

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

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**Abstract:** *In this 88th compilation of BAV results, visual observations of 113 variable stars obtained mostly in the years 2015 and 2016 are presented, giving 316 maxima and minima of eclipsing binaries, pulsating and eruptive stars.*

We introduce 4 minima of eclipsing binaries, 7 maxima of 6 Cepheids, 140 maxima and minima of 70 mirastars, 157 maxima and minima of 31 semiregular variables and 8 maxima and minima of 2 eruptive stars. The results were acquired by 10 observers in Germany and 2 in Austria, mostly in the years 2015 and 2016. The observations were made at private observatories.

This paper contains only unpublished observations.

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

**Observers**

BHE	Böhme, D.; Nessa	SCB	Schubert, M.; Stralsund
BR	Braune, W., Berlin	SG	Sterzinger, P., Wien (Austria)
KB	Kriebel, W.; Schierling	SM	Sturm, A., Saarburg
KR	Krisch, G., Edemissen	SWZ	Schwarz, B., Laubach
NMN	Neumann, J.; Leipzig	VLM	Vollmann, W.; Wien (Austria)
RCR	Rätz, K.; Herges-Hallenberg	VOH	Vohla, F., Altenburg

**Explanations to the main tables 1 to 5**

column 1	Variable	designation from the GCVS
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	Mag	magnitude
column 6	Observer	abbreviations. see page 1. table "observers"
column 7	Rem	remarks: abbreviations. see table "remarks"
column 8	N	number of measurements

**Table 1 – Eclipsing Binaries**

Variable	Phs	HJD	Mag	Observer	Rem	N
epsil	Aur	min	55400.0	SCB		213
V1143	Cyg	min	57257.416	RCR		9
u	Her	min	57257.427	RCR		9
U	Oph	min	57256.454	RCR		12

**Table 2 – Cepheids**

Variable	Phs	HJD	Mag	Observer	Rem	N
X	Cyg	max	56513.81	SCB	1)	51
SU	Cyg	max	56530.61	SCB	1)	51
V459	Cyg	max	56887.45	KB	1)	53
S	Sge	max	56190.69	SCB	1)	56
U	Vul	max	56190.48	SCB	1)	56
SV	Vul	max	56532.02	SCB	1)	59
		max	56890.8	KB	1)	76

**Table 3 – MiraStars**

Variable	Phs	HJD	Mag	Observer	Rem	N
R	And	max	57095	VOH		19
W	And	max	57027	VOH		35
T	Aqr	max	57296	SCB		12
R	Aql	max	57248	SWZ		20
		max	57249	SCB		25
		max	57250	SM		19
		max	57255	KR		25
		max	57259	RCR		12
		max	57528	SWZ		11
R	Ari	max	56640	VOH		25
		max	56991	VOH		26
		max	57383	KR		7
R	Aur	max	56808	VOH		71
X	Aur	max	56814	VOH		18
		max	56973	VOH		12
		max	57147	VOH		35
UV	Aur	min	57068	VOH		64
AZ	Aur	max	56973	VOH		53
R	Boo	max	56834	VOH		47
		max	57054	VOH		41
		max	57290	KR		13
R	Cam	max	56860	SCB		12
		max	56959	SCB		12
T	Cam	max	56895	VOH		24
X	Cam	max	56870	VOH		24
		max	57157	VOH		25
		max	57302	SCB		15
WY	Cam	max	56918	SCB		17
		max	57352	SCB		23
R	CVn	max	57065	VOH		61
R	Cas	max	57004	SCB		36
T	Cas	max	57321	NMN		24
U	Cas	max	57091	VOH		21
V	Cas	max	56739	VOH		47
		max	56976	VOH		45
		max	57209	RCR		18
W	Cas	max	56795	VOH		87
		min	56985	VOH		98
V667	Cas	max	56986	VOH		41
S	Cep	max	56865	VOH		134

