

**BAV-results of observations**
Visual maxima and minima of eclipsing binaries, pulsating and eruptive stars

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Abstract: *In this 84th compilation of BAV results, visual observations obtained mostly in the years 2014 and 2015 are presented on 101 variable stars giving 276 maxima and minima on eclipsing binaries, pulsating and eruptive stars.*

We introduce 3 minima from 3 eclipsing binaries, 3 maxima of one RR-Lyrae-Star, 123 maxima and minima from 59 mirastars, 121 maxima and minima from 27 semiregular- and RV-Tauri-stars and 26 maxima and minima from 11 eruptive variables.

The results were acquired by nine observers in Germany and one in Austria mostly in the years 2014 and 2015. The observations were made at private observatories.

This paper contains only unpublished observations. All the light curves with evaluations can be obtained from the office of the BAV for inspection.

Please use the following link for an easy access to all the publications of the BAV including the "Lichtenknecker Database of the BAV": <http://www.bav-astro.de/sfs>.

Observers

BR	Braune, W., Berlin	SM	Sturm, A., Saarburg
KR	Krisch, G., Edemissen	SV	Strüver, H., Duisburg
NMN	Neumann, J., Leipzig	SWZ	Schwarz, B., Laubach
RCR	Rätz, K.; Herges-Hallenberg	VOH	Vohla, F., Altenburg
SG	Sterzinger, P., Wien (Austria)	WNK	Winkler, R., Werder

Explanations to the main tables 1 to 4

column 1	Variable	designation from the GCVS or preliminary compatible to SIMBAD
column 2		constellation
column 3	Phs	phase: maximum (max) or minimum (min)
column 4	HJD	heliocentric UTC timings of the observed min or max
column 5	U	if uncertain, mark "·"
column 6	Mag	magnitude, using the Harvard-System
column 7	Observer	abbreviations, see page 1, table "observers"
column 8	Rem	remarks: abbreviations, see page 15, table "remarks"
column 9	N	number of measurements

Table 1 – Eclipsing Binaries

Variable	Phs	HJD	U	Mag	Observer	Rem	N
VW	Cep	min	56871.473		RCR		7
SZ	Her	min	56871.476		RCR		7
EE	Peg	min	56870.478		RCR		13

Table 2 – RR-Lyrae-Stars

Variable	Phs	HJD	U	Mag	Observer	Rem	N
RR	Lyr	max	56911.478		SV		12
		max	56914.405		SV		10
		max	56992.377		SV		6

Table 3 – MiraStars

Variable	Phs	HJD	U	Mag	Observer	Rem	N
R	And	max	57095	6.4	VOH		19
W	And	max	57027	:	9.5	VOH	35
R	Aql	max	56984	6.15	SWZ		14
		max	56987	5.95	KR		15
R	Ari	max	56640	8.8	VOH		25
		max	56991	8.2	VOH		26
		max	57000	7.6	KR		14
R	Aur	max	56808	6.5	VOH		71
X	Aur	max	56814	8.4	VOH		18
		max	56973	8.7	VOH		12
		max	57147	8.2	VOH		35
UV	Aur	min	57068	10.7	VOH		64
AZ	Aur	max	56973	:	9.4	VOH	53
R	Boo	max	56826	:	6.75	RCR	13
		max	56834	7.3	VOH		47
		max	57054	7.4	VOH		41
T	Cam	max	56895	:	8.4	VOH	24
X	Cam	max	56870	7.7	VOH		24
		max	57157	8.4	VOH		25
R	CVn	max	57065	7.6	VOH		61
U	Cas	max	57091	8.2	VOH		21
V	Cas	max	56738	7.8	RCR		14
		max	56739	7.5	VOH		47
		max	56976	7.5	VOH		45
		max	57210	7.3	KR		19
W	Cas	max	56795	9.1	VOH		87
		min	56985	12.5	VOH		98
V667	Cas	max	56986	9.8	VOH		41
S	Cep	max	56838	7.0	NMN		21
		max	56865	7.7	VOH		134
		min	57073	11.2	VOH		89
T	Cep	max	56748	6.0	RCR		34
		max	56749	5.9	NMN		22
		max	56753	6.05	SWZ		16
		min	56928	10.8	VOH		83
		max	57134	6.4	VOH		107
		max	57138	6.7	SWZ		38
		max	57139	6.25	SM		22
S	CrB	max	56903	7.3	VOH		61
R	Cyg	max	56969	8.1	VOH		49
		max	56977	8.4	KR		22
U	Cyg	min	56899	11.7	VOH		101
Z	Cyg	max	56981	8.3	SV		13
		max	56985	8.3	VOH		26

