

**NSV 00821, A NEW OVERCONTACT ECLIPSING BINARY SYSTEM
IN TRIANGULUM**

NSV 00821 (= Wr 139 = CSV 005986 = GSC 2327.1518) was announced as a possible Cepheid by Weber (1963) with a photographic magnitude variation from 11^m8 to 12^m5 without giving any further information. To check it, the star was included in the program of the Grup d'Estudis Astronòmics for observing poorly studied variables. An initial monitoring with the 0.4-m telescope at Mollet del Valles Observatory showed that NSV 00821 is not a Cepheid but an overcontact eclipsing binary system. It was then decided to follow this object with the 0.5-m telescope at L'Ametlla del Valles Observatory (Spain). NSV 00821 was observed for 21 nights between 27 September and 26 December 1996. GSC 2327.1604 and GSC 2327.1636 were used as comparison and check stars respectively. The Guide Star Catalog records GSC 2327.1518 (NSV 00821) with a photovisual magnitude of 11.48 ± 0.40 (PAL-V1 filter).

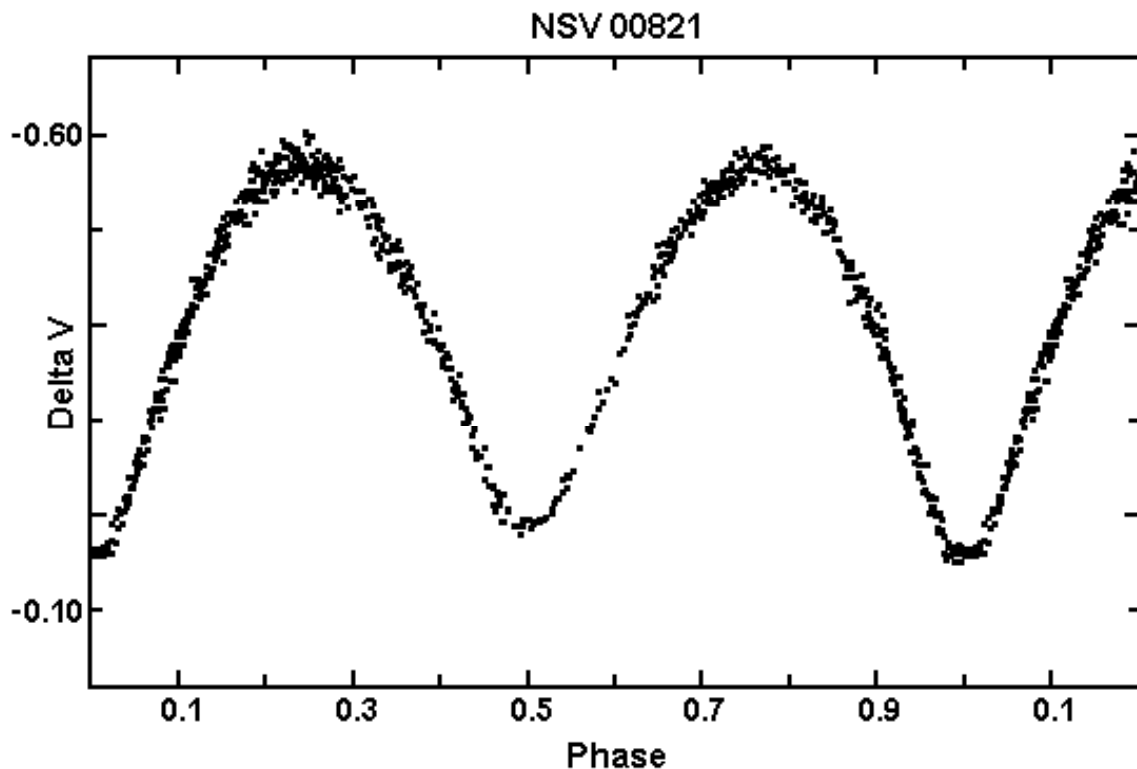


Figure 1

Observations obtained in the V band with a CCD camera, confirmed our preliminary data in the sense that NSV 00821 is an overcontact eclipsing binary system, with a period close to 16 hours 50 minutes (Figure 1). The amplitude of the light variation is 0.41 ± 0.01 magnitude at minimum I, which is a transit, and 0.39 ± 0.01 magnitude at minimum II, which is an occultation. The following ephemeris has been computed:

$$\begin{aligned} \text{Min.I} = \text{HJD } 2450416.41635 + 0^{\text{d}}70170 \times E \\ \pm 0.00047 \pm 0.00002 \end{aligned}$$

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Reference:

Weber, R., 1963, *IBVS*, No. 21