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**PHOTOELECTRIC MINIMA OF SELECTED ECLIPSING BINARIES
AND MAXIMA OF PULSATING STARS**

(BAV Mitteilungen No. 99)

In this 33rd compilation of BAV results, photoelectric observations obtained in the years 1996 and 1997 are presented on 93 variable stars giving 151 minima and maxima. All times of minima and maxima are heliocentric. The errors are tabulated in column “±”. The values in column O–C are determined without incorporation of nonlinear terms. The references are given in the section “remarks”. All information about photometers and filters are specified in the column “Rem”. The observations were made at private observatories. The photoelectric measurements and all the lightcurves with evaluations can be obtained from the office of the BAV for inspection.

Table 1. Eclipsing binaries

Variable		Min JD 24..	+/-	Ph	Obs	O–C	GCVS	Rem
LO	And	50422.2818	.0004	LB	AG	–0.0811	GCVS 85	2)
		50422.2820	.0007	LV	AG	–0.0809	GCVS 85	2)
ST	Aqr	50394.2435		L	KI	–0.0228	GCVS 85	1)
CX	Aqr	50369.3328		L	KI	–0.0008	GCVS 85	1)
V346	Aql	50343.3329		L	KI	–0.0053	GCVS 85	1)
V417	Aql	50303.4155		L	KI	–0.0415	BAVR 9)	1)
		50315.4511	.0003	LB	AG	–0.0411 s	BAVR 9)	2)
		50315.4517	.0005	LV	AG	–0.0405 s	BAVR 9)	2)
V609	Aql	50299.4307		L	KI	–0.0225	GCVS 85	1)
V724	Aql	50301.3793		L	KI	–0.0037 s	BAVM 57	1)
AP	Aur	50096.4104		L	MS	+0.0033 s	BAVM 67	1)
CG	Aur	50100.3663		L	MS	+0.0277 s	GCVS 85	1)
GX	Aur	50098.3305		L	MS	–0.0123 s	BAVM 69	1)
		50158.3524		L	MS	–0.0111	BAVM 69	1)
IU	Aur	50381.4989	.0005	LV	AG	–0.0013 s	GCVS 85	2)
		50381.4998	.0009	LB	AG	–0.0004 s	GCVS 85	2)
NSV2733	Aur	50096.2680		L	MS			1)
		50101.5474		L	MS			1)
		50151.3335		L	MS			1)
TY	Boo	50150.4382		L	MS	–0.0052	BAVM 68	1)
VW	Boo	50086.6593		L	MS	–0.0229	BAVR 8)	1)
		50204.4183		L	KI	–0.0219	BAVR 8)	1)
AC	Boo	50190.4053		L	QU	–0.0458 s	GCVS 85	5)
		50193.4020		L	QU	–0.0448	GCVS 85	5)
FF	Cnc	50115.3770		L	FR	–0.0336	BAVM 65	1)
		50123.3163		L	FR	–0.0331	BAVM 65	1)
		50140.5146		L	FR	–0.0357	BAVM 65	1)
		50152.4265		L	FR	–0.0321	BAVM 65	1)
		50156.3948		L	FR	–0.0333	BAVM 65	1)
		50158.3724		L	FR	–0.0404 s	BAVM 65	1)
		50162.3462		L	FR	–0.0360 s	BAVM 65	1)

Table 1 (cont.)

