

Seismic properties and microstructures of Happone peridotite-serpentinite complex

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The Happon ultramafic complex, Hida Gaien belt preserves subsequent development of peridotite mylonites to serpentinite mylonites. We divided the peridotites into two categories: coarse type and fine type. The coarse type has coarse granular texture, whereas the fine type shows elongated or fine-grained texture. Fabric analyses revealed that the coarse type is characterized by olivine a-slip system, whereas the fine type is dominated by olivine c-slip system. The difference of the olivine slip system between two types could result from the difference of water condition: anhydrous and hydrous, respectively. The fine type was overprinted by serpentinite foliations that were developed along the olivine b-plane, indicating that serpentinization was subsequently developed after peridotite mylonitization. Seismic properties of the fine type peridotites are similar to those of B-type defined by Jung and Karato (2001).