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FIVE NEW W UMa VARIABLES

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Observed star(s):				
Star name	GCVS type	Coordinates (J2000)		Comp./check star(s)
		RA	Dec	
TYC 2511-167-1	EW	10 ^h 34 ^m 12 ^s .41	+32°08'52".0	*
GSC 2511-53	EW	10 ^h 33 ^m 04 ^s .91	+32°22'15".3	*
GSC 6336-140	EW	20 ^h 18 ^m 26 ^s .75	−18°58'19".7	*
GSC 825-1465	EW	09 ^h 20 ^m 59 ^s .20	+14°57'24".8	*
GSC 229-701	EW	09 ^h 04 ^m 17 ^s .82	+04°32'29".8	*

* R magnitudes of about ten USNO-A2.0 stars in the fields.

Observatory and telescope:
Les Engarouines Observatory (IAU astrometric code A14), 0.212m Newton.

Detector:	KAF-1600 CCD.
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Filter(s):	None, roughly <i>R</i> .
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Availability of the data:
Upon request

Method of data reduction:
Standard CCD-frame reduction using Prism.

Date(s) of the observation(s):	
TYC 2511-167-1	2002-3-9, 13; 2002-4-6, 17, 18, 19; 2002-12-3, 7; 2003-4-5
GSC 2511-53	2002-3-13; 2002-4-6, 17; 2002-12-3, 7; 2003-2-2; 2003-4-5
GSC 6336-140	2002-8-5, 7, 14, 16; 2002-9-7, 15
GSC 825-1465	2003-2-7, 8, 9; 2003-3-5
GSC 229-701	2003-2-8; 2003-3-5, 7, 8

Table 1. Light curve parameters from the data analysis by the CourbRot software (Behrend, 2001). Uncertainties correspond to one standard-deviation.

Star name	HJD of a pr. min.	Period	Tot. var.	Type
TYC 2511-167-1	2452366 ^d 884 ±0 ^d 010	0 ^d 4368897 ±0 ^d 0000015	0 ^m 38 ±0 ^m 03	W UMa
GSC 2511-53	2452358 ^d 913 ±0 ^d 003	0 ^d 3709787 ±0 ^d 0000014	0 ^m 143 ±0 ^m 005	W UMa
GSC 6336-140	2452508 ^d 702 ±0 ^d 002	0 ^d 39118 ±0 ^d 00002	0 ^m 376 ±0 ^m 009	W UMa
GSC 825-1465	2452678 ^d 248 ±0 ^d 002	0 ^d 53461 ±0 ^d 00004	0 ^m 394 ±0 ^m 009	W UMa
GSC 229-701	2452678 ^d 548 ±0 ^d 003	0 ^d 30953 ±0 ^d 00003	0 ^m 30 ±0 ^m 02	W UMa

Remarks:

The Simbad database reports no known variable stars in the vicinity of these five objects. Tycho's photometry for TYC 2511-167-1 was downloaded from the CDS web-server. As expected, the uncertainties for this faint star were too high to usefully constrain the light curve and its period; the general trend is nevertheless in relative agreement with the parameters we deduced from our observations. All objects were found to be variable by L. B., in the course of asteroidal light curve determination.

Acknowledgements:

These researches used the Simbad database, operated by the CDS at Strasbourg, France.

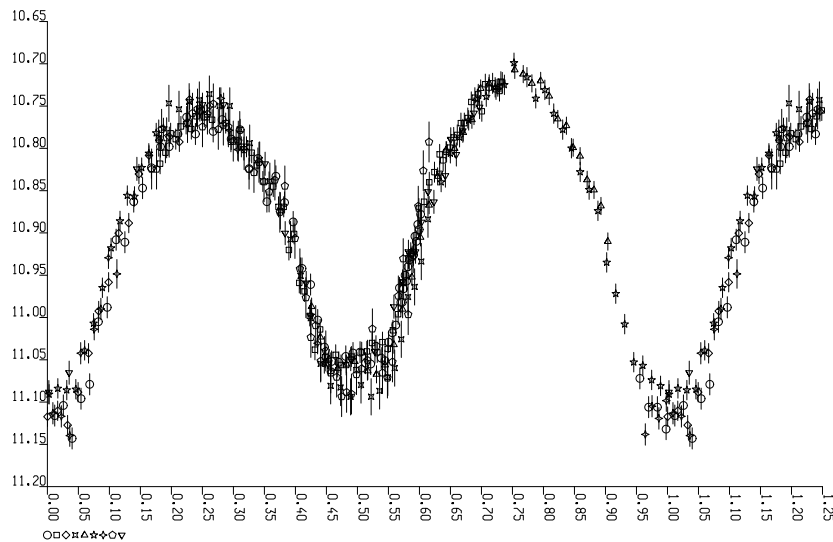


Figure 1. Unfiltered light curve of TYC 2511-167-1, $P = 0^d4368897$.

The small labels denote the chronologic order of the series of observations in Figs. 1-5.

