

BBSAG Bulletin 39

1

1978 November 6

72nd List of Minima of Eclipsing Binaries

The following table lists 416 minima obtained visually mainly during 1978 September and October by the observers

MA	Μαρία 'Ανδρανάκου, 'Αθήνα, Greece
AB	Alberto Buzzoni, Ferrara, Italy
RD	Roger Diethelm, Reinach, Switzerland
FF	Francesco Ferraro, Matera, Italy
MFi	Maurizio Franchini, Cerro Maggiore, Italy
RG	Robert Germann, Wald, Switzerland
KL	Kurt Locher, Grüt, Switzerland
EL	Eolo Lucentini, Calderola, Italy
DM	Δημοσθένης Μουρίνης, Ηετραιάς, Greece
CPa	Carlo Pampaloni, Firenze, Italy
MP	Maurizio Penna, Asti, Italy
HP	Hermann Peter, Stelfingen, Switzerland
CP	Cosimo Plasmati, Matera, Italy
EP	Ennio Poretti, Arconato, Italy
PR	Philippe Ralin-court, Nantes, France
AR	Alain Royer, Epinac, France
GT	Gilles Troispoux, Fleury-les-Aubrais, 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.

(footnotes to page 2 :)

- * GCVS 1969 period erroneous, O-C according to the GCVS 1976:
+.004 +.007 +.007 +.012 -.006
- ** no period given in the GCVS 1969, O-C according to the GCVS 1976: -.016
- *** not contained in the GCVS 1969, O-C according to the GCVS 1976: +.051 +.050 +.048 +.042 +.052 +.049 +.050 +.059 +.052 +.044 +.048
- **** O-C according to the GCVS 1969 exceeds 1 period, O-C according to the elements of BBSAG Bulletin 38, page 6 : +.000
- ***** not contained in the GCVS 1969, O-C according to the GCVS 1974: -.002 -.003 -.004: -.010 -.004

