Science Committee (SCICOM) Meeting

19-20 March 1998
Boulder, Colorado
DRAFT MINUTES
(Corrected 7/21/98)

SCICOM Participant List

SCICOM Members

Kevin Brown	Univ. of California San Diego, Scripps Institution of Oceanography
Steve d'Hondt[1]	University of Rhode Island, Graduate School of Oceanography
Susan Humphris (Chair)	Woods Hole Oceanographic Institution
Hermann Kudrass	Bundesanstalt für Geowissenschaften und Rohstoffe, Germany
John Ludden	CRPG, Vandoeuvre-les-Nancy, France
Judith McKenzie	Swiss Federal Institute of Technology (ETH), Zurich
Kenneth Miller	Rutgers, The State University, New Brunswick
Gregory Moore	University of Hawaii
J. Casey Moore	University of California, Santa Cruz
Greg Mountain[2]	Lamont-Doherty Earth Observatory, Columbia University
Jonathan Overpeck	NGDC, NOAA, Boulder
Julian Pearce	University of Durham, United Kingdom
Maureen Raymo	Massachusetts Institute of Technology, Cambridge
Steve Scott	Canadian Secretariat for Ocean Drilling, Toronto
Kensaku Tamaki	Ocean Research Institute, University of Tokyo, Japan

[1] - alternate for Roger Larson
[2] - alternate for Gerard Bond

Liaisons

Jack Baldauf	Science Operator (ODP-TAMU)
Dave Goldberg	Wireline Logging Services (ODP-LDEO)
Bruce Malfait	U.S. National Science Foundation
Nick Pisias	Joint Oceanographic Institutions, Inc.

Guests & Observers

Jamie Austin	UTIG, Austin
Wolf Berger	Univ. of California San Diego, Scripps Institution of Oceanography
Warner Brückmann	GEOMAR, JOIDES Office Science Coordinator (elect)
Ju-Chin Chen	Chinese Taipei ODP Consortium
Christina Chondrogianni	JOIDES Office, Wooods Hole Oceanographic Institution
Kathy Ellins	JOIDES Office, Woods Hole Oceanographic Institution
John Farrell	Joint Oceanographic Institutions, Inc.
P. Jeff Fox	Science Operator, ODP-TAMU
Bill Hay	ODP-TAMU

Jock Keene	University of Sydney, Australia
Kazu Kitazawa	JAMSTEC, Japan
Kate Moran	Geological Survey of Canada Atlantic
Mary Reagan	Wireline Logging Services (ODP-LDEO)
Shiri Srivastava	Geological Survey of Canada Atlantic (SSP Chair)
Takeo Tanaka	JAMSTEC, Japan
Shirley Waskilewicz	JOIDES Office, Woods Hole Oceanographic Institution

Apologies

Emily Klein	Duke University

Summary of SCICOM Motions and Consensus Items from the SCICOM Meeting 3

SCICOM Motion 98-1-7
In response to EXCOM Motion 98-1-12, SCICOM sets up Organizing Committee for the 1999 Conference on the Scientific Objectives of Ocean Drilling in the 21st Century with the following mandate:

Conference on the Scientific Objectives of Ocean Drilling in the 21st Century: Mandate for the Organizing Committee

Overall Goal

To set up and coordinate an international conference to define the major scientific objectives of a program of ocean drilling that will span at least the first decade of the 21st century.

Mandate

To define the scientific objectives for future ocean drilling that will complement those already enunciated for riser drilling by CONCORD. This will be accomplished in the following manner:

- a widely publicized call for 1-2 page extended abstracts that describe a drilling project, and define its scientific objectives, their importance, and the necessity for drilling;
- development of a conference structure and agenda, based on the input from the extended abstracts;
- selection of members for the Organizing Committee to provide the breadth of expertise dictated by the extended abstracts, and to act as Session Chairs;
- determination of a list of invited participants;
- organization and execution of a Conference in April-May 1999;
- preparation of a final document that defines the proposed new and exciting program of scientific ocean drilling.

Timeline

- April-May: Format definition for extended abstracts
- June: Call for extended abstracts
- September: Deadline for extended abstracts
- October: Selection of additional members of the Organizing Committee
  Development of Conference Structure
- January: Status report to EXCOM
- April-May: Conference
- June: Publication of final report

Membership

SCICOM will appoint an Executive group of the Organizing Committee who will initiate the call for extended abstracts and make preliminary plans for the Conference. This group will consist of 4-6 international scientists who represent a range of expertise, have good organizational skills, and excellent and timely writing ability.

Once the extended abstracts are reviewed, the Executive group will then select and 4 additional group (up to 10) to serve on the Organizing Committee and act as Chairs of Sessions. These will be selected on the basis of their specific expertise and their ability to run effective sessions. They will be responsible for a written, post-meeting report for their session that will then be integrated with the others by the Executive group.

Proposed: C. Moore; Seconded: J. Ludden *15 in favor; 1 absent*

SCICOM Motion 98-1-8
SCICOM recommends the following individuals for the Organizing Committee of the 1999 Conference on the Scientific Objectives of Ocean Drilling in the 21st Century:

- N. Pisias (Co-Chair)
- A. Taira (Co-Chair)
- L. Mayer
- M. McNutt
- H. Okada
- R. Zahn

Alternates in the event that these individuals will not serve are:

- T. Moore (alternate for N. Pisias)
- K. Moran (alternate for L. Mayer)
- R. Larson or R. Detrick (alternate for M. McNutt)
- J. Cann (alternate for R. Zahn).

Proposed: G. Moore, Seconded: C. Moore *14 in favor; 2 absent*

SCICOM Motion 98-1-9_
In response to EXCOM Motion 98-1-13, SCICOM establishes a Seismogenic Detailed Planning Group to plan for the first leg of riser drilling in IODP. Its mandate is as follows:

Overall Goal

To define a comprehensive study of an active seismogenic zone that will investigate the physical and chemical processes that control earthquake nucleation and propagation. This will include development of a coordinated drilling plan, and identification of drilling, monitoring, technological, and site survey requirements. This study will be the first project to be undertaken by IODP using the new riser drilling ship.

Mandate

To work with other appropriate international geoscience initiatives to:

1. Define the detailed scientific objectives of drilling and monitoring an active seismogenic zone.
2. Develop a coordinated drilling strategy to complete the defined objectives that will likely include an integrated program of non-riser and riser drilling.
3. Identify potential geographic areas as targets for drilling that are in the vicinity of Japan.
4. Determine the site survey requirements both for deep drilling and to maximize the scientific results from seismogenic zone drilling.
5. Determine the drilling technologies/facilities, downhole measurements and sampling, and long-term monitoring that will be required.
6. Solicit proposals for experiments or investigative strategies that might be included.

Timeline

- By the year 2000, the PPG will produce a written report of the overall plan and its recommendations for implementation.

Proposed: S. Scott; Seconded: M. Raymo *15 in favor; 1 absent*

SCICOM Motion 98-1-10
SCICOM appoints the following members to the Seismogenic Detailed Planning Group to begin the planning process by publishing a request for proposals as soon as possible with a submittal deadline on 1 August 1998:

R. Hyndman (Chair)	Canada
G. Harjes	Germany
S. Kodaira	Japan
K. Brown	US
J.P. Foucher	France

SCICOM expects to augment this group based on proposal submissions at its August meeting.

Proposed: S. Scott; Seconded: J. Pearce *13 in favor; 3 absent*

SCICOM Motion 98-1-11
In order to fulfill the objectives of the LRP and to respond to existing proposals, SCICOM establishes that the general ship track for the *JOIDES Resolution* will remain in the Indian and Pacific Oceans through FY'01. SCICOM anticipates that the ship will return to the Atlantic Ocean prior to the end of Phase III.

Proposed: K. Miller; Seconded: K. Brown *14 in favor; 2 absent*

SCICOM Motion 98-1-12
SCICOM endorses convening an International Sea Level Workshop. The workshop will review principles of studying sea-level change, review results of recent ODP drilling for sea-level objectives, re-evaluate drilling strategies, and review possible future drilling targets.

Proposed: K. Miller; Seconded: C. Moore *14 in favor; 2 absent*

SCICOM Consensus 98-1-13
By consensus, SCICOM appoints John Diebold to replace Shiri Srivastava as the Chair of the Site Survey Panel following their July 1998 meeting.

