

## I. PHYSICS

### Astrophysics (Solar Corona)

#### WHITE LIGHT CORONAL PHOTOGRAPHY

M. C. PANDE, K. R. BONDAL, V. P. GAUR, K. SINHA and G. C. JOSHI  
*Uttar Pradesh State Observatory, Nainital, U.P.*

(Received 13 October 1980)

THE experiment aimed towards estimation of separation of *K*-corona from *F*-corona through polarization measurement and to determine coronal electron densities, temperatures, integral brightness and orientations of major streamers in space.

**Keywords:** K-Corona; F-Corona; Coronal Electron Density.

#### EQUIPMENT

10 cm aperture refractor of 229 cm focal length and 11 cm aperture *f*/3 refractor were used. Corona was photographed with both telescopes through red filters (peak transmission at 6500Å) and HN-38 type polaroids in four different orientations 45 degrees apart.

#### SUMMARY OF PRELIMINARY RESULTS

Coronal photographs through both short and long focal length telescopes were successfully recorded.

#### LOCATION

Palem. Lat. 78° 15', Long. 16° 31.5. Elevation 642 m (110 km South-West of Hyderabad), Mahboobnagar, A.P.

#### REFERENCES

- Bappu, M. K. V., Bhattacharya, J. C., Sivaraman, K. R. (1972) On emission lines of hydrogen, helium and ionized calcium seen on a coronal spectrogram of the March 7, 1970 Eclipse. *Solar Phys.*, 26, 366.
- Cavellini, F., and Righini A. (1975) H and K (CaII) emissions as observed in coronal spectrum in the July 20, 1963 solar eclipse. *Solar Phys.*, 45, 291.
- Menzel, D. H. (1970) Eclipse instrumentation for the solar corona. *Applied Opt.*, 9, 2626.
- Newkirk, Jr. G., Dupree, R. G., and Schmahl, E. J. (1970) Magnetic fields and the structure of the solar corona II observations of the 12 November 1966 solar corona. *Solar Phys.*, 15, 15.
- Rybansky, M., and Rusin, V. (1975) The integral brightness of the corona during the solar eclipse of June 30, 1973. *Bull. astr. Inst. Osl.*, 26, 206.
- Saito, K., and Yamashita, Y. (1962) Polarigraphic observations of the solar corona at the total eclipse on October 12, 1958 in the Southern Pacific. *Ann. Tokyo astr. Obs. Ser. II*, 7, 163.
- Tsubaki, T., Kurokawa, H., and Kanno, M. (1971) Fine structure in the inner corona observed at the 1970 Eclipse. *Solar Phys.*, 21, 305.
- Waldmeier, M. (1975). The excitation of the coronal line 5303 Å. *Solar Phys.*, 45, 147.