cur- rent no.	star	or- der	minimum JD hel 244...	O-C	ob- n ser- ver	cur- rent no.	star	or- der	minimum JD hel 244...	O-C	ob- n ser- ver
13229	RT	And	I 3756.349	-.014	11 RG	13286		II	3756.364	-.048	9 RD
13230			I 3766.425	-.002	10 HP	13287		II	3756.374	-.038	7 RG
13231			I 3795.340	-.017	6 RG	13288		I	3776.384	-.046	5 RG
13232			I 3795.348	-.009	7 HP	13289		II	3787.282	-.045	7 RG
13233	TT	And	I 3810.341	-.049	8 HP	13290		II	3788.289	-.051	8 RG
13234	TW	And	I 3790.442	+.016	8 HP	13291		II	3789.308	-.046	8 RD
13235	XZ	And	I 3755.446	-.034	7 HP	13292		II	3790.321	-.046	7 RD
13236			I 3789.379	-.034	6 RD	13293		II	3791.339	-.042	8 RG
13237			I 3793.451	-.033	9 HP	13294		II	3791.341	-.040	7 HP
13238	AB	And	I 3756.385	+.033	7 RG	13295		I	3805.278	-.039	7 RG
13239			I 3762.359	+.033	6 RG	13296		I	3806.289	-.042	7 RG
13240			I 3765.337	+.024	8 RG	13297	V 337 Aql	I	3809.277	-.081	7 RG
13241			I 3767.332	+.028	7 RG	13298	V 342 Aql	I	3767.450	-.060	9 KL
13242			I 3769.324	+.028	7 RG	13299	V 343 Aql	I	3805.260	-.011	10 HP
13243			I 3776.298	+.032	7 RG	13300	V 346 Aql	I	3790.353	-.009	8 HP
13244			II 3795.382	+.033	6 HP	13301		I	3811.376	-.007	7 HP
13245			II 3806.321	+.019	9 RG	13302	V 417 Aql	II	3765.379	+.082	10 RD
13246	BL	And	I 3765.413	-.029	7 HP	13303	V 688 Aql	I	3769.38	+.01	13 RD <i>new</i>
13247			I 3791.398	-.050	7 RD	13304	V 803 Aql	I	3802.252	****	10 KL
13248	BX	And	I 3776.343	+.005	5 RG	13305		II	3811.278	****	9 KL
13249			I 3793.416	-.005	7 HP	13306	V 805 Aql	I	3764.372	+.004	10 HP
13250			I 3809.279	-.005	6 RG	13307		I	3793.272	+.006	10 HP
13251	CN	And	I 3791.358	-.001	6 RD	13308	SS Ari	I	3790.300	+.081	6 RD
13252	EP	And	I 3764.362	*	6 KL	13309		I	3795.573	+.087	11 RD
13253			II 3765.374	*	6 KL	13310	RY Aur	I	3767.602	-.004	9 KL
13254			I 3777.294	*	6 KL	13311	AR Aur	I	3754.492	-.003	9 EP
13255			II 3788.413	*	7 KL	13312	LY Aur	I	3780.404	*****	12 EP
13256			I 3791.426	*	9 RD	13313		II	3786.406	*****	8 EP
13257	GK	And	I 3791.407	**	6 RD	13314		II	3790.408	*****	11 EP
13258	GZ	And	II 3755.412	***	6 KL	13315		II	3794.405	*****	11 EP
13259			I 3755.563	***	11 KL	13316		I	3804.416	*****	9 EP
13260			I 3767.457	***	9 KL	13317	ZZ Boo	I	3722.409	+.005	18 PR
13261			II 3767.603	***	11 KL	13318		I	3732.374	-.013	25 AB
13262			I 3776.306	***	5 KL	13319	AQ Cam	I	3762.576	+.007	10 KL <i>new</i>
13263			II 3776.456	***	8 KL	13320	RY Cnc	I	3776.641	-.045	10 KL
13264			I 3776.609	***	11 KL	13321	RZ Cas	I	3715.459	+.001	9 AR
13265			I 3805.442	***	10 KL	13322		I	3721.443	+.010	19 CP
13266			II 3805.587	***	8 KL	13323		I	3727.417	+.006	39 EL
13267			II 3807.561	***	9 KL	13324		I	3727.424	+.014	14 CP
13268			I 3812.598	***	6 KL	13325		I	3733.384	-.003	13 AR
13269	RY	Aqr	I 3772.360	-.095	8 HP	13326		I	3745.351	+.012	36 FF
13270			I 3776.295	-.094	7 RG	13327		I	3751.316	+.001	15 MFi
13271	CR	Aqr	I 3812.222	+.185	11 KL	13328		I	3751.320	+.006	8 EP
13272			I 3814.263	+.168	10 KL	13329		I	3751.326	+.011	24 FF
13273	CX	Aqr	I 3746.427	+.013	8 AR	13330		I	3770.441	+.002	16 GT
13274			I 3765.328	+.010	6 KL	13331		I	3776.417	+.002	15 GT
13275			I 3770.334	+.012	7 KL	13332		I	3782.398	+.006	9 GT
13276			I 3772.562	+.016	7 KL	13333		I	3788.372	+.004	14 EP
13277			I 3775.345	+.020	10 AR	13334		I	3794.349	+.005	13 EP
13278	CZ	Aqr	I 3806.292	+.008	9 KL	13335		I	3806.296	.000	8 RG
13279			I 3806.297	+.013	9 MA	13336	TV Cas	I	3723.356	-.013	10 EL
13280			I 3806.301	+.017	9 DM	13337		I	3732.413	-.019	24 CPa
13281	EE	Aqr	I 3755.508	+.010	10 KL	13338		I	3732.421	-.013	24 AB
13282			I 3776.383	+.016	11 KL	13339		I	3732.424	-.009	14 MFi
13283	XZ	Aql	I 3787.416	+.039	12 HP	13340		I	3752.362	-.009	14 FF
13284	OO	Aql	II 3754.338	-.047	7 RD	13341		I	3752.365	-.007	27 AB
13285			II 3755.352	-.047	7 RD	13342		I	3772.288	-.022	11 EP

