

COMMISSION 27 OF THE I. A. U.
INFORMATION BULLETIN ON VARIABLE STARS
Number 3328

Konkoly Observatory
Budapest
15 May 1989
HU ISSN 0374 - 0676

ON THE SPECTRUM OF BD+24^o 676

Recently Weaver and Hobson (1989) reported on the presence of the H α emission line in the spectrum of BD+24^o 676 on Feb. 16, 1988. This line had been previously detected also on a plate of the late seventies/early eighties by Stephenson (1986) in the course of one of his large surveys, and Weaver and Hobson concluded that the star might be a bright T Tauri object, particularly because the energy distribution in their spectra met a G to K star.

The object is present on several plates taken by W. Götz with the 7^o and 3^o objective prisms attached to the 50/70/172 cm Schmidt camera of Sonneberg Observatory. On two well-exposed blue sensitive 7^o plates the Balmer lines H γ to H η are visible in absorption (Oct. 11, 1967, and Nov. 26, 1968); traces of H δ and H ϵ seem also indicated on two further plates. This finding is not in crude contrast to the spectral type of F5, given in the HD extension (HDE283817), and of G0 of the AGK3 catalogue (AG+24^o 421), but certainly a more efficient spectral investigation is needed.

A good 7^o IN plate exposed behind a Schott RG1 filter shows neither a trace of H α in emission nor in absorption (Feb. 5, 1967). As to H β , no statement can be made because it lies outside or at the edge of the sensitivity range or inside the green gap of our plates. We conclude that on our plate the H α emission just fills in the absorption line and we thus confirm the supposition of Weaver and Hobson (1989) who pointed to the fact that an H α emission has not been discovered at this star by the H α surveys for T Tauri stars in that sky region and that therefore the line strength must probably be considered as variable.

Although the star is situated in the merging area of several dark lanes extending from northwest to southeast, the question whether BD+24^o 676 is truly related to the T Tauri class is still open, especially since its polarization behaviour is not different from the field stars of that region (Moneti et al., 1984).

A part of this paper is based on the SIMBAD data retrieval system of the astronomical Data Center, Strasbourg, France.

W. WENZEL

Sternwarte Sonneberg
Zentralinstitut für Astrophysik
Akademie der Wissenschaften
der DDR

References:

- Moneti, A., Pipher, J.L., and Helfer, H.L. 1984, *Astrophys. J.*, 282, 508.
Stephenson, C.B. 1986, *Astrophys. J.*, 300, 779.
Weaver, B., and Hobson, S.W. 1989, *Publ. Astron. Soc. Pacific*, 100, 1443.