IODP Proposal Evaluation Panel
3rd Meeting, 11-12 December 2012
Kyoto, Japan

Proposal Evaluation Panel – PEP

Richard Arculus	Australian National University
Jennifer Biddle	University of Delaware
Tim Bralower	Pennsylvania State University
Beth Christensen	Adelphi University
Peter Clift	Louisiana State University
Adélie Delacour	Université Jean Monnet
Eric Ferre [a]	University, Carbondale
José Abel Flores [b]	Universidad de Salamanca
Jörg Geldmacher	GEOMAR-Helmholtz Centre for Ocean Research
Verener Heuera	University of Bremen
Barbara John	University of Wyoming
Dick Kroon*	The University of Edinburgh
Kyung Eun Lee	Korea Maritime University
Lisa McNeil	University of Southampton
Katsuyoshi Michibayashi	Shizuoka University
Tomoaki Morishita	Kanazawa University
Maryline Moulin	Instituto Dom Luiz
Masafumi Murayama	Kochi University
Clive Neal	University of Notre Dame
Hiroshi Nishi	Tohoku University
Koichiro Obana	Japan Agency for Marine-Earth Science and Technology (JAMSTEC)
Stuart Robinson	University College London
Amelia Shevenell	University of South Florida
Ashok Singhvi	Physical Research Laboratory
David Smith	University of Rhode Island
Michael Strasser	ETH Zurich
Nabil Sultan	IFREMER
Yohey Suzuki	The University of Tokyo
Yoshinori Takano	Japan Agency for Marine-Earth Science and Technology (JAMSTEC)
Eiichi Takazawa	Niigata University
John Tarduno	University of Rochester
Jun Tian	Tongji University
Jody Webster	Sydney University
Yasuhiro Yamada	Kyoto University
Yusuke Yokoyama	The University of Tokyo
James Zachos	University of California, Santa Cruz

Unable to attend.
a –Alternate for John
b –Alternate for Moulin

Liaisons, Guests, and Observers

Jamie Allan	National Science Foundation (NSF), USA
Wataru Azuma	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan
Peter Blum	Integrated Ocean Drilling Program, Texas A&M University, USA
Sarah Davies	University of Leicester, UK
Jan De Leew	Royal Netherlands Institute for Sea Research, (NIOZ), The Netherlands
David Divins	Ocean Drilling, The Consortium for Ocean Leadership, USA
Nobuhisa Eguchi	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan
Akiko Fuse	Japan Drilling Earth Science Consortium (J-DESC), Japan
Robert Gatliff	British Geological Survey, UK
Tom Janecek	National Science Foundation (NSF), USA
Barry Katz	Chevron Corporation, USA
Hodaka Kawahata	The University of Tokyo, Japan
Yoshi Kawamura	IODP Management International, Inc., Japan
Gil Young Kim	Korea Institute of Geoscience & Mineral Resources (KIGAM), Korea
Yusuke Kubo	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan
Mitch Malone	Integrated Ocean Drilling Program, Texas A&M University, USA
Charna Meth	U.S. Science Support Program, Consortium for Ocean Leadership, USA
Greg Myers	Ocean Drilling, The Consortium for Ocean Leadership, USA
Yasuyuki Nakamura	Japan Agency for Marine-Earth Science and Technology (JAMSTEC), Japan
Jeff Schuffert	U.S. Science Support Program, Consortium for Ocean Leadership, USA
Shingo Shibata	Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan
Angela Slagle	Lamont-Doherty Earth Observatory, USA
Shouting Tuo	Tongji University, China
Keita Umetsu	Japan Drilling Earth Science Consortium (J-DESC), Japan
Michiko Yamamoto	IODP Management International, Inc., Japan
Carlos Zarikian	Integrated Ocean Drilling Program, Texas A&M University, USA

IODP Proposal Evaluation Panel

3rd Meeting, 2012, Kyoto, Japan

Draft Meeting minutes (ver.1)

Tuesday	**11th of Dec 2012**	**09:30-18:30**

1. Introduction

1.1. Call to order and self-introductions

PEP chair Dick Kroon called the meeting to order at 9:30. All meeting participants introduced themselves.

1.2. Welcome and meeting logistics

Kroon welcomed the meeting participants and the meeting host Yasuhiro Yamada outlined the logistics for the meeting.

1.3. Approve PEP meeting agenda

The meeting agenda of the PEP #2 meeting was approved unanimously.

1.4. PEP Review Process

General evaluation criteria for IODP proposal are (as per PEP ToR):

- Are the scientific questions/hypotheses being addressed exciting and of sufficiently wide interest to justify the requested resources?
- Will the proposal significantly advance one or more goals of the Science Plan?
- Would the proposal engage new communities or other science programs into the drilling program?
- To what degree does the integrated experimental design of site characterization, drilling, sampling, measurements, and downhole experiments constitute a compelling and feasible scientific proposal?

Kroon highlighted the items 1 and 4 as the most important ones.

1.4.1: Participants' declarations of COI for current proposal set

COIs have been declared by participants by e-mail to Kroon before the meeting.

Proposal#	**COI**
735-CPP2	Tian
777-APL3	Lee
793-CPP2	Clift, Singhvi
795-Full2	Clift
808-APL	Clift

812-Pre	Shevenell
813-Pre	Robinson
817-Pre	Webster

Kroon assigned the watchdogs accordingly to prevent COIs.

The participants were reminded to leave the room if they had COI with the proposal being reviewed. If they had institutional COI, they cannot make a comment unless requested by the (sub-)chair.

