

**IODP-MI
Operations Task Force
Meeting Report**

**Hotel Novotel, Edinburgh,
Scotland
June 10th - 11th 2011**

**June 10th – 11th
Meeting**

Location

BGS, Edinburgh, Scotland

Agenda

10th June (from 9:00 to 17:00)

1. Introduction
2. Reports (recent development)

SPC	(Filippelli)	10min.
E-OTF result, APLs	(Kawamura)	10min.
DPG: Tohoku Rapid Response Drilling	(Johnson)	20min.
Engineering Development Sea Trial Proposal (revised)	(Kawamura)	10min.
- +Ongoing activities

USIO	(Divins/Malone)	10min.
CDEX	(Azuma/Eguchi)	10min.
ESO	(Gatliff/McInroy)	10min.
3. Overview for FY12 & FY13

+ Funding expectations		
NSF	(Allan)	15min.
MEXT	(Kuramoto)	15min.
EMA	(Mevel)	15min.
+ Operations expectations		
USIO	(Divins)	15min.
ESO	(Gatliff)	15min.
CDEX	(Azuma)	15min.
4. Review FY12 operation plan

USIO	(Divins/Malone)	
CDEX	(Azuma/Eguchi)	
ESO	(Gatliff/McInroy)	
5. Develop FY13 science plan options for SPC August

USIO	(Divins/Malone)	
CDEX	(Azuma/Eguchi)	
ESO	(Gatliff/McInroy)	

11th June (from 9:00 to 14:00)

6. Develop FY13 science plan options for SPC August
7. Review operational realities of the proposals residing at OTF (Kagaya)
8. Other

Operation Task Force – OTF

Barbara John	Science Planning Committee, University of Wyoming, USA
Robert Gatliff	ECORD Science Operator (ESO), British Geological Survey, UK
David Divins	IODP-USIO, Ocean Drilling, The Consortium for Ocean Leadership, USA
Gretchen Früh-Green*	Science Planning Committee, ETH Zurich, Switzerland
Gabe Filippelli	Science Planning Committee (Chair), Indiana University-Purdue University Indianapolis, USA
Junzo Kasahara	Science Planning Committee (Vice chair), University of Tokyo, Japan
Kevin Johnson	IODP Management International, Japan
Susumu Umino	Science Planning Committee, Kanazawa University, Japan
Ruediger Stein ^{a1}	Science Support & Advisory Committee of ECORD (ESSAC)
Wataru Azuma	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan
Yoshi Kawamura (Chair)	IODP Management International, Japan

Liaisons, Guests, and Observers

Catherine Mevel	European Consortium for Ocean Research Drilling, (ECORD)
David McInroy	ECORD Science Operator (ESO), British Geological Survey, UK
Issa Kagaya	IODP Management International, Japan
Jamie Allan	National Science Foundation (NSF), USA
Mitch Malone	IODP-USIO, Texas A&M University, USA
Nobuhisa Eguchi	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan
Shingo Shibata*	Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan
Shinichi Kuramoto ^{a2}	Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan

***Unable to attend**

a1 –Alternate for Gretchen Früh-Green

a2 –Alternate for Shingo Shibata

PREFACE

This report provides a summary of the IODP-MI Operations Task Force (OTF) meeting in Edinburgh on June 10th - 11th 2011. This meeting focused on confirming schedule of *Chikyu*, *JOIDES Resolution* and *Mission Specific Platform* for FY12 and identifying the operation/expedition options (draft science plan) for FY13.

At the beginning of the meeting, Yoshi Kawamura (Chair, IODP-MI) explained the agenda of the meeting and Issa Kagaya (IODP-MI) introduced the logistics.

1. Reports (recent development)

E-OTF result report: APLs **Yoshi Kawamura (Chair, IODP-MI)**

Six APL proposals in SPC were forwarded to OTF. After discussions at E-OTF meeting by email on April, 2011, OTF agreed following two APLs to be added in FY12 USIO's expedition on May 3rd.

- 779-APL Atlantic Massif Lithosph Hydration
on Exp. 340 Lesser Antilles Volcanic Landslides
- 786-APL Alaskan Glacial and Ocean History
on Exp. 341 Southern Alaska Margin Tectonics, Climate & Sedimentation

However, 786-APL Alaskan Glacial and Ocean History won't happen in FY12, due to delaying/postponing Exp. 341 Southern Alaska Margin 1 by USIO-NSF discussion after the E-OTF.

772-APL2 North Atlantic Crustal Architecture was also discussed on the E-OTF but found not fitting to JR ship track and agreed to hold it in OTF.

DPG report: Tohoku Rapid Response Drilling **Kevin Johnson (IODP-MI)**

Detail Planning Group (DPG) for Tohoku Rapid Response Drilling had their first meeting on May 18-20th, 2011 in Tokyo, Japan. The DPG was formed based on consensus statement at SPC meeting on March 2011 to specify and address the possibility of doing Rapid Response Drilling at the place of March 11th earthquake in Tohoku Japan. The SPC consensus statement included following Terms of Reference for DPG.

The rapid response drilling, Tohoku mega-earthquake detailed planning group (DPG) will;

1. Evaluate the overall scientific merits and feasibility of a rapid response drilling project.
2. Assuming a strong scientific case can be made, outline a research and drilling plan including required pre-drilling survey data, draft locations and depths of drilling, and hole and observatory design.
3. Submit a first, interim report to IODP-MI by June 8, 2011.
4. If justified by the interim report, a full proposal for drilling will be requested for submission with a tentative deadline of August 1, 2011.

The first meeting in Tokyo was chaired by Shuichi Kodaira (JAMSTEC), Emily Brodsky (UC Santa Cruz) and Jim Mori (DPRI, Kyoto Univ.), 23 scientists from 6 countries were joined the meeting and made following recommendations to IODP;

1. The DPG recommends that IODP undertake rapid fault drilling for the Tohoku earthquake if the slipped fault can be sampled and multiple temperature measurements can be carried out.
2. Initial calculations indicate that a hole would need to be completed by July 2012 in order to ensure meeting the scientific objectives.
3. Preliminary site surveys indicate that the primary slip surface is at an accessible depth (<1 km) below the ocean floor in a region with extremely large (~50 m) local slip. The likely primary target locations are at 6-7 km water depth.
4. Drilling and completing a cased hole for monitoring or repeat observations has never before been attempted at these water depths. The success of a rapid response drilling project will hinge on solving this technical challenge.

