·11	— ·20	·96	— ·20	·58	— ·11
·3702	·22	— ·32	1·13	— ·24	·57	— ·05
·4370	·67	— ·38	1·00	— ·30	·54	— ·12
·4592	·44	— ·43	1·02	— ·30	·62	— ·15
96·2833	·24	— ·40	— ·09	— ·20	·65	·56
·3051	·14	— ·33	— ·03	— ·27.	·59	·77
97·2695	·00:	— ·51	·05	— ·12	— ·18	— ·11
·2937	·05	— ·53	·05	— ·33	— ·34	— ·08
·4021	·61	— ·50	·21	— ·23	— ·48	·37
·4239	·60	— ·52	·10	— ·22	— ·48	·62
98·3693	·51	— ·07	·28	·25.	— ·68	— ·06
·3911	·27	— ·01	·28	— ·02	— ·59	— ·08
6000·3818	— ·04	— ·06	·78	— ·24	·14	·00
·4036	·08	·00	·86	— ·31	·19	— ·04
02·4764	·07	— ·18	—	— ·20	·26	— ·02
05·3703	·56	— ·47	— ·06	— ·12	·07	·06
07·2692	·59	— ·36	·33	— ·25	·49	— ·07
·2910	·32	— ·51	·34	— ·23	·50	— ·07
09·4674	·09	— ·58	·81	— ·24	— ·58	·44
·4892	·02	— ·60	·88	— ·24	— ·61	·35
10·4016	·08	— ·19	1·15	— ·12.	— ·22	— ·07
·4726	·19	— ·12	1·15	·12	— ·20	— ·03
12·4148	·63	— ·17	1·18	— ·30	·58	— ·09
·4366	·41	— ·03	1·10	— ·24	·48	— ·09
13·3570	·54	— ·55	—	— ·23	·38	— ·08
·3788	·44	— ·51	·61	— ·34	·41	·14
·5132	·01	— ·56	·49	— ·24	·44	·18
14·2646	·36	— ·58	— ·14	—	— ·79	— ·06
·2864	·65	— ·55	— ·14	— ·20	— 1·01	— ·07
·3605	·03	— ·47	— ·11	— ·25	— ·93	— ·15
·3823	·02	— ·35	— ·11	— ·25	— ·99	— ·15
·4041	— ·01	— ·41	—	— ·09	— 1·01	— ·02
·4266	·01	— ·24	— ·13	— ·26	— ·93	— ·07
·4485	·05	— ·06	— ·07	— ·23	— ·95	— ·04
·4703	·08	— ·06	— ·08	— ·29	— ·88	— ·10
·4921	·27	·01	— ·17	— ·23	— ·84	— ·03
·5143	·51	— ·13:	— ·11	— ·27	— ·89	·03
·5364	·47	— ·20	— ·18	— ·16	— ·87	— ·03
15·4364	·38	— ·51	·28	— ·31	— ·34	— ·14

