# *JOIDES* SCIENCE COMMITTEE MEETING

## LONG MARINE LABORATORY
## UNIVERSITY OF CALIFORNIA, SANTA CRUZ

## 15–18 August 1999

**Science Committee - SCICOM**

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|---|---|
| G. Bond | Lamont-Doherty Earth Observatory, Columbia University, USA |
| K. Brown | Scripps Institution of Oceanography, University of California, San Diego, USA |
| M. Coffin | Institute for Geophysics, University of Texas, USA |
| W. Hay (Chair) | GEOMAR Research Center, University of Kiel, Germany |
| D. Hodell* | Department of Geology, University of Florida, USA |
| N. Holm | Department of Geology and Geochemistry, Stockholm University, Sweden (ECOD) |
| S. Humphris | Woods Hole Oceanographic Institution, USA |
| E. Klein | Department of Geology, Duke University, USA |
| K. Miller | Department of Geological Sciences, Rutgers University, USA |
| J. C. Moore | Department of Earth Sciences, University of California, Santa Cruz, USA |
| A. Robertson | Department of Geology and Geophysics, University of Edinburgh, UK |
| S. Srivastava | Bedford Institute of Oceanography, Dalhousie University, Canada (PacRim) |
| K. Tamaki | Ocean Research Institute, University of Tokyo, Japan |
| D. Wiens | Department of Earth and Planetary Science, Washington University, USA |
| J. Zachos** | Department of Earth Sciences, University of California, Santa Cruz, USA |

* Replaced M. Raymo for this meeting only
** Replaced J. T. Overpeck for this meeting only

**Associate Member Observers**

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| J. Ludden | CNRS, Nancy, France |
| Z. Zhou | Department of Marine Geology & Geophysics, Tongji University, Shanghai, China |

**Liaisons**

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|---|---|
| J. Baldauf | Ocean Drilling Program, Texas A&M University, USA |
| D. Goldberg | Lamont-Doherty Earth Observatory, Columbia University, USA |
| B. Malfait | National Science Foundation, USA |
| K. Moran | Joint Oceanographic Institutions, Inc., USA |

**Guests**

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|---|---|
| M. Ball | U.S. Geological Survey, Denver, USA (PPSP Chair) |
| B. Bekins | U.S. Geological Survey, Menlo Park, USA (ESSEP member) |
| P. Delaney | Department of Ocean Sciences, University of California, Santa Cruz, USA (CDC Chair) |
| J. Diebold | Lamont-Doherty Earth Observatory, Columbia University, USA (SSP Chair) |
| J. Farrell | Joint Oceanographic Institutions, Inc., USA |
| J. Fox | Ocean Drilling Program, Texas A&M University, USA |
| H. Fujita | Japan Marine Science and Technology Center, Japan |
| H. Kinoshita | Japan Marine Science and Technology Center, Japan |
| K. Kitazawa | Japan Marine Science and Technology Center, Japan |
| N. Lundberg | Department of Geology, Florida State University, USA (ESSEP Chair-elect) |
| T. Moore | Department of Geological Sciences, University of Michigan, (ESSEP and IPSC Chair) |
| M. Reagan | Lamont-Doherty Earth Observatory, Columbia University, USA |
| M. Shinano | Japan Marine Science and Technology Center, Japan |
| S. Takagawa | Japan Marine Science and Technology Center, Japan |
| S. Tanaka | Science and Technology Agency, Japan |
| J. Tarduno | Department of Earth & Environmental Sciences, University of Rochester, USA (ISSEP Chair) |

**JOIDES Office**

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|---|---|
| W. Brückmann | GEOMAR Research Center, University of Kiel, Germany |
| B. Rohr | GEOMAR Research Center, University of Kiel, Germany |
| J. Schuffert | GEOMAR Research Center, University of Kiel, Germany |

# *JOIDES* OPERATIONS COMMITTEE MEETING

## LONG MARINE LABORATORY
## UNIVERSITY OF CALIFORNIA, SANTA CRUZ

## 16–18 August 1999

**Operations Committee - OPCOM**

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|---|---|
| R. Carter | Australian Geological Survey Organisation, Canberra, Australia (PacRim) |
| W. Hay (Chair) | GEOMAR Research Center, University of Kiel, Germany (OPCOM Chair) |
| D. Hodell | Department of Geology, University of Florida, USA |
| J. C. Moore | Department of Earth Sciences, University of California, Santa Cruz, USA |
| J. Natland | Rosenstiel School of Marine & Atmospheric Sciences, University of Miami, USA |
| K. Tamaki | Ocean Research Institute, University of Tokyo, Japan |

**Liaisons**

| | |
|---|---|
| J. Baldauf | Ocean Drilling Program, Texas A&M University, USA |
| M. Ball | U.S. Geological Survey, Denver, USA (PPSP Chair) |
| J. Diebold | Lamont-Doherty Earth Observatory, Columbia University, USA (SSP Chair) |
| B. Malfait | National Science Foundation, USA |
| K. Moran | Joint Oceanographic Institutions, Inc., USA |
| M. Reagan | Lamont-Doherty Earth Observatory, Columbia University, USA |

**Guests**

| | |
|---|---|
| D. Goldberg | Lamont-Doherty Earth Observatory, Columbia University, USA |
| J. Farrell | Joint Oceanographic Institutions, Inc., USA |
| J. Fox | Ocean Drilling Program, Texas A&M University, USA |
| H. Fujita | Japan Marine Science and Technology Center, Japan |
| H. Kinoshita | Japan Marine Science and Technology Center, Japan |
| K. Kitazawa | Japan Marine Science and Technology Center, Japan |
| N. Lundberg | Department of Geology, Florida State University, USA (ESSEP Chair-elect) |
| T. Moore | Department of Geological Sciences, University of Michigan, USA (ESSEP and IPSC Chair) |
| M. Shinano | Japan Marine Science and Technology Center, Japan |
| S. Takagawa | Japan Marine Science and Technology Center, Japan |
| S. Tanaka | Science and Technology Agency, Japan |
| J. Tarduno | Department of Earth & Environmental Sciences, University of Rochester, USA (ISSEP Chair) |

**JOIDES Office**

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| W. Brückmann | GEOMAR Research Center, University of Kiel, Germany |
| B. Rohr | GEOMAR Research Center, University of Kiel, Germany |
| J. Schuffert | GEOMAR Research Center, University of Kiel, Germany |

# *JOIDES* SCIENCE COMMITTEE MEETING

**LONG MARINE LABORATORY**
**UNIVERSITY OF CALIFORNIA, SANTA CRUZ**

**15–18 August 1999**

# Motions and Consensus Items

**SCICOM Consensus 99-2-1**
SCICOM approves the meeting agenda.

**SCICOM Consensus 99-2-2**
SCICOM approves the minutes of the March 1999 SCICOM Meeting.

12 in favor, 1 abstain (Zachos), 2 absent (Bond, Klein).

**SCICOM Motion 99-2-3**
SCICOM endorses the recommendations forwarded from the June 1999 SciMP meeting.

Moore proposed, Holm seconded; 11 in favor, 4 absent (Bond, Coffin, Robertson, Zachos).

**SCICOM Consensus 99-2-4**
SCICOM congratulates TAMU on their successful transition to a CD- and web-based publication of the Initial Reports Volume. The first CD and accompanying volume available for Leg 177 is a highly professional production that underlines the quality of the TAMU publications office. In integrating electronic publication with a user-friendly printed summary volume, TAMU publications have set a new standard for electronic scientific publication.

Miller proposed, Moore seconded, passed by acclimation.

**SCICOM Consensus 99-2-5**
SCICOM approves the proposed chairs, mandates, and membership of the IPSC working groups.

**SCICOM Consensus 99-2-6**
SCICOM will not rank Proposal 560-Full nor forward it to OPCOM for possible scheduling at this meeting.

**SCICOM Motion 99-2-7**
SCICOM forwards Proposal 431-Rev to OPCOM without ranking, so as to complete an already highly ranked proposal.

Klein proposed, Wiens seconded, 11 in favor, 1 opposed (Hodell), 1 abstained (Robertson), 2 absent (Coffin, Zachos).

**SCICOM Motion 99-2-8**
SCICOM forwards Proposal 517-Full to OPCOM for scheduling the second leg of W. Nankai, based on the SSEPs and SCICOM reviews of the scientific plan and contingent upon successful drilling operations during Leg 190 (see SCICOM Motion 98-2-7). SCICOM also encourages the proponents to continue to seek funding to offset the costs of this very expensive leg. SCICOM expects that ODP/TAMU will continue to develop the advanced CORKs and have them completely ready for use by the beginning of the leg. If not, SCICOM views it as critical that the LWD work proceeds as scheduled.

Humphris proposed, Robertson seconded, 13 in favor, 2 absent (Coffin, Zachos).

**SCICOM Motion 99-2-9**
SCICOM views the timely development and testing of the advanced CORK system as critical to achieving the objectives of drilling at the Nankai accretionary prism. SCICOM therefore instructs OPCOM to work closely with JOI and ODP/TAMU to ensure that development proceeds appropriately. SCICOM also requests that JOI and ODP-TAMU present at the next SCICOM meeting a timeline for development and testing of the advanced CORKs.

Humphris proposed, Srivastava seconded, 13 in favor, 2 absent (Coffin, Zachos).

**SCICOM Motion 99-2-10**
SCICOM expresses concern about highly ranked proposals (those forwarded to OPCOM) that clearly lie outside the projected area of ship operations for several years yet receive a new global scientific ranking each year. Such proposals inevitably slip in rank because of the higher priority placed on those proposals with a geographic urgency to schedule. SCICOM therefore adopts the following procedure:
1) Every proposal, regardless of its geographic location, will receive a global scientific ranking when first reviewed by SCICOM.
2) If OPCOM does not schedule a highly ranked proposal primarily because it lies outside the projected area of ship operations, SCICOM will not automatically re-rank that proposal the following year. When the possibility arises to schedule such a proposal, SCICOM may request the proponents to submit an update, in the form of either an addendum or a revised proposal (not subjected to further external review), for consideration at the spring meeting of the SSEPs.

Humphris proposed, Klein seconded, 13 in favor, 2 absent (Coffin, Brown).

**SCICOM Consensus 99-2-11**
SCICOM decides to forward the top ten ranked proposals to OPCOM for possible scheduling. See minutes above (Section G) for a complete list of proposal rankings.

11 in favor, 3 abstained (Hay, Zachos, Brown), 1 absent (Coffin).

**SCICOM Motion 99-2-12**
SCICOM endorses Yngve Kristoffersen and Jan Backman as candidates for chair or co-chairs of the new Arctic PPG. The chair(s), in consultation with the JOIDES Office, will select the other members of this PPG from among a list of nominees endorsed by SCICOM and from other sources. The membership should reflect the climate focus and other requirements of the PPG mandate (see SCICOM Motion 99-1-5) and include one member with previous experience on the Extreme Climate PPG. SCICOM must approve the final membership.

Miller proposed, Robertson seconded, 14 in favor, 1 absent (Coffin).

**SCICOM Motion 99-2-13**
SCICOM appoints Shemin Ge as chair of the new Hydrogeology PPG. The chair, in consultation with the JOIDES Office, will select the other members of this PPG from among a list of nominees endorsed by SCICOM. SCICOM must approve the final membership.

Brown proposed, Moore seconded, 13 in favor, 1 abstained (Zachos), 1 absent (Coffin).

**SCICOM Motion 99-2-14**
Given the importance of the deep biosphere within the Long-Range Plan and the normal 3-year term length of a PPG, SCICOM at its Spring 2000 meeting may institute a new Deep Biosphere PPG (with a revised mandate). Toward this objective, SCICOM invites a representative of the current Deep Biosphere PPG to attend this meeting, present that group's achievements, and suggest future science initiatives in this field.

Robertson proposed, Holm seconded, 14 in favor, 1 absent (Coffin).

**SCICOM Motion 99-2-15**
SCICOM reaffirms the policy that, when replacing or appointing new JOIDES panel chairs, the appropriate balance between U.S. and other members should be respected as much as possible.

Robertson proposed, Moore seconded, 13 in favor, 2 absent (Coffin, Zachos).

