



CENTER FOR DEEP EARTH EXPLORATION
Japan Agency for Marine-Earth Science and Technology
3173-25 Showa-machi, Kanazawa-ku, Yokohama Kanagawa 236-0001 Japan
<http://www.jamstec.go.jp/chikyu/>



Call for NanTroSEIZE Stage 3 Participation

CDEX/JAMSTEC

15 December 2009

CDEX currently plans to implement one Nankai Trough Seismogenic Zone Experiment (NanTroSEIZE) expedition during 2010: NanTroSEIZE Plate Boundary Deep Riser -1. The expedition schedule and planned operations are subject to change based on final budget and operational time decisions as well as sea conditions (Kuroshio current) at the proposed drilling sites.

Our current plan for 2010 Chikyu operation is to begin deep riser drilling at Site C0002, where the ultimate objective is to cross the plate interface to ~7000 m below sea floor total depth. In this Expedition, the current plan at Site C0002 is to drill down to approximately 3,000 m below sea floor (mbsf) and set 13-3/8" casing in the borehole. Planned operations include: continuous logging while drilling (LWD), continuous cuttings sampling, wireline logging, downhole measurements, and limited intervals of coring. The main target for 2010 riser drilling is below 1000 mbsf, because the upper kilometer at Site C0002 was already logged with LWD and cored in NanTroSEIZE Stage 1. Several additional contingency plans are in place, including monitoring sensor installation in Site C0010 (splay fault site) and in the upper 1000 m at C0002, as well as coring of shallow sediments at other NanTroSEIZE transect sites.



Science Objectives

Riser drilling at Site C0002

This is the second riser drilling site of NanTroSEIZE project, with its ultimate goal of drilling down ~7000 mbsf to the plate boundary megathrust and deploying a long-term borehole observatory. However, due to time constraints, this target will not be reached during 2010; therefore our target for 2010 is to set 13-3/8" casing at approximately 3,000 mbsf. The main research objective for this interval is to sample the interior of the inner accretionary prism in the mid-slope region.

LWD/MWD logs will be used to acquire physical properties information pertinent for permanent observatory installation during NanTroSEIZE Stage 4, as well as acquiring well stability data. Limited coring will be conducted within the prism, restricted to intervals of specific interest, but continuous collection of cuttings as well as mud gas are planned, similar to Expedition 319 program at Site C0009. A program of downhole experiments and measurements of stress and pore fluid pressure/permeability (MDT tool), wireline logging, and a walkaway Vertical Seismic Profile are tentatively planned.

Contingency Plan

Contingency plans include: replacing the currently deployed temporary observatory at Site C0010, HPCS sediment coring with downhole measurements at the subduction inputs sites (C0011 and C0012), basement coring at Site C0012, and riserless drilling and casing for future observatory installation at Site C0002 to a planned depth of 1,000 mbsf with 9-5/8" casing.



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Science Party and Required expertise

The Science Party will be separated into two groups of 13 scientists each (including Co-chief scientists), and will sail for an approximately 2 month period each. Since Chikyuu will remain on site during the entire Expedition, the Science Parties will embark/disembark via helicopter. Each group will consist of Sedimentologists, Physical Property specialists, Geochemists, Micropaleontologists, Logging scientists, and Structural Geologists.

The current scientific operation schedules are shown below (Table 1). Previous NanTroSEIZE expedition reports are available at <http://www.iodp.org/scientific-publications/>. Also a summary of the scientific objectives and operations for the overall NanTroSEIZE drilling is available at <http://www.jamstec.go.jp/chikyuu/eng/Expedition/NantroSEIZE/index.html>.

Unfortunately, the expedition schedule, including details of expedition operations, is liable to change at short notice, a situation which we are sure complicates your own scheduling arrangements, and raises a lot of questions on your part. We will update you regularly on the progress and status of expedition planning and in the meantime please do not hesitate to contact us with any questions you may have.

Sincerely yours,

Yoshi Kawamura

NanTroSEIZE Expedition Manage



Table 1

D/V Chikyu Schedule for 2010

Expedition #	Expedition Name	Schedule	Duration	Co-Chief Scientists	EPM
3xx	NanTroSEIZE Ultra Deep Riser-1	1 June 2009 (1)	153 days (2) (3)	TBN	TBN

Remarks:

- (1) All expedition schedules are subject to change based on FY budgetary situation change and simulated site condition.
- (2) Riser operation composed of multi sub-legs and each leg will be arranged as stagger configuration.
- (3) Science Party will take a helicopter transportation.