
Press Releases



September 5, 2016
JAMSTEC



International Ocean Discovery Program Expedition 370 “T-Limit of the Deep Biosphere off Muroto” - Deciphering factors that constrain the extent of the deep biosphere in a subduction zone -

IODP (International Ocean Discovery Program)^{*1} Expedition 370, “T-Limit of the Deep Biosphere off Muroto”^{*2} will take place aboard the Japan Agency for Marine-Earth Science and Technology (JAMSTEC: Asahiko Taira, President) D/V *Chikyu* from September 10 to November 10, 2016.

The IODP T-Limit project aims to: (1) study the factors that control biomass activity and diversity of microbial communities in a subseafloor environment where temperatures increase from ~30°C to 130°C and thus likely encompasses the biotic-abiotic transition zone, and (2) determine the geochemical, geophysical and hydrogeological characteristics in sediments and the underlying basaltic basement, and elucidate if the supply of fluids containing thermogenic and/or geogenic nutrients and energy substrates may support subseafloor microbial communities in the Nankai accretionary complex. Core samples will be drilled and retrieved from sedimentary sections, 300–1190 m below seafloor and basement basalt, 1190–1240 m below seafloor.

To take full advantage of the scientific technology available today, the scientific work program onboard *Chikyu* will be complemented by simultaneous shore-based work at the Kochi Core Center^{*3}, located within reach of *Chikyu* via helicopter shuttle for transporting freshly cored sediment and rock samples. Co-chief Scientists Drs. Fumio Inagaki, JAMSTEC and Verena Heuer, University of Bremen will lead the shipboard team, and Yuki Morono, JAMSTEC, the shore-based team. A total of 28 scientists from 8 countries will also participate in the project.

More details and updates of the Expedition 370 can be found at:
<http://www.jamstec.go.jp/chikyu/e/exp370/>

***1 The International Ocean Discovery Program (IODP)** is an international marine research collaboration that explores Earth's history and dynamics using ocean-going research platforms to recover data recorded in seafloor sediments and rocks and to monitor subseafloor environments. IODP depends on facilities funded

by three platform providers with financial contributions from five additional partner agencies. Together, these entities represent 25 nations whose scientists are selected to staff IODP research expeditions conducted throughout the world's oceans. Scientist activities are managed by the IODP Program Member Offices (iodp.org/about-iodp).

***2 T-Limit of the Deep Biosphere off Muroto**

"T" here refers to temperature.

***3 The Kochi Core Center** is a research facility jointly managed by the Kochi University and JAMSTEC. It is one of three IODP core repositories in the world, including the Gulf Coast Repository of the Texas A&M University in the US and the Bremen Core Repository of the University of Bremen in Germany.