The DPG also addressed some serious issues that need to be concern and questions after the great discussion at the meeting as follow;

Concern issues

1. Water depth near or somewhat in excess of 7,000 meters
2. More detailed Site Survey Data are needed for site selection – ongoing
3. Potentially unstable formation conditions within and above the main target zone, including potential for strongly elevated pore fluid pressure
4. Requirement for 1.5 years from March, 2011 allows only short lead time for preparation of drilling, coring, downhole measurement tools and observatory elements including casing, seals, sensors, umbilical cables, and data loggers.

Questions

1. What stress and stability conditions allow rupture to propagate to the ocean bottom?
2. What are the fingerprints of the processes controlling stress in a large earthquake fault zone, and how might we recognize them in exposed or cored faults that have not produced a historical earthquake?
3. What was the stress on the fault during slip and was the stress completely released?
4. How do faults heal to regain strength and stress?
5. How are the changing stress and strength related to generating new earthquakes and aftershocks?

Wataru Azuma (CDEX) and some other OTF members asked about Go/No Go decision for calling full proposal for this project and its funding. Shinichi Kuramoto (MEXT) answered that the priority of the budget for this project in Japanese government is not as high as one for the reconstruction of towns, and one for dealing

with the nuclear power plant situations. Also there is no extra funding available for this project at the moment. Gabe Filippelli (SPC Chair) commented that there is no written policy for Rapid Response Drilling proposal in IODP. However, SPC will decide whether SPC request the full proposal submission or not after reviewing the DPG meeting report, then August SPC will review the full proposal. Kevin Johnson (IODP-MI) commented that site surveys will be critical and results are needed by July to write a full proposal by 1st of August. Also there is concern with time availability of assembling the third-party tools and other tools for long-term measurements. CDEX commented that an expected water depth of the potential site (around 7,000 m) and currently proposed drilling/coring depth (around 1,000 m) is technically feasible for Chikyu, the timing is tight but feasible, although budgetary issues are existing. Mitch Malone (USIO) commented that *JOIDES Resolution*'s current drill string strength limitations are about 7,000m and might be difficult to conduct this scientific request, because there is very high risk of losing the entire drill string of the *JOIDES Resolution* at once.

Engineering Development Sea Trial Proposal (revised) and others

Yoshi Kawamura (Chair, IODP-MI)

IODP-MI presented revised proposals of Engineering Development's Sea Trial from proponents.

MDHDS (Motion Decoupled Hydraulic Delivery System); MDHDS was successfully conducted a pressure test up to 5,000psi as Full-System (combined with MFTM, ERS and T2P) at LDEO. Final land filed test is scheduled in September in Sugarland, TX. The proponents are accepting to do the sea trial testing at anywhere, but preferred either at Gulf of Mexico, or at Cape Fear.

SCIMPI (Simple Cable Instruments for Measuring Parameters In-situ); SCIMPI has deployed in sea and tested full set of tools from R/V Endeavor on March and IODP-MI is now waiting their test results report. CDEX contacted to the proponents to discuss the possibility of using the SCIMPI tool for temperature measurement on Rapid Response Drilling at Tohoku with under 7,000mbsf condition. However this means SCIMPI will need to be modified for 10,000+psi pressure rating and it is quite not realistic.

IODP-MI just received letters from the proponents of Exp. 334 Costa Rica Seismogenesis Project (CRISP) and Exp. 335 Superfast Spreading Rate Crust 4. The letter from Exp.334 proponents said that Exp. 334 Costa Rica Seismogenesis Project (CRISP) had only one month and could visit only two of four sites in their proposal. The proponents are requesting to revisit to drill remaining sites. Exp. 335 Superfast Spreading Rate Crust 4 proponents are also requesting to revisit Site 1256D and coring ahead, with an option to install some casing.

Gabe Filippelli (SPC Chair) commented that Exp.334 and Exp.335 proponents want to complete the proposal and finish their targets. SPC will discuss those proposals on August, 2011 SPC meeting.

SPC report

Gabe Filippelli (SPC Chair)

The major items at March, 2011 SPC meeting was (1) Reviewed and ranked the last set of proposals in this program (current IODP) by platform, (2) Discussed and considered of SSEP proposals to determine those that will be transferred to the new program, (3) Regular funding agencies, IODP-MI, and IO reports, (4) March OTF meeting results discussion, and (5) Potential rapid response drilling proposals.

March SPC meeting deactivated several SSEP proposals and proponents received letters from IODP-MI about deactivation. SPC received some requests from proponents to explain the process of deactivation that SPC did for their proposals. SPC had report from ICDP about proposal evaluation and development relationship between IODP and ICDP. ICDP established a task force with four members already and SPC made consensus to designate some task force members from SIPCom, PEP and IODP-MI.

Gabe Filippelli (SPC Chair) explained proposal handling during at program transition during FY11 – FY12. Nobu Eguchi (CDEX) commented that ODP proposals proponents were asked if they wanted to forward their proposals to the new program during transition at ODP to IODP. Ruediger Stein (SPC) commented that SPC should provide letters for both deactivated and forwarded proposals so that proponents have a chance to update their proposals. Gabe Filippelli (SPC Chair) answered that proponents whose proposals were forwarded to new program by SPC, will be asked either they want their proposals to be forwarded to the new program or not.

+Ongoing activities

USIO

Mitch Malone (USIO)

USIO gave highlight summary from recent *JOIDES Resolution* operations on the Exp. 334: Costa Rica Seismogenesis Project and Exp. 335: Superfast Spreading Rate Crust 4.

Exp. 334: Costa Rica Seismogenesis Project; The expedition's main objective was to characterize the upper plate, lithology, deformation, and fluid system, and drilled at 3 slope sites (U1378, U1379 and U1380) and an incoming plate site (U1381) along a transect offshore the Osa Peninsula in Costa Rica. Coring at upper slope site went well but middle slope site was difficult and couldn't reach the target depth. LWD had some technical problems and there were several logistical challenges with getting LWD tool equipment to the ship from the subcontracting office.

