

BBSAG Bulletin 27

1976 May 4

60th List of Minima of Eclipsing Binaries

The following table lists minima obtained visually mainly during 1976 March and April by the observers

RB Roland Boninsegna, Marcinelle, Belgium
 PC Paolo Carnevali, Roma, Italy
 JC Jean-Pierre Clavin, Marcinelle, Belgium
 RD Roger Diethelm, Reinach, Switzerland
 PD Philippe Doby, Wattrelos, France
 RG Robert Germann, Wald, Switzerland
 JL Jean-François Le Borgne, Brest, France
 KL Kurt Locher, Grüt, Switzerland
 AM Alain Marot, Quimper, France
 HP Hermann Peter, Otelfingen, Switzerland
 EP Ennio Poretti, Arconate, Italy
 PR Philippe Ralincourt, Nantes, France
 JR Joseph Remis, St. Amand, France
 AR Alain Royer, Epinac, France
 GT Gilles Troispoux, Fleury-lès-Aubrais, France
 VT Vince Tuboly, Debrecen, Hungary

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

cur- rent no.	star	minimum or- der	JD hel 244...	O-C	ob- n ser- ver	cur- rent no.	star	minimum or- der	JD hel 244...	O-C	ob- n ser- ver
9602	XZ And	I	2839.282	-0.024	10 RG	9629		I	2864.410	+0.005	7 KL
9603		I	2839.282	-0.023	10 KL	9630		I	2866.361	+0.010	7 KL
9604		I	2839.283	-0.022	8 HP	9631		II	2866.510	-0.004	6 KL
9605	LT Aql	I	2879.623	+0.015	8 KL	9532		I	2867.332	+0.009	7 KL
9606	00 Aql	II	2878.612	-0.034	15 KL	9633		II	2869.423	-0.009	8 KL
9607		II	2879.617	-0.042	11 KL	9634		I	2869.590	-0.003	6 KL
9608		I	2897.608	-0.043	8 KL	9635		I	2898.465	+0.010	10 HP
9609	V 343 Aql	I	2899.566	-0.005	7 KL	9636		I	2899.433	+0.005	9 HP
9610	WW Aur	II	2842.354	+0.002	9 HP	9637	TY Boo	I	2887.383	+0.025	6 RD
9611		II	2847.402	0.000	11 GT	9638	TZ Boo	I	2874.386	+0.017	10 HP
9612		I	2866.338	-0.002	10 HP	9639	AC Boo	II	2887.417	+0.005	9 RD
9613		I	2866.342	+0.002	13 RB	9640	AR Boo	I	2870.516	+0.058	7 KL
9614		I	2866.343	+0.004	8 JC	9641		I	2872.594	+0.052	6 KL
9615		II	2890.329	+0.002	7 JR	9642	Y Cam	I	2839.629	+0.100	7 KL
9616	ZZ Aur	I	2866.388	-0.021	10 HP	9643		I	2859.454	+0.092	15 HP
9617		I	2869.393	-0.020	10 HP	9644		I	2869.371	+0.092	11 HP
9618		I	2872.394	-0.024	9 HP	9645	SV Cam	I	2884.620	-0.015	10 KL
9619	AP Aur	I	2782.370	+0.186	11 RD	9646		I	2886.402	-0.013	10 HP
9620	AR Aur	II	2799.401	+0.013	17 EP	9647	XZ Cam	I	2866.359	+0.074	10 KL
9621		II	2832.452	-0.013	34 EP	9648	TU Cnc	I	2840.454	-0.022	6 KL
9622		I	2859.361	+0.020	11 HP	9649	TX Cnc	I	2887.378	+0.006	7 RD
9623		II	2890.340	-0.010	8 JR	9650	WW Cnc	I	2866.419	-0.231	7 HP
9624	CL Aur	I	2841.349	+0.055	10 HP	9651		I	2885.405	-0.217	10 HP
9625	HL Aur	I	2870.437	+0.002	10 HP	9652	WX Cnc	I	2872.379	+0.119	10 HP
9626		I	2880.399	+0.006	8 HP	9653	WY Cnc	I	2840.289	0.000	6 RG
9627		I	2885.374	+0.001	9 HP	9654		I	2859.376	+0.011	11 HP
9628	TU Boo	II	2858.415	+0.009	12 KL	9655		I	2864.336	-0.005	8 RG

