COMMISSIONS 27 AND 42 OF THE IAU
INFORMATION BULLETIN ON VARIABLE STARS

Number 4725

Konkoly Observatory
Budapest
11 June 1999

HU ISSN 0374 – 0676

PHOTOELECTRIC VI$_C$ OBSERVATIONS AND NEW CLASSIFICATION FOR RV NORMAE

L. N. BERDNIKOV[1], D. G. TURNER[2]

[1] Sternberg Astronomical Institute, 13 Universitetskij prosp., Moscow 119899, Russia
e-mail: berdnik@sai.msu.su

[2] Saint Mary's University, Halifax, Nova Scotia, B3H 3C3, Canada

Name of the object:
RV Nor = GSC 8714.0914

Equatorial coordinates:	**Equinox:**
R.A.= $16^{\rm h}04^{\rm m}10^{\rm s}$ **DEC.**= $-56°04'48''$	2000

Observatory and telescope:
South African Astronomical Observatory, 0.5-m reflector

Detector:	Photomultiplier Hamamatsu

Filter(s):	VI_c

Comparison star(s):	No. We conducted the "all sky photometry"

Check star(s):	No. See above

Transformed to a standard system:	VI_c
Standard stars (field) used:	Standard stars from E-regions

Availability of the data:
Through IBVS Web-site as 4725-t1.txt

Type of variability:	RV

Remarks:

RV Nor is listed in the GCVS-IV as a type II Cepheid with the elements:

$$\text{Max JD} = 2444119.43 + 32\overset{\rm d}{.}333 \times E,$$

that are used in Figure 1 for plotting our data. The accuracy of the individual observations is near $0\overset{\rm m}{.}01$ in all filters. It is obvious that these elements are not valid, and if RV Nor is periodic variable, it is most probably an RVTAU type star with a period near twice of above one. Using Harris' (1980) observations, we obtained the following ephemeris:

$$\text{Min JD} = 2444138.5 + 64\overset{\rm d}{.}77 \times E.$$

This ephemeris is used in Figure 2.

Acknowledgements:
The research described here was supported in part by the Russian Foundation of Basic Research and the State Science and Technology Program "Astronomy" to LNB and through NSERC Canada to DGT. We would also like to express our gratitude to the administrations of SAAO for allocating a large amount of observing time.

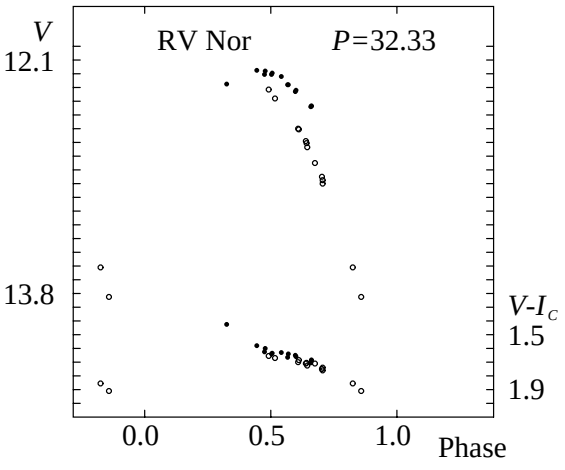

Figure 1. Observations obtained before and after JD 2451270 identified by circles and dots respectively.

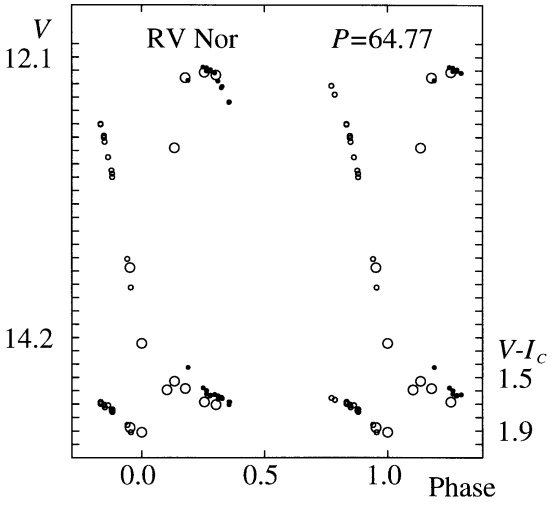

Figure 2. Small circles and dots represent our observations, large circles represent data from Harris (1980), whose intermediate-band measurements were converted to $V - I_c$, using formulae from Coulson et al. (1985).

References:

Coulson, I.M., Caldwell, J.A.R., & Gieren, W.P., 1985, *Astrophys. J. Suppl. Ser.*, **57**, 595
Harris, H., 1980, Ph.D. Thesis., University of Washington