

BBSAG Bulletin 34

1977 September 7

67th List of Minima of Eclipsing Binaries

The following table lists 222 minima obtained visually mainly during 1977 July and August by the observers

- FA Patrice Albert, Angers, France
- RB Roland Boninsegna, Marcinelle, Belgium
- JB Jean Bourgeois, Montignies-le-Tilleul, Belgium
- JC Jean-Pierre Clovin, Marcinelle, Belgium
- PDa Philippe Danthine, Montignies-sur-Sambre, Belgium
- RD Roger Diethelm, Reinach, Switzerland
- MF Michel Frangeul, Angers, France
- RG Robert Germann, Wald, Switzerland
- VL Viviane Lardinois, Marcinelle, Belgium
- JL Jean-François Le Borgne, Brest, France
- PL Philippe Le Strat, Paris, France
- RL Rolande Leydon, Embrun, France
- KL Kurt Locher, Grüt, Switzerland
- AM Alain Marot, Quimper, France
- PM Pascal Mons, Aubervilliers, France
- MP Maurizio Penna, Asti, Italy
- EP Ennio Foretti, Arconate, Italy
- AR Alain Royer, Epinac, France
- JR Joseph Remis, Aix-en-Provence, France
- GT Gilles Troispoux, Fleury-les-Aubrais, France
- SW Stefano Wabnitz, Roma, Italy

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.

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
*													
11605	RT And	I	3327.424	-0.008	10	KL	11613	XZ And	I	3326.547	-0.028	10	KL
11606		I	3330.559	-0.018	7	KL	11614	AB And	I	3330.562	+0.027	7	RG
11607		I	3335.578	-0.031	6	KL	11615		I	3347.490	+0.028	8	RG
11608		I	3344.399	-0.014	8	RG	11616		I	3358.442	+0.027	5	KL
11609		I	3361.386	-0.009	7	KL	11617		I	3362.417	+0.020	10	KL
11610		I	3371.436	-0.022	7	KL	11618		I	3371.389	+0.031	7	RG
11611	UU And	I	3368.482	+0.101	7	KL	11619	EP And	I	3327.509	**	7	KL
11612		I	3371.455	+0.101	7	KL	11620		II	3358.438	**	10	KL

