

On the non-double-couple component observed for the March 25 1998 Antarctic earthquake

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Several moment tensor solutions have been obtained for the March 25 1998 Antarctic earthquake, and a large non-double-couple component is observed for the analyses including long period Rayleigh wave data (e.g., Harvard quick CMT; Kikuchi et al., 1998). We calculate synthetic seismograms using these solutions for 1-D and 3-D earth models, respectively. We find the followings: (1) No azimuthal dependence of the change of Rayleigh wave amplitudes is clearly caused by the 3-D model; (2) The solution containing the large non-double-couple component better explains the observed waveforms. These suggest that the 3-D earth structure is not likely to be responsible for the observed non-double-couple component.