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GSC 00279-00321: A NEW W UMa ECLIPSING BINARY

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Name of the object:
GSC 00279-00321

Equatorial coordinates:	**Equinox:**
R.A.= $11^{h}57^{m}51^{s}.278$ **DEC.**= $06°27'04''.70$	2000

Observatory and telescope:
M. Koppelman: Private observatory, MN USA, 160-mm Newtonian astrograph; D. Terrell: Sommers Bausch Observatory, CO USA, 60-cm Boller and Chivens telescope; T. Droege: Private Observatory TOM1, Batavia, IL, dual 100-mm refractors

Detector:	M. Koppelman: SBIG ST-237A; D. Terrell: SBIG ST-8; T. Droege: Custom built dual CCD 442A

Filter(s):	M. Koppelman: None; D. Terrell: Johnson V; T. Droege: Johnson V and Cousins I, Bessel formulation

Date(s) of the observation(s):
2002.02.07, 2002.05.31, 2002.06.01, 2002.06.06

Comparison star(s):	GSC 00279-00536 GSC 00279-00287

Transformed to a standard system:	No

Availability of the data:
Through IBVS Web-site as file 5299-t1.txt

Type of variability:	EW

Remarks:

The variability of GSC 00279-00321 was clearly demonstrated by data acquired from the TASS survey (*viz.* Droege, 2002; Henden, 2001) in February of 2002. The period and nature of the variability was not immediately apparent. Figure 1 shows the TASS V-band discovery observations and follow-up V-band observations by Terrell.

Koppelman made extensive unfiltered observations to try to characterize the light curve. Figure 2 shows the characteristic shape of a W UMa binary. The system shows a large asymmetry of about 0.1 magnitudes between the maxima. The system may be associated with the X-ray source J115752.7+062658 as W UMa systems frequently show X-ray emission arising from coronal activity. Although our data are limited, there are indications that the system may exhibit light curve changes on time scales of weeks.

Using all of the available data, the period was determined by eye examination of phase plots at different trial values. Given the very limited temporal coverage of our observations, attempts to use more rigorous period-finding techniques were unsuccessful. A preliminary ephemeris for the brightness minimum is

$$2452425.7329 + 0^{\mathrm{d}}.2898 \times E \qquad (1)$$

Coordinates are from the Tycho catalog, adjusted for proper motion by VizieR.

Acknowledgements:

Many thanks are due to Tom Droege, Arne Henden, John Greaves and everyone else involved with The Amateur Sky Survey (TASS). This research made use of the SIMBAD database, operated by the CDS at Strasbourg, France.

References:

Droege, T., 2000, *The Amateur Sky Survey (TASS)*, `http://www.tass-survey.org/`
Henden, A. A., 2001, *"The TASS Mark IV Photometric Survey"*, *JAAVSO*, **29**, 118

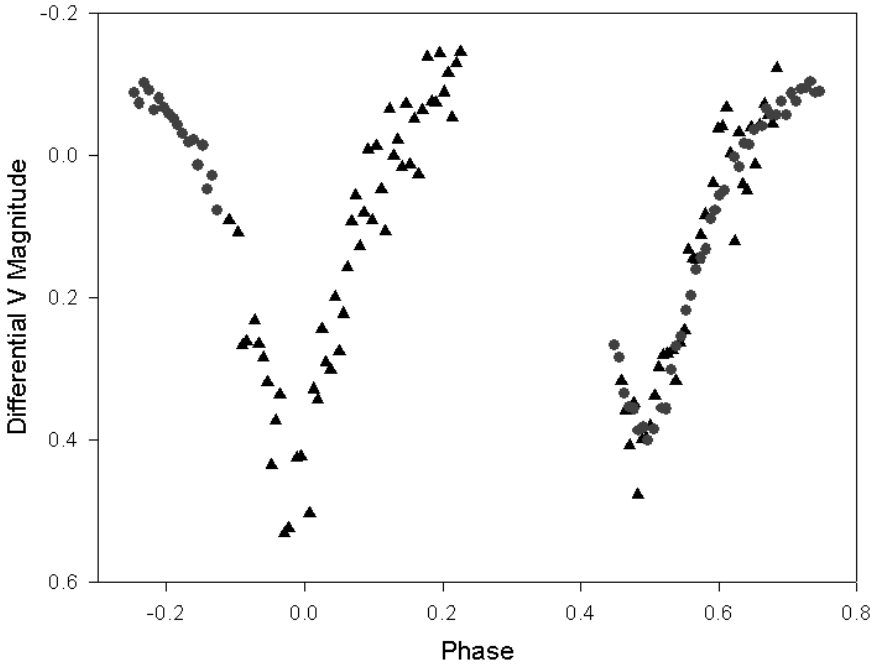

Figure 1. TASS discovery (triangles) and Terrell follow-up (circles) V-band observations.

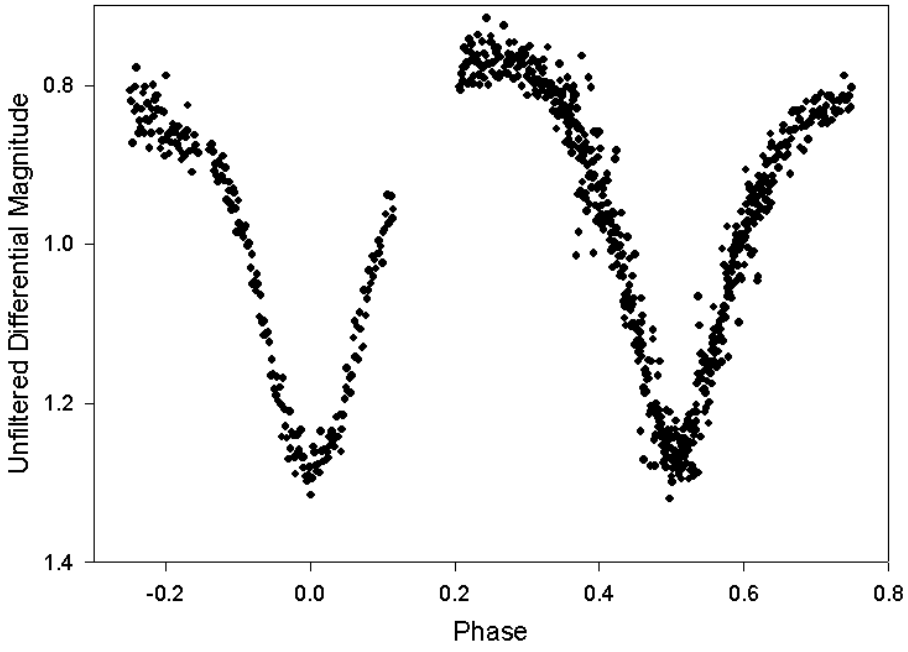

Figure 2. Koppelman unfiltered observations.

ERRATUM FOR IBVS 5278

The epoch that was given for the new classical Cepheid NSV 02852 is the time of maximum, so the ephemeris is:

$$HJDMax = 2452234.46 + 2.1371 \times E$$

The correct reference of Cannon & Pickering:

Cannon, A.J., and Pickering, E.C. 1918-1924, The Henry Draper Catalogue and Extension, Ann. Astron. Obs. Harvard College, 91-100

(Although HD252611 is in the Henry Draper Catalogue, it was actually published in the HD catalogue extension.)

Enrique Garcia-Melendo