

Temporal Change in three-dimensional velocity structure in the Western Nagano Prefecture

Toshimitsu Ihashi[1], # Yoshihisa Iio[2], Yoji Kobayashi[3], Shiro Ohmi[4], Shigeki Horiuchi[5], Haruo Sato[6]

[1] Inst.of Geoscience, Tsukuba Univ., [2] ERI, [3] Tsukuba Univ., [4] D.P.R.I., Kyoto Univ., [5] NIED, [6] Geophysics, Science, Tohoku University

Three-dimensional velocity structures in the focal region of the 1984 Western Nagano Prefecture Earthquake, central Japan, was determined from a tomographic inversion of two sets of travel time data obtained in 1986 and 1997 by the dense networks installed in the region. We found that velocity structure possibly change with time in this region. It appears that the V_p/V_s ratio in 1997 is relatively high compared with that in 1986 around a depth of 4km in this region (V_p and V_s seem to be high and low, respectively), where frequencies per unit depth is the maximum. In other depths, a temporal velocity change in large scale cannot be detected though there exist strong lateral heterogeneities especially from the surface to a depth of 2km.