

Relationships between fault movement and cold seep activity in the Nankai Trough

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We will discuss about relationships between cold seep and geological structure of the Nankai Trough off Tokai, Kumano and Muroto. Fluid ventings are observed at four active fault zones off Tokai. Previous diving results indicate that the most active venting occur at the frontal part of the prism. Large dead-colony sites are often observed at the upper prism slope and the forearc basin. It is inferred that continuous accretion and dewatering occur at the prism toe and intermittent fault movements cause episodic venting at the upper prism slope and the forearc basin. Cold seep off Tokai is more active than that off Muroto and Kumano. Ridge subduction and coarse-grained prism probably induce active venting.