

Spacial and Temporal Impact of Deep-Sea Hydrothermal Activity on Subsurface Biosphere

Ken Takai[1], Fumio Inagaki[1]

[1] DEEP-STAR, JAMSTEC

<http://www.jamstec.go.jp>

Based on our recent, preliminary investigation for terrestrial and oceanic subsurface biosphere, we have proposed a hypothesis that microorganisms confined in the subsurface are able to serve as facies microfossils probably reflecting global or local environmental setting at the time of their prosperity. Unexpected ubiquity of extremophilic archaea even in non-extreme subsurface environments is the most outstanding discovery, representing formation of potential reservoir of probably dormant extremophilic archaea in the global subsurface biosphere and impact of the past and the present ocean hydrothermal activities.