BBSAG Bulletin 35

1977 December 2

68th List of Minima of Eclipsing Binaries

The following table lists 339 minima obtained visually mainly during 1977 September to November by the observers

MBe Mino Benucci, Firenze, Italy
RB Roland Boninsegna, Marcinelle, Belgium
BB Bernard Bouzin, Toulouse, France
ABu Alberto Buzzoni, Ferrara, Italy
JC Jean-Pierre Clovin, Marcinelle, Belgium
RD Roger Diethelm, Reinach, Switzerland
PDa Philippe Danthine, Montignies-sur-Sambre, Belgium
JD Jean-Luc Duquesne, Ramonville, France
FF Francesco Ferrara, Matera, Italy
MFr Massimo de Francesco, Roma, Italy
RG Robert Germann, Wald, Switzerland
ZH Zoltàn Hevesi, Kaposvàr, Hungary
AL Alfredo Livi, Pistoia, Italy
JL Jean-François Le Borgne, Brest, France
SL Stéphane Le Jehan, St.Brieuc, France
RLe Robert Leyman, Laval-Trahegnies, Belgium
KL Kurt Locher, Grüt, Switzerland
TM Thierry Maniet, Guingamp, France
AM Alain Marot, Quimper, France
EN Edmond Nezry, Toulouse, France
AP Angelo del Parigi, Matera, Italy
MP Maurizio Penna, Asti, Italy
CPa Carlo Pampaloni, Firenze, Italy
CP Cosimo Plasmati, Matera, Italy
HP Hermann Peter, Otelfingen, Switzerland
EP Ennio Poretti, Arconate, Italy
PR Philippe Ralincourt, Nantes, France
JR Joseph Remis, Aix-en-Provence, France
AR Alain Royer, Epinac, France
FT Franco Travaglino, Vigevano, Italy
GT Gilles Troispoux, Fleury-les-Aubrais, France
VT Vince Tuboly, Debrecen, Hungary
FV Francesco Vespe, Matera, Italy
SW Stefano Wabniz, Roma, Italy
NZ Nicola Zaccaria, Pisa, 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.

(footnotes to page 2 :)

