Research on the stagnant slab by long-term BBOBS and OBEM arrays

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To investigate the stagnant slab beneath the northern Philippine Sea, we have started a large scale array and 3 years long observation in 2005 by using 12 broadband ocean bottom seismometers (BBOBS) and 11 ocean bottom electro-magnetometers (OBEM). It is a key part of the Stagnant Slab Project started in 2004 for 5 years, because of the first direct dense observation above this target to reveal the fine physical structure of the stagnant slab. And, the transition of the slab morphology along the Izu - Ogasawara (Bonin) - Mariana arc shown by a global tomography is also an interest to be resolved with high resolution by this experiment.

The first deployment cruise was performed with the R.V. Kairei (Jamstec) during 5-26 Oct. 2005, and we could visit all 18 stations planned. Both of BBOBS and OBEM have been used in several long-term experiments with high reliability. In this presentation, we introduce the purpose of this experiment, whole plan of 3 years long observation, details of BBOBS and OBEM, expected results by simulations, and the last cruise.