Seismic Structure of the Plate Boundary Zone off-Fukushima by airgun-OBS survey

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We made a series of seismic profilings in the off-Fukushima region to clarify the relationship between spatial heterogeneities of the seismicity and of the seismic structure around the plate boundary.

In the trenchward area with almost no seismicity, the oceanic crust subducts at a shallow dip angle, and contacts with the island-arc crust. The dip angle of the oceanic crust increases at about 100 km from the trench axis. The active interplate seismicity is limited along the steep dipping plate boundary where the mantle wedge is underlain by the subducting oceanic crust. It is strongly suggested that there are earthquakes withinthe oceanic crust beneath the interplate seismic zone, by comparing any structure model with hypocenter distributions precisely located by OBS data.