

NOTES

VARIABLE $H\alpha$ EMISSION IN ϵ AURIGAE

ABSTRACT

Distinct $H\alpha$ absorption was present in ϵ Aurigae on October 14, 1929, during the total phase of eclipse. On January 22 and March 15, 1935, emission was evidently present, just filling up the absorption.

During the total phase of the eclipse of ϵ Aurigae a single exposure was made on a coarse-grained panchromatic plate, on October 14, 1929. This plate was greatly overexposed, but it shows distinct absorption at $H\alpha$, although it is not as strong as would be expected from the intensity of $H\beta$. Apparent narrow emission borders cannot be confidently regarded as real, as opposed to Eberhard effect.

On January 22, 1935, an exposure was made on the fine-grained Eastman III-F emulsion, for comparison with the spectrum of Nova Herculis. This plate shows the spectrum to be continuous at $H\alpha$. Evidently an emission line equal in intensity to the continuous spectrum just fills up the absorption. Another plate taken on March 15 shows no further change. All the exposures referred to were obtained with the single-prism spectrograph, having a dispersion of 175 Å/mm at $H\alpha$.

Whether the observed change is due to the eclipse of the bright-line star or is an independent phenomenon cannot be decided until more data are available.

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VARIATIONS IN THE SPECTRUM OF 29 CANIS MAJORIS

ABSTRACT

The emission lines $He\ II\ 4686$, $N\ III\ 4634$, and $N\ III\ 4640$, and the absorption line $He\ I\ 4472$, vary in intensity with the orbital period of this binary.

Recent spectrograms of this massive O7-type binary show that the emission lines $He\ II\ 4686$, $N\ III\ 4634$, and $N\ III\ 4640$, and the