

THE PLATE ARCHIVE OF THE TAUTENBURG SCHMIDT TELESCOPE

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The Karl-Schwarzschild-Observatorium, about 15 km away from Jena in the Tautenburg forest at 330 m above sea level, was founded in 1960. The 2m-Universal-Telescope contains three optical systems: Schmidt, Cassegrain and Coudé. The spherical primary mirror consists of Sitall (a Russian ceramic glass).

The Schmidt system with a free aperture of 1.34 m is the largest of the world. The focal length is 4 m, and the vignetting-free field covers 3.3 degrees by 3.3 degrees on plates of 24 cm by 24 cm. Colour filters are available for U, B, V, and R. The limiting magnitude on deep plates can reach 21.5 mag in B and 20.5 mag in V and U. A second corrector lens with an integrated prism is also available; this produces spectra with a reciprocal linear dispersion of 260 nm per millimetre at H γ .

A multi-object fibre-feed spectrograph with robotic-positioning of 34 optical fibres in a field of 2.3 degrees diameter (Pitz et al. 1993) is under construction in cooperation with the Max-Planck-Institut für Astronomie Heidelberg.

More than 8300 plates have been taken with the Tautenburg Schmidt telescope since 1960. They are stored vertically in a room with temperature control.

The most important data of our plates have been available in computer-readable form since 1983. Now the catalogue is written in dBase IV and contains the following data:

- PLNR	plate number
- ALPHA	right ascension of the plate centre
- DELTA	declination of the plate centre
- DATE	date of the beginning of exposure
- BEGIN	hour:minutes of the beginning of exposure
- ETIME	exposure time
- EMFI	information on the emulsion-filter combination used
- W	with or without calibration wedge
- REM	remarks, e.g. objective prism plate
- S	number for special objects, in most cases comets
- PLACE	place of storage

A short excerpt from the catalogue is given in Table 1.

Table 1

PLNR	ALPHA	DELTA	DATE	BEGIN	ETIME	EMFI	W	REM	S	PLACE
8263	11:24:11	+06:30	93MAR01	02:52	020:00	B	0	BEWO	0	TAUTENB
8264	13:41:58	+28:24	93MAR01	03:28	029:00	B	1		0	TAUTENB
8265	05:20:12	+42:22	93MAR19	20:00		OFUS	0	FOKAEBKA	0	TAUTENB
8266	03:20:27	+41:33	93MAR19	20:50	022:00	B	1		0	TAUTENB
8267	08:40:11	+20:01	93MAR19	21:31	030:00	B	0		0	BABELSB
8268	08:47:03	+21:30	93MAR19	22:20	029:00	B	0		0	BABELSB
8269	09:57:49	+69:11	93MAR19	23:15	002:00	B	1		0	TAUTENB
8270	13:41:58	+28:24	93MAR20	00:10	032:00	B	1		0	TAUTENB

Notes:

in EMFI: B, for blue plate with GG13 filter; OFUS, for blue plate without any filter;

in REM: the BEWO telescope is guided to a moving object.; FOKAEBKA focus plate for a special plate holder.

About 15 per cent of our plates have been loaned to 68 astronomers in various institutes all over the world. Unfortunately, some astronomers need 100 and more plates at the same time. Others have borrowed our plates for 10 years and longer. The largest problem is that some astronomers had loaned our originals to other colleagues, and we do not know now where the plates are. Analogous problems with their plate library seem to exist for the colleagues from the UKST (Morgan & Tritton 1993). In accordance with the aims of the 'Wide-field Imaging' working group (MacGillivray 1993), we ask everyone who sees Tautenburg plates to help us by having the plates returned to our archive.

References

- MacGillivray, H.T., 1993. Report of the 1st Meeting of the WFI WG Organising Committee, in IAU Commission 9, Working Group on 'Wide-field Imaging', Newsletter 2.
- Morgan, D. and Tritton, S., 1993. UK Schmidt Telescope (UKST) News from ROE, in IAU Commission 9, Working Group on 'Wide-field Imaging', Newsletter 2.
- Pitz, E., Lorenz, H. and Elsässer, H., 1993. The Tautenburg 'Feldspinne', in 'Fiber Optics in Astronomy' II, *ASP Conference Series*, Vol. 37, ed. P.M. Gray.