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A SUSPECTED SYMBIOTIC STAR IN THE REGION
OF THE SMALL MAGELLANIC CLOUD

On a low-dispersion Kodak IIA-0 objective-prism plate, taken with the Curtis Schmidt telescope at the Cerro Tololo Inter-American Observatory on July 14, 1967, the star Henize S18 = Lindsay 250 (A.J. 66, 169, 1961) shows only Balmer series emission visible to $H\epsilon$. On a Kodak IIIa-J plate, taken with the same instrument on Sept. 17, 1977, the hydrogen lines appear as before and the star seems unchanged in brightness but $HeII\lambda 4686$ emerges with a strength nearly equal to that of $H\beta$. Nebular lines are not detected at either epoch. The marked variability in $HeII\lambda 4686$ suggests that this is a symbiotic object. However, symbiotic stars are usually thought to involve a late-type giant, whereas this star, if it is an SMC member, would have the luminosity of a supergiant. On the other hand, VV Cephei systems do contain supergiants but do not display high-excitation emission features.

Unfortunately, on a very deep IIIa-J plate, taken on Jan. 7, 1975, the spectrum is over-exposed and unclassifiable but a strong ultraviolet continuum is present extending to $\lambda 3300$. The multi-color photometry of Lindsay (see above) would, therefore, indicate a composite spectrum. The late-type component might be G or K-type since TiO bands are not observed on red and infrared objective-prism plates also taken in 1967. W.P. Bidelman has noted that, if by chance this were a foreground star, it might have properties similar to the peculiar high galactic latitude star AG Dra (Ap.J. 117, 467, 1953). Clearly, a radial velocity determination and higher dispersion spectroscopic data are urgently needed in order to resolve this apparent anomaly.

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