

IODP Science Planning Committee**10th Meeting, 27–30 August 2007****Coast Hotel, Santa Cruz, USA*****Science Planning Committee (SPC)***

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| Keir Becker (chair) | Rosenstiel School of Marine & Atmospheric Science, University of Miami, USA |
| Jan Behrmann | Leibniz Institute for Marine Sciences, IFM-GEOMAR, Germany |
| Barbara Bekins | U.S. Geological Survey, Menlo Park, USA |
| Tim Byrne | Department of Geology and Geophysics, University of Connecticut, USA |
| Gilbert Camoin | CEREGE, Centre National de la Recherche Scientifique, France |
| Steve D'Hondt | Graduate School of Oceanography, University of Rhode Island, USA |
| Gabe Filippelli | Department of Earth Sciences, Indiana University-Purdue University, Indianapolis, USA |
| Yong-Il Lee* | School of Earth and Environmental Sciences, Seoul National University, Korea |
| Qianyu Li* | Laboratory of Marine Geology, Tongji University, China |
| Ian Macgregor ^a | National Science Resources Center, Smithsonian Institution, USA |
| Chris MacLeod | Department of Earth Sciences, Cardiff University, United Kingdom |
| Katsumi Marumo | National Institute of Advanced Industrial Science and Technology, Japan |
| Harue Masuda | Department of Geosciences, Osaka City University, Japan |
| James Mori (vice-chair) | Disaster Prevention Research Institute, Kyoto University, Japan |
| Greg Mountain* | Department of Geological Sciences, Rutgers University, USA |
| Naohiko Ohkouchi | Institute for Frontier Research on Earth Evolution (IFREE), JAMSTEC, Japan |
| Heiko Pälike ^b | National Oceanography Center, Southampton, UK |
| Rolf Pedersen* | Department of Earth Science, University of Bergen, Norway |
| Terry Quinn ^c | Institute for Geophysics, University of Texas, USA |
| Carolyn Ruppel | United States Geological Survey, Woods Hole, USA |
| Hiroaki Sato | Department of Earth and Planetary Sciences, Kobe University, Japan |
| Wonn Soh ^d | Deep Sea Research Department, JAMSTEC, Japan |
| Tomochika Tokunaga* | School of Engineering, University of Tokyo, Japan |
| Hiroyuki Yamamoto | Department of Marine Ecosystem Research, JAMSTEC, Japan |

^aAlternate for Gabe Filippelli starting Wednesday, 29 August.^bAlternate for Rolf Pedersen (and SSEP liaison)^cAlternate for Greg Mountain^dAlternate for Tomochika Tokunaga

*Unable to attend.

Liaisons, Guests, and Observers

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| Jamie Allan | National Science Foundation (NSF), USA |
| Jack Baldauf | JOI Alliance, Texas A&M University, USA |
| David Divins | JOI Alliance, Joint Oceanographic Institutions, Inc. (JOI), USA |
| Bob Duncan (Hotspot DPG) | College of Ocean and Atmospheric Sciences, Oregon State University, USA |
| Nobuhisa Eguchi | IODP Management International, Inc., Sapporo Office, Japan |
| Dan Evans | ECORD Science Operator (ESO), British Geological Survey, United Kingdom |
| Peter Flemings (EDP) | Department of Geosciences, Pennsylvania State University, USA |
| Jun Fukutomi | Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan |
| Dave Goldberg | JOI Alliance, Borehole Research Group, Lamont-Doherty Earth Observatory, USA |
| Tom Janecek | IODP Management International, Inc., Washington, D.C. Office, USA |
| Barry Katz (EPSP) | Energy Technology Company, Chevron, USA |
| Hiroshi Kawamura | IODP Management International, Inc., Sapporo Office, Japan |
| Yoshihisa Kawamura | Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan |
| Hans Christian Larsen | IODP Management International, Inc., Sapporo Office, Japan |
| Catherine Mével | ECORD Managing Agency (EMA), Paris Geophysical Institute (IPGP), France |
| Greg Myers | IODP Management International, Inc., Washington, D.C. Office, USA |
| Catherine O'Riordan | U.S. Science Support Program, Joint Oceanographic Institutions, Inc. (JOI), USA |
| Toshiyuki Oshima | Ministry of Education, Culture, Sports, Science, and Technology (MEXT), Japan |
| Dale Sawyer (SSP) | Department of Earth Science, Rice University, USA |
| Manik Talwani | IODP Management International, Inc., Washington, D.C. Office, USA |
| Barry Zelt | IODP Management International, Inc., Sapporo Office, Japan |

IODP Science Planning Committee

10th Meeting, 27–30 August 2007
Coast Hotel, Santa Cruz, USA

EXECUTIVE SUMMARY (v1.2)

1.3. Approve SPC meeting agenda – highlight action items

SPC Consensus 0708-02: The SPC approves the agenda of its tenth meeting on 27–30 August 2007 in Santa Cruz, USA.

1.4. Approve last SPC meeting minutes

SPC Consensus 0708-03: The SPC approves the minutes of its ninth meeting on 4-7 March 2007 in Osaka, Japan.

1.5. Items approved since March 2007 meeting

SPC Motion 0706-01: The SPC recognizes the scientific relevance of the two 603-Add2 proposed contingency sites to the NanTroSEIZE program splay-fault drilling objectives. The SPC therefore approves the addition of these sites as contingency options for NanTroSEIZE Stage 1 operations, should time remain available after operations at the primary Stage 1 sites.

Becker moved, Camoin seconded, 16 in favor, 1 absent (Macgregor), none opposed, 3 non-voting (Behrmann, Lee, Zhou).

SPC Motion 0707-01: The SPC appoints Heiko Pälike as a new co-chair of the Science Steering and Evaluation Panel (SSEP), effective immediately.

Masuda moved, Sato seconded, 16 in favor, none opposed, none abstained, 3 non-voting (Lee, Li, Pedersen), 1 absent (D'Hondt).

SPC Motion 0708-01: Proposal 545-Full3 (Juan de Fuca Flank Hydrogeology) will be excluded from the review of proposals residing with the Operations Task Force (OTF) to be conducted at the August 2007 SPC meeting.

Byrne moved, Tokunaga seconded; 13 in favor, 2 opposed (Bekins, Behrmann), 1 abstained (D'Hondt), 1 absent (MacLeod or Pedersen), 3 non-voting (Lee, Li and Pedersen or MacLeod).

5. OTF Report: IODP expedition scheduling I

5.2. SPC discussion and potential approval

SPC Consensus 0708-04: The SPC approves the FY2008 and early FY2009 recommended scheduling options presented in the Operations Task Force (OTF) report. Recommended expeditions for the *JOIDES Resolution* will begin in May 2008 and proceed as follows:

- Pacific Equatorial Age Transect II (Proposal 626-Full2)
- Bering Sea Plio-Pleistocene (Proposal 477-Full4)
- Pacific Equatorial Age Transect I (Proposal 626-Full2)
- Canterbury Basin (Proposal 600-Full)
- Wilkes Land Margin (Proposal 482-Full3)

Recommended expeditions for *Chikyu* will begin in late September 2007 and proceed as follows:

- NanTroSEIZE LWD
- NanTroSEIZE site NT2-3 riser pilot hole

- NanTroSEIZE sites NT1-3 and NT2-1 (ending in February 2008)
- NanTroSEIZE sites NT3-1, NT1-7, NT1-1 (starting in early October 2008)
- NanTroSEIZE NT2-3 riser drilling

All NanTroSEIZE expeditions are related to proposal 603-CDP3 and component proposals. Inspection and maintenance and non-IODP work is planned for February through September 2008.

MSP operations in FY2008 are expected to be New Jersey Shallow Shelf (Proposal 564-Full2). A possibility remains for Great Barrier Reef (519-Full2) operations starting in late FY2008 and spanning the FY2008/2009 transition.

7. SPC review of OTF proposals I

7.2. 621-Full Monterey – status after OTF + SASEC

SPC Consensus 0708-05: In response to SASEC Consensus 0706-10 and the request from the June 2007 Operations Task Force (OTF) meeting, it is clear to the SPC that it is not realistic to consider scheduling the Monterey Bay test borehole facility under the current IODP budget situation and given the issues and complexities associated with the required environmental impact assessment. Therefore the SPC has no choice but to deactivate Proposal 621-Full Monterey Bay Observatory.

8. SAS panel reports

8.4. Scientific Technology Panel (STP)

SPC Consensus 0708-06: The SPC accepts STP Recommendation 0708-02 on a revised IODP Measurements Document, in particular version “Rev-3” in which (1) DNA, biomarker, and Phospholipid microbiological analysis, and (2) microbial activity measurements using radiotracers are listed as supplemental microbiology measurements.

SPC Consensus 0708-07: The SPC receives STP Recommendation 0708-04 on including microbiology legacy samples as a part of any IODP sampling plan and tentatively approves the recommendation subject to an investigation of costs by IODP-MI and the Implementing Organizations. Collection and storage procedures should take into account the guidelines suggested in the IODP Microbiology Working Group report (2003), but updated as appropriate to account for environmental variation and post-2003 refinements of microbiological sampling practices.

SPC Consensus 0708-08: The SPC accepts STP Recommendation 0708-05 on integrating microbiological sampling into expedition sampling plans.

SPC Consensus 0708-09: The SPC receives STP Consensus 0708-09 concerning the final report of the Science Advisory Structure Executive Committee (SASEC) SAS review working group. The SPC notes that the possibility of combining STP and EDP, if warranted by further IODP budget shortfalls, has not actually been formally proposed.

SPC Consensus 0708-10: The SPC receives STP Consensus 0708-10 concerning internet access during STP and other SAS meetings. The SPC notes that the decision to allow or disallow access to internet during SAS meetings resides with each SAS panel and committee.

SPC Consensus 0708-11: The SPC receives STP Consensus 0708-11 on time stamps for measurements and procedures, and forwards it to IODP-MI noting that the key aspects are incorporated in the QA/QC report (draft 1).

SPC Consensus 0708-12: The SPC receives STP Consensus 0708-13 concerning post-expedition data capture, forwards this request to IODP-MI and suggests that IODP-MI provides an update on inclusion of post-expedition generated results at the February 2008 STP meeting.

8.5. Engineering Development Panel EDP

SPC Consensus 0708-13: The SPC accepts the recommended changes to the terms of reference of the Engineering Development Panel (EDP) concerning attendance of an EDP liaison at Science Steering and Evaluation Panel (SSEP) meetings, as presented in EDP Consensus 0707-03.

8.6. Industry-IODP Science Program Planning Group (IIS PPG)

SPC Consensus 0708-14: The SPC commends the Industry-IODP Science Program Planning Group (IIS PPG) for its efforts in developing IODP-industry collaborations, both within and outside of the program. The SPC receives IIS PPG Consensus 0707-01 and Consensus 0707-03 and forwards them to IODP-MI and the Implementing Organizations with SPC encouragement to further develop industry collaborations as described in those consensus statements.

SPC Consensus 0708-15: The SPC receives IIS PPG Consensus 0707-05 regarding travel support for Industry-IODP Science Program Planning Group (IIS PPG) members and forwards their concern to the Program Member Offices (PMOs), which are responsible for providing travel support.

SPC Consensus 0708-16: The SPC appoints Andrew Bell as a new member of the Industry-IODP Science Program Planning Group (IIS PPG), replacing resigned member Neil Frewin, effective immediately.

8.7. Hotspot Geodynamics Detailed Planning Group (DPG) report

SPC Consensus 0708-17: The SPC accepts the final report of the Hotspot Geodynamics Detailed Planning Group (DPG), and commends Bob Duncan for his role as chairman, and the DPG for achieving results quickly with only one meeting.

10. FY2009/2010 engineering development I – EDP recommendations

SPC Consensus 0708-18: The SPC endorses the FY2009 engineering development plan including development of borehole measurement tools, and specifically a phased approach (starting with high level system design) for the development of the SCIMPI (Simple Cabled Instrument for Measuring Parameters In-situ) and S-CORK (Sediment-CORK) tools.

11. SPC review of OTF proposals II – categorization of proposals

SPC Motion 0708-19: The SPC leaves proposal 505-Full5 (Mariana Convergent Margin) as a coring program only (without CORKs) as a Group 1 proposal at the Operations Task Force (OTF).

Mori moved, Bekins seconded; 16 in favor, none opposed, 1 abstained (Quinn).

The following motion did not receive the required affirmative vote of at least two-thirds of all members present and eligible to vote; hence proposal 633-Full2 was not considered in subsequent scheduling options by the Operations Task Force during its 29 August 2007 meeting.

SPC Motion 0708-20: The SPC leaves proposal 633-Full2 (Costa Rica Mud Mounds) as a coring program only (without CORKs) at the Operations Task Force (OTF) as Group 2 for FY2009/2010 scheduling.

Behrmann moved, MacLeod seconded; 9 in favor, 6 opposed, 2 abstained (Quinn, MacLeod).

SPC Consensus 0708-21: In addition to any new proposals forwarded by the SSEP for SPC review and ranking at its March 2008 meeting, the SPC will review and rank those proposals that were previously forwarded to the Operations Task Force (OTF) with the exception of those that were identified at this meeting as clear Group/Tier 1 proposals or those that might appear in the FY2009/2010 schedule options to be approved by the SPC after further OTF schedule development this fall.

12. Complementary Project Proposals

SPC Consensus 0708-22: The SPC accepts the concept of Complementary Project Proposals for hybrid IODP projects with substantial external funding as an IODP planning mechanism, and assigns a working group (Ruppel, Camoin, Mori) to examine the evaluation process for such proposals.

17. SPC recommendations regarding Scientific Technology Panel (STP) service reduction options

SPC Consensus 0708-23: The SPC receives STP Recommendation 0708-01 on IODP budget reduction models and encourages IODP-MI to work with the Implementing Organizations (IOs) and with the Scientific Technology Panel (STP) in developing a recommended model.

SPC Consensus 0708-24: The SPC supports the recommendation by the Scientific Technology Panel (STP) in the background to STP Recommendation 0708-01 that the expedition science party not be reduced in size.

19. Mission proposal review II – SPC recommendations

SPC Consensus 0708-25: The SPC does not designate proposal 720-MP (Birth of Oceans Mission) as an IODP mission. The SPC reaffirms the importance of the Initial Science Plan (ISP) goals related to continental rifting and the initiation of seafloor spreading and encourages the proponents of the individual proposals that were included in 720-MP to pursue appropriate projects through the normal SAS framework.

SPC Consensus 0708-26: The SPC does not designate proposal 713-MP (Mission Monsoon) as an IODP mission. However, the SPC concluded that the deep drilling objectives of four proposals, 552-Full3 (Bengal Fan), 595-Full3 (Murray Ridge), 618-Full3 (East Asia Margin) and 683-Full (East Asia Topography and Monsoon), could benefit from detailed scoping at this stage (see SPC Motion 0708-27 and SPC Consensus 0708-28).

SPC Motion 0708-27: A Detailed Planning Group (DPG) should be formed as requested in SSEP Recommendation 0705-4 to prioritize components of proposal 713-MP (Mission Monsoon), in particular proposals 552-Full3 (Bengal Fan), 595-Full3 (Murray Ridge), 618-Full3 (East Asia Margin) and 683-Full (East Asia Topography and Monsoon), with terms of reference to be written after the August 2007 SPC meeting by a subgroup of the SPC and

approval by e-mail. The DPG should: (1) have a timeline of 1 year; (2) be chaired by a non-proponent; (3) prioritize the drilling programs; (4) address technical issues; (5) include an outreach and education plan; and (6) include a modeling component to help prioritize sites.

Quinn moved, Camoin seconded; 17 in favor, none opposed.

SPC Consensus 0708-28: The SPC accepts the draft mandate for the Asian Monsoon detailed planning group (DPG) as presented by SSEP co-chair/SPC alternate Heiko Pälike. The SPC approves Steve Clemens and Jerry Dickens as candidate chairpersons for the DPG. The SPC also approves Peter Clift, Douglas Burbank, Christian France-Lanord, Hongbo Zheng, Ryuji Tada, Peter Molnar, Karen Bice, Brian Horton, Matt Huber, John Kutzback and Sidney Hemming as candidate members, and Naohiko Ohkouchi as SPC liaison.

The following motion did not receive the required affirmative vote of at least two-thirds of all members present and eligible to vote; hence proposal 719-MP was not designated as an IODP mission.

SPC Motion 0708-29: The SPC designates proposal 719-MP (Mission Moho) as an IODP mission.

Mori moved, Macgregor seconded; 7 in favor (Becker, Macgregor, Marumo, Masuda, Mori, Ohkouchi, Sato), 8 opposed (Behrmann, Bekins, Byrne, Camoin, D'Hondt, Pälike, Quinn, Ruppel), 2 abstained (Yamamoto, Soh).

SPC Consensus 0708-30: The SPC requests that the Engineering Development Panel (EDP) work with IODP-MI and the Implementing Organizations (IOs) to assess the technological needs required to achieve the deep penetrations required for a Mohole.

20. IODP FY2009/2010 scheduling II – SPC recommendations

SPC Consensus 0708-31: The SPC approves the FY2009 recommended scheduling options developed at the 29 August 2007 meeting of the Operations Task Force. Recommended FY2009 expeditions are:

JOIDES Resolution:

- Pacific Equatorial Age Transect I (Proposal 626-Full2) spanning the FY2008/2009 transition
- Canterbury Basin (Proposal 600-Full)
- Wilkes Land Margin (Proposal 482-Full3)
- Mariana Convergent Margin (Proposal 505-Full5 coring only) and South Chamorro Seamount CORK (Proposal 693-APL)
- Non-IODP work beginning mid-May 2009

Chikyu:

- NanTroSEIZE sites NT3-1, NT1-7, NT1-1
- NanTroSEIZE riser program
- Non-IODP work and Asian Monsoon (Proposal 605-Full2)
- NanTroSEIZE riser and observatory program (beginning 1 Sept. 2009)

MSP:

Great Barrier Reef (Proposal 519-Full2) beginning Sept. 2009

SPC Consensus 0708-32: The SPC affirms that the *Chikyu* FY2010 riser program should be at site NT3-01.

SPC Consensus 0708-33: The SPC approves the Atlantic Ocean as the top priority ocean basin for FY2010 *JOIDES Resolution* operations, with Mid-Atlantic Ridge Microbiology (proposal 677-Full) as the top priority Tier 1 program.

SPC Consensus 0708-34: The March 2007 SPC rankings should guide expedition priorities for Tier 2 FY2010 *JOIDES Resolution* operations in the Atlantic Ocean, i.e., priorities are (1) 659-Full (Newfoundland Rifted Margin); (2) 644-Full2 (Mediterranean Outflow); and (3) 661-Full2 (Newfoundland Sediment Drifts).

SPC Consensus 0708-35: Should FY2010 *JOIDES Resolution* operations in the Indian Ocean become necessary, the SPC priorities for expeditions are: (1) 595-Full3 (Murray Ridge); (2) 549-Full6 (Northern Arabian Sea Monsoon); and (3) 552-Full3 (Bengal Fan).

SPC Consensus 0708-36: Juan de Fuca Flank Hydrogeology Part 2 (Proposal 545-Full3) is the Tier 1 choice for FY2010 *JOIDES Resolution* operations in the Pacific Ocean; Superfast Spreading Crust (Proposal 522-Full5) is the top-ranked Tier 2 choice.

21. Potential Complex Drilling Project (CDP) designations

SPC Consensus 0708-37: The SPC designates proposal 707-Full2 (Sagami Bay Seismic Monitoring) as a Complex Drilling Project (CDP) incorporating component proposals 722-Full (Sagami Bay Tectonics and Paleoseismology) and 723-Full (Sagami Bay Kanto Asperity Network).

The following motion did not receive the required affirmative vote of at least two-thirds of all members present and eligible to vote; hence proposal 694-Full3, and other related Izu-Bonin-Mariana proposals mentioned below are not designated as a Complex Drilling Project (CDP).

SPC Motion 0708-38: The SPC designates proposal 694-Full3 (Izu-Bonin-Mariana Arc Evolution) as a Complex Drilling Project (CDP) incorporating component proposals 695-Full (Izu-Bonin-Mariana Pre-Arc Crust), 696-Pre (Izu-Bonin-Mariana Deep Forearc Crust), 697-Full (Izu-Bonin-Mariana Reararc Crust) and 698-Full (Izu-Bonin-Mariana Arc Middle Crust).

Byrne moved, Mori seconded; 10 in favor, 4 opposed (Behrmann, MacLeod, Quinn, Ruppel), 3 abstained (Soh, Masuda, Ohkouchi).

22. Review of 712-APL (Sediment-CORK Trial Installation)

SPC Consensus 0708-39: In accordance with SPC Consensus 0708-18, the SPC defers forwarding proposal 712-APL (Sediment-CORK Trial Installation) to the Operations Task Force (OTF) because the S-CORK tool is still under development.

25. Review of motions and consensus items

SPC Consensus 0708-40: The SPC thanks Tim Byrne for his dedicated service on the committee, and designates him as a **CDP** – a person who is **Committed, Dedicated, and Passionate** for IODP science.

SPC Consensus 0708-41: The SPC thanks Chris MacLeod for his insightful and dedicated work as a member of this committee. As a marine geologist who studies the development and evolution of the oceanic crust, he has made invaluable contributions to the committee and to the IODP in general through his well thought through actions and contributions that often anticipated unintended consequences. We are sorry that Chris leaves the SPC in the wake of

Missions. Chris' high standards, professionalism, and dedication to all scientific drilling throughout his career serve as a model for all members of the advisory panels. However, we are certain that he will stay active in the IODP community and continuously promote IODP science with his tremendous energy.

SPC Consensus 0708-42: As the only microbiologist among the SPC members, Dr. H. Yamamoto has enlightened the committee on the importance of biological aspects of deep ocean drilling. We will succeed his ideas, and continue collaboration between bio- and geo-sciences.

SPC Consensus 0708-43: The SPC thanks Barbara Bekins for her hard work, dedication, and attention to detail during the initial years of IODP and her term on SPC. Barbara's leadership on marine hydrogeology and observatories and her recognition of IODP mandates related to outreach and societal relevance have provided important direction in shaping SPC decisions. We wish her well in her post-SPC endeavors and hope to see her back in the IODP community soon in some other role.

SPC Consensus 0708-44: Traditionally addressing Nobu Eguchi as either Nobu-san or Eguchi-san, the SPC at Nobu's last meeting as science coordinator uniquely name him, eternally, "Eguchi-SAS" (or Nobu-SAS). Nobu-SAS has served as science coordinator during the ODP-IODP interim phase and through the entire IODP Phase I before finally surrendering to CDEX. His responsiveness, sense of humor, distinct and cross cultural socializing skills (in lieu of saying, excesses) will be sorely missed by the SAS but are, however, not lost for the program. We wish him all the best at CDEX and look forward to his continued engagement in IODP.

SPC Consensus 0708-45: The SPC thanks Barbara Bekins and JOI-USSSP for hosting its 10th meeting in the beautiful beachside location in Santa Cruz, and for a lovely evening reception at Natural Bridges Park. Some of us also thank Barbara and Ivanno Aiello for the geological field trip... even if we didn't make the last stop at the winery.

SPC Consensus 0708-46: The SPC thanks Keir Becker for his outstanding contribution to IODP in his role as chairperson of the committee. The committee affirms Keir's Guiding Principles:

- Have patience with your colleagues
- Do your homework
- Have more patience with your colleagues
- Build a consensus
- Use all of your energy, all of your talents and all of your intellect to have even more patience with your colleagues
- Thank your colleagues

IODP Science Planning Committee

10th Meeting, 27–30 August 2007
Coast Hotel, Santa Cruz, USA

FINAL MINUTES (v1.1)

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| Monday | 27 August 2007 | 09:00-17:30 |
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1. Introduction

1.1. Call to order and self-introductions

Keir Becker called the meeting to order at 08:30. All meeting participants introduced themselves.

1.2. Welcome and meeting logistics

Meeting host Barbara Bekins welcomed everyone to Santa Cruz and explained the meeting logistics.

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

Keir Becker reviewed the meeting agenda and noted that it included approximately double the normal number of major items for a summer SPC meeting. He listed some of the key action items for the meeting, including: (1) re-evaluation of several proposals residing with the Operations Task Force (OTF); (2) approval of FY2009 and FY2010 schedules; (3) providing SPC input to the Science Advisory Structure (SAS) Executive Committee (SASEC) on prioritization of the IODP Initial Science Plan (ISP) initiatives through 2013; (4) first ever review of (three) mission proposals; (5) providing SPC input to IODP Management International (IODP-MI) on the Scientific Technology Panel's (STP) evaluation of Implementing Organization (IO) budget reduction service models; (6) prioritization of FY2009/2010 engineering development projects; (7) decision on designation of complex drilling program (CDP) status for two sets of proposals; and (8) decision on adoption of the complementary project proposal (CPP) planning mechanism. Becker noted that for most of the important agenda items there would be two sessions: the first for information and definition of issues; the second for discussion and decisions. He also noted that because an OTF meeting to develop FY2009/2010 scheduling options would take place on Wednesday (29 August), agenda item 15 would be moved to Thursday. Becker asked for other changes or additions to the agenda. Without further comment, the committee approved the agenda by consensus.

