Deformation of the Earth's Surface by Local Mass Loading

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The mass of big building cause a deformation of the Earth crust up to long distance from area of realization. The elastic and rheological effects are modelled as viscoelastic and plastic. In both cases exists new factor-time. More deeply knowledge of mechanical properties of materials and modern computer equipment allow construct very precise model reaction of the Earth surface on loading in time. Geodesists and geophysicists need to know this laws of surface deformation and theirs time evolution for geodetic nets design, for analysis of repeated measurements or analysis time series. The poster contents the mathematical modelling of the Earth elastic surface deformation caused by symmetric loading of its boundary, time evolution of vertical displacements and local deformation caused temperature effects.