

BBSAG Bulletin 56

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1981 October 5

89th List of Minima of Eclipsing Binaries

The following table lists 25 photoelectric and 417 visual minima obtained mainly during 1981 July to September by the observers

MA	Maria Andrakakou, Athens, Greece
GB	Guy Boistel, Sautron, France
RB	Roland Boninsegna, Dourbes, Belgium
(RD)	Roger Diethelm, Flüh, Switzerland, photoelectric
RD	" " " " visual
(DE)	Demetrius P. Elias, Penteli, Greece, photoelectric
DE	" " " " visual
RG	Robert Germann, Wald, Switzerland
RLe	Robert Leyman, Leval-Trahegnies, Belgium
KL	Kurt Locher, Grüt, Switzerland
PM	Paul Matagne, Bruxelles, Belgium
DM	Dimosthenis Mourikis, Pireas, Greece
EN	Edmond Nezry, Toulouse, France
IN	Ioulia Nikolaou, Glifada, Greece
APa	Aristos Parris, Larisa, Greece
HP	Hermann Peter, Otelfingen, Switzerland
EP	Ennio Foretti, Arconate, Italy
PR	Philippe Ralincourt, Nantes, France
JV	Jacques Vialle, La Rochelle, France

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: +.004
+.013 +.014 +.016

** not contained in the GCVS 1969, O-C according to the GCVS 1976:
+.094 +.070 +.071 +.075 +.081

*** no period given by the GCVS 1969, O-C according to the GCVS
1974: +.095 +.101 +.106

**** further minima must be waited for to obtain further digits of
the period to reduce unambiguously (cf. BBSAG Bulletin 44, page 5)

***** O-C according to the GCVS 1969 exceeds one period, O-C accord-
ing to the elements of BBSAG Bulletin 38 page 6: +.017 +.018
+.002 +.011 +.006 +.008 +.009 +.005: -.009

***** no period given by the GCVS, O-C according to the elements of
BBSAG Bulletin 34 page 5: -.024 +.014

§ §§ ambiguous minimum orders due to lack of recent observations: As
judged from the O-C, § should be secondary and §§ primary, but
as judged from the estimated brightness, reversely.