Exp. 335: Superfast Spreading Rate Crust 4; The drilling conditions were extremely challenging and problematic. Significant time was required to initially reach the bottom of the hole. With the hole finally stabilized, the first coring run was initiated returning 4 cores, but there were indications of problems. The bit was returned with all roller cones on the RCB bit ripped off, and the supports and other extended pieces were worn completely smooth. Most of the rest of the expedition was spent fishing and cleaning the hole. Overall there were 24 reentries, 150 miles (240 km) pipe tripped. The cruise could core 5 times and ran triple combo logging before cemented the hole to stabilize at the end.

Yoshi Kawamura (Chair, IODP-MI) asked about remaining metal junk of RCB bit in

the hole. USIO answered that they couldn't find substantive metal junk from the RCB bit on fishing runs (i.e., metal filings only) and the last coring bit run did not show wear that would indicate metal junk remaining. They expect there is no remaining metal junk left in bottom of the hole. The junk might be washed out from hole or buried in side wall. The only way to know for sure is to return and drill ahead. Jamie Allan (NSF) commented that the program will need to review the decision tree of this operation when the problem happened and impacted significantly on later operation at the cruise. Also need to seek developing new bit technology (e.g. PDC bit) to platform.

CDEX

Nobu Eguchi (CDEX)

CDEX reported situation of *Chikyu* after the March 11th earthquake and tsunami disaster in Tohoku, Japan.

Chikyu has been in the dry dock for repair works in Yokohama since April 11th and will finish on June 17th. The DP system sea trial will be conducted after the repair works in June and the preparation works for non-IODP work at early July in Yokohama. The DP system simulation results showed the remaining five thrusters are feasible to do the drilling operation at calm sea condition. Non-IODP works will start from middle of July and end at Feb. 2012. New replacement thruster will be installed at March 2012. Then *Chikyu* will be back to the IODP operations at early-mid April 2012.

ESO

David McInroy (ESO)

ESO presented the status of four OTF proposals which ESO has been scoping for FY12-13 *Mission Specific Platform* operations.

548-Full3 Chicxulub K-T Impact Crater; ESO received the letter from Mexican ministries and has been requested to submit a permit application to their directors. ESO will sign a MoU with UNAM (National Autonomous University of Mexico) and the permit application will be submitted through UNAM to Mexican ministries. With this MoU, ESO will invite two Mexican scientists as the Science Party on this project. ESO has been contacting to several platform contractors for this project and waiting for the quotes from them.

The proponents submitted an ICDP proposal requesting US\$1.45M co-fund to this IODP project. A decision by ICDP will be made at the July 2011 AOG meeting.

672-Full3 Baltic Sea Basin Paleoenvironment; The Project Management Team (PMT) meeting has been arranged by ESO with two lead proponents and will be held on June 28th 2011 at BGS Edinburgh. ESO already received the quotes from two platform contractors for this project. But the deepest penetration site on this proposal will raise the operation costs and limit the choice of contractor to one company. ESO will discuss with the proponents at the PMT meeting the consequences of dropping the deepest water site to form a cost effective expedition. If dropping the site is required to implement the expedition under a realistic budget, ESO will seek SPC approval to do so.

758-Full2 Atlantis Massif Seafloor Processes; A PMT meeting has been also scheduled on June 29th 2011. ESO wants to keep this proposal and the proposal 716-Full2 Hawaiian Drowned Reefs for the first expedition of new program to make time for seabed drilling, logging and sampling technology to mature.

There are two more un-scoped OTF proposals for *Mission Specific Platform*. The Proposal 637-Full2 New England Margin Hydrogeology is on hold due to technical issues. The proponents of proposal 581-Full2 Late Pleistocene Corallgal Banks are independently attempting to find co-funding support from industry and they received good feedback from FUGRO. ESO wants to get some guidance from SPC on which proposal has high scientific priority than other one between Chicxulub and Baltic Sea. Gabe Filippelli (SPC Chair) commented Baltic Sea could be done soon because there are fewer issues in the proposal, but Chicxulub might take longer to be ready because of permitting issues. ESO should continue scoping for both proposals, but priority is depending on its logistics, timing and cost. SPC will make absolute ranking of *Mission Specific Platform*'s OTF proposals in August meeting.

2. Overview for FY12 & FY13

+ funding expectations

NSF

Jamie Allan (NSF)

NSF gives budget guidance to USIO every year. NSF does not know whether the budget level in FY12 will be same as FY11 (\$64M [\$61M + additional \$3M]) or more/less. NSF has been planning roughly \$65M/Y through the operation contract to USIO for FY12 and FY13. But FY11 operation had to cancel Exp. 341 Southern Alaska Margin Tectonics Climate & Sedimentation because the total operation cost of FY11 was estimated over than \$70M due of highly fuel price and this expedition had long transit. This mean US regional based scheduling and less numbers of expedition are required while flat funding and highly fuel price continue. The tight budget level and highly fuel price are major effective reduction to *JOIDES Resolution* operation planning on FY12 and FY13.

The Cascadia observatory installation/fabrication proposal to NSF was recently declined because of cost and management concerns. Review indicated that the proponents need better project management, preferably with a true professional project manager and coordinated project team for complex borehole installations (CORKs and instrumentation, connections to cabled observatories, etc). Also, the effectiveness of new technology (e.g., Osmosamplers and other sampling devices) needs to be well-documented in the literature to continue spending large amounts of NSF funds on developmental or unproven systems.

MEXT**Shinichi Kuramoto (MEXT)**

The very tight budget situation on IODP in MEXT has been continuing since the national review and screening process done in 2009 by the cabinet. Since then, 5-8% annual budget reduction has been occurring to JAMSTEC. After March 11th Tohoku Mega earthquake, JAMSTEC received small supplementary budget (~\$3M) for *Chikyu* repair works. The Budget guidance to JAMSTEC for JFY12 (late FY12 - early FY13) might be delay because the current cabinet situation is in quite chaos.

The national review process of this year will soon start and New Science Plan will be reviewed in this summer, the accomplishment of current IODP program will also be reviewed by next March.

