Cruise Summary NT10-E01

1. Cruise Information

- Cruise ID NT10-E01
- Name of vessel ROV Hyper Dolphin & R/V Natsushima

●Title of the cruise

Environmental assessment investigation for the IODP by the Chikyu in the North Knoll of the Iheya Ridge, Okinawa Trough Japan. (JAMSTEC domestic investigation)

●Chief scientist [Affiliation]

Katsunori Fujikura（JAMSTEC BioGeos）

●Representative of the Science Party [Affiliation]

Katsunori Fujikura（JAMSTEC BioGeos）

○Title of the proposal

Environmental assessment investigation for the IODP by the Chikyu in the North Knoll of the Iheya Ridge, Okinawa Trough Japan. (JAMSTEC domestic investigation)

●Cruise period

28 August – 4 September, 2010

●Ports of call

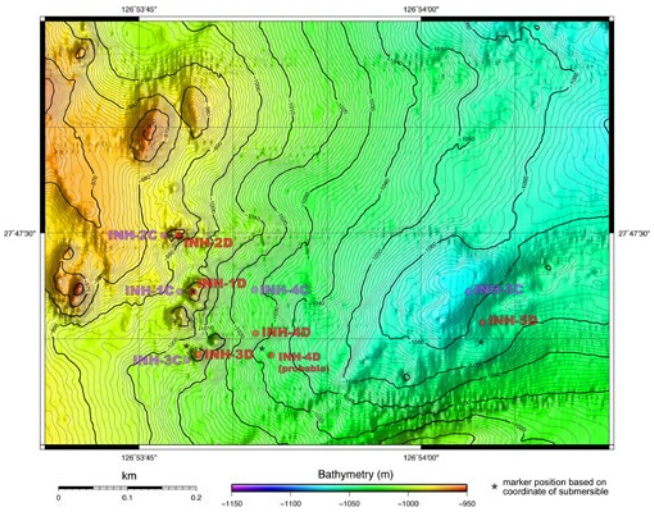
Departure---JAMSTEC, 2010/8/28

Arrival--- Naha, Okinawa 2010/9/4

●Research area

North Knoll of the Iheya Ridge, Okinawa Trough

○Research map Overview of the Observation



2. Mission

●Overview of the observation

Ocean Drilling investigation by the Chikyu will be conducted in the early September 2010 at the hydrothermal vent sites, the North Knoll of the Iheya Ridge in the Okinawa Trough. Ocean Drilling investigation can be thought to give the production of the accumulation thing, a vent water activities style a change, and it is expected to influence an environment and an ecosystem. It is the most important doing assessment in advance when it is expected to exert artificial disturbance on the natural environment. And, an environment before and after drilling and a change in the ecosystem are interesting even if the experiment to understand the succession process of the vent ecosystems is taken. Therefore, the purpose of this investigation is environmental assessment investigation for the IODP by the Chikyu. First, before science drilling by "Chikyu" done in September, we try to have data on the biological distribution, the chemical environment, physics environment and the geological environment.

On 3 Sep. 2010, we conducted diving survey using ROV HPD at the North Knoll of the Iheya Ridge, Okinawa Trough. Dive track was covered three sites, INH-1D, 4D, and 5D, which are drilling target sites. In order to environmental assessment, we could baseline data and samples, such as biological distribution patterns, faunal composition and fluid chemical. We also deployed many markers with small thermometers and sediment traps.