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FIVE NEW PULSATING VARIABLES

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Observed star(s):				
Star name	GCVS type	Coordinates (J2000)		Comp./check star(s)
		RA	Dec	
GSC 1649-6	RR Lyr	21 ^h 08 ^m 57 ^s .98	+15°56'55".6	*
USNO-A2.0 1050-1201364	RR Lyr	04 ^h 16 ^m 50 ^s .81	+18°52'20".9	*
GSC 2497-101	RR Lyr	09 ^h 30 ^m 23 ^s .23	+33°53'10".7	*
GSC 5569-389	HADS/SX Phe	14 ^h 46 ^m 00 ^s .85	-10°13'15".6	*
GSC 4998-854	RR Lyr	14 ^h 47 ^m 51 ^s .52	-06°34'45".7	*

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

Observatory and telescope:

F.-X. Bagnoud Obs. (IAU astrometric code 175), 0.60m Newton; Ottmarsheim Obs. (224), 0.305m Schmidt-Cassegrain; Village-Neuf Obs. (138), 0.20m Schmidt-Cassegrain; Les Engarouines Obs. (A14), 0.212m Newton.

Detector:

KAF-1600 at 175 and A14, KAF-1602E at 138 and 224

Filter(s):

None, roughly *R*.

Availability of the data:

Upon request

Method of data reduction:

Standard CCD-frame reduction using IRAF at 175, and Prism elsewhere.

Date(s) of the observation(s):

GSC 1649-6	2002-8-11, 14, 15; 2002-9-11, 12 (138)
USNO-A2.0 1050-1201364	2002-9-30 (175); 2002-9-31; 2002-10-1; 2003-1-13 (224)
GSC 2497-101	2002-12-7; 2003-2-2, 8 (A14)
GSC 5569-389	2003-5-7, 11, 29, 30 (A14)
GSC 4998-854	2003-5-29, 30, 31 (A14)

Table 1. Light curve parameters from the data analysis by the CourbRot software (Behrend, 2001). M-m denotes the rising fraction of the light curve. Uncertainties correspond to one standard-deviation.

Star name	HJD of a max.	Period	Tot. var.	M-m	Type
GSC 1649-6	2452500 ^d .480 ±0 ^d .004	0 ^d .55259 ±0 ^d .00020	0 ^m .92 ±0 ^m .04	0.15	RR Lyr
USNO-A2.0 1050-1201364	2452547 ^d .535 ±0 ^d .004	0 ^d .266882 ±0 ^d .000009	0 ^m .391 ±0 ^m .020	0.4	RR Lyr
GSC 2497-101	2452678 ^d .292 ±0 ^d .005	0 ^d .420003 ±0 ^d .000025	0 ^m .665 ±0 ^m .026	0.25	RR Lyr
GSC 5569-389	2452766 ^d .4469 ±0 ^d .0013	0 ^d .0731905 ±0 ^d .0000022	0 ^m .469 ±0 ^m .021	0.25	HADS/SX Phe?
GSC 4998-854	2452788 ^d .569 ±0 ^d .005	0 ^d .3143 ±0 ^d .0006	0 ^m .456 ±0 ^m .013	0.3	RR Lyr

Remarks:

The Simbad database reports no known variable star in the vicinity of these five objects. They were found to be variable respectively by C. D., Y. R. and 3×L. B., in the course of asteroidal light curve determination.

Acknowledgements:

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

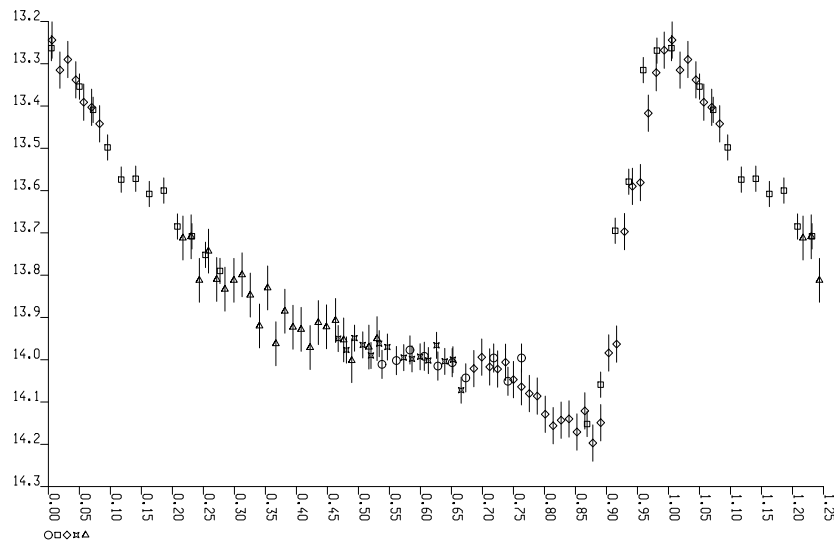


Figure 1. Unfiltered light curve of GSC 1649-6, $P = 0^d.55259$. The small labels denote the chronologic order of the series of observations in Figs. 1-5.