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
9656		I	2869.313	-0.004	7 RD	9707		I	2869.383	-0.039	8 RG
9657		I	2869.322	+0.004	7 RG	9708		I	2870.330	-0.042	8 RG
9658		I	2888.394	+0.001	10 HP	9709		II	2871.634	-0.043	7 KL
9659	VZ CVn	I	2887.345	-0.008	5 RD	9710		II	2872.360	-0.029	7 KL
9660	YZ CVn	I	2858.481	*	12 KL	9711		I	2874.369	-0.047	9 HP
9661		I	2864.359	*	10 KL	9712		II	2885.408	-0.035	8 RG
9662		I	2871.406	*	13 KL	9713		II	2886.346	-0.046	7 RG
9663		I	2872.586	*	12 KL	9714		II	2899.404	-0.042	6 RG
9664	R CMa	I	2802.432	+0.025	11 VT	9715	RZ Com	II	2874.398	-0.001	11 HP
9665	RX CMa	I	2841.358	-0.020	10 KL	9716		I	2885.400	-0.001	9 HP
9666	XZ CMi	I	2866.353	-0.016	7 RD	9717		I	2887.425	-0.007	9 HP
9667	AK CMi	I	2841.351	+0.008	8 HP	9718		II	2899.443	-0.006	11 HP
9668		I	2858.334	+0.013	12 HP	9719	CC Com	I	2841.448	+0.092	9 HP
9669		I	2859.459	+0.006	10 HP	9720		I	2858.447	+0.099	8 HP
9670		I	2871.359	+0.023	7 KL	9721		I	2866.407	+0.114	7 KL
9671		I	2880.398	+0.007	8 HP	9722		II	2866.504	+0.102	6 KL
9672		I	2888.328	+0.015	8 HP	9723		II	2867.380	+0.096	8 HP
9673	RZ Cas	I	2802.296	+0.008	16 VT	9724		I	2870.363	+0.098	8 HP
9674		I	2803.476	-0.008	22 VT	9725		I	2872.354	+0.104	7 KL
9675		I	2827.393	+0.004	13 RB	9726		II	2880.406	+0.101	8 HP
9676		I	2839.344	+0.003	9 HP	9727		II	2886.371	+0.107	8 KL
9677		I	2839.345	+0.003	22 JC	9728		I	2887.352	+0.095	7 KL
9678		I	2839.346	+0.005	17 JR	9729		I	2887.360	+0.104	5 RD
9679		I	2839.350	+0.008	9 RG	9730		II	2889.448	+0.095	9 HP
9680		I	2845.323	+0.005	9 PR	9731		I	2898.389	+0.098	8 HP
9681		I	2858.467	+0.002	12 PR	9732	DD Com	II	2866.471	+0.028	11 KL
9682		I	2858.469	+0.003	9 JR	9733		II	2886.391	+0.028	7 KL
9683		I	2858.469	+0.003	22 JC	9734		I	2887.346	+0.041	8 KL
9684		I	2858.469	+0.003	12 HP	9735	U CrB	I	2898.391	-0.019	9 HP
9685		I	2864.445	+0.004	14 JR	9736	TW CrB	II	2840.486	***	7 KL
9686		I	2864.448	+0.007	8 HP	9737		I	2858.451	***	11 KL
9687		I	2870.419	+0.001	11 HP	9738		II	2870.518	***	11 KL
9688		I	2870.424	+0.006	7 PR	9739		I	2878.469	***	7 KL
9689	AB Cas	I	2889.421	+0.003	9 HP	9740		I	2882.600	***	6 KL
9690	IV Cas	I	2869.616	+0.076	7 KL	9741		II	2886.417	***	10 KL
9691		I	2872.617	+0.081	6 KL	9742	W Crv	I	2840.500	-0.011	6 KL
9692		I	2874.618	+0.086	9 KL	9743		II	2869.413	-0.010	9 HP
9693		I	2878.612	+0.086	6 KL	9744		II	2874.465	-0.002	9 HP
9694		I	2879.609	+0.084	11 KL	9745		I	2887.460	-0.009	10 KL
9695		I	2897.575	+0.077	10 KL	9746		I	2887.464	-0.005	9 HP
9696		I	2898.572	+0.075	7 KL	9747		II	2888.426	-0.010	9 HP
9697	V523 Cas	II	2859.302	**	6 KL	9748	V Crt	I	2867.591	+0.028	9 HP
9698	U Cep	I	2841.342	+0.040	10 KL	9749		I	2874.415	+0.031	8 HP
9699		I	2846.330	+0.042	6 KL	9750		I	2874.416	+0.032	10 KL
9700	VW Cep	I	2847.367	-0.106	6 KL	9751		I	2886.371	+0.053	8 KL
9701		II	2848.357	-0.089	10 KL	9752	UW Cyg	I	2889.463	-0.008	11 KL
9702	EG Cep	I	2888.475	+0.011	7 KL	9753	AV Del	I	2899.543	-0.028	6 KL
9703	RW Com	I	2864.395	-0.042	10 RG	9754	Z Dra	I	2841.378	+0.003	8 HP
9704		I	2866.292	-0.045	8 RG	9755		I	2887.527	-0.001	12 HP
9705		II	2866.424	-0.031	9 RG	9756		I	2898.390	+0.002	8 KL
9706		II	2867.364	-0.041	8 RG	9757		I	2898.390	+0.003	9 HP

