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GSC 1172.1452 (BRH V30) IS A NEW ECLIPSING BINARY OF W UMa TYPE

(BAV MITTEILUNGEN NO. 139)

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Name of the object:
GSC 1172.1452

Equatorial coordinates:	**Equinox:**
R.A.= $23^h32^m32^s.6$ **DEC.**= $10°33'20''$	2000

Observatory and telescope:
W. Moschner: Private observatory, 32-cm Ritchey–Chrétien telescope; K. Bernhard: Private observatory, 20-cm Schmidt–Cassegrain telescope

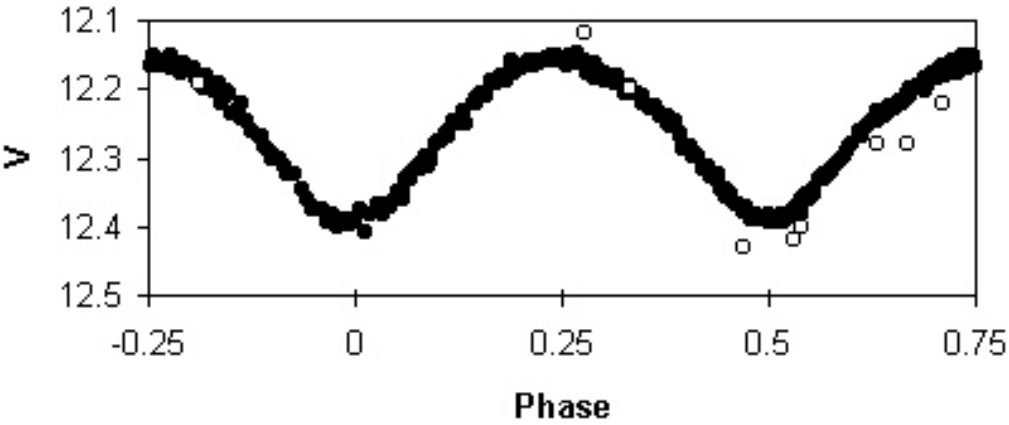

Figure 1. The phase diagram of GSC 1172.1452 assuming that the comparison star GSC 1172.1385 has $V = 11.7$. The CCD observations of Bernhard (open circles) and W. Moschner (filled circles) are folded with the ephemeris given in the text

Detector:	W. Moschner: SBIG ST-9 camera; K. Bernhard: Starlight Xpress SX camera

Filter(s):	W. Moschner, K. Bernhard: None

Comparison star(s):	GSC 1172.1385, $V \approx 11^{\mathrm{m}}.7$

Check star(s):	GSC 1172.1483

Transformed to a standard system:	No

Availability of the data:
Upon request

Type of variability:	W UMa

Remarks:

In 1999 the variability of GSC 1172.1452 has been found as part of a programme to discover and classify new variables using CCD observations of selected fields on the edge of the northern Milky Way (eg. Bernhard & Lloyd 2000). Additional observations were performed on 9 nights between November 1999 and September 2001 (W. Moschner). This star has previously been referred to as Brh V30 (Bernhard 1999, Moschner 2001).

The times of minima were calculated using Kwee and Van Woerden method:

Type	JD Hel.	Error
Min I	2451487.3384	0.0010
Min II	2452123.4786	0.0005
Min I	2452133.5752	0.0005
Min II	2452135.4594	0.0005
Min II	2452136.4862	0.0005
Min II	2452137.5136	0.0005
Min I	2452144.5286	0.0005
Min I	2452176.3612	0.0005

The ephemeris was calculated using the "Least Square Method" on the observed times of MinI:

$$\mathrm{MinI} = \mathrm{HJD}\ \underset{\pm 15}{2452144.5285} + \underset{\pm 10}{0^{\mathrm{d}}.3422865} \times E. \tag{1}$$

Acknowledgements:

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

References:

Bernhard, K., 1999, *vsnet-obs*, No. 24340,
http://www.kusastro.kyoto-u.ac.jp/vsnet/Mail/obs24000/msg00340.html
Bernhard, K., Lloyd, C., 2000, *IBVS*, No. 4920
Moschner, W., 2001, http://www.var-mo.de/bev.sterne.htm