



Atlantida3.1_2014: The software for tidal prediction

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In this work, we describe the possibilities of the ATLANTIDA3.1 2014 software, which was recently developed for analyzing the data on tides of the Earth. These possibilities include the calculation of the gravimetric oceanic effect, the amplitude delta-factors for oceanless Earth, as well as the predicted amplitude factors and phase shifts for the Earth with ocean. Calculation of the amplitudes and phases of the oceanic gravimetric effect with the allowance for dissipation based on six oceanic tidal models (SCW80, CSR3, CSR4, FES95.2, FES2012 and NAO99b). The delta-factors of the diurnal and semidiurnal body tides and their latitudinal dependences are calculated according to (Spiridonov E.A., 2014). For the other groups of waves, the program uses the average values of delta-factors of the body tides from (Dehant V., et al., 1999). The program also calculates the tidal series. These computations are carried out by the PRILET subroutine developed by E.A. Boyarsky and L.V. Afanasyeva. The computational scheme here largely follows the PREDICT program from the Wenzel's ETERNA 3.3 package. The expansion of tidal potential into 1200 Tamura's waves (1987) is applied.