

Recent crustal deformation in southwestern Hokkaido, Japan

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In southwestern Hokkaido, crustal deformation that cannot be explained only by the subduction of Pacific plate is observed by the continuous GPS network. The purpose of this study is to reveal the origin of this crustal deformation. We assumed the afterslip of the 1993 Hokkaido Nansei-oki earthquake and the interplate coupling associated with the subduction of Pacific plate as the origin of the crustal deformation. We did a grid search for slips of the six assumed fault planes to explain the observed crustal deformation. From the results, we found that we need to consider the slip not only on the Hokkaido Nansei-oki earthquake but also on the 1940 Shakotan-hanto-oki earthquake in order to explain the observed crustal deformation.