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ELEMENTS FOR 7 PULSATING VARIABLES

HÄUSSLER, K.¹; BERTHOLD, T.^{1,2}; KROLL, P.²

¹ Bruno-H.-Bürgel-Sternwarte, Töpelstr. 46, D-04746 Hartha, Germany

² Sternwarte Sonneberg, Sternwartestr. 32, D-96515 Sonneberg, Germany

email: sternwartehartha@lycos.de, tb@4pistysteme.de, pk@4pistysteme.de

These stars were reported to be variable by Boyce & Huruhata (1942), Hoffmeister (1931, 1943, 1966, 1967) and Götz et al. (1957). Except in the cases of V565 Oph and V943 Oph (see details noted in the remarks below), no further observations or ephemeris have been published until today. Photographic plates of a field centered at 67 Oph, taken with the Sonneberg Observatory 40-cm Astrographs during three intervals spread over the years from 1938 to 1994, were used to investigate the behaviour of these objects (see Table 1).

The given elements were obtained by means of least-squares solutions. Photographic amplitudes were derived with respect to magnitudes of the comparison stars given in Table 2. An extensive list holding the times of maxima derived can be retrieved as `5758-t3.txt`, using the link in the HTML version of this paper. Individual data are available upon request.

Table 1. Summary of this paper

Star	Type	Epoch 2400000+	Period (day)	Max.	Min.	$M - m$	No. of Plates
V565 Oph	Cep	47736.504 ±23	1.8997213 ±56	14 ^m 0	15 ^m 0	0 ^p 20	242
V943 Oph	RRc	49475.526 ±8	0.2718626 ±2	15 ^m 7	16 ^m 1		105
V1066 Oph	CWB	48832.363 ±66	1.9202194 ±121	15 ^m 5	16 ^m 2	0 ^p 20	114
V1079 Oph	RR/DSC	49488.532 ±6	0.2493961 ±1	15 ^m 4	16 ^m 3	0 ^p 25	141
V2034 Oph	RRab	49124.461 ±7	0.6933048 ±5	15 ^m 5	16 ^m 5	0 ^p 20	168
NSV 9519	RRab	48362.569 ±13	0.6477471 ±7	14 ^m 4	15 ^m 5	0 ^p 32	140
NSV 10069	RRab	49475.523 ±5	0.2917116 ±2	14 ^m 1	15 ^m 4	0 ^p 30	219

Table 2. Comparison stars and cross references

V565 Oph 238.1931 USNO 0900-10946581		V943 Oph S 4192 USNO 0825-11559850		
Comp. No.	USNO	m^*	USNO	m^*
1	0900-10928684	13 ^m 6	0825-11549978	15 ^m 5
2	0900-10938160	14 ^m 1	0825-11557631	15 ^m 8
3	0900-10942877	14 ^m 7	0825-11555176	16 ^m 4
4	0900-10943881	15 ^m 2		

V1066 Oph S 9835 USNO 0900-10308821		V1079 Oph S 9845 USNO 0900-10857955		
Comp. No.	USNO	m^*	USNO	m^*
1	0900-10305081	15 ^m 6	0900-10861783	15 ^m 5
2	0900-10306618	15 ^m 9	0900-10857822	16 ^m 2
3			0900-10854899	16 ^m 5

V2034 Oph S 9281 USNO 0900-11253134		NSV 9519 HV 11018 USNO 0975-09544608		
Comp. No.	USNO	m^*	USNO	m^*
1	0900-11261755	15 ^m 3	0975-09548857	14 ^m 4
2	0900-11259056	15 ^m 9	0975-09541815	15 ^m 1
3	0900-11253836	16 ^m 6	0975-09545937	15 ^m 5

NSV 10069 S 9285 USNO 0900-11358051		
Comp. No.	USNO	m^*
1	0900-11361620	13 ^m 8
2	0900-11349891	14 ^m 7
3	0900-11352999	15 ^m 1
4	0900-11359626	16 ^m 1

* Magnitudes refer to the B values of the USNO–A2.0 catalogue

Remarks:

V565 Oph

Both type and period previously published by of Hoffmeister (1943) and cited in the GCVS are erroneous. The variable is situated very near a bright star on the plates. Most of the timings given by Hoffmeister obviously represent brightenings. Only the visual timing (J.D. 2429438.500) has been included in this period analysis.

V943 Oph

Both type and period previously published by of Götz et al. (1957) and cited in the GCVS are erroneous.

V2034 Oph

A spurious period of 0^d.4094386 is possible, but the light curve is better represented with the period given above.