* GCVS 1969 period erroneous, O - C according to the GCVS 1976 : -0.003 +0.013

** not contained in the GCVS 1969, O - C according to the GCVS 1976 : -0.019

*** no period given in th GCVS 1969, O - C according to the GCVS 1974 : +0.069

current no.	star	order	JD hel 244...	O-C	n	observer
11827	RT And	I	3403.524	-0.009	4	KL
11828		I	3412.324	-0.014	7	KL
11829		I	3417.359	-0.011	6	KL
11830		I	3429.310	-0.009	8	RG
11831		I	3441.248	-0.021	4	KL
11832		I	3456.346	-0.017	8	RG
11833		I	3468.301	-0.012	8	HP
11834	XZ And	I	3409.351	-0.019	6	KL
11835	AB And	I	3391.301	+0.029	8	RG
11836		I	3391.304	+0.032	6	KL
11837		I	3392.299	+0.032	7	RG
11838		II	3409.396	+0.036	8	RG
11839		II	3421.336	+0.028	11	RG
11840		II	3425.334	+0.043	9	AR
11841		II	3429.309	+0.036	8	RG
11842		II	3431.291	+0.026	8	RD
11843		II	3432.273	+0.013	10	AR
11844		II	3433.289	+0.033	7	AR
11845		I	3456.346	+0.023	9	RG
11846		I	3458.335	+0.021	9	RG
11847		I	3459.328	+0.019	7	RG
11848	BL And	I	3458.391	-0.040	7	HP
11849	BX And	I	3430.406	+0.004	8	HP
11850	CN And	I	3431.277:	-0.025:	6	RD
11851		II	3432.462	+0.003	6	RD
11852	EP And	I	3420.459	*	6	KL
11853		II	3456.238	*	6	KL
11854	GZ And	II	3429.286	**	5	RD
11855	XZ Aqr	I	3477.260	***	10	KL
11856	CX Aqr	I	3393.381	+0.017	10	KL
11857		I	3398.379	+0.012	7	RG
11858		I	3398.380	+0.013	6	KL
11859		I	3417.290	+0.020	7	KL
11860		I	3458.426	+0.012	4	KL
11861	LT Aql	I	3398.443	+0.053	6	KL
11862	OO Aql	I	3364.380	-0.027	8	BB
11863		I	3365.367	-0.054	7	BB
11864		I	3366.404	-0.031	6	BB
11865		II	3388.432	-0.048	14	BB
11866		II	3388.455:	-0.025:	9	AR
11867		II	3392.491	-0.043	18	BB
11868		II	3392.496	-0.038	16	EN
11869		II	3392.499	-0.036	15	JD
11870		II	3393.503	-0.045	13	EN
11871		II	3393.508	-0.040	12	JD
11872		II	3394.511	-0.051	16	BB
11873		II	3394.514	-0.048	17	JD
11874		II	3394.518	-0.044	18	EN
11875		I	3397.305	-0.044	7	RG
