# Seismicity and P wave velocity structure deduced from ocean-bottom seismographic observation in the south off Hokkaido region

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In 1999, we conducted observations of microearthquakes with the use of 22 ocean-bottom seismometers (OBS) in the south off Hokkaido region, Japan. The OBS data reveal the seismicity and the detailed three-dimensional P wave velocity structure by a tomography method. We find high seismicity in the mantle wedge of the off Urakawa area and the aftershock area of 1968 off Tokachi earthquake. We also find the seismicity within the subducting Pacific plate around the Kuril Trench. From the tomographic images, a distinct low-velocity zone is detected beneath the western side of the Hidaka range. This is considered to be the crust of the northeast Japan arc. In the eastern side of the Hidaka range, we find the lower crust of the Kuril arc delaminated by the collision.

In 1999, we conducted observations of microearthquakes with the use of 22 ocean-bottom seismometers (OBS) in the south off Hokkaido region, Japan. In this observation area, the Kuril island arc is considered to collide with the northeast Japan arc and the Pacific plate is subducting beneath them. Moreover many large earthquakes occurred in this region. The OBS data reveal the seismicity and the detailed three-dimensional P wave velocity structure by a tomography method. We find high seismicity in the mantle wedge of the off Urakawa area and the aftershock area of 1968 off Tokachi earthquake. We also find the seismicity within the subducting Pacific plate around the Kuril Trench. From the tomographic images, a distinct low-velocity zone (ca. 6km/s) is detected beneath the western side of the Hidaka range. This is considered to be the crust of the northeast Japan arc. In the eastern side of the Hidaka range, we find the lower crust of the Kuril arc delaminated by the collision.