IODP Science Planning Committee

1st Meeting, 15-19 September 2003

Hokkaido University
Sapporo, Japan

Science Planning Committee - SPC

Jamie Austin**	Institute for Geophysics, University of Texas at Austin, USA
Keir Becker	Rosenstiel School of Marine & Atmospheric Science, University of Miami, USA
Tim Byrne[a] (iISSEP)	Department of Geology and Geophysics, University of Connecticut, USA
Mike Coffin (chair)	Ocean Research Institute, University of Tokyo, Japan
Bob Duncan*	College of Oceanic & Atmospheric Sciences, Oregon State University, USA
Andy Fisher*	Earth Sciences Department, University of California, Santa Cruz, USA
Don Fisher[b]	Department of Geosciences, Pennsylvania State University, USA
Hisao Ito	Geological Survey of Japan
Kenji Kato	Institute of Geosciences, Shizuoka University, Japan
Barry Katz[c] (iPPSP)	ChevronTexaco, Energy, Research and Technology Company, USA
Hodaka Kawahata	Geological Survey of Japan
Yoshihiro Masuda[d] (iTAP)	Department of Geosystem Engineering, University of Tokyo, Japan
Ken Miller	Department of Geological Sciences, Rutgers University, USA
Ted Moore (acting vice-chair) [e]	Department of Geological Sciences, University of Michigan, USA
Kate Moran[f] (iTAP)	Graduate School of Oceanography, University of Rhode Island, USA
James Mori	Disaster Prevention Research Institute, Kyoto University, Japan
Warren Prell[g]	Department of Geological Sciences, Brown University, USA
Terry Quinn	College of Marine Science, University of South Florida, USA
Wonn Soh	Deep Sea Research Department, JAMSTEC, Japan
Yoshiyuki Tatsumi	Institute for Frontier Research on Earth Evolution (IFREE), JAMSTEC, Japan

[a]Alternate for Jamie Austin.
[b]Alternate for Keir Becker during proposal review and ranking.
[c]Alternate for Bob Duncan.
[d]Alternate for Yoshiyuki Tatsumi on last day only.
[e]Acting for Jamie Austin.
[f]Alternate for Ken Miller during proposal review and ranking.
[g]Alternate for Andy Fisher.
**Attending as IMI interim director.
*Unable to attend.

Liaisons

Jamie Allan	National Science Foundation (NSF), USA
Yasuhisa Tanaka	Ministry of Education, Culture, Sports, Science, and Technology (MEXT), Japan

Guests

Jack Baldauf	JOI Alliance, Texas A&M University, USA
Rodey Batiza	National Science Foundation (NSF), USA
Steve Bohlen	Joint Oceanographic Institutions, Inc. (JOI), USA
Gilbert Camoin (iESSEP)	CEREGE-CNRS, France
Harry Doust (iILP)	Faculty of Earth Sciences, Vrije Universiteit, The Netherlands
André Droxler (iSSP)	Department of Earth Science, Rice University, USA
Rob Dunbar (IMAGES)	Department of Geological and Environmental Sciences, Stanford University, USA
John Farrell	Joint Oceanographic Institutions, Inc. (JOI), USA
Jeff Fox	JOI Alliance, Texas A&M University, USA
David Goldberg	JOI Alliance, Lamont Doherty Earth Observatory, USA
Benoît Ildefonse (iPC)	Laboratoire de Tectonophysique, ISTEEM, Université Montpellier II, France
Yoshihisa Kawamura	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan
Eiichi Kikawa (iSciMP)	Deep Sea Research Department, JAMSTEC, Japan
Andrew Kingdon	ECORD Science Operator (ESO), British Geological Survey, United Kingdom

Hajimu Kinoshita (iPC)	Japan Marine Science and Technology Center (JAMSTEC), Japan
Chris MacLeod (iPC)	Department of Earth Sciences, Cardiff University, United Kingdom
Osamu Miyaki	Ministry of Education, Culture, Sports, Science, and Technology (MEXT), Japan
Toru Nishikawa (Host)	Advanced Earth Science and Technology Organization (AESTO), Japan
Hisatake Okada (IMI)	Department of Earth Science, Hokkaido University, Japan
Kyoko Okino (iSSP)	Ocean Research Institute, University of Tokyo, Japan
Kiyoshi Otsuka	OD21 Program Department, JAMSTEC, Japan
Joanne Reuss	Department of Geological Sciences, University of Michigan, USA
Saneatsu Saito	Deep Sea Research Department, JAMSTEC, Japan
Izumi Sakamoto	International Working Group Support Office (IWGSO), USA
Michael Sarnthein (IMAGES)	Institut für Geowissenschaften, Universität zu Kiel, Germany
Takehiro Sasayama	OD21 Program Department, JAMSTEC, Japan
Kiyoshi Suyehiro (IMI)	Deep Sea Research Department, JAMSTEC, Japan
Noriyuki Suzuki (Host)	Department of Earth Science, Hokkaido University, Japan
Uko Suzuki	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan
Asahiko Taira	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan
Kozo Takahashi (iESSEP)	Department of Earth and Planetary Sciences, Kyushu University, Japan
Kensaku Tamaki (SPPOC)	Ocean Research Institute, University of Tokyo, Japan
Mariko Tanaka	Advanced Earth Science and Technology Organization (AESTO), Japan
Hidekazu Tokuyama (J-DESC)	Ocean Research Institute, University of Tokyo, Japan
Doug Wilson (ODP Leg 206)	Department of Geological Sciences, University of California, Santa Barbara, USA
Zuyi Zhou (iPC)	Department of Marine Geology and Geophysics, Tongji University, China

iSAS Office

Nobuhisa Eguchi	Japan Marine Science and Technology Center (JAMSTEC), Japan
Yayoi Komamura	Japan Marine Science and Technology Center (JAMSTEC), Japan
Jeff Schuffert	Japan Marine Science and Technology Center (JAMSTEC), Japan
Minoru Yamakawa	Japan Marine Science and Technology Center (JAMSTEC), Japan

IODP Science Planning Committee

1st Meeting, 15-19 September 2003

Hokkaido University
Sapporo, Japan

EXECUTIVE SUMMARY (v.2.0)

1c. Approve SPC meeting agenda

SPC Motion 03-09-1: The SPC approves the revised agenda for its first meeting on 15-19 September 2003 in Sapporo, Japan.

Becker moved, Miller seconded; 14 in favor.

1d. Review SPC procedures and protocol

SPC Motion 03-09-2: The SPC adopts the provisional mandate given in the agenda book for this first meeting only.

Becker moved, Moore seconded; 14 in favor.

SPC Motion 03-09-3: The SPC endorses the conflict-of-interest policy proposed for provisional use at its first meeting.

Katz moved, Miller seconded; 14 in favor.

7. Matters forwarded from iSAS

7a. Committee and panel recommendations

7a.i - iPC

SPC Motion 03-09-4: The SPC requests the PPSP, ILP, and implementing organizations to work together to develop recommendations on environmental principles in the IODP.

Quinn moved, Byrne seconded; 14 in favor.

SPC Motion 03-09-5: The SSEPs will determine when a proposal is ready to forward to the SPC. The SPC will endeavor not to request revised proposals.

Quinn moved, Katz seconded; 13 in favor, 1 abstained (Kato).

7a.ii - iSSEPs

SPC Motion 03-09-6: The SPC will consider proposals presented by the SSEPs co-chairs for designation as complex drilling projects (CDPs).

Quinn moved, Moore seconded; 14 in favor.

7a.v - iSciMP

SPC Motion 03-09-7: The SPC receives iSciMP Recommendation 01-2-10 on addressing the role and maintenance of micropaleontology reference centers in the IODP.

Prell moved, Ito seconded; 14 in favor.

SPC Motion 03-09-8: The SPC endorses iSciMP Recommendation 02-1-4 on maintaining shipboard microfossil reference collections.

Quinn moved, Moore seconded; 14 in favor.

SPC Motion 03-09-9: The SPC receives iSciMP Recommendation 02-1-5 and supports the development of the OD21 core description and visualization system.

Ito moved, Becker seconded; 14 in favor.

SPC Motion 03-09-10: The SPC receives iSciMP Recommendation 02-2-4 and supports further SAS investigations of standardizing the diameter of drill pipe used on IODP platforms.

Prell moved, Byrne seconded; 13 in favor, 1 abstained (Ito).

SPC Motion 03-09-11: The SPC receives iSciMP Recommendation 02-2-5 and endorses the development by JAMSTEC of the anti-contamination coring tool.

Becker moved, Ito seconded; 14 in favor.

SPC Motion 03-09-12: The SPC accepts the iSciMP laboratory working group reports on paleontology, paleomagnetics, and underway geophysics and forwards these reports to the SPPOC.

Prell moved, Katz seconded; 13 in favor, 1 abstained (Becker).

SPC Motion 03-09-13: The SPC charges the SciMP to develop a section of the *Guide to the IODP* identifying the skill sets recommended for the scientific staffing of various types of IODP expeditions. The SciMP should complete this task in time for the March 2004 SPC meeting.

Katz moved; Moran seconded; 13 in favor, 1 abstained (Ito).

SPC Motion 03-09-14: The SPC charges the SciMP to develop, in collaboration with the implementing organizations, a section of the *Guide to the IODP* describing required and recommended measurements necessary to complete an IODP scientific expedition. This section of the *Guide to the IODP* should include all earlier approved working group reports and iSciMP recommendations on this topic.

Moran moved, Prell seconded; 14 in favor.

7a.vi - iTAP

SPC Motion 03-09-15: The SPC accepts iTAP Recommendation 03-2 on developing a hole-problem risk mitigation plan and forwards it to the SPPOC.

Becker moved, Moore seconded; 13 in favor, 1 abstained (Moran).

SPC Consensus 03-09-16: The SPC receives iTAP Recommendation 03-7 on formulating a more-flexible IODP coring and logging policy to allow use of improved technologies and charges the TAP and the SciMP with developing a draft policy by the March 2004 SPC meeting.

SPC Consensus 03-09-17: The SPC accepts iTAP Recommendation 03-6 on outfitting the fulltime riser and non-riser drilling vessels with remotely operated vehicles (ROVs) and forwards this recommendation to the SPPOC.

7b. iSAS working group reports

SPC Motion 03-09-18: The SPC accepts the database working group report and forwards it to the SPPOC.

Quinn moved, Moore seconded; 14 in favor.

SPC Motion 03-09-19: The SPC accepts the microbiology working group report and forwards it to the SPPOC.

Quinn moved, Kato seconded, 14 in favor.

SPC Motion 03-09-20: The SPC accepts the data-bank working group report and forwards it to the SPPOC.

Becker moved, Byrne seconded; 13 in favor, 1 absent (PreII).

SPC Motion 03-09-21: The SPC receives the progress report from the matrix working group and requests that the working group finalize its report in time for the March 2004 SPC meeting. The final report should include a reevaluation of required versus recommended data and a response to all other comments from SPC members.

Quinn moved, Byrne seconded; 14 in favor.

7c. Policy on interacting with ancillary programs

SPC Motion 03-09-22: The SPC recommends modifying the iPC-approved policy statement on ancillary programs in the IODP as follows:

iPC Consensus 5-3: Scientific and educational programs are encouraged to develop projects that are ancillary to the IODP Annual Program Plan and apply for permission to execute such projects as part of IODP ~~research~~ expeditions. Proposals for such ancillary programs must be approved by the Science Planning Committee (SPC) chair in consultation with the ~~co-~~chief scientists and implementing organizations of the affected ~~drilling project~~expeditions(s), the IODP Science Policy and Planning Oversight Committee (SPPOC), and by IODP Management International, Inc. (IMI) prior to the development of the annual program plan. For the purposes of assessing proposals for ancillary programs, it is understood that: 1) they must be conducted at no extra cost (in time or money) to IODP scientific operations; 2) they will in no way interfere with, or require the alteration of, drilling plans approved by the IODP; 3) sufficient space must be available on the ~~project~~expedition drilling platform(s) to accommodate needed personnel, equipment, and/or laboratory facilities without interfering with primary IODP drilling, sampling and related operations; and 4) permission to undertake at-sea activities required by ancillary programs must be obtained from the on-site operations manager of the IODP ~~project~~expedition on a day-by-day basis, and such permission can be rescinded at any time as required by operational considerations.

Becker moved, Katz seconded; 13 in favor, 1 abstained (Kato).

7d. IODP sample and data policy

SPC Motion 03-09-23: The SPC accepts the IODP Sample and Data Policy and forwards it to the SPPOC.

Ito moved, Byrne seconded; 14 in favor.

8. Publications

SPC Motion 03-09-24: The SPC establishes a working group to develop recommendations for an IODP publications policy. The working group, co-chaired by Miller and Tatsumi, will report at the March 2004 SPC meeting.

Ito moved, Moore seconded; 14 in favor.

8.1 Select OPCOM members from SPC

SPC Motion 03-09-25: All SPC members, including those identified as proponents of drilling proposals under review, may participate in selecting the OPCOM members from the SPC.

Moore moved, Prell seconded; 13 in favor, 1 abstained (Miller).

SPC Motion 03-09-26: The SPC approves Hisao Ito and Terry Quinn as additional SPC representatives on the OPCOM through the March 2004 OPCOM meeting.

Miller moved, Moore seconded, 13 in favor, 1 abstained (Quinn).

8.2 Arctic Drilling

SPC Motion 03-09-27: The SPC affirms the high scientific priority and potential of scientific drilling in the central Arctic Ocean and recognizes that Proposal 533-Full3 Arctic–Lomonosov Ridge is currently in the implementation phase for operations anticipated for August and September 2004. The SPC therefore forwards this previously top-ranked proposal to the OPCOM without re-ranking for consideration for scheduling in FY2004.

Prell moved, Miller seconded; 14 in favor.

10. Presentation and discussion of proposals

SPC Consensus 03-09-28: The SPC regards the first part of Proposal 545-Full3 Juan de Fuca Flank Hydrogeology as worth scheduling on its own.

SPC Consensus 03-09-29: The SPC recommends requiring quadruple APC holes at each site of Proposal 572-Full3 North Atlantic Neogene–Quaternary Climate and penetrating deeper than proposed at one site to obtain paleointensity records from beyond 3 Ma.

11. Global ranking of proposals

SPC Consensus 03-09-30: The SPC will rank all of the sixteen proposals reviewed at this meeting.

SPC Motion 03-09-31: The SPC forwards the top twelve ranked proposals to the OPCOM in two groups, with the top five proposals in Group I and the next seven in Group II. The SPC requests that the OPCOM propose scheduling options that honor and adhere to these ranking groups as closely as possible.

Moran moved, Prell seconded; 12 in favor, 2 opposed (Kato, Ito).

12. Review alternative schedules developed by OPCOM

SPC Motion 03-09-32: The SPC recommends including Proposal 533-Full3 Arctic–Lomonosov Ridge in the mission-specific platform operations schedule for FY2004, pending ECORD participation in the IODP.

Byrne moved, Kato seconded; 13 in favor, 1 absent (Moran).

SPC Consensus 03-09-33: The SPC establishes a project-scoping group to review the operational plan for implementing Proposal 533-Full3 Arctic–Lomonosov Ridge. The group will report to the OPCOM and should include SPC member Keir Becker as the leader, SPC chair and OPCOM co-chair Mike Coffin, and several other appropriate members such as an icebreaker captain. The group should conduct its review by late October 2003 to ensure enough time for including the Arctic drilling project in the annual program plan for FY2004.

