BBSAG Bulletin 65

1983 April 18

98th List of Minima of Eclipsing Binaries

The following table lists 269 visual minima obtained mainly during 1983 February and March by the obserevers

RD	Roger Diethelm, Rodersdorf, Switzerland
DE	Demetrius P.Elias, Penteli, Greece
RG	Robert Germann, Wald, Switzerland
TK	Thomas Keller, Oberwil, Switzerland
KL	Kurt Locher, Grüt, Switzerland
EN	Edmond Nezry, Toulouse, France
CPa	Carlo Pampaloni, Firenze, Italy
APa	Aristos Parris, Larisa, Greece
HP	Hermann Peter, Otelfingen, Switzerland
TS	Thomas Schildknecht, Evilard, Switzerland
GS	George Stefanopoulos, Aghia Paraskevi, Greece
NS	Nikolaos Stoikidis, Larisa, Greece
PWi	Patrick Wils, Niel, Belgium

The O - C values refer to the linear elements of the GCVS 1969, disregarding improved elements in the 1971, 1974, and 1976 supplements to the GCVS. Reductions were made mainly using the tracing paper method.

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(footnotes to page 2 :)

* GCVS 1969 period erroneous, O - C according to the GCVS 1976 : +.009

** not contained in the GCVS, O - C according to the elements on page 6 of this issue : +.016 +.021 -.011 -.005 -.014 -.010 -.015 -.010 +.008 -.004 +.017 +.003 +.008 -.018

*** no period given by the GCVS, O - C according to the elements of BBSAG Bulletin 27, page 7 : +.122

**** not contained in the GCVS 1969, O - C according to the GCVS 1976 : +.003

***** not contained in the GCVS, O - C according to the elements of BBSAG Bulletin 63, page 5 : +.025 +.041 +.050 +.045 +.039 +.058 +.048 +.046 +.040 +.039 +.054

(n) not
(v) very slightly) disturbed according to the criteria of Crawford and Olson, PASP 91, page 413, 1979, but no correction applied to the symmetric tracing paper solution