* The 7 preceding numbers are on page 5 of this issue

** GCVS 1969 period erroneous, O-C according to the GCVS 1976: -0.008
+0.007 +0.008

cur- rent- no.	star	minimum or- JD hel der 244...	O - C	ob- n ser- ver	cur- rent no.	star	minimum or- JD hel der 244...	O - C	ob- n ser- ver
11621		I 3361.470	**	10 KL	11660		I 3330.592	+0.004	8 KL
11622	RY Aqr	I 3359.375	-0.087	8 RG	11661		I 3336.563	-0.001	16 JC
11623		I 3359.383	-0.079	4 KL	11662		I 3336.566	+0.002	14 PDa
11624	XZ Aqr	I 3347.538	*	10 KL	11663		I 3336.570	+0.006	18 EP
11625	CX Aqr	I 3344.442	+0.006	6 RG	11664		I 3336.573	+0.009	7 RG
11626		I 3378.367	+0.015	7 KL	11665		I 3342.538	-0.002	13 JR
11627	CZ Aqr	I 3371.472	+0.016	6 KL	11666		I 3342.540	0.000	20 RL
11628	OO Aql	I 3327.376	-0.036	6 KL	11667		I 3342.540	0.000	9 PM
11629		I 3328.384	-0.041	6 KL	11668		I 3342.541	0.000	14 JL
11630		I 3340.561	-0.017	7 KL	11669		I 3348.513	-0.004	26 PM
11631		II 3347.389	-0.041	7 RG	11670		I 3348.525	+0.008	19 EP
11632		II 3348.399	-0.045	8 RG	11671		I 3348.526	+0.009	29 PL
11633		II 3358.538	-0.041	10 KL	11672		I 3360.469	0.000	13 AM
11634		I 3364.373	-0.034	7 AR	11673		I 3366.443	-0.003	10 RB
11635		I 3365.377	-0.044	8 AR	11674		I 3366.443	-0.002	10 VL
11636		I 3366.396	-0.039	9 AR	11675		I 3366.445	-0.001	12 RL
11637		I 3367.406	-0.042	8 AR	11676		I 3366.446	+0.001	13 AR
11638					11677		I 3366.450	+0.004	17 JR
11639	V 343 Aql	I 3327.512	-0.007	7 KL	11678		I 3366.455	+0.010	9 EP
11640	V 479 Aql	I 3347.454	+0.019	10 KL	11679		I 3372.422	0.000	10 GT
11641	V 803 Aql	I 3336.460	-0.015	11 KL	11680		I 3385.572	+0.002	11 KL
11642		II 3348.447	-0.017	6 KL	11681	TV Cas	I 3007.375	-0.013	7 RB
11643		II 3349.495	-0.019	6 KL	11682		I 3065.385	-0.006	10 MP
11644	V 805 Aql	I 3328.503	+0.025	10 KL	11683		I 3344.510	-0.023	15 JR
11645		I 3340.555	+0.036	12 KL	11684		I 3344.513	-0.020	15 RL
11646	RY Aur	I 3380.598	-0.002	7 KL	11685	AB Cas	I 3385.594	-0.001	10 KL
11647		I 3193.360	+0.031	6 JL	11686	EP Cas	II 3358.359	-0.009	7 KL
11648		I 3222.356	-0.012	10 JC	11687		I 3360.409	+0.008	7 KL
11649	TY Boo	II 3360.400	+0.018	5 RD	11688		II 3362.411	-0.025	10 KL
11650	VW Boo	I 3358.390	-0.070	4 RD	11689	IR Cas	I 3371.469	-0.081	7 KL
11651	SV Cam	I 3067.295	-0.007	7 MP	11690	U Cep	I 3327.485	+0.040	11 KL
11652	TY Cap	I 3361.455	-0.096	10 KL	11691		I 3332.476	+0.045	5 KL
11653	RZ Cas	I 2798.467	+0.001	19 RB	11692		I 3347.425	+0.036	14 RG
11654		I 3176.382	+0.020	18 SW	11693		I 3347.427	+0.038	11 KL
11655		I 3200.310	+0.004	11 JL	11694	EG Cep	I 3340.501	+0.002	21 JL
11656		I 3200.311	+0.005	27 MP	11695	NN Cep	I 3348.482	***	9 GT
11657		I 3225.406	0.000	17 AM	11696	TW Cet	II 3380.650	-0.021	7 KL
11658		I 3231.380	-0.003	15 MF	11697		I 3385.557	-0.024	6 KL
11659		I 3231.381	-0.002	13 PA	11698	VY Cet	II 3366.635	****	5 KL
					11699		I 3371.566	****	6 KL
					11700		II 3380.602	****	10 KL
					11701	AA Cet	I 3357.605	*****	9 KL