* period previously unknown, 0 - C according to the elements of page 7 of this issue: 0.000 +0.001 -0.005 -0.001

** not contained in the GCVS, 0 - C according to Häussler's elements IBVS 887: +0.027

*** not contained in the GCVS, 0 - C according to the elements of Цесевич and Каретников, Переменные Звёзды Приложение 1, № 6, p.459: -0.006

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
9758	RR Dra	I	2886.518	+0.115	13	HP	9813		I	2874.369	+0.008	11	KL
9759	RZ Dra	I	2887.413	-0.011	10	HP	9814		I	2874.371	+0.010	9	HP
9760	TW Dra	I	2898.467	-0.038	10	HP	9815		II	2898.359	+0.012	9	HP
9761	AI Dra	I	2874.439	+0.004	12	KL	9816	CU Hya	I	2887.378	+0.084	10	KL
9762		I	2880.420	-0.008	9	RG	9817	EU Hya	I	2866.399	-0.013	9	HP
9763		I	2886.421	-0.001	8	RG	9818	SW Lac	II	2882.615	-0.092	10	KL
9764	YY Eri	I	2839.294	-0.023	9	RG	9819	Y Leo	I	2858.403	+0.094	10	KL
9765		I	2840.265	-0.017	7	RG	9820		I	2858.404	+0.095	12	HP
9766		I	2848.302	-0.017	9	RG	9821		I	2885.379	+0.093	11	KL
9767	SX Gem	I	2835.402	-0.031	11	HP	9822		I	2885.381	+0.095	10	HP
9768	TX Gem	I	2839.330	+0.003	11	HP	9823		I	2885.383	+0.097	15	RG
9769		I	2867.321	-0.006	8	KL	9824	UU Leo	I	2859.373	-0.016	6	KL
9770	AF Gem	I	2840.372	-0.016	10	HP	9825		I	2864.411	-0.017	6	HP
9771		I	2855.297	-0.013	12	RG	9826		I	2869.444	-0.023	8	KL
9772		I	2855.299	-0.012	10	KL	9827		I	2869.448	-0.019	14	HP
9773		I	2886.375	-0.023	9	RG	9828		I	2874.484	-0.023	10	KL
9774	AY Gem	I	2839.400	+0.004	13	HP	9829	UV Leo	II	2842.443	-0.011	14	JC
9775		I	2842.436	-0.014	12	HP	9830		I	2843.343	-0.012	16	JC
9776	BD Gem	I	2841.341	+0.040	8	HP	9831		I	2848.349	-0.006	6	KL
9777	BO Gem	I	2841.299	0.000	6	KL	9832		I	2848.354	-0.002	8	HP
9778	CX Gem	I	2842.469	-0.039	9	HP	9833		I	2848.354	-0.001	7	RG
9779	GW Gem	I	2858.392	-0.042	12	HP	9834		II	2848.648	-0.008	6	KL
9780		I	2864.328	-0.041	8	HP	9835		II	2859.452	-0.005	10	HP
9781		I	2866.305	-0.042	8	HP	9836		I	2866.336	-0.022	6	RD
9782		I	2885.416	-0.033	8	HP	9837		I	2866.364	+0.006	8	RG
9783		I	2885.437	-0.012	10	KL	9838		I	2869.347	-0.011	7	RD
