

IODP Science Planning Committee**15th Meeting, 23-26 March 2010****University of Sydney, Sydney, Australia*****Science Planning Committee (SPC)***

Ryo Anma ^a	Tuskuba University, Japan
Donna Blackman	Scripps Institution of Oceanography, USA
Gilbert Camoin	CEREGE-CNRS, France
Daekyo Cheong (non-voting)	Kangwon National University, Korea
David Feary	National Academy of Sciences, USA
Gabriel Filippelli (Chair)	Indiana University-Purdue University Indianapolis, USA
Gretchen Früh-Green	ETH Zurich, Switzerland
Chris Hollis ^b (non-voting)	GNS Science, New Zealand
Hugh Jenkyns	University of Oxford, United Kingdom
Barbara John	University of Wyoming, USA
Takeshi Kakegawa	Tohoku University, Japan
Junzo Kasahara (Vice chair)	University of Tokyo, Japan
Chunfeng Li (non-voting)	Tongji University, China
Richard Murray	Boston University, USA
Naohiko Ohkouchi	IFREE, JAMSTEC, Japan
Larry Peterson	Rosenstiel School of Marine and Atmospheric Science, University of Miami, USA
Ruediger Stein	Alfred-Wegener-Institute for Polar and Marine Research, Germany
Akira Takada	National Institute of Advanced Industrial Science and Technology (AIST), Japan
Tomochika Tokunaga*	University of Tokyo, Japan
Suzumu Umino	Kanazawa University, Japan
Ben van der Pluijm	Department of Geological Sciences, University of Michigan, USA
Jody Webster* (non-voting)	University of Sydney, Australia
Toshitsugu Yamazaki	National Institute of Advanced Industrial Science and Technology (AIST), Japan

^a Alternate for Tomochika Tokunaga^b Alternate for Jody Webster

*Unable to attend

Liaisons, Guests, and Observers

Jamie Allan	National Science Foundation (NSF), USA
Maria Ask (EDP)	Luleå University of Technology, Sweden
Wataru Azuma	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan
Keir Becker**	University of Miami, USA
Se Won Chang (K-IODP)	Korea Institute for Geoscience and Mineral Resources (KIGAM), Korea
Richard Coleman	The Australian Research Council, Australia
David Divins	Ocean Drilling, The Consortium for Ocean Leadership, USA
Nobuhisa Eguchi	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan
Elisabetta Erba**	The University of Milano, Italy
Dan Evans	ECORD Science Operator (ESO), British Geological Survey, United Kingdom
Neville Exon (ANZIC)	Research School of Earth Sciences, The Australian National University, Australia
Geoff Garrett**	The Australian National University, Australia

Akira Ishiwatari (SSEP)	Center for Northeast Asian Studies, Tohoku University, Japan
Barry Katz (EDP)	Chevron Corporation, USA
Hodaka Kawahata**	University of Tokyo, Japan
Hiroshi Kawamura	IODP Management International, Japan
Yoshihisa Kawamura	IODP Management International, Japan
Dennis Kent**	Rutgers University, USA
Denise Kulhanek	IODP Management International, Japan
Hans Christian Larsen	IODP Management International, Japan
Jeanette Lezius (ESSAC)	Alfred-Wegener-Institute for Polar and Marine Research, Germany
Ian Macgregor**	University of California, Davis, USA
Alberto Malinverno	Lamont-Doherty Earth Observatory, USA
Mitch Malone	JOI Alliance, Texas A&M University, USA
Catherine Mével	ECORD Management Agency (EMA), Paris Geophysical Institute (IPGP), France
Joanna Morgan**	Imperial College London, United Kingdom
Takeshi Nakagawa	Ministry of Education, Culture, Sports, Science, and Technology (MEXT), Japan
Seung-il Nam	Korea Institute for Geoscience and Mineral Resources (KIGAM), Korea
Clive Neil (STP)	University of Notre Dame, USA
Jin-Oh Park (SSP)	Ocean Research Institute, University of Tokyo, Japan
Ian Ridley	National Science Foundation (NSF), USA
Jeff Schuffert	U.S. Science Support Program (USSSP), The Consortium for Ocean Leadership, USA
Fujii Toshitsugu**	University of Tokyo, Japan

**Triennium Review Committee

IODP Science Planning Committee

15th Meeting, 23-26 March 2010

University of Sydney, Sydney, Australia

EXECUTIVE SUMMARY (v1.2)

1. Introduction

1.3. Approve Science Planning Committee meeting agenda – highlight action items

SPC Consensus 1003-01: The SPC adds an executive session at the end of Day 3 (Thursday) to the agenda, and then approves the agenda for its fifteenth meeting on 23-26 March 2010 in Sydney, Australia.

1.4. Approve last Science Planning Committee meeting minutes

SPC Consensus 1003-02: The SPC approves the minutes of its fourteenth meeting on 25-27 August 2009 in Kiel, Germany.

1.5. Items approved since August 2009 meeting

SPC Motion 1001-01: The SPC does not forward Proposal 757-APL (South Pacific Eocene-Oligocene) to the Operations Task Force (OTF).

Jenkyns moved; van der Pluijm seconded; 16 in favor (Blackman, Camoin, Feary, Früh-Green, Jenkyns, John, Kakegawa, Kasahara, Murray, Ohkouchi, Peterson, Takada, Tokunaga, Umino, van der Pluijm, Yamazaki); 1 did not vote (Filippelli); 4 non-voting (Cheong, Li, Stein, Webster)

SPC Motion 1001-02: The SPC forwards Proposal 762-APL Grizzly Bare Outcrop Microbiology to the Operations Task Force (OTF) for potential scheduling.

van der Pluijm moved; Peterson seconded; 15 in favor (Blackman, Camoin, Fear, Früh-Green, John, Kakegawa, Murray, Ohkouchi, Peterson, Stein, Takada, Tokunaga, Umino, van der Pluijm, Yamazaki); 2 did not vote (Filippelli, Kasahara); 4 non-voting (Cheong, Jenkyns, Li, Webster)

2. Presentation and discussion of proposals

2.3. Solid Earth Cycles and Geodynamics

SPC Consensus 1003-03: The SPC recognizes an urgent need to develop adequate borehole monitoring capabilities for future ocean drilling activities, the lack of which currently hamper highly meritorious proposals that address key goals of the IODP science plan. Particularly, capabilities for fluid, biosphere, seismic, and displacement monitoring are central to the future of the program. Borehole monitoring will also provide synergistic collaborations with other ocean observatory activities that are being planned or underway.

7. IODP Science Advisory Structure panel reports

7.4 Scientific Technology Panel

SPC Consensus 1003-04: The SPC accepts all consensus items forwarded to it by the Scientific Technology Panel (STP) for this meeting.

7.5 Engineering Development Panel

SPC Motion 1003-05: The SPC accepts all Engineering Development Panel (EDP) consensus items forwarded to it for this meeting.

van der Pluijm moved, Peterson seconded, passed unanimously

8. Approve new Science Steering and Evaluation Panel co-chair

SPC Motion 1003-06: The SPC approves the nomination of Yasufumi Iryu as the new co-chair of the Science Steering and Evaluation Panel (SSEP).

Camoin moved; Peterson seconded; passed by consensus

10. International Continental Scientific Drilling Program report

10.2. ICDP and US NAS combined discussion on Climate-Hominid Evolution

SPC Consensus 1003-07: SPC recognizes the high scientific value and widespread societal interest in understanding how—or whether—climate influenced the early stages of human evolution on the African continent. Addressing this issue requires a much more detailed understanding of the regional and local climates in which hominids and hominins evolved, and this understanding will require a coherent and integrated approach to recovering detailed climate records from terrestrial (former lake) sequences, from present day lakes in Africa, and from the ocean basins surrounding Africa. SPC invites the ICDP community to join with the IODP community to establish a Joint Program Planning Group charged to plan an integrated onshore, lake, and ocean drilling program that would dramatically enhance scientific understanding of how past climates may have influenced the early stages of our evolution.

15. Global ranking of proposals I

15.1. Select proposal pool to rank

SPC Consensus 1003-08: The SPC deactivates Proposals 547-Full4 Oceanic Subsurface Biosphere and 557-Full2 Storegga Slide Gas Hydrates and will not consider them for ranking.

SPC Consensus 1003-09: The SPC will not consider Proposal 703-Full (Costa Rica SEISCORK) for ranking during this meeting.

SPC Consensus 1003-10: The SPC asks for revision of Proposals 667-Full NW Australian Shelf Eustasy, 595-Full3 Indus Fan and Murray Ridge, and 698-Add2 Izu-Bonin-Mariana Arc Middle Crust and returns them to the proponents.

SPC Consensus 1003-11: The SPC will include in the ranking pool 18 of the proposals reviewed at this meeting.

16. Presentation and discussion of Ancillary Project Letters

SPC Consensus 1003-12: The SPC will keep 738-APL Nankai Trough Submarine Landslides at the Operations Task Force (OTF) to be scheduled.

SPC Consensus 1003-13: The SPC enthusiastically endorses Proposal 763-APL Iberian Margin Paleoclimate to triple APC-core the Pleistocene sequence at the location of the well-

known Iberian margin core MD95-2042 and forwards it to the Operations Task Force (OTF). We recognize the high value of this site for providing an important North Atlantic reference section that allows for direct correlation to polar ice cores through its isotopic signals, and for integrating marine and terrestrial signals by virtue of its relatively near-shore position. This APL has outstanding potential to provide a “virtual Greenland” record that will provide insights into the rates and magnitudes of climate change on multiple timescales and over multiple glacial-interglacial cycles when natural climate forcing (e.g., orbital, CO₂) differed substantially. Recognizing that creation of a proper marine “type section” calls for a multitude of replicated proxy measurements, SPC encourages OTF to consider providing enough time to collect a fourth APC hole to 150 mbsf to ensure recovery of a complete sequence so that sediment does not become limiting in post-collection sampling. The potential value of logging at least one hole should also be considered as part of the operational considerations at this site.

18. Global ranking of proposals II

18.3 Select ranked proposals to forward to Operations Task Force

SPC Motion 1003-14: The SPC moves to have proposals ranked 1-11 forwarded to the Operations Task Force (OTF) with the understanding that Proposal 659-Full includes alternate site emphasis.

Murray moved, Camoin seconded, 12 in favor (Blackman, Camoin, Feary, Filippelli, John, Kakegawa, Kasahara, Murray, Okhouchi, Peterson, Stein, Takada), 1 opposed (Yamazaki), 4 abstained (Anma, Früh-Green, Umino, van der Pluijm), 3 non-voting (Cheong, Hollis, Li)

SPC Consensus 1003-15: The SPC places Proposal 681-Full2 Lesser Antilles Volcanic Landslides in the holding bin until after the site survey data have been released. Once the data are released, the SPC chair will send an email to all SPC members.

SPC Consensus 1003-16: The SPC removes all tier designations for proposals residing at the Operations Task Force (OTF) and does not give any tier designations for proposals being forwarded to OTF this year.

18.5. Select proposals to deactivate

SPC Consensus 1003-17: The SPC deactivates Proposal 556-Full4 Malvinas Confluence because it has ranked low in the last several SPC evaluations and realistically has little chance of being implemented within the current phase of the IODP, which ends in 2013.

20. Other Business

20.1 Liaisons Ocean Observatories Initiative

SPC Consensus 1003-18: The SPC creates a subcommittee consisting of Früh-Green, Blackman, and Kasahara to work with the Science Advisory Structure Executive Committee (SASEC) to enhance communication with ocean observatory efforts to promote collaborative science activities.

21. Review of motions and consensus items

SPC Consensus 1003-19: The SPC thanks Jody Webster for (virtual) hosting the 15th IODP Science Planning Committee Meeting, held at the University of Sydney. We thank Neville Exon for being the on-site host. Inke Falkner and Edwina Tanner from the University of

Sydney offered indispensable logistical support. The meeting venue was in a beautiful location that was further amplified by lovely weather and most helpful people. The SPC thanks Tom Hubble for a wonderful fieldtrip to Long Reef that focused on sandstone depositional environments, and also showed us where to live near Sydney when money is no object. Finally, the SPC thanks the host for a welcoming ice breaker on Monday evening and an enjoyable banquet on Thursday night.

SPC Consensus 1003-20: The SPC thanks Dan Evans for his dedicated and highly effective service as ESO Manager. Between 2003 and 2010, he has played a crucial role in the successful implementation of the first four IODP MSP operations (Arctic Coring, Tahiti Sea Level, New Jersey Shallow Shelf, Great Barrier Reef Environmental Changes), which turned out to be major achievements in scientific drilling. The Program will miss his experience and Welsh wisdom.

SPC Consensus 1003-21: The SPC greatly thanks Tomochika Tokunaga's deep knowledge of the program, especially for hydrological aspects in subduction zone processes that have been critical in SPC decision making. Thank you Tomochika, we will miss your enthusiastic contributions.

SPC Consensus 1003-22: The SPC is very enthusiastic about the upcoming start of work on the Costa Rica Seismogenesis Project. Operations during CRISP-A promise to position the program well for eventual deep riser drilling.

SPC Consensus 1003-23: The SPC will leave Proposal 738-APL Nankai Trough Submarine Landslides at the Operations Task Force (OTF), and asks the NanTroSEIZE Project Management Team (PMT) to recommend appropriate co-Chief scientists suited to the new drilling plan involving non-riser operations.

IODP Science Planning Committee

15th Meeting, 23-26 March 2010

University of Sydney, Sydney, Australia

DRAFT MINUTES v1.1

Tuesday	23 March 2010	08:30-17:30
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1. Introduction

1.1. Call to order and self introductions

The Science Planning Committee (SPC) chair Gabriel Filippelli called the meeting to order at 08:40. He reminded everyone that this is an international meeting, so speak slowly and clearly. All meeting participants introduced themselves, stating their name, scientific specialty, and institution/organization affiliation. At 08:45 the SPC chair noted that fifteen voting members were present, which was enough to begin the meeting.

1.2. Welcome and meeting logistics

Local meeting host (by proxy) Neville Exon welcomed the meeting participants to the University of Sydney and explained that the meeting host Jody Webster was unable to attend as he was a co-chief on the Great Barrier Reef Expedition that was currently underway. Edwina Tanner outlined the logistics for the meeting and indicated she would be around during morning tea and at lunch to help with any logistical issues.

1.3. Approve Science Planning Committee meeting agenda – highlight action items

Gabe Filippelli summarized the major agenda items for the meeting: (1) review and ranking of twenty-four proposals; (2) agency, Integrated Ocean Drilling Program – Management International (IODP-MI), and Implementing Organization (IO) reports; (3) Science Advisory Structure (SAS) panel reports; (4) International Working Group Plus (IWG+) interactions; (5) 2nd Triennium Review Panel; and (6) brief Operations Task Force (OTF) meeting Tuesday night to discuss implementation issues for the Costa Rica Seismogenesis Project (CRISP) A.

Filippelli asked if there were any changes to the agenda. Stein asked if Proposal 748-Full Nice Airport Landslide would be discussed during the meeting, as it was currently not on the agenda. Filippelli indicated he had discussed the proposal with the proponents over the last two months, but there was no resolution at this point. He noted that the proposal was not forwarded to SPC by the Science Steering and Evaluation Panel (SSEP), but the proponents felt this decision was improper. Filippelli indicated there could be further explanation of this on Wednesday. Feary then asked if there would be an SPC Executive Session, which was also not on the agenda. He suggested that there was a little time on Day 3 of the agenda so it might be scheduled then. Filippelli moved to add an Executive Session to the agenda and asked for any objections. As there were none, the agenda was approved by consensus.

<p>SPC Consensus 1003-01: The SPC adds an executive session at the end of Day 3 (Thursday) to the agenda, and then approves the agenda for its fifteenth meeting on 23-26 March 2010 in Sydney, Australia.</p>

1.4. Approve last Science Planning Committee meeting minutes

Gabe Filippelli asked for comments or clarifications/changes to the draft minutes from the fourteenth SPC meeting (August 2009; Kiel, Germany). With no comments, the committee approved the minutes by consensus.

