



BAV Mitteilungen

BAV-results of observations

Joachim Hübscher
E-Mail-address: publicat@bav-astro.de

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Abstract: *This 79th compilation contains especially the results of visual and fotografic observations of BAV-members mostly from the years 2013 and 2014. Here we publish altogether 319 minima and maxima of 119 eclipsing binaries and pulsating stars, 31 of them have been observed using photomultipliers or CCD-Technique. The data were acquired by 15 observers.*

We introduce 83 minima timings from 10 eclipsing binaries, 5 maxima from 5 delta-Cephei-stars, 139 maxima and minima from 73 mirastars, 85 maxima and minima from 28 semiregular, longperiod and RV-Tauri-stars and 7 maxima and minima from 3 cataclysmic variables.

The results were acquired by 13 observers in Germany and 2 in Austria mostly in the years 2013 and 2014. All moments of minima and maxima are heliocentric UTC.

This paper contains only unpublished observations. All the lightcurves 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>.

Table 1 – Eclipsing Binaries

Variable	phase	JDhel. UTC	PH	Observer	O-C	Source	n	Remarks
GU	Aql	min	43801.259	F	Häußler, K.	-0.049	GCVS	2)
		min	45082.593	F	Häußler, K.	-0.036	GCVS	2)
		min	46982.453	F	Häußler, K.	-0.065	GCVS	2)
V407	Aql	min	47762.341	F	Häußler, K.	-0.016	GCVS	2)
		min	37559.452	F	Häußler, K.	0.139	GCVS	2)
		min	37578.383	F	Häußler, K.	0.158	GCVS	2)
		min	37584.277	F	Häußler, K.	0.142	GCVS	2)
		min	37838.429	F	Häußler, K.	0.164	GCVS	2)
		min	37851.417	F	Häußler, K.	0.150	GCVS	2)
		min	37871.536	F	Häußler, K.	0.175	GCVS	2)
		min	37877.443	F	Häußler, K.	0.172	GCVS	2)
		min	37903.437	F	Häußler, K.	0.162	GCVS	2)
		min	37941.278	F	Häußler, K.	0.179	GCVS	2)
		min	37961.357	F	Häußler, K.	0.164	GCVS	2)
		min	38675.308	F	Häußler, K.	0.187	GCVS	2)
		min	40780.489	F	Häußler, K.	0.227	GCVS	2)
		min	42624.443	F	Häußler, K.	0.261	GCVS	2)
		min	45163.437	F	Häußler, K.	0.319	GCVS	2)
min	46019.229	F	Häußler, K.	0.343	GCVS	2)		
min	46299.354	F	Häußler, K.	0.334	GCVS	2)		
min	46650.413	F	Häußler, K.	0.340	GCVS	2)		
V416	Aql	min	37544.334	F	Häußler, K.	-0.005	GCVS	2)
		min	37556.393	F	Häußler, K.	0.012	GCVS	2)
		min	37560.392	F	Häußler, K.	-0.003	GCVS	2)
		min	37857.441	F	Häußler, K.	-0.002	GCVS	2)
		min	37869.496	F	Häußler, K.	0.011	GCVS	2)
		min	37877.527	F	Häußler, K.	0.013	GCVS	2)
		min	37881.536	F	Häußler, K.	0.008	GCVS	2)
		min	37932.39	F	Häußler, K.	0.02	GCVS	2)
		min	39678.5	F	Häußler, K.	0.0	GCVS	2)
		min	40030.434	F	Häußler, K.	-0.005	GCVS	2)
		min	40798.462	F	Häußler, K.	-0.019	GCVS	2)
		min	46640.415	F	Häußler, K.	-0.001	GCVS	2)
		min	46644.402	F	Häußler, K.	-0.028	GCVS	2)
		min	46648.397	F	Häußler, K.	-0.048	GCVS	2)
		min	46648.397	F	Häußler, K.	-0.048	GCVS	2)
V418	Aql	min	38584.524	F	Häußler, K.	0.043	GCVS	2)
		min	38640.373	F	Häußler, K.	0.020	GCVS	2)
		min	40030.484	F	Häußler, K.	0.020	GCVS	2)
		min	45492.514	F	Häußler, K.	-0.055	GCVS	2)
		min	45854.533	F	Häußler, K.	-0.090	GCVS	2)
		min	46976.458	F	Häußler, K.	-0.087	GCVS	2)
		min	48098.458	F	Häußler, K.	-0.009	GCVS	2)
V970	Aql	min	48887.38	F	Häußler, K.	-0.01	GCVS	2)
		min	39651.491	F	Häußler, K.	-0.023	GCVS	2)
		min	39684.501	F	Häußler, K.	-0.007	GCVS	2)
		min	45585.357	F	Häußler, K.	0.059	GCVS	2)
		min	45646.245	F	Häußler, K.	0.036	GCVS	2)
		min	46642.402	F	Häußler, K.	0.038	GCVS	2)
		min	46703.288	F	Häußler, K.	0.013	GCVS	2)
V981	Aql	min	47849.223	F	Häußler, K.	0.053	GCVS	2)
		min	49567.481	F	Häußler, K.	0.102	GCVS	2)
		min	37584.277	F	Häußler, K.	-0.029	GCVS	2)
		min	38640.373	F	Häußler, K.	0.032	GCVS	2)
		min	41517.436	F	Häußler, K.	-0.017	GCVS	2)