* ** *** **** ***** see preceding page

cur- rent no.	star	minimum or- der	JD hel 244...	O-C	n ser- ver	ob- ser- ver	cur- rent no.	star	minimum or- der	JD hel 244...	O-C	n ser- ver	ob- ser- ver
13343		I	3772.302	-.008	9	MFi	13392		I	3770.408	-.013	13	GT
13344		I	3781.349	-.024	6	EP	13393		I	3773.400	-.018	10	GT
13345		I	3790.420	-.016	9	HP	13394		I	3773.419	+.001	17	EP
13346		I	3790.433	-.003	11	EP	13395		I	3776.400	-.014	11	GT
13347	AB Cas	I	3754.656	+.005	6	KL	13396		I	3782.394	-.013	6	GT
13348		I	3772.426	+.005	8	HP	13397		I	3788.397	-.003	10	EP
13349	EP Cas	I	3795.570	-.022	12	RD	13398		I	3791.387	-.009	7	HP
13350	LR Cas	I	3777.297	-.065	6	RD	13399		I	3794.384	-.008	10	EP
13351	PV Cas	I	3756.357	+.079	8	RD	13400	SW Cyg	I	3756.529	+.230	6	KL
13352	SU Cep	I	3769.395	+.016	12	RD	13401	UW Cyg	I	3762.498	-.013	6	KL
13353	XX Cep	I	3769.304	-.006	6	RG	13402	WW Cyg	I	3755.369	+.022	8	HP
13354	ZZ Cep	I	3756.352	-.001	6	RD	13403	ZZ Cyg	I	3805.356	-.032	8	HP
13355	CW Cep	I	3795.548	+.013	8	RD	13404	AE Cyg	I	3764.364	+.013	5	KL
13356	EG Cep	I	3762.598	+.019	10	KL	13405	CG Cyg	I	3755.370	-.039	9	RD
13357		I	3765.328	+.025	8	RG	13406		I	3755.388	-.020	10	HP
13358		I	3766.414	+.019	12	HP	13407		I	3772.428	-.022	7	HP
13359		I	3795.268	+.011	9	RG	13408		I	3781.273	-.012	5	KL
13360		I	3796.357	+.011	8	RG	13409		I	3791.362	-.022	8	HP
13361		I	3796.366	+.020	8	HP	13410	GO Cyg	I	3762.326	+.010	5	RG
13362		I	3813.246	+.017	8	RG	13411		I	3767.350	+.009	6	RG
13363	EK Cep	I	3780.317	+.009	15	EP	13412	KR Cyg	I	3766.421	-.007	9	HP
13364		I	3811.319	+.017	11	HP	13413		I	3777.415	.000	9	HP
13365	SS Cet	I	3810.440	-.051	9	HP	13414	KV Cyg	I	3805.323	+.016	12	HP
13366	TW Cet	I	3813.307	-.025	7	RG	13415	MR Cyg	I	3755.432	-.015	9	HP
13367	AA Cet	I	3772.601	*	7	KL	13416	V 387 Cyg	I	3777.443	+.059	10	HP
13368	TW CrB	I	3765.310	**	6	KL	13417		I	3811.396	+.060	7	HP
13369		II	3770.316	**	6	KL	13418	V 401 Cyg	I	3755.421	+.043	5	HP
13370	Y Cyg	I	3719.446	-.038	9	AR	13419		I	3762.426	+.056	8	HP
13371		I	3719.474	-.009	24	PR	13420		II	3795.343	+.049	9	HP
13372		I	3722.448	-.032	8	AR	13421	V 456 Cyg	I	3756.360	+.011	8	RD
13373		I	3722.464	-.016	25	PR	13422		I	3766.392	+.022	10	HP
13374		I	3722.480	.000		MP	13423	V 463 Cyg	I	3791.411	-.011	10	RD
13375		I	3722.488	+.008	19	EP	13424	V 477 Cyg	I	3703.451	-.004	50	CPa
13376		I	3725.445	-.032	18	CPa	13425		I	3731.605	-.014	28	CPa
13377		I	3725.458	-.019	11	AR	13426		I	3731.607	-.012	11	PR
13378		I	3725.469	-.008	27	PR	13427		I	3790.280	-.014	8	HP
13379		I	3725.469	-.008		MP	13428	V 498 Cyg	I	3769.44	+.07	13	RD
13380		I	3725.480	+.004	20	EP	13429		I	3790.33	+.06	8	RD
13381		I	3731.445	-.024	6	AR	13430	V 687 Cyg	I	3793.335	+.009	9	HP
13382		I	3731.459	-.010	22	PR	13431		I	3810.405	+.007	7	HP
13383		I	3731.461	-.008		MP	13432	V 700 Cyg	I	3791.413	-.050	7	RD
13384		I	3731.470	+.001	14	EP	13433	V 728 Cyg	I	3809.321	+.085	10	HP
13385		I	3740.436	-.024	8	AR	13434		I	3811.364	+.068	9	HP
13386		I	3746.426	-.024	8	AR	13435	V 836 Cyg	I	3777.318	+.004	7	RD
13387		I	3746.444	-.007	14	EP	13436	TY Del	I	3787.275	+.008	6	KL
13388		I	3764.413	-.016	8	GT	13437		I	3794.428	+.014	10	HP
13389		I	3764.418	-.011	8	HP	13438	YY Del	I	3772.430	+.023	11	HP
13390		I	3767.412	-.014	8	GT	13439	DM Del	I	3756.377	***	7	RD
13391		I	3767.414	-.011	8	HP	13440		I	3789.362	***	7	RD

