

BBSAG Bulletin 59

1982 April 6

9 2nd List of Minima of Eclipsing Binaries

The following table lists 10 photoelectric and 207 visual minima obtained mainly during 1982 February and March by the observers

LC	Lars Capol, Wetzikon, Switzerland
(RD)	Roger Diethelm, Flüh, Switzerland, photoelectric
DE	Demetrius P. Elias, Penteli, Greece
RG	Robert Germann, Wald, Switzerland
RH	Renate Häring, Bäretswil, Switzerland
DHu	Daniel Hunn, Wetzikon, Switzerland
JKä	Jürg Kägi, Pfäffikon, Switzerland
KK	Katerina Kocian, Wetzikon, Switzerland
MKo	Michael Kohl, Uster, Switzerland
JL	Jean-François Le Borgne, Bagnères, France
KL	Kurt Locher, Grüt, Switzerland
CM	Claudio Maranta, Uster, Switzerland
GM	George Mavrofridis, Athens, Greece
HP	Hermann Peter, Otelfingen, Switzerland

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: +.012 +.026 +.014
- ** O-C according to the GCVS amounts to one whole period, O-C according to the elements of BBSAG Bulletin 57, p.6: -.006
- *** not contained in the GCVS 1969, O-C according to the GCVS 1976: +.080
- **** no period given by the GCVS, O-C according to the elements of BBSAG Bulletin 27, page 7: +.106 +.121 +.112
- ***** GCVS period erroneous, O-C according to the elements of BBSAG Bulletin 53, page 5: -.027
- ***** not contained in the GCVS 1969, O-C according to the GCVS 1976: +.006 .000
- § O-C according to the GCVS amounts to several entire periods, O-C according to the elements of BBSAG Bulletin 50, page 5: -.016
- (n) not disturbed according to the criteria of Crawford & Olson, PASP 91, page 413, 1979