cur- rent no.	star	minimum or- der	JD hel 244...	O-C	n ser- ver	ob- cur- rent no.	star	minimum or- der	JD hel 244...	O-C	n ser- ver	ob- cur- rent no.	star	minimum or- der	JD hel 244...	O-C	n ser- ver
17230	RT And	I	4820.4988	-.0159	7	(RD) 17281	XZ Aql	I	4793.512	+.057	12	HP					
17231	UU And	I	4844.398	+.130	6	KL 17282		I	4838.438	+.060	11	HP					
17232	WX And	I	4810.494	-.398	6	IN 17283	FK Aql	I	4845.371	-.044	6	KL					
17233		I	4810.495	-.397	7	DE 17284	OO Aql	I	4785.405	-.058	11	RD					
17234		I	4810.500	-.391	7	KL 17285		I	4793.538	-.052	9	RD					
17235		I	4846.492	-.414	6	KL 17286		I	4821.374	-.065	8	RG					
17236	WZ And	I	4842.414	-.022	6	KL 17287		I	4821.3872	-.0522	6	(RD)					
17237		I	4865.364	-.029	6	KL 17288		II	4842.416	-.055	7	RG					
17238	XZ And	I	4815.480	-.048	8	RG 17289		I	4854.324	-.057	7	RG					
17239		I	4838.562	-.040	6	MA 17290		II	4878.401	-.053	8	RG					
17240		I	4857.557	-.048	6	KL 17291	V 337 Aql	I	4845.380	-.118	7	RG					
17241	AB And	II	4785.418	+.038	7	RD 17292	V 343 Aql	I	4812.412	-.012	8	HP					
17242		I	4793.535	+.023	8	RD 17293		I	4847.461	-.011	15	DE					
17243	EP And	I	4829.588	*	6	KL 17294	V 346 Aql	I	4841.396	-.012	8	HP					
17244		II	4830.607	*	6	KL 17295	V 407 Aql	I	4793.468	+.077	6	KL					
17245		II	4835.457	*	6	KL 17296	<u>new</u>	I	4877.374	+.060	7	KL					
17246		II	4865.362	*	7	KL 17297	V 417 Aql	II	4815.397	+.056	11	(RD)					
17247	EX And	I	4791.570	-.406	7	KL 17298	V 420 Aql	I	4854.449	-.006	7	KL					
17248		I	4809.520	-.410	9	DE 17299	<u>new</u> V 479 Aql	I	4810.417	+.020	6	KL					
17249		I	4809.532	-.398	8	KL 17300		I	4810.418	+.021	5	DE					
17250		I	4871.556	-.400	6	KL 17301		I	4810.421	+.025	5	IN					
17251	GZ And	I	4808.501	**	23	DE 17302		I	4850.424	+.014	17	DE					
17252		I	4811.528	**	7	DE 17303	V 760 Aql	I	4810.457	+.018	6	DE					
17253		I	4811.529	**	7	KL 17304		I	4810.463	+.025	7	KL					
