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## BAV-resultes of observations Visual maxima and minima of pulsating and eruptive stars

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**Abstract:** *In this 90th compilation of BAV results of visual observations of variable stars obtained mostly in the year 2017 are presented, giving 149 maxima and 80 minima of pulsating and eruptive stars.*

We introduce 80 minima and 169 maxima of pulsating and eruptive stars. The results were acquired by 6 observers in Germany, mostly observed in the year 2017. The observations were made at private observatories.

This paper contains only unpublished observations. The types of the variable stars are taken from GCVS-catalog [3] or observer.

Please use the following link for an easy access to all the publications of the BAV [1] [2]:  
<http://www.bav-astro.de/sfs>

### Explanations to the table

column 1	Variable	designation from the GCVS
column 2		constellation
column 3	Phs	phase: maximum (max) or minimum (min)
column 4	HJD 24+	heliocentric UTC timings of the observed min or max
column 5	U	if uncertain, mark „ : “
column 6	Mag	magnitude
column 7	Obs	abbreviations, see table at the end of the list.
column 8	Type	type of the variable star
column 9	N	number of measurements

**Table 1 - Times of minima and maxima**

Variable	Ext	HJD 24+	U	Mag	Obs	Type	n	
R	AND	max	57511	:	6.5	VOH	M	41
W	AND	max	57796		7.2	VOH	M	32
Z	AND	max	57560		9.9	VOH	ZAND	68
TU	AND	max	57764		8.6	VOH	M	43
VX	AND	max	57643		7.4	NMN	SRA	30
AQ	AND	max	57617		7.7	VOH	SRB	80
R	AQL	max	57529		6.5	VOH	M	57
RV	AQL	max	57670		8.9	VOH	M	18
R	ARI	max	57764		8.8	VOH	M	31
R	AUR	max	57739		7.3	VOH	M	70
X	AUR	max	57637		8.3	VOH	M	31
X	AUR	min	57722		12.9	VOH	M	40
X	AUR	max	57808		8.1	VOH	M	30
X	AUR	max	57988		9.1	VOH	M	27
Z	AUR	min	57637		11.1	VOH	SR	25
Z	AUR	max	57699		9.7	VOH	SR	33
Z	AUR	max	57799		10.3	VOH	SR	18
Z	AUR	min	57863		11.1	VOH	SR	17
UV	AUR	min	57446		10.4	VOH	M	23
VX	AUR	max	57648	:	8.7	VOH	M	25
AZ	AUR	min	57657		12.6	VOH	M	61
AZ	AUR	max	57832		8.9	VOH	M	61
R	BOO	max	57500		6.8	VOH	M	59
R	BOO	max	57722		7.3	VOH	M	28
V	BOO	max	57515		7.6	VOH	SR	71
V	BOO	max	57790	:	7.7	VOH	SR	95
V	BOO	min	57924	:	9.6	VOH	SR	95
R	CAM	max	57461		9.1	VOH	M	58
X	CAM	max	57595		8.2	VOH	M	43
X	CAM	max	57738		8.2	VOH	M	34
X	CAM	max	57889		8.3	VOH	M	36
X	CAM	min	57955		12.6	VOH	M	36
TW	CAM	min	50496	:	10.1	NMN	RV	29
TW	CAM	max	50510.5	:	9.7	NMN	RV	29
TW	CAM	max	50550.5	:	9.5	NMN	RV	29
TW	CAM	min	53623.5	:	10.5	NMN	RV	20
TW	CAM	max	53643.5	:	9.5	NMN	RV	20
WY	CAM	max	57772		10.6	VOH	M	65
R	CVN	max	57733		7.6	VOH	M	52
R	CAS	max	57885		6.5	VOH	M	66
T	CAS	max	57805		8.6	NMN	M	25
T	CAS	min	57599		10.8	VOH	M	182
T	CAS	max	57803	:	8.6	VOH	M	182
U	CAS	max	57651		8.2	VOH	M	49
U	CAS	max	57924		9.4	VOH	M	27
V	CAS	min	57556		12.7	VOH	M	71
V	CAS	max	57659		7.3	VOH	M	71
V	CAS	max	57895		7.6	VOH	M	52
W	CAS	max	57598		8.9	VOH	M	122
W	CAS	min	57797		12.2	VOH	M	113
SV	CAS	max	57541		6.5	NMN	SR	32
SV	CAS	min	57747		9.5	NMN	SR	32
SV	CAS	max	57548		6.4	VOH	SR	51
SV	CAS	min	57893		9.1	VOH	SR	28
WZ	CAS	max	57739	:	6.6	NMN	SRB	23
PZ	CAS	max	56944	:	8.7	NMN	SRC	37
PZ	CAS	max	57084.5	:	8.7	NMN	SRC	37
PZ	CAS	min	57174	:	9.4	NMN	SRC	40
PZ	CAS	max	57220	:	8.9	NMN	SRC	40

