

Strain step associated with the southeast off Kii peninsula earthquake on September 5, 2004

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Research Center for Earthquake Prediction, Kyoto University, has been developed some observatories for crustal deformation in the southeastern Japan. Many extensometers settled in these observatories recorded strain discontinuity at the southeast off Kii peninsula earthquake sequence on September 5, 2004, $M_w=7.1$ and 7.4. We extract these strain steps and compared with the calculated values by the dislocation theory. The calculations are carried on 4 fault models, three of these are based on CMT solutions and the other was based on the geodetic data by Geographical Survey Institute of Japan. 3 CMT solutions are after Yamanaka (Earthquake Research Institute), Yagi (Building Research Institute) and one reported by Japan Meteorological Agency. Each model is positioned in two manners, as the center of energy release is coincident with the depth of it's own solution and the depth of JMA source. The model of JMA, where the center of energy release was not reported on the fault surface, is shifted horizontally in three cases. Over 10 cases were calculated to find most adequate model. The comparison of observed steps with calculated ones reveal that Yagi's model, which is 110km long, 25km width and the depth of top edge is 7.1km, is best fit solution.