* not contained in the GCVS 1969, O-C according to the GCVS 1974: -.016

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

-.008 - .008

*** GCVS period erroneous, O-C according to the elements of BBSAG Bulletin 27, page 5 : -.017 -.003 -.007

cur- rent no.	star	minimum or- der	JD hel 244...	0-C	n ser- ver	ob- ser- ver	cur- rent no.	star	minimum or- der	JD hel 244...	0-C	n ser- ver	ob- ser- ver
13441		I	3796.352	***	8	HP	13491	DP Her	I	3776.337	-.189	7	KL
13442	ET Del	I	3789.384	-.042	5	RD	13492	DQ Her	I	3808.261	+.040	11	KL
13443		I	3791.481	-.046	10	RD	13493	V 338 Her	I	3790.362	+.100	8	HP
13444	FZ Del	I	3777.484	-.005	8	HP	13494	u Her	I	3788.385	-.002	9	EP
13445		I	3810.300	-.004	7	HP	13495	SW Lac	II	3755.301	-.108	7	RG
13446	Z Dra	I	3783.444	+.006	6	KL	13496		II	3762.358	-.107	6	RG
13447	RR Dra	I	3795.377	+.149	10	RG	13497		II	3762.359	-.106	9	GT
13448		I	3795.384	+.155	11	HP	13498		I	3764.432	-.118	13	GT
13449	RZ Dra	I	3764.402	-.017	8	HP	13499		I	3765.394	-.117	19	GT
13450		I	3769.361	-.016	11	RD	13500		I	3766.359	-.119	13	GT
13451		I	3775.420	-.017	9	HP	13501		I	3767.324	-.112	6	RG
13452		I	3790.294	-.016	6	RD	13502		II	3771.445	-.116	13	GT
13453		I	3795.246	-.023	8	RG	13503		I	3773.418	-.111	16	GT
13454		I	3796.360	-.010	8	HP	13504		I	3773.428	-.102	7	HP
13455		I	3806.261	-.025	7	RG	13505		I	3775.336	-.118	11	GT
13456	WW Dra	II	3793.443	+.086	11	HP	13506		II	3775.502	-.112	9	GT
13457	AI Dra	I	3718.403	+.004	11	AR	13507		I	3776.310	-.106	7	RG
13458		I	3718.410	+.011	19	PR	13508		II	3776.462	-.115	11	GT
13459		I	3725.586	-.006	12	AR	13509		I	3792.335	-.118	7	RG
13460		I	3754.364	.000	11	AR	13510		II	3794.423	-.114	7	HP
13461		I	3790.327	-.002	12	EP	13511		II	3795.385	-.115	16	GT
13462		I	3796.322	.000	7	RG	13512		II	3796.356	-.105	7	RG
13463		I	3802.327	+.011	12	EP	13513		II	3810.465	-.108	8	HP
13464	CM Dra	I	3777.361	*	7	KL	13514	CM Lac	I	3787.316	-.004	5	RG
13465	TZ Eri	I	3795.478	-.067	16	RG	13515		I	3795.338	-.005	6	RG
13466	WX Eri	I	3762.468	+.013	7	KL	13516		I	3795.356	+.013	7	HP
13467		I	3776.457	+.007	6	KL	13517	TT Lyr	I	3791.274	-.030	6	HP
13468		I	3813.505	+.008	7	KL	13518	TZ Lyr	I	3755.310	+.027	8	RG
13469	YY Eri	I	3762.653	-.001	7	KL	13519		I	3756.366	+.025	8	RD
13470		II	3795.600	-.008	12	RD	13520		I	3756.371	+.030	7	RG
13471	ZZ Eri	II	3808.606	-.011	6	KL	13521		I	3765.364	+.034	8	HP
13472		II	3813.510	+.016	10	KL	13522		I	3765.367	+.036	10	RD
13473	BL Eri		3764.646	**	9	KL	13523		I	3791.281	+.038	7	HP
13474			3773.603	**	6	KL	13524		I	3792.331	+.031	7	RG
13475			3783.603	**	7	KL	13525	UZ Lyr	I	3769.380	+.025	14	RD
13476			3812.539	**	4	KL	13526	EW Lyr	I	3773.349	+.065	10	HP
13477	HR Gem	I	3773.662	+.006	5	KL	13527		I	3810.372	+.062	9	HP
13478	RX Her	I	3765.342	-.011	8	RG	13528	FL Lyr	I	3795.453	+.004	7	HP
13479		I	3765.351	-.002	8	HP	13529	NY Lyr	I	3755.442	-.078	11	RD
13480		II	3806.248	-.013	6	RG	13530	RW Mon	I	3765.586	-.010	9	KL
13481	SZ Her	I	3766.387	+.036	11	HP	13531	U Cph	II	3719.455	+.009	15	PR
13482	TT Her	I	3756.368	-.051	7	RG	13532		II	3756.344	-.003	9	RD
13483		I	3767.320	-.044	7	RG	13533		II	3756.346	-.001	10	RG
13484		I	3788.293	-.048	7	RG	13534		I	3777.304	-.010	7	RD
13485		I	3809.253	-.067	7	RG	13535		I	3777.310	-.004	9	RG
13486	TU Her	I	3755.418	-.087	11	HP	13536	RZ Oph	I	3775.59	+.33	13	RG
13487		I	3755.421	-.084	8	KL	13537	V 501 Oph	I	3777.392	.000	9	HP
13488	UX Her	I	3764.440	-.049	11	HP	13538		I	3810.307	+.005	8	HP
13489		I	3806.259	-.049	7	RG	13539	V 508 Oph	I	3762.345	+.020	8	RG
13490	CC Her	I	3762.321	+.068	13	HP	13540		I	3764.406	+.013	8	HP

