

BAV Mitteilungen

Beobachtungsergebnisse der
Berliner Arbeitsgemeinschaft für Veränderliche Sterne e.V. (B A V)

(B A V - M I T T E I L U N G E N N R . 5 6)

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In this 23th compilation of BAV results of observations are given from the years 1989 and 1990 for 1035 observed minima and maxima on 404 variables stars including 172 photoelectric results.

Die vorliegenden Ergebnisse wurden überwiegend in den Jahren 1989 und 1990 gewonnen. Insgesamt wurden 1.035 Ergebnisse aus rund 22.500 Einzelschätzungen bzw. -messungen von 32 Beobachtern abgeleitet. Es werden 387 beobachtete Minima an 157 Bedeckungssternen, 165 Maxima von 79 RR-Lyrae- und Delta Cephei Sternen, 228 Ergebnisse von 110 Mirasternen, 84 Ergebnisse von 30 Halbgelmäßigen und RV Tauri Sternen, sowie 84 Ergebnisse von 28 Eruptiven mitgeteilt.

B E O B A C H T E R :

AG F. Agerer	Zweikirchen	MX H. Marx	Korntal
AW D. Altweier	Leverkusen	MZ G. Maintz	Bonn
BR W. Braune	Berlin	PI J. Pietz	Erfstadt
DM M. Dahm	Bremen	PS A. Paschke	Rueti <CH>
FR P. Frank	Velden	QU W. Qvester	Esslingen
GE R. Geckeler	Saulgau	RZ W. Renz	Grafenhausen
GI D. Girrbach	Böblingen	SC E. Schröder	Bremen
HH B. Hassforther	Heidelberg	SD J. Schmidt	Mainz
HO P. Hoffmann	Hannover	SF K. Seifert	Hamburg
KB W. Kriebel	Moosburg	SM A. Sturm	Köln
KI W. Kleikamp	Marl	SO R. Schertler	St. Peter <AU>
KR G. Krisch	Bockenem	SU H. Schubert	Grosshansdorf
KT S. Korth	Monheim	SV H. Strüver	Duisburg
MK G. Marekfia	Saarbrücken	TH A. Thomas	Mainz
MO M. Moeller	Timmendf. Str.	WU E. Wunder	Rückersdorf
MS W. Moschner	Lennestadt	WZ W. Wenzel	Berlin

Neben Privatinstrumenten wurden Instrumente von Volkssternwarten sowie der BAV eingesetzt. Alle angegebenen Zeiten sind heliozentrisch korrigiert. Die 172 lichtelektrischen Beobachtungen wurden von 3 Beobachtern gewonnen, die Geräte und Filter hierfür sind in den jeweiligen Bemerkungen angegeben. Die Berechnungen für die

Berliner Arbeitsgemeinschaft für veränderliche Sterne e. V. (BAV)
Zentrale der deutschen Veränderlichenbeobachter

Kurzperiodischen wurden von Joachim Hübscher vorgenommen. Der BAV liegen die Lichtkurven mit Einzelschätzungen und der Auswertung vor. Die lichtelektrischen Messungen liegen in der Geschäftsstelle zur Einsicht vor.

Für die Unterstützung unserer Arbeit danken wir besonders der AKADEMIE DER WISSENSCHAFTEN DER UdSSR, dem OBSERVATORIUM ASTRONOMICZNE KRAKOW der Uniwersyteyt Jagiellonski, sowie der IAU - Kommission 27.

2 1 . B E D E C K U N G S V E R A E N D E R L I C H E

Stern		Min	JD 24...	Ph	Obs	B-R 1	GCVS	B-R 2	Bem.
RT	And	47778.338			BR	-0.015	85		
XZ	And	47778.432			BR	+0.014	85		
AA	And	47851.4297	:	LB	AG	-0.0698	85		2)
		47851.4297	:	LV	AG	-0.0698	85		2)
AB	And	47735.429			SO	+0.000	85		
		47778.408	/		BR	-0.001	85		
BX	And	47904.360	:		PI	-0.018	85		
CN	And	47777.3424		LV	AG	-0.0313	85		2)
		47777.3427		LB	AG	-0.0310	85		2)
DS	And	47775.491		F	MS	KI	-0.005	85	7)
KN	And	47862.523		F	MS	KI		+0.066	27) 7)
ST	Aqr	47862.2703		LB	AW		-0.0094	85	1)
		47862.2703		LV	AW		-0.0094	85	1)
DD	Aqr	47805.4915		LB	AG		+0.0668	85	2)
		47805.4921		LV	AG		+0.0675	85	2)
OO	Aql	47753.413	/		SF		+0.007	85	
		47803.3205		LV	AW		-0.0040	85	1)
		47803.3205		LB	AW		-0.0040	85	1)
		47803.323			SF		-0.002	85	
V346	Aql	47805.339			SO		-0.003	85	
SS	Ari	47791.4822	/	LB	AG		-0.0817	85	2)
		47791.4827	/	LV	AG		-0.0812	85	2)
		47847.3116		LB	AW		-0.0764	85	1)
		47847.3116		LV	AW		-0.0764	85	1)
		47848.3220	/	LB	AW		-0.0810	85	1)
		47848.3220	/	LV	AW		-0.0810	85	1)
RZ	Aur	47824.499		F	FR		-0.032	85	7)
SX	Aur	47967.349			PI		-0.003	85	
AH	Aur	47787.5792		LV	AG		+0.0894	85	+0.0189 18) 2)
		47787.5793		LB	AG		+0.0896	85	+0.0190 18) 2)
		47804.6245	/	LV	AG		+0.0827	85	+0.0156 18) 2)
		47804.6247	/	LB	AG		+0.0828	85	+0.0158 18) 2)
		47849.5863	/	LB	AG		+0.0665	85	+0.0086 18) 2)
		47849.5873	/	LV	AG		+0.0676	85	+0.0097 18) 2)
		47862.4347	/	LV	AG		+0.0642	85	+0.0089 18) 2)
		47862.4365	/	LB	AG		+0.0659	85	+0.0106 18) 2)
		47862.6793		LV	AG		+0.0616	85	+0.0063 18) 2)
		47862.6800		LB	AG		+0.0624	85	+0.0071 18) 2)