SCICOM Motion 98-1-14
SCICOM echoes EXCOM's concern (EXCOM Motion 98-1-3) regarding the possible reduction of French participation in ODP. France is a valuable founding member of ODP and her scientists have contributed extensively to the understanding of Earth processes through ocean drilling. In fairness to all other members, however, the possible reduction of France's financial contribution must be accompanied by a reduction in representation in

the JOIDES Advisory Structure and participation in shipboard activities. France has been a welcomed member at SCICOM and we hope that a mechanism for their continued participation will be found. 6

Proposed: G. Mountain; Seconded: C. Moore *13 in favor; 1 abstention; 2 absent*

SCICOM Consensus 98-1-15
Recognizing that Shiri Srivastava's last meeting as the Chair of the Site Survey Panel occurs before SCICOM's next meeting, SCICOM extends its thanks to Shiri for serving as a tireless SSP Chair. His good-natured tenacity guided SSP in developing and maintaining high standards for site survey readiness; the science derived from ocean drilling is much improved because of these efforts. SCICOM wishes him well in all his future ventures.

SCICOM Consensus 98-1-16
With the rotation of Joris Gieskes from his most recent JOIDES advisory position as SCIMP chair, SCICOM would like to acknowledge the numerous outstanding and long lasting contributions he has made to ODP planning and science. In particular, he has skillfully managed a smooth transition from a system utilizing multiple service panels into a single integrated Scientific Measurements Panel.

SCICOM Consensus 98-1-17
SCICOM would like to thank Judy McKenzie for her years of service on both this committee and PCOM. Her invaluable input into a wide variety of diverse topics, and steadfast support for the newly burgeoning field of microbiology, will leave a significant positive imprint on the direction of ocean drilling in the coming years.

SCICOM Consensus 98-1-18
SCICOM sincerely thanks Ellen Kappel for her many years of dedicated effort in support of ODP. During her tenure with JOI and the ODP, Ellen selflessly worked to advance the science of the program. She led new initiatives to promote ODP through outreach programs that have been broadly recognized for their excellence. Ellen's hard work, dedication, fairness and enthusiasm have provided a strong foundation for advancing the scientific and technical excellence of the Program. The "heart and soul" of JOI will be missed, but her legacy will live on. We extend our best wishes for success in her future endeavors

SCICOM Consensus 98-1-19
SCICOM thanks Jonathan Overpeck and NGDC for hosting our March 1998 meeting in this mile-high winter wonderland. They provided us with a wonderful opportunity to learn about the world's leading data archiving center, take home stunning maps, view snow-capped peaks, dine on mountain trout and caribou, and experience the full range of Colorado climatic variability. Thank you for a well-organized and highly enjoyable meeting.

I. IODP Planning — Scientific Advice [7]

1. EXCOM Action Item on a 1999 Scientific Conference (S. Humphris)

In January 1998, EXCOM tasked SCICOM with setting up a scientific conference in Spring 1999 with the following consensus:

EXCOM Consensus 98-1-12
By consensus, EXCOM (1) approves the timeline proposed by Nick Pisias, Acting Director of ODP, for an IODP scientific conference in spring 1999 and tasks SCICOM with organizing this conference; and (2) approves the timetable for the design and issuance of an RFP for a second ship/platform for IODP.

2. Proposed Timetable (N. Pisias)

Pisias said that there are scientific problems to address through ocean drilling beyond 2003 and that the goal of this effort must be a new program. EXCOM has called for an international conference to plan for the new post-2003 program of ocean drilling, and charged SCICOM in organizing this conference. The conference is intended to set the course for a new way of doing business, define the scientific objectives of the new program, make a definitive statement to the community, build community support, and encourage the best young scientists to assume a leadership role in carrying out post-2003 scientific ocean drilling.

The first step has already been completed through CONCORD, which defined the scientific rationale and focus for riser drilling, and established the initial scientific priorities for riser drilling. Pisias suggested that the planning for the meeting should take a holistic approach, and that its organization should be based on white papers, and that participants should be invited based on the submission of white papers and budgetary constraints. The target date for the conference is Spring of 1999.

SCICOM's task is to name the organizing committee and determine the Committee's charge. This Committee will define the format of, and broadly solicit, the white papers, organize the meeting, invite participants, and then write a report. One input to this meeting will be the CONCORD report. A draft report produced by the summer of 1999 would be used in formulating an RFP for the conceptual design of the second platform; a final version would be prepared by the fall of 1999. The fourth step in the planning sequence would involve the organization of an Integration Meeting to be held in 2001. This meeting will involve a broad-based scientific discussion, intended to integrate everything, and also work out the structure (advisory?) of the new program. This meeting might be a small group that takes the CONCORD and Conference documents and integrates them into a Long Range Plan for a new drilling program.

The products of this exercise would be: science for the new program; structure of a new program; conceptual design of ship(s) to achieve the science, and a Long Range Plan. Pisias then presented a timeline showing the proposed planning timeline for this process (Appendix 7).

Discussion: Overpeck asked about the anticipated size of the March 1999 meeting. Pisias said it could be as large as 300 people. He added that all who submitted white papers would be invited, and the meeting would be open to anyone. It would be organized around the themes that emerge from this submission. Overpeck said that the approach presented would

yield a bottom-up scientific plan, which 8
would bring in fresh ideas. Miller endorsed
the introduction of ideas from the ground up. He asked about the role that the JOIDES panels and PPGs will have in the planning effort, noting the importance of ODP corporate memory. Humphris replied that the advisory structure will have some responsibility in getting people to write white papers and mobilizing input from all the member countries. She added that the PPGs could write white papers that put forward compelling arguments for their long-range goals. Goldberg noted that abstracts were submitted to CONCORD. Ludden asked about potential participation of the ICDP. Humphris responded that the ICDP could submit a white paper, but that it would be hard to combine the two programs. Miller said that forward thinking should be focused on a global drilling program, although he admitted programmatic realities may exist that might not make it possible to bring the ICDP community under the same umbrella.

Raymo said that her sense from EXCOM is that the non-riser science should be the focus. Pisias responded that EXCOM debated this point and concluded that the conference should encompass a broader community than just proponents of non-riser science. Pearce stated that he did not support a separate non-riser conference. Humphris also noted her opposition to a purely non-riser science meeting, and added that the scientific ocean drilling community needed the opportunity to define the scientific objectives of ocean drilling without the discussion being facility-drive. CONCORD focused on defining the science for a facility; i.e. the riser ship. In addition, she pointed out that some objectives might require a combination of drilling by two different platforms. Overpeck stressed the necessity for balance, saying that it was imperative to involve the CONCORD community and not have them believe this was going to be repetitive.

Scott said that the schedule was very tight; national committees may need some time to hold their own meetings prior to the proposed Spring 1999 conference.

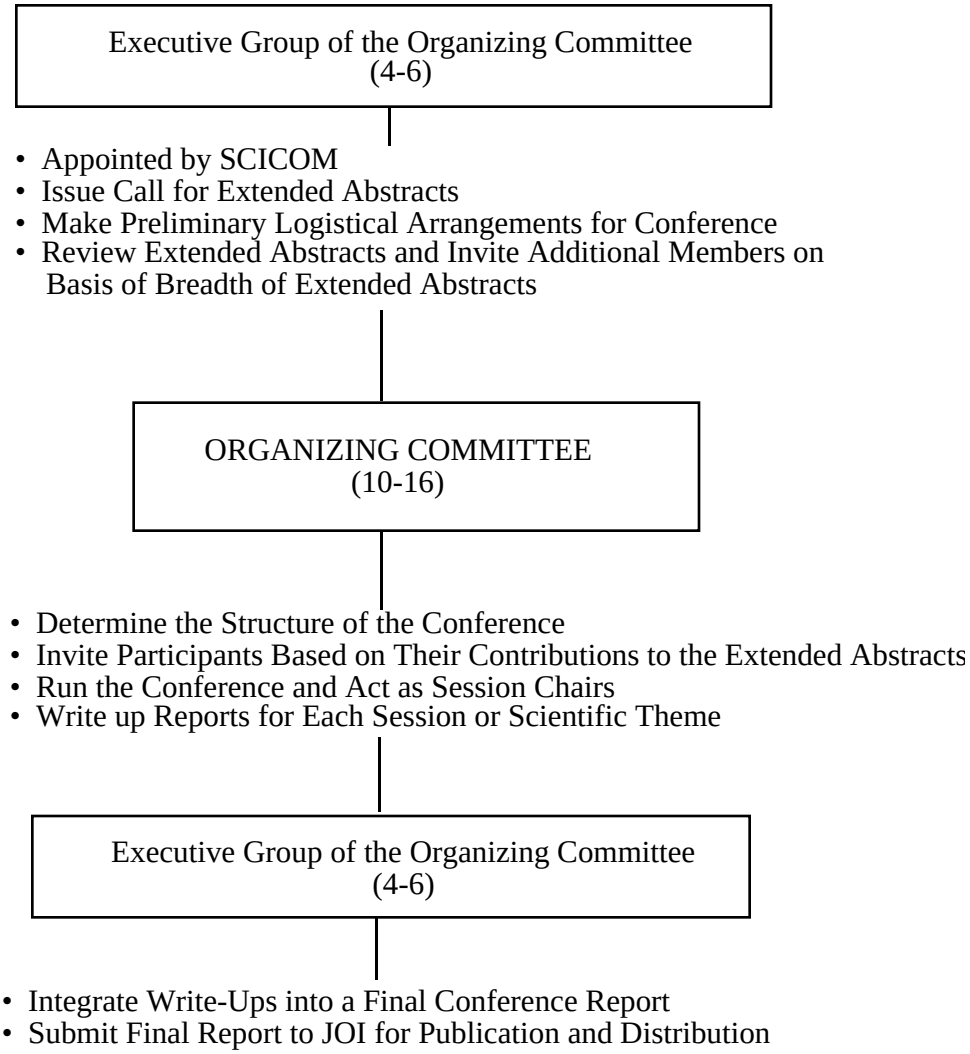
Jonasson questioned whether the report should present a conceptual design. He said that he preferred to see the functional specifications defined in the draft report and answers to such questions as, "does the second ship/platform need a lab?" Pisias indicated that the conceptual design was proposed in order to get a handle on cost, and added that what the RFP will look like is as yet unknown. He also pointed out the need to initiative site surveys now for post-2003 drilling science.

