A full current profile measurement by ADCPs at Umitaka Spur off Joetsu region, eastern Japan Sea

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In order to estimate a methane flux from an active cold seep site, it is necessary to measure a current velocity profile around the site. The systematic observation was carried out near active cold seep site at Umitaka Spur off Joetsu region, eastern Japan Sea in the research cruise R/V Tansei-maru KT-06-26. The methane gas plume from the sea bottom has been observed there. The observation included a mooring system with 3D current velocity meters and ADCPs, CTD-casts with seawater sampling and detection of plume with PDR.

Using the 3D meters and ADCPs, the current velocity profile in vertical direction ranged 20m to 600m above the sea bottom was measured for 58 hours. The sea depth of mooring site is 910m. The mooring system is shown in Figure. In addition, ADCP mounted on the R/V Tansei-maru covered the remained top part of the water column.