

Block-fault modeling of the Hokkaido island, northeastern Japan.

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The overall pattern of the crustal deformation in Hokkaido Island, northeastern Japan is now being revealed by leveling, tide gauge observation, and the GPS network of the Geographical Survey Institute of Japan (GSI). The northern part of Hokkaido shows uplifting and horizontal motion similar to that of the Amurian plate in this region, whereas the Pacific coastal area shows subsidence and northwestward motion due to the subduction of the Pacific plate. We try to estimate a block-fault motion of Hokkaido inverting leveling, tide gauge observation, and GPS data of the GSI with Green functions computed by finite element method taking into account 3D inhomogeneous structure beneath Hokkaido.