SPC Consensus 1003-02: The SPC approves the minutes of its fourteenth meeting on 25-27 August 2009 in Kiel, Germany.

1.5. Items approved since August 2009 meeting

Gabe Filippelli noted that two ancillary project letters (APLs) had been acted upon by SPC through email discussions since the August 2009 meeting, resulting in two motions.

SPC Motion 1001-01: The SPC does not forward Proposal 757-APL (South Pacific Eocene-Oligocene) to the Operations Task Force (OTF).

Jenkyns moved; van der Pluijm seconded; 16 in favor (Blackman, Camoin, Feary, Früh-Green, Jenkyns, John, Kakegawa, Kasahara, Murray, Ohkouchi, Peterson, Takada, Tokunaga, Umino, van der Pluijm, Yamazaki); 1 did not vote (Filippelli); 4 non-voting (Cheong, Li, Stein, Webster)

SPC Motion 1001-02: The SPC forwards Proposal 762-APL Grizzly Bare Outcrop Microbiology to the Operations Task Force (OTF) for potential scheduling.

van der Pluijm moved; Peterson seconded; 15 in favor (Blackman, Camoin, Fear, Früh-Green, John, Kakegawa, Murray, Ohkouchi, Peterson, Stein, Takada, Tokunaga, Umino, van der Pluijm, Yamazaki); 2 did not vote (Filippelli, Kasahara); 4 non-voting (Cheong, Jenkyns, Li, Webster)

1.6. Science Planning Committee procedures and protocol

Gabe Filippelli showed a PowerPoint slide indicating the role of the SPC within the SAS. Specifically he mentioned that the SPC was chartered by the Science Advisory Structure Executive Committee (SASEC) for science planning. The SPC focuses on the annual process of review for ranking of mature proposals and also recommends the annual engineering plan. All other SAS panels report through the SPC. He noted that since the SPC is basically the top of the filter, the committee must be aware of what is going on in the other panels and SASEC at all times.

1.6.1. Terms of reference, Robert's Rules, ranking/voting procedures

Gabe Filippelli referred to the SPC terms of reference and noted that a SPC decision requires either a consensus or an affirmative vote of at least two-thirds of the committee. He also pointed out that a quorum comprises two-thirds of the committee. Filippelli explained that the SPC occasionally uses straw votes, which are unofficial and generally do not appear in the minutes (unless specifically requested by the chairperson). He explained that SPC meetings are conducted according to Robert's Rules of Order and listed some of salient points from this set of rules. He noted that consensus is not defined by Robert's Rules; however, consent is defined and means that even if a person has an objection, he or she does not feel strongly enough to stop the meeting to make another motion.

1.6.2. Conflict-of-interest policy and participants' declarations

Gabe Filippelli reviewed the conflict-of-interest (CoI) procedures for the meeting. He noted that all CoIs are recorded in the minutes, even if it is decided that the person can be present in the room during discussion of proposals. All proposals being ranked or on the schedule to be discussed must have CoIs declared; the chair makes the final judgment about conflicts, but SPC members can ask for clarification if they disagree with the decision. Conflict-of-interest declarations must be done by all people present at the meeting. Filippelli listed the different types of CoIs, including egregious (proposal proponent) and institutional conflicts, although in the past the committee has generally not regarded institutional conflicts as real conflicts. The SPC members and other meeting participants declared the following direct or potential indirect CoIs regarding potential discussions; the chair's ruling follows each member's declaration(s):

SPC member conflict-of-interest declarations

Name	Declaration	Ruling by Filippelli*
Blackman	a. Institutional: 553-Full2 Cascadia Margin Hydrates; 659-Full Newfoundland Rifted Margin; 661-Full2 Newfoundland Sediment Drifts; 703-Full Costa Rica SEISCORK b. Professional: publishing with a proponent of 551-Full Hess Deep Plutonic Crust	a. No conflict b. No conflict
Camoin	Lead proponent on 519-Full2, residing at OTF	No conflict
Früh-Green	Professional: working on a project with one of the proponents of 551-Full Hess Deep Plutonic Crust (focus of research is different)	No conflict
John	a. Institutional: 659-Full Newfoundland Rifted Margin b. Professional: working with proponents of 551-Full Hess Deep Plutonic Crust	a. No conflict b. No conflict
Ohkouchi	Institutional: 695-Full2 Izu-Bonin-Mariana Pre-Arc Crust; 697-Full3 Izu-Bonin-Mariana Reararc Crust; 698-Full2 Izu-Bonin-Mariana Arc Middle Crust	No conflict
Peterson	Institutional: 551-Full Hess Deep Plutonic Crust; 703-Full Costa Rica SEISCORK	No conflict
Murray	a. Applied to sail on upcoming expedition already on schedule b. Student participated on Expedition 322 NanTroSEIZE Stage 2: Subduction Inputs	a. No conflict b. No conflict
van der Pluijm	Research associate working on IODP NanTroSEIZE	No conflict
Yamazaki	Originally a proponent of 695-Full2 Izu-Bonin-Mariana Pre-Arc Crust, but is no longer	No conflict

Observer and liaison conflict-of-interest declarations

Name	Declaration	Ruling by Filippelli*
Neal	Proponent: 548-Full2 Chixculub K-T Impact Crater	Conflict: 1

Exon	Proponent: 667-Full NW Australian Shelf Eustasy	Conflict: 2
Malone	Institutional: 567-Full4 South Pacific Paleogene	No conflict
Mével	Institutional: 681-Full2 Lesser Antilles Volcanic Landslides	No conflict
Park	Proponent of 603 (NanTroSEIZE Stages 1, 2, 3); 731-Pre Papua New Guinea Orogenic Lifecycle; 738-APL Nankai Trough Submarine Landslides	Conflict: 3

***Conflicts:**

- 1: Conflicted for Agendum 2 (Presentation and discussion of proposals).
- 2: Conflicted for part of Agendum 2.2 (Presentation and discussion of Proposal 667-Full NW Australian Shelf Eustasy). Proponents asked that the proposal not be ranked at this meeting, so Feary will give a brief presentation and then Exon will be allowed to return to the meeting.
- 3: Conflicted for Agendum 10 (Clarify status of proposals remaining at OTF).

2. Presentation and discussion of proposals

The committee reviewed the twenty-four full proposals shown in the table below, organized by agendum according to the three main themes of the Integrated Ocean Drilling Program (IODP) Initial Science Plan (ISP). For each proposal, the lead watchdog presented the scientific objectives and the second and third watchdogs were given the opportunity to comment. The chairs of the SSEP, the Site Survey Panel (SSP), and the Environmental Protection and Safety Panel (EPSP) were then given the opportunity to comment. This was followed by SPC member discussion, and then the floor was opened for comments from everyone.

Prior to beginning the proposal review, Filippelli brought up CoI issues. He noted that Exon was conflicted with a proposal (667-Full NW Australian Shelf Eustasy) that the proponents had asked not to be ranked at this meeting. It was therefore decided that Feary (lead watchdog) would do a brief presentation of the proposal at the beginning of the proposal review, and then Exon would be allowed to return to the room. Additionally, Filippelli noted that input from the SSP chair (Park) would be incredibly valuable to the discussion. Although he is a Nankai Trough Seismogenic Zone Experiment (NanTroSEIZE) proponent, that proposal was not being discussed, therefore Filippelli recommended he be allowed to provide input as the SSP chair during Agendum 2 (Proposal presentation and discussion), but then not be present during discussion of proposals available for scheduling (Agendum 10). Neal remained out of the room for the entire proceedings as a conflicted proponent.

Proposal	Short Title	Watchdogs	Conflicts
2.1. Deep Biosphere and Subseafloor Ocean (6 proposals)			
547-Full4	Oceanic Subsurface Biosphere	Murray/Peterson/Camoin	None
553-Full2	Cascadia Margin Hydrates	Kakegawa/Blackman/Jenkyns	None
555-Full3	Cretan Margin	van der Pluijm/Kakegawa/Feary	None
557-Full2	Storegga Slide Gas Hydrates	Hollis/Feary/Kasahara	None
589-Full3	Gulf of Mexico Overpressure	Kasahara/van der Pluijm/Blackman	None
633-Full2	Cost Rica Mud Mounds	Kakegawa/Kasahara/Umino	None
2.2. Environmental Change, Processes, and Effects (10 proposals)			
548-Full2	Chixculub K-T Impact Crater	Stein/Yamazaki/Jenkyns	Neal

556-Full4	Malvinas Confluence	Li/Stein/Camoin	None
567-Full4	South Pacific Paleogene	Murray/Stein/Hollis	None
581-Full2	Late Pleistocene Coralgal Banks	Camoin/Feary/Hollis	None
595-Full3	Indus Fan and Murray Ridge	Cheong/Murray/Peterson	None
661-Full2	Newfoundland Sediment Drifts	Jenkyns/Cheong/Yamazaki	None
667-Full	NW Australian Shelf Eustasy	Feary/Jenkyns/Cheong	Exon
672-Full3	Baltic Sea Basin Paleoenvironment	Hollis/Murray/Li	None
686-Full	Southern Alaska Margin I	Peterson/Cheong/Murray	None
732-Full2	Antarctic Peninsula Sediment Drifts	Stein/Yamazaki/Peterson	None

2.3. Solid Earth Cycles and Geodynamics (8 proposals)

551-Full	Hess Deep Plutonic Crust	Früh-Green/Anma/Takada	None
659-Full	Newfoundland Rifted Margin	Takada/Anma/John	None
669-Full3	Walvis Ridge Hotspot	John/ Früh-Green/Umino	None
681-Full2	Lesser Antilles Volcanic Landslides	Kasahara/ Früh-Green/Yamazaki	None
695-Full2	Izu-Bonin-Mariana Pre-Arc Crust	Umino/Takada/Feary	None
697-Full3	Izu-Bonin-Mariana Reararc Crust	Anma/van der Pluijm/John	None
698-Full2	Izu-Bonin-Mariana Arc Middle Crust	John/Umino/Takada	None
703-Full	Costa Rica SEISCORK	Kasahara/van der Pluijm/Peterson	None

As a result of the discussion of Proposal 703-Full Costa Rica SEISCORK, the SPC decided there was a need to indicate the importance of developing SEISCORK technology. This resulted in the following consensus statement:

SPC Consensus 1003-03: The SPC recognizes an urgent need to develop adequate borehole monitoring capabilities for future ocean drilling activities, the lack of which currently hamper highly meritorious proposals that address key goals of the IODP science plan. Particularly, capabilities for fluid, biosphere, seismic, and displacement monitoring are central to the future of the program. Borehole monitoring will also provide synergistic collaborations with other ocean observatory activities that are being planned or underway.

Wednesday

24 March 2010

08:30-17:30

3. Agency Reports

3.1. International Working Group Plus

Catherine Mével reported on the IWG+, a group formed to develop a new multinational program architecture that promotes delivery of the best possible and most exciting and relevant science to the broad scientific community and the public through ocean drilling. IWG+ meets every six months (beginning in June 2009) and is composed of three co-chairs, members from all funding agencies, and observers from IODP-MI, IOs, and the scientific community. She indicated that excellent planning progress has been made and that the new program should focus on integrative cooperation with leadership emphasis on the platform providers rather than the current lead agencies.

Mével described four position papers on points of agreement developed by IWG+. The first position paper is on the multinational program architecture and financial contributions. This paper suggests elimination of the distinction between platform operations costs (POC) and science operating costs (SOC), and that platform providers would cover all costs associated

with operating their platforms. Commingled funds would be maintained and used to support integrative activities and contribute to *Chikyu* riser operations. At this point participation rights based on financial contributions to the commingled funds have not been defined. The second position paper describes the new program management and money flow and suggests that IODP-MI would continue as the Central Management Office (CMO) through the transition phase (until 2016). In the new program the CMO would continue to conduct integrative activities including planning, core curation, data management, education and outreach, recruitment of new members, publications, engineering development, linkages to other programs, and fund raising. The third paper proposes a new SAS structure, which will be forwarded to the Triennium Review Committee when it is completed. This paper suggests simplifying the current structure into two committees for proposal evaluation and program development. (This would be a reduction from the current three: SSEP/SPC/SASEC). It also suggests separate pathways for planning riser and long-term multi-expedition riserless projects. The new structure may include an Executive Board, with membership similar to that currently in IWG+. The fourth position paper describes transition to the new program. It stresses the importance of beginning now in order to be ready for new expeditions in 2014. One important consideration is when to call for new proposals to the program. Mével asked for SPC comments on this consideration. She stressed the importance of having the new structure in place well before 2013.

Mével indicated that the IWG+ is overseeing writing of the new science plan. Working with SASEC and IODP-MI, a committee was formed in December 2009 to undertake this task. IWG+ has given guidance to this Science Plan Writing Committee (SPWC), including suggested yearly operational time of 5-10 months for the *Chikyu*, 8-12 months for the *JOIDES Resolution (JR)*, and one Mission-Specific Platform (MSP) operation. IWG+ has indicated that the new science plan should be aimed at the broad scientific community and should include a mix of exciting basic science and societally relevant science. Furthermore it should include borehole experiments, links to other large programs, and incorporate education and outreach throughout the program. The hope is to have preparations in place for the new plan by mid-2011.

van der Pluijm asked about going from three to two committees, but including an executive board in the proposed new SAS. Mével indicated that the plan is to simplify the SAS and they do not want to add an executive board in addition to the two proposed panels/committees. Camoin commented on the separate pathways for riser versus riserless projects. He noted that the current model does not work well for long-term expeditions, but since they are still in the planning phase for the new organization, ideas would be welcome. Murray asked about phasing out the CMO by 2016. Mével responded that they hope to keep the function, but phase out the current CMO. The new CMO would have the same broad scope as the current one. Allan indicated that the National Science Foundation (NSF) would convert all contracts to competitive agreements as part of this process (see Agendum 3.3). Neil asked what the new SAS would look like. Mével indicated that it is currently unknown what it would look like in the new program. Allan added that the way SAS is set up now does not work as there is a lot of confusion as to who does what. He suggested that the new system should be simpler, with an Executive Board overseeing the entire program that includes all participants, operators, central management, and funding agencies (similar to the International Continental Scientific Drilling Program (ICDP) and other large programs). Park asked if the total number of expeditions each year would be similar to current levels in the new program. Mével indicated that it would depend, but at a minimum would be similar to current operational

days. Schuffert noted that the existing SAS would continue for now and asked if membership rotation should continue at this point. Mével indicated that by June there should be more information about how to proceed; the transition plan needs to be finalized first.

3.2. Japan Ministry of Education, Culture, Sports, Science, and Technology

Takashi Nakagawa gave the Japan Ministry of Education, Culture, Sports, Science, and Technology (MEXT) report. He began with an outline of NanTroSEIZE, indicating that the first riser expedition to investigate the mechanisms of large earthquakes and tsunamis was completed in 2009. The current NanTroSEIZE program is expected to run from 2007 to 2013, with the first stage of activities conducted during September 2007-February 2008 and the second stage conducted during May-October 2009. During the second stage, the *Chikyu* drilled to 1,603 meters below the seafloor (mbsf) and future stages plan to drill to 6,000 mbsf or more.

