

Three-dimensional Seismic Velocity Structure of Usu Volcano Area

Shin'ya Onizawa[1], Hiromitsu Oshima[2], Hitoshi, Y. Mori[3], Tokumitsu Maekawa[4], Masayoshi Ichianagi[5], Hiromu Okada[6]

[1] ISV, Hokkaido Univ., [2] Earth and Planetary Sci., Hokkaido Univ, [3] Inst. Seismolgy and Volcanology, Hokkaido Univ., [4] Inst. Seismology and Volcanology, Hokkaido Univ., [5] Institute of Seismology and Volcanology, Hokkaido Univ, [6] UVO - Inst. Seism. Volcan., Hokkaido University

Three-dimensional velocity inversion is performed in order to investigate seismic velocity structure beneath Usu volcano, by using travelttime data of earthquakes due to the 2000 eruptive activity. The following features are obtained. At the shallowest depth, high velocity anomaly is detected at the edifice of Usu volcano. At depths of 2-4 km, regional velocity gradient from southern coast of Toya lake to coast of Uchiura bay is observed. This result is consistent with apparent resistivity structure and gravity anomaly. At a depth of 6 km, a low velocity anomaly, which can be candidate of a magma chamber, is detected.

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