** see preceding page

* no period given in the GCVS 1969, O - C according to the GCVS 1974: +0.076

*** no period given in the GCVS, O - C according to Rolland's elements IBVS 1231: -0.050

**** GCVS 1969 period erroneous, O - C according to the GCVS 1976: -0.019 -0.029
-0.026

cur- rent no.	star	minimum or- der	JD hel 244...	0-C	ob- n ser- ver	cur- rent no.	star	minimum or- der	JD hel 244...	0-C	ob- n ser- ver
11702		II	3361.636	*****	12 KL	11733		I	3347.383	***	7 KL
11703	RW Com	II	3326.380	-0.054	7 RG	11734		I	3371.488	***	5 KL
11704	TW CrB	I	3358.401	*	5 RD	11735	SZ Her	I	3343.419	+0.023	7 KL
11705	SW Cyg	I	3349.521	+0.219	10 KL	11736	CC Her	I	3344.423	+0.058	9 KL
11706	ZZ Cyg	I	3331.380	-0.032	5 KL	11737		I	3344.433	+0.069	8 RG
11707		I	3366.577	-0.038	8 KL	11738	GL Her	I	3338.504	+0.080	11 KL
11708	CG Cyg	I	3358.401	-0.018	5 RD	11739	MT Her	I	3360.426	+0.025	5 RD
11709		I	3366.595	-0.028	6 KL	11740	V502 Her	I	3347.454	+0.023	6 RD
11710	GO Cyg	I	3360.372	+0.003	6 RD	11741		I	3358.376	+0.035	5 RD
11711	V370 Cyg	I	3348.492	+0.032	10 RD	11742		II	3360.388	+0.014	6 RD
11712	V387 Cyg	I	3360.405	+0.047	5 RD	11743		I	3387.352	+0.024	6 KL
11713	V456 Cyg	I	3338.401	+0.020	10 KL	11744	u Her	I	3347.418	+0.002	22 EP
11714	V541 Cyg	I	3348.443	-0.081	7 RD	11745	SW Lac	I	3336.582	-0.115	7 RG
11715	V548 Cyg	I	3326.391	-0.093	8 RG	11746		II	3340.594	-0.112	9 KL
11716	**Cyg	I	3336.519	**	6 KL	11747		I	3347.496	-0.107	8 RG
11717	TT Del	I	3360.429 ⁴²⁹	+0.047 ^{+0.029}	6 RD	11748		I	3358.404	-0.104	6 KL
11718	FZ Del	I	3358.386	-0.004	6 KL	11749		I	3359.361	-0.100	4 KL
11719	RZ Dra	I	3347.396	-0.010	8 RG	11750		I	3359.369	-0.101	8 RG
11720	WW Dra	I	3330.558	+0.158	12 RG	11751		II	3362.411	-0.105	10 KL
11721		I	3344.442	+0.153	9 RG	11752		II	3371.391	-0.106	7 RG
11722	AI Dra	I	3248.474	+0.009	33 RP	11753	TW Lac	I	3360.551	-0.078	10 KL
11723		I	3290.418	-0.005	6 RB	11754	CM Lac	I	3336.396	-0.006	7 RG
11724		I	3326.388	+0.001	9 RG	11755		I	3344.419	-0.006	7 RG
11725		I	3344.375	+0.005	13 EP	11756	TZ Lyr	I	3299.471	+0.034	7 AR
11726		I	3357.547	-0.009	27 JB	11757		I	3344.405	+0.018	7 RG
11727		I	3369.536	-0.008	12 RB	11758		I	3371.380	+0.023	9 RG
11728		I	3369.545	+0.001	20 AM	11759	UZ Lyr	I	3330.589	+0.009	6 KL
11729		I	3369.552	+0.008	13 AR	11760	EW Lyr	I	3348.517	+0.058	10 KL
11730		I	3377.335	+0.001	18 EP	11761	NY Lyr	II	3347.437	+0.025	7 RD
11731	CM Dra	I	3331.526	***	6 KL	11762	U Oph	I	3007.407	-0.006	6 RB
11732		I	3338.502	***	7 KL	11763		I	3292.554	-0.007	10 RB
						11764		I	3371.393	-0.004	9 RG

***** see preceding page

* not contained in the GCVS 1969, 0-C according to the GCVS 1976: -0.006

** anonyme, not contained in the GCVS, 0-C according to Clark's elements IBVS 1252: -0.005

*** GCVS elements incomplete, 0-C according to Martins' elements PASP 87, p.160, 1975 : -0.244 -0.245 -0.245 -0.243

current no.	star	minimum or-der	JD hel 244...	O-C	n	ob- server
11765	RV Oph	I	3347.398	-0.003	6	KL
11766	SZ Oph	I	3349.398	+0.283	11	KL
11767	V449 Oph	I	3347.440	+0.056	7	KL
11768	V508 Oph	II	3328.409	+0.005	10	KL
11769		II	3347.387	+0.019	7	RG
11770		I	3371.346	+0.015	7	RG
11771	V566 Oph	II	3348.480	+0.032	8	GT
11772	V586 Oph	I	3336.553	-0.009	6	KL
11773	V752 Oph	I	3338.514	*	7	KL
11774	V1010 Oph	I	3312.448	-0.068	9	AR
11775		I	3359.397	-0.000	10	RG
11776		I	3359.414	-0.063	16	EP
11777		I	3361.375	-0.087	12	AR
11778		I	3365.353	-0.077	10	AR
11779	ER Ori	I	3385.631	-0.032	4	KL
11780	BN Peg	I	3327.603	-0.282	8	KL
11781		I	3360.418	-0.278	12	KL
11782	DI Peg	I	3371.387	-0.019	8	RG
11783	WY Per	I	3380.563	-0.042	7	KL
11784	β Per	I	3327.590	-0.094	10	KL
11785	RW PsA	II	3348.556	-0.052	10	KL
11786	U Sge	I	3367.394	+0.004	7	KL
11787	UZ Sge	I	3335.482	+0.057	10	KL
11788	CW Sge	II	3348.507	**	8	RD
11789		II	3358.401	**	5	RD
11790		II	3360.396	**	6	RD
11791	V505 Sgr	I	3348.499	-0.040	14	GT
11792		I	3348.515	-0.024	31	FL
11793		I	3348.517	-0.023	14	FM
11794		I	3367.446	-0.020	12	AR

