

I. PHYSICS

Astrophysics (Solar Corona)

MONOCHROMATIC PICTURE OF CORONA IN $\lambda 5303\text{\AA}$

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AIM of the experiment is to assess the nature of monochromatic picture of the solar corona in the wavelengths of 5303\AA .

Keywords : Monochromatic; Green Coronal Line; Celestron; Radial Distance; Longitudinal; Hydromagnetic Wave.

EQUIPMENT

The green coronal line $\lambda 5303\text{\AA}$ was also photographed using a 8 inch $f/10$ Celestron-8 telescope and 10\AA band width filter. Exposures of 5, 15 and 45 sec. were taken during totality again on Tri X film.

RESULTS

An interesting result that has emerged from the reduction of a monochromatic picture is an oscillatory character in the log (Intensity) vs. Radial distance plot about a mean straight line along a certain azimuth. The oscillation seems consistent with a longitudinal hydromagnetic wave propagating with a period of 5 minutes—the period of photospheric oscillations. Further work is in progress.

The mean line width temperatures agree well with the scale height temperature calculated from the Celestron picture.

LOCATION

Gadag, Karnataka. (Long. $15^{\circ} 25' \text{N}$; Lat. $75^{\circ} 37' \text{E}$).

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