

## Seismic survey in the off Ibaragi and the off Boso Peninsula region using ocean bottom seismometers, air-guns and explosives

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The Japan trench is one of the most active seismogenic zones in the world. In the off Ibaragi region, repeating large earthquakes with a fairly constant size ( $M \sim 7$ ) have occurred every 20 years. It has been reported that plate geometry may affect rupture propagation [Mochizuki et al., 2008]. Moreover, in the off Boso Peninsula region, the Philippine Sea plate subducts under the Pacific plate from Sagami trough. However, a detailed deep seismic structure and geometry of Philippine Sea plate are not still obtained due to its complicated structure. In September 2008, we conducted seismic survey using 81 OBSs and controlled sources such as airguns and explosives. Seven lines run parallel to trench axis. In the seismic survey, we used four 25-liters airguns and explosives whose charge size was 40 kg as controlled sources. Recording conditions were almost good enough to detect explosive signals over 200 km of offset. And we can see first arrivals which have apparent velocity over 8km/s. It is thought that refractions of the oceanic Moho.