Farrell suggested that there may be a better word than "drilling" in ICOSOD (Integrating Conference on Scientific Ocean Drilling) to reflect the objectives of the future program. Humphris disagreed, saying that it needs to be clear that this scientific planning is for a drilling-related activity.

3. Formation of an Organizing Committee (S. Humphris)

Humphris presented a proposed overall flow diagram for the organization and execution of the Conference:

Planning Mechanism for the 1999 Conference



She recommended that a small Executive Group be set up to begin the process of solicitation of white papers (or letters of interest) which would be then be added to form the full Organizing Committee. In addition, Humphris proposed a mandate for the Organizing Committee. To encourage as much input as possible, she proposed using the term "extended abstract" rather than "white paper" which people often found confusing or formidable. Carter wanted revision of the first item of the mandate which, following his suggestion, was changed emphasizing the necessity of ocean drilling.

Motion 98-1-7

In response to EXCOM Motion 98-1-12, SCICOM sets up Organizing Committee for [10] the 1999 Conference on the Scientific Objectives of Ocean Drilling in the 21st Century with the following mandate:

Conference on the Scientific Objectives of Ocean Drilling in the 21st Century:
Mandate for the Organizing Committee

Overall Goal

To set up and coordinate an international conference to define the major scientific objectives of a program of ocean drilling that will span at least the first decade of the 21st century.

Mandate

To define the scientific objectives for future ocean drilling that will complement those already enunciated for riser drilling by CONCORD. This will be accomplished in the following manner:

- a widely publicized call for 1-2 page extended abstracts that describe a drilling project, and define its scientific objectives, their importance, and the necessity for drilling;
- development of a conference structure and agenda, based on the input from the extended abstracts;
- selection of members for the Organizing Committee to provide the breadth of expertise dictated by the extended abstracts, and to act as Session Chairs;
- determination of a list of invited participants;
- organization and execution of a Conference in April-May 1999;
- preparation of a final document that defines the proposed new and exciting program of scientific ocean drilling.

Timeline

- April-May: Format definition for extended abstracts
- June: Call for extended abstracts
- September: Deadline for extended abstracts
- October: Selection of additional members of the Organizing Committee
  Development of Conference Structure
- January: Status report to EXCOM
- April-May: Conference
- June: Publication of final report

Membership

SCICOM will appoint an Executive group of the Organizing Committee who will initiate the call for extended abstracts and make preliminary plans for the Conference. This group will consist of 4-6 international scientists who represent a range of expertise, have good organizational skills, and excellent and timely writing ability.

Once the extended abstracts are reviewed, the Executive group will then select and additional group (up to 10) to serve on the Organizing Committee and act as Chairs of Sessions. These will be selected on the basis of their specific expertise and their ability to

run effective sessions. They will be responsible for a written, post-meeting report for their session that will then be integrated with the others by the Executive group. 11

Proposed: C. Moore; Seconded: J. Ludden *15 in favor; 1 absent*

Humphris stated the SCICOM needs to form the small Executive Group at this meeting to get the process started. The Group needs to consist of influential individuals who have experience in organizing and coordinating conferences, and can prepare written material in a timely fashion. Their main task will be to energize the community and get the process going. She proposed a group of 4 - 6 members with scientific breadth, representing both Environment and Interior objectives, and with international representation that represented the present vision of the structure of IODP; i.e. one-third US, one-third Japanese and one-third other representatives. Young, future leaders of the drilling program should be involved. Suggestions for this Group had been received from several national offices of ODP partners and the list was discussed after the listed individuals present at the meeting were asked to leave. The selection process begun by categorizing the individuals into the groups "Environment" and "Interior". Moore inquired if someone from SCICOM should be involved and Humphris replied that the SCICOM Chair should be an *ex officio* member.

Humphris will invite the nominated individuals, assist in the design of the advertisement, and circulate letters requesting helping generating extended abstracts from the ODP national offices, international geoscience initiatives, and all members of the JOIDES Advisory Structure.

SCICOM Motion 98-1-8
SCICOM recommends the following individuals for the Organizing Committee of the 1999 Conference on the Scientific Objectives of Ocean Drilling in the 21st Century:

- N. Pisias (Co-Chair)
- A. Taira (Co-Chair)
- L. Mayer
- M. McNutt
- H. Okada
- R. Zahn

Alternates in the event that these individuals will not serve are:

- T. Moore (alternate for N. Pisias)
- K. Moran (alternate for L. Mayer)
- R. Larson or R. Detrick (alternate for M. McNutt)
- J. Cann (alternate for R. Zahn).

Proposed: G. Moore, Seconded: C. Moore *14 in favor; 2 absent*

4. Seismogenic Zone Planning (S. Humphris)

Following the CONCORD recommendation that the first scientific objective for the riser drilling ship should be an experiment at a seismogenic zone, EXCOM approved the creation of a group to begin planning for this experiment, and asked SCICOM to set up a PPG to address the issues related to a seismogenic zone experiment.

Humphris presented a proposed mandate for the PPG that addressed drilling strategy and technology, site survey requirements applicable to deep drilling, and the solicitation of

proposals. She pointed out that ODP needs to work with other international geoscience initiatives studying seismogenic zones to: 12

- define detailed scientific objectives of drilling and monitoring;
- develop a coordinated drilling strategy, that will include some pilot programs of non-riser drilling, in order to accomplish the final objectives;
- identify specific geographic areas in the vicinity of Japan suitable for the experiment;
- determine site survey requirements;
- organize and nurture the development of specific drilling proposals.

Humphris said that she tried to write the mandate so that, in the process of planning for seismogenic zone drilling, site survey requirements will be addressed that will be applicable to the future of deep drilling. She questioned whether, given the short time frame in which this has to be completed, it was realistic to solicit drilling proposals for the first leg of riser drilling, or whether the group should define the project and its location. Moore considered it inappropriate to put this group in the same category as the existing PPGs, and suggested it was more properly a DPG since it was defining drilling plans in a drilling location that was geographically restricted. Miller asked if there were any parameters for maximum target depths. C. Moore responded that it is ~10 km, with a total depth of 2500 m for the riser. This implies that the Nankai Trough is a likely target. Mountain stated that if you have only a few sites where this experiment can occur, a large part of the community will be eliminated.

Pearce said that, in terms of timing, there is no point in soliciting a pile of proposals as this project needs to be pushed very quickly, particularly if some preliminary drilling is needed by the *JOIDES Resolution* while the ship is still in the W. Pacific. Humphris further stated that she did not feel it appropriate to publicize a general request for proposals because of the geographic and site survey limitations. Rather than put out a general RFP, it would be more productive to put out an advertisement indicating that ODP is planning to drill in a seismogenic zone near Japan, and request letters of interest for specific experiments or strategies that address scientific problems associated with seismogenic zones. Ludden said that, on this basis, it would be more appropriate to call this a DPG.

SCICOM Motion 98-1-9_
In response to EXCOM Motion 98-1-13, SCICOM establishes a Seismogenic Detailed Planning Group to plan for the first leg of riser drilling in IODP. Its mandate is as follows:

Overall Goal

To define a comprehensive study of an active seismogenic zone that will investigate the physical and chemical processes that control earthquake nucleation and propagation. This will include development of a coordinated drilling plan, and identification of drilling, monitoring, technological, and site survey requirements. This study will be the first project to be undertaken by IODP using the new riser drilling ship.

Mandate

To work with other appropriate international geoscience initiatives to:

1. Define the detailed scientific objectives of drilling and monitoring an active seismogenic zone.
2. Develop a coordinated drilling strategy to complete the defined objectives that will likely include an integrated program of non-riser and riser drilling.
3. Identify potential geographic areas as targets for drilling that are in the vicinity of Japan.
4. Determine the site survey requirements both for deep drilling and to maximize the scientific results from seismogenic zone drilling.