17254		I	4811.533	**	7	DM 17305		I	4810.470	+.032	5	IN					
17255		I	4846.615	**	7	KL 17306	V 762 Aql	I	4844.533	****	6	KL					
17256	XZ Aqr	I	4809.580	***	8	DE 17307	V 803 Aql	II	4779.512	*****	11	DE					
17257		I	4809.586	***	8	KL 17308		I	4780.435	*****	18	DE					
17258		I	4842.538	***	6	KL 17309		II	4791.486	*****	6	KL					
17259	AT Aqr	§§§	4810.511	+.041	6	KL 17310		I	4793.467	*****	15	DE					
17260		§§§	4810.513	+.043	6	DE 17311		I	4811.379	*****	9	DE					
17261		§§§	4810.516	+.046	5	IN 17312		I	4811.381	*****	9	DM					
17262		§§§	4811.543	+.008	6	DM 17313		I	4811.382	*****	9	KL					
17263		§§§	4811.543	+.008	7	DE 17314		I	4817.436	*****	10	DE					
17264		§§§	4811.574	+.040	6	KL 17315		I	4874.317	*****	4	DE					
17265		§§§	4846.548	+.043	7	KL 17316	V 805 Aql	II	4820.4858	+.0295	14	(RD)					
17266	AU Aqr	I	4854.383	+.023	8	KL 17317	V 829 Aql	I	4793.498	*****	8	RD					
17267	AY Aqr	§§§	4844.411	-.012	5	KL 17318		I	4821.398	*****	6	(RD)					
17268	<u>new</u>	§§§	4844.551	-.012	6	KL 17319	V 1045 Aql	I	4846.484	-.010	7	KL					
17269	CR Aqr	II	4790.537	+.198	6	KL 17320	<u>new</u> SS Ari	II	4821.456	-.139	7	RG					
17270		II	4791.547	+.178	5	KL 17321		II	4831.606	-.138	9	RG					
17271		II	4817.528	+.178	16	DE 17322	TX Ari	I	4842.565	-.155	6	KL					
17272		I	4868.474	+.189	16	DE 17323		I	4877.509	-.198	6	KL					
17273	CX Aqr	I	4790.566	+.012	7	KL 17324	WW Aur	I	4280.353	+.002	16	PM					
17274		I	4853.390	+.009	6	KL 17325		I	4583.357	+.004	18	PM					
17275		I	4878.411	+.010	7	RG 17326	TU Boo	II	4793.425	.000	7	KL					
17276		I	4878.413	+.012	9	HP 17327		I	4813.379	+.010	8	HP					
17277	CZ Aqr	I	4810.532	+.003	6	DE 17328	AC Boo	I	4815.366	-.010	7	RG					
17278		I	4810.533	+.003	5	IN 17329											
17279		I	4810.534	+.005	6	KL 17330											
17280	EE Aqr	I	4878.346	+.005	8	RG 17331											