Nakagawa noted that the Japan Drilling Earth Science Consortium (J-DESC) has contributed a white paper for the new science plan. This white paper includes five sections; four dedicated to important themes for the new science plan (deep biosphere, Earth's interior, geohazards, and paleoenvironments) and one to science implementation. Nakagawa indicated that there is a new IODP campaign to promote Japanese participation in IODP and that this campaign has resulted in a lot of outreach to students. He also mentioned the recent meeting between MEXT, NSF, and the European Consortium for Ocean Research Drilling (ECORD) officials. The group met at the new IODP-MI office in Tokyo and also traveled to Kochi to visit the Kochi Core Center (KCC). Nakagawa also noted that there was a large political change in Japan last year and that this was not good news for IODP. He said the new government initiated a program review of the *Chikyu* (and many other science programs) and that there would be a focus switch to independent agencies (such as the Japan Agency for Marine-Earth Science and Technology (JAMSTEC)) instead of contributions from many scientists. Even with these changes, he noted that new *Chikyu* drilling should begin in June or July of this year.

van der Pluijm asked for further clarification about the results of the government change. Nakagawa indicated that the new government tried to shrink the budget for *Chikyu* operations. Kakegawa indicated that he thought JAMSTEC was not subject to another governmental review yet, and asked if there was a misunderstanding. Azuma indicated that politicians wonder why an international program is so important when JAMSTEC contributes so much money to *Chikyu* operations. Prior to the change of government, decisions were made by bureaucrats, but now the decisions will be made by politicians. Blackman asked if NanTroSEIZE was still an important priority for MEXT.

3.3. U.S. National Science Foundation (NSF)

Jamie Allan began with a brief introduction to the early days of the Deep Sea Drilling Program (DSDP). He indicated that when the program first drilled into the Mediterranean Sea, they discovered it had completely dried up in the past. This amazing result from the new program excited NSF, even after they discovered that most of the scientists on the expedition were European (only one scientist was from the U.S.). Even then NSF knew that science was most important, despite the U.S. paying for much of the program at that time; however, the international phase of scientific ocean drilling began soon after. Today, the program is still called the Ocean Drilling Program (ODP) within NSF; they have never transitioned to IODP. Allan showed the organizational structure of the marine geosciences program within NSF.

The section head is Rodey Batiza. Within the ODP program, Jamie Allan handles contracts, Sarah Menassian is the science assistant, Ian Ridley works with the grants program, Deborah Smith handles the United States Science Support Program (USSSP) and ODP grants, and John Walters is the former Science Ocean Drilling Vessel (SODV) project officer (he is now retired).

Allan then discussed NSF-specific post-2013 planning. He noted that NSF has called for a National Research Council (NRC) scientific drilling study to look at past accomplishments of the program (in its various phases) and also to examine the post-2013 draft science plan in terms of its potential for transformative discoveries. NSF is currently exploring conversion of the CMO and System Integration Contract (SIC) to cooperative agreements by 2011. In order to implement a new program, first NSF must obtain Directorate for Geosciences (GEO) approval and then National Science Board (NSB) approval. NSF hopes there will be no gap in the program between 2013 and 2014. Allan went on to explain that the current program management is awkward and overly complex, with significant overlap between the CMO and SIC. The SIC was developed first to ensure that work could go forward; there are subcontracts within SIC with Texas A&M University (TAMU) for ships and Lamont-Doherty Earth Observatory (LDEO) for logging. The CMO contract is with IODP-MI and since services it provides are planned not to be re-competed, change to a cooperative agreement should be seamless. In the new program, the SIC would focus on management of operations and seeking new cooperation, whereas the CMO would not be involved with platform management or flow of money for platform operations.

Murray asked for clarification on re-competing and what would be migrating to different structures. Allan indicated that eventually all cooperative agreements would have to be re-competed as the NSB has made it clear that re-competition is expected in any program. NSF hopes to do minimum re-competition initially during the transition, with a target date for re-competition after 2015. van der Pluijm asked what NSF sees as the value of an international program. Allan responded that international programs leverage science capabilities enormously. There are more minds looking at problems and different cultures solve problems in different ways. He indicated that NSF looks at it in terms of intellectual capital. Filippelli commented to NSF and IWG+ that SPC is aware they will have to help with transition of proposals and that SPC is prepared to give guidance or develop a more concrete plan for how to transition proposals at the next SPC meeting. Mével noted that the next meeting might be a little late. Neil asked for clarification on the difference between a contract and a cooperative agreement. Allan indicated that contracts were the only means available to acquire services in the U.S. government until the 1980s and 1990s. Contracts work well for purchasing or building physical things, but relatively poorly for acquiring intellectual services. Contracts are implemented through a contracting officer, who has legal authority. Cooperative agreements are a longer term agreement designed more for intellectual services, with no contracting officer as a middle man. IODP began with contracts because they were acquiring a drillship and planned to funnel a lot of money; additionally, contracts had been used for previous phases of the program. Changes within NSF in acquiring and running large facilities have made using contracts awkward; thus, IODP wants to take advantage of these new tools (cooperative agreements). Blackman asked what exploring new partnerships mean. Allan indicated that this means seeking users for the drillship (*JR*). The biggest challenge with the program is that we cannot run the drillship all year, but we want to be able to do that. Peterson asked about the timing for the NRC study. Allan indicated that the committee is being put together now and that hopefully the review will be finished within a year. Filippelli asked who the proposed members of the review committee are. Allan indicated that they are

people outside of the ocean drilling community. Feary added that the committee is mostly assembled at this point.

3.4. ECORD Management Agency

Catherine Mével indicated that as of 1 April 2010, the new chair of the ECORD Management Agency (EMA) would be Guido Lüniger of Germany. She also noted that Ruediger Stein became the new ECORD Science Support and Advisory Committee (ESSAC) chair on 1 October 2009. At that time the ESSAC office moved to the Alfred Wegener Institute in Bremerhaven, Germany and Jeanette Lezius became the new ESSAC coordinator. ECORD plans to implement two more MSP expeditions prior to the end of the current program; however, there is concern about the exchange rate between the euro and the dollar. ECORD will offer three paleoclimate summer schools this year: Dynamics of Past Climate Changes (Bremen, Germany), Palaeoclimatology (Urbino, Italy), and Ocean and Climate Changes in Polar and Subpolar Environments (Québec, Canada). As in previous years, 10-15 scholarships will be available to help students participate. Mével noted that the next ECORD meeting will be held in Tromsø, Norway on 26-27 May 2010. At this meeting, members will decide on ECORD grants (a new scheme to support young scientists), the new ECORD distinguished lecturers, and the 2011 ECORD summer schools.

Mével noted that ECORD is involved with many IODP activities at the upcoming European Geosciences Union (EGU) meeting in Vienna, Austria in May. There will be a joint IODP-ICDP booth on 3-6 May. There is also an IODP-ICDP Townhall meeting at 19:00 on Tuesday, 4 May. Furthermore, there is an interdivision session “EuroFORUM 2010”: Achievements and perspectives in scientific ocean and continental drilling that includes oral and poster presentations. Finally, several press conferences have been organized to cover the future of ocean drilling and the recent Great Barrier Reef Environmental Changes (GBREC) and New Jersey Shallow Shelf (NJSS) MSP expeditions. Other events of interest at the EGU meeting include an *Aurora Borealis* townhall on Monday, 3 May and two workshops: Siberian volcanic province (organized by Lindy Elkins-Tanton) and (Magellan workshop) Volcanic basins: scientific, economic, and environmental aspects (convened by Nick Arndt and Henrik Svensen).

In preparation for the future of international scientific ocean drilling, ECORD member countries have agreed in principle to continue as a consortium and to provide access to MSPs (one expedition per year). ECORD has an active role in IWG+ (Mével is a co-chair) and also recently participated in a joint meeting between NSF, MEXT, and ECORD in Tokyo. The Council will organize an independent evaluation of ECORD scientific achievements using ocean drilling and of future prospects in a new program of seafloor exploration. This report should be complete by mid-2011 and is crucial to requests for funding in the new phase.

Finally, Mével outlined a new European Commission (EC) funded program: Deep Sea and Subseafloor Frontier (DS3F) led by Achim Kopf. This program has been awarded one million euro over 2.5 years to develop a roadmap for better integration of drilling with other initiatives that address deep seafloor processes. This will include a workshop led by C. Mével and M. Ask on mission specific seafloor sampling. This program is important to increase ECORD visibility with respect to the EC, and should help to promote the deep seafloor concept for more substantial funding in the future.

Blackman asked how often funded coordination activities develop into a real program. Mével replied that they expect to be able to lobby the EC and submit proposals specifically on topics related to these activities. Hollis noted that currently MSPs occur every two years. How will the costs be worked out for funding one a year? Mével indicated this was a challenge and that they were working on it now. One possibility is to find outside funding. Exon noted that every MSP is a sort of prototype, as a different drilling vessel is used each time. Is there a way to get around this? Mével answered that this does cause problems, but that it is the only way to address the science plan. Früh-Green asked if there would be new member countries within the consortium. Mével indicated that they are talking to Eastern European countries and that the Baltic Sea proposal (if implemented) could encourage these countries to participate in the new phase.

3.5. China Ministry of Science and Technology

Chung-feng Li was not given any updates by the China Ministry of Science and Technology (MOST), so there was no report.

3.6. Korea Institute of Geoscience and Mineral Resources

Se Won Chang indicated that the current status of Korea-IODP (K-IODP) is as a one-sixth associate member and that the new Memorandum of Understanding (MOU) between the Korea Institute of Geoscience and Mineral Resources (KIGAM) and NSF/MEXT for 2008-2013 was signed in 2009. The K-IODP contribution this year is one million U.S. dollars. K-IODP has developed a plan for post-2010 participation. The program is run on a three to five year project basis and 2010 is the last fiscal year of the current four-year K-IODP project. K-IODP is preparing a new science plan for the upcoming 5 years and a public forum on this plan was held on 29 October 2009 at the International Convention Center in Jeju, Korea. Chang outlined the proposed new K-IODP structure that includes several groups working in cooperation with each other and the SAS. This structure would oversee six fixed working groups, as well as flexible task force teams (TFTs). In addition, he noted that twelve Korean scientists attended the IODP New Ventures in Exploring Scientific Targets (INVEST) meeting last year. Chang reported on the Okinawa Trough TFT and indicated that Korean scientists have been working in cooperation with Japanese scientists since 2008 to prepare a drilling proposal in the Okinawa Trough area. To facilitate this they have held several workshops and meetings. The K-IODP also established a TFT on the paleoceanography of Okinawa Trough (2009) and expects to establish one on the petrology and tectonics of Okinawa Trough this year. Chang also noted that KIGAM has submitted a proposal to ICDP and expects that a new K-ICDP program will be launched in 2011.

Chang noted that five Koreans sailed on IODP expeditions in 2009 and that three more participated on Onshore Science Parties (OSPs) for MSP expeditions. So far in 2010 one Korean has sailed. Four SAS meetings have been held in Korea: the 10th SSEP meeting (May 2008), the 10th SSP meeting (February 2009), the 9th Scientific Technology Panel (STP) meeting (August 2009), and the 9th SASEC and IWG+ meeting (January 2010). Chang also reported on the first Asian IODP Consortium and Marine Geoscience Cooperation induction meeting, held in April 2009 in Korea. This meeting was held together with a joint meeting of all geological societies in Korea. Attendees included representatives from Australia, New Zealand, Korea, Taiwan, Japan, IODP-MI, NSF, and MEXT. This meeting was followed by a second meeting (Asian Pacific IODP Consortium), also held in Korea, in January 2010. India was also represented at this meeting, in addition to the previously mentioned countries. He also mentioned Korea-Japan Joint Symposia on Ocean Drilling, held in 2007 and 2009.

Chang gave details of Korean collaborations with KCC, which included a KIGAM-KCC joint symposium in February 2008 and participation of five Koreans in the Kochi Core School in March 2010. In addition, KCC has advised KIGAM during construction of a new core repository at KIGAM. Finally, Chang indicated that KIGAM hosted an IODP summer school with nineteen participants in August 2009.

Hollis asked what happened to the plan to use the *JR* for a commercial gas hydrates project after the Wilkes Land expedition. Chang noted that they had hoped to do this, but in the end they opted for a different drillship, with drilling to begin in May. Hollis asked if the *JR* was not an attractive drillship for gas hydrates, but it turned out that the United States Implementing Organization (USIO) opted not to send the *JR* because of problems with communication. Li asked what Korea's plan for membership is in the next phase of the drilling program. Chang replied that they hope to make a contribution as a full member, but it is still under discussion. Stein noted that Korea has a brand new research ice breaker vessel, and wanted to know if Korea would offer support if others wanted to use it as a joint venture for site surveying. Chang indicated that the vessel is operated by a different group in Korea, but that it should be possible to cooperate with IODP. Filippelli noted that he was particularly impressed by Korea's education activities and that they have made a phenomenal effort to engage younger scientists. Hollis then asked what ages were the students involved in these activities and Chang noted that they covered a wide range from first grade to undergraduate students.

3.7. Australian Research Council

Neville Exon began by noting that the Australian Research Council (ARC) is the funding agency, but they never write the report; it is written by the Australia-New Zealand IODP Consortium (ANZIC) and so it should be called that in the agenda. Together Australia and New Zealand make up 30% of a membership unit in IODP. The Australian IODP consortium consists of fourteen universities and three government agencies, whereas the New Zealand IODP consortium consists of five universities and one government agencies. He also noted that both countries now have adequate funding. Australia recently received additional funding from ARC to continue as a 25% member through the end of 2012; this additional money also includes some funding for post-cruise research. New Zealand received additional funding to continue as a 5% member until the end of 2011. Both countries are confident they will be able to continue as members through the end of the current phase of the program. They are also working towards membership in the new program, perhaps as part of an Asian-Pacific Consortium.

Exon presented the ANZIC organization. The Governing Council is chaired by Kate Wilson and the Science Committee is chaired by Stephen Gallagher. Neville Exon heads the ANZIC office and Chris Hollis the New Zealand Office. ANZIC has a number individuals involved in planning for the new phase of scientific drilling, including two members on the SPWC, a representative on IWG+, and one on the Triennium Review Committee. Additionally, ANZIC submitted a white paper to the INVEST conference. Australia is also building a new research vessel with seismic capabilities that should be available for future site survey work. They also hope to have some coring capability on the ship, which should be available by mid-2012. ANZIC has also had a number of participants on recent cruises in the region, including three on the Great Barrier Reef expedition, two official (and three New Zealanders representing other countries) on Canterbury Basin, and two on the Wilkes Land expedition. Exon noted that parties interested in the Asian-Pacific IODP Consortium met in Korea in January 2010. If

formed, this group (potential members include Australia, India, Korea, New Zealand, Taiwan) would seek a full membership in the new program, assuming cost will be similar to what it is in IODP. Currently a working group has drafted a set of principles for potential membership in the consortium. Filippelli asked about Canadian membership in the consortium and Exxon noted that Canadians are taking positions on cruises depending on cruise location. Exxon also mentioned that port call activities in Australia have been very successful, with support from politicians who are very interested in marine science.

Chris Hollis reported on New Zealand ANZIC port call activities in New Zealand. He noted that the Canterbury Basin cruise was particularly important to New Zealand not only for research on climate change, but also for petroleum exploration. As a result, they received \$400,000 for IODP, which allows New Zealand to remain a partner in ANZIC through 2012. In addition to port call activities that included participation from some university and government officials, they also hosted a holiday program for teenagers. This program lasted for two weeks and included a tour of the *JR* and taking of a gravity core in the harbor to study during the program. In addition to using materials from Ocean Leadership, they also used material from ANDRILL (through participation of Richard Levy) and developed new activities of their own. Hollis also noted that some upcoming cruises will be in the New Zealand region.

3.8. Ministry of Earth Sciences

IODP-MI received a report from the Ministry of Earth Sciences (MoES) and distributed it via email. There was no presentation as no representative from India attended the SPC meeting. Murray asked which institutions in India are involved with IODP. No one attending the meeting knew the answer to that question.

4. IODP Management International, Inc. report

Hans Christian Larsen presented the new corporate structure of IODP-MI following consolidation of the Washington, D.C. and Sapporo offices. Kiyoshi Suyehiro is the president and Hans Christian Larsen the vice president. Larsen oversees science management, data/communication, and outreach. Most employees are located in the Tokyo office, whereas the contracts officer and finance officer remain in Washington D.C.