*** see preceding page

* GCVS elements incomplete, 0-C according to Martins' elements PASP 87, p.168, 1975: -.323

** Whereas the observations of last winter quite clearly showed the GCVS period to be erroneous, these results seem to fit it anew (cf. BBSAG Bulletin 36, p.6). The puzzle is probably visually insoluble, and possibly due to variability of the comparison star 5'south-

cur- rent no.	star	minimum or- der	JD hel 244...	O-C	n ser- ver	ob- ser- ver	cur- rent no.	star	minimum or- der	JD hel 244...	O-C	n ser- ver	ob- ser- ver
13541	v 839 Dph	I	3756.363	+0.009	9	RD	13590		I	3729.392	-0.032	9	PR
13542		I	3765.375	+0.023	8	RD	13591		I	3729.394	-0.030	8	AR
13543	V 916 Dph	I	3775.371	+0.051	6	KL	13592		I	3730.575	-0.022	16	PR
13544	EQ Ori	I	3767.642	-0.078	10	KL	13593		I	3755.423	-0.025	11	HP
13545	FK Cri	I	3783.621	+0.269	6	KL	13594		I	3806.283	-0.027	7	RG
13546	U Peg	II	3789.365	-0.006	6	RD	13595	SZ Scl	II	3783.453	+0.044	7	KL
13547		I	3790.303	-0.006	5	RD	13596		I	3805.438	+0.052	7	KL
13548	TY Peg	I	3788.305	-0.017	11	KL	13597		II	3812.315	+0.032	11	KL
13549		I	3791.380	-0.035	12	HP	13598	U Sct	I	3754.347	+0.034	6	RD
13550	UX Peg	I	3811.274	-0.274	8	HP	13599	RS Sct	I	3754.338	+0.018	7	RD
13551	DF Peg	I	3765.320	-0.008	8	RD	13600	AO Ser	I	3762.316	-0.003	10	HP
13552	DI Peg	I	3791.354	-0.025	9	RG	13601	RW Tau	I	3762.634	-0.008	6	KL
13553		I	3791.370	-0.009	6	HP	13602		I	3765.407	-0.083	6	KL
13554		I	3803.465	-0.015	8	HP	13603		I	3776.481	-0.085	6	KL
13555		I	3806.309	-0.018	9	RG	13604	SV Tau	I	3795.598	-0.046	12	RD
13556	DK Peg	I	3789.359	+0.072	10	RD	13605	AM Tau	I	3773.622	-0.136	6	KL
13557	EE Peg	I	3779.338	+0.058	12	EP	13606	AP Tau	I	3783.464	**	6	KL
13558	Z Per	I	3767.388	+0.022	6	KL	13607	BN Tau	I	3764.618	+0.041	12	KL
13559	RV Per	I	3777.669	+0.013	6	KL	13608	CT Tau	II	3795.629	+0.024	10	RD
13560	RW Per	I	3775.627	+0.293	6	KL	13609	V Tri	I	3755.660	+0.014	11	KL
13561	RY Per	I	3790.374	+0.019	7	RD	13610		I	3791.362	+0.018	9	RG
13562	WY Per	I	3756.539	-0.032	5	KL	13611	X Tri	I	3772.518	-0.038	6	KL
