

# BBSAG Bulletin 67

1

1983 August 10

## 100<sup>th</sup> List of Minima of Eclipsing Binaries

The following table lists 186 visual minima obtained mainly during 1983 June and July by the observers

MA	Maria Andrakakou, Athens, Greece
GB	Guy Boistel, Sautron, France
WB	Wilhelmine Burgat, Worblaufen, Switzerland
RD	Roger Diethelm, Rodersdorf, Switzerland
DE	Demetrius P. Elias, Penteli, Greece
RG	Robert Germann, Wald, Switzerland
MKo	Michael Kohl, Uster, Switzerland
KL	Kurt Locher, Grüt, Switzerland
HP	Hermann Peter, Otelfingen, Switzerland
GSc	Gabrielle Schneider, Gockhausen, Switzerland
GS	George Stefanopoulos, Aghia Paraskevi, Greece
NS	Nikolaos Stoikidis, Larisa, Greece

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.

( footnotes to page 2 : )

- \* GCVS 1969 period erroneous, O-C according to the GCVS 1976: +.025 +.023
- \*\* not contained in the GCVS 1969, O-C according to the GCVS 1976: +.094 +.100 +.102
- \*\*\* O-C according to the GCVS exceeds one period; O-C according to the elements of BBSAG Bulletin 38, page 6: +.004 +.007 +.010
- \*\*\*\* no period given by the GCVS, O-C according to the elements of BBSAG Bulletin 27, page 7: +.114
- \*\*\*\*\* not contained in the GCVS, O-C according to the elements on page 4 of this issue: +.033 -.003 -.008 -.009 -.006 +.001:
- \*\*\*\*\* not contained in the GCVS 1969, O-C according to the GCVS 1976: +.002 +.003 +.006
- § §§ ambiguous minimum orders due to the lack of pre-recent observations: As judged from the O-C, § should be secondary and §§ primary, but as judged from the estimated brightness, reversely.
- §§§ not contained in the GCVS, O-C according to the elements BBSAG Bulletin 63, page 6: +.052 +.073 +.050 +.073
- §§§§ not contained in the GCVS 1969, O-C according to the GCVS 1974: -.032 -.054 -.037
- §§§§§ no period given by the GCVS 1969, O-C according to the GCVS 1976: -.026 -.040
- §§§§§§ not contained in the GCVS, O-C according to Шугаров's elements *Астрономический Циркуляр* 949, 1977: +.105
- (n) not disturbed according to the criteria of Crawford and Olson, *IAUO 91 page 413 1979*