Stern	Min	JD 24...	Ph	Obs	B-R 1	GCVS	B-R 2	Bem.
AH	Aur	47885.6575 /	LB	AG	+0.0566	85	+0.0060 18)	2)
		47885.6602 /	LV	AG	+0.0593	85	+0.0087 18)	2)
AP	Aur	47803.5499	LB	AG	-0.1363	85	+0.0301 18)	2)
		47803.5534	LV	AG	-0.1327	85	+0.0337 18)	2)
		47861.3518	LV	AG	+0.1651	85	-0.2422 18)	2)
		47861.3521	LB	AG	+0.1654	85	-0.2419 18)	2)
		47861.6349	LB	AG	-0.1212	85	+0.0408 18)	2)
		47861.6350	LV	AG	-0.1211	85	+0.0409 18)	2)
		47947.3261	LV	AG	+0.1732	85	-0.2406 18)	2)
EP	Aur	47947.3265	LB	AG	+0.1735	85	-0.2402 18)	2)
		47848.668	F	MS KI	+0.000	85		7)
HL	Aur	47947.362	F	MS KI	-0.005	85		7)
		47860.435	F	MS KI	-0.005	85		7)
IM	Aur	47946.340	F	MS KI	-0.005	85		7)
		47904.4692	LB	AG	-0.0588	85		2)
IY	Aur	47904.4696	LV	AG	-0.0584	85		2)
		47848.3301	LV	AG	-0.0654	85		2)
VW	Boo	47848.3309	LB	AG	-0.0647	85		2)
		47271.442 /	F	MS KI	+0.018	85	-0.001 13)	7)
AK	Cam	47947.515 /	F	MS KI	-0.002	85	-0.010 13)	7)
		47819.4292	LV	AG	-0.1307	85		2)
AL	Cam	47819.4303	LB	AG	-0.1296	85		2)
		47804.3072	LV	AG	-0.0244	85		2)
AY	Cam	47804.3074	LB	AG	-0.0242	85		2)
		47817.4141	LV	AG	+0.0061	85		2)
AZ	Cam	47817.4155	LB	AG	+0.0076	85		2)
		47813.6079	LV	AG	+0.0085	85		2)
WY	Cnc	47813.6098	LB	AG	+0.0104	85		2)
		47943.409		PI	-0.002	85		
VZ	CVn	47972.4263	LV	AG	+0.0000	85		2)
		47972.4270	LB	AG	+0.0007	85		2)
R	CMa	45743.3754	LV	AW	+0.0106	85		1)
XZ	CMi	47945.413		KB	+0.006	85		
YY	CMi	47969.330		SF	+0.015	85		
AC	CMi	47945.318	F	MS KI	+0.049	85		7)
AM	CMi	47913.4608	LB	AG	+0.0728	85		2)
		47913.4640	LV	AG	+0.0760	85		2)
		47962.3804 :	LB	AG	+0.0715	85		2)
		47962.3853 :	LV	AG	+0.0764	85		2)
RZ	Cas	45013.487		AW	-0.009	85		
		45055.329		AW	+0.000	85		
		45673.2731	LV	AW	+0.0007	85		1)
		47749.417		SF	+0.001	85		
		47828.316		SO	+0.013	85		
		47859.390		GI	+0.011	85		
		47920.346		MZ	+0.009	85		
		47963.369		MZ	+0.004	85		
TV	Cas	47814.365		SF	-0.007	85		
		48017.370		SF	-0.014	85		
TW	Cas	47777.378		SO	-0.010	85		
AL	Cas	47727.453	F	MS KI	-0.007	85		7)
		47928.5565	LV	AG	-0.0172	85		2)
DN	Cas	47928.5586	LB	AG	-0.0150	85		2)
		47790.387	F	MS KI	-0.083	85		7)
EG	Cas	47804.448	F	MS KI	-0.086	85		7)
		47843.590 :	F	MS KI	-0.076	85		7)
		47848.475	F	MS KI	-0.083	85		7)

Stern	Min	JD 24...	Ph	Obs	B-R 1	GCVS	B-R 2	Bem.
EP	Cas	47790.364	F	MS KI	-0.029	85		7)
		47805.419 /	F	FR	-0.022	85		7)
		47847.305	F	MS KI	-0.028	85		7)
KR	Cas	47754.5511	LV	AG	-0.1165	85		2)
		47754.5559	LB	AG	-0.1116	85		2)
		47803.613	F	MS KI	-0.098	85		7)
MM	Cas	47803.510	F	MS KI	-0.553	85	+0.565 12)	7)
		47843.473	F	MS KI	+0.023	85	-0.018 12)	7)
		47850.434	F	MS KI	+0.033	85	-0.007 12)	7)
		47864.334	F	MS KI	+0.031	85	-0.009 12)	7)
OX	Cas	47871.4143	LB	AG	+0.0419	85		2)
		47871.4177	LV	AG	+0.0454	85		2)
V384	Cas	47792.319	F	MS KI	-0.073	85		7)
		47844.413	F	MS KI	-0.067	85		7)
V389	Cas	47804.5140	LB	AG	+0.0527	85		2)
		47804.5159	LV	AG	+0.0546	85		2)
		47864.395	F	MS KI	+0.059	85		7)
V520	Cas	47770.445	F	FR	+0.069	85		7)
		47792.484	F	MS KI	+0.077	85		7)
V541	Cas	47819.3062 /	LV	AG	+0.2102	85		2)
		47819.3075 /	LB	AG	+0.2115	85		2)
VZ	Cep	47728.477	F	MS KI	+0.000	85		7)
		47863.3802	LB	AG	+0.0000	85		2)
		47863.3809	LV	AG	+0.0007	85		2)
XX	Cep	47754.454		SO	+0.006	85		
		47759.368		SO	-0.009	85		
ZZ	Cep	47804.345		SF	-0.010	85		
		48016.378		SF	-0.015	85		
		47564.500	F	FR	-0.018	85		7)
CW	Cep	47725.469	F	FR			+0.001 28)	7)
		47714.433	F	MS KI	+0.182	85		7)
EO	Cep	47758.422	F	MS KI	+0.162	85		7)
		47846.443	F	MS KI	+0.168	85		7)
		47848.263	F	MS KI	+0.154	85		7)
		47689.447 /	F	MS KI	-0.061	85	-0.004 14)	7)
		47787.330 /	F	MS KI	-0.065	85	-0.001 14)	7)
NN	Cep	47757.445		SF	-0.022	85		
		47758.478 /		SF	-0.018	85		
		47788.328		SF	-0.013	85		
		47822.289 /		SF	-0.014	85		
		47927.270 /		SF	-0.007	85		
		47928.297		SF	-0.009	85		
VV	Cet	47822.4909	LB	AG	+0.0660	85		2)
		47822.4918	LV	AG	+0.0669	85		2)
SS	Com	47909.588	F	MS KI	+0.017	85	-0.003 14)	7)
		45945.479	F	FR	+0.312	85		7)
CV	Cyg	47770.4707	LB	AG	-0.1061	85		2)
		47770.4775	LV	AG	-0.0993	85		2)
DK	Cyg	47758.4345	LB	AG	+0.0236	85	+0.0076 17)	2)
		47758.4352	LV	AG	+0.0242	85	+0.0083 17)	2)
		47790.4436	LV	AG	+0.0257	85	+0.0097 17)	2)
		47790.4438	LB	AG	+0.0259	85	+0.0099 17)	2)
GG	Cyg	47671.415	F	FR	+0.056	85		7)
		47824.00		DM	-0.18	85		red
V367	Cyg	47824.00		SO	-0.18	85		red
		47833.30 /		SO	-0.18	85		red
		47687.492	F	FR	-0.005	85		7)
V370	Cyg							

Stern	Min	JD 24...	Ph	Obs	B-R 1	GCVS	B-R 2	Bem.
V388	Cyg	47803.3702	LB	AG	-0.0105	85	-0.0348 12)	2)
		47803.3705	LV	AG	-0.0102	85	-0.0345 12)	2)
V466	Cyg	47672.561 /	F	FR	+0.006	85		7)
		47759.530	F	MS KI	+0.002	85		7)
V628	Cyg	47671.507	F	MS KI	-0.014	85		7)
		47744.489 :	F	MS KI	-0.017	85		7)
V680	Cyg	40069.474	F	FR	+0.033	85	+0.021 12)	7)
		47777.5463	LV	AG	+0.0432	85	+0.0152 12)	2)
		47777.5464	LB	AG	+0.0433	85	+0.0153 12)	2)
V753	Cyg	47671.555	F	MS KI	+0.043	85		7)
		47713.454	F	MS KI	+0.038	85		7)
		47744.408	F	MS KI	+0.040	85		7)
		47753.453	F	MS KI	+0.037	85		7)
		47754.404 :	F	MS KI	+0.036	85		7)
		47775.360	F	MS KI	+0.039	85		7)
		47991.552	F	MS KI	+0.043	85		7)
V822	Cyg	47669.414	F	MS KI	-0.057	85		7)
V877	Cyg	47697.482	F	MS KI	+0.037	85		7)
V909	Cyg	47759.4882	LB	AG	+1.3747	85	-0.0269 12)	2)
		47759.4889	LV	AG	+1.3754	85	-0.0262 12)	2)
V939	Cyg	47748.398	F	MS KI	-0.066	85		7)
V961	Cyg	47668.537	F	MS KI	-0.049	85		7)
		47719.477	F	MS KI	-0.054	85		7)
V963	Cyg	47690.460	F	MS KI	-0.003	85		7)
		47697.436	F	MS KI	+0.001	85		7)
		47759.511	F	MS KI	+0.013	85		7)
V974	Cyg	47686.463	F	FR	-0.095	85		7)
		47763.363	F	FR	-0.102	85		7)
V1004	Cyg	47671.456	F	FR	+0.262	85		7)
		47672.497	F	FR	-0.067	85		7)
		47753.406	F	MS KI	-0.071	85		7)
		47777.408	F	MS KI	-0.068	85		7)
		47788.379	F	MS KI	-0.069	85		7)
		47843.236 :	F	MS KI	-0.068	85		7)
V1018	Cyg	47763.570	F	FR	-0.059	85		7)
V1034	Cyg	47812.3661	LB	AG	-0.0017	85		2)
		47812.3662	LV	AG	-0.0015	85		2)
V1073	Cyg	47822.3117	LB	AG	-0.0344	85		2)
		47822.3191	LV	AG	-0.0270	85		2)
		47840.3834	LB	AG	-0.0374	85		2)
		47840.3840	LV	AG	-0.0369	85		2)
TZ	Dra	47763.440		SO	-0.008	85		
		48041.4404	LB	AG	-0.0049	85		2)
		48041.4404	LV	AG	-0.0049	85		2)
AI	Dra	47860.308		MZ	-0.001	85		
AX	Dra	47729.4883	LV	AG	-0.0441	85	-0.0035 12)	2)
		47729.4897	LB	AG	-0.0427	85	-0.0021 12)	2)
		47805.6215	LB	AG	-0.0449	85	-0.0042 12)	2)
		47805.6217	LV	AG	-0.0447	85	-0.0040 12)	2)
BH	Dra	47770.334		SO	+0.014	85		
BU	Dra	47727.5046	LV	AG	+0.0989	85		2)
		47727.5060	LB	AG	+0.1003	85		2)
CV	Dra	47728.4944	LB	AG			-0.0159 29)	2)
		47728.4944	LV	AG			-0.0159 29)	2)
		47958.5499	LV	AG			+0.2845 29)	2)
		47958.5522	LB	AG			+0.2868 29)	2)
		47970.5906	LB	AG			-0.0272 29)	2)