9784		I	2887.400	-0.028	12	HP	9839		I	2869.348	-0.011	14	JC
9785		I	2887.401	-0.027	8	RD	9840		I	2869.358	0.000	7	RG
9786	HR Gem	I	2869.312	-0.002	10	KL	9841		I	2869.360	+0.002	9	HP
9787		I	2869.330	+0.016	7	RD	9842		I	2878.344	-0.016	7	KL
9788		I	2885.348	0.000	10	KL	9843		II	2880.446	-0.014	11	RG
9789	RX Her	II	2871.618	-0.003	10	KL	9844		II	2887.363	+0.002	8	HP
9790	SZ Her	I	2866.476	+0.029	10	HP	9845		I	2899.359	-0.003	7	RG
9791		I	2870.563	+0.025	11	KL	9846	UX Leo	I	2869.319	-0.259	7	RD
9792		I	2879.558	+0.022	11	KL	9847	VZ Leo	I	2887.346	-0.149	10	HP
9793		I	2884.468	+0.023	11	KL	9848		I	2899.336	-0.148	5	KL
9794	TU Her	I	2898.511	-0.078	11	HP	9849		I	2899.349	-0.136	9	HP
9795	UX Her	I	2878.486	-0.058	7	KL	9850	XZ Leo	II	2887.351	+0.008	8	RD
9796	CC Her	I	2874.517	+0.059	10	KL	9851	AM Leo	II	2866.321	-0.031	6	RD
9797	MT Her	I	2874.654	+0.018	10	KL	9852		I	2887.355	-0.030	6	RD
9798		I	2878.566	+0.029	10	KL	9853	BL Leo	I	2859.348	+0.004	6	KL
9799		I	2897.588	+0.029	7	KL	9854		I	2864.416	-0.003	4	KL
9800		I	2898.561	+0.027	7	KL	9855		II	2867.379	0.000	7	KL
9801	V 342 Her	I	2884.594	-0.003	11	KL	9856		I	2886.396	-0.013	7	KL
9802	RX Hya	I	2886.406	+0.016	7	RG	9857		II	2898.381	-0.010	6	KL
9803	SX Hya	I	2870.525	+0.206	13	KL	9858	RS Lep	I	2841.319	-0.013	6	KL
9804	TY Hya	I	2840.427	+0.169	13	KL	9859		I	2841.324	-0.008	8	HP
9805	VZ Hya	I	2848.401	+0.011	10	HP	9860	TY Lib	I	2867.454	-0.007	6	KL
9806	WY Hya	I	2839.289	+0.013	8	HP	9861		I	2870.640	-0.023	6	KL
9807		II	2840.366	+0.013	8	HP	9862	RY Lyn		2887.447	*	13	RD
9808		II	2845.366	+0.004	4	KL	9863	UU Lyn	I	2887.341	-0.029	5	RD
9809		I	2859.334	+0.010	8	HP	9864	TZ Lyr	I	2878.510	+0.016	6	KL
9810		I	2864.350	+0.013	7	HP	9865	LZ Lyr	I	2870.609	+0.253	11	KL
9811		I	2869.359	+0.010	7	RD	9866	U Oph	I	2866.508	-0.008	8	RG
9812		I	2869.361	+0.012	8	HP	9867		II	2887.480	-0.002	9	HP
							9868	RV Oph	I	2886.506	-0.004	10	KL
							9869	V 449 Oph	I	2872.596	+0.067	6	KL
							9870	V 501 Oph	I	2899.489	+0.026	9	HP
							9871	V 508 Oph	I	2839.670	+0.008	7	KL

