

## **T A U M O K—Multi-Object Spectroscopy with the Tautenburg Schmidt Telescope**

S. Marx, H. Lehmann, M. Pluto, R. Ziener

*Thüringer Landessternwarte, D-07778 Tautenburg, F. R. Germany*

A multi-object camera for the Tautenburg Schmidt Telescope (134/200/400) was developed and constructed in cooperation with the Max-Planck-Institut für Astronomie in Heidelberg and the Thüringer Landessternwarte Tautenburg. The experience with the "Spaltspinne" for the 3.5 m Telescope of the Calar Alto Observatory (Pitz 1993) was the foundation of TAUMOK. The technical concept was given by Pitz et al. (1993).

Thirty six rods controlled by a processor can be moved in an area with a diameter of 16 cm. This area covers a field of  $2.3^\circ$  in the focal plane which is flattened by a plano-convex lens. Each of 34 rods carry two fibres with diameters of  $100\ \mu\text{m}$  with one fibre for the object and another for the background light. The fibres have a length of 7 m and their opposite faces form the entrance slit of a spectrograph. At present, reciprocal dispersions of 3.4, 10, 20 and 40 nm/mm can be realized. A CCD camera with a chip-size of  $1152 \times 770$  pixels (pixel size  $22.5\ \mu\text{m}$ ) is used as detector. Two of the 36 rods are equipped with image bundles for telescope guiding.

At present TAUMOK is tested in the laboratory. Astronomical observations with TAUMOK should be started by the middle of 1994. At first redshifts of galaxies should be measured and a search for B-stars as indicators of a possible spiral arm behind the Perseus arm should start.

### **References**

- Pitz E., 1993, in *Fiber Optics in Astronomy II*, ASP Conf. Ser. 37, P.M. Gray, ed., p. 20
- Pitz E., Lorenz H. & Elsässer H., 1993, in *Fiber Optics in Astronomy II*, ASP Conf. Ser. 37, P.M. Gray, ed., p. 166