1.4.2: New Proposal Guidelines

The future SAS structure will consist of the PEP and SCP, and will be embedded in the new framework of the International Ocean Discovery Program (IODP) starting Oct. 1st , 2013. Proposals, after successful review within the SAS, will be forwarded to the Facility Governing Boards (FBs) of the three independent implementation organization (IOs: CEDX, USIO, ESO) for potential implementation. The three FBs will replace the Operation Task Force (OTF).

FBs are about to be formed, but have not met yet. Thus, it is not fully clear yet how the new structure will impact PEP. In order to provide SAS's input to the FBs, a subcommittee of SIPCOM was formed to rework the IODP proposal guidelines. This new guideline draft has been sent out to the PEP members before the meeting.

Kroon presented the key wordings of the new guidelines and PEP discussed the following items:

For Pre-proposals (new wordings are in *cursive*):

A well-prepared preliminary proposal should:

- Present a *conceptual strategy* for addressing the scientific objectives through drilling, logging, or other down-hole measurements
- Describe the proposed drilling sites, penetration depths, expected lithologies, available site-survey data, *and discuss the recovery rates needed to achieve key goals*
- *Describe any development of advanced and non-standard tools, special sampling techniques, down-hole measurements, bore-hole observatories or others*
- *identify any logistical problems, e.g. extreme weather, sea-ice, piracy, or others,*

….

The PEP seeks advice on technical aspects of the drilling proposal through a representative of the appropriate Implementation Organisation (Platform Operator) who in turn participates in the platform's Facility Board (FB).

Concerns raised by PEP:

- In the review process, feasibility should not be taken into consideration (i.e. if the science is excellent, pre-proposal shouldn't be deactivated for "feasibility issues"). The key thing for a pre-proposal should be to identify the best conceptual strategies and scientific ideas
- Yet, proponents (in particular "newcomers" to the IODP) need to be aware of feasibility

issues and think towards facing reality at the earliest possible stage.
- Identifying and describing strategies for dealing with non-standard tools and logistical problem should not be part of developing the science idea, for which the 5 page limit already is short enough.
- Question arising if "feasibility" details need to be looked at Pre or Full Proposal stage. PEP concluded that there needs to be some kind of "feasibility" consideration BUT it should not overweigh. PEP wants to have the focus on the scientific idea at the Pre Proposal stage

Suggestions proposed by PEP plenary discussion:

- Questions regarding logistic and feasibility could be assessed for all proposals using a predefined check-box form, not counting against the 5-page limit to develop the scientific idea.
- A box "potential logistics and/or funding challenges" could be added to the proposal coversheet (similar as it currently is for the "non-standard tool"). This would make all proponents to be aware of and thinking about "feasibility"

Additional notes and suggestions by PEP:

- Additionally, following item should be added to "A well-prepared preliminary proposal should": describe post-expedition analytical approach to use sample and data obtained by drilling to address the proposed scientific objectives.
- Within the Proposal guidelines, possibly as header paragraph, also provide e-mail and webpage address of IOs for proponents to contact and seek advice at an early stage of proposal development
- The new formulation to seek IOs advice on technical aspects should also provide PEP with the possibility for a proposal to taking side-ways if needed.

For Full-proposals (new wordings are in *cursive*):

A well-prepared full proposal should:

- describe the available site-survey data and any plans for acquiring additional data, and discuss how the drilling targets relate to those data. *In addition, the proponents are reminded to upload the available site survey data in the Site Survey Data Bank in case the data are directly available, or a.s.a.p. after collection of new data.*
- describe any development of advanced and non-standard tools, special sampling techniques, *down-hole measurements, bore-hole observatories or others, and include an out-year plan for observatory data recovery, maintenance and ultimate termination.*
- *describe any external funding for non-standard tools,*
- *identify any logistical problems, e.g. extreme weather, sea-ice, piracy, or others,*

…

New Full proposals can be revised only once. There is no time limit for resubmission as time may be required for the proponents to seek essential advice on technical and funding aspects from the IO (and thus FB) to improve the overall feasibility of the drilling proposal. Moreover, proponents may wish to organise a workshop to advance their scientific objectives, drilling plan, or indeed to develop new techniques (in case the drilling plan requires new techniques, it is advised to ask representatives of the IO in question to attend

the workshop)
…..
(after external review and positive PEP evaluation): *The PEP forwards the Full Proposal to the appropriate FB if the proposal satisfies most requirements of the Site Characterization Panel (SCP) and Environmental Protection and Safety Panel (EPSP)*

Concerns / responses during PEP plenary discussion:

- The key thing is that there is no time limit for revised full proposal submission and that PEP will be expecting sufficient site survey data be available for the (revised) full proposal to be sent out for external review.
- PEP generally feels that it is a good idea to ask proponent for more information on site survey data, provided that PEP does not use this information for deactivating a proposal.
- Thus key questions are: when do we send the proposal out for review? What kind of site survey data is needed? Another key question is: how do we make sure proponents get funding for site survey data?
- Possible answers to this are
  - It requires PEP and SCP to collaborate very closely,
  - SCP needs to give a clear advice to proponents
  - There needs to be flexibility for proposal to go sideways
  - This requires Pre-Proposal only be forwarded if they have a real chance, and not forward too many Pre-Proposals, so the funding agencies understand that we are serious

- Concerns are
  - That "waiting for site survey data" should not delay the science review process
  - External review may become of less importance, because funding agencies may have already decided on the success of proposals through funding a site-survey or not. Yet external review remains key for the validation of the final proposal and also for science integrity within the wider (outside IODP) science community.
  - FBs may have different advice. Also, if not obvious from the proposed drilling plan, positively evaluated and rated proposal may be forwarded to more than one FB. This needs to be communicated to and considered by the proponents

For Full-proposals with substantial external funding (CPP):
Discussion items by PEP plenary session:

- The key is that CPPs require a certain degree of flexibility as they will become more important in the future.
- Yet, CPP should be treated as closely as possible as full proposal
- External advice/review remains key for the validation of the final proposal and also for science integrity within the wider (outside IODP) science community.
- Adviser vs. Reviewer: Consequence remains the same that external reviewer/advisor provide input for thumbs-up vs. thumbs-down decision making. Therefore, reviewer should be the preferred word.
- Fast track can be done by normal PEP, mostly, or by ad hoc e-mail groups if required.
- Rating is not required. CPPs have to reach "fair" at the minimum to receive a thumbs-up decision by PEP

- The key idea of PEP is to help nurturing CPP proposals.

