



June 26, 2012  
JAMSTEC

### **Integrated Ocean Drilling Program (IODP) Expedition 343T Japan Trench Fast Drilling Project (Installation of Observatory Assembly at fault zones in Japan Trench)**

The Japan Agency for Marine-Earth Science and Technology (JAMSTEC: Asahiko Taira, President), as part of the Integrated Ocean Drilling Program (IODP),<sup>\*1</sup> deployed the Deep-Sea Scientific Drilling Vessel *Chikyu* for 54 days from April 1 to May 24 to conduct the Expedition 343 Japan Trench Fast Drilling Project<sup>\*2</sup> (previously reported on [May 25, 2012](#) ).

After this expedition, repair of the D/V *Chikyu*'s azimuth thrusters and annual inspection was completed on June 22, and the vessel will conduct an expedition to install the observatory assembly that was postponed during the previous expedition.

#### **1. Details of Japan Trench Fast Drilling Project (Expedition 343T)**

- Period: July 5 to July 24, 2012
- Ocean Area: [Figure 1](#)

#### **2. D/V *Chikyu* Operating Plan (Schedule)**

- June 22                      Annual vessel inspection completed
- June 23 – June 25        Departure from Sasebo Harbor on expedition
- June 26 – July 4         Contracted Operations (including equipment preparation), etc.
- July 5 – July 24         Japan Trench Fast Drilling Project (Expedition 343T)

Installation of observatory assembly ([Figures 2, 3](#)) to measure the frictional heating at and near the plate boundary fault.

- End of July (Currently being coordinated) Scheduled start of Deep Coalbed Biosphere off Shimokita-Hachinohe

## Drilling Project

Note: Schedule may change due to meteorological conditions and progress of investigations.

### **\*1. The Integrated Ocean Drilling Program (IODP).**

IODP is an international marine research drilling program dedicated to advancing scientific understanding of the Earth by monitoring and sampling subseafloor environments. Through multiple platforms, scientists explore IODP's principal themes: the deep biosphere, environmental change, and solid Earth cycles. IODP has been in operation since October 2003, funded jointly by the Japan Ministry of Education, Culture, Sports, Science and Technology and by the U.S. National Science Foundation. Additional support is provided by the 18-member European Consortium of Ocean Research Drilling, the People's Republic of China, the Republic of Korea, Australia, India, and New Zealand.

### **\*2: Japan Trench Fast Drilling Project (Expedition 343)**

This project aims to study the frictional properties of the plate boundary fault that is believed to have caused the Tohoku Earthquake and associated tsunami. The drilling site was in the ocean area east of the Ojika Peninsula, Miyagi Prefecture ([Figure 1](#)), where an extremely large displacement of the seafloor had been inferred by previous research. Drilling was conducted from April 1 to May 24, 2012, from the seafloor to depth of the plate boundary, 850.5 meters below the seafloor. Along with collecting physical data on the formations, core samples were collected from 648 to 844.5 m below the seabed surface including the plate boundary fault. The planned installation of the observatory assembly in the borehole to measure the frictional heat at and near the plate boundary fault was rescheduled to July of this year due to problems with the cable for the underwater video camera system that was necessary for this work.