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| SPC Consensus 0708-02: The SPC approves the agenda of its tenth meeting on 27–30 August 2007 in Santa Cruz, USA. |
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1.4. Approve last SPC meeting minutes

Keir Becker asked for comments or suggested changes to the draft minutes for the ninth SPC meeting (March 2007; Osaka). With no additional comments, the committee approved the revised minutes by consensus.

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| SPC Consensus 0708-03: The SPC approves the minutes of its ninth meeting on 4-7 March 2007 in Osaka, Japan. |
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1.5. Items approved since March 2007 SPC meeting

Keir Becker noted that the committee had decided three items prior to the August meeting by email vote: (1) approval of additional NanTroSEIZE contingency sites for Stage 1 operations;

(2) approval of Heiko Pälke as a new Science Steering and Evaluation Panel (SSEP) co-chair; and (3) agreement to exclude the second Juan de Fuca expedition from the re-evaluation of OTF proposals at this meeting, thus leaving it at the OTF as a high priority proposal.

NanTroSEIZE contingency sites (June 2007)

SPC Motion 0706-01: The SPC recognizes the scientific relevance of the two 603-Add2 proposed contingency sites to the NanTroSEIZE program splay-fault drilling objectives. The SPC therefore approves the addition of these sites as contingency options for NanTroSEIZE Stage 1 operations, should time remain available after operations at the primary Stage 1 sites.

Becker moved, Camoin seconded, 16 in favor, 1 absent (Macgregor), none opposed, 3 non-voting (Behrmann, Lee, Zhou).

Approval of new Science Steering and Evaluation panel (SSEP) co-chair (July 2007)

SPC Motion 0707-01: The SPC appoints Heiko Pälke as a new co-chair of the Science Steering and Evaluation Panel (SSEP), effective immediately.

Masuda moved, Sato seconded, 16 in favor, none opposed, none abstained, 3 non-voting (Lee, Li, Pedersen), 1 absent (D'Hondt).

Excluding Juan de Fuca second expedition from review at August SPC meeting (August 2007)

SPC Motion 0708-01: Proposal 545-Full3 will be excluded from the review of proposals residing with the Operations Task Force (OTF) to be conducted at the August 2007 SPC meeting.

Byrne moved, Tokunaga seconded; 13 in favor, 2 opposed (Bekins, Behrmann), 1 abstained (D'Hondt), 1 absent (MacLeod or Pedersen), 3 non-voting (Lee, Li and Pedersen or MacLeod).

Background to SPC Motion 0708-01:

NanTroSEIZE proposals and the Great Barrier component of proposal 519-Full2 are being excluded from the SPC review of OTF proposals because they appear on OTF recommended schedules for FY2009/2010 even after the adjustments required to FY2008 schedules. However, the other major program deferred in the FY2008 schedule adjustments -the second Juan de Fuca Hydrogeology expedition (proposal 545-Full3) -does not appear in the OTF recommended schedules for FY2009/2010, primarily because of costs and the IODP budget uncertainties. On the other hand, the FY2008 schedule still includes a programmatic commitment in FY2008 to that expedition, in terms of the remedial cementing that is now scheduled at the end of the second Equatorial Pacific SODV expedition, to seal the Expedition 301 CORKs and set the stage for a return Juan de Fuca expedition.

1.6. SPC procedures and protocol

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

Keir Becker referred to the SPC's terms of reference and noted that an SPC decision requires either a consensus or 2/3 affirmative vote on a motion. He also pointed out that a quorum comprised 2/3 of the voting membership. Becker mentioned that the SPC occasionally uses straw votes, which are unofficial and generally do not appear in the minutes (unless specifically requested by the chairperson). Becker described how the meeting would be conducted, explained that SPC meetings are conducted according to Robert's Rules of Order, and listed some of the salient points from this set of rules. Because the concept of consensus is not defined in Robert's Rules of Order, Becker defined the meaning of consensus for the SPC meeting.

1.6.2. Conflict-of-interest policy and statements

Keir Becker reviewed the conflict-of-interest procedures for the meeting. He noted that the meeting participants should declare all potential conflicts now, including institutional, although in the past the committee had not generally regarded institutional conflicts as real conflicts. The committee members and other meeting participants declared the following direct or potential indirect conflicts of interest regarding the proposals to be reviewed and proposals remaining at the OTF for scheduling; the chair's ruling follows each members declaration(s).

SPC member conflicts:

| Name | Declaration | Ruling by Becker |
|-------------|--|--|
| Yamamoto | Institutional: JAMSTEC proponents on several proposals | No conflict |
| Camoin | Proponent: 519-Full2 (Great Barrier Reef) | Conflict: 1,7 |
| Ohkouchi | Institutional: JAMSTEC proponents on several proposals | No conflict |
| Quinn | Participant of Expedition 310 (linked to Great Barrier Reef); Institutional conflict with proponents of 548-Full2 (Chicxulub) | No conflict |
| Byrne | 1: Paid consultant for the Kochi Core Center; 2: Co-chief scientist for NanTroSEIZE stage 2 operations, and scientist on stage 1 operations (Expedition 315) | 1: No conflict*; 2: Conflict: 1 |
| MacLeod | 1: Proponent of 719-MP (Mission Moho); 2: Chief scientist for site survey cruise related to 551-Full (Hess Deep) | 1: Conflict: 2; 2: No conflict |
| Becker | 1: Proponent of 712-APL (Sediment-CORK); 2: Proponent of an engineering development proposal | 1: Conflict: 3 2: Conflict: 4 |
| Behrmann | Participant in Expedition 315 (NanTroSEIZE) | No conflict |
| Ruppel | 1: Institutional: MIT/USGS; 2: Potential conflict on complementary project proposal discussion | 1: No conflict 2: No conflict |
| D'Hondt | 1: Proponent of 545-Full3 (Juan de Fuca Flank Hydrogeology); 2: Proponent of 677-Full (Mid -Atlantic Ridge Microbiology); 3: Institutional: colleague is an engineering development proposal proponent | 1: Conflict: 1; 2: Conflict 5 3: No conflict |
| Bekins | 1: Institutional: USGS; 2: Proponent of 621-Full (Monterey Bay Observatory) | 1: No conflict 2: Conflict 6 |
| Pälike | 1: Proponent of 661-Full2 (Newfoundland Sediment Drifts); 2: Co-chief for Equatorial Pacific Expedition | 1: Conflict 7 2: Conflict: 1 |
| Soh | 1: Director of Kochi Core Center; 2: Proponent of 603-CDP3, 603A-Full2 (NanTroSEIZE) | 1: No conflict; 2: Conflict: 1 |

Observer and liaison conflicts:

| Name | Declaration | Ruling by Becker |
|-------------|--|-------------------------|
| Sawyer | 1: Proponent of 720-MP (Birth of Oceans Mission) | 1: Conflict: 2 |

| | | |
|----------|---|---|
| | 2: 659-Full (Newfoundland Rifted Margin); 3: Logging scientist on Expedition 314 (NanTroSEIZE) | 2: Conflict 7 3: No conflict |
| Flemings | Proponent of an engineering development proposal | Conflict 4 |

Conflicts:

- 1: Conflicted for discussions of FY2008/2009 scheduling.
- 2: Conflicted for reviews of mission proposals.
- 3: Conflicted for review of 712-APL.
- 4: Conflicted for discussions of FY2009/2010 engineering developments.
- 5: Conflicted for review of OTF proposals with observatory components.
- 6: Conflicted for discussion of 621-Full.
- 7: Conflicted for discussions of FY2009/2010 scheduling.

Notes:

* Becker noted that no employee of an implementing organization (IO) can be a member of a SAS committee. Byrne answered that he had received only a few days pay for his work as a consultant to the Kochi Core Center. Mori indicated that he did not see this as a major problem. Becker ruled that Byrne was not conflicted.

2. Agency reports**2.1. Japan Ministry of Education, Culture, Sports, Science, and Technology (MEXT)**

Toshiyuki Oshima noted two updates with respect to the MEXT report in the agenda book. The Japanese Prime Minister appointed new cabinet members on 27 August; Mr. Bunmei Ibuki was reappointed as the Minister of Education, Culture, Sports, Science, and Technology. *Chikyu* has finished its overseas shakedown cruises and will be ready from mid-September 2007 for the first NanTroSEIZE expedition. He also noted that JAMSTEC had explained the significance of NanTroSEIZE to the Japanese media in early August, and that a welcome ceremony for *Chikyu* would take place 16 September in Shingu Port in Wakayama Prefecture. Oshima also noted that *Chikyu* would sail to the first NanTroSEIZE drilling site on 21 September.

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

Jamie Allan thanked the NSF's partners in the IODP, particularly MEXT, EMA and ECORD for helping to support the program in the past year when the NSF could not achieve its hoped-for level of support. Allan noted that this support emphasizes the quality of leadership of the NSF's partners.

Allan thanked the SAS and stated that he was appreciative for all that the SAS was doing in response to the financial challenges faced by the program, and in particular for sharpening the focus of the goals in the Initial Science Plan (ISP). He mentioned that the challenges would require a transformation in the way the program conducts its business; for example, the program will need to be more flexible. He noted that ideas to address this would be presented later in this meeting and suggested that everyone should be receptive to these ideas.

Allan described the past year at the NSF as a "wild ride". He stated that \$65M funding for FY2008 now appears to be quite firm and will be the base (with increases for inflation only) for subsequent years. He noted that NSF/ODP is committed to running a balanced program, one which includes the United States Science Support Program (USSSP) and a grants program, and provides seeds for future intellectual growth within the program. Allan mused on what the program will be able to do with \$65M (plus increases for inflation), and suggested that services on board could be pared back to ODP levels or lower. He noted that the \$65M funding level was not enough to afford the day rate for the *JOIDES Resolution* even if it was to be docked for the entire year. Referring to refurbishment of the *JOIDES*

Resolution, Allan explained that funding is insufficient to accomplish the proposed work, and that the extra cost would be borne by the ship's owner, with the additional costs folded into the day rate charged to the program. Because of this, the program cannot afford to run the ship full time and the NSF would have to withdraw the ship from the program for three to four months per year. He pointed that it was unknown whether the three to four months would be continuous or distributed over a longer period and interspersed between periods of program usage; the NSF was exploring possibilities. Allan noted that the NSF has given draft memos to IODP-MI and the United States Implementing Organization (USIO) detailing the responsibilities associated with the *JOIDES Resolution*. He mentioned that the NSF was preparing a second memo concerning the usage of the USIO equipment on board the *JOIDES Resolution*. Allan remarked that he had just returned from the shipyard in Singapore where refurbishment work on the *JOIDES Resolution* is being undertaken. He stated that this is a difficult time to do any work in shipyards and reported that the availability of the *JOIDES Resolution* would be further delayed, and deferred to the USIO report for details.

Allan concluded by providing a few personnel updates. Mark Abbott would *not* be coming to the NSF as Assistant Director of Geosciences. Debbie Smith (WHOI) would come to NSF/ODP as a rotator to help oversee the USSSP. Kevin Johnson, who oversaw the grants program, will be leaving the NSF. Kevin Mandernack (Colorado School of Mines) would start at the NSF in January.

Becker, seeking clarification, asked if “withdrawing from the program for three to four months” implied that the SAS would have nothing to do with the *JOIDES Resolution* during those months. Allan stated that this was so. Allan declared that whether the ship was in the program or not was a “black and white line”; however, he noted that on either side were “many shades of grey”. He explained that when the ship was not within the program the NSF had control only of the NSF-owned equipment on board.

2.3. ECORD Managing Agency (EMA)

Catherine Mével provided additional EMA news that was not included in the agenda book report. She reported that the funding of the European Consortium for Ocean Research Drilling (ECORD) was not finalized, but that there was good news from Canada: IODP Canada's funding proposal to the Natural Sciences and Engineering Research Council (NSERC) had passed the first step, so the outlook for an increased contribution to ECORD funding from Canada looked favorable. Mével reported that ECORD would be able to increase its contribution to the program's science operating costs (SOCs). She stated that ECORD prefers to have one expedition every two years, and would not be able to afford expeditions that require funds from more than two years. She also reported that ECORD would not receive money from the European Commission in 2008, but noted that it was possible that funds could be received for 2009. Mével mentioned that a proposal to support the preparatory phase of the Aurora Borealis, an ice-capable drillship, had been funded. She stated that ECORD wants to develop more ties with the International Continental Scientific Drilling Program (ICDP), and noted that some ECORD countries are members of the ICDP, and some are not. She mentioned that ECORD was considering joining the ICDP as a consortium, but that there are complications because Germany is a major member of the ICDP. Mével concluded by noting that the ECORD Science Support and Advisory Committee (ESSAC) office would move to Aix-en-Provence, France starting 1 October 2007, with Gilbert Camoin as the new ESSAC chair, and Bonnie Wolff-Boenisch (formerly with ICDP) as the new ESSAC science coordinator.

2.4. China Ministry of Science and Technology (MOST)

MOST did not send a representative to the SPC meeting.

2.5 Korea Institute of Geoscience and Mineral Resources (KIGAM)

KIGAM did not send a representative to the SPC meeting.

3. Implementing Organization (IO) reports

3.1. Center for Deep Earth Exploration (CDEX)

Yoshihisa Kawamura presented supplemental information not included in the CDEX report in the agenda book. He presented a summary of *Chikyu* overseas drilling shakedown (ODS) cruises, which included operations offshore of Kenya, the northwest shelf of Australia, and offshore Japan. Kawamura summarized recent technical achievements including an upgrade of the dynamic positioning system (DPS), and reported that three riser holes had been drilled in water depths of 500–2200m, with maximum penetrations of 3700m; in riserless mode holes had been drilled to 3200m. He noted that some deviated/directional drilling had been accomplished, and that the average sea current during drilling was 2.5kt.

Kawamura reported on damage to three of six riser tensioners. He noted that the cause was still under investigation so that riser operations were now suspended, and the tensioners had been removed and shipped to Germany for repair and investigation. He also mentioned that *Chikyu* would return to Japan on 28 August.

Kawamura summarized the NanTroSEIZE/*Chikyu* expedition plan for FY2007. He reported that the Stage 1 science party members were now fixed, the sample request window had recently closed (15 July–24 August), and sample request evaluation would be complete by 15 September.

3.2. U.S. Implementing Organization (USIO)

David Divins gave an update on the status of the *JOIDES Resolution*. He noted that NSF-Major Research Equipment and Facilities Construction (MREFC) funding (over 3 years) for refurbishment of the ship was fixed at \$115M. Overseas Drilling Limited (ODL), which provides the *JOIDES Resolution*, has reinvested \$15M in some vessel improvements for an increase in day rate of the improved vessel.

Divins reviewed the schedule for modifications to the *JOIDES Resolution*, and noted that vessel commissioning would likely occur sometime between the end of February and the end of March 2008, with IODP operations beginning 30–60 days later. He presented a slideshow showing the *JOIDES Resolution* in various stages of refurbishment, and highlighted a web site with a virtual tour of the ship: <http://iodp.tamu.edu/labs/ship.html>.

Discussing the new reality forced by budget shortfalls, he projected that funding would allow for eight months of IODP operation per year, with the remainder allocated to non-IODP operations. He stressed the need for flexibility in scheduling of expeditions. Divins reported that for FY2009 NSF guidance suggests flat to at most a modest increase in funding above the FY2008 level of \$51M for platform operating costs (POCs). He pointed out that the USIO was allowed to reduce operations to ~70% with respect to year-round operations (i.e., about four expeditions per year). He outlined major operational constraints, including increasing program costs due to higher ship rates, fuel costs, etc. In addition, he stressed that 30% of the ship time would be considered “non-IODP”, and that this needs to be factored into the planning, scheduling and all other aspects of the IODP. Divins defined non-IODP work as using the *JOIDES Resolution* for work outside the USIO’s NSF-IODP contract. He noted that planning for finding, negotiating, and scheduling such work was being initiated by the USIO. He listed possible types of “off-contract” activities: (1) interagency projects; (2) pure industry work; (3) technology development (e.g., using the ship as a test bed); and (4) industrial – science collaborations. Divins stressed that non-IODP work will require that expedition

planning by the USIO and IODP-MI will have to become more flexible, coordinated, and have clearly defined priorities.

Requesting clarification, Ruppel asked that if the ship does not get work for four months it would cost the program money. Divins responded that this was so, and that the program cannot afford to tie the ship up to dock for four months. The USIO would have to cut back on staff and service. Pălike inquired when the increased day rate, implemented to account for ODL's investment of \$15M, would end. Divins explained that the increased rate would end in 2013, but until then, the day rate would increase over time. Filippelli wondered if there had been any thought about where the *JOIDES Resolution* will end up when it goes off contract. Divins responded that for the sake of efficiency the scheduling of off-contract work would have to be coordinated with the IODP. Byrne asked if will be possible to maintain a quality science program. Divins opined that budget was the driving force, and quoted projected running costs of \$37M (\$40M after adding in logging contract costs) for FY2009, noting that that it was not possible to reduce the quality of science enough to make a difference with respect to the budget. Jamie Allan reiterated various possibilities for non-IODP work including on-contract work with NSF/IODP that would be covered by the complementary project proposal concept (see agenda item 12).

3.3. ECORD Science Operator (ESO)

Before describing ESO activities, Dan Evans presented a tribute to Tim Brewer, manager of the European Petrophysics Consortium (EPC), who tragically passed away on 14 July 2007. Evans stressed that everyone at ESO would miss Tim's experience, expertise, humor and friendship. He noted that Mike Lovell will manage the EPC in the short term until a long-term arrangement is made.

Returning to ESO activities, Evans reported that in late June 2007 the ESO decided not to carry out Expedition 313 (New Jersey Shallow Shelf – Proposal 564-Full2) in 2007. He noted that the preferred contractor, DOSSEC, have issued another request for proposals (RFP) to potential platform owners to provide a platform with a defined start time of early May 2008; however, Evans pointed out that this may not be possible or could be prohibitively expensive.

Evans reported that the ESO has submitted a FY2008 Program Plan that includes implementing Great Barrier Reef (Proposal 519-Full2) in September-November 2008, but only if a fixed start time for New Jersey can be agreed upon. He noted that this plan includes carrying out the New Jersey Onshore Science Party in October-November 2008, even if this means overlapping with the Great Barrier Reef offshore operation. Addressing Great Barrier Reef permitting issues, Evans noted that the Great Barrier Reef Marine Park Authority (GBRMPA) may reject the ESO's application on the grounds that the proposed drilling activity is inconsistent with Section 38 of the Great Barrier Reef Marine Park Act (concerning "operations for the recovery of minerals" within the Marine Park). He did, however, note that the Park Authority has expressed no objections to the proposed methodology and have not yet said "no".

Soh asked about the definition of the Marine Park, and requested clarification on the phrase "care and development of the Marine Park", which appears in Section 38. Evans explained that the Marine Park was a legally defined region, and that the GBRMPA decides what is allowed to happen within that area. He further explained that the phrase "care and development" refers to work that would be beneficial to the Marine Park.

4. IODP Management International, Inc. (IODP-MI) report

4.1. Activity report

Hans Christian Larsen reviewed activities at IODP-MI. He listed recent staff changes and noted that SAS oversight and support including SASEC will now be provided by the Vice President for Science Planning and two science coordinators.

Larsen reviewed areas of data management, starting with the status of the Scientific Earth Drilling Information Service (SEDIS). He described the three phases in its development, and explained that Phase I was near completion; after a RFP in early summer 2007, a vendor to develop Phase II would be chosen in a few days; and funds for Phase III were (so far) secure for FY2008 and the scope of this part of the project was still to be defined. Larsen also reported on the Site Survey Data Bank, noting that a number of new features would be completed in 2007, and that funding for further development was unavailable. He described a Google Earth application for displaying the location of all holes drilled during DSDP, ODP, and IODP.

Larsen summarized the status of long range planning workshops and noted that funding for workshops in FY2008 was still pending budget approval, but that it seemed likely there would be funding for one workshop and possibly two. Larsen briefly mentioned the very successful topical symposium on North Atlantic Climate Variability, and a thematic science review meeting focusing on climate variability, both held in Bremen in mid-August 2007. He noted that from the latter, a final report would be available for the SASEC in October 2007. Larsen reviewed other IODP-MI meeting activities, including a Deep Biosphere Task Force meeting in Washington D.C. on 17-19 September 2007. He also noted that IODP-MI had requested the Implementing Organizations (IOs) to present budget scenarios for reduced shipboard services at the recent (August 2007) Scientific Technology Panel (STP) meeting.

Larsen briefly reviewed statistics for active proposals (128 active proposals), and noted that three mission proposals were submitted for the last (1 April 2007) submission deadline. He presented a slide from the March 2007 SPC meeting on “scientific planning within a new budget reality”, mentioning that the SASEC, at the request of IODP-MI, had prepared a draft principles document for discussion later in this meeting (agenda items 13 and 16). Larsen also mentioned the need for an editorial board for the program’s journal, *Scientific Drilling*, and requested nominations for members at this meeting.

Manik Talwani addressed shortfalls in IODP funding, non-IODP funding and working with industry. He noted that shortfalls in Science Operating Cost (SOC) funding are being addressed by budget cuts by the Implementing Organizations (IOs), Program Member Offices (PMOs) and IODP-MI. He pointed out that shortfalls in Platform Operating Costs (POCs) were much bigger, hence the availability of *Chikyu* and the *JOIDES Resolution* for only seven, or so, months per year. Talwani noted that the costs involved in maintaining the drilling program for the additional five months, i.e., approximately \$30-40M for the *JOIDES Resolution* and \$100M for *Chikyu*, were at least an order of magnitude greater than the SOC shortfall. He listed industry and non-IODP countries as other potential sources of funding. He listed three paths for industry participation: (1) through regular IODP proposals; (2) complementary project proposals (see agenda item 12); (3) non-IODP work. He stated that complementary project proposals may not be effective because the time lines involved may be too long for industry. Talwani reviewed SASEC Consensus 0706-07 on the use of IODP drilling platforms for non-IODP activities. Referring specifically to the *JOIDES Resolution*, Talwani, on the basis of a conversation with David Divins, described how the vessel could be employed to the advantage of the program and the scientific community when it is not fully financed by the NSF for a full twelve months of operation. In this “off-IODP mode”, the NSF

IODP contract would be suspended, although the USIO would continue to lease the ship from ODL. The USIO would then lease it out to entities, such as industry or other governments. Talwani noted that in this mode, the NSF would have to grant permission to allow the ship to retain the government furnished equipment. He described advantages of the “off-IODP” mode for all parties concerned. For the USIO, the ship could be leased out at a slightly higher rate than the negotiated day rate with ODL. The scientific community would benefit by the possible participation in industry programs that could be of mutual interest to academia and industry. Industry would benefit from access to a drill ship at relatively cheap rates, with inclusion of all tools as well as technicians. Involvement of academic scientists in drilling programs could also be of additional help to industry and could be a good recruiting tool. Talwani concluded by noting that the “off-IODP mode” is a new concept that has not been tried before because, up until now, it has not been necessary. He acknowledged that there could be several obstacles in making this mode work in reality, but stressed that if it can be done, it could be a winning strategy for all concerned. He also noted that some of elements of this concept could also be applied to the use of *Chikyu* and to Mission Specific Platforms (MSPs).

Jamie Allan noted that the NSF funding shortage had indeed made the situation difficult for IODP-MI and the USIO, and he expressed his gratitude for the efforts of IODP-MI and the USIO to meet the challenges. Byrne said that the “off-IODP mode” sounds like a hybrid model. Talwani replied that it was a hybrid in a scientific and intellectual sense, but is financially driven by industry. MacLeod asked if it would be helpful for industry to have a directory of IODP scientists, e.g., scientists could volunteer to add their name to a list of experts. Talwani agreed it would be very helpful to have a list of 20-30 names and suggested that the SPC chairperson could prepare such a list. Becker noted, however, that the SAS cannot be formally involved in planning non-IODP work. Allan suggested that a list could be put on the web. Pálke asked if ODL would allow the USIO to sublet the *JOIDES Resolution*. Divins replied that the contract allows for it; the USIO would just need to inform ODL of where the ship is operating. He suggested that it would be to ODL’s benefit to help the USIO locate work for the *JOIDES Resolution*.