13. Vote on FY2004 schedule (non-conflicted SPC members)

SPC Motion 03-09-34: The SPC approves the following expedition schedule for the non-riser vessel during June 2004 through May 2005.

1.	545-Full3	Juan de Fuca Flank Hydrogeology (Part I)
2.	572-Full3	N. Atlantic Neogene-Quaternary Climate (Part I)
3.	512-Full3	Oceanic Core Complex (Part I)
4.	512-Full3	Oceanic Core Complex (Part II)
5a.	572-Full3	N. Atlantic Neogene-Quaternary Climate (Part II)
5b.	543-Full2	CORK in Hole 642E

The SPC also identifies the non-A-CORK component of 553-Full2 Cascadia Margin Hydrates as an alternate first expedition in case any significant delays arise in the logistical planning for Proposal 545-Full3.

Prell moved, Moran seconded; 14 in favor.

13.1 Nominate chief scientists

SPC Motion 03-09-35: The SPC endorses the iPC nominations for chief scientists of the Arctic drilling project, as previously forwarded to the ECORD.

Quinn moved, Moore seconded; 13 in favor, 1 absent (Moran).

14. Review letters to proponents of unscheduled proposals

SPC Motion 03-09-36: The SPC recommends that the ECORD develop an operational plan as soon as feasible for Proposals 519-Full2 South Pacific Sea Level and 564-Full New Jersey Shelf, in light of their respective global rankings of #1 and #4 at this meeting.

Quinn moved, Moore seconded; 14 in favor.

SPC Motion 03-09-37: The SPC forwards Proposals 519-Full2 South Pacific Sea Level, 564-Full New Jersey Shelf, and 589-Full3 Gulf of Mexico Overpressures to the OPCOM for consideration at the next OPCOM scheduling meeting without re-ranking.

Katz moved, Moore seconded; 14 in favor.

SPC Consensus 03-09-38: The SPC chair and the IMI interim program director will work with CDEX to establish an initial project-scoping group for the riser-drilling component of Proposal 595-Full3 Indus Fan and Murray Ridge.

15. Approve project and site designation scheme

SPC Consensus 03-09-39: The SPC requests the SciMP to draft a scheme for designating expeditions and boreholes in the IODP for consideration at the March 2004 SPC meeting.

17. Identify obligations of IODP scientists

SPC Consensus 03-09-40: The SPC recommends the following policy on obligations of IODP scientists for SPPOC approval.

- Scientific Party members must submit their manuscripts, including data reports, within 20 months post-moratorium.
- Scientists receiving samples or conducting nondestructive analyses must publish a peer-reviewed paper in English and submit their data to the IODP database (*e.g*., the IODP Information Services Center) or a progress report to the IODP Curator within 36 months of receiving samples or conducting analyses.
- All publications incorporating IODP data or samples must acknowledge the IODP and be submitted to the IODP Curator.

19. Revisit SPC mandate and conflict-of-interest statement

SPC Motion 03-09-41: The SPC endorses the following revised mandate and terms of reference for itself and forwards them to the SPPOC.

1.1 General Purpose. The Science Planning Committee (SPC) reports to the Science Policy and Planning Oversight Committee (SPPOC) and provides advice to IODP Management International (IMI) and, through IMI, to the implementing organizations on plans designed to optimize the scientific productivity and operational efficiency of the drilling program.

The SPC is specifically responsible for: the custody and initial implementation of the IODP Initial Science Plan; ranking of mature drilling proposals (*i.e*., those that have undergone external review, been grouped by the Science Steering and Evaluation Panels (SSEPs), and been judged as complete by the Science Advisory Structure (SAS)) that address the scientific themes and initiatives in the IODP Initial Science Plan; advising how these proposals might be most effectively mapped into a drilling plan based on the IODP multiple platform concept; carrying out long-term science planning; fostering communications among and between the general community, the SAS, the IMI, and the implementing organizations.

1.2 Mandate. The SPC encourages the international community to develop and submit drilling proposals for the IODP. The SPC can initiate and terminate temporary SAS groups as needed. The SPC recommends SAS membership to the SPPOC, particularly with respect to disciplinary balance. The SPC chair serves as a member of the OPCOM, and the SPC appoints other SPC members to the OPCOM, as defined in the OPCOM mandate. The SPC recommends SAS meeting frequency and timing to the SPPOC. In addition, the SPC may assign special tasks to SAS committees, panels, and planning groups. The SPC approves the chairs of all SAS panels and planning groups. The SPC chair approves the meeting agendas for all SAS committees, panels, and planning groups other than the SPPOC. The SPC sponsors and convenes planning conferences at intervals determined by long-term science plans for IODP. The SPC assigns its own watchdogs to proposals that are forwarded from the SSEPs. The SPC ranks the scientific objectives of the proposals into final priority after they are reviewed by the SSEPs. The SPC approves by at least a two-thirds majority the annual drilling schedule as forwarded from the OPCOM. The SPC nominates chief scientists to the implementing organizations, who make the final selection.

The SPC periodically reviews the IODP SAS in light of developments in science and technology and recommends amendment of the SAS and its mandates to the SPPOC. Much of the work of the SPC is carried out by the commissioning of reports from the OPCOM and the

other SAS panels, including both formal and *ad hoc* working groups, *ad hoc* subcommittees of its own membership, and by its chair or vice-chair.

1.3 Structure. The SPC is empowered to modify an infrastructure appropriate to the definition and accomplishment of tasks described in the annual program plan as approved by the SPPOC. Communication with the SAS panels and planning groups is maintained by having their chairs meet with the SPC annually and by assigning SPC members as non-voting liaisons to SAS panels and planning groups as necessary. Where counsel and communication are deemed important, other individuals may be asked to meet *ad hoc* with the committee or its panels.

1.4 Meetings. The SPC meets at least twice a year, normally in March and August. Robert's Rules of Order will govern its meetings and those of all of its subcommittees.

1.5 Membership. The SPC will consist initially of seven members from Japan and seven members from the U. S. All appointees to the SPC shall satisfy the fundamental criteria of having the ability and commitment to provide mature and expert scientific direction to IODP planning. Each member should have a designated alternate to serve in his or her absence. The term of membership will be three years and at least one third of the members shall rotate off the committee annually, so that the SPC membership is replaced every three years. Re-appointment shall be made only in exceptional circumstances. The fields of specialization on the SPC shall be kept balanced as far as possible by requests to national program committees. If an SPC member misses two meetings in succession, the SPC chair or vice-chair will discuss the problem of SAS representation with the appropriate country representative(s) on the SPPOC.

1.6 Liaison. The director of IODP at the IMI, the directors of the implementing organizations, or nominees thereof, and representatives of the lead agencies are permanent, non-voting liaison observers. The SPC chair is the liaison to the SPPOC, and the SPC assigns other liaisons to the SSEPs, PPSP, and other SAS panels and groups.

1.7 Vote and Quorum. The SPC shall reach all its decisions by the affirmative vote of at least two thirds of all members present and eligible to vote. A quorum shall equal two-thirds of the committee.

1.8 Chair and Vice-Chair. The SPC chair and vice-chair shall alternate between Japanese and U.S. institutions, excluding the implementing organizations. The vice-chair will replace the chair every two years, with a new vice-chair appointed.

Moore moved, Becker seconded; 14 in favor.

SPC Consensus 03-09-42: The SPC endorses the following principles for a SAS conflict-of-interest policy and forwards them to the SPPOC.

- Proponents or other attendees having a significant conflict of interest regarding a proposal must declare that conflict and should not be present when that proposal is discussed.
- Proponents or other attendees having a significant conflict of interest regarding a proposal cannot participate in the ranking of that proposal.
- Participants in the SAS cannot be regular members of more than one panel.
- Representatives of the IMI and implementing organizations cannot serve on SAS panels other than the SPPOC and the OPCOM.

SPC Consensus 03-09-43: The SPC endorses the following two-phase procedure for evaluating proposals and forwards it to the SPPOC.

Phase 1: Watchdog Assignment, Proposal Presentation, and Discussion
All conflicts that might exist with regular and alternate panel or committee members are identified at the outset of Phase 1. The panel or committee chair(s) consult(s) with the SAS Office and assign(s) watchdogs as soon as the relevant proposals are identified. The watchdogs must not have any conflicts with their assigned proposals.

Committee or panel members, liaisons, observers, and guests at the meeting must announce any potential conflict that might appear to exist (*e.g.*, institutional, professional, commercial, or familial relationships with proponents) to the committee or panel chair(s). The chair(s) will determine whether a conflict is considered significant, subject to review by the committee or panel. Any attendees who have a significant conflict with a proposal under review should leave the room during the discussion of that proposal.

Watchdogs will present and discuss their assigned proposals, panel members are invited to provide additional information and to ask questions, and the chair(s) may invite comment or solicit information from guests or observers at the meeting. The panel or committee should discuss the importance of the proposed work relative to achieving the scientific goals of the IODP, the likelihood of significant contributions or discoveries that further our scientific understanding, and the technical challenges or uncertainties that might affect the success of the proposal. They should also discuss the relationship of each proposal to any previous drilling results; however, they should avoid making comparisons to other proposals under review. The chair(s) must ensure compliance throughout the discussion.

Phase 2: SPC Proposal Evaluation, Comparison, Ranking, and Scheduling
All conflicted attendees must leave the room for the entire Phase 2. Voting alternates for conflicted committee members may remain in attendance and will be invited to attend the entire meeting. IODP national committees or consortia should have been consulted regarding how they wish to provide alternate voting representatives.

The committee defines the pool of proposals to be ranked, either by (a) consensus suggested by the chair or (b) vote on each proposal, with a two-thirds vote ensuring inclusion of a proposal in the ranking pool. A watchdog summarizes the discussion of each proposal, emphasizing its strong points and any concerns raised in the earlier discussion. The committee may now discuss the importance of the proposed science relative to other proposals under review.

Following the final discussion, the proposals are ranked from 1 to *N*, where *N* equals the number of proposals selected for ranking and 1 represents the highest rank. Each voting SPC member completes and signs a paper ballot, and the ballots are archived after the meeting in a sealed envelope. The votes are tabulated and the proposals listed in order of mean ranking, with standard deviations and complete placings indicated.

The SPC selects a subset of the ranked proposals to forward to the OPCOM for developing schedule options, then votes to select a recommended schedule from the option(s) presented by the OPCOM. If the SPC does not approve any schedule option, the OPCOM must provide further options.

The watchdogs provide written summaries of the discussions of each proposal, but the SPC cannot return any proposal to the proponents with a requirement for major revision and further review by the SSEPs.

21. Other business

SPC Consensus 03-09-44: The SPC recommends to the SPPOC that the IODP Science Advisory Structure should evaluate, rank, and schedule drilling proposals irrespective of the nationalities of the proponents.

SPC Consensus 03-09-45: The SPC thanks Hokkaido University and the Advanced Earth Science and Technology Organization (AESTO) for their fine hospitality, highlighted by the celebratory banquet in the Elm Restaurant of the Enreiso Faculty Center.

IODP Science Planning Committee

1st Meeting, 15-19 September 2003

Hokkaido University
Sapporo, Japan

MINUTES (v.2.0)

Monday **15 September 2003** **08:30-17:00**

1. Introduction

1a. Welcome and meeting logistics

Mike Coffin opened the proceedings at 08:30 and welcomed everyone to the inaugural meeting of the IODP Science Advisory Structure. Noriyuki Suzuki welcomed everyone to Hokkaido University and explained the meeting logistics. Hisatake Okada offered encouragement to the SPC on behalf of the IMI Board of Governors.

1b. Opening remarks from MEXT and NSF

Yasuhisa Tanaka and Jamie Allan gave brief opening remarks on behalf of the MEXT and the NSF, saying that the two lead agencies had developed a good working relationship based on communication, cooperation, and trust. They expressed optimism that the ECORD and China would join the IODP in the near future.

1c. Approve SPC meeting agenda

Mike Coffin asked the meeting participants to introduce themselves, and he distributed a commercially published handbook as an aid for increasing the awareness of cultural differences among the committee members. He acknowledged the efforts of the iPC, IPSC, MEXT, and NSF in laying the groundwork for the start of the IODP and outlined the current status of scientific and operational planning activities. Coffin proposed several changes to the agenda, including switching Items 1d.ii and 1d.iii, including a report under Item 2 on the recent meeting of the implementing organizations (IOs), dropping Item 6a in the absence of a report or a representative from the International Continental Scientific Drilling Program (ICDP), and adding Items 8.1 on selecting the OPCOM members from the SPC, 8.2 on the Arctic drilling project, and 13.1 on nominating co-chief scientists for the scheduled drilling projects. The committee approved the revised agenda without further comment.

SPC Motion 03-09-1: The SPC approves the revised agenda for its first meeting on 15-19 September 2003 in Sapporo, Japan.

Becker moved, Miller seconded; 14 in favor.

1d. Review SPC procedures and protocol

1d.i. Present SPC draft mandate

Coffin referred to the draft SPC mandate included in the agenda book and called for a motion to approve it for provisional use at this meeting. He explained that the committee would review the draft mandate again near the end of the meeting to propose any changes.

SPC Motion 03-09-2: The SPC adopts the provisional mandate given in the agenda book for this first meeting only.

Becker moved, Moore seconded; 14 in favor.

1d.ii. Robert's Rules of Order

Coffin outlined several important principles of Robert's Rules of Order, such as following the agenda, considering only one item of business and one main motion at a time, promoting courtesy, etc. Katz noted that in the strictest sense the chair would have no voice in any discussions. Coffin replied that he would not adopt that principle, on the basis of the MEXT-NSF Memorandum of Cooperation on the IODP. Austin asked about the protocol of discussions. Coffin explained that he would first ask committee members to speak in order around the table, and then he would open the floor to guests before returning to the committee for final comments.

1d.iii. Conflict-of-interest statements (JOIDES and iPC)

Keir Becker reviewed the JOIDES conflict-of-interest policy and explained how he had interpreted it as the former SCICOM chair. He described what constituted a conflict of interest and cited several examples involving proponents of proposals, candidates for co-chief scientist, and financial interests. Becker added that normal practice in the JOIDES science advisory structure allowed persons to vote at only one level. Becker also reviewed the SCICOM proposal ranking procedure and noted that conflicted members remained excluded from the entire process. He identified the key question as what distinguishes a general discussion from a discussion leading directly to a vote, and he explained that once someone makes a motion then according to the rules of order the following discussion clearly leads directly to a vote. Becker recommended adopting the JOIDES conflict-of-interest policy after substituting the SPC for the SCICOM. He suggested that conflicted members could remain present during the general discussions, as Austin had proposed prior to the meeting, because the agenda called for discussing the proposals before selecting the pool for ranking. Becker also recommended in the future selecting the pool of proposals for ranking before discussing them because this would exclude conflicted members from the entire discussion of proposals.

Prell asked Becker to confirm the point about excluding conflicted members for the entire general discussion. He wondered how the committee could define the pool of proposals to rank before discussing them and whether conflicted members would participate in that process. Becker confirmed what he had recommended and emphasized the importance of avoiding any perception of a conflict of interest. Byrne asked about the necessity of the SPC selecting which proposals to rank after the SSEPs had already decided which proposals to send forward for ranking. Coffin replied that the SPC might not necessarily want to rank all of the proposals in the prospectus. Katz suggested inviting all proponents to attend the meetings and thus avoid the unfairness of having certain proponents in the room as an information resource. Kato questioned how to define institutional conflicts considering the differences in national systems. Miller agreed on the importance of declaring institutional conflicts but saw an advantage in allowing the presence of conflicted members during the general discussions because it would give them insight on the proposals for the following year. Miller also wondered why proponents of mission-specific platform (MSP) proposals should remain excluded from reviewing and ranking riser and non-riser proposals. Moore responded that not every proposal would present a definite choice of the appropriate platform before the OPCOM discussed it. Coffin added that the assignment of platforms could involve financial competition among the operators.