Kroon asked all PEP participants to send additional comments to the new proposal guideline draft by e-mail. Those comments will be present to SIPCOM in January and considered for the revision of the new proposal guidelines.

1.4.3: Reflection on Edinburgh meeting (responses from proponents)

Kroon summarized all decisions made in the last PEP meeting and outlined proposals that came back and will be discussed during this meeting. He reflected that PEP has been quite decisive and possibly slightly harsh (deactivated 7 out of 20 proposals) but that it was the right and correct way in order to guarantee that the best proposals are selected to be forwarded to the FBs.

2. Question-and-answers to Agency reports

MEXT(Japan), NSF(U.S.), EMA(ECORD), MOST(China), KIGAM(KIGAM), ANZIC(Australia/ New Zealand) ,MoES(India)

-MEXT

MEXT fielded no questions but advertised the Chikyu+10 Workshop (April 21st-23rd, Tokyo) information is available on the website: http://www.jamstec.go.jp/chikyu+10/

-NSF

Stuart Robinson asked the NSF representative for his view of the future role and membership of the PEP. Jamie Allan responded that membership of PEP would be determined through MOUs between countries, and an exchange agreement between Japan and other countries. Not all of the respective “Facilities Boards” will use the PEP in the same way; for example, the Chikyu Facility Board might call for proposals every 3 years, and ECORD might act in a similar way. Allan confirmed there will be only one PEP, but Chikyu and MSP may ask for additional independent reviews.

-ECORD

Clive Neal asked ECORD for news of the MagellanPlus Series Program. Sarah Davis replied that the workshop series were continuing including the arc hydrothermal workshop in Lisbon that has just taken place. More broadly, the intentions include fostering marine and continental coring in collaboration with ICDP.

-KIGAM

No question.

-MoES

Clive Neal asked if there is a linkage between the mooted on-land drilling of an entire Deccan Traps section and 793-CPP. Shouting Tuo replied no actual linkage.

- ANZIC

Richard Arculus advertised the arrival of a new 94m-long “ocean class” research vessel (RV Investigator) towards the end of 2013, that would be capable of future site surveys for IODP proposals.

3. IODP-MI report

Michiko Yamamoto provided the IODP-MI report.

[Proposal submission for 2012 May deadline]
MI received 20 proposals in total. 9 proposals are “revised proposals” and 11 are new proposals.

[Proposal statistics]

Total number of active proposal: 88

Breakdown by science plan theme

Theme	Number of proposal
Climate and Ocean	43
Biosphere Frontier	13
Earth Connections	15
Earth in Motion	17

Breakdown by ocean

Ocean	Number of proposal
Arctic	8
Atlantic	19
Indian	13
Pacific	39
Southern	6
Mediterranean	1

Breakdown by SAS evaluation stage

SAS Stage	Number of proposal
PEP	52
OTF	35
Holding Bin	1

Breakdown by lead proponent’s country

Country of PI	Number of proposal
US	46
Japan	8
ECORD	25
China	1
Korea	2
ANZIC	5
India	1

Breakdown by platform

Platform	Number of proposal
Non-Riser	63
Riser	8
MSP	13
Multiple	6

[Schedule of SAS meeting]

May 14-15, 2012	PEP	Edinburgh, UK
June 1, 2012		Data submission deadline
June 19-20, 2012	SIPCOM	Washington DC, USA
August 7-9, 2012	SCP	Barcelona, Spain
August	STP	TBD (USA)
October 1, 2012		Proposal deadline
December 1, 2012		Data submission deadline
December 11-12, 2012	PEP	Kyoto, Japan
January 22-23	SIPCOM	Edinburgh, UK
February 20-22?	SCP	Kochi, Japan