Table 1 – Eclipsing Binaries

Variable	phase	JDhel. UTC	PH	Observer	O-C	Source	n	Remarks
V981	Aql	min	41536.498	F	Häußler, K.	-0.002	GCVS	2)
		min	43078.243	F	Häußler, K.	0.017	GCVS	2)
		min	44516.275	F	Häußler, K.	0.022	GCVS	2)
		min	45193.44	F	Häußler, K.	-0.03	GCVS	2)
		min	45280.239	F	Häußler, K.	0.001	GCVS	2)
		min	46595.526	F	Häußler, K.	0.006	GCVS	2)
		min	46612.468	F	Häußler, K.	0.018	GCVS	2)
		min	46613.484	F	Häußler, K.	-0.024	GCVS	2)
		min	46683.354	F	Häußler, K.	0.008	GCVS	2)
		min	46976.458	F	Häußler, K.	0.004	GCVS	2)
		min	47029.367	F	Häußler, K.	0.005	GCVS	2)
		min	47030.401	F	Häußler, K.	-0.019	GCVS	2)
		min	47411.335	F	Häußler, K.	-0.019	GCVS	2)
		min	48068.445	F	Häußler, K.	-0.021	GCVS	2)
V1135	Aql	min	42631.378	F	Häußler, K.	0.115	GCVS	2)
		min	45141.442	F	Häußler, K.	0.102	GCVS	2)
		min	45163.437	F	Häußler, K.	0.079	GCVS	2)
		min	46289.454	F	Häußler, K.	0.021	GCVS	2)
		min	46327.301	F	Häußler, K.	0.123	GCVS	2)
		min	46613.484	F	Häußler, K.	0.069	GCVS	2)
V1138	Aql	min	47862.205	F	Häußler, K.	0.042	GCVS	2)
		min	40781.503	F	Häußler, K.	-0.009	GCVS	2)
		min	45056.639	F	Häußler, K.	0.007	GCVS	2)
		min	45163.437	F	Häußler, K.	-0.073	GCVS	2)
BM	Cas	min	47470.24	F	Häußler, K.	-0.05	GCVS	2)
		min	47862.205	F	Häußler, K.	0.025	GCVS	2)
BM	Cas	min	55758.500	vis	Neumann, J.	-0.960	GCVS	10
		min	56550.500	vis	Neumann, J.	1.920	GCVS	10
AR	Lac	min	56481.481	vis	Rätz, K.	-0.054	GCVS	15

Table 2 – Cepheiden

Variable	phase	JDhel. UTC	PH	Observer	O-C	Source	n	Remarks
TW	Cap	max	56184.600	vis	Kriebel, W.	9.428	GCVS	48 1)
W	Gem	max	56762.3	vis	Reinhard, P.	-0.3	GCVS	34 1)
zeta	Gem	max	56767.2	vis	Reinhard, P.	-1.2	GCVS	34 1)
GY	Sge	max	56183.700	vis	Kriebel, W.	-5.863	GCVS	64 1)
S	Vul	max	56405.000	vis	Kriebel, W.	2.744	GCVS	51 1)