* period unknown

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
9872		II	2882.598	+0.009	6	KL	9923	W Uma	II	2753.504	-0.094	23	EP
9873		II	2889.489	+0.004	10	KL	9924		II	2776.518	-0.102	24	EP
9874		II	2898.456	+0.007	8	HP	9925		I	2781.354	-0.104	25	EP
9875	V566 Oph	I	2863.661	+0.023	8	PR	9926		I	2782.353	-0.106	26	EP
9876		I	2870.632	+0.031	6	PR	9927		II	2782.523	-0.103	9	EP
9877		II	2871.644	+0.018	9	PR	9928		I	2783.353	-0.107	18	EP
9878	V752 Oph	I	2866.516	*	10	KL	9929		II	2783.523	-0.104	20	EP
9879		I	2899.567	*	6	KL	9930		I	2784.354	-0.107	11	EP
9880	V913 Oph	I	2839.650	-0.082	6	KL	9931		I	2793.363	-0.107	22	EP
9881		I	2889.509	-0.075	10	KL	9932		I	2799.361	-0.114	15	EP
9882	V1010 Oph	I	2878.548	-0.066	11	KL	9933		I	2800.366	-0.110	16	EP
9883	ER Ori	I	2840.298	-0.025	9	RG	9934		I	2803.369	-0.111	22	EP
9884		I	2848.336	-0.030	8	RG	9935		I	2831.400	-0.105	32	EP
9885		II	2855.321	-0.032	7	RG	9936		I	2834.402	-0.105	31	EP
9886		II	2858.293	-0.024	10	KL	9937		I	2835.404	-0.105	51	EP
9887		II	2869.293	-0.032	7	RG	9938		I	2836.404	-0.106	6	RB
9888-FK	Ori	I	2866.336	+0.232	4	RD	9939		I	2836.405	-0.105	46	EP
9889	FT Ori	I	2870.333	+0.016	9	HP	9940		I	2836.407	-0.103	15	PR
9890	OS Ori	I	2869.346	-0.028	7	KL	9941		I	2837.406	-0.105	13	AR
9891	Z Per	I	2841.333	+0.026	8	HP	9942		I	2838.405	-0.106	45	EP
9892	RT Per	I	2838.374	-0.062	10	HP	9943		I	2840.401	-0.112	16	RB
9893	β Per	I	2656.636	-0.079	9	PR	9944		I	2841.402	-0.112	8	PD
9894		I	2814.362	-0.060	6	RB	9945		I	2841.405	-0.109	15	JC
9895		I	2837.289	-0.072	13	PC	9946		I	2842.410	-0.106	10	RB
9896		I	2837.298	-0.063	9	AR	9947		I	2842.410	-0.106	14	JC
9897	UZ Pup	II	2842.362	-0.043	9	HP	9948		I	2843.408	-0.108	16	AR
9898		I	2848.337	-0.029	9	HP	9949		I	2856.419	-0.110	34	EP
9899		I	2879.340	-0.025	7	KL	9950		I	2857.419	-0.111	22	EP
9900	AY Pup	I	2840.397	+0.058	7	KL	9951		I	2858.420	-0.111	24	JC
9901		I	2842.283	+0.058	6	KL	9952		I	2862.419	-0.115	25	EP
9902		I	2864.319	+0.063	7	KL	9953		I	2863.420	-0.115	25	EP
9903	RZ Pyx	I	2840.315	+0.191	11	KL	9954		I	2864.437	-0.099	10	JL
9904		II	2858.372	+0.200	6	KL	9955		I	2865.424	-0.113	29	EP
9905	UZ Sge	I	2874.618	+0.067	10	KL	9956		I	2866.431	-0.107	19	RB
9906	RS Sct	I	2869.576	+0.021	6	KL	9957		I	2871.426	-0.116	28	EP
9907		I	2871.572	+0.024	6	KL	9958		I	2871.446	-0.096	10	JL
9908	AO Ser	I	2878.567	-0.007	6	KL	9959		II	2871.606	-0.103	10	JL
9909		I	2885.610	+0.001	6	KL	9960		I	2872.439	-0.104	6	JL
9910		I	2886.489	0.000	10	KL	9961		II	2872.608	-0.103	9	JL
9911		I	2886.490	+0.001	8	HP	9962		I	2886.443	-0.114	30	EP
9912	AU Ser	I	2866.496	**	12	KL	9963		I	2888.447	-0.112	39	EP
9913		II	2867.468	**	9	KL	9964	TX Uma	I	2884.510	-0.008	11	KL
9914		I	2878.477	**	6	KL	9965	UX Uma	I	2840.496	+0.001	6	KL
9915		II	2886.409	**	7	RG	9966		I	2842.462	+0.001	6	KL
9916		I	2887.365	**	9	RG	9967		I	2866.456	+0.001	4	KL
9917		II	2888.332	**	7	RG	9968		I	2867.437	-0.001	4	KL
9918	AC Tau	I	2843.329	+0.060	6	KL	9969		I	2869.405	0.000	4	KL
9919	CT Tau	I	2864.398	+0.019	8	HP	9970		I	2869.602	0.000	4	KL
9920	HU Tau	I	2774.361	+0.009	32	EP	9971		I	2878.649	0.000	5	KL
9921		I	2776.442	+0.034	36	EP	9972		I	2879.633	+0.001	4	KL
9922	X Tri	I	2858.302	-0.037	12	KL	9973		I	2885.335	0.000	6	KL
							9974		I	2886.318	-0.001	5	KL
							9975	VV Uma	I	2840.381	+0.094	9	RG
							9976		I	2842.419	+0.070	8	HP
							9977	XZ Uma	I	2858.399	-0.071	10	HP
							9978	UW Vir	I	2842.472	+0.256	10	KL
							9979	AH Vir	I	2849.658	+0.053	5	KL
							9980		I	2866.353	+0.041	7	RD
							9981	AK Vir	I	2866.450	+0.038	11	HP
							9982		I	2866.466	+0.054	7	KL