ECORD**Catherine Mevel (ECORD)**

FY11's ECORD contribution has now increased to \$22M since IODP started and \$16M is going to commingled funds. However there is not much of POC budget available for *Mission Specific Platform* operations. \$13M will be spending for POC until the end of the program if all national members of ECORD pay their portion of contribution.

+ Operations expectations**USIO****David Divins (USIO)**

USIO is hoping to receive additional budget from IODP commingled funds due to cancellation of Exp. 337 Deep coalbed biosphere off Shimokita, so this can be used for a fourth expedition in Atlantic Ocean in FY12, but not Exp.341 Southern Alaska Margin Tectonics Climate & Sedimentation. Wataru Azuma (CDEX) asked LAs about possibility of using that remaining commingled funds to Tohoku Rapid Response Drilling. Jamie Allan (NSF) and Catherine Mevel (ECORD) answered that commingled funds issues will be discussed at IODP Council meeting following week.

USIO suggested that IOs need more time to build and set implementing schedules with new SAS. This will need to consideration on PEP and SIPCom meeting schedules.

CDEX**Wataru Azuma (CDEX)**

CDEX have many uncertain issues on JFY12 *Chikyu* operation planning because they have not received the budget guidance from MEXT until now. CDEX is preparing two operation scenarios for JFY12, one with same budget level as JFY11 and one with the reduced budget. CDEX will be not able to provide *Chikyu* on IODP operation until April 2012, when new thruster will be installed on *Chikyu* and finished sea trail.

ESO**Robert Gatliff (ESO)**

ESO will have enough budgets to conduct one big expedition and possibly one smaller expedition, using sea bed drilling system in FY12-13. ESO is now preparing to do site survey for proposal 548-Full3 Chicxulub K-T Impact Crater in FY12, if Mexican government permitted the survey.

3. Review FY12 operation plan and Develop FY13 science plan options for SPC August

USIO FY12 operation plan**Mitch Malone (USIO)**

USIO presented the current FY12 operations schedule of the *JOIDES Resolution* (Figure-OTF-1).

Expedition	Exp #	Dates	Co-chiefs
Non-IODP		3 Jun–16 Sep	
Mid-Atlantic Microbiology	336	16 Sep–17 Nov	Edwards Bach
Mediterranean Outflow	339	17 Nov–17 Jan	H.-Molina Stow
Atlantic Massif (APL 779)	340T	17 Jan-6 Feb	Blackman
Lesser Antilles	340	6 Feb–18 March	Le Friant Ishizuka
Non-IODP		18 March-Sep	

Figure OTF-1. The *JOIDES Resolution* operation schedule plan for FY12 (before June OTF meeting).

FY12 operation will start from Exp. 336 Mid-Atlantic Ridge Microbiology on Sep 16th 2011, and end on Exp. 340 Lesser Antilles Volcanism and Landslides, which includes 779-APL Atlantis Massif Lithosphere Hydration on Mar 18th 2012. Cascadia CORKs was removed from schedule in January 2011, due to CORK's funding issues, and replaced by Exp. 340 Lesser Antilles Volcanism and Landslides. Later 779-APL Atlantis Massif Lithosphere Hydration was added to Exp. 340 Lesser Antilles, and 786-APL Alaskan Glacial and Ocean History was added to Exp. 341 Southern Alaska Margin Tectonics Climate & Sedimentation. However Exp. 341 Southern Alaska and 786-APL were removed from schedule in May 2011, due to USIO's funding situation.

There is possibility to have fourth expedition in FY12 in the Atlantic Ocean, if extra

funds are approved. The feasible option in the Atlantic is proposal 661-Full2 Newfoundland Sediment Drifts, although the proposal has not reviewed by EPSP and four sites have an SSP 2A classification. The other Atlantic option, proposal 659-Full Newfoundland Rifted Margin requires re-entering an existing hole to deepen, which is not possible because the cone is buried, or starting a new hole, which would be cost prohibitive. The only feasible option for 659-Full, is to drill the alternate sites, with the potential funds available.

There is an option to have MDHDS at-sea testing at ODP Site 1073 in New Jersey on the way to Newfoundland after non-IODP. This option will take 2.6 day transit and 2 days operations, other option is at Cape Fear site but this will depend on *JOIDES Resolution's* tie up place and FY13 operations schedule.

Gabe Filippelli (SPC Chair) asked about the possibility of coring the deep site from proposal 672-Full3 Baltic Sea Basin Paleoenvironment with *JOIDES Resolution*. The USIO responded that it would require about 10 days of transit (one way) to cross the Atlantic Ocean to reach the Baltic Sea site.

The OTF recommended the following *JOIDES Resolution* FY12 operation schedule plan with potential fourth expedition (661-Full2 Newfoundland Sediment Drifts) to the SPC. (Figure OTF-2)

