BBSAG Bulletin 33

1977 July 12

The following table lists 249 minima obtained visually mainly during 1977 March to June by the observers

AB	Alberto Buzzoni, Ferrara, Italy
RD	Roger Diethelm, Reinach, Switzerland
RG	Robert Germann, Wald, Switzerland
RK	Rudolf Kratochwill, Graz, Austria
KL	Kurt Locher, Grüt, Switzerland
EL	Eolo Lucentini, Calderola, Italy
AP	Angelo del Parigi, Matera, Italy
HP	Hermann Peter, Otelfingen, Switzerland
CP	Cosimo Plasmati, Matera, Italy
EP	Ennio Poretti, Arconate, Italy
GT	Gilles Troispoux, Fleury-lès-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.

current no.	star	minimum order	JD hel 244...	O-C	n	observer
11349	RT And	I	3269.562	-0.009	11	KL
11350	XZ And	I	3204.391	-0.027	10	KL
11351	AB And	II	3279.616	+0.026	11	KL
11352		II	3292.565	+0.031	8	RG
11353	EP And	I	3204.274	*	10	KL
11354		I	3291.551	*	8	KL
11355		II	3292.562	*	8	KL
11356		II	3311.555	*	7	KL
11357	RY Aqr	I	3292.523	-0.073	7	RG
11358	OO Aql	II	3219.676	-0.041	6	KL
11359		I	3231.588	-0.040	5	KL
11360		II	3251.604	-0.042	9	RG
11361		II	3311.411	-0.036	7	RG
11362	V803 Aql	I	3307.475	-0.023	6	KL
11363		II	3311.555	-0.026	8	KL
11364	V805 Aql	I	3205.678	+0.020	13	KL
11365	TT Aur	I	3212.362:	-0.002:	10	RD
11366		I	3212.371	+0.007	11	HP
11367		I	3220.367	+0.006	10	HP
11368		I	3244.374	+0.025	6	KL
11369	WW Aur	I	3217.319	+0.001	16	EP
11370		I	3217.322	+0.004	11	HP
11371		I	3222.370	+0.002	9	HP
11372		II	3246.352	-0.003	8	EP
11373		II	3246.364	+0.008	10	AB
11374	ZZ Aur	I	3213.389	-0.019	8	HP
11375	AR Aur	II	3258.332	-0.004	13	EP
11376		II	3258.333	-0.003	10	AP
11377	TU Boo	II	3219.665	+0.003	6	KL
11378		II	3273.491	-0.002	8	KL
11379	Y Cam	I	3292.503	+0.118	7	KL
11380	SV Cam	I	3239.283	-0.009	6	KL
11381		I	3265.379	-0.008	9	KL
11382	TX Cnc	II	3239.446	+0.015	7	RD
11383		I	3250.346	+0.003	7	RD
11384	WW Cnc	I	3212.376	-0.231	10	HP
11385	WY Cnc	I	3219.311	-0.001	7	RG
11386	YZ CVn	I	3220.546	**	9	KL
11387		I	3273.452	**	10	KL
11388		I	3307.538	**	11	KL

* GCVS 1969 period erroneous, O-C according to the elements of the GCVS 1976: +0.009 -0.001 -0.001 0.000