4. Implementing Organization (IO) reports

4.1. CDEX

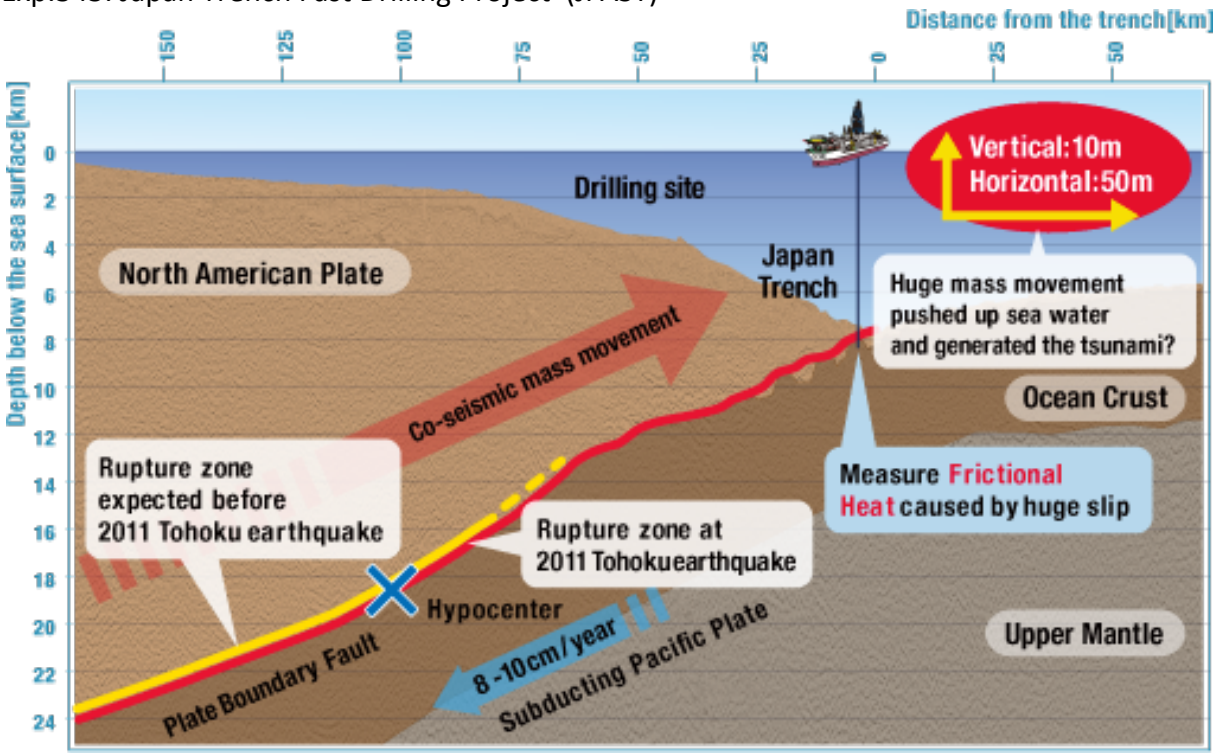
Yusuke Kubo provided the CDEX report.

[Chikyu's activity over the last 6 months]

Exp.343	Japan Trench Fast Drilling Project	Apr.1-May 24	J.Mori F.Chester
	Sry Dock at Sasebo, Japan	May 30 - Jun. 23	
	Non-IODP	Jun. 23 - Jul.4	
Exp.343T	Japan Trench Fast Drilling Project II	Jul.5 - 19	J.Mori
Exp. 337	Deep Coalbed Biosphere off Shimokita	Jul.25 - Sept.30	F.Inagaki K.U.Hinrichs

Exp.338	NanTroSEIZE Stage3 Plate Boundary Deep Riser -2	Oct.1 - Jan.13 2013	B.Dugan K.Kanagawa G.Moore M.Strasser

Exp.343: Japan Trench Fast Drilling Project (JFAST)



LWD and coring at the Tohoku earthquake slip surface. Installation of thermometer was not completed in the planned schedule.

[Exp.343T: Japan Trench Fast Drilling Project II]

The LWD and coring operation in April-May. Thermometer string was intalled at C009. Temperature data will be retrieved in Feb. 2013

[Exp.337: Deep Coalbed Biosphere off Shimokita]

Operation plan:

- Riser drilling with spot cores to 2200 mbsf

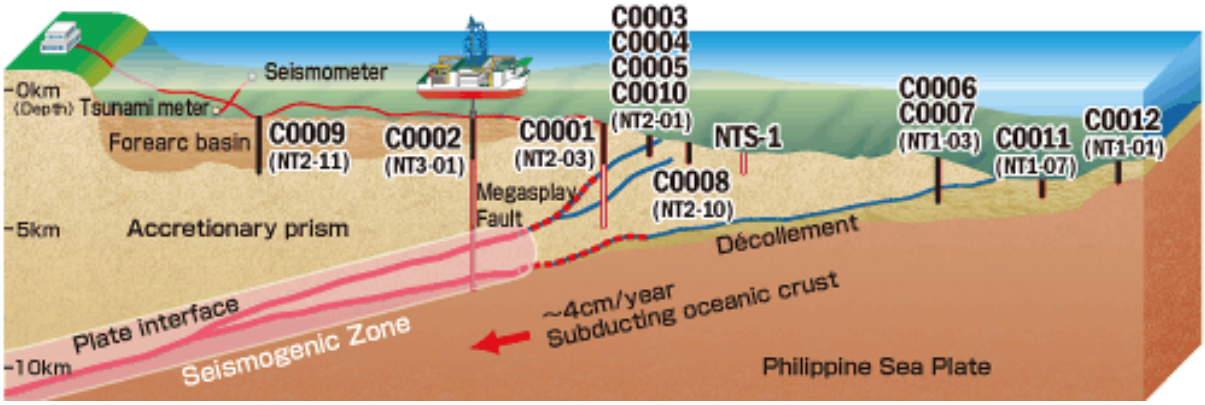
-Large diameter cores across the critical formations

-Formation fluid sampling by wireline tools.

-Mud gas monitoring by newly installed lab

[Exp.338: NanTroSEIZE Plate Boundary Deep Riser 2]

Deepen the hole C0002 to 3600 mbsf with LWD, for future target of mega-splay fault at 5200mbsf.



On Nov.17, BOP was disconnected due to bad weather. The upper part of the pipe was damaged when tilted under the strong current.

Riser drilling was suspended at about 2000mbsf, and hole deepening will resume next year after repair.

Currently riserless contingency operation has been ongoing until Jan, 2013

The damaged part was shipped to Singapore for repair.