Table 3 – MiraStars (cont.)

Variable	Phs	HJD	U	Mag	Observer	Rem	N
RT	Cyg	min	56862		12.5	VOH	45
		max	56939		7.4	VOH	43
		max	56940	:	7.1	RCR	7
		min	57051		11.5	VOH	47
		max	57118		7.4	VOH	53
BG	Cyg	max	57013		10.1	VOH	25
CN	Cyg	max	56923		9.3	VOH	29
		max	57124		10.0	VOH	25
chi	Cyg	max	56837		6.75	SM	19
		max	56843		6.9	VOH	73
		max	56846		6.5	SWZ	13
		max	56853		6.55	RCR	19
		max	57232		3.95	KR	31
R	Dra	max	57108		7.9	VOH	41
Y	Dra	max	56894	:	9.5	VOH	12
R	Gem	max	57061		6.5	VOH	53
ST	Gem	max	57120		10.1	VOH	39
ZZ	Gem	max	57074		10.1	VOH	50
S	Her	max	56980		7.8	KR	12
		max	56984		8.0	VOH	35
T	Her	max	56829		7.6	VOH	39
		max	56835	:	7.8	RCR	11
		max	56988		8.3	VOH	20
		max	57162		7.6	VOH	42
		max	57164		7.0	KR	26
U	Her	max	57143		7.8	VOH	54
W	Her	max	56793		8.1	VOH	48
		max	57084		8.3	VOH	40
RS	Her	max	57009		8.7	VOH	17
RU	Her	max	57062		8.1	VOH	22
SS	Her	max	56870		9.7	VOH	7
S	Lac	max	57029		8.4	VOH	16
R	Leo	max	56643		5.6	SWZ	17
		max	56950		5.35	SM	14
		max	56957		5.4	VOH	32
		max	56960		5.5	KR	8
		min	57138		10.4	VOH	32
R	LMi	max	57124		7.6	VOH	53
R	Lyn	max	56880		8.4	VOH	21
W	Lyr	max	56906		8.1	VOH	50
		max	57081		9.0	VOH	36
X	Oph	max	56870		6.8	VOH	72
Z	Oph	max	56945		8.6	VOH	26
		max	56952		8.1	KR	12
U	Ori	max	57104	:	6.8	NMN	6
		max	57119	:	7.1	VOH	38
Y	Ori	max	57004		9.9	VOH	24
RZ	Peg	max	56997		8.0	KR	12
R	Per	max	56930	:	9.3	VOH	18
U	Per	max	56807		8.4	VOH	72
Y	Per	max	56879		9.1	VOH	57
		min	57053		10.6	VOH	77
TW	Per	max	56960		11.1	VOH	26
R	Ser	max	56869		6.60	SM	9
		max	56878		6.9	VOH	21
		max	57217		6.2	KR	17
R	Tau	max	56912		8.2	VOH	16
V	Tau	max	57049		9.3	VOH	27
R	Tri	max	56923		6.1	VOH	60
		min	57070		11.2	VOH	41

Table 3 – MiraStars (cont.)

