

Three-dimensional velocity structure near Miyakejima and Kouzushima islands from travel time analyses

Hiroko Hagiwara[1], Shin'ichi Sakai[2], Tomoaki Yamada[3], Hajime Shiobara[4], Naoshi Hirata[5], Toshihiko Kanazawa[6], Azusa Nishizawa[7]

[1] ERI, Tokyo Univ, [2] Earthquake Research Institute, Univ. of Tokyo, [3] ERI, Univ. of Tokyo, [4] OHRC, ERI, Univ. Tokyo, [5] ERI, Univ. Tokyo, [6] ERI, Tokyo Univ, [7] Hydrographic Department

<http://www.eri.u-tokyo.ac.jp>

The earthquake swarm which occurred in Miyakejima island on June 26th, 2000 caused volcanic activity and nearby crustal movement, and it was accompanied by the seismic activity near Kouzushima and Miyakejima. By ERI, JHD, and JAMSTEC, ocean bottom seismometers of the self levitation type were installed in this sea area in order to obtain precise hypocentral distribution. Using it, P - and S-wave three-dimensional velocity structure of the focal region were obtained by the seismic tomography method. As the result, the low velocity area exists near west 5km of Miyakejima island, and the existence of the magma is indicated. It was proven that earthquake occurrence region which distributes for the northwest-southeast direction also slowed in comparison with the peripheral part down.