** no period given by the GCVS, O-C according to the elements of BBSAG Bulletin 27, p.7: +0.012 +0.020 +0.016

current no.	star	minimum order	JD hel 244...	O-C	n	observer
11389	R CMa	I	3202.272	+0.016	12	EP
11390		I	3203.396	+0.004	22	EP
11391		I	3219.312	+0.016	13	EP
11392	RZ Cas	I	3182.378	+0.001	35	EL
11393		I	3182.382	+0.005	25	CP
11394		I	3250.506	0.000	18	EP
11395		I	3274.416	+0.004	17	EP
11396		I	3311.471	+0.006	25	EP
11397	LR Cas	I	3220.324	-0.060	6	RD
11398	V 523 Cas	II	3266.608	*	6	KL
11399	V 752 Cen	I	3244.457	**	9	KL
11400		II	3245.378	**	8	KL
11401	U Cep	I	3210.312	+0.040	7	KL
11402		I	3292.568	+0.028	10	KL
11403		I	3297.561	+0.033	7	KL
11404		I	3307.537	+0.037	9	KL
11405		I	3322.500	+0.042	6	KL
11406	EG Cep	I	3296.404	+0.019	8	KL
11407	RW Com	I	3210.330	-0.041	6	RG
11408		I	3212.339	-0.049	10	RG
11409		I	3250.324	-0.040	8	RG
11410		I	3254.358	-0.040	8	RG
11411		I	3281.407	-0.050	8	RG
11412		II	3288.412	-0.046	7	RG
11413	RZ Com	I	3213.413	0.000	7	HP
11414	CC Com	I	3212.427	+0.108	8	HP
11415		II	3222.468	+0.109	8	HP
11416		II	3239.459	+0.107	9	HP
11417		I	3250.381	+0.105	7	RG
11418		I	3254.356	+0.109	9	RG
11419		II	3254.467	+0.109	6	RD
11420	U CrB	I	3288.467	-0.042	11	KL
11421	TW CrB	II	3254.465	***	6	RD
11422		I	3295.393	***	7	KL
11423	VW Cyg	I	3307.473	+0.024	7	KL
11424	ZZ Cyg	I	3205.656	-0.032	10	KL
11425		I	3278.570	-0.039	7	KL
11426		I	3297.439	-0.027	6	KL
11427	V 477 Cyg	I	3297.397	-0.030	7	RG
11428	W Del	I	3304.511	+0.136	8	KL
11429	TT Del	I	3291.539	+0.045	7	KL
11430	Z Dra	I	3213.311	-0.002	6	KL
11431		I	3217.388	+0.002	7	HP
11432	TW Dra	I	3204.414	-0.040	8	KL
11433		I	3291.396	-0.071	11	RG
11434	WW Dra	II	3212.490	+0.145	10	KL
11435		I	3219.397:	+0.106:	8	RG
11436		I	3228.673	+0.124	10	RG
11437		I	3307.414	+0.161	10	RG
11438	AI Dra	I	3248.469	+0.004	13	EP
11439		I	3308.412	+0.007	11	EP
11440		I	3314.406	+0.007	16	EP
11441	CM Dra	I	3288.401	****	11	KL
11442		I	3291.573	****	10	KL
11443		I	3293.480	****	6	KL
11444		I	3307.432	****	7	KL
11445	S Equ	I	3311.445	+0.008	10	RG
11446	YY Eri	I	3210.305	-0.018	8	RG
11447	RW Gem	I	3212.416	-0.005	12	HP
11448		I	3212.424	+0.004	10	KL
11449	TX Gem	I	3217.327	-0.002	7	KL
11450		I	3217.333	+0.004	11	HP
11451	AF Gem	I	3213.427	-0.012	8	HP
11452	BD Gem	I	3250.368	+0.038	8	RD
11453	CX Gem	I	3210.311	-0.027	10	KL
11454	FG Gem	I	3220.402	-0.078	8	HP
11455	GW Gem	I	3220.430	-0.018	9	HP
11456		I	3222.402	-0.024	9	HP
11457	RX Her	I	3291.377	+0.013	8	RG
11458		II	3307.390	+0.018	7	RG
11459	TU Her	I	3288.429	-0.079	11	KL
11460	TX Her	I	3248.458	+0.008	20	EP
11461		I	3250.516	+0.006	31	EP
11462		I	3285.528	+0.001	27	EP
11463	CC Her	I	3278.533	+0.059	9	KL
11464		I	3304.544	+0.060	7	KL
11465		I	3311.482	+0.063	10	KL

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

** not contained in the GCVS 1969, O-C according to the GCVS 1974 : -0.017 -0.022

*** not contained in the GCVS 1969, O-C according to the GCVS 1976 : -0.006 -0.004

**** GCVS elements incomplete, O-C according to the elements of Martins, PASP 87 (1975) p.168 : -0.237 -0.237 -0.233 -0.235