Variable	Ext	HJD 24+	U	Mag	Obs	Type	n
PZ	CAS	min	57409	:	9.4	NMN SRC	40
PZ	CAS	max	57486	:	9.0	NMN SRC	40
PZ	CAS	max	57628	:	8.7	NMN SRC	34
V0667	CAS	max	57703		9.8	VOH M	57
T	CEN	max	57877		6.3	SM SR	16
S	CEP	max	57786		7.8	NMN M	28
S	CEP	min	57535		9.8	VOH M	128
T	CEP	max	57885.5		6.0	NMN M	24
T	CEP	max	57889			SM M	25
T	CEP	max	57876	:	6.7	SWZ M	10
T	CEP	max	57514		5.9	VOH M	138
T	CEP	min	57670		10.0	VOH M	146
PQ	CEP	max	57790	:	8.0	NMN M	20
PQ	CEP	min	57574		12.0	VOH M	9
PQ	CEP	max	57830		8.6	VOH M	129
S	CRB	min	57499		13.0	VOH M	63
S	CRB	max	57616		7.6	VOH M	74
T	CRB	max	57711		9.5	VOH NR	68
T	CRB	min	57773		10.1	VOH NR	68
RR	CRB	min	57837		8.0	VOH SRB	52
RR	CRB	max	57868		7.8	VOH SRB	52
R	CYG	max	57868		8.8	VOH M	66
U	CYG	max	57610		8.7	VOH M	133
W	CYG	max	57509		5.5	VOH SRB	75
W	CYG	max	57936		5.6	VOH SRB	77
Z	CYG	max	57528		8.5	VOH M	64
Z	CYG	max	57776		7.8	VOH M	48
RS	CYG	min	57573		9.0	VOH SRA	176
RT	CYG	max	57762		6.8	NMN M	9
RT	CYG	max	57507		7.5	VOH M	77
RT	CYG	min	57625		11.7	VOH M	77
RT	CYG	max	57695		7.3	VOH M	46
RT	CYG	max	57910		8.1	VOH M	55
RU	CYG	max	57495		8.2	VOH SRA	169
RU	CYG	min	57708		8.8	VOH SRA	169
RU	CYG	max	57868		8.0	VOH SRA	100
SS	CYG	max	57633		8.2	VOH UGSS	21
SS	CYG	max	57757		8.3	VOH UGSS	13
SS	CYG	max	57874		8.3	VOH UGSS	11
SS	CYG	max	57918.4		8.3	VOH UGSS	9
SS	CYG	max	57956		8.2	VOH UGSS	23
TY	CYG	max	57760		9.5	VOH M	13
AA	CYG	max	57754		8.5	VOH SRB	139
AA	CYG	min	57850		9.8	VOH SRB	139
AF	CYG	max	57522		7.1	VOH SRB	66
AF	CYG	min	57584		7.9	VOH SRB	31
AF	CYG	max	57622		7.3	VOH SRB	30
AF	CYG	min	57645		7.8	VOH SRB	29
AF	CYG	max	57742		7.1	VOH SRB	43
AF	CYG	min	58011	:	7.3	SV SRB	9
BF	CYG	min	57594		10.7	VOH ZAND	152
BG	CYG	max	57590		10.0	VOH M	58
CH	CYG	max	57641			NMN ZAND+SR	32
CH	CYG	max	57725		8.2	NMN ZAND+SR	32
CH	CYG	min	57745		8.5	NMN ZAND+SR	32
CH	CYG	min	57786		8.6	VOH ZAND+SR	137
CN	CYG	max	57526		9.4	VOH M	48
CN	CYG	min	57623		13.4	VOH M	43
CN	CYG	max	57727		9.2	VOH M	36