**SCICOM Motion 99-2-16**
SCICOM requests EXCOM to amend the Terms of Reference for Program Planning Groups as follows:

6.5 **Liaison.** ~~SCICOM establishes liaison with the PPGs by the appointment of non-voting liaisons~~. The SSEPs will appoint liaisons to the PPGs, and ~~The~~ PPG Chairs ~~will~~ may attend one meeting of the SSEPs per year, ~~as~~ if requested by the SSEPs Chairs.

Srivastava proposed, Holm seconded, 11 in favor, 4 absent (Coffin, Hay, Hodell, Zachos).

**SCICOM Motion 99-2-17**
SCICOM opts to include LWD and advanced CORKs as part of the scheduled science plan for the second leg at W. Nankai (Proposal 517-Full).

Wiens proposed, C. Moore seconded, 12 in favor, 1 abstained (Brown), 2 absent (Coffin, Zachos)

**SCICOM Motion 99-2-18**
SCICOM will place either Proposal 534-Full or 510-Full3 (ranked 9 and 10, respectively) at the beginning of the drilling schedule for 2000 because the future ship track will most likely preclude the scheduling of these proposed legs during the remainder of the program.

Robertson proposed, Miller seconded, 10 in favor, 2 against (Tamaki, Bond), 1 abstained (Brown), 2 absent (Coffin, Zachos)

**SCICOM Motion 99-2-19**
SCICOM places Proposal 510-Full3 at the beginning of the drilling schedule for 2000 (see SCICOM Motion 99-2-18).

Srivastava proposed, Robertson seconded, 8 in favor, 2 against (Tamaki, Bond), 3 abstained (Wiens, Moore, Brown), 2 absent (Coffin, Zachos)

**SCICOM Motion 99-2-20**
SCICOM decides to schedule Proposal 500-Full2 rather than 499-Rev.

Hodell proposed, Humphris seconded, 12 in favor, 1 abstained (Brown), 2 absent (Coffin, Zachos).

**SCICOM Motion 99-2-21**
SCICOM approves the drilling schedule for 2001 and beyond, as shown below. This schedule could change to take advantage of optimal weather windows, but all projects will be scheduled.

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| 510-Full3 | Marion Plateau |
| 431-Rev | W Pacific Network - WP-1 |
| 517-Full | Nankai (LWD + CORKs) |
| 523-Full | Hawaii-Emperor Seamounts |
| 546-Full | Hydrate Ridge |
| 500-Full2 | H2O Observatory |
| 486-Rev2 | Paleogene Equatorial Pacific |
| 465---- | SE Pacific Paleoceanography |

Humphris proposed, Holm seconded, 10 in favor, 1 opposed (Wiens), 2 abstained (Brown, Tamaki), 2 absent (Coffin, Zachos).

**SCICOM Motion 99-2-XX (did not pass)**
SCICOM recognizes the importance of completing the high-priority ION sites and thus intends to schedule Proposal 499-Rev during 2000.

Wiens proposed, Holm seconded, 4 in favor, 7 opposed, 2 abstained (Brown, Robertson,), 2 absent (Coffin, Zachos).

**SCICOM Motion 99-2-22**
SCICOM recognizes the importance of completing the high-priority ION sites and thus intends to schedule Proposal 499-Rev before the end of the current program. SCICOM will forward this proposal to OPCOM for possible scheduling at the August 2000 meeting.

Wiens proposed, Holm seconded, 9 in favor, 2 opposed (Hodell, Tamaki), 3 abstained (Brown, Robertson, Zachos), 1 absent (Coffin).

**SCICOM Motion 99-2-23**
SCICOM resolves that the *JOIDES Resolution* will operate in the Atlantic Ocean during at least part of 2002.

Moore proposed, Holm seconded, 9 in favor, 1 opposed (Tamaki), 3 abstain (Brown, Robertson, Zachos), 2 absent (Bond, Coffin).

**SCICOM Consensus 99-2-24**
From the land of the rising sun a new drilling program dawns. The sun sets on Kensaku Tamaki at SCICOM, but rises again over a new InterRidge leader. SCICOM thanks Kensaku for his numerous, significant, and incisive contributions to our deliberations. We know he will remain an important player in marine geosciences, both nationally and internationally, and we look forward to working with him in other future capacities.

**SCICOM Consensus 99-2-25**
SCICOM thanks Kevin Brown for his long and continuous service that spanned the challenging transition from PCOM to SCICOM. We appreciate Kevin's keen scientific insights, always offered in a genial style, and his imperturbable nature during tense moments. We wish him well in his scientific endeavors as he retreats from the meeting room to the pleasures of sea-floor seeps and soft mud.

**SCICOM Limerick 99-2-26**
*Ode to Jim Natland* (by E. Klein)
The indefatigable Jim,
Heads bow and hats tip off to him.
On matters related
To drilling and data
It's clear we can't function without him.

**SCICOM Consensus 99-2-27**
SCICOM bids fond farewell to charter OPCOM member Dave Hodell who unhesitatingly jumped into the breech of SCICOM. Dave's perspective, ranging from the ice of the subantarctic to the fire of Florida and Guatemalan lakes will be sorely missed.

**SCICOM Consensus 99-2-28**
SCICOM bids fond farewell to two long-time PacRim members, Shiri Srivastava and Bob Carter. Shiri has ardently supported ODP since Leg 105, serving as chair of the Site Survey Panel and most recently on SCICOM. Bob has observed the rises and falls of the sea-level issue within ODP, served as a charter OPCOM member, and provided a unique perspective to ODP issues from down under. We will miss them and wish them well as they travel to the antipodes of the PacRim.

**SCICOM Consensus 99-2-29**
SCICOM expresses gratitude to Susan Humphris, our first chair and guiding light in the intricacies of the new advisory structure. Without her dedication, innovative talents, and discipline, the advisory structure would not have developed into the well-oiled, proposal-nurturing machine we know today. We wish her well in the months until we find a way to make use of her energy and talents in a new capacity! May her service on the USSAC Conceptual Design Committee represent the start of a long and distinguished post-SCICOM career.

**SCICOM Consensus 99-2-30**
SCICOM congratulates Ted Moore on a job well done as the first chair of the ESSEP, and we wish him well as the first chair of IPSC. His talents as researcher, professor, petroleum geologist, director, guru, soothsayer, and knight in shining armor will all serve him well in this endeavor. May we all live by the motto "In Ted we trust."

**SCICOM Consensus 99-2-31**
SCICOM takes this opportunity to thank John Tarduno for his service as the chair of ISSEP, though he still has one more meeting. John accepted the position of chair when ISSEP was first created. He has worked extremely hard to ensure that each proposal receives the most thoughtful and fair consideration possible and has taken the nurturing role of the SSEPs very seriously. One of the great successes of the new JOIDES advisory structure has been the synergy between the two SSEPs. This can be attributed to the strong leadership provided by both John and Ted, and will be a legacy to their service. SCICOM acknowledges John's dedication to ODP and the excellent job that he has done as chair of ISSEP. We wish him well in the future and look forward to his continued involvement in ODP.

**SCICOM Consensus 99-2-32**
SCICOM thanks Casey Moore for a relaxing meeting under the mists and redwood trees of the Santa Cruz Mountains. Being lost in the trees adds a new ambience to the unique beauty of the Santa Cruz campus and our memories of the meeting. We also thank Casey and John Tarduno for leading the field trip, and we thank UCSC and JOI for hosting the social events. As we return to our own institutions, the cover of our Agenda Book will remind us of the hospitality extended by the "banana slug" university.

# *JOIDES* SCIENCE COMMITTEE MEETING

**LONG MARINE LABORATORY**
**UNIVERSITY OF CALIFORNIA, SANTA CRUZ**

**15–18 August 1999**

# Minutes

**Sunday, August 15.....8:30**

### A. Welcome and Introduction

1. Introduction of SCICOM Members, Liaisons, and Guests

Bill Hay called the meeting to order promptly at 0830 and the participants introduced themselves.

2. Logistics of the Meeting

Casey Moore explained the logistics of the meeting. Gary Griggs, Director of the Marine Science Institute, spoke on behalf of UCSC and described the regional Monterey Bay Marine Science Facilities. Jim Gill, Associate Chancellor of Research, offered greetings as a new member of JOI.

3. Approval of the Agenda

Hay noted that Tom Janecek and Alister Skinner could not attend the meeting. The committee offered no other changes and approved the agenda by consensus.

**SCICOM Consensus 99-2-1**
SCICOM approves the meeting agenda.

4. Approval of the Minutes of March 1999 SCICOM Meeting

**SCICOM Consensus 99-2-2**
SCICOM approves the minutes of the March 1999 SCICOM Meeting.

12 in favor, 1 abstain (Zachos), 2 absent (Bond, Klein).

5. Update on Recommendations from March 1999 SCICOM Meeting and EXCOM response

Hay gave a brief update on recommendations from the previous SCICOM meeting, including the status of the PPGs. He noted that the agenda book contained the final revised mandates of the two new PPGs and that EXCOM approved the change in the Terms of Reference that SCICOM had requested at its last meeting. Hay expressed confusion about the meaning of past motions on multi-leg proposals and said that he had not done anything yet about leg synthesis papers by co-chiefs. Ted Moore commented on the ineffectiveness of the Deep Biosphere PPG, but added that we should not disband it entirely. He suggested holding a workshop to involve the broader microbiology community, then have the PPG write a final report. Nils Holm noted that RIDGE and other co-sponsors had held a microbiology workshop two years ago in Washington, D.C., and Hay mentioned a deep biosphere meeting scheduled for next week in Colorado or Utah.

### B. Discussion of how to maximize scientific results during remainder of ODP

Hay stressed the importance of discussing how to plan the science program for the remainder of the program. He noted that relatively few legs remained for scheduling. Natland asked how firm the

schedule would be at the very end, and Hay guessed that any modification would mean fewer legs. Malfait remarked that this looked like a good way to proceed, although we did not really know the final schedule. Moran asked when JOI would know the target budget for 2003, but Malfait could not give a definite answer. Fox stated that since demobilization would occur in a mutually agreeable U.S. port, this would put a constraint on the end of the program. Hay suggested continuing the discussion by having Moore and Tarduno give the SSEPs perspective, followed by Humphris giving the budget background and a refresher about the thinking behind the prioritization scheme.

Moore showed a diagram of the proposals considered by ESSEP, grouped thematically under the broad categories of fluids, climate, and sea level. He noted that the SSEPs had acted more critically lately when grouping proposals, classifying fewer as Group I than II, perhaps because of technical problems, scientific importance, thematic imbalances, and other reasons. Natland requested and received a definition of the SSEP groupings. Moore stated that we have only two proposals for extreme warm climates, only one for climate-tectonics, and only one for sea level, though he expected to see at least two more sea-level proposals before the program ends. He also noted that the climate-tectonics proposal had arisen from the RFP for a deep hole, which the reviewers did not realize.

Coffin asked whether any LRP themes were missing from the existing proposals, and Moore replied that we had them all covered except perhaps for a specific deep-biosphere proposal other than as an add-on to other studies. Ludden asked whether the committee should know about any other proposals besides those on the list. Moore hesitated to mention other proposals because he did not know for certain what would actually come back in and when, but he said he knew about two more extreme warm climate proposals. Tarduno mentioned that hydrogeology did not appear on the thematic list, but the SSEPs had seen elements of that in a couple of proposals. Miller asked about climate & tectonics, noting that we did not have much to show for the PPG. Moore said that the SSEPs had seen only one proposal along those lines, and although it concerned a good area and a good topic, it had an unconventional style.

Tarduno summarized the ISSEP perspective and explained the ISSEP review process. He reiterated that panel groupings reflected factors other than just science. He thought the panel currently had a low tolerance for risk related to developing technology, scheduling, multi-legs, etc. The panel was looking for "home runs," but these would prove hard to predict when results take five years to mature. Perhaps the most important thing for post-2003 drilling would be to have a few home runs in the remainder of this program. Tarduno showed diagrams of how ISSEP proposals fit into the LRP themes on mantle dynamics, ocean crust, mass balances, deformation of lithosphere, and earthquake processes. He noted that we had no proposals or completed legs for in-situ crust or core complexes, but he thought we had done a generally good job of covering the LRP.