Larsen then gave an overview of the 2nd IODP-MI Triennium Review. He noted that this review is a contractual requirement every three years. This year the mandate is to review the effectiveness of science planning and SAS functionality, the relationship between SAS, IODP-MI, and the IOs, and the evaluation and ranking process for proposals. Additionally, the review board will address the effectiveness of SAS service panels and integration of the IOs. He indicated that the review will analyze SAS activities within the current system and help focus discussion for post-2013 scientific drilling. The panel consists of eight members led by Ian Macgregor as the panel chair. To complete the assessment the panel is using many resources, including the First Triennium report, previous SAS reviews, the Board of Governors (BoG) ad hoc review committee report, other science evaluation structures, and opinions solicited from various agencies and organizations (30+ responses). The panel first met at the SSEP meeting in November 2009, met again in Sydney during the SPC meeting, and will have a final meeting in Vienna in May. The last meeting will be used to begin drafting a report, which should be submitted to NSF by July.

Larsen also reported on the INVEST meeting, held in Bremen, Germany in September 2009. The meeting attracted 583 participants, including 64 students and young career scientists. A total of 122 white papers and 92 posters were submitted to the meeting. The final report is in the copy edit state, with an executive report included in the next *Scientific Drilling* issue. Larsen noted that the SPWC will take input from INVEST and others to formulate the new science plan. The SPWC consists of 14 members, with representatives from the U.S., Japan, ECORD, and ANZIC. The SPWC has identified a number of requirements for the new science plan, including that it excel at the highest level of external review, take ocean drilling into a new era of innovative science, address fundamental and unresolved questions, include new and emerging fields of science and methodologies, be open to other global science initiatives, demonstrate a clear awareness of societal needs, and be consistent with the nature and capability of the drilling platforms to be used. The committee first met in January 2010 and identified four major areas of study: climate change: record of the past, lessons for the future; deep life: exploration of the marine intraterrestrials; renewing the lithosphere: consequences for our planet; and the Earth in motion: deforming plate boundaries, fluid flow, and active experimentation. The science plan may also include sections on program management and implementation, linkages and partnerships, and education and public awareness. A draft of the science plan should be finished by June. It will be reviewed by SASEC and then sent for external review, with an anticipated completion date of early 2011.

Larsen skipped several slides on the IODP-MI BoG charge to SAS, as that would be presented by Filippelli during Agendum 6 (SASEC report). Larsen noted that last November, IODP-MI received fifteen proposals, of which eleven were new submissions. He noted that this is similar to the total number of proposals submitted at each deadline over the last two years, but a decrease from earlier in the program. The submitted proposals include eight in the ISP theme Deep Biosphere, five in Environment, and two in Solid Earth. Larsen mentioned that there are currently 103 active proposals, including 24 in Deep Biosphere, 42 in Environment, and 37 in Solid Earth. He also noted there is a reasonable geographic distribution of the 1,039 unique proponents on proposals currently in the system.

Larsen noted that the OTF has had email discussions of scoping and priorities for Proposal 537A-Full5 Costa Rica Seismogenesis Phase A and Proposal 734-APL Cascadia Accretionary Prism CORK. Upcoming OTF meetings include a short evening meeting on 24 March 2010 in Sydney and 26-28 April 2010 at the IODP-MI office in Tokyo. In addition, there have been several meetings of the NanTroSEIZE Project Management Team (PMT) to work out the schedule and priorities for the *Chikyu*. Larsen noted that the *JR* schedule is set through the end of 2011, with the main challenge being implementation of CRISP A. Larsen indicated that the *Chikyu* schedule was not yet set and depended on finances and the strength of the Kuroshio Current. He noted one of the issues with the budget was the new Japanese government, which began reviewing major programs. At one point, budget cuts threatened the entire *Chikyu* program, but in the end JAMSTEC only received a 6% budget cut, saving *Chikyu* operations. On 1 March, JAMSTEC/Center for Deep Earth Exploration (CDEX) informed IODP-MI that they would not pursue riser drilling in 2010 due to riser issues at high current speeds. This year they will further develop technology to allow drilling independent of the state of the Kuroshio Current in 2011. Larsen noted that IODP-MI has received a detailed presentation by CDEX on plans for further development of this technology. JAMSTEC/CDEX also indicated that they plan to implement the Proposal 601-Full3 Okinawa Trough Hotbiosphere proposal prior to NanTroSEIZE. Finally, they noted that ancillary science funding in Japan may provide an option for two and one-half months of

riser drilling this year on a specific proposal (that had already been reviewed as a pre-proposal by SSEP, who have invited a full proposal). As a result, Larsen indicated that IODP-MI encouraged the proponents of Proposal 745-Pre Shimokita pre-proposal to submit a Complimentary Project Proposal (CPP). Larsen noted that IODP-MI told CDEX and the proponents that IODP procedures would need to be followed, but that existing fast-track mechanisms for CPPs could be used, with SAS reviews done electronically when necessary. As a result of these revelations, IODP-MI has discussed possible scheduling options and staffing strategies for the *Chikyu* with CDEX and OTF.

Larsen concluded by mentioning upcoming workshops and special IODP sessions at meetings. The first is a MoHole workshop scheduled for 2-5 June in Kanazawa, Japan. This workshop is being held to discuss possible locations and site survey requirements, as well as engineering challenges for this project. The second workshop is on the Deep Carbon Observatory Initiative and deep crustal drilling. It will be held in Washington, D.C. at the Carnegie Institute on the 9-11 September. Upcoming special IODP sessions will be held at the American Geophysical Union (AGU) Western Pacific Geophysics Meeting in Taipei, the AGU Meeting of the Americas in Brazil, and the 18th International Sedimentological Congress in Argentina.

van der Pluijm asked what the difference is between renewing the lithosphere and Earth in motion in the proposed science plan. Larsen indicated that the latter relates primarily to observatories. Kasahara asked where geohazards fits into the new science plan. Larsen replied mostly within Earth in motion. Li asked how the new science plan will be written. Larsen indicated that the first SPWC meeting defined the structure and that different subgroups have been asked to deliver different components for each part of the new plan. These will be reviewed at the next meeting in Cambridge, UK in May and new writing assignments will be given then. Murray asked for clarification regarding the requested Shimokita CPP. Larsen confirmed that it would get input from SAS panels. Azuma asked if there was an opportunity to check the annual report made by the council. Larsen noted that IODP-MI usually does not report on the council and that the main activity of the council is in IWG+. Schuffert asked if the Shimokita CPP would involve international participation. Larsen confirmed that it would follow IODP rules, which would also apply to international participation. Ridley asked if there was an update on potential participation of the Sloane Foundation in Project Mohole. Larsen indicated they have shown interest in deep processes, but have made no commitments. Blackman asked if the Shimokita CPP would affect funds for NanTroSEIZE. Larsen noted that the CPP would add to the overall budget and take nothing away from other *Chikyu* IODP projects. Filippelli asked for confirmation that a CPP was funded both through funds of opportunity and some program funds. Larsen indicated that some program funds are used. He noted that the outside group must fund at least 70% of operations, but some science and co-mingled funds would be provided. In the case of the Shimokita CPP, 100% of operational funds would be provided by the third party and Larsen was optimistic that the use of science and co-mingled funds would have little impact on the current budget. Kasahara asked what a new SAS structure would do to program submission deadlines. Larsen said that SASEC and IWG+ hope to implement components of the new structure during the current program for testing, which would include changes to proposal deadlines and panels. He noted this would be decided in the next six months, but at present there were no proposed changes to proposal deadlines.

5. Implementing Organization reports

5.1. Center for Deep Earth Exploration

Wataru Azuma provided an update on CDEX activities. He noted that the *Chikyu* is currently tasked with implementing NanTroSEIZE and that to date stages one and two have been implemented, with stage three expected in 2012 and stage four in 2013. He described results from the two IODP expeditions carried out during 2009, noting that the first riser drilling occurred during Expedition 319, which drilled to 1600 mbsf. In addition, the cruise marked the first use of cuttings for biostratigraphy and the first walk-away vertical seismic profile (VSP) experiment on the *Chikyu*. An in-situ monitoring system was also installed during the expedition. He explained that Expedition 322 was a riserless expedition to characterize input sediments and basement rocks to clarify history of the Izu-Bonin area volcanic activity. During this cruise, scientists recognized two different hydrogeologic pathways.

Azuma presented results from engineering studies undertaken by CDEX during 2009. The first study examined vortex induced vibration (VIV) in riser pipe due to high current velocities. He noted that acceleramometers were installed in the riser hole to obtain data about riser motion under high current velocities. These data were used for model simulations, resulting in better understanding of fatigue and weak points of riser pipe. Further testing is currently underway. The other study hoped to improve prediction of the Kuroshio Current using new software by Earth Simulator based on satellite observations. The results indicate that the main Kuroshio will be over Proposed Site NT3-01 for the long term, with current strengths >5 knots at times. These studies are to address the safety concerns of operating under high Kuroshio Current velocities and should result in modifications to the riser pipe (including welding quality improvement) to prolong pipe life.

Azuma also mentioned sample curation at the KCC, including the Bering Sea expedition sampling party and work on routine microbiology sampling. He finished by outlining the *Chikyu* preliminary operation plan for 2010-2011. This plan would include dock work and inspections between 1 April – 31 May; the Shimokita CPP from 20 June to 28 August; the Okinawa Trough expedition from 1 September to 15 October, and NanTroSEIZE operations between 18 October – 10 January. This led to discussion of the Shimokita CPP. Filippelli reminded the SPC that a CPP is still an IODP proposal and must therefore seek SSEP approval and be forwarded to the SPC for approval. Azuma noted that five months of shipboard time are guaranteed to the *Chikyu* for IODP operations and that the Shimokita CPP if approved would add time to the IODP program, not take away from other projects. Allan noted that he had not seen the proposal, but thought it was a win-win situation in that the proponents get access to the international community and IODP gets access to sample and data that are preserved for future generations.

5.2. United States Implementing Organization

David Divins provided an update of USIO activities. He noted that the Fiscal Year (FY) 2009 annual report was available online and he also had a few CDs available for those who wanted one. He showed the current FY10 *JR* schedule:

Expedition 324	Shatsky Rise	4 September – 4 November 2009
Expedition 317	Canterbury Basin	4 November 2009 – 4 January 2010
Expedition 318	Wilkes Land	4 January – 8 March 2010
Transit		8 March – 13 April 2010
Maintenance Period		13 April – 5 July 2010

Expedition 327	Juan de Fuca	5 July – 4 September 2010
Expedition 328	Cascadia CORK	4 September – 18 September 2010
Transit		18 September – 8 October 2010

Divins gave a brief review of the expeditions already completed or underway during FY10. He noted that average recovery of basement during the Shatsky Rise expedition was 53%, much improved from before the *JR* refit. He also noted that several records were set during the Canterbury Basin expedition, including the deepest sediment hole drilled (1927 mbsf), the deepest microbiology sample taken (1925 mbsf), the deepest shelf site drilled (1030 mbsf), and the shallowest water site drilled (85 m). He indicated that the Wilkes Land expedition marked twelve months of continuous *JR* operations and that more than 2000 m of core had been collected during the expedition. Professional video footage was also captured during the expedition and is now available at <http://www.youtube.com/user/OceanLeadership> and <http://joidesresolution.org>. Divins noted that the maintenance period would be used to upgrade Information Technology (IT) and science applications such as the Laboratory Information Management System (LIMS) database. In addition, infrastructure upgrades would include elevator maintenance, floor replacement in the core splitting room, and modifications to the core description lab.

Divins showed the proposed FY11 *JR* operations schedule:

South Pacific Gyre	8 October – 12 December 2010
Louisville Seamount Trail	12 December 2010 – 11 February 2011
Transit	11 February – 15 March 2011
CRISP A	15 March – 16 April 2011
Superfast Spreading Rate 4	16 April – 19 May 2011
Maintenance	19 May – Mid-September 2011
Mid-Atlantic Microbiology	Mid-September – Mid-November 2011

Divins reported on potential non-IODP work for the *JR*, led by Greg Myers. He indicated that there was an engineering proposal submitted to the Research Partnership to Secure Energy for America (RPSEA) in December 2009 to modify the *JR* to use riserless mud recovery (RMR) equipment. He also noted that the USIO provided a non-binding cost estimate to the British Geological Survey (BGS) for using the *JR* to drill off Hatton Bank and Rockall Margin. This would be a six-week drilling program implemented during FY11 if cost issues can be resolved. He mentioned that the Consortium of Ocean Leadership is spearheading formal discussions with the U.S. Department of Energy Hydrate Joint Industry Program to ascertain the possibility of using the *JR* for operations in the Gulf of Mexico during FY12. In response to questions, Divins indicated that plans for a joint Korea gas hydrates project did not go forward due to timing issues and lack of available capital.

Divins summarized the very successful port-call activities conducted in Wellington and Hobart, which included press conferences, ship tours, and science talks. He also described USIO educational activities, including the Teacher at Sea Program in which a teacher from Texas sailed on the Canterbury Basin expedition. He noted planning is underway for the 2010 School of Rock, which is scheduled to take place during the Cascadia CORK expedition. He mentioned that a professor from the University of the Virgin Islands sailed on the Shatsky Rise expedition as part of the Historically Black Colleges and Universities (HBCU) Educator at Sea pilot diversity initiative. Finally, he noted that there have been over seventy live ship-

to-shore international video conferences from the *JR* and that these are a great way to engage the public in scientific ocean drilling.

Hollis asked if there were plans to include videographers on future cruises. Divins responded that there was and that the videos were very popular. He noted that those first created during the Wilkes Land expedition were designed for kids, but would be edited together for science education. Blackman noted that as more high profile work comes from these expeditions, traffic on the videos should increase. Murray agreed, indicating that the public get excited about the videos, even if they do not care about the details of the science being done.

5.3. ECORD Science Operator

Dan Evans presented the ECORD Science Operator (ESO) report. He provided a summary of the results from the OSP for Expedition 313 New Jersey Shallow Shelf. He reminded participants that the expedition was drilled during summer 2009 and that the OSP was held in Bremen from 4 November to 6 December 2010. Scientific results showed that there were at least ten cycles of sea-level rise and fall (of up to 100 m) from 14-35 Ma. He noted that an unexpected result was the presence of thick freshwater lenses as deep as 400 mbsf at all three drill sites and that they may have originated during the last glacial cycle when sea level was much lower.

Evans also provided an update on the Expedition 325 Great Barrier Reef Environmental Changes. He noted that a vessel contract was originally signed last year to use the vessel *Bluestone Topaz* in late 2010. Unfortunately, problems developed with the ship, so a brand new vessel was offered (*Greatship Maya*). Building was completed on this ship late last year. He noted that the ship had better technology and accommodations, but that there had also been problems because it was the ship's first voyage. On the other hand, he indicated that the program was only paying about 60% of the market cost for the ship. Due to the vessel change, the expedition was rescheduled for February – April 2010, with the OSP to be held in Bremen in July. Evans noted that the expedition was currently underway and that operations had been more difficult than the previous Tahiti expedition. He indicated that strong currents had caused some drilling problems and that average recovery at this point was about 24% (but this number had not been corrected for voids). He also noted that Cyclone Ului had impacted operations. As a result of these issues, he indicated that there had been a lot of downtime, but that the program would not pay for that time and that the expedition would extend for a full 45 days, ending on 6 April 2010.

Evans gave an update on potential future MSPs. He noted that Proposal 716-Full2 Hawaiian Drowned Coral Reefs is planned for FY11 and that scoping has begun. He indicated that Proposal 637-Full2 New England Shelf Hydrogeology remains in the holding bin at SPC due to the need for further site survey work. He noted that three MSP proposals were being reviewed at the current SPC meeting: 548-Full2 Chixculub K-T Impact Crater, 581-Full2 Late Pleistocene Coralgall Banks, and 672-Full3 Baltic Sea Basin Palaeoenvironment.