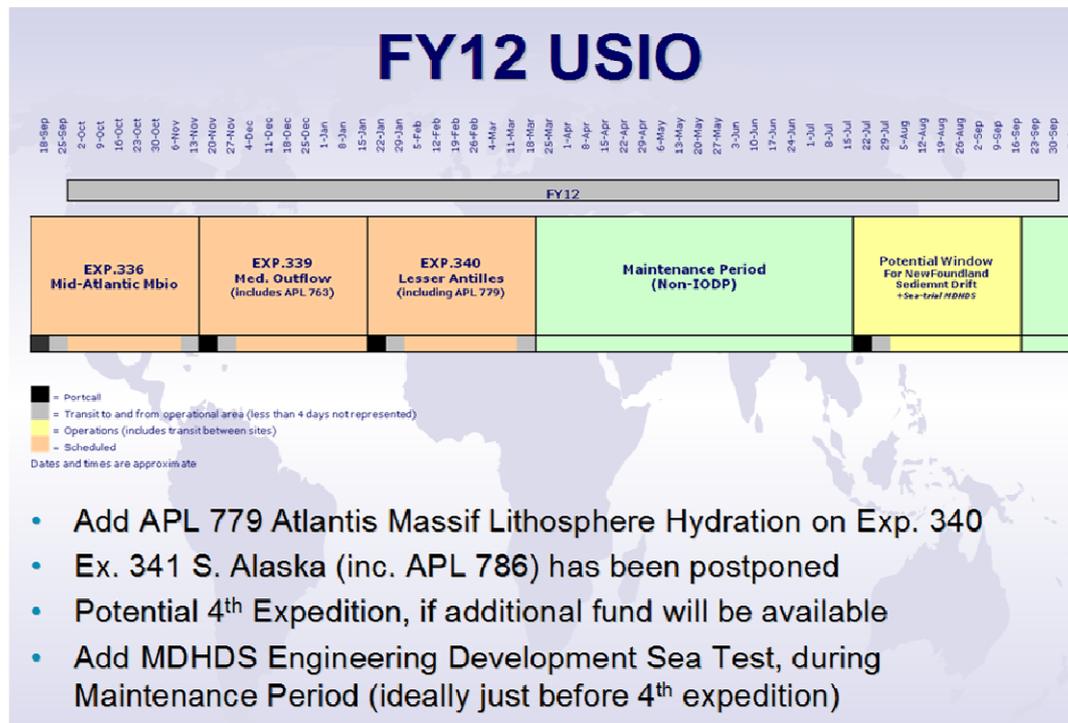


Figure OTF-2. The *JOIDES Resolution* operation schedule plan for FY12 (June OTF meeting consensus).

USIO FY13 operation plan

Mitch Malone (USIO)

USIO presented several OTF proposals on Eastern Pacific area with some existing issues for FY13 *JOIDES Resolution* operations options.

551-Full Hess Deep Plutonic Crust; Proposed area was drilled in ODP Leg 147 and was very challenging to start drilling the hole (Hole 894G, TD159 mbsf). Proponents requests to use hammer drill on operation but since the manufacture ended their business, this tool is not currently available. The drilling operation will be either of following options but based on the results of pilot hole drilling;

1. Sediment pond and stable hole, deploy the Free-Fall Funnel and deepen the hole.
or
2. Drill in ~10 m 13-3/8" casing with a modified the Free-Fall Funnel and deepen the hole. (This option is similar to the original operation requests on proposal)

537A-Full4 Costa Rica Seismogenic Phase A (CRISP-2); Proponents request to re-drilled and deepen with RCB well into basement at the upper slope Site U1379. Casing is not required at this site but there is ecotourism issue that will need to be addressed. A main focus for future operations is to attempt to reach basement at the middle slope location, which could not be achieved during Exp. 334. The USIO is suggesting a new approach to advance through unstable formation, which entails establishing an upper casing string and then using a cement and drill strategy to get through and stabilize the hole through the unstable part of the formation. The proponents also requested extensive casing at the slope sites for possible future downhole instrumentation, however, this would be cost prohibitive. Estimated operational time for a coring and wireline logging return to CRISP is ~40 days, excluding contingency.

633-Full2 Costa Rica Mud Mounds; This proposal has CORK, LWD/MWD operation and ROV is recommended for all sites. These operations will impact operational cost and make it extremely challenging. Also EPSP requested safety issues on four sites (CRMB-4B, CRMD-4D, CRMD-5A, CRMD-5B).

Exp. 341 Southern Alaska Margin Tectonics Climate & Sedimentation; There is no issues on this operation except transit. The weather window is in summer.

USIO proposed *JOIDES Resolution* operations options with three cruises/year and four cruises/year for FY13 as follows (Figure-OTF-3).

FY13 options

3 Expedition Option

- CRISP-2 or Superfast (5)/ Hess Deep/ Tie Up/Alaska/Tie up or Demobilization

•4 Expedition Options

- CRISP-2 or Superfast/ Hess Deep/ Tie Up/Alaska/Asian Monsoon
- CRISP/Hess Deep/Superfast/Tie Up/Alaska
- Requires funding for 4 expeditions

- SCIMPI options: Site 1000 prior to Panama Canal or Hydrate Ridge prior to Alaska

Figure OTF-3. *JOIDES Resolution*'s possible operation options for FY13 (USIO proposed plan).

Jamie Allan (NSF) and Shinichi Kuramoto (MEXT) commented that proposal 605-Full2 Asian Monsoon is important for many Asian countries considering join to IODP on a larger scale. Linked to this, the efforts should be made to encourage proposal submission for the areas in the western Pacific and the Indian Ocean so that 605-Full2 Asian Monsoon can be accommodated in an extended regional drilling effort in keeping with the new logistical coordination imperatives of IODP. USIO commented that SIPCom will need to make an effort to generate a medium-range guide plan (5 years) of where the ships will be operating to encourage proposal submission for these geographic regions and ensure that enough proposals are in the system to justify these geographic groupings.

The OTF recommended the following *JOIDES Resolution* FY13 operation schedule plan with to the SPC for discussion. (Figure-OTF-4).