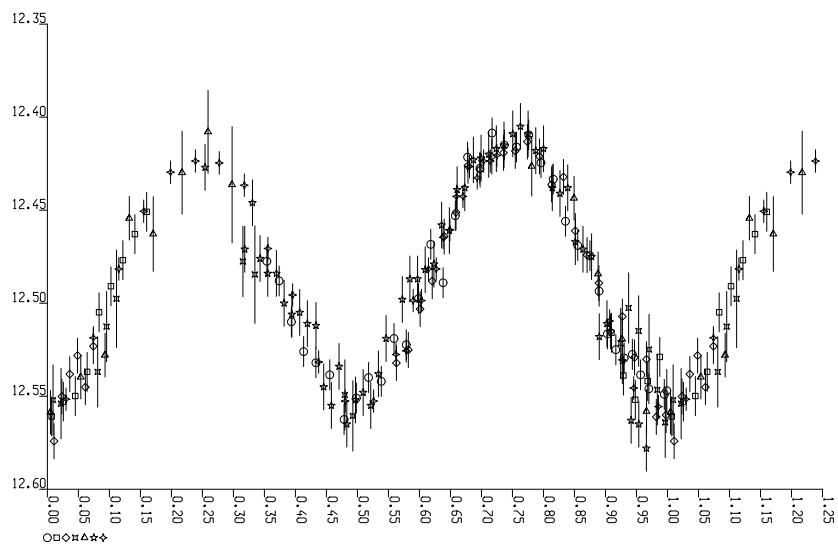


Figure 2. Unfiltered light curve of GSC 2511-53, $P = 0^{\text{d}}3709787$.

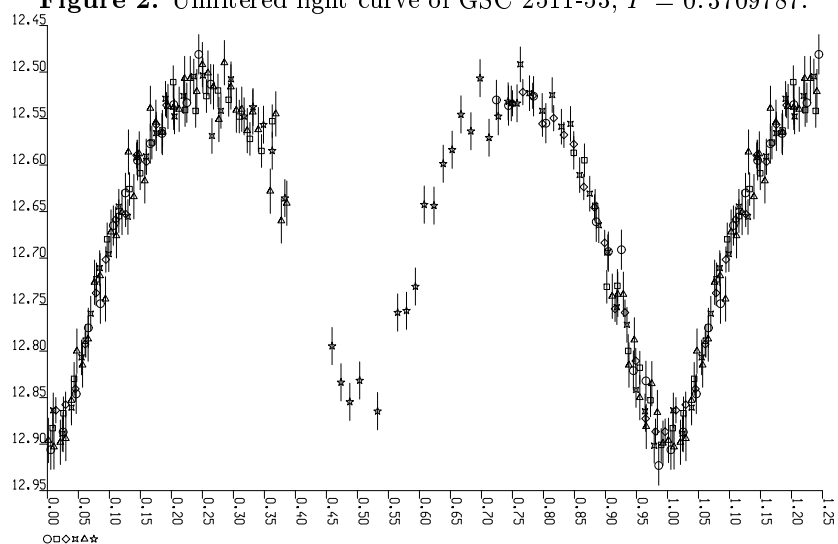


Figure 3. Unfiltered light curve of GSC 6336-140, $P = 0^{\text{d}}391178$.

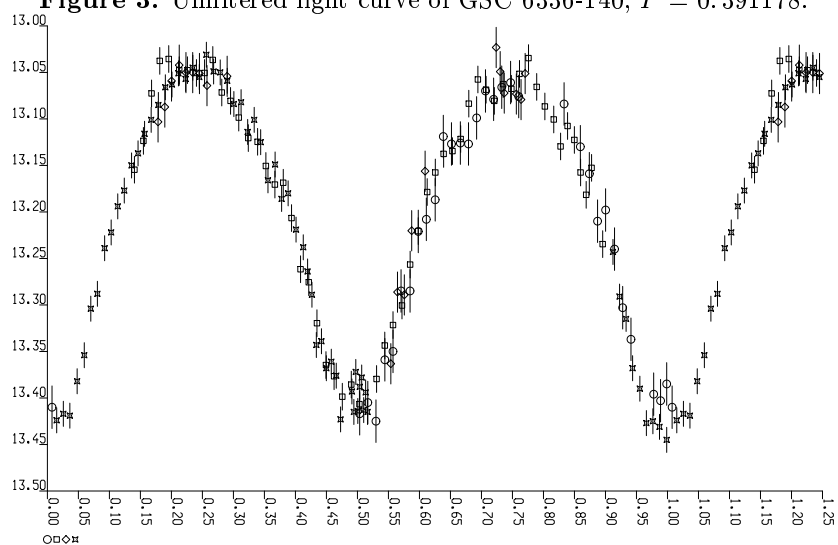


Figure 4. Unfiltered light curve of GSC 825-1465, $P = 0^{\text{d}}534615$.

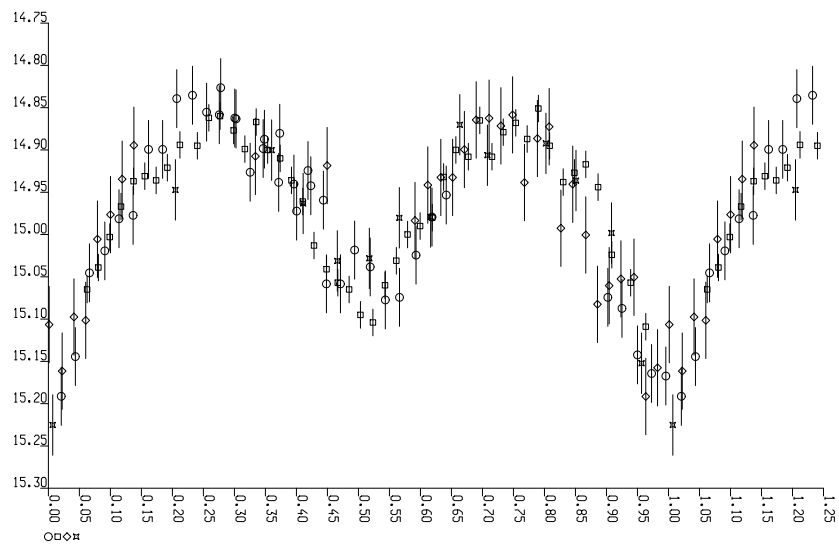


Figure 5. Unfiltered light curve of GSC 229-701, $P = 0^d309525$.

Reference:

Behrend, R., 2001, *Orion*, **304**, 12