Table 3 – Mirastars

Variable	phase	JDhel	Mag	Observer	n	PH	Rem	Filter	Error
R	And	max	56684	6.9	Vohla, F.	27			
W	And	max	56609	7.5	Vohla, F.	43			
TU	And	max	56514	7.8	Vohla, F.	20			
HI	Aql	max	56548	12.0	Quester, W.	14	C	4)	V na
X	Aur	max	56645	8.3	Vohla, F.	33			
UV	Aur	min	56663	10.7	Vohla, F.	50			
VX	Aur	max	56362	8.2	Vohla, F.	17			
		max	56682	8.8	Vohla, F.	27			
AZ	Aur	max	56578	8.9	Vohla, F.	40			
		max	56385	7.6	Vohla, F.	35			
R	Boo	max	56624	7.6	Vohla, F.	22			
		max	56409	8.2	Schubert, M.	16			

Table 3 – Mirastars (cont.)

Variable	phase	JDhel	Mag	Observer	n	PH	Rem	Filter	Error	
R	Cam	min	56531	12.8	Schubert, M.	16				
		max	56680	8.6	Schubert, M.	16				
		max	56690	8.7	Vohla, F.	34				
X	Cam	max	56728	8.6	Vohla, F.	29				
WY	Cam	max	56521	10.2	Schubert, M.	31				
R	CVn	max	56411	7.9	Schubert, M.	24				
		max	56417	8.2	Vohla, F.	56				
		max	56740	7.3	Vohla, F.	58				
		max	56741	7.2	Neumann, J.	9				
CE	CMi	max	56685	12.9	Böhme, D.	10	C	7)	-I	9.0
R	Cas	max	56565	6.9	Schubert, M.	18				
		max	56586	6.7	Neumann, J.	6				
U	Cas	max	56538	8.9	Vohla, F.	26				
		max	56808	8.1	Vohla, F.	21				
V	Cas	max	56502	7.3	Vohla, F.	40				
		max	56504	7.0	Rätz, K.	28				
W	Cas	max	56393	9.1	Vohla, F.	68				
V667	Cas	max	56631	9.8	Vohla, F.	38				
S	Cep	min	56575	10.7	Vohla, F.	108				
T	Cep	max	56325	6.0	Neumann, J.	17				
		max	56380	6.4	Rätz, K.	24				
		min	56521	9.7	Neumann, J.	12				
		min	56560	9.5	Vohla, F.	66				
		max	56739	6.0	Sturm, A.	21				
		max	56753	6.05	Sturm, A.	16				
		max	56756	6.2	Vohla, F.	66				
RY	Cep	max	56403	9.2	Schubert, M.	10				
		min	56485	12.2	Schubert, M.	10				
		max	56552	9.3	Schubert, M.	10				
		min	56634	12.6	Schubert, M.	10				
V530	Cep	max	56573	13.57	Rätz, M.	14	C	6)	B	12.0
		max	56575	11.90	Rätz, M.	14	C	6)	V	5.0
		max	56577	10.19	Rätz, M.	14	C	6)	R	6.0
		max	56581	8.32	Rätz, M.	14	C	6)	I	7.0
S	CrB	min	56440	13.1	Vohla, F.	51				
		max	56541	7.6	Vohla, F.	42				
R	Cyg	max	56537	7.3	Vohla, F.	44				
U	Cyg	min	56456	12.3	Vohla, F.	71				
		max	56660	7.9	Vohla, F.	85				
		max	56682	7.2	Neumann, J.	16				
Z	Cyg	max	56725	9.6	Vohla, F.	32				
RT	Cyg	min	56469	11.2	Vohla, F.	53				
		max	56554	6.9	Vohla, F.	58				
		min	56665	12.3	Vohla, F.	44				
		max	56760	8.1	Vohla, F.	41				
BG	Cyg	max	56420	10.2	Vohla, F.	35				
		max	56722	10.2	Vohla, F.	23				
CN	Cyg	max	56718	9.4	Vohla, F.	27				
chi	Cyg	max	56420	3.85	Sturm, A.	26				
		max	56424	3.5	Vohla, F.	75				
EV	Del	max	56588	12.27	Rätz, M.	10	C	6)	B	2.5
		max	56589	11.04	Rätz, M.	10	C	6)	V	4.0
		max	56591	10.02	Rätz, M.	10	C	6)	R	5.0

Table 3 – Mirastars (cont.)

