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THE ERUPTIVE VARIABLE IN SCORPIUS: A SYMBIOTIC STAR

Sanduleak, Stephenson and MacConnell (1978) have reported the discovery of an "eruptive variable" in Scorpius (α 17^h40^m32^s.6 δ -36°02'07" (1950)). They found it to show a strong emission spectrum (Balmer lines, [O III] lines and the 4640-68 Å blend) and to be about 14th magnitude.

The object was observed with the infrared photometer on the 0.75m telescope at the SAAO at Sutherland on 1978 July 10 with the following results:

$$J(1.2\mu) = 10.05 \pm .08 \quad H(1.6\mu) = 8.79 \pm .05 \quad K(2.2\mu) = 8.28 \pm .04$$

The infrared colours show that a cool component is present in this object. The photometry is consistent with the presence of a late M giant having an A_v of about 3 magnitudes (using intrinsic colours from Lee 1970). Since for such a star M_K is about -7, the distance of the system is about 10 kpc. The object is thus best interpreted as a symbiotic system in the general region of the nuclear bulge of our Galaxy. The fact that the object had not apparently been detected in previous objective prism surveys suggests that it may have been unusually bright at the time of the work of Sanduleak et al.

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References:

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