4.2. Nomination of an editorial board for *Scientific Drilling*

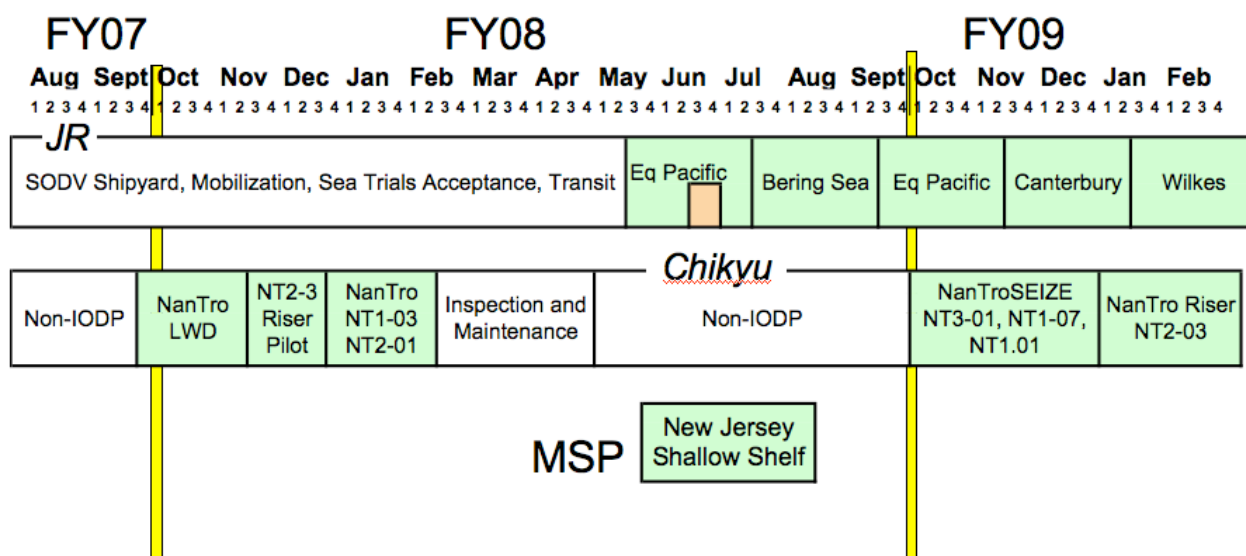
Keir Becker asked the committee for volunteers to serve on the *Scientific Drilling* journal editorial board. Camoin, Ohkouchi, Yamamoto, Behrmann, and Becker volunteered.

5. Operations Task Force (OTF) Report: IODP expedition scheduling I

5.1. Update on FY2007-2009 schedule developments

Tom Janecek presented an update on FY2008 and early FY2009 scheduling. He began by reviewing the FY2008/2009 *JOIDES Resolution*, *Chikyu*, and Mission Specific Platform (MSP) schedules at the conclusion of the March 2007 SPC meeting. He proceeded to detail the changes to the schedules since then. Issues for the *JOIDES Resolution* included change of start date to ~mid-February 2008, and further delays until early May, fishing union restrictions (allowing no NanTroSEIZE operations between March–May). Issues for *Chikyu* included damage to riser tensioners (resulting in deferral of riser operations from June 2008 to January 2009), addition of a riserless expedition in early FY2009, input from the NanTroSEIZE Project Management Team (PMT), and the addition of five months of non-IODP work in late FY2008. The key issue for MSP operations was the delay in platform availability for New Jersey, resulting in a shift of one fiscal year for New Jersey and Great Barrier Reef, with the possibility for a Great Barrier Reef proposal in FY2008. Janecek concluded by showing a diagram of the latest FY2008/early FY2009 schedules developed at the August 26 OTF meeting just before SPC.

FY08 / Early FY09 Schedules



5.2. SPC discussion and potential approval

Bekins asked if anyone had plotted shipyard schedule versus time. Baldauf commented that ODL and the shipyard were having a dialog on a final plan for completing work on the *JOIDES Resolution*, but that it would be 10-14 days before their schedule is available. He noted that the *JOIDES Resolution* is currently receiving a high level of attention at the shipyard, but was not sure if this would be maintained over the next few months. Filippelli stated that the OTF had done an excellent job in trying to incorporate high priority science, especially with respect to the *JOIDES Resolution*. MacLeod asked if there were any other options for FY2008/early FY2009 scheduling. Janecek replied that there was not at this time. Ruppel observed that the type of science for all the expeditions was very similar, i.e., basic coring, and stressed the need to consider other types of science that needs to be finished before the IODP ends in 2013. Becker replied that this was a fair comment but noted that it was too late for any expensive options to be incorporated on the current schedule. Katz observed that the programs, especially those of the *JOIDES Resolution* and *Chikyu*, were not very integrated. Behrmann claimed that this observation would be correct if the *JOIDES Resolution* and *Chikyu* were staffed only by U.S. and Japanese scientists, respectively, but he noted that scientists from all member countries comprised the staff on all ships. Allan noted that, in addition, the planning is integrated. Becker noted that the similar (sea level) themes of New Jersey and Canterbury would allow for integration and synthesis post-expedition. Becker asked if there was a consensus to approve the FY2008/early 2009 schedule options presented by Janecek.

SPC Consensus 0708-04: The SPC approves the FY2008 and early FY2009 recommended scheduling options presented in the Operations Task Force (OTF) report. Recommended expeditions for the *JOIDES Resolution* will begin in May 2008 and proceed as follows:

- Pacific Equatorial Age Transect II (Proposal 626-Full2)
- Bering Sea Plio-Pleistocene (Proposal 477-Full4)
- Pacific Equatorial Age Transect I (Proposal 626-Full2)
- Canterbury Basin (Proposal 600-Full)
- Wilkes Land Margin (Proposal 482-Full3)

Recommended expeditions for *Chikyu* will begin in late September 2007 and proceed as follows:

- NanTroSEIZE LWD
- NanTroSEIZE site NT2-3 riser pilot hole
- NanTroSEIZE sites NT1-3 and NT2-1 (ending in February 2008)
- NanTroSEIZE sites NT3-1, NT1-7, NT1-1 (starting in early October 2008)
- NanTroSEIZE NT2-3 riser drilling

All NanTroSEIZE expeditions are related to proposal 603-CDP3 and component proposals. Inspection and maintenance and non-IODP work is planned for February through September 2008.

MSP operations in FY2008 are expected to be New Jersey Shallow Shelf (Proposal 564-Full2). A possibility remains for Great Barrier Reef (519-Full2) operations starting in late FY2008 and spanning the FY2008/2009 transition.

Filippelli asked to what extent the start of *JOIDES Resolution* operations could be delayed before the first expedition (Pacific Equatorial Age Transect) would be impacted. Janecek explained that this was being discussed by Baldauf and the proponents. Baldauf explained that the real problem is for Bering Sea, which cannot be delayed any further than currently scheduled (late FY2008). MacLeod asked if there was a delay in the start of *JOIDES Resolution* operations, could Pacific Equatorial Age Transect be split into two unequal length expeditions in order to keep Bering Sea in its slot. Baldauf stated that all options had to be explored. Becker brought the discussion to a close by noting that there were too many possibilities to discuss now, and that consideration of the possibilities was the job of the OTF.

6. (Science Advisory Structure Executive Committee) SASEC report

Keir Becker's SASEC report started with a presentation of highlights from the third SASEC meeting (March 2007). These included: formal SASEC approval of Jim Mori as next SPC chair (starting 1 October 2007); receipt of interim recommendations of the SAS review working group and request for a final report at the June 2007 SASEC meeting, which would include reduced SAS scenarios if required by the budget situation; endorsement of pursuit of mutually beneficial collaborative relationships with industry to utilize IODP platforms; endorsement of exploring ICDP-IODP mutual core curation and proposal evaluation; receipt of nominations for an editorial board to update the Initial Science Plan (ISP) while recognizing the need to prioritize among ISP objectives; and review of seven workshop proposals for FY2008 with ultra-high resolution paleoclimate workshop as the top priority. Becker noted that the ICDP Science Advisory Group (SAG) were somewhat skeptical about the concept of mutual proposal evaluation for all proposals, though there was interest for proposals with an amphibious component.

Becker also presented the highlights from the fourth SASEC meeting (June 2007). These included: no formal approval of the FY2008 program plan due to FY2008 scheduling uncertainties; re-scoping and advancement of the timeline for updating the ISP, with a plan to reaffirm the basic ISP science themes and initiatives, but with focus on selected subjects through Phase 2 before 2013 IODP renewal; acceptance of the SAS review working group's final report; and endorsement for two avenues for pursuing outside funding sources for IODP platform operations, i.e., a purely non-IODP, or "off-IODP contract" option which would have no SAS involvement, and a hybrid model with quick SAS evaluation of "complementary project proposals" (further discussion on the latter took place under agenda item 12).

Becker provided background information on the SAS review working group, which was formed in July 2006 to review the SAS and to recommend "any changes to optimally

configure its activities as IODP enters Phase II” or “any changes in structure necessary to integrate missions into the IODP proposal review process.” He noted that after FY2008/2009 budget shortfalls came to light in January 2007, the SASEC in March asked the working group to draft a report based on its recommendations at the time and also to look at scenarios for further reductions in SAS for cost savings. Becker summarized the recommendations of the working group, which do not include profound structural changes to the SAS required for full Phase II operations or incorporation of mission planning, or for the added impact of budget limitations. Becker did, however note that the working group identified significant ways in which the SAS structure and process can be streamlined, for more effective performance under difficult financial conditions. The most profound recommended changes included reducing the US and Japanese membership levels from 7/7 to 5/5 on most panels, and reducing service panel meeting frequency from two to one per year unless very well justified. Becker also described several other ideas considered by the working group for further reductions in the SAS if required by the IODP financial situation, but noted that none were recommended for implementation.

Becker described a revised plan, developed at the June 2007 SASEC meeting, for updating the Initial Science Plan (ISP). This, and the remaining part of his SASEC presentation was repeated for agenda item 13.1. Becker noted that as of its March 2007 meeting, the SASEC started the nomination process for an editorial board for its planned update of the ISP, which was to involve a major re-evaluation of ISP themes and initiatives and publication of an updated ISP at end of 2008. However, Becker explained that in June the SASEC re-scoped and advanced the timeline for its plan to update the ISP, so that the updated ISP could have maximum effect on IODP Phase 2 objectives prior to renewal efforts for post-2013. The plan now is to (a) reaffirm the basic ISP science themes and initiatives, but focus on selected subjects through Phase 2 before 2013 IODP renewal, and (b) publish by mid-2008 an updated Phase 2 implementation plan essentially as an addendum to the ISP. Becker explained that the SASEC drafted a set of “Guiding Principles”, including four initiatives recommended for special focus during Phase 2. He noted that the timeline allows for one round of SPC and SSEP comments, at their August and November 2007 meetings, respectively, and that there would also be a one-month period for public comment.

Becker presented the SASEC’s guiding principles for phase two of IODP:

SASEC Guiding Principles:

1. High scientific impact in next 5 years;
2. Necessary precursor for future investigations - build for future;
3. Reach major milestones;
4. Balance among risk, cost, and scientific impact;
5. Integrated, interdisciplinary approach;
6. Societal relevance;
7. Minimum requirements:
 - MSP - one program every two years;
 - Chikyu* - average of 7 months/year over two-yr period (must include riser operations);
 - JOIDES Resolution* - average of 7 months/year over five-year period.

Becker also presented the SASEC's implementation principles for phase two of IODP:

SASEC Implementation Principles:

Chikyu:

Achieving major milestones in NanTroSEIZE;
Maximizing use of *Chikyu* for riser drilling;
Start a new riser program.

MSP:

Coring, logging, and pioneering challenging environments.

JOIDES Resolution:

Optimize operating days within restrictions of prioritized science.

All platforms:

Develop non-IODP or hybrid projects to increase science operational days and flexibility.

Becker concluded by presenting the four initiatives recommended by the SASEC as areas of special focus for phase two of the IODP:

SASEC Special Focus Areas for Phase Two of the IODP:

1. Limits of life - microbial biosphere;
2. Rapid and extreme climate and sea level change;
3. Seismogenic zone and initiation of borehole observatories;
4. Deep crustal section.

There were no questions or discussion.

7. SPC review of Operations Task Force (OTF) proposals I

7.1. Objectives of review and procedures

Keir Becker described the original plan, as decided at the March 2007 SPC meeting, for the re-evaluation of proposals residing at the Operations Task Force (OTF). He noted that because of the difficult budget situation, the OTF and SASEC subsequently agreed that the SPC should focus its re-evaluation on three groups of proposals:

1. Proposals with observatories: because of high costs, only a few of these could likely be completed before renewal of the program. SPC will review these as a group and categorize them to indicate priority when funds become available, either program funds or external funds.
2. Proposals with riser programs: at most only one riser proposal can be started before renewal of the program. The SPC will review and prioritize the two riser proposals currently at OTF besides NanTroSEIZE.
3. MSP proposals: all MSP proposals at the OTF are expensive (>\$5M) to very expensive, and there is a shortage of MSP proposals, particularly inexpensive ones, residing with the SSEP. The SPC needs to decide how to handle the very expensive proposals.

Becker described the categorization scheme for OTF proposals, which was designed to inform the OTF and the IOs of the highest priorities for scheduling, and to inform the proponents of realistic chances for scheduling their proposals before renewal. Becker noted that rather than re-rank the proposals, the SPC should attempt to categorize them as follows:

- A. Very high priority and potentially affordable - leave at OTF as high priority Group 1.
“Potentially affordable” could depend on either commercial work for the IO that

offsets costs and frees some program funding, or external funding raised by the proponents.

- B. High science priority but fiscally probably not feasible under current funding levels - consider scaling back or return to the SPC for re-review at next ranking meeting.
- C. Lower priority - return to the SPC for re-review and re-ranking.
- D. Low priority and/or not feasible for Phase 2 - return to SPC but defer any further evaluation until planning begins for post-renewal.

Becker described how the SPC should factor costs into the proposal reviews. He noted that the SASEC has endorsed a mix of programs before renewal, including the highest priority proposals that might involve extra costs, but that the SPC should be as selective as possible in applying category A to only those proposals considered very important to be scheduled before renewal. He also noted that IODP-MI had provided qualitative cost ratings for all of the OTF proposals. He pointed out that for proposals with extra costs (e.g., casing, observatories, expensive MSP operations) it would not be easy for the SPC to judge whether a proposal should be left at the OTF or returned to the SPC on fiscal grounds. He further explained that the limited potential for program funds for extra costs before renewal meant the program can probably only afford the very highest priority proposals with extra costs, but that by being as selective as possible in choosing the high priority proposals, the SPC can probably do so mainly on a science prioritization basis, using only the qualitative cost information at hand.

Referring to the other eight or nine proposals at the OTF not considered at this meeting, Becker noted that they are mostly riserless programs with reasonable costs, and distributed globally. He mentioned that the OTF and SASEC have agreed they should probably be left at the OTF to allow the USIO and CDEX flexibility in scheduling riserless programs, especially as off-contract work might become available in any ocean. Becker suggested that if the SPC thinks that any of these should in fact be re-reviewed, this could be done at the next (March 2008) SPC meeting. He also pointed out that one special case (Proposal 621-Full Monterey Bay Observatory) would be dealt with separately in agenda item 7.2.

Referring to category “D” proposals, which would not be evaluated until post-renewal of the IODP, Camoin asked whether proponents would be encouraged to update their proposal. Becker suggested that the SPC could consider deactivation or could encourage a new submission. Mori asked how many proposals would be appropriate for category “A”. Becker suggested closer to three or four, rather than ten, but that it was up to the SPC to decide how many high priority proposals “must” be completed before renewal. Mori stressed that the importance of the process was to determine the high priority proposals that should be completed, and suggested the fewer the better because, with more, the prioritization would be done by the OTF, just as before. Ruppel expressed concern that the low-cost riserless proposals were being left with the OTF and not being re-reviewed at this meeting, since it may appear that there is a focus on “cheap” science which could be interpreted as unfair to expensive proposals. She also expressed concern about the strong negative message associated with categories “C” and “D”. Becker suggested that perhaps the SPC should consider implementing a process whereby all proposals are re-categorized in August if not scheduled after the OTF meeting that follows the March SPC meeting. D’Hondt agreed that it would be useful to consider re-evaluating all of the non-riser proposals. MacLeod said he was concerned about sending a clear message to the proponents if their proposal has effectively no hope of being scheduled. Pälke suggested that, for flexibility, it could be useful to have a large number of high-quality proposals residing with the OTF. Becker explained that that is

the current state, which is why the SPC needs to prioritize the proposals. Regarding the non-riser proposals not being reviewed at this meeting, Mori said that this was not a one-time process, and that there will have to be re-reviews of these proposals in the future, perhaps every two years; including all the non-riser proposals in this meeting would have been too many for the SPC to deal with at once. Macgregor suggesting splitting the “A” category into two; one addressing scientific priorities, the other operational priorities seen in context of scientific priorities. Becker replied that this could be done after focusing on science priorities alone. D’Hondt thought splitting the “A” category would be too confusing. Ruppel suggested that by the end of the reviews there may not be that many category “A” proposals anyway. Mori asked for clarification on how a decision for each proposal would be reached. Becker explained that the watchdogs should make an initial recommendation for categorizations. If the SPC disagrees, there would be discussion. If the disagreement was strong enough, balloting would be required. Masuda noted that she was confused over how post-expedition costs should be factored into the review, e.g., an observatory after drilling is the financial responsibility of the proponents, not the program. Becker agreed that this posed a difficulty but he preferred that the SPC should be making the decisions, and not leaving it up to another group. Mori suggested that the relevance of a proposal to the ISP themes and initiatives should be important in the review process. Ruppel added that in addition to the ISP, other issues such as logistics (e.g., cabled observatories), or links to industry, should be factored in. Becker suggested that if these issues were germane the watchdogs should mention them during their presentations.

7.2. 621-Full Monterey Bay Observatory– status after OTF and SASEC

Conflicted SPC member Bekins left the room.

Keir Becker summarized the history of proposal 621-Full (Monterey Bay Observatory). He noted that this proposal was forwarded to the OTF by the SPC in June 2004 not on the basis of a science ranking, but for its engineering/test-bed aspects. Because the science aspect was considered weak, the proposal was not ranked (SPC Consensus 0406-14). Becker noted that the Science Planning and Policy Oversight Committee (SPPOC) also made a strong endorsement with qualifications in June 2005 that highlighted the need for a test facility (SPPOC Consensus 0506-5). He noted, however, that an environmental impact statement (EIS) for Monterey would be very expensive, and could not even be considered until the proponents and the program developed a detailed science and operations plan for the instrument testing. He also explained that in June 2007 the SASEC effectively rescinded the earlier SPPOC endorsement in SASEC Consensus 0706-10. In summary, Becker noted that it does not seem possible that this proposal could be scheduled before renewal (or possibly ever), thus the question for the SPC was whether to deactivate the proposal, or place it in category “D”.

Ruppel noted that she was unclear on how the OTF viewed proposal 621-Full and its chances of succeeding. Becker responded that the OTF primarily deals with implementation issues. He noted that the OTF believed the proposal should be deactivated, but had returned it for the SPC to decide. He also noted that there were plans to investigate this proposal that did not proceed, e.g., as of 2005 IODP-MI was going to set up an observatory task force that would address some of the generic observatory implementation issues that pertain especially for this proposal. He further stated that now was the time for a decision to be made as to whether or not this proposal will ever be implemented. Talwani, puzzled, stated that he was under the impression that it was either impossible or extremely expensive to get an EIS. Allan explained that the biggest problem, according to the marine sanctuary officials, was that the drillship would be visible from shore; this meant that there was no guarantee that it would ever happen. He also noted that another unknown factor would come from the involvement of

the California Coastal Commission. Allan estimated the cost for doing an EIS for the *JOIDES Resolution* at about \$1M, which he described as “a lot of money”. Becker observed that, to this point, the discussion has stopped just short of suggesting deactivation. Quinn stated that in the “early days” there was more enthusiasm for this proposal, but that now he could see the reality of the issue and would suggest deactivation. D’Hondt agreed and noted that what was really missing was a good science plan. He also mentioned that at least one other site has been identified for such a test facility and wondered if it might receive equal enthusiasm. Becker noted that that proposal was still at SSEP level, and explained that Monterey Bay was attractive due to easy access with both ROV and cable. Becker asked the committee if there was a consensus to deactivate proposal 621-Full.

SPC Consensus 0708-05: In response to SASEC Consensus 0706-10 and the request from the June 2007 Operations Task Force (OTF) meeting, it is clear to the SPC that it is not realistic to consider scheduling the Monterey Bay test borehole facility under the current IODP budget situation and given the issues and complexities associated with the required environmental impact assessment. Therefore the SPC has no choice but to deactivate Proposal 621-Full Monterey Bay Observatory.

7.3. OTF proposals with observatory components

7.4. OTF riser programs

7.5. OTF mission specific platform (MSP) programs

The committee reviewed twelve proposals comprising eleven full proposals and one ancillary project letter (APL). The OTF proposals were grouped into three categories: proposals with observatory components; proposals requiring *Chikyu* riser capability; and proposals requiring a mission specific platform (MSP). For proposal 537B-Full4 (Costa Rica Seismogenesis Project Phase B) the observatory component and requirement for riser capability were reviewed independently.

The review of proposals with observatory components focused on selecting the highest priority observatory proposals for possible scheduling before 2013. Because of limitations on program funding and available platform time through 2013 only a few proposals at most will be scheduled; for the rest the SPC will request updates or addenda from the proponents addressing issues such as the justification of the observatory plan, removal of proposed observatories and focusing on highly-rated coring activities.

The review of riser proposals focused on selecting one more proposal (in addition to NanTroSEIZE) for possible implementation starting prior to 2013. The review was based on pure scientific merit as well as programmatic priorities.

The review of MSP proposals focused on the high costs of all the MSP proposals residing with the OTF, and resulted in recommendations to all proponents of these proposals to scale back their objectives in order to reduce costs, or to seek outside funding.

A group of three watchdogs was assigned to each category (see table under agenda item 11). Meeting participants conflicted for a specific category left the room for the discussions related to that category. For each proposal, one of the watchdogs presented the scientific objectives and provided a suggested classification (A, B, C or D, or in some cases, a range of classifications). On Monday, committee discussions were of a general nature. During the second phase of the discussion, conducted on Tuesday (agenda item 11), the committee discussed the classifications suggested by the watchdogs in more detail. Final dispositions for all proposals are presented under agenda item 11.

Tuesday**28 August 2007****09:00-17:30****8. IODP Science Advisory Structure (SAS) panel reports****8.1 Science Steering and Evaluation Panel (SSEP)**

Heiko Pälike reported on the May 2007 SSEP meeting. He noted that the SSEP reviewed 35 proposals, including three mission proposals and two regular proposals with external reviews. Pälike presented several slides showing breakdowns of active proposals (e.g., by ISP theme, country/consortium affiliation of lead proponent, geographic distribution, residence within the SAS (i.e., SSEP, SPC or OTF), and maturity (number of revisions). He summarized the dispositions for the 35 proposals reviewed at the May meeting: of three preliminary proposals, revisions were requested for two while development of a full proposal was requested for the third; two full proposals were forwarded to the SPC for review at its March 2008 meeting: 556-Full4 (Malvinas Confluence) forwarded with three stars and 601-Full3 (Okinawa Trough Deep Biosphere) forwarded with four stars); one APL (712-APL Sediment-CORK Trial Installation) was forwarded to the SPC for review at its August meeting; two groups of proposal were forwarded to the SPC for determination of complex drilling project (CDP) designation: “umbrella” proposals 707-Full2 (Sagami Bay Seismic Monitoring), which the SSEP recommended for CDP designation and 694-Full3 (Izu-Bonin-Mariana Arc Evolution), which the SSEP was undecided on CDP designation; five full proposals were sent for external review; no action was taken on one proposal which had been sent for external review and for which a revised proposal is expected from the proponents; revisions were requested for eleven full proposals; three mission proposals were evaluated; and seven proposals (three full, two preliminary, and two APL) were deactivated.

Pälike reiterated that the SSEP was strongly supportive of CDP designation for proposal 707-Full2 (Sagami Bay Seismic Monitoring) together with component proposals 722-Full (Sagami Bay Tectonics and Paleoseismology) and 723-Full (Sagami Bay Kanto Asperity Network). In support of CDP designation, he presented SSEP Recommendation 0705-3.