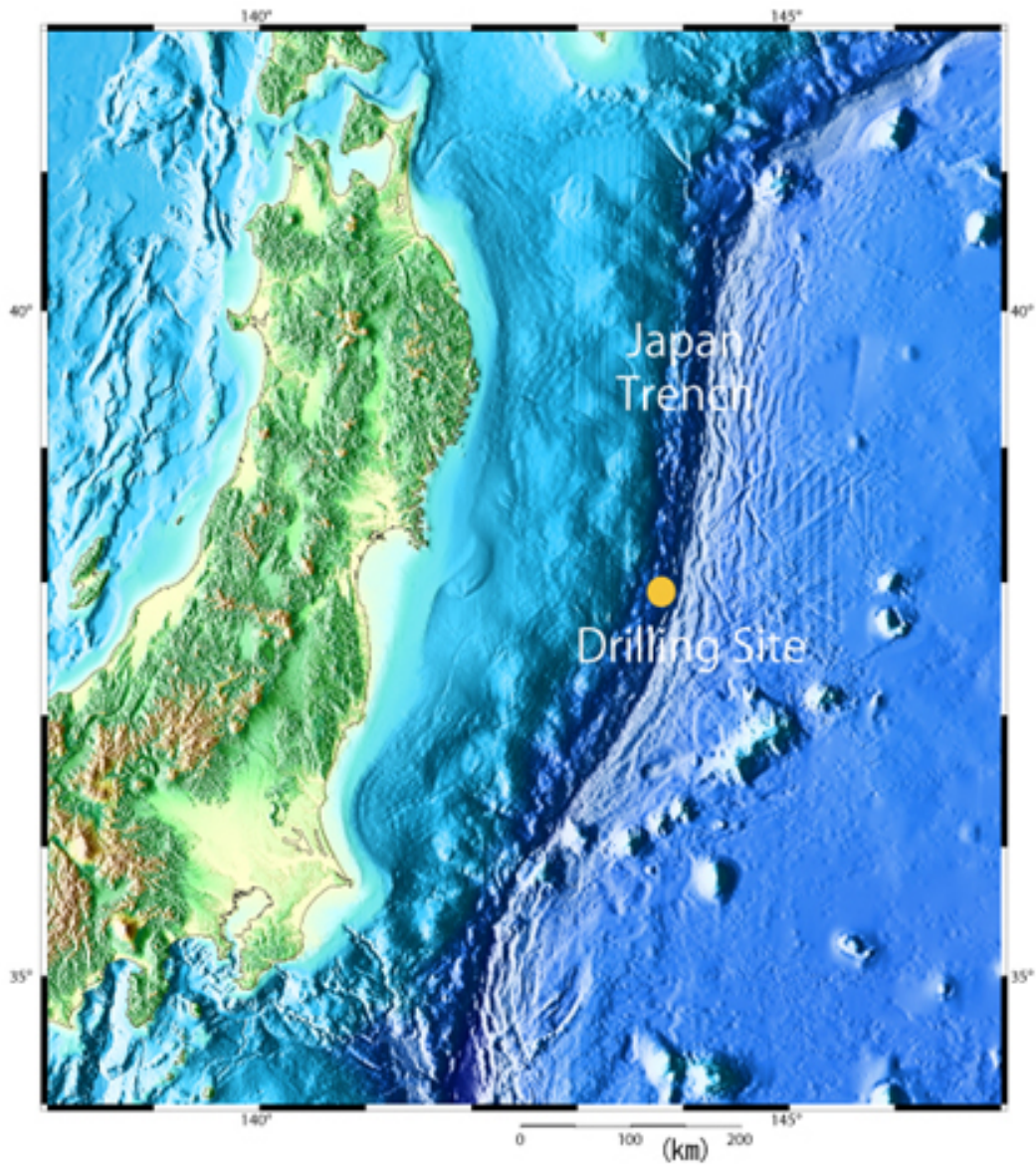


Figure 1: Drilling site

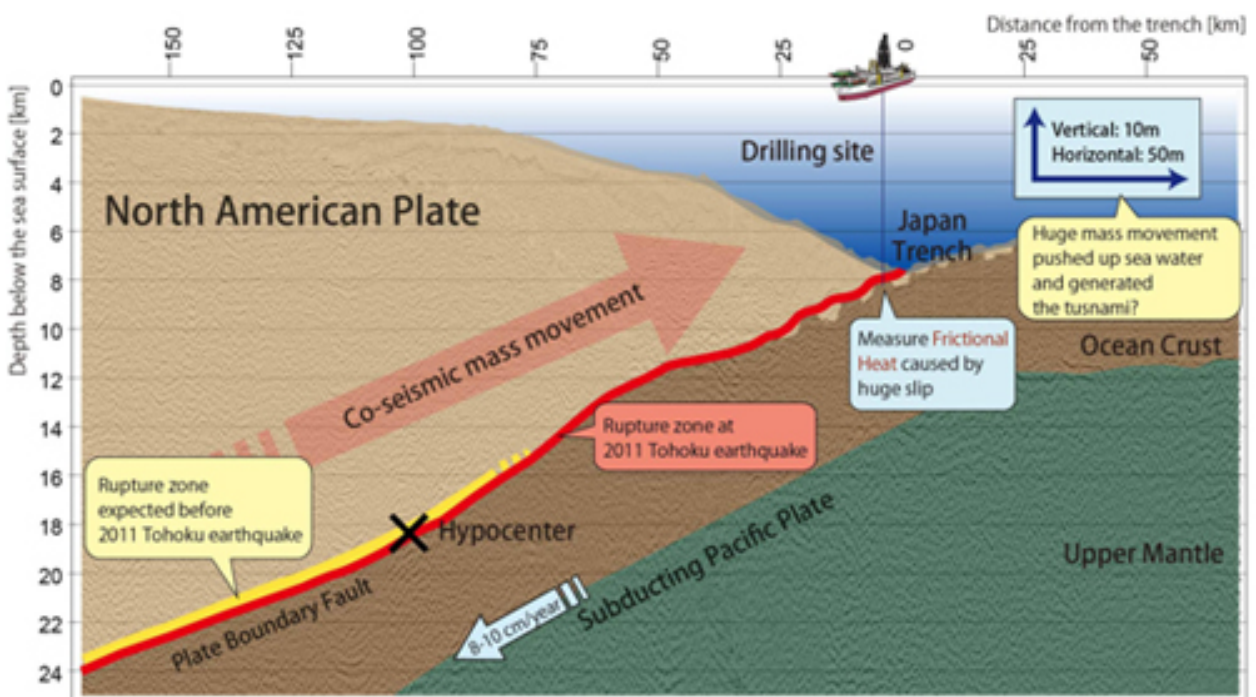


Figure 2: Conceptual image of sub-seafloor structure at the drill site

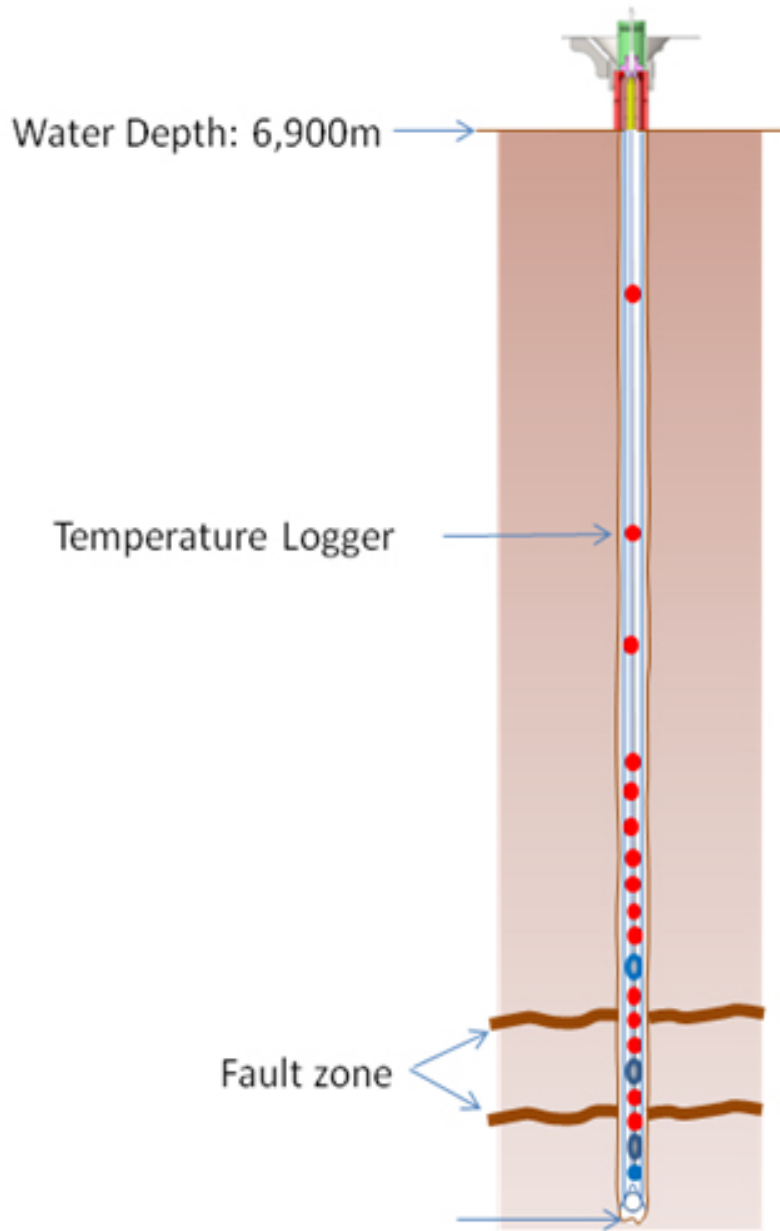


Figure 3:observatory assembly

Contacts:

Japan Agency for Marine-Earth Science and Technology (JAMSTEC)

(For *Chikyu*)

Yasuo Yamada, Manager

Planning and Coordination Department

Center for Deep Earth Exploration (CDEX)

Email: [cdex@jamstec.go.jp](mailto:cdex@jamstec.go.jp)

(For publication)

Kazushige Kikuchi, Director,

Senior Administrative Specialist, Planning Department Press Office

Email: [press@jamstec.go.jp](mailto:press@jamstec.go.jp)