13563	XZ Per	I	3788.475	+0.007	10	KL	13612		I	3775.431	-0.040	9	HP
13564		I	3803.446	+0.007	9	HP	13613		I	3776.405	-0.038	6	KL
13565	CH Per	I	3755.511	-0.235	11	KL	13614		I	3776.409	-0.034	9	RG
13566		I	3776.551	-0.230	11	KL	13615		I	3804.576	-0.039	12	KL
13567	II Per	I	3788.472	+0.006	10	KL	13616		I	3806.520	-0.040	5	KL
13568	IZ Per	I	3788.403	-0.002	13	EP	13617		I	3806.525	-0.035	5	MA
13569	KW Per	I	3754.662	+0.043	8	KL	13618		I	3806.526	-0.034	5	DM
13570		I	3795.635	+0.041	10	RD	13619		I	3809.436	-0.039	10	HP
13571	QU Per	I	3777.587	*	7	KL	13620	RW Tri	I	3765.646	-0.003	6	KL
13572		I	3782.403	*	4	KL	13621		I	3767.500	-0.004	5	KL
13573	β Per	I	3786.373	-0.094	11	EP	13622		I	3783.501	-0.002	6	KL
13574		I	3809.295	-0.111	8	RG	13623		I	3804.604	-0.001	6	KL
13575	Y Psc	I	3763.642	+0.150	6	KL	13624		I	3805.530	-0.003	4	KL
13576		I	3767.418	+0.161	8	KL	13625	UX UMa	I	3755.409	.000	9	RD
13577	SX Psc	I	3762.417	-0.025	9	HP	13626	AC UMa	I	3755.463	+0.254	6	KL
13578		I	3810.317	-0.027	6	HP	13627	FX Vel	II	3805.625	+0.017	7	KL
13579	UV Psc	I	3772.471	+0.022	9	HP	13628	Z Vul	I	3767.416	+0.006	9	HP
13580		I	3791.408	+0.016	7	HP	13629		I	3794.428	+0.016	7	HP
13581		I	3803.472	+0.025	8	HP	13630	XZ Vul	I	3788.340	+0.265	8	KL
13582		I	3809.489	+0.015	8	HP	13631		I	3791.399	+0.235	8	RD
13583	RW PsA	II	3788.301	-0.059	6	KL	13632	AW Vul	I	3790.303	-0.021	8	HP
13584	U Sge	I	3732.522	+0.024	13	AR	13633	BE Vul	I	3794.396	+0.020	9	HP
13585		I	3776.444	-0.002	7	KL	13634	BK Vul	I	3755.398	+0.002	9	RD
13586		I	3793.357	+0.009	13	HP	13635	BC Vul	I	3755.394	-0.075	12	HP
13587	UZ Sge	I	3765.338	+0.059	10	HP	13636		I	3790.415	-0.080	10	HP
13588	V 505 Sgr	I	3717.569	-0.026	11	PR	13637		I	3794.312	-0.076	6	HP
13589		I	3723.492	-0.018	5	PR	13638	BU Vul	I	3765.306	-0.003	6	KL
							13639		I	3765.307	-0.002	8	HP
							13640		I	3790.351	+0.006	8	HP
							13641		I	3803.436	+0.005	9	HP
							13642	CD Vul	I	3810.360	-0.012	6	HP
							13643	FM Vul	I	3755.400	+0.009	11	RD
							13644	NO Vul	I	3788.380	***	8	KL

