

SOME RESULTS OF THE CURRENT WORK ON THE CATALOGUE OF *PZT* PROGRAMME STARS

S. Sadžakov, D. Šaletić, M. Dačić

The Group for Relative Coordinates of the Belgrade Observatory, upon successively completing the Catalogue of the declinations of latitude stars (1972), containing programmes of 28 stations with visual and photograph zenith-tubes, started in June 1973 the work on a catalogue of *PZT* programme stars.

In the first half of 1973 preliminary observations were carried out and the results showed that measurements for the *PZT* programme could be undertaken. From June 1973 till May 1975 in all 120 series were observed with a total of 6842 star transits as well as 24 Kuestner series with 825 transits. Although stars of this catalogue are observed in narrow zones, Kuestner series were observed for control of the instrument's system and also for possible wider usage of the observing material in the later analysis.

The rule was strictly observed that the temperature within the pavilion be equalized, as far as possible, to that outside the pavilion. For that reason the roof of the pavilion was opened two hours before the observation started. In the course of the observation, every half-hour, and even more frequently, readings of the air temperature and pressure were made. Collimation error was determined around the middle of the series and the flexure mostly once a month, before and after Kuestner series. Observational data for this catalogue will be used for the reduction of uncomplete day observations of the Sun and inner planets.

The measurements of both coordinates were carried out simultaneously. The mean time of star transit has been determined from ten contacts disposed around instrument's meridian. Right ascensions have been computed according to Bessel formula. The quantity n has been deduced from the observation of fundamental stars at both upper and lower transits as well as from the observation of reference stars of a given series.

In case a variation with the time of the quantities $u + m$ and M (equator point) has been stated, a graphic plotting has first been made and therefrom mean values calculated. It should be remarked that a variation with the declination occurred in a few series only, which is quite understandable in view of the fact that observations are made in narrow zones.

According to results acquired, the mean square error of one observation of right ascension is $\epsilon_{\alpha} \cos \delta = \pm 0^{\circ}022$, and the error of the mean value of $u+m$ for a series is $\epsilon_{u+m} \cos \delta = \pm 0^{\circ}007$. Mean square error of one observation of declination is $\epsilon_{\delta} = \pm 0''.28$, and the error of the mean value of the equator point is $\epsilon_M = \pm 0''.09$. These errors have been calculated for reference stars. But since three groups of observers have actually performed the measurements, we present the errors according to groups:

Observers			Number of series	$\epsilon_{\alpha} \cos \delta$	ϵ_{δ}
Eyepece micrometer	Microscope micrometer	Assistant observer			
DŠ	SS	MD VP MM	68	0.020	0''.26
SS	MD	VP MM	45	0.025	0.34
SS	MM	VP	7	0.025	0.24

DŠ — Dušan Šaletić, SS — Sofija Sadžakov, MD — Miodrag Dačić, VP — Vojislava Protić-Benišek, MM — Milan Mijatov).

With regard to this errors and to the measures undertaken in order to make observations as tight as possible connected to the *FK4* system, one is entitled to expect satisfactory quality of this observational catalogue.

R E F E R E N C E S

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