

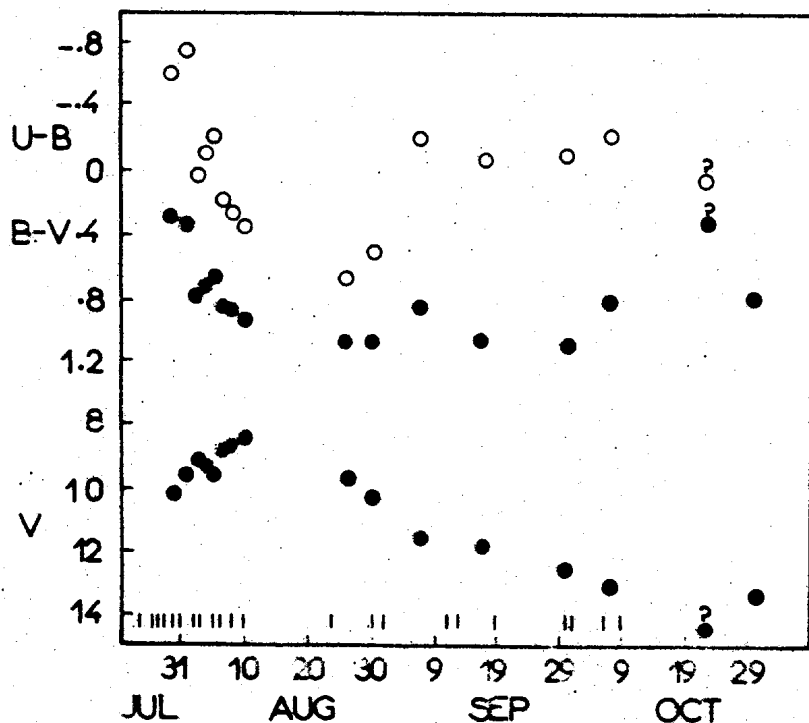
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 INFORMATION BULLETIN ON VARIABLE STARS

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Spectroscopic and photometric observations of the RCrB type variable RY Sgr were begun at the Cassegrain focus of the 74 - inch Radcliffe reflector following the receipt of a letter dated 22 July, from R. P de Kock (Royal Observatory, Cape) indicating that the star was several magnitudes fainter than usual. The Figure shows the photoelectric observations made in the UBV system; nights on which spectra were taken are also shown. The first spectrum (July 25)



Light curve of RY Sgr. Filled circles, V and (B-V). Open circles (U-B)
 Vertical lines indicate dates on which spectra were obtained.

showed a rich emission spectrum. Ca II, H and K, were the strongest absorption lines in the underlying continuum which appeared to be quite blue. Subsequently the continuum became somewhat redder. After August 3 the emission lines weakened until on August 6 they had almost disappeared. At this stage the absorption spectrum differed markedly from that at maximum light. A further emission spectrum appeared around August 30 and thereafter strengthened. The emission line λ 3888 identified as He I in RCrB by Herbig was first seen on September 11 and subsequently increased in strength until on October 9 it was equal to Ca II, H and K, in emission. A spectrum extending to the red, taken on October 6 showed the sodium D lines to be very strong in emission. Amongst other emission lines so far identified are lines of Ti II, Sc II, Fe II and Sr II.

RY Sgr was found to have a faint companion ($V = 15.7$, $(B-V) = +0.7$, $(U-B) = +0.2$) of which we have found no earlier record. It would be important to know whether the companion is physical or not.

It is hoped to undertake a detailed analysis of these and subsequent observations.

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