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## NSV 25616 IS A NEW CLASSICAL CEPHEID

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<b>Name of the object:</b>
NSV 25616 = TYC2 3598 937 1 = GSC 3598.0937 = No. 1083 (NGC 7092) (Platais, 1988)

<b>Equatorial coordinates:</b>	<b>Equinox:</b>
R.A. = 21 <sup>h</sup> 28 <sup>m</sup> 44 <sup>s</sup> .93    DEC. = +48°58'41".6	J2000.0

<b>Observatory and telescope:</b>
40-cm astrograph in Crimea

<b>Detector:</b>	Photoplate
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<b>Filter(s):</b>	None
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<b>Comparison star(s):</b>	GSC 3598.0695, $B_{pg} = 11^m36$ ; GSC 3598.0933, $B_{pg} = 11^m93$ ; GSC 3598.0147, $B_{pg} = 12^m25$ ; GSC 3598.1205, $B_{pg} = 12^m50$
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<b>Transformed to a standard system:</b>	$B_{pg}$
<b>Standard stars (field) used:</b>	Derived from comparison with $B$ magnitudes of the Tycho catalog (ESA, 1997)

<b>Availability of the data:</b>
Upon request

<b>Type of variability:</b>	DCEP
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**Remarks:**

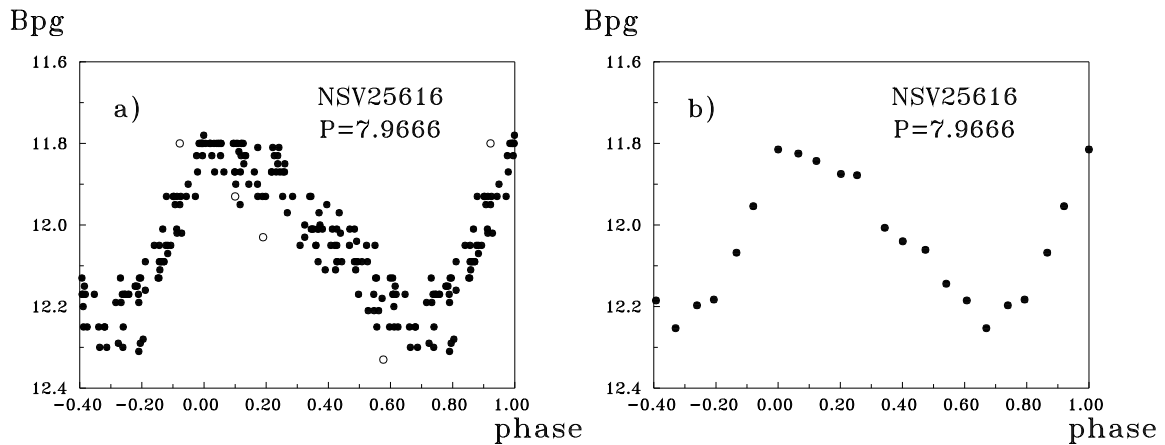
The variability of the star No. 1083 in the open cluster NGC 7093 = M 39, later included in the catalog of suspected variables as NSV 25616, was supposed by Platais (1988) who had considered it a possible Cepheid, presumably on the grounds of its spectral type (G2). We estimated by eye the brightness of the variable on 188 plates from Moscow archive, JD 2433483–49634. The star is a classical Cepheid with the following light elements:

$$JD_{\max} = 2441958.37 + 7^{\text{d}}.9666 \times E.$$

The variability range from our estimates is 11<sup>m</sup>.8–12<sup>m</sup>.3; this range seems somewhat too small, maybe indicating that the magnitudes of the comparison stars need improvement. The hump on the descending branch is characteristic of classical Cepheids with similar period values. Max – min = 0<sup>p</sup>.35. The phased light curve is given in Fig. 1.

**Acknowledgements:**

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**Figure 1.** The phased light curve (a) and the mean phased light curve (b). Uncertain estimates are shown as open circles

**References:**

- ESA, 1997, The Hipparcos and Tycho Catalogues, SP-1200  
 Platais, I.K., 1988, *Nauchnye Informatsii*, No. 65, 119