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V1542 Aql IS AN ECLIPSING BINARY OF W UMa TYPE

(BAV MITTEILUNGEN NO. 138)

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Name of the object:	
V1542 Aql = GSC 1057.01309 = Brh	V8

Equatorial coordinates:		Equinox:
$R.A. = 19^{h}46^{m}25.1$	$DEC. = +08^{\circ}45'12''$	2000

Observatory and telescope:

W. Quester: Private observatory, 20-cm Cassegrain telescope f/6.4; K. Bernhard: Private observatory, 20-cm Schmidt–Cassegrain telescope



Figure 1. Differential V light curve of V1542 Aql measured in July 2001

Detector:	W. Quester: ST-7E camera;					
	K. Bernhard: Starlight Xpress SX camera					
$\mathbf{Filter(s)}$:	W. Quester: Bessel V ;					
	K. Bernhard: None					
Comparison star(s):	GSC 1057.01223, $V \approx 10^{\text{m}}_{\cdot}4$					
Check star(s):	GSC 1057.01437, GSC 1057.01527					
Transformed to a standard system: No						
Availability of the data:						
Upon request						

Type of variability: W UMa

Remarks:

V1542 Aql was discovered by Bernhard (1999) as a variable star. Bernhard and Lloyd (1999) published possible light curves and results of a period search. They concluded that the star either is a β Cep-, δ Sct- or a W UMa-type variable with four possible periods in the range from 0.172675 to 0.417570 days.

W. Quester observed V1542 Aql during 4 nights in July 2001. The rms error of single observations is $\pm 0^{\text{m}}02$. The light curve, folded with the period given below, shows variations of a W UMa-type eclipsing variable (Figure 1).

The following times of minima were observed (HJD 2400000 +):

minimum time	type	observer	minimum time	type	observer
51065.388	\mathbf{s}	$\operatorname{Bernhard}$	52113.3933(07)	р	Quester
51080.405	р	$\operatorname{Bernhard}$	52113.6000(15)	\mathbf{s}	$\operatorname{Quester}$
51103.378	р	Bernhard	52115.4825(07)	р	$\operatorname{Quester}$
51111.3146(10)	р	Bernhard	52116.5270(05)	\mathbf{S}	Quester
52112.5593(10)	р	Quester			

Figures in brackets denote rms errors in units of the last decimal, p and s denote primary and secondary minima. The uncertainty of Bernhard's first three minima may be around ± 0.01 day; these minimum times are based on only a few observations during each night. They were given lower weight in the calculation of the period. Resulting elements of the light variations are:

$$\begin{array}{l} \text{Min p} = \text{HJD } 2452112.1411 + 0^{4}.4175361 \times E. \\ \pm 16 \qquad \pm 13 \end{array}$$
(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. 19782,

http://www.kusastro.kyoto-u.ac.jp/vsnet/Mail/obs19000/msg00782.html Bernhard, K., Lloyd. C., 1999, *IBVS*, No. 4685