

MIS005-10

会場:ファンクションルームB

時間: 5月24日11:30-11:45

メタンあり遠方より来たる、また海底湧出メタンの起源ならずや：沖縄トラフ熱水研究からの考察

## Origin of methane in marginal geofluids

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Methane concentration higher than 1 mmol/kg is a remarkable geochemical feature of hydrothermal fluids venting at the Okinawa Trough. Although the high methane concentration was considered to result from thermal decomposition of sedimentary organic matter (Ishibashi et al., 1995, Chem. Geol.), we investigated hydrothermal fluids using multiple tracers, delta-13C, delta-D, [H<sub>2</sub>], and C1/C2 ratio, and proposed a novel model that describes microbial methanogenesis at fluid recharge zone as a dominant methane source for the venting hydrothermal fluids (Kawagucci et al. in prep.). This model has a potential to discuss the origin of methane not only for hydrothermal systems, but also for any methane-entrained geofluid systems at marginal region because fluid recharges possibly occur at organic matter-enriched land (Toki et al., 2004, EPSL). Discussion about the origin of methane at the Okinawa Trough hydrothermal systems and our model will be presented.

キーワード:メタン,メタンの起源,海底湧出流体

Keywords: methane, origin of methane, geofluids