Vs structure of the shallow crust beneath ocean-bottom seismometers: south and north Okinawa trough

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We employ a P-wave polarization method to estimate the Vs of the shallow crust beneath ocean-bottom seismometer (OBS) arrays in Okinawa trough. In comparison, we applied this method to F-net in the Tohoku region, Japan. We found that the seafloor beneath OBSs is characterized by Vs of hundreds of m/s, while Vs of the shallow crust of Tohoku is typically 2-4 km/s with the about 1 km/s at volcano sites. The OBSs along the Okinawa trough were probably deployed on the very soft oceanic crust first layer composed of young, uncompact sediment. The observed Ps following the P phase attests to this hypothesis. We are in the process of extending this research to OBSs on old seafloor of the Pacific basin.