current no.	star	minimum or- der	JD hel 244...	O - C	n	ob- ser- ver
11466	DP Her	I	3273.446	-0.178	6	KL
11467	MT Her	I	3283.369	+0.027	6	KL
11468	u Her	I	3306.408:	+0.013:	9	EP
11469		I	3308.470:	+0.024:	10	EP
11470	UY Hya	I	3250.354:	-0.001:	9	RD
11471	VY Hya	I	3239.359	-0.010	15	RG
11472		I	3265.368	-0.016	4	KL
11473		I	3273.378	-0.012	6	KL
11474	WY Hya	II	3213.403	+0.014	9	HP
11475	AV Hya	I	3220.421	-0.006	9	HP
11476	FG Hya	II	3220.356	+0.012	7	RD
11477	AU Lac	I	3275.553	-0.055	7	KL
11478	CM Lac	I	3291.460	-0.010	8	RG
11479	FT Lac	I	3304.451	-0.061	10	KL
11480	PP Lac	I	3291.560	*	6	KL
11481		II	3292.573	*	6	KL
11482	Y Leo	I	3212.481	+0.097	10	HP
11483		I	3212.481	+0.097	10	KL
11484		I	3239.457	+0.095	7	RD
11485		I	3239.459	+0.098	9	HP
11486	RW Leo	I	3210.315	+0.035	6	KL
11487	UV Leo	II	3201.494	-0.012	20	EP
11488		I	3202.397	-0.009	20	EP
11489		II	3212.312	+0.004	8	RG
11490		II	3215.298	-0.009	12	EP
11491		I	3217.403	-0.005	8	HP
11492		II	3228.500	-0.010	26	EP
11493		II	3239.302	-0.010	6	KL
11494		II	3246.503	-0.010	27	EP
11495		I	3247.406	-0.006	33	EP
11496		II	3249.505	-0.008	27	EP
11497		I	3250.406	-0.006	30	EP
11498		I	3259.407	-0.007	36	EP
11499		I	3274.406	-0.010	30	EP
11500		I	3277.403	-0.013	30	EP
11501	VZ Leo	I	3239.386	-0.154	11	HP
11502	XY Leo	I	3212.337	-0.033	9	RD
11503		I	3220.303	-0.022	5	RD
11504	BL Leo	I	3217.391	-0.006	4	KL
11505		II	3218.371	-0.014	5	KL
11506	RY Lyn		3220.350	**	9	RD
11507	SX Lyn	I	3273.337	-0.316	10	RG
11508	UU Lyn	I	3213.381	-0.037	9	HP
11509		I	3220.426:	-0.017:	8	HP
11510		I	3250.395	-0.031	8	RD
11511	TZ Lyr	I	3211.678	+0.026	6	KL
11512	EW Lyr	I	3307.581	+0.045	6	KL
11513		I	3311.490	+0.056	10	KL
11514	RW Mon	I	3222.356	-0.003	11	HP
11515	BO Mon	I	3218.312	+0.133	11	HP
11516		I	3218.313	+0.135	8	KL
11517	U Oph	I	3292.558	-0.003	10	RG
11518	RV Oph	I	3288.405	-0.002	7	KL
11519	V 449 Oph	I	3281.565	+0.064	7	KL
11520		I	3291.506	+0.061	10	KL
11521	V 502 Oph	I	3312.435	-0.039	14	GT
11522	V 508 Oph	I	3281.356	+0.016	7	RG
11523		II	3297.386	+0.013	10	KL
11524	V 752 Oph	I	3281.566	***	6	KL
11525		I	3283.412	***	7	KL
11526	V 868 Oph	I	3283.436	-0.051	6	KL
11527	V 916 Oph	I	3292.579	+0.044	7	KL
11528	V 1010 Oph	I	3251.591	-0.073	8	RG
11529		I	3255.562	-0.070	10	KL
11530		I	3273.416	-0.075	8	RG
11531		I	3292.595	-0.078	9	RG
11532		I	3306.486	-0.076	14	EP
11533		I	3308.480	-0.067	13	EP
11534		I	3312.426	-0.090	13	GT
11535		I	3312.440	-0.076	21	EP
11536		I	3314.430	-0.070	15	EP
11537	ER Ori	II	3217.335	-0.026	7	HP
11538	OS Ori	I	3217.342	-0.027	10	HP
11539	V 392 Ori	I	3212.367:	+0.016:	10	RD
11540	V 640 Ori	I	3218.311	-0.015	7	KL
11541	BN Peg	I	3322.595	-0.296	5	KL
11542	DI Peg	I	3311.594	-0.020	5	KL
11543	RT Per	I	3216.364	-0.058	4	KL

