

Northern boundary of the Izu block estimated from the crustal deformation at the 2000 seismo-volcanic event

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Accompanying the 2000 seismo-volcanic event in the northern Izu islands a remarkable crustal deformation was observed in an extended region from Kanto to western Tokai. The crustal deformation is explained fairly well by an idea that it was produced mainly by a dyke intrusion in the sea region to the west of Miyake Island (Nishimura et al., 2001; Ozawa et al., 2001; Kobayashi et al., 2003). However, it seems that the movement of the Izu Peninsula was not continuously connected to that of the surrounding region. This impression gave us an expectation that we could get information on the existence of the Izu block and its northern boundary by investigating crustal deformation at the 2000 seismo-volcanic event in the northern Izu islands minutely. Standing on the viewpoint, we examined displacements along many lines that connect GPS stations in the Izu Peninsula and those in the Kanto and Tokai districts at the 2000 event, and calculated spatial distribution of the displacement fields. The results show that the northern boundary of the Izu block is not such a simple line as was estimated by Sugimura (1972), but it goes northward from Suruga Bay, traverses the southern foot of Mt. Fuji, then, runs down along the Tan-na fault, and goes out to Sagami Bay from somewhere around Omuro-yama. This line almost accords to that proposed by Yoshida et al. (1979) as the boundary of the Izu block about 25 years ago.