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

(BAV MITTEILUNGEN NO. 118)

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In this 39th compilation of BAV results, photoelectric observations obtained in the years 1998 and 1999 are presented on 115 variable stars giving 172 minima and maxima. All moments 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. . .	±	Obs	$O - C$		Fil	Rem
V449 Oph	50977.4734	.0003	KI	+0.0356		GCVS 85	1)
V508 Oph	50950.5658	.0002	KI	+0.0056		GCVS 85	1)
	50987.4582	.0003	KI	+0.0052		GCVS 85	1)
V839 Oph	50985.4927	.0004	KI	-0.0711		GCVS 85	1)
DZ Ori	50754.5893	.0011	MS	-0.2699		GCVS 85	1)
	50813.3486	.0004	MS	-0.2670		GCVS 85	1)
ER Ori	50845.3071	.0003	KI	+0.0205	s	GCVS 85	1)
	51138.5131	.0003	KI	+0.0229		GCVS 85	I 1)
FH Ori	50849.2846	.0005	KI	-0.2561		GCVS 85	1)
	51137.5314	.0003	KI	-0.2647		GCVS 85	I 1)
FR Ori	50862.3705	.0001	KI	+0.0191		GCVS 85	1)
FT Ori	50850.3423	.0002	QU	+0.0071		GCVS 85	Ir 4)
FZ Ori	51178.3646	.0006	KI	-0.0540	s	GCVS 85	Ir 1)
GU Ori	50863.4275	.0003	FR				5)
	50865.3103	.0005	FR				5)
	50897.3183	.0003	FR				5)
V343 Ori	50859.3746	.0006	KI	+0.1243	s	GCVS 85	1)
	51166.4424	.0007	AG	+0.1288		GCVS 85	BV 2)
U Peg	51146.2454	.0003	KI	-0.0759	s	GCVS 87	I 1)
AT Peg	51077.4580	.0008	KI	+0.0053		GCVS 87	1)
BB Peg	51078.4304	.0004	KI	+0.0058	s	GCVS 87	1)
CC Peg	51035.5428	.0005	AG	+0.0980		GCVS 87	1)
DO Peg	50771.2495	.0005	KI	-0.0194		GCVS 87	1)
EU Peg	50671.4216	.0011	MS	+0.0342		GCVS 87	1)
EY Peg	49947.626	.001	AG				1)
	51080.4514	.0007	AG				V 1)
GH Peg	51140.2461	.0004	KI	+0.0046		GCVS 87	I 1)
HW Per	50756.4168	.0024	MS	+0.0165	s	GCVS 87	1)
	51197.3119	.0006	MS	+0.0236		GCVS 87	1)

Table 1 (cont.)

