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A NEW 7-DAY CLASSICAL CEPHEID IN CASSIOPEIA

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Name of the object:
Var 74 = GSC 4281.1972

Equatorial coordinates:	**Equinox:**
R.A.= $23^{\rm h}44^{\rm m}43\overset{\rm s}{.}6$ **DEC.**= $+61^\circ16'58''$	J2000.0

Observatory and telescope:
40-cm astrograph in Crimea

Detector:	Photoplate

Filter(s):	None

Date(s) of the observation(s):
1948-1994

Comparison star(s):	USNO-A2.0	α (J2000)	δ (J2000)	B_{pg}
	1500.09991623	$23^{\rm h}45^{\rm m}01\overset{\rm s}{.}0$	$+61^\circ18'34''$	$14\overset{\rm m}{.}82$
	1500.09980530	$23^{\rm h}44^{\rm m}19\overset{\rm s}{.}1$	$+61^\circ18'19''$	$15\overset{\rm m}{.}38$
	1500.09984515	$23^{\rm h}44^{\rm m}34\overset{\rm s}{.}6$	$+61^\circ19'23''$	$15\overset{\rm m}{.}78$

Check star(s):	None

Transformed to a standard system:	B_{pg}
Standard stars (field) used:	B-band standard sequence in NGC 7654 (Hoag et al., 1961)

Availability of the data:
Upon request

Type of variability:	DCEP

Remarks:

The brightness of the newly discovered variable star was estimated by eye on 599 plates from Moscow archive, JD 2432853–49633. Periodic variability typical of a classical Cepheid was revealed. The light elements are the following:

$$\mathrm{JD}_{\max} = 2442486.26 + 7^{\mathrm{d}}.67786 \times E.$$

The variability range is $14^{\mathrm{m}}.95$–$15^{\mathrm{m}}.70$. Max − min = $0^{\mathrm{m}}.35$. The phased light curve (Fig. 1) shows a hump on descending branch, in agreement with the Hertzsprung progression for this value of period.

Acknowledgements:

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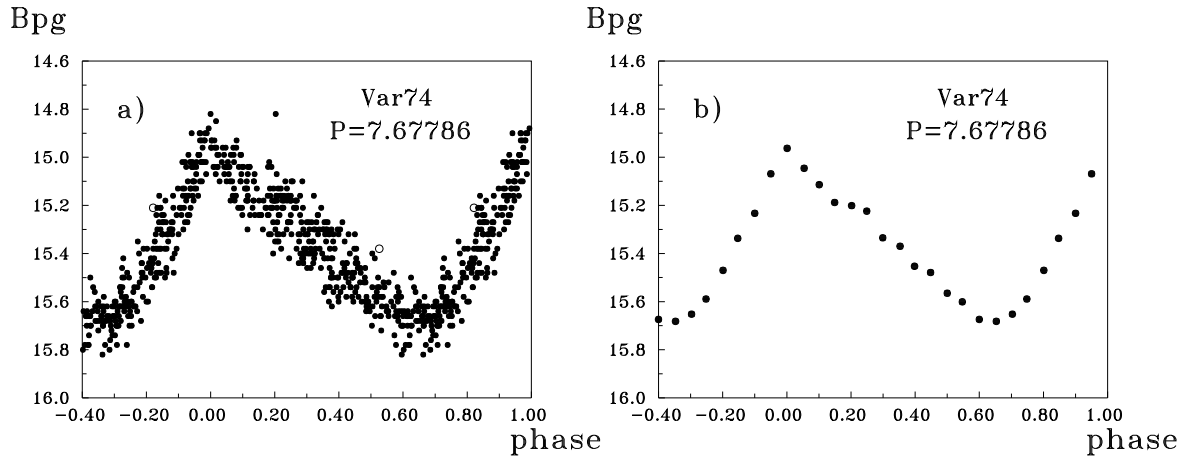

Figure 1. Phased light curve (a) and mean phased light curve (b). Uncertain estimates are shown as open circles.

Reference:

Hoag, A.A., Johnson, H.L., Iriarte, B., Mitchell, R.I., Hallam, K.L., Sharpless, S., 1961, *Publ. of the US Naval Obs.*, vol. XVII, part VII, Washington