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IDENTIFICATION AND SPECTRUM OF THE NEW VARIABLE
IN SERPENS

Stienon (1971) has reported finding a peculiar new emission-line variable of type K, and Hidajat (1971) has described its spectrum on objective-prism plates taken at Bosscha Observatory. It is clear from the coordinates and finding chart given by Stienon that the variable is identical to the star BD-10°4662. We have a short-exposure direct plate which confirms the identity of the variable as marked in Stienon's finding chart with the BD star.

Four objective-prism plates are available here taken with the Curtis Schmidt-type telescope of The University of Michigan. Two of these are in the red region (dispersion of 420 Å/mm at H α) with dates of 1965 July 21 and 1969 July 24, and both show the presence of moderately strong H α emission on a non-banded spectrum. The third plate is on IN emulsion behind a W89B filter at very low dispersion (about 3500 Å/mm at the A-band) and shows only that there are no molecular bands in the near-infrared spectrum as was pointed out by Hidajat. The fourth plate is IIA-0 with a dispersion of 110 Å/mm at H γ and a limiting m_{pg} of about 11; the plate was taken on 1969 June 19. The spectrum of the variable is weakly exposed, and the blueward portion ($\lambda < 4100\text{Å}$) is contaminated by the spectrum of a faint M star 11' north of the variable. The absorption spectrum of the variable is that of a dwarf star of type about K5, and H β is weakly present in emission. It is not possible to tell whether CaII is in emission. The star is not present in the catalogues of stars of large proper motion nor in the catalogues of nearby stars.

Stienon has pointed out the possible similarity this star to Popper's flare star, BY Dra. Other possibly similar stars are AS 216 (Merrill and Burwell 1950; =CoD-27°11363) and AS 292 (=HD319139=CoD-32°13906). Bidelman (1954, Table 11) gives types of dK0e and dK5e, respectively, for these stars. Neither of these stars is known to vary in light. BY Dra, AS 216, and AS 292 show bright lines of CaII; a well-exposed slit spectrogram of BD-10° 4662 might also reveal emission at H and K.

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References

- Bidelman, W.P. (1954) Ap.J. Suppl. 1, 175.
Hidajat, B. (1971) Inf. Bull. Var. Stars No.559.
Merrill, P.W. and Burwell, C.G. (1950) Ap. J. 112, 72.
Stienon, F.M. (1971) Inf. Bull. Var. Stars No.545.