SSEP Recommendation 0705-3: SSEP recommends that Proposal 707-Full2, Kanto asperity project: Geological and geophysical characterization of the history and present behavior of the earthquake cycle, be recognized as a Complex Drilling Proposal (CDP) associated with component proposals presently assigned 722-Full and 723-Full. The SSEP views the scientific goals of this project as very high priority and unusually high in terms of societal relevance. The scope of the project, the interrelationship of individual phases of proposed research, and the dependence of individual expeditions on the outcome of previous ones, necessitates this designation. At this time, all of the proposals lack critical site survey data, and further consideration by the SSEP will be delayed until such data have been acquired and analyzed. However, we note that designation of Proposal 707 as a CDP may help the proponents to obtain funding to carry out the needed surveys. Additionally, CDP designation would enhance integration of the multiple science components and long-term science planning.

Pälike reiterated that although the SSEP understands the scientific importance of Izu-Bonin-Mariana arc drilling, the panel was undecided on CDP designation for proposal 694-Full3 (Izu-Bonin-Mariana Arc Evolution) and proposed component proposals 695-Full (Izu-Bonin-Mariana Pre-Arc Crust), 696-Pre (Izu-Bonin-Mariana Deep Forearc Crust), 697-Full (Izu-Bonin-Mariana Rear Arc Crust) and 698-Full (Izu-Bonin-Mariana Arc Middle Crust). The panel's indecision on CDP designation was formally presented in SSEP Recommendation 0705-5.

SSEP Recommendation 0705-5: The SSEP asks SPC to decide whether or not 694-Full3 should be endorsed as a Complex Drilling Project (CDP).

SPC discussion and decision on CDP designation for the Sagami Bay and Izu-Bonin-Marian Arc proposals occurred under agenda item 21.

Pälike reviewed the SSEP's 5-star grouping system and gave a brief overview of the scientific objectives of the two proposals forwarded by the SSEP for review and ranking at the March 2008 SPC meeting. He also noted that during the SSEP's review of mission proposal 713-MP (Mission Monsoon) the panel recognized that the four component proposals dealing with the Asian monsoon and Tibetan uplift history, all of which were reviewed very positively during previous SSEP meetings, primarily needed further coordination, organization and prioritization, which could be best achieved by forming a Detailed Planning Group (DPG) to develop an optimal plan (including drilling, proxies to be used, post-cruise science, etc.) for addressing the main objectives of the research. This led to SSEP Recommendation 0705-4:

SSEP Recommendation 0705-4: The SSEP recommends that SPC consider forming a Detailed Planning Group that will be responsible for organizing and prioritizing proposals dealing with the history of Asian monsoon and its linkage to the uplift of the Himalayan-Tibetan orogenic system (Proposals 552 – Bengal Fan, 595 – Indus Fan, 618 – SE Asian Shelf, and 683 – East Asia Topography and Monsoon). The SSEP will provide SPC with a mandate for the DPG before the next SPC meeting.

The SPC returned to this recommendation during the reviews of mission proposals (see agenda item 19).

Ruppel wondered why the SSEP sent back two Full4 proposals for revision. Pälike replied that the proponents had not fully responded to previous suggestions, but the panel was willing to ask for another revision. He noted that the SSEP did in fact deactivate several proposals at the May 2007 meeting because the proponents had not responded to reviews. D'Hondt asked if there was any mechanism, outside of a revised proposal, for proponents to communicate with the panel. Pälike replied that proponent response letters (PRLs) were accepted only after a proposal had been sent for external review, and that otherwise the proponents can communicate directly with the watchdogs listed on the review form. He suggested it would be worthwhile allowing a PRL for any review. Byrne explained that this had been done in the past, but resulted in proposals with a large number of PRLs, which led to confusion. D'Hondt suggested that if a revision is necessary to respond, then the proponents (or proposals with several revision) should not be penalized.

8.2 Site Survey Panel (SSP)

Dale Sawyer reported on the July 2007 SSP meeting. He noted that the panel reviewed 19 proposals including one APL, one preliminary proposal, and one Antarctic Drilling Program (ANDRILL) proposal. Sawyer provided a summary of the site survey status of seven proposals reviewed by the SSP in July which were relevant to the present SPC meeting: 505-Full5 (Mariana Convergent Margin), 537A-Full5 (Costa Rica Seismogenesis Project Phase A), 605-Full2 (Asian Monsoon), 661-Full2 (Newfoundland Sediment Drifts), 707-Full2 (Sagami Bay Seismic Monitoring), 722-Full (Sagami Bay Tectonics and Paleoseismology) and 723-Full (Sagami Bay Kanto Asperity Network). He also provided a summary of a special review of an ANDRILL proposal, which includes drill sites in the Eastern Ross Sea and on Coulman High.

Sawyer reported that, in response to the recent SASEC SAS review working group report, the panel considered the issue of reducing meeting frequency to once per year. He explained that

the panel strongly prefers to continue meeting twice per year, noting that the U.S. and Japanese membership of the panel is already in the process of being reduced. In addition he pointed out that the SSP feels that the reviewing load is consistent with two meetings per year. Sawyer stated that, in general, panel members become most effective after one or two meetings, so that a reduction in meeting frequency would lead to a smaller fraction of panel members that would be operating effectively at each meeting. He also pointed to corporate memory as an important issue as the SSP reviews proposals over many years. He further noted that the SSP feels that reviews by email would not be effective, and that no form of online meeting or conference call would yield the same diverse input and discussion found in traditional face-to-face meetings. He noted that as a result, the SSP plans to request its next meeting for late January 2008 in Tokyo or Yokohama.

Sawyer reported that the SSP members commend the accessibility and efficiency offered by the Site Survey Data Bank in supporting the activities of the panel. He noted that the panel now feels that meetings can be held at any location that has good internet connectivity. He also explained that as panel membership rotates, and as online access to most relevant data increases, more of the work of preparing for panel discussions is happening prior to the panel meetings, and this represents a change from the past culture of the panel.

8.3 Environmental Protection and Safety Panel (EPSP)

Barry Katz reported on the June 2007 EPSP meeting, at which the panel previewed five proposals: 519-Full5 (South Pacific Sea Level, Part 2: Australian Great Barrier Reef), 705-Pre2 (Santa Barbara Basin Climate Change), 595-Full3 (Murray Ridge), 505-Full5 (Mariana Convergent Margin), and 548-Full2 (Chicxulub K-T Impact Crater), and reviewed some additional sites for NanTroSEIZE (related to 603-CDP3 and component proposals). He noted that the EPSP has now caught up reviewing all proposals, and that the June meeting comprised mainly previews.

For proposal 519-Full5 (Great Barrier Reef), Katz noted the need for additional contingency sites; he also noted that the EPSP recommended additional contingency sites for all proposals. He also noted that when the panel approves sites for the reef drilling it will include permission for drilling within a radius of 150m of a center point. For proposal 705-Pre2 (Santa Barbara Basin Climate Change), Katz reported that the EPSP believes that safe drilling locations can be identified and has recommended that the proponents go forward with the development of a full proposal. For proposal 595-Full3 (Murray Ridge), Katz again noted the need for more contingency sites. He reported that progress had been made by the proponents since the last EPSP review in June 2005, but that the panel will require a more consistent presentation in terms of content for a final review. For proposal 505-Full5 (Mariana Convergent Margin), Katz again stressed the need for more contingency sites. He noted that because fluid seeps have been identified in the area, there is a need for visual inspection prior to drilling to avoid macro-communities. Katz also mentioned that the panel has accepted the approach of positioning the holes based on sidescan data near multi-channel seismic data, but stressed that this did not indicate a change in panel policy for approving sites. For proposal 548-Full2 (Chicxulub K-T Impact Crater), Katz reported that the thermal history suggests there is limited hydrocarbon risk in the area.

Katz reported that at the June meeting the EPSP was set to review a request to approve deep riser drilling (to 3500m) at two NanTroSEIZE sites previously approved to 1250m depth for Stage 1 drilling (NT2-3B and NT2-3C). He noted, however, that the EPSP deferred its decision pending submission of additional material (anticipated pore pressure profile, fracture gradient, casing design plan, and a contingency plan) which was due 1 September 2007 for review at a special EPSP meeting in Japan in later September. Katz reported that the EPSP

did approve two Stage 1 contingency sites (NT2-5A and NT2-10A) at slightly shallower depths than requested). He also noted that in July the EPSP approved by electronic review a new location for a Stage 1 alternate site (NT2-1D) which, as NT2-1B, had been previously approved in January 2007.

Katz reported that the EPSP planned to shift to a single three-day meeting per year, with the next meeting planned for June 2007 in Hanover, Germany. Referring to the SASEC SAS review working group's report, he indicated that he was not comfortable with reducing the size of the panel, because a diverse group of expertise was needed to do complete assessments.

Talwani asked who was making the pore pressure predictions for the NanTroSEIZE sites, and commented that real-time monitoring is required for deep drilling. Katz replied that the panel had asked the proponents to provide the information on pore pressure prediction, and it was up to them to obtain it from whomever they wanted. He commented that with NanTroSEIZE it was difficult to separate the proponents from the operators. He also mentioned that real time monitoring was an operator issue, and that the EPSP has an operational protocol in place to deal with real time monitoring programs on pore pressure, which specifies how an operator will deal with problems.

8.4 Scientific Technology Panel (STP) (excluding agenda item 9)

Keir Becker reported on the August 2007 STP meeting, which had taken place less than one week prior to the SPC meeting. He showed a presentation created by STP chair Mike Lovell; however the STP did not have a representative at the SPC meeting. The presentation focused on outstanding (from previous STP meetings) STP recommendations and consensus statements directed at the SPC. A separate STP presentation on budget models and reduced service options was presented under agenda item 17.

The STP presentation noted that the postponement by IODP-MI of its regular June meeting to mid-August resulted in no representation from the SPC or the lead agencies. It was noted that the meeting was postponed to enable discussion of service reduction models, for which details and presentations were not available until August. The STP presentation also noted that STP chair Mike Lovell had recently, and temporarily, following the death of Tim Brewer taken over the duties of European Petrophysics Consortium (EPC) Coordinator and as a member of the ECORD Science Operator (ESO). Because of this, Lovell declared a conflict of interest and abstained from voting on statements relating to the Implementing Organizations (IOs); Clive Neal, as vice-chair, chaired all session where there was a perceived conflict for Lovell.

During the presentation of STP recommendations and consensus statements it became clear that the SPC did not have sufficient information to fully respond to some of the statements. D'Hondt noted that the executive summary for the August STP meeting, from which the STP recommendations and consensus statements in the presentation were taken, referred to two documents not in hand by the SPC: the Microbiology working group report from 2003, and the QA/QC report, draft 1. Becker responded by asking for volunteers to look more closely at the STP recommendations and consensus statements and to recommend responses from the SPC for approval within one month. D'Hondt volunteered to lead the working group, which also comprised Soh and Becker. After the meeting, the working group suggested modifications to the preliminary wording of three SPC consensus statements (0708-06, -07 and -11). These statements were distributed to the committee in early October and, with no objections, were accepted as the consensus statements that appear in these minutes.

Becker presented STP Consensus 0708-15 on open hole VSPs.

STP Consensus 0708-15: Open Hole VSP. STP requested advice from EDP (Consensus 0601-03). STP wishes to follow up this general request and again seeks advice from EDP on whether there are “off the shelf solutions” or whether STP should seek to investigate technology development in seeking solutions to IODP requirements.

EDP chair Flemings noted that he felt there was a powerful suite of technologies available from vendors to do this (open hole VSP) at any level. Becker noted that no specific response from the SPC was required.

Becker presented STP Recommendation 0708-02 on the IODP Measurements Document. During the meeting, Becker stated that this recommendation needed closer examination before acceptance. The SPC response to this recommendation (SPC Consensus 0708-06) was finalized after the meeting, as described above.

STP Recommendation 0708-02: IODP Measurements Document. STP has revised the IODP Measurements Document and recommends this new version replace the existing document on the IODP web site.

SPC Consensus 0708-06: The SPC accepts STP Recommendation 0708-02 on a revised IODP Measurements Document, in particular version “Rev-3” in which (1) DNA, biomarker, and Phospholipid microbiological analysis, and (2) microbial activity measurements using radiotracers are listed as supplemental microbiology measurements.

Becker presented STP Recommendation 0708-04 on legacy samples. He noted that this seemed like a reasonable recommendation but wondered if this would entail extra costs. Janecek noted that any extra costs would have to be approved by IODP-MI and the Implementing Organizations (IOs). Becker suggested tentatively accepting the recommendation subject to an investigation of costs. The SPC response to this recommendation (SPC Consensus 0708-07) was finalized after the meeting, as described above.

STP Recommendation 0708-04: Legacy Samples. In reference to Action Item 0612-31, the STP recommends that microbiology legacy samples shall be a part of any IODP sampling plan. Collection and storage of legacy samples should follow the guidelines presented in the 2003 Microbiology Working Group report.

SPC Consensus 0708-07: The SPC receives STP Recommendation 0708-04 on including microbiology legacy samples as a part of any IODP sampling plan and tentatively approves the recommendation subject to an investigation of costs by IODP-MI and the Implementing Organizations. Collection and storage procedures should take into account the guidelines suggested in the IODP Microbiology Working Group report (2003), but updated as appropriate to account for environmental variation and post-2003 refinements of microbiological sampling practices.

Becker presented STP Recommendation 0708-05 on the integration of microbiological sampling into expedition sampling plans. He commented that this seemed reasonable, and the recommendation was accepted by consensus.

STP Recommendation 0708-05: Integrating Microbiological Sampling into Expedition Sampling Plans. STP recommends that microbiology sampling be integrated into expedition plans. Such integration should be flexible enough to accommodate the scientific plans for each respective expedition.

SPC Consensus 0708-08: The SPC accepts STP Recommendation 0708-05 on integrating microbiological sampling into expedition sampling plans.

Becker presented STP Consensus 0708-09, which refers to the SASEC SAS review working group report. He noted that, beyond accepting a reduction in the size of the membership, the STP does not want to change the way it operates. He suggested that the SPC should receive this consensus statement, since there was no actual recommendation on the table calling for such changes. This recommendation was accepted by consensus.

STP Consensus 0708-09: SASEC WG Report. STP discussed at length the implications and suggestions contained in the SASEC WG report, exploring various models and concepts towards reducing costs while maintaining efficiency and effectiveness in serving IODP and representing the scientific community. As Phase 2 operations begin STP believes there to be an important role in monitoring and evaluating scientific technology on a regular basis while also looking forward to future expeditions' requirements. STP has already agreed to change its meeting format at SPC's request to accommodate this. The Background to this consensus provides additional information based on discussions at STP.

STP recommends maintaining two meetings per year with reduced membership (as now being implemented by USAC and J-DESC).

STP also recommends, under exceptional circumstances, giving members the possibility to leave the panel after one year (voluntarily) and also giving the chair the flexibility to request an extension to the terms of certain members on an as needed basis.

STP wishes to collaborate with EDP to the benefit of IODP as necessary, but sees no requirement for holding joint meetings. Furthermore, the mandates of STP and EDP have little overlap and therefore STP sees no advantage in merging the two panels.

SPC Consensus 0708-09: The SPC receives STP Consensus 0708-09 concerning the final report of the Science Advisory Structure Executive Committee (SASEC) SAS review working group. The SPC notes that the possibility of combining STP and EDP, if warranted by further IODP budget shortfalls, has not actually been formally proposed.

Becker presented STP Consensus 0708-10 on internet access during STP and SAS meetings. He suggested receiving this consensus statement, noting access to internet during a panel meeting is a decision that can be made by the panel. This recommendation was accepted by consensus.

STP Consensus 0708-10: Internet connection during STP meeting sessions. STP recommends limiting internet access within the meeting sessions be adopted as a general policy of STP and considered across all SAS meetings.

SPC Consensus 0708-10: The SPC receives STP Consensus 0708-10 concerning internet access during STP and other SAS meetings. The SPC notes that the decision to allow or disallow access to internet during SAS meetings resides with each SAS panel and committee.

Becker presented STP Consensus 0708-11 on time stamps. During the meeting, Becker suggested that this consensus statement seemed reasonable but that the exact wording in the STP executive summary needed to be checked. The SPC response to this STP consensus statement (SPC Consensus 0708-11) was finalized after the meeting, as described above.

STP Consensus 0708-11: Time stamp. The STP thanks Basile for his presentation on time stamps for measurements and procedures. The issues resulting from this presentation have been incorporated in STP's response to the IODP-MI QA/QC Task Force report (draft 1) and submitted to IODP-MI.

SPC Consensus 0708-11: The SPC receives STP Consensus 0708-11 on time stamps for measurements and procedures, and forwards it to IODP-MI noting that the key aspects are incorporated in the QA/QC report (draft 1).

Becker presented STP Consensus 0708-13 on post expedition data capture. Larsen noted that the IODP-MI can provide an update at the next STP meeting. Becker suggested forwarding the STP request to IODP-MI. This was accepted by consensus.

STP Consensus 0708-13: Post-Expedition Data Capture. STP requests that an update be given prior to our next meeting regarding inclusion of post-expedition generated results (data and processed data). STP is particularly interested in the mechanism for this data capture, when it is likely to be implemented, and what the arrangements are for QA/QC of the data.

SPC Consensus 0708-12: The SPC receives STP Consensus 0708-13 concerning post-expedition data capture, forwards this request to IODP-MI and suggests that IODP-MI provides an update on inclusion of post-expedition generated results at the February 2008 STP meeting.

Becker concluded the STP presentation by noting that the next STP meeting was planned for sometime within the first two weeks of February 2008 in Japan, hosted by Noritoshi Suzuki.

8.5 Engineering Development Panel (EDP)

Peter Flemings reported on the July 2007 EDP meeting. He noted that his last meeting as chair would be the next meeting in France. After reminding the committee of the EDP mandate, Flemings gave an overview and status report of the Technology Roadmap, which he described as a long term vision (greater than two years) of priorities in engineering development vital to achieve the science goals of the IODP. He explained the purpose of the roadmap was to: (1) motivate engineering development (SAS, IODP-MI, IOs, funding organizations, etc); (2) induce proposals for engineering development; (3) identify common engineering challenges between platforms; (4) strengthen the process of engineering development; and (5) focus thinking to determine what is important. He also presented a table of many items addressed in the roadmap, broken down into three categories: sampling/logging/coring, drilling/vessel/infrastructure, and observatory.

Flemings described the EDP's process for engineering development project classification, noting that there were four stages (concept, design, fabrication, and implementation), and that the EDP specified the requirements for each stage of these developments. He also noted that the EDP gives rigorous review after the concept phase. Flemings also briefly described the engineering development proposal process, noting that the goal was to develop new technology to achieve the goals of the IODP. He stated that the process was effective, that it drives the system to expand capability, allows competition and creative interaction, and involves the scientists who are actually making things happen. Referring to how the funding system is responding to this engineering development process, Flemings stated that the engineering developments that appear to have broad impact, across platforms, and have potential to be standard technology are being re-directed to IODP-MI from national funding agencies. Flemings also noted that more interaction with, and participation from, the IOs, particularly the ESO, would be beneficial. He mentioned that although funding is a problem,

technology development is critical to the vitality of the IODP, and the program must invest in improvements that achieve new science with relatively minor cost.

Finally, Flemings presented EDP Consensus 0707-03, which suggests some changes, and an addition to the wording of the EDP terms of reference. Becker commented that he saw value in having an EDP liaison at the SSEP meetings and, while recognizing that funding to support a liaison was an issue, he recommended endorsement of the change in wording. MacLeod asked if a liaison from EDP was needed for each SSEP meeting. Flemings suggested that once per year may be enough. Ensuing discussion regarding changes to the precise wording of the final sentence of EDP consensus 0707-03 ended with an SPC consensus to accept the suggested changes to the terms of reference. Allan quipped that if the STP and EDP were combined, there would be a lot of money to bring liaisons.

EDP Consensus 0707-03: EDP SSEP Liaison. One important way that EDP can learn of engineering development needs is through interaction at the SSEP meetings. In addition, EDP can provide to SSEP important insight regarding the state of engineering development and current engineering capabilities in the IODP. EDP requests SPC modify EDP's Terms of Reference as follows:

Current wording: "The EDP chair shall be liaison to the SPC, with vice-chair as alternate. The SPC chair shall be a liaison to the EDP, with the SPC vice-chair as alternate. A science coordinator from the IODP-MI Sapporo Office shall attend each EDP meeting. Representatives from the IOs shall also be invited to attend the meetings."

Revised wording: "The EDP chair shall be liaison to the SPC, with vice-chair as alternate. The SPC chair shall be a liaison to the EDP, with the SPC vice-chair as alternate. A representative from IODP-MI shall attend each EDP meeting. Representatives from the IOs shall also be invited to attend the meetings. EDP will send a liaison to SSEP meetings.

SPC Consensus 0708-13: The SPC accepts the recommended changes to the terms of reference of the Engineering Development Panel (EDP) concerning attendance of an EDP liaison at Science Steering and Evaluation Panel (SSEP) meetings, as presented in EDP Consensus 0707-03.

8.6 Industry-IODP Science Program Planning Group (IIS PPG)

Tim Byrne, SPC liaison to the July 2007 IIS PPG meeting, reviewed the highlights of that meeting and presented several consensus statements. He provided an update on the progress of projects from the January 2007 IIS PPG meeting, noting that: the South Atlantic rifted margins project was included in the Continental Breakup and Birth of Oceans mission proposal (720-MP); Mesozoic source rocks and paleo-oceanography white paper and pre-proposal are moving forward; there is still strong interest in the Arctic and a white paper is in progress; an IIS PPG Workshop was successful in attracting Japanese industry; there still seems to be a need for formal alternates, but no consensus on who might/should pay. Other items addressed at the July 2007 meeting included: the future of IODP-industry collaborations (e.g., via an industry task force or PPG); a possible change in role of the IIS PPG from nurturing proposals to nurturing collaborations, for which the IIS PPG requested confirmation from the SPC that this is appropriate; and nomination of Andrew Bell as a new member. The next meeting is planned for January or February 2008 in Europe.

Referring to the suggested possible change in role of the IIS PPG, Becker noted that while there was no specific request for a change in mandate, it did appear that the IIS PPG wanted to de-emphasize the most important aspects of its mandate. He suggested that the SPC could encourage the PPG as long as they do not de-emphasize these important aspects. Larsen

commented that the IIS PPG was set up under a very different scenario, and that now with ships not operating year-round, the role of the PPG needs to be reconsidered. Talwani stated that during the July IIS PPG meeting there was discussion about whether the PPG should be disbanded, which was followed by a suggestion for one more meeting. After a successful workshop it seems they now do not want to disband or have just one more meeting. Byrne confirmed that this was the case. He suggested that the PPG is confused about the Industry Task Force. Byrne indicated that he thought the task force would be outside the SAS. Becker confirmed that this is correct, because task forces are IODP-MI groups and industry work done outside the IODP cannot include planning by the SAS.

Byrne presented several IIS PPG consensus statements. Referring to IIS PPG Consensus 0707-01 on an Industry Task Force, Becker commented that the SPC could endorse the recommendation, but could do nothing more because task forces are the responsibility of IODP-MI. He asked whether the IOs and IODP-MI think the formation of such an Industry Task Force would be helpful. Divins stated that he was not certain that a formal group such as a task force would be beneficial. He suggested that what is needed are specific people who have industry contacts, and that it was more of a business issue and not a science issue. Talwani stated that the IODP-MI cannot form an Industry Task Force as suggested by the IIS PPG. He suggested ignoring this issue. Becker commented that the SPC could just receive the recommendation, note that it is not within the purview of the SAS to deal with it, and forward it to IODP-MI and the IOs. MacLeod commented that to deal with this issue required knowing if there would be more than one meeting. Katz stated that for anything related to industry-IODP interaction, industry scientists have no control of funds, and therefore the management people with control of the money need to be addressed in a different manner. Byrne suggested that there was a need to educate industry scientists, since the people with money will ask the scientists if the science is good. MacLeod agreed. Katz stated that what industry needs to know is what has to be done, and how much it will cost for something to happen. With no further discussion, Becker's recommendation to receive IIS PPG Consensus 0707-01 was accepted by consensus. Becker also recommended that the SPC receive IIS PPG Consensus 0707-03 on an industry drilling consortium; this was accepted by consensus without further discussion.

IIS PPG Consensus 0707-01: SASEC Consensus Statements 0706-07 and 0706-08 represent radical changes in the manner with which academic scientists collaborate with industry in ocean drilling. The "Deal" between academic scientists and the funding agencies and the drill ship operators is changing dramatically. We recommend that options for pursuing substantial industry support for the IODP drilling platforms be pursued by an Industry Task Force (ITF) independent of the IODP SAS. The ITF would consist of representatives from the petroleum industry, the Implementing Organizations, IODP-MI and SAS (ex-officio) facilitated by IODP-MI.