§ displaced secondary

current no.	star	minimum order	JD hel 244...	O-C	n	observer
19742	WZ And	I	5368.325	-.032	6	HP
19743	AB And	I	5379.331	+.031	11	PWi
19744		I	5383.314	+.031	11	PWi
19745		I	5384.311	+.032	12	PWi
19746	EP And	I	5389.281	*	6	KL
19747	V 416 Aql	I	5398.682	-.037	6	KL
19748	SS Ari	II	5388.259	-.097	7	RG
19749	SX Aur	II	5401.359	-.018	9	RD
19750	ZZ Aur	I	5384.277	-.022	7	HP
19751		I	5399.310	-.019	7	HP
19752		I	5402.317	-.019	9	HP
19753	AR Aur	II	5375.361:	+.079:	20	CPa
19754	CL Aur	I	5382.328	+.041	6	KL
19755	HL Aur	I	5385.357	+.001	7	HP
19756		I	5400.293	-.003	7	HP
19757		I	5405.281	+.004	8	HP
19758	IM Aur	II	5404.288	-.056	5	RD
19759	IY Aur	I	5401.339	-.039	9	RD
19760	KO Aur	I	5399.341	-.044	7	RD
19761		I	5403.359	+.021	9	RD
19762	TU Boo	II	5380.708	.000	5	KL
19763	Y Cam	I	5368.452	+.197	6	KL
19764		I	5401.506	+.195	6	KL
19765	RY Cnc	I	5398.594	-.030	8	KL
19766	SW Cnc	I	5407.401	-.111	5	KL
19767	WW Cnc	I	5378.436	-.303	7	KL
19768		I	5387.357	-.311	15	DE
19769		I	5397.412	-.299	7	KL
19770		I	5406.336	-.303	9	RG
19771	WX Cnc	I	5402.383	+.141	10	HP
19772	WY Cnc	I	5406.360	-.004	12	PWi
19773	NSV 4187 Cnc	I	5379.328	**	6	KL
19774		I	5382.289	**	6	KL
19775		I	5383.439	**	10	KL
19776		II	5384.332	**	7	KL
19777		I	5384.619	**	8	KL
19778		II	5385.510	**	6	KL
19779		I	5387.574	**	7	KL
19780		II	5388.466	**	6	KL
19781		II	5397.352	**	11	KL
19782		I	5399.409	**	8	KL
19783		II	5401.499	**	8	KL
19784		I	5402.372	**	8	KL
19785		I	5406.515	**	7	KL
19786		II	5407.376	**	8	KL
19787	YZ CVn	I	5383.576	***	6	KL
19788	TU CMa	I	5384.331	-.005	11	HP
19789	UU CMa	I	5417.308	-.382	5	KL
19790	AG CMi	I	5368.390:	-.192:	4	KL
19791	AK CMi	I	5357.333	+.019	7	DE
19792		I	5383.363	+.018	6	KL
19793		I	5383.373	+.028	9	HP
19794		I	5387.332	+.025	8	DE
19795		I	5387.332	+.025	8	HP
19796		I	5400.345	+.023	10	HP
19797		I	5404.305	+.021	7	RG
19798		I	5404.307	+.023	10	HP
19799		I	5409.391	+.014	6	APa
19800		I	5409.401	+.024	7	NS
19801		I	5417.323	+.024	7	NS
19802	RZ Cas	I	5313.505	+.002	20	EN
19803		I	5355.342	+.006	12	EN
19804		I	5355.347:	+.010:	8	CPa
19805		I	5410.321	+.003	8	PWi
19806	AB Cas	I	5385.340	+.006	10	HP
19807	OR Cas	I	5381.347	+.028	18	PWi
19808	V 523 Cas	I	5383.269	****	6	KL
19809	U Cep (n)	I	5324.431	+.060	9	GS
19810	(n)	I	5334.404	+.061	7	GS
19811	(v)	I	5349.365	+.064	6	GS
19812	(v)	I	5379.273	+.055	7	KL
19813	(v)	I	5379.280	+.062	10	GS
19814	XX Cep	I	5342.326	-.001	8	GS
19815		I	5349.338	-.001	6	GS
19816	CO Cep §	II	5397.420	+.138	6	KL
19817	EG Cep	I	4852.378	+.014	8	PWi
19818	NSV 817 Cep	II	5368.420	*****	6	KL
19819		I	5383.326	*****	10	KL
19820		II	5383.571	*****	6	KL
19821		I	5385.693	*****	7	KL
19822		I	5390.414	*****	6	KL
19823		II	5397.288	*****	6	KL
19824		I	5398.460	*****	8	KL
19825		I	5399.403	*****	7	KL
19826		I	5404.597	*****	5	KL
19827		I	5407.432	*****	6	KL
19828		I	5414.537	*****	6	KL
19829	RW Com	I	5397.340	-.065	7	RG
19830		I	5407.314	-.060	7	RG
19831	RZ Com	I	5378.500	+.002	6	KL
19832		I	5389.670	+.001	6	KL
19833		II	&404.392	-.002	10	HP
19834	CC Com	II	5397.335	+.174	7	RG
19835		II	5399.328	+.181	6	RG
19836		I	5399.426	+.169	6	HP