Variable	phase	JDhel	Mag	Observer	n	PH	Rem	Filter	Error	
EV	Del	max	56593	8.65	Rätz, M.	11	C	6)	I	3.0
R	Dra	max	56635	7.7	Vohla, F.	35				
Y	Dra	max	56557	8.8	Vohla, F.	22				
		max	56561	8.6	Schubert, M.	15				
R	Gem	max	56701	7.3	Neumann, J.	15				
		max	56715	7.4	Vohla, F.	45				
ST	Gem	max	56615	9.7	Vohla, F.	23				
ZZ	Gem	max	56749	9.7	Vohla, F.	42				
BR	Gem	max	56697	12.2	Böhme, D.	15	C	7)	-I	8.0
HV	Gem	max	56666	11.35	Böhme, D.	14	C	7)	-I	5.0
IX	Gem	max	56718	12.3	Böhme, D.	14	C	7)	-I	9.0
KL	Gem	max	56714	13.9	Böhme, D.	13	C	7)	-I	11.0
LL	Gem	min	56698	15.9	Böhme, D.	11	C	7)	-I	6.0
S	Her	max	56688	7.9	Vohla, F.	22				
T	Her	max	56494	7.1	Rätz, K.	19				
		max	56497	7.6	Vohla, F.	42				
		max	56658	8.6	Vohla, F.	18				
U	Her	max	56739	7.7	Vohla, F.	41				
W	Her	max	56519	8.3	Vohla, F.	36				
RS	Her	max	56558	8.7	Vohla, F.	25				
		max	56783	8.2	Vohla, F.	39				
RU	Her	max	56595	9.7	Vohla, F.	15				
SS	Her	max	56749	9.5	Vohla, F.	12				
S	Lac	max	56550	8.5	Vohla, F.	29				
		max	56794	7.7	Vohla, F.	16				
R	Leo	max	56335	5.8	Schubert, M.	26				
		max	56636	5.4	Vohla, F.	52				
		max	56643	5.6	Vohla, F.	17				
		max	56644	5.05	Sturm, A.	17				
W	Lyr	max	56508	8.3	Vohla, F.	44				
		max	56708	9.2	Vohla, F.	27				
V562	Mon	max	56671	12.0	Böhme, D.	9	C	7)	-I	12.0
X	Oph	min	56396	8.8	Vohla, F.	64				
		max	56540	7.2	Vohla, F.	63				
		min	56683	8.8	Vohla, F.	64				
Z	Oph	max	56591	7.7	Vohla, F.	30				
U	Ori	max	56746	7.4	Vohla, F.	28				
GN	Ori	min	56665	14.6	Böhme, D.	12	C	7)	-I	6.0
R	Per	max	56720	8.6	Vohla, F.	24				
U	Per	min	56712	11.5	Vohla, F.	44				
Y	Per	min	56553	10.3	Vohla, F.	23				
		max	56627	9.1	Vohla, F.	68				
V	Tau	max	56720	9.4	Vohla, F.	23				
IK	Tau	max	56675	9.9	Böhme, D.	12	C	7)	-I	10.0
R	Tri	max	56660	6.5	Vohla, F.	51				
R	UMa	max	56413	7.8	Rätz, K.	15				
		max	56422	7.7	Schubert, M.	22				
		max	56430	7.7	Vohla, F.	46				
		max	56735	7.3	Vohla, F.	63				
S	UMa	max	56403	7.5	Rätz, K.	17				
		min	56524	12.3	Vohla, F.	49				
		max	56619	8.1	Vohla, F.	62				
		max	56635	7.65	Neumann, J.	11				

Table 3 – Mirastars (cont.)