[Chikyu activity over the coming 12 months]

Exp. 338	NanTroSEIZE Plate Boundary Deep Riser -2	~Jan.13, 2013
Non-IODP	At Nankai Trough	Jan. to March
Non-IODP	TBD	April to July
Exp.348	NanTroSEIZE Plate Boundary Deep Riser	Aug. 2013 to Jan. 2014

[In the next IODP phase]

- IODP Science drilling is the highest priority not only for annual ship schedule but also for technology development

- 40-50 months are to be available for IODP cruise

[CHIKYU+10 Workshop]

Discuss priority projects for Chikyu's next decade of exploration

Jan. 31 : White paper submission deadline

April 5 : Registration deadline

Apr. 21-23: Workshop in Tokyo

Website: http://www.jamstec.go.jp/chikyu+10/

4.2. USIO

David Divins provided USIO report.

[Exp 342: Newfoundland Sediment drifts (2 June - 1 August 2012)]

Objectives:

Drill a depth transect between ~2400 and 5000 m water depth into a sequence of rapidly accumulated sediment drifts of Paleogene age on J Anomaly Ridge and Southeast Newfoundland Ridge

Conduct 2-day testing the Motion Decoupled Hydraulic Delivery System (MDHDS)

Science Goals:

Study multiple extreme climate events at unprecedented temporal resolution from a high-latitude site during an interval of time when Earth was much warmer than today

Highlights:

Retrieval of new evidence of three major events in Earth's history: the Paleocene-Eocene Thermal Maximum (PETM), the Cretaceous/Paleogene (or K/Pg) boundary, and the Eocene-Oligocene boundary

Recovered 5,413 m of core (= 649 cores) from 28 holes at 10 sites with a 94.3% recovery

[Exp. 344: CRISP-2 (23 october - 11 December 2012)]

Costa Rica Seismogenesis Project 2 (CRISP)/ Expedition 344 ended on 11 December. It was a continuation of Expedition 334 (CRISP 1); together these expeditions comprise Stages 1 and 2 of CRISP Program A. CRISP Program A is the first step toward deep riser drilling through the seismogenic zone

Objectives:

The principal objective of CRISP Program A is to establish the boundary conditions of the Costa Rica erosive subduction system

Science Goals:

Estimate the composition, texture, and physical properties of the upper plate material

Assess the subduction channel thickness and the rate of subduction erosion.

Evaluate fluid/ rock interaction, the hydrologic system, and the geochemical processes (indicated by composition and volume of fluids) active within the upper plate

Measure the stress field across the updip limit of the seismogenic zone

[Exp 345: Hess Deep (11 December 2012 - 12 February 2013)]

Expedition 345 is in progress. It is the second offset drilling program at the Hess Deep Rift to study crustal accretion processes at the fast-spreading East Pacific Rise (EPR).

Anticipated challenging drilling/coring operations with water depths in excess of 4400 m that will impact routine operations such as pipe tripping, reentry, and wireline coring/logging, and make these operations more time consuming than they would be in shallower waters.

Objective:

Principal objective is to sample the lower levels of young plutonic crust that formed at the fast-spreading East Pacific Rise (EPR), filling in a major lithologic gap.

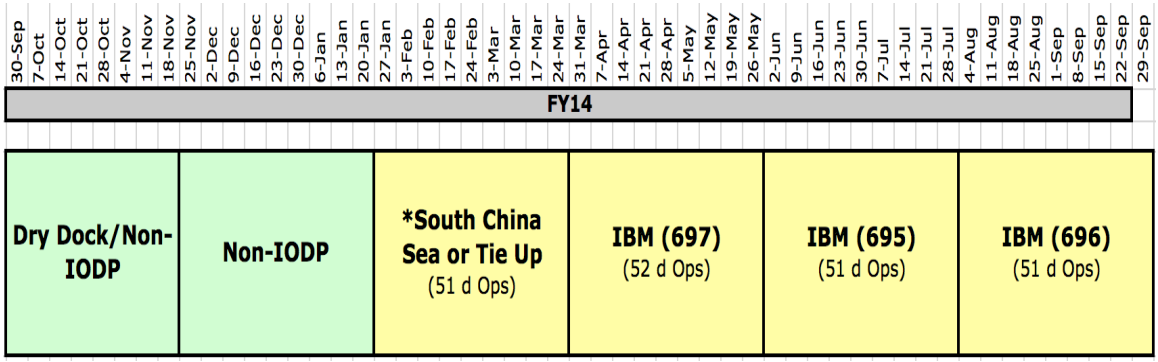
Goal:

Test competing hypotheses of magmatic accretion and hydrothermal processes in the lower ocean crust formed at the fast-spreading EPR.

[FY13 JR OPERATIONS Schedule]

EXPEDITION	EXP #	DATES	TOTAL DAYS (port/at sea)	CO-CHIEF SCIENTISTS
Non-IODP		1 Aug – 23 Oct '12		
CRISP-2	344	23 Oct – 11 Dec '12	49 (2/47)	R. Harris A. Sakaguchi
Hess Deep	345	11 Dec – 12 Feb. 13	63 (7/56)	K. Gillis J. Snow
Non-IODP		12 Feb – 25 May '13		
SCIMPI	341S	25 – 29 May '13	4 (0/4)	
South Alaska	341	29 May – 29 July '13	61 (3/58)	J. Jaeger, S. Gulick
Asian Monsoon	346	29 July – 28 Sep '13	60 (5/55)	R. Tada R. Murray

[FY14 JR OPERATIONS SCHEDULE]



-JR required to perform dry dock by January 2014

- 205 days operations, IBM 696 in typhoon season

- If SCS not possible, substitute with other proposal is not an option

[E&O ACTIVITIES]

Expedition 342: Newfoundland

- Caitlin Scully, recent graduate student from Scripps Institution of Oceanography, and Dan Brinkhuis, videographer

- Good media coverage: PBS Newshour, BoingBoing, Deep Sea News

- Six expedition videos available at http://www.youtube.com/user/OceanLeadership?feature=BF

Expedition 344: CRISP 2

- Dena Rosenberger, a high school teacher from El Cajon, California and Thanos Fatouros, videographer/computer animator.

