

Formation Fluid Circulation at the Nankai Trough Seismogenic Zone

Hitoshi Mikada[1]; Junzo Kasahara[2]; Tada-nori Goto[3]; Takafumi Kasaya[3]

[1] Kyoto Univ.; [2] JCSS; [3] JAMSTEC

<http://tansa.kumst.kyoto-u.ac.jp/>

Scientific drilling experiments have been conducted four times at the Nankai Trough in the past. These experiments have revealed: accretionary prism formation, the development of decollement as a set of detachment faults, geomorphological development, diagenetic development in the sediments, salinity changes, etc. These findings would surely be related to phenomena deeply on-going at the seismogenic zone. Among these new findings, fluid movement or circulation might be one of keys towards further understanding of seismogenic processes. We know that fluids could be discharged through the decollement and well-developed thrust fault system at the toe of the accretionary prism. We would like to discuss how further studies should be directed to our goal in terms of geophysical and geoexplorational points of view. We think that it is necessary to understand fluid migration system in a various kind of spatio-temporal scales, to continue formation pressure monitoring, and to attempt to acquire fluid-related parameters used in numerical modeling as precisely as possible.