ON THE EQUATION OF PRECESSION AND NUTATION OF THE DYNAMICALLY UNBALANCED EARTH

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Abstract

In contrast to the deduction of the equations of precession and nutation adopted as a standard by the IAU, the authors develop a rigorous theory of the rotation of the Earth taking into account the inequality of the equatorial moments of inertia of the Earth and retaining small terms usually neglected to simplify an approximate solution.

The equation is expressed in terms of the so-called Beletsky-Chernousko's variables used in astrodynamics.

E. P. Fedorov, M. L. Smith and P. L. Bender (eds.), Nutation and the Earth's Rotation, 157.