current no.	star	minimum or-der	JD hel 244...	O-C n	ob-ser-ver	current no.	star	minimum or-der	JD hel 244...	O-C n	ob-ser-ver
18212	XZ And	I	5012.284	-.052	9 RG	18256		I	5035.301	*****	6 KL
18213		I	5012.288	-.048	7 KL	18257	U Cep (n)	I	5010.291	+.043	11 RG
18214	AB And	I	5004.285	+.022	7 RG	18258	GI Cep	I	5058.551	.000	6 KL
18215	EP And	II	5002.351	*	6 KL	18259	RW Com	II	5044.299	-.053	7 RG
18216		II	5013.276	*	6 KL	18260		I	5054.375	-.064	7 RG
18217		I	5035.288	*	6 KL	18261		I	5055.333	-.056	7 RG
18218	EX And	I	5010.329	**	6 KL	18262	RZ Com	I	5027.465	-.002	7 KL
18219	GZ And	I	5004.304	***	7 KL	18263	CC Com	II	5028.340	+.156	9 RG
18220	V 760 Aql	I	5053.618	+.025	6 KL	18264		I	5044.344	+.161	8 RG
18221	TT Aur	I	5006.265	+.041	7 RG	18265		II	5054.385	+.161	7 RG
18222		I	5010.256	+.035	6 RG	18266	W Crv	I	5005.610	-.004	6 KL
18223	ZZ Aur	I	5013.325	-.024	9 HP	18267		I	5022.686	-.004	8 KL
18224	HL Aur	I	5032.388	-.008	6 KL	18268		I	5024.626	-.004	6 KL
18225		I	5037.366	-.009	6 KL	18269		I	5044.421	-.001	6 KL
18226	IM Aur	I	5028.275	-.008	8 (RD)	18270	V Crt	I	5022.644	+.036	6 KL
18227	TU Boo	I	5050.427	+.004	7 KL	18271		I	5032.479	+.043	6 KL
18228		I	5058.534	+.004	6 KL	18272	WZ Cyg	I	5050.592	+.023	6 KL
18229	Y Cam	I	5011.433	+.175	6 KL	18273	Z Dra	I	5002.436	+.017	6 KL
18230		I	5054.385	+.155	8 RG	18274		I	5006.510	+.018	5 LC
18231	AQ Cam	I	5043.540	+.018	5 KL	18275		I	5006.510	+.019	5 JKä
18232	AT Cam	I	5012.334	-.068	6 RG	18276		I	5006.512	+.021	5 CM
18233	AY Cam	I	5022.291	-.005	8 RG	18277		I	5006.512	+.021	5 DH
18234	RY Cnc	I	5010.590	-.037	6 KL	18278		I	5006.517	+.025	5 KK
18235	TU Cnc	I	5048.345	-.027	7 KL	18279		I	5055.379	+.019	6 KL
18236	TX Cnc	I	5022.348	+.034	12 (RD)	18280	SX Dra	I	5010.455	+.270	7 KL
18237	WW Cnc	I	5003.456	-.312	6 KL	18281	TW Dra	I	5006.419	-.045	11 KL
18238		I	5013.526	-.286	7 KL	18282		I	5006.419	-.045	12 MKo
18239	WX Cnc	I	5043.364	+.127	9 HP	18283		I	5006.435	-.029	13 RH
18240	WY Cnc	I	5037.288	-.006	8 RG	18284	YY Eri	I	5004.255	-.018	8 RG
18241	YZ CVn	I	5028.560	****	8 KL	18285		I	5012.300	-.010	7 RG
18242		I	5054.435	****	6 KL	18286		I	5022.265	-.012	7 RG
18243		I	5055.602	****	7 KL	18287	AM Eri	I	5004.317	§	6 KL
18244	RX CMa	I	5028.373	-.026	6 KL	18288	RW Gem	I	5003.356	.000	10 KL
18245	UU CMa	I	5053.349	-.364	6 KL	18289	WW Gem	II	5027.345	-.015	16 (RD)
18246	EG CMa	I	5014.327	*****	4 KL	18290	AV Gem	I	5010.298	.000	5 KL
18247	YY CMi	I	5055.403	+.010	15 (RD)	18291	BT Gem	I	5043.422	-.057	7 KL
18248	AK CMi	I	5018.370	+.027	7 KL	18292	CP Gem	I	5053.300	+.054	6 KL
18249		I	5022.321	+.017	10 RG	18293	CX Gem	I	5010.502	-.036	6 KL
18250		I	5022.326	+.022	6 KL	18294	FO Gem	I	5043.454	+.326	10 KL
18251		I	5056.275	+.017	12 DE	18295	GW Gem	I	5054.340	-.025	8 RG
18252	IV Cas	I	5012.464	+.128	6 KL	18296	SZ Her	I	5060.611	+.036	6 KL
18253	KT Cas	I	5043.292	-.048	6 KL	18297	CC Her	I	5005.614	+.101	7 KL
18254	V 389 Cas	I	5035.282	+.283	6 KL	18298	DQ Her	I	5053.631	+.011	6 KL
18255	V 523 Cas	I	5003.291	*****	8 KL	18299	ES Her	I	5053.606	-.135	6 KL
						18300	MT Her	I	5058.654	+.025	6 KL
						18301		I	5060.604	+.025	6 KL