Variable	Min JD 24. . .	\pm	Obs	$O - C$		Fil	Rem
KL Per	51077.4389	.0004	AG			V	1)
	51166.3595	.0003	AG				1)
V432 Per	50718.4086	.0006	AG	+0.0000	BAVM 61	BV	2)
	50718.6009	.0004	AG	+0.0007	s BAVM 61	BV	2)
V449 Per	51138.3650	.0011	MS	+0.0318	GCVS 87		1)
V482 Per	51185.3277	.0011	AG	+0.0909	BAVM 68	BV	2)
V505 Per	51171.4393	.0013	AG	+0.0032	s IBVS 3479	BV	2)
UV Psc	50756.4201	.0001	KI	-0.0098	GCVS 87		1)
CU Sge	51020.4911	.0004	KI	+0.0142	GCVS 87		1)
DK Sct	51036.3879	.0004	KI	+0.0299	GCVS 87		1)
BI Ser	50562.4168	.0004	AG	+0.1887	GCVS 87		1)
CC Ser	50546.4804	.0005	AG	-0.1086	s GCVS 87	BV	2)
Y Sex	50897.4562	.0007	HSR	+0.0223	BAVR 1)		4)
	50904.3837	.0004	KI	+0.0227	s BAVR 1)		1)
RZ Tau	50824.3861	.0002	KI	+0.0283	GCVS 87		1)
	50848.2882	.0002	KI	+0.0291	s GCVS 87		1)
	51155.4725	.0003	KI	+0.0298	s GCVS 87	Ir	1)
CU Tau	50672.5366	.0011	MS	+0.0572	GCVS 87		1)
	50673.5678	.0011	MS	+0.0579	s GCVS 87		1)
GR Tau	51184.2912	.0004	AG	+0.0407	s GCVS 87		1)
	50013.5295	.0014	AG	-0.0058	s BAVR 2)	BV	2)
	51139.5145	.0004	KI	-0.0194	BAVR 2)	I	1)
V1112 Tau	51198.4049	.0005	QU	-0.0188	BAVR 2)	V	4)
	50464.3023	.0011	MS				1)
	50841.2966	.0014	MS				1)
X Tri	51140.5268	.0007	KI			I	1)
	51081.3423	.0003	HSR	-0.0345	GCVS 87	V	4)
UY UMa	50570.5012	.0003	AG	+0.0572	GCVS 87		1)
	50898.3909	.0003	AG	+0.0609	GCVS 87		1)
	50898.5770	.0003	AG	+0.0590	s GCVS 87		1)
	50944.4471	.0006	AG	+0.0552	s GCVS 87		1)
AW Vir	50904.4927	.0002	KI	+0.0114	s GCVS 87		1)
AZ Vir	50916.5061	.0005	KI	-0.0122	s GCVS 87		1)
BH Vir	50948.4075	.0002	KI	-0.0045	GCVS 87		1)
GR Vir	50947.371:	.001	KI	-0.064	s GCVS 87		1)
HW Vir	50927.3774	.0002	HSR			Ir	4)
	50943.3678	.0001	KI				1)
	50943.4262	.0002	KI				1)
	50943.4843	.0002	KI				1)
	50946.4024	.0005	QU				4)
HI Vul	50948.3866	.0006	QU				4)
	50680.4438	.0007	AG	-0.0496	GCVS 87		1)

Table 2: Pulsating stars

Variable	Max JD 24. . .	\pm	Obs	$O - C$		Fil	Rem
SW And	51125.317	.005	PS	-0.005	BAVM 78		3)
	51178.3804	.0014	ATB	-0.0141	BAVM 78		1)
XX And	51139.4344	.0035	ATB	-0.0586	SAC 60		1)
GP And	51158.4139	.0028	ATB	+0.0006	GCVS 85		1)
	51165.2591	.0003	KI	+0.0004	GCVS 85	Ir	1)
OV And	51169.3449	.0021	ATB	-0.0052	MVS 11,133		1)
BR Aqr	51139.3024	.0004	KI	-0.1159	GCVS 85	I	1)
CP Aqr	51080.3324	.0004	KI	-0.0743	GCVS 85		1)
CY Aqr	51129.2612	.0003	KI	+0.0094	GCVS 85	Ir	1)
	51129.3222	.0003	KI	+0.0094	GCVS 85	Ir	1)
AA Aql	51077.3211	.0004	KI	-0.0006	BAVM 78		1)
V341 Aql	51105.2728	.0008	KI	+0.0157	GCVS 85	Ir	1)
RV Ari	50755.3547	.0027	MAR	+0.0038	GCVS 85		1)
	50755.4412	.0023	MAR	-0.0028	GCVS 85		1)

Table 2 (cont.)