Variable	phase	JDhel	Mag	Observer	n	PH	Rem	Filter	Error
S	UMa	min	56754	11.8	Vohla, F.	65			
T	UMa	max	56630	8.1	Vohla, F.	50			
		max	56633	7.75	Neumann, J.	9			
RS	UMa	max	56419	9.2	Schubert, M.	13			
		max	56667	8.7	Vohla, F.	32			
		max	56672	8.6	Neumann, J.	9			
S	UMi	max	56625	8.8	Vohla, F.	91			
T	UMi	min	56505	12.4	Vohla, F.	32			
		max	56609	10.7	Vohla, F.	35			
		min	56698	12.0	Vohla, F.	32			
		max	56779	10.7	Vohla, F.	37			
U	UMi	max	56403	8.3	Vohla, F.	58			
		max	56408	8.0	Schubert, M.	18			
		min	56583	11.6	Vohla, F.	58			
		max	56757	8.5	Vohla, F.	77			
R	Vir	max	56799	7.1	Vohla, F.	26			
R	Vul	max	56664	8.4	Vohla, F.	14			
		max	56801	8.4	Vohla, F.	19			
2MASS J05480797+3248586									
	Aur	max	56293	12.0	Böhme, D.	11	C	7)	-l 8.0
		max	56725	12.5	Böhme, D.	12	C	7)	-l 10.0
VSX J061538.2+215007									
	Gem	max	56631	12.9	Böhme, D.	12	C	7)	-l 8.0

Table 4 – Semiregular, Longperiod and RV-Tauri-Stars

Variable	phase	JDhel	Mag	Observer	n	PH	Rem	Filter	Error
VX	And	max	56624	7.7	Neumann, J.	24			
AQ	And	max	56608	7.85	Neumann, J.	19			
T	Ari	max	56681	8.1	Vohla, F.	39			
Z	Aur	max	56709	9.8	Vohla, F.	22			
		min	56755	11.0	Vohla, F.	24			
V	Boo	max	56806	8.2	Vohla, F.	52			
RX	Boo	max	56432	7.7	Neumann, J.	16			
SV	Cas	min	56547	10.2	Vohla, F.	69			
		min	56549	9.6	Neumann, J.	9			
		max	56683	7.0	Vohla, F.	45			
		max	56704	7.2	Neumann, J.	18			
W	Cyg	max	55955	5.8	Winkler, R.	20			
		min	56022	7.0	Winkler, R.	20			
		max	56376	6.4	Vohla, F.	24			
		min	56497	6.4	Winkler, R.	36			
		min	56564	7.2	Vohla, F.	57			
		max	56636	6.2	Vohla, F.	50			
		min	56702	6.9	Vohla, F.	35			
		max	56756	5.4	Vohla, F.	34			
		min	56824	7.0	Vohla, F.	40			
RS	Cyg	max	56471	7.4	Vohla, F.	58			
		max	56595	7.4	Vohla, F.	58			
RS	Cyg	min	56671	10.2	Vohla, F.	65			
RU	Cyg	min	56485	8.6	Vohla, F.	47			
		max	56599	8.0	Vohla, F.	68			
AA	Cyg	max	56518	8.6	Vohla, F.	65			

Table 4 – Semiregular, Longperiod and RV-Tauri-Stars (cont.)

