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GSC 608_143: A NEW W UMa VARIABLE

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Name of the object:
GSC 608_143

Equatorial coordinates:	**Equinox:**
R.A.= $00^h59^m50^s.10$ **DEC.**= $+12°25'03''.8$	J2000

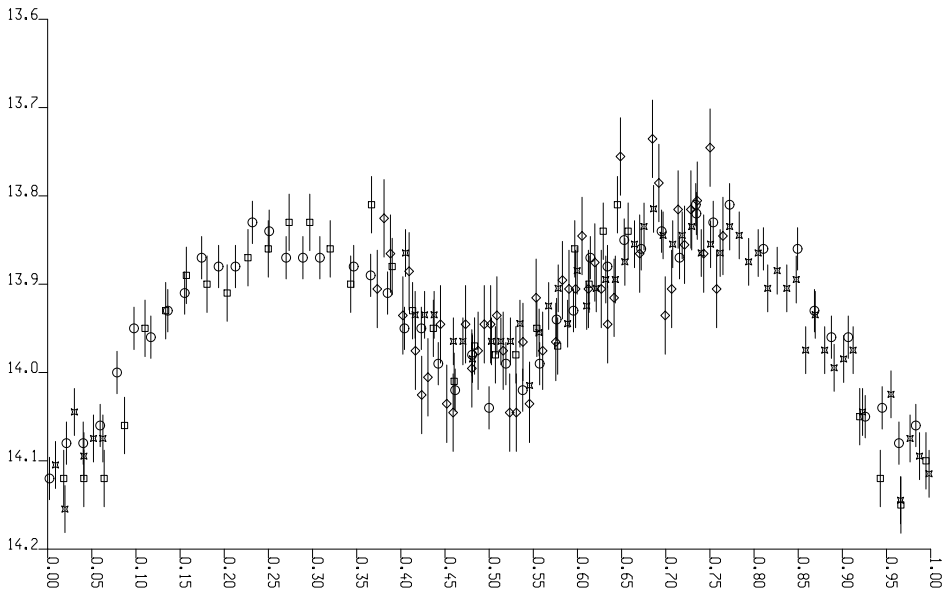

Figure 1. Unfiltered lightcurve of GSC 608_143

Observatory and telescope:
Les Engarouines Observatory (IAU astrometric code 164), 0.212m Newton telescope Blauvac Observatory (code 627), 0.257m Newton telescope Village-Neuf Observatory (code 138), 0.20m Schmidt–Cassegrain telescope

Detector:	KAF 1600 CCD at 164, KAF 400 CCD at 627, KAF 401e CCD at 138

Filter(s):	None, roughly R

Transformed to a standard system:	No

Availability of the data:
Upon request

Remarks:

The variability of GSC 608_143 was found by Bernasconi from unfiltered CCD frames obtained around 2001-09-18 (circles in Figure 1) for the successful determination of the asteroid (2052) Tamriko light curve. Further observations were obtained by Roy (2001-10-01, diamonds), Demeautis (2001-10-03 near the full moon, and 2001-10-12, stars) and Bernasconi (2001-10-13, squares) for the confirmation of the preliminary light curve and the accurate determination of the period. A sixth order Fourier polynomial with adjustable period was fitted on the observations, using the `CourbRot` software (Behrend, 2001). The resulting light curve is shown in Figure 1. The numerical values are as follows:

$$\begin{aligned} \text{HJD of a principal minimum} &= 2452185.0022 \pm 0.0011 \\ \text{Period} &= 0.316657 \pm 0.000019\,\text{d} \\ \text{Total variation} &= 0.27 \pm 0.01\,\text{mag} \end{aligned}$$

The shape of the light curve indicates that the variability type of GSC 608_143 is probably W UMa.

Acknowledgements:

We thank Dr. F. Barblan and Dr. M. Grenon for introducing us to the world of variable stars' light curves.

Reference:

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