Coffin proposed forming a working group to formulate a conflict of interest statement before the end of the meeting. He noted that the Science Planning and Policy Oversight Committee (SPPOC) must ultimately develop a final policy that would apply to all of the IODP. Becker and Kato volunteered to lead the working group, and Byrne, Moore, Mori, and Kikawa

volunteered to join in. Austin reminded the group to consider that the policy should apply to the entire SAS and that complex drilling projects (CDPs) could pose special concerns. Prell remarked that some proposals involve a large number of proponents. Miller asked about the possibility of proponents removing themselves from a proposal to eliminate a conflict. Becker confirmed that it had happened in the past, but the chair still had to decide whether any conflict remained.

Coffin asked for approval of the provisional conflict-of-interest policy for this meeting. Austin suggested that approving it would allow reassignment of the watchdogs. Coffin cited the difficulty of doing so at this point and declined the idea.

SPC Motion 03-09-3: The SPC endorses the conflict-of-interest policy proposed for provisional use at its first meeting.

Katz moved, Miller seconded; 14 in favor.

2. IODP Management International, Inc. (IMI) progress report

Jamie Austin provided background information on the IMI and referred to the IMI Web site for further information. He defined the IMI as an international corporation whose founding members held their first official meeting in March 2003, and he explained that the interim president, Paul Stoffa, had asked him to serve as the interim director. Austin listed the twelve founding and ten additional members of the IMI and identified the ten regular and four alternate members of the board of governors. He announced that the board had already begun negotiating with the selected candidates for the IMI president and vice president. He also noted that the IMI must select a location for its permanent office, possibly in Washington, D.C., but it probably would not get established until at least February 2004. Austin stated that the IMI must prepare an annual program plan in October and November 2003 for operations beginning in mid 2004. He added that the plan must consider all three facets of IODP operations and ultimately must go to the funding agencies for final approval. Austin mentioned that the NSF had selected the JOI Alliance as the U.S. Systems Integration Contractor in early August, outfitting of the *Chikyu* should finish in 2004 or 2005, and the operational status of the Arctic MSP project remained uncertain. He then presented the mandate of the newly established SPPOC, indicating its main responsibilities and characterizing its membership. Austin noted that the SPPOC required a two-thirds majority for voting whereas the SPC draft mandate required only a simple majority. He suggested that the SAS might want to consider reconciling that difference as it begins assessing all of the panel mandates for possible revisions.

Allan stated that the first phase of operations would occur in the absence of an operating central management organization (CMO) office. He emphasized that Austin would need help preparing the annual program plan at the same time as preparing the IMI proposal for the CMO contract. Bohlen clarified that a country or institution could participate as a member of the IODP without joining as a member of the IMI. Coffin asked if any restrictions applied on accepting and handling proposals submitted by non-members of the IODP. Austin replied that the program historically had accepted all proposals, but the IMI would welcome a statement from the SPC. Tatsumi noted that the functions of the CMO office in Japan remained undecided. Austin confirmed that even the number of CMO offices remained unknown.

Austin reported on the meeting of the IOs in Bozeman, Montana on 19-20 August 2003. He described the goals of establishing a dialog and good relationships among the IOs and beginning to assess how they should interact given the new level of complexity surrounding the IODP. Austin noted that the meeting resulted in action items on 1) developing a program-

wide HSE policy, 2) implementing the exchange and sharing of technical staff, 3) establishing and implementing a program-wide sample curation and management policy, 4) identifying a minimum acceptable set of data to derive from all platforms, and 5) collectively educating the community about the need to conduct long-range expedition planning. He announced that the IOs planned to meet again, probably in February 2004 in Edinburgh, to discuss core storage and sampling issues, database management, and planning activities for publications, education, and outreach. Austin emphasized the importance of having SAS involvement in these activities.

Coffin asked about the size of the next meeting. Austin expected about seventeen attendees, with the SAS represented by various individuals. Coffin said that he raised the issue for the SPC because of the importance of those meetings in integrating the program operations. Soh expressed concern about the quality control of acquiring data from MSPs. Austin confirmed the goal of integrating all MSP data into the IODP system. Miller worried about the short timeline before the first MSP expedition. Moore noted that the iSAS had already worked for a while on this issue. MacLeod said that the ECORD Science Operator (ESO) would strive to get as much data as possible within the constraints of MSP operations. Quinn hoped to preserve flexibility for MSP projects. Miller agreed that the minimum standards should remain flexible for MSPs. Kato asked about coordination with the SAS, particularly the SciMP. Kikawa reported that the iSciMP had discussed this issue, and he hoped that the operators would not go ahead independently. Austin affirmed that the IO efforts should definitely incorporate input from the SciMP and not proceed as a parallel activity. Fox asserted that the timeline required moving forward now to digest the iSciMP recommendations and implement them in a coordinated way among the IOs. Taira conceded the importance of maintaining the dialog between the IOs and the SAS on developing data standards. Coffin believed that everyone had the same goal in mind, and although some efforts might get duplicated during the transition phase, things would eventually reach equilibrium. He left open the possibility of returning to this issue later.

The committee took a short recess from 11:00-11:20.

3. iSAS Office report

Minoru Yamakawa reported on the past iSAS meeting schedule and indicated the schedule of upcoming SAS meetings. He summarized the number of proposals submitted during the interim period and showed how they distributed among the three main scientific themes of the IODP Initial Science Plan. Yamakawa noted that approximately half of the 101 active proposals focus on the Environmental Change, Processes, and Effects theme, one quarter fall under the Deep Biosphere and Subseafloor Ocean theme, and another quarter under the Solid Earth Cycles and Geodynamics theme. He listed the seventeen proposals up for review at this meeting and presented a map showing the geographic distribution of the proposed drilling areas. Yamakawa described the status of activities in the iSAS Office and the plan for funding the office during the transition period until the establishment of the permanent IODP science office in Japan.

Moore asked how many of the proposals inherited from the JOIDES Science Advisory Structure had not yet shown any activity in the iSAS. Yamakawa replied that thirty of the proposals on the active list had not shown any new activity in the iSAS. Moore concluded that those proposals would remain on the active list for one more year. Coffin proposed to discuss that issue later in the meeting.

4. Operator reports

4a. Center for Deep Earth Exploration (CDEX)

Asahiko Taira outlined the CDEX structure and provided a brief update on the construction of the *Chikyu*. He presented the CDEX policy statement on health, safety, and the environment (HSE) and identified the various types of hazards considered for operating the riser drilling ship. He also defined the commitments for creating an HSE management system and safety training program and emphasized that CDEX would strive to minimize the environmental impact of riser operations, particularly for the handling and disposal of drill cuttings. Taira presented a typical planning schedule for riser drilling projects showing separate phases for deep and shallow seismic site surveying and drilling preparation. He showed an animated example of a riser drilling operation and outlined the supply and transportation factors for crew changes and drilling supplies. Taira listed the types of data collected on *Chikyu* and illustrated the division of platform- and shore-based measurements. He also mentioned several long-term developments for the *Chikyu*, such as 4000 m riser capabilities, an improved core recovery system, and new measurement and sampling tools.

Coffin asked about the minimum water depth for drilling operations with the *Chikyu*. Taira identified a minimum limit of about 500 m. Suzuki suggested that 750 m might prove better in terms of safety. Doust supposed that extending riser drilling to 4000 m water depth would depend on the development of a suitable wellhead control. Taira confirmed that such development must happen through international efforts.

Katz asked who in the IODP would make the decision to switch targets or abandon a project if necessary, for example after reaching the targeted objectives or the targeted budget. Taira replied that the scientific objectives would always represent the main target, but if the budget becomes a factor then the SAS would have to provide input. Austin said that the SAS would give advice and the IODP management would decide. Allan added that the pathway for making decisions would not differ much from the ODP way, but it would involve a larger magnitude budget. Bohlen noted that the ODP practice of organizing around a two-month leg schedule often involved compromising the science objectives.

The committee recessed for lunch from 12:00-13:00.

4b. U.S. Systems Integration Contractor

Steve Bohlen reported on the goals of the JOI Alliance in leading the U.S. activities in the IODP. He outlined the organizational structures of JOI, TAMU, and LDEO and described the detailed responsibilities, functions, characteristics, and personnel of the JOI Alliance teams for systems integration, systems management, joint operations, joint technical development, information, and joint publication, outreach, and education. Bohlen announced that TAMU and Columbia would make substantial financial and personnel commitments to the IODP, such as the five new faculty positions and five new graduate assistant positions at TAMU amounting to $50 million over ten years. He envisioned the JOI Alliance as a more integrated, higher-performing organization that would need to interface effectively with the other IOs and the CMO. Bohlen diagrammed the contracting and stakeholder relationships within the IODP and concluded that the ability of the U.S., Japan, and others to work together would dictate the success of the program.

Allan clarified that the MEXT would station a liaison at the NSF to consult on managing the contract to the CMO. Miller asked if the JOI Alliance would handle IODP publications. Bohlen described that as an undecided issue, but said that JOI would compete if necessary and would also still need to publish certain documents to meet its commitments to the NSF and

the U.S. program. Allan explained that the structuring of the contracts would allow for transferring certain functions to the CMO once it gets firmly established.

4c. ECORD Science Operator (ESO)

Andy Kingdon reported on MSP operational planning by the ECORD Science Operator (ESO) and stated that the ECORD aims to include all European IODP members and perhaps other members from outside Europe. He outlined the current European structure as comprising the ECORD Management Agency (EMA), the ECORD Council, the ECORD Science Support Advisory Committee (ESSAC), and the ESO. Kingdon also outlined the ESO management structure and identified its six core members as the British Geological Survey (BGS), Bremen University, the University of Leicester, the University of Montpellier, Aachen University, and the Free University in Amsterdam. He cited the direct contractual relationship between the ESO and the EMA and explained that the BGS would handle all contracting with the CMO and let the subcontracts for platform operations, while the University of Leicester would coordinate the efforts of the European Petrophysics Consortium. Kingdon described the activities of the ESO over the last twelve months and indicated the actions taken since the previous ranking of MSP proposals, mostly concerning the planning for the Arctic project. He announced that the Bremen core repository would open a new building in 2004 with increased space and improved facilities that would allow science parties to gather there for most of their work. Kingdon also expressed enthusiasm over the effects of the IO coordination meeting in Montana.

Prell asked how many MSP expeditions could take place each year. Kingdon stated that ECORD certainly hoped to conduct at least one MSP project in each of the first four years of the IODP, though it would depend on the budget. Tatsumi asked whether the analytical facilities at the Bremen core repository would focus on samples collected on MSP expeditions. Kingdon replied that the IODP would have broad access to the facilities. He added that the ESO wants to provide as many on-site capabilities as possible and must consider the recommendations of the SAS. Katz referred to the necessity of monitoring hydrocarbons for safety. Kingdon assured the committee that the ESO had already begun considering that issue and would always regard safety as the utmost concern. Miller noted that the ICDP has considerable experience with on-site capabilities for MSP projects. Soh asked about links in Europe to the ICDP. Kingdon said that the ESO plans to adopt the database system already developed by the ICDP for data obtained from lake drilling. Miller asked if the ESO could take on operations such as the Gulf of Corinth drilling project. Kingdon replied that they could cooperate but had no desire to take over any ICDP operations. Dunbar asked how the IODP would decide that a proposal requires an MSP. Kingdon answered that the SAS would decide on platforms, but the CMO would ultimately tell the ESO what to do.

5. ODP Leg 206 report

Doug Wilson reported on the results of ODP Leg 206 that drilled into oceanic crust on the East Pacific Rise. He cited the objective of drilling an intact sequence of flows, dikes, and upper gabbros at a site of fastest possible spreading rate, and he summarized the operations at Holes 1256A-D. Wilson presented the geochemical results from the overlying sedimentary cover and pore water. He also summarized the igneous geochemistry of the hard rocks and discussed the alteration styles. Wilson reported the occurrence of more thick flows in the upper section and said that evidence supported the thermal models that predict a vertically thin dike zone of <1 km.

Kawahata asked about the maximum temperature for penetrating deep rocks in the future. Wilson identified an upper temperature limit of 230-250˚C for drilling with water circulation, or a depth of about 3 km at this site. He suggested that using mud circulation might help to reduce the thermal shock to the drilling equipment. MacLeod asked if they had ruled out tectonic variations to explain the observed difficulty of getting good remanent magnetization data after cleaning. Wilson believed that the flows had not tilted more than 10˚.

The committee took a short recess from 03:00-03:20.

6. Reports from other scientific programs

6a. IMAGES

Michael Sarnthein described the IMAGES program as a formally recognized focus of the International Geosphere Biosphere Program (IGBP) seeking to link the records obtained from marine sediment cores and ice cores. He noted that the paleoceanographic community overlaps between IMAGES and ocean drilling. Sarnthein asserted that IMAGES coring has provided excellent records throughout the world ocean in the last ten years, but they have not sampled in many areas. He identified specific needs for obtaining additional high-quality archives from the equatorial Pacific, the Southern Ocean sea ice, fjords in the northern and southern hemispheres, global drifts, the Indian margin, and elsewhere. Sarnthein explained that answering high-resolution IMAGES questions requires large diameter cores with continuous length up to 60-80 meters, good core quality up to the sediment surface, rapid deployment of the coring device at any water depth (20-5000 m), and a liberalized sampling policy. Rob Dunbar added that IMAGES wants to bring international collaboration to its efforts by associating with the IODP, and IMAGES can certainly help the IODP to address many of the goals stated in its Initial Science Plan.

6b. InterMARGINS

Kiyoshi Suyehiro presented the mission statement of InterMARGINS and explained that it concerns all aspects of continental margin research. He listed Japan, the U.K., and the U.S.A. as current members and noted that ten other countries have national MARGINS programs doing active research. Suyehiro cited various activities in the past year, including steering committee meetings, newsletters, and the new constitution and program plan. He said that InterMARGINS wants to increase its national membership and continue sponsoring more workshops, perhaps in collaboration with the IODP. Suyehiro added that InterMARGINS researchers would like to see greater flexibility in IODP scheduling to ensure meeting target objectives, especially for deep drilling.

Moore recounted the efforts during the interim phase to conceive of a project-oriented approach rather than a leg-oriented program. He noted that the SPC could recommend allowing greater flexibility in scheduling but management must still implement the plans. Bohlen described it as a trade off between flexibility and operational realities, not a lack of desire. Austin acknowledged the difficulty of avoiding rigid scheduling practices within the constraints of an annual budget plan, and he also identified the challenge of how to use the extra drilling time gained by achieving objectives early.

