

Change in the amplitude indicators in tidal variations of gravity during the preparation of nearby earthquakes

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Abstract. The authors revealed an effect of gravitational field variations for the principal lunar wave O1, which preceded nearby earthquakes, using for the first time the approach based on the method of calculating tidal parameters in a sliding window with various window width (from 30 to 120 days). Since the observed data were free from the oceanic load, this effect is assumed to be associated with a local restructuring of the density medium in the solid Earth. A seasonal cyclicity was revealed for the K1 wave. Such cyclicity was not taken into account when compiling a solid Earth model PREM (preliminary reference Earth model).

Keywords:

tidal variations of gravity, geodynamics, seismicity, gravity effect

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