Variable		Min JD 24..	+/-	Ph	Obs	O-C	GCVS	Rem
YY	CMi	50157.3659		L	KI	+0.0123	GCVS 85	1)
AK	CMi	50153.3079	.0003	LB	AG	-0.0128	GCVS 85	2)
		50153.3088	.0009	LV	AG	-0.0119	GCVS 85	2)
AV	CMi	50152.3325		L	KI	+0.0011	GCVS 85	1)
V359	Cas	50344.5852	.0003	L	AG	+0.1426	GCVS 85	1)
U	Cep	50203.394		L	PTT	+0.080	GCVS 85	4)
CW	Cep	50300.5001	.0008	LB	AG	+0.0193 s	GCVS 85	2)
		50300.5013	.0006	LV	AG	+0.0205 s	GCVS 85	2)
SS	Com	50199.4782		L	KI	+0.0339	BAVR 9)	1)
CC	Com	50188.4183		L	KI	-0.0086 s	GCVS 85	1)
NSV6177	Com	50187.4258		L	MS	+0.0106 s	BAVM 88	1)
		50249.4683		L	FR	+0.0012	BAVM 88	1)
V370	Cyg	50153.6335		L	MS	-0.0115	GCVS 85	1)
V700	Cyg	50246.4825	.0003	L	AG	-0.0228	GCVS 85	1)
V961	Cyg	50152.6104		L	MS	-0.0617	GCVS 85	1)
		50153.6298		L	MS	-0.0612 s	GCVS 85	1)
EX	Del	50291.3807		L	KI	-0.0416	GCVS 85	1)
EF	Dra	50301.5180	.0006	LV	AG	+0.0085 s	BAVM 63	2)
		50301.5194	.0007	LB	AG	+0.0099 s	BAVM 63	2)
TT	Her	50249.4870		L	KI	+0.0267	GCVS 85	1)
AK	Her	50248.4941		L	KI	+0.0041	GCVS 85	1)
HS	Her	50281.500 :	.002	LB	AG	+0.807	GCVS 85	2)
		50281.500 :	.002	LV	AG	+0.807	GCVS 85	2)
		50304.426 :	.002	LB	AG	+0.809	GCVS 85	2)
		50304.427 :	.002	LV	AG	+0.810	GCVS 85	2)
		50313.4287	.0003	LV	AG	-0.0132	GCVS 85	2)
		50313.4293	.0003	LB	AG	-0.0126	GCVS 85	2)
DHK40	Her	50251.5088	.0003	LB	AG			2)
		50251.5090	.0004	LV	AG			2)
		50291.4891	.0014	LV	AG			2)
		50291.4924	.0011	LB	AG			2)
NSV7457	Her	50144.3803		L	MS			1)
		50144.5898		L	MS			1)
		50151.5038		L	MS			1)
FG	Hya	50156.3407		L	KI	-0.0410 s	GCVS 85	1)
CO	Lac	50248.4857	.0007	LV	AG	+0.0097 s	GCVS 85	2)
		50248.4860	.0004	LB	AG	+0.0100 s	GCVS 85	2)
UV	Leo	50190.4029		L	KI	+0.0166	GCVS 85	1)
XY	Leo	50173.4305		L	KI	-0.0313	GCVS 85	1)
		50180.3974		L	KI	-0.0247 s	GCVS 85	1)
XZ	Leo	50175.3742		L	KI	+0.0213	GCVS 85	1)
AP	Leo	50178.3981		L	KI	-0.0266	GCVS 85	1)
RT	LMi	50154.3495		L	MS	-0.0009 s	GCVS 85	1)
V404	Lyr	50158.5502		L	MS	-0.0648	GCVS 85	1)
		50248.4586	.0001	L	AG	-0.0627	GCVS 85	1)
BO	Mon	50154.268 :		L	KI	-0.059	GCVS 85	1)
V449	Oph	50251.5146		L	KI	+0.0327	GCVS 85	1)
V508	Oph	50250.4693		L	KI	+0.0095 s	GCVS 85	1)
V566	Oph	50252.4837		L	KI	+0.0417	GCVS 85	1)
V839	Oph	50284.4612		L	KI	-0.0846 s	GCVS 85	1)
V1016	Ori	50080.494		L	PTT	+0.067	GCVS 85	4)
ZZ	Peg	49934.4658		L	MSR	+0.1310	GCVS 87	1)
V482	Per	50106.2985		L	MS	+0.0346	BAVM 68	1)
CU	Sge	50283.4426		L	KI	+0.0150	GCVS 87	1)
CW	Sge	50279.4305	.0017	LB	AG	-0.0898 s	GCVS 87	2)
		50279.4346	.0017	LV	AG	-0.0857 s	GCVS 87	2)

Table 1 (cont.)