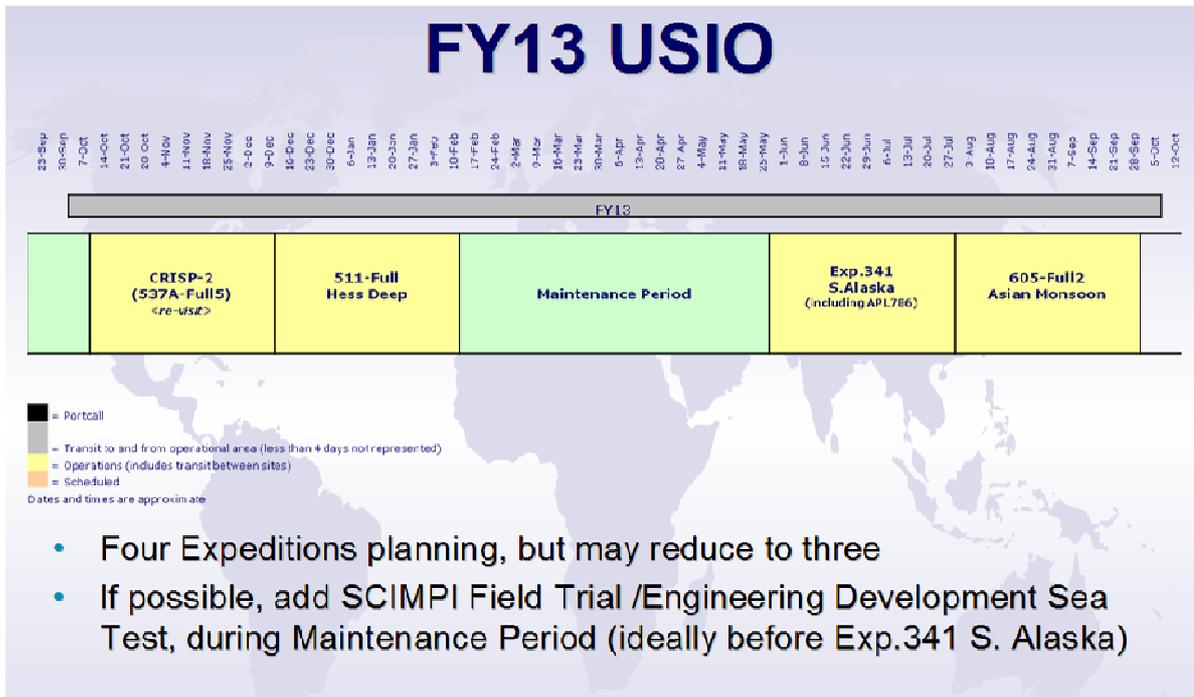


Figure OTF-4. The *JOIDES Resolution* operation schedule plan for FY13 (June OTF meeting consensus).

CDEX FY12-13 operation plan

Nobu Eguchi (CDEX)

CDEX presented *Chikyu*'s possible operation options for FY12 – FY13 and beyond (Figure-OTF-5, 6).

As CDEX reported on FY11 schedule, *Chikyu* will finish dock work include sea trial in June 2011 and will go to non-IODP work from July 10th to the end of Feb 2012. Then *Chikyu* will have one month dry dock period in March 2012 for installing new thruster. IODP operation window will start from April 2012 till early Jan 2013. One month non-IODP work is scheduled on Feb 2013, and then second IODP operation window on FY13 will start from Jun 2013 and end on Dec 2013.

FY12 Operation window

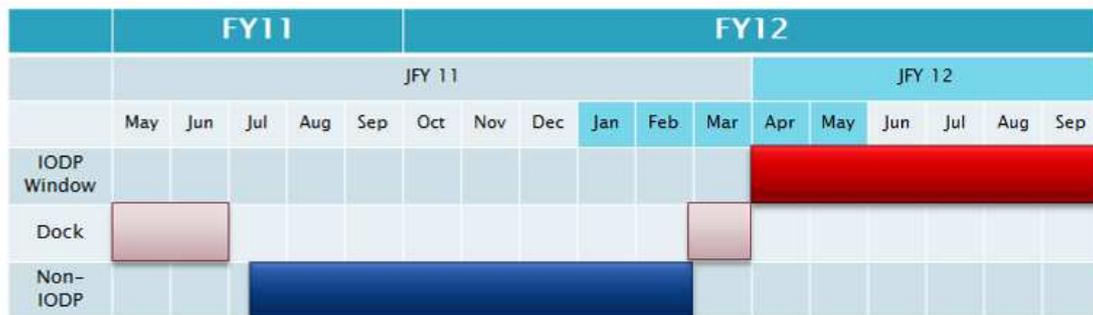


Figure OTF-5. *Chikyu* operation window on FY12.

FY13 Operation window

	FY13												FY14					
	JFY 12						JFY 13											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan		
IODP Window																		
Dock																		
Non-IODP																		

Figure OTF-6. *Chikyu* operation window on FY13 and beyond.

Current budgetary possible operation option for late FY12 to early FY13 (JFY12) are include two riser operation, Exp. 337 Deep Coalbed Biosphere off Shimokita and Exp. 338 NanTroSEIZE Stage 3 Plate Boundary Deep Riser 2, and one riserless operation for NanTroSEIZE Riserless observatory 2 or other.

Exp. 337 Deep Coalbed Biosphere off Shimokita; The expedition was originally scheduled on FY11 but was postponed due to March 11th earthquake in Tohoku, Japan. This expedition is CPP and CDEX is receiving fund from government project. JFY12 is final year for this project and *Chikyu* must finish the expedition in that year. The operation includes riser drilling (TD 2,200m), spot coring and extended wireline logging. The expedition duration will be 62 days without addendum of this proposal (pressure core sampling). The proponents are requesting to cancel addendum due of limited duration and want OTF to agree this change on proposal and expedition.

OTF agreed to remove addendum (745-Add) of pressure core sampling from proposal 745-CPP Shimokita Coal Bed Biosphere and Exp. 337 Deep Coalbed Biosphere off Shimokita.

Exp. 338 NanTroSEIZE Stage 3 Plate Boundary Deep Riser 2; This is the second phase of NanTroSEIZE Deep Riser hole. The top hole section was already drilled on 2009 and set 20” casing to 860 mbsf. The operation includes LWD drilling, spot coring, wireline logging and casing. The expedition duration is expected 126 days to reach 3,600 mbsf and set 13-3/8” casing.

NanTroSEIZE Riserless observatory 2; Genius Plug will retrieve from hole C0010 which was installed on 2010. Then drill out around 10 – 20 m at the bottom of the hole and install same type of riserless long-term observatory which was installed on hole C0002 at Exp. 332 NanTroSEIZE Stage 2: Riserless Observatory. The expedition duration is expected 22 days and suitable time window will be on Dec 2012, due to fishing restriction.

Tohoku Rapid Response Drilling; If this scheduled in FY12 schedule. The potential time window will be April – June 2012 after new thruster installation Total operation estimate time is 1.5 - 2.5 months. NanTroSEIZE Riserless observatory 2 will need to

trade off and postpone beyond FY13, if this operation in FY12. The expected water depth of the potential site (around 7,000 m) and currently proposed drilling/coring depth (around 1,000 m) is technologically feasible for *Chikyu* but hole stability at land slide part will be big issue. Possible time window and limited budget might limit some of the science target on DPG planning, also proponents might need to consider contingency sites at different water depths.