* * * * * § § § see preceding page

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
17329		II	4824.358	-.086	7	RG	17367		I	4854.425	+.000	11	HP
17330	Y Cam	I	4869.295	+.174	5	KL	17368	XX Cep	I	4816.402	-.027	11	MA
17331	AQ Cam	I	4844.556	+.017	7	KL	17369		I	4816.408	-.021	11	KL
17332	YZ CVn	I	4793.437	*	8	KL	17370		I	4816.410	-.019	9	IN
17333	TY Cap	I	4793.458	-.099	8	HP	17371		I	4816.410	-.019	6	RG
17334		I	4793.458	-.098	7	KL	17372	BR Cep	I	4877.476	-.145	7	KL
17335	RZ Cas	I	4253.321	+.002	27	JV	17373	DP Cep	I	4871.550	***	6	KL
17336		I	4259.295	.000	21	JV	17374		I	4873.496	***	6	KL
17337		I	4486.392	.000	29	PM	17375	EK Cep	I	4847.417	+.012	9	HP
17338		I	4498.344	-.001	31	JV	17376		I	4878.412	+.013	8	HP
17339		I	4498.349	+.004	32	PM	17377	GI Cep	I	4868.587	-.068	6	KL
17340		I	4517.476	+.007	34	PM	17378	TW Cet	II	4841.647	-.031	7	KL
17341		I	4553.331	+.005	26	PM	17379		II	4868.591	-.019	7	KL
17342		I	4811.496	-.003	16	PF	17380		II	4877.456	-.026	6	KL
17343		I	4811.497	-.003	17	EN	17381	VY Cet	I	4842.530	****	6	KL
17344		I	4811.498	-.001	15	PM	17382		I	4847.639	****	6	KL
17345		I	4829.428	.000	26	GB	17383		II	4868.601	****	7	KL
17346		I	4835.400	-.005	14	GB	17384		I	4873.540	****	7	KL
17347		I	4835.403	-.001	19	PM	17385		II	4877.470	****	6	KL
17348		I	4835.405	+.001	13	RB	17386	AA Cet	I	4831.536	*****	4	KL
17349		I	4835.408	+.004	11	RL	17387		II	4842.531	*****	6	KL
17350	TV Cas	I	4814.523	-.038	17	RB	17388		I	4847.624	*****	9	KL
17351		I	4834.464	-.036	16	RB	17389		II	4873.612	*****	7	KL
17352		I	4834.475	-.025	25	PM	17390	TW CrB	II	4824.409	*****	5	KL
17353	IR Cas	I	4853.318	-.098	6	KL	17391	SW Cyg	I	4840.349	+.251	7	KL
17354		I	4859.442	-.101	6	KL	17392	UW Cyg	I	4842.602	+.005	7	KL
17355	IV Cas	I	4868.669	+.120	8	KL	17393	WW Cyg	I	4798.520	+.033	7	KL
17356		I	4873.652	+.111	11	KL	17394	WZ Cyg	I	4831.419	+.025	9	KL
17357	OR Cas	I	4844.463	+.043	7	HP	17395		I	4834.329	+.012	6	KL
17358		I	4854.429	+.044	8	HP	17396		I	4838.424	+.016	6	KL
17359	V 345 Cas	I	4847.572	-.002	6	KL	17397	ZZ Cyg	I	4824.347	-.032	6	KL
17360	V ^{neu} 309 Cas	I	4865.647	+.293	8	KL	17398		I	4844.462	-.033	7	HP
17361	V ^{neu} 523 Cas	I	4793.434	**	6	KL	17399		I	4878.406	-.034	9	HP
17362		I	4865.409	**	6	KL	17400	CG Cyg	I	4785.408	-.027	10	RD
17363	U Cep (n)	I	4793.392	+.039	9	KL	17401		I	4795.512	-.021	14	DE
17364	SU Cep	I	4793.381	+.010	6	KL	17402		I	4814.446	-.021	9	KL
17365	WX Cep §	II	4820.400	+.022	16	(RD)	17403		I	4814.447	-.020	5	MA
17366	WY Cep	I	4844.433	+.008	9	HP	17404		I	4816.340	-.021	8	KL