Stern		Min JD 24...	Ph	Obs	B-R 1	GCVS	B-R 2	Bem.
CV	Dra	47970.5908	LV	AG			-0.0271 29)	2)
SX	Gem	47969.370	F	FR	-0.053	85		7)
YY	Gem	47592.368	/	PI	-0.010	85		
AL	Gem	47827.604	F	MS KI	+0.021	85		7)
CW	Gem	47804.610	F	MS KI	+0.196	85		7)
		47863.333	F	MS KI	+0.184	85		7)
		47925.418	F	MS KI	+0.178	85		7)
		47967.378	F	MS KI	+0.184	85		7)
CX	Gem	47825.474	F	FR	-0.001	85		7)
		47970.443	F	FR	+0.000	85		7)
RX	Her	47773.360	/	SF	-0.007	85		
TX	Her	47757.370		SF	+0.003	85		
		47759.431		SF	+0.004	85		
		47760.452		SF	+1.025	85		
		47790.335		SF	+0.011	85		
UX	Her	47729.496		KB	+0.010	85		
AK	Her	47674.477	/	SF	+0.012	85		
		47694.490		SF	+0.002	85		
		47701.454	/	SF	+0.010	85		
V342	Her	47968.552	F	MS KI	-0.021	85		7)
V450	Her	48014.4860	LB	AG	-0.2558	85		2)
		48014.4876	LV	AG	-0.2542	85		2)
V728	Her	47963.5740	LV	AG	+0.0914	85	-0.0009 22)	2)
		47963.5759	LB	AG	+0.0933	85	+0.0010 22)	2)
AV	Hya	47943.402	F	MS KI	-0.026	85		7)
SW	Lac	47726.455	/	SF	-0.002	85		
		47727.403	/	F	FR	-0.016	85	7)
		47735.433	/	SF	-0.004	85		
		47735.440	/	SO	+0.002	85		
		47739.436		SF	-0.010	85		
		47745.536		SF	-0.004	85		
		47748.420		SF	-0.007	85		
		47752.430	/	SF	-0.005	85		
		47760.441	/	F	FR	-0.012	85	7)
		47760.603	/	F	FR	-0.011	85	7)
		47777.443	/	SF	-0.009	85		
		47778.409	/	BR	-0.004	85		
		47815.292	/	SF	-0.005	85		
		47818.336		SF	-0.008	85		
		47818.343		GI	-0.001	85		
VY	Lac	47854.4484	LV	AG	+0.3952	85		2)
		47854.4489	LB	AG	+0.3956	85		2)
AW	Lac	47778.4697	LB	AG	+0.0979	85	-0.0015 17)	2)
		47778.4700	LV	AG	+0.0982	85	-0.0012 17)	2)
		47849.3272	LV	AG	+0.0987	85	-0.0010 17)	2)
		47849.3275	LB	AG	+0.0990	85	-0.0007 17)	2)
CM	Lac	47760.537		KB	+0.000	85		
		47805.462		SF	-0.006	85		
OO	Lac	47734.474		SO	+0.079	85		
V364	Lac	47760.451	/	F	FR	+0.164	85	7)
UV	Leo	47651.428		GI	+0.000	85		
		47982.383	/	WZ	+0.009	85		
UX	Leo	47945.4794	LV	AG	-0.2136	85		2)
		47945.4831	LB	AG	-0.2099	85		2)
		47947.4972	LB	AG	-0.2101	85		2)
		47947.4976	LV	AG	-0.2097	85		2)
VZ	Leo	47860.553	F	MS KI	-0.033	85		7)

Stern	Min	JD 24...	Ph	Obs	B-R 1	GCVS	B-R 2	Bem.
XY	Leo	47207.361	F	MS KI	-0.130	85		7)
		47207.493	F	MS KI	+0.003	85		7)
		47212.333	F	MS KI	+0.013	85		7)
		47238.467	F	MS KI	+0.010	85		7)
		47854.6878	LV	AG	+0.0249	85		2)
		47854.6878	LB	AG	+0.0249	85		2)
		47928.415		PI	-0.113	85		
		47943.333		PI	+0.032	85		
		47966.340		PI	+0.027	85		
		47207.489		F MS KI	+0.004	85		7)
XZ	Leo	47212.362	F	MS KI	+0.000	85		7)
		47238.466	F	MS KI	+0.010	85		7)
AM	Leo	48011.434		MZ	-0.009	85		
		48011.438		GI	-0.005	85		
AP	Leo	47943.572	F	MS KI	-0.006	85		7)
		48012.419	: LB	AG	-0.016	85		2)
		48012.419	: LV	AG	-0.016	85		2)
SW	Lyn	47963.4408	LV	AG	+0.0102	85		2)
		47963.4410	LB	AG	+0.0105	85		2)
UV	Lyn	47849.4776	LV	AG	+0.0086	85		2)
		47849.4786	LB	AG	+0.0095	85		2)
		47929.5706	LV	AG	+0.0102	85		2)
		47929.5706	LB	AG	+0.0103	85		2)
V406 beta	Lyr	47969.609	F	MS KI	-0.004	85		7)
		47696.70		DM	-3.01	85		red
DD	Mon	47864.576	F	MS KI	+0.074	85		7)
		47909.450	F	MS KI	+0.075	85		7)
		47929.331	F	MS KI	+0.076	85		7)
HI	Mon	47929.3108	LV	AG	+0.7833	85		2)
		47929.3153	LB	AG	-0.7867	85		2)
V384	Mon	47927.325	: F	MS KI	+0.073	87		7)
V396	Mon	47946.298	F	FR	-0.004	87		7)
		47947.288	/ F	FR	-0.005	87		7)
		47947.484	F	FR	-0.008	87		7)
V453	Mon	47928.281	F	MS KI	-0.061	87		7)
V464	Mon	47849.523	F	MS KI	-0.093	85		7)
		47928.414	F	MS KI	-0.051	85		7)
V532	Mon	47886.611	F	MS KI	+0.131	85		7)
U	Oph	48018.4950	/ LB	AG	+0.0077	85		2)
		48018.4965	/ LV	AG	+0.0092	85		2)
WZ	Oph	47724.471		PI	-2.086	85		
V566	Oph	47695.432		SF	-0.002	85		
		47729.436		SF	+0.002	85		
		47745.416		SF	+0.006	85		
		47662.534	/	PI	+0.057	85		
V839	Oph	47670.492		PI	+0.040	85		
		47724.495		PI	+0.055	85		
		47939.356		MZ	+0.004	85		
FT U	Ori Peg	47771.396	/	SF	-0.018	87		
		47849.3285	/ LV	AW	-0.0404	87		1)
		47849.3285	/ LB	AW	-0.0404	87		1)
		47850.267		PI	-0.039	87		
		47853.289		SF	-0.015	87		
		47855.347	/	SF	-0.019	87		
		47856.268		PI	-0.035	87		
		47862.266		PI	-0.033	87		
		47886.254		SF	-0.031	87		