cur- rent no.	star	minimum or- der	JD hel 244...	0-C	n	ob- ser- ver	cur- rent no.	star	minimum or- der	JD hel 244...	0-C	n	ob- ser- ver
20145	XZ And	I	5533.489	-.049	10	MKo	20191	IR Cas	I	5526.520	-.101	8	MKo
20146		I	5537.545	-.064	8	GSc	20192	V 523 Cas	I	5504.553	*****	10	KL
20147		I	5537.558	-.052	10	KL	20193		I	5508.527	*****	6	KL
20148	EP And	I	5529.523	*	6	KL	20194		II	5524.538	*****	6	KL
20149		I	5531.540	*	6	KL	20195	U Cep (n)	I	5481.498	+.066	8	GS
20150	GZ And	II	5528.478	**	13	DE	20196	(n)	I	5496.448	+.058	11	GS
20151		I	5547.547	**	6	KL	20197	(n)	I	5511.403	+.054	19	GS
20152		I	5547.549	**	6	DE	20198	SU Cep	I	5523.510	+.004	6	KL
20153	RY Aqr	I	5526.535	-.161	6	MKo	20199		I	5532.520	+.001	8	RG
20154		I	5530.473	-.156	6	KL	20200	NSV 817 Cep	II	5489.458	§§§§§	6	KL
20155		I	5530.493	-.136	6	RG	20201		I	5493.497	§§§§§	6	KL
20156		I	5532.440	-.156	6	KL	20202		I	5502.456	§§§§§	6	KL
20157	AT Aqr	§	5547.491	+.047	6	KL	20203		I	5519.495	§§§§§	9	KL
20158		§	5547.493	+.049	6	MA	20204	AA Cet	I	5536.596	§§§§§	7	KL
20159		§	5547.495	+.051	6	DE	20205		II	5540.596	§§§§§	14	KL
20160	AY Aqr	§	5527.546	-.009	4	KL	20206		I	5543.561	§§§§§	10	KL
20161		§	5547.428	-.008	6	KL	20207	RZ Com	II	5493.409	-.011	6	RG
20162		§	5547.439	+.003	6	DE	20208	CC Com	II	5496.423	+.176	6	HP
20163		§	5547.440	+.004	6	MA	20209	SW Cyg	I	5535.463	+.269	8	NS
20164	CR Aqr	I	5527.530	+.183	5	KL	20210	WW Cyg	I	5530.387	+.039	11	NS
20165	CX Aqr	I	5529.473	+.014	6	KL	20211	WZ Cyg	I	5520.497	+.017	6	KL
20166		I	5534.486	+.015	7	HP	20212	BR Cyg	I	5526.489	+.005	8	MKo
20167		I	5535.590	+.014	7	KL	20213		I	5530.499	+.017	7	MKo
20168		I	5535.594	+.019	5	GSc	20214		I	5534.494	+.016	7	HP
20169	XZ Aql	I	5531.534	+.064	7	KL	20215	CG Cyg	I	5531.424	-.022	8	RD
20170	FK Aql	I	5489.522	-.059	11	HP	20216		I	5543.405	-.033	7	RG
20171		I	5489.523	-.058	7	KL	20217	HK Cyg	I	5490.396	§§§§§	7	KL
20172	OO Aql	I	5531.399	-.058	8	RD	20218		I	5526.497	§§§§§	7	KL
20173	V 342 Aql	I	5520.491	-.144	7	KL	20219	MR Cyg	I	5531.410	-.017	7	RD
20174	V 343 Aql	I	5535.494	-.014	8	NS	20220	V 370 Cyg	I	5526.516	+.051	6	KL
20175	V 479 Aql	I	5526.463	+.006	6	KL	20221	V 456 Cyg	I	5508.469	+.039	7	KL
20176	V 688 Aql	I	5531.386	-.024	9	RD	20222		I	5533.409	+.026	5	MKo
20177	V 803 Aql	I	5490.487	***	6	KL	20223	SVS 2194 Cyg	I	5496.397	§§§§§	19	DE
20178		II	5531.453	***	16	DE	20224	TT Del	I	5519.543	+.087	7	KL
20179		II	5531.457	***	14	MA	20225	TY Del	I	5533.483	+.032	10	HP
20180	RS Ari	I	5526.523	-.092	8	KL	20226		I	5533.483	+.032	8	MKo
20181	TU Boo	I	5502.473	-.005	6	KL	20227	YY Del	I	5523.576	+.032	7	KL
20182	YZ CVn	I	5490.539	****	6	KL	20228	FZ Del	I	5522.398	-.010	5	NS
20183	TY Cap	I	5526.528	-.113	6	MKo	20229	Z Dra	I	5488.402	+.019	9	WB
20184	NSV 13478 Cap	I	5527.571	*****	6	KL	20230		I	5488.403	+.020	9	KL
20185		II	5529.524	*****	7	KL	20231		I	5522.346	+.027	6	NS
20186		I	5531.508	*****	8	KL	20232	RZ Dra	I	5518.374	-.036	7	RG
20187		I	5547.419	*****	4	MA	20233		I	5530.492	-.037	6	RG
20188		I	5547.422	*****	4	KL	20234	TW Dra	I	5441.482	-.047	7	GS
20189		I	5547.429	*****	5	DE							
20190	RZ Cas	I	5503.546	-.001	17	GB							