Kevin Johnson (IODP-MI) commented that OTF or SPC needs to write a letter to the DPG proponents to telling them the possible drilling window. Gabe Filippelli (SPC Chair) answered that SPC will review the DPG report in the next two weeks and send a recommendation to DPG about proposal submission. OTF need to tell them that they need to submit a proposal that fits to the time window, all 3rd party equipment need to be ready by then. OTF discussed the possibility of moving Exp. 337 Deep Coalbed Biosphere off Shimokita to April than have Tohoku Rapid Response Drilling from June to make sufficient preparation period for proponents. However, OTF found this option is not feasible because DPG is requesting that temperature measurement must start from July.

Junzo Kasahara (SPC Vice Chair) asked potential safety issues with the aftershocks of Mar 11th earthquake. CDEX answered there will be no issues related with aftershocks and Tsunami during offshore operation at the site. Ruediger Stein (ESSAC) mentioned that 3-D site survey for the potential sites is planned on late 2011 but it is not clear how August SPC meeting is going to review the proposal and do site selection without survey data.

Yoshi Kawamura (Chair, IODP-MI) commented there is no proposal available yet at this moment and have to wait the decision of calling full proposal for this drilling by SPC. Wataru Azuma (CDEX) commented this kind of project and process is first case for IODP and there is no existing template or sample for IOs to implement this project. Strong leader ship by IODP-MI is required.

Chikyu's possible operations time window for FY12 will be as follows with CDEX's current budget estimate;

1. (2 months, Riser) Exp. 337 Deep Coalbed Biosphere off Shimokita
2. (4 months, Riser) Exp. 338 NanTroSEIZE Stage 3, Plate Boundary Deep Riser 2
3. (1.5 months [min], Riserless) Tohoku Rapid Response Drilling
or (1 month Riserless) NanTroSEIZE Riserless observatory 2

Chikyu's possible operation options for late FY13 and beyond will be as follows;

Exp. 338 NanTroSEIZE Stage 3, Plate Boundary Deep Riser 2;

FY13 plan; Continue drilling from 3,600 mbsf up to 5,200 mbsf where expected for

Mega-spray fault area as follows.

- Set 11-3/4” Casing (casing shoe depth; 4,700 mbsf)
Coring 4,500 m to 4,700 mbsf and run wireline logging
- Drilling and coring (5,200 mbsf)
Coring 5,000 m to 5,200 mbsf (expected Mega-spray fault area) and run wireline logging
- Plug back and suspend the hole
- Total operation days; 4.9 months

Beyond FY13 plan; Continue drilling from 5,200 mbsf and have second coring and logging on Mega-spray fault, then complete drilling to plate boundary which is in around 7,000 mbsf as follows.

- Side track and set 9-5/8” Casing (casing shoe depth; 6,000 mbsf)
Coring 5,100 m to 5,200 mbsf and run wireline logging (Second coring, logging on Mega-spray fault)
- 8-1/2” hole drilling (to 7,000 mbsf)
Coring 6,800 m to 7,000 mbsf and run wireline logging
- Total operation days; 7.6 months

Yoshi Kawamura (Chair, IODP-MI) commented that these CDEX operation plan shows that they can reach to mega-spray fault on 2013 but no possibility to reach plate boundary at 7,000mbsf which is major science target of NanTroSEIZE. OTF members agreed on this CDEX operation plan with NanTroSEIZE target on 2013.

The OTF recommended the following the *Chikyu* FY12-13 operation schedule plan with to the SPC. (Figure-OTF-7)



FY 12

- CPP Shimokita (Exp. 337; Riser); 2 months
- Additional riser operation; 1.5 months (extend to FY13)
- Riserless operation; 1 month+

Figure OTF-7 The *Chikyu* operation schedule plan for FY12-FY13.

4. Review operational realities of the proposals residing at OTF

Issa Kagaya (IODP-MI)

IODP-MI showed list of current scheduled and non-scheduled OTF proposals and their status includes SSP classifications and EPSP review result (Figure-OTF-10, 11, 12, 13).

677-Full Mid-Atlantic Ridge Microbiology; Ruediger Stein (ESSAC) pointed that this proposal is already scheduled in FY12 but still has 2Cc in SSP classification which is not good rating. Mitch Malone (USIO) and Yoshi Kawamura (IODP-MI) replied that they will check the current status and report to OTF if there are still issues on SSP.

758-Full2 Atlantis Massif Seafloor Processes; Barbara John (SPC) commented that this proposal has insufficient site survey data for seabed drilling site. Proponents submitted proposal to NSF to receive some additional suite survey data to locate the site.

601-Full3 Okinawa Trough Deep Biosphere; Nobu Eguchi (CDEX) reported that this proposal has three remaining site from Exp. 331 Deep Hot Biosphere in 2010. Deepest hole is 1,600 mbsf and possible to drill with riserless.

537B-Full4 Costa Rica Seismogen Phase B; Nobu Eguchi (CDEX) reported that this proposal is waiting for 3-D site survey at drilling area. Shinichi Kuramoto (MEXT) reported that the survey was already conducted right after the Exp. 334 Costa Rica Seismogenesis Project (CRISP), but unfortunately the survey was not fully covered the proposal target sites.

705-Full2 Santa Barbara Basin Climate Chang; Mitch Malone (USIO) reported that June 2011 EPSP meeting previewed the proposal but deferred the detail review until proponents submit additional high resolution 3-D survey data. Also there are concerns about environmental impact and additional cost for its assessment. Jamie Allan (NSF) commented that environmental impact statement is required and will need long time to negotiate with such as environmental protection organization.

Gabe Filippelli (SPC Chair) commented that port call and logistics at the Indian Ocean expeditions will be issues for some proposals in the Indian Ocean.