* no period given in the GCVS,
O-C according to the elements
on page 6 of this issue: .000
.000:

** GCVS 1969 elements incomplete, O-C according to the GCVS 1976: -0.072

*** not contained in the GCVS 1969, O-C according to the GCVS 1976: +0.014

A Q Camelopardalis :

The Minimum Brightness

According to the GCVS 1969-71-74-76, nothing is known about the minimum magnitude of this EA star except that it is below 15.0 photographic. Surveying the eclipse at JD 2443762 I obtained

$$m_{\min v} \approx 16$$

with this rough accuracy because of the lack of suitable comparison stars, referring only to the visual impression got from the minima of RW Tri ($B = 16.04$, $V \approx 15$) and CH Per ($m_p = 17.1$, $V \approx 16.5$) with the same instrument and similar conditions.

K. Locher

Q U Persei :

Detection of the Period

For this EA binary no period is given by the GCVS 1969-71-74-76. My visual survey during the past 6 weeks has yielded unambiguously the elements

$$JD_{\text{hel min I}} = 2443777.587 + 2.408 E$$

as well as the remaining unknown photometric parameters as

$$|m_{\max} - m_{\min I}| = 1.6 \pm .2$$

$$|m_{\max} - m_{\min II}| = .03 \pm .03$$

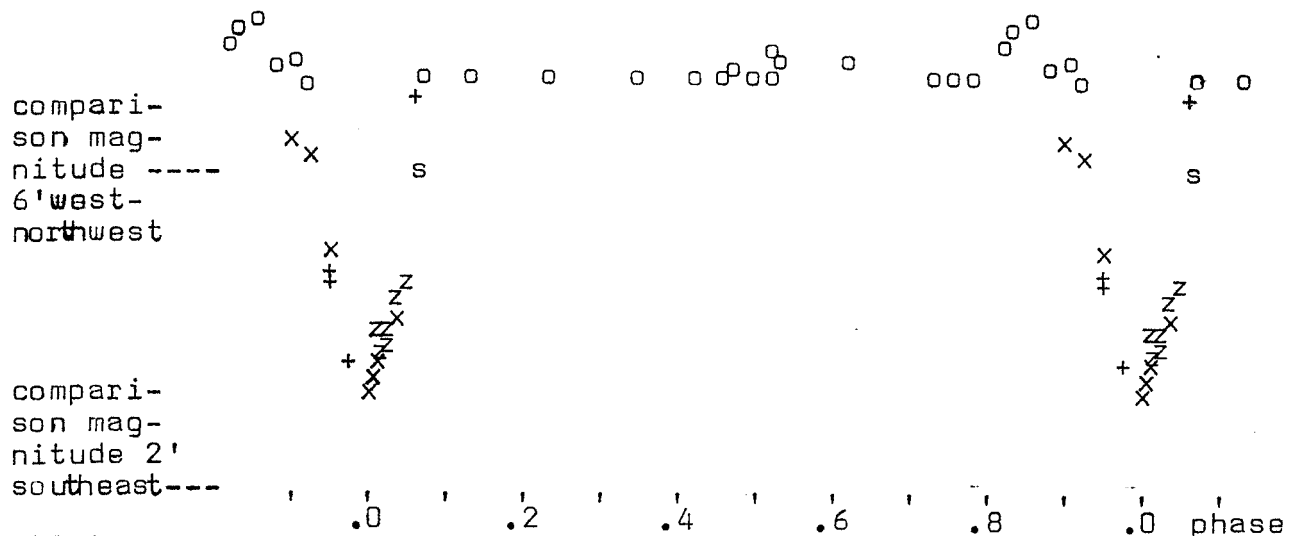
$$D/p = .15 \pm .01$$

$$d/p = .01 \pm .01$$

Figure 41 plots all my observations against phase.

