

## Three-dimensional seismic velocity structure in the central part of Unzen volcano

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Three-dimensional subsurface seismic velocity structure in the central part of Unzen volcano was obtained by the velocity inversion with new developed 3-D seismic ray tracer (Fermat) (Nishi, 2000).

Employed ray tracer is robust enough for velocity heterogeneity. Travel time data for the inversion were obtained by the experimental explosions on Unzen Volcano in November 1995.

Velocity anomaly of more than -10 percent is found at the sea level of near Fugen peak. Another low velocity region is found at the depth of 3km about 1.5km southwest of Fugen peak. This location suggests the relation between the low velocity region and the B pressure source proposed by the results of leveling survey.