

Initial results of block tectonics of southern Kyusyu, southwest Japan based on GPS velocities

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Japanese nationwide continuous GPS array has revealed complex features of crustal deformation field in the Kyushu-Ryukyu Arc, southwest Japan. It reflects not only the variation of subduction style of the Philippine Sea plate from the Nankai Trough to the Ryukyu Trench but also the backarc opening at the Okinawa Trough. We try to interpret the deformation field as a surface expression of interactions between several tectonic blocks. GPS horizontal velocities and earthquake source mechanisms are used to define block boundaries. Based on block motions determined from GPS velocities we discuss key factors dominating deformation field in the Kyushu-Ryukyu Arc.