

DISCUSSION: SESSION II

L.D. Kovbasjuk: Nearly diurnal variations of latitude are likely to bias the principal terms of nutation derived from observations.

E.P. Fedorov: This effect is presumed to be unsubstantial.

G.P. Pilnik: Due to the fact that the tidal coefficient $l+k-l$ is not known with adequate precision, there is some degree of uncertainty in the principal nutation term obtained from observations.

E.P. Fedorov: As the correction for the tidal term O_1 is very small, there is no need for a precise value of the coefficient mentioned by Dr. Pilnik.

N.P.J. O'Hora: The fortnightly nutation obtained from observations with the PZT at Herstmonceux is almost the same as derived by Drs. Korsun' and Tarady from observations of the ILS stations.

R.O. Vicente: I wish to congratulate Prof. Popov for such a long series of observations, and emphasize the fact, mentioned by Dr. Yatskiv, that more than one period of observations is needed in order to obtain a good determination of the 18.6 year nutation. The Working Group on Pole Coordinates is reducing all the observations of the ILS in a consistent system in order to publish the coordinates of the pole since 1900. It is hoped that a by-product of this work will be a new determination of this nutation.

The statistical analysis employed by Popov and Yatskiv shows several periods for the nearly diurnal nutation. I should like to point out that the theory can forecast several periods near a sidereal day, depending on the Earth model adopted.

J.D. Mulholland: When D.D. McCarthy, P.K. Seidelmann and T.C. Van Flandern state that non-conventional nutation series will be used in high-precision applications if this symposium does not adopt a more accurate series, they state a very real danger. We have already seen exactly this happen with the astronomical unit and the terrestrial mass in the 1964 IAU System of Astronomical Constants. It seems necessary to avoid this dangerous confusion, since there is no assurance that everyone will adopt the same non-conventional series.

B. Guinot: I agree with the comments of Mulholland. Not only during the IAU meeting in Grenoble, but even before, in the discussion of the Working Group on the Astronomical Constants, it was urged to give the numerical values of all the relevant terms of nutation.

The present erroneous values are a nuisance in the BIH work on UT1. They also affect the work on the star catalogues such as the compilation of star catalogues with astrolabes.