Stern		Min	JD 24...	Ph	Obs	B-R 1	GCVS	B-R 2	Bem.
U	Peg	47904.237			PI	-0.037	87		
BG	Peg	47818.339		F	MS KI	-0.815	87	+0.015 30)	7)
		47861.283		F	MS KI	-0.830	87	+0.007 30)	7)
BX	Peg	47727.408	/	F	MS KI	-0.010	87		7)
		47727.548		F	MS KI	-0.010	87		7)
		47790.358		F	FR	-0.013	87		7)
		47822.327		F	MS KI	-0.013	87		7)
		47822.3275		LB	AG	-0.0122	87		2)
		47822.3278		LV	AG	-0.0120	87		2)
		47847.2843		LB	AG	-0.0129	87		2)
		47847.2844		LV	AG	-0.0128	87		2)
GH	Peg	47863.2808		LB	AW	+0.0056	87		1)
		47863.2822		LV	AW	+0.0070	87		1)
GP	Peg	47752.5089		LV	AG	-0.0198	87		2)
		47752.5092		LB	AG	-0.0196	87		2)
		47790.549		F	MS KI	-0.028	87		7)
IQ	Per	47805.405			SO	+0.022	87		
IT	Per	47778.454		F	MS KI	+0.003	87		7)
		47847.4714		LV	AG	+0.0021	87		2)
		47847.4719		LB	AG	+0.0026	87		2)
IU	Per	47469.459		F	MS KI	-0.007	87		7)
		47847.4180		LB	AG	+0.0036	87		2)
		47847.4188		LV	AG	+0.0043	87		2)
		47847.421		F	MS KI	+0.007	87		7)
		47860.270		F	MS KI	+0.000	87		7)
IZ	Per	47778.454			SF	-0.033	87		
		47968.369	/		SF	-0.034	87		
V449	Per	47847.462		F	MS KI	+0.026	87		7)
V450	Per	47847.646		F	MS KI	+0.025	87		7)
beta	Per	45647.2538		LV	AW	+0.0057	87		1)
		47046.433			DM	-0.060	87		
		47849.342			SU	+0.004	87		
SU	Psc	47817.378		F	MS KI	-0.228	87		7)
U	Sge	47755.436			KB	-0.006	87		
CW	Sge	47803.407		F	FR	-0.139	87		7)
		47804.395		F	FR	+0.189	87		7)
WY	Tau	47822.412	/	F	FR	+0.029	87		7)
CD	Tau	47555.325			MZ	+0.001	87		
CF	Tau	47864.4441		LV	AG	-0.0748	87	-0.0173 17)	2)
		47864.4464		LB	AG	-0.0725	87	-0.0151 17)	2)
CT	Tau	47822.605	/	F	FR	-0.014	87		7)
EQ	Tau	47849.283		F	MS KI	-0.007	87		7)
		47880.3453		LV	AG	-0.0079	87		2)
		47880.3459		LB	AG	-0.0073	87		2)
HU	Tau	47888.386			RZ	+0.005	87		
V781	Tau	47525.4715		LV	AW	-0.0099	87		1)
		47525.4722		LB	AW	-0.0092	87		1)
		47554.2752		LV	AW	+0.1662	87		1)
		47554.2752		LB	AW	+0.1662	87		1)
		47822.434		F	FR	-0.015	87		7)
		47822.604	/	F	FR	-0.018	87		7)
X	Tri	47805.349			BR	-0.011	87		
TX	UMa	47966.496	:		PI	+0.071	87		
W	UMi	47849.520			SF	-0.043	87		
HT	Vir	48013.3998		LV	QU				5)
RR	Vul	47788.4240		LV	AG	-0.0305	87		2)
		47788.4245		LB	AG	-0.0300	87		2)

Stern		Max	JD 24...	Ph	Obs	B-R 1	GCVS	B-R 2	Bem.
SW	And	47804.354			PI	-0.082	85	+0.021	S90
		47816.293			PI	-0.084	85	+0.019	S90
		47823.372			KB	-0.081	85	+0.022	S90
		47827.343			HO	-0.091	85	+0.012	S90
		47827.345			PI	-0.089	85	+0.014	S90
		47862.289			PI	-0.085	85	+0.019	S90
		47904.265	:		PI	-0.126	85	-0.020	S90
X	Ari	47825.493			KB	+0.101	85	+0.012	25)
TZ	Aur	47991.381		F	MS	+0.004	85		7)
RS	Boo	47612.463			PI	+0.011	85	+0.018	20)
		47672.450			PI	+0.002	85	+0.009	20)
		48012.450			KB	+0.019	85	+0.026	20)
		48014.364	:		MZ	+0.046	85	+0.053	20)
		48015.466			KB	+0.017	85	+0.024	20)
		48032.444			KB	+0.014	85	+0.021	20)
VZ	Cnc	47928.4400		LV	QU	+0.0112	85	+0.0168	S90
		47939.310			SF	+0.001	85	+0.006	S90
		47941.275			SF	+0.004	85	+0.010	S90
		47943.4191		LV	QU	+0.0078	85	+0.0134	S90
		47944.303			SF	+0.000	85	+0.006	S90
		47946.447			SF	+0.003	85	+0.009	S90
		47965.347			SF	-0.003	85	+0.003	S90
		47967.312			SF	+0.000	85	+0.006	S90
		47968.3837		LV	QU	+0.0015	85	+0.0071	S90
		47973.381			SF	+0.004	85	+0.010	S90
		47974.4461		LV	QU	+0.0004	85	+0.0052	S90
		47975.3290		LV	QU	-0.0094	85	-0.0037	S90
		47983.367			SF	+0.002	85	+0.007	S90
		47990.322			SF	+0.001	85	+0.006	S90
W	CVn	47654.493			TH	-0.089	85	+0.025	S90
		47995.486			KB	-0.083	85	+0.033	S90
		48011.490			KB	-0.080	85	+0.036	S90
AA	CMi	47913.422			PS	+0.021	85		
RR	Cet	47824.483			KB	+0.000	85		
		47833.335			KB	+0.003	85		
V	Com	47968.376		F	MS	+0.010	85		7)
SZ	CrB	47967.610		F	MS	+0.174	85		7)
XZ	Cyg	47777.337			WU	+0.036	85	+0.003	20)
SU	Dra	47604.371			PI	+0.010	85		
		47983.445			KB	+0.003	85		
SW	Dra	47944.414			PI	+0.021	85		
XZ	Dra	47612.494	:		PI	-0.013	85	+0.019	S90
		47910.277			MZ	-0.040	85	-0.007	S90
VX	Her	47722.436			KB	+0.220	85	+0.004	26)
AR	Her	47666.519		F	MS	-0.188	85		7)
		47667.488		F	MS	-0.160	85		7)
		47981.423		F	MS	-0.203	85		7)
RR	Leo	46910.483			SD	+0.006	85	+0.011	19)
		47966.369			PI	+0.007	85	+0.013	19)
		47970.441			KB	+0.006	85	+0.013	19)
		47989.434			MZ	-0.001	85	+0.006	19)
ST	Leo	46913.428			SD	-0.007	85		
		46914.378			SD	-0.012	85		
EH	Lib	47987.463		F	MS	+0.013	85		7)
		47987.548		F	MS	+0.010	85		7)
SZ	Lyn	47812.5197		LV	AG	+0.0067	85		2)