6c. InterRidge

Kensaku Tamaki reported on the InterRidge program, identifying France, Japan, the U.K., and the U.S. as principle members and Canada, Germany, India, Korea, Norway, and Portugal as associate members, plus an additional seventeen corresponding members. He listed the individual members of the InterRidge Steering Committee and reported that Colin Devey would assume the chairmanship at end of 2003 when the InterRidge Office moves from Japan

to Germany. Tamaki announced that the InterRidge Next Decade Plan for 2004-2013 calls for establishing seven new working groups for ultra-slow spreading ridges, ridge-hotspot interaction, back-arc spreading systems, mid-ocean ridge ecosystems, monitoring and observatories, deep earth sampling, and global exploration. Tamaki affirmed that InterRidge had coordinated effectively with the ODP through symposia and would like to do similar things with the IODP. He cited a series of recent and upcoming meetings such as the April 2002 Southwest Indian Ridge workshop in the U.K., the September 2002 InterRidge Theoretical Institute on thermal regimes and hydrothermal circulation in Italy, the September 2003 symposium on ridge-hotspot interaction in France, an October 2003 Asian InterRidge workshop in Beijing, and a May 2004 Joint Theoretical Institute on back-arc spreading in Korea.

7. Matters forwarded from iSAS

7a. Committee and panel recommendations

7a.i. interim Planning Committee (iPC)

Coffin summarized iPC Consensus 3-4 on developing a set of environmental principles for the IODP.

iPC Consensus 3-4: iPC recommends that IWG develop a set of environmental principles for addressing potential public concerns about the impact of IODP activities, for raising the awareness of all IODP participants toward such concerns, and for providing clear and consistent operating guidelines for all IODP contractors.

Katz volunteered that the PPSP could begin addressing this issue. Austin noted that the IOs had already started considering this issue at the Montana meeting. Doust clarified that he had envisioned a simple set of principles when he first proposed the idea to the iPC.

SPC Motion 03-09-4: The SPC requests the PPSP, ILP, and implementing organizations to work together to develop recommendations on environmental principles in the IODP.

Quinn moved, Byrne seconded; 14 in favor.

Coffin presented iPC Consensus 4-4 on empowering the SSEPs to decide when a proposal should go forward to the next level. He explained that this meant that the SSEPs would no longer have to forward every proposal to the SPC immediately after external review.

iPC Consensus 4-4: The iSSEPs should decide when a proposal is ready to be forwarded to the iPC.

Coffin also presented two *ad hoc* recommendations from the iPC co-chairs on precluding the SPC from requesting revised proposals and on declining proposals that the SPC had ranked multiple times but not scheduled.

Austin worried that proponents would not understand these recommendations unless coupled with the ranking and scheduling procedure. The committee affirmed that the second recommendation would not prevent them from commenting on proposals. Coffin sought to define the meaning of multiple times in the third recommendation. Katz suggested adding not scheduled for non-operational reasons. Miller asserted that a proposal should not get reconsidered after ranking low twice. Becker cited past examples of proposals that got scheduled in the ODP after ranking below the line more than once. Coffin sensed a general agreement to approve the first two recommendations but not the third and called for a motion.

SPC Motion 03-09-5: The SSEPs will determine when a proposal is ready to forward to the SPC. The SPC will endeavor not to request revised proposals.

Quinn moved, Katz seconded; 13 in favor, 1 abstained (Kato).

7a.ii. interim Science Steering and Evaluation Panels (iSSEPs)

Tim Byrne provided the SSEPs definition of CDPs and described the process for handling CDP proposals. He then presented iPC Motion 5-10 on CDPs.

iPC Motion 5-10: A complex drilling project (CDP) has an overarching scientific goal and a pathway involving a series of interlinked components, with each component achievable in a reasonably short time and the overall goal not achievable through a series of stand-alone projects.

Potential CDPs are identified by the Science Steering and Evaluation Panels (SSEPs) and should be presented by the SSEPs co-chairs to the Science Planning Committee (SPC) for designation as CDPs after submission of an umbrella and at least one component proposal. SPC designation of a CDP is not necessary for the SSEPs to continue nurturing the component proposals.

The committee approved the idea without debate.

SPC Motion 03-09-6: The SPC will consider proposals presented by the SSEPs co-chairs for designation as complex drilling projects (CDPs).

Quinn moved, Moore seconded; 14 in favor.

7a.iii. interim Site Survey Panel (iSSP)

Coffin referred to iSSP Recommendation 02-1-1 on developing a two-tiered approach to site surveys in support of riser-based drilling.

iSSP Recommendation 02-1-1: The iSSP recognizes that the site-survey data required for riser drilling is considerably more comprehensive than previously required for non-riser drilling. In particular, high-resolution, 3-D surveys of the shallow subsurface will be required for safety purposes and most likely to satisfy regulatory agencies as well. This will require a two-tier process, with separate requirements to satisfy (1) scientific criteria for site selection in the proposal and (2) safety and regulatory criteria for drilling. We recommend that high resolution, 3-D survey data in support of drilling fall under the purview of IODP and be included in the planning and funding process.

Katz noted that this plan would have eliminated the debate concerning the site-survey status of the Arctic project. Becker thought that the iSSP recommendation referred to surveys conducted by the operators. Allan mentioned an effort to minimize liability to the CMO to allow its establishment. The committee decided to table the recommendation until further discussion.

7a.iv. interim Pollution Prevention and Safety Panel (iPPSP)

No recommendations came forward from the iPPSP.

7a.v. interim Scientific Measurements Panel (iSciMP)

Coffin summarized SciMP Recommendation 01-2-10 on maintaining micropaleontology reference centers in the IODP and proposed receiving it.

SciMP Recommendation 01-2-10: SciMP recommends that the role and maintenance of the Micropaleontology Reference Centers in the IODP structure be addressed by iSAS. Specific topics of concern include adequately supporting curation of the collections and exploiting curator's taxonomic and stratigraphic expertise in advancing program goals (*e.g.*, creation and vetting of dictionaries for paleontological applications, assembling reference sample sets, creation of digital image atlases, creation of stratigraphic databases). It is recognized that achieving these goals will not be likely under the current *ad hoc* funding of the MRC effort.

Becker noted that the iPC had formally accepted the recommendation, not just received it. The committee decided only to receive it.

SPC Motion 03-09-7: The SPC receives iSciMP Recommendation 01-2-10 on addressing the role and maintenance of micropaleontology reference centers in the IODP.

Prell moved, Ito seconded; 14 in favor.

Coffin summarized iSciMP Recommendation 02-1-3 on endorsing the SciMP hard rock working group report. He noted that the report technically represented a product of the JOIDES Science Advisory Structure and not the iSAS.

iSciMP Recommendation 02-1-3: iSciMP endorses the principles and goals articulated by the SciMP Hard Rock Working Group report (May 2002) and recommends that these goals be realized for all rock and sediment types.

Allan provided background information on the recommendation. Coffin suggested tabling it until later and the committee agreed.

Coffin summarized iSciMP Recommendation 02-1-4 on maintaining shipboard microfossil reference collections.

iSciMP Recommendation 02-1-4: To improve the stratigraphic quality and consistency of shipboard biostratigraphy in IODP, iSciMP recommends that shipboard reference collections of Mesozoic and Cenozoic microfossils as well as digital image atlases and stratigraphic databases are needed and should be available for all IODP platforms and laboratories.

Katz expressed concern about not getting enough information from the condensed versions of the recommendations as presented to the committee. Kingdon worried about the practicalities of implementing this recommendation for MSPs. Moore suggested that it could apply to the Bremen repository where the MSP science parties would conduct most of their work.

SPC Motion 03-09-8: The SPC endorses iSciMP Recommendation 02-1-4 on maintaining shipboard microfossil reference collections.

Quinn moved, Moore seconded; 14 in favor.

Coffin briefly summarized the following three recommendations from the iSciMP.

iSciMP Recommendation 02-1-5: iSciMP applauds the progress made in developing the OD21 integrated core description and data visualization system. iSciMP recognizes the value of a common core description and data visualization system for the IODP, and that the OD21 integrated system could become the common system used by all IODP platforms and laboratories

iSciMP Recommendation 02-02-4: iSciMP notes that standardization of drillpipe diameter across platforms has the potential to bring benefits to IODP. iSciMP recommends continued investigation of standardization of drillpipe across all IODP platforms. iSciMP recognizes that platforms may on occasion need to use alternate drilling systems, but such choice must meet the scientific objectives.

iSciMP Recommendation 02-02-5: iSciMP applauds JAMSTEC's effort to address anti-contamination drilling and sampling and encourages their continued development and communication with the iSAS on these matters.

The committee passed the following motions with little or no discussion.

SPC Motion 03-09-9: The SPC receives iSciMP Recommendation 02-1-5 and supports the development of the OD21 core description and visualization system.

Ito moved, Becker seconded; 14 in favor.

SPC Motion 03-09-10: The SPC receives iSciMP Recommendation 02-2-4 and supports further SAS investigations of standardizing the diameter of drill pipe used on IODP platforms.

Prell moved, Byrne seconded; 13 in favor, 1 abstained (Ito).

SPC Motion 03-09-11: The SPC receives iSciMP Recommendation 02-2-5 and endorses the development by JAMSTEC of the anti-contamination coring tool.

Becker moved, Ito seconded; 14 in favor.

SPC Motion 03-09-12: The SPC accepts the iSciMP laboratory working group reports on paleontology, paleomagnetics, and underway geophysics and forwards these reports to the SPPOC.

Prell moved, Katz seconded; 13 in favor, 1 abstained (Becker).

The committee addressed the remaining iSciMP recommendations on Thursday morning after the recess. Coffin summarized iSciMP Recommendation 03-01-7 on including a seismic integrator as part of the scientific party.

iSciMP Recommendation 03-01-7: iSciMP recommends a Seismic Integrator be included as part of the scientific party for any drilling project where core-log-seismic integration is required.

Byrne asked how this worked onboard in the past. Moore said that the science party did not always have that expertise available. Kingdon added that the associated duties had become a bit overwhelming for the logging staff scientists. Tatsumi clarified that it concerned a member of the science party and not a technician. Soh asked for more details about the function and role of the seismic integrator. Moore explained the various requirements and confirmed that the function extended to core-log integration. Prell asserted that every expedition required a different set of expertise, and a good co-chief would ensure having this particular expertise involved anyway if obviously needed. Coffin characterized it as just a recommendation and agreed that the expedition leaders must decide the scientific party. Austin suggested forwarding it to the operators to give them guidance on a new position in a new program.

Coffin asked if any guidelines existed for creating the science party on any of the platforms. Moran replied that the ODP had a baseline description of the science party and the IODP would need something similar to ensure fulfilling the science goals. She also recognized the concerns about keeping enough flexibility and noted that the operators essentially received the

advice from hearing this discussion. Katz recommended including the recommendation in the new *Guide to the IODP*. Moore suggested requesting the SciMP to develop a list of specialties from the themes of the Initial Science Plan for science parties on the different platforms. Coffin agreed to charge the iSciMP with identifying a comprehensive list of disciplines for science parties. Ito said that he could provide guidance as a liaison to the SciMP. Byrne preferred instructing them to complete a section of the *Guide*. Austin advised putting a timeline on it for the March SPC meeting.

SPC Motion 03-09-13: The SPC charges the SciMP to develop a section of the *Guide to the IODP* identifying the skill sets recommended for the scientific staffing of various types of IODP expeditions. The SciMP should complete this task in time for the March 2004 SPC meeting.

Katz moved; Moran seconded; 13 in favor, 1 abstained (Ito).

Coffin summarized iSciMP recommendation 03-01-8 on checkshots and zero-offset VSPs.

iSciMP Recommendation 03-01-8: iSciMP recommends that whenever correlation of logs to seismic is required for any IODP drilling project, either checkshots or zero-offset VSPs should be routinely collected.

Moore thought this recommendation seemed obvious and suggested just including it in the *Guide*. Becker did not want to decide on it without knowing the full implications for costs and staffing. Coffin saw implications for time and having the equipment available on the platforms. Kikawa explained that the panel had discussed it only from a scientific perspective and did not consider the cost implications. Kato preferred establishing a more general framework instead of examining the details of these specific recommendations on a case-by-case basis. Ito regarded the statement as too strong at the moment and suggested requesting the SciMP to work out the details. Austin stated that the SPC should define a path for dealing with these issues. He suggested having the panel meet with the operators to develop a document that could ultimately go in the *Guide*.

Coffin suggested entertaining a general motion regarding data requirements for particular projects. Moran believed that the SciMP had addressed those issues through its working groups. Coffin clarified that they had not worked closely with the operators. Austin indicated that the operators would continue considering these issues with or without input from the SAS, but he sensed earlier that the SAS wanted to stay involved. Prell suggested forwarding all of the iSciMP recommendations to the operators. Katz described it as part of the scientific assessment and suggested directing it to the proponents rather than the operators. He said that way it would not get included in the operational plan unless it appeared in the proposal. Becker proposed asking the SciMP to come back with a more integrated view instead of such a piecemeal approach. Austin suggested accepting all of the iSciMP recommendations and charging the panel in turn to develop a more integrated approach together with the IOs as appropriate.

SPC Motion 03-09-14: The SPC charges the SciMP to develop, in collaboration with the implementing organizations, a section of the *Guide to the IODP* describing required and recommended measurements necessary to complete an IODP scientific expedition. This section of the *Guide to the IODP* should include all earlier approved working group reports and iSciMP recommendations on this topic.

Moran moved, Prell seconded; 14 in favor.

Coffin and Moore summarized iSciMP Recommendation 03-01-9 on integrated laboratories and core repositories.

iSciMP Recommendation 03-01-9: iSciMP identifies the importance of shore-based facilities to complete routine measurements after IODP drilling expeditions and to calibrate and develop the measurements facilities continuously on shore. iSciMP recommends that integrated laboratories of core repository and shore-based facilities ("IODP integrated core repository"), which does not exist in the ODP period, are required to maximize the IODP multi-platform operations and to create new sciences.

Potential examples of such combined laboratory and curatorial facilities include, but are not limited to, the Center for Advanced Marine Core Research (CMCR), Kochi University, Japan, operated in cooperation with JAMSTEC, and the Bremen Core Repository at Bremen University, Germany.

Tatsumi noted that Japan and Europe had already made considerable progress in this regard. Kikawa explained that the iSciMP had discussed this issue because of the efforts underway at Kochi University and the University of Bremen. Moore suggested that the previous motion encompassed this matter, and the committee thus took no further action on it.

7a.vi. interim Technology Advice Panel (iTAP)

Coffin summarized iTAP Recommendation 03-2 on developing a hole problem risk mitigation plan and iTAP Recommendation 03-3 on evaluating the termination of each ODP borehole as part of the legacy documentation.

iTAP Recommendation 03-2: iTAP recommends that a hole problem risk mitigation plan be developed for every scheduled program. The plan should include near-real-time analyses during the drilling program that uses real-time drilling parameters. These parameters should also be captured into the IODP database to be used to improve future drilling plans.

iTAP Recommendation 03-3: iTAP recommends that the Ocean Drilling Program incorporate an evaluation of the termination of each borehole as part of the ongoing legacy documentation of the ODP. iTAP will define the scope of this evaluation so that the information can be used to prepare for the technical challenges in IODP.

Prell suggested handling the iTAP recommendations as a package rather than individually. Moran indicated that the SPC did not need to consider the second recommendation because the iTAP had continued examining that issue. The committee accepted the first recommendation without debate.

SPC Motion 03-09-15: The SPC accepts iTAP Recommendation 03-2 on developing a hole-problem risk mitigation plan and forwards it to the SPPOC.

Becker moved, Moore seconded; 13 in favor, 1 abstained (Moran).