11876		I	3397.308	-0.041	8	KL
11877		I	3402.370	-0.047	7	RG
11878		I	3404.402	-0.042	11	AR
11879		II	3414.290	-0.036	8	RG
11880		II	3425.436	-0.040	10	AR
11881		I	3432.279	-0.039	10	AR
11882		I	3433.287	-0.045	7	AR
11883		I	3435.318	-0.040	7	RG
11884		I	3435.319	-0.040	7	HP
11885		II	3453.300	-0.049	8	RG
11886		II	3456.339	-0.051	9	RG
11887		I	3468.262	-0.038	7	HP
11888	V 337 Aql	I	3429.298	-0.055	6	RD
11889	V 346 Aql	I	3436.303	-0.022	10	RG
11890		I	3436.316	-0.009	11	HP
11891	V 803 Aql	II	3391.387	-0.011	10	KL
11892		I	3398.370	-0.008	8	KL
11893	V 829 Aql	II	3431.290	****	10	RD
11894		I	3434.320	****	5	RD
11895	TX Ari	I	3432.469	+0.002	7	RD
11896	WW Aur	I	3159.248	+0.006	14	NZ
11897		I	3174.392	0.000	23	SW
11898		II	3453.422	+0.015	8	HP
11899		II	3458.457	0.000	8	HP
11900	AR Aur	I	3136.368	+0.005	16	CPa
11901		II	3415.461	+0.000		CPa
11902	Y Cam	I	3391.662	+0.111	6	KL
11903	SV Cam	I	3380.433	-0.010		SW
11904		I	3434.407	-0.005	10	KL
11905		I	3435.586	-0.013	12	KL
11906		I	3456.340	-0.017	8	RG
11907		I	3468.210	+0.001	10	KL
11908	RY Cnc	I	3458.592	-0.046	11	KL
11909	R CMa	I	3430.577:	-0.003:	5	KL
11910	AK CMi	I	3410.653	+0.019	10	KL
11911	TY Cap	I	3401.315	-0.093	6	KL
11912	RZ Cas	I	3133.362	-0.007	14	CPa
11913		I	3139.347	-0.007	13	CPa
11914		I	3225.403	-0.004	8	SL
11915		I	3225.406	0.000	14	TM
11916		I	3335.374	+0.005	22	CP
11917		I	3347.331	+0.003	13	CP
11918		I	3348.519	+0.002	30	MBe
11919		I	3366.443	-0.003	28	PR
11920		I	3366.443	-0.002	14	JB
11921		I	3366.447	+0.001	14	JL
11922		I	3366.448	+0.002	13	MP
11923		I	3366.448	+0.002	17	AB
11924		I	3366.450	+0.005	32	MBe
11925		I	3372.420	-0.002	18	CP
11926		I	3390.346	-0.005	8	VT
11927		I	3390.353	+0.002	11	ZH
11928		I	3390.355	+0.005		CPa
11929		I	3390.360	+0.010		SW
11930		I	3396.322:	-0.005:	47	AP
11931		I	3396.325	-0.002	11	EP
11932		I	3396.326	0.000	7	JR
11933		I	3396.328	+0.001	22	FT