Stern		Max	JD 24...	Ph	Obs	B-R 1	GCVS	B-R 2	Bem.
U	Aql	47805.33			SM	+1.13	85		red
SZ	Aql	47766.70			KB	+1.27	85		red
TT	Aql	47772.75			KB	+0.63	85		red
		47815.33			SM	+1.94	85		red
FF	Aql	47817.82			SF	-0.01	85		red
		47835.85			SC	+0.14	85		red
eta	Aql	47065.29			DM	+0.38	85		red
		47381.36			DM	+0.67	85		red
		47797.29			SM	+0.36	85		red
		47804.23			DM	+0.12	85		red
RT	Aur	47200.80			DM	+0.56	85		red
		47562.35			DM	+0.48	85		red
		47588.36			SU	+0.39	85		red
		47909.42			SM	+0.83	85		red
		47946.33			SF	+0.46	85		red
		47957.60			SC	+0.54	85		red
RX	Aur	47921.12			KB	+0.00	85		red
		47945.29	:		SM	+0.92	85		red
SY	Aur	47930.30			KB	-1.18	85		red
BK	Aur	47891.20			KB	+0.21	85		red
RW	Cam	47944.49			KB	+0.48	85		red
RX	Cam	47925.42			SM	+0.20	85		red
RY	CMa	47921.42			SM	+0.67	85		red
RW	Cas	47854.04			KB	-0.95	85		red
SU	Cas	47825.10			SF	-0.07	85		red
		47938.33			SF	+0.10	85		red
TU	Cas	47819.03			SF	+0.08	85		red
		47885.42			SM	+0.15	85		red
FM	Cas	47883.27			KB	-0.14	85		red
CP	Cep	47805.81			KB	+1.95	85		red
delta	Cep	47178.55			DM	+0.14	85		red
		47537.95			DM	+0.00	85		red
		47822.33			SM	-0.04	85		red
X	Cyg	47714.40			GE	+0.45	85		red
		47795.63			DM	-0.25	85		red
		47796.30			SF	+0.42	85		red
		47860.33			SM	-1.09	85		red
SU	Cyg	47808.85			SF	+0.09	85		red
		47832.04			SC	+0.21	85		red
		47847.33			KB	+0.12	85		red
		47847.33			SM	+0.12	85		red
TX	Cyg	47796.15			KB	+0.11	85		red
VX	Cyg	47790.38			KB	+0.19	85		red
DT	Cyg	47703.20	:		GE	-0.12	85		red
		47825.61			SF	-0.17	85		red
W	Gem	47922.65			KB	-0.24	85		red
		47946.33			SM	-0.30	85		red
RZ	Gem	47928.86			KB	-0.23	85		red
AA	Gem	47920.30			KB	+0.56	85		red
zeta	Gem	47196.45			DM	+0.18	85		red
		47562.20			DM	+0.51	85		red
		47967.33			SM	-0.40	85		red
T	Mon	47920.29			SM	+0.90	85		red
		47921.05			KB	+1.66	85		red
Y	Oph	47767.46	:		SM	+2.81	85		red
RS	Ori	47928.42			KB	-0.02	85		red

Stern	Max	JD 24...	Ph	Obs	B-R 1	GCVS	B-R 2	Bem.
GQ	Ori	47925.27		KB	+0.35	85		red
AW	Per	47860.58		KB	+0.04	87		red
		47912.29		SM	+0.04	87		red
S	Sge	47825.33		SM	-0.06	87		red
U	Sgr	47777.42		SM	+0.49	87		red
W	Sgr	47817.25		SM	-0.61	87		red
X	Sgr	47741.42		SM	+0.92	87		red
Y	Sgr	47788.33		SM	-0.22	87		red
YZ	Sgr	47856.21		SM	-1.35	87		red
BB	Sgr	47814.25		SM	-0.03	87		red
V350	Sgr	47790.33		SM	-0.16	85		red
RU	Sct	47764.00		KB	+1.41	87		red
ST	Tau	47930.33		KB	-0.08	87		red
S	Vul	47718.00		HH	+10.67	87		red
T	Vul	47378.00		DM	-0.07	87		red
		47706.40		GE	+0.10	87		red
		47750.56		SF	-0.09	87		red
		47759.57		DM	+0.04	87		red
		47799.42		SM	-0.03	87		red
		47830.28		SV	-0.21	87		red
		47843.78		SU	-0.02	87		red
U	Vul	47792.33		SM	+0.08	87		red
X	Vul	47854.60		KB	+0.24	87		red
SV	Vul	47725.00		HH	+1.86	87		red
		47769.60		KB	+1.45	87		red

B e m e r k u n g e n :

: = unsicher
 red = reduzierte Ergebnisse

Stern	Phase	JD 24..	Magn.	Beob.	Stern	Phase	JD 24..	Magn.	Beob.		
R	And	Min	47544	: 14.8	MX	SS	Cas	Min	47895	13.2	MX
W	And	Max	47867	7.0	KB	VZ	Cas	Min	47488	13.0	MX
SX	And	Max	47516	9.7	MX			Max	47568	9.7	MX
UW	And	Max	47547	10.1	MX	T	Cep	Min	47537	10.3	MX
R	Aqr	Max	47840	6.8	HH			Min	47542	10.5	PI
R	Aql	Max	47691	6.4	HH			Max	47730	6.15	MX
		Min	47835	10.9	MX			Max	47733	5.9	PI
		Max	47968	6.1	HH			Max	47738	5.9	HH
X	Aql	Max	47734	8.1	HH			Max	47743	6.0	MK
		Max	47734	8.25	KR			Max	47745	6.0	KR
RU	Aql	Max	47420	9.7	MX	Y	Cep	Max	47800	10.0	MX
TV	Aql	Max	47459	9.9	MX	o	Cet	Max	47179	3.8	DM
OU	Aql	Max	47817		PS			Max	47508	3.25	DM
R	Ari	Max	47495	: 7.8	PI			Max	47513	3.4	PI
		Max	47875	8.0	DM			Max	47816	2.5	MK
		Max	47877	8.15	KB			Max	47820	3.0	MO
R	Aur	Max	47226	7.0	MX			Max	47821	2.9	KB
U	Aur	Min	47544	14.5	MX	S	CrB	Min	47731	13.2	MX
W	Aur	Max	47540	9.15	MX	V	CrB	Max	47331	8.1	MX
X	Aur	Max	47565	8.5	PI			Max	47674	8.1	MX
		Min	47642	13.2	MX			Max	47692	8.2	KB
		Max	47895	: 9.25	MO			Max	47708	: 8.6	MO
		Max	47897	8.9	PI	X	CrB	Min	47662	13.5	MX
VX	Aur	Max	47536	8.7	MX	R	Cyg	Max	47624	: 8.9	HH
R	Boo	Max	47631	7.1	MX	U	Cyg	Max	47772	: 6.35	DM
		Max	47638	7.3	MO			Max	47781	7.2	KB
		Max	47644	7.3	HH	RT	Cyg	Max	47435	6.9	DM
RR	Boo	Min	47640	14.5	MX			Max	47628	: 6.8	HH
		Max	47719	9.2	KB			Min	47738	12.3	KB
		Max	47723	9.2	PI			Max	47824	7.8	PI
RT	Boo	Min	47701	13.7	MX			Max	47825	7.7	KB
W	Cam	Max	47718	9.7	MX			Max	47827	7.75	HH
X	Cam	Max	47558	8.4	MX			Max	47831	8.0	DM
		Min	47630	13.3	MX	TY	Cyg	Max	47859	9.3	KB
		Max	47695	8.2	MX	AM	Cyg	Max	47400	11.2	MX
		Min	47775	13.1	MX	BG	Cyg	Max	47810	9.55	KB
		Max	47842	7.8	MX	CM	Cyg	Min	47513	14.1	MX
R	CVn	Min	47657	12.1	KB	DD	Cyg	Max	47374	: 10.0	MX
		Min	47669	12.1	MX			Min	47450	13.1	MX
U	CVn	Max	47609	9.7	MX			Max	47529	10.0	MX
		Max	47610	9.1	PI	V369	Cyg	Max	47456	9.7	MX
R	CMi	Min	47252	10.5	MX	chi	Cyg	Max	47485	4.3	DM
S	CMi	Max	47206	6.7	MX			Max	47872	5.85	SU
		Max	47540	7.2	PI			Max	47874	5.9	HH
		Max	47880	: 6.9	HH			Max	47874	: 6.3	MK
R	Cas	Max	47500	6.3	PI	R	Del	Max	47814	7.6	PI
		Max	47937	: 5.2	MZ	S	Del	Max	47435	8.3	MX
T	Cas	Max	47700	7.7	MX			Max	47701	8.6	PI
		Min	47884	12.0	MX	X	Del	Max	47430	9.4	MX
V	Cas	Max	47576	7.5	MX			Max	47724	9.1	PI
		Max	47789	7.9	DM	RX	Del	Max	47469	11.0	MX
		Max	47798	7.8	KB	R	Dra	Min	47645	12.8	MX
		Max	47800	7.9	MX			Max	47732	8.1	MO
		Max	47800	8.2	PI			Max	47735	7.95	SU
W	Cas	Max	47853	: 9.4	PI			Max	47975	6.9	SU
SS	Cas	Max	47810	9.9	MX	W	Dra	Min	47675	14.7	MX

