

Deep structure of the Nojima Fault by a borehole observation of trapped waves

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We analyze fault zone trapped waves at the Toshima borehole station beside the Nojima fault by an analysis of a polarization and a dispersion of waveform. In six records, we find a distinct dispersive wave train that polarized to the strike of the Nojima fault, following the shear wave arrival. This wave train is interpreted as a trapped wave. We estimate group velocity and model as a low velocity layer sandwiched between two homogeneous half-spaces. Best fitting value of shear wave velocity to a dispersion curve is 2.3 km/s and reduced by 20 %. This result suggests that hypocenters of these six events are located near the Nojima fault. However, we cannot find trapped waves in others, suggesting that most of the aftershocks occur outside of the fault zone.