COMMISSIONS 27 AND 42 OF THE IAU
INFORMATION BULLETIN ON VARIABLE STARS
Number 5203

Konkoly Observatory
Budapest
20 November 2001
HU ISSN 0374 – 0676

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

(BAV MITTEILUNGEN NO. 140)

BERNHARD, K.[1,3]; MOSCHNER, W. [2,3]

[1] A–4030 Linz, Austria, e-mail: kl.bernhard@aon.at

[2] D–57368 Lennestadt, Germany, e-mail: wolfgang.moschner@t-online.de

[3] Bundesdeutsche Arbeitsgemeinschaft für Veränderliche Sterne e.V. (BAV), Munsterdamm 90, D–12169 Berlin, Germany

VAR 1:

Name of the object:
V1538 Aql, GSC 0477.3880

Equatorial coordinates:	**Equinox:**
R.A.= $19^h24^m36^s.4$ **DEC.**= $06°31'28''$	2000

Comparison star(s):	GSC 0477.3656, $V \approx 12^m.1$

Check star(s):	GSC 0477.3346

Type of variability:	RRc

VAR 2:

Name of the object:
GSC 1123.1704

Equatorial coordinates:	**Equinox:**
R.A.= $21^h28^m30^s.2$ **DEC.**= $10°45'23''$	2000

Comparison star(s):	GSC 1123.1430, $V \approx 12^m.8$

Check star(s):	GSC 1123.1424

Type of variability:	WUMa

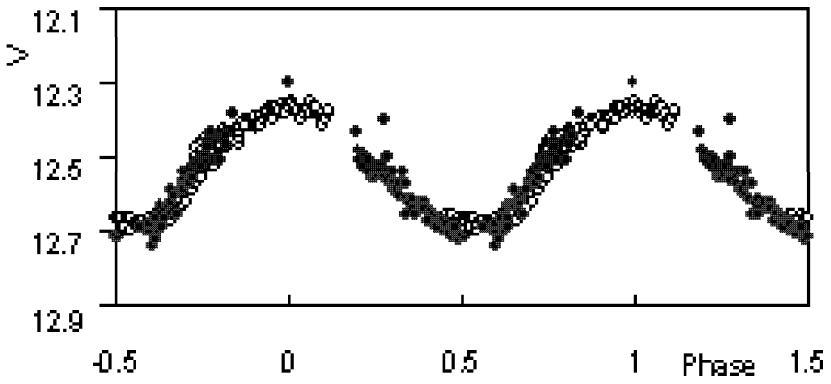

Figure 1. The phase diagram of V1538 Aql assuming that the comparison star GSC 0477.3656 has V=12$^{\rm m}$.1. The CCD observations of K. Bernhard (open circles) and W. Moschner (filled circles) are folded with the ephemeris given in the text

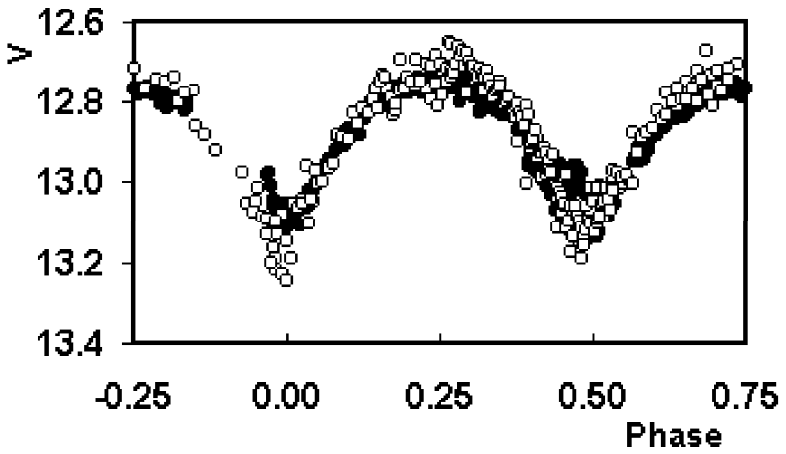

Figure 2. The phase diagram of GSC 1123.1704 assuming that the comparison star GSC 1123.1430 has V = 12$^{\rm m}$.8, observations of K. Bernhard (open circles) and W. Moschner (filled circles)

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 form those given in the announcement of the discovery (Bernhard & Lloyd, 2000):
V1538 Aql:

$$\begin{array}{c} \mathrm{Max} = \mathrm{HJD}\ 2452202.26 + 0\overset{\mathrm{d}}{.}267937 \times E. \\ \qquad\qquad\quad \pm 1 \qquad\quad \pm 4 \end{array} \tag{1}$$

GSC 1123.1704:

$$\begin{array}{c} \mathrm{MinI} = \mathrm{HJD}\ 2451484.322 + 0\overset{\mathrm{d}}{.}43611 \times E. \\ \qquad\qquad\quad \pm 8 \qquad\quad \pm 1 \end{array} \tag{2}$$

Acknowledgements:

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

Reference:

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