2)

Stern	Phase	JD 24..	Magn.	Beob.	Stern	Phase	JD 24..	Magn.	Beob.		
W	Dra	Max	47784	10.0	MX	RU	Lyn	Max	47626	10.8	MX
X	Dra	Max	47535	10.85	MX	W	Lyr	Max	47665	7.8	PI
		Max	47782	11.2	MX			Max	47668	7.8	HH
RT	Dra	Max	47443	10.0	MX			Min	47775	11.6	KB
V	Gem	Max	47933	8.25	KB			Max	47862	7.5	KR
BP	Gem	Max	47583	10.3	MX			Max	47864	7.9	KB
S	Her	Min	47663	13.7	MX	RW	Lyr	Max	47462	12.9	MX
		Max	47824	6.95	KR	AB	Lyr	Max	47658	10.4	MX
T	Her	Min	47704	12.0	KB	Y	Mon	Max	47536	9.0	MX
		Max	47777	7.0	DM	X	Oph	Max	47726	7.2	HH
		Max	47777	7.8	PI			Max	47732	6.6	MK
		Max	47781	7.75	KB	RU	Oph	Max	47730	8.65	KB
		Max	47782	7.5	MX			Max	47731	8.7	PI
		Max	47783	7.65	KR	AY	Oph	Max	47393	10.9	MX
		Min	47874	12.9	MX	U	Ori	Max	47483	6.5	PI
U	Her	Max	47837	6.8	KR			Max	47836	7.1	HH
W	Her	Min	47707	13.7	MX	T	Peg	Max	47436	9.1	MX
		Max	47813	8.4	PI			Max	47808	9.1	MO
RS	Her	Max	47380	8.2	MX			Max	47811	8.65	KB
		Max	47806	8.0	PI	W	Peg	Min	47484	12.5	MX
RU	Her	Max	47816	7.5	MX	Z	Peg	Max	47418	7.9	MX
RV	Her	Max	47820	9.4	MX			Max	47753	8.3	PI
SS	Her	Min	47638	12.6	MX	RV	Peg	Max	47498	10.0	MX
		Max	47679	9.1	HH	RW	Peg	Max	47773	9.1	PI
		Max	47681	8.9	MX	RZ	Peg	Max	47873	7.6	KR
SY	Her	Min	47420	12.4	MX	SW	Peg	Max	47504	9.6	MX
		Max	47466	7.8	MX	DL	Peg	Max	47475	10.3	MX
		Min	47650	13.2	MX	R	Per	Max	47877	9.4	MX
		Max	47709	9.0	MX			Max	47882	9.4	KB
		Max	47716	8.8	KB	Y	Per	Max	47951	8.1	MO
		Min	47766	11.6	KB	AI	Per	Max	47472	11.7	MX
		Max	47814	8.0	PI	R	Ser	Max	47640	6.6	MO
		Max	47819	8.6	KB			Max	47645	6.1	KB
AS	Her	Max	47447	8.85	MX			Max	47650	6.25	HH
DN	Her	Max	47292	10.0	MX			Max	47662	6.2	PI
DO	Her	Max	47410	10.3	MX	WX	Ser	Max	47684	13.85	MX
		Max	47629	11.4	MX	BC	Ser	Max	47670	10.0	MX
R	Leo	Max	45437	5.45	SU	V	Tau	Max	47875	9.7	MX
		Max	47302	5.9	MK			Max	47886	9.25	KB
		Max	47622	5.5	PI	R	Tri	Max	47899	5.7	MK
		Max	47624	5.5	MO			Max	47899	5.65	SU
		Max	47625	5.65	KB	R	UMa	Max	47695	6.9	GI
		Max	47626	5.8	MK			Max	47710	6.8	PI
		Max	47627	5.5	HH			Max	47998	7.5	MK
		Max	47628	5.8	AW	S	UMa	Min	47713	12.3	MX
		Max	47628	5.55	DM	T	UMa	Max	47674	8.0	MO
		Max	47629	4.95	SU			Max	47682	7.9	MX
		Max	47630	5.4	KR	RS	UMa	Min	47702	14.7	MX
		Max	47942	6.05	HH	RU	UMa	Max	47685	8.2	MX
		Max	47946	6.0	MK	S	UMi	Max	47248	8.2	MX
		Max	47948	5.3	SU			Min	47430	12.6	MX
V	Leo	Max	47639	9.3	KB			Min	47737	12.4	MX
		Max	47649	9.2	MX	T	UMi	Min	47651	14.6	MX
W	Lyn	Max	47607	9.9	MX	U	UMi	Max	47381	8.4	MX
X	Lyn	Max	47607	10.4	MX			Max	47676	8.1	MX
RT	Lyn	Max	47261	9.8	MX	R	Vir	Max	47613	7.3	MX
		Max	47651	9.8	MX			Min	47689	11.7	MX

Stern	Phase	JD 24..	Magn.	Beob.	Stern	Phase	JD 24..	Magn.	Beob.		
U	Vir	Max	47646	8.6	KB	R	Vul	Min	47853	11.3	MX

B e m e r k u n g e n :

- : = unsicher
 - 1) = Stillstand im Anstieg
 - 2) = Welle im Anstieg
- Alle Helligkeiten im Harvard-System (AAVSO charts)

