

## THE ECLIPSING BINARY STAR NSV 03999 IN CAMELOPARDALIS

JOAQUIN VIDAL-SAINZ

Grup d'Estudis Astronòmics, Apartado 9481, 08080 Barcelona, Spain, e-mail: vidal@astro.gea.cesca.es

NSV 03999 (= CSV 006617 = BV 0217 = GSC 4631.1941) was announced as an eclipsing binary system by Strohmeier (1958). In the NSV (Kholopov, 1982), a photographic brightness variation from 10<sup>m</sup>.6 to 11<sup>m</sup>.1 and spectral type F2 were given without supplying further information. In order to verify these data, the star was observed in the V band from Monegrillo Observatory (Spain), using the 0.4m telescope and a CCD light detector. NSV 03999 was monitored for 11 nights, from March 15 to April 11, 1997 obtaining more than 600 photometric measurements. GSC 4631.1830 (= PPM 001390 = SAO 001315) was used as comparison star and GSC 4631.1814 and GSC 4631.1794 were used as check stars.

Photometric observations showed that NSV 03999 is in fact an Algol type binary star with a period over 1 day. Phase curve (Figure 1) indicates that the amplitude of the light variation is  $0.45 \pm 0.02$  magnitude at primary minimum and  $0.28 \pm 0.02$  magnitude at secondary minimum. The following ephemeris was computed:

$$\begin{aligned} \text{Min. I} = \text{HJD } 2450534.6410 &+ 1^{\text{d}}09172 \times E \\ &\pm 0.0002 \pm 0.00012 \end{aligned}$$

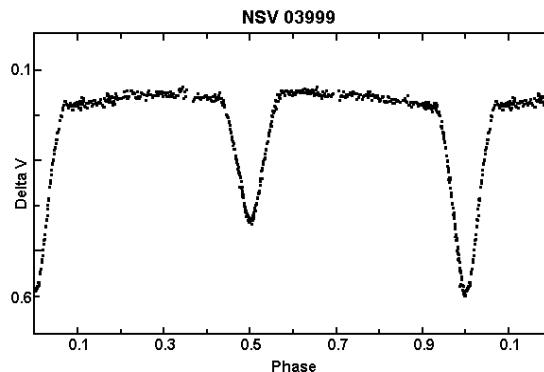


Figure 1.

A list of minimum timings for the above given ephemeris was also obtained after using the Kwee and van Woerden's (1956) method. These are given in Table 1. The typical error for the given minima is 0<sup>d</sup>0002.

Table 1

HJD + 2400000	Epoch	Minimum
50534.6410	0.0	I
50537.3710	2.5	II
50543.3749	8.0	I
50550.4712	14.5	II

#### References:

- Kholopov, P. N., editor, 1982, New Catalogue of Suspected Variable Stars, Moscow  
Kwee, K. K., van Woerden, H., 1956, BAN, 12, 327  
Strohmeier, W., 1958, KVB No. 23