- Four short expedition videos including animations were created while onboard. Will soon be available at http://www.youtube.com/user/OceanLeadership?feature=BF

- 20-minute expedition documentary in development

[Newsletter]

The Fall 2012 Core Discoveries newsletter was published November and is available at: http://www.oceanleadership.org/programs-and-partnerships/scientific-ocean-drilling/core-discoveries-newsletter/

[Port Call: Puntarenas, Costa Rica]

- Ship tours and press briefing on December 12, 2012.

- Outreach activities coordinated in partnership with the Volcanological and Seismological Observatory of Costa Rica, National University of Costa Rica

[Non-IODP expedition (August - October 2012)]

-Non-IODP expedition conducted in northern Atlantic waters for a gas and oil company ended in early October

-In-line with the non-IODP window that followed Expedition 342: Newfoundland Sediment Drifts

-Significant day rate recovery for NSF from this approximately two month operation

-Future operations with same oil and gas operator are being explored

4.3. ESO

Sarah Davies provided ESO report.

[ESO institutes]

British Geological Survey	European Petrophysics Consortium	University of Bremen
Overall ESO management	**Downhole logging & core petrophysics**	**Curatorial & analytical facilities**
Provides ESO Science Manager	Offshore & onshore expedition phases	Provides Curation & Laboratory Manager
Responsible for logistics planning & platform contracts for Mission Specific Expeditions	Provides Petrophysics Staff Scientist & expedition staff	Provides staff & labs to offshore operations
Provides Operations, Data and Outreach Managers	Consortium University of Leicester (Lead), UK - Universite de Montpellier, France - RWTH Aachen, Germany	Co-ordinates & hosts Onshore Science Party at the MARUM, Bremen
Provides Staff Scientist and expedition staff		Core curation

[Future MSPs]

FY13, next MSP			
672	Baltic Sea Basin Paleoenvironment	OTF	Forwarded March 2011, SPC ranked #2 Spring/Summer 2013
FY14 / FY15 options			
548	Chicxulub K-T Impact Crater	OTF	Forwarded March 2010, SPC ranked #4 First MSP of the new program, 2014?
758	Atlantis Massif Seafloor Processes	OTF	Forwarded March 2011, SPC ranked #1 2014-2015? Depends on seabed drill readiness
FY16 and beyond			
716	Hawaiian Drowned Reefs	OTF	Forwarded March 2009, SPC ranked #6
581	Late Pleistocene Coralgal Banks (full expedition)	OTF	Forwarded March 2010, SPC ranked #10
637	New England Shelf Hydrogeology	OTF	Forwarded March 2009, SPC ranked #4 In holding bin with technology and cost issues
Plus new MSP proposals, possibly in the Arctic			

[Proposal 672 / IODP Expedition 347 : Baltic Sea Paleoenvironment]

Recover records of climate change over the last 140,000 years in the vicinity of the Scandinavian Ice Sheet

Co-chiefs: Thomas Andrén, Bo Barker Jørgensen

- Drilling contractor is Island Drilling partnered with Geoquip Marine to provide both the coring rig and the vessel

- Coring rig will be Geoquip Marine's GMTR 120 geotechnical and coring rig

- Will utilise the British Geological Survey Marine Wireline Coring System

- Start date is currently contracted to be between 1st May – 30th June 2013

- Operation duration will be a maximum of 60 days

- OSP at least 2 months after offshore phase (Oct/Sep 2013)

Planning:

- 24 September: Co-chief Meeting to plan expedition science program

- 10 October: Science Party invitations sent, currently returning confirmations

- 10 October Expedition: 347 Scientific Prospectus published by the USIO Publications Services

[Other ESO Preparations]

- ESO BGS: new Science, Data Management & ESO offices containers

- ESO EPC: Sally Morgan, has worked with Geotek to develop & install a fast-track MSCL system for use offshore

- ESO Bremen: worked on fine-tuning the Scientific Prospectus, Sample and Measurement Plan, core flow, contamination tests assessment, and planning for the microbiology and geochemistry requirements

[Proposal 548, Chicxulub Impact Crater]

Objectives:

- To drill into one of the largest & best preserved impact craters on Earth,

- Target: a topographic feature of crater known as the peak ring

- What is peak ring made of?

- How did the peak ring form?

- How do rocks weaken during large impacts?

- What caused the environmental changes that lead to mass extinction?

Hazard survey:

- Tender exercise ended 26th Oct.

- 4 companies have responded, ESO currently assessing.

- Plan to implement survey in 2013 (Apr-Oct), to prepare for drilling in 2014 (Feb-May). Jun-Nov is hurricane season.

Drilling operation

- If FY14 Chicxulub drilling looks affordable, ESO will issue notice of interest for platform and drilling services.

- ESO will apply for permits once the preferred contractor is known.

- Mexican authorities are aware of the project and have asked ESO to submit survey and drilling permit applications when ready.

[Proposal 758 : Serpentinization and life]

Drill a spreading-parallel profile across the southern wall of the Atlantis Massif. Aims to explore the extent of the biosphere in young ultramafic seabed.