Evans lastly noted that with his retirement at the end of April, he would be replaced by David McInroy as the ESO Science Manager. McInroy will be assisted by Robert Gatliff (BGS Head of Science for Marine Geology) as the ESO Chair and Alan Stevenson (ESO Outreach Manager) as the Team Leader.

Filippelli first thanked Evans for his commitment and support to the program over the years before opening the floor to questions. Früh-Green asked how many scientists were on the Great Barrier Reef expedition. Evans indicated six were onboard and that some who were supposed to be onboard were not available due to the change of schedule; those positions were covered by ESO staff. Camoin added that ten scientists were onboard during the Tahiti expedition. Camoin also commented on the recovery so far during the expedition, indicating that coral reefs are 30-40% voids, so the actual recovery has to be recalculated based on logging. One of the problems with the Great Barrier Reef cores is that the quality is not as good; many are broken, which could be a bigger problem. Ohkouchi asked if the problems resulted from the ship being so new. Evans replied that there were many factors, and that these would have to be examined upon conclusion of the expedition. Exon added that it was a new ship, new drill rig, and inexperienced drillers, but the ESO staff are experienced and have done a fantastic job with the problems encountered. He further noted that the Great Barrier Reef has much higher porosity, which makes recovery that much more difficult.

6. Science Advisory Structure Executive Committee report

Gabe Filippelli noted that the SPC Chair is a non-voting member of SASEC. He gave an overview of the topics covered at the January 2010 SASEC meeting in Korea. SASEC unanimously approved the vice-chair of the SPC (Junzo Kasahara). They also formed a new budget committee; the SPC Chair is also a member of that committee. Filippelli noted they would meet sometime in April. He also indicated that SASEC requested that the SPC develop and present to SASEC a small number of alternate drilling schedules to finish up the program. SASEC suggested the following guiding principles be used to generate schedules: expeditions should complete high priority science, should be likely to make major advances, and should be consistent with the SASEC 2008 implementation plan. Filippelli suggested that to develop drilling schedules, the SPC should review how the ISP themes have been addressed to-date, identify which proposals are mature enough to be included in the schedule, and consider a strategic perspective to determine which proposals would help position IODP for a successor program. Filippelli noted that the BoG want the proposed drilling schedules by the end of June. As a result, the SPC will have to use email communication to complete this task since that is before the next SPC meeting in August. He noted that the OTF would put together potential drilling schedules at their meeting in April based on decisions made at the SPC meeting, adding that five SPC members are also on OTF. The potential drilling schedules will be returned to SPC members for feedback prior to being released to the BoG.

Larsen noted that if more SPC members need to attend the OTF meeting in April to facilitate development of drilling schedules, that there would be no problem from the OTF side. Exon asked who makes the final decision on alternative schedules. Filippelli indicated that OTF makes the final decision, which will be approved by the SPC. Larsen added that SASEC will decide which schedules they like best to send on. Allan concluded that the ultimate approver is the funding agencies, which illustrates the problem. Historically there has not been a huge problem with funding, but because there is not enough money now, things get changed.

7. IODP Science Advisory Structure panel reports

7.1. Science Steering and Evaluation Panel

Akira Ishiwatari presented a report on the November 2009 SSEP meeting held in Melbourne, Australia. He noted that SSEP had thirty-two members as of that meeting; seven were new members, four alternates were present, and one member was absent with no alternate. He also noted that five SSEP members were leaving. He indicated that seventeen proposals were

reviewed during two breakout sessions of the meeting (microbiology and solid Earth/paleoclimate), including two with new external reviews. Of those reviewed, one proposal (three star ranking) and three APLs were sent to SPC and none were sent for external review. Proponents of three pre-proposals were invited to re-submit as full proposals and three pre-proposals were sent back for revision. Additionally, five full proposals were sent back for revision and one full and one pre-proposal were deactivated. Ishiwatari also reviewed results from previous SSEP meetings, noting that most proposals forwarded to the SPC get a four-star ranking. He also indicated that the number of full proposals to be revised is decreasing, whereas the number of pre-proposals invited for full proposal submission is increasing. He noted these results should encourage thought about the usefulness of preliminary proposals in the new science plan.

Ishiwatari indicated that SSEP recommended SPC consider Yasufumi Iryu for the next co-chair of SSEP, mentioning the Dr. Iryu is a professor at Nagoya University specializing in carbonate sedimentology and geochemistry, as well as coralline algae paleontology. Finally, he noted the next SSEP meeting will be held in Kochi on 18-21 May 2010. Kasahara asked if there were any statistics on how long proposals remain in SSEP. Ishiwatari replied that the shortest stay is two years, the longest over ten, with the average probably around five or six years.

7.2. Site Survey Panel

Jin-Oh Park provided a review of the January 2010 SSP meeting in Wellington, New Zealand. He noted seven new members attended the meeting and one member rotated out of the panel after the meeting. At the meeting, SSP reviewed a total of twenty-one proposals, including fourteen full, four APLs, and three preliminary proposals. Of these, he provided detailed information on the site survey status of twelve proposals residing with OTF and SPC. He noted that SSP also discussed the SSP matrix for microbiology proposals and that Fornari and Mitchell would suggest a prototype matrix at the next meeting. At the meeting the panel identified SSP liaisons to upcoming meetings: SPC, March 2010 (Park); SSEP, May 2010 (Kawamura); and EPSP, June 2010 (Kashihara). Park noted that the next SSP meeting would be held in Brest, France on 26-28 July 2010.

Li asked why SSP needed to develop a different matrix for microbiology proposals. Park replied that the current matrix is designed for solid Earth proposals and that the SSP wanted to think about what is specifically needed for proposals focused on microbiology. Hollis asked if the proponents of Proposal 705-Full2 Santa Barbara Basin Climate Change could do anything to get the site survey data in better shape. Park noted that they need to make sure their seismic interpretations are consistent among all seismic lines. Filippelli noted that there were a whole range of issues with implementing this proposal. Katz added that the EPSP still needed a response from proponents on issues presented to them the previous year. Allan noted that the operational plan changed from a series of shallow holes to one deep hole that would require riser drilling due to the presence of oil and gas; this would further necessitate an environmental impact statement. Katz indicated the deep hole was unlikely to happen at this location, but that a series of offset holes had more potential.

7.3. Environmental Protection and Safety Panel

Barry Katz provided an update of EPSP activities since the August 2009 SPC meeting. He noted that membership in EPSP is relatively stable and that the panel meets only once a year in June. Prior to discussing past activities, he gave a quick update on EPSP status of

proposals covered during Tuesday's meeting before he arrived. He indicated that since the last SPC meeting, the EPSP has undertaken email reviews of four upcoming expeditions. For Expedition 318 Wilkes Land, the EPSP recommended approval for the request to deepen the target drilling depth at four sites. For Expedition 322 NanTroSEIZE Stage 2 the EPSP recommended approval of the suggested contingency site and the request for deepening the target drilling depth at one site. For Expedition 325 Great Barrier Reef the EPSP recommended approval of the request to deepen one hole per transect, leaving selection of the hole up to the drilling party. Finally, for Expedition 327 Juan de Fuca the EPSP recommended approval of the request to deepen one hole to permit CORK replacement. They also recommended approval of three sites for the Grizzly Bare APL. Katz noted that the next meeting would be in Yokohama, Japan at the end of June 2010.

Blackman asked for clarification on the status of Proposal 595-Full3 Indus Fan and Murray Ridge and the potential need for a shallow hazard assessment. She wondered if this assessment could happen within the current program. Katz noted it could happen within any timeframe depending on how much money could be spent. He also noted that the data are available at Shell, but was uncertain if they would release it.

7.4. Scientific Technology Panel

Clive Neal presented the results of the last STP meeting held at Brighton Beach, Australia in March 2010. He noted that twenty consensus statements and eight action items were generated during the meeting. Of the twenty consensus items, Neal highlighted the eight most important ones for SPC consideration. He presented STP Consensus 1003-01 on the new IODP Science plan. He noted that STP was working closely with the Engineering Development Panel (EDP) and supported the memorandum to IODP-MI, SPC, IWG+, and the SPWC developed by EDP to address engineering development in the new science plan. He also noted that both STP and EDP would be involved in review of the new science plan. Neal presented STP Consensus 1003-07 on the release of Scientific Technology Roadmap version 1.0. He noted that STP requests SPC and IODP-MI approve the release of this document to the IODP community. This roadmap points to core quality and core recovery issues being the highest priority. Neal also mentioned several other consensus statements of interest to SPC: STP Consensus 1003-04 on modification of the STP terms of reference; STP Consensus 1003-05 on approval of the expedition measurement plan for IODP Expedition 327; STP Consensus 1003-09 on the potential use of the Göttingen Borehole Magnetometer for IODP Expedition 330 Louisville Seamounts; STP Consensus 1003-12 on Simple Cabled Instrument for Measuring Parameters In-situ (SCIMPI) deployment at Hydrate Ridge Site 1245 during Expedition 327; and STP Consensus 1003-14 on routine microbiological sampling analytical results. Malone noted that the SCIMPI deployment is not scheduled for Expedition 327. Neal indicated that CDEX has implemented microbiology sampling on the *Chikyu* and thus has real data on how long the sampling takes. He further noted that this sampling has not been implemented on the *JR*, which does not have enough manpower to do it. Allan added that during reorganization, many people were let go and microbiology sampling has suffered as a result. Murray noted that the deep biosphere is a major component of the ISP and therefore commitment needs to be made. Allan commented that so far the science party has taken up the slack on microbiology sampling on the *JR* and that NSF would review operations this year to see what needs to be done to increase efficiency. Malone added that the decision was made to include routine microbiological sampling without knowing the manpower (cost) required. Murray concluded that there was a disconnect between the science plan and what is actually happening. Neal presented eight action items from the March 2010

STP meeting. He highlighted Action Item 1003-22 on review of the IODP depth scale document. He noted there is confusion as to how to implement the various depth scales. STP will review this and hopes to have a usable document by the next SPC meeting in August.

Filippelli noted that SPC needed to receive all of the STP consensus items to review and accept. Neal provided these and they were discussed by SPC during review of motions and consensus items (Agendum 21) on Friday, 26 March. At that time, Filippelli noted that he did not have any objections to accepting the consensus statements. Murray agreed, pointing out that the change in the STP terms of reference better reflected STP communication with the IOs over the last few years (direct rather than through SPC). H. Kawamura added that IODP-MI is kept informed of these communications. Filippelli noted that without hearing any further discussion, SPC accepts the consensus items delivered by STP.

SPC Consensus 1003-04: The SPC accepts all consensus items forwarded to it by the Scientific Technology Panel (STP) for this meeting.

7.5. Engineering Development Panel

Maria Ask presented the results from the January 2010 EDP meeting in Sendai, Japan. She noted twenty-one consensus statements were produced at the meeting and indicated thirteen were important to SPC. She presented EDP Consensus 1001-03 about the next EDP meeting, to be held from 14-16 July 2010 in Santa Fe, New Mexico. She also presented EDP Consensus 1001-09, in which EDP endorses the IODP-MI FY11 engineering development plan. She noted that EDP Consensus 1001-08 thanks the IODP-MI president for presenting the IODP-MI/EDP communication plan, noting that EDP appreciates his support for continued engineering development in the current and future program. She outlined Consensus 1001-10 on the engineering development proposal process, noting that the disbanding of the Engineering Task Force risked weakening the process. The task force was composed of a group of experts that helped to speed up the review process. The consensus statement asks IODP-MI to decide if the existing engineering development proposal process will continue to be promoted. Ask also mentioned several other consensus statements including: EDP Consensus 1001-11 requesting IODP-MI provide engineering development demobilization funds beyond 2013 to complete current projects; EDP Consensus 1001-12 encouraging the submission of engineering development proposals; EDP Consensus 1001-19 requesting a SPWC representative present an update on the status of the new science plan at the July 2010 EDP meeting so that there can be engineering input to the new science plan; and EDP Consensus 1001-16 requesting reports from IODP-related conferences on deep drilling be forwarded to EDP.

Ask presented EDP Action Item 1001-01 on INVEST implementation and the renewal process. EDP formed a working group of EDP members that attended the INVEST conference to provide comments forwarded to interested parties in time for the IWG+ meeting in January 2010. Ask also noted that EDP understands that the new science plan will likely involve projects requiring new technologies. To implement this, different organizational structures and skill sets will be needed than are currently available within the IOs. This led to a discussion of the challenges of deep borehole projects within the current program. Ask suggested perhaps there needed to be a separate working group for long-term projects.

Ask provided the EDP consensus items and they were discussed by SPC during review of motions and consensus items (Agendum 21) on Friday, 26 March. At that time Filippelli noted that he had reviewed the consensus statements and found nothing of concern. No further questions were raised by SPC members, leading to a motion to accept all EDP consensus items.

SPC Motion 1003-05: The SPC accepts all Engineering Development Panel (EDP) consensus items forwarded to it for this meeting.

van der Pluijm moved, Peterson seconded, passed by consensus

8. Approve new Science Steering and Evaluation Panel co-chair

Gabe Filippelli noted that Yasufumi Iryu was the SSEP's nominee for new co-chair with a majority yes vote. He asked for comments or discussion on the nomination. Camoin indicated he had worked with Iryu and that he was a very good scientist with great communication skills and he strongly recommended him for the position. This led to SPC Motion 1003-06 to appoint Iryu as co-chair of SSEP.

SPC Motion 1003-06: The SPC approves the nomination of Yasufumi Iryu as the new co-chair of the Science Steering and Evaluation Panel (SSEP).

Camoin moved; Peterson seconded; passed by consensus

9. Engineering development issues

9.1. Engineering development update

Yoshi Kawamura gave a report on IODP-MI engineering activities. He noted that there were five projects underway during FY10 and gave a brief overview of each. He noted that SCIMPI design was underway using USIO telemetry and the Electric Releasing System (ERS), and that the stand-alone device would take temperature, pressure, and resistivity measurements. Preparation is currently underway for sea tests. He indicated that design of the Motion Decoupled Hydraulic Delivery System (MDHDS) is well underway using USIO telemetry. He noted that the extended life test is nearing completion for the Long Term Borehole Monitoring System (LTBMS). For this project the primary deliverables have been completed, including specifications for a telemetry system. He indicated that the Multi-sensor Magnetometer Module (MMM) project had not started yet awaiting contract initiation, but he hoped a prototype would be ready within three years. The last project is the common deployment system for simple observatories. Y. Kawamura indicated that the design is complete and fabrication should commence soon using USIO telemetry.

Y. Kawamura mentioned that three proposals were received by IODP-MI for FY11 and forwarded to EDP for review. He added that two were not within the IODP-MI funding purview and that none will be included in the FY11 draft engineering plan. The three proposals are: EDP-2011-01A Wireline Hydraulic Testing and Imaging Tool (two star SOC proposal); EDP-2011-02A Development of Carbon Fiber Reinforced Plastic Riser Pipe for 4000m Deep Water (four star non-SOC proposal); and EDP-2011-01B Replacement of Magnetic Susceptibility Sonde, which was determined to not be an engineering development proposal.

Y. Kawamura presented the FY11 draft engineering plan, indicating that it will consist of continuing projects including SCIMPI and MMM. He noted that there are no new SOC

engineering projects for FY11 and that there will be a call for engineering development proposals in 2012 and 2013, with the stipulation that the projects cannot extend beyond the current program. Ask queried why there would be continuity with scientific proposals but not engineering development proposals between the current and new program. Y. Kawamura noted that this was not finalized yet, but that the problem is that there is no guarantee for continued funding in the new program.

