MINOR CONTRIBUTIONS AND NOTES

DESIRABILITY OF OBSERVATIONS OF THE SOLAR ROTATION AT THE TIMES OF ECLIPSE

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In the lines of spectra from the solar limb there is blending of such nature as to affect the measurements of the velocity of the sun's rotation from the displacements of these lines. The magnitude of the effect varies from line to line. Various factors contribute to the blending of spectra.[1] The factors operating between the moon and the point of observation are nearly eliminated just before and after totality, when only the limb under observation is visible. To investigate the problem a powerful spectroscope (producing spectra of scale about 1 mm to 1 A) is necessary and a large image of the sun preferred. The region of the b-group is suggested because the effect of blending is known for the b-lines and others near them, and because iodine and chlorine comparison spectra are available. It is very desirable that such observations be made at the eclipse of June 8, so that terrestrial sources of blended spectra may be removed in order to investigate the solar and interplanetary sources. The observations need not interfere with those during the precious seconds of totality.

At least one party is planning[2] to make determinations of the speed of rotation of the corona from displacements of the coronal lines at the time of total eclipse on June 8. In view of the fact that Deslandres, Campbell, and Bosler have obtained values of this speed of from 3 to 4 km per second, it is very important that every precaution be taken to keep check on the errors that beset such measurements. In this regard I would suggest that the spectroscope be used to determine the velocity of rotation of the reversing layer by observations of the east and west limbs of the

[1] Journal of the Royal Astronomical Society of Canada, 10, 201-219, and 345-357, 1916; Astrophysical Journal, 44, 177-189, and 198-199, 1916.

[2] Edwin B. Frost, Popular Astronomy, 26, 110, 1918.