Variable	phase	JDhel	Mag	Observer	n	PH	Rem	Filter	Error		
AA	Cyg	max	56519	8.0	Neumann, J.	11					
		min	56618	10.0	Neumann, J.	11					
		min	56652	10.4	Vohla, F.	53					
AF	Cyg	max	56744	9.0	Vohla, F.	41					
		max	56472	6.7	Vohla, F.	47					
		min	56516	7.9	Vohla, F.	37					
		max	56559	7.1	Vohla, F.	37					
		min	56591	7.9	Vohla, F.	42					
		max	56670	6.6	Vohla, F.	43					
CH	Cyg	max	56781	7.2	Vohla, F.	44					
		U	Del	max	56594	6.4	Neumann, J.	10			
S	Dra	min	56628	6.9	Neumann, J.	10					
		min	56594	9.1	Vohla, F.	127					
SS	Gem	max	56637	8.8	Vohla, F.	28					
		min	56663	9.1	Neumann, J.	10					
		max	56676	8.5	Neumann, J.	10					
		min	56702	9.5	Neumann, J.	10					
		min	56705	9.5	Vohla, F.	30					
		max	56729	8.8	Vohla, F.	35					
NT	Gem	min	56650	11.3	Böhme, D.	11	C	7)	-l 14.0		
PS	Gem	min	56709	7.6	Neumann, J.	13					
eta	Gem	min	56580	3.45	Böhme, D.	9	C	5)	o 5.0		
		max	56652	3.16	Böhme, D.	9	C	5)	o 5.0		
		min	56682	3.25	Böhme, D.	9	C	5)	o 5.0		
		max	56713	3.19	Böhme, D.	9	C	5)	o 5.0		
		min	56455	7.0	Vohla, F.	33					
X	Her	max	56524	6.0	Vohla, F.	11					
		min	56569	6.3	Vohla, F.	11					
		max	56612	6.0	Vohla, F.	11					
		min	56507	9.5	Vohla, F.	21					
AC	Her	min	56507	9.5	Vohla, F.	21					
RT	Hya	max	56756	7.0	Sturm, A.	20					
		U	Mon	max	56628	5.7	Vohla, F.	8			
		min	56650	6.4	Vohla, F.	8					
		min	56697	7.1	Sturm, A.	17					
		max	56714	6.0	Sturm, A.	17					
		Z	Psc	max	56526	7.0	Neumann, J.	8			
		min	56606	7.6	Neumann, J.	8					
R	Sct	max	56695	6.4	Neumann, J.	8					
		min	56162	6.0	Winkler, R.	36					
		min	56461	8.6	Sterzinger, P.	13	E	3)	o 2.0		
		max	56507	5.9	Winkler, R.	25					
		max	56511	5.8	Vohla, F.	53					
		max	56512	5.75	Sterzinger, P.	13	E	3)	o 1.0		
		min	56567	7.7	Vohla, F.	35					
		min	56573	7.9	Sterzinger, P.	13	E	3)	o 2.0		
		max	56611	5.1	Vohla, F.	17					
		max	56733	4.6	Vohla, F.	11					
TU	Tau	min	56773	7.5	Vohla, F.	12					
		min	56656	9.1	Neumann, J.	19					
		Z	UMa	max	56464	6.7	Vohla, F.	46			
		min	56563	8.8	Vohla, F.	46					
		max	56663	6.6	Vohla, F.	58					

Table 4 – Semiregular, Longperiod and RV-Tauri-Stars (cont.)

Variable	phase	JDhel	Mag	Observer	n	PH	Rem	Filter	Error
Z	UMa	min	56749	9.7	Vohla, F.	68			
		max	56853	6.6	Vohla, F.	15			
RY	UMa	max	56299	: 7.1	Vohla, F.	55			
		min	56434	: 7.9	Vohla, F.	55			
		max	56569	: 7.1	Vohla, F.	55			
		min	56704	: 7.9	Vohla, F.	55			

Table 5 – Eruptive and CataclysmicVariables

Variable	phase	JDhel	Mag	Observer	n	PH	Rem	Filter	Error
Z	And	min	56557	10.5	Vohla, F.	145			
SS	Cyg	max	56514	: 8.4	Vohla, F.	9			
		max	56565	: 8.3	Vohla, F.	10			
		max	56604	: >8.7	Vohla, F.	9			
		max	56700	: 8.4	Vohla, F.	8			
		max	56798	: 8.3	Vohla, F.	8			
AX	Per	max	56210	: 10.34	Pagel, M.	83	C	8)	V 10.0

Remarks for Tables 1 to 5

JD	:	uncertain
n	:	number of measurements
PH	C	ccd-photometrie
	E	photoelectric observations
	F	fotogrphic series
	vis) visual observation
	blank)
Rem	1)	normal lightcurve
	2)	estimates on digitalized Sonneberg survey plates
	3)	photometer SSP5, without filter
	4)	ccd-camera ST-7E
	5)	ccd-camera Canon EOS 450D
	6)	ccd-camera Moravian G2-1600
	7)	ccd-camera Meade DSI Pro 3
	8)	ccd-camera Canon EOS 40D
Filter	B-,V-,R-,I	B-, V-, R-, I-filter
	-I	Infrared cut-off filter
	o	without filter
Error		mean error (d)
	na	not applicable

Erratum for BAV Mitteilungen No. 233

VZ Aur 56362 VOH has to be deleted