379	0.4	47646	8.6	Y	38	0.4	47853	11.3	MX	1
380	0.5	47646	8.6	X	39	0.5	47853	11.3	MX	2
381	0.6	47646	8.6	W	40	0.6	47853	11.3	MX	3
382	0.7	47646	8.6	V	41	0.7	47853	11.3	MX	4
383	0.8	47646	8.6	U	42	0.8	47853	11.3	MX	5
384	0.9	47646	8.6	T	43	0.9	47853	11.3	MX	6
385	1.0	47646	8.6	S	44	1.0	47853	11.3	MX	7
386	1.1	47646	8.6	R	45	1.1	47853	11.3	MX	8
387	1.2	47646	8.6	Q	46	1.2	47853	11.3	MX	9
388	1.3	47646	8.6	P	47	1.3	47853	11.3	MX	10
389	1.4	47646	8.6	O	48	1.4	47853	11.3	MX	11
390	1.5	47646	8.6	N	49	1.5	47853	11.3	MX	12
391	1.6	47646	8.6	M	50	1.6	47853	11.3	MX	13
392	1.7	47646	8.6	L	51	1.7	47853	11.3	MX	14
393	1.8	47646	8.6	K	52	1.8	47853	11.3	MX	15
394	1.9	47646	8.6	J	53	1.9	47853	11.3	MX	16
395	2.0	47646	8.6	I	54	2.0	47853	11.3	MX	17
396	2.1	47646	8.6	H	55	2.1	47853	11.3	MX	18
397	2.2	47646	8.6	G	56	2.2	47853	11.3	MX	19
398	2.3	47646	8.6	F	57	2.3	47853	11.3	MX	20
399	2.4	47646	8.6	E	58	2.4	47853	11.3	MX	21
400	2.5	47646	8.6	D	59	2.5	47853	11.3	MX	22
401	2.6	47646	8.6	C	60	2.6	47853	11.3	MX	23
402	2.7	47646	8.6	B	61	2.7	47853	11.3	MX	24
403	2.8	47646	8.6	A	62	2.8	47853	11.3	MX	25
404	2.9	47646	8.6	Z	63	2.9	47853	11.3	MX	26
405	3.0	47646	8.6	Y	64	3.0	47853	11.3	MX	27
406	3.1	47646	8.6	X	65	3.1	47853	11.3	MX	28
407	3.2	47646	8.6	W	66	3.2	47853	11.3	MX	29
408	3.3	47646	8.6	V	67	3.3	47853	11.3	MX	30
409	3.4	47646	8.6	U	68	3.4	47853	11.3	MX	31
410	3.5	47646	8.6	T	69	3.5	47853	11.3	MX	32
411	3.6	47646	8.6	S	70	3.6	47853	11.3	MX	33
412	3.7	47646	8.6	R	71	3.7	47853	11.3	MX	34
413	3.8	47646	8.6	Q	72	3.8	47853	11.3	MX	35
414	3.9	47646	8.6	P	73	3.9	47853	11.3	MX	36
415	4.0	47646	8.6	O	74	4.0	47853	11.3	MX	37
416	4.1	47646	8.6	N	75	4.1	47853	11.3	MX	38
417	4.2	47646	8.6	M	76	4.2	47853	11.3	MX	39
418	4.3	47646	8.6	L	77	4.3	47853	11.3	MX	40
419	4.4	47646	8.6	K	78	4.4	47853	11.3	MX	41
420	4.5	47646	8.6	J	79	4.5	47853	11.3	MX	42
421	4.6	47646	8.6	I	80	4.6	47853	11.3	MX	43
422	4.7	47646	8.6	H	81	4.7	47853	11.3	MX	44
423	4.8	47646	8.6	G	82	4.8	47853	11.3	MX	45
424	4.9	47646	8.6	F	83	4.9	47853	11.3	MX	46
425	5.0	47646	8.6	E	84	5.0	47853	11.3	MX	47
426	5.1	47646	8.6	D	85	5.1	47853	11.3	MX	48
427	5.2	47646	8.6	C	86	5.2	47853	11.3	MX	49
428	5.3	47646	8.6	B	87	5.3	47853	11.3	MX	50
429	5.4	47646	8.6	A	88	5.4	47853	11.3	MX	51
430	5.5	47646	8.6	Z	89	5.5	47853	11.3	MX	52
431	5.6	47646	8.6	Y	90	5.6	47853	11.3	MX	53
432	5.7	47646	8.6	X	91	5.7	47853	11.3	MX	54
433	5.8	47646	8.6	W	92	5.8	47853	11.3	MX	55
434	5.9	47646	8.6	V	93	5.9	47853	11.3	MX	56
435	6.0	47646	8.6	U	94	6.0	47853	11.3	MX	57
436	6.1	47646	8.6	T	95	6.1	47853	11.3	MX	58
437	6.2	47646	8.6	S	96	6.2	47853	11.3	MX	59
438	6.3	47646	8.6	R	97	6.3	47853	11.3	MX	60
439	6.4	47646	8.6	Q	98	6.4	47853	11.3	MX	61
440	6.5	47646	8.6	P	99	6.5	47853	11.3	MX	62
441	6.6	47646	8.6	O	100	6.6	47853	11.3	MX	63

Stern	Phase	JD 24..	Magn.	Beob.	Stern	Phase	JD 24..	Magn.	Beob.				
RU	And	Min	47513	12.0	MX	CH	Cyg	Max	47589	7.6	TH		
		Max	47571	10.8				Max	47597	7.75	HH		
ST	And	Max	47807	8.7	HH			Min	47651	8.2	TH		
TV	And	Min	47823	10.4	MX			Min	47653	8.1	HH		
		Max	47853	9.9	MX			Max	47694	7.2	TH		
		Min	47883	10.7	MX			Max	47699	7.3	HH		
		Max	47909	9.7	MX			Min	47747	8.0	HH		
S	Aql	Min	47763	10.85	KB			Max	47786	7.75	HH		
		Max	47823	8.9	KB			Min	47849	8.55	HH		
T	Ari	Min	47881	10.4	MX			Max	47884	8.1	HH		
U	Boo	Max	47703	10.4	MX			Min	47950	9.3	HH		
V	Boo	Max	47655	8.2	HH	EU	Del	Max	47990	8.9	HH		
		Min	47759	9.6	MX			Max	47759	5.6	PI		
		Min	47768	9.3	HH			Min	47784	6.5	PI		
		Max	47837	8.0	HH			Max	47813	5.7	PI		
		Max	47960	8.45	HH			Min	47836	6.2	PI		
T	Cnc	Max	47580	8.35	HH	RY	Dra	Max	47538	6.7	TH		
		Min	47900	8.95	HH			Min	47688	8.0	TH		
rho	Cas	Min	43595	5.6	TH	SS	Gem	Min	47962	9.6	MO		
		Max	46208	4.4	TH			Max	47990	8.5	MO		
		Min	46529	5.4	TH			UU	Her	Min	47829	9.2	SC
		Max	47605	4.55	HH					Max	47859	8.6	SC
		Min	47800	4.9	HH	AC	Her	Min	47303	7.8	HH		
		Min	47534	7.6	TH			Max	47320	7.3	HH		
SS	Cep	Max	47690	7.2	TH			Min	47605	7.75	HH		
		Min	47568	7.9	TH			Min	47643	8.0	HH		
AR	Cep	Max	47651	7.1	TH			Max	47664	7.2	HH		
		Min	47663	8.1	TH			Min	47683	7.75	HH		
		Min	47685	7.0	MO			Max	47703	7.5	HH		
		Min	47690	6.55	HH			Min	47719	8.2	HH		
		Max	47750	5.65	HH			Max	47739	7.2	HH		
		Max	47750	5.8	MO			Min	47755	7.75	HH		
		Min	47816	7.0	MO			Max	47770	7.35	HH		
		Min	47822	6.5	HH			Min	47796	8.3	HH		
		Max	47889	5.4	HH			Max	47811	7.1	HH		
		Min	47946	6.6	HH			Min	47834	7.7	HH		
RS	Cyg	Min	47896	8.5	HH			Max	47855	7.45	HH		
RV	Cyg	Max	47725	7.85	HH			Min	47870	8.25	HH		
		Min	47870	8.45	HH			Max	47944	8.3	HH		
AF	Cyg	Min	47668	7.5	HH			Min	48022	8.35	HH		
		Max	47708	6.4	DM	g	Her	Min	47859	5.5	SC		
		Max	47710	6.35	HH			RY	Leo	Min	47621	11.0	MX
		Max	47712	6.2	PI	U	Mon	Max	47544	6.0	KR		
		Min	47762	7.8	DM			Max	47545	5.8	SM		
		Min	47764	7.5	PI			Min	47573	7.25	KR		
		Min	47766	7.8	HH			Min	47574	7.2	SM		
		Max	47807	6.4	PI			Max	47593	6.0	KR		
		Max	47808	6.35	HH			Max	47595	6.8	SM		
		Max	47815	6.5	DM			Min	47854	7.2	HH		
		Min	47851	7.8	HH			Max	47879	5.75	SM		
		Min	47852	8.0	SO			Max	47880	5.65	HH		
		Min	47854	7.6	PI			Min	47900	6.05	HH		
		Min	47855	7.75	DM			Min	47904	6.2	SM		
		Min	47859	7.8	SC			Max	47918	6.0	SM		
		CH	Cyg	Min	47549	8.6	TH			Max	47920	5.8	HH
Min	47557			8.7	HH			Min	47944	6.9	SC		