Variable	Ext	HJD 24+	U	Mag	Obs	Type	n
R	DEL	max	57793	:	8.9	VOH M	19
EU	DEL	min	57687		6.3	VOH SRB	24
R	DRA	min	57514		13.3	VOH M	50
R	DRA	max	57608		8.2	VOH M	38
R	DRA	max	57870		7.8	VOH M	55
S	DRA	min	57450		9.1	VOH SRB	87
S	DRA	max	57567		8.6	VOH SRB	87
Y	DRA	max	57548		9.2	VOH M	28
Y	DRA	max	57878		8.5	VOH M	31
TX	DRA	min	57641		7.9	VOH SRB	22
TX	DRA	max	57829		6.7	VOH SRB	27
TX	DRA	min	57877		8.4	VOH SRB	15
AG	DRA	min	57761		10.2	VOH ZAND	94
AP	DRA	max	57997		11.1	VOH M:	17
R	GEM	max	57818		7.5	VOH M	46
SS	GEM	min	57413	:	9.6	VOH RVA	19
SS	GEM	min	57506		9.6	VOH RVA	21
SS	GEM	min	57774		9.8	VOH RVA	30
ST	GEM	max	57846		9.7	VOH M	17
ZZ	GEM	max	57648	:	9.1	VOH M	48
CD	GEM	max	57804		11.9	VOH M	16
S	HER	max	57598		7.5	VOH M	70
S	HER	max	57910		7.3	VOH M	66
T	HER	min	57583		12.9	VOH M	53
T	HER	max	57662		8.4	VOH M	31
T	HER	max	57816		7.9	VOH M	41
T	HER	min	57912		12.4	VOH M	50
U	HER	max	57543		7.2	VOH M	80
W	HER	max	57639		8.0	VOH M	46
W	HER	max	57925		8.8	VOH M	52
X	HER	min	57451		7.0	VOH SRB	21
X	HER	min	57570		7.3	VOH SRB	59
X	HER	max	57621	:	6.6	VOH SRB	37
X	HER	max	57815	:	6.2	VOH SRB	31
X	HER	min	57869		7.0	VOH SRB	47
RS	HER	max	57650		8.6	VOH M	29
RS	HER	max	57881		8.2	VOH M	55
RU	HER	max	57532		8.7	VOH M	50
SS	HER	max	57617		9.5	VOH M	14
AC	HER	min	57148		8.4	VOH RVA	19
AC	HER	min	57602		8.5	VOH RVA	13
AC	HER	min	57637		8.3	VOH RVA	21
AC	HER	min	57867		8.0	VOH RVA	12
AC	HER	min	57902		8.4	VOH RVA	19
RT	HYA	max	57808		7.0	SM SRB	37
S	LAC	max	57757	:	8.8	VOH M	23
R	LEO	max	57894		6.0	SM M	29
R	LEO	min	57760		10.7	VOH M	66
R	LEO	max	57903	:	6.1	VOH M	23
S	LEO	max	57821		10.7	VOH M	11
R	LMI	max	57861		7.0	NMN M	10
R	LMI	max	57864		7.1	VOH M	23
R	LYN	max	57623		8.0	VOH M	55
W	LYR	max	57684	:	8.6	VOH M	45
W	LYR	min	57780		12.5	VOH M	49
W	LYR	max	57871		8.0	VOH M	57
U	MON	min	57427		7.1	VOH RVB	24
U	MON	max	57450		5.3	VOH RVB	24
U	MON	min	57471		6.4	VOH RVB	24