Variable	Max JD 24...	\pm	Obs	$O - C$		Fil	Rem
RW Ari	51139.246:	.003	HSR	-0.170	GCVS 85		4)
SY Ari	51168.2669	.0012	KI			Ir	1)
TZ Aur	50540.4034	.0012	ATB	+0.0076	GCVS 85		1)
	50874.5016	.0012	ATB	+0.0074	GCVS 85		1)
RS Boo	50951.5260	.0014	ATB	+0.0122	BAVR 3)		1)
TW Boo	50891.4370	.0008	HSR	-0.0273	GCVS 85		4)
UU Boo	50881.4293	.0002	HSR	+0.1058	GCVS 85		4)
UY Boo	50942.5448	.0028	HSR	+0.1177	SAC 68	Ir	4)
	50944.4946	.0021	HSR	+0.1149	SAC 68	Ir	4)
YZ Boo	50950.4164	.0080	MZ	-0.0024	GCVS 85		6)
CG Boo	50863.4415	.0006	MS				1)
CM Boo	50871.4631	.0005	QU	-0.0127	BAVM 75		4)
	50882.4210	.0004	QU	-0.0182	BAVM 75		4)
	50893.3843	.0006	HSR	-0.0184	BAVM 75		4)
	50949.4209	.0008	BK	-0.0170	BAVM 75		4)
CQ Boo	50941.4827	.0010	QU	+0.0584	MVS 10,39		4)
	50945.4535	.0035	HSR	+0.0828	MVS 10,39	Ir	4)
	50948.5485	.0031	BK	+0.0772	MVS 10,39		4)
CS Boo	50926.4878	.0015	HSR	-0.0048	IBVS 2855	Ir	4)
	50926.4901	.0016	BK	-0.0026	IBVS 2855		4)
AH Cam	50859.4999	.0004	QU	+0.1485	GCVS 85	Ir	4)
	51136.3799	.0006	HSR	+0.1088	GCVS 85		4)
VZ Cnc	50885.3455	.0003	KI	+0.0033	GCVS 85		1)
RZ CVn	50152.4870:	.0160	KRW, ZAU	-0.1980	GCVS 85		4)
	50577.4670	.0052	KRW, ZAU	-0.2088	GCVS 85		4)
	50585.4100	.0042	KRW, ZAU	-0.2095	GCVS 85		4)
X CMi	50863.3626	.0033	BK	+0.0063	BAVR 6)		4)
Y CMi	50845.437	.005	PS	+0.238	GCVS 85		3)
HU Cas	51185.4689	.0002	AG				1)
GSC 4004.1211 (Cas)	50772.2947	.0024	MS				1)
	50772.4188	.0009	MS				1)
	50772.5389	.0018	MS				1)
RR Cet	51155.3689	.0007	KI	-0.0027	GCVS 85	Ir	1)
RZ Cet	51138.3887	.0005	KI	-0.0839	GCVS 85	I	1)
S Com	50896.4364	.0006	HSR	+0.0143	SAC 60		4)
	50927.5277	.0035	ATB	+0.0165	SAC 60		1)
U Com	50950.469	.010	PS	+0.020	GCVS 85		3)
RY Com	50950.3741	.0012	BK	+0.0894	GCVS 85		4)
ST Com	50934.4920	.0035	ATB	-0.0224	GCVS 85		1)
SZ CrB	50562.4870	.0011	MS	-0.2094	GCVS 85		1)
	50898.5166	.0022	MS	-0.1955	GCVS 85		1)
XZ Cyg	51017.4287	.0007	HSR	-0.0247	BAVM 78	Ir	4)
DX Del	51033.4554	.0007	KI	+0.0440	GCVS 85		1)
RT Equ	51055.471	.005	PS	+0.030	GCVS 85		3)
RX Eri	50863.344	.005	PS	-0.003	GCVS 85		3)
BK Eri	51184.2689	.0012	KI	-0.0957	GCVS 85	Ir	1)
SZ Gem	51221.4798	.0007	QU	-0.0378	GCVS 85	V	4)
	51222.4832	.0010	QU	-0.0367	GCVS 85	V	4)
KV Gem	51165.4878	.0012	KI	-0.0241	GCVS 85	Ir	1)
VX Her	50935.4667	.0021	ATB	-0.0249	BAVR 4)		1)
DY Her	50975.4435	.0004	KI	-0.0159	GCVS 85		1)
RR Leo	50896.5410	.0010	ATB	+0.0268	GCVS 85		1)
	50898.353	.003	PS	+0.029	GCVS 85		3)
SS Leo	50824.558	.005	PS	-0.007	GCVS 85		3)
	50925.3889	.0046	MAR	-0.0176	GCVS 85		1)
ST Leo	50849.625	.005	PS	-0.009	GCVS 85		3)
	50863.4866	.0025	HSR	-0.0099	GCVS 85		4)
SW Leo	50571.4811	.0013	FR	+0.0018	GCVS 85		5)
WW Leo	50553.378	.013	PS	+0.021	GCVS 85		3)
TV Lib	50950.4543	.0003	KI	-0.0034	GCVS 85		1)

Table 2 (cont.)