The committee returned to the iTAP recommendations on Friday afternoon. Coffin summarized iTAP Recommendation 03-7 on reformulating the mandatory rules for coring and logging.

iTAP Recommendation 03-7: The iTAP recommends that SPPOC reformulate the existing ODP policy regarding mandatory rules for continuous coring and interval logging in all drilled holes. Some scientific drilling objectives, especially within complex drilling programs, could best be served using other protocols for drilling, coring and logging.

Becker wondered if the SPC could charge the TAP with drafting a revised policy before sending it to the SPPOC. Coffin recommended just receiving the recommendation for now and also charging the SciMP to get involved.

SPC Consensus 03-09-16: The SPC receives iTAP Recommendation 03-7 on formulating a more-flexible IODP coring and logging policy to allow use of improved technologies and charges the TAP and the SciMP with developing a draft policy by the March 2004 SPC meeting.

Coffin presented iTAP Recommendation 03-6 on outfitting the full-time IODP drilling platforms with ROV technology.

iTAP Recommendation 03-6: The iTAP recommends that both full-time (non-riser and riser) platforms be outfitted with ROVs.

Prell asked if the objective of this recommendation related to safety and pollution prevention. Moran explained that it also related to reentering holes and installing observatory systems. Austin noted that the CDEX had already planned for this capability on the *Chikyu*, and he supposed that MSPs could also use such equipment in many instances.

SPC Consensus 03-09-17: The SPC accepts iTAP Recommendation 03-6 on outfitting the fulltime riser and non-riser drilling vessels with remotely operated vehicles (ROVs) and forwards this recommendation to the SPPOC.

Coffin referred to iSciMP/iTAP Joint Recommendation 03-01-1 on accepting the report of the joint logging subcommittee.

iSciMP/iTAP Joint Recommendation 03-01-1: iSciMP and iTAP recommend to iPC acceptance of the Joint iSciMP-iTAP Logging Subcommittee report, and requests iPC distribute it to the IO's and IMI as soon as possible. The full report of the Logging Subcommittee is found in Appendix Joint-1 and includes descriptions of standard parameters to be measured, a discussion of potential industrial contacts, and other topics.

Becker remarked that the subcommittee report addressed many important issues. Coffin noted that the SPC had not yet received the report. Masuda explained that the revised report had just arrived by email and he proceeded to read several of the recommendations. Ito opposed forwarding the report to the CMO before having a chance to read and discuss it. Coffin deferred this issue until after the SPC actually received the report.

7a.vii. interim Industry Liaison Panel (iILP)
No recommendations came forward from the iILP.

7b. iSAS working group reports

7b.i. Database
The committee accepted the database working group report without comment.

SPC Motion 03-09-18: The SPC accepts the database working group report and forwards it to the SPPOC.

Quinn moved, Moore seconded; 14 in favor.

7b.ii. Microbiology
The committee accepted the microbiology working group report without comment.

SPC Motion 03-09-19: The SPC accepts the microbiology working group report and forwards it to the SPPOC.

Quinn moved, Kato seconded, 14 in favor.

7b.iii. Data bank
Moore described the data-bank report as an attempt to give guidance to proponents and encourage them to submit digital data. Austin emphasized the broader need for establishing a new IODP data bank by next June because the current data bank contract expires next spring. Coffin suggested that the data bank could form part of the information services center. Moore regarded the CMO as responsible for determining how to integrate the data bank into the management structure of the program.

SPC Motion 03-09-20: The SPC accepts the data-bank working group report and forwards it to the SPPOC.

Becker moved, Byrne seconded; 13 in favor, 1 absent (Prell).

7b.iv. Matrix
Droxler presented the matrix scheme for site-survey data showing the common data needs and special data requirements for the SSP and the PPSP. He stated the project goals and explained that the working group had developed the matrix so far based on what it viewed as the minimum requirements. Droxler said that they would appreciate guidance from the SPC on the matter of requirements versus recommendations.

Quinn complimented the working group for developing this idea. Moore recognized the intent of maximizing the scientific results of the program, but he worried about imposing too many requirements on proponents and not giving them advice until too late. He added that significant exceptions exist to the proposed requirements. Droxler again requested more specific feedback from SPC members on the matrix requirements. Austin wondered how to send a consistent signal to proponents in the event that requirements turn into recommendations, or vice-versa, late in the process. He suggested posting a general timeline of the data requirements for proponents. Katz identified that as a reason why the iPPSP had started trying to enter the process as early as possible in the development of proposals, at least for a quick preview and not necessarily a detailed review. Moran suggested that the operators would want to take responsibility for geotechnical properties. Byrne echoed the concerns about putting last-minute hurdles in front of proponents. He favored calling it recommended rather than required data and believed that the situation had improved since the iSSP also had started reviewing proposals at an earlier stage. Kawahata worried that some prospective proponents might have trouble understanding the details of the matrix scheme. He urged for accompanying it with a careful and thorough explanation. Tatsumi thought the working group should rethink some of these issues and report again at the next SPC meeting. Soh saw an immediate need for the matrix for MSP and non-riser proposals, with perhaps more time still available for riser drilling. Austin added that many riser sites would probably require 3-D data. Ito mentioned the expense of 3-D surveys. Soh worried that the time and cost of 3-D surveys might place a heavy burden on proponents and possibly limit the number of proposals for riser drilling. Quinn proposed that SPC members submit further comments directly to the SSP co-chairs.

SPC Motion 03-09-21: The SPC receives the progress report from the matrix working group and requests that the working group finalize its report in time for the March 2004 SPC meeting. The final report should include a reevaluation of required versus recommended data and a response to all other comments from SPC members.

Quinn moved, Byrne seconded; 14 in favor.

7b.v. Project management

The committee deferred discussing this item until later in the meeting but then ran out of time before returning to it.

7b.vi. Project scoping

The committee deferred discussing this item until later in the meeting but then ran out of time before returning to it.

7c. Policy on interacting with ancillary programs

Coffin asked for approval of the iPC statement on ancillary programs with a few minor changes. Moore noted that the iPC and the IWG had already approved the original statement. After a brief discussion the committee voted to approve the modified statement.

SPC Motion 03-09-22: The SPC recommends modifying the iPC-approved policy statement on ancillary programs in the IODP as follows:

iPC Consensus 5-3: Scientific and educational programs are encouraged to develop projects that are ancillary to the IODP Annual Program Plan and apply for permission to execute such projects as part of IODP ~~research~~ expeditions. Proposals for such ancillary programs must be approved by the Science Planning Committee (SPC) chair in consultation with the ~~co-~~chief scientists and implementing organizations of the affected ~~drilling project~~expeditions(s), the IODP Science Policy and Planning Oversight Committee (SPPOC), and by IODP Management International, Inc. (IMI) prior to the development of the annual program plan. For the purposes of assessing proposals for ancillary programs, it is understood that: 1) they must be conducted at no extra cost (in time or money) to IODP scientific operations; 2) they will in no way interfere with, or require the alteration of, drilling plans approved by the IODP; 3) sufficient space must be available on the ~~project~~expedition drilling platform(s) to accommodate needed personnel, equipment, and/or laboratory facilities without interfering with primary IODP drilling, sampling and related operations; and 4) permission to undertake at-sea activities required by ancillary programs must be obtained from the on-site operations manager of the IODP ~~project~~expedition on a day-by-day basis, and such permission can be rescinded at any time as required by operational considerations.

Becker moved, Katz seconded; 13 in favor, 1 abstained (Kato).

7d. IODP sample and data policy

The committee accepted the sample and data policy without comment.

SPC Motion 03-09-23: The SPC accepts the IODP Sample and Data Policy and forwards it to the SPPOC.

Ito moved, Byrne seconded; 14 in favor.

8. Publications

Coffin referred to iSciMP Recommendation 03-01-10 on a publications plan that should include a print and electronic Expedition Report volume, a continually updated online bibliography of each expedition, and an expedition science summary by the chief scientists.

iSciMP Recommendation 03-01-10: iSciMP recommends that the publications program of the IODP include the components listed below. The responsibility for implementing and overseeing these components will lie within central management of the IODP. The publication obligations incurred by a member of the Scientific Party are described in the IODP Sample and Data Policy.

1. A complete print and electronic Expedition Report volume. Both versions will capture all information produced by the Scientific Party for each drilling project, including core images and descriptions, and will be consistent and standardized across all platforms and shore-based components.

2. A continually updated on-line bibliography of each drilling project.

3. An Expedition Science Summary written by the chief scientists of the expedition will serve as a lead-in to the on-line bibliography. The Expedition Science Summary will be submitted 32 months post-moratorium.

Prell wondered if the timing of the expedition report would delay the release of the initial results. Moran explained that the expedition reports would equate to the initial reports. Austin believed that the expedition reports for riser drilling would not necessarily equate to the old initial reports. He said that the change in title reflected the change to multiple platforms and a desire to break from the old way of thinking. Austin added that the iSciMP had recognized that the scientific results have already migrated primarily to the outside literature, and the debate over print and electronic publishing focused more on the issue of improving program visibility. He also suggested that publishing print copies might not cost that much extra after already producing the content for the electronic version. Fox clarified that TAMU typically distributed about 1400 of the 1700 print copies of each volume, hence storing the extra print copies also contributed to the total costs. Miller believed that the IODP should not look back toward printed publications. Doust recommended that the publications plan should correlate with the reports from the reviews within the project management scheme. Ildefonse understood the intent of having a single volume for each expedition instead of two, but he wanted to ensure that the program would have an outlet for making data available to the community without necessarily involving a publication. Kikawa replied that the expedition reports could perhaps include some papers not suitable for outside publication.

Coffin proposed forming a working group to develop recommendations for an IODP publications policy. Miller, Quinn, Tatsumi, and Kato volunteered to serve on the working group. Austin suggested that the group should consider identifying the differences between program publications and platform related publications.

SPC Motion 03-09-24: The SPC establishes a working group to develop recommendations for an IODP publications policy. The working group, co-chaired by Ken Miller and Yoshiyuki Tatsumi, will report at the March 2004 SPC meeting.

Ito moved, Moore seconded; 14 in favor.

Tuesday 16 September 2003 8:30-17:00

The committee did not have any formal sessions scheduled on this day. Instead the attendees engaged in informal group discussions or participated on a local excursion.

Wednesday **17 September 2003** **8:30-17:00**

8.1 Select OPCOM members from SPC

Coffin explained that the SPPOC chair had appointed him and Ted Moore as co-chairs of the OPCOM for this meeting only. Other OPCOM members would include Jack Baldauf from the JOI Alliance, Yoshihisa Kawamura from the CDEX, and Jamie Austin from the IMI. Coffin proposed appointing Ito and Quinn from the SPC to fulfill the mandated OPCOM membership. He explained that Japan had nominated Ito, and Quinn represented the only regular U.S. member of the SPC without a conflict of interest at this meeting. Becker asked if the conflicted SPC members could participate in selecting the OPCOM members. Prell argued for allowing it and the committee agreed.

SPC Motion 03-09-25: All SPC members, including those identified as proponents of drilling proposals under review, may participate in selecting the OPCOM members from the SPC.

Moore moved, Prell seconded; 13 in favor, 1 abstained (Miller).

Soh asked who would appoint the OPCOM chair for beyond this meeting. Coffin replied that the SPPOC would do it. Becker asked about the tenure of the SPC members on the OPCOM. Coffin said the SPC could decide and should try to remain flexible. Austin believed that serving on the OPCOM would require a substantial commitment, and he wanted to ensure that some continuity would carry forward if the membership changed. Miller asked whether the OPCOM would have its next meeting before or after the March SPC meeting. Becker noted that meeting before the SPC in March would allow the OPCOM to receive service panel recommendations and then report to the SPC. The committee decided to appoint Ito and Quinn to the OPCOM through March 2004.

SPC Motion 03-09-26: The SPC approves Hisao Ito and Terry Quinn as additional SPC representatives on the OPCOM through the March 2004 OPCOM meeting.

Miller moved, Moore seconded, 13 in favor, 1 abstained (Quinn).

Coffin confirmed that anyone who wanted to attend the current OPCOM meeting could do so. Austin suggested that one co-chair from each of the SAS panels should attend as a designated representative.

8.2 Arctic Drilling

Coffin proposed to exclude Proposal 533-Full3 from the ranking exercise at this meeting because of its previous top-ranked status and current stage of advanced operational planning. He explained that this would also allow the committee to hear an update on the operational plans from one of the proponents. The committee passed the following motion without debate.

SPC Motion 03-09-27: The SPC affirms the high scientific priority and potential of scientific drilling in the central Arctic Ocean and recognizes that Proposal 533-Full3 Arctic–Lomonosov Ridge is currently in the implementation phase for operations anticipated for August and September 2004. The SPC therefore forwards this previously top-ranked proposal to the OPCOM without re-ranking for consideration for scheduling in FY2004.

Prell moved, Miller seconded; 14 in favor.

Moran presented an overview of the Arctic drilling expedition planned for 2004. She described the typical summer sea-ice conditions in the Arctic and explained that the expedition would deploy a fleet of three or four conventionally powered icebreakers, including the drilling vessel, to manage the ice. Moran showed bathymetric and geographic

maps of the Arctic Ocean and detailed seismic profiles of the proposed drilling sites on the Lomonosov Ridge. She outlined the main goal of recovering hemipelagic sediment cores to examine Cenozoic records of climate and environmental change. Specific paleoceanographic objectives included the history of ice rafting, the density structure of Arctic surface water, the Arctic's role in the onset of Northern Hemisphere glaciation, the development of the deep Fram Strait and deep water exchange between the Arctic and Atlantic Oceans, and the history of biogenic sedimentation. Moran also mentioned the lower priority of recovering bedrock, and she emphasized that the relatively small number of cores recovered to date from the Arctic Ocean represent only a small fraction of geological time, almost exclusively in the Quaternary.

Tatsumi asked about the availability of dredge samples from the Lomonosov Ridge. Moran replied that none existed from the proposed drilling sites. Sarnthein asked about possible effects of ice scouring on sediments. Moran confirmed that ice scouring could have affected some of the shallowest sites but not the primary sites. Miller asked about the length and cost of the project. Moran explained that the plan involved 35 days in the ice and the estimated cost ranged from $8.5 to 9 million, but the ESO had not yet finished negotiating the day rates with potential contractors.

9. Discuss and establish SPC proposal review and ranking procedure

Coffin described the procedure for reviewing and ranking proposals. He explained that the lead watchdogs would present the proposals, followed by comments from the second and third watchdogs, then the rest of the committee. He also encouraged alternates and observers to participate. Coffin asked the lead watchdogs to focus on the scientific objectives and importance of the proposals and noted that their duties would extend beyond the meeting. He also stated that all participants must declare any conflict of interests before the presentation and discussion of proposals, with conflicted members excluded from the discussion of their own proposals, from the entire global ranking process, and from the subsequent review and approval of the scheduling options.

Coffin explained that after discussing all of the proposals, the committee would select the pool to retain for ranking and then submit signed ballots with the numerical rankings to the iSAS Office science coordinators who would tabulate the results. Based on the rankings, the committee would select the proposals to forward to the OPCOM. Finally, the committee would review the scheduling choices developed by the OPCOM and vote to select a schedule for FY2004 and 2005. Coffin added that the committee could decide how many expeditions to schedule, but he recommended filling the complete schedule to avoid putting future stress on the program. Austin wanted to clarify that proponents not on the committee could remain in the room for the ranking procedure.

Coffin presented a sample review letter for return to the proponents. Becker asked whether the proponents would receive the review letters in time to submit changes for the 1 October deadline. Coffin hoped to have the review letters completed by the end of the meeting. Ildefonse wondered if sending such letters accorded with the earlier recommendation that the SPC would not request revised proposals. Coffin answered that the review letters would provide feedback but not explicitly request any revisions. Austin suggested making it clear that revised proposals would go back to the SSEPs for review.

