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Static and dynamic stress changes and Earthquake triggering

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In most of the statistical studies earthquakes are represented by five coordinates take from ordinary earthquake catalogs but there are many other quantities, which characterize an earthquake, fault plane parameters, stress drop, fault rupture length, rupture velocity etc. Stress changes in the Earth's crust can be estimated from model calculations that use near-surface deformation as an observational constraint. But the widespread correlation of changes of earthquake activity with stresshas led to suggestions that stress changes might be calculated from seismicity catalogues. In this part of the cooperated study, stress drop, stress changes and triggering of earthquakes will be evaluated by using Coulomb failure criteria. Shear and normal stress altered on surrounding faults by an earthquake. Small sudden stress changes cause large changes in seismicity rate. Rate sizes are high in the stress-increased areas and low in the stress dropped areas. Changes in the seismicity rate are followed by a dependent recovery. In this study our aim is to understand the effect of static and dynamic stress changes in promoting earthquake failure by using homogeneous and complete earthquake catalog that we created for Turkey.