**Table 3 – MiraStars (cont.)**

Variable	Phs	HJD	Mag	Observer	Rem	N		
T	Cep	min	57073	11.2	VOH	89		
		min	56916	10.1	SCB	12		
		min	56928	10.6	VOH	83		
		max	57025	7.4	SCB	12		
		min	57070	7.9	SCB	12		
		max	57134	6.4	VOH	107		
		max	57137	6.0	KR	36		
		max	57138	6.3	SCB	12		
		max	57143	6.5	RCR	41		
		max	57497	5.8	SWZ	31		
		max	57524	5.2	NMN	21		
		R	Cep	max	56554	9.4	SCB	16
		AX	Cep	max	57328	11.3	SCB	16
BF	Cep	max	57100	10.7	SCB	11		
S	CrB	max	56903	7.3	VOH	61		
R	Cyg	max	56969	8.1	VOH	49		
		max	57394	6.75	KR	18		
U	Cyg	min	56899	11.7	VOH	101		
Z	Cyg	max	56985	8.3	VOH	26		
RT	Cyg	min	56862	12.5	VOH	45		
		max	56939	7.4	VOH	43		
		min	57051	11.5	VOH	47		
		max	57118	7.4	VOH	53		
BG	Cyg	max	57013	10.1	VOH	25		
CN	Cyg	max	56918	8.8	SCB	8		
		max	56923	9.3	VOH	29		
		max	57124	10.0	VOH	25		
chi	Cyg	max	57331	9.4	SCB	12		
		max	56843	6.9	VOH	73		
		max	57231	4.4	RRC	19		
		max	57231	4.4	SM	32		
		max	57231	4.45	SWZ	28		
		max	57233	4.5	VLM	32		
		max	57239	4.8	SCB	38		
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	56984	8.0	VOH	35		
		max	57295	7.7	KR	25		
T	Her	max	56829	7.6	VOH	39		
		max	56988	8.3	VOH	20		
		max	57162	7.6	VOH	42		
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	min	56957	5.4	VOH			
		max	57138	10.4	VOH	63		
R	LMi	max	56739	8.3	SCB	11		
		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		
		max	57100	8.85	KR	17		
		max	57291	7.25	KR	16		

**Table 3 – MiraStars (cont.)**

Variable	Phs	HJD	Mag	Observer	Rem	N
X	Oph	max	56870	6.8	VOH	72
Z	Oph	max	56945	8.6	VOH	26
U	Ori	max	57119	7.1	VOH	38
Y	Ori	max	57004	9.9	VOH	24
BK	Ori	max	52655	9.6	NMN	14
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	56878	6.9	VOH	21
		max	57220	6.1	SM	18
U	Ser	max	57269	8.0	KR	14
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
		max	57444	6.3	KR	14
R	UMa	max	57029	7.1	VOH	53
		max	57326	7.6	KR	14
S	UMa	max	56867	7.9	VOH	55
		max	57090	7.5	KR	38
		max	57547	7.7	SWZ	11
T	UMa	max	56890	8.1	VOH	40
		max	57129	6.65	KR	27
		max	57132	6.3	SCB	25
		max	57135	6.8	RCR	20
		max	57136	6.6	VOH	59
RS	UMa	max	56946	9.5	VOH	20
		max	57453	8.3	KR	12
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	Mag	Observer	Rem	N
AQ	And	max	56963	8.0	VOH	50
T	Ari	max	57998	8.2	VOH	38
Z	Aur	min	57079	11.0	VOH	34
V	Boo	min	56899	9.6	VOH	39
		max	57009	7.8	VOH	54
		min	57152	9.6	VOH	69
ST	Cam	min	56354	7.6	SCB	18
		max	56408	7.2	SCB	18
		min	56505	7.6	SCB	18
		max	56587	7.1	SCB	18
		min	56712	7.7	SCB	18
		max	56775	7.0	SCB	18
		min	57090	7.7	SCB	18
		min	57272	7.7	SCB	18
		max	57411	6.85	SCB	18
SV	Cas	min	57011	9.4	VOH	76

**Table 4 – Semiregular Stars (cont.)**

Variable	Phs	HJD	Mag	Observer	Rem	N
WZ	Cas	min	57132	7.0	NMN	9
		max	57199	6.7	NMN	9
		min	57310	7.2	NMN	9
V465	Cas	max	57423	6.95	NMN	21
		min	57301	7.05	SCB	35
		max	57340	6.8	SCB	35
RR	CrB	min	57389	7.3	SCB	35
		min	56811	8.5	VOH	26
		max	56841	7.7	VOH	17
W	Cyg	min	56864	8.4	VOH	31
		max	57117	7.3	VOH	17
		min	57151	8.0	VOH	19
		max	56881	5.3	VOH	25
		min	56948	7.1	VOH	25
RS	Cyg	max	57012	5.6	VOH	25
		min	57075	7.0	VOH	25
		max	57136	5.7	VOH	25
		min	57196	7.0	VOH	25
		min	56761	10.2	VOH	43
RU	Cyg	max	56936	7.6	VOH	115
AA	Cyg	max	57079	8.2	VOH	80
		min	56837	9.7	VOH	51
AF	Cyg	max	56952	9.0	VOH	59
		min	57060	10.3	VOH	48
		max	56833	7.0	VOH	71
		min	56922	7.9	VOH	66
CH	Cyg	max	56987	7.1	VOH	44
		min	57092	7.9	VOH	71
		min	57045	7.8	KR	33
		max	57059	7.3	KR	33
U	Del	min	57074	8.3	KR	33
		max	57138	6.55	KR	33
		max	57218	6.2	NMN	21
		min	57272	6.9	NMN	21
EU	Del	max	57307	6.5	NMN	21
		min	56905	6.5	VOH	125
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	57389	8.6	KR	18
		min	57421	9.8	KR	18
		max	57435	8.5	KR	18
II	Gem	max	57389	13.6	BHE	10
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	56506	9.5	VOH	
		max	56519	7.3	VOH	30
		min	57105	7.9	KR	12
		max	57120	7.5	KR	12
		min	57142	8.0	KR	12
		max	57164	7.6	KR	12
		min	57185	7.9	KR	12
		max	57202	7.6	SM	7
		max	57204	7.5	KR	12
min	57226	8.0	SM	7		
max	57237	7.35	KR	10		