10. Presentation and discussion of proposals

The following SPC members declared a conflict of interest and left the room during the subsequent review of the relevant proposal: Becker as a proponent of Proposal 545-Full3 and

Miller as a co-lead proponent of Proposal 564-Full. Becker also declared that he had formerly appeared as a proponent several years ago on earlier versions of Proposals 543-Full2 and 553-Full2 but had never taken an active role in developing either proposal. Coffin determined that Becker no longer had a conflict of interest for those two proposals. Other meeting participants who declared a conflict of interest and left the room during the review of particular proposals included: Austin as a proponent of Proposal 564-Full, Camoin as the lead proponent of Proposal 519-Full2 and a collaborator with the proponents of Proposal 581-Full2, Droxler as the lead proponent of Proposal 581-Full2, and MacLeod as a proponent of Proposal 512-Full3.

The committee reviewed the sixteen drilling proposals in the order specified below, with the proposals grouped according to the three main themes of the IODP Initial Science Plan. For each proposal, the lead watchdog presented the scientific objectives, the committee discussed the objectives in detail, and the SSEPs co-chairs offered a final assessment of the scientific priority as determined by the iSSEPs.

Proposal	**Short title**	**Watchdogs**	**Conflicts**
Deep Biosphere and Subseafloor Ocean			
545-Full3	Juan de Fuca Flank Hydrogeology	D. Fisher/Ito/Kato	Becker
547-Full4	Oceanic Subsurface Biosphere	Kato/Moore/Ito	None
553-Full2	Cascadia Margin Hydrates	Kato/Byrne/Ito	None
557-Full2	Storegga Slide Gas Hydrates	Prell/Tatsumi/Mori	None
573-Full2	Porcupine Basin Carbonate Mounds	Quinn/Kato/Soh	None
584-Full2	TAG II Hydrothermal	Tatsumi/Kawahata/Mori	None
589-Full3	Gulf of Mexico Overpressures	D. Fisher/Soh/Ito	None
Environmental Change, Processes, and Effects			
482-Full3	Wilkes Land Margin	Soh/Byrne/Moore	None
519-Full2	South Pacific Sea Level	Quinn/Moore/Prell	Camoin
543-Full2	CORK in Hole 642E	Ito/Byrne/Kawahata	None
548-Full2	Chicxulub K-T Impact Crater	Mori/D. Fisher/Tatsumi	None
564-Full	New Jersey Shelf	Soh/Prell/Quinn	Miller/Austin
572-Full3	Late Neogene-Quaternary Climate	Moore/Kawahata/Prell	None
581-Full2	Late Pleistocene Coralgal Banks	Kawahata/Quinn/Moore	Droxler
595-Full3	Indus Fan and Murray Ridge	Byrne/Soh/Prell	None
Solid Earth Cycles and Geodynamics			
512-Full3	Oceanic Core Complex	Tatsumi/D. Fisher/Mori	MacLeod

Droxler reviewed the site-survey readiness classification scheme and summarized the site readiness of each proposal. Austin raised the issue of flexibility for site readiness given the short timeframe of scheduling and added that the act of scheduling a proposal often encourages the submission of lacking data. Coffin preferred remaining flexible and suggested discussing this issue if necessary under other business on the last day. He then returned to several outstanding issues regarding Proposals 545-Full3, 572-Full3, 573-Full2, and 595-Full3. Tatsumi and Kato left the meeting for the remainder of the afternoon.

Proposal 545-Full3 – Becker again left the room as a proponent. Coffin explained the choice of conducting this project either in two phases of 45 and 23 days long or as a single 65-day expedition. Moore wanted to commit one way or the other regardless of how long of a gap it would entail between phases. Katz asked about the minimum requirements from the first

phase to justify going back the second time. Moore said that the answer only mattered when choosing the first option. Byrne preferred giving the proponents the flexibility they requested. Miller cited the difficulty of predicting when the ship could return to the area without knowing a long-term ship track. He therefore suggested giving flexibility to the OPCOM. Baldauf wanted to ensure that everyone had the same idea in mind when ranking the proposal. Miller recommended ranking based on the option presented in the proposal. Coffin agreed and asked for a consensus to give the OPCOM flexibility in scheduling this proposal.

SPC Consensus 03-09-28: The SPC regards the first part of Proposal 545-Full3 Juan de Fuca Flank Hydrogeology as worth scheduling on its own.

Proposal 572-Full3 – Coffin identified the issue of deepening one hole and allocating more time for taking quadruple advanced piston cores (APC). Sarnthein said that quadruple APC holes would certainly benefit the science. Austin cautioned against considering the time constraints at the SPC level. Miller suggested requiring quadruple APC holes instead of just allowing additional time for it.

SPC Consensus 03-09-29: The SPC recommends requiring quadruple APC holes at each site of Proposal 572-Full3 North Atlantic Neogene–Quaternary Climate and penetrating deeper than proposed at one site to obtain paleointensity records beyond 3 Ma.

Proposal 573-Full2 – Coffin framed the question of considering this proposal as a full expedition of forty-four days on site plus transit time or as a shorter pilot study of fewer sites. Miller suggested drilling a couple of the sites if the ship track would allow it. He wondered if the SPC could forward a portion of the proposal to the OPCOM for exploratory drilling to get baseline data for future proposal development. Moore wanted to apply the consistent principle of ranking the proposal as presented. The committee agreed and Coffin suggested providing the proponents with feedback on the options if the proposal ranked low.

Proposal 595-Full3 – Coffin framed the question of splitting the proposal into shallow and deep holes, or the riser and non-riser components. Soh favored splitting it. A brief debate ensued on how to define shallow. Sarnthein believed that a shallow hole reaching the Tortonian would give a good scientific return. Miller argued that the first component could stand on its own and had to come first no matter what platform would get used for the second piece. He suggested deferring the ranking of the second component. Byrne remarked that the project management review procedure should apply to every project. Austin noted that the SPC could conduct the science as it sees fit. He advised remaining flexible at first and letting the OPCOM provide options. Coffin reiterated that the committee would rank the proposal as presented.

Thursday 18 September 2003 8:30-12:00

11. Global ranking of proposals

Coffin explained the global ranking procedure and noted that the committee first had to select the pool of proposals to rank. Prell confirmed that Don Fisher and Kate Moran had joined the committee temporarily as voting alternates for Becker and Miller, the two conflicted members.

Kato raised the issue of ranking Proposal 595-Full3 in two parts and wondered if it constituted a CDP. Coffin recalled the lack of a consensus on that issue the previous day. Prell wanted to rank it as one piece based solely on the science and let the OPCOM determine the

logistics. Kawahata agreed. Moore noted the alternate approach of considering it as a series of independent pieces, though not necessarily as a CDP. Kato looked to clarify the concept of CDPs. Byrne explained that the SSEPs had not identified this proposal as a CDP. He preferred ranking it as a single piece. Quinn stated that the SPC should rank the science without considering the drilling platforms. The committee briefly discussed several scientific points before agreeing not to split the proposal for ranking.

Katz suggested reviewing the site-survey readiness in defining the pool for ranking. Byrne repeated the earlier point that proponents often submit data once their proposal gets scheduled. Katz noted that a proposal must get rejected at some point if it does not have sufficient site-survey data available. Coffin believed that the SPC should consider any scientific judgments about the sufficiency of the site-survey data in evaluating the proposals. Byrne still wanted to retain all of the proposals in the pool. Quinn saw nothing to gain by culling one or two proposals from the pool. Mori said that the SPC should focus on science and let the other panels handle other matters. Tatsumi proposed ranking all of the proposals on the basis of science. The rest of the committee agreed.

SPC Consensus 03-09-30: The SPC will rank all of the sixteen proposals reviewed at this meeting.

Each SPC member assigned the numerical rankings of one to sixteen to the proposals in the pool. The members submitted their rankings on signed ballots. The iSAS Office staff collected the ballots and tabulated the results as follows.

Rank	Proposal #	Short Title	Mean	Stdv
1.	519-Full2	South Pacific Sea Level	4.43	2.56
2.	512-Full3	Oceanic Core Complex	4.57	3.16
3.	545-Full3	Juan de Fuca Flank Hydrogeology	4.64	3.88
4.	564-Full	New Jersey Shelf	5.21	3.81
5.	589-Full3	Gulf of Mexico Overpressures	6.21	5.22
6.	553-Full2	Cascadia Margin Hydrates	8.14	4.00
7.	572-Full3	N. Atlantic Late Neogene-Quaternary Climate	8.64	3.67
8.	482-Full3	Wilkes Land Margin	8.79	4.59
9.	543-Full2	CORK in Hole 642E	9.14	3.96
10.	547-Full4	Oceanic Subsurface Biosphere	9.50	3.25
11.	595-Full3	Indus Fan and Murray Ridge	9.57	3.13
12.	584-Full2	TAG II Hydrothermal	10.21	3.14
13.	557-Full2	Storegga Slide Gas Hydrates	11.14	3.48
13.	581-Full2	Late Pleistocene Coralgal Banks	11.14	3.98
15.	548-Full2	Chicxulub K-T Impact Crater	11.57	5.77
16.	573-Full2	Porcupine Basin Carbonate Mounds	13.07	3.67

Coffin presented the ranking results and opened the debate on deciding which proposals to forward to the OPCOM. Moore wanted to draw the line low to give the OPCOM maximum flexibility. He suggested forwarding the top eleven or twelve proposals. Several SPC members agreed. Quinn saw the clearest break in the rankings after the top five, and others agreed. Moran proposed forwarding the proposals in two groups of because of the clear break after the top five. Kato favored accepting the top four as the first group and the top eleven overall. Katz noted that breaking after the top eleven would yield nine non-riser proposals for the OPCOM to consider.

Coffin raised the issue of ranking proposals again at the next SPC meeting in March 2004 and asked how many new proposals could potentially come forward for ranking by then. Byrne answered about ten, but it would require compressing the external review process again and conducting an additional SSEPs meeting by email, and the SSEPs co-chairs no longer favored the idea.

Moore identified the problem of having a pool of good proposals but with a broad geographic distribution. Allan recommended ensuring enough flexibility for the OPCOM without prescribing too much because some of the scheduling options might involve unacceptably long transit times. Baldauf favored maximizing the flexibility for the OPCOM and letting them devise options. Fox added that the OPCOM would clarify many of the scheduling constraints. Moore suggested forwarding all of the proposals in three groups to the OPCOM. Kawahata agreed. Coffin recognized the top five as the first group but did not see a clearly defined boundary between the second and third group. Mori suggested just identifying the first group as a high priority and not distinguishing among the rest. Katz illustrated that the rankings showed little if any statistical difference below the top five, except for the bottom proposal.

Coffin asked if the committee wanted to exclude any of the proposals from going forward this time. The committee discussed what would happen to the proposals falling below the line. Byrne said that the proponents could always submit a revised proposal, and a ranking below the line would send a stronger signal about the need for improvement. He thus preferred forwarding only the top twelve. Katz added that the bottom four proposals would not give the OPCOM much more flexibility anyway because two of them required MSPs and another still needed site surveys. Several committee members supported the idea of forwarding the top twelve proposals in two groups and leaving the third group behind to send a signal to the proponents that those proposals needed reworking. Coffin called for a motion to forward the top twelve proposals to the OPCOM. Ildefonse noted that Proposal 557-Full2 had ranked highly before in the ODP, yet now the SPC regarded the same proposal as not ready for scheduling. Prell viewed it as a result of the competition with new proposals. Austin recognized the importance of sending consistent signals, but he also put responsibility on the proponents to keep improving their proposals.

SPC Motion 03-09-31: The SPC forwards the top twelve ranked proposals to the OPCOM in two groups, with the top five proposals in Group I and the next seven in Group II. The SPC requests that the OPCOM propose scheduling options that honor and adhere to these ranking groups as closely as possible.

Moran moved, Prell seconded; 12 in favor, 2 opposed (Kato, Ito).

Thursday 18 September 2003 12:00-17:00

The Science Planning Committee adjourned for the afternoon while the Operations Committee convened its first meeting.

Friday **19 September 2003** **8:30-17:00**

12. Review alternative schedules developed by OPCOM

Masuda replaced Tatsumi as a voting SPC member for the final day of the meeting. Conflicted proponents Becker, MacLeod, Miller, and Moran left the room. Coffin presented OPCOM Consensus 03-09-1 on including Proposal 533-Full3 in the FY2004 operations schedule.

OPCOM Consensus 03-09-1: The OPCOM recommends Proposal 533-Full3 Arctic–Lomonosov Ridge to the SPC for inclusion in the FY2004 operations schedule to institute the necessary steps for program implementation. Its final implementation is contingent upon ECORD participation in the IODP.

The committee agreed to approve the OPCOM recommendation for scheduling the Arctic expedition before discussing how to review the latest operational plan.

SPC Motion 03-09-32: The SPC recommends including Proposal 533-Full3 Arctic–Lomonosov Ridge in the mission-specific platform operations schedule for FY2004, pending ECORD participation in the IODP.

Byrne moved, Kato seconded; 13 in favor, 1 absent (Moran).

Moore explained that the SAS should conduct a final review of the operational plan for the Arctic expedition. He nominated Becker to lead the review committee and proposed that the other members should include former Arctic PPG chair and DPG member Martin Hovland, an icebreaker captain, a tool expert from the TAP such as Huey or Taylor, and the SPC chair. Moore recommended advising the IMI to cooperate with the Europeans in setting up the group. Austin responded that he had already started polling prospective participants and wanted to keep the group small but complete. Coffin supported instating Becker as the chair. Becker asked to whom the group would report. Moore said they would report to the OPCOM and the OPCOM would report in turn to the SPC. MacLeod asked when the group would meet. Austin replied that Kingdon had started working on the logistics for meeting in late October in Edinburgh. Becker asked if the OPCOM would need to review the report earlier than March. Austin said yes, to ensure including it in the program plan.

SPC Consensus 03-09-33: The SPC establishes a project-scoping group to review the operational plan for implementing Proposal 533-Full3 Arctic–Lomonosov Ridge. The group will report to the OPCOM and should include SPC member Keir Becker as the leader, SPC chair and OPCOM co-chair Mike Coffin, and several other appropriate members such as an icebreaker captain. The group should conduct its review by late October 2003 to ensure enough time for including the Arctic drilling project in the annual program plan for FY2004.

Moran returned to the proceedings. Coffin outlined three scenarios for the FY2004 and FY2005 schedule as presented in OPCOM Consensus 03-09-2. He cited the estimated cost and number of transit days for each scenario and noted that all three scenarios exceeded the estimated provisional operating budget of $3.8 million.

OPCOM Consensus 03-09-2: The OPCOM recommends the following three scenarios to the SPC for consideration as possible drilling schedules for FY2004 and FY2005, with preference given to Scenario 10.