\* \*\* \*\*\* \*\*\*\* \*\*\*\*\* § §§ §§§ §§§§ §§§§§ §§§§§§ (n) see preceding page

cur- rent no.	star	minimum or- JD hel der 244...	0-C n	ob- ser- ver	cur- rent no.	star	minimum or- JD hel der 244...	0-C n	ob- ser- ver
20235	UZ Dra	I 5534.398	+.003	11 RG	20273	V 391 Oph	I 5518.556	-.014	5 KL
20236	CM Dra	I 5493.502	*	6 KL	20274	V 508 Oph	I 5489.396	+.010	8 HP
20237		I 5526.481	*	8 KL	20275		I 5489.397	+.011	7 RG
20238		I 5531.548	*	23 DE	20276		II 5508.535	+.013	6 KL
20239		I 5531.550	*	14 MA	20277		I 5523.537	+.016	6 KL
20240		I 5533.449	*	40 DE	20278		I 5530.430	+.014	8 RG
20241	TX Gem	I 5457.335	-.005	6 NS	20279	V 735 Oph	I 5542.387	-.216	8 RG
20242	SZ Her	I 5502.384	+.039	7 KL	20280	V 913 Oph	I 5533.488	-.129	6 HP
20243		I 5533.469	+.035	8 MKo	20281	UX Peg	I 5533.518	-.033	9 MKo
20244		I 5533.473	+.040	12 HP	20282	BG Peg	I 5532.518	+.442	9 RG
20245	TU Her	I 5530.480	-.063	5 MKo	20283	BN Peg	I 5519.560	-.282	6 KL
20246	CC Her	I 5489.397	+.106	7 RG	20284		I 5529.551	-.277	6 KL
20247		I 5489.404	+.112	6 KL	20285	BY Peg	II 5519.538	+.099	7 KL
20248		I 5489.404	+.113	12 HP	20286	CW Peg	I 5526.394	-.253	6 KL
20249		I 5496.341	+.113	10 NS	20287	DK Peg	I 5530.462	+.039	7 RG
20250		I 5534.485	+.110	11 HP	20288	ER Peg	I 5526.547	-.062	6 RG
20251	CT Her	I 5520.475	+.066	9 KL	20289	RT Per	I 5533.528	-.078	7 MKo
20252	DQ Her	I 5547.557	+.011	16 DE	20290		I 5533.534	-.072	7 KL
20253		I 5547.557	+.011	11 KL	20291	KW Per	I 5530.571	+.049	6 KL
20254	GL Her	I 5493.531	+.095	6 KL	20292		I 5531.507	+.054	6 KL
20255	MT Her	I 5502.483	+.032	6 KL	20293	$\beta$ Per	I 5532.548	-.159	10 RG
20256	EX Hya	I 5429.405	+.005	25 DE	20294	Y Psc	I 5533.562	+.160	6 KL
20257	VX Lac	I 5504.528	-.080	6 KL	20295	RW PsA	I 5526.585	-.060	6 KL
20258	Y Leo	I 5458.373	+.142	8 NS	20296		II 5528.569	-.059	8 KL
20259	TY Lib	I 5518.445	-.003	7 KL	20297		I 5530.551	-.059	6 KL
20260	NSV 7060 Lib	I 5489.400	**	6 KL	20298		I 5534.506	-.070	6 KL
20261		II 5490.435	**	7 KL	20299	U Sge	I 5517.467	+.003	9 GS
20262	SX Lyn	I 5435.367	-.404	5 GS	20300	UZ Sge	I 5533.490	+.052	9 HP
20263		I 5437.414	-.279	6 GS	20301	WX Sgr	I 5518.542	+.465	4 KL
20264	RV Lyr	I 5490.434	+.064	7 KL	20302	EG Sgr	I 5527.430	***	10 DE
20265		I 5526.431	+.071	6 KL	20303		I 5527.436	***	11 KL
20266	TZ Lyr	II 5531.376	+.038	6 RD	20304		I 5532.422	***	6 KL
20267	UZ Lyr	I 5543.390	+.024	7 RG	20305		I 5532.424	***	10 DE
20268	EW Lyr	I 5519.445	+.092	6 KL	20306		I 5532.432	***	6 GSc
20269	FH Lyr	I 5527.361	-.061	7 DE	20307		I 5542.358	***	17 DE
20270		I 5527.376	-.046	8 KL	20308	RS Sct	I 5526.519	+.012	6 RG
20271	$\beta$ Lyr	I 5536.35	-.09	6 RG	20309		I 5530.502	+.010	5 RG
20272	RV Oph	I 5526.496	+.006	9 MKo	20310		I 5530.502	+.010	6 KL
					20311		I 5534.491	+.014	6 KL