Variable		Min JD 24..	+/-	Ph	Obs	O-C	GCVS	Rem
RS	Sct	50286.4524		L	KI	+0.0032	GCVS 87	1)
DK	Sct	50287.4765		L	KI	+0.0311	GCVS 87	1)
CU	Tau	49710.2821		L	MS	-0.0758	GCVS 87	1)
		49710.4866		L	MS	-0.0774 s	GCVS 87	1)
		49721.4198		L	MS	-0.0680	GCVS 87	1)
		49722.2436		L	MS	-0.0687	GCVS 87	1)
		49722.4498		L	MS	-0.0686 s	GCVS 87	1)
		49723.2743	.0003	L	AG	-0.0685 s	GCVS 87	1)
		50114.3675	.0003	L	AG	+0.0340	GCVS 87	1)
		50115.3979	.0003	L	AG	+0.0338 s	GCVS 87	1)
HU	Tau	50043.392		L	QU	+0.008	GCVS 87	5)
TX	UMa	50141.4465		L	KRW	+0.1221	GCVS 87	5)
TY	UMa	50192.5267		L	FR	-0.0594 s	GCVS 87	1)
		50193.5905		L	FR	-0.0592 s	GCVS 87	1)
		50194.4775		L	FR	-0.0586	GCVS 87	1)
		50195.3645		L	FR	-0.0579 s	GCVS 87	1)
		50195.5409		L	FR	-0.0588	GCVS 87	1)
UY	UMa	50142.4061		L	MS	+0.0563 s	GCVS 87	1)
		50142.5929		L	MS	+0.0551	GCVS 87	1)
		50152.3668		L	MS	+0.0526	GCVS 87	1)
		50192.4160		L	MS	+0.0561 s	GCVS 87	1)

Table 2. Pulsating Stars

Variable		Max JD 24..	+/-	Ph	Obs	O-C	GCVS	Rem
OV	And	50115.2449		L	BK	-0.0038	MVS11,133	5)
XX	Boo	50249.4483		L	BK	+0.0196	GCVS 85	5)
CM	Boo	50195.3938		L	QU	-0.0342	BAVM 75	5)
CS	Boo	50088.6621		L	MS	-0.0041	IBVS 2855	1)
NSV6836	Boo	50175.5082		L	MS			1)
NSV7020	Boo	50190.4655		L	MS			1)
		50200.5584		L	MS			1)
HD32456	Cam	50150.5520		LB	GB	+0.0089	BAVM 84	7)
		50150.5600		LV	GB	+0.0169	BAVM 84	7)
AQ	Cnc	50186.4045		L	BK	-0.0474	GCVS 85	5)
RZ	CVn	50152.4306		L	KRW	-0.2543	GCVS 85	5)
ST	CVn	50153.500		L	PS	-0.061	GCVS 85	3)red
AD	CMi	50153.3664		L	KI	+0.0072	GCVS 85	1)
RV	CrB	50153.4574		L	MS	+0.0011	GCVS 85	1)
V798	Cyg	50314.4909		L	BK	-0.0680	GCVS 85	5)
GI	Gem	50081.5076		L	BK	+0.0685	GCVS 85	5)
		50153.4273		L	BK	+0.0661	GCVS 85	5)
BD	Her	50282.5358		L	KI	+0.0857	GCVS 85	1)
		50300.5499		L	BK	+0.0913	GCVS 85	5)
DL	Her	50247.4852		L	KI	+0.0217	GCVS 85	1)
LS	Her	50252.5143		L	BK	+0.0122	GCVS 85	5)
V418	Her	50301.4673		L	BK	+0.0354	GCVS 85	5)
ET	Hya	50151.4937		L	BK	+0.1043	GCVS 85	5)
DE	Lac	50313.5138		L	BK	+0.0187	GCVS 85	5)
RR	Leo	50170.4459		L	QU	+0.0229	GCVS 85	5)
		50194.4204		L	QU	+0.0206	GCVS 85	5)
ST	Leo	50166.585		L	PS	-0.010	GCVS 85	3)
		50192.3934		L	KI	-0.0131	GCVS 85	1)
SZ	Leo	50224.4201		L	BK	+0.2455	GCVS 85	5)
AA	Leo	50166.465		L	PS	-0.055	GCVS 85	3)

Table 2 (cont.)