Exp.	Scenario 8	Scenario 9	Scenario 10
1	545-Full3 (Pt. 1)	545-Full3	545-Full3 (Pt. 1)
2	572-Full3 (Pt. 1)	572-Full3 (Pt. 1)	572-Full3 (Pt. 1)
3	584-Full2	584-Full2	512-Full3 (Pt. 1)
4	512-Full3 (Pt. 1)	512-Full3 (Pt. 1)	512-Full3 (Pt. 2)
5	512-Full3 (Pt. 2)	572-Full3 (Pt. 2) + 543-Full2	572-Full3 (Pt. 2) + 543-Full2
6	589-Full3 or 543-Full2	-----	-----
Cost:	$6.2-7.0M	$5.6M	$4.6M
Trans:	42 days	52 days	52 days

Coffin described the preferred Scenario 10 in greater detail and stressed that it would complete two highly ranked projects. Moore liked the preferred scenario because it covered a wide range of scientific topics. Kato inquired from a geographical viewpoint why all of the scenarios included the North Atlantic expedition (572-Full3) instead of Cascadia (553-Full2). Baldauf cited the short lead-time available for planning the first expeditions and the difficulty and risk of trying to conduct two challenging projects such as Juan de Fuca (545-Full3) and Cascadia in a row at the beginning of operations. Fox added that it also reflected concerns about weather windows. Moran asked if acquiring quadruple APC would really double the length of the North Atlantic expedition. Baldauf said probably not, but the revised estimate included transit time. Byrne suggested devising a contingency plan in case the last expedition would take less time than available. Moore said that the SPC could revisit that issue in March if necessary. Moran identified the possible unavailability of third-party tools for Juan de Fuca as a risk not mentioned or discussed by the OPCOM. She also wondered if the SPC should discuss whether to commit to Cascadia as part of returning to complete the second portion of Juan de Fuca. Moore opposed making such a commitment now. Baldauf suggested devising a contingency plan for the first expedition in case the planning did not proceed as needed. He recommended identifying something that would fit in the slot without having to rework the entire schedule. Prell asked if Juan de Fuca truly depended on third-party tools. Baldauf replied yes. Moore proposed doing the easier part of Cascadia, without the CORKs, as a contingency. Katz stressed that the PPSP would need to have all safety data for Cascadia in hand by December. Baldauf stated that the decision between Juan de Fuca and Cascadia could not wait until March, and he expected to have a clearer idea in the next few weeks about the viability of Juan de Fuca. Austin mentioned the early November deadline for the program plan. Katz said that he could not wait until then to decide which proponents to invite to the December PPSP meeting.

Coffin presented the details of Scenario 9. Byrne viewed this scenario less favorably because it included the lowest ranked proposal of those forwarded to the OPCOM. Moran asked if the second part of Oceanic Core Complex (512-Full3) depended on achieving any specific results

in the first part. Ildefonse believed that the two phases corresponded to two separate holes with different objectives. Fisher agreed that results of the first phase should have no bearing on the second phase.

Coffin presented the details of Scenario 8. Byrne asked why the other scenarios did not include the Gulf of Mexico (589-Full3). Katz referred to safety issues and a lack of site-survey data and said that it could not possibly get scheduled any earlier than the fifth or sixth expedition, and it still might require a shallow gas survey that would need extra funding. Austin added that it also reflected a desire to fill the entire schedule. Moran suggested that the strong industry participation on the proposal might help to get the data released. Katz promised that the PPSP would continue moving forward on Gulf of Mexico and Cascadia, but it would put a lot of pressure on the system if either one got included in the current schedule. Byrne asked why TAG II would cost so much. Baldauf replied that it involved the use of expensive tools and hardware, plus logging-while-drilling (LWD).

13. Vote on FY2004 schedule (non-conflicted SPC members)

The committee agreed to focus on the preferred scenario presented by the OPCOM and to discuss any potential modifications. Coffin asked about a possible contingency plan for the first expedition. Fisher noted that the proposal itself contained a contingency plan. Prell recalled that the proposed contingency plan still required the third-party tools. Baldauf said that any contingency plan would have to exclude the A-CORKs and just do the straightforward RCB holes. Moore suggested combining the non-A-CORK sites of Juan de Fuca and Cascadia as a contingency. Moran suggested limiting the contingency plan to just the non-A-CORK components of Cascadia because the scientific results from Juan de Fuca depended heavily on the A-CORKs. Austin suggested also planning for a fiscal contingency because the preferred scenario still exceeded the provisional budget. He recommended emphasizing the high scientific priority of Juan de Fuca; otherwise the funding agencies might just approve the less costly plan. Coffin asked for comments on the other expeditions of the preferred scenario. Moran suggested emphasizing that the last expedition would fulfill important scientific goals and not just fill the time available. Prell presumed that the OPCOM would have a continuing dialog on the contingency issues and proposed to adopt the modified schedule.

SPC Motion 03-09-34: The SPC approves the following expedition schedule for the non-riser vessel during June 2004 through May 2005.

1.	545-Full3	Juan de Fuca Flank Hydrogeology (Part I)
2.	572-Full3	N. Atlantic Neogene-Quaternary Climate (Part I)
3.	512-Full3	Oceanic Core Complex (Part I)
4.	512-Full3	Oceanic Core Complex (Part II)
5a.	572-Full3	N. Atlantic Neogene-Quaternary Climate (Part II)
5b.	543-Full2	CORK in Hole 642E

The SPC also identifies the non-A-CORK component of 553-Full2 Cascadia Margin Hydrates as an alternate first expedition in case any significant delays arise in the logistical planning for Proposal 545-Full3.

Prell moved, Moran seconded; 14 in favor.

13.1 Nominate co-chief scientists

Coffin opened the discussion on nominating co-chief scientists for the scheduled expeditions. Proponents Becker, MacLeod, and Moran left the room. Coffin listed the seven candidates that the iPC had previously nominated for the Arctic expedition and already forwarded to the ESO. The committee decided without comment to endorse the previous list of nominees.

SPC Motion 03-09-35: The SPC endorses the iPC nominations for chief scientists of the Arctic drilling project, as previously forwarded to the ECORD.

Quinn moved, Moore seconded; 13 in favor, 1 absent (Moran).

Moran returned and the committee proceeded with nominating potential co-chief scientists for each of the non-riser drilling expeditions scheduled at this meeting. Coffin recommended obtaining further nominations outside the meeting and submitting them to the iSAS Office by 1 October. Austin suggested prioritizing the list. Moore proposed doing it by email after compiling the complete list. Moran noted that no Europeans had contributed to the discussion. Coffin asked for guidance from the lead agencies for nominating co-chiefs. Allan stated that each participation unit would equal two scientists per platform, and the same proportions would also apply to co-chiefs. Moore suggested asking the SPPOC to address this issue. Austin wondered how to handle the leadership of expeditions with mixed scientific objectives. Prell believed that split expeditions would require integrated science parties. Baldauf replied that they also might require joint pre-cruise meetings and sampling parties.

14. Review letters to proponents of unscheduled proposals

Coffin reviewed the list of unscheduled proposals and presented an example of a review letter to the proponents. He asked the committee to consider what kind of message to send. Quinn suggested asking the ESO to begin formulating operational plans for the two high-ranked MSP proposals. He argued that it would send a strong message to the European community that this committee, even with no official European representatives at the moment, viewed such science as a high priority. MacLeod expressed concern about the possibility of highly ranked MSP proposals receiving a lower re-ranking in the future and the consequent implications for ESO's operational planning of those missions. Kingdon responded that ECORD could likely conduct Proposal 519-Full2 in FY2005 and Proposal 564-Full in FY2006 providing that ECORD joined the IODP.

SPC Motion 03-09-36: The SPC recommends that the ECORD develop an operational plan as soon as feasible for Proposals 519-Full2 South Pacific Sea Level and 564-Full New Jersey Shelf, in light of their respective global rankings of #1 and #4 at this meeting.

Quinn moved, Moore seconded; 14 in favor.

Coffin wanted to ensure the consistency of reviews and rankings over time, but saw it as difficult to do with a changing committee membership. Moore suggested preserving the current high ranking of Proposal 589-Full3 for the next OPCOM scheduling meeting and encouraging all of the others to provide updates prior to the next SPC ranking and scheduling meeting. Katz remarked on advising the proponents of Proposal 553-Full3 about its contingency status for the current schedule. Prell asked if the SSEPs would take any further action on these proposals. Byrne replied that the SSEPs would not get involved unless a revised proposal comes in. The committee decided to exempt the three remaining unscheduled proposals of Group I from re-ranking at the next meeting.

SPC Motion 03-09-37: The SPC forwards Proposals 519-Full2 South Pacific Sea Level, 564-Full New Jersey Shelf, and 589-Full3 Gulf of Mexico Overpressures to the OPCOM for consideration at the next OPCOM scheduling meeting without re-ranking.

Katz moved, Moore seconded; 14 in favor.

Moore proposed forming a project-scoping group to begin examining the riser component of Proposal 595-Full3. He said the planning should start now, though it would not mean making a commitment to implement that proposal. Moore also suggested that IODP should have at least three riser projects planned at all times, and the SPC would probably have to set up similar groups for other riser drilling proposals in March. Byrne questioned when the SAS would define the platform needed for a proposal. Moore responded that the OPCOM and not the proponents would decide on the appropriate platforms. Coffin asked if the SPC needed to do something about this issue now. Austin suggested at least informing the proponents what the committee intends to do.

SPC Consensus 03-09-38: The SPC chair and the IMI interim program director will work with CDEX to establish an initial project-scoping group for the riser-drilling component of Proposal 595-Full3 Indus Fan and Murray Ridge.

15. Approve project and site designation scheme

Coffin reported that the OPCOM had briefly discussed but reached no decision on a project and site designation scheme proposed by J-DESC. He identified a need for input by March and proposed charging the SciMP to address this issue.

SPC Consensus 03-09-39: The SPC requests the SciMP to draft a scheme for designating expeditions and boreholes in the IODP for consideration at the March 2004 SPC meeting.

16. Other recommendations from OPCOM

The committee received no other recommendations from the OPCOM.

17. Identify obligations of IODP scientists

Coffin reviewed three main obligations for IODP scientists as derived from the sample and data policy accepted earlier. These included submitting manuscripts within twenty months post-moratorium, publishing a peer-reviewed paper or submitting a progress report to the curator within thirty-six months of receiving samples or conducting analyses, and acknowledging IODP in all publications incorporating IODP data and submitting those publications to the curator. Moore suggested adding a requirement to submit all generated data to the IODP database or information services center. Prell asked if this excluded data reports. Katz noted that the second item referred to progress reports. Katz left the meeting.

MacLeod wanted to make the timelines absolutely clear. Prell suggested that the first requirement should define manuscripts as including data reports. Becker suggested clarifying the obligations regarding borehole observatories and whether it would make sense to stream such data to the IODP database. Austin said that it would definitely complicate the moratorium issue. Zhou asked whether the requirement for publishing in English would include papers in Chinese journals or only international journals. The committee agreed that any peer-reviewed journal would suffice as long as the paper appeared in English. Coffin asked whether the modified policy should go back to the SciMP. Moran suggested just asking the SciMP to include it in their efforts on the *Guide to the IODP*. The committee decided to forward the policy directly to the SPPOC.

SPC Consensus 03-09-40: The SPC recommends the following policy on obligations of IODP scientists for SPPOC approval.

- Scientific Party members must submit their manuscripts, including data reports, within 20 months post-moratorium.
- Scientists receiving samples or conducting nondestructive analyses must publish a peer-reviewed paper in English and submit their data to the IODP database (*e.g.*, the IODP Information Services Center) or a progress report to the IODP Curator within 36 months of receiving samples or conducting analyses.
- All publications incorporating IODP data or samples must acknowledge the IODP and be submitted to the IODP Curator.

18. IODP proposal evaluation process

Coffin reviewed several points concerning the proposal evaluation process, noting that the SSEPs determine when to forward a proposal to the SPC and the SPC designates CDP proposals. He raised the issue proposed by J-DESC to restructure the SSEPs into three separate panels with fewer members and to have them rely more on external reviews, for example getting six for each proposal. Coffin indicated that it would take time and effort to get more reviews, but he believed the iSAS Office staff would do everything necessary to give the SSEPs what they want.

Moore felt reluctant to change too much before having more experience with the current SAS. Camoin promised that the SSEPs would address this issue at their next meeting and develop recommendations. Soh supported the idea of reorganizing the SSEPs according to the three themes of the IODP Initial Science Plan. Kato stressed the importance of covering the full range of relevant disciplines in reviewing each proposal. Soh suggested using the external reviewers to fill in the gaps in expertise on the SSEPs. Austin questioned how reducing the membership of the SSEPs would help the problem. Byrne interpreted it as a matter of relying more on external reviews to make up for the decreased panel membership. Moore cautioned that external reviewers would not mentor proposals, and although proponents might complain about getting mixed messages from different panels, they had never complained about the concept of getting advice to improve their proposals. He preferred waiting to hear from the SSEPs on how they wanted to proceed. Prell opposed relegating the SSEPs to just keeping track of external reviews. Quinn also viewed the SSEPs role as important and did not want to diminish it. Coffin concluded that the SPC should defer further discussion until hearing more from the SSEPs at the next meeting.

Eguchi asked to clarify the SSEPs membership for the next meeting and noted the approaching deadline for distributing the meeting logistics and the proposals. He reported that the iSAS Office had received notice of the U.S. members but not those from Japan or Europe. Austin stated that the SSEPs must have equal membership at the moment from the U.S. and Japan. MacLeod added that the funding agencies had not yet finished negotiating the number of European members. He suggested allowing the current members to remain as observers or letting the panel chairs invite them as guests. Austin did not want to forget other potential members as well.

19. Revisit SPC mandate and conflict-of-interest statement

Coffin proposed modifying the provisional SPC mandate to make the clause on vote and quorum consistent with the SPPOC mandate. Becker asked if the two-thirds majority vote referred to all members or just all members present. Moore suggested amending it to all members present and eligible to vote. He also suggested adding a statement specifying that

the SPC would approve the chairs of all SAS panels and working groups, as already indicated in the individual panel mandates. After additional minor editing, the committee voted to endorse the revised mandate.

SPC Motion 03-09-41: The SPC endorses the following revised mandate and terms of reference for itself and forwards them to the SPPOC.

1.1 General Purpose. The Science Planning Committee (SPC) reports to the Science Policy and Planning Oversight Committee (SPPOC) and provides advice to IODP Management International (IMI) and, through IMI, to the implementing organizations on plans designed to optimize the scientific productivity and operational efficiency of the drilling program.

The SPC is specifically responsible for: the custody and initial implementation of the IODP Initial Science Plan; ranking of mature drilling proposals (*i.e*., those that have undergone external review, been grouped by the Science Steering and Evaluation Panels (SSEPs), and been judged as complete by the Science Advisory Structure (SAS)) that address the scientific themes and initiatives in the IODP Initial Science Plan; advising how these proposals might be most effectively mapped into a drilling plan based on the IODP multiple platform concept; carrying out long-term science planning; fostering communications among and between the general community, the SAS, the IMI, and the implementing organizations.

1.2 Mandate. The SPC encourages the international community to develop and submit drilling proposals for the IODP. The SPC can initiate and terminate temporary SAS groups as needed. The SPC recommends SAS membership to the SPPOC, particularly with respect to disciplinary balance. The SPC chair serves as a member of the OPCOM, and the SPC appoints other SPC members to the OPCOM, as defined in the OPCOM mandate. The SPC recommends SAS meeting frequency and timing to the SPPOC. In addition, the SPC may assign special tasks to SAS committees, panels, and planning groups. The SPC approves the chairs of all SAS panels and planning groups. The SPC chair approves the meeting agendas for all SAS committees, panels, and planning groups other than the SPPOC. The SPC sponsors and convenes planning conferences at intervals determined by long-term science plans for IODP. The SPC assigns its own watchdogs to proposals that are forwarded from the SSEPs. The SPC ranks the scientific objectives of the proposals into final priority after they are reviewed by the SSEPs. The SPC approves by at least a two-thirds majority the annual drilling schedule as forwarded from the OPCOM. The SPC nominates chief scientists to the implementing organizations, who make the final selection.