- How biological processes change with rock type changes

- The role of serpentinisation in hydrothermal systems

-How serpentinisation might sustain microbial communities

- What processes lead to variations in lithologies and detachment faulting

[Proposal 758, Atlantis Massif Seafloor Processes]

- A full and up-to-date copy of the site survey database associated with this proposal has been assembled on the servers at the BGS.

- ESO operations staff are continuing to evaluate all available seabed drill options, including the evolving RD2 (BGS) and MeBo (MARUM) seabed drills for this proposal.

- BGS and MARUM engineers are discussing fluid sampling tool development for both seabed drills, required for this proposal.

[IODP Expedition 325: GBREC post-cruise meeting]

- 3-7 July, Heron Island, Queensland, Australia

- 9-13 July, Special session at the 12th International Coral Reef Symposium (Cairns, Australia) was co-organised with scientists associated with Expedition 310 (Tahiti)

- First papers from expedition are in press

[ECORD Engineering and Technology Panel #1]

- 8th November 2012, BGS Edinburgh

- ECORD ETPs will be project-driven: what technology is needed to implement highly–ranked proposals so they can be scheduled

- Participants will largely vary from meeting to meeting

- 1st meeting: fluid and microbiology sampling from sea bed drills

Meeting Aims:

(1) Project-focussed: how do we meet the minimum requirements of IODP Proposal 758: Atlantis Massif Seafloor Processes

(2) IODP-focussed: how do we enhance an expedition based on Proposal 758 & provide more of the legacy data expected by IODP (minimum measurements)

(3) Future-focussed: Provide and test new tools that the community can use on future proposals

- ESO seeks to develop prioritised list of sea bed drill developments, and an indication of the level

of development required

- To develop/modify, ESO want to collaborate with MARUM so tools will work on both the BGS Rockdrill and the MeBo

Essential (for Proposal 758)	Desirable (for Proposal 758)	Other / legacy / ambitious
•High % core recovery P •Minimise contamination (incl. time on seafloor) •Ability to assess contamination P •Downhole logging: •Optical imaging P •Acoustic imaging P •Spectral gamma ray P •Measure bottom water (CTD) P •Seal borehole with the facility to extract fluid samples in the future (e.g. by ROV)	•Semi real-time review of borehole images •Downhole logging: •Formation Resistivity P •Deep UV spectroscopy (DEBI-t) •CORK instruments: •Reduction potential (Eh) •pH •Fluid temperature •H2 probe •In-situ fluid pressure P •Downhole microbial incubation experiments (possibly FLOCS-type system)	•Downhole fluid and microbiological sampling using a GeoMicrobe Sled connected to the wellhead •Fluid resistivity •Other IODP minimum measurements (downhole): •Density •Porosity •Sonic •Formation temperature •Microresistivity/FMS
Notes: P Ticked items are already available, developed, or are in development for sea bed drills Underlined items are IODP minimum measurements		

[ECORD Summer Schools 2012]

-Submarine Landslides, Earthquakes and Tsunami (September 3-14, Bremen, Germany)

- The Urbino Summer School in Paleoclimatology (July 11-31, Urbino, Italy)

- Impacts of the Cryosphere dynamics from Land to Ocean. (July 5-21, Montreal, Canada)

5. Monitoring IODP Science 2013-2023

As requested by SIPCOM, Dick Kroon analyzed the active proposals in the system and re-calculated the percentage of the proposals in each theme and challenge with the new proposals submitted for 2013 October deadline.

SIPCOM Action Item 1201-17: SIPCOM asks PEP to summarize the scientific and regional distribution of pre-proposals, proposals, CPPs, and APLs at PEP and OTF, to enable SIPCOM at their June 2012 meeting to evaluate future coverage of the post-2013 IODP Science Plan.

[CO: Climate and Ocean Change: Reading the Past, Informing the Future]

Challenge 1: How does Earth's climate system respond to elevated levels of atmospheric CO2?

-39x (19.0%)

Challenge 2: How do ice sheets and sea level respond to a warming climate?
-26x (12.7%)

Challenge 3: What controls regional patterns of precipitation, such as those associated with monsoons or El Niño?

-17x (8.3%)

Challenge 4: How resilient is the ocean to chemical perturbations?

-9x (4.4%)

Total hits Climate and Oceans: 44.4%

[BF: Biosphere Frontiers: Deep Life, Biodiversity, and Environmental Forcing of Ecosystems]

Challenge 5: What are the origin, composition, and global significance of subfloor communities?

-15x (7.3%)

Challenge 6: What are the limits of life in the subseafloor?

-13x (6.3%)

Challenge 7: How sensitive are ecosystems and biodiversity to environmental change?

-13x (6.3%)

Total hits Biosphere: 20.9%

[EC: Earth Connections: Deep Processes and Their Impact on Earth's Surface Environment]

Challenge 8: What are the composition, structure, and dynamics of Earth's upper mantle?

-11x (5.4%)

Challenge 9: How are seafloor spreading and mantle melting linked to ocean crustal architecture?
-16x (7.8%)

Challenge 10: What are the mechanisms, magnitude, and history of chemical exchanges between the oceanic crust and seawater?

-3x (1.5%)

Challenge 11: How do subduction zones initiate, cycle volatiles, and generate continental crust?

-11x (5.4%)

Total hits Earth Connections: 20.1%

[EM: Earth in Motion: Processes and Hazards on Human Time Scales]

Challenge 12: What mechanisms control the occurrence of destructive earthquakes, landslides, and tsunami?

-18x (8.8%)

Challenge 13: What properties and processes govern the flow and storage of carbon in the subseafloor?

-4x (2.0%)

Challenge 14: How do fluids link subseafloor tectonic, thermal, and biogeochemical processes?