cur- rent no.	star	minimum or- der	JD hel 244...	O-C	n	ob- ser- ver	cur- rent no.	star	minimum or- der	JD hel 244...	O-C	n	ob- ser- ver
18302	MX Her	I	5010.671	-.196	7	KL	18345	FP Mon <i>new</i>	I	5004.346	-.177	4	KL
18303	SY Hya	I	5028.333	-.130	7	KL	18346	HM Mon	I	5004.332	+.088	6	KL
18304	TY Hya	I	5012.476	+.202	6	KL	18347		I	5010.452	+.093	6	KL
18305		I	5054.433	+.210	7	KL	18348		I	5043.472	+.092	6	KL
18306	VW Hya	I	5048.316	-.156	5	KL	18349	V 449 Oph	I	5010.675	+.054	7	KL
18307		I	5056.427	-.135	7	KL	18350	V 501 Oph	I	5036.695	.000	6	KL
18308	VY Hya	I	5010.400	-.026	6	KL	18351	V 508 Oph	I	5036.688	+.014	8	KL
18309		I	5014.411	-.018	11	GM	18352		II	5060.656	+.019	4	KL
18310		I	5028.400	-.037	6	KL	18353	V 557 Oph	I	5028.682	+.267	5	KL
18311		I	5030.410	-.029	7	KL	18354	V 916 Oph	I	5058.626	+.034	6	KL
18312		I	5040.418	-.026	9	KL	18355	VV Ori <i>new</i>	I	5027.288	-.012	16	(RD)
18313		I	5044.420	-.027	9	KL	18356	EQ Ori	I	5014.329	-.085	4	KL
18314		I	5050.425	-.026	6	KL	18357	ER Ori	I	5004.288	-.036	8	RG
18315		I	5054.428	-.025	6	KL	18358		II	5022.283	-.036	7	RG
18316	WY Hya	II	5013.431	+.002	7	KL	18359		II	5022.291	-.028	12	(RD)
18317		II	5018.452	+.012	6	KL	18360		II	5044.298	-.037	6	RG
18318		I	5022.389	+.010	8	KL	18361		II	5055.304	-.040	7	RG
18319	EX Hya	I	5043.488	+.015	6	KL	18362	FK Ori	I	5055.347	+.312	6	KL
18320		I	5047.431	+.004	23	DE	18363	FT Ori	I	5028.367	+.023	12	(RD)
18321		I	5053.519	+.015	6	KL	18364	Z Per	I	5011.302	+.023	6	KL
18322		I	5056.373	+.006	23	DE	18365		I	5011.314	+.034	11	MKb
18323	Y Leo	I	5018.308	+.142	10	RG	18366	RT Per	I	5027.284	-.074	7	KL
18324		I	5043.598	+.141	7	KL	18367		I	5032.375	-.080	8	KL
18325		I	5050.337	+.135	7	KL	18368		I	5038.328	-.073	7	KL
18326	AP Leo	I	5044.293	+.001	7	RG	18369	ST Per	I	5013.397	-.029	16	MKb
18327	BL Leo	II	5058.542	-.011	6	KL	18370	DM Per	I	5027.331	+.036	15	(RD)
18328	RS Lep	I	4985.463	-.003	10	GM	18371	UZ Pup	I	5037.344	-.045	6	KL
18329		I	5007.367	-.008	9	GM	18372	XZ Pup	I	5012.351	-.019	6	KL
18330		I	5038.298	-.002	6	KL	18373	AY Pup	I	5054.342	+.043	6	KL
18331	TY Lib	I	5028.584	-.008	8	KL	18374	RZ Pyx	II	5002.415	+.209	6	KL
18332	AA Lib <i>new</i>	I	5010.685	-.303	5	KL	18375		I	5022.412	+.190	6	KL
18333	RR Lyn <i>new</i>	I	5028.297	+.018	13	(RD)	18376	WX Sgr <i>new</i>	I	5058.645	+.456	6	KL
18334	RY Lyn	I	5018.410	*	6	KL	18377	V 505 Sgr	I	4816.450	-.033	12	JL
18335		I	5058.581	*	6	KL	18378	AO Ser	I	5050.571	+.009	8	KL
18336	UV Lyn	I	5055.397	**	16	(RD)	18379	AU Ser	I	5014.666	***	8	KL
18337	RV Lyr	I	5058.545	+.056	6	KL	18380		II	5022.597	***	6	KL
18338	EW Lyr	I	5055.635	+.082	6	KL	18381	LX Ser	I	5053.497	****	6	KL
18339	β Lyr	I	5031.88	-.06	5	RG	18382	RW Tau	I	5011.382	-.089	8	KL
18340	RW Mon	I	5027.430	-.001	9	KL	18383		I	5011.387	-.084	12	MKb
18341	BM Mon	I	5010.337	+.015	7	KL	18384		I	5036.300	-.091	6	KL
18342	BO Mon	I	5027.409	+.163	6	KL							
18343		I	5056.338	+.165	8	KL							
18344	FN Mon	I	5028.404	+.121	7	KL							