**Table 4 – Semiregular Stars (cont.)**

Variable	Phs	HJD	Mag	Observer	Rem	N
	max	57239	7.6	SM		7
	min	57257	8.05	KR		10
	min	57259	7.95	SM		7
	max	57273	7.5	SM		7
	max	57274	7.35	KR		10
	min	57295	8.45	KR		10
	min	57298	8.0	SM		16
	min	57448	8.20	SM		12
RT	Hya	min 57443	:	8.6	SM	36
U	Mon	min 56697		7.1	VOH	20
		min 56716		5.6	VOH	
		min 56724		6.2	VOH	
		max 56956	:	5.5	VOH	
		min 56974	:	6.1	VOH	16
		min 56994	:	5.7	VOH	
		min 57020		7.2	VOH	10
		max 57046		5.5	VOH	13
		min 57067		6.55	KR	28
		min 57070		6.7	VOH	13
		max 57091	:	5.6	KR	28
U	Mon	min 57112	:	6.9 :	KR	28
		max 57126		5.5	KR	28
		min 57129		5.95	KR	28
		min 57288		6.3	SM	11
		max 57349		6.0	SM	11
X	Mon	max 57389		7.45	SM	23
FX	Ori	max 51958		8.9	NMN	21
		min 52319		10.0	NMN	15
		max 52689		8.7	NMN	12
alpha	Ori	min 57407		0.8	BR	9
R	Sct	max 56829		5.1	VOH	53
		min 56927		7.4	VOH	60
		min 57077		6.2	VOH	20
		max 57115		4.95	SG	11
		min 57146		5.7	SG	10
		min 57146	:	5.8	SM	7
		max 57173		5.2	SG	11
		max 57178	:	5.4	SM	7
		min 57212		7.0	SM	7
		min 57214		6.55	SG	10
		max 57236	:	5.35	SM	7
		max 57247		5.1	SG	11
		min 57268		6.1	SG	10
		min 57268		6.1	SG	11
		max 57292		4.55	SG	11
		max 57293		5.05	SM	7
		min 57340	:	6.5	SM	7
Z	UMa	max 56854		6.8	VOH	56
		min 56928		9.6	VOH	43
		max 57035		6.9	VOH	71
		min 57134		9.7	VOH	
		min 57134		9.7	VOH	69
		min 57138		9.4	KR	48
		max 57214		6.8	SWZ	25
		max 57233		6.9	KR	48
		max 57407		6.9	KR	29
		max 57409		6.85	SWZ	21
RY	UMa	max 55433		7.2	SCB	18
		min 55560		7.7	SCB	18
		min 56162		7.9	SCB	18

**Table 4 – Semiregular Stars (cont.)**

Variable		Phs	HJD	Mag	Observer	Rem	N
		min	56447	7.7	SCB		18
		min	56716	7.7	SCB		18
		max	56857	7.2	VOH		92
		min	56980	7.8	SCB		18
		min	56983	7.8	VOH		89
		max	57139	6.9	SCB		18
		min	57280	8.0	SCB		18
		max	57485	6.8	SCB		18
ST	UMa	max	57244	6.3	SWZ		22
		max	57407	6.65	SWZ		11
		max	57491	6.55	SWZ		22
V	UMi	max	56743	7.3	VOH		22
		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
V	UMi	max	57206	7.3	VOH		22

**Table 5 – Eruptive Stars**

Variable		Phs	HJD	Mag	Observer	Rem	N
Z	And	max	56837	9.8	VOH		123
T	CrB	min	56743	10.7	VOH		27
		min	56811	: 10.5	VOH		
		max	56851	10.2	VOH		36
		max	56919	10.2	VOH		30
		min	57099	10.5	VOH		21
		max	57129	9.9	VOH		24
T	Ori	min	57448	12.6	KR		10
V361	Ori	min	56936	9.6	KR		

**Remarks**

- : uncertain  
1) normal lightcurve  
2) this maximum is the maximum of the secondary period