

Mauna Loa site in Hawaii, on instrumented aircraft operated by the National Center for Atmospheric Research, and on the Skylab (formerly ATM) and OSO-1 spacecraft.

*Application of Fourier Techniques to Solar Data.* In collaboration with Brault (Kitt Peak National Observatory), White applied Fourier Transform to noisy (i.e., real data). The development of the Fast Fourier Transform algorithm and the application of optimum filter technique now permit a 'best' numerical solution to the correction problem for real data. As a result we can now specify constraints on the data collection process to insure that the Fourier representation of the data is accurate enough for good recovery of the true profile. This method also permits construction the optimum numerical filter from the data (05.021.008).

*A Computer-Controlled Infrared Eclipse Telescope.* An F/8, chopped, dual beam, gyroscopically pointed telescope has been constructed for use in obtaining infrared (7–13  $\mu$ ) observations of the spectrum of the thermal emission of the solar corona. The instrument employs a scanning Michelson interferometer with germanium beam splitter and a germanium bolometer operated at 2K. The resulting interferograms are stored on magnetic tape. A small general purpose digital computer is used for experimental control and data processing. A fourier transformed spectrum may be generated on operator request (Lee, MacQueen and Mankin, 04.032.040).

*The High Altitude Observatory Stokes Polarimeter.* The successful use of the HAO longitudinal magnetograph at Climax to study prominence magnetic fields (see Tandberg-Hanassen 1970 for a review of the literature), prompted Tandberg-Hanassen to plan a full Stokes polarimeter in the hope of investigating the vector field in prominences. The design concepts of the polarimeter are mainly due to Beckers and Lee, while Baur, Curtis, Hull and Rush have been responsible for building the instrument. One of the unique aspects of this instrument is that it is designed to operate at low light levels so that the Stokes spectrum of prominences and even the corona can be measured, and an elaborate calibrative scheme has been devised by Baur.

The polarimeter employs two electro-optic light modulators (KDP cells) driven at different frequencies, followed by a quarter wave plate and a polaroid. The two beams from the polaroid are fed to two photocells, and by taking the sum and difference signals from the cells, the four Stokes parameters are obtained, using three lock-in amplifiers.

The instrument was tested successfully on the big spar of the Sacramento Peak Observatory coronagraph in February 1972. After some modification and being brought under computer control, it is hoped that it will be operational during the winter of 1972–73 (Tandberg Hausen, 04.073.059).

V. B. NIKONOV

*President of Commission*

JOINT WORKING GROUP OF COMMISSIONS 9 AND 46 FOR  
EXCHANGE OF EQUIPMENT

A Circular Letter was sent to the directors of all astronomical institutes and observatories asking if there is any possibility for loaning some types of astronomical equipment.

Many answers were received up to November 1972, all of them negative. Some observatories have already loaned their excess equipment. Another, recently organized, does not have such equipment.

N. N. MIHELSON

*Chairman of the Working Group*

GROUPE DE TRAVAIL SUR L'EMPLOI EN ASTRONOMIE  
DES RÉCEPTEURS PHOTOÉLECTRIQUES D'IMAGES

*Introduction*

L'emploi de ces récepteurs a continué à se développer au cours des deux dernières années. Cette activité est confirmée par l'organisation de plusieurs réunions spécialisées et par la parution d'articles de synthèse, notamment :