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**ON THE VARIABILITY OF V1538 Aql (Brh V17)
AND GSC 1123.1704 (Brh V28)**

(BAV MITTEILUNGEN NO. 140)

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VAR 1:

Name of the object:	
V1538 Aql, GSC 0477.3880	
Equatorial coordinates:	Equinox:
R.A. = 19 ^h 24 ^m 36 ^s .4 DEC. = 06°31'28"	2000
Comparison star(s):	GSC 0477.3656, $V \approx 12^m1$
Check star(s):	GSC 0477.3346
Type of variability:	RRc

VAR 2:

Name of the object:	
GSC 1123.1704	
Equatorial coordinates:	Equinox:
R.A. = 21 ^h 28 ^m 30 ^s .2 DEC. = 10°45'23"	2000
Comparison star(s):	GSC 1123.1430, $V \approx 12^m8$
Check star(s):	GSC 1123.1424
Type of variability:	WUMa

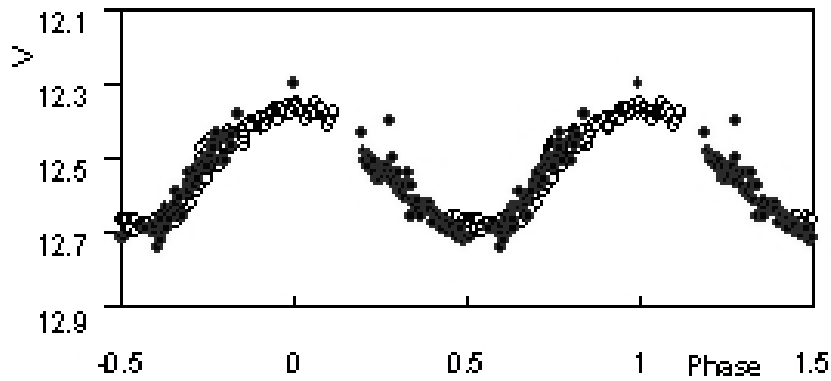


Figure 1. The phase diagram of V1538 Aql assuming that the comparison star GSC 0477.3656 has $V=12^m1$. The CCD observations of K. Bernhard (open circles) and W. Moschner (filled circles) are folded with the ephemeris given in the text

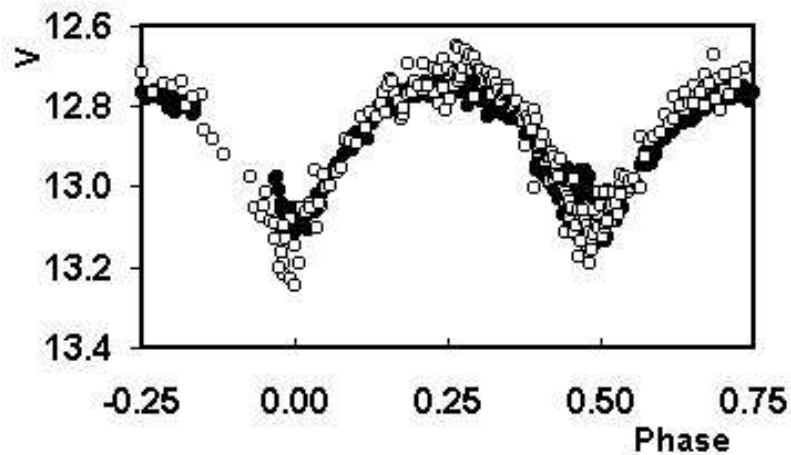


Figure 2. The phase diagram of GSC 1123.1704 assuming that the comparison star GSC 1123.1430 has $V = 12^m8$, observations of K. Bernhard (open circles) and W. Moschner (filled circles)

Observatory and telescope:	
W. Moschner: Private observatory, 32-cm Ritchey–Chrétien telescope; K. Bernhard: Private observatory, 20-cm Schmidt–Cassegrain telescope	
Detector:	W. Moschner: SBIG ST-6 camera; K. Bernhard: Starlight Xpress SX camera
Filter(s):	W. Moschner, K. Bernhard: None
Transformed to a standard system:	No
Availability of the data:	
Upon request	

Remarks:

The variability of V1538 Aql and GSC 1123.1704 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 (Bernhard & Lloyd 2000). Further observations of V1538 Aql were performed on 2 nights in October 1999 (W. Moschner) and on 3 nights in October 2001 (K. Bernhard). GSC 1123.1704 was observed on 8 nights between October and November 1999 (W. Moschner) and on 9 nights between October 1999 and October 2001 (K. Bernhard).

The ephemeris were calculated using the “Phase Dispersion Minimization” method. The light curves show variations of an RRc star for V1538 Aql and of a WUMa star for GSC 1123.1704. These types and periods are partly different from those given in the announcement of the discovery (Bernhard & Lloyd, 2000):

V1538 Aql:

$$\text{Max} = \text{HJD } 2452202.26 + 0^{\text{d}}.267937 \times E. \quad (1)$$

$$\pm 1 \qquad \pm 4$$

GSC 1123.1704:

$$\text{MinI} = \text{HJD } 2451484.322 + 0^{\text{d}}.43611 \times E. \quad (2)$$

$$\pm 8 \qquad \pm 1$$

Acknowledgements:

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Reference:

Bernhard, K., Lloyd, C., 2000, *IBVS*, No. 4920