Variable		Max JD 24.. +/-	Ph	Obs	O-C	GCVS	Rem
AX	Leo	50189.4212	L	BK	-0.0187	GCVS 85	5)
BX	Leo	50188.4399	L	BK	+0.0186	GCVS 85	5)
Y	LMi	50146.3529	L	BK	+0.0548	GCVS 85	5)
		50170.4954	L	BK	+0.0716	GCVS 85	5)
		50190.4066	L	BK	+0.0529	GCVS 85	5)
EH	Lib	50283.3665	L	SG	+0.0018	GCVS 85	6)
RW	Lyn	50175.3572	L	BK	+0.0132	BAVM 75	5)
EX	Lyr	50303.5011	L	BK	+0.0664	GCVS 85	5)
V462	Lyr	50287.5089	L	BK	+0.0616	GCVS 85	5)
V567	Oph	50286.5046	L	BK	+0.0624	GCVS 85	5)
FU	Vir	50170.5380	L	MS	+0.1865	GCVS 87	1)
		50193.5098	L	MS	+0.1839	GCVS 87	1)
		50200.4203	L	MS	+0.2021	GCVS 87	1)

Remarks:

AG	Agerer, F.	Tiefenbach	MS	Moschner, W.	LenneStadt
BK	Birkner, C.	Hagen	MSR	Moschner, J.	LenneStadt
PS	Paschke, A.	Rueti CH	FR	Frank, P.	Velden
PTT	Petter, Dr.G.	Dresden	GB	Groebel, R.	Eckental
QU	Quester, W.	Esslingen	KI	Kleikamp, W.	Marl
SG	Sterzinger, Dr.P.	Wien A	KRW	Krawietz, A.	Hartha
:	= uncertain				
s	= secondary minimum				
L	= photoelectric observation - without filter				
LB	= as above - filter: B				
LV	= as above - filter: V				
red	= reduced results				
1)	= photometer CCD 375x242 uncoated - without filter				
2)	= photometer EMI 9781A - filter: V=GG495,1mm; B=BG12,1mm+GG385,2mm				
3)	= photometer Cryocam 89A - without filter				
4)	= photometer TC-211 - without filter				
5)	= photometer ST-7 - without filter				
6)	= photometer SSP5				
7)	= photometer 1P21 - filter: V=GG14,2mm; B=BG12,1mm+GG13,2mm				
BAVM nn	= BAV Mitteilungen No. nn				
BAVM 57	= BAV Mitteilungen No. 57 = IBVS No. 3555				
BAVM 63	= BAV Mitteilungen No. 63 = IBVS No. 3811				
BAVM 65	= BAV Mitteilungen No. 65 = IBVS No. 3859				
BAVM 67	= BAV Mitteilungen No. 67 = IBVS No. 3942				
BAVM 84	= BAV Mitteilungen No. 84 = IBVS No. 4306				
BAVM 88	= BAV Mitteilungen No. 88 = IBVS No. 4386				
BAVR 8)	= BAV Rundbrief 32,122 ff				
BAVR 9)	= BAV Rundbrief 33,152 ff				
GCVS nn	= General Catalogue of Variable Stars, 4th ed. 19				

Franz AGERER
 Joachim HUEBSCHER
 Bundesdeutsche Arbeitsgemeinschaft
 für Veränderliche Sterne e.V. (BAV)
 Munsterdamm 90, D-12169 Berlin
 Germany