

COMMISSION 27 OF THE I. A. U.
INFORMATION BULLETIN ON VARIABLE STARS

Number 3496

Konkoly Observatory
Budapest
23 July 1990
HU ISSN 0374 - 0676

HN Cyg: A MISCLASSIFIED U Gem

HN Cyg is listed in the 1985 edition of the GCVS as UG: (doubtful classification among U Gem stars). It appears in the atlas and catalogue of northern dwarf novae by Bruch et al. (1987, *Astron. Astrophys. Suppl.* 70, 481) who reported outbursts on April 17, 1980 and Sept. 27, 1981. On these bases we included HN Cyg in our spectroscopic monitoring of dwarf novae with the Asiago 1.8 m telescope equipped with a Boller & Chivens spectrograph and CCD.

On July 8, 1990 we detected HN Cyg very bright with respect to its appearance on the Buch et al. finding chart. We took low resolution spectra (7.7 Ang/pixel, range 3200-7600 Ang) that showed a late type spectrum with strong TiO bands. Reobserving HN Cyg the following night with the same equipment we found it still very bright and again it showed a late type spectrum. From the depth of the TiO bands at 6200 and 7100 Ang (see figure) a spectral type of M 6.5 can be derived using the calibration of Kenyon & Fernandez-Castro (1987, *Astron. J.* 93, 938). For the luminosity class the determination is somewhat more uncertain, also if we favour a III class.

Thus, HN Cyg does not seem to be a U Gem star. What is more probable, considering the large amplitude of variation and the optical spectrum at maximum, is a classification of HN Cyg among the Mira variables.

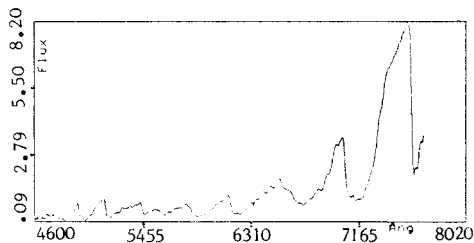


Figure 1. Absolute spectrophotometry of HN Cyg on July 8 and 9, 1990. The flux is in unit of $10^{-14} \text{ erg} \cdot \text{cm}^{-2} \cdot \text{sec}^{-1} \cdot \text{A}^{-1}$.

U. MUNARI¹, R. CLAUDI² and A. BIANCHINI²

1: Asiago Astrophysical Observatory, I-36012 Asiago (VI), Italy

2: Astronomical Observatory of Padova, I-35100, Padova, Italy