5. Determine the drilling technologies/facilities, downhole measurements and sampling, and long-term monitoring that will be required.
6. Solicit proposals for experiments or investigative strategies that might be included.

Timeline

- By the year 2000, the PPG will produce a written report of the overall plan and its recommendations for implementation.

Proposed: S. Scott; Seconded: M. Raymo *15 in favor; 1 absent*

Pisias said that he felt that the DPG should consist of individuals who have good ideas, rather than setting up a group that will act from the top down. Humphris said that if membership were to be based on the submitted letters of interest, then SCICOM could set up a core group now and fill out the DPG at their next meeting. Mountain suggested that an RFP be issued immediately and there be a special deadline of 1 August.

C. Moore asked where money will come from to support all these IODP-related activities. Humphris replied that this is not yet known but the question had been raised to the IWG in Bob Detrick's letter since the members of IWG represent the funding agencies. Humphris asked Malfait when there will be a decision on whether funds will be available to start the process; Malfait replied that from the US side there is not a separate pot of money available. Humphris stated that it is hard to plan when additional funds are not available and asked Malfait whether this issue will be brought up at the May IWG meeting. Malfait replied that he expected it to be discussed. Pisias added that USSAC does not have money for this. G. Moore said he could not believe USSAC does not have $5000 to send people to a meeting to plan the future of ocean drilling. Humphris suggested one option would be to not set up the DPG now, but have the JOIDES Office work with people already involved through MARGINS and write a RFP in order to get proposals in, and then create the DPG at the August meeting when there might be an answer on funding. Malfait advised that it might be wise to set the DPG up now and try to make it work, rather than to sit back and wait for the funds. Kudrass asked if this DPG was something special, and Humphris replied it is planning for a new program rather than planning for the existing program. Hence, planning for a new program should be funded out of different moneys.

Taking Malfait's advice, a list of individuals was then considered for the Seismogenic Zone DPG with the goal of creating a small core group that would later have others added. C. Moore asked if there should be national balance on this committee. Humphris replied we should make some attempt at international representation, although the proposals coming in will determine its final makeup. The task of the core group will be to get the process started.

Motion 98-1-10

SCICOM appoints the following members to the Seismogenic Detailed Planning Group to begin the planning process by publishing a request for proposals as soon as possible with a submittal deadline on 1 August 1998:

R. Hyndman (Chair)	Canada
G. Harjes	Germany
S. Kodaira	Japan
K. Brown	US
J.P. Foucher	France

SCICOM expects to augment this group based on proposal submissions at its August meeting.

Proposed: S. Scott; Seconded: J. Pearce 14 *13 in favor; 3 absent*

J. Leg Reports

1. Leg 177 - Southern Ocean Paleoceanography (D. Hodell)

The goal of Leg 177 drilling in the Atlantic sector of the Southern Ocean was to recover a latitudinal and depth transect to study the paleoceanographic and climatic history of the southern high latitudes. The goals of the study was to drill a latitudinal transect across the Antarctic Circumpolar Current in order to provide the sedimentary sequences needed to expand the biostratigraphic, biogeographic, paleoceanographic, and paleoclimatic history of the Southern Ocean during the Cenozoic. This period was marked by major changes in Southern hemisphere paleogeography, including the gradual isolation of the Antarctic continent and the opening of the Drake Passage. The 7 drilling sites were located on a transect south of Cape Town at water depths between 1976 m to over 4600 m. The lithology changed from N to S from being dominated by calcareous to diatom oozes. The sediment cores from 4 of the drilling sites show high temporal resolution with sedimentation rates between 13 - 25 cm/ka containing expanded Pleistocene sections, thus promising an excellent correlation to the Greenland and Vostok ice records.

Hodell highlighted the results of Site 1091 at which the deepest sediments were dated at 3.4 Ma. Color reflectance and magnetic susceptibility show clear glacial/interglacial changes, the warm interglacials characterized by peaks of color reflectance and low susceptibility values, and clear changes at the B/M boundary. Site 1090 was presented as the most important section, containing in the upper part an expanded Pleistocene record (24-35 cm/ka), followed by a large hiatus (14 ka) at the early Miocene to Middle Eocene. Inclination shows a superb reversal stratigraphy at the E/O boundary.

In terms of drilling operations, there was a high rate of core liner failure (46.8%). In addition, at Site 1093, dense laminated diatom mats dissipated the energy of the APC resulting in poor core recovery (good recovery for the last million years). The problem with the Lower Guide Horn (LGH) during drilling at the last site (Site 1094) restricted the operational parameters and resulted in early abandonment of that site.

The Janus paleo application was abandoned after Site 1088 because the data input was considered extremely tedious and time consuming.

Discussion: Pisias asked about the operations at the last site when there was a high degree of roll and then the weather ameliorated and it could have been possible to continue, were the procedures adequate to make a series of decisions to not abandon the site after the weather improved. Hodell replied that the vessel started drifting off station and an alarm went off, but the ship recovered quickly and was back to its station keeping. However, people got spooked by the event, and this, coupled with the fact that ODL wanted to stop operations and try to secure the LGH, resulted in pressure to stop operations.

Scott asked how all the data were logged after the Janus paleo application had been abandoned. Hodell explained that Excel spreadsheets were adopted instead; thus the data exist and can still be incorporated into the Janus paleo database. Humphris said that this issue had been discussed at OPCOM, and the question raised as to whether the design of the database needs improvement. OPCOM requested that TAMU provide a written report with the help of the Co-Chiefs and submit it to the JOI Steering Committee and SCIMP for further discussions. An additional issue related to this incident is the responsibility of the scientists

on board. Scientists participating on an ODP leg need to understand that they are part of a big program and not out only for their own personal science. 15

Hodell said that there had been 2 days of training in the use of the software at the port call. The intention of all the scientists had been to enter the data into Janus, but the biostratigraphers found it cumbersome and considered it a waste of time and detracting them from what they were out there to do. Clearly, some flaws in the database make it difficult to use, and the biostratigraphers decided to abandon it. By using Excel they felt able to generate the same information, but 3-5 times faster.

C. Moore asked about the challenging weather conditions and how much time had been lost. Hodell replied that overall the weather was good and that they had to wait on weather only twice. A bigger issue was that at the pre-cruise meeting, a long transit of 10-11 days was planned. However, shortly before the cruise, the Captain decided he needed more days (up to 12-13) and when at sea on the Leg, he decided he needed 15 days. Thus, there was a loss of operational days. Baldauf responded that TAMU has already implemented a procedure whereby any transit of >5 days is sent to the Captain directly to ask for time estimates in the planning stages.

McKenzie asked about the formation and sampling of the diatom mats for microbes. Baldauf explained that they form as a result of major algal blooms just below the surface waters. They can be seen in the surface ocean from satellites. On Leg 138, they were able to recover the diatom mats very well; however, this leg had problems, so recovery is unpredictable. There was microbiological sampling done for John Parkes that was done by the technicians who seemed to be well-trained and were following a protocol set out by John Parkes.

Baldauf clarified that the operational parameters at Site 1094 were exceeded.

2. Leg 176 - Return to Hole 735B (J. Natland)

ODP Hole 735B, located on a 15 km long wave cut terrace 18 km east of the Atlantis II transform fault, was drilled on Leg 118 and represents the only existing deep penetration into plutonic basement in the oceans. The goal of Leg 176 drilling was to deepen Hole 735B to directly determine the nature of the magmatic, metamorphic, tectonic and hydrothermal processes in the lower ocean crust at a slow spreading ocean ridge. The hole was deepened to ~1500 m with excellent recovery and a spectacular section of gabbro.

The crust consists of several units of relatively primitive olivine gabbro and troctolite, each of which is composed of many smaller magma bodies identified as Mg cluster provinces. These probably represent small intrusive masses that penetrated cold rock. The rocks exhibit magmatic crystal-plastic and brittle deformation features. Susceptibility data were particularly useful in outlining the occurrence and distribution of intervals rich in iron-titanium oxides, which correlate with the intensity of deformation. As identified in scan images, the susceptibility peaks reflect oxide minerals in deformed layers resulting from migrating fluids. Mylonite formation, observed in thin sections, indicates high-T deformation. There is also a complex record of high temperature metamorphism brittle failure, and hydrothermal alteration that began near the solidus temperature and continued down to very low-T conditions near the bottom of the hole.

The drilling operations at Hole 735B needed 2 days longer than anticipated, and were considered to be very successful. The Leg ended on a disappointing note when one of the pipe connections failed. The drillstring was about 100 m off the bottom of the hole, and was hung off (not attached to the heave compensator). Swells resulted in the drill string landing

on a ledge in the hole twice, and the drill 16
string broke, leaving 1403 m of pipe and the
BHA in the hole. Fishing operations recovered 497 m of pipe but there is still 734 m of pipe and 172 m of BHA in the hole.

