

AVO analysis of the Nankai Trough multichannel seismic reflection data

Jin-Oh Park[1], Tetsuro Tsuru[2], Takashi Hamajima[3], Yoshiyuki Kaneda[4], Asahiko Taira[5], Shin'ichi Kuramoto[6], EW9907/08 Cruise Shipboard Scientific Party Kuramoto Shin'ichi

[1] JAMSTEC, FRPSD, [2] Frontier, Jamstec, [3] JGI,Inc., [4] JAMSTEC,Frontier, [5] Ocean Research Institute, Univ. of Tokyo, [6] GSJ

We performed an amplitude variation with offset (AVO) analysis using 2D multichannel seismic reflection data across the Nankai Trough to figure out physical property along plate boundary decollement. With angle gather data after preprocessing including prestack time migration, we calculated two major AVO attributes for the decollement reflection in the 45 km area landward from deformation front: zero-offset P-wave reflection amplitude (P) and gradient of amplitude versus $\sin^2\theta$ (G). Both P- and G-values along the decollement decrease landward, suggesting that both contrasts of P-wave acoustic impedance and Poisson's ratio above and below the decollement significantly decrease landward.