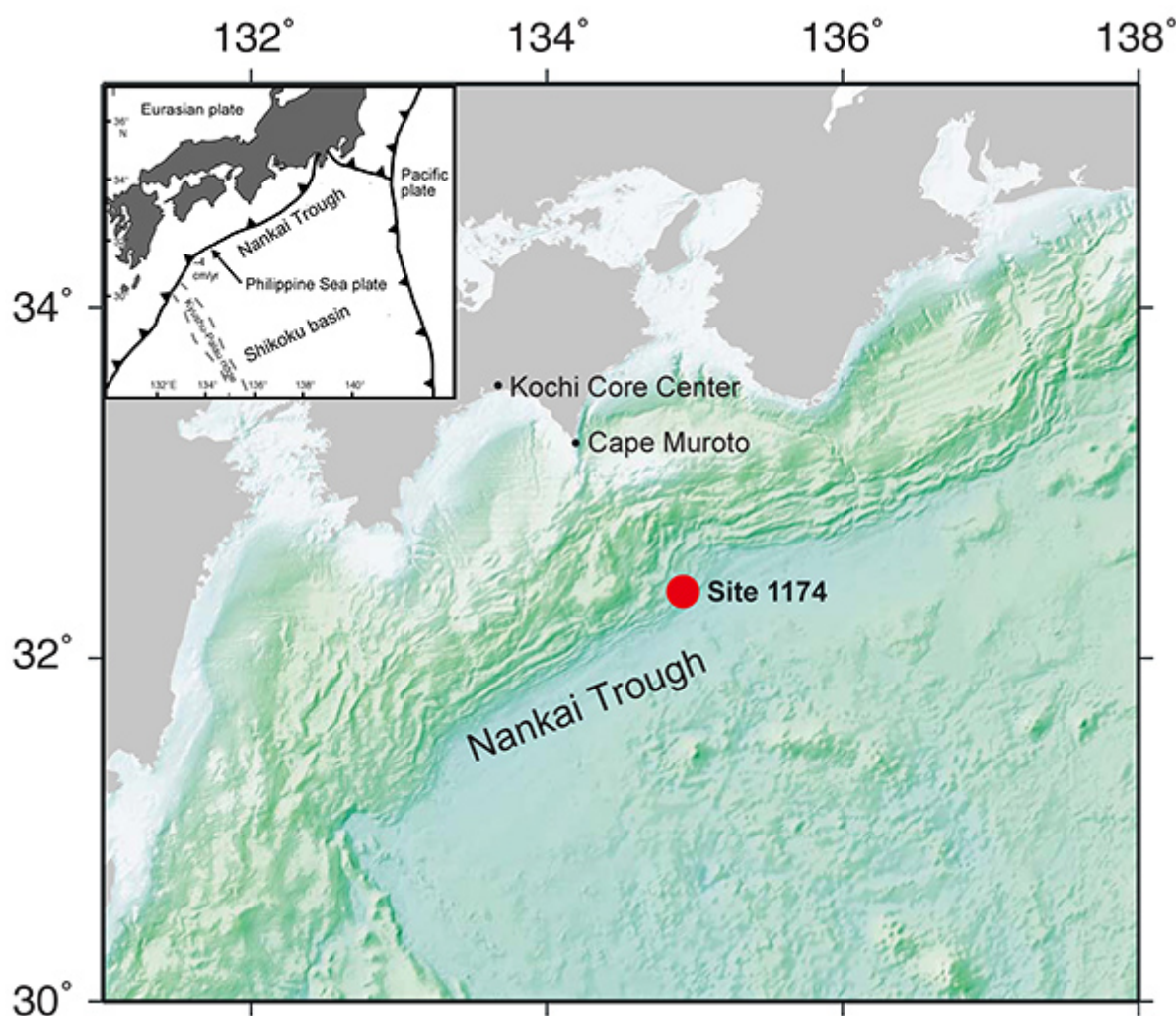


Figure 1. Drill site for IODP Expedition 370 (32°22'N, 134°57'E) (120 km southeast of Cape Muroto and 180 km southeast of the Kochi Core Center in Kochi Prefecture)

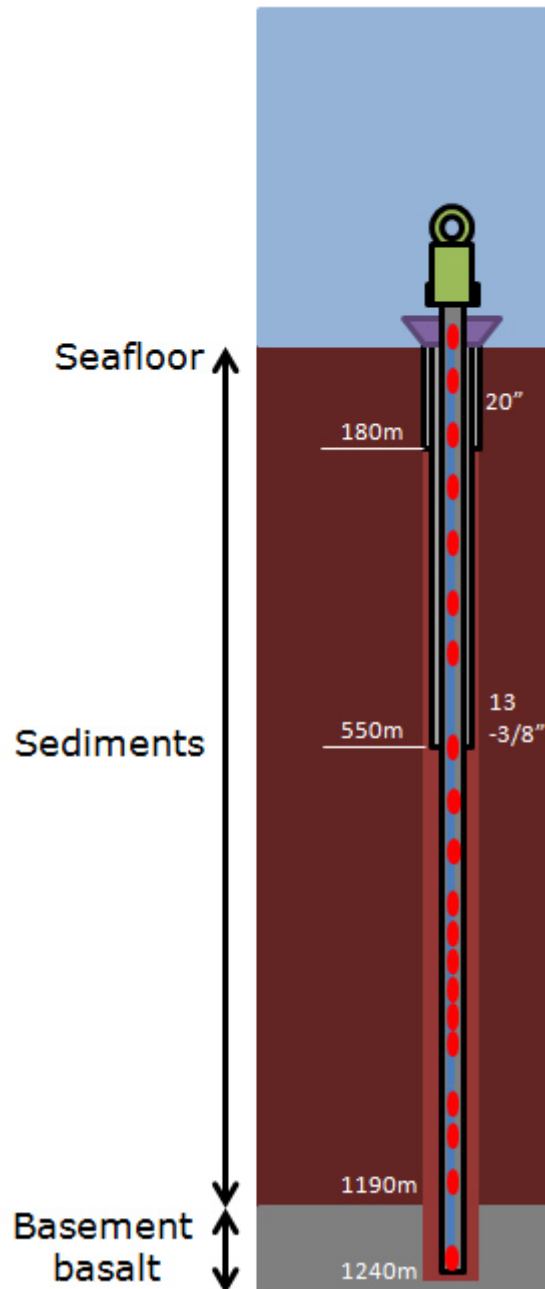


Figure 2: Conceptual diagram of the borehole temperature observatory.

Contact:

(For IODP and this expedition)

Masakuni Hanada, Director, Planning and Coordination Office, Center for Deep Earth Exploration (CDEX)

(For press release)

Tsuyoshi Noguchi, Manager, Press Division, Public Relations Department