* ** *** see preceeding page

**** no period given in the GCVS, O-C according to the elements of BBSAG Bulletin 34, p.5 : -0.007 -0.005

current no.	star	minimum order	JD hel 244...	O-C	n	observer
11934		I	3396.329	+0.002	42	FV
11935		I	3396.331	+0.004	9	GT
11936		I	3396.339	+0.013	22	CP
11937		I	3396.341	+0.014	17	FF
11938		I	3397.523	+0.001	18	BB
11939		I	3397.523	+0.001	16	AM
11940		I	3397.526	+0.004	13	JD
11941		I	3402.300	-0.002	9	RG
11942		I	3402.315	+0.013	43	AP
11943		I	3415.459	+0.009		CPa
11944		I	3415.460	+0.009	33	MBe
11945		I	3421.435	+0.008	20	CP
11946		I	3433.368	-0.011	7	KL
11947		I	3433.370	-0.009	10	RG
11948		I	3433.378	-0.001	12	RB
11949		I	3433.378	-0.001	13	AR
11950		I	3433.384	+0.004	23	MBe
11951		I	3433.384	+0.005	15	PDa
11952		I	3433.388	+0.008	22	RLe
11953		I	3433.388	+0.009	20	CP
11954		I	3439.359	+0.004	20	SW
11955		I	3439.363	+0.007	15	MFr
11956		I	3450.482	+0.002	15	RB
11957		I	3463.265	+0.004	16	JC
11958		I	3463.270	+0.009	15	EP
11959		I	3464.463	+0.007	15	EP
11960		I	3464.469	+0.013	16	NZ
11961	TV Cas	I	3364.452	-0.020	19	PR
11962		I	3424.200	-0.008	19	SW
11963		I	3433.330	-0.021	6	RB
11964		I	3433.336	-0.015	9	RG
11965		I	3453.273	-0.018	8	RG
11966		I	3462.344	-0.009	16	SW
11967	AB Cas	I	3400.634	+0.003	7	KL
11968		I	3429.341	+0.006	7	HP
11969		I	3459.407	+0.001	7	HP
11970	V 459 Cas	II*	3392.609	-0.136	7	KL
11971	V 523 Cas	II	3409.401	**	6	KL
11972		I	3444.224	**	8	KL
11973	U Cep	I	3439.659	+0.027	6	KL
11974	XX Cep	I	3409.337	-0.026	10	RG
11975		I	3409.360	-0.003	7	KL
11976	EG Cep	I	3370.469	+0.016	10	JL
11977		I	3405.314	+0.006	8	AR
11978		I	3429.291	+0.019	8	RG
11979		I	3430.382	+0.021	9	HP
11980		I	3436.371	+0.019	9	HP
11981	GI Cep	I	3432.488	-0.012	5	RD
11982	GK Cep	I	3464.439	-0.060	23	NZ
11983	TW Cet	I	3397.596	-0.026	7	KL
11984		I	3453.370	-0.018	10	KL
11985		II	3456.377	-0.021	10	RG
11986	VY Cet	II	3396.618	***	7	KL
11987		II	3397.655	***	10	KL
11988		II	3406.510	***	5	KL
11989		II	3409.570	***	11	KL
11990		I	3451.324	***	6	KL
11991		I	3453.376	***	11	KL
11992	AA Cet	I	3409.611	****	10	KL
11993	RW Com	II	3447.673	-0.045	6	KL
11994	Y Cyg	II	3361.477	+0.055	15	PR
11995		II	3364.481	+0.063	19	PR
11996		II	3367.458	+0.043	19	PR
11997	SW Cyg	I	3436.402	+0.214	17	HP
11998		I	3459.263	+0.210	9	HP
11999	ZZ Cyg	I	3414.353	-0.037	7	KL
12000		I	3436.358	-0.034	10	HP
12001		I	3460.245	-0.034	8	KL
12002	BR Cyg	I	3430.377	+0.015	8	HP
12003		I	3450.348	+0.003	10	HP
12004	CG Cyg	I	3459.377	-0.025	9	HP
12005	GO Cyg	I	3434.318	+0.020	5	RD
12006	V 401 Cyg	II	3429.379	+0.032	9	HP
12007	V 456 Cyg	II	3417.273	+0.022	7	KL
12008		I	3437.328	+0.025	10	HP
12009		I	3446.229	+0.014	8	KL
12010		I	3453.370	+0.024	9	HP
12011	V 477 Cyg	I	3398.324	-0.022	7	RG
12012		I	3459.336	-0.032	11	RG
12013		I	3459.359	-0.008	9	HP
12014	V 548 Cyg	I	3429.326	-0.050	7	RG
12015	V 728 Cyg	I	3436.403	+0.050	9	HP
12016	V 836 Cyg	I	3434.275	+0.001	6	RD
12017	V 1068 Cyg	I	3432.75	*****	25	RD
12018	W Del	I	3450.321	+0.152	11	HP
12019	AV Del	I	3450.311	-0.009	11	HP
12020	DM Del	I	3431.279	******	7	RD
12021		I	3456.285	******	6	HP
12022	FZ Del	I	3409.302	+0.002	6	KL
12023		I	3456.288	-0.004	6	HP
12024	Z Dra	I	3400.640	0.000	7	KL
12025	RZ Dra	I	3433.372	-0.020	7	RG
12026	WW Dra	II	3397.640	+0.111	5	KL
12027	AI Dra	I	3308.410	+0.005	19	MP
12028		I	3314.408	+0.009	14	MP
12029		I	3344.377	+0.008	17	MP

