

In spite of the uncertainties in the measurements of R , the results indicate that Miss Underhill is correct in her interpretation of the discrepancy in the region of the Balmer lines.

June 1951

¹ *Ap. J.*, **108**, 83, 1948.

² *Pub. Obs. Univ. Mich.*, **7**, 147, 1939.

³ Unsöld, *Physik der Sternatmosphären*, Springer, 1938, p. 183.

⁴ *Photometric Atlas of Stellar Spectra*, Univ. of Michigan Press, 1946.

SYSTEMATIC DISPLACEMENTS OF ABSORPTION LINES IN ϵ AURIGAE

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In a recent paper¹ before the American Astronomical Society, O. Struve has shown that, at certain times, the profiles of the absorption lines of ϵ Aurigae differ greatly, even for the same atom. This phenomenon is probably related to the discovery by W. S. Adams² and others that the radial velocities obtained from the absorption lines of many supergiant stars of advanced spectral class give discordant results. In order to test whether, in ϵ Aurigae, the differences in line profiles are correlated with differences in radial velocities, 139 lines were measured on Struve's Mount Wilson coude spectrogram of March 23, 1951. The lines were grouped in four classes: B—steep on the shortward side; C—symmetrical; D—slightly steeper on the longward side; E—conspicuously steep on the longward side. The displacements relative to class C, given in Angstrom units, confirm with considerable probability the expected trend, and show, in conjunction with Struve's results, that differences of the order of 10 km/sec may be frequent, irrespective of the atom, or even of the multiplet chosen.

Group	No. of Lines	$\Delta\lambda$	M.E.
B	20	-0.19	$\pm .08$ A
C	51	0.00	$\pm .04$
D	45	+0.06	$\pm .03$
E	23	+0.08	$\pm .09$

¹ *A.J.*, in press.

² See, for example, *Ap. J.*, **93**, 11, 1941.