\* GCVS elements incomplete, 0-C according to Martins' elements PASP 87, page 168, 1975: -.597 -.602 -.609 -.607 -.610

\*\* not contained in the GCVS, 0-C according to the elements of BBSAG Bulletin 66, page 5: -.006 -.009

\*\*\* 0-C according to the GCVS, but with half its period: -.189 -.184  
-.169 -.168 -.160 -.179

current no.	star	minimum or-der	JD hel 244...	O-C	n	observer	
20312	$\Lambda$ 0 Ser	I	5496.390	-.002	8	NS	
20313	$\Lambda$ U Ser	II	5496.445	*	8	HP	* GCVS 1969 elements too inaccurate for reasonable reduction, O-C according to the GCVS 1974: -.002 -.011 -.020:
20314		II	5504.553	*	6	KL	
20315		II	5530.439	*	7	RG	
20316	X Tri	I	5545.572	-.042	5	KL	
20317	ZZ UMa	I	5493.404	-.009	5	RG	
20318	AW Vir	II	5489.391	+.009	7	RG	
20319	$\Lambda$ Z Vir	I	5493.389	**	7	RG	** GCVS 1969 period erroneous, O-C according to the GCVS 1976: +.019 +.014
20320		II	5518.384	**	7	RG	
20321	Z Vul	I	5532.525	+.024	8	RG	
20322		I	5537.434	+.023	7	RG	
20323	AW Vul	I	5527.399	-.023	8	RG	
20324		I	5531.426	-.028	7	MKo	
20325	$\Lambda$ Y Vul	I	5534.483	+.046	8	HP	
20326	BE Vul	I	5526.474	+.014	7	MKo	
20327	BP Vul	I	5504.566	+.001	6	KL	
20328	BU Vul	I	5518.395	+.020	6	RG	
20329		I	5543.421	+.010	6	RG	
20330	CD Vul	I	5524.499	-.023	7	KL	

N S V 1 3 4 7 8 Capricorni  
 Detection of the Period

This star had been suspected to be of EW type by Shapley & Hughes, HARVARD ANNALS 90, no.4, 1934, with a photographic amplitude of 0<sup>m</sup>.9. My visual survey during 12 nights in July and August 1983, assisted in a crucial one by two other observers, confirms the type, yields the period as