IIS PPG Consensus 0707-03: The industry members of IIS PPG would like to investigate the potential of using platforms currently utilized by IODP for industry developed drilling consortiums. A possible project envisioned could be, for example, an Arctic basin analysis program. In order to proceed in a timely manner, we request that IODP-MI ascertain the level of interest of the IO's in pursuing and facilitating this approach to solving IODP funding issues. If there is interest, prior to the IIS PPG or ITF engaging the entire industrial community to inquire about creating this consortium, we need the following information that will drive corporate decisions: (1) the approximate cost of the ships for drilling in both ice free and ice covered locations in the Arctic, (2) the drilling capabilities of each ship, (3) the scheduling and availability, and (4) the fiscal responsibilities (liability, etc). While this

potential program would be driven by industry interests we believe that there could be significant opportunities for scientific collaboration with academia and government.

SPC Consensus 0708-14: The SPC commends the Industry-IODP Science Program Planning Group (IIS PPG) for its efforts in developing IODP-industry collaborations, both within and outside of the program. The SPC receives IIS PPG Consensus 0707-01 and Consensus 0707-03 and forwards them to IODP-MI and the Implementing Organizations with SPC encouragement to further develop industry collaborations as described in those consensus statements.

Referring to IIS PPG Consensus 0707-02 on a change to its mandate, Becker asked if the white papers written by the PPG would be made public. Larsen commented that he would not approve the next IIS PPG meeting without seeing the white papers. Becker stated that the SPC did not need to formally respond to the meeting plan embedded in IIS PPG Consensus 0707-02, as the eventual meeting request would be subject to normal approval by the SPC chair and IODP-MI Vice President for Science Planning.

IIS PPG Consensus 0707-02: Given the already strong proposal pressure and the much reduced availability of the IODP drilling platforms for the remainder of the program, there is little point in further “promoting development of IODP drilling proposals to address industrial priority research within SAS or within the context of the ISP”. We recommend an IIS PPG meeting in France (Paris?) in January-February 2008 to complete the white papers and to consider other avenues for pursuing academic-industry liaisons within SAS (for example, more mini-workshops similar to the Tokyo workshop).

Referring to IIS PPG Consensus 0707-05 on funding for travel, Becker suggested that the SPC could receive this request and forward it to the Program Member Offices (PMOs). With no further discussion, this was accepted as a consensus.

IIS PPG Consensus 0707-05: We request that SPC and the National Funding Agencies sort out all funding issues with respect to IIS PPG member travel reimbursement. To be effective, the IIS PPG needs members from multi-national oil companies and negotiating “who pays the travel” is not an effective use of IIS PPG time.

SPC Consensus 0708-15: The SPC receives IIS PPG Consensus 0707-05 regarding travel support for Industry-IODP Science Program Planning Group (IIS PPG) members and forwards their concern to the Program Member Offices (PMOs), which are responsible for providing travel support.

Referring to the recommendation to appoint Andrew Bell as a new member of the IIS PPG in IIS PPG Consensus 0707-04, Becker asked who would pay for his travel support. He noted that this vacancy is not for an ECORD-entitled member, but that it represented an extra slot, and ESSAC or Shell would have to agree to cover travel costs. MacLeod responded that normally costs would be met by the national office of the country of the member, which in this case would be IODP-Netherlands. In this case, however, he noted that Bell is British, but posted in the Netherlands and IODP-Netherlands has an issue with paying his costs. MacLeod asked for guidance. Becker replied that this was outside the SAS and that it was a PMO issue since they paid the travel costs. Ruppel asked what specific expertise Bell would bring to the IIS PPG. Byrne did not know. Becker suggested that the panel look at Bell’s CV, then return to this issue on Thursday. On Thursday, Bekins reported that Bell was a basin modeler with a quantitative approach and international experience; she supported his membership. Becker suggested that the SPC could appoint Bell, but travel funding would be

a European issue. MacLeod agreed to this suggestion. A straw vote showed unanimous support for the appointment of Bell to the IIS PPG.

IIS PPG Consensus 0707-04: We recommend that the SPC appoint Andrew Bell (Shell) as a new member of the Industry-IODP Science Program Planning Group (IIS PPG), replacing resigned member Neil Frewin, effective immediately.

SPC Consensus 0708-16: The SPC appoints Andrew Bell as a new member of the Industry-IODP Science Program Planning Group (IIS PPG), replacing resigned member Neil Frewin, effective immediately.

Byrne presented two other IIS PPG recommendations. Addressing IIS PPG Consensus 0707-06 on IIS PPG participation at the proposed 2008 IODP rapid climate workshop, Becker stated that a regular application process existed, and Rudolf should apply to attend the workshop. Referring to IIS PPG Consensus 0707-07 on technical sessions at various meetings external to the IODP, Becker commented that this shows that the IIS PPG is fulfilling its mandate, however the same comment applied regarding a regular application process. The SPC took no further action on these two items.

IIS PPG Consensus 0707-06: We recommend industry participation at the IODP rapid climate change workshop if approved (Kurt Rudolf).

IIS PPG Consensus 0707-07: We recommend that technical sessions and/or panel discussions be held at AAPG, GSA and/or EAGE (Kurt Rudolf, Andy Pepper, and Marty Perlmutter to evaluate).

8.7 Hotspot Geodynamics Detailed Planning Group (DPG)

DPG chair Bob Duncan reported on the work of the Hotspot Geodynamics DPG, which met once in January 2007. He began by reviewing the mandate of the DPG, noting its purpose was to review current approaches and develop an optimal drilling, logging, and post-expedition science plan for addressing themes of hotspot-generated volcanic lineaments, including hotspot motion, the temporal evolution of hotspot mantle sources, plate-motion reference frames, and mantle-plume models, with focus on three proposals: 620-Full3 (Hotspot Seamounts), 636-Full2 (Louisville Seamount), and 669-Full (Walvis Ridge Hotspot).

Duncan reviewed the topics addressed by hotspot geodynamics studies: mantle-based reference frame - moving hotspots and rigid plates; “true polar wander” - if it exists, how much; deep mantle convection -scale and timing; mantle physical properties - viscosity, etc.; mantle heterogeneity and chemical regimes; plume dynamics. He briefly reviewed the results of ODP Leg 197, which show a progressive southward drift of the Hawaiian hotspot during 81–49 Ma. Duncan gave an overview of mantle flow modeling and resulting predictions for hotspot tracks using moving and fixed plume sources. He noted that variable hotspot drift and rigid plate motion can be reconciled for the Pacific plate, but stressed that the key for doing this is to get good paleolatitudes and ages for globally distributed hotspot tracks, and for a comparable time interval (45-80 Ma). Duncan showed model predictions for various hotspot drifts and polar motion for different hotspots (Hawaii, Louisville, Reunion, Kerguelen, Tristan).

Duncan presented the DPG’s recommendations for a global program: (1) 3-4 additional hotspot tracks, globally distributed; (2) paleolatitudes at ages comparable to Emperor seamount sites (80, 61, 56, 49 Ma); (3) radiometric ages (many dredge sites for context); (4)

synthetic plate polar wander paths from continents and oceans; (5) and geochemical data to assess hotspot-ridge and plume-lithosphere interactions (T, depth and evolution of plume source). He reviewed three proposals in the system. Proposal 636-Full2 (Louisville Seamount) is the Pacific plate complement to Emperor drilling which will provide a clear paleolatitude test of hotspot motion ($\sim 0^\circ$) versus polar motion ($\sim 15^\circ\text{S}$). Duncan noted that the site survey for this proposal was complete, and that the data were being processed (29 dredge sites on 21 seamounts; 79 seismic lines with 69 crossing points on 22 seamounts). Proposal 620-Full3 (Hotspot Seamount) is antipodal to Hawaii and will permit a paleolatitude test of hotspot motion ($\sim 0^\circ$) versus polar motion ($\sim 5^\circ\text{N}$). Duncan noted that the 90E Ridge site survey (R/V Revelle) was complete: 23 dredge sites recovered basalts; seismic lines; data being processed. He also noted some concern about faulting and tilting associated with ridge jumps. Proposal 669-Full (Walvis Ridge Hotspot) is the most complete and continuous hotspot track, and will provide mantle-based reference for reconstructions tied to the African plate. It will provide a clear paleolatitude test of hotspot motion ($\sim 0^\circ$) versus polar motion ($\sim 10^\circ\text{N}$). Duncan noted that the site survey dataset for this proposal is incomplete, but that a German cruise is planned.

Addressing priorities, Duncan noted that a paleolatitude test at Louisville Seamount could be performed that should distinguish true polar wander from hotspot drift, thus making this program the top priority. Hotspot Seamount and Tristan-Walvis Ridge were the second and third priority programs.

Sato commented that plume heads are caused by LIPs and asked if this was discussed by the DPG. He also noted that Hawaiian volcanoes are more discrete than continuous and asked about the mechanism. Duncan replied that the DPG did not concern itself with LIPs, and did not focus on discrete versus continuous mechanisms, though this was addressed. He noted that lithospheric thickness is probably important in determining whether the process is discrete or continuous. Ruppel noted that there were three existing hotspot proposals and asked if there was some other location, not addressed by these proposals, that could help answer some of the questions. Duncan stated that the DPG did not discuss hotspots outside the age range of 80–40 Ma. MacLeod asked if the proponents determined paleolatitudes from non-oriented cores. Duncan replied that incomplete recovery was a problem, and that paleolatitudes were based on inclinations. He noted that getting paleolatitudes from sediments is ambiguous, though it was worth looking into anything that can reduce drilling time. Becker asked if there was consensus to accept the report of the DPG, and suggested commending Duncan. He stated that the DPG has fulfilled its objectives, and that its report will become the measure by which the SPC can evaluate the proposals.

SPC Consensus 0708-17: The SPC accepts the final report of the Hotspot Geodynamics Detailed Planning Group (DPG), and commends Bob Duncan for his role as chairman, and the DPG for achieving results quickly with only one meeting.

9. STP report on reduced service options

Discussions on this topic took place under agenda item 17.

10. FY2009/2010 engineering development I – EDP recommendations

Conflicted engineering development proposal proponents (Becker, Flemings), and representatives of the U.S. Implementing Organization (USIO) (Divins, Baldauf and Goldberg) left the room. Jim Mori acted as chair during Becker's absence.

Greg Myers provided a review of FY2007 and FY2008 engineering developments and the FY2009 engineering development plan. He gave a status report on FY2007 engineering developments: (1) long term borehole monitoring system, which is on schedule and within

budget (CDEX); (2) downpipe camera feasibility study, which was completed in April (ESO); and (3) pulse telemetry module feasibility study, which is scheduled to be completed by 30 September (USIO). He also gave a status report on FY2008 engineering developments: (1) long term borehole monitoring system, for which the design was being finalized prior to beginning production of an experimental prototype; and (2) coring study by IODP-MI proposed to occur in FY2008, and designed to define the factors that control quantity and quality, and establish the framework for quantifying core quality.

Myers described how the FY2009 engineering plan was being developed, noting that it began with the implementation of an engineering development proposal process. He described how an engineering development proposal moves through the proposal process, and noted that the SPC evaluates the engineering development plan and technology priorities and provides advice to IODP-MI. Myers reviewed the three classes of engineering development projects: (A) cost < \$100,000, require minimal proposal documentation, may be forwarded to the Engineering Development Panel (EDP) for further review and advice; (B) cost > \$100,000, requires greater documentation, will be forwarded to the EDP for review and advice; and (C) proposals solicited by IODP-MI based on advice from the SAS, these are also forwarded to the EDP for review and advice. Myers listed the near-term engineering development focus areas: (1) sampling, logging and coring; (2) drilling, vessel infrastructure; and (3) borehole infrastructure. He presented the general timeline for IODP engineering proposals, which starts with a yearly proposal submission deadline on 15 April. He noted this was an iterative process between reviewers and proponents.

Myers announced that ten engineering proposals were submitted to IODP-MI, and noted that six were returned to the proponents for various reasons, while four were forwarded to the EDP for evaluation. Of these, the three which received an EDP star rating of three or four were forwarded to the SPC for consideration: (1) Simple Cabled Instrument for Measuring Parameters In-situ (SCIMPI); (2) Sediment-CORK (S-CORK); and (3) Motion Decoupled Hydraulic Delivery System (MDHDS). The first two were classified as four stars, the third as three stars by the EDP. Myers described some technical details of the tools and system. He noted that the SCIMPI was much cheaper (~90%) than a traditional CORK, and that the S-CORK was similar but only does temperature and pressure measurements. The MDHDS is for making reliable in situ formation pressure measurements.

Referring to the SCIMPI and S-CORK tools, MacLeod asked how much borehole collapse was needed for the device to work, and noted that soft sediments do not normally totally collapse. Myers replied that it was not known how much collapse was needed. Asked by MacLeod how one would know if the borehole did collapse and the tool was working well, Myers replied that the proponents claim this can be determined from pressure data. Behrmann noted that in accretionary wedges, holes do totally collapse (and that the problem was usually trying to keep the hole open). Bekins asked for more details. Mori asked what tools were in the SCIMPI. Myers explained it contained tools for pressure, temperature and sampling. Mori observed that the SCIMPI and S-CORK tools seemed to do very similar things. Myers agreed and noted that they are both substantially cheaper than regular CORKs.

Myers presented the FY2009 engineering development plan. He noted that CDEX will continue construction and testing of the long term borehole monitoring system, building on work done in FY2007-2008. For both the SCIMPI and S-CORK the FY2009 plan calls for the re-phasing of both proposals so that the high-level system design of each is completed first, and for collaboration between proponent groups on the design of overlapping items, with construction to begin in FY2010. IODP-MI will solicit proposals for a common deployment system for both observatories. Allan asked if the proponents had agreed to go

forward with this plan. Myers confirmed that he had spoken to both proponent groups and they had accepted this plan. Myers noted that the FY2009 plan also includes development of the MDHDS, a system which would facilitate the acquisition of meaningful in-situ pressure measurements on riser and riserless platforms and provide a real-time link to the surface for use by pressure tools and core barrels.

Myers presented some “science driver” statistics, noting that of the 38 drilling proposals residing with the SPC, OTF, or scheduled, 14 included an observatory, and of these, 8 could be simple observatories. He also reported that 16 of the 38 proposals include in situ pressure measurements.

Myers reported on planning for a Joint Industry Project (JIP) engineering field trial with DeepStar. He explained that the IODP-MI, USIO, AGR and BP are submitting a proposal to study the steps required to deploy and test AGR’s Riserless Mud Recovery system at ultra-deep (>1500m) sites in the Gulf of Mexico. Myers noted that a successful test would provide the impetus for drilling and exploration in water depths greater than 4000m. He concluded by reviewing the engineering information available on the IODP web site.

Mori explained that the SPC was being asked to endorse the FY2009 engineering development plan. Ruppel said she was unhappy with the inability of IODP-MI to decide between two very similar systems (SCIMPI and S-CORK) that do almost the same thing, and wondered why both are included in the program plan instead of choosing one. She noted that industry talks about direct push systems, and wondered why the program was looking at two tools that were deployed in a similar way, instead of looking at one of these and a direct push system. She asked why IODP-MI was not making the “hard decision”. Myers explained that it was prudent to do high level design on both systems, but that there was no commitment at this point for an end product. After the high level design a decision would be made on which tool to proceed with. Ruppel expressed satisfaction with this approach. Allan pointed out that any development of either or both tools depends on their inclusion in future program plans that would need the approval of the lead agencies, and would require available funds. Janecek noted that hopefully this process will get the proponent groups talking and stimulate competition, which should result in a better product. Mori suggested that the SPC could make a statement that, in the end, it wants to see the development of only one of the two tools. Janecek explained that, after the high level design is finished, the SPC would be presented with a description of the next step, costs, and merits for moving ahead separately or combined, and its advice would be solicited. He noted that this was an iterative process that needs to be started early.

Referring to the MDHDS, Bekins noted that the colleted delivery system used at present (which is supposed to telescope when the ship heaves) does not work all the time and is the weakest part of making in situ measurements. She strongly endorsed the MDHDS approach and the work on this system, and asked why it received three stars from the EDP instead of four. Myers explained that there were technical issues regarding seals, but that a recent response letter from the proponents would probably change this to a four or five star proposal.

Returning to CORKs, Quinn stated that the 90% savings justifies the development of the new CORKs. Bekins asked if the high level design includes a plan for testing with documentation. Myers suggested it could be stipulated to add this to the high level design document. Bekins recommended standardization of the CORKs, which is why good documentation would be needed, with information on calibration, leak issues, other things that staff on the ship need to know. Myers suggested that this was getting beyond the scope of a high level design document. Janecek stated that what Bekins described would be considered as part of

development of third party tools. Bekins explained that she wanted to be sure that the proponents have these issues in mind during development. Allan noted that the proponents have tried to get funding from other sources, and stated that the fact that IODP-MI is providing an opportunity for high level design is a really good thing, as it will clarify the need for everyone and lets the program as a whole see the need and benefit of these devices. He suggested that having a high level design document will greatly facilitate the development process.

Mori asked if there was a consensus to endorse the FY2009 engineering plan, with a phased approach for the development of the SCIMPI and S-CORK tools leading to the ultimate development of one tool at the end. Quinn questioned the need to stipulate that the only one tool should be developed in the end, because this might inhibit collaboration. Mori agreed that the important point was to endorse the phased approach. The committee agreed by consensus.

SPC Consensus 0708-18: The SPC endorses the FY2009 engineering development plan including development of borehole measurement tools, and specifically a phased approach (starting with high level system design) for the development of the SCIMPI (Simple Cabled Instrument for Measuring Parameters In-situ) and S-CORK (Sediment-CORK) tools.

Filippelli asked about the advantages of a good push system (e.g., cone penetrometer) versus drilling. Myers replied that the proposed observatories are more suited to the needs of the program in comparison to push systems.

11. SPC review of OTF proposals II – categorization of proposals

Continued from agenda item 7. Becker noted that in several cases the watchdogs had difficulty in deciding between the B and C classifications, which he emphasized had similar outcomes, i.e., in both cases the proposals were returned to the SPC for re-review and ranking; only the message returned to the proponent would be different. Becker asked if the classification scheme should be for internal SPC use only. Both Quinn and Larsen voiced concern over the scheme, and there was a general agreement among the committee to use the classification scheme only for internal SPC discussions. In addition, it was agreed that the classifications would not appear in the minutes. Discussions continued from Monday led to a consensus decision for each proposal with one of two possible results: leave at OTF as high priority Group 1; or return to the SPC for re-review and ranking at the March 2008 meeting. Proponents of proposals returned to the SPC will receive a written review, which will include a lead paragraph from the chair. The disposition of each proposal is shown in the table below.

For proposal 505-Full5 (Mariana Convergent Margin) the original watchdog recommendation was to leave the proposal with the OTF as a Group 1 proposal without the observatory component, which, especially given the cost of CORKs, the watchdogs felt needed better justification. The committee agreed that the proposal represented high priority science and briefly discussed whether removing the CORK component would affect this view. The following motion passed:

SPC Motion 0708-19: The SPC leaves proposal 505-Full5 (Mariana Convergent Margin) as a coring program only (without CORKs) as a Group 1 proposal at the Operations Task Force (OTF).

Mori moved, Bekins seconded; 16 in favor, none opposed, 1 abstained (Quinn).

A similar discussion ensued for proposal 633-Full2 (Costa Rica Mud Mounds); however, there was not strong support to leave this proposal at the OTF as a Group 1 proposal without CORKs. A motion was made to leave the proposal at the OTF as a Group 2 proposal without CORKs. This motion did not receive the required affirmative vote of at least two-thirds of all

members present and eligible to vote; hence proposal 633-Full2 was not considered in subsequent scheduling options by the Operations Task Force during its 29 August 2007 meeting. [Note: although the names of the opposed voters for all motions are normally recorded by the science coordinators and listed with the motion, the names of those opposed for this motion were mistakenly not recorded.]

SPC Motion 0708-20: The SPC leaves proposal 633-Full2 (Costa Rica Mud Mounds) as a coring program only (without CORKs) at the Operations Task Force (OTF) as Group 2 for FY2009/2010 scheduling.

Behrmann moved, MacLeod seconded; 9 in favor, 6 opposed (names mistakenly not recorded), 2 abstained (Quinn, MacLeod).

| Proposal | Short title | Disposition |
|---|--|---|
| OTF proposals with observatory components | | |
| Watchdogs: Barbara Bekins, Harue Masuda, Carolyn Ruppel; Conflicts: D'Hondt | | |
| 505-Full5 | Mariana Convergent Margin | Leave with OTF as Group 1 (as a coring program only without CORKs) |
| 537A-Full5 | Costa Rica Seismogenesis Project Phase A | Return to SPC |
| 537B-Full4 | Costa Rica Seismogenesis Project Phase B | Return to SPC |
| 553-Full2 | Cascadia Margin Hydrates | Return to SPC |
| 589-Full3 | Gulf of Mexico Overpressures | Return to SPC |
| 633-Full2 | Costa Rica Mud Mounds | Return to SPC |
| 677-Full | Mid-Atlantic Ridge Microbiology | Leave with OTF as Group 1 |
| 693-APL | S. Chamorro Seamount CORK | Leave with OTF as Group 1 |
| OTF riser proposals | | |
| Watchdogs: Jan Behrmann, Gabe Filippelli, Jim Mori | | |
| 537B-Full4 | Costa Rica Seismogenesis Project Phase B | Return to SPC |
| 595-Full3 | Indus Fan and Murray Ridge | Leave with OTF as Group 1 |
| OTF Mission Specific Platform (MSP) propsoals | | |
| Watchdogs: Terry Quinn, Steve D'Hondt, Chris MacLeod | | |
| 548-Full2 | Chicxulub K-T Impact Crater | Return to SPC |
| 581-Full2 | Late Pleistocene Coralgall Banks | Return to SPC |
| 637-Full2 | New England Shelf Hydrogeology | Return to SPC |

Becker displayed a list of other proposals previously forwarded to the OTF, but not dealt with at this meeting:

Proposals forwarded to the OTF in 2003-2006:

- 477-Full4 (Sea of Okhotsk Plio-Pleistocene);
- 549-Full6 (Northern Arabian Sea Monsoon);
- 605-Full2 (Asian Monsoon).

Proposals forwarded to the OTF in March 2007:

- 522-Full5 (Superfast Spreading Crust);
- 552-Full3 (Bengal Fan);
- 644-Full2 (Mediterranean Outflow);
- 654-Full2 Shatsky Rise Origin;
- 659-Full (Newfoundland Rifted Margin);
- 661-Full2 (Newfoundland Sediment Drifts).

Becker asked if these proposals should be left with the OTF (as in the plan approved by the SASEC), or should they be returned to the SPC for re-review and ranking. Filippelli noted that nothing about these proposals has changed recently and therefore recommended leaving them with the OTF. Byrne wondered if there were any proposals in this list that the SPC was prepared to classify as “must be done” (prior to 2013). Becker noted that watchdogs for these proposals had not been assigned, and that there were members of the committee who are not familiar with some of these proposals. Ruppel claimed there was a limit to how many of these could be done by renewal (2013) and that, while they could be left at the OTF for flexibility in scheduling, perhaps they should be returned to the SPC for re-review and ranking in March 2008. Becker noted that this would be equivalent to putting them in Group 2. Quinn countered that he did not see a need for these proposals to go back to the SPC, and that there was a need to maintain flexibility for scheduling purposes. Janecek noted that, in terms of what could be done by 2013, the above list of nine proposals could in fact be completed by 2012. From an IO perspective, Baldauf expressed concern that if these proposals were moved back to the SPC it could affect long-term planning. Bekins noted that the minutes for the March 2007 SPC meeting indicated that *all* proposals at the OTF would be revisited; she suggested putting all of these proposals in Group 2, and those not scheduled at the 29 August 2007 OTF meeting should go back to the SPC.

Subsequent to the 29 August 2007 OTF meeting (see agenda item 20 for relevant discussions and results), Ruppel suggested leaving the above proposals with the OTF for now, but after the ranking exercise at the March 2008 SPC meeting, and considering the locations of the proposed drilling in relation to the projected ship track, prioritizing this group of proposals using the same process used for the other OTF proposals reviewed at this meeting. Mori pointed out that there may be a problem in reviewing that many additional proposals in March. Ruppel suggested giving mini-presentations for each proposal (e.g., five minutes). Mori agreed that in March the above list of proposal should in fact be looked at, together with any newly ranked proposals. Becker asked if there was a consensus for this suggestion.