Variable	Ext	HJD 24+	U	Mag	Obs	Type	n
U	MON	min	57743		7.1	VOH RVB	18
X	OPH	max	57550		6.6	VOH M	97
X	OPH	max	57857		6.7	VOH M	83
Z	OPH	max	57652		8.4	VOH M	62
Z	OPH	min	57870		12.4	VOH M	55
U	ORI	min	57752		12.9	VOH M	30
U	ORI	max	57867		7.3	VOH M	20
Y	ORI	max	57833		10.1	VOH M	10
R	PER	max	57757		8.3	VOH M	24
U	PER	max	57511		7.4	VOH M	62
U	PER	min	57648		11.1	VOH M	59
U	PER	max	57815		8.2	VOH M	60
X	PER	min	57717		6.5	NMN GCAS+XP	24
X	PER	max	57780.5	:	6.1	NMN GCAS+XP	24
Y	PER	min	57805		10.0	VOH M	44
TW	PER	max	57637		10.2	VOH M	28
RV	SCO	max	57928.29			SM DCEP	14
R	SCT	min	57626		5.8	VOH RVA	50
R	SCT	min	57841		5.9	VOH RVA	11
R	SER	max	57587		7.4	VOH M	45
R	SER	max	57933		6.8	SM M	28
V	TAU	max	57748		9.5	VOH M	33
R	TRI	max	57719		6.2	VOH M	72
R	UMA	max	57925		6.7	SWZ M	10
R	UMA	min	57517		13.0	VOH M	75
R	UMA	max	57633		7.3	VOH M	86
R	UMA	min	57820		12.5	VOH M	73
S	UMA	max	57750			NMN M	16
S	UMA	max	57994		8.0	SWZ M	13
S	UMA	max	57550		7.7	VOH M	57
S	UMA	max	57763		8.1	VOH M	77
T	UMA	max	57908		6.6	SWZ M	14
T	UMA	max	57652		8.2	VOH M	48
T	UMA	max	57913		6.7	VOH M	39
Z	UMA	max	57976		6.3	SWZ SRB	22
Z	UMA	min	57532		9.4	VOH SRB	35
Z	UMA	max	57579		7.2	VOH SRB	48
Z	UMA	max	57648		7.1	VOH SRB	48
Z	UMA	min	57719		9.6	VOH SRB	43
Z	UMA	max	57779		7.6	VOH SRB	48
Z	UMA	min	57881		8.9	VOH SRB	61
RS	UMA	max	57958		8.6	VOH M	30
RY	UMA	min	57595		7.8	NMN SRB	37
RY	UMA	max	57725.5		7.1	NMN SRB	37
RY	UMA	min	57829.5		7.8	NMN SRB	37
RY	UMA	max	57469		7.1	VOH SRB	97
RY	UMA	min	57575		7.8	VOH SRB	54
RY	UMA	max	57742		7.0	VOH SRB	89
RY	UMA	min	57862		7.9	VOH SRB	71
S	UMI	max	57579		8.5	VOH M	114
S	UMI	min	57764		12.0	VOH M	85
T	UMI	max	57549		10.8	VOH M	47
T	UMI	min	57673		11.8	VOH M	49
T	UMI	max	57745		10.6	VOH M	43
T	UMI	max	57842		11.3	VOH M	44
T	UMI	min	57871		11.6	VOH M	44
T	UMI	max	57903		11.3	VOH M	44
T	UMI	min	57959		11.6	VOH M	44
U	UMI	min	57564		11.6	VOH M	86

Variable	Ext	HJD 24+	U	Mag	Obs	Type	n
U	UMI	max 57721		8.3	VOH	M	89
U	UMI	min 57883		11.5	VOH	M	95
V	UMI	min 57750		8.4	VOH	SRB	47
V	UMI	max 57825		7.7	VOH	SRB	33
V	UMI	max 57924		7.9	VOH	SRB	43
R	VIR	max 57812		6.5	VOH	M	23
R	VUL	max 57610		7.7	VOH	M	31
R	VUL	max 57740	:	7.7	VOH	M	17
R	VUL	max 57896	:	8.3	VOH	M	24
NSV2106	ORI	max 57712		8.2	NMN		21
CHI	CYG	max 57647		4.8	VOH		120

### Observers

BRW	Braunwarth, Horst	Hamburg
NMN	Neumann, Joerg	Leipzig
SM	Sturm, Arthur	Saarburg
SV	Struever, Helmut	Duisburg
SWZ	Schwarz, Bernd	Laubach
VOH	Vohla, Frank	Altenburg

### References:

- [1] BAV Services for Scientists, 2013, <http://www.bav-astro.de/sfs/index.php/>
- [2] Lichtenknecker Database of the BAV, <http://www.bav-astro.de/LkDB/index.php/>
- [3] Samus N.N., Kazarovets E.V., Durlevich O.V., Kireeva N.N., Pastukhova E.N.,  
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