Coffin asked whether any discussion had arisen over the various Nankai proposals. Tarduno replied that some proponents had attempted to link the proposals but only in general terms. Moore noted the distinction between East and West Nankai. Tarduno added that some panel members felt a need for successful drilling first and did not see a clear connection between Nankai and a post-2003 program. Natland recalled that when we first started the SSEPs we wondered how much risk assessment was going on in the old thematic panels. We really need a group of people with technical expertise to address this issue, and we need to know which proposal groupings this has affected. Tarduno responded that we should not trivialize a message that comes from 30 good scientists. As liaison to ISSEP, Robertson felt that the SSEPs considered the limited number of legs left to schedule and tried to send through the best science.

T. Moore reported that we had a total of seven gas hydrate proposals either now or soon ready for consideration. ESSEP figured that we would drill at least one of these before the program ends, and they identified Proposal 546 (Hydrate Ridge) as the best because it provided a nice mix of activities. Opinions differed on the second best, but most favored Proposal 544 (Gulf of Mexico). Tarduno noted that although the ISSEP mandate did not include gas hydrates, several ISSEP members had an interest and familiarity with this subject. ISSEP identified Proposal 539 (Blake Ridge) as the best because of its simple setting, its global implications, and the potential to understand dynamics. They chose Proposal 546 as second best, but not unanimously. Fox asked why we should pick only the best gas hydrate proposal rather than identify the best package to fully understand the problem. T. Moore replied that the SSEPs saw this as an initial step because they doubted that we could accomplish a full plan. Srivastava asked when the Gas Hydrate PPG would meet again, and T. Moore replied in September.

Humphris outlined the general areas of the LRP where progress had occurred and presented a list of specific goals that we had accomplished and those that we had not. She then placed the accomplishments in the context of the prioritization document and budgetary constraints, saying that we must end the program on a vital note with both science and technology moving forward and poised for further progress in the future. Humphris then presented a list of 16-20 project types that we would ideally need to do. That was clearly too many, so again we really must prioritize the science. She also suggested that the ship should move into the eastern Pacific by the end of 2001.

Robertson asked how new emerging topics fit into the scheme. Humphris sympathized with the problem but emphasized the need for "home runs", saying we should keep in mind the future program. Miller said that in defining a "home run" we should ask whether it represented a world class place to study a particular world class problem. Moran added that some themes, such as ultra-high-resolution climate studies, often required only a few days of ship time. Robertson also inquired about the status of the plan to return to the Atlantic, and Humphris referred to a motion that the ship would return before the end of the program in 2003.

Ludden asked when we would stop accepting proposals. Hay replied that the next March deadline would probably represent the last chance to submit a new proposal with the possibility of scheduling in this program, and it would have to be a perfect proposal. Natland recalled that proposals from the end of DSDP were used at the beginning of ODP, though perhaps not in the best way. He asked whether we could identify projects that would make a good bridge between programs or benefit from more time for technological development. Robertson commented that it was important to know what really important science issues we want to address in the new program. Hay suggested that every committee member identify one important item. Srivastava wanted to clarify whether the non-riser platform would have different capabilities than the *JOIDES Resolution*. Hay noted that Peggy Delaney would report about the Conceptual Design Committee (CDC) for the non-riser ship, and perhaps they could benefit from this discussion.

Coffin believed that since the RFP for deep drilling, SCICOM had not shown much initiative toward this idea and should decide whether to keep pushing it or not. Tarduno added that the SSEPs had discussed the idea of testing the limits of the *JOIDES Resolution*, but they had not received a clear message as to whether this remained an important issue. Humphris explained that this idea originated from EXCOM, and SCICOM had backed away from it lately because of budgetary constraints. Robertson suggested that it might prove useful to OD21 for us to continue pursuing this issue, and Hay suggested giving JAMSTEC a chance to think about it and respond later. Natland said that we could not do anything without worthwhile proposals in place, but Wiens believed that if proposals arose only from an RFP then perhaps some of the justification had

disappeared. Diebold noted that the community perceived a sense of coyness on the part of the advisory structure regarding this issue.

Srivastava summarized the SSEPs grouping that showed the deep-hole proposal at the bottom of the list, then he listed his personal priorities. Natland cautioned against discussing specific proposals without everyone first admitting conflicts of interest. Hay proposed moving on with general ideas. Coffin felt that we ought to set science priorities and have the broadest possible involvement of the science community, and we ought to move the ship back into different regions of the ocean. In particular we need to get proposals from the deep biosphere and climate-tectonics groups. Zhou favored gas hydrates and active margin processes, while C. Moore would favor plans to round out what we had done in climate, plus the Hawaiian Emperor Seamounts, gas hydrates, and Nankai. Holm felt that we needed a higher rate of hits now than before, but we should not try to complete everything now and leave nothing for the start of the new program. He stated that the LRP is just a plan, not a requirement of what we must complete, but he would like to complete the Southern Ocean paleoceanography. Miller stressed the importance of gas hydrates and of course sea level, and he said that if the Prydz Bay proposal succeeded we might want to return to Antarctica, but the Arctic would provide the biggest "home run." Ludden noted the importance of observatories, thought that we should finish Nankai, and wondered whether we needed a separate biosphere leg. He agreed with Miller about demonstrating the viability of alternate platforms and thought a home run was mantle dynamics/hot spots.

Robertson stated that climatic change might still represent the best topic for helping to fund a new program. We have inadequate data for modeling studies. We might not completely solve everything but could provide a springboard. We also need to do legwork for OD21 and address gas hydrates. Tamaki wanted to complete the ION sites, begin on the deep biosphere, and continue with climate change. He thought that Humphris had outlined a good start. Hodell presented a priority list of proposals based on the SCICOM environment subcommittee. Brown noted that decadal- to millennial-scale climate change looked very interesting, as well as the deep biosphere, and he definitely favored gas hydrates but had a personal bias toward them. We also need to have a lot of site-survey data for a deep hole in the seismogenic zone. He would like to drill more ION sites but wondered if we really needed them. Wiens did not see the point of a prioritization and checklist of what we had already done in the LRP because we needed to focus on the time remaining. Gaps in the LRP could exist for good reasons, such as no proposals. He did not worry about completing something just for the sake of doing so, but he did see the value of developing new technologies and bringing in new communities for selling the program. Zachos professed a bias to extreme climates and saw decadal- to millennial-scale climate variability as important.

Natland felt that we were leaning toward filling in gaps, rounding things off, and presenting a complete package at the end of the program. Instead, we should think specifically about what we want to accomplish and leave logistics considerations to OPCOM. Hay cautioned that the new program might not have the same partners. Humphris agreed and said that we should of course try to do the best science, but we would inevitably have to show what we had accomplished. Perhaps this should not serve as a driving factor, but we had to consider it. Hay affirmed that he certainly got this message from the last ODP Council meeting. Natland remarked that all proposals address the LRP. Humphris stressed that we could not just take a random walk through the LRP. Fox stated that we ought to respect the wishes of the Council to see closure on some issues, but without losing sight of science priorities. Srivastava thought that we would stand the best chance of continuing with a new program if we could show clearly that we had completed certain themes. Tarduno believed it would work out, judging from what he had seen so far with the proposals.

**C. Reports of Liaisons**

1. NSF

Bruce Malfait reported on the membership levels of ODP countries and consortia and the ODP program budget. ESF would increase to 99% full in 2000, but PacRim may decrease because of a reduced input from Taiwan. The NSF/ODP budget was likely to remain level in 2000 and 2001. Malfait also mentioned several U.S. ODP science support awards. NSF received LOIs from U.K., Germany, the European Commission, and China. The IWG support office would be established at JOI. The U.S. had formed a conceptual design committee for a non-riser vessel.

2. ODP Management Report

Kate Moran reported that DOE had given $70K for a new microbiology lab on the *JOIDES Resolution*. Ongoing industry–technology projects included the JAMSTEC/JOI advanced diamond core barrel (ADCB), HYACE, and CONOCO deep-water site investigations. The latter represented a real cooperation with ODP in the lead. Other planned or ongoing industry–science collaborations included another workshop in Houston during October 1999 and the EGI South Atlantic database migration. The latter remained on hold, however, because of uncertainties and volatility in industry support. Moran also said that she would review industry partnership efforts at a meeting of the international ODP program offices at JOI in September.

Moran talked about the success of Leg 185 as part of the deep biosphere initiative. Ludden stated that Leg 185 was a success primarily in terms of biologists and geologists working together, and not because the contamination tests were completely successful. Moran replied that the tests were successfully completed but the results were not all favorable. Humphris inquired whether the new microbiology lab would include space for an isotope lab. Fox answered yes, but they plan to keep the isotope facility separate from the lab stack by adopting the current van as a module for isotopes.

Moran outlined the FY00 Program Plan, noting that it met the target budget and maintained innovation. The ship would operate in the western Pacific and Southern Ocean, with 6 science legs and 1.5 engineering legs. Moran also listed several targets for technology development, including improved core quality, gas hydrates, advanced CORKs, large-diameter logging tools, and hard-rock reentry. C. Moore asked how so many legs fit into one year, and Moran answered that they had variable lengths and one crossed over to the next fiscal year. Coffin stated that the budget for 2000 would be about 4% less and for 2001 about 8% less than what Malfait showed, and he asked how that would impact things. Moran replied that it would fall to OPCOM to decide what to do with high-cost legs. Humphris pointed out that those budgets were calculated several years ago, when we used to have a category for innovation that provided some flexibility for development of new tools.

3. EXCOM

Hay summarized the draft motions from the recent EXCOM meeting in Sydney.

**D. Committee and panel reports**

1. ESSEP

Ted Moore reported that Neil Lundberg would replace him as chair at the November meeting and Julie Morris would replace Tarduno at the following meeting. He expressed particular concerns about maintaining expertise in hydrology and fluid flow and added that he could see another weakness coming in paleoceanography, especially at longer time scales. Humphris asked whether any effort had gone into putting a microbiologist on ESSEP. Moore answered no, but they had had

two members who in general may have proved more valuable than a pure microbiologist. He recognized the importance of microbiology but thought it might prove better to integrate it into other areas like hydrology, etc. Farrell reported that USSAC considered the need for expertise on the deep biosphere and had nominated someone with a geochemistry and microbiology background for ESSEP and a bacteriologist for USSAC. Natland asked whether the mix of things on the SSEPs, the synergy, had worked out. Moore answered yes, partly because Tarduno had kept everyone focused and well organized.

2. ISSEP

Tarduno noted that the panel had approached saturation in terms of different fields and number of members. This meant that they could not add new areas of expertise, such as deep biosphere, to the panel without changing its size or replacing another area that they might still need. Some proposals asked very specific questions that the panel could not adequately address. Miller believed that we needed people with the broadest possible expertise to evaluate proposals, so perhaps it would not prove worthwhile to put a strict microbiologist on the panel.

Hay asked the SSEPs chairs to explain why they wanted to wait until now to give input to SCICOM on proposals. Tarduno answered that they waited primarily because they did not want to submit an official text without giving the proponents a chance to respond to it. Miller said that this did not seem quite fair because some proposals had SSEPs comments and some did not. T. Moore replied that SCICOM had already ranked those proposals once. C. Moore pointed out that he asked for SSEPs comments because he really valued them. Coffin asked whether any proponents had complained about this change in procedure, and Tarduno answered no. T. Moore added that he and Tarduno could provide comments but they would represent only their opinion and not the panel's. Humphris said that SCICOM wanted to see the comments from the panel members about the proposals, not an explanation of the groupings. Moore tried to clarify the difference between the two sets of comments normally provided by the SSEPs

3. TEDCOM

The TEDCOM Chair, Alister Skinner, could not attend the meeting. Hay reported briefly on the TEDCOM meeting in Vancouver. TEDCOM members were very impressed with the science being proposed. They reviewed the current plans for the OD21 vessel and questioned the need for the proposed double derrick. They urged ODP to replace the seals in the passive heave compensator when installing the active heave compensator during drydock.