SPC Consensus 0708-21: In addition to any new proposals forwarded by the SSEP for SPC review and ranking at its March 2008 meeting, the SPC will review and rank those proposals that were previously forwarded to the Operations Task Force (OTF) with the exception of those that were identified at this meeting as clear Group/Tier 1 proposals or those that might appear in the FY2009/2010 schedule options to be approved by the SPC after further OTF schedule development this fall.

12. Complementary Project Proposals

Keir Becker gave a brief overview of the Complementary Project Proposal (CPP) concept. He presented a SASEC consensus on the CPP concept:

SASEC Consensus 0706-08: SASEC endorses the concept of the Complementary Project Proposal for hybrid IODP projects with substantial external funding, and the evaluation criteria as set out in the June 5, 2007 concept description. In light of the current IODP budget situation, SASEC urges SPC to formally adopt Complementary Project Proposals as an IODP planning mechanism, and to refine the SAS evaluation process for such proposals as appropriate. Ideally, such proposals could be accepted as soon as the October 1, 2007 IODP proposal deadline.

Becker noted that CPPs would have to satisfy all the usual requirements for a regular IODP proposal, including approval by the SAS, and the rights to access data and samples, and scientific participation as defined in the Memorandums of Understanding (MOU). Outside funding for CPPs could come from industry, another national agency, a non-IODP member

nation, or a private foundation. Becker described the SAS review process for CPPs, noting that, like an ancillary project letter (APL), a very good CPP could be approved and forwarded to the OTF in a one-pass SSEP+SPC review process. Becker admitted that it was not certain whether there was a demand for this sort of process, but he suggested it should be one avenue available, the other being projects completely outside the SAS.

D'Hondt asked what sort of financial contribution would be required from an external source. Becker suggested it would have to make financial sense for the program, thus probably more than 50%, and perhaps full funding. Byrne asked if CPPs were expected to be of short duration, like APLs. Becker stated they could be of any duration, depending on funding. Filippelli expressed support for the concept as a way to deal with the downtime when the drillships cannot be used by the IODP; he could see no down side. Camoin suggested that an external review process may be useful. Becker replied that a project would be judged by whether it was of sufficient interest and benefit to the program. Quinn observed that there will be a five-month "hole" in the schedule, and if the CPP concept could minimize the duration of this hole it was worth supporting. Ruppel cautioned that with externally funded CPPs some level of IODP funding will be inevitable. She opined that it was hard to imagine how industry would be interested in the concept, though perhaps a national agency might be. She also agreed that the concept would probably rarely be used, but was useful to have as an option. D'Hondt stated that he was OK with the concept, but that it probably would not prove to be a big help to fill the gap in ship time, and he agreed with Ruppel that there would be a cost involved for the IODP which could detract from regular IODP expeditions. He expressed concern that a proponent with, for e.g., \$3-4M for funding half an expedition could circumvent the normal SAS process. Becker stated that in such a case, the SAS would probably not support or recommend the project. Pälke asked who, realistically, could be expected to take advantage of the CPP concept. He also suggested that there would need to be an outreach component to instruct potentially interested parties on how to navigate through the process. Ohkouchi stated that this was the first he had heard of the CPP concept. He noted that through this mechanism, the nurturing process of the SAS is substantially circumvented, which could potentially result in an immature project with big money, but weak science. Becker reiterated that the project would have to be approved by the SAS, and there was a need for a quick decision process – this was essential for the concept. Pälke asked for clarification on the expected amount of external funding required for a CPP. He noted that it would be hard to market the concept without knowledge of the costs. Becker responded that costs were not known, but it was likely that projects that didn't provide 100% funding would not be very successful using this mechanism. Larsen commented that the CPP concept would likely not be of interest to industry. He wondered what would motivate proponents to use this mechanism. Ruppel agreed that likely few would ever use the CPP procedure, but suggested that a possible motivation would be access to the IODP structure, staff in the labs, access to IODP tools, and most importantly, quick implementation. Ohkouchi warned that money is stronger than science, and counseled using very careful wording to describe the CPP concept. Quinn asked for clarification of what was expected of the SPC at this meeting in relation to the CPP concept. Becker explained that the SASEC has urged the SPC to formally adopt CPPs as an IODP planning mechanism.

Becker called for a straw vote to gauge support for the CPP planning mechanism. The straw vote indicated strong support. Bekins suggested it would be useful if the committee had more time to think about the CPP concept. Filippelli stated that he was not against delaying a decision if some members were uncomfortable. Becker stated that if no motion was put forward, the committee would return to this item on Thursday. No motion was put forward.

On Thursday, Becker reminded the committee of SASEC Consensus 0706-08. He also noted that he had put forward the Complementary Project Proposal concept as simply one way to bring external funding into the program while still within the realm of the SAS.

Bekins noted that the IODP is seeking new member countries, and expressed concern that the CPP mechanism might be used by perspective new members instead of joining the program. Allan stated that CPPs would have to go through the program and be approved by the Lead Agencies. D'Hondt wondered to what degree the guidelines for CPPs would need to specify the amount of funding required. Becker stated that the SASEC has asked the SPC to refine the SAS evaluation process for such proposals as appropriate. He indicated that the cost to have a ship sit idle would need to be considered. Ruppel expressed support for the concept, but suggested that it would not save money, since if someone brought in 60% funding, the IODP would still have to contribute 40% funding. Becker suggested that 40% of the cost for an expedition might be less than 100% of the cost to have a ship sitting idle at a dock, so it could still be a net gain. Quinn commented that the goal was obviously to make this an economically viable option, otherwise the Implementing Organizations (IOs) would not be interested if they were to lose money. Janecek asked if, for example, some entity comes up with funding for three months ship time, who would be entitled to the data. Allan explained that the program's rules would apply; that is, if the project was done as part of the program, then the program data access rules would apply. If the three months was outside the program, then the IODP rules would not apply.

Ruppel suggested that a small SPC working group be formed to examine the evaluation process for CPPs. Ruppel and Camoin volunteered to work with Mori to examine the evaluation process. Becker asked for another straw vote in favor of the CPP concept. Receiving strong support he sought, and received, a consensus on SPC endorsement of the Complementary Project Proposal planning mechanism.

SPC Consensus 0708-22: The SPC accepts the concept of Complementary Project Proposals for hybrid IODP projects with substantial external funding as an IODP planning mechanism, and assigns a working group (Ruppel, Camoin, Mori) to examine the evaluation process for such proposals.

13. Initial Science Plan (ISP) Phase 2 Focus I

13.1. SASEC draft principles and foci; charge to the SPC

13.2. SPC discussion – breakout groups if needed

Keir Becker reviewed the SASEC's revised plan for updating the Initial Science Plan (ISP), and again presented the SASEC's guiding principles, implementation principles, and special areas of focus for phase two (to 2013) of IODP (see agenda item 6 for details).

Becker asked if the committee agreed with the list of four focus areas (limits of life - microbial biosphere; rapid and extreme climate and sea level change; seismogenic zone and initiation of borehole observatories; deep crustal section, e.g., 1256D), and he noted that three ISP initiatives did not appear in this list (gas hydrates, continental breakup and sedimentary basin formation, and large igneous provinces (LIPs). MacLeod suggested deferring the discussion until after reviewing the mission proposals, because, for example, selecting continental breakup as a theme would necessitate changing the focus areas. D'Hondt suggested that, on the other hand, discussion now could be used to guide the discussions of mission proposals. He asked how to propose minor changes to the document. Becker responded that minor wording changes could be given directly to himself. Pălike asked how the list of four focus areas arose. Becker explained that the SASEC had discussions prior to meeting in June 2007, and that members of the SASEC suggested the four focus areas (Hayes suggested limits of life – microbial biosphere, Miller and Wefer suggested rapid and extreme

climate and sea level change, Kimura suggested seismogenic zone and initiation of borehole observatories, and Tatsumi suggested deep crustal section). Ruppel commented that, although she had no issues with the list, the membership of SASEC presumably played a large role in deciding the items on the list. Addressing renewal of the program in 2013, Ruppel ask if the NSF had any advice for what was need to argue for renewal. Allan stated that renewal was a new process which he has not previously been involved in. He suggested that by 2011 significant results to argue for renewal should be obtained. He noted that the initial phase of IODP was the most successful period ever for scientific drilling. In contrast to the good start with many exciting results, he mentioned that in the last year he has had to defend this program, many aspects of which, but not all, were defensible. He suggested that the goals of the program had to be focused and that everyone needed to think about what was really important to get accomplished, and what was not. Ruppel commented that without specific advice, the program would effectively be working in a vacuum. Behrmann asked Allan if he believed that the SASEC's four focus areas were defensible themes. Allan replied that they represented a good start. Becker commented that the program has already made a major commitment to NanTroSEIZE and expeditions to 1256D, so it is already making significant progress in addressing the seismogenic zone and deep crustal initiatives. Ohkouchi commented that presumably the four focus areas will have a major impact on whether a mission will be designated. Becker agreed that this was probably true. Filippelli asked if the four focus areas would be guiding principles for individual proposals, and would they need to be considered when ranking. Becker said yes, but only until 2013. He also noted that the process for writing a new ISP will probably start in two years. Sawyer commented that the four focus areas seem unfriendly to industry, and he asked if this aspect was discussed by the SASEC. Becker replied that this was not specifically discussed by the SASEC. He added that industry will likely be more engaged in non-IODP work. Byrne suggested that industry is actually interested in rapid and extreme climate change. Referring to the specific mention of 1256D in the fourth focus area, MacLeod suggested that, since 1256D may give the biggest scientific return, it was appropriate to specifically mention it. Becker asked the committee to think about the proposed focus areas and be prepared to formulate a response under agenda item 16.

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| Wednesday | 29 August 2007 | 09:00-17:30 |
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14. Mission proposal review I

14.1. Objectives of review and procedures

Conflicted meeting participants (MacLeod and Sawyer) left the room.

Keir Becker noted that the goals of missions were to allow the IODP to: (1) address its scientific goals and initiatives effectively, efficiently, and within budgetary constraints; and (2) engage a broader array of scientific stakeholders, including a younger generation and new communities. He reminded the committee that a mission is defined as “an intellectually integrated and coordinated drilling strategy originating from the scientific community that addresses a significant aspect of an IODP Science Plan theme over an extended period and which merits urgent promotion in order to achieve overall IODP program goals.”

Becker reviewed the overarching principles for mission designation: (1) must address scientific themes of global significance and originate from the scientific community; (2) missions do not replace regular proposal process; (3) definition and planning should integrate scientific strategies, technological approaches, management and education and outreach plans; and (4) should be proposed only when there are compelling reasons for development of complex strategies or coordination of multiple expeditions. He also presented the criteria for

mission designation: (1) the plan should lead to considerable scientific success and be a high IODP priority; (2) the compelling reasons for considerable technological development and/or complex drilling strategies require advance planning on a longer term than for typical expeditions.

Becker noted that for each mission proposal, the possible outcome of the SPC review would be one of four options: (1) designation as an IODP Mission; (2) reject (do not resubmit); (3) resubmit at the next mission proposal deadline; or (4) unbundle some, or all of the component proposals and proceed with regular proposals. Referring to option (3) Becker noted that it was not clear if or when there would be another call for mission proposals.

Ruppel asked if, in rejecting a mission, could the SPC also suggest that individual component proposals be rejected also. Becker explained that “rejection” means rejection as a mission, and individual components should not be rejected. D’Hondt expressed continuing confusion over what constitutes a mission. Becker explained that a mission was defined as shown during his presentation. Filippelli noted that there is a distinction between a complex drilling project (CDP) and a mission. He stated that a mission is more than a set of proposals that would not be competitive by themselves. Camoin asked how the component proposals of a mission would be treated by the SAS. Becker explained that the component proposals would go through the usual SAS review procedures (e.g., SSEP, SPC, etc.), and pointed out this was the same for both missions and CDPs. He further elucidated that the SPC was reviewing the “umbrella” mission proposal. Mori suggested that the phrase “merits urgent promotion in order to achieve overall IODP program goals” in the mission definition was an important difference between missions and CDPs or regular proposals. Becker agreed, and suggested that missions are one way by which the scientific community and the SAS can indicate areas which require early scoping. Byrne added that he thought “urgent” also meant that a mission should help with renewal of the program, otherwise, why spend a lot of money. Becker clarified that urgency in the definition refers to the achievement of overall IODP program goals. Bekins stated that she thought missions were also a way to increase inclusiveness, i.e., a group of mature component proposals would be acceptable as a mission, but there should be an additional outreach and education component, and addition of new scientists. Filippelli wondered whether the SPC embraced these aspects, because he felt the comments from the SSEP indicated a different viewpoint for missions; the lack of interest in outreach etc. by the SSEP concerned him. Byrne observed that the Initial Science Plan (ISP) is being focused down to four themes, and missions means focusing in on one theme. He expressed discomfort with this, noting that he would prefer to kick-start all four themes. Becker explained that a top-down approach has been rejected by the SASEC for missions, and he noted that missions do not replace the regular proposal process.

With no further discussion, Becker suggested that the watchdogs make their presentations of the mission proposals, to be followed by presentations on the SSEP and external review panel review process and outcomes.

The SPC review process for the mission proposals was described in detail by SPC chair, Keir Becker, in the following section that was included in the reviews returned to the proponent:

As is normally the case for important SPC action items, the agenda for SPC#10 was organized such that there were two sessions for the mission proposal review: an initial session for information presentation and definition of the matters requiring SPC action, and a second session at least a day later for resolution. Note that the SPC terms of reference specify that SPC decisions, such as potential designation of a mission, are made either by consensus or by affirmative vote of 2/3 of members present and eligible to vote, with 2/3 of the voting membership constituting a quorum.

The first session for the mission proposal discussion – for information and definition of the decision-making process intended for the second session – was conducted during the morning of the third day of the SPC meeting. It was scheduled then partly to maximize the time for SPC members to digest the results of the external mission proposal review panel. Those results were emailed to the SPC members shortly after the external review panel finished August 25.

The first mission proposal session (Agenda item 14) had several parts and took several hours:

1. First, the SPC chair summarized four aspects of the SASEC-approved mission implementation plan: the goals and definition of missions, the principles and criteria specified for mission designation, the right and responsibilities of SPC for designating missions, and the potential outcomes of the SPC review. Extensive discussion followed to clarify any lingering questions on these basic aspects.
2. The mission proposals were then summarized for SPC, one-by-one by watchdog teams of three SPC members with appropriate expertise. The watchdogs summarized the proposed science and the outcomes of the SSEP and external panel reviews. They were also asked to present watchdog team recommendations as to whether the mission proposal should actually be designated as a mission. Questions and full discussion were allowed on each of the proposals.
3. The SSEP co-chair in attendance (H. Pālike) then summarized in more detail the SSEP review process and reasons for their recommendations, again with full discussion in response to questions from SPC members.
4. The IODP-MI Vice President for Science Planning (H.C. Larsen) then thoroughly presented the external panel review process and recommendations, again with full discussion in response to questions from SPC members.
5. The SPC chair closed by summarizing what was to be expected for decision-making at the session scheduled for the following morning. He indicated that, based on discussions so far, it appeared that he would probably have to utilize the straw vote mechanism in the next day's session to get a sense of the committee preferences on each mission proposal, and he urged SPC members to think carefully overnight in attempting to finalize their opinions on each proposal.

The second, decision-making mission proposal session the next morning (Agenda item 19) also had several parts and took several hours:

1. The chair started by reviewing the presentation he had shown the previous day about the process. A fourth slide had been added to clarify issues that had arisen during those discussions and to review alternative or complementary options that had been raised in the SSEP and external panel reviews. SPC members were then allowed to discuss general mission questions further. Note that during this discussion it was decided that the format of the SPC reviews returned to the proponents would include a summary statement from the SPC watchdog teams plus the texts of the SSEP and external panel reviews. After the SPC meeting, it was decided that the SPC reviews would also include this chair's description of the process.
2. SPC then went through the mission proposals one-by-one, allowing for full discussion and with the clear understanding that a straw vote on mission designation would be conducted at the end of each discussion. Because the chair

had assured the committee that the straw vote results would be off-the-record and therefore not reported in the minutes, their outcomes are reported here in only a qualitative sense. But none of the straw votes resulted in even a simple majority in favor of mission designation for any of the proposals.

3. When discussion and straw votes had been conducted on all three mission proposals, SPC took a break to allow for further reflection, understanding that they would need to record formal consensus statements or conduct formal votes for the final decisions on each proposal after the break.
4. After the break, the chair returned to the question of alternative options to advance planning on the three proposed efforts, given that the straw votes had not shown even a simple majority of SPC members in favor of designating any of the three proposals as IODP Missions. We agreed that, no matter what the outcome of the formal decisions to come, SPC should make some sort of positive statements on each, especially those that included component proposals that are already highly-ranked and endorsed for potential scheduling.
5. SPC then went through the mission proposals for a formal consensus statement or motion on each, working in order of least to greatest apparent support as registered in the earlier straw votes. In each case, the floor was opened for further discussion, and the decision was reached only when the chair had verified that there were no further comments.

14.2. Presentations of mission proposals

14.2.1. Mission Monsoon (713-MP)

Watchdogs were Quinn, Ohkouchi and Camoin.

14.2.2. Mission Moho (719-MP)

Watchdogs were Sato, Macgregor and Mori.

14.2.3. Mission Birth of Ocean (720-MP)

Watchdogs were Ruppel, Byrne and Behrmann.

For each of the three mission proposals, the lead watchdogs (Quinn, Sato and Ruppel, respectively) summarized the proposal as explained above in the description of the SPC review process (see agenda item 14.1), and provided an initial mission designation recommendation. This was followed by general discussion by the entire committee.

14.3. Summary of SSEP mission proposal review process

SSEP co-chair Heiko Pälike described the process and criteria used by the SSEP for its reviews of the mission proposals. He noted that the SSEP had been charged to recommend to the SPC whether or not the mission proposals warranted mission designation based on their definition as: (1) an intellectually integrated and coordinated drilling strategy; (2) originates from the scientific community; (3) addresses a significant aspect of an IODP Initial Science Plan (ISP) theme over an extended period; and (4) merits urgent promotion in order to achieve overall IODP program goals. Pälike stated that the SSEP interpreted “urgent promotion” to mean additional resources would be made available to maximize the scientific return. He noted that in the SSEP review process breakout group discussions on the mission proposals were led by five assigned watchdogs and the review procedure was similar to other regular proposals, except the evaluation step which focused on whether the proposals satisfied the four criteria required for mission designation. Following the breakout sessions, in the plenary session discussion, the three mission proposals were evaluated again based on the mission designation criteria to assure the same review criteria were applied to all three proposals. Pälike then provided an overview of the SSEP’s discussion and recommendation

for each proposal. He noted that some SSEP members thought the SSEP reviews should be returned to the proponents.

The committee discussed the results of the SSEP reviews. Quinn and Byrne expressed their appreciation for the efforts of the SSEP in their reviews of the mission proposals.

14.4. Summary of External Mission Review Panel process

Hans Christian Larsen presented a report on the meeting of the External Mission Review Panel, which met just prior to the SPC meeting (24-25 August). He noted that the panel was given the mission proposals only (they were not given the component proposals). In addition the panel was provided with: (1) the mission implementation document; (2) a summary of task and guidelines by IODP-MI; (3) a brief overview of IODP platforms and proposal process; (4) a review of IODP themes, achievements and current plans; (5) information on proposal pressure, but no SAS reviews of proposals; and (6) information on NanTroSEIZE as an example of a mission type program commitment. Larsen summarized the results of the external panel's review for each mission.

The committee discussed the results of the External Mission Review Panel's recommendations.

14.5. Charge to SPC

Keir Becker presented some questions and issues for the panel to consider. He noted that the conceptual mission proposal review process had no nurturing by the SSEP, only by the SPC in its review, while nurturing of component proposals was to be done partly by the mission team and the SSEP. As a procedural issue, he asked the committee whether the reviews by the SSEP and external review panel should be included with the SPC reviews. Quinn stated it would be helpful to give the proponents a spectrum of information. Becker agreed. Ruppel voiced concern over any differences of opinion between the SSEP and external review panel and final SPC review. Pälke commented that he believed the SSEP would enthusiastically support returning the SSEP reviews to the proponents. Byrne agreed that the SSEP and external reviews should go back to the proponents. Pälke suggested that the SPC reviews should include a covering paragraph to explain the entire review process. With general agreement by the committee to include the SSEP and external reviews with the SPC reviews, Becker instructed the watchdogs to write their reviews in that context. He reminded the committee of its charge and the possible outcomes of the reviews (see agenda item 14.1). If a proposal was not designated as a mission, Becker asked the committee to consider whether a Detailed Planning Group (DPG) should be formed with a specific task. If there was a clear need to attack technological issues, Becker suggested the committee could encourage IODP-MI and the Engineering Development Panel (EDP) to form a Program Planning Group (PPG) or Task Force. With no further discussion, Becker noted that the SPC would decide on mission designation on Thursday under agenda item 19

15. IODP FY2009/2010 scheduling I – OTF options

Discussion on FY2009/2010 scheduling was deferred to agenda item 20.

16. Initial Science Plan (ISP) Phase 2 Focus II – develop SPC recommendations

Keir Becker reviewed the SASEC's guiding principles for phase two of the IODP (see agenda item 6). Becker then posed a hypothetical question: what if an extremely important mission specific platform (MSP) operation appears that requires three years of platform operation cost (POC) funds? Mével recommended more flexibility in the language. Quinn, however, favored keeping the current language and suggested that if such an MSP operation appears, the SPC can reconsider the minimum requirement for one MSP operation every two years. Evans pointed out that, from an ECORD Science Operator (ESO) perspective, if there was to be

only one MSP operation every three years, it would be very hard to keep the Implementing Organization (IO) structure together. He stressed that ECORD was paying quite a lot to maintain the presence of ESO within the IODP structure. Becker pointed out that if an extremely high priority MSP operation comes up, the SPC would prefer to have the flexibility to consider scheduling it. Pälke noted that the sixth guiding principle (societal relevance) was vague and, if it is to be included, needs clarification as to what it means. Quinn suggested that a lot of time could be spent trying to define “societal relevance”, and that perhaps some ambiguity would be helpful. Ruppel expressed concern that the guiding principles document would become the standard for judging proposals, and if this were the case, there are several proposals that would not meet the guidelines. Becker explained that the plan was to publish the guiding principles document as an implementation plan; it would be an addendum to the ISP, which has an obsolete implementation plan. He mentioned that the SASEC would apply the guiding principles when approving a program plan, i.e., the principles would be applied to the portfolio of proposals in a program plan. Behrmann commented that he believed these guiding principles were already being used. Bekins noted that the implementation document in fact states that the principles would be used in the proposal review process. Becker said that the SPC could request that the document be reworded to address this concern. There was general agreement amongst the committee to request that the document be changed to remove the reference to proposal review. Ruppel voiced concern that in the future the SSEP will start to use these principles in their reviews. Becker promised to raise the issue with the SASEC and to ask for more careful wording.

Becker reviewed the SASEC’s implementation principles for phase two of IODP (see agenda item 6). Quinn wondered about the meaning of “pioneering challenging environments”. Pälke claimed that all of the points were obvious for the program, e.g., “optimize operating days”, and wondered why they were necessary. Becker explained that, for the cited example, the other option was to maximize operations with cheaper programs. Allan declaimed that the bottom line for renewal depends upon science results. He suggested not limiting any implementation options. He explained that the SPC should be setting the science plan, giving its advice to IODP-MI, which manages the program and which works with the IOs to set up operational schedules, and a program plan for the lead agencies. He suggested that the SPC should not become involved in management decisions. D’Hondt recommended adding “achieving major milestones” for all platforms, and removing the reference to NanTroSEIZE.

Becker again reviewed the four initiatives recommended by the SASEC as areas of special focus for phase two of the IODP (see agenda item 6). Pälke commented that what is missing is a stocktaking of what has been achieved. He suggested that the SASEC should provide a more detailed quantitative discussion of achievements. He also noted a major difference in the style of the four focus areas, e.g., “rapid and extreme climate and sea level change” is very broad, while others are more detailed and refer to specific projects (e.g., “deep crustal section” refers to Mohole). He suggested a more consistent style.

Camoin noted that the wording of the four initiatives presented by Becker, and included in the agenda book, are different with respect to the more recent *IODP Implementation Plan: 2008-2013* document (2nd draft; 20 August 2007). Wording of the initiatives in this document is: (1) the deep biosphere and the limits of life; (2) rapid and extreme climate change; (3) processes of ocean crust formation and a deep crustal section; and (4) the seismogenic zone and initiation of borehole observatories. Both D’Hondt and Quinn expressed concern about the change in wording and wanted to see the revised document, which in fact had been distributed to the committee approximately one week prior to the SPC meeting.