* no period given by the GCVS, O-C according to the elements of BBSAG Bulletin 27, page 7: +.084

** not contained in the GCVS 1969, O-C according to the GCVS 1976: +.003+.001

*** see page 7 of this issue

**** GCVS 1969 period erroneous, O-C according to the GCVS 1976: -.001
-.005 -.003 -.005 +.006

***** not contained in the GCVS 1969, O-C according to the GCVS 1974: -.025
-.020 -.021 -.037

***** not contained in the GCVS 1969, O-C according to the GCVS 1976: +.008
§ displaced secondary

(n) not disturbed according to the criteria of Crawford and Olson, PASP

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
17405		I	4821.383	-.027		7 RG	17447	TW Dra	I	4787.479	-.050	7	KL
17406		I	4838.430	-.021		8 HP	17448		I	4832.389	-.049	6	KL
17407		I	4845.365	-.029		7 RG	17449		I	4832.394	-.044	17	(RD)
17408	V 382 Cyg	II*	4842.3538	+.0657	14	(RD)	17450		I	4832.402	-.036	12	HP
17409	V 387 Cyg	I	4793.428	+.062		7 HP	17451		I	4877.302	-.046	9	HP
17410		I	4877.346	+.062		8 HP	17452	UZ Dra	I	4854.367	-.046	8	RG
17411	V 456 Cyg	I	4853.435	+.030		8 HP	17453		I	4854.406	-.008	11	HP
17412		I	4878.380	+.022		9 HP	17454	AI Dra	I	4466.467	+.008	27	PM
17413	V 470 Cyg	I	4820.485	-.070	14	(RD)	17455		I	4840.495	+.006	23	PM
17414	^{neu} V 525 Cyg	I	4787.513	+.387		8 KL	17456		I	4840.495	+.006	12	RB
17415	^{neu} V 687 Cyg	I	4877.432	+.015	10	HP	17457	CM Dra	I	4765.438	**	23	DE
17416	^{neu} V 698 Cyg	I	4869.1	+.3		7 KL	17458		I	4772.416	**	36	DE
17417	^{neu} V 700 Cyg	I	4793.514	-.071		6 RD	17459		I	4777.494	**	27	DE
17418	V 728 Cyg	I	4806.422	+.086		7 HP	17460		I	4784.466	**	28	DE
17419	V 836 Cyg	I	4821.463	-.002		6 RG	17461		I	4832.376	**	6	KL
17420		I	4842.3802	+.0060	16	(RD)	17462		I	4869.451	**	24	DE
17421	W Del	I	4842.456	+.147		6 KL	17463	S Equ	I	4847.387	+.025	11	HP
17422	TT Del	I	4853.425	+.061		6 KL	17464		I	4878.301	+.015	9	RG
17423		I	4853.434	+.069		11 HP	17465		I	4878.322	+.036	9	HP
17424	TY Del	I	4822.375	+.023		6 (RD)	17466	RZ Equ	I	4842.386	+.054	6	KL
17425		I	4835.472	+.018		8 KL	17467	^{neu} WX Eri	I	4847.535	+.011	6	KL
17426		I	4847.380	+.014		11 HP	17468	ZZ Eri	I	4854.610	+.022	6	KL
17427		I	4878.356	+.022		11 HP	17469	AM Eri	II	4844.617	***	6	KL
17428		I	4878.367	+.033		7 RG	17470		I	4854.587	***	6	KL
17429	YY Del	I	4787.587	+.028		8 KL	17471	BD Gem	I	4873.569	+.056	7	KL
17430		I	4834.380	+.029		6 KL	17472	SZ Her	I	4773.463	+.039	12	DE
17431	DM Del	I	4822.381	+.069	13	(RD)	17473		I	4796.364	+.034	6	KL
17432	FZ Del	I	4814.368	-.016		9 KL	17474		I	4796.368	+.037	5	APe
17433		I	4814.369	-.015		6 MA	17475		I	4818.454	+.034	7	KL
17434		I	4814.373	-.011		7 IN	17476		I	4832.356	+.030	9	RG
17435		I	4821.417	-.015		7 RG	17477		I	4832.365	+.038	8	HP
17436		I	4854.323	-.005		7 HP	17478		I	4837.271	+.035	13	IN
17437	Z Dra	I	4793.391	+.018		6 KL	17479		I	4837.272	+.037	14	NC
17438		I	4835.475	+.021		6 KL	17480		I	4845.455	+.038	10	IN
17439		I	4854.475	+.016	12	HP	17481	TT Her	I	4793.415	-.039	6	RG
17440		I	4865.334	+.016		7 KL	17482	TU Her	I	4816.362	-.086	7	RG
17441	RR Dra	I	4834.478	+.188		6 KL	17483	TX Her	I	4486.403	+.007	11	EP
17442	RZ Dra	I	4793.441	-.016		7 HP	17484	AK Her	I	4821.397	-.037	10	(RD)
17443		I	4815.471	-.020		7 RG	17485		II	4823.2928	-.0378	10	(DE)
17444		I	4830.346	-.020		7 RC	17486		I	4840.3623	-.0401	34	(DE)
17445		I	4847.422	-.021		8 HP	17487	AM Her	I	4812.447	****	40	DE
17446		I	4878.277	-.015		7 RG	17488		I	4847.397	****	19	DE
							17489	^{neu}	I	4876.289	****	20	DE