* ** *** **** ***** (n) (v) § see preceeding page

current no.	star	minimum	JD hel 244...	O-C	n	observer
19837		II	5401.297	+.164	7	RG
19838		I	5404.292	+.180	7	RG
19839		II	5404.396	+.174	6	HP
19840		I	5417.305	+.172	8	RG
19841	W Crv	I	5388.644	-.006	5	KL
19842		I	5401.458	+.002	6	KL
19843	V Crt	I	5402.446	+.038	6	KL
19844	Z Dra	I	5378.445	+.015	6	KL
19845		I	5408.313	+.019	6	NS
19846	CM Dra	I	5401.540	*	6	KL
19847	AM Eri	I	5370.282	**	7	KL
19848		II	5379.294	**	17	DE
19849	RW Gem	I	5384.467	.000	12	HP
19850		I	5407.390	-.001	11	HP
19851		I	5407.397	+.006	7	KL
19852	TX Gem	I	5387.336	-.003	9	HP
19853		I	5401.338	-.002	11	HP
19854		I	5401.339	-.001	6	KL
19855		I	5415.326	-.014	9	NS
19856	AF Gem	I	5378.350	-.028	7	HP
19857		I	5404.470	-.022	8	HP
19858	AV Gem	I	5385.333	-.013	6	KL
19859	AY Gem	I	5401.410	+.002	10	HP
19860	BT Gem	I	5398.417	-.064	7	KL
19861	CP Gem	I	5370.414	+.069	7	KL
19862	GW Gem	I	5383.411	-.017	7	HP
19863		I	5385.383	-.024	6	HP
19864		I	5387.366	-.019	7	HP
19865	SZ Her	I	5384.579	+.039	6	KL
19866		I	5388.664	+.033	6	KL
19867	TU Her	I	5387.652	-.073	8	KL
19868	DQ Her	I	5404.470	+.009	7	KL
19869		I	5404.666	+.012	7	KL
19870		I	5404.667	+.013	7	TS
19871	RX Hya	I	5405.327	+.056	5	APa
19872		I	5405.348	+.077	6	NS
19873		I	5414.477	+.079	6	KL
19874	TY Hya	I	5385.406	+.253	6	KL
19875		I	5399.370	+.234	6	KL
19876		I	5399.397:	+.262:	6	HP
19877	VY Hya	I	5368.597	-.043	7	KL
19878	WY Hya	I	5385.411	+.017	10	HP
19879	XZ Hya	I	5385.499	+.097	6	KL
19880	AI Hya	§II	5402.352	***	7	RD
19881	DK Hya	I	5368.503	-.240	6	KL
19882		I	5401.363:	-.263:	5	KL
19883		I	5402.399	-.271	6	KL
19884	EU Hya	I	5417.345	-.040	9	RG
19885	EX Hya	I	5385.600	+.003	8	KL
19886		I	5399.524	+.010	28	DE
19887	Y Leo	I	5387.556	+.141	6	KL
19888		I	5399.356	+.138	7	HP
19889		I	5399.358	+.140	10	RG
19890		I	5399.359	+.141	6	KL
19891		I	5404.416	+.140	8	HP
19892		I	5414.531	+.139	6	KL
19893	UU Leo	I	5397.456	-.029	6	KL
19894	UV Leo	II	5401.415	-.005	10	HP
19895	XY Leo	I	5399.355	-.086	7	RD
19896		I	5399.366	-.076	6	TK
19897		I	5403.337	-.082	8	RD
19898		II	5404.320	-.093	6	RD
19899	XZ Leo	I	5404.320	-.093	6	RD
19900	BL Leo	I	5414.491	-.001	6	KL
19901	T LMi	I	5385.295	-.135	6	KL
19902		I	5397.368	-.142	6	KL
19903		I	5400.392	-.138	8	HP
19904		I	5403.398	-.151	6	KL
19905	RY Lyn	I	5378.583	****	6	KL
19906		I	5388.620	****	6	KL
19907		I	5404.415	****	6	KL
19908		I	5404.420	****	14	HP
19909	EW Lyr	I	5396.673	+.090	7	KL
19910		I	5398.619	+.088	7	KL
19911	FH Lyr	I	5414.575	-.011	6	KL
19912	RW Mon	I	5414.364	-.004	7	KL
19913	BO Mon	I	5372.331	+.184	6	GS
19914		I	5383.448	+.174	9	HP
19915		I	5383.452	+.178	6	KL

* GCVS elements incomplete, O - C according to Martins' elements PASP 87, page 168, 1975: -.585

** O - C according to the GCVS amounts to several entire periods, O - C according to the elements of BBSAG Bulletin 50, page 5: -.013 -.023

*** GCVS 1969 period too rough for reasonable reduction, O - C according to the GCVS 1976: -.543

**** no period given by the GCVS, O - C according to the elements of Samolyk & Wedemayer JAAVSO 6, page 49, 1977: +.032 +.025 +.034 +.040