Variable	Phs	HJD	U	Mag	Observer	Rem	N
R	UMa	max		56728	7.2	RCR	31
		max		57029	7.1	VOH	53
		max		57031	6.8	KR	26
S	UMa	max		56867	7.9	VOH	55
		max		57098	7.5	SWZ	16
		max		57102	7.35	KR	25
T	UMa	max		56890	8.1	VOH	40
		max		57136	6.6	VOH	59
RS	UMa	max		56946	9.5	VOH	20
S	UMi	min		56800	12.4	VOH	77
		max		56943	8.9	VOH	79
		min		57119	12.1	VOH	35
T	UMi	min		56921	11.9	VOH	48
		max		56996	10.1	VOH	24
		min		57077	10.6	VOH	54
U	UMi	min		56904	11.6	VOH	79
		max		57079	8.0	VOH	99
R	Vir	max		57093	7.7	VOH	33
R	Vul	max	:	56930	8.4	VOH	19

Table 4 – Semiregular Stars

Variable	Phs	HJD	U	Mag	Observer	Rem	N	
AQ	And	max		56963	8.0	VOH	50	
		max		56964	7.2	NMN	8	
		min		57043	8.5	NMN	8	
T	Ari	max		56998	8.2	VOH	38	
Z	Aur	min		57079	11.0	VOH	17	
V	Boo	min		56899	9.6	VOH	39	
		max		57009	7.8	VOH	54	
		min		57152	9.6	VOH	69	
SV	Cas	min		57011	9.4	VOH	76	
WZ	Cas	max		56807	6.3	NMN	14	
		min		56915	7.6	NMN	14	
T	Cen	max		57150	6.35	SM	10	
RR	CrB	min		56811	8.5	VOH	26	
		max		56841	7.7	VOH	17	
		min		56864	8.4	VOH	31	
		max		57117	:	7.3	VOH	1731
		min		57151	:	8.0	VOH	19
W	Cyg	min		56809	6.55	WNK	41	
		max		56881	5.3	VOH	27	
		min		56948	7.1	VOH	27	
		max		57012	5.6	VOH	27	
		min		57075	7.0	VOH	27	
		max		57136	5.7	VOH	27	
RS	Cyg	min		56761	10.2	VOH	43	
		max		56936	7.6	VOH	115	
RU	Cyg	max		57079	8.2	VOH	80	
AA	Cyg	min		56837	9.7	VOH	51	
		max		56952	9.0	VOH	59	
		min		57060	10.3	VOH	48	
AF	Cyg	max		56833	7.0	VOH	71	
		min		56922	7.9	VOH	66	
		max		56987	7.1	VOH	44	
		min		57092	7.9	VOH	71	
CH	Cyg	max		57204	:	6.55:	KR	21
		min		57239	:	6.9	KR	21
EU	Del	min	:	56905	6.5	VOH	125	

Table 4 – Semiregular Stars (cont.)

Variable	Phs	HJD	U	Mag	Observer	Rem	N
TX	Dra	max	56803		6.9	VOH	13
		max	56901		7.1	VOH	26
		max	57039		7.1	VOH	29
		min	57116		7.9	VOH	39
		max	57162		7.2	VOH	37
SS	Gem	max	56951	:	8.6	KR	8
		min	56968		9.5	KR	8
		min	57062		9.6	KR	9
X	Her	min	56851		7.4	VOH	115
		max	57000	:	6.2 :	VOH	9
		min	57083		7.0	VOH	35
AC	Her	max	57144		6.0	VOH	25
		min	55715		8.7	KR	10
		min	56506		9.5	VOH	15
		max	56519		7.3	VOH	15
		max	56937		7.0	KR	9
		min	56962		8.0	KR	9
		max	56977		7.35	KR	9
		max	57024		7.4	KR	6
		min	57066		7.95	KR	6
		max	57164		7.65	KR	8
		min	57185		7.95	KR	8
		max	57203		7.55:	KR	8
		min	57223		8.1	KR	8
		max	57237		7.4	KR	8
		RT U	Hya Mon	max	57019	:	7.2
min	56697				7.1	VOH	7
max	56716				5.6	VOH	7
min	56724				6.2	VOH	7
max	56956			:	5.5	VOH	6
max	56960			:	5.7	KR	11
min	56974			:	6.1	VOH	6
max	56994			:	5.7	VOH	6
min	57019				7.5	SM	7
min	57020				7.2	VOH	10
max	57046				5.5	VOH	13
max	57048				5.75	SM	7
min	57068				6.7	VOH	13
min	57072				6.2	SM	7
max	57088				5.65	SM	7
alpha	Ori	min	57108		6.3	SM	7
		min	56229	:	0.7	BR	5
		max	56340	:	0.45:	BR	5
		min	56356		0.8	BR	5
		max	56372		0.55	BR	5
		max	56609		0.6	BR	37
		min	57021		1.1	BR	6
R	Sct	max	57045		0.6	BR	6
		min	57081		0.75	BR	12
		min	56707		6.65	SG	16
		min	56772		7.0	SG	16
		max	56829		5.1	VOH	53
		max	56834		4.9	SM	12
		min	56864		5.75	SG	16
		min	56927		7.4	VOH	60
		min	56929		7.0	SG	16
		min	56932		7.5	SM	12
		max	56969		5.0	WVK	39
		min	57077		6.2	VOH	20
min	57081		7.1	KR	10		

