

I. PHYSICS

Astrophysics (Solar Corona)

MULTISLIT SPECTROPHOTOMETRY OF THE CORONA

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THE purpose of the experiment was to measure the kinetic temperatures at several points in the corona in the line 6374Å.

Keywords : Multislit Spectrophotometry; Coelostat; Spectrograph; Varo Tube.

EXPERIMENT

AN image of the corona was formed by an $f/10$ lens of the 14cm aperture, fed by a coelostat on the slit plane of the spectrograph with four entrance slits spaced 12.3 arcmins apart. The 10cm Littrow lens of focal length 100cm with a 600 line grating formed focussed multispectra on a single stage Varo image intensifier tube. The spectra were photographed on 103aD emulsion.

SUMMARY OF PRELIMINARY RESULTS

Two exposures were obtained during the totality phase, the second being with the solar image stepped up by a predetermined displacement. The data provide a range of locations for evaluating the half widths of the lines. The neon spectrum through an adjacent window provide a reference for determining the line of sight velocities.

LOCATION

Jawalagera, Karnataka. Long. $76^{\circ} 52' 52''$ E, Lat. $15^{\circ} 50' 57''$ N.