

Seismological structure of the source regions of the low-frequency events beneath southwestern Japan

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Recently several slow slip events were observed along the Sagami and the Nankai troughs, from which the Philippine sea plate is subducting northwestward. Nonvolcanic low frequency tremors were also found around the descending Philippine Sea slab along the Nankai trough. We determine three-dimensional P and S wave seismic velocity structures by making use of a travel time tomography technique beneath from the Kanto to Kyushu district and then construct a three-dimensional map of the Poisson's ratio. We find that the slow slip events and the low frequency tremors occur in and around the high Poisson's ratio regions.