4. SCIMP

In the absence of the SciMP Chair, Moran presented the recommendations from the last SciMP meeting. Miller asked why the ship needed to have both conventional and digital photo imaging capabilities. Moran replied that we had to ensure first that we could archive the digital images and provide them to the community before we could stop doing conventional photography. Ludden asked whether ODP would take the XRF off the ship. Fox replied that the long-term strategy called for removing the XRF after addition of the ICP system. Humphris asked about a motion stemming from a previous SciMP recommendation regarding JOI evaluating the overall staffing of ODP. Moran replied that discussions had just started concerning possible changes with shipboard science positions. Fox added that the discussions focused more on how to meet the changing needs of the science community and not so much on changing the total number of positions.

Robertson stressed the importance of having access to the Citation Database. Coffin suggested that the committee should reconsider the SciMP recommendation on Preliminary Reports and let them

stay in the gray area rather than make them more official. Robertson agreed because the Preliminary Reports often contained mistakes that remained uncorrected for months or even permanently. Hay noted that once something appears on the Web, everyone generally regards it as published. Miller suggested establishing a moratorium of say two months before the reports go on the Web. Coffin noted that many options existed and proposed discussing it later. In a related sense, Ball suggested that the JOIDES Office could distribute the Drilling Prospectus on CD-ROM, and Hay concurred. Ludden thought the committee should follow up on an earlier email from one member and commend TAMU for the success of the new electronic publication format.

**SCICOM Motion 99-2-3**
SCICOM endorses the recommendations forwarded from the June 1999 SciMP meeting.

Moore proposed, Holm seconded; 11 in favor, 4 absent (Bond, Coffin, Robertson, Zachos).

**SCICOM Consensus 99-2-4**
SCICOM congratulates TAMU on their successful transition to a CD- and web-based publication of the Initial Reports Volume. The first CD and accompanying volume available for Leg 177 is a highly professional production that underlines the quality of the TAMU publications office. In integrating electronic publication with a user-friendly printed summary volume, TAMU publications have set a new standard for electronic scientific publication.

Miller proposed, Moore seconded, passed by acclimation.

5. SSP

John Diebold summarized the proceedings of the last SSP meeting. He announced that Al Hine would serve as SSP liaison to the next ESSEP meeting and Michael Enachescu would do the same for ISSEP. SSP had also suggested three people to replace Gail Christenson. Diebold also outlined the availability of seismic data for various proposals and commented on the often very poor quality of the data received, wishing they could get more digital navigation data with information on site location. Ball asked whether one could realistically say that a proposal scoring lower than 2 on their scale could get ready for scheduling before 2001 and Diebold replied no.

6. PPSP

Mahlon Ball stated that if SCICOM scheduled six legs for drilling in 2001, they would meet the request of the PPSP. Srivastava asked when the PPSP would hold its next meeting, and Ball replied that it would occur in December before AGU.

**E. Report on IPSC**

Ted Moore listed all IPSC activities since its March inception as well as those planned through December 1999, including the next IPSC meeting in October. He commended the efforts of Tom Janecek and SciMP in providing input to JAMSTEC on OD21 shipboard facilities. Moore gave a tentative outline of a long-range science plan and said that he expected to have a first draft ready for editorial review by December. Hay asked whether IPSC wanted input from SCICOM on the long-range-plan. Ludden suggested calling it a ten-year plan rather than a long-range plan. Tarduno hoped that it would remain a flexible document. Moore replied that IPSC intended to address the science plan from a priority standpoint, and they would like to get volunteers from SCICOM to review it. He added that we should also start thinking about the transition from this program to the next one. For example, although we did not know when drilling would begin, we should continue to evaluate proposals that would remain in the system and provide feedback to proponents.

Moore then presented mandates for the Science Plan, Industrial Liaison, and Technical Advice Working Groups and listed their potential membership. He requested approval from SCICOM for the proposed mandates and attributed the slow progress on establishing these groups primarily to the current uncertainties in industry. Moore also presented a series of flowcharts outlining various options for the science advisory and management structures. One option showed a science advisory structure similar to the current one, except with an independent engineering subcontractor for technology development, whereas another option showed separate riser and non-riser science committees. Miller asked why IPSC had not established a working group for a non-riser ship, and Moore answered that he expected the CDC to take care of that. Humphris hoped that IPSC would look at other models for handling multi-directional programs and address the question of how to do science in a multi-platform program. Moore stated that we would need two shore-based labs if not a full lab on the ships. He also explained that his community survey had shown a strong preference (69-11) for the full vs. limited option of staffing and equipping the riser ship for science operations. Brown asked how we would find enough scientists to participate on a 3-5 year leg, and Moore acknowledged the potential difficulty. Carter suggested that we would need stronger involvement of graduate students. Miller asked what kinds of measurements we had to consider. Humphris said that we could do the minimum necessary for safety, ephemeral properties, and decision making. Ludden added that all good geochemistry could only happen in a shore-based lab.

Natland asked about the project management for long-term riser legs and about the technical and logistical difficulties of drilling the seismogenic zone. Moore replied that he would expect every riser leg to have its own DPG, and they would most likely have to tailor the plan to individual parts of a given leg. Brown explained that the SEIZE DPG had considered many of these issues, but it would help to have lots more information on seismicity, heat flow, etc. C. Moore suggested that a DPG should exist by now to select a site for the first riser leg. Moran suggested that SCICOM identify what problems would exist for scheduling riser legs using a structure similar to the present one. Humphris noted that the new program would most likely have a different structure than the current one because of the greater complexity and expense of site surveys for riser drilling, and she wondered whether the new program would have a separate operator for site surveys. Natland agreed that at some level the project would have to include surveying. Diebold emphasized the much greater expense of the 3-D surveys needed for riser drilling compared to current site surveys, and Moore added that no one could get 3-D surveys funded for an area without a good scientific reason to drill there. Coffin mentioned an ongoing effort in the U.K. to get a survey vessel on a long-term charter and asked where the site-survey issue fit within IPSC planning so far. Moore replied that it did not yet fit, but he hoped to establish a liaison with industry to address this issue. Humphris asked whether a timetable existed yet for meshing finances with hopes and expectations, and Moore said not yet. Purdy stated that the process would occur continuously through 2002.

See Section H below for further comments on the IPSC working groups.

**SCICOM Consensus 99-2-5**
SCICOM approves the proposed chairs, mandates, and membership of the IPSC working groups.

**Monday, August 16 ..... 8:30**

**Joint Meeting of SCICOM and OPCOM (continued)**

**F. Presentation and discussion of drilling proposals**

SCICOM decided by straw vote that proponents must leave the room for the entire presentation and discussion of their own proposal. Wiens asked whether the SSEPs would provide more input on the

proposals. Hay answered yes and announced that he wanted to group the proposal presentations according to the themes presented yesterday by the SSEPs chairs. He asked the SCICOM watchdogs to identify the most important kernel of science in each proposal. Hay proposed to have a 10-minute presentation of each proposal, followed by 5 minutes of comment from the SSEPs chairs, 15 minutes of general discussion, and a brief wrap-up of the theme.

1. Mantle Dynamics

431-Rev W. Pacific (Wiens)

499-Rev ION Equatorial Pacific (Wiens)

These two proposals represent components of the ION seismometer emplacement program. It is important to have a clean clamping connection in the borehole and it was noted that this might prove difficult to achieve at the eastern Pacific sites with poor host rock conditions. This problem can be eliminated by cementing the instruments in place, as was done on Leg 186. The holes in the eastern Pacific are to be cased and prepared for permanent seismometer emplacement. It was asked why the areas planned for seismometer emplacement all lay in the northern hemisphere, when it is generally recognized that the sparse nature of the seismic net in the southern hemisphere is a major problem. The proponents view these proposed sites as essential to the initial development of the system and have avoided the less accessible parts of the ocean for the immediate future. Hay asked whether any proposals for Southern Hemisphere sites had entered the review system. Tarduno advised that the three proposals in the current prospectus represent the only ones in the system.

500-Full2 H2O Long-Term Seafloor Observatory (Tamaki)

Natland, a co-proponent, left the room during the presentation and discussion of this proposal. The original proposal called for a seismometer emplacement to take advantage of a disused cable connection between the mainland and Hawaii. JOIDES had asked the proponents to consider expanding the science by also investigating the ocean crust. Much of the discussion centered on whether the additional crustal investigation, added at JOIDES request, merited the additional time involved. Additional information on the crust would be gained by deepening the basement penetration. Ludden noted that we had drilled 400 meters of fast spreading crust on Leg 185. He urged that a proper crustal study should include a transect of holes, not just a single hole on 40 Ma crust. The question was raised whether the crustal study in a single hole might yield useful information on the nature of active hydrologic flow in the system. The committee agreed by consensus not to consider the crustal investigation when voting on the proposal.

The discussion then turned to the seafloor observatory proper. A seafloor seismometer had already been buried at this locality and worked for some time, until it developed a leak. Wiens showed data demonstrating that borehole emplacement offers a definite advantage in receiving a clearer signal. There are several experiments to be done in addition to the emplacement of the seismometer. Only one hole is to be drilled, and it must penetrate deeply enough into basement to ensure that it will produce a good long-period record. The other experiments are to be carried out on the seafloor, not in the hole. Hodell inquired whether the seismometer installation and other experiments would require less time than a normal leg, and Baldauf answered yes. Humphris noted that SCICOM had previously ranked all three mantle-dynamics proposals in the top ten.

2. Gas Hydrates

355-Full7 Peru Margin (Moore)

Brown, a co-proponent, left the room during the presentation and discussion of this proposal. This proposal has been in the system for some time. It places the study of gas hydrates in a dynamic tectonic framework. Holm noted that the latest version had strong microbiology and molecular biological components.

546-Full Hydrate Ridge (Holm)

This proposal involves three drill sites, estimated to comprise only half a normal leg. The question was raised whether the proponents might have underestimated the leg length. It was also questioned whether two sites were needed. HR3 looks very similar to HR1 and much simpler to drill. Moore explained that the proponents claimed to see a double BSR at HR1 and that gas was escaping from the surface there.

553-Full Cascadia Margin (Holm)

Holm led the discussion of this proposal. He noted that one reviewer had suggested combining Cascadia Margin with Hydrate Ridge, but another reviewer had urged not to combine them.

A general discussion of gas hydrate proposals ensued. In other hydrate proposals, two CORKs were proposed for Cascadia, one CORK has been implied for later installation at Hydrate Ridge, and none for the Peru Margin. The discussion then ranged to consider this proposal in the context of all of the gas hydrate proposals in the system. Moran reminded SCICOM that they needed to consider the proposals individually. SCICOM regretted that the Gas Hydrates PPG had not prioritized these proposals. The PPG had emphasized the need to investigate extreme types of hydrate accumulation. It was noted that Blake Ridge is a very simple system, and the conditions become increasing complex in the Gulf of Mexico and on the active margins. The Norwegian margin will be of special interest because of the potential relation between gas hydrates and slope failure. It was questioned whether studies on active margins would contribute much to one of the major objectives, estimating the global volumes of gas hydrates. It was asked why so little effort was devoted to determining flow rates. C. Moore replied that Cascadia planned to use advanced CORKs and would get flow rates. Among the proposals, ESSEP favored Hydrate Ridge because it proposed to calibrate gas volumes to seismic signals. C. Moore preferred the Cascadia Margin because he felt it would be possible to quantify the amounts of hydrate present and to evaluate their occurrence in a broader context. The question was raised whether we should hold off on scheduling any of the gas hydrate proposals until we had a better understanding of the entire spectrum of gas hydrate proposals in the system. The consensus was that we should consider those in the prospectus for scheduling in 2001.

3. Fluids

478-Full4 Eastern Nankai (Brown)

The available seismic data have not clearly defined the décollement, an important aspect of the proposed objectives. Tarduno stated that ISSEP did not feel satisfied with the quality of the seismic data, and that these were essential to define faulting at these depths. Brown noted that a planned 3-D Site Survey in 2000 should contribute much new information. It was noted that this work might have a bearing on the location of the OD21 Seismogenic Zone investigation. The SEIZE DPG had not designated a specific site, but would certainly consider this area. Ludden asked whether SCICOM could evaluate parts A and B of the proposal separately. Tarduno noted that the connections between the two sets of sites were not well developed. Wiens inquired why ISSEP had

classified Part B as "IV" – Tarduno replied that it was because of the poor seismic coverage. Wiens noted that Part B might be more interesting, but is being downgraded because of the poor imaging available at present. SCICOM decided to vote separately on Parts A and B.