Variable	Max JD 24. . .	\pm	Obs	$O - C$		Fil	Rem
CN Lyr	50947.5176	.0021	HSR	+0.0031	BAVR 5)	Ir	4)
CM Ori	51136.4893	.0007	HSR	-0.0431	GCVS 85		4)
VV Peg	51035.5247	.0005	KI	-0.0281	GCVS 87		1)
BF Peg	51035.4653	.0005	HSR	+0.1398	GCVS 87		4)
	51036.4574	.0021	HSR	+0.1402	GCVS 87		4)
	51037.4465	.0031	HSR	+0.1377	GCVS 87		4)
BP Peg	51015.4428	.0004	HSR	+0.0352	GCVS 87	Ir	4)
	51081.3876	.0006	KI	+0.0349	GCVS 87		1)
DH Peg	51020.5068	.0035	HSR	+0.0280	GCVS 87	Ir	4)
	51138.2935	.0011	KI	+0.0243	GCVS 87	I	1)
DY Peg	50453.2928	.0008	ATB	-0.0010	GCVS 87		1)
	51137.2674	.0003	KI	-0.0022	GCVS 87	I	1)
	51158.4139	.0007	ATB	-0.0043	GCVS 87		1)
SS Psc	51156.393	.004	ATB	-0.066	GCVS 87		1)
AN Ser	50969.4383	.0008	KI	+0.0039	GCVS 87		1)
AR Ser	50948.5198	.0012	KI	-0.0012	GCVS 87		1)
CW Ser	50944.4831	.0006	KI	+0.0229	GCVS 87		1)
DY Ser	50953.5204	.0011	KI	-0.0121	GCVS 87		1)
RV UMa	50865.4766	.0011	HSR	+0.0634	GCVS 87		4)
AE UMa	50862.3840	.0035	MAR	-0.0033	GCVS 87		1)
ST Vir	50945.5825	.0018	BK	+0.1327	GCVS 87		4)
UU Vir	50942.4064	.0006	KI	-0.0168	GCVS 87		1)
AF Vir	50949.4746	.0004	KI	+0.0742	GCVS 87		1)
AT Vir	50947.4275	.0042	BK	-0.1580	GCVS 87		4)
AV Vir	50951.4639	.0042	HSR	+0.0133	GCVS 87	Ir	4)
BC Vir	50951.4006	.0005	KI	-0.0023	GCVS 87		1)
FU Vir	50865.5034	.0003	MS	+0.1763	GCVS 87		1)

Remarks:

AG: Agerer, F., Tiefenbach
 ATB: Achterberg, Dr. H., Norderstedt
 BK: Birkner, C., Hagen
 FR: Frank, P., Velden
 HSR: Husar Dr. D., Hamburg
 KI: Kleikamp, W., Marl
 KRW: Krawietz, A., Kurort Hartha
 MAR: Martignoni, M., Busto Arsizio (I)
 MS: Moschner, W., Lennestadt
 MZ: Maintz, G., Bonn
 PS: Paschke, A., Rueti (CH)
 QU: Quester, W., Esslingen
 ZAU: Zaunick, H., Radebeul

: = uncertain

s = secondary minimum

1) = photometer CCD 375 \times 242 uncoated — filter: V/Ir

2) = photometer EMI 9781A — filter: V = GG495, 1 mm; B = BG12, 1 mm + GG385, 2 mm

3) = photometer Cryocam 80A — without filter

4) = photometer ST-7 — filter: V or Ir = KG/2

5) = photometer OES-LcCCD11 — without filter

6) = photometer LC14 — without filter

BAVM 61 = BAV Mitteilungen No. 61 = IBVS No. 3797

BAVM 87 = BAV Mitteilungen No. 87 = IBVS No. 4332

BAVM *nn* = BAV Mitteilungen No. *nn*

BAVR 1) = BAV Rundbrief 32, 36

BAVR 2) = BAV Rundbrief 35, 1

BAVR 3) = BAV Rundbrief 36, 157

BAVR 4) = BAV Rundbrief 39, 9

BAVR 5) = BAV Rundbrief 43, 57

BAVR 6) = BAV Rundbrief 44, 162

GCVS *nn* = General Catalogue of Variable Stars, 4th ed. 19*nn*SAC *xx* = Rocznik Astronomiczny No. *xx*, Krakow (SAC)IBVS *xxxx* = Information Bulletin on Variable Stars No. *xxxx*MVS *xx, xxx* = Mitteilungen über Veränderliche Sterne *xx, xxx*, Sonneberg

[From IBVS 4912]

Correction to IBVS No. 4712

UY UMa instead of 50944.4471 AG correct is 50944.4531