* no period given by the GCVS, O-C according to the elements of Samolyk and Wedemayer, JAAVSO 6, page 49, 1977: +.022 +.014

** GCVS 1969 period erroneous, O-C according to the GCVS 1976: +.019

*** GCVS 1969 elements too inaccurate for reasonable reduction, O-C according to the GCVS 1974: -.007 +.001

**** not contained in the GCVS, O-C according to the elements of Africano, H... and ... JAAVSO 3466: +.012

cur- rent no.	star	minimum or- der	JD hel 244...	O-C n	ob- ser- ver	cur- rent no.	star	minimum or- der	JD hel 244...	O-C n	ob- ser- ver
8385	AC Tau	I	5011.328	+.065	8 KL	18403		I	5053.439	.000	7 KL
8386		I	5013.374	+.068	8 KL	18404	VV UMa	I	5006.297	+.124	8 RG
8387	AS Tau	I	5044.326	+.228	6 KL	18405		I	5028.290	+.121	10 RG
8388	ES Tau	I	4994.428	*	5 KL	18406		I	5054.395	+.107	7 RG
8389		I	5004.422	*	7 KL	18407	XZ UMa	I	5002.330	-.078	6 KL
8390	V Tri	I	5013.268	+.016	8 HP	18408		I	5013.342	-.068	17 MKo
8391	X Tri	I	5007.336	-.045	10 GM	18409		I	5013.343	-.067	6 KL
8392		I	5008.309	-.044	14 GM	18410	AC UMa	I	5037.400	+.338	4 KL
8393		I	5009.281	-.044	13 GM	18411	BM UMa	II	5053.538	**	6 KL
8394		I	5010.252	-.044	9 RG	18412		I	5056.380	**	7 KL
8395		I	5010.253	-.043	5 GM	18413	GR 304 UMa ^{ucl}		5053.530	***	6 KL
8396	RW Tri	I	5043.324	-.002	9 KL	18414	UW Vir	I	5022.641	+.361	10 KL
8397	TW UMa	I	5055.355	-.093	7 KL	18415	VV Vir	I	5058.566	****	6 KL
8398	TX UMa	I	5007.338	-.008	9 GM	18416	BF Vir	I	5024.616	-.045	6 KL
8399	TY UMa	I	5055.328	+.080	7 RG	18417	BO Vul	I	5043.558	-.090	7 KL
8400	UX UMa	I	5010.565	.000	7 KL	18418	NO Vul	I	5058.642	*****	5 KL
8401		I	5028.658	-.001	6 KL						
8402		I	5044.394	+.002	6 KL						

- * GCVS period erroneous, O-C according to the elements of BBSAG Bulletin 58, page 6: +.012 -.002
- ** GCVS 1969 type and period erroneous, O-C according to the GCVS 1976: +.060 +.054
- *** period unknown
- **** O-C according to the GCVS exceeds two periods, O-C according to the elements of BBSAG Bulletin 31, page 6: +.001
- ***** not contained in the GCVS 1969, O-C according to the GCVS 1976: +.024

D Q Monocerotis :

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

The GCVS 1969-71-74-76 gives a minimum epoch and no period for this EA binary. My visual survey during 30 winter nights 1981-2 has yielded a distinct descending branch lasting several hours on JD 2445013 and a further observed moment near minimum on JD 2444993.3. Their mutual distance of roughly 20 days must be one single period as judged from the rough phases of the observations during the remaining 28 nights. More precisely, a solution can be found only with the assumption that the observations in the pairs of nights JD 2444930-1 and 2445054-5 both enclose a minimum, which on the other hand confines the uncertainty of the period to a few hundredths of a day, so that the number of periods elapsed since the old GCVS epoch is quite surely 473. Altogether elements are defined so as

$$2435164.405 + 20.6482 E$$

Figure 60 plots all observations against phase with a different symbol for each period, so that all dates are unambiguously reproduceable from it. Plot symbols are

- for 472 < E < 473
- o for 473 < E < 474
- + for 474 < E < 475
- x for 476 < E < 477
- z for 477 < E < 478
- * for 478 < E < 479
- s for 479 < E < 480