* no period given by the GCVS, O - C according to Figer's (1st set) elements IBVS 1231 : +0.039 +0.049

** period unknown

*** no period given by the GCVS, O - C according to the elements of BBSAG Bulletin 27, page 4, footnote 1 : -0.014 -0.004

current no.	star	minimum order	JD hel 244...	O-C	n	observer
11544	ST Per	I	3154.281	-0.004	6	KL
11545	KW Per	I	3204.284	+0.037	10	KL
11546		I	3217.328	+0.043	7	KL
11547		I	3281.582	+0.041	4	KL
11548	β Per	I	3204.278	-0.109	10	RG
11549		I	3224.376	-0.083	11	RK
11550	UZ Pup	I	3220.333	-0.025	5	RD
11551	XZ Pup	I	3212.408	-0.016	11	HP
11552		I	3212.408	-0.016	7	KL
11553		I	3245.284	-0.026	6	KL
11554	U Sge	I	3296.407	+0.009	10	KL
11555	UZ Sge	I	3284.526	+0.062	6	KL
11556		I	3304.462	+0.057	7	KL
11557	XY Sgr	I	3291.547	+0.015	7	KL
11558	AK Ser	I	3275.467	-0.009	7	KL
11559	AO Ser	I	3205.694	+0.002	6	KL
11560		I	3279.560	+0.003	7	KL
11561	AU Ser	I	3211.639	*	7	KL
11562		I	3275.406	*	10	KL
11563		II	3281.395	*	9	RG
11564		II	3288.362	*	7	RG
11565	RW Tau	I	3239.330	-0.080	8	HP
11566	HU Tau	I	3212.352	+0.009	9	RD
11567		I	3212.369	+0.026	9	HP
11568	TX UMa	I	3212.283	-0.001	9	RG
11569		I	3215.352:	-0.004:	19	EP
11570		I	3218.400	-0.011	15	EP
11571	UX UMa	I	3219.677	+0.001	6	KL
11572		I	3273.368	0.000	5	KL
11573		I	3275.532	+0.001	5	KL
11574		I	3284.575	-0.003	5	KL
11575		I	3288.513	+0.002	7	KL
11576		I	3303.457	-0.001	7	KL
11577		I	3304.440	-0.001	6	KL
11578		I	3307.392	+0.001	6	KL
11579		I	3311.522	0.000	6	KL
11580	XY UMa	I	3212.361	-0.011	9	RD
11581	XZ UMa	I	3204.303	-0.081	7	KL
11582		I	3254.413	-0.086	12	RG
11583		I	3254.427	-0.072	6	RD
11584	UW Vir	I	3273.432	+0.273	10	KL
11585	VV Vir	I	3220.496	**	6	KL
11586		I	3275.367	**	10	KL
11587		I	3283.398	**	7	KL
11588		I	3303.476:	**	4	KL
11589		I	3304.364:	**	5	KL
11590		I	3307.488	**	7	KL
11591	AH Vir	I	3291.398	+0.040	7	RG
11592	AZ Vir	I	3254.465	***	6	RD
11593		I	3281.403	***	12	RG
11594	BH Vir	I	3222.441	+0.004	7	HP
11595	Z Vul	I	3266.609	+0.003	11	KL
11596	BO Vul	I	3284.496	-0.068	7	KL
11597	BU Vul	I	3219.651	+0.006	8	KL

* GCVS 1969 period too inaccurate for reasonable reduction, O-C according to the GCVS 1974: -0.006 -0.011 -0.013 -0.004

** O-C according to the GCVS exceeds 2 periods, O-C according to the elements of BBSAG Bulletin 31, page 5 : +0.010 +0.006 +0.007 +0.009: +0.005: +0.006

*** GCVS 1969 period erroneous, O-C according to the GCVS 1976: -0.002 +0.012

The Amplitude of V 868 Ophiuchi

is unknown according to the GCVS which states 12.9 ... (13.8p . From comparison to several nearby AAVSO sequences I obtain a smaller amplitude,

$$|m_{max} - m_{min}| = .9 \pm .1 ,$$

but, on the other hand, a fainter minimum in spite :

$$m_{V\ min} = 14.3 \pm .2$$

K. Locher