517-Full Nankai Trough (Humphris)

Humphris reminded SCICOM that the first part of this proposal (Leg 190) had received top ranking. She referred to SCICOM Motion 98-2-7 pertaining to this project. It was a question of whether to split it into two short legs rather than one long one, and this was an OPCOM issue. Robertson noted that LWD on the second leg was essential to get the full value from the results of the first leg. Others agreed that it was essential to get the LWD data. ESSEP had looked on this program as analogous to ANTOSTRAT in that one leg was approved but not yet drilled and involved using expensive unproven technology. Humphris responded that the comparison with ANTOSTRAT was not appropriate because SCICOM had agreed from the beginning that a two-leg program was needed to accomplish a single set of objectives. Tarduno reported that ISSEP had classified the second leg as "IV" because they needed more information that would only become available after the first leg was completed.

Concern was also expressed over whether the CORKs needed for the second leg would be available in time. Humphris responded that all of the pieces needed for the advanced CORKs are available in industry, and it is just a matter of modification for use on the *JOIDES Resolution*. OPCOM should track the development to ensure that they can be deployed as planned. Moran noted that the SSEPs were asked to make an evaluation of the technical information, and that evaluation should be available to the committee. She noted that the biggest risk was emplacement and casing, and that TAMU engineers thought that was under control. Tarduno replied that "technical review" was the right wording, but the important message was that the technology be delivered on time, and that was an OPCOM issue. Brown argued for preserving the LWD portion of the leg regardless of the advanced CORKs development. Hay noted that it is not possible to wait for the results of the first leg to schedule the second or else it would be too late, but we could always cancel the second leg if the first one proves disastrous.

505-Full3 Mariana Convergent Margin (Humphris)

Humphris reported that this proposal focused on processes in the down-going slab. It had received favorable reviews although it was not particularly well organized. It also had a strong biological component but perhaps with too much emphasis on the origin of life. Robertson emphasized the unique opportunity to investigate the deeper part of the subduction zone, the close tie with continental geology, and noted that it would generate interest beyond the marine community. It was noted that the proposal is interesting in terms of mud volcanoes, but some SCICOM members were not convinced that it would be possible to look at fluids from different depths because the plumbing system was not necessarily vertical. Humphris responded that it might not be as simple as presented, but that if they recovered good suites of metamorphic minerals it would be possible to put constraints on temperatures and pressures. The question was raised how we would know that the fluids were coming from the slab. Klein noted $^{10}$Be would provide a certain clue. Tarduno noted that ISSEP had classified it as a "I" because of its complementary nature to other studies of mass balance. There was some concern that the available seismics do not resolve the structure of the mud volcanoes and their surroundings.

4. Extreme Climates

482-Full2 Wilkes Land (Miller)

Miller noted that a letter from Carlota Escutia informed SCICOM that Proposal 482 (Wilkes Land) is being revised. It was again noted that Wilkes Land offers a unique opportunity to trace seismic reflectors from the shelf into the deep sea.

489-Full2 Ross Sea (Miller)

This revised proposal now concentrates effort on the eastern basin of the Ross Sea and focuses sharply on investigating the history of the West Antarctic ice sheet, with one site targeting the older history. C. Moore inquired about the success of the results of the Cape Roberts drilling on the shelf and its implications for drilling with the *JOIDES Resolution*. Miller noted that it was very successful in recovering different sediment types, but that there was no problem with heave in drilling from the ice.

503-Full2 Weddell Sea (Miller)

This proposal combines two earlier proposals that originally had two different objectives: history of the western sector of the East Antarctic ice sheet, and the Cretaceous history of Antarctica. All drilling would occur on the continental rise, none on the shelf.

In a general discussion of the three ANTOSTRAT proposals, it was noted that Wilkes Land would use the same drilling strategy as Prydz Bay, but that Ross Sea would use a very different strategy. With regard to possible iceboat support, Hay noted that the *Polarstern* would operate in the Weddell Sea in 2002, and discussions had begun between the proponents and Antarctic research groups concerning operations in the Ross Sea and Wilkes Land areas in 2001. Moran cautioned that we do not really know anything yet about iceboats.

486-Rev2 Paleogene Equatorial Pacific (Zachos)

T. Moore, a co-proponent, left the room during the presentation and discussion of this proposal. Zachos described it as a timely, high-priority problem in an ideal location, proposed by highly qualified proponents and with an excellent chance of success. The scientific goals concern the warm climate of the Eocene. The proposed transect would define the position of the ITCZ, equatorial productivity, and detailed climate evolution during the Eocene. Several members noted that SCICOM had seen this proposal before and ranked it highly, but it did not lie close to the proposed drilling tracks. It was also noted that the proposed study constitutes about a leg and a half. Moran inquired whether we could achieve the high-priority goals if we reduced it to a standard leg. Zachos tried to select four sites for removal, but the need for a transect across the paleo-equator would make it hard to capture with fewer sites. Others agreed that it might be difficult to locate the paleo-equator with fewer sites. Hay stated that he thought it would require the proponents to answer Moran's question.

534-Full Shatsky Rise (Miller)

Zachos, a co-proponent, left the room during the presentation and discussion of this proposal. Miller reported that the chief concern here lies with the recovery of chert sections. ESSEP had split down the middle between "I" and "II" on this proposal, but it was not clear what problems those who classified it "II" perceived. It would be very interesting to constrain the position and thickness of the oxygen minimum zone in the Pacific during the Paleogene and Cretaceous. Tarduno noted that ISSEP had classified it as "III" but hoped to get some information on a small LIP through a

short basement penetration. Hodell noted that the real strength at Shatsky was the Cretaceous record. Miller called attention to Roger Larson's communication regarding success in drilling older sediments in the Pacific. Much of the success may depend on the effectiveness of the active heave compensator to be installed during drydock, and on the advance diamond core barrel (ADCB).

5. Mass Balances

451-Full5 Tonga Forearc (Robertson)

Robertson noted that this project would be of great interest to continental geologists as a modern analog. Brown noted that it might help answer the important question of how the Oman ophiolite and similar sequences became obducted. Tarduno noted that this proposal has had a long history and that the proponents had responded well to the panel's comments. Humphris expressed concern that the original proposal had two themes, one major and one minor. The minor theme had now become the major and vice versa, but the drilling strategy had not changed. Robertson replied that the proponents felt that the original strategy was adequate to address both themes and the original focus was still important. The key was the north-south temporal evolution of the arc. It was asked if 100 m of basement penetration was enough to gain insight on arc evolution, and answered that the proponents believe so.

**Tuesday, August 17 ..... 8:30**

**F. Presentation and discussion of drilling proposals (continued)**

6. Sea Level

510-Full3 Marion Plateau (Hodell)

This proposal offered a good strategy for determining the absolute magnitude of sea level changes. It will yield good amplitude estimates, and will be an effective evaluation of sequence architecture. This is a unique situation and opportunity to investigate the amplitude problem that can not be done anywhere else in the world. It is an excellent example of a problem that can not be solved by any method other than drilling. T. Moore noted that one or two other sea-level proposals might be seen by SCICOM before the end of the program, but the proponents have done an excellent job, and the seismic data are superb. It was also noted that this would yield important new information on the development of carbonate platforms.

7. Past Mantle Flow

523-Full Hawaii-Emperor Seamounts (Robertson)

Tarduno, a co-proponent, left the room during the presentation and discussion of this proposal. This proposal has been very well received by ISSEP. This study would have an impact on paleoclimate studies because it would better determine the orientation of the paleoequator in the Pacific. There is concern about the lack of seismic data in the proposal. Diebold noted that data should be available for all sites, although it is not yet all in the data bank. T. Moore stated that ESSEP is aware of the paleoceanographic implications of this proposal because it involves reconstruction of plate motion for a critical time interval. Lundberg added that he would feel dismayed if SCICOM regarded the ESSEP classification as "III" to be a negative opinion. It was observed that the proposed hotspot drift rates are too high for mantle convection, but noted that the estimates come from extremely limited data with large error bars. Ludden said that he would like to see a petrologist on the proposal because of the hardrock recovery that will be achieved. Wiens asked whether the new data would enable a distinction between hotspot drift and true polar wander. Robertson replied that the new data would have error bars, but that hopefully they would not be large. It was noted that

volcanoes take a long time to build and their chemistry changes so it will be important to know what kind of rocks are going to be drilled. There was concern about potential problems with the bottom hole assembly twisting off during the basement penetrations.

8. Climate

521-Full4 Indus Fan (Hodell)

Hodell reminded SCICOM that this proposal represented a response to the RFP for a deep hole. It is intended to date the uplift of Tibet and the western Himalaya through fission track studies of single crystals recovered from the sediment. Tarduno reported that ISSEP was originally very excited about this proposal, but classified it as "IV" because the site location was not well characterized. The proponents had originally proposed to drill through the entire fan, but the review was very critical of this. Now they plan to bottom in the Miocene, but this would still fit the interest of climate modelers. The proponent's response letter (PRL) did not answer one reviewer's question and the panel would still like to see an explanation. Brückmann noted that the proponent was at sea when he had to prepare the PRL and may not have had access to the necessary data.

The question was raised whether this was the best place to study this problem. T. Moore said that if you wanted to get at the unroofing history you would have to look proximally. Humphris asked where we stood in understanding Tibet and Himalayan uplift after the E Asian Monsoon and Bengal Fan legs. These legs had provided information on the eastern part of the region, but the western areas have had a different history. Robertson replied that single crystal studies would be most important in this was the area, but siting is critical. Miller asked if the study could be done with cuttings from industry wells. Hay noted that a recent synthesis of the sedimentary mass balance of southeastern Asia (Metivier et al., 1999) used industry data and assumed an industry-determined stratigraphy for the Bengal and Indus fans that differs from that of DSDP and ODP. T. Moore noted that it is difficult to carry the seismic data from basin to shelf. To determine sedimentation rates in the proposed hole it would be important to know how it fits into the package of fan deposition, but this could probably be done after the drilling. It was noted that there will be a competing Bengal fan proposal, raising the question as to which location was better. Then it was recalled that the two areas have different histories. How deep the hole would have to be to define the history of the drainage system? It would need to be 1500 m deep. Miller asked why this proposal came to SCICOM when both SSEPs classified it as a "IV", but it was recalled that all proposals that go out for external review are automatically forwarded to SCICOM.

Humphris suggested that SCICOM could decide not to rank this proposal. T. Moore stated that he would prefer to see SCICOM rank the proposal especially in view of the fact that it was submitted in response to the RFP. Hay stated that one option was not to rank it, and then to write to the proponents and stress the need for better site information and justification. Some SCICOM members expressed concern that the proposal was not ready for drilling.

465----- SE Pacific Paleoceanography (Miller)

Miller noted that the rationale for the proposed study included both longitudinal and depth transects. It would essentially require two legs in its present form, but the two legs would not necessarily need to be consecutive. T. Moore noted that it would be unfortunate to miss the older part of the stratigraphic section because of its integral nature to understanding the paleoceanographic development of the Pacific. Bond agreed about the importance of this project because we know so little about the southeastern sector of the South Pacific gyre.

477-Full2 Okhotsk and Bering Seas (Bond)

This proposal concerns the history of the Okhotsk and Bering Seas. Bond noted that this is an important area because of its potential as a source of intermediate or deep waters, but that its history remains largely unknown. There may be too many sites proposed, and it is a region of high sedimentation rates. The proposal contained inadequate discussion of how the sediments would be dated or how proxies would be used to interpret paleoenvironmental conditions, and especially how they would investigate the ice-rafted detritus (IRD) and determine the source areas. There was concern that the seismic data seem to show unconformities suggesting that the record may contain a number of hiatuses. The proposal needs another revision to address these concerns, but some SCICOM members expressed hope that it could be drilled before the end of the program.

T. Moore noted that ESSEP endorsed the reviewer's comments and the proponents' response. Bond was impressed by the detail of the response. Brown suggested that perhaps we might do a pilot study at one site to determine whether the sediments look the way we expect them to. Baldauf inquired how SCICOM would prioritize the three main objectives. Bond stated that he would put IRD last and the gateway aspect first, but that a depth transect would be needed. Hodell suggested that the proponents might be attempting to do too much, and they might better concentrate the drilling plan on understanding the Sea of Okhotsk as a source of intermediate water and extend the study beyond the Sea proper.