FY12 (June 2011OTF)

	Numbers	Tytle	Ocean	Schedule	P-type	SSP	EPSP	Remarks
2	644-Full2	Mediterranean Outflow	Atl	Exp.339	RL	1Ba, 1Bd, 1Cd	approved	763-APL
2	763-APL	Iberian Margin Paleoclimate	Atl	(Exp.339)	RL	1A	approved	
1	677-Full	Mid-Atlantic Ridge Microbiology	Atl	Exp.336	RL	2Cc	approved (e-reviewed)	multilevel CORK
3	681-Full2	Lesser Antilles Volcanic Landslides	Atl	Exp.340	RL	1Aa, 1Ba, 1Bb	approved	(779-APL)
3	779-APL	Atlantis Massif Lithosph. Hydration	Atl		RL	1Aa		
2	661-Full2	Newfoundland Sediment Drifts	Atl		RL	1Bb, 2Ab	No review	
1	745-CPP	Shimokita Coal Bed Biosphere	Pac	Exp.337	R	1Bd	approved	FY11 plan canceled
3	603C-Full	NanTroSEIZE Phase 3	Pac	Exp.338	R	2A, 2B, 2C	approved	FY12-13 (4m +5m)

Figure OTF-10. OTF proposals scheduled for FY12 operations at June 2011 OTF meeting. (Proposal with pink number was forwarded to OTF on March 2011, SPC meeting. Items with red mean issues exist.)

FY13 (June 2011OTF)

	Numbers	Tytle	Ocean	Schedule	P-type	SSP	EPSP	Remarks
3	537A-Full5	Costa Rica Seismogen Phase A	Pac		RL	1Bb, 1Bd	2A,3B,4A approved	Not completed (Exp.334)
3	551-Full	Hess Deep Plutonic Crust	Pac		RL	1Aa	No review	Hardrock
2	686-Full	Southern Alaska Margin 1	Pac	Exp.341	RL	1Aa, 1Bc	approved	FY12 plan canceled (786-APL)
2	786-APL	Alaskan Glacial and Ocean History	Pac		RL	1Ac	approved	FY12 plan canceled (686-Full)
2	605-Full2	Asian Monsoon	Pac		RL	1Aa	most approved	Clearance?
3	603-Full	NanTroSEIZE Phase 3	Pac	Exp.338	R	2A, 2B, 2C	approved	FY12-13 (4m + 5m)
3	603-Full	NanTroSEIZE Observatories	Pac		RL(+R)	1A, 1B	approved	

Figure OTF-11. OTF proposals scheduled for FY13 operations at June 2011 OTF meeting. (Proposal with pink number was forwarded to OTF on March 2011, SPC meeting. Items with red mean issues exist.)

Non scheduled

	Numbers	TYtle	Ocean	Schedule	P-type	SSP	EPSP	Remarks
2	477-Full4	Okhotsk Plio-Pleistocene	Pac		RL	1Ca	approved	Remaining sits Permitting ? (Russia)
1	505-Full5	Mariana Convergent Margin	Pac		RL	1Bc, 2Cc	No review	3 CORKs No remarks with safety
3	522-Full5	Superfast Spreading Crust	Pac		RL	1Aa, 2Cc	approved	Junk in hole? Not completed (Exp.335)
2	549-Full6	Northern Arabian Sea Monsoon	Ind		RL	1A	approved	Security (Pakistan)
2	552-Full3	Bengal Fan	Ind		RL	1Aa	approved	
1	553-Full2	Cascadia Margin Hydrates	Pac		RL	1B, 1A	approved	ACORK
2	595-Full4	Indus Fan and Murray Ridge	Ind		RL	1Ba	Previewed	Security (Pakistan)
1	633-Full2	Costa Rica Mud Mounds	Pac		RL	1Aa, 1Ab	approved ROV?	4 CORKs
3	659-Full	Newfoundland Rifted Margin	Atl		RL	1Aa	No review	Deep > 2,120m
1	693-APL	S. Chamorro Seamount CORK	Pac		RL	3A	No review	Replacement of an existing CORK
3	695-Full2	Izu-Bonin-Mariana Pre-Arc Crust	Pac		RL	1Ba	No review	
3	697-Full3	Izu-Bonin-Mariana Reararc Crust	Pac		RL	1Bb	No review	Deep? 1,900m
2	705-Full2	Santa Barbara Basin Climate Chang	Pac		RL	1Aa, 1Ab	Previewed	Environmental issues 3D survey
2	724-Full	Gulf of Aden Faunal Evolution	Ind		RL	2Cc, 2Cb	No review	Security
2	732-Full2	Antarctic Peninsula Sediment Drifts	Ant		RL	1Ba	No review	
3	537B-Full4	Costa Rica Seismogen Phase B	Pac		R	2C 3D surv	No review	CORK?
1	601-Full3	Okinawa Trough Deep Biosphere	Pac		RL(R)	1Bb	approved	Remaining sits
3	603B-Full2	NanTroSEIZE Phase 2	Pac		R	2A, 2B	approved	low priority: not drill
2	548-Full3	Chicxulub K-T Impact Crater	Atl		MSP	1Aa	Previewed	Permit?
2	581-Full2	Late Pleistocene Coralgall Banks	Atl		MSP	1A	No review	MDCB, MMS
2	672-Full3	Baltic Sea Basin Paleoenvironment	Atl		MSP	1Ba	No review	
2	716-Full2	Hawaiian Drowned Reefs	Pac		MSP	1Aa	approved	Permit?
1+2+3	758-Full2	Atlantis Massif Seafloor Processes	Atl		MSP	1Ba, 2Ad, 2Ca	No review	

Figure OTF-12. Non-scheduled OTF proposals at June 2011 OTF meeting.

(Proposal with pink number was forwarded to OTF on March 2011, SPC meeting. Items with red mean issues exist.)

Non scheduled (APL)

Them	Numbers	Tytle	Ocean		P-type	SSP	EPSP	Remarks
3	769-APL2	Costa Rica Crustal Architecture	Pac		RL	1Bd	No review	
3	772-APL2	North Atlantic Crustal Architecture	Atl		RL	2Ad	No review	
2	783-APL	Indian Monsoon history	Ind		RL	1Ba	No review	
1	785-APL	Gulf of Mexico SCIMPI field trail	Atl		RL	3A	No review	

Figure OTF-13. Non-scheduled APL proposals at June 2011 OTF meeting.

(Proposal with pink number was forwarded to OTF on March 2011, SPC meeting. Items with red mean issues exist.)

8. Other

The next OTF meeting will be schedule in spring 2012 by IODP-MI.