10. International Continental Scientific Drilling Program report

10.1. International Continental Scientific Drilling Program report

Ruediger Stein gave a report on the status of ICDP, noting that as of spring 2010 there were thirteen member countries, five new member countries (Italy, Spain, Sweden, Switzerland, New Zealand), and two countries (France and Israel) to join in 2010. Stein highlighted some of the differences between the IODP and ICDP proposal process, indicating the ICDP requires a formal review of a preliminary proposal. If the reviews are positive, a workshop is convened, which is an essential element to developing a full proposal. He also noted that many operational funds often come from outside of ICDP, who on average contribute 19%.

Stein gave an overview of past and current ICDP projects, showing drilling localities within different themes. So far, seven proposals have addressed volcanic systems and thermal regimes, eight have addressed active faulting and earthquake processes, and twenty-one have addressed climate dynamics and global environments. Many of the latter are lake projects, drilled by ICDP-owned drilling rigs. Stein summarized three recent ICDP drilling projects. The first was the Potrok Aike Maar Lake Sediment Archive Drilling Project (PASADO), drilled in Argentina in 2008. The aim of PASADO was to complete a high resolution reconstruction of climate over the last 100 ka. They drilled seven holes with over 94% recovery. The second project was drilled in Lake Elgygytgyn in Siberia and completed in two phases in 2008 and 2009. Lake Elgygytgyn was created by a meteorite impact at 3.6 Ma. At that time there was no icesheet covering the locality. The goal of the project is to reconstruct climate. They drilled two holes, one in permafrost and one in the lake, with 75% recovery. The last ICDP drilling project Stein mentioned was the Lake Malawi Drilling Project, completed in 2005. This project drilled seven holes at two sites with 92% recovery, obtaining a 1.5 million year record to look at interannual climate variability in Africa over this time to provide an environmental context for human origins. In relation to this project, Stein indicated ICDP had received a new proposal to complete a high resolution reconstruction of paleoclimate based on deposits close in age and location to hominin localities. Stein noted that the objectives of this proposal are similar to those of IODP Proposal 724-Full Gulf of Aden drilling, suggesting a joint venture between IODP and ICDP.

10.2. ICDP and U.S. National Academy of Sciences combined discussion on Climate-Hominid Evolution

David Feary presented a proposal for a Joint Program Planning Group (JPPG) to address climate and hominin evolution. He noted that there are both scientific and public interests in the climate influence on human evolution. He also reminded the committee that IODP has several proposals related to this topic in the system and that ICDP also has a number of targets in Africa that would address this topic. The latter is contemplating a long period of drilling in African lakes in the future. He noted that the U.S. National Academy of Sciences (NAS) recently published a report “Understanding Climate’s Influence on Human Evolution”, which was coincident with the opening of the Smithsonian National Museum of Natural History’s permanent human evolution exhibition “David H. Koch Hall of Human

Origins". In addition, he noted that there is a need to establish plans and priorities for the post-2013 program.

Feary provided an outline of the NAS report on climate and human origins (covering approximately the last eight million years), noting that NSF asked NAS to do the report approximately two and a half years ago. As a result of the report, the NAS recommended the following: a major exploration initiative to locate new fossil sites; a comprehensive, integrated scientific drilling program on land, in lakes, and in ocean basins surrounding the regions where hominins evolved; a major investment in climate modeling experiments for the key time intervals and regions critical for understanding human evolution; and an expanded education and outreach program.

Feary noted that NAS has provided recommendations for IODP focus in the African region. The goal is to characterize the paleoclimate, paleohydrologic, and paleovegetation history of targeted regions. IODP should specifically focus on sediment packages offshore African river basins, including large (e.g., Nile, Niger, Zambezi, Congo) and small systems (e.g., Ganane, Ruffi ii). They note that IODP should focus on drilling more distal fan successions, which are more likely to be continuous and have high sediment accumulation rates, but also that transects should be drilled from terrestrial hominin localities to distal fan sites.

Feary provided several SPC draft recommendations. First he suggested that IODP invite ICDP to participate in a JPPG to describe a coherent onshore-offshore strategy to address potential linkages between past climates and human evolution. Second the JPPG should consider existing proposals, but also identify other optimum areas and encourage development of proposals. He noted that this would be done during the successor program and so the JPPG should not be constrained by current operational procedures. Feary suggested that the JPPG have two co-chairs, one from IODP and one from ICDP. He also suggested nominating two or three additional members from each group. The goal would be that the JPPG would report to the SPC (and the equivalent ICDP body) in late 2011. If this proposal met SPC approval, Feary suggested a small subgroup draft the JPPG mandate and terms of reference.

Kasahara noted that there was cooperation between IODP and ICDP for Proposal 548-Full2 Chixculub K-T Impact Crater and wondered if this would be a similar program. Feary said it would, noting that the K-T had a smaller focus but that this new program would have a much larger focus and therefore would need advice as to where to look for linkages and how to create a coherent strategy. He also noted that not only would drilling occur on the ocean and in lakes, but also in a terrestrial setting with a truck-mounted drilling rig. Murray asked if the focus would be solely around Africa. Feary thought that it should be to keep the goals achievable, noting that the focus would be the period prior to human dispersal from Africa. Camoin noted that there was a chapter on this topic in the INVEST report and that he endorses the idea. He suggested organizing a workshop with SPC and ICDP members, but open it up to a much wider audience. Feary agreed with this, but noted that there had already been an ICDP workshop, although with little offshore focus. H. Kawamura confirmed there was an ICDP workshop and that a summary was available in the January 2010 issue of *Scientific Drilling*. Kakegawa noted that a colleague had asked him if geology could constrain the age of hominin fossil deposits. He originally said no, but thought it was more possible now and wondered if the error could be reduced to 1000 years. Feary noted that timing was certainly an issue and would be an important aspect of this program. Filippelli

added that the smaller lakes targeted by ICDP often have discontinuous records, so ocean drilling is necessary for age control. Mével and Peterson both agreed this was a good idea. van der Pluijm noted that Proposal 724-Full Gulf of Aden Faunal Evolution is logistically impossible at this time and wondered how that could be resolved. Feary noted there were many other sites around Africa that could be targeted. Stein added that there are many old ODP sites around South Africa and that with legacy data available that could be a place to start. Filippelli indicated he would support a workshop, but with a working group to first define the focus of the workshop. He noted that either SPC or SSEP could call for a program planning group. Murray noted that with a report requested in late 2011 (eighteen months from now) that planning needed to begin as soon as possible. Filippelli noted that a short motion or consensus statement was needed at that point. Feary indicated he had one and that he would work with Stein to finalize it for approval during Agendum 21 on Friday.

SPC Consensus 1003-07: SPC recognizes the high scientific value and widespread societal interest in understanding how—or whether—climate influenced the early stages of human evolution on the African continent. Addressing this issue requires a much more detailed understanding of the regional and local climates in which hominids and hominins evolved, and this understanding will require a coherent and integrated approach to recovering detailed climate records from terrestrial (former lake) sequences, from present day lakes in Africa, and from the ocean basins surrounding Africa. SPC invites the ICDP community to join with the IODP community to establish a Joint Program Planning Group charged to plan an integrated onshore, lake, and ocean drilling program that would dramatically enhance scientific understanding of how past climates may have influenced the early stages of our evolution.

Thursday

25 March 2010

08:30-17:30

11. Clarify status of proposals remaining at the Operations Task Force

Yoshi Kawamura summarized the status of proposals remaining at OTF. He noted that all twenty-four proposals listed under agenda items 11.1 and 11.2 are considered to be residing within OTF.

11.1. Scheduled or recommended for FY10-11

Blackman asked for clarification of the status of Proposal 734-APL Cascadia Accretionary Prism CORK. Kawamura replied that it is scheduled after Expedition 327 Juan de Fuca Hydrogeology. The following proposals are either scheduled or recommended for scheduling as of March 2010:

Proposal	Short Title
519-Full2	South Pacific Sea Level
522-Full5	Superfast Spreading Crust
537A-Full5	Costa Rica Seismogenesis Phase A
545-Full3	Juan de Fuca Flank Hydrogeology
603A-Full2	NanTroSEIZE Phase 1: Reference Sites
603B-Full2	NanTroSEIZE Phase 2: Mega-splay Faults
603C-Full	NanTroSEIZE Phase 3: Plate Interface
603D-Full2	NanTroSEIZE Observatories

636-Full3	Louisville Seamount Trail
662-Full3	South Pacific Gyre Microbiology
677-Full	Mid-Atlantic Ridge Microbiology
734-APL	Cascadia Accretionary Prism CORK

11.2. Available for future consideration by the Operations Task Force

Kawamura confirmed that all twelve proposals listed under this agenda are available for future consideration by OTF. Excluding proposals forwarded to the OTF at this meeting, the following proposals are available for developing future scheduling options by OTF:

Proposal	Short Title
477-Full4	Okhotsk/Bering Plio-Pleistocene (Okhotsk)
505-Full5	Mariana Convergent Margin
537B-Full4	Costa Rica Seismogenesis Phase B
549-Full6	Northern Arabian Sea Monsoon
552-Full3	Bengal Fan
601-Full3	Okinawa Trough Deep Biosphere
605-Full2	Asian Monsoon
644-Full2	Mediterranean Outflow
693-APL	S. Chamorro Seamount CORK
716-Full2	Hawaiian Drowned Coral Reefs
724-Full	Gulf of Aden Faunal Evolution
738-APL	Nankai Trough Submarine Landslides

Some discussion commenced about potential scheduling issues with some of the proposals. Filippelli noted that Proposal 477-Full 4 Okhotsk/Bering Plio-Pleistocene was a single proposal that had been divided due to clearance issues in the Sea of Okhotsk. He indicated that the Bering Sea sites from the proposal had already been drilled, but the other sites would not be until things changed with the permitting issues. Y. Kawamura noted that Proposal 601-Full3 Okinawa Trough Deep Biosphere was likely a contingency for NanTroSEIZE this year. van der Pluijm noted that there needed to be a distinction between riser and riserless drilling, especially using riserless operation as a contingency for riser drilling. Eguchi indicated that the Kuroshio Current was causing problems with riser drilling this year. Y. Kawamura added that CDEX is confident that with technology they are developing to minimize VIV, they will be able to do riser drilling even under higher Kuroshio Current speeds; however, they will use the next year to finish testing the system. Filippelli noted that a site change for this proposal had been sent to IODP-MI and the SPC chair, but it was determined that this did not change the overall objectives. Katz indicated that if the sites had changed that it would have to be re-reviewed by EPSP. Eguchi added that although they plan to drill Okinawa this year, there is only enough time to drill four or five sites, but that the proponent is happy to start with this. Y. Kawamura noted that although there is a SSP issue for Proposal 724-Full Gulf of Aden Faunal Evolution, the bigger program is security issues drilling in that region. Malone added that at this time it would require a military presence for safety. Allan indicated that NSF has been in correspondence with the U.S. State Department about issues related to this (although not specifically about the *JR*), with the result that it will not happen at this point.

Significant discussion revolved around Proposal 738-APL Nankai Trough Submarine Landslides. Y. Kawamura noted that it is an APL, but would take approximately nine operational days, as opposed to three allotted for APLs. As a reminder, Filippelli noted that

for each expedition, three or four days are set aside for APL or engineering development proposals. The SPC has not really discussed how to deal with APLs for the *Chikyu*, where expedition lengths are longer. Früh-Green noted that the argument against longer APLs is that they take away from primary expedition objectives, so the question becomes would this APL take away from NanTroSEIZE. Blackman noted that the NanTroSEIZE PMT looks upon the proposal favorably. Eguchi added that the PMT would like to add it to the schedule, but are waiting for SPC/OTF approval. Kasahara asked why it was submitted as an APL if it would take so long. Eguchi responded that it was originally written to be done by the *JR*, where it would take three days; with the *Chikyu* the operations time would be longer. He further added that because of the increased length they were waiting for SPC/OTF approval before putting it on the schedule. Filippelli noted that they needed to work on guidelines for implementing APLs. Malone offered to make suggestions at the next OTF meeting.

11.3. Holding bin

Confusion over the holding bin led to some discussion. Feary asked if there was a need for another category within the holding bin for proposals with clearance issues. Filippelli and H. Kawamura indicated that the holding bin was for proposals designated to be forwarded to OTF, but had insufficient data for SSP and/or EPSP to clear for scheduling. Thus, those proposals are retained in a holding bin at SPC until data become available. Filippelli suggested looking at the holding bin issue again on Friday. He did not think that adding another bin at OTF would be useful for operators. Murray indicated that it needed to be reemphasized that proposals in the holding bin are not at OTF, but retained at SPC. Kasahara asked if there was a time limit for proposals to be held in the holding bin. Filippelli indicated there was not. Excluding proposals placed in the holding bin during this meeting, the following proposals reside in the holding bin at SPC:

Proposal	Short Title
618-Full3	East Asia Monsoon
637-Full2	New England Shelf Hydrogeology
705-Full2	Santa Barbara Basin Climate Change

12. Thematic summaries

To assist with determining how well each of the three major ISP themes had been addressed to-date within IODP, thematic summaries were presented for each. Gilbert Camoin covered Deep Biosphere and Subsurface Ocean, Naohiko Ohkouchi covered Environmental Change, Processes, and Effects, and Donna Blackman covered Solid Earth Cycles and Geodynamics. Each noted how the main objectives within each theme had been addressed by prior drilling, and how current proposals (both those at OTF and at SPC) would address the ISP.

13. Regional context

13.1. Drilling history, future proposal pressure by basin

Hiroshi Kawamura displayed a world map showing the distribution of sites drilled through the history of scientific ocean drilling. He noted that many areas have been drilled, although there are some gaps, particularly in the eastern Pacific Ocean. He noted that at SPC there are twelve Pacific Ocean proposals, eleven Atlantic Ocean proposals, two Indian Ocean proposals, one Mediterranean proposal, and one Southern Ocean proposal. He gave the following breakdown for proposals residing at OTF: twenty-three Pacific Ocean proposals, three Atlantic Ocean proposals, three Indian Ocean proposals, and two Southern Ocean proposals. Filippelli then asked where the *JR* would be going over the next year. H.

Kawamura showed a map and Malone outlined the expedition plan, which has the ship in the Pacific Ocean until a non-operational period scheduled for summer 2011 when the ship may be in port in the Gulf of Mexico. New expeditions would then likely commence in the Atlantic in September 2011 (677-Full Mid-Atlantic Ridge Microbiology). Filippelli then noted that there has been no drilling in the Indian Ocean or South Atlantic during IODP. Exon added that it had been ten years since a drilling expedition occurred in the Indian Ocean and suggested returning to that region could prompt Indians to submit drilling proposals. Feary noted that SPC has sent several Indian Ocean proposals to OTF and hopes that there is still a chance the *JR* could return to the Indian Ocean before the end of the program.

14. Discussion of process for expedition “scheduling” to the end of the program

Gabe Filippelli noted that the SASEC report given on Wednesday covered the information included in this agendum. He said that the proposals already at OTF and those forwarded as a result of the current SPC meeting would be used to draft proposed schedules through the end of the program during the OTF meeting in April. He noted that five SPC members were also members of OTF, but SPC could opt to send additional members if necessary. Feary commented that Asian monsoon proposals that had come through the SAS structure had been set aside until feedback was received from the Detailed Planning Group (DPG) on Asian Monsoon. He expressed concern that there was a risk these proposals would not be included in the program. Filippelli replied that one of the Asian monsoon proposals was a tier one proposal planned to be implemented prior to the end of the current program. Larsen noted that from an OTF perspective it would be best to have as many proposals as possible for flexibility of shiptracks. He indicated that non-mature proposals should not be forwarded, but the SPC could use comments to OTF to provide clear explanations of positives and concerns for each of the forwarded proposals. Filippelli noted that there would be draft schedule possibilities and that they would eventually approve a drilling plan each year.