455-Rev3 Laurentide Ice Sheet Outlets (Bond)

This proposal addresses the problem of Laurentide Ice Sheet Outlets. Bond questioned why we had to keep re-ranking proposals like this that lay far from any possible ship track for the next year. Humphris noted that the ranking of this proposal had dropped from 4 to 9 over the past two years, not for science reasons, but because other proposals for drilling in the Pacific had been ranked higher. Miller noted that there is a risk in not re-evaluating proposals because science moves forward and the relevance of a project may change. As it stands the proposal does not represent the latest science, and it would be useful if the proponents would revise the proposal as the ship track approaches the area. Humphris noted that we had asked them to do that after the August 1998 meeting. Diebold noted that the proponents had been very responsive in providing site survey information.

Humphris noted that she would like to avoid ranking proposals that cannot get on the schedule, but then we lose the global aspect of the science ranking. Wiens asked if we might exclude them based on area. Humphris added that she would only exclude those that SCICOM had already ranked once.

549-Full Arabian Sea OMZ (Zachos)

This proposal addresses the history of the oxygen minimum zone in the Arabian Sea. T. Moore noted that ESSEP classified it "I" and regarded it as very interesting. Bond agreed with the importance of this region in documenting millennial-scale variability outside the North Atlantic, and noted that the proponents have excellent reputations.

9. Ocean Crust

525-Full Mid-Atlantic Ridge Peridotite (Srivastava)

This study will investigate peridotites along the Mid-Atlantic Ridge. Klein characterized it as an elegant and exciting proposal. Tarduno noted that ISSEP classified it "I" and had received a clear message from the external reviewers that they considered it high-priority science. Natland noted the uniqueness of the study area for investigating mantle peridotites. Tamaki felt sure that this study

would provide a better understanding of a slow-spreading ridge system. He also noted that he had rarely if ever seen better reviews. The success of the project would depend on the ability to spud-in on bare rock.

535-Full2 735 Deep--Slow Spreading Ridge (Klein)

Natland, a co-proponent, left the room during the presentation and discussion of this proposal. Klein stated that the project could be accomplished successfully, and would be a major achievement before the end of the program. She noted that we have yet to see the later gabbros and primitive cumulates found in ophiolites. The question was raised how important the exact contact was, and was there likelihood that the contact at the proposed site might be tectonic, possibly a detachment fault. It was noted that this is a fundamental uncertainty in this proposal. ISSEP had grouped it "I-II" in part because of this risk. The proponents would argue that it is important to sample the contact even if it differs from what they expect because it may be representative of a large area. Ludden stated that he expected the contact would be mylonite on a slow spreading ridge. Wiens asked why the contact must be drilled if it is exposed on the surface. Klein replied that drilling was required to provide unaltered samples. It was asked whether they could move the drill site towards the surface exposure and decrease the depth of penetration required. Klein replied that the proponents want to log the lower 1500 m as close as possible to Hole 735B. SCICOM was reminded that this is a two-leg project and SCICOM should consider whether they want to make this great a commitment before the end of the program.

10. Tectonics

560-Full Woodlark Basin (Robertson)

SCICOM agreed by consensus to discuss this proposal although it had not gone through the entire review process. SCICOM made this exception to the rules because the Leg 180 Woodlark Basin drilling through the detachment fault had been terminated by safety concerns based on shipboard interpretation of hydrocarbon data. Subsequent analysis of the data suggested that drilling could have proceeded. The exceptional potential importance of this proposal is that it would complete one of the major tectonic objectives outlined in the Long-Range Plan, and if not included in the 2001 schedule it is highly unlikely that the *JOIDES Resolution* would return to this area before the end of the program. The discussion was held with the understanding that it did not imply that SCICOM must include the proposal in its ranking. Robertson, who had sailed on Leg 180, led the discussion. (The possible conflict of interest stemming from the fact that Brian Taylor had submitted the proposal "on behalf of the Shipboard Scientific Party" was discounted because Robertson had not seen the proposal beforehand nor would he agree to act as a co-proponent).

Srivastava asked about the plans for additional seismic work. Robertson stated that they would only do a little more with the *JOIDES Resolution*. Zhou asked whether the proposed study would make a link between continental and oceanic rocks. Robertson affirmed that possibility. Tarduno noted that ISSEP had decided to send the proposal out for external review, but that the panel wanted to see the reviews because they wanted reassurance about the safety issue. A consensus emerged that the safety issue remained a strong concern and that the committee needed more information before they could consider this proposal for scheduling.

**SCICOM Consensus 99-2-6**
SCICOM will not rank Proposal 560-Full nor forward it to OPCOM for possible scheduling at this meeting.

**G. SCICOM Vote on scientific ranking**

Wiens asked why SCICOM had to rank Proposal 431-Rev again based on past decisions regarding this proposal, and he wondered whether this had ever happened before. Tamaki noted that funds had already been committed to developing the instruments. Robertson thought SCICOM should just go ahead and rank it. Hodell asked how OPCOM could judge the relative merits of an unranked proposal compared to the ranked ones.

**SCICOM Motion 99-2-7**
SCICOM forwards Proposal 431-Rev to OPCOM without ranking, so as to complete an already highly ranked proposal.

Klein proposed, Wiens seconded, 11 in favor, 1 opposed (Hodell), 1 abstained (Robertson), 2 absent (Coffin, Zachos).

Klein still had concerns about the cost of CORKs on Proposal 517-Full. Moran noted that OPCOM should know why SCICOM wanted to separate LWD and CORKs. Miller did not want to separate them and wanted to see it scheduled even if it included only LWD and not CORKs. Hodell again expressed concern about how OPCOM would consider these unranked proposals. Tarduno hoped that any decision to proceed with the second Nankai leg would not preempt comments by the SSEPs on the results of the first leg.

**SCICOM Motion 99-2-8**
SCICOM forwards Proposal 517-Full to OPCOM for scheduling the second leg of W. Nankai, based on the SSEPs and SCICOM reviews of the scientific plan and contingent upon successful drilling operations during Leg 190 (see SCICOM Motion 98-2-7). SCICOM also encourages the proponents to continue to seek funding to offset the costs of this very expensive leg. SCICOM expects that ODP/TAMU will continue to develop the advanced CORKs and have them completely ready for use by the beginning of the leg. If not, SCICOM views it as critical that the LWD work proceeds as scheduled.

Humphris proposed, Robertson seconded, 13 in favor, 2 absent (Coffin, Zachos).

**SCICOM Motion 99-2-9**
SCICOM views the timely development and testing of the advanced CORK system as critical to achieving the objectives of drilling at the Nankai accretionary prism. SCICOM therefore instructs OPCOM to work closely with JOI and ODP/TAMU to ensure that development proceeds appropriately. SCICOM also requests that JOI and ODP-TAMU present at the next SCICOM meeting a timeline for development and testing of the advanced CORKs.

Humphris proposed, Srivastava seconded, 13 in favor, 2 absent (Coffin, Zachos).

SCICOM then addressed the issue of how to handle highly ranked proposals that remain unscheduled primarily for geographic reasons. Miller stressed the need to state that such proposals would not go out for re-review, and Lundberg requested allowing the SSEPS to have a second look.

**SCICOM Motion 99-2-10**
SCICOM expresses concern about highly ranked proposals (those forwarded to OPCOM) that clearly lie outside the projected area of ship operations for several years yet receive a new global scientific ranking each year. Such proposals inevitably slip in rank because of the higher priority placed on those proposals with a geographic urgency to schedule. SCICOM therefore adopts the following procedure:
1) Every proposal, regardless of its geographic location, will receive a global scientific ranking when first reviewed by SCICOM.
2) If OPCOM does not schedule a highly ranked proposal primarily because it lies outside the projected area of ship operations, SCICOM will not automatically re-rank that proposal the following year. When the possibility arises to schedule such a proposal, SCICOM may request the proponents to submit an update, in the form of either an addendum or a revised proposal (not subjected to further external review), for consideration at the spring meeting of the SSEPs.

Humphris proposed, Klein seconded, 13 in favor, 2 absent (Coffin, Brown).

SCICOM members voted by closed ballot to establish a global scientific ranking of 19 proposals, as summarized below. Farrell and Fox tallied the votes.

| Rank | Proposal | Title | Mean | Std. dev. |
|---|---|---|---|---|
| 1. | 523-Full | Hawaii-Emperor Seamounts | 6.2 | 4.8 |
| 2. | 465----- | SE Pacific Paleoceanography | 6.3 | 4.2 |
| 3. | 486-Rev2 | Paleogene Equatorial Pacific | 6.4 | 3.5 |
| 4. | 525-Full | Mid-Atlantic Ridge Peridotite | 6.4 | 3.5 |
| 5. | 500-Full2 | H2O Long-Term Seafloor Observatory | 7.0 | 5.0 |
| 6. | 499-Rev | ION Equatorial Pacific | 7.5 | 5.2 |
| 7. | 546-Full | Hydrate Ridge | 8.3 | 4.8 |
| 8. | 505-Full3 | Mariana Convergent Margin | 8.6 | 5.0 |
| 9. | 534-Full | Shatsky Rise | 8.8 | 3.6 |
| 10. | 510-Full3 | Marion Plateau | 9.2 | 5.5 |
| 11. | 489-Full2 | Ross Sea | 9.9 | 4.5 |
| 12. | 553-Full | Cascadia Margin | 10.4 | 4.8 |
| 13. | 451-Full5 | Tonga Forearc | 11.4 | 5.2 |
| 14. | 535-Full2 | 735 Deep--Slow Spreading Ridge | 12.6 | 6.2 |
| 15. | 477-Full2 | Okhotsk and Bering Seas | 12.8 | 5.8 |
| 16. | 549-Full | Arabian Sea OMZ | 12.9 | 4.3 |
| 17. | 478-Full4 | Eastern Nankai (Part A) | 13.2 | 4.9 |
| 18. | 478-Full4 | Eastern Nankai (Part B) | 15.3 | 4.7 |
| 19. | 355-Full7 | Peru Margin | 16.5 | 2.6 |

SCICOM then deliberated on how many of the ranked proposals to forward to OPCOM for possible scheduling. Miller suggested drawing the line above Proposal 489 because that proposal and the one below it could both benefit greatly from a revision. Lundberg noted that any proposals requiring external review would have to arrive by the October deadline to make it into the program. Carter hoped that this would not eliminate all chances for the Antarctic proposals. Miller replied that the proponents of Proposal 489 already had a rewrite in the works.

**SCICOM Consensus 99-2-11**
SCICOM decides to forward the top ten ranked proposals to OPCOM for possible scheduling. See minutes above (Section G) for a complete list of proposal rankings.

11 in favor, 3 abstained (Hay, Zachos, Brown), 1 absent (Coffin).

Ludden noted that all proposals ranked above the line had U.S. lead proponents. He suggested that perhaps the process should change so that all proposals would have to involve proponents from several countries. Robertson said that one could see how this might happen from the nature of the science, and it could create a problem for some funding agencies. He believed that many projects could benefit with greater international involvement from the beginning. He would not favor quotas but perhaps guidelines. Malfait explained that JOIDES had looked at this issue in the past and found that the proponents roughly reflected the proportion of resources put in. Ludden said that a different perception existed now, but Malfait suggested that this might depend on the ship track.

**SCICOM Subcommittee**

**H. Comments on IPSC Working Groups**

Moore again showed the mandate and the proposed membership of the Science-Plan Working Group and asked SCICOM for any new names. He wanted John Armentrout to chair the Industrial Liaison Working Group and asked for nominations for members. He also wanted to get PPSP-type people for the Technical Advice Working Group, but he expected a very flexible membership. Srivastava asked how long the working groups would operate, and Moore replied that they would exist for three years, with more activity in the early stage than later. Ludden asked whether any of the working groups would look at shipboard facilities because he worried that the results of Moore's survey might not reflect true feelings about the issue. Moore replied that he had received a real mix of responses, and those who worried about a large shipboard lab had valid concerns. IPSC held a unanimous view, however, that you had to design the riser ship from the start with the broadest range of capabilities and decide later whether to take full advantage of those capabilities. Robertson added that the floating university concept had powerful appeal from the start.

