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NSV 03007 IS AN EW ECLIPSING BINARY SYSTEM

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Name of the object:	
NSV 03007 = GSC 3376_287 = HV 07649 = CSV 000766	
Equatorial coordinates:	Equinox:
R.A. = 20 ^h 22 ^m 10 ^s DEC. = +31°15'12"	2000.0
Observatory and telescope:	
Esteve Duran Observatory, 0.6-m Cassegrain telescope	
Detector:	CCD
Filter(s):	V
Comparison star(s):	GSC 3376_1091
Check star(s):	GSC 3376_254
Transformed to a standard system:	No
Availability of the data:	
Upon request	
Type of variability:	EW

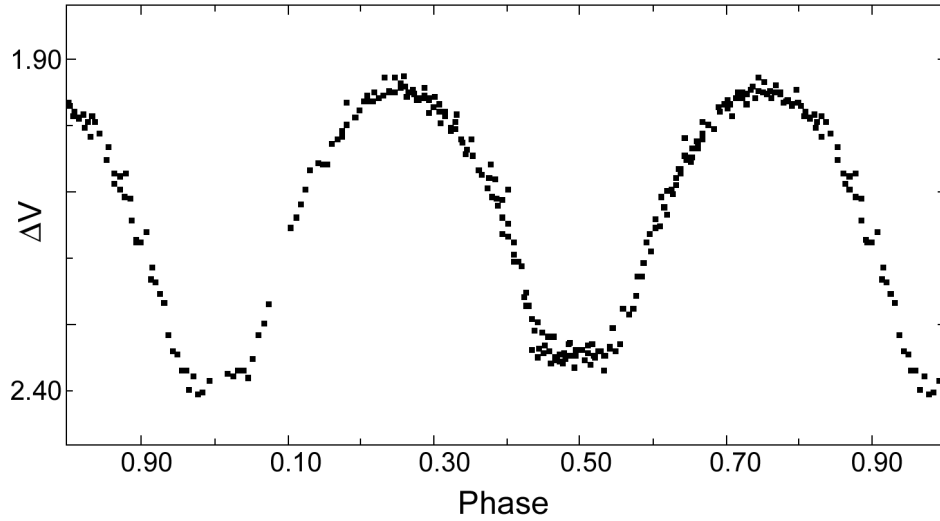


Figure 1. Folded light-curve of NSV 03007

Remarks:

The variability of NSV 03007 was announced by Boyd in 1937, and listed in the NSV catalogue (Kholopov, 1982) as an RR Lyr variable with a photographic magnitude variation between 13.7 and 14.3. The star, observed during a NSV survey searching for faint variables, was successfully monitored for 6 nights from October 2, 2000 to March 18, 2001. Observations show that this object is actually an EW eclipsing binary system with a period of about $0^{\text{d}}385$ (Figure 1). The star fades $0^{\text{m}}44$ during minimum I and 0.40 during the secondary eclipse. Taking as a reference the V magnitude of the check star derived from Tycho observations (ESA, 1997), our photometry indicates that the minimum V magnitude for NSV 03007 is of 13.17. Although some fundamental observational data about this star are still unknown, a preliminary analysis using the Wilson–Devinney code (Wilson, 1998) suggests that the mass ratio between the two components could be as small as 0.2. The following ephemeris was computed:

$$\text{Min. I} = \text{HJD } 2451966.464 + 0^{\text{d}}384758 \times E, \\ \pm 0.002 \pm 0.000020$$

in addition to the two secondary minimum timings: HJD 2451960.498 and 2451962.422.

References:

- Boyd, C. D., 1937, *Harvard Bulletin*, No. 905
 ESA, 1997, *The Hipparcos and Tycho Catalogues*, ESA SP-1200
 Kholopov, P. N., editor, 1982, *New Catalogue of Suspected Variable Stars*, Moscow
 Wilson, R. E., 1998, *Computing Binary Star Observables (Reference Manual to the Wilson–Devinney Program)*, Dept. of Astronomy, University of Florida, Gainesville

ERRATUM FOR IBVS 5065

The coordinates for NSV 03007 given in IBVS 5065 are in error. The actual ones (2000), according to its identification with GSC 3376-0287 and SIMBAD database are:

$$\begin{aligned} \text{R.A.} &= 06^{\text{h}}32^{\text{m}}46^{\text{s}}.2 \\ \text{Dec.} &= +46^{\circ}23'32''.82. \end{aligned}$$

Enrique García-Melendo