from a single line. In the case of stars like *β Geminorum* and *α Böötis*, where their similarity to the Sun allows of satisfactory identifications and blends, the mean error is only one third of the above, while the mean error of setting on the lines of *o Ceti* which are of good quality for measurement, is not materially greater than with solar stars. It is evident, therefore, from the satisfactory agreement of the velocities obtained at two epochs nine years apart, that the star's velocity, so far as it is determined from displacements of the absorption lines, is constant, and, as Professor Campbell has already said, its variability is probably not dependent upon or connected with any orbital motion.

A comparison of the displacements of the bright hydrogen lines on the two plates already measured, and their corresponding velocities, with the mean velocity from the absorption lines, shows that the former is about 15 kms. smaller, that, if the displacement could be explained by velocity changes only, the emissive layer is lagging behind the absorptive layer at the rate of 15 kms. per sec. It is of course more likely that the difference is due to some unknown condition in the atmosphere of the star which may displace the spectral lines. To obtain all the information possible in regard to the character and displacement of the hydrogen emission lines, a number of plates were made with varying exposure, from 1 minute to 20 minutes, and these were carefully compared with one another and with the previously exposed more intense plates to determine the form of the emission lines. No trace could be found of Campbell's triple formation in any of the plates, although the earlier ones, when the star was near maximum, were not suitably exposed to exhibit such an effect. The lines were, however, in the majority of the plates, unsymmetrically broadened with respect to the actual centre of intensity determined from the tips of the emission lines. These tips were nearer to the violet side of the bands, showing that the radiation was not symmetrical, and this asymmetry became more evident, the more intense became the line. This is indicated in two ways in the table of the velocities