K. Locher

Fig. 41



JD: o sporadic 43747-83, z 43765, x 43777, + 43782, s 43787

RZ Ophiuchi : Unexpectedly Narrow Eclipse

According to the GCVS 1969-71-74-76 this EA binary shows a total-ity duration of .040 period = 10.5 days. I observed the beginning of the descending branch near September 16, and then was surprised to obtain it distinctly longer than the GCVS value of 4 days for $\frac{1}{2}(D-d)$. Near and after the minimum the weather did not allow the same quality of observation, so that I am not sure whether the totality lasted zero or a few days, but in any case much less than the GCVS value of 10.5 days. All my observations are plotted in fig.42, the comparison stars of which are identified by fig.43.

R. Germann

Fig. 42

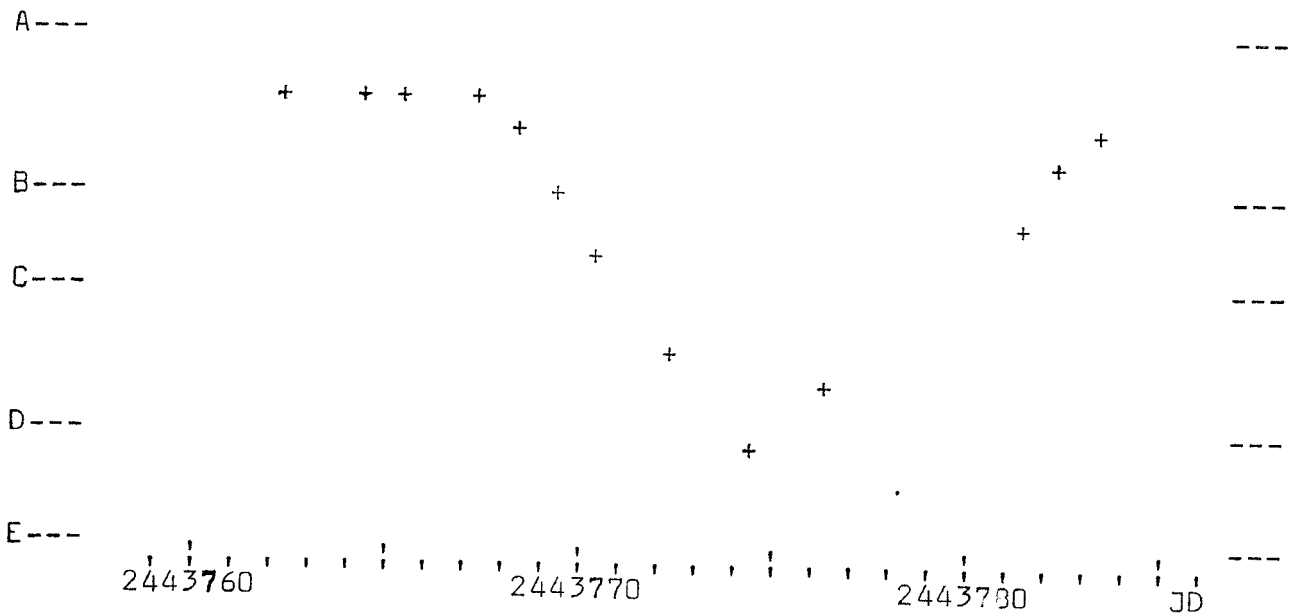
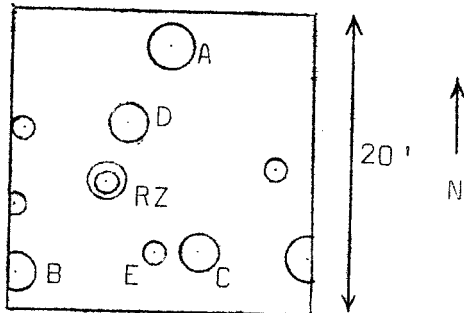


Fig. 43



A c k n o l e d g m e n t s

As a first time, a considerable share of my results in this issue is from stars fainter than magnitude 13.5. This is owing to the use of the 63 cm - "Newall" - Refractor at Athens - Πεντέλη and the 60 cm - Cassegrain at Berne - Zimmerwald, where I am indebted for allowance and help to the directors and collaborators Σ. Πακίδης, Γ. Κοντόπουλος, Δ. Ήλιος, M. Schürer, and P. Wild .

K. Locher