

Deep crustal structure beneath the Mizuho Plateau, East Antarctica (2)

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The 41st and 43rd Japanese Antarctic Research Expedition conducted seismic exploration on the Mizuho Plateau, East Antarctica, in the austral summer season of 1999-2000. Shot records with clear later arrivals are obtained from this survey. The obtained seismic records show the clear onsets of the first arrivals in a distance range of less than 100 km from each large shot. In particular, seismic waves traveling through the ice sheet and the dispersed surface waves are distinctly observed. Some later phases are also detected.

We used reflection analysis (band-pass filter, static correction, Normal Move Out, Auto-gain-control) for shot records, and obtained single-fold section by using the results of refraction and wide-angle reflection analysis (Yoshii et al., 2004). The reflection profiling shows the several reflections around the Moho discontinuity. We discussed for the structure of lower crust and compared with the structure for the previous results. Moreover, we investigated characteristics of Moho discontinuity by using PmP coda wave.