The SPC periodically reviews the IODP SAS in light of developments in science and technology and recommends amendment of the SAS and its mandates to the SPPOC. Much of the work of the SPC is carried out by the commissioning of reports from the OPCOM and the other SAS panels, including both formal and *ad hoc* working groups, *ad hoc* subcommittees of its own membership, and by its chair or vice-chair.

1.3 Structure. The SPC is empowered to modify an infrastructure appropriate to the definition and accomplishment of tasks described in the annual program plan as approved by the SPPOC. Communication with the SAS panels and planning groups is maintained by having their chairs meet with the SPC annually and by assigning SPC members as non-voting liaisons to SAS panels and planning groups as necessary. Where counsel and communication are deemed important, other individuals may be asked to meet *ad hoc* with the committee or its panels.

1.4 Meetings. The SPC meets at least twice a year, normally in March and August. Robert's Rules of Order will govern its meetings and those of all of its subcommittees.

1.5 Membership. The SPC will consist initially of seven members from Japan and seven members from the U. S. All appointees to the SPC shall satisfy the fundamental criteria of having the ability and commitment to provide mature and expert scientific direction to IODP planning. Each member should have a designated alternate to serve in his or her absence. The term of membership will be three years and at least one third of the members shall rotate off the committee annually, so that the SPC membership is replaced every three years. Re-appointment shall be made only in exceptional circumstances. The fields of specialization on the SPC shall be kept balanced as far as possible by requests to national program committees. If an SPC member misses two meetings in succession, the SPC chair or vice-chair will discuss the problem of SAS representation with the appropriate country representative(s) on the SPPOC.

1.6 Liaison. The director of IODP at the IMI, the directors of the implementing organizations, or nominees thereof, and representatives of the lead agencies are permanent, non-voting liaison observers. The SPC chair is the liaison to the SPPOC, and the SPC assigns other liaisons to the SSEPs, PPSP, and other SAS panels and groups.

1.7 Vote and Quorum. The SPC shall reach all its decisions by the affirmative vote of at least two thirds of all members present and eligible to vote. A quorum shall equal two-thirds of the committee.

1.8 Chair and Vice-Chair. The SPC chair and vice-chair shall alternate between Japanese and U.S. institutions, excluding the implementing organizations. The vice-chair will replace the chair every two years, with a new vice-chair appointed.

Moore moved, Becker seconded; 14 in favor.

Becker presented the results of the conflict-of-interest working group that had included himself, Kato, Moore, Mori, Kikawa, and Byrne. He explained that the group had identified a set of basic principles and developed a detailed procedure for evaluating proposals with the goals of assuring fair and complete discussion, maintaining an appropriate set of experts on the panels, assuring that proponents who happen to attend meetings do not realize any advantage over those not present, and assuring that conflicted participants would not unfairly influence the discussion of competing proposals. Becker outlined the main points of the working group consensus and explained that they favored a compromise between the policy adopted for this meeting and the stricter JOIDES policy. He also outlined the three main principles on declaring conflicts of interest, excluding conflicted persons from discussing or ranking the pertinent proposals, and excluding anyone from serving as a member of more than one SAS panel at a time. Becker proposed endorsing the simple statement of principles before discussing the details of the proposed procedure for evaluating proposals.

Moore asked about the acceptability of letting panel members serve as alternates on other panels. Coffin felt most concerned about having panel chairs serving on multiple panels, though he recognized the beneficial experience for panelists to serve as alternates on higher-level panels. Quinn favored using the most-informed people to get the best science. Mori saw it as an even more extreme problem for the smaller community on the Japanese side. He added that the working group thought that the onus should fall on the individuals to declare any conflicts. Prell noted that conflicts would have to get identified before meetings to assign alternates. Austin stressed that the national programs would need sufficient lead-time to

identify appropriate alternates and allow them to prepare for meetings. He also noted the cost savings of choosing alternates from among the panel chairs or other liaisons already scheduled to attend a meeting anyway. Ito referred to the efficiencies of having inter-panel liaisons attend from the meeting host country. The committee amended the third principle to distinguish between regular and alternate members.

Coffin suggested adding a fourth principle stating that representatives of the CMO and the IOs could not serve on SAS panels other than the SPPOC and the OPCOM. Moore wondered if such a principle would cause any particular problem for Japan. Coffin equated the internal departments of JAMSTEC with the various academic departments of TAMU, for example, and said that it should not pose any problem. Prell suggested using the less ambiguous term employees instead of representatives. Austin preferred the broader term because the SPPOC would represent the CMO but the CMO would not employ the SPPOC. Coffin asked if anyone objected to the revised principles and received no response.

SPC Consensus 03-09-42: The SPC endorses the following principles for a SAS conflict-of-interest policy and forwards them to the SPPOC.

- Proponents or other attendees having a significant conflict of interest regarding a proposal must declare that conflict and should not be present when that proposal is discussed.
- Proponents or other attendees having a significant conflict of interest regarding a proposal cannot participate in the ranking of that proposal.
- Participants in the SAS cannot be regular members of more than one panel.
- Representatives of the IMI and implementing organizations cannot serve on SAS panels other than the SPPOC and the OPCOM.

Becker described the proposed two-phase procedure for evaluating proposals in the SAS. Phase 1 concerned watchdog assignments and the presentation and discussion of proposals, and Phase 2 concerned the evaluation, comparison, ranking, and scheduling of proposals by the SPC. The committee subsequently modified the procedure as discussed and shown below.

Coffin called for comments on the first phase. Prell asked if the first phase would apply to all panels. Becker replied that the first phase would also apply to the SSEPs. Austin wanted to define the first phase as beginning some number of weeks before the meeting to prevent assigning conflicted watchdogs and to ensure including alternates in the watchdog assignments. Moore noted that a proposal would always have more than one watchdog, so conflicts that arise late should not have much impact. Coffin wanted to clarify that the procedure precluded conflicted members from serving as watchdogs or lead watchdogs only on their own proposals and not all proposals. He suggested amending the text to say that the committee or panel chair, in consultation with the SAS Office, would assign watchdogs as soon as possible after identifying the relevant proposals, and the watchdogs must not have any conflicts with their assigned proposals. Soh inquired about the definition of a professional conflict. Coffin cited an example of close collaborators from different institutions. The committee also decided to add commercial conflicts to the list of examples. Austin raised the possibility of the chair and the vice chair having a conflict at the same time. Moore supposed that they would have to contact the SPPOC chair for guidance.

Coffin asked for comments on the second phase. Moore wondered if a non-conflicted alternate member could replace more than one member as a proxy voter. Coffin regarded that as a quorum issue for the SPPOC to discuss. Ildefonse suggested requiring that voting alternates remain present during the discussion of proposals. The committee amended the

procedure to invite voting alternate members to attend the entire meeting. Coffin asked if the committee felt satisfied with a 50% vote for including proposals in the ranking pool. Prell did not mind broadening the available pool. Quinn noted that if the committee split on whether or not to rank a proposal then it probably would not rank highly anyway. Masuda inquired if the proponents of low-ranked proposals would have an opportunity to revise them. Coffin said yes because an addendum might not suffice in all cases. Prell asked about analyzing the voting results in other ways besides just the mean and standard deviation. He suggested presenting the complete table of voting results to the committee. Becker noted that the proposed procedure did not preclude that possibility. Moore suspected that it might not really help that much and could even make the decision harder. Coffin looked for a consensus on considering additional statistics of the proposal rankings. The committed agreed to consider a summary of the place rankings for each proposal.

Ito inquired how the SPC would discuss proposals for riser drilling. Coffin replied that the SPC should not consider platform issues because that job belonged to the OPCOM. Kawamura expressed concern about waiting until OPCOM meetings to discuss platform issues because the riser operator needed more lead time to prepare for riser operations. Moore suggested that the SPC could decide to initiate the scoping process for riser projects, as just done for the Indus Fan, before sending the proposals to the OPCOM. Ito also worried that not all SPC members could easily understand how the OPCOM arrived at scheduling options. He recommended receiving some explanatory document from the OPCOM. Coffin sympathized with the concern and invited all SPC members to attend the OPCOM meeting as observers to understand the procedure.

SPC Consensus 03-09-43: The SPC endorses the following two-phase procedure for evaluating proposals and forwards it to the SPPOC.

Phase 1: Watchdog Assignment, Proposal Presentation, and Discussion
All conflicts that might exist with regular and alternate panel or committee members are identified at the outset of Phase 1. The panel or committee chair(s) consult(s) with the SAS Office and assign(s) watchdogs as soon as the relevant proposals are identified. The watchdogs must not have any conflicts with their assigned proposals.

Committee or panel members, liaisons, observers, and guests at the meeting must announce any potential conflict that might appear to exist (*e.g.*, institutional, professional, commercial, or familial relationships with proponents) to the committee or panel chair(s). The chair(s) will determine whether a conflict is considered significant, subject to review by the committee or panel. Any attendees who have a significant conflict with a proposal under review should leave the room during the discussion of that proposal.

Watchdogs will present and discuss their assigned proposals, panel members are invited to provide additional information and to ask questions, and the chair(s) may invite comment or solicit information from guests or observers at the meeting. The panel or committee should discuss the importance of the proposed work relative to achieving the scientific goals of the IODP, the likelihood of significant contributions or discoveries that further our scientific understanding, and the technical challenges or uncertainties that might affect the success of the proposal. They should also discuss the relationship of each proposal to any previous drilling results; however, they should avoid making comparisons to other proposals under review. The chair(s) must ensure compliance throughout the discussion.

Phase 2: SPC Proposal Evaluation, Comparison, Ranking, and Scheduling
All conflicted attendees must leave the room for the entire Phase 2. Voting alternates for conflicted committee members may remain in attendance and will be invited to attend the entire meeting. IODP national committees or consortia should have been consulted regarding how they wish to provide alternate voting representatives.

The committee defines the pool of proposals to be ranked, either by (a) consensus suggested by the chair or (b) vote on each proposal, with a two-thirds vote ensuring inclusion of a proposal in the ranking pool. A watchdog summarizes the discussion of each proposal, emphasizing its strong points and any concerns raised in the earlier discussion. The committee may now discuss the importance of the proposed science relative to other proposals under review.

Following the final discussion, the proposals are ranked from 1 to *N*, where *N* equals the number of proposals selected for ranking and 1 represents the highest rank. Each voting SPC member completes and signs a paper ballot, and the ballots are archived after the meeting in a sealed envelope. The votes are tabulated and the proposals listed in order of mean ranking, with standard deviations and complete placings indicated.

The SPC selects a subset of the ranked proposals to forward to the OPCOM for developing schedule options, then votes to select a recommended schedule from the option(s) presented by the OPCOM. If the SPC does not approve any schedule option, the OPCOM must provide further options.

The watchdogs provide written summaries of the discussions of each proposal, but the SPC cannot return any proposal to the proponents with a requirement for major revision and further review by the SSEPs.

20. Review SSEP, SSP, PPSP, SciMP, TAP, and ILP mandates
Coffin proposed requesting the SAS panels to submit their respective mandates for consideration at the March 2004 SPC meeting. Austin viewed it as an even broader issue that should include input from the national programs. He also noted the availability of input from the PEC VI report by early 2004. Moran offered that the panel chairs could begin this undertaking. Ito thought that all panel members should have an opportunity to contribute. Kato suggested that the panel chairs could get confirmation from each panel before the SPC considers their findings. Coffin identified the alternative of charging a subcommittee of the SPC to do it. Ito preferred having a working group with several liaisons from other panels. Austin suggested having the panels review their mandates by March and then decide how to proceed. The committee agreed to wait until March for input from the panels.

21. Other business
Quinn reported that the publications working group had decided to meet electronically over the next several months. Austin suggested that it would help to get input for the program plan by late October or early November.

Coffin raised a constituency recommendation on the origin of drilling proposals. Allan stated that the program could accept proposals from proponents of non-member countries, but scientists from non-member countries could not participate on an expedition unless as a guest of a program member. Kato questioned the necessity of the SPC saying anything about this matter. Moore stressed the intent of getting as many good scientific ideas as possible.

SPC Consensus 03-09-44: The SPC recommends to the SPPOC that the IODP Science Advisory Structure should evaluate, rank, and schedule drilling proposals irrespective of the nationalities of the proponents.

Coffin noted the lack of time at this meeting to discuss all of the items on the agenda and asked for suggestions on improving the meeting efficiency. He also asked if the SPC and the OPCOM needed to meet more often than twice per year or have longer meetings. Austin favored having extra meetings and stressed the particular importance of improving on strategic planning. He also suggested doing more work in advance of the meetings to help the members prepare, such as using subcommittee meetings to package information better. Moran suggested asking the SAS panels to package better what they send forward and having the SPC simply accept some of the reports as read. Masuda suggested assigning a certain time limit for each panel report and having an email list server for each panel.

Becker recalled the rationale for decreasing from three to two meetings per year as a way to focus on long-term science planning. He added that although changing back to three would provide more time, it would alter the schedule for all other panels. Moore recommended considering a third specialized meeting unrelated to panel reports and proposal review and instead focusing for example on project management. Coffin favored having a more-focused third meeting and saw it as an opportunity for providing more-strategic thinking. Ito favored having a third meeting and reiterated the concern about getting better educated on OPCOM issues. Kawahata recommended preserving the current structure as much as possible because it rests on the firm foundation of the DSDP and the ODP. Mori appreciated the need for a third meeting but worried about finding a way to schedule it. Baldauf asked about the target window for when a third meeting might occur. The committee decided to investigate the possibility of holding an extra meeting in June.

SPC Consensus 03-09-45: The SPC thanks Hokkaido University and the Advanced Earth Science and Technology Organization (AESTO) for their fine hospitality, highlighted by the celebratory banquet in the Elm Restaurant of the Enreiso Faculty Center.

Kato, Ito, and Soh left the meeting at 16:30.

22. Future meetings

22a. Liaisons to other panels and programs

Coffin explained the idea of having a set of dual liaisons from the U.S. and Japan who would share duties depending on meeting locations. He noted that it would get more complicated when Europe joins the program. He also wondered if the SPC needed more than two liaisons for the SSEPs. Allan suggested that the SPC might need only one liaison to the SSEPs since they had reorganized to meet as a single group. Camoin responded that the SSEPs would still break into at least three groups at each meeting. Coffin said that it would end up as two liaisons plus the chair. The committee assigned the following set of liaisons:

SSEPs - Tatsumi, Fisher, Kawahata, Quinn,
PPSP - Coffin, Austin,
SSP - Mori, Miller,
SciMP - Ito, Duncan,
TAP - Becker, Soh,
ILP - Moore, Kato.

22b. 2nd SPC and OPCOM meetings, March 2004

Coffin cited two possibilities for the next SPC meeting: either hosted by Becker in Miami during the first or second week of March or hosted by JOI in Washington, D.C. during the second or third week of March. Kato and Soh already had other plans for 8-12 March, Quinn could not attend during 13-16 March, and Ildefonse noted the European IODP forum scheduled for 15-17 March. The committee agreed on the dates of 22-26 March in Washington, D.C.

23. Review of motions and consensus items

Coffin explained that he and the iSAS Office staff would compile and distribute an executive summary to the committee within the next two weeks.