Becker asked the committee for any comments on the list of focus areas. Marumo asked what was meant by “limits of life”. Becker explained it could mean anything that limits life: depth, temperature, nutrients, environment, etc. Bekins noted that there was no mention of fluid flow making it possible for sub-seafloor life. D’Hondt recommended adding a sentence to explain that the four initiatives are focus areas, and there is no intention to exclude projects with other foci. Becker agreed, and noted that this point was made to the SASEC, so it should appear (in a revised document). Mori commented that he had no problem with mentioning borehole observatories up front, but the description of the initiative in the text says almost nothing about borehole observatories, and should say more. Ruppel wondered what aqueous geochemists would think of the list. Becker clarified that the reference to borehole observatories was a reference to NanTroSEIZE specifically, not to observatories in general. MacLeod pointed out that fluids will be dealt with extensively in three of the initiatives, though not explicitly mentioned.

Becker noted that he had not heard a strong call to make any changes to the list. Quinn noted that the implementation document states that over the next six years an IODP priority will be a Mohole on fast spreading crust, and wondered if that did not bear on previous discussions. Becker concurred. MacLeod suggested that whether or not a mission for a Mohole is approved affects whether addressing topics on 1256D is an appropriate way forward. Ruppel expressed concern that perhaps all members of the committee had not read the document, and if so, some will not be happy with it. Becker emphasized that the SPC had been charged with reading it.

Becker again asked the committee if it was content with the four focus areas presented. D’Hondt responded that he was happy with the first two, which were within his area of expertise, but that he would let others comment on the other two. Byrne stated he was not comfortable with the specific reference to 1256D in the fourth initiative, because it seems to indicate a commitment to returning to that hole no matter what. Mori agreed, and noted that, on the other hand, there was no mention of Nankai. Becker asked if there was dissatisfaction with the wording only, not the topics, and he reminded the committee that the text in his presentation was his own, not the text in the implementation document. D’Hondt noted that Nankai was in fact mentioned in the document. Ruppel asked if the SASEC were suggesting that these four focus areas were intended to meet the guiding principles. Becker replied that this was a good comment to send back to the SASEC; Byrne agreed.

Becker announced that Mori had a plan for dealing with the text: for each of the four topics, one SPC member would volunteer to collect and collate comments from other members. The comments should be received within one week, and collated within two weeks and sent back to the SASEC. Becker requested four volunteers. Steve D’Hondt volunteered for “limits of life - microbial biosphere”; Gilbert Camoin volunteered for “rapid and extreme climate and sea level change”; Tim Byrne volunteered for “seismogenic zone and initiation of borehole observatories”; and Keir Becker volunteered for “deep crustal section”. Becker requested that comments on other parts of the document be sent to himself within one week. Ruppel questioned whether it was appropriate for the document to specifically refer to scheduled expeditions and proposals that have not been scheduled. D’Hondt asked if, after the changes were implemented, would the document be circulated amongst the committee for final comments. MacLeod agreed that the entire committee should get a chance to review it to make sure all parts are acceptable. Becker reminded the committee that the document was circulating amongst the SASEC right now, and that there would be a public period of comment. He then returned to the question posed by Ruppel and asked if the SPC was comfortable, or not, with the mention of specific expeditions and proposals in the document. Mori expressed concern about an apparent endorsement of proposals, though he was not

concerned about the references to scheduled expeditions. Byrne instead recommended that proposals or expeditions that have not been drilled should not be mentioned. Bekins asked about the intended audience for the document. Becker again explained that it would be published as an addendum to the ISP, basically as a revised implementation plan. Bekins then suggested that, in keeping with the style of the ISP, it was not appropriate to mention specific sites, such as 1256D. D'Hondt agreed that the document can, and should, be retooled to not mention specific sites. Mori asked if that meant Nankai should not be mentioned. Byrne suggested taking the ISP as a guide, i.e., it is acceptable to mention 1256D in the text, but not in the title of a focus area. Becker closed off discussion.

The committee briefly returned to this agenda item on Thursday. Becker reported that he had communicated overnight with the SASEC chair, Susan Humphris, and that he had raised the questions and concerns expressed by the SPC over the guiding principles document. He noted that Humphris basically agreed with those concerns, and with having a point of contact in the SPC to report within one week. Becker also reported that Humphris will take the lead in incorporating comments from the SPC, after which she would forward the document to the SSEP for comments (while at the same time posting it for public comment). This was to happen by the end of September, when Humphris' term as SASEC chair ends. Becker reported that in response to the question about how the guiding principles will be used for proposal ranking and scheduling, Humphris had replied that they were guiding principles, and that every proposal does not have to meet all principles. Becker had suggested to Humphris that the document needs clarification in this regard.

17. SPC recommendations re STP service reduction options

Keir Becker presented a report, prepared by the Scientific Technology Panel (STP), on discussions at its August 2007 meeting concerning budget models for reduced service options. In its report, the STP: (1) stated a preference for the concept of a full service (implying minimum and standard IODP measurements), reduced schedule model; (2) noted that a reduction in the number of expeditions may have a positive impact; (3) recommended that the Expedition Science Party be retained in any model implemented to meet budget reductions; (4) stressed that the goals of the Initial Science Plan (ISP) cannot be achieved if the suite of minimum measurements is reduced; (5) highlighted a need for STP to identify the impact of removing measurements from full service should further cost savings be necessary for whatever reason; (6) proposes to continue discussions, with further information from the IOs, to enable STP to examine the costs against achieving the suite of minimum and standard measurements; (7) recommended that cores need to be split on board the *JOIDES Resolution* and *Chikyu*; (8) encouraged discussion and investigation of using additional non-IO staff on a part-time basis in a supporting role in providing technical support; (9) asks IODP-MI to determine if there is scope for scheduling expeditions with similar measurement requirements close together to reduce the costs of maintaining the appropriate equipment/support base on any one platform; and (10) expressed a wish to investigate a number of support models, including full service/reduced schedule, reduced service/reduced schedule, and minimum service/reduced schedule, and noted that further information from the IOs would be required to recommend any one of these models.

Becker presented STP Recommendation 0708-01 on IODP budget models and noted that the SPC needs to make a recommendation, and that IODP-MI needs time to digest the STP recommendation and its implications. He suggested receiving the recommendation, and encouraging IODP-MI to work with the IOs and the STP to come up with a recommended model. Janecek noted that the STP grappled hard with the information available, and decided to elaborate the key issues and then forward to IODP-MI for it to provide the appropriate information that will allow the STP to make recommendations. Becker added that IODP-MI,

working with the IOs, can determine what level of effort is required to extract the necessary information. Mori asked if there were large cost savings associated with the various support models. Larsen replied that the underlying assumption is that it is hard to make significant savings, but the process is still necessary. Baldauf confirmed that significant effort was being put into the analysis of various budget reduction models. He indicated that reducing the number of measurements on the *JOIDES Resolution*, would not lead to significant cost reductions. Larsen pointed out that the process was still necessary to convince everyone of those findings. Becker again asked if the SPC agreed to receive the STP consensus.

STP Recommendation 0708-01: IODP Budget Models

STP thanks the USIO, CDEX, and ESO for their presentations on possible models to accommodate budget reductions. STP discussed at length the implications of the financial situation facing IODP with respect to the models outlined by the IOs. While STP supported the overall proposal of a full service/reduced schedule model (see Background below), it was concerned that alternative scenarios must also be explored to accommodate any failure to secure non-IODP funds to offset the budget reductions.

STP provides various suggestions for further exploration by the IOs in the Background to this Recommendation.

STP discussion at this Beijing meeting was, however, time limited and to enable further consideration STP requests IODP-MI instruct the IOs to provide detailed analyses of each minimum and standard measurement.

These analyses should include:

- a. a list of equipment available offshore to make the minimum and standard measurements with an indication of whether this equipment is standard “off the shelf” or custom built;
- b. the capital and on going maintenance costs for enabling the equipment to function;
- c. the ongoing technical support costs (i.e. Full Time Equivalent numbers) on an Expedition by Expedition basis;
- d. a comment on the effect of making this measurement in terms of:
 - (i) time involved and effect on flow of core;
 - (ii) the cost and science implications of removing this measurement and it being done by participants (not IOs) on shore;
 - (iii) whether equipment is currently available at core repositories or could be easily removed to shore for access by IODP participants;
 - (iv) any implications for staffing by IOs through removing this measurement (will it lead to a cost saving or not; will it impact other measurements).

IOs should provide an indication of the relative rather than absolute costs as applied to equipment, maintenance and staff support.

SPC Consensus 0708-23: The SPC receives STP Recommendation 0708-01 on IODP budget reduction models and encourages IODP-MI to work with the Implementing Organizations (IOs) and with the Scientific Technology Panel (STP) in developing a recommended model.

Becker pointed out that in the background to STP Recommendation 0708-01 the STP recommended that in any budget reduction model that may be adopted, the expedition science

party should be retained. He asked the committee if there was a consensus to support this recommendation.

Excerpt from background to STP Recommendation 0708-01:

The success of IODP Expeditions has traditionally relied on the Expedition Science Party (whether shipboard or shore based (as for MSPs)). This group of scientists provides an economical and efficient means of acquiring large quantities of data in addition to optimizing the scientific interaction and thus enhancing the scientific output of IODP Expeditions. The Expedition Science Party should be retained in any model implemented to meet budget reductions.

SPC Consensus 0708-24: The SPC supports the recommendation by the Scientific Technology Panel (STP) in the background to STP Recommendation 0708-01 that the expedition science party not be reduced in size.

18. FY2009/2010 engineering development II – SPC prioritization

All discussion on FY2009/2010 engineering developments was completed under agenda item 10.

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| Thursday | 30 August 2007 | 09:00-17:30 |
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19. Mission proposal review II – SPC recommendations

Mission Birth of Oceans (720-MP):

This proposal was not recommended for mission designation by the SSEP, external review panel, or the SPC watchdogs, and there was no support for mission designation in the SPC straw vote. After further discussion, the SPC came to agreement on a consensus statement not designating that proposal as a Mission. Nevertheless, the SPC reaffirmed the importance of addressing that ISP initiative via the regular proposal process.

SPC Consensus 0708-25: The SPC does not designate proposal 720-MP (Birth of Oceans Mission) as an IODP mission. The SPC reaffirms the importance of the Initial Science Plan (ISP) goals related to continental rifting and the initiation of seafloor spreading and encourages the proponents of the individual proposals that were included in 720-MP to pursue appropriate projects through the normal SAS framework.

Mission Monsoon (713-MP):

This proposal was not recommended for mission designation by the SSEP, external review panel, or SPC watchdogs but received some support in the SPC straw vote (order of ¼ of the voting membership). During the subsequent discussion, it seemed that there would not be sufficient SPC support for mission designation, but there was strong interest in the overarching scientific justification, so the discussion turned to the alternative suggestion from the SSEP to form a Detailed Planning Group (DPG) for four of the six component proposals. These are the four component proposals with deeper drilling objectives to get older signals of the monsoon/tectonic interactions; the other two proposals for shallower, younger objectives are already at the OTF as priorities for potential scheduling as riserless expeditions. Formation of that DPG was approved by motion, and a working group was appointed to draft a mandate, which was approved later in the meeting. Having approved the DPG, SPC then registered a consensus statement not to designate the Asian Monsoon proposal as a mission.

SPC Consensus 0708-26: The SPC does not designate proposal 713-MP (Mission Monsoon) as an IODP mission. However, the SPC concluded that the deep drilling objectives of four proposals, 552-Full3 (Bengal Fan), 595-Full3 (Murray Ridge), 618-Full3 (East Asia Margin)

and 683-Full (East Asia Topography and Monsoon), could benefit from detailed scoping at this stage (see SPC Motion 0708-27 and SPC Consensus 0708-28).

SPC Motion 0708-27: A Detailed Planning Group (DPG) should be formed as requested in SSEP Recommendation 0705-4 to prioritize components of proposal 713-MP (Mission Monsoon), in particular proposals 552-Full3 (Bengal Fan), 595-Full3 (Murray Ridge), 618-Full3 (East Asia Margin) and 683-Full (East Asia Topography and Monsoon), with terms of reference to be written after the August 2007 SPC meeting by a subgroup of the SPC and approval by e-mail. The DPG should: (1) have a timeline of 1 year; (2) be chaired by a non-proponent; (3) prioritize the drilling programs; (4) address technical issues; (5) include an outreach and education plan; and (6) include a modeling component to help prioritize sites.

Quinn moved, Camoin seconded; 17 in favor, none opposed.

Although, as mentioned in SPC Motion 0708-27, the SPC intended to write the terms of reference for the Asian Monsoon DPG after the meeting, a draft terms of reference was in fact written during the meeting and presented by Heiko Pälke (see Appendix A of these minutes). The committee also suggested names for potential DPG chair (Steve Clemens and Jerry Dickens) and members (Peter Clift, Douglas Burbank, Christian France-Lanord, Hongbo Zheng, Ryuji Tada, Peter Molnar, Karen Bice, Brian Horton, Matt Huber, John Kutzback and Sidney Hemming). Ohkouchi was nominated as SPC liaison to the DPG. The committee accepted the terms of reference and nominations by consensus.

SPC Consensus 0708-28: The SPC accepts the draft mandate for the Asian Monsoon detailed planning group (DPG) as presented by SSEP co-chair/SPC alternate Heiko Pälke. The SPC approves Steve Clemens and Jerry Dickens as candidate chairpersons for the DPG. The SPC also approves Peter Clift, Douglas Burbank, Christian France-Lanord, Hongbo Zheng, Ryuji Tada, Peter Molnar, Karen Bice, Brian Horton, Matt Huber, John Kutzback and Sidney Hemming as candidate members, and Naohiko Ohkouchi as SPC liaison.

Mission Moho (719-MP):

For this proposal, the SSEP did not recommend mission designation, whereas the external review panel unanimously recommended mission designation. The SPC watchdogs also recommended mission designation, but the SPC straw vote showed less than half of the SPC in favor of mission designation. The SPC conducted a thorough discussion of the merits of the proposal in meeting the mission definition and principles/criteria for mission designation. A wide variety of opinions was expressed. After the chair verified that no one still wished to speak to the issues, he invited a motion to designate the Mission Moho proposal as an IODP Mission. That motion was made and seconded, and brief additional discussion ensued. After again verifying that no member still wished to speak to the matter, the chair called the question. The motion failed to carry, with a vote of 7 in favor, 8 opposed, 2 abstentions. (This was actually a slightly more negative result than the original straw vote.) The SPC then turned to a common theme in all three reviews (SSEP, external panel, SPC) – that achieving the ultimate aim of the 21st Century Mohole ISP initiative would require long-term technological progress. It was stated by an industry representative that industry is now beyond 3 km in riser drilling capability and would be pushing deeper in the near future, i.e., toward the 4 or 4.5 km capability discussed in the Mission Moho proposal. The SPC then registered a consensus asking Engineering Development Panel (EDP) (which has already listed deeper-water riser capabilities as a top priority in the long-term engineering development roadmap for IODP) to work with IODP-MI and the IOs on monitoring industry developments as a special focus with an aim to bringing the appropriate capabilities to the

IODP. This clearly leaves open the option for IODP-MI to form an appropriate working group or task force if that is deemed appropriate.

The following motion did not receive the required affirmative vote of at least two-thirds of all members present and eligible to vote; hence proposal 719-MP was not designated as an IODP mission.

SPC Motion 0708-29: The SPC designates proposal 719-MP (Mission Moho) as an IODP mission.

Mori moved, Macgregor seconded; 7 in favor (Becker, Macgregor, Marumo, Masuda, Mori, Ohkouchi, Sato), 8 opposed (Behrmann, Bekins, Byrne, Camoin, D'Hondt, Pälke, Quinn, Ruppel), 2 abstained (Yamamoto, Soh).

SPC Consensus 0708-30: The SPC requests that the Engineering Development Panel (EDP) work with IODP-MI and the Implementing Organizations (IOs) to assess the technological needs required to achieve the deep penetrations required for a Mohole.

20. IODP FY2009/2010 scheduling II – SPC recommendations

Conflicted SPC alternate member Heiko Pälke left the room.

Tom Janecek presented FY2009 and FY2010 scheduling options arising from the 29 August Operations Task Force (OTF) meeting, and described proposed changes to the scheduling process. Addressing schedule flexibility, Janecek stressed the importance of retaining long-lead planning, but noted that short-term changes (e.g., to incorporate non-IODP contract work) in the schedule are a new reality. He outlined a new modified ranking exercise comprising three steps: (1) the SPC determines “essential”, or “Tier 1” proposals, e.g., that must be completed by 2013 (with a three-year outlook); (2) analysis of Tier 1 proposals – can they be done, and if not, need to identify new Tier 1 proposals (an iterative process); and (3) the SPC annually ranks remaining, “Tier 2”, proposals. Janecek described the Tier 2 proposals as the pool of proposals that provides flexibility to fill in gaps between Tier 1 and non-IODP work, and the scheduling of Tier 2 proposals would depend on budgets, locale/length of non-IODP projects, weather etc. Tier 2 proposals not scheduled after some specified number of cycles would return to the SPC for re-review and ranking.

Janecek described a new scheduling process: (1) the SPC identifies the Tier 1 and Tier 2 proposals; (2) the OTF develops a three-year Tier 1 plan for SPC approval; and (3) the OTF then develops the annual schedule comprising a mixture of Tier 1, Tier 2 and non-IODP projects, with endorsement by the SPC. For changes to the annual schedule, Janecek proposed that Tier 1 changes would require full SPC approval, while changes to Tier 2 and non-IODP projects could be made by the OTF without approval by the SPC. Attendant with these changes, the SPC membership on OTF would increase to five members, giving the SPC a majority on the OTF (five SPC, three IOs, and one IODP-MI). Janecek noted decisions would be made by consensus, and that if consensus could not be reached, the OTF would have to come back to the SPC for guidance. Janecek provided a conceptual scheduling example to illustrate the new process.

Becker noted that the reprioritization of OTF proposals at this meeting has been consistent with the new process, but without the formal Tier 1 and 2 designations. Ruppel expressed support for the increased SPC membership on the OTF with the new process. She asked for confirmation that the SPC would not be involved in approving the non-IODP part of the schedule. Janecek confirmed this was correct; the SPC would only approve the IODP part of the schedule. D'Hondt also expressed support for the Tier 1 and 2 designation system, claiming that it provides structure to the process. He did, however, express some concern that

scheduling decisions for Tier 2 proposals would not come back to the entire SPC. Janecek clarified that the OTF would not include any proposals in the schedule which the SPC had not forwarded, and that decisions on Tier 2 proposals center around changing the order in which the proposals were implemented, not removing them. Camoin asked if the Tier 1 proposals were to be determined on an annual basis. Janecek replied that enough proposals need to be identified to extend over about three fiscal years to allow building a schedule around high priority proposals. Camoin, seeking clarification, asked what would happen if something comes up that is higher priority – can it replace a Tier 1 proposal. Janecek stated that this sort of detail would have to be worked out. Mori stated that it was up to the SPC to decide the Tier 1 proposals, and suggested that doing so every year might be too often. He suggested every second year. Janecek reiterated the need for flexibility.

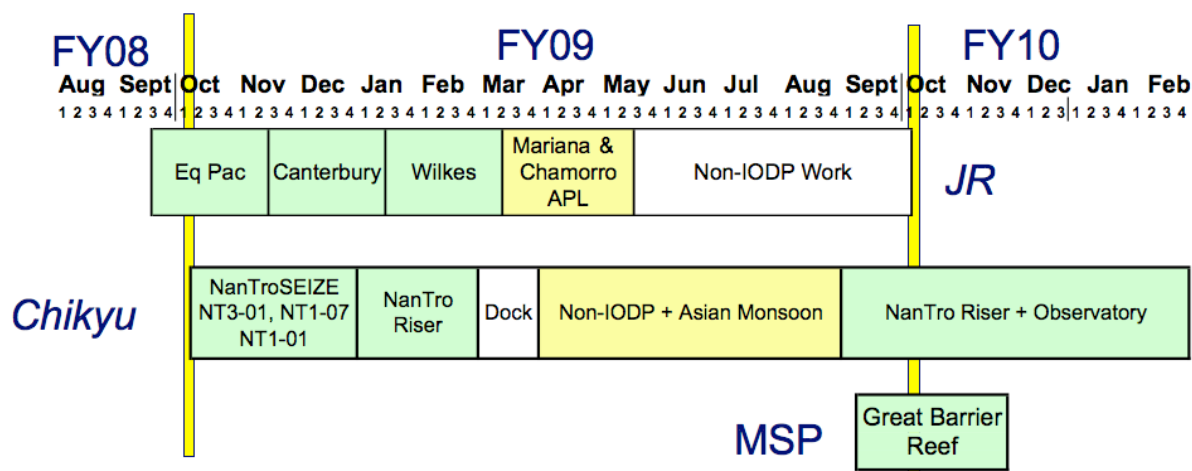
Janecek reviewed the current FY2009 scheduling options for the three platforms. He displayed SPC Consensus 0608-17, in which the SPC approves a ship-track model for SODV operations in FY2009-FY2010 that would proceed clockwise through the Pacific Ocean, assuming a start at Wilkes Land. Janecek listed the available options for the Pacific and presented the OTF's recommendation for Mariana Convergent Margin (proposal 505-Full5 coring only), noting that Juan de Fuca (proposal 545-Full3) was too expensive for FY2009, NanTroSEIZE would be addressed with *Chikyu*, and that Mariana (proposal 505-Full5) was a good fit with South Chamorro Seamount CORK (proposal 693-APL).

Janecek listed seven options for FY2009 *Chikyu* operations, and presented the OTF recommendation for Asian Monsoon (proposal 605-Full2), noting that it was highly ranked, and that there were clearance issues with the Sea of Okhotsk (proposal 477-Full4).

Janecek listed five options for FY2009 MSP operations, and presented the OTF recommendation for Great Barrier Reef (GBR; proposal 519-Full2), noting that the ECORD Science Operator (ESO) would continue pursuing GBR permitting. He also stated that the OTF would report back to the SPC if GBR or New Jersey (proposal 564-Full2) proved impossible to implement.

Janecek showed a diagram of the recommended FY2009 schedule for each platform.

FY09 Platform Recommendations



Becker asked for comments; conflicted SPC member Camoin left the room. Soh asked about the status of Russian permission for the Sea of Okhotsk (proposal 477-Full4). Baldauf noted that either *Chikyu* or the *JOIDES Resolution* could be utilized, and he stated that the USIO will know more after the submission of the Bering Sea clearance request. Fukutomi noted that clearance was indeed an issue, and that it was not known how many months or years it will take to obtain clearance. MacLeod asked about the status of clearance for the Bering Sea. Becker noted that most sites are in U.S. waters, but those in Russia have not received clearance. Baldauf added that an application had been submitted and is pending review by Russian diplomats. D'Hondt asked who from the SPC was on the OTF. Becker informed him that currently the SPC chair, vice-chair and one ECORD member were members of the OTF. With an increase to five SPC members he suggested these would comprise two U.S., two Japanese, and one ECORD member. Bekins inquired about the implications of further shipyard delays for the *JOIDES Resolution*. Baldauf replied that the implications depended on the magnitude of the delay. He explained that moderate slippage would impact the Bering Sea, scheduled for late FY2008, which cannot be delayed any further. He added that another problem would be trying to maintain Wilkes Land Margin (proposal 482-Full3) within its weather window, and noted that everything else had to be worked around the timing of Wilkes. Janecek noted that for any major changes, such as removal of a proposal, the OTF would come back to the SPC with a recommended new schedule for approval. Becker asked for a consensus to approve the FY2009 schedule.

SPC Consensus 0708-31: The SPC approves the FY2009 recommended scheduling options developed at the 29 August 2007 meeting of the Operations Task Force.