current no.	star	minimum or-der	JD hel 244...	O-C	n	ob- server
11795	RS Sct	I	3358.451	+0.017	6	KL
11796		I	3360.451	+0.024	7	KL
11797		I	3362.434	+0.015	9	KL
11798	AU Ser	II	3344.402	***	8	RG
11799		I	3348.460	***	10	RD
11800	AP Tau	II	3380.575	****	6	KL
11801	HU Tau	I	2807.274	+0.022	8	RB
11802	V Tri	I	3346.602	+0.014	10	KL
11803	X Tri	I	3326.503	-0.037	6	KL
11804		I	3327.554	-0.037	10	KL
11805		I	3328.525	-0.038	7	KL
11806		I	3360.588	-0.035	11	KL
11807		I	3361.560	-0.035	7	KL
11808		I	3362.529	-0.038	7	KL
11809	RW Tri	I	3347.560	-0.003	6	KL
11810	UX UMa	I	3335.516	0.000	6	KL
11811		I	3338.465	-0.001	6	KL
11812		I	3349.478	-0.001	5	KL
11813	RU UMi	I	3292.383	+0.001	7	AR
11814		I	3293.421	-0.012	8	AR
11815		I	3326.495	-0.008	7	KL
11816	AW Vul	I	3327.395	-0.025	11	KL
11817		I	3331.426	-0.026	8	KL
11818		I	3347.558	-0.024	6	KL
11819		I	3348.362	-0.026	6	KL
11820	BM Vul	I	3348.498	-0.030	6	RD
11821	CD Vul	I	3366.601	-0.020	6	KL
11822	NO Vul	II	3331.428	*****	7	KL
11823		II	3335.499	*****	7	KL
11824		I	3336.427	*****	7	KL
11825		I	3349.399	*****	8	KL
11826		II	3367.370	*****	10	KL

* no period given in the GCVS, O-C according to the elements of BBSAG Bulletin 27, page 4, footnote 1: 0.000

** GCVS 1969 period too inaccurate for reasonable reduction, O-C according to the GCVS 1974: -0.001 -0.012 +0.002

*** GCVS 1969 period too inaccurate for reasonable reduction, O-C according to the GCVS 1974: -0.006 -0.006

**** GCVS 1969 elements incomplete, O-C according to the GCVS 1976: -0.071

***** not contained in the GCVS 1969, O-C according to the GCVS 1976: +0.033 +0.026 +0.027 +0.021 +0.011

Provisional Elements for V 829 Aquilae

Neither the 1969 edition of the GCVS nor any of its supplements give elements for the eclipsing binary V829 Aql. A visual survey over the last three seasons leads me to the following provisional elements:

$$(I) \quad \text{Min JD hel} = 2442621.472 + 1.2114053 E$$

$$\quad \quad \quad \pm \quad \quad .018 \quad \pm \quad .0000051$$

Among the 104 observations in 22 nights 45 showed the star near minimum. They yielded the following 7 weighted minima:

BBSAG current no.	O	n	weight	E	O - C _I
11598	2442621.464	11	4	0	-0.008
11599	2632.34:	1	1	9	-0.035
11600	2633.50:	10	1	10	-0.086 only descend-
11601	2740.26:	1	1	98	+0.070 (ing branch
11602	2993.382	9	4	307	+0.002
11603	3016.378	6	2	326	-0.012
11604	3360.421	7	4	610	-0.008

The observations outside of the main minimum exclude a shorter period. A secondary minimum was not observed visually. However there seems to be a small indication that the period should be doubled. To give an answer to this question as well as to verify the elements given above, further observations are recommended.

R. Diethelm

A Reinterpretation of V 868 Ophiuchi

The period 0.443224^d was given the uncertainty sign (:) by the GCVS 1969 and not improved in the 3 GCVS supplements issued since. My observations during 17 nights of this summer show this value to be erroneous in figure 36 and offer new provisional elements as follows:

$$\text{Min}_I \text{ JD hel} = 2443280.126 + 1.352 E$$

Very probably a better solution does not exist for these observations. Therefore, since the right half of figure 36 does not give a very convincing impression either, the light variation may be irregular either purely or superposed to eclipses.

K. Locher

figure 36

compar-
ison
magni-
tude 7'
southwest

compar-
ison
magni-
tude 3'
southwest

