Changes in tidal response before strong earthquakes

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Abstract. The Beaumont and Berger (1974) idea about the possibility of the earthquakes prediction by using time-variable tidal response is verified by using GPS-data about displacements field in the seismic regions, and global seismic net (GSN) of tiltmetric and gravimetric tidal data in the vicinities of strong earthquakes centers before and after greatest seismic events. In our previous work we represented the results of modeling of time-variable changes in the structure tidal response near the focal point of catastrophic earthquakes. The model of fo-cal point includes data about length and orientation of the fault surface and the value of discontinuity of tangent subvector of displacement on the opposite banks of the fault surface. The model is based on GPS-data about horizontal and vertical displacements of the Earth surface.

Keywords: Earth tides, earthquake prediction.