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SPECTROSCOPIC DISCOVERY OF AN ERUPTIVE AND TWO PROBABLE LATE-TYPE EMISSION-LINE VARIABLES

The following stars, of presumed interest to variable star observers, were discovered on 75 minute exposure (baked Kodak IIIa-J emulsion) objective-prism plates (1360 Å mm^{-1} at H_γ) taken for the Case Low-Dispersion Northern Sky Survey (see Pesch and Sanduleak, 1983).

1. $\alpha = 10^h52^m18^s.9$, $\alpha = +37° 15'.8$ (1950). On a plate taken on 5 May 1981, the spectrum is that of a 14th magnitude, moderately blue early-type star with very weak hydrogen absorption lines. However, inspection of the Palomar Sky Survey (POSS) prints shows only a 19th magnitude stellar image at this position. Thus, this would appear to be some type of eruptive variable which underwent at least a 5 mag. outburst.

2. $\alpha = 10^h45^m16^s.9$, $\delta = +52° 34'.4$ (1950). On 14 Jan. 1983, the spectrum is that of a late K or early M-type star with strong Balmer series emission seen down to at least Hε and a very strong ultraviolet continuum. The star seems to have a comparable apparent magnitude of B $\sim$16.5 on both the objective-prism plate and the POSS O print. The

image diameters on the POSS O and E prints yield an estimate of B-V $\sim$ +1.0. Such stars are only rarely noted in our survey; the only other case (involving a flare star) was reported by Sanduleak (1983). Not a known proper motion star.

3. $\alpha = 16^h30^m33^s.0$, $\delta = +53° 33'.6$ (1950). Involved here is a physical double ($\sim$3 arc seconds separation) of two comparable brightness (B $\sim$16 mag.) late K or early M-type stars. The easternmost and slightly fainter component (to which the above coordinates apply) alone displays, on a plate taken 23 May 1984, the H and K Lines of Ca II in emission with extraordinary strength, i.e. the strongest yet seen at this dispersion by these observers. Neither star shows evidence of the Balmer series in emission nor any indication of an abnormally strong uv continuum. This pair does not appear to have been detected in proper motion surveys.

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