Asked whether there are any future plans, Natland said that there will be a proposal submitted to complete a deep hole at this site. Drilling time estimates based on drillinng but not coring down to 1.5 km and then drilling and coring below that depth suggests that 3 km could be reached in 2 legs. The Co-Chiefs believe that this would likely recover the crust-mantle boundary.

3. Leg 174A — Mid-Atlantic Sea Level Transect (J. Austin)

Austin presented an overview of the drilling operations at the sites that continued the sea level transect first begun on Leg 150. Two sites were occupied on the shelf in water depths of 88 and 98 m with recovery in both cases <50% due to unconsolidated sands. The oldest sediments recovered at both sites were late middle Miocene. At Site 1071, both of the top drive motors failed which is unprecedented. The beacon cones were too narrow for the shallow water and signal anomalies were produced. The station-keeping system was unable to keep up with the excursions in shallow water, despite excellent weather. However, using the manual mode of operation, station-keeping was finally successful. The setting of casing to seal off unconsolidated sands was not possible. Drilling conditions were excellent in terms of weather and hydrocarbon accumulation. Logging success was variable, with the best logs recovered at Site 1072. LWD and wireline logs were run at both sites and were successfully used to fill gaps in recovery caused by the sands. He concluded that drilling operations in water depths below 75m can be done but are not efficient using the *JOIDES Resolution*. They require good weather, a new ASK system and new beacons optimized for shallow water, differential GPS, and casing to stabilize sandy sections. Site selection was successful due to the availability of high resolution seismic grids.

Only one site on the slope was occupied in 638 m water depth. At Site 1073 the deepest penetration was 663.6 mbsf with a core recovery of 99.9% revealing the thickest, most complete Pleistocene section ever collected on a continental margin by ocean drilling. The oldest sediments recovered were dated at latest Eocene. Abundant planktonic and benthic forams as well as nannos and dinocysts will allow excellent age calibration.

A proposal has been submitted to NOPP for drilling on the inner shelf using a jack-up rig. In May 1998 there will be a seismic survey of the inner shelf supported by NSF. In addition, two new sites will be drilled as a continuation of Leg 174AX on the New Jersey coastal plain by the end of 1998.

Discussion: Malfait inquired whether there were places where hydrocarbons could have been problematic. Austin replied that eight of the sites were covered with seismic grids in 1995, and then an independent industry consultant hired by ODP did a hazards assessment of the grids. Drilling was prohibited anywhere near a fault or an amplitude anomaly. Austin felt this was a good procedure, even though it cost money because it provided some confidence that drilling could be done safely at these sites. Austin added that this Leg was also used as an opportunity to PR because of its proximity to New York City. Humphris asked whether, now that there were land sites as well as drill sites on and off the shelf, it is possible to begin to correlate some of the boundaries and develop a picture of sea level change. Austin replied that although this was beginning to be possible, the problem is that there is a well-defined geometry on the shelf, but there is a condensed sequence on the slope. The stratigraphic correlations that can be made are based not on geometry, but on following a reflector. What is really needed is enough of the reflectors sampled and calibrated in an area where the

seismic geometry is optimal to do the job properly. If penetration had been 200-300 m deeper, then they might have sampled half a dozen more of these Miocene or older surfaces, and then the robustness of the correlation with the coastal plain would have been considerably better. Hence, if it was possible to go with a jack-up and get some casing done, then it would be possible to correlate from the slope to the coastal plain, but there is still a 100 km gap on the inner shelf that needs to be filled. 17

4. Leg 175 - Benguela Current (W. Berger)

The goal of ODP Leg 175 was to reconstruct the Late Neogene history of the Benguela Current and the associated upwelling off Angola and Namibia between 5° and 32°S. This is one of the greatest upwelling regions of the world -- intermediate in size between the Peru and California upwelling systems. The Benguela Current and the associated upwelling regions are characterized by organic-rich sediments that contain a detailed record of productivity history with a resolution of ~1000 yrs. One of the major aims was to monitor the evolution of the Benguela Current system and its relationship to the onset of Northern Hemisphere and Antarctic glacial cycles.

In addition, eastern boundary upwelling is strongly involved in modulation of the carbon cycle, and therefore in control of the partial pressure of CO_2 content of the atmosphere. Hence, in order to predict the effects of changes in productivity on the CO_2 content of the atmosphere, relations between circulation, nutrient transport, and the sedimentation of organic compounds and carbonate must be established for each region of high productivity.

Thirteen sites, consisting of 40 holes, were drilled off the western coast of Africa, and a record 8 km of core were recovered. These have provided an excellent record of the strength of the Benguela Current for the late Neogene, different types of upwelling (e.g. coastal, estuarine-influenced, etc.), and sea level changes. In addition, the sites off the Angola/Namibia margin also provided an excellent setting for natural experiments in sediment diagenesis that are important in the formation of economically important resources, such as petroleum and phosphate.

Interstitial water chemistry revealed high ammonia and alkalinity values resulting in dolomite precipitation. Berger highlighted the diatom maximum at about 2 Ma ago, with the increase starting at 4 Ma ago. He suggested this maximum to be related to different water mixing rather than to an increase in productivity. There is evidence from foraminifera species for a warm water influx from the Indian Ocean during this time. He expects that modeling of the current systems will demonstrate the influence of ocean circulation to the development of the desert on the continent.

The drilling operations were, in general, very successful and the cruise went smoothly. Due to the high recovery, by the end of the leg they ran out of liner. The only limitations were due to hydrocarbons off Angola where for safety reasons, drilling was limited to 200 mbsf. An additional factor inhibiting penetration were the diatom layers contained in some of the sediment records.

K. Phase III Scientific Planning

1. Review of Proposal Status (K. Ellins)

Humphris reminded SCICOM that the Spring 18
meeting was the one at which progress
towards achieving the goals of the LRP is reviewed and, on the basis of both proposal pressure and the geographic locations that needed to be drilled for the LRP themes, the 4-year ship track is extended by one year. Humphris then presented an overview of what has been scheduled and how each Leg fits into the major themes of the LRP.

Ellins summarized the status of all active proposals, grouping them by LRP themes and answered many questions related to specific proposals.

Ludden asked if proposals that arrived for the March 15th deadline could be scheduled for FY'00. Ellins replied that even if they were selected for external review at the May SSEPs meeting, that process will not have occurred in time for consideration in August.

Humphris commented that based on the allocations of legs for FY'98 and FY'99, and on the proposal pressure as presented by Ellins, SCICOM needed to:
1) extend the four-year ship track to the end of FY'01
2) identify gaps in proposal pressure that will affect achievement of the LRP goals and where SCICOM should be encouraging additional proposals.

Pearce suggested that the *JOIDES Resolution* should stay in the Indian Ocean and W. Pacific for another year as there is no end of exciting science to be done. Raymo stated that the bulk of the proposals related to "Earth's Changing Climate" are focusing on the Pacific and Indian Oceans and the Antarctic. Humphris remarked that SCICOM needs to be mindful that one problem is that people do not write proposals until there is an indication that the ship is going to go to that ocean; hence proposal pressure can be misleading. Hence, it is also important to look at the LRP to determine whether there are themes that can only be addressed in other parts of the ocean and therefore require the ship to move away from the Indian Ocean and Pacific.

Miller said the ship should stay in the Pacific, but move by the end of Phase III to the eastern part of the Pacific and then to the Atlantic. There is a top-ranked proposal (Laurentide Ice Sheet Outlet) and a proposed deep hole on the North Atlantic Rifted Margin, so there is the need to look beyond the 4 year ship track as this planning proceeds. He added that the Motion should indicate the intent that the ship will move from the Pacific/Indian Ocean in 2002 and 2003, and need to affirm to the community that it will be in the Atlantic before the end of the Program so that they start thinking about Atlantic proposals. Humphris clarified that there are ~8 proposals for deep holes in every ocean; the NARM proposal is the one that has been sent out for review, but that does not imply it is necessarily the one that the SSEPs favor.

Humphris then asked what themes of the LRP are being fulfilled by staying in the Pacific and Indian Oceans. Pearce answered that climate-tectonic links is an important one, LIPs are best tackled in that area, Nankai, and the Antostrat proposals. Raymo said she is unaware of the quality of these proposals, but a lot of them are focusing on tectonics of Asia, the Indonesia throughflow is a hot topic now, and the extreme climate warmth is being addressed by at least one proposal. Miller added that there are two ranked proposals -- SE Pacific and the Paleogene Transect -- which represent bulleted objectives straight out of the LRP, and that others, like Shatsky, that look promising for the Paleogene warmth issue. These indicate that the Pacific and Indian Oceans are the places to continue to work for another year.