J.D.— 2420000	AY Pup	$7^h35^m45^s$ $-25°21'.9$	WX Pup	$7^h46^m44^s$ $-20°59'.1$	WW Pup	C.P.D. $-25°2896$
	m	m	m	m	m	m
6015·4582	·49	— ·60	·22	— ·29	— ·38	— ·12
28·3092	·16	— ·58	1·13	— ·22	·22	·69
·3310	·35	— ·48	1·06	—	·34	·52
29·3881	·06	— ·42	1·33	·00	·43	·11
·4491	·02	— ·53	1·36	·10	·49	·71
30·3005	·09	— ·45	1·21	·12	— ·12	— ·17
·3223	·10	— ·54	1·23	·15:	— ·19	— ·14
36·2545	·07	— ·58	·87	— ·22	— ·83	·16
·2761	·16	— ·58	·86	— ·14	— ·90	·43
38·3965	·18	— ·49	1·35	— ·21	— ·02	— ·17
·4183	·34	— ·47	1·39	—	·12	— ·11
39·2915	·01	— ·01	1·23	— ·19	·18	— ·09
·3133	·08	— ·20	1·13	— ·16	·22	— ·10
40·4505	·04	— ·50	·38	— ·32	·54	— ·11
·4723	·07	— ·41	·43	— ·37.	·63	— ·20
42·3860	·14	— ·45	·19	·15	— ·78	— ·13
·4079	·36	— ·48	·21	·03	— ·67	— ·07
63·2829	·50	— ·33	·94	— ·41	·07	— ·09
·3047	·50	— ·17	·89	— ·37	·14	— ·01
64·3514	— ·04	— ·62	1·24	— ·26	— ·75	·36
·3732	— ·02	— ·49	1·20	— ·20	— ·74	·15
65·3175	·04	— ·21	1·31	— ·17.	— ·36	— ·07
67·3205	·31	— ·25	·35	— ·10	·48	— ·10
83·2432	·59	— ·51	1·37	— ·23	·19	·12
84·2259	·05	— ·40	1·05	— ·17	·43	— ·01
85·2141	— ·01	— ·49	·30	— ·27	·29	— ·08
·2359	·00	— ·61	·35	— ·26	·21	— ·08
86·2133	·04	— ·20	— ·09	— ·24	— ·82	— ·07
·2355	·26	— ·34	— ·02	— ·34	— ·84	— ·04
87·2268	·46	— ·49	·36	·05	— ·39	·25
·2486	·22	— ·47	·33	·05	— ·30	·06
89·2665	·14	— ·48	·67	— ·24	·39	— ·09
·2887	·20	— ·55	—	— ·23	·34	— ·03
91·2561	·12	— ·56	1·22	— ·26	— ·53	·05
·2779	·09	— ·42	1·23	— ·30	— ·69	— ·06
92·2561	·01	— ·31	1·36	— ·22	— ·57	·11
·2779	— ·07	— ·40	1·39	— ·23	— ·62	·25
93·2609	·13	— ·52	1·04	— ·04	·00	— ·13
·2827	·32	— ·59	·92	·12	— ·10	— ·15
94·2494	·50	— ·20	·31	— ·30	·23	— ·09
·2712	·46	— ·22	·28	— ·25	·27	— ·11
97·2504	·17	— ·53	·27	— ·31	— ·89	— ·05
·2722	·37	— ·49	·20	— ·22	— ·82	— ·05
99·2593	·03	—	·90	— ·22	·08	·06
6101·2786	·52	— ·44	1·26	— ·16	·66	·06
02·2436	·44	— ·02	·91	— ·20	— ·32	— ·23
·2774	·21	— ·14	·79	—	— ·57	— ·32
15·1944	·02	— ·49	·20	— ·20	— ·05	·60
·2162	·00	— ·54	·23	— ·25	— ·01	·42
17·1937	·26	— ·47	—	— ·28	·57	— ·10
·2165	·49	— ·42	·92	— ·18	·42	— ·07
6241·5823	·07	— ·04	·73	— ·22	— ·29	·04
·6045	·01	— ·25	·77	— ·26	— ·33	— ·04
48·5467	·47	— ·51	·28:	— ·24	·26	— ·09
·5692	·35	— ·40	·39	— ·21	·13	— ·01
49·5461	·06	— ·04	·34	— ·06	·47	·33
·5679	·07	—	·32	— ·13	·58	·15
64·4881	·60	— ·41	— ·11	— ·15	·00	·02
·5099	·34	— ·44	— ·05	— ·27	·13	— ·07
65·5277	·04	— ·39	·05	— ·15	·21	·42
·5495	·02	— ·27	·11	— ·21	·43	·27
66·5295	·09	— ·38	·32	— ·30	·54	— ·15
·5514	·22	— ·45	·34	— ·41	·58	— ·11
68·4629	·63	— ·43	·62	·08	— ·62	·09
·4847	·55	— ·39	·73	·27	— ·69	·07
·5543	·05	— ·42	·74	— ·14	— ·61	— ·11
·5763	·02	— ·55	·78	— ·21	— ·58	— ·08
69·4644	·13	— ·48	·87	— ·19	—	·33
6269·4862	·05	— ·41	·93	— ·17	— ·07	·50
·5532	— ·01	— ·28	1·03	— ·23	— ·18	·31
·5751	·09	— ·14	1·07	— ·34	·00	·10
70·5130	·02	— ·38	1·15	— ·26.	·22	— ·03
·5348	·19	— ·37	1·26	— ·13	·25	·03
73·5217	·03	— ·39	— ·10	— ·23	— ·90	·74
·5435	·00	— ·34	— ·13	— ·26	— ·86	·38
76·4583	·67	— ·23	·31	— ·24	·33	·06
·4805	·29	— ·30	·41	— ·30	·29	·01
77·4858	— ·06	— ·40	·74	— ·21	·56	·47
·5074	— ·07	— ·29	·89	— ·18	·66	·71
94·4139	— ·01	— ·13	·13	·09.	·78	— ·02
99·4145	·58	— ·46	·46	— ·34	·49	·01
·4363	·52	— ·46	·50	— ·27	·67	— ·01
6303·4118	·52	— ·46	·39	— ·15	·20	— ·08
·4357	·21	— ·59	·45	— ·20	— ·01	— ·14
·5479	·03	— ·53	·56	— ·10	— ·04	— ·17
·5697	·05	— ·54	·50	— ·33	·04	— ·04
05·5204	·61	— ·52	1·06	— ·30	·73	·61
·5419	·35	— ·46	1·03	— ·22.	·67	·46
06·3799	·08	— ·48:	1·07	— ·23	— ·36	— ·02
·4710	·51	— ·09	1·29	·28	— ·65	— ·05
·4945	·25	·01	1·25	·08	— ·71	— ·06
09·5083	·54	— ·53	— ·06	— ·14	·27	·69
·5302	·34	— ·63	— ·10	— ·18	·20	·65
10·3471	— ·10	— ·38	— ·03	—	·69	— ·08
·4582	·51	— ·22	·22	— ·20	·56	— ·15
·4799	·23	— ·15	·25	— ·18.	·62	— ·03
23·3615	·44	— ·31	1·01	— ·11.	— ·64	— ·03
·4973	·07	— ·53	1·05	— ·19	— ·64	— ·09
·5189	·01	— ·43	1·23	— ·32	— ·68	— ·19
24·4548	·15	— ·49:	1·19	— ·35	— ·18	·04
·4766	·23	— ·33	1·27	— ·09:	— ·24	— ·03
25·4289	·47	— ·42	1·16	·11.	·19	·04
·4507	·48	— ·39	1·07	·03	·19	·14
33·3049	— ·06	·11	1·18	— ·26	·54	— ·07
·5570	·06	—	—	—	—	—
37·2858	— ·03	— ·10	·04	— ·27	·67	— ·23
·3997	·60	— ·22	·16	— ·27.	·41	— ·03
·4216	·53	— ·45	·36:	— ·31	·47	·00
38·5041	·13	— ·41	·27	— ·24	·66	— ·05
·5230	·10	— ·46	·23	— ·25	·77	— ·03
62·4149	— ·03	— ·53	·22	— ·28	— ·60	— ·04
·4377	·04	— ·47	·13	— ·30	— ·43	— ·01
63·3976	·23	— ·15	— ·02	·03	— ·03	— ·04
·4198	·53	·14	— ·13	·09.	— ·13	— ·01
6476·2394	·48	— ·48	1·23	— ·29	·59	— ·01
·2610	·23	— ·53	1·30	— ·21.	·81	— ·09
7365·4834	— ·08	— ·05	·35	— ·09	— ·21	— ·03
·5053	·05	— ·20	·29	— ·20	— ·26	— ·09
7717·5038	·12	— ·34	·73	—	·76	— ·13
·5252	·30	— ·55	·84	·12	·67	·04
48·4740	·35	— ·24	— ·12	— ·18	·05	— ·07
·4955	·54	— ·34	— ·13	— ·26	— ·06	— ·05
7802·4384	·63	— ·46	— ·07:	— ·26	— ·74	·63
·4596	·50	— ·51	— ·03	— ·24	— ·68	·69
03·3512	·43	— ·48	·30	— ·17	— ·15	— ·09
·3727	·61	— ·34	·37	— ·13	— ·16	— ·08
07·3183	·23	— ·49	1·15	·06	— 1·00	— ·08
·3397	·44	— ·49	1·24	— ·06	— ·85	— ·09
8219·3083	·33	— ·37	1·35	— ·20	·48	— ·10
·3298	·52	— ·32	1·30	— ·19.	·56	— ·13
8656·2190	·27	— ·20	1·13	— ·21	·06	— ·05
·2577	·03	— ·39	1·13	— ·25	— ·03	— ·04
8660·2244	·12	—	—	—	—	—
8965·2903	·09	— ·36	·27	— ·27	— ·10	— ·06
·3124	·10	— ·44	·27	— ·12	— ·30	— ·06
·3574	— ·05	— ·40	·29	— ·26	— ·21	— ·16

