

Reflection seismology with J-array: mantle reverberation beneath the western Ocean Hemisphere

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We have stacked more than 40 transversely polarized broadband records of J-array for the deep Bonin event (1998/8/20, Mw 7.0, 422km deep) to observe ScS mantle reverberations.

Clear phases reflected from 410km- and 660km-discontinuities are observed.

Assuming PREM, estimated depths of these discontinuities give normal values.

The stacked ScS reverberation record also shows a phase which can be interpreted as reflections from a discontinuity at a depth of 950km.