15. Global ranking of proposals I

15.1 Select proposal pool to rank

Gabe Filippelli noted that the committee had already discussed that some proposals may need to be deactivated or sent back to the proponents for revision and resubmission. He indicated that those proposals need to be selected now and that the remaining would represent the pool of proposals to rank. Filippelli reminded everyone that although some proposals may be fast tracked into the program, this meeting would probably be the last full ranking exercise of the current program. He cautioned everyone to carefully consider whether proposals were fully mature. During discussion, two proposals were deactivated by consensus: 547-Full4 Oceanic Subsurface Biosphere and 557-Full2 Storegga Slide Gas Hydrates.

SPC Consensus 1003-08: The SPC deactivates Proposals 547-Full4 Oceanic Subsurface Biosphere and 557-Full2 Storegga Slide Gas Hydrates and will not consider them for ranking.

Options for Proposal 703-Full Coast Rica SEISCORK were discussed by the committee. Kasahara noted that it was a good proposal, but there was no chance of getting funding for the CORK during the current program. van der Pluijm agreed, noting that deactivation was not a good option for a proposal that represents future research avenues, but also did not want the proposal to receive a low ranking solely because it could not be implemented at this time. During discussion, Filippelli told the committee that H. Kawamura indicated the proposal could be retained at SPC but not ranked at the meeting, and that a short letter could be sent to

the proponents to indicate the reasons for this decision. After further discussion, the committee agreed to this option by consensus.

SPC Consensus 1003-09: The SPC will not consider Proposal 703-Full (Costa Rica SEISCORK) for ranking during this meeting.

Filippelli noted there were three proposals to consider returning to the proponents for revision. Proposal 667-Full NW Australian Shelf Eustasy had new 3D seismic that would result in sites being relocated, and also that the sediment targets had changed. An addendum to Proposal 595-Full3 Indus Fan and Murray Ridge added a new site and also changed the depth and age objectives compared to what had originally been submitted. The addendum 698-Add2 Izu-Bonin-Mariana Arc Middle Crust substantially changed the target depth based on new seismic acquired. As a result, the proposal planned to core significantly less middle crust than originally anticipated (approximately 250 m instead of 2000 m). After discussion the committee agreed that the targets and objectives had changed substantially enough in each of these proposals that the SSEP should review each again. By consensus SPC opted to return each proposal to the proponents for revision.

SPC Consensus 1003-10: The SPC asks for revision of Proposals 667-Full NW Australian Shelf Eustasy, 595-Full3 Indus Fan and Murray Ridge, and 698-Add2 Izu-Bonin-Mariana Arc Middle Crust and returns them to the proponents.

The SPC also discussed whether to include Proposal 669-Full3 Walvis Ridge Hotspot in the ranking pool. Philippelli noted that the proponents requested that the proposal remain active, but that they do not have site survey data and are unlikely to obtain funding for future site surveys without support of the SPC. Feary added that he worried that if the proposal ranked low due to lack of site survey data that it would send the wrong message. After further discussion it was agreed that since the proponents had not asked for the proposal to not be ranked, that it would be retained in the ranking pool. Philippelli indicated that the remaining eighteen proposals would be included in the pool for ranking.

SPC Consensus 1003-11: The SPC will include in the ranking pool 18 of the proposals reviewed at this meeting.

16. Presentation and discussion of Ancillary Project Letters

Gabe Philippelli noted that Proposal 738-APL Nankai Trough Submarine Landslides would be a three-day expedition if completed by the *JR*, but in reality the location makes it necessary to complete with the *Chikyu*, which would take nine days of operations. He noted that nine days represents about 10% of the time dedicated to NanTroSEIZE expeditions this year. Ohkouchi and Feary asked if someone needed to make a motion to still classify the proposal as an APL at OTF ready to be drilled. Philippelli noted that he was just trying to find consent to keep the APL at OTF as it currently stands. van der Pluijm indicated that a similar discussion occurred at the March 2009 meeting and there was no concern about it then. Filipelli noted that there was consent for retaining the APL at OTF.

SPC Consensus 1003-12: The SPC will keep 738-APL Nankai Trough Submarine Landslides at the Operations Task Force (OTF) to be scheduled.

The committee reviewed one APL: 736-APL Iberian Margin Paleoclimate (watchdogs: Peterson/Feary/Filippelli). By consensus, the committee decided to send Proposal 736-APL to the OTF for possible implementation. During discussion of the proposal, the possibility of logging was addressed, although it was noted that logging might not be worth it due to the shallow nature of the proposed holes. As a result, the committee agreed that a fourth hole should be cored if possible to ensure collection of a complete section and also ensure availability of ample sediment for research, and that implementing a logging program should at least be considered.

SPC Consensus 1003-13: The SPC enthusiastically endorses Proposal 763-APL Iberian Margin Paleoclimate to triple APC-core the Pleistocene sequence at the location of the well-known Iberian margin core MD95-2042 and forwards it to the Operations Task Force (OTF). We recognize the high value of this site for providing an important North Atlantic reference section that allows for direct correlation to polar ice cores through its isotopic signals, and for integrating marine and terrestrial signals by virtue of its relatively near-shore position. This APL has outstanding potential to provide a “virtual Greenland” record that will provide insights into the rates and magnitudes of climate change on multiple timescales and over multiple glacial-interglacial cycles when natural climate forcing (e.g., orbital, CO₂) differed substantially. Recognizing that creation of a proper marine “type section” calls for a multitude of replicated proxy measurements, SPC encourages OTF to consider providing enough time to collect a fourth APC hole to 150 mbsf to ensure recovery of a complete sequence so that sediment does not become limiting in post-collection sampling. The potential value of logging at least one hole should also be considered as part of the operational considerations at this site.

17. Discussion of the current proposal evaluation system

Ian Macgregor, chair of the Second Triennium Review Board, introduced the eight board members and outlined the purpose of the review, which is to review the SAS structure to find ways to improve it. Geoff Garrett then presented an outline of the recommendations that the committee has drafted, noting that they are preliminary and that the final recommendations will be drafted later this year.

Friday

26 March 2010

08:30-17:30

18. Global ranking of proposals II

18.1. Balloting by Science Planning Committee members

Overnight, each of the seventeen SPC members and alternates present and eligible to vote assigned the numerical rankings one through eighteen to the eighteen proposals in the global ranking pool. On Friday morning, each of the members submitted their rankings on signed ballots to the IODP-MI science coordinators. Cheong, Hollis, and Li were the non-voting members present.

18.2. Tabulation of results

H. Kawamura and Kulhanek collected the ballots and tabulated the following results for the eighteen proposals ranked by the committee:

Rank	Proposal #	Short Title	Mean	Std. Dev.	Result
1	732-Full2	Antarctic Peninsula Sediment Drifts	3.471	2.375	OTF
2	695-Full2	Izu-Bonin-Mariana Pre-Arc Crust	4.882	4.029	OTF
3	686-Full	Southern Alaska Margin 1	5.417	5.328	OTF
4	548-Full3	Chicxulub K-T Impact Crater	6.471	4.515	OTF
5	553-Full2	Cascadia Margin Hydrates	6.765	3.977	OTF
6	681-Full2	Lesser Antilles Volcanic Landslides	7.706	5.301	*
7	661-Full2	Newfoundland Sediment Drifts	8.000	3.657	OTF
8	551-Full	Hess Deep Plutonic Crust	8.294	4.239	OTF
9	633-Full2	Costa Rica Mud Mounds	10.059	4.575	OTF
10	581-Full2	Late Pleistocene Coralgal Banks	10.529	5.479	OTF
11	659-Full	Newfoundland Rifted Margin	10.647	3.656	OTF
12	672-Full3	Baltic Sea Basin Paleoenvironment	11.000	3.518	NF
13	697-Full3	Izu-Bonin-Mariana Reararc Crust	11.412	5.374	NF
14	567-Full4	South Pacific Paleogene	11.471	3.300	NF
15	555-Full3	Cretan Margin	12.118	4.045	NF
16	589-Full3	Gulf of Mexico Overpressures	13.529	4.155	NF
17	669-Full3	Walvis Ridge Hotspot	13.765	3.113	NF
18	556-Full4	Malvinas Confluence	16.000	2.318	†

OTF = forwarded to OTF

NF = not forwarded to OTF

* = placed in “holding bin” due to site survey deficiencies (see SPC Consensus 1003-15)

† = deactivated

18.3 Select ranked proposals to forward to the Operations Task Force

Gabe Filippelli explained that the SPC needed to decide which proposals to forward to OTF. He noted that the OTF chair had indicated that OTF needed many good proposals for operational flexibility (more is better), but that this is just guidance for SPC. Filippelli indicated that in the past, SPC has opted to draw a line in the rankings and forward everything above that line to OTF; however, SPC may choose to forward others for platform flexibility. Filippelli noted that some first-time proposals did very well in the ranking process this year. He mentioned that there has been criticism that the SAS system bogs down proposals, but that this shows that excellent proposals can get through the system very quickly. He also noted that looking at the top-ranked proposals, all ISP main themes are covered and that the ranking process was a little more clear-cut than in past years.

The committee deliberated over which proposals to forward to the OTF. Camoin asked if there was guidance in the number of proposals that should be at OTF to provide operational flexibility. Filippelli noted there was no number guidance from the OTF chair, but that if there are good proposals, he would like to have them forwarded. Früh-Green asked if this was the last batch of proposals that would be forwarded in the current IODP program. Filippelli indicated that proposals could be forwarded next year, but it was unlikely that many new ones would make it on the schedule at that time. Both Katz and Mével noted that the first expeditions of the new program would come from proposals forwarded to OTF during the final stages of the current program. Allan reminded the committee that the ship needs to run on a regional basis, so if there are relatively minor differences in ranking, forwarding more proposals would give the operator more flexibility.

Filippelli noted that due to the situation, forwarding more proposals than was typical in the past would be better. Peterson suggested forwarding the top ten proposals as a point to begin the discussion. Früh-Green noted that there was a bigger statistical difference between rankings eight and nine. In support of Peterson, Evans pointed out that it would be better to have two MSP proposals forwarded so that an alternate was available in case of permitting issues. Allan further noted that there was little statistical difference between rankings ten and eleven, and that forwarding an additional Atlantic option would be helpful. van der Pluijijm reminded everyone that in the past the SPC has pulled out the MSP proposals and then looked at the list again. Murray indicated that he saw a clear break between rankings eight and nine. He agreed that if the Chixculub proposal was not to work out there should be another MSP proposal waiting, but that would not be an issue before the next ranking meeting. Yamazaki and Kasahara agreed. Filippelli agreed that there was convenient break between eight and nine; however, he noted that Evans and Allan wanted the SPC to consider operational reality if only the top eight proposals were forwarded.

Allan suggested examining the rankings in terms of those that address gaps in the ISP. Filippelli noted that the top ranked set of proposals do a good job of filling out the ISP, but agreed that there may be some in the lower half that would be useful as well. Stein indicated that the only proposal dealing with continental breakup (a part of the ISP not yet addressed) was ranked eleventh. He wondered if the SPC only forwarded the top eight proposals if more could be forwarded in 2011. Filippelli indicated he believed SPC could do that. Feary asked if losing another year on an MSP would make it difficult for implementation during the remainder of the program. Evans said it could make it difficult, but also could be okay. Mével reminded everyone that there were some permitting issues with the Hawaii MSP proposal. Jenkyns asked if the SPC would still designate tiers for proposals forwarded to OTF. If so he suggested sending proposals 1-8 as tier one and proposals 9-11 as tier two. Filippelli indicated he thought the tiering system might begin to fail near the end of the program. Feary further commented that in the past tiering was done on a proposal by proposal basis.

Filippelli asked if anyone thought the forwarding line should be drawn higher than between eight and nine, and then indicated there seemed to be consensus for forwarding at least the top eight proposals. van der Pluijijm and Camoin further commented that the proposals forwarded to OTF would be given a tier designation that would take into account what was already at OTF waiting to be scheduled and that tier one proposals are those that should be implemented before the end of the current program. Filippelli indicated he was skeptical of the tier designation only because of operational constraints. Feary noted that he just wanted to make sure there was a range of high priority options in the different ocean basins and that it was valuable to send a message about what SPC wanted to see completed. He also noted that other issues needed to be considered, such as the sixth ranked proposal (681-Full2 Lesser Antilles Volcanic Landslides) would go straight to the holding bin.

Filippelli asked for further comments on where to draw the line for proposals to forward to OTF. Hollis agreed with the division between eight and nine and noted that the MSP proposals Coralgal Banks and Baltic Sea were ranked closely together; he hoped they would be improved sufficiently by the next ranking meeting. Kakegawa suggested drawing the line between proposals eleven and twelve since the eleventh ranked proposal would be important for rounding out the ISP. Filippelli agreed. Blackman noted that there would be stronger interest in forwarding Proposal 659-Full Newfoundland Rifted Margin if the alternate sites were considered first. John agreed that considering the state of the old hole and that the re-

entry cone is below the seafloor that the alternate sites would have to be considered. Filippelli indicated they could send a message that SPC was not endorsing re-entry, but drilling the alternate sites. Früh-Green indicated she would support that. Feary noted that SPC had requested the proponents consider that after the last ranking meeting and that they had not changed the focus of the proposal. He indicated he was uncomfortable with forwarding the proposal with the alternate site emphasis when the proponents did not take into account previous recommendations. Malone noted that if the proposal went to OTF, he would ask what strategy needed to be followed and would like to know what SPC thought was important. Allan noted a philosophical difference between NSF and SPC; NSF thinks that the SPC has the power to take pieces out of proposals to address the ISP. Filippelli agreed with the clarification that when the proposals are forwarded to OTF they are no longer the proponent's proposals but the program's.

Filippelli called for a straw vote to get a general feeling of where SPC consensus was.

Divins noted that there was operational concern that if Newfoundland Rifted Margin was not forwarded there would not be an Atlantic program in FY12. van der Pluijm asked for clarification about how many Atlantic proposals were needed for there to be an Atlantic program, since there was one scheduled and one ready for scheduling. Malone indicated that two more were needed for a full year in the Atlantic. Filippelli asked if a full year were required and Malone said no. Früh-Green asked if the program was still trying to get the ship to the Indian Ocean. Filippelli replied that based on tier one proposals at OTF, that should be a priority.

Kakegawa noted that proposals nine and ten were good proposals that should be forwarded, making the case to draw the line between rankings eleven and twelve. Früh-Green suggested including the third MSP proposal (672-Full3 Baltic Sea Basin Paleoenvironment) to give them more scheduling possibilities. She noted that the Baltic Sea proposal had a different focus than previous MSPs and that it would send the message that the program does not just focus on one type of problem and also includes newcomers to the program. Mével agreed this would be good from the ECORD perspective as it would give them an opportunity to involve new countries in Europe. Filippelli asked the lead watchdog (Hollis) if he would feel comfortable with forwarding the proposal to OTF with guidance from the review process. Hollis noted he thought the proposal could benefit from some strengthening, but that it would not make a difference in the drilling targets so it would be good to have it sent to OTF. Früh-Green asked if the scientific objectives would just be expanded. Hollis noted that they are hoping to address many vast questions. Filippelli asked for any further discussion of forwarding the Baltic Sea Basin proposal to OTF. Murray noted that he still thought the proposal could benefit from improvement. Hollis asked Murray to clarify if he was talking about the proposal rather than the drilling targets. Murray noted that his concern was whether or not the operations were aligned with the science. Anma added that he thought the thirteenth ranked proposal (697-Full3 Izu-Bonin-Mariana Rear-arc) was mature science and should be forwarded to OTF. Camoin noted that he strongly supported the comments about involving new countries, but wondered if the Baltic Sea proposal would receive a higher ranking at the next meeting if an addendum was submitted. Hollis thought that it could be improved with a proponent response letter (PRL). Camoin noted that he didn't want to send the wrong message to the community and that the ranking may reflect that the proposal was just not well written. Filippelli noted he was hearing great interest for the Baltic Sea Basin proposal, but that they could make it better with a small amount of effort.

van der Pluijm reiterated that they should pull out the MSP proposals (as they use a different platform and do not compete with the other proposals) and look at the others separately. Filippelli noted that doing that they would remove rankings four, ten, and twelve and just consider the others. van der Pluijm indicated that if the line was then drawn between rankings eight and nine, seven *JR* proposals would be forwarded, which he thought would be enough. Camoin indicated he thought they would need more than that to make schedules. Murray noted that while he originally thought the line should be between eight and nine, he could see the benefit of drawing it between eleven and twelve, which would preserve ocean basin flexibility. Filippelli noted that the SPC members had voiced opinions and that if no one had anything further to add, they would attempt to seek consensus. If that were not possible, they would vote.