On reviewing the themes under which the scheduled Legs fit, C. Moore commented that the big gap appears to be under "Sediments, Fluids and Bacteria as Agents of Change". There are gas hydrates objectives both in the Atlantic and Pacific. Humphris suggested that a lot of

fluid flow work was being done using 19
CORKs on Legs that had other objectives, so
the observed gap under this theme may be misleading. Brown pointed out that PacManus fits under Tansfer of Heat Materials and the Fluids theme. Pearce commented there is quite a large bacterial initiative at Woodlark as well.

Overpeck asked how alternative platform proposals fit into this. Humphris replied that it will be important as the prioritization of the LRP goals gets done over the next few months to look at whether any high priority themes require an alternative platform and, if so, then it will have to be included as a leg expense. She pointed out that it should be no different in terms of budgeting from requiring an ice boat for Antarctic drilling. Overpeck said that Proposal 519 was referred to the Shallow Water PPG, whereas a number of other relevant proposals have not been pushed into PPGs. Humphris noted that when PPGs meet, the JOIDES Office sends them a list of all proposals active in the system that fall within their purview, and supplies them with copies of those of interest.

Pisias suggested that JOI tries to come up with the true SOEs (Special Operating Expenses) in the program, and as SCICOM prepares for planning in August, it has an idea of what each leg might represent in terms of the SOE. So, if an alternative platform proposal is ranked high, SCICOM will know its implications to the budget. Fox stated that an alternative platform costing is the proponent's responsibility, and that TAMU's responsibility is to provide the SOE costs related to the *JR* and not to other requirements for a platform. Ludden replied that this is an ODP program and should be treated as such. Pisias said that JOI should be willing to provide a response to costing items that were included in the LRP, and that would include alternative platforms. Humphris confirmed that JOI is willing to provide cost estimates for the themes or legs that might be of interest in the next few years. Mountain said that evaluating costs for alternative platforms is also in the mandate of the Shallow Water PPG.

Miller said that there are at least 3 critical themes that need alternative platforms: sea level, coral reefs, and the Arctic. The structure as it exists has been very helpful in fostering those efforts in two ways -- (1) helping to fund them, and (2) the structure as it exists in ODP itself; i.e. publications, archiving. This type of support is at minimal cost directly to the program as the drilling is being funded from other sources and is one thing that can be used to foster relations with other programs. Overpeck stated that, in his opinion, the best science on the list cannot be accomplished with the *JOIDES Resolution* and we need to do something to ensure that we move ahead with alternative platforms. Humphris said that if there are themes of high priority that cannot be carried out with *JR*, then the prioritization effort will determine the focus of the program over the next few years.

Humphris stated that it seems that the sense of the group is that the ship needs to stay one more year in the Indian Ocean or W. Pacific, but the intent is that the ship will be moving towards the Atlantic by the end of the program. Tamaki said that, in terms of proposal pressure, Nankai, Nankai CORK, Ontong Java, PacManus, Shatsky, and Taiwan collision clearly focus on the Pacific/ Indian Oceans. Ludden said that SCICOM is committed to the South Pacific because of ION. Humphris commented that hopefully, by the next meeting, there would be some data on whether buried or borehole seismometer are better. Brown replied preliminary data suggests that the buried seismometer looks less noisy than the borehole but, because the borehole could not be packed off, so that the fluid flow noise is unresolved. Humphris stated that SCICOM has committed to drill the six top priority ION holes as possible, but beyond that, proof that this is the best deployment method would be required.

Pisias commented that the odds of getting an ice boat, alternate platform, 1000 m of casing, and a lot of instruments in one year is pretty small. Tamaki inquired about financial support

for an alternate platform. Humphris replied 20
that we first need cost estimates, but we can
consider an alternate platform which may mean one less cruise on the *JR*. Fox said that this will not save money, because of the 5 year contract with ODL, and that we cannot be flexible with the *JR*.

Motion 98-1-11
In order to fulfill the objectives of the LRP and to respond to existing proposals, SCICOM establishes that the general ship track for the *JOIDES Resolution* will remain in the Indian and Pacific Oceans through FY'01. SCICOM anticipates that the ship will return to the Atlantic Ocean prior to the end of Phase III.

Proposed: K. Miller; Seconded: K. Brown *14 in favor; 2 absent*

Fox expressed concern that if planning for a seismogenic zone experiment post-2003 requires using the *JR*, then the planning needs to be on a fast track to capture the time frame before the ship begins to move away from the area and cannot respond.

Brown asked if there is a way of flagging proposals that will never succeed. Humphris replied that the SSEPs can discourage a proposal. The additional step that should perhaps happen is that when a proposal is discouraged, it should also be deactivated so they are not still in the system. d'Hondt stated that on the Environment SSEP, the members have been loathe to discourage any proposals that meet one of the objectives of the LRP, and asked if the SSEPs should go a step further and say it is not a very good proposal and is unlikely to succeed. Humphris replied that this is appropriate and, in the end, is fairer to everybody. This was one of the reasons the Preliminary Proposal step was introduced so that a lot of effort would not be put in to developing something that would not be competitive. Ellins suggested that the SSEPs be asked to take a look again at old proposals at their next meeting and decide if they want to consider deactivating them. Humphris stated that the guideline is that proposals that show no activity for 3 years are deactivated, but in order to clean up the system now, older proposals should be pointed out to the SSEPs for consideration for deactivation.

3. Status of PPGs (S. Humphris)

The current status of PPGs is as follows:

- Long-Term Observatories (Co-Chairs - Keir Becker & Kiyoshi Suyehiro)
  First meeting - 7/97, Second meeting - 3/98
- Deep Biosphere (Chair - John Parkes)
  First meeting - 12/97; Second meeting with ODP-TAMU Engineers - 3/98
- Climate-Tectonic Links (Chair - Tom Crowley)
  First meeting - 5/98
- Architecture of the Oceanic Lithosphere (Co-Chairs - Rodey Batiza & Joe Cann)
  First meeting - 5/98
- Extreme Climates & Environments of the Paleogene and Cretaceous
  (Chair - Dick Kroon)
  Setting up first meeting
- Shallow Water Systems (Co-Chairs - Greg Mountain & Terry Quinn)
  Setting up first meeting
- Gas Hydrates To be Staffed at 3/98 SCICOM Meeting

Humphris commented that over the past year, 21
she has called more than 100 people to sit on
various committees and had only 1 US and 2 non-US scientists turn her down. A lot of new people have been brought into the program which is a positive sign that the community is highly interested.

Shallow Water PPG (G. Mountain) -- All members of the Shallow Water PPG have been contacted, and a welcome letter has been sent out asking each person (1) for their prioritized list of scientific objectives for shallow water drilling and (2) to distribute their key scientific papers. They will be setting up a web page and may have their first meeting in June. He thought it might be valuable to meet this summer in St. John's and visit a state-of-the-art vessel. He pointed out that Leon Holloway did a wonderful cross-industry survey on "Drilling in the Antarctic", and he should be encouraged to be the liaison from ODP-TAMU.

Long Term Observatory PPG (K. Brown) -- The PPG had a successful meeting in Japan and endorsed the design of a new generation of CORKs. These will take a small time commitment from ODP engineers. The PPG would be interested in getting Hole 808E cleaned out, perhaps as part of the Nankai CORK proposal. Humphris asked whether any fishing effort had been tried before and G. Moore answered that no attempt had been made. Brown said what needed to be removed is too heavy to lift up with wirelines.

It is likely that in the year 2001, perhaps at the NERO site, there will be another attempt at a comparison between buried and borehole seismometers. Another aspect of the ION sites is that they coulc be used to do ancillary science, which would require better site survey data. We have 10 or 12 legacy holes which are considered as appropriate for long-term observatories. The PPG would like to see more legacy holes for post-2003. They will also be advising JAMSTEC on their wireline reentry system. Brown reported that Bobb Carson will be resigning because he is too busy and that it would be helpful to have a biosphere expert in the group, as well as a SCICOM liaison.

Gas Hydrates PPG (S. Humphris) -- Humphris reminded SCICOM of the mandate of the Gas Hydrates PPG and presented a list of nominations for membership on this PPG that derived from input from SCICOM members, national committees, and included all those who had active proposals or had been involved in site surveys for active proposals. She commented on the recent DOE meetings that have been held relating to gas hydrates at which ODP has been well represented. It is hoped that ODP will continue to play a prominent role in any initiative put forward by DOE, with perhaps the possibility of some funding to pursue ODP's gas hydrates interests.

SCICOM discussed the nominees and selected a list that attempted to provide the appropriate disciplinary balance. Malfait commented that there was only one industry person on the list and recommended more industry involvement. Goldberg indicated that he could provide some names, and Humphris agreed to take action on this issue and find another person. It was noted that the liaison from the Biosphere PPG is from DOE. Humphris will contact the nominees and set up the PPG.