**I. Membership of new PPGs**

1. Arctic Climate PPG

Hay recommended Kristoffersen as chair because he did not have a proposal in the system. Miller said that some SCICOM members had considered that issue but would rather choose a paleoceanographer as chair. He also said that the committee should remain flexible at this point and suggested having co-chairs. Tarduno noted that the two proposed chairs (Kristoffersen and Backman) had worked together extensively and you could not go wrong with either one.

**SCICOM Motion 99-2-12**
SCICOM endorses Yngve Kristoffersen and Jan Backman as candidates for chair or co-chairs of the new Arctic PPG. The chair(s), in consultation with the JOIDES Office, will select the other members of this PPG from among a list of nominees endorsed by SCICOM and from other sources. The membership should reflect the climate focus and other requirements of the PPG mandate (see SCICOM Motion 99-1-5) and include one member with previous experience on the Extreme Climate PPG. SCICOM must approve the final membership.

Miller proposed, Robertson seconded, 14 in favor, 1 absent (Coffin).

2. Hydrogeology PPG

The committee reviewed a list of candidates for membership on the PPG. Moran inquired about whom would serve as chair. Brown replied that several highly qualified candidates had declined to serve as chair but Bekins had suggested Shemin Ge. C. Moore expressed confidence in her scientific credentials but worried about her knowledge of and commitment to ODP. Hay spoke in support of Ge as chair.

**SCICOM Motion 99-2-13**
SCICOM appoints Shemin Ge as chair of the new Hydrogeology PPG. The chair, in consultation with the JOIDES Office, will select the other members of this PPG from among a list of nominees endorsed by SCICOM. SCICOM must approve the final membership.

Brown proposed, Moore seconded, 13 in favor, 1 abstained (Zachos), 1 absent (Coffin).

**J. Deep Biosphere PPG**

The committee engaged in a lengthy discussion about the possibility of disbanding the Deep Biosphere PPG and reconstituting it in a different form. Ludden thought that SCICOM overreacted at its last meeting and that we needed to keep the expertise of this PPG available for at least a year or two. Holm agreed that we needed to continue receiving input from the microbiologists. Miller thought that the job now looked as if it fell under the mandate of SciMP, and Moran asked about the possibility of integrating microbiology elsewhere within the advisory structure. Robertson and Humphris favored keeping a core group of microbiologists together because dispersing them among other groups would dilute their impact. Moran suggested that we could incorporate microbiology into the program in other ways, for example at the national committee level. She also asked about the difference between the old and the new mandate, and Hay answered that a new mandate did not exist yet, only a statement of intent. Moran then suggested that the committee should examine the mandate of the old group to see if the problem lay there. Robertson promised that such a discussion would eventually take place. Hodell wanted to make it clear that the new group would have a revised mandate so as not to result in more of the same. He also said that it seemed like we needed a new model for a planning group. Klein suggested softening the language about the revised membership in the proposed motion, and Miller suggested not mentioning the membership at all. Robertson added that the new PPG could remain small.

**SCICOM Motion 99-2-14**
Given the importance of the deep biosphere within the Long-Range Plan and the normal 3-year term length of a PPG, SCICOM at its Spring 2000 meeting may institute a new Deep Biosphere PPG (with a revised mandate). Toward this objective, SCICOM invites a representative of the current Deep Biosphere PPG to attend this meeting, present that group's achievements, and suggest future science initiatives in this field.

Robertson proposed, Holm seconded, 14 in favor, 1 absent (Coffin).

**K. New PPGs?**

1. Small Drill PPG

Miller offered that this could represent an example of an alternate platform, but Humphris believed that this did not constitute an appropriate topic for a PPG. Srivastava and others concurred and let the matter drop.

**L. Discussion of Panel Chairmanships, Memberships, and Rotations**

Humphris believed that a problem definitely existed with having too many U.S. chairs. Ludden agreed, noting that the problem would worsen when the JOIDES Office rotated back to the U.S. Humphris reminded the committee that they held the responsibility to name the panel chairs, and Robertson presented a draft motion regarding this matter.

**SCICOM Motion 99-2-15**
SCICOM reaffirms the policy that, when replacing or appointing new JOIDES panel chairs, the appropriate balance between U.S. and other members should be respected as much as possible.

Robertson proposed, Moore seconded, 13 in favor, 2 absent (Coffin, Zachos).

1. OPCOM

The committee deferred the discussion of OPCOM membership until the joint session resumed. Hay suggested that the non-US members should come from those not now on OPCOM. Humphris said that they discussed having one OPCOM member stay on for another year, and Miller said that they wanted C. Moore to stay on. Tamaki noted a need for paleoenvironment expertise, but Natland pointed out that OPCOM members should have operations expertise rather than some particular science expertise. Miller said that nonetheless it would not hurt to have that expertise, and Moore said that he would not object to having a paleoceanographer on OPCOM. SCICOM then nominated several candidates for OPCOM membership and proposed letting Hay decide.

2-3. SSEPs

Neil Lundberg had taken over as ESSEP Chair, and Julie Morris would take over as ISSEP Chair after the next meeting. At the request of the SSEPs chairs, the committee revisited the issue of liaisons to the PPGs because of an unintended consequence of the decision made at the previous SCICOM meeting (see SCICOM Motion 99-1-7). The following motion reinstates the right of the SSEPs to appoint liaisons to the PPGs and clarifies the option of inviting PPG chairs to attend SSEPs meetings.

**SCICOM Motion 99-2-16**
SCICOM requests EXCOM to amend the Terms of Reference for Program Planning Groups as follows:

6.5 **Liaison.** ~~SCICOM establishes liaison with the PPGs by the appointment of non-voting liaisons~~. The SSEPs will appoint liaisons to the PPGs, and ~~The~~ PPG Chairs ~~will~~ may attend one meeting of the SSEPs per year, ~~as~~ if requested by the SSEPs Chairs.

Srivastava proposed, Holm seconded, 11 in favor, 4 absent (Coffin, Hay, Hodell, Zachos).

4-7. TEDCOM, SCIMP, SSP, and PPSP

No actions taken at this time.

**M. Other matters**

While OPCOM met separately to devise a schedule, Humphris led a discussion about what to do with the proposals that fell below the cut-off line for possible scheduling in 2001.

355-Full7 Peru Margin

The consensus is that this proposal is not competitive against other convergent margin hydrate proposals. The proponents should submit a revised proposal for the new program after additional site surveying planned for 2000.

451-Full5 Tonga Forearc

This proposal has fallen below the cut-off line several times. SCICOM feels enthusiastic about the underlying idea, but remains concerned about the drilling strategy. The consensus is that this proposal should be dropped from further consideration, but that the proponents should be encouraged to submit a new proposal for the post-2003 program.

477-Full2 Okhotsk and Bering Seas

This is the first time this proposal has been seen by SCICOM. The proponents should address concerns about age control and the proxies to be used. It would also be more attractive to SCICOM if the proponents were to prioritize and reduce the number of sites.

478-Full4 Eastern Nankai

The proposal needs revision to clarify the objectives and incorporate better seismic data. A revised proposal would go out for review again.

489-Full2 Ross Sea

The proponents have informed SCICOM that a revision will be submitted for the 1 October 1999 deadline. The revised proposal will not go out for review again, but the SSEPs will look at it.

535-Full2 735 Deep

SCICOM is concerned that the nature of the boundary plays such an important role in determining what questions could be addressed and the extent to which answers might be found. Some members of SCICOM also expressed concern about the remoteness of the area from the ship track and about devoting two legs to a single project with only ten legs left to go in the program. SCICOM agreed that the proposal should not go out for review again, but that the proponents should have an opportunity to respond to SCICOM concerns.

549-Full Arabian Sea OMZ

This proposal reads as though two proposals were combined, with an introduction. It would be better received if it appeared to be a more carefully integrated project. No further review is needed.

553-Full Cascadia Margin

SCICOM would like to see a microbiological component added to the proposed program. SCICOM would also like to see better site justifications and would like to have the proponents consider reducing it to one leg.

**Wednesday, August 18.....8:30**

**N. OPCOM Presentation of Alternative Schedules**

Hay presented three alternative schedules as forwarded from OPCOM. Model 1 included the full program at Nankai, Model 2 included only LWD, and Model 3 included LWD and only one advanced CORK. Models 2 and 3 also included an extra leg at the beginning of the schedule for either Proposal 510 (Marion Plateau) or 534 (Shatsky Rise). In addition, all three models involved choosing between Proposal 499 (E. Pacific ION) and 500 ($H_2O$ observatories).

Hay noted that the decision of whether to drill Proposal 499 or 500 had budgetary implications. Wiens asked about the priority of the ION sites within the program and why we could not schedule both of these highly ranked proposals. Humphris said that Proposal 500 would have a larger science impact than Proposal 499 because of the cable and the chance for a real-time observatory. Wiens noted that the group of unscheduled proposals would include either Proposal 499 or 500 and Proposal 505 (Mariana Convergent Margin), which all ranked higher than either Shatsky Rise or Marion Plateau. Hay explained that new information had arrived indicating that Proposal 505 lacked sufficient seismic data. Miller said that the idea was to get flexibility in scheduling this year, but we should make it clear that we intend to do the other ION site.

Wiens expressed concern about starting to strip away important science at Nankai, changing it from what was reviewed and ranked. Humphris believed that limiting Nankai to only LWD would severely compromise the science objectives. Robertson thought the committee should consider the previous commitment to Nankai and adopt Model 1, with the contingency to switch to Model 2 if the advanced CORKs were not ready. C. Moore characterized the CORKs as essential at Nankai, saying they would set us up for a new program. He emphasized that two CORKs would give hydrogeology, whereas one would only give earthquake monitoring. Tarduno agreed on the importance of the advanced CORKs.

Miller favored doing the full program at Nankai, but he also wanted to include Proposal 510. Humphris remarked that Proposal 510 had ranked low (#10) and inserting it at the beginning of the schedule would increase the weather risk on later legs. Hodell argued for pushing the weather window on Proposal 546 (Hydrate Ridge). C. Moore felt that the weather should remain satisfactory off Oregon in October, but late November would carry a high risk, while Brown expressed concern about October based on personal experience. Fox advised that although we had to leave the western Pacific behind, we could still access the NE Pacific later in the program. Bond argued for drilling one hole from Proposal 477 in the Bering Sea on the way around the North Pacific, but Baldauf noted that this would push Proposal 546 completely off the schedule for weather reasons. Klein objected that Proposal 477 had not ranked above the line, but Bond still thought this stood out as an exception. Hay responded that he would prefer to do fewer things well rather than have the drilling activities spread too thinly. Also, he did not want to push the weather window even further for later legs.

Carter believed that Proposal 510 would interest a wide range of sedimentologists and stratigraphers who had not traditionally participated in ODP. Hodell felt that it had de-emphasized the paleoceanographic aspects but remained a multi-faceted project. Bond asked whether sea level appeared as a high priority in the LRP, while Miller noted the low cost of the leg. Klein said that the committee had already ranked the proposals and should now talk about scheduling. Hodell replied that this did constitute a scheduling issue because it represented the last opportunity to get a sea-level record from the western Pacific. Robertson suggested that perhaps we should consider Fox's advice. Humphris thought we should schedule Proposal 510 or 534 now if possible and do a better investigation of the weather window off Oregon for Proposal 546.

**O. SCICOM Vote on Schedule**

Hay called for a decision on scheduling the full or partial program at Nankai.

**SCICOM Motion 99-2-17**
SCICOM opts to include LWD and advanced CORKs as part of the scheduled science plan for the second leg at W. Nankai (Proposal 517-Full).

Wiens proposed, C. Moore seconded, 12 in favor, 1 abstained (Brown), 2 absent (Coffin, Zachos)

Hay then called for a decision on the option of including either Proposal 534-Full or 510-Full3 at the beginning of the schedule for 2000. Tamaki argued that both proposals had ranked quite low (#9 and 10, respectively). Moran noted that Proposal 534 had a greater potential for success with staffing, but Humphris and Hodell disagreed and said that the committee should not even consider this issue. Tamaki again emphasized the low rank of both proposals, while Hodell reiterated that we would not have any more chances in the western Pacific. Wiens asked how far the proposed schedule would extend into the following year, and Baldauf answered two months. Srivastava suggested skipping Proposal 546 altogether. Robertson said that he would like to include either Proposal 510 or 534 in the schedule and suggested proceeding with the vote.