* displaced secondary minimum

** not contained in the GCVS 1969, O-C according to the elements of the GCVS 1976 : +0.002 +0.005

to*** see next page

current no.	star	minimum order	JD hel 244...	O-C	n	observer
12030		I	3363.552	+0.002	11	PR
12031		I	3369.552	+0.008	25	MP
12032		I	3369.554	+0.010	25	PR
12033		I	3369.555	+0.010	11	JL
12034		I	3392.315	-0.007	8	RG
12035		I	3392.320	+0.006	12	EP
12036		I	3392.334	+0.012	9	JL
12037		I	3398.308	-0.008	6	RG
12038		I	3398.322	+0.006	7	RB
12039		I	3398.323	+0.007	14	EP
12040		I	3404.321	+0.010	11	AR
12041		I	3410.309	+0.005	8	AR
12042		I	3410.309	+0.005	12	EP
12043		I	3428.285	-0.002	9	RB
12044		I	3434.296	+0.016	10	RB
12045		I	3452.271	+0.008	14	JC
12046		I	3458.256	-0.001	16	JC
12047	CM Dra	I	3392.415	*	6	KL
12048		I	3394.316	*	6	KL
12049		I	3420.316	*	10	KL
12050		I	3453.297	*	10	KL
12051	WX Eri	I	3463.608	+0.001	7	KL
12052	YY Eri	I	3391.642	-0.006	8	KL
12053		II	3396.605	-0.005	7	KL
12054		I	3403.531	-0.012	4	KL
12055	BT Gem	I	3457.604	-0.038	7	KL
12056	SZ Her	I	3388.424	+0.032	12	AR
12057		I	3393.332	+0.032	6	KL
12058		I	3429.321	+0.025	11	RD
12059		I	3429.326	+0.030	8	HP
12060		I	3456.324	+0.031	8	HP
12061	UX Her	I	3397.362	-0.040	7	RG
12062	DH Her	I	3436.339	-0.039	9	HP
12063	GL Her	I	3392.433	+0.075	6	KL
12064	V502 Her	I	3392.365	+0.049	9	KL
12065		II	3394.388	+0.047	6	KL
12066		I	3402.341	+0.051	6	KL
12067		I	3429.302	+0.050	6	RD
12068	u Her	I	3396.417	+0.022	21	MP
12069		I	3347.426	+0.010	22	AL
12070		I	3347.436	+0.020	14	CP
12071	RX Hya	I	3447.704	+0.042	12	KL
12072		I	3463.668	+0.035	9	KL
12073	WY Hya	I	3463.659	+0.026	6	KL
12074	SW Lac	II	3372.362	-0.097	11	GT
12075		I	3392.397	-0.107	10	KL
12076		II	3397.336	-0.110	6	RG
12077		I	3402.337	-0.110	7	RG
12078		I	3409.383	-0.120	8	RG
12079		II	3429.442	-0.107	10	HP
12080		I	3453.334	-0.110	6	RG
12081		II	3456.387	-0.103	7	RG
12082		II	3458.299	-0.115	10	RG
12083		II	3458.305	-0.109	8	HP
12084		II	3459.274	-0.102	8	RG
12085	VX Lac	I	3410.338	-0.062	6	KL
12086	CM Lac	I	3397.372	-0.007	7	RG
12087		I	3458.360	+0.002	8	HP
*12088	LU Lac	II	3398.357	-0.004	6	KL
*12089	NR Lac	I	3399.332:	+0.034:	7	KL
12090	PP Lac	II	3417.321	**	7	KL
12091	UV Leo	I	3467.618	-0.026	12	KL
12092	RW Leo	I	3457.647	+0.033	11	KL
12093	T LMi	I	3467.666	-0.106	7	KL
12094	RS Lep	I	3463.691	-0.007	6	KL
12095	RY Lyn	I	3412.642	*******	7	KL
12096	TZ Lyr	I	3434.314	+0.027	5	RD
12097	EW Lyr	I	3391.391	+0.059	13	KL
12098	RW Mon	I	3439.640	-0.014	7	KL
12099	U Oph	I	3314.374:	+0.007:	8	MP
12100		II	3392.359	-0.004	9	RG
12101		II	3429.261	-0.004	7	RG
12102	V449 Oph	I	3398.406	+0.056	6	KL
12103	V503 Oph	II	3435.308	+0.018	7	HP
12104		II	3453.229	+0.010	6	KL
12105	V566 Oph	I	3372.439	+0.027	12	GT

