

I. PHYSICS

Astrophysics (Solar Corona)

DETERMINATION OF LIMB DARKENING COEFFICIENTS OF THE SOLAR DISC IN THE VISIBLE AND NEAR ULTRAVIOLET

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(Received 13 October 1980)

AIM of the experiment was to determine photoelectrically the limb darkening of the solar disc at two regions of the spectrum at visible 4800Å and near ultraviolet 3600Å very close to the second and third contact times.

Keywords : Limb Darkening Coefficients; Solar Disc; Contact Times; Paschen Runge Spectrometer.

EQUIPMENT

A Paschen Runge spectrometer with two exit slits feeding two photometers. The amplified photometer outputs were recorded on two channels of a eight-channel pen recorder. Absolute time marks were recorded on two adjacent channels.

RESULTS

Intensity variations at the two spectral regions near both the second and third contacts are recorded. Variations at the two spectral regions show significant differences.

LOCATION

Jawalgera, Karnataka. Long. 76° 52' 52" E; Lat. 15° 50' 57" N.