

The relation between postseismic crustal deformation and groundwater migration

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Judging from the results of coseismic discharge changes at Rokko-Takao station and of coseismic groundwater level changes at Osakayama observatory, the cause of the postseismic crustal deformation is considered as follows: Coseismic strain changes generate the coseismic pore pressure changes which corresponds to the strain changes. The lack of the uniformity in space distribution of the pore pressure is canceled by groundwater migrations from high pressure areas to low pressure areas including the ground surface. Such postseismic pore pressure changes cause postseismic crustal deformations. Therefore, if the permeabilities in the medium are known, the postseismic crustal deformations in time and space will be estimated.