* GCVS elements incomplete, O-C according to Martins' elements PASP 87, p. 168, 1975 : -0.248 -0.250 -0.256 -0.259

** no period given in the GCVS, O-C according to Figer's (1st set) elements IBVS 1231 : +0.053

*** GCVS 1969 period erroneous, O-C according to the GCVS 1976 : -0.027 -0.013 -0.019 -0.018 -0.021 -0.014

**** not contained in the GCVS 1969, O-C according to the GCVS 1974 : -0.018

***** see page 6 of this issue

****** GCVS period erroneous, O-C according to the elements of BBSAG Bulletin 27, p. 5 : -0.066 -0.038

******* no period given in the GCVS, O-C according to the elements of Samolyk and Wedemayer, JAAVSO preprint 1977 : -0.004

current no.	star	minimum order	JD hel 244...	O - C	n	observer
12106	V 916 Oph	I	3420.307	+0.068	10	KL
12107	V 1010 Oph	I	3361.391	-0.071	12	PR
12108		I	3361.394	-0.068	17	BB
12109	ER Ori	II	3400.662	-0.031	10	KL
12110		I	3410.621	-0.022	11	KL
12111		I	3463.552	-0.016	6	KL
12112	EW Ori	II	3463.405	-0.014	6	KL
12113	FK Ori	I	3456.436	+0.255	10	KL
12114	FT Ori	I	3459.460	+0.017	8	HP
12115	OS Ori	I	3467.620	-0.021	11	KL
12116	TY Peg	I	3392.488	-0.030	11	KL
12117	UX Peg	I	3431.301	-0.016	11	RD
12118	BG Peg	I	3431.317	+0.002	10	RD
12119	BY Peg	II	3393.372	+0.079	6	KL
12120		II	3420.382	+0.076	7	KL
12121		I	3451.320	+0.069	6	KL
12122	DI Peg	I	3391.319	-0.018	8	RG
12123		I	3393.457	-0.016	11	KL
12124	EE Peg	I	3382.467	+0.045	11	ZH
12125		I	3390.374	+0.067	9	ZH
12126	RT Per	I	3430.409	-0.064	9	HP
12127		I	3436.361	-0.058	8	HP
12128		I	3447.402	-0.059	6	KL
12129		I	3453.350	-0.058	7	HP
12130	RV Per	I	3420.473	+0.019	6	KL
12131	XZ Per	I	3393.465	+0.007	7	KL
12132		I	3409.587	+0.007	6	KL
12133	KW Per	I	3393.332	+0.040	6	KL
12134		I	3420.340	+0.042	6	KL
12135	β Per	I	3396.411	-0.091	7	RG
12136		I	3399.277	-0.088	8	RG
12137		I	3419.357	-0.034	14	EP
12138		I	3462.363	-0.089	14	EP
12139		I	3462.368	-0.003	17	SW
12140	Y Psc	I	3394.607	+0.160	4	KL
12141		I	3390.367	+0.154	12	KL
12142		I	3447.320	+0.151	10	KL
12143	RV Psc	I	3429.357	*	5	RD
12144		II	3431.307	*	7	RD
12145	SZ Psc	I	3464.255	+0.006	12	EP
12146	VZ Psc		3431.287	**	9	RD
12147			3432.458	**	7	RD
12148			3446.301	**	6	RD
12149	RW PsA	I	3393.425	-0.059	7	KL
12150		I	3390.472	-0.058	6	KL
12151		I	3453.266	-0.054	10	KL
12152	UZ Pup	I	3447.657	-0.028	11	KL
12153		I	3463.540	-0.034	6	KL
12154	XZ Pup	I	3420.681	-0.019	8	KL
12155	AY Pup	I	3447.697	+0.055	10	KL
12156		I	3463.665	+0.078	6	KL
12157		II	3467.623	+0.050	6	KL
12158	RZ Pyx	II	3447.705	+0.203	10	KL
12159	V 505 Sgr	I	3367.410	-0.055	12	JL
12160		I	3367.434	-0.032	21	PR
12161		I	3367.437	-0.028		MP
12162		I	3399.360	-0.043	7	RG
12163		I	3405.310	-0.007	8	AR
12164		I	3425.406	-0.020	11	AR
12165		I	3431.315	-0.025	10	AR
12166	RS Sct	I	3392.330	+0.020	10	RG
12167		I	3392.331	+0.021	10	KL
12168		I	3398.315	+0.027	7	RG
12169		I	3402.293	+0.019	7	KL
12170		I	3402.302	+0.029	8	RG
12171	AK Ser	I	3402.346	-0.019	6	KL
12172	AC Tau	I	3421.612	+0.075	5	KL
12173	AM Tau	I	3401.616	-0.140	4	KL
12174	AP Tau	I	3396.596:	***	7	KL
12175		I	3397.592	***	11	KL
12176		II	3459.330	***	9	KL
12177	IL Tau	I	3396.548	+0.003	6	KL
12178	V Tri	I	3458.378	+0.016	12	RG
12179		I	3458.382	+0.020	7	HP
12180	X Tri	I	3402.365	-0.035	15	RG
12181		I	3432.400	-0.037	8	RD
12182		I	3435.398	-0.035	7	HP
12183		I	3436.363	-0.041	12	RG
12184		I	3437.335	-0.040	12	RG
12185	RS Tri	I	3453.466	+0.005	12	HP
12186	RW Tri	I	3397.648	-0.002	7	KL
12187		I	3410.631	-0.004	6	KL
12188		I	3439.617	-0.004	6	KL
12189		I	3453.299	-0.002	6	KL

* GCVS 1969 elements too inaccurate for reasonable reduction, O - C according to the GCVS 1976: -0.009 +0.006

