SECULAR VARIATION OF TASHKENT ASTRONOMICAL LATITUDE

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ABSTRACT

The mean astronomical latitude of the Tashkent Observatory was determined by D. D. Gedeonov in 1895-1896 before the International Latitude Service had been organized. The determination was based on a continuous fourteen-month series of observations with a Wanschaff visual zenith telescope (d = 68 mm., f = 870 mm.). These data consisted of the observations of 2214 Talcott pairs which were observed from July, 1895 through August, 1896.

In accordance with the suggestions and instructions of V. P. Shcheglov, G. M. Kaganovsky repeated the research of Gedeonov in 1969-1970, observing 2369 Talcott pairs in fourteen months. Unfortunately the Wanschaff visual zenith telescope was not preserved, so the observations were carried out with a Bamberg transit instrument (d = 100 mm., f = 1000 mm.). In both cases the observations were reduced to the AGK 4 system.

The variation of the mean astronomical latitude of Tashkent during the 75-year interval between the two observations is (Kaganovsky, 1972)

$$\phi_{1970} - \phi_{1896} = -0''.309 \pm 0''.021.$$

The variation of the Tashkent mean latitude in the same time interval derived from the polar coordinates of Vicente and Yumi (1969) is -0".256. The agreement of these values corroborates secular polar movement. Therefore when geographic coordinates are obtained it is necessary to point out the epoch of their determination and to reduce them to the Conventional International Origin.

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DISCUSSION

S. K. Runcorn: Is the secular polar motion that is found in agreement with that found by Markowitz?
V. P. Shcheglov: Yes, because he used the same initial data.

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