* period previously unknown (cf. BBSAG Bull 24, p.4), 0-C according to the now definite elements JD 2442899.567 + 1.8366 E : +0.008 0.000

** GCVS 1969 period too inaccurate, 0-C according to the GCVS 1974: -0.004 +0.002 -0.004 +0.005 -0.005 -0.005

Elements for DM Delphini

A number of unsuccessful observations of this bright variable using the elements published in the 1969 edition of the GCVS

$$JD_{\min \text{ hel}} = 2430663.067 + .8446725 E \quad (1)$$

led me to the conclusion that these elements could be erroneous. Therefore, I observed the star, regardless of phase, during several nights in 1975, obtaining the minima previously published (6) (7) (8).

From these observations I derived the following new elements:

$$JD_{\min \text{ hel}} = 2442606.400 + .333042 E$$

As shown in Table 16, these elements also fit all observed minima known to the writer quite well. Judging from the visual observations, DM Del seems to belong to the EB type with a primary amplitude of about 0.7 and a secondary one close to 0.4. Photoelectric work should be attempted to ensure the new elements.

R. Diethelm

Table 16	O	E	O - C _{new}	Observer	Reference
	2429354.640	-39790	-.019	Иценко	2
	380.001	-39714	+.031	"	2
	30663.067	-38861.5	+.057	Цесевич	1
	906.301	-35131	.000	"	1
	33852.540	-26284.5	-.018	Перова	1
	853.400	-26282	+.010	"	1
	863.532	-26251.5	-.016	"	1
	864.403	-26249	+.022	"	1
	40063.424	- 7635.5	-.034	Diethelm	3
	542.352:	- 6197.5	-.020:	"	4
	720.563:	- 5662.5	+.013:	"	5
	41628.294:	- 2937	+.038	"	unpublished
	42275.388:	- 994	+.032:	"	"
	296.347	- 931	+.009	"	"
	303.308:	- 910	-.024:	"	"
	403.217:	- 610	-.027:	"	"
	570.497	- 108	+.065	"	6
	606.412	0	+.012	"	6
	616.430:	30	+.039:	"	6
	617.375	33	-.015	"	6
	620.385	42	-.003	"	6
	621.378	45	-.009	"	6
	623.378	51	-.007	"	6
	629.372	69	-.008	"	6
	633.374	81	-.002	"	6
	740.281	402	-.002	"	7
	748.273	426	-.003	"	8

- (1) Н.Б. Перова, Переменные Звёзды 9 (1953), 142
 (2) И.М. Иценко, Переменные Звёзды 10 (1955), 404
 (3) BBSAG minima list, Orion 109 (1968)
 (4) 116 (1970)
 (5) 119 (1970)
 (6) BBSAG Bulletin 23 (1975)
 (7) 24 (1975)
 (8) 25 (1976)

Period Changes in RZ Draconis ?

Recently A.Mallama (J.A.A.V.S.O. 4, 13, 1975) has claimed evidence exists for short-term period changes in RZ Dra, based on visual observations by BBSAG members, and has discussed possible causes. However, there is in fact practically no evidence of such changes.

Excluding the uncertain point on JD 2441901.357 the mean O-C for RZ Dra, 2441506...2254, is found to be $-0^d.0093$. Assuming this holds constant for the interval considered, and the standard deviation of the timing of a single minimum is $0^d.005$ (quoted by Mallama), a χ^2 of 43 is obtained. This indicates that any departures from constant O-C is not significant even at the 30% level.