* displaced secondary

** GCVS elements incomplete, O-C according to Martins' elements PASP 87, page 168, 1975 : -.485 -.484 -.481 -.485 -.491 -.497

*** O-C according to the GCVS amounts to several entire periods, O-C according to the elements of BBSAG Bulletin 50, page 5 : -.003 -.005

**** no period given by the GCVS, O-C according to the elements of Szkody & Brownlee, Ap J 212 page 113, 1977. .024 .020 .021

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
17490	CC Her	I	4844.352	+0.099	8	HP	17537		II	4816.418	-0.012	7	RG
17491		I	4877.298	+0.100	8	HP	17538	V 451 Oph	I	4834.3649	+0.0072	14	(RD)
17492		I	4877.298	+0.100	7	KL	17539		I	4845.333	-0.008	7	RG
17493	DH Her	I	4841.412	-0.044	12	HP	17540		I	4878.292	+0.003	7	RG
17494		I	4865.299	-0.052	9	HP	17541	V 456 Oph	II	4814.468	-0.234	14	(RD)
17495	DP Her	I	4787.468	-0.194	7	KL	17542		I	4842.406	-0.300	16	(RD)
17496	DQ Her	I	4809.474	+0.010	9	KL	17543	V 501 Oph	I	4835.362	+0.001	7	HP
17497		I	4809.475	+0.011	11	DE	17544		I	4865.366	+0.008	12	HP
17498		I	4812.572	+0.010	31	NC	17545	V 508 Oph	II	4742.408	+0.013	7	RG
17499		I	4812.572	+0.010	15	DM	17546		I	4779.467	+0.007	17	DE
17500		I	4812.572	+0.010	31	DE	17547		II	4793.437	+0.013	6	HP
17501		I	4819.542	+0.010	21	DE	17548		II	4812.411	+0.023	7	HP
17502		I	4848.392	+0.010	27	DE	17549		I	4816.365	+0.013	6	RG
17503		I	4853.428	+0.012	32	DE	17550		I	4865.327	+0.014	7	HP
17504		I	4853.429	+0.013	33	NC	17551	V 557 Oph	I	4791.524	+0.274	6	KL
17505	GL Her	I	4806.452	+0.088	8	HP	17552	V 566 Oph	II	4815.4259	+0.0534	14	(RD)
17506		I	4813.486	+0.086	9	HP	17553		I	4816.4496	+0.0530	12	(RD)
17507	LP Her _{new}	I	4844.543	-0.367	6	KL	17554	V 586 Oph	I	4791.404	+0.012	9	KL
17508	MT Her	I	4784.558	+0.026	21	DE	17555	V 752 Oph	I	4811.509	*	8	DE
17509		I	4787.498	+0.040	8	KL	17556		I	4811.521	*	8	DM
17510	MX Her	I	4806.432	-0.187	7	HP	17557		I	4811.522	*	8	KL
17511		I	4813.469	-0.192	8	HP	17558	V 839 Oph	II	4815.480	+0.034	18	(RD)
17512		I	4853.361	-0.210	6	KL	17559	V 1010 Oph	I	4793.401	-0.070	7	RG
17513	PW Her	I	4785.433	-0.080	11	RD	17560	UX Peg	I	4869.328	-0.035	9	RG
17514	V 338 Her	I	4815.368	+0.106	7	RG	17561	BG Peg	I	4878.442	+0.414	8	KL
17515		I	4832.335	+0.099	7	RG	17562	BN Peg	I	4793.415	-0.292	7	RG
17516		I	4845.394	+0.101	8	RG	17563		I	4838.363	-0.281	9	HP
17517		I	4845.399	+0.106	11	HP	17564	BY Peg	II	4787.443	+0.084	7	KL
17518	SW Lac	I	4805.4893	-0.1434	12	(DE)	17565		I	4793.424	+0.082	6	KL
17519		I	4842.3752	-0.1412	14	(RD)	17566		II	4874.294	+0.084	5	KL
17520	VX Lac	I	4853.380	-0.079	11	HP	17567		II	4878.393	+0.080	6	KL
17521	AU Lac	I	4790.525	-0.068	7	KL	17568	CW Peg	I	4871.548	-0.274	5	KL
17522		I	4847.606	-0.078	6	KL	17569	DO Peg	I	4853.401	+0.169	6	KL
17523	CM Lac	I	4838.401	+0.009	11	HP	17570	RT Per	I	4846.363	-0.072	19	DE
17524	TT Lyr	I	4829.578	+0.015	8	KL	17571	ST Per	I	4846.554	-0.027	6	KL
17525	TZ Lyr	I	4813.496	+0.037	5	HP	17572	WY Per	I	4844.505	-0.036	6	KL
17526		I	4847.342	+0.038	9	HP	17573	BY Per	I	4846.399	+0.166	7	KL
17527	UZ Lyr	I	4847.405	+0.027	15	HP	17574		I	4854.468	+0.167	6	KL
17528	EW Lyr	I	4835.422	+0.076	13	HP	17575	IZ Per	I	4485.393	+0.020	19	EP
17529		I	4835.425	+0.079	7	KL	17576	KW Per	I	4812.566	+0.041	7	KL
17530		I	4878.295	+0.077	11	HP	17577		I	4827.465	+0.041	6	KL
17531	FL Lyr	I	4821.366	+0.006	12	(RD)	17578		I	4842.368	+0.043	6	KL
17532		I	4845.324	+0.004	7	RG	17579		I	4865.648	+0.042	6	KL
17533		I	4845.325	+0.005	7	HP	17580	β Per	I	4821.465	-0.129	6	RG
17534		I	4869.270	-0.010	7	RG	17581	Y Psc	I	4844.428	+0.161	11	HP
17535	U Oph	I	4369.430	+0.012	21	PM							
17536		II	4489.348	.000	45	PM							