**SCICOM Motion 99-2-18**
SCICOM will place either Proposal 534-Full or 510-Full3 (ranked 9 and 10, respectively) at the beginning of the drilling schedule for 2000 because the future ship track will most likely preclude the scheduling of these proposed legs during the remainder of the program.

Robertson proposed, Miller seconded, 10 in favor, 2 against (Tamaki, Bond), 1 abstained (Brown), 2 absent (Coffin, Zachos)

Before voting to approve the final drilling schedule for 2001, the committee conducted separate votes to decide between Proposals 510 and 534 and between Proposals 499 and 500.

**SCICOM Motion 99-2-19**
SCICOM places Proposal 510-Full3 at the beginning of the drilling schedule for 2000 (see SCICOM Motion 99-2-18).

Srivastava proposed, Robertson seconded, 8 in favor, 2 against (Tamaki, Bond), 3 abstained (Wiens, Moore, Brown), 2 absent (Coffin, Zachos)

**SCICOM Motion 99-2-20**
SCICOM decides to schedule Proposal 500-Full2 rather than 499-Rev.

Hodell proposed, Humphris seconded, 12 in favor, 1 abstained (Brown), 2 absent (Coffin, Zachos).

**SCICOM Motion 99-2-21**
SCICOM approves the drilling schedule for 2001 and beyond, as shown below. This schedule could change to take advantage of optimal weather windows, but all projects will be scheduled.

| | |
|---|---|
| 510-Full3 | Marion Plateau |
| 431-Rev | W Pacific Network - WP-1 |
| 517-Full | Nankai (LWD + CORKs) |
| 523-Full | Hawaii-Emperor Seamounts |
| 546-Full | Hydrate Ridge |
| 500-Full2 | H2O Observatory |
| 486-Rev2 | Paleogene Equatorial Pacific |
| 465---- | SE Pacific Paleoceanography |

Humphris proposed, Holm seconded, 10 in favor, 1 opposed (Wiens), 2 abstained (Brown, Tamaki), 2 absent (Coffin, Zachos).

SCICOM then discussed a possible motion concerning the fate of Proposal 499. Moran recommended considering how to develop community involvement and the science party for ION legs. She added that the OPCOM discussion made it clear that we could reach the location easily from anywhere in the Pacific Ocean. Hodell asked whether we really needed ION sites in the Southern Hemisphere and whether Proposal 499 would give us anything more than Proposal 500. Wiens replied that it would test data acquisition without a cable and added that we did not have any more ION proposals in the system. Furthermore, this one represented the highest rated unscheduled proposal and it would have to happen in 2002 or not at all. Humphris said that this decision differed from the splitting done with the earlier ION sites WP1 and WP2, and the fact that Proposal 499 ranked highly did not differentiate it from all other highly ranked but unscheduled proposals. Robertson agreed with Humphris and thought that it would remain highly ranked. Natland suggested not restricting it explicitly to 2002 when it could be done in 2003. Srivastava agreed because SCICOM had already scheduled one leg for 2002. Tamaki said that SCICOM should not make too many commitments for 2002. Wiens could not understand the reluctance to commit to this proposal after the earlier discussion. Klein feared that a specific motion would lock us in.

**SCICOM Motion 99-2-XX (did not pass)**
SCICOM recognizes the importance of completing the high-priority ION sites and thus intends to schedule Proposal 499-Rev during 2000.

Wiens proposed, Holm seconded, 4 in favor, 7 opposed, 2 abstained (Brown, Robertson,), 2 absent (Coffin, Zachos).

After the proposed motion failed to receive a majority of votes, Miller suggested voting again after striking the reference to 2002 and just saying before the end of program. Hodell suggested adding that it would go forward for scheduling without re-ranking and Klein agreed.

**SCICOM Motion 99-2-22**
SCICOM recognizes the importance of completing the high-priority ION sites and thus intends to schedule Proposal 499-Rev before the end of the current program. SCICOM will forward this proposal to OPCOM for possible scheduling at the August 2000 meeting.

Wiens proposed, Holm seconded, 9 in favor, 2 opposed (Hodell, Tamaki), 3 abstained (Brown, Robertson, Zachos), 1 absent (Coffin).

The committee then discussed the possibility of future operations in the Atlantic Ocean. Tamaki believed that the ship would certainly move to the Atlantic anyway and questioned the need for a specific motion, but Holm stressed the importance of sending a clear signal to encourage submission of proposals for the Atlantic. Humphris worried that it would sound as if we wanted to exclude all but the Atlantic. Srivastava suggested that the submission of proposals for the Atlantic had slowed because the ship had operated in the Pacific for the last three years.

**SCICOM Motion 99-2-23**
SCICOM resolves that the *JOIDES Resolution* will operate in the Atlantic Ocean during at least part of 2002.

Moore proposed, Holm seconded, 9 in favor, 1 opposed (Tamaki), 3 abstain (Brown, Robertson, Zachos), 2 absent (Bond, Coffin).

### P. SCICOM Subcommittee report on draft motions for Panel Chairs, Committee, Panel, and PPG memberships. Vote on draft motions

See Sections I–J above.

### Q. Report on OD21

Takagawa showed the proposed schedule of the ship design and construction. He also reviewed certain recommendations from SciMP and showed how the design would accommodate these suggestions. The latest design showed that the OD21 ship would have up to four times more lab space than the *JOIDES Resolution*, with about ±1˚C temperature variability. T. Moore noted that a better temperature control would require a noisier system. Takagawa described the options for berthing space, ideally with single or no more than double rooms, each with a private shower and toilet. He also reported that re-supply would nominally occur every two to four weeks. T. Moore asked about the limiting factor for re-supply, and Takagawa answered fuel. Klein wondered if the savings associated with increased fuel storage capacity would offset the expense of the re-supply ships. Humphris inquired whether the re-supply boats could offload core and reduce the need for core storage space. Natland asked if the need for re-supply would create difficulty in going to certain parts of the ocean. C. Moore asked about the difficulties of re-supply in rough seas.

Moran commended JAMSTEC for accommodating the SciMP recommendations so quickly and asked whether the lab and core storage containers would have a flexible design for use on other platforms. Moran also asked about the possibility of designing the riser ship to operate in water shallower than 500 m, particularly if warranted by proposal pressure. She noted that we had not drilled very deeply on continental margins for safety reasons. Takagawa answered that dynamic positioning works only to within 5 m, and in shallow water this corresponds to a large angle of motion and increased stress on the riser. Moran asked about the possibility of anchoring the ship, and Takagawa replied that changes in the wind, swell, or current direction would cause problems, but he drew a diagram of potential mooring systems showing one that could allow some rotation of the ship.

### R. Conceptual Design Committee (CDC) Report

Peggy Delaney reported on the progress of the new Conceptual Design Committee (CDC) for the non-riser ship. Srivastava asked whether the new ship would have shallow-water capability. Delaney anticipated receiving target sections for shallow-water sites. The CDC would try to achieve the widest range of objectives in the most efficient manner and identify things that we could not do without other platforms. Hay asked how input from the international community could reach

the committee. Delaney replied that this would probably happen through IPSC, though communication should remain wide open. The CDC would take input from anyone and wanted to maintain the strength of full international participation.

**S. COMPLEX Report status**

Moran reported that JOI had posted the latest draft version of the COMPLEX report on their website and she expected to see the final report in January.

**T. New Business**

Hay reviewed the list of possible co-chiefs for the newly scheduled legs and asked the committee for additional suggestions.

**U. Future Meetings**

Hay mentioned that the next SCICOM meeting, tentatively scheduled for 16-19 February 2000 in Washington, D.C., would occur in conjunction with EXCOM. Miller asked whether SCICOM would have a joint session with EXCOM or whether they would simply observe our meeting? Hay said that he envisioned a common session of symposia.

The discussion then turned to the August 2000 SCICOM meeting. Ludden noted that IGC would meet in Brazil in mid August. Moran explained that holding the meeting later in August would impact the program plan, and Humphris added that it would also leave little time before the next proposal deadline. Srivastava offered to host the summer meeting in Halifax in early August. Hay suggested 2-5 August 2000 and the committee accepted this plan.

**V. Review of Motions and Action Items**

**SCICOM Consensus 99-2-24**
From the land of the rising sun a new drilling program dawns. The sun sets on Kensaku Tamaki at SCICOM, but rises again over a new InterRidge leader. SCICOM thanks Kensaku for his numerous, significant, and incisive contributions to our deliberations. We know he will remain an important player in marine geosciences, both nationally and internationally, and we look forward to working with him in other future capacities.

**SCICOM Consensus 99-2-25**
SCICOM thanks Kevin Brown for his long and continuous service that spanned the challenging transition from PCOM to SCICOM. We appreciate Kevin's keen scientific insights, always offered in a genial style, and his imperturbable nature during tense moments. We wish him well in his scientific endeavors as he retreats from the meeting room to the pleasures of sea-floor seeps and soft mud.

**SCICOM Limerick 99-2-26**
*Ode to Jim Natland* (by E. Klein)
The indefatigable Jim,
Heads bow and hats tip off to him.
On matters related
To drilling and data
It's clear we can't function without him.

**SCICOM Consensus 99-2-27**
SCICOM bids fond farewell to charter OPCOM member Dave Hodell who unhesitatingly jumped into the breech of SCICOM. Dave's perspective, ranging from the ice of the subantarctic to the fire of Florida and Guatemalan lakes will be sorely missed.

**SCICOM Consensus 99-2-28**
SCICOM bids fond farewell to two long-time PacRim members, Shiri Srivastava and Bob Carter. Shiri has ardently supported ODP since Leg 105, serving as chair of the Site Survey Panel and most recently on SCICOM. Bob has observed the rises and falls of the sea-level issue within ODP, served as a charter OPCOM member, and provided a unique perspective to ODP issues from down under. We will miss them and wish them well as they travel to the antipodes of the PacRim.

**SCICOM Consensus 99-2-29**
SCICOM expresses gratitude to Susan Humphris, our first chair and guiding light in the intricacies of the new advisory structure. Without her dedication, innovative talents, and discipline, the advisory structure would not have developed into the well-oiled, proposal-nurturing machine we know today. We wish her well in the months until we find a way to make use of her energy and talents in a new capacity! May her service on the USSAC Conceptual Design Committee represent the start of a long and distinguished post-SCICOM career.

**SCICOM Consensus 99-2-30**
SCICOM congratulates Ted Moore on a job well done as the first chair of the ESSEP, and we wish him well as the first chair of IPSC. His talents as researcher, professor, petroleum geologist, director, guru, soothsayer, and knight in shining armor will all serve him well in this endeavor. May we all live by the motto "In Ted we trust."

**SCICOM Consensus 99-2-31**
SCICOM takes this opportunity to thank John Tarduno for his service as the chair of ISSEP, though he still has one more meeting. John accepted the position of chair when ISSEP was first created. He has worked extremely hard to ensure that each proposal receives the most thoughtful and fair consideration possible and has taken the nurturing role of the SSEPs very seriously. One of the great successes of the new JOIDES advisory structure has been the synergy between the two SSEPs. This can be attributed to the strong leadership provided by both John and Ted, and will be a legacy to their service. SCICOM acknowledges John's dedication to ODP and the excellent job that he has done as chair of ISSEP. We wish him well in the future and look forward to his continued involvement in ODP.

**SCICOM Consensus 99-2-32**
SCICOM thanks Casey Moore for a relaxing meeting under the mists and redwood trees of the Santa Cruz Mountains. Being lost in the trees adds a new ambience to the unique beauty of the Santa Cruz campus and our memories of the meeting. We also thank Casey and John Tarduno for leading the field trip, and we thank UCSC and JOI for hosting the social events. As we return to our own institutions, the cover of our Agenda Book will remind us of the hospitality extended by the "banana slug" university.

*Meeting adjourned* ..... *17:00*