J.D.— 2420000	AY Pup	$7^h35^m45^s$ —25°21′·9	WX Pup	$7^h46^m44^s$ —20°59′·1	WW Pup	C.P.D. —25°2896
	m	m	m	m	m	m
8965·4236	·31	— ·42	·31	— ·09	— ·34	·00
85·2571	— ·01	—	—	— ·22	·45	—
·2785	— ·02	—	—	— ·15	·44	—
·3478	·20	—	—	· ·23	·58	—
·3947	·47	—	—	— ·16	·63	—
9380·2091	·24	— ·04	·88	— ·28	— ·36	— ·06
·2271	·36	—	·92	— ·16	— ·37	— ·01
94·2557	·05	— ·01	·02	— ·27	·67	·61
99·2040	·21	— ·52	1·17	— ·23	·56	— ·05
·2282	·48	— ·51	1·24	— ·22	·59	— ·11
9399·2483	·57	— ·53	1·07	— ·12	·58	— ·03
·2642	·51	— ·44	1·00	— ·26	·57	·01
9400·1981	·54	—	1·00	— ·30	·62	·01
·2198	·29	— ·08	·97	— ·26	·65	— ·14
02·2077	— ·05	— ·15	— ·14	— ·02	— ·48	·13
·2302	·09	— ·12	— ·23	— ·17	— ·53	·37
·2531	·31	— ·01	— ·25	— ·22	— ·39	·49
07·2034	·55	— ·46	1·02	— ·24	— ·69	— ·02
·2228	·64	— ·35	1·02	— ·23	— ·62	— ·02
·2422	·43	— ·39	1·05	— ·26	— ·77	— ·01

