1928, ten plates were taken, each having been standardized with a new
sensitometer of variable apertures. The density-curves show that the
lines of the earlier plates are unsymmetrical, the sharper edge being on
the red side of the line. The last plate taken, which is certainly within
the phase of constant minimum light, shows the lines to be quite sym-
metrical.

The ratios of the areas of the violet sides of the lines to the red sides
have been taken as a measure of the asymmetry of the line. The con-
tours and the ratios have been measured for the lines: Fe+ 4515,
Fe+ 4541, Ti+ 4563, and Ti+ 4572. The ratios on Apr. 28, Oct. 29,
Nov. 6, 12, 24, Dec. 5, and 9, are, respectively: Fe+ 4515, 1.4, 1.6,
1.2, 1.6, 1.5, 1.0, and 1.0; Fe+ 4541, 1.2, 1.1, 1.1, 1.4, 1.3, 0.8,
and 0.8; Ti+ 4563, 1.1, 1.1, 0.9, 1.3, 0.9, 0.8, and 0.8; Ti+ 4572,
1.2, 1.4, 1.6, 1.2, 1.4, 1.0, and 1.0.

The asymmetry of the lines seems to be due to a widening of the
violet sides of the lines, just as though a fainter component were pres-
ten but not resolved by the spectrograph. This, however, as has been
pointed out by Ludendorff, would not be possible in a simple eclipsing
system, for the component would have been recognized at the times of
maximum difference in velocity of the two stars. The lines on the
plate of Dec. 9 are of about the same width and sharpness as on plates
taken in 1922. The earlier plates are not standardized and as yet no
attempt has been made to obtain the contours of the lines.

These preliminary results do not seem to support the hypothesis that
the asymmetry is due to the rotation of the eclipsed star. There is the
possibility that the asymmetry may be associated with the 150-day
period rather than with the longer period. Series of spectrophotometric
observations through the minimum phase will probably settle this point.

THE DUPONT-PATHE PANCHROMATIC PLATE.

By Philip Fox and O. J. Lee.

For many spectrographic problems it is desirable to photograph a
long range of the spectrum in one exposure. To accomplish this it is
essential that the spectrograph should at one setting give this range in
good focus and that the plate should be so adapted that it will give uni-
fom intensity of image throughout the range. The single-prism
spectrograph of the Dearborn Observatory gives photographs in sharp
focus from λ 3700 to λ 6800 and perhaps even farther. Titanium lines
at λ 3706 and λ 6258 and Hα at 6563 and all intermediate lines are
simultaneously in sharp focus.

Through the courtesy of the Redpath Laboratory of the DuPont-
Pathé Film Mfg. Co. at Parlin, N. J., we were supplied with hand-
coated plates of their panchromatic emulsion. The performance of this
emulsion in connection with our spectrograph when exposed to the sky