§ displaced secondary

current no.	star	minimum order	JD hel 244...	O-C	n	observer
19916	BP Mon	I	5404.448	-.803	7	KL
19917	BZ Mon	I	5398.349	-.830	6	KL
19918	FH Mon	I	5398.389	-.120	6	KL
19919	HM Mon	I	5368.377	+.098	6	KL
19920	V 449 Oph	I	5398.520	+.059	6	KL
19921	V 508 Oph	I	5386.649	+.011	7	KL
19922		I	5396.647	+.010	6	KL
19923	V 913 Oph	I	5414.620	-.121	5	KL
19924	ET Ori	I	5385.392	+.010	12	HP
19925	GG Ori	I	5403.337	+.006	8	RD
19926	OS Ori	I	5398.269	-.037	6	KL
19927	V 640 Ori	I	5368.375	-.018	6	KL
19928		I	5368.376	-.016	9	HP
19929	V 642 Ori	I	5401.338	-.009	8	RD
19930	BG Peg	I	5333.355	+.421	9	RG
19931	RT Per	I	5388.280	-.077	9	RG
19932		I	5388.284	-.072	7	KL
19933		I	5399.325	-.074	6	RG
19934		I	5399.325	-.074	9	HP
19935	RV Per	I	5368.336	+.050	9	HP
19936	ST Per	I	5368.271	-.034	7	HP
19937		I	5405.340	-.042	4	NS
19938	XZ Per	I	5368.512	+.004	5	KL
19939		I	5390.396	+.007	8	KL
19940		I	5397.309	+.010	6	HP
19941	IU Per	I	5402.324	+.072	8	HP
19942		I	5402.332	+.080	7	KL
19943	KW Per	I	5384.362	+.047	17	PWi
19944		I	5384.362	+.047	6	KL
19945		I	5384.364	+.050	9	HP
19946		I	5385.294	+.047	8	HP
19947	β Per	I	4976.305	-.129	16	PWi
19948	XZ Pup	I	5400.402	-.021	7	KL
19949	AY Pup	I	5401.375	+.046	6	KL
19950		I	5402.313	+.046	7	KL
19951		I	5417.324	+.050	4	KL
19952	DF Pup	I	5398.299	+.128	6	KL
19953	RZ Pyx	I	5400.434	+.200	6	KL
19954		II	5401.428	+.210	4	KL
19955		I	5402.407	+.204	6	KL
19956	AU Ser	I	5380.686	*	6	KL
19957		II	5386.672	*	7	KL
19958	LX Ser	I	5385.574	**	7	KL
19959	RW Tau	I	5407.327	-.090	15	RG
19960		I	5407.328	-.089	9	HP
19961		I	5407.328	-.088	7	KL
19962	SV Tau	I	5375.301	-.022	5	GS
19963		I	5401.275	-.051	8	RG
19964	AH Tau	II	5401.284	-.049	8	RG
19965		II	5404.281	-.046	7	RG
19966	AN Tau	I	5385.334	-.043	7	HP
19967	CT Tau	I	5404.359	+.034	10	HP
19968		II	5407.348	+.022	8	RG
19969	EQ Tau	II	5401.311	***	7	RG
19970		I	5407.286	***	6	RG
19971	ES Tau	I	5398.363	****	6	KL
19972	IL Tau	I	5385.308	*****	4	KL
19973	V Tri	I	5381.362	+.016	15	PWi
19974		I	5384.285	+.013	12	PWi
19975		I	5384.286	+.014	8	RG
19976	X Tri	I	5381.380	-.044	20	PWi
19977		I	5383.322	-.044	7	HP
19978		I	5383.328	-.038	16	PWi
19979		I	5384.292	-.046	11	RG
19980		I	5384.294	-.044	6	KL
19981		I	5384.299	-.039	19	PWi
19982	RW Tri	I	5370.278	-.003	6	KL
19983		I	5380.249	-.007	37	DE
19984	TY UMa	II	5397.295	******	9	RG
19985		I	5406.332	******	9	RG
19986	UX UMa	I	5370.475	+.001	6	KL
19987	VV UMa	I	5382.276	+.114	6	KL
19988		I	5384.349	+.125	16	PWi
19989		I	5399.474	+.129	9	HP