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A Z Virginis

Unprejudiced Surveys support Busch's 'b' - Interpretation

In 1974 H.Busch (Mitteilungen Hartha 7, p.6) announced two alternatives to the GCVS 1969 (and slightly different also 1974) elements as follows:

GCVS : 2428303.360 + .2974967 E
 Busch 'b' : 2427926.565 + .3496647 E
 Busch 'c' : 2427926.609 + .5380787 E

All BBSAG surveys made since were completely unprejudiced and therefore had to cover at least one half of the longest ('c') period in question. They support set 'b' emphatically, as shown in Table 15b, confirming Busch's assumption.

All previous BBSAG observations were prejudiced by predictions based on the (now probably wrong) GCVS period, and in a few cases the observer was obviously misled psychologically. This is a certain support to the writer's personal (but not every BBSAG member's) opinion that variables with amplitudes below $0^m.8$ should not be surveyed visually. Nevertheless these questionable results are in favour of set 'b' too. They are recompiled in Table 15a.

K. Locher

Table 15 a	BBSAG		Observer	O	O-C _{GC}	O-C _b	O-C _c
	Bull.no.	Min.no.					
more or less	2	3424	KL	41390.572	+ .035	- .007	- .111
psychologically	2	3425	KL	41393.380	+ .016	+ .004	+ .006
prejudiced	2	3426	KL	41411.397	+ .035	+ .013	- .002
observations	2	3427	KL	41416.594	+ .026	- .035	+ .083
	3	3620	KL	41439.380	+ .053	+ .023	+ .001
	3	3621	KL	41440.420	+ .052	+ .014	- .036
	3	3622	HP	41450.384	+ .050	+ .012	- .026
	3	3623	HP	41472.419	+ .070	+ .018	- .052
	3	3624	RD	41473.420	+ .030	- .030	- .127
	3	3625	HP	41483.430	+ .074	+ .015	- .072
	3	3626	KL	41494.441	- .071	+ .011	- .091
	8	4793	RG	41764.385	+ .043	+ .014	+ .006
	9	4950	RG	41830.407	+ .021	- .050	+ .113
	10	5150	RG	41830.401	+ .021	- .050	+ .112
	15	6256	RG	42147.383	+ .014	- .045	- .108
	15	6257	RG	42156.453	+ .010	- .067	+ .084
	15	6258	RG	42187.380	- .002	- .085	+ .071
	15	6259	HP	42193.395	+ .063	- .014	- .102
				mean :	+ .030	- .014	- .014
				(RMS deviation from mean)/period :	.078	.075	.151

Table 15 b	BBSAG		Observer	O	O-C _{GC}	O-C _b	O-C _c	
	Bull.no.	Min.no.						
strictly unprejudiced surveys	22	8247	KL	42521.415	-.056	+.020	-.041	
	22	8248	KL	42521.583	-.037	+.013	+.127	
	22	8249	RG	42521.406	-.065	+.011	-.050	
	22	8250	HP	42530.498	-.047	+.012	-.105	
	22	8251	RG	42531.369	-.068	+.009	-.041	
	22	8252	RG	42531.548	-.038	+.013	-.131	
	22	8253	HP	42532.424	-.054	+.015	-.062	
	22	8254	RG	42532.425	-.053	+.016	-.061	
	22	8255	RG	42534.311	+.048	-.021	-.059	
	22	8256	RG	42546.412	-.049	+.016	-.064	
	22	8257	RG	42551.489	-.029	+.023	-.099	
	22	8258	RG	42561.432	-.052	+.001	-.111	
	23	8777	RD	42568.426	-.050	+.001	-.112	
	23	8778	RG	42571.417	-.033	+.020	-.080	
					mean :	-.042	+.011	-.064
					(RMS deviation from mean)/period :	.091	.031	.111

YZ Canum Venaticorum :
Detection of the Period

After a sporadic and unsuccessful visual survey in 1974 I undertook an extensive one during the past few weeks, which yielded the 5 well-defined minima published in the lists of the last and the present Bulletin, and the period, unknown according to the GCVS 1969/1971/1974, as follows :

$$\text{Min}_{I \text{ hel}} = 2442838.497 + 1.1755 E$$

The remaining unknown photometric parameters result as :

$$|\max - \min_{II}| = .06 \pm .02 \quad D/p = .19 \pm .02 \quad d/p = .055 \pm .005$$

All my visual observations are plotted against phase in the following figure.
K. Locher

figure 33 -----comparison magnitude 5' southwest-----