Recommended FY2009 expeditions are:

JOIDES Resolution:

- Pacific Equatorial Age Transect I (Proposal 626-Full2) spanning the FY2008/2009 transition
- Canterbury Basin (Proposal 600-Full)
- Wilkes Land Margin (Proposal 482-Full3)
- Mariana Convergent Margin (Proposal 505-Full5 coring only) and South Chamorro Seamount CORK (Proposal 693-APL)
- Non-IODP work beginning mid-May 2009

Chikyu:

- NanTroSEIZE sites NT3-1, NT1-7, NT1-1
- NanTroSEIZE riser program
- Non-IODP work and Asian Monsoon (Proposal 605-Full2)
- NanTroSEIZE riser and observatory program (beginning 1 Sept. 2009)

MSP:

Great Barrier Reef (Proposal 519-Full2) beginning Sept. 2009

Baldauf noted that the USIO did not intend to show Mariana Convergent Margin (proposal 505-Full5) on the schedule until clear budget guidance had been received from the Lead Agencies. Janecek suggested it could be added to the schedule with a note to indicate that the project was pending available funding. Ruppel pointed out that the lead proponent for South Chamorro Seamount (proposal 693-APL), Wheat needs to get funding before an expedition can occur. Allan explained that the Lead Agencies have given general guidance to JOI regarding expected POC funding for FY2009, and this should be sufficient to begin planning. MacLeod pointed out that the weather window for Mariana Convergent Margin and South Chamorro Seamount was narrow, and asked what would happen if the IOs were offered a huge amount of money for non-IODP work in that window. Janecek quipped “money wins”. MacLeod asked if this mean industry would not be told that the *JOIDES Resolution* would be available from May 2009. Janecek explained that if non-IODP work significantly impacts IODP work, the OTF would have to come back to the SPC for approval.

Janecek reviewed the current FY2010 options for all platforms. Conflicted meeting participants left the room (Sawyer, D’Hondt, Pälke); Katz assumed the role of U.S. alternate, Camoin returned. Janecek presented the options for the *JOIDES Resolution* for the Pacific, Atlantic and Indian oceans and presented the OTF recommendations for a single Tier 1 program for each ocean: Juan de Fuca 2 (proposal 545-Full3), Mid-Atlantic Microbiology (proposal 677-Full), and Murray Ridge (proposal 595-Full3), respectively. He noted that the SPC needed to prioritize the oceans for FY2010 operations.

Janecek presented the FY2010 *Chikyu* riser options, which comprised one ~five-month project and two other already at the OTF (NanTroSEIZE site NT3-01 and Murray Ridge). He pointed out that the SASEC has set pre-2013 priorities which include achieving major milestones in NanTroSEIZE, maximizing the use of *Chikyu* for riser drilling, and starting a new riser program. He noted that NT3-01 is the OTF recommendation because it addresses the SASEC priorities, and because significant logistical preparation was underway and no other viable project is ready. Janecek asked the SPC for affirmation of its commitment to the NanTroSEIZE riser program.

Janecek presented the FY2010 *Chikyu* riserless options, which included three likely options in the western Pacific, NanTroSEIZE, Shatsky Rise (proposal 654-Full2), and Asian Monsoon (proposal 605-Full2), with the Sea of Okhotsk unlikely because of permitting issues. He noted that there should be one riserless expedition per fiscal year, but that the OTF had no recommendation at this time.

Addressing FY2010 MSP operations, Janecek noted that the OTF had no recommendation at present, and that it was awaiting the outcome of New Jersey and Great Barrier Reef scheduling. He also noted that the OTF would revisit MSP options after the March 2008 SPC rankings.

Ruppel asked if the Atlantic ocean was chosen for FY2010 *JOIDES Resolution* operations, would new Atlantic programs that appear in March 2008 be too late to be included on the FY2010 schedule. Janecek explained that it would not be too late in March 2008. He suggested choosing three Atlantic programs now, then possibly choosing one from March

2008. Katz noted that with the long timeline involved for *Chikyu* preparations, a commitment for the next riser project was needed now. Janecek concurred that the SPC needed to decide the next riser project for FY2010, since permitting would need to begin right away.

Becker asked the SPC to affirm its support for the *Chikyu* riser program, noting there was only one choice (site NT3-01). There was no discussion.

SPC Consensus 0708-32: The SPC affirms that the *Chikyu* FY2010 riser program should be at site NT3-01.

Becker noted that for FY2010 *JOIDES Resolution* operations the committee need to prioritize oceans. Camoin suggested that to be consistent with proposals that the SPC has ranked, especially at the previous meeting, the Atlantic should be top priority. Ruppel agreed strongly, stating that a commitment to the Atlantic would demonstrate to the outside world that a project such as Mid-Atlantic Ridge Microbiology (proposal 677-Full), with outside funding from the Moore Foundation, can go forward. MacLeod asked if choosing the Atlantic for FY2010 precluded drilling on the way to the Atlantic. Janecek stated that a schedule for the Pacific already exists, so it was unlikely that there would be drilling during the transition to the Atlantic, though it would depend where the ship started from. He noted that the OTF need a sense of priority, with as much flexibility as possible. Becker note that the SPC also needs to choose a second priority ocean. A straw vote on approving the Atlantic as the top priority ocean basin for FY2010 received strong support. Becker asked for, and received, a consensus to support this choice along with endorsing the OTF-recommended Mid-Atlantic Ridge Microbiology proposal as the top priority Tier 1 proposal.

SPC Consensus 0708-33: The SPC approves the Atlantic Ocean as the top priority ocean basin for FY2010 *JOIDES Resolution* operations, with Mid-Atlantic Ridge Microbiology (proposal 677-Full) as the top priority Tier 1 program.

Becker asked the committee for a second priority ocean, but received no comments. A straw vote showed an even split (8 votes each, with 1 abstention) between the Pacific and Indian oceans. Becker asked Janecek if it was necessary to decide on a second priority ocean. Janecek replied it was not essential, and that off-contract work could decide the location if necessary.

For Tier 2 priorities in the Atlantic, Becker suggested using the rankings from the March 2007 SPC meeting: Newfoundland Rifted Margins (proposal 659-Full2; rank=2), Mediterranean Outflow (proposal 644-Full2; rank=5), and Newfoundland Sediment Drifts (proposal 661-Full2; rank=9). With no further discussion, this was agreed to by consensus.

SPC Consensus 0708-34: The March 2007 SPC rankings should guide expedition priorities for Tier 2 FY2010 *JOIDES Resolution* operations in the Atlantic Ocean, i.e., priorities are (1) 659-Full (Newfoundland Rifted Margin); (2) 644-Full2 (Mediterranean Outflow); and (3) 661-Full2 (Newfoundland Sediment Drifts).

Becker asked Janecek if the OTF wanted proposals for other oceans to be prioritized. Janecek replied that it would be helpful if at least an obvious top one or two proposals could be identified. Becker noted that for the Indian Ocean, the only potential proposals are Bengal Fan (proposal 552-Full3), Northern Arabian Sea Monsoon (proposal 549-Full6), and riserless portions of Murray Ridge (proposal 595-Full3). Becker asked the committee if Murray Ridge should be the number one priority, but received no comments. Becker also noted that Bengal Fan is included in the Asian Monsoon DPG, while Northern Arabian Sea Monsoon is not. Camoin recommend Northern Arabian Sea Monsoon as the second priority (after Murray Ridge). Behrmann agreed. Becker asked, and received, a consensus to select Murray Ridge,

Northern Arabian Sea Monsoon, and Bengal Fan, in that order, as priorities for the Indian Ocean.

SPC Consensus 0708-35: Should FY2010 *JOIDES Resolution* operations in the Indian Ocean become necessary, the SPC priorities for expeditions are: (1) 595-Full3 (Murray Ridge); (2) 549-Full6 (Northern Arabian Sea Monsoon); and (3) 552-Full3 (Bengal Fan).

Becker noted that options for FY2010 *JOIDES Resolution* operations in the Pacific Ocean were Juan de Fuca Hydrogeology Part 2 (proposal 545-Full3), Superfast Spreading Crust (proposal 522-Full5), Shatsky Rise Origin (proposal 654-Full2), and Geodynamo (proposal 612-Full3). He asked the committee if there was agreement that Juan de Fuca Hydrogeology Part 2 should be the Tier 1 choice, based on minimal complexity. MacLeod suggested that another Superfast expedition would give the biggest scientific return for the least cost. Becker agreed, and noted that the Moho workshop also mentions this. Camoin also agreed. Mori pointed out that Superfast and Shatsky had rankings at the March 2007 meeting that, based on their standard deviations, were the same. MacLeod noted that that ranking was done prior to the Mission Moho proposal, and prior to the new SASEC guiding principles. Becker asked for further opinions. Janecek noted that it was acceptable to have more than one Tier 1 proposal in any ocean basin. Mori expressed discomfort with declaring Superfast a Tier 1 proposal without going through more serious SPC discussion. Quinn expressed confidence that the OTF understands how important Superfast is to the SPC. Soh asked if the Sea of Okhotsk was not ranked at the March 2007 SPC meeting. Becker explained that it was ranked at an earlier (June 2005) SPC meeting, and expressed uncertainty how it would rank on its own (without the Bering Sea component). With no further discussion, the committee agreed that Juan de Fuca Flank Hydrogeology Part 2 is the Tier 1 choice for the Pacific in FY2010, and that Superfast Spreading is the top ranked Tier 2 choice.

SPC Consensus 0708-36: Juan de Fuca Flank Hydrogeology Part 2 (Proposal 545-Full3) is the Tier 1 choice for FY2010 *JOIDES Resolution* operations in the Pacific Ocean; Superfast Spreading Crust (Proposal 522-Full5) is the top-ranked Tier 2 choice.

21. Potential Complex Drilling Project (CDP) designations

The SPC had been asked by the Science Steering and Evaluation Panel (SSEP; see SSEP Recommendations 0705-3 and -5 under agenda item 8.1) to consider two sets of proposals for possible designation as complex drilling projects (CDPs): Sagami Bay (Kanto Asperity Project) (proposals 707-Full2 Sagami Bay Seismic Monitoring, 722-Full Sagami Bay Tectonics and Paleoseismology and 723-Full Sagami Bay Kanto Asperity Network) and Izu-Bonin-Mariana Arc (proposals 694-Full3 Izu-Bonin-Mariana Arc Evolution, 695-Full Izu-Bonin-Mariana Pre-Arc Crust, 696-Pre Izu-Bonin-Mariana Deep Forearc Crust, 697-Full Izu-Bonin-Mariana Reararc Crust and 698-Full Izu-Bonin-Mariana Arc Middle Crust). Watchdogs for this agenda item were Tim Byrne and Gilbert Camoin. Byrne provided background information on CDPs, describing them as a set of proposals which: (1) have strong potential to significantly advance understanding of ISP themes; (2) comprise an umbrella and closely interrelated component proposals; (3) have overarching objectives that can be attained solely by completion of components, not by a series of independent proposals; and (4) require multi-phased and/or multi-platform expeditions. He also noted that the SPC was not undertaking a detailed review of the proposals to prepare for ranking, only determining whether or not either group of proposals should be designated as a CDP. For each group of proposals, Byrne reviewed the history of the proposals, outlined the scientific objectives, and described the drilling plan, including how the various component proposals contributed to the overall project.

For the Sagami Bay (Kanto Asperity Project) set of proposals, the watchdogs recommended designation as a CDP. Byrne noted that (1) the proposals addressed seismic hazards in a heavily populated area, were directly relevant to the IODP ISP, and of broad societal relevance and interest; (2) the project was motivated by a feasible and testable hypothesis relating plate boundary asperity characteristics and properties to mode of deformation and seismic hazards; and (3) ocean drilling is critical to extending onshore observatories to the offshore regions, and that the linkage between the two domains is very important. Byrne suggested that the biggest problem with the project was the current lack of high quality site survey data. He also suggested that one of the proposals, 772-Full, on its own would probably not be ranked very high by the SPC because it was a very localized investigation.

Becker reminded the committee that it was not reviewing the science, just determining whether a CDP should be designated. He noted that previously when a CDP was designated, IODP-MI was expected to form a scoping group; however, he pointed out that this was no longer an expectation due to limited resources. He stated that CDP designation simply governs how the proposals comprising the CDP will be evaluated. He added that he was in favor of accepting the SSEP recommendation for CDP designation. SSEP co-chair Pälke explained that the SSEP thought CDP designation might make it easier for the proponents to get site surveys funded. D'Hondt asked to confirm that CDP designation does not imply a commitment to move ahead with drilling. Becker confirmed this. Allan, referring to the lack of site survey data, asked what would be needed for this project to go forward. Byrne responded that 3-D seismic data were required. Sawyer added that deeper drilling needs better site characterization, but that the requirements depend on the geological target, and that the target has not been clearly identified to the Site Survey Panel (SSP). He claimed that to some degree, it was not certain what type of data were needed. Allan suggested that this reflects the relative immaturity of the proposals. Byrne noted that the SSEP had recommended that the proponents not submit revised proposals until after they have collected more site survey data.

For the Izu-Bonin-Mariana (IBM) Arc set of proposals, the watchdogs again recommended designation as a CDP. Byrne noted that the overall goal of understanding the formation of continental-like crust in an arc setting requires understanding arc evolution, and in arc settings where there is little along-strike variation, but substantial across strike variation, this requires sampling that captures both the temporal (vertical) and across-strike variations. He suggested that at IBM, deep drilling would obtain samples of the continental-like crust but understanding the origin of these materials requires results from the along-strike drilling sites, and thus the sites are very integrated. Byrne suggested that all of the components might not be ranked high enough by the SPC to be drilled, and therefore recommended CDP designation.

Becker noted that each individual proposal would have to rank high enough on its own to get drilled. Pälke explained that while the SSEP strongly endorsed CDP designation for the Sagami Bay proposals (SSEP Recommendation 0705-3), the panel could not agree on a recommendation for CDP designation of the IBM proposals (SSEP Recommendations 0705-5) because it was not clear that the objectives of the latter could not be achieved by a series of individual proposals; that is, it would be possible to drill IBM-1, -2 and -3 (proposals 695-Full, 696-Full and 697-Full2) and see if the results support drilling at IBM-4 (proposal 698-Full2). Ruppel stated that, given the budget problems of the IODP, she was troubled by the idea that something that would not rank highly could be drilled, and was concerned about giving a sense of false hope to the proponents. Becker explained that CDP designation did not imply any commitment of resources. Pälke stated that IBM-1 and -2 have worthy objectives, but that the pragmatic approach would be to deal with them separately, since they would not necessarily benefit by CDP designation. He suggested that only IBM-3 and -4 have possible

merit as a CDP. Ohkouchi expressed concern about the budget situation, and the future of IODP, noting an inconsistency between the window of drilling time, which was shrinking, and the acceptance and pushing forward of many proposals. Byrne, replied that the program needs a lot of proposal pressure and competition between proposals, as opposed to a top-down approach. Bekins asked if there was a down side to CDP designation. Becker said there was none. MacLeod suggested that with a CDP there should be an interdependency of the various components, which he could not see with the IBM proposals. He suggested that they could be done sequentially, and could see no benefit of CDP designation.

Returning to the Sagami Bay (Kanto Asperity Project) proposals, Becker called for a straw vote on CDP designation. With no negative votes Becker asked for, and received, a consensus to designate this group of proposals as a CDP.

SPC Consensus 0708-37: The SPC designates proposal 707-Full2 (Sagami Bay Seismic Monitoring) as a Complex Drilling Project (CDP) incorporating component proposals 722-Full (Sagami Bay Tectonics and Paleoseismology) and 723-Full (Sagami Bay Kanto Asperity Network).

Becker called for a straw vote on CDP designation for the IBM proposal group. The result of this vote showed less than unanimous support for CDP designation. Becker stated that a motion for CDP designation was required. Byrne moved, and Mori seconded the motion.

Quinn asked for an explanation of the difference between the SPC watchdog's and SSEP's view of CDP designation for the IBM proposals. Both Byrne and Pälke suggested there was a difference in the interpretation of the definition and requirements for a CDP. D'Hondt suggested that if the proponents want CDP designation, there was no reason not to give it. Ruppel reiterated her discomfort over the suggestion that a criteria for CDP designation was that one of the components is viewed as weak. Masuda pointed out that the success of the project depends on whether or not it will be possible to accomplish deep (6 km) riser drilling. She wondered if that is not possible, would the results of the project be weak. MacLeod stated that at least two of the proposals can stand on their own and have a realistic chance of being scheduled. He suggested that once these were accomplished and the results were evaluated, the justification for the weaker components could be made more strongly and perhaps could stand on their own.

The following motion did not receive the required affirmative vote of at least two-thirds of all members present and eligible to vote; hence proposal 694-Full3, and other related Izu-Bonin-Mariana proposals mentioned below are not designated as a Complex Drilling Project (CDP).

SPC Motion 0708-38: The SPC designates proposal 694-Full3 (Izu-Bonin-Mariana Arc Evolution) as a Complex Drilling Project (CDP) incorporating component proposals 695-Full (Izu-Bonin-Mariana Pre-Arc Crust), 696-Pre (Izu-Bonin-Mariana Deep Forearc Crust), 697-Full (Izu-Bonin-Mariana Reararc Crust) and 698-Full (Izu-Bonin-Mariana Arc Middle Crust).

Byrne moved, Mori seconded; 10 in favor, 4 opposed (Behrmann, MacLeod, Quinn, Ruppel), 3 abstained (Soh, Masuda, Ohkouchi).

22. Review of 712-APL

Conflicted SPC member Becker left the room. Mori reported that the SPC watchdogs (Mori, Masuda, Behrmann) recommended deferring forwarding proposal 712-APL (Sediment-CORK Trial Installation) to the Operations Task Force (OTF) because the S-CORK described in this APL is still under development. The committee accepted this recommendation by consensus.

SPC Consensus 0708-39: In accordance with SPC Consensus 0708-18, the SPC defers forwarding proposal 712-APL (Sediment-CORK Trial Installation) to the Operations Task Force (OTF) because the S-CORK tool is still under development.

23. Other business

The committee did not raise any other business for discussion.

24. Future meetings

24.1. Liaisons to other panels and programs

The committee identified its liaisons for the upcoming round of SAS panel meetings as follows: November 2007 SSEP (France) - Mori (plans to attend but may have a scheduling conflict), alternate Pedersen (Ruppel also volunteered); January 2008 SSP (Japan) - Mori; January 2008 STP (Japan) - Mori; January 2008 EDP (France) - Mori; January or February 2008 IIS-PPG (France) - Behrmann. Decision on a liaison for the June 2008 EPSP meeting in Germany was deferred until the March 2008 SPC meeting.

24. 2. 11th and 12th SPC meetings

24. 2.1. March 2008; Europe

Gilbert Camoin noted that European Geosciences Union (EGU) general assembly in Vienna, Austria (13-18 April 2008) would include an interdivision session called EuroFORUM 2008: Achievements and perspectives in ocean and continental drilling. He also noted that there would be a joint ICDP/IODP town hall meeting at the EGU meeting.

Camoin announced that the eleventh SPC meeting would take place March 2008 in the Scientific Park of the University of Barcelona in Barcelona, Spain, hosted by Angelo Camerlenghi of the University of Barcelona. The meeting will include an optional field trip on the topic of geohazards and submarine slides, and will include fossil examples of submarine slope instabilities. In a poll conducted after the meeting, dates for the next meeting were set for 3–6 March 2008.

24. 2. 2. August/Sept 2008; Asia?

This will most likely be in Japan, but no specific options were identified.

25. Review of motions and consensus items

Tributes were presented to outgoing SPC members Tim Byrne (by Terry Quinn), Chris MacLeod (by Gilbert Camoin), Hiroyuki Yamamoto (by Harue Masuda), Barbara Bekins (by Keir Becker), and Keir Becker (by Tim Byrne). The committee also thanked departing IODP-MI science coordinator Nobu Eguchi for his many years of outstanding service, and Barbara Bekins for hosting the tenth SPC meeting.

SPC Consensus 0708-40: The SPC thanks Tim Byrne for his dedicated service on the committee, and designates him as a **CDP** – a person who is **C**ommitted, **D**edicated, and **P**assionate for IODP science.

SPC Consensus 0708-41: The SPC thanks Chris MacLeod for his insightful and dedicated work as a member of this committee. As a marine geologist who studies the development and evolution of the oceanic crust, he has made invaluable contributions to the committee and to the IODP in general through his well thought through actions and contributions that often anticipated unintended consequences. We are sorry that Chris leaves the SPC in the wake of Missions. Chris' high standards, professionalism, and dedication to all scientific drilling throughout his career serve as a model for all members of the advisory panels. However, we are certain that he will stay active in the IODP community and continuously promote IODP science with his tremendous energy.

SPC Consensus 0708-42: As the only microbiologist among the SPC members, Dr. H. Yamamoto has enlightened the committee on the importance of biological aspects of deep ocean drilling. We will succeed his ideas, and continue collaboration between bio- and geo-sciences.

SPC Consensus 0708-43: The SPC thanks Barbara Bekins for her hard work, dedication, and attention to detail during the initial years of IODP and her term on SPC. Barbara's leadership on marine hydrogeology and observatories and her recognition of IODP mandates related to outreach and societal relevance have provided important direction in shaping SPC decisions. We wish her well in her post-SPC endeavors and hope to see her back in the IODP community soon in some other role.

SPC Consensus 0708-44: Traditionally addressing Nobu Eguchi as either Nobu-san or Eguchi-san, the SPC at Nobu's last meeting as science coordinator uniquely name him, eternally, "Eguchi-SAS" (or Nobu-SAS). Nobu-SAS has served as science coordinator during the ODP-IODP interim phase and through the entire IODP Phase I before finally surrendering to CDEX. His responsiveness, sense of humor, distinct and cross cultural socializing skills (in lieu of saying, excesses) will be sorely missed by the SAS but are, however, not lost for the program. We wish him all the best at CDEX and look forward to his continued engagement in IODP.

SPC Consensus 0708-45: The SPC thanks Barbara Bekins and JOI-USSSP for hosting its 10th meeting in the beautiful beachside location in Santa Cruz, and for a lovely evening reception at Natural Bridges Park. Some of us also thank Barbara and Ivano Aiello for the geological field trip... even if we didn't make the last stop at the winery.

SPC Consensus 0708-46: The SPC thanks Keir Becker for his outstanding contribution to IODP in his role as chairperson of the committee. The committee affirms Keir's Guiding Principles:

- Have patience with your colleagues.
- Do your homework.
- Have more patience with your colleagues.
- Build a consensus.
- Use all of your energy, all of your talents and all of your intellect to have even more patience with your colleagues.
- Thank your colleagues.

Becker adjourned the meeting at 15:30.

Appendix A: Detailed Planning Group (DPG) on Asian Monsoon and Cenozoic Tectonic History

1. General Purpose. SPC and SSEP recognize the high scientific value and societal relevance of making progress on understanding how tectonic evolution and uplift of the Himalaya and Tibet region affect the monsoonal system, including rates of uplift, erosion and their relationship with the global climatic evolution, such as presented by Mission Monsoon (Proposal 713MP) and its component proposals. Following SSEP recommendation 0705-4, SPC agrees to provide the following terms of reference to form a Detailed Planning Group (DPG) including the following detailed charges:

2. Mandate. The DPG is charged to develop an optimal plan to advance the understanding of the Asian monsoon and Cenozoic tectonic history that coordinates, organizes and prioritizes a drilling plan, the erosion and uplift proxies to be used, and an integration of post-cruise science. Specifically, the DPG shall identify how the current strong source-to-sink component originally presented in Proposal 713-MP ("Mission Monsoon") can be retooled to more clearly identify the proxy toolbox that will allow differentiation between uplift and erosion on one side and monsoon on the other. It should also identify and consider technical issues of deep drilling and analysis, within non-scientific constraints such as necessary permits, budgetary constraints, and potential political complications.

3. Scope. The DPG should focus on existing proposals:

- 552 – Bengal Fan
- 595 – Indus Fan
- 618 – SE Asian Shelf
- 683 – East Asia Topography and Monsoon

and adhere to the guiding principles that the prioritization advanced by the DPG should not hold back proposals that are already scheduled.

4. Outreach and Education. The DPG should include and identify outreach and education possibilities and make recommendations as to their feasibility and implementation. It should include specific statements as to the extremely high societal relevance of the project.

5. Climate Modeling. The SPC recognizes the importance of advancing climate modeling within the scope of the monsoon system and this DPG and charges the DPG with including input from climate modelers. The DPG should take modeling results into consideration for their site prioritization and evaluate how predicted drilling results will bear on predictions that arise from climate models.

6. Timeline. The DPG is charged to provide SPC with an interim report that describes initial implementation principles and site prioritization in time for the March 2008 SPC meeting. A full report, following the example of the previous Hotspot Geodynamics DPG, should be submitted to SPC in time for the August 2008 meeting.

7. Composition of the DPG. The DPG chairperson shall be from outside the proponent group of Mission Monsoon and its component proposals. The membership of the DPG shall comprise members from both the proponent group as well a diverse group from outside the proponents, including climate modelers and formal liaisons to a designated subset of SPC. It should also seek advice from IODP-MI and the IOs as to the practical feasibilities.

8. Decisions. The Monsoon DPG shall make decisions by consensus.

9. Chair. The SPC shall appoint the chair of the Asian Monsoon and Cenozoic Tectonic History DPG.

10. Liaisons. The SPC may appoint a liaison to the Asian Monsoon and Cenozoic Tectonic History DPG