SPC Motion 1003-14: The SPC moves to have proposals ranked 1-11 forwarded to the Operations Task Force (OTF) with the understanding that Proposal 659-Full includes alternate site emphasis.

Murray moved, Camoin seconded, 12 in favor (Blackman, Camoin, Feary, Filippelli, John, Kakegawa, Kasahara, Murray, Okhouchi, Peterson, Stein, Takada), 1 opposed (Yamazaki), 4 abstained (Anma, Früh-Green, Umino, van der Pluijm), 3 non-voting (Cheong, Hollis, Li)

Filippelli asked if any of the proposals within the group forwarded to OTF would need to be retained in the holding bin. It was noted that Proposal 281-Full2 Lesser Antilles Volcanic Landslides was missing site survey data. Feary indicated they were funded for a site survey this year (Kasahara thought in the spring), but would be best to retain in the holding bin until that was completed. Filippelli noted that the holding bin was for proposals where site survey data are not available, or similar issues. Katz commented that a number of things can happen and that often sites get changed after proposals are forwarded to OTF. He felt that if the science was good, forward the proposal and let the scheduling process happen. Feary noted that the holding bin concept was started with the New England Hydrate proposal that was basically a concept with no drilling sites selected due to a lack of site survey data. He further commented that the holding bin concept was to ensure that the original objectives were still addressed once sites were selected. Katz noted that proposals rarely include enough alternate sites, so those are usually added at EPSP meetings anyway. Filippelli agreed that things often change during scheduling, but also noted that placing the proposal in the holding bin would not impact scheduling of the expedition as nothing would happen until after the site survey anyway. Filippelli asked if there was any other discussion, otherwise he would assume consent for placing Proposal 281-Full2 Lesser Antilles Volcanic Landslides in the holding bin. van der Pluijm asked for clarification as to whether the holding bin was at SPC or OTF. Camoin and H. Kawamura noted that based on the 2009 Miami SPC meeting minutes, the holding bin is for proposals to be forwarded to OTF for which there is insufficient data (from EPSP or SSP) to schedule and that the SPC chair has the authority to forward the proposal to OTF once the data are available. Filippelli confirmed that Proposal 281-Full2 Lesser Antilles Volcanic Landslides would not be at OTF if retained in the holding bin. He then once again attempted to seek consensus.

SPC Consensus 1003-15: The SPC places Proposal 681-Full2 Lesser Antilles Volcanic Landslides in the holding bin until after the site survey data have been released. Once the data are released, the SPC chair will send an email to all SPC members.

The SPC then discussed designating tier one/tier two for proposals being forwarded to OTF. During the discussion, Evans noted that the Hawaiian Drowned Reefs proposal had a tier ranking, but he thought MSP proposals did not receive rankings. Camoin noted that it was originally considered a *JR* proposal, but that it would no longer have a ranking now that it was a MSP proposal. Filippelli noted that the original tiering process was within ocean basins (Pacific/Atlantic/Indian); SPC specifically identified one or two proposals in each ocean basin that they really wanted to see accomplished. Feary added that tier two proposals would be returned to SPC if not scheduled within two years. Filippelli indicated he thought the tiering process was no longer valid due to the approaching end of the current program, but noted that many did not share this view. Blackman thought that there was potential to use tiering to begin pulling the *JR* towards the Indian Ocean. Filippelli noted that SPC tiered by ocean basin because they are not putting together a program plan. Feary said that the motivation for tiering in the first place was due to a request from OTF, but if they no longer wanted tier designations, then SPC should not do that. Larsen indicated that he did not think tiering was desirable anymore and that the comments that come with the forwarded proposals would be more useful. Filippelli and Kasahara asked how to deal with the proposals already given a tier designation. Larsen responded that the tiering would basically be ignored anyway and that the comments would be more important during scheduling. Filippelli noted that since the OTF chair felt tier ranking designations were no longer useful, that SPC should remove all tier designations and not rank any being forwarded. This was agreed to by consensus.

SPC Consensus 1003-16: The SPC removes all tier designations for proposals residing at the Operations Task Force (OTF) and does not give any tier designations for proposals being forwarded to OTF this year.

Filippelli indicated that the committee needed to identify two additional SPC members to attend the April OTF meeting. Larsen noted that it didn't have to be two, but the number needed to be manageable and that there was the issue of funding for travel to consider. Filippelli noted the meeting would be held on the 26-28 April in Tokyo. He thought the best way to address this was to look at it by ISP theme. Filippelli and Okhouchi are OTF members within the paleoenvironment theme, but Okhouchi cannot attend the meeting. Yamazaki is his replacement and his specialty is in solid Earth. Stein and Feary agreed that they could both attend the OTF meeting as additional paleoenvironmental experts. Within the solid Earth theme, Früh-Green, John, and Kasahara would normally attend, although Früh-Green would not be at the April meeting. All agreed that with alternate Yamazaki there would be enough solid Earth expertise present. No SPC representatives attending OTF have expertise in deep biosphere; Kasahara agreed to ask Tokonaga to attend the meeting as the deep biosphere expert.

18.4. Nominate co-chief scientists for forwarded proposals

Filippelli indicated that co-chief nominations for proposals forwarded to OTF would be completed over lunch, after adjournment of the meeting.

18.5. Select proposals to deactivate

H. Kawamura asked if there will be discussion about possible deactivation of poorly ranked proposals. Filippelli indicated there would be. Larsen noted that there has already been some discussion about how to transfer proposals into the new program. He suggested deactivation of current proposals that have no chance of being implemented in the current or new

program. After discussion, the committee decided by consensus to deactivate one proposal: 556-Full4 Malvinas Confluence.

SPC Consensus 1003-17: The SPC deactivates Proposal 556-Full4 Malvinas Confluence because it has ranked low in the last several SPC evaluations and realistically has little chance of being implemented within the current phase of the IODP, which ends in 2013.

19. Expedition scheduling for APLs and Engineering Development

There was no discussion of this agenda item.

20. Other business

20.1. Liaisons Ocean Observatories Initiative (OOI)

Gabe Filippelli asked David Feary to address interaction between SPC and the Ocean Observatories Initiative (OOI). Feary noted that the way to establish better contact with the group would be to invite a liaison from OOI to attend SPC meetings. Murray asked if there is an international component to OOI. Divens noted that OOI is a national body within the U.S. Blackman added that there is an international group related to seismic deployment. Larsen noted that establishing contact with outside organizations was within the mandate of SASEC and he therefore recommended having SASEC and SPC work together to establish a small group to proceed with this. Filippelli suggested drafting a consensus statement indicating that several people from SPC would work with Divens to establish contact and interact with OOI. van der Pluijm noted that this could help get momentum going for observatories within the program. Larsen added that currently IODP and OOI compete for the same money, so it would be good if SPC could work with SASEC on reaching out to OOI. Filippelli agreed that SPC would identify several members to work with SASEC and the USIO to enhance coordination with ocean observatory efforts. He suggested identifying two U.S. members to lead this up, as the programs were within the U.S. The European and Japanese members of SPC expressed discomfort with this and Mével noted that both Europe and Japan have a lot of interest in ocean observatories as well. After discussion it was agreed that the subcommittee should consist of one person representing the U.S. (Blackman), ECORD (Früh-Green), and Japan (Kasahara), and a consensus statement was drafted.

SPC Consensus 1003-18: The SPC creates a subcommittee consisting of Früh-Green, Blackman, and Kasahara to work with the Science Advisory Structure Executive Committee (SASEC) to enhance communication with ocean observatory efforts to promote collaborative science activities.

21. Review of motions and consensus items

Ben van der Pluijm drafted a consensus statement thanking the hosts of the 15th SPC meeting held at the University of Sydney.

SPC Consensus 1003-19: The SPC thanks Jody Webster for (virtual) hosting the 15th IODP Science Planning Committee Meeting, held at the University of Sydney. We thank Neville Exon for being the on-site host. Inke Falkner and Edwina Tanner from the University of Sydney offered indispensable logistical support. The meeting venue was in a beautiful location that was further amplified by lovely weather and most helpful people. The SPC thanks Tom Hubble for a wonderful fieldtrip to Long Reef that focused on sandstone depositional environments, and also showed us where to live near Sydney when money is no

object. Finally, the SPC thanks the host for a welcoming ice breaker on Monday evening and an enjoyable banquet on Thursday night.

Gilbert Camoin thanked Dan Evans for his service as ESO manager.

SPC Consensus 1003-20: The SPC thanks Dan Evans for his dedicated and highly effective service as ESO Manager. Between 2003 and 2010, he has played a crucial role in the successful implementation of the first four IODP MSP operations (Arctic Coring, Tahiti Sea Level, New Jersey Shallow Shelf, Great Barrier Reef Environmental Changes), which turned out to be major achievements in scientific drilling. The Program will miss his experience and Welsh wisdom.

Junzo Kasahara thanked departing SPC member Tomochika Tokunaga for his service on the committee.

SPC Consensus 1003-21: The SPC greatly thanks Tomochika Tokunaga's deep knowledge of the program, especially for hydrological aspects in subduction zone processes that have been critical in SPC decision making. Thank you Tomochika, we will miss your enthusiastic contributions.

Donna Blackman provided a draft statement indicating SPC's enthusiasm for the upcoming start of operations on the Costa Rica Seismogenesis Project.

SPC Consensus 1003-22: The SPC is very enthusiastic about the upcoming start of work on the Costa Rica Seismogenesis Project. Operations during CRISP-A promise to position the program well for eventual deep riser drilling.

Gabe Filippelli suggested that SPC ask the NanTroSEIZE PMT to recommend co-chiefs for the new drilling plan.

SPC Consensus 1003-23: The SPC will leave Proposal 738-APL Nankai Trough Submarine Landslides at the Operations Task Force (OTF), and asks the NanTroSEIZE Project Management Team (PMT) to recommend appropriate co-Chief scientists suited to the new drilling plan involving non-riser operations.

22. Future meetings

22.1. Liaisons to other panels and programs

Gabe Filippelli listed the meetings where an SPC representative is requested if at all possible. He noted he would likely attend the May SSEP meeting and the June SASEC meeting. He indicated that a U.S. member should attend the July EDP meeting, noting that he had it on his calendar, but would be happy to let another attend if interested. He asked for a potential attendee for the July SSP meeting and after discussion amongst the ECORD members it was decided Stein would attend as long as it was held as currently scheduled (beginning on 26 July). Filippelli asked how often an SPC representative attended EPSP meetings. Katz replied that historically the chair or vice-chair attends. It was decided that since the next EPSP meeting would be one day in Japan that Kasahara would attend as the SPC representative. Filippelli noted that the next STP meeting would be in August in either Sapporo or Geneva.

Given that it was being held on one of two continents, he opted to hold off on selecting a liaison until the location had been decided.

22.2. 16th and 17th Science Planning Committee meetings

22.2.1. August 2010 (USA)

Gabe Filippelli indicated the next SPC meeting would be held in San Diego around the end of August or beginning of September. Blackman noted that there was a climate conference in La Jolla during the week of 30 August and at least six members indicated they would be attending as much of that meeting as possible. Filippelli noted that the conference typically drew at least 600 people, with at least one-third of those having sailed on the *JR* and half having used ODP samples. van der Pluijm asked if the SPC meeting would be over by noon on Wednesday. Filippelli and Larsen both indicated a full day would be required.

22.2.2. March 2011 (Japan?)

There was no discussion of this meeting.

Gabe Filippelli thanked everyone for their participation and willingness to work together. He adjourned the meeting at 12:38.

Appendix: Acronyms and Abbreviations

AGU	American Geophysical Union
AIST	National Institute of Advanced Industrial Science and Technology
ANZIC	Australia-New Zealand IODP Consortium
APL	Ancillary project letter
ARC	Australian Research Council
BGS	British Geological Survey
BoG	Board of Governors
CDEX	Center for Deep Earth Exploration
CoI	Conflict-of-Interest
CMO	Central Management Office
CPP	Complimentary Project Proposal
CRISP	Costa Rica Seismogenesis Project
DPG	Detailed Planning Group
DS3F	Deep Sea and Subseafloor Frontier
DSDP	Deep Sea Drilling Program
EC	European Commission
ECORD	European Consortium for Ocean Research Drilling
EDP	Engineering Development Panel
EGU	European Geosciences Union
EMA	ECORD Management Agency
EPSP	Environmental Protection and Safety Panel
ERS	Electric Releasing System
ESO	ECORD Science Operator
ESSAC	ECORD Science Support and Advisory Committee
FY	Fiscal Year
GBREC	Great Barrier Reef Environmental Changes
GEO	Directorate for Geosciences
HBCU	Historically Black Colleges and Universities
ICDP	International Continental Scientific Drilling Program
INVEST	IODP New Ventures in Exploring Scientific Targets
IO	Implementing Organization
IODP	Integrated Ocean Drilling Program
IODP-MI	Integrated Ocean Drilling Program – Management International
IPGP	Paris Geophysical Institute
ISP	Initial Science Plan
IT	Information Technology
IWG+	International Working Group Plus
JAMSTEC	Japan Agency for Marine-Earth Science and Technology
J-DESC	Japan Drilling Earth Science Consortium
JPPG	Joint Program Planning Group
<i>JR</i>	<i>JOIDES Resolution</i>
KCC	Kochi Core Center
KIGAM	Korea Institute of Geoscience and Mineral Resources
K-IODP	Korea-IODP
LDEO	Lamont-Doherty Earth Observatory
LIMS	Laboratory Information Management System
LTBMS	Long Term Borehole Monitoring System

mbsf	meters below the seafloor
MDHDS	Motion Decoupled Hydraulic Delivery System
MEXT	Japan Ministry of Education, Culture, Sports, Science, and Technology
MMM	Multi-sensor Magnetometer Module
MoES	Ministry of Earth Sciences (India)
MOST	China Ministry of Science and Technology
MOU	Memorandum of Understanding
MSP	Mission-Specific Platform
NanTroSEIZE	Nankai Trough Seismogenic Zone Experiment
NAS	National Academy of Sciences
NJSS	New Jersey Shallow Shelf
NRC	National Research Council
NSB	National Science Board
NSF	National Science Foundation
ODP	Ocean Drilling Program
OOI	Ocean Observatories Initiative
OSP	Onshore Science Party
OTF	Operations Task Force
PASADO	Potrok Aike Maar Lake Sediment Archive Drilling Project
PMT	Project Management Team
POC	Platform operations costs
PRL	Proponent response letter
RMR	Riserless mud recovery
RPSEA	Research Partnership to Secure Energy for America
SAS	Science Advisory Structure
SASEC	Science Advisory Structure Executive Committee
SCIMPI	Simple Cabled Instrument for Measuring Parameters In-situ
SIC	System Integration Contract
SOC	Science operating costs
SODV	Science Ocean Drilling Vessel
SPC	Science Planning Committee
SPWC	Science Plan Writing Committee
SSEP	Science Steering and Evaluation Panel
SSP	Site Survey Panel
STP	Scientific Technology Panel
TAMU	Texas A&M University
TFT	Task Force Team
USIO	United State Implementing Organization
USSSP	United States Science Support Program
VIV	Vortex induced vibrations
VSP	Vertical seismic profile