Stern	Phase	JD 24..	Magn.	Beob.	Stern	Phase	JD 24..	Magn.	Beob.		
U	Mon	Min	47946	7.1	HH	R	Sct	Max	47759	4.9	KR
		Min	47946	7.5	SM			Max	47760	5.15	HH
		Max	47967	5.8	SM			Min	47796	6.7	KB
X	Mon	Min	47885	8.0	HH			Min	47797	7.15	DM
		Max	47905	7.8	HH			Min	47797	6.9	HH
		Min	47927	8.3	HH			Min	47797	6.9	KR
		Max	47963	7.6	HH			Min	47797	7.2	PI
RV	Mon	Min	47920	7.65	HH			Min	47797	7.25	SM
TX	Per	Max	47788	10.15	KB			Max	47825	5.4	SM
		Min	47830	10.8	KB			Max	47827	5.05	KB
R	Sct	Min	47362	6.1	SM			Max	47829	4.9	KR
		Min	47440	7.1	SM	RV	Tau	Max	47932	9.9	MO
		Min	47672	5.8	HH			Min	47951	10.9	MO
		Min	47675	5.8	PI			Max	47972	9.8	MO
		Max	47694	5.3	HH	Z	UMa	Min	47573	7.95	KR
		Max	47698	5.1	PI			Min	47584	7.95	SU
		Min	47724	6.55	KR			Max	47616	7.2	SU
		Min	47727	6.75	DM			Min	47658	8.45	SU
		Min	47728	6.5	PI			Min	47667	8.6	KR
		Min	47729	6.7	KB			Max	47716	6.7	SU
		Min	47730	6.8	HH	Min	47828	8.5	SO		
		Max	47755	4.9	KB	Min	47830	8.5	SU		
		Max	47756	4.8	SM	Max	47899	6.6	SU		
		Max	47758	4.9	PI						

B e m e r k u n g e n :

: = unsicher

Alle Helligkeiten im Harvard-System (AAVSO charts)

Stern	Phase	JD 24..	Magn.	Beob.	Stern	Phase	JD 24..	Magn.	Beob.					
RX	And	Max	47551	10.6	KT	SS	Cyg	Max	47928	8.35	MO			
		Max	47596	10.3				Max	47982	8.35	MO			
		Max	47768	10.8				CI	Cyg	Min	47797	12.0	KT 1)	
		Max	47791	10.3				EM	Cyg	Max	47728	12.6	KT	
		Max	47791	10.4				MO	Max	47744	12.8	KT		
		Max	47853	11.7				KT	Max	47777	12.4	KT		
AR	And	Max	47862	11.1	KT	U	Gem	Max	47817	12.3	KT			
		Max	47768	11.9				MO	Max	47850	12.3	KT		
		Max	47804	11.7				KT	Max	47999	9.3	MO		
		Max	47805	11.5				MO	AH	Her	Max	47675	12.3	KT
		Max	47858	12.1				MO	Max	47690	12.2	KT		
		Max	47859	12.7				KT	Max	47729	11.5	KT		
DX	And	Max	47860	12.0	KT			Max	47743	11.4	KT			
		Max	47945	11.4				MO	Max	47757	11.7	KT		
RW	Aur	Min	47945	11.4	MO			Max	47773	11.2	MO			
		Max	47973	10.4				MO	Max	47777	11.7	KT		
SS	Aur	Max	47963	10.7	MO			Max	47791	12.4	KT			
TT	Boo	Max	47728	12.8	KT			Min	47671	15.8	KT			
Z	Cam	Max	47749	10.7	MO	AM	Her	Min	47759	15.0	KT			
		Max	47784	11.3				MO	Max	47797	13.2	KT		
		Max	47790	11.2				MO	Min	47858	15.0	KT		
		Max	47803	11.3				MO	Max	47863	13.4	KT		
		Max	47822	11.0				MO	Max	47963	12.1	MO		
		Max	47858	10.3				MO	X	Leo	Max	47859	12.6	KT
SY	Cnc	Max	47980	10.8	MO	AY	Lyr	Max	47690	13.5	KT			
		Max	47980	10.8				MO	LL	Lyr	Max	47729	13.4	KT
		Min	47774	8.3				KR	MV	Lyr	Max	47729	13.4	KT
		Min	47775	8.35				HH	Min	47759	14.0	KT		
		Min	47778	8.5				DM	Max	47848	12.4	KT		
		Min	47778	8.6				PI	CN	Ori	Max	47859	12.4	KT
SS	Cyg	Max	47668	8.35	MO	RU	Peg	Max	47753	10.9	MO			
		Max	47669	8.4				KT	Max	47849	10.8	MO		
		Max	47669	8.5				PI	GK	Per	Max	47759	10.1	KT
		Max	47727	8.4				KT	KT	Per	Max	47741	11.8	KT
		Max	47727	8.1				MO	Max	47790	11.7	KT		
		Max	47729	8.2				KB	Max	47859	11.6	KT		
		Max	47731	8.3				PI	CQ	Tau	Min	47933	11.1	MO
		Max	47790	8.7				PI	Max	47963	9.7	MO		
		Max	47792	8.35				MO	Min	47977	10.5	MO		
		Max	47797	8.6				KT	SU	UMa	Max	47986	11.2	MO
		Max	47843	8.3				PI	SW	UMa	Max	47967	9.6	MO 2)
		Max	47845	8.5				KT	CH	UMa	Max	47790	11.5	MO
		Max	47845	8.3				MO	WW	Vul	Min	47757	11.1	KT

B e m e r k u n g e n :

: = unsicher

1) = Bedeckungsminimum

2) = Supermaximum

Alle Helligkeiten im Harvard-System (AAVSO charts)

Nr. 52 beta Lyr 47411.60 SV anstelle von 47411.00

Nr.	beta	Lyr	47411.60	SV	anstelle von	47411.00
UN	01.0	01000	01000	UN	01.0	01000
UN	02.0	02000	02000	UN	02.0	02000
UN	03.0	03000	03000	UN	03.0	03000
UN	04.0	04000	04000	UN	04.0	04000
UN	05.0	05000	05000	UN	05.0	05000
UN	06.0	06000	06000	UN	06.0	06000
UN	07.0	07000	07000	UN	07.0	07000
UN	08.0	08000	08000	UN	08.0	08000
UN	09.0	09000	09000	UN	09.0	09000
UN	10.0	10000	10000	UN	10.0	10000
UN	11.0	11000	11000	UN	11.0	11000
UN	12.0	12000	12000	UN	12.0	12000
UN	13.0	13000	13000	UN	13.0	13000
UN	14.0	14000	14000	UN	14.0	14000
UN	15.0	15000	15000	UN	15.0	15000
UN	16.0	16000	16000	UN	16.0	16000
UN	17.0	17000	17000	UN	17.0	17000
UN	18.0	18000	18000	UN	18.0	18000
UN	19.0	19000	19000	UN	19.0	19000
UN	20.0	20000	20000	UN	20.0	20000
UN	21.0	21000	21000	UN	21.0	21000
UN	22.0	22000	22000	UN	22.0	22000
UN	23.0	23000	23000	UN	23.0	23000
UN	24.0	24000	24000	UN	24.0	24000
UN	25.0	25000	25000	UN	25.0	25000
UN	26.0	26000	26000	UN	26.0	26000
UN	27.0	27000	27000	UN	27.0	27000
UN	28.0	28000	28000	UN	28.0	28000
UN	29.0	29000	29000	UN	29.0	29000
UN	30.0	30000	30000	UN	30.0	30000
UN	31.0	31000	31000	UN	31.0	31000
UN	32.0	32000	32000	UN	32.0	32000
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UN	41.0	41000	41000	UN	41.0	41000
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UN	99.0	99000	99000	UN	99.0	99000
UN	100.0	100000	100000	UN	100.0	100000

0 1 2 3 4 5 6 7 8 9

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100