TIDAL AMPLITUDE DELTA-FACTORS AND PHASE SHIFTS FOR EARTH WITH OCEAN

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Abstract. The generalization of M.S. Molodenskiy's problem, which describes the state of selfgravitating elastic compressible sphere, to the case of biaxial hydrostatic rotating elliptical inelastic shell is obtained. The six-order system of equations is complemented by the corrections for the relative and Coriolis accelerations. The ordinary and load Love numbers are calculated with the allowance for their latitude dependence and dissipation for different Earth's structure models (tree variants of AK135, IASP91 and PREM). The theoretical amplitude delta-factors of degree 2 for the oceanic Earth are compared with their most recent empirical counterparts obtained by the GGP network gravimeters.

Keywords: tidal amplitude delta-factors, Love numbers, tidal prediction.