* no period given by the GCVS, O-C according to the elements of BBSAG Bulletin 27 page 4 footnote 1. + 0.42 + 0.53 + 0.54

cur- rent no.	star	minimum or- JD hel der 244...	0-C	n	ob- n ser- ver	cur- rent no.	star	minimum or- JD hel der 244...	0-C	n	ob- n ser- ver
17582		I 4878.317	+.158	11	HP	17625	AC Tau	I 4878.508	+.064	6	KL
17583	SX Psc	I 4847.614	-.037	5	KL	17626	AM Tau	I 4844.622	-.176	7	KL
17584	UV Psc	I 4831.552	+.017	8	RG	17627	IL Tau	I 4854.620	*****	8	KL
17585	RW PsA	I 4842.430	-.076	6	KL	17628	V Tri	I 4812.539	+.013	6	KL
17586		I 4877.401	-.068	7	KL	17629		I 4815.480	+.027	8	RG
17587	UZ Sge	I 4844.396	+.053	8	HP	17630		I 4842.389	+.017	7	RG
17588		I 4844.397	+.054	6	KL	17631	X Tri	I 4829.546	-.044	7	KL
17589	CW Sge	II 4832.399	*	14	RD	17632		I 4830.520	-.041	11	KL
17590	XY Sgr	I 4790.513	-.004	6	KL	17633		I 4834.407	-.040	7	KL
17591	EG Sgr	I 4791.527	**	8	KL	17634		I 4835.378	-.041	6	KL
17592		I 4811.410	**	7	KL	17635	RV Tri	I 4857.585	-.032	6	KL
17593		I 4811.426	**	7	DE	17636	RW Tri	I 4809.585	-.003	9	DE
17594		I 4811.434	**	7	DM	17637		I 4809.585	-.003	7	KL
17595	V 535 Sgr	I 4835.389	-.020	6	HP	17638		I 4846.453	-.004	6	KL
17596	U Sct	I 4813.423	+.032	11	HP	17639		I 4846.454	-.003	45	DE
17597	RS Sct	I 4832.394	+.015	6	KL	17640		I 4869.411	-.003	23	DE
17598		I 4832.398	+.020	11	HP	17641	UX UMa	I 4791.401	-.002	6	KL
17599		I 4834.393	+.022	6	KL	17642		I 4819.400	.000	36	DE
17600		I 4842.357	+.015	7	RG	17643	RR Vul	I 4808.550	+.009	7	KL
17601	BS Sct	I 4806.453	+.071	10	HP	17644	VV Vul	I 4844.538	+.195	6	KL
17602	RT Scl	I 4842.587	-.157	7	KL	17645	AW Vul	I 4793.529	-.021	11	KL
17603	AK Ser	I 4842.362	-.006	6	KL	17646		I 4793.534	-.016	6	RD
17604	AU Ser	I 4787.403	***	7	RD	17647		I 4847.564	-.019	6	KL
17605		II 4793.409	***	6	RG	17648		I 4877.399	-.022	10	HP
17606		II 4815.422	***	7	RG	17649	AX Vul	I 4853.388	-.006	7	KL
17607		I 4816.408	***	7	RG	17650	AY Vul	I 4791.445	+.035	9	KL
17608		II 4817.353	***	6	KL	17651	BE Vul	I 4865.309	+.020	8	HP
17609		I 4838.426	***	9	HP	17652	BO Vul	I 4831.458	-.088	9	KL
17610		I 4845.384	***	6	RG	17653		I 4835.351	-.087	6	KL
17611	LX Ser	I 4808.406	****	34	DE	17654		I 4835.352	-.086	7	HP
17612		I 4809.354	****	15	DE	17655	BU Vul	I 4838.435	+.006	8	HP
17613		I 4809.355	****	7	KL	17656		I 4842.423	+.011	7	RG
17614		I 4811.415	****	17	DE	17657		I 4854.375	+.015	8	RG
17615		I 4811.415	****	8	DM	17658	CD Vul	I 4854.434	-.017	12	HP
17616		I 4811.415	****	10	KL	17659		I 4865.372	-.019	6	KL
17617		I 4812.365	****	16	NC	17660	GP Vul	I 4767.484	-.034	13	DE
17618		I 4812.366	****	10	DM	17661		I 4829.450	-.018	6	KL
17619		I 4812.366	****	24	DE	17662		I 4831.505	-.028	6	KL
17620		I 4817.437	****	29	DE	17663		I 4857.316	-.030	6	KL
17621		I 4848.330	****	27	DE	17664	ND Vul	II 4787.417	§	6	KL
17622		I 4869.243	****	20	DE	17665		II 4811.518	§	7	DM
17623	RW Tau	I 4842.486	-.085	7	KL	17666		II 4811.522	§	7	KL
17624		I 4878.480	-.087	7	KL						