4. Report on the December Deep Biosphere PPG Meeting (J. McKenzie)

McKenzie commented that there was some difficulty in getting the first meeting organized, because Parkes wanted to get everyone involved. The meeting was directly after the AGU Fall Meeting, and only one person was unable to attend, which shows the active commitment of the group.

During the December meeting, it was decided 22
that there was a need to talk to the ODP-
TAMU engineers. They discussed three items at their meeting: (1) developing a plan for integration of microbiology sampling and analysis into drill sites with other objectives, where appropriate; and (2) organizing the development of drilling proposals and specific drilling sites; and (3) providing advice on the need for, and specifications for, a shipboard microbiological facility, development of sampling procedures, analytical techniques and a curation of samples. The first part of the meeting was spent in answering the question: "what is deep biosphere science", and in members presenting their interests and expertise to the Group, which was extremely diverse.

There was also a focus on the shipboard microbiology facility and the minimum requirements for routine microbiology measurements. There needs to be a way to carry out routine microbiological measurements on the ship. The PPG put together a list of the minimum requirements needed for a laboratory. McKenzie said that this list was composed very carefully, with each person given an assignment to find the best and cheapest way to do it. This list came to ~$215K. The list was discussed at SCIMP and then at OPCOM. SCIMP then paired this list down to what they considered absolute essentials and has talked with TAMU about what could be pull out of existing material and equipment. Jonasson pointed out that there is a list with a price tag of $400K. This list was not from the PPG but has many items in common, but what the PPG list does not include are any consumable items.

A very important factor to be considered for microbiology is the contamination of samples during drilling expressed as: QA/QC (quality assessment/quality control). In order to deal with this issue, as well as discuss a microbiological facility, they requested the next meeting be held at TAMU.

They then looked at the legs that are scheduled to determine which are appropriate for microbiological work. A scientist will be going on Leg 180; the Bristol group is interested in putting someone on board for Leg 183; Leg 185 is also a possible target leg. There was also interest in possibly doing some downhole incubation experiments on Leg 186 or post-drilling. The PPGs want to get actively involved in these programs.

Future plans are to develop their own proposals, identify upcoming legs that would be of interest, and try to get the microbiology community interested. They are preparing a report to be presented at the next Subsurface Microbiological Conference organized by Pedersen, and Everett Shock is looking into organizing a Gordon Conference. McKenzie stated that she was very impressed with the activity and the intensity of this group. They also decided they needed a liaison to the Gas Hydrates PPG, and Tommy Phelps from DOE is their designate.

What SCICOM needs to do is to link this experiment to the effort being put into studying life in extreme environments. There may be some funding opportunities that could be helpful; e.g. DOE. At some level, SCICOM needs to make a commitment in terms of space, container or equipment to get this program started. According to the recommendations by engineers, some contamination experiments can be done on upcoming legs identified as appropriate for microbiology sampling, and SCICOM should encourage this. In addition, SCICOM should back their requests for shipboard experiments on legs that they have identified as of potential interest.

Humphris inquired whether the experiments require drilling time or sampling time, or does it just require taking a sample out of the cores as they are collected. McKenzie replied that, in the case of the contamination test, pumping fluid down could take several hours to get the amount of fluid they need with tracers in it and then take and test the core. Humphris said

that SCICOM would need to encourage this 23
effort to ensure that it is not something that
gets lost because it is not a prime objective of a cruise. McKenzie said that a sampling procedure, particularly timing, needs to be determined. Humphris said that the microbiologist on Leg 158 had first priority as soon as the core came up before anything else happened to the core. Baldauf remarked that these experiments need to be built into the Prospectus and identified well ahead of time. Farrell stated that there are possibilities on many legs, and asked if this PPG will move forward to set up a drilling proposal or will it mostly work through identifying opportunities on existing legs. If they do not move forward on developing their own proposal, is it still worth having a PPG? McKenzie replied that she is sure there will be proposals but first there must be routine sampling to identify the problems that might require a full leg. Farrell said he thought PPGs were tasked to foster drilling proposals; Humphris stated that there are different mandates for each PPG, and the Biosphere PPG mandate includes the development of proposals if specific drilling sites are required. Fox said that, based on the discussions at TAMU, the PPG plans to use the legs between now and drydock to conduct QA/QC as it does not take too much time or money. Post drydock, they will then know enough to propose a specific leg and will have had the time to get resources together (external to ODP) to have a full blown lab capability on ship.

Brown inquired whether NASA was ever approached regarding life in extreme environments. McKenzie replied that this was discussed and that Everett Shock is involved in some projects. Farrell said that there was a workshop in DC last March with NASA representatives. Tamaki asked about the sites appropriate for microbiology and McKenzie replied that would be open. C. Moore asked about the criteria that make certain legs of interest, and McKenzie mentioned temperature variation, transects, sedimentary environments, and different ecosystems. d'Hondt asked if the contamination experiments could be scheduled for Leg 180, and Baldauf replied that they are coming up with costs and that a biologist will be sailing on Leg 180.

General Discussion on PPGs: Fox was concerned that when the new structure was created, one of the reasons was to move away from a historical characteristic of the Program that was criticized: that the science of the program was balkanized, and that a given leg would nibble around the edges of a fundamental scientific problem. He stated that there was a perception and a reality that the Program was not focusing its resources in a true programmatic sense. So, the LRP and the new advisory structure were created to produce a few key themes and a process which amalgamated the goals into a more focused programmatic packet. The PPGs were designed to nurture proposals, but also to take disparate proposals and fashion them into an integrated packet that would focus on fundamental issues. This would then be sent to the SSEPs. Fox stated he is worried that if SCICOM doesn't make a commitment to this, at the end of this program, it will still look the same, with scattered legs and an inability to say we have devoted our resources to solve a finite number of fundamental questions.

Overpeck said that the concern made sense to him. From outside, it looks like ODP is trying to capture the best science, but the process is still fairly balkanized. The ESSEPs are confused by the process. The job of SCICOM is to make the process streamlined and as effective as possible to see vision work in a timely fashion. SCICOM needs to come up with a fast-track approach and free up resources. It also needs to make decisions, in a time when resources are non existent, and the information is needed quickly in order to set priorities. This needs to happen before 2003, so all the PPGs should be put on a tighter communication schedule to ensure they understand what needs to happen. Their reports need to be done soon. Finally, he commented that he had heard that other partners and initiatives with money are interested in some of the same things. That gives ODP leverage, and it also means the Program is planning some exciting science. The PPGs need to be encouraged to be more proactive in finding sources of additional funds that ODP can leverage against its substantial contribution;

i.e. a drillship. SCICOM should be prepared 24
to put its contribution up against whatever is
best leveraged, and should be willing to tell the PPGs that it is willing to scrap other legs to do exciting science that is well leveraged.

Miller agreed with the comment, and said there should be continued SCICOM liaison with PPGs as well as liaisons from SSEPs to foster communication and ensure information transfer as quickly as possible. His other suggestion was that SCICOM should put together a scientific equivalent of ODP's greatest hits in terms of the major theme issues of the program. This is important to start widely disseminating the fundamental advances in Earth Sciences that ODP has made. Humphris agreed it is a good idea and suggested it be in conjunction with the 30 year anniversary of scientific ocean drilling. She was, however, worried about Overpeck's comments as they related to how ODP is viewed -- is it a program or a facility? She expressed concern that if we follow Overpeck's advice of going out and finding resources and then completing the best-leveraged programs, ODP will be moving towards being a facility rather than a Program. She suggested that during the prioritization exercise that SCICOM will be going through in the next few months, there will be some scientific themes that other groups are not interested in but are very important to ODP, and she would not like to see those lost for the sake of doing other science for which there might be better leverage, but is of lower priority to ODP.

Concerning the issue of liaisons to SCICOM, Humphris acknowledged Fox's concern but said that it was difficult to get things moving faster. Brown indicated that the reason the Observatory PPG had made so much progress was that they had stepped up their meeting schedule so that they now have some concrete ideas. She said that in terms of the PPGs, there were two main reasons they were set up. First, if there was a fundamental question of how to approach the science, or the science was new to ODP, those were appropriate avenues for PPGs. If it was a matter of lack of proposal pressure, or a question of getting community consensus on how to approach the science, then those were not appropriate for a PPG. The second reason concerned the time frames in which planning needs to be done -- all are concerned with Phase III, with a few PPGs moving towards the future IODP. Ludden said that he did not agree with moving towards diversification. Humphris said that her understanding of Overpeck's comments was not that we should diversify, but that there are other programs that have resources that we could try to bring to bear on getting the science done -- even if it means not doing other themes. Overpeck said he was trying to be pragmatic when the Program is strapped for resources. SCICOM should look for ways to invest its dollar in areas with higher return on investment as long as it is really good science. This should be part of the decision-making process; i.e. weighing in bang for the buck. Humphris said she did not disagree with this, but cautioned that it is important to keep in mind that we are a Program and want to do good science and that ODP does not become just a facility that is used by others. ODP must have a scientific program. C. Moore agreed with Overpeck that it is unlikely that everything within the LRP can be achieved, and stated that there are a lot of sitautions we can be opportunistic about.