Table 4 – Semiregular Stars (cont.)

Variable	Phs	HJD	U	Mag	Observer	Rem	N
R	Sct	max	57109	:	5.0	KR	10
		min	57124	:	5.35	KR	10
		min	57213		6.75	KR	10
Z	UMa	max	56853		6.6	SWZ	15
		max	56854		6.8	VOH	56
		min	56928		9.35	KR	27
		min	56928		9.6	VOH	43
		max	56970		7.7	KR	27
		max	57035		6.9	VOH	71
		max	57036		6.95	KR	95
		max	57038		6.9	SWZ	19
		min	57134		9.4	KR	32
		min	57134		9.7	VOH	69
		max	57218		6.9	KR	32
RY	UMa	max	56857		7.2	VOH	92
		min	56983		7.8	VOH	89
ST	UMa	max	57154		6.5	SWZ	21
V	UMi	min	56952	:	8.4	VOH	23
		max	56978		7.5	VOH	27
		min	57025		8.6	VOH	24
		max	57079		7.4	VOH	27
		min	57111		7.9	VOH	28
		max	57136		7.4	VOH	32
		min	57178		8.2	VOH	27
		max	57206		7.3	VOH	22

Table 5 – Eruptive Stars

Variable	Phs	HJD	U	Mag	Observer	Rem	N
Z	And	max	56837		9.8	VOH	123
T	CrB	min	56743		10.7	VOH	27
		max	56811		10.2	VOH	18
		min	56851	:	10.5	VOH	18
		max	56919		10.2	VOH	30
		min	57099		10.5	VOH	21
		max	57129		9.9	VOH	24
SS	Cyg	max	56961		8.6	KR	8
		max	57074		8.65	KR	6
T	Ori	max	56963		10.4	KR	6
		min	56970		11.5	KR	6
AN	Ori	max	56935		11.0	KR	5
		min	56963		12.4	KR	5
KS	Ori	max	56935		9.85	KR	4
		min	56937		10.6	KR	4
		max	56955		9.8	KR	4
		min	56966		10.45	KR	4
LP	Ori	max	56955		8.4	KR	5
		min	56963		8.9	KR	5
		max	56974		8.2	KR	5
MR	Ori	min	56963		12.7	KR	6
		max	56968		10.8	KR	6
MX	Ori	max	56939		9.7	KR	13
V361	Ori	min	56936		9.6	KR	14
		max	56972		8.2	KR	14
V725	Tau	min	55246		9.4	NMN	13

Remarks

: uncertain

Erratum for BAVM213 (OEJV No. 131)

Z UMa max 54640 7.0 BOR correct are **min** and **8.9**

Erratum for BAVM218

S UMa min 55261 7.95 KR correct is **max**

Bundesdeutsche Arbeitsgemeinschaft für Veränderliche Sterne e.V. (BAV)

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