* GCVS 1969 period too inaccurate for reasonable reduction, O - C according to the GCVS 1974: -.004 -.009

** not contained in the GCVS, O - C according to the elements of Africano, Horne & Margon IAUC 3466: +.021

*** GCVS 1969 period erroneous, O - C according to the GCVS 1976: +.001 +.002

**** GCVS period erroneous, O - C according to the elements of BBSAG Bulletin 58, page 5: -.002

***** no period given by the GCVS 1969, O - C according to the GCVS 1974 -.026

****** GCVS period erroneous, O - C according to the elements of Broglia

current no.	star	minimum order	JD hel 244...	O-C	n	observer
19990		I	5406.346	+.127	9	RG
19991		I	5406.348	+.129	12	PWi
19992		I	5417.347	+.130	8	RG
19993	XY UMa	I	5379.327:	-.019:	13	PWi
19994		I	5399.450	-.013	9	HP
19995		I	5400.417	-.004	8	HP
19996		I	5401.382	+.003	10	HP
19997		I	5402.337	-.001	7	HP
19998	XZ UMa	I	5370.262	-.063	6	KL
19999		I	5380.296	-.078	10	DE
20000		I	5403.264	-.063	5	NS
20001		I	5404.477	-.073	12	HP
20002		I	5409.367	-.072	6	APa
20003		I	5409.369	-.070	8	NS
20004		I	5409.372	-.067	13	PWi
20005	ZZ UMa	I	5378.447	-.003	6	KL
20006		I	5401.430	-.013	10	HP
20007	UW Vir	I	5406.525	+.380	6	KL
20008	VV Vir	I	5388.700	*	6	KL
20009		I	5402.538	*	6	KL
20010		I	5414.576	*	5	KL

* O - C according to the GCVS exceeds two periods,
O - C according to the elements of BBSAG Bulletin 31, page 6 : -.006 +.002 -.005

N S V 4 1 8 7 C a n c r i

D e t e c t i o n o f t h e P e r i o d

This star is contained in the NSV catalogue as a suspected rapid variable of $1^m.7$ photographic amplitude, based on a study by KIPPENHAHN, ASTRONOMISCHE NACHRICHTEN 282, page 73, 1955.

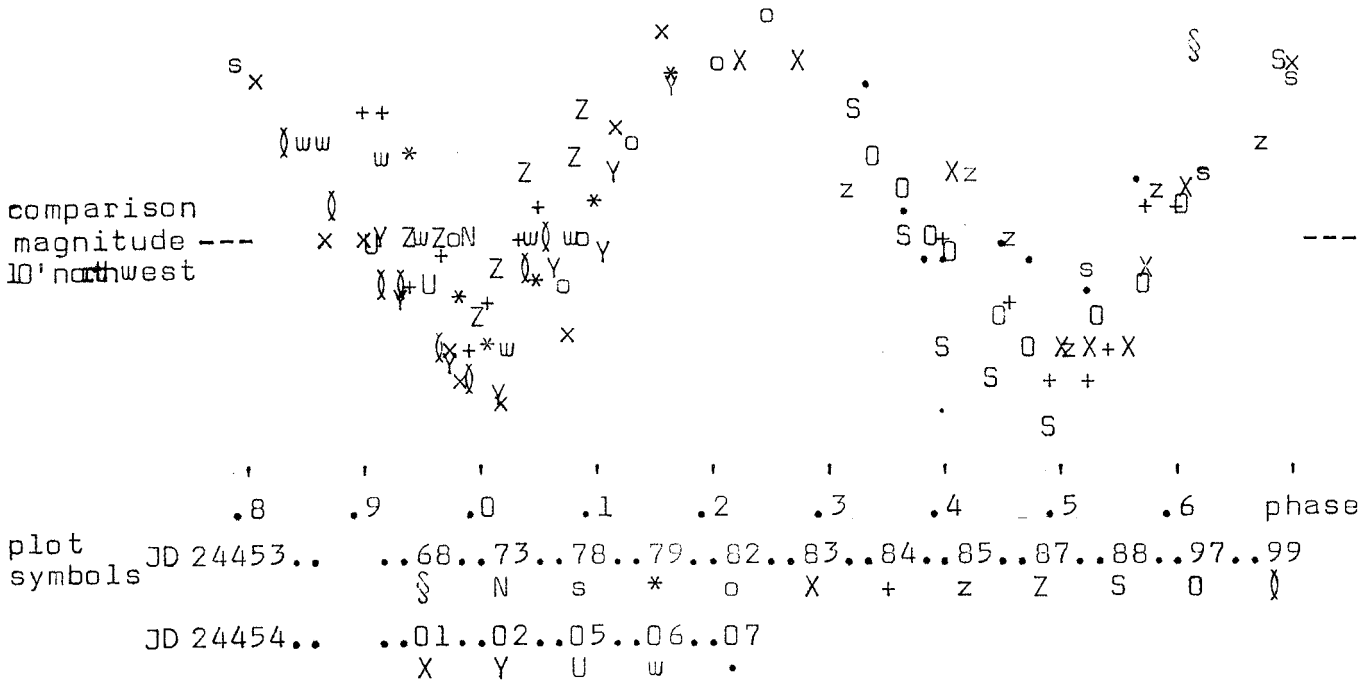
My visual survey during 17 nights 1.83 February and March has yielded that the amplitude is much less and that the type is EW with the elements