-10x (4.9%)

Total hits Earth in Motion: 15.7%

[Total]

Climate and Oceans: 44.4%

Biosphere: 20.9%

Earth Connections: 20.1%

Earth in Motion:15.7%

Kroon summarized that Biosphere hits have increased and Earth in Motion hits have diminished using the Challenges rather than the Themes. This makes sense because the Biosphere Challenges are present within proposals contributing to all other main themes. Climate and Oceans is clearly the biggest contributor, followed by Earth Connections and the Biosphere. Earth in Motion seems to be the smallest contributor on paper to the New Science Plan. The reasons may be that it is a very distinct science field or perhaps this area is a very expensive one (Corks etc.)

6. Proposal review

21 proposals were reviewed at this meeting. The panel members were thematically divided into four breakout groups (but physically into two rooms) to review and discuss on the proposals. Below are the lists of breakout groups.

Break-out room 1- CO and CO/EM
Chair:Bralower

Proposal#	Short Title	Watchdog1	Watchdog 2	Watchdog 3
702 Full	Southern African Climates	Zachos	Tian	Christensen
777-APL3	Okinawa Trough Quaternary Paleoceanography	Murayama	Clift	Singhvi
784-Full2	Amundsen Sea Ice Sheet history	Bralower	Shevenell	Tian
795-Full2	Indian Monsoon Rainfall	Nishi	Christensen	Lee
812-Pre	Ross Sea Glacial History	Christensen	Murayama	Zachos
813-Pre	Antarctic Cenozoic Paleoclimate	Flores	Bralower	Nishi
817-Pre	Maldives Atolls Sea Level	Yokoyama	Zachos	Bralower
814-Pre	Greenland Ice Sheet	Clift	Shevenell	Tian
815-Pre	Weddell Sea History	Robinson	Webster	Lee
807-Full	Indonesian Throughflow	Clift	Webster	Lee
793-CPP2	Arabian Sea Monsoon	Shevenell	Tian	Tarduno

Break-out room 2 EM, BF, EC and CO/EM
Chair: Strasser, Arculus, Takano

Proposal#	Short Title	Watchdog 1	Watchdog 2	Watchdog 3
707-MDP	Kanto Asperity Project: Overview	Strasser	Michibayashi	Yamada
770 Full3	Kanto Asperity Project: Observatories	Strasser	Michibayashi	Yamada
808-APL	East/Japan Sea back-arc opening	Michibayashi	Arculus	Sultan
809-APL	Alaska Holocene record	McNeill	Obana	Yamada
811-Pre	Cape Fear Slope Stability	Sultan	McNeill	Morishita
816-APL	ReCORK Hole858G	Obana	Yamada	McNeill
800-MDP	Indian ridge Moho	Takazawa	Neal	Delacour
774-APL2	Costa Rica Subseafloor Microbial Mats	Biddle	Smith	Takano
810-APL	Hole504B life limit	Suzuki	Biddle	Heuer
735-CPP2	South China Sea Evolution	Arculus	Morishita	Yokoyama

Wednesday	12th of December 2012	9:30-18:00

6. Proposal review continued

The breakout groups gathered again to continue their discussion.

7. Reports from breakout sessions

Sub-chairs presented the summary of the breakout discussions. The course of action regarding each of the 21 PEP proposals reviewed during the 3rd PEP meeting was achieved by consensus of the full panel. The specific dispositions for each proposal were as follows:

Proposal#	Title	PEP review for,m
702 Full	Southern African Climates	Send to External Review
707-MDP	Kanto Asperity Project: Overview	Endorse umbrella proposal, but request further development along with daughter proposals
735-CPP2	South China Sea Evolution	Forward to FB
770 Full3	Kanto Asperity Project: Observatories	Put in holding bin before further consideration by the Facility Boards
774-APL2	Costa Rica Subseafloor Microbial Mats	Deactivate
777-APL3	Okinawa Trough Quaternary Paleoceanography	Forward to FB
784-Full2	Amundsen Sea Ice Sheet history	Deactivate
793-CPP2	Arabian Sea Monsoon	Send to external review
795-Full2	Indian Monsoon Rainfall	Send to external review
800-MDP	Indian ridge Moho	Send to external review
807-Full	Indonesian Throughflow	Send to External Review
808-APL	East/Japan Sea back-arc opening	Deactivate
809-APL	Alaska Holocene record	Forward to FB
810-APL	Hole504B life limit	Deactivate
811-Pre	Cape Fear Slope Stability	Develop full-proposal
812-Pre	Ross Sea Glacial History	Develop full proposal
813-Pre	Antarctic Cenozoic Paleoclimate	Develop full proposal
814-Pre	Greenland Ice Sheet	Develop MDP
815-Pre	Weddell Sea History	Deactivate and encouraged to submit two new Pre-Proposal(s)
816-APL	ReCORK Hole858G	Forward to FB
817-Pre	Maldives Atolls Sea Level	Deactivate

The PEP and representatives from NSF and Ocean Leadership, discussed the balance between the benefits of fast tracking proposals and external review. Specifically, it was suggested that the PEP skip external review for some proposals to meet scheduling deadlines. This suggestion generated a spirited discussion, with several PEP members making a strong case for upholding external review standards. Even in light of the constraints imposed by scheduling, PEP members noted that an expedited external review was possible, with PEP watchdogs involved in the process.

Hiroshi Nishi commented that the review criteria for CPPs should be more discussed at the next PEP.

8. Review of motions and consensus items

No motions and consensus

9. 4th PEP meeting

Location: Santa Cruz

Timing: mid June

Host: James Zachos

10. AOB

No other business was discussed.

Kroon adjourned the meeting at 16:30.