Raymo said that the Climate & Tectonics mandate states it will exist for three years, which gives a false impression as to the timescale they are working under. Pearce said that unless we put a timescale on PPGs they will not deliver in time to contribute to Phase III. Brown was worried that speeding this up would mean more meetings that may not be affordable. Humphris said that the PPGs need to be encouraged to complete the task as quickly as possible, and that SCICOM could try to get that message across to them. Raymo said that having liaisons from SCICOM will help.

The following nomination for the liaisons to PPGs was agreed:

Ken Miller:	Extreme Climate 25
Maureen Raymo:	Climate Tectonics Links
Jon Overpeck:	Shallow Water Reefs
Casey Moore:	Gas Hydrates
Emily Klein:	Architecture of Oceanic Lithosphere
Kevin Brown:	Observatories
Nils Holm:	Deep Biosphere

Overpeck suggested the PPG Chairs should give a presentation at the Spring SCICOM meetings in place of Leg Reports. Humphris said that a written report could be required, and if a SCICOM liaison participates at the PPGs, then there is no need to invite the PPG Chair to the SCICOM meetings as a report can be given by the SCICOM liaison. The liaisons are charged with informing the PPGs on the timing issue of their planning activities, and the annual review of their activities at the SCICOM Spring meeting.

Miller referred to page 7 in the SSEP Minutes regarding the discussion on sea level changes. After discussion with members of the sea level group, Moore, Austin and Karner have created a primer for proponents which is added as Appendix III to the SSEPs minutes and is available on the JOIDES Office web site (http://www.whoi.edu/joides).

Motion 98-1-12
SCICOM endorses convening an International Sea Level Workshop. The workshop will review principles of studying sea-level change, review results of recent ODP drilling for sea-level objectives, re-evaluate drilling strategies, and review possible future drilling targets.

Proposed: K. Miller; Seconded: C. Moore *14 in favor; 2 absent*

L. Update on Drydock Planning

See TAMU Report -- Item B.3.

M. Panel Reports and Action Items

1. OPCOM (S. Humphris)

Humphris presented a report of the OPCOM meeting the previous Monday, and went through the list of consensus and action items (see Summary of OPCOM Minutes).

2. SSEPs (J. Overpeck)

Overpeck reported on the ESSEP meeting based on the Minutes. He said that either he or Humphris would take care of the action items. He further reported that there was a problem regarding the timing of the fall proposal submission deadline that needed to be dealt with.

Humphris explained that the annual JOIDES timetable was set up with the idea that proposals would be sent out for external review only once. At their August meeting, however, SCICOM decided to send a few proposals back to the SSEPs for further revision. However, this resulted in the proponents having only 2-3 weeks to meet the 15 September deadline in order for their proposals to be sent out again for external review and be considered again at the August 1998 meeting. The JOIDES Office gave them an extension to 1 October to try to help this

situation, but this created a problem for the 26
SSEPs in that they did not have sufficient
time for review. Humphris has now reviewed the calendar and suggests that the fall deadline be moved to 1 October, that SCICOM meet in the middle of August to give the proponents 6 weeks to revise a proposal considered at SCICOM, and that the SSEPs to meet in November as originally scheduled. G. Moore said that the problem came up because we have changed the original intent of reviewing only once. Humphris said that the problem arose because the system had to be jump-started in January 1997, and so a lot of proposals were sent out for review. She envisioned the problem should go away in time.

3. Panel membership Issues (S. Humphris)

Humphris reported that Srivastava will Chair his last meeting of SSP in July, so a new Chair needs to be selected by SCICOM. SSP has put forward three candidates for the position, which SCICOM then discussed. Humphris said that there was another issue to consider and voiced concern that if another US scientist is nominated, then all panels, except TEDCOM would be chaired by a US scientist. She asked the non-US partners if they considered this a problem. All non-US SCICOM members felt that this should not be a point of consideration.

Consensus 98-1-13
By consensus, SCICOM appoints John Diebold to replace Shiri Srivastava as the Chair of the Site Survey Panel following their July 1998 meeting.

N. Status of Liaisons

Humphris reported that Gerard Bond has agreed to be the liaison to NAD. R. Larson, the official liaison to the ICDP, will be on sabbatical in Japan and requested SCICOM to find a substitute to attend the next meeting in April. Kudrass agreed to serve as liaison for the next meeting in Larson's absence.

Pearce suggested there should be a liaison to GERM, to define how GERM could link with ODP in the future. Since there are several SCICOM members involved in GERM, it was felt that at present, no formal liaison need be designated. Hay advised that an INTERMARGINS office will be set up at GEOMAR next January.

O. New business

Mountain commented on the new publications policy and said that he wanted to be sure that all SCICOM members understood that the on-demand printed version of the Initial Reports would not look like our current publications, but would be more like a manuscript. Everything produced by TAMU will now be formatted for electronic publication rather than for hard copy publication. Baldauf noted that the print will be on a laser quality level. C. Moore highlighted that this will improve the accessibility of ODP data, and believes that this is the right way to go. Mountain said that it will not be feasible for the user to print on demand. Baldauf replied that this is incorrect; printing will be still possible, but the figures will be of less quality. Humphris added that she has asked SCIMP to set up an archiving and a data distribution plan that will involve the mirror sites and the archiving issues.

Mountain also indicated that he felt that SCICOM should express their concern regarding France's likely reduction in participation in ODP.

Motion 98-1-14
SCICOM echoes EXCOM's concern (EXCOM Motion 98-1-3) regarding the possible reduction of French participation in ODP. France is a valuable founding member of ODP and her scientists have contributed extensively to the understanding of Earth processes through ocean drilling. In fairness to all other members, however, the possible reduction of France's financial contribution must be accompanied by a reduction in representation in the JOIDES Advisory Structure and participation in shipboard activities. France has been a welcomed member at SCICOM and we hope that a mechanism for their continued participation will be found.

Proposed: G. Mountain; Seconded: C. Moore *13 in favor; 1 abstention; 2 absent*

P. Future meetings

The next SCICOM meeting will be on 17-19 August; the PANCH will meet on 20 August, and OPCOM on 21-22 August. The meeting will be hosted be J. Pearce in Durham and will be held downtown in a hotel. Detailed information will be posted on the web site. A field trip will be arranged for the weekend before the meeting.

Brown has already volunteered to host the meeting for Spring 1999 at SIO, and the summer 1999 meeting will be in Kiel, Germany. In the year 2000, the spring meeting will be hosted by C. Moore at Santa Cruz and the summer meeting is tentatively planned for Australia.

Consensus 98-1-15
Recognizing that Shiri Srivastava's last meeting as the Chair of the Site Survey Panel occurs before SCICOM's next meeting, SCICOM extends its thanks to Shiri for serving as a tireless SSP Chair. His good-natured tenacity guided SSP in developing and maintaining high standards for site survey readiness; the science derived from ocean drilling is much improved because of these efforts. SCICOM wishes him well in all his future ventures.

Consensus 98-1-16
With the rotation of Joris Gieskes from his most recent JOIDES advisory position as SCIMP chair, SCICOM would like to acknowledge the numerous outstanding and long lasting contributions he has made to ODP planning and science. In particular, he has skillfully managed a smooth transition from a system utilizing multiple service panels into a single integrated Scientific Measurements Panel.

Consensus 98-1-17
SCICOM would like to thank Judy McKenzie for her years of service on both this committee and PCOM. Her invaluable input into a wide variety of diverse topics, and steadfast support for the newly burgeoning field of microbiology, will leave a significant positive imprint on the direction of ocean drilling in the coming years.

Consensus 98-1-18
SCICOM sincerely thanks Ellen Kappel for her many years of dedicated effort in support of ODP. During her tenure with JOI and the ODP, Ellen selflessly worked to advance the science of the program. She led new initiatives to promote ODP through outreach programs that have been broadly recognized for their excellence. Ellen's hard work, dedication, fairness and enthusiasm have provided a strong foundation for advancing the scientific and

technical excellence of the Program. The "heart and soul" of JOI will be missed, but her legacy will live on. We extend our best wishes for success in her future endeavors

28

Consensus 98-1-19
SCICOM thanks Jonathan Overpeck and NGDC for hosting our March 1998 meeting in this mile-high winter wonderland. They provided us with a wonderful opportunity to learn about the world's leading data archiving center, take home stunning maps, view snow-capped peaks, dine on mountain trout and caribou, and experience the full range of Colorado climatic variability. Thank you for a well-organized and highly enjoyable meeting.

ADJOURN

SCICOM Meeting
19-20 March 1998

APPENDICES

Appendix 7 Proposed timeline showing the activities leading to the Spring 1999 Conference.