$$\mathrm{Min}_{\mathrm{I\ JD\ hel}} = 2445379.312 + .5912\ E \quad .$$

Fig. 66 plots all my observation against phase.

K. Locher

Fig. 66



2nd Report on Visual Survey of NSV Stars Suspected to be Eclipsing

Improvements with respect to 1st Report are underlined

NSV no.	Constellation	catalogued amplitude	* type	resulting amplitude	* type	number nights surveyed	remarks
817	Cep	1.0p	EA	1.1v	EB	35	see BBSAG Bulletin 63, page 5
1126	Ari	1.0p	S:	0.2v	CST:	12	
1212	Tau	1.0p	EA	0.2v	CST:	25	
3772	Mon	2.5p	EA	0.0v	CST:	11	
3835	CMi	1.1p	S:	0.3v	S:	14	
4029	UMa	1.1p	E	1.0v	S	14	

4497	UMa	1.3p	E	0.5v	E	26	
4537	Ant	1.2p	E	1.1v	S	3	
4782	Leo	>1.5p	S	1.1v	RR	6	$JD_{max\ hel}$ = 2445345.53 + .529 E
							$(t_{max} - t_{min})/p$ = .16
5126	UMa	>1.5p	EA:	0.1v	CST:	14	
5183	UMa	1.3p	E	0.1v	CST:	17	
5519	UMa	1.0p	EA	0.1v	CST:	19	
5576	CVn	>1.0p	E:	0.1v	CST:	11	
5698	CVn	>1.0p	E	0.3v	L §)	14	§) or S type with period close to 1 day
5722	CVn	1.0p	EA	0.3v	S	13	
6264	CVn	4.1p	S:	0.5v	S	8	
11365	Lyr	1.5p	E	0.0v	CST:	20	

* nomenclature as NSV page 6

E R R A T A

(4th list after the general one in BBSAG Bulletin 54, pages 4 - 6)
(3rd list see BBSAG Bulletin 63, page 4)
(2nd " " " " 60, " 7)
(1st " " " " 58, " 5)

Corrections are underlined

Bulletin no.	page					
61	3	18792	DQ Her	I	5140.373	+.011 29 DE
62	3	19039	SVS 2194 Cyg	I	5241.562	+.085 14 DE
63	2	19239	XZ Aqr	I	5252.316	+.107 9 DE
		19243	AY Aqr	§	5274.321	-.002 6 KL
		19263ff.	NSV 817 Cep			
		19292	FZ Del	I	5226.342	-.012 8 GM
64	4	19596	RY Lyn	I	5351.314	+.028 9 GM
		19622	V 508 Oph	I	5275.291	+.021 6 RG
	6	19727	X Tri	I	5351.264	-.042 7 GM