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V 1057 CYGNI

Photographic observations of V 1057 Cygni with the Uppsala-Kvistaberg Schmidt telescope have given the following magnitudes (with probable errors about ± 0.1 mag.):

	V	B	U
1976-09-20	10.55	12.15	-
1976-09-28	10.65	12.2	13.3

Considering the known rapid fluctuations of one or two tenths of a magnitude, these values do not differ significantly from those reported one year ago (Welin, IBVS 1057, 1975). The rate of brightness decrease must now be definitely less than 0.05 mag. per 100 days, and it seems likely that the decline has stopped altogether.

Spectra of V1057 Cygni have been obtained in August, 1976, with the 1.5 m telescope of l'Observatoire de Haute Provence, equipped with the PEDISCOU spectrograph plus 2-stage RCA image tube (reciprocal dispersion about 100 \AA/mm). These spectra show a rather strong G-band, which together with, i. a., Ca I 4227 \AA indicates a spectral type of about G0. The hydrogen lines are, however, too strong for this type. Due to the low resolution of these image tube plates no conclusive radial velocities could be measured. The hydrogen and calcium (neutral and ionized) absorption lines are generally shifted about 2 \AA towards shorter wavelengths. The K-line has an emission component, apparently with only a small net radial velocity, situated to the longward side of the absorption line. That this emission line can be seen at all suggests that it has grown stronger over the last three years - it was about as visible on a 20 \AA/mm spectrum taken in August 1973 at Haute Provence.

In conclusion, V 1057 Cygni has now developed a mixed spectrum similar to that of FU Orionis (Herbig, Vistas in Astronomy, Vol. 8, p. 109, 1966), with a relatively cool, expanding shell surrounding the star. The rise of K-line emission

also had its counterpart in the history of FU Orionis.

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