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

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Abstract: *In this 85th 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This paper contains only unpublished observations.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	:	6.4	VOH		19
W	And	max	57027	:	9.5	VOH		35
T	Aqr	max	57296		8.0	SCB		12
R	Aql	max	57248		6.4	SWZ		20
		max	57249		6.3	SCB		25
		max	57250		6.5	SM		19
		max	57255		6.2	KR		25
		max	57259		6.3	RCR		12
		max	57528		6.45	SWZ		11
R	Ari	max	56640		8.8	VOH		25
		max	56991		8.2	VOH		26
		max	57383	:	8.5	KR		7
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	56834		7.3	VOH		47
		max	57054		7.4	VOH		41
		max	57290	:	7.5 :	KR		13
R	Cam	max	56860		8.9	SCB		12
		max	56959		8.9	SCB		12
T	Cam	max	56895	:	8.4	VOH		24
X	Cam	max	56870		7.7	VOH		24
		max	57157		8.4	VOH		25
		max	57302		7.4	SCB		15
WY	Cam	max	56918		9.8	SCB		17
		max	57352		9.9	SCB		23
R	CVn	max	57065		7.6	VOH		61
R	Cas	max	57004		4.4	SCB		36
T	Cas	max	57321		8.0	NMN		24
U	Cas	max	57091		8.2	VOH		21
V	Cas	max	56739		7.5	VOH		47
		max	56976		7.5	VOH		45
		max	57209		7.0	RCR		18
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	56865		7.7	VOH		134

Table 3 – MiraStars (cont.)

Variable		Phs	HJD		Mag	Observer	Rem	N
		min	57073		11.2	VOH		89
T	Cep	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
RY	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
		max	57331		9.4	SCB		12
chi	Cyg	max	56843		6.9	VOH		73
		max	57231		4.4	RCR		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
		max	57423		6.95	NMN		21
V465	Cas	min	57301		7.05	SCB		35
		max	57340		6.8	SCB		35
		min	57389		7.3	SCB		35
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		17
		min	57151		8.0	VOH		19
W	Cyg	max	56881		5.3	VOH		25
		min	56948		7.1	VOH		25
		max	57012		5.6	VOH		25
		min	57075		7.0	VOH		25
		max	57136		5.7	VOH		25
		min	57196		7.0	VOH		25
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	min	57045		7.8	KR		33
		max	57059		7.3	KR		33
		min	57074	:	8.3 :	KR		33
		max	57138		6.55	KR		33
U	Del	max	57218		6.2	NMN	2)	21
		min	57272		6.9	NMN		21
		max	57307		6.5	NMN		21
EU	Del	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
		max	57144		6.0	VOH		25
AC	Her	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