Reference:

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

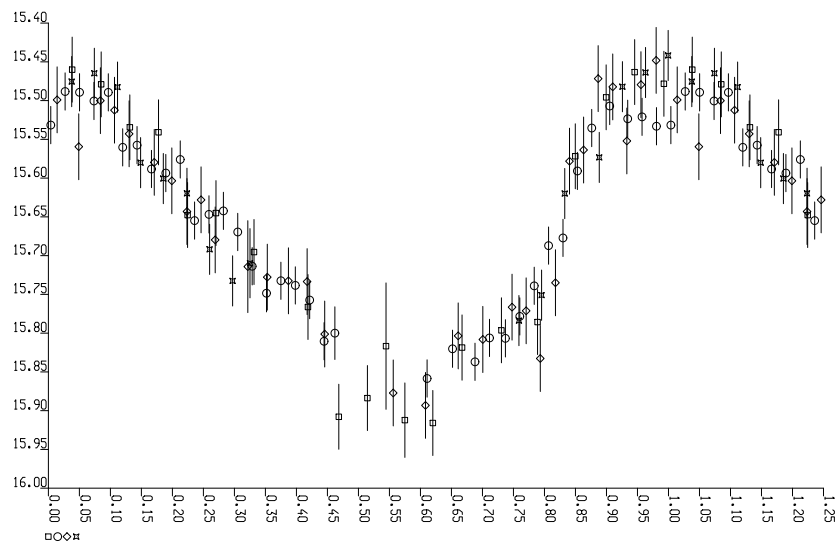


Figure 2. Unfiltered light curve of USNO-A2.0 1050-1201364, $P = 0^d.266882$.

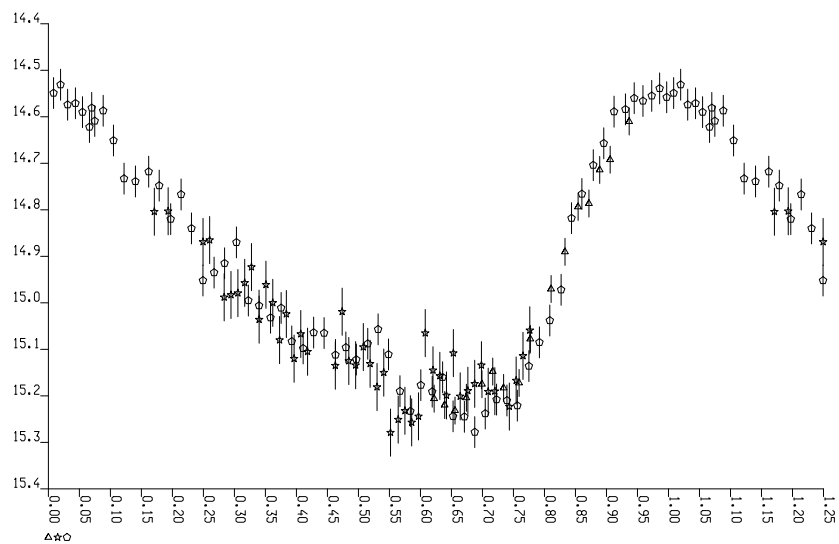


Figure 3. Unfiltered light curve of GSC 2497-101, $P = 0^d.420003$.

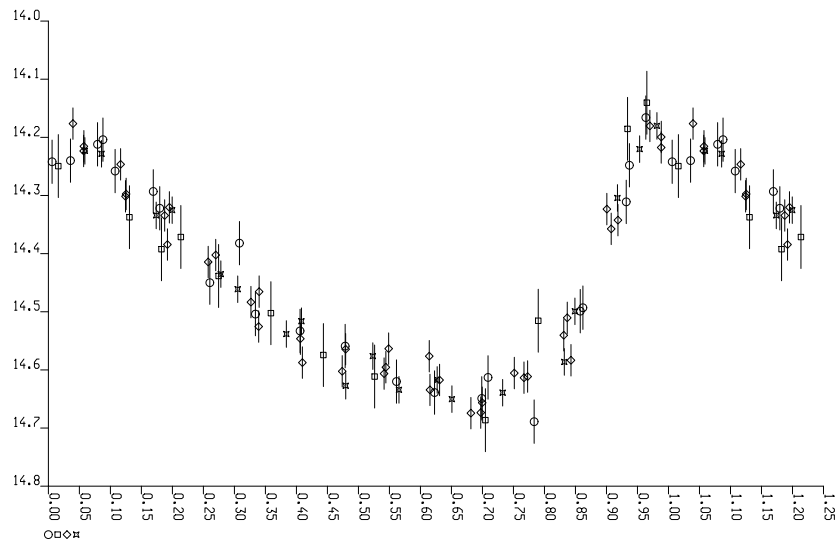


Figure 4. Unfiltered light curve of GSC 5569-389, $P = 0^d0731905$.

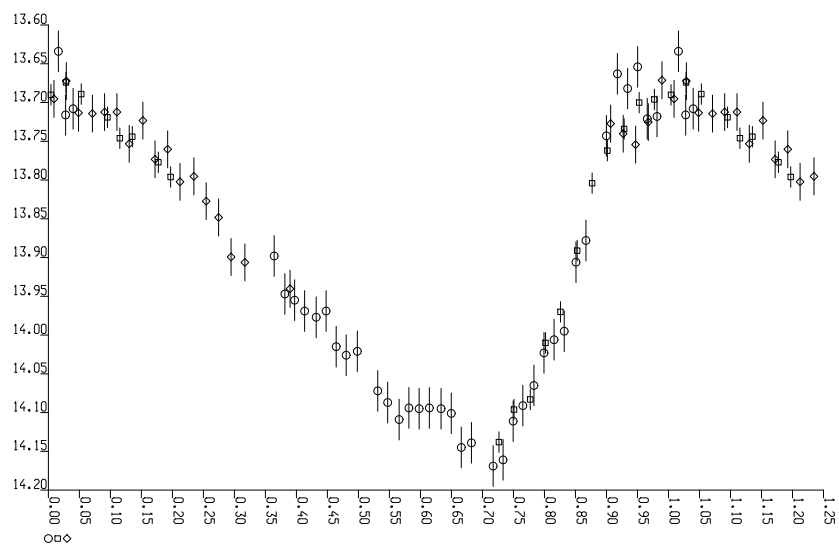


Figure 5. Unfiltered light curve of GSC 4998-854, $P = 0^d3143$.