* GCVS 1969 elements too inaccurate for reasonable reduction, O-C according to the GCVS 1974: -.006

** O-C according to the GCVS but with half its period (cf. BESAG Bulletin 54, page 4): -.177 -.184 -.168 -.160

*** GCVS 1969 elements too inaccurate for reasonable reduction, O-C according to the GCVS 1974: -.007 +.007 -.010 +.010 -.012 -.002 -.002

**** not contained in the GCVS, O-C according to the elements of Africano, Horne & Margon IAU 3466: +.011 +.009 +.009 +.010 +.010 +.010 +.009 +.010 +.010 +.011 +.011

current no.	star	minimum or- der	JD hel 244...	0-C	n ser- ver	ob- ser- ver	
17667		II	4811.523	§	6	DE	*****no period given by the GCVS 1969, 0-C according to the GCVS 1974: -.013
17668		I	4838.402	§	6	KL	§ not contained in the GCVS 1969, 0-C according to the GCVS 1976:
17669		II	4869.349	§	13	DE	+ .016 + .017 + .021 + .022 + .020
17670		I	4874.349	§	8	DE	+ .008 + .001
17671	NP Vul	I	4842.368	§§	5	KL	§§ not contained in the GCVS 1969, 0-C according to the GCVS 1976: +.053:

V 1933 Sagittarii

The Minimum Brightness and Duration are unknown according to the GCVS 1969-71-74-76. My visual survey of the minimum JD 2444757 yields

$$m_v \min_I = 15.1 \pm .3$$

$$d = 0$$

K. Locher

D P C o p h e i

D i s c o r d a n t R e s u l t s

My two recent visual minima (page 3 of this issue) are again in favour of the new period (cf. BBSAG Bulletin 49, page 6) and contradict again the one of the GCVS, but nevertheless all BBSAG minima as a whole cannot be satisfactorily fitted to an ephemeris. Neither are these 2 new minima equally deep and broad as the distinct one which gave the base to the d value reported in BBSAG Bulletin 54 page 4.

The star seems to be affected by very active gas stream emission, if it is eclipsing at all. The problems cannot be solved visually. K. Locher

E R R A T A

B A S I C C o m p u t e r P r o g r a m BBSAG Bulletin 55 page 5

a) Lines 700 and 840 should be corrected as underlined:

$$700 \text{ VTO} = (\underline{.25882} - \sin(OD) * \sin(VDT)) / (\cos(OD) * \cos(VDT))$$

$$840 \text{ IF VTLC} < 0 \text{ THEN VTL} = (P/2) - \text{ATN}(VTLS / \text{SQR}(1 - VTLS * VTLS)) : \text{GOTO } 860$$

Error a) had affected the heliocentric correction and the time of visibility in certain sectors of Right Ascension.

b) Lines 730 740 750 should be shifted to the new positions 702 704 706 respectively.

Error b) had affected the zenith distances of circumpolar stars.