Crust and upper mantle structure in East Antarctica from phase velocity of Rayleigh wave

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Phase velocities in East Antarctica are measured by using two-station method. Rayleigh waves from the 16 May 1995 Loyalty Islands earthquake recorded by Dumont d'Ulville and Syowa stations in Antarctica are used in this study. The path runs through the central part of East Antarctica. The measured phase velocities at periods shorter than 40 s are higher than those shown by the previous study in which the paths run through the western part of East Antarctica. It is suggested that the crust beneath the central part of East Antarctica is thinner or faster than that beneath the western part. A preliminary 1-D seismic structure model of the crust and upper mantle beneath East Antarctica, inferred from the measured phase velocities, is also presented.