

There seems therefore reasonable ground for believing that considerable improvement in the efficiency, and considerable increase in the range of the majority of spectrographic equipments can be attained by looking into the character of the star image given by the condensing system. Although the exact effect of atmospheric disturbances on the effective diameter of the star image is difficult of determination, I feel satisfied, if I can obtain a correcting-lens that will give a star image reasonably free from aberration, that the exposure times required here can be very materially reduced, I hope by 50 per cent., and I see no reason why a similar or even greater improvement could not be effected in some of the other equipments.

I acknowledge with pleasure my indebtedness to Dr. W. F. King, the Director of the Observatory, for help and encouragement in the prosecution of the work, and to Mr. W. E. Harper for making duplicate measures for comparison purposes on some of the test plates.

DOMINION OBSERVATORY, OTTAWA

January, 1907