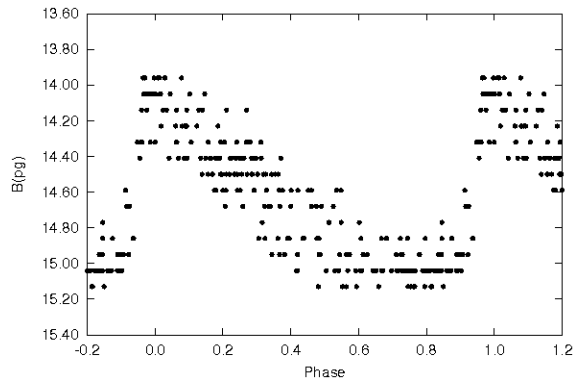


Figure 1. Light curve of V565 Oph

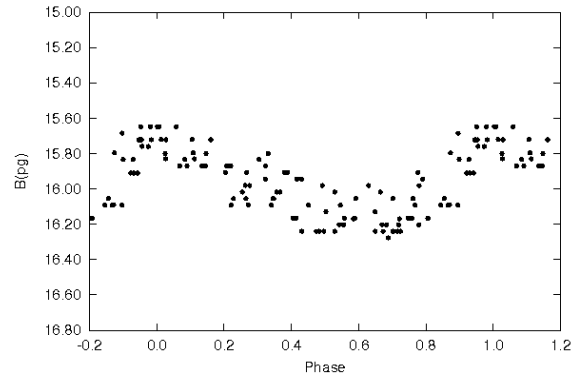


Figure 2. Light curve of V943 Oph

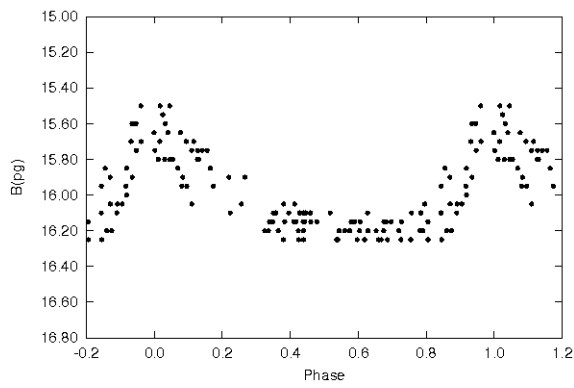


Figure 3. Light curve of V1066 Oph

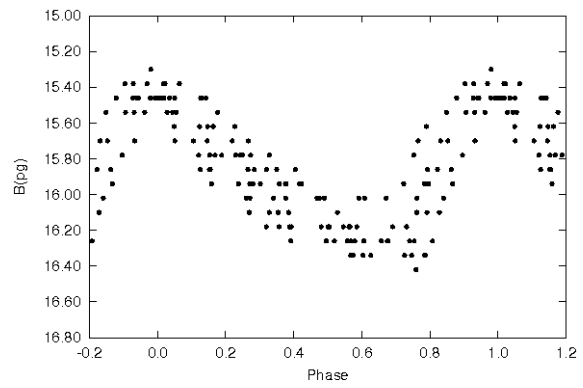


Figure 4. Light curve of V1079 Oph

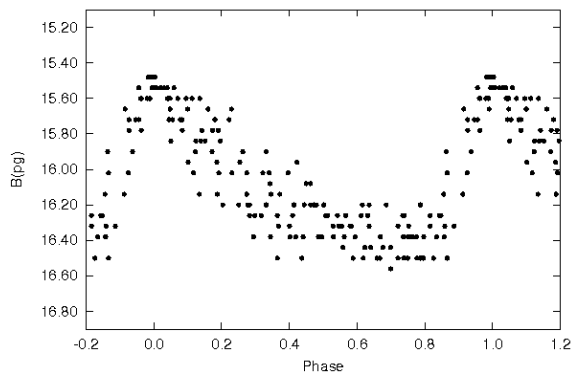


Figure 5. Light curve of V2034 Oph

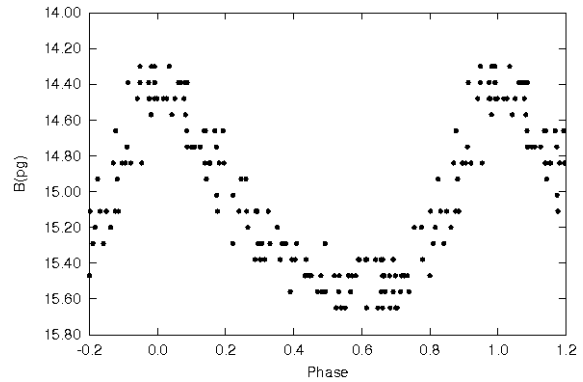


Figure 6. Light curve of NSV 9519

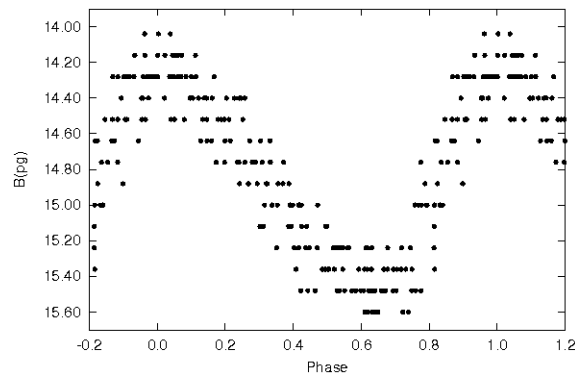


Figure 7. Light curve of NSV 10069

This research made use of the SIMBAD data base, operated by the CDS at Strasbourg, France.

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