

Long-term monitoring of temperature profiles in sea-floor sediments with pop-up type instruments

Hideki Hamamoto[1], Makoto Yamano[2], Osamu Matsubayashi[3], Shusaku Goto[4]

[1] Earthquake Research Institute, [2] ERI, Univ. Tokyo, [3] GSJ, AIST, MITI, [4] Tokai Univ.

We obtained records of the temperature profiles in surface sediments and the bottom water temperature for about 7 months at two stations off Shikoku with water depths of 1040m and 1690m using pop-up type temperature monitoring systems. The temperature profiles in sediments showed large variations following the variations of the water temperature, which suggests that we cannot measure heat flow with an ordinary heat flow probe. We intend to determine heat flow by removing the effect of the water temperature variation through analysis of the obtained data.

We obtained records of the temperature profiles in surface sediments and the bottom water temperature for about 7 months at two stations off Shikoku with water depths of 1040m and 1690m using pop-up type temperature monitoring systems. The temperature profiles in sediments showed large variations following the variations of the water temperature, which suggests that we cannot measure heat flow with an ordinary heat flow probe. We intend to determine heat flow by removing the effect of the water temperature variation through analysis of the obtained data.