** period roughly known only

*** GCVS 1969 elements incomplete, O - C according to the GCVS 1976: -0.003: -0.064 -0.047

current no.	star	minimum order	JD hel 244...	O-C	n	observer
12190		I	3450.631	-0.004	8	KL
12191	KZΠ5959 Tri	II	3429.329:	*	9	RD
12192		I	3432.489	*	7	RD
12193	TX UMa	I	3466.530	-0.004	16	EP
12194	UX UMa	I	3391.370	0.000	5	KL
12195		I	3393.337	0.000	8	KL
12196		I	3394.321	+0.001	5	KL
12197		I	3420.282	0.000	6	KL
12198	XZ UMa	I	3420.663	-0.073	10	KL
12199	RU UMi	I	3366.393	-0.004	7	BB
12200	FX Vel	I	3435.623	**	7	KL
12201	AH Vir	II	3450.697	+0.052	6	KL
12202	AW Vul	I	3394.327	-0.028	11	KL
12203	AX Vul	I	3393.479	-0.006	7	KL
12204		I	3456.255	0.000	11	KL
12205	BO Vul	I	3393.469	-0.065	6	KL
12206		I	3397.353	-0.073	9	KL
12207		I	3399.296	-0.076	6	KL
12208	BU Vul	I	3431.315	+0.005	11	RD
12209		I	3456.350	+0.004	8	HP
12210		I	3460.295	0.000	8	HP
12211		I	3460.304	+0.010	6	KL
12212	CD Vul	I	3395.324	-0.014	6	KL
12213		I	3449.336	-0.017	10	KL
12214	KN Vul	I	3429.310	-0.027	7	RD
12215	NO Vul	I	3392.383	***	6	KL

* period unknown

** not contained in the GCVS 1969, O-C according to the GCVS 1976: -0.009

*** not contained in the GCVS 1969, O-C according to the GCVS 1976: -0.003

In Dedication to Prof. Б.В.Кукаркин
who died on September 15, 1977 :

A Visual Minimum of V 1068 Cygni

The news of the death of Prof.Кукаркин, Sternberg State Astronomical Institute, Moscow, reached my desk on the very day the most recent minimum of this very interesting eclipsing variable was scheduled to begin. In a letter dated September 5, 1977, Prof.Кукаркин had urged me to observe the star visually in order to confirm the elements found by Hoffleit and Шугаров (IBVS 1202, 1977),

$$\text{Min JD hel} = 2437876.1 + 42.68\ E ,$$

and recently corrected by Prof. Кукаркин (private communication) to

$$\text{Min JD hel} = 2443048.602 + 42.692\ E .$$

Table 16 contains the 25 observations I obtained from October 14 to October 20, 1977. As comparison stars I used 'A' and 'B' from Weber's chart (IBVS 30, 1963). Favourable weather conditions enabled me to follow the star's brightness changes daily. From these observations the following conclusions can be taken:

1) The visual amplitude amounts to only about $0^m.4$ ($10^m.2 - 10^m.6$), in sharp contrast to the photographic amplitude given by Weber ($10^m.7 - 11^m.3$), but in good agreement with the notion that the early type main component (B-A) is eclipsed by a much cooler secondary (G-K, IBVS 1202).
2) The descending branch of the light curve seemed to be considerably steeper than the ascending one, taking only about $1^h.5$ compared to 3^h. The heliocentric time of minimum (JD 2443432.75) was therefore determined as the arithmetical mean of the times of the second (..31.306) and third contact (..34.196).
3) From these data we can conclude that the star remained in minimum light for d = $2^d.09$.
4) There is a slight indication that V 1068 Cygni was brighter by about $0^m.3$ before the observed minimum than after it.

R. Diethelm

Table 16

integer JD:	fractional JD & magnitude:									
2443431	.256	.266	.277	.288	.299	.306	.316	.325	.332	.341
	9.8	10.1	10.4:	10.0	10.2	10.5	10.6	10.6	10.6	10.6
2443432	.251	.449	.473	.495						
	10.6	10.6	10.6	10.6						
2443433	.278									
	10.6									
2443434	.242	.285	.295	.314	.328	.347				
	10.4	10.2	10.3	10.2	10.1	10.0				
2443435	.422									
	10.4									
2443436	.237	.310								
	10.4	10.2								
2443437	.232									
	10.3									

Possible Apsidal Motion in AP Tauri

The GCVS (1976) states the secondary minimum of this EA binary to occur at phase 0.48, which is wholly based on the photographic study by Кондратьев (Переменные Звёзды Приложение 2, №10, p.273, 1975), covering mainly the years 1965 to 1970. Now my 15 visual BBSAG minima obtained 1975 to 1977 do not show this negative deviation from mid-period (rather a positive one if any), as shown in figure 37. Thus, if Кондратьев 's result is significant, which does not seem to me to be beyond any doubt, the apsidal line would have rotated into the position parallel to the line of sight within about 8 years. In any case this rapid motion is not impossible for so rapidly revolving a pair.

K. Locher

Figure 37