AY Pup.

Three comparison stars have been used, which are the same as used by HERTZSPRUNG in *B.A.N.* No. 340. The average magnitude differences between the comparison stars in provisional magnitudes from 362 plates were found to be: $m'_b - m'_a = \cdot 91$ and $m'_c - m'_a = \cdot 75$.

The provisional magnitudes of the variable were reduced for each plate according to the formula $m = \cdot 84\ (m'_v - m'_a)/[\frac{1}{2}(m'_b + m'_c) - m'_a]$, all plates thus being reduced to an "average" gradation.

$7^h35^m45^s$, — 25°21′·9.

This variable is star *b* in *B.A.N.* No. 340. Only one comparison star was used, viz. the same as used by HERTZSPRUNG. In Table 1 the difference $m'_v - m'_a$ is given for each plate, m'_v and m'_a being the provisional magnitudes of the variable and the comparison star respectively.

WX Pup.

The images of this variable and the comparison stars are strongly overexposed on most of the plates. They had to be measured with a greater diaphragm than is customary in the old Schilt photometer. The same comparison stars have been used as in *B.A.N.* No. 340.

The average provisional magnitudes for the comparison stars from 349 plates, with a as zeropoint, are: $m'_b = \cdot 37$ and $m'_c = 1{\cdot}27$. From two plates taken with a grating in front of the objective the difference $m_c - \frac{1}{2}\ (m_a + m_b)$ was found to be $1^m{\cdot}4$.

The m_{pr} of the variable have been reduced for each plate according to the formula

$$m_v = 1{\cdot}4\ (2\ m'_v - m'_a - m'_b)/(2\ m'_c - m'_a - m'_b)$$

$7^h46^m44^s$, — 20°59′·1.

This is variable *g* in *B.A.N.* No. 340. Four comparison stars have been used, the coordinates of which relative to the variable are: a + $16^s{\cdot}7$, — 0′·5; b — $3^s{\cdot}3$, + 3′·8; c — $7^s{\cdot}6$, + 3′·3 while d is the same as used by HERTZSPRUNG. The average m_{pr} of the comparison stars from 342 plates was found to be, with a as zeropoint, $m'_b = \cdot 38$, $m'_c = \cdot 63$ and $m'_d = \cdot 45$. The difference between the m_{pr} of the variable and the mean of the m_{pr} of the four comparison stars was formed without regard to the differences in gradation between the different plates.

WW Pup.

Three comparison stars have been used, viz. a = C.P.D. — 20°2833, b = C.P.D. — 20°2826 and c at $7^h36^m15^s$, — 20°47′·6 (1875).

The average m_{pr} of the comparison stars from 357 plates was, with a as zeropoint, $m'_b = 1{\cdot}11$, $m'_c = 1{\cdot}92$.

From two plates taken with a grating in front of the objective the difference in magnitude between the comparison stars a and c was found to be $2^m{\cdot}37$. The m_{pr} of the variable were reduced for each plate according to the formula

$$m_v = 2{\cdot}37\ (m'_v - m'_b)/(m'_c - m'_a).$$

C.P.D. — 25°2896.

Three comparison stars have been used, viz. a = C.P.D. — 25°2868, b = C.P.D. — 25°2873 and c at $7^h43^m4^s$, — 25°47′·5 (1875).

The average m_{pr} of the comparison stars from 351 plates was, with a as zeropoint, $m'_b = \cdot 42$, $m'_c = 1{\cdot}28$.

From one plate taken with a grating in front of the objective the differences between the comparison stars were found to be $m_b - m_a = {}^m{\cdot}40$ and $m_c - m_a = 1^m{\cdot}73$.

The m_{pr} of the variable have been reduced according to the formula

$$m_v = 1{\cdot}3\ [m'_v - \tfrac{1}{2}\ (m'_a + m'_b)]\ /\ [m'_c - \tfrac{1}{2}\ (m'_a + m'_b)].$$