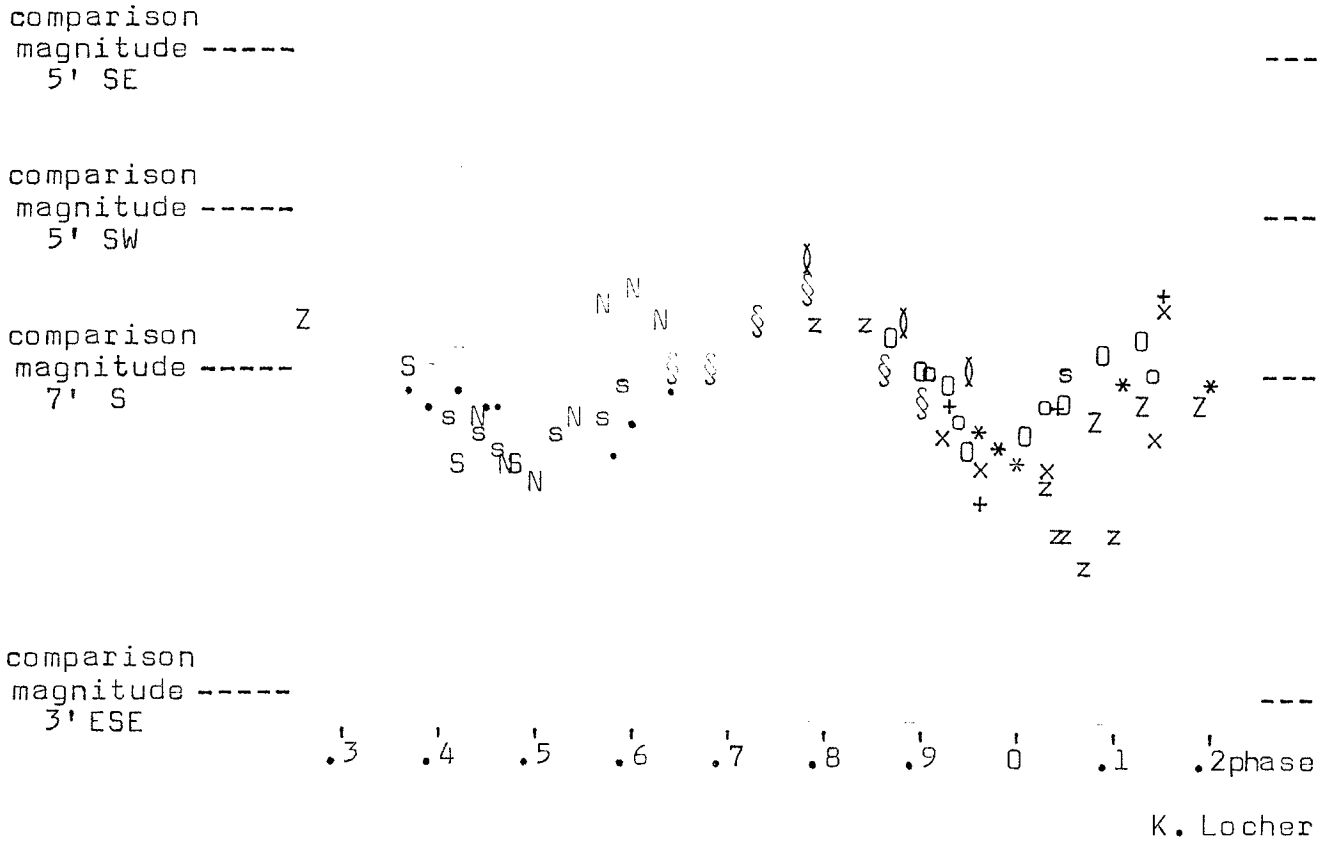
$$\text{Min}_I \text{ JD} = 2445527.538 + .442 E$$

and the amplitude considerably less.

Figure 68 plots all these observations against phase, using the following symbols:

	Julian date	observer
z	2445527	K. Locher
N	29	"
S	30	"
O	31	"
Z	32	"
Ø	34	"
o	47	"
+	"	M. Andrakakou
x	"	D.P. Elias
s	48	K. Locher
S	52	"
.	53	"
*	55	"

Figure 68



K. Locher

4<sup>th</sup> Report on Visual Survey of NSV Stars Suspected to be Eclipsing

Improvements with respect to previous reports are underlined>

NSV no.	Con- stel- la- tion	catalogued am- pli- tuda	* type	resulting am- pli- tude	* type	number nights sur- veyed	remarks
817	Cep	1.0p	EA	1.1v	EB	<u>49</u>	see BBSAG Bulletin 63, p.5
11441	Aql	1.4p	S	0.2v	CST:	7	
12452	Aql	2.3p	S:	0.9v	S	14	
13198	Cyg	1.2p	S	0.9v	S	7	
13354	Aqr	>1.0p	S	0.4v	S	12	
13478	Cap	0.9p	EW	0.5v	EW	12	see pages 2 & 4 this issue
13710	Cap	1.1p	S	0.5v	E	1	
13996	Peg	1.1p	S:	0.9v	S	14	

\* nomenclature as NSV page 6

H K Cygni : The Minimum Duration

is unknown according to the GCVS 1969-71-74-76. My visual observations JD 2445490 